ANSCHUTZ
EXPLORATION CORPORATION
555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

RECEIVED
NOV 12 1998
DIV. OF OIL, GAS & MINING

November 11, 1998

Via Federal Express

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 W. North Temple, Ste. 1210
Salt Lake City, UT 84114-5801

RE: ***Anschutz Ranch Deep #10-27***
Section 27, T4N, R7E
Summit County, Utah
Application for Permit to Drill

Dear Ladies and Gentlemen:

Enclosed is our application for permit to drill along with a check in the amount of $50.00 for the permit fee. Our application also includes a location plat, cut and fill diagrams, BOP Schematic, drilling program and H_2S Contingency Plan.

We respectfully request the Division of Oil, Gas and Mining keep information regarding this well confidential or "Tight Hole".

Please advise the undersigned of your decision pertaining to the approval of our permit at (303) 299-1344. Thank you.

ANSCHUTZ EXPLORATION CORPORATION

Susan M. Balano
Operations Technician

SMB
Enclosures

FORM 3

STATE OF UTAH

DIVISIO F OIL, GAS AND MINING

5. Lease Designation and Serial Number: Fee

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

6. If Indian, Allottee or Tribe Name: N/A

1A. Type of Work: DRILL [X] DEEPEN [ ]

7. Unit Agreement Name: N/A

B. Type of Well: OIL [ ] GAS [X] OTHER: SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. Farm or Lease Name: Anschutz Ranch Deep

2. Name of Operator: Anschutz Exploration Corporation

CONFIDENTIAL

9. Well Number: 10-27

3. Address and Telephone Number: 555 17th Street, Suite 2400, Denver, CO 80202

10. Field and Pool, or Wildcat: Wildcat

4. Location of Well (Footages)

At Surface: 1433' FSL and 1228' FEL (Surface Location) NESE

At Proposed Producing Zone: 2200' FNL and 2550' FWL (Btm. Hole Location) SENW

11. Qtr/Qtr, Section, Township, Range, Meridian: Sec. 27, T4N - R7E

14. Distance in miles and direction from nearest town or post office: 20 miles SW of Evanston, Wyoming

12. County: Summit

13. State: Utah UTAH

15. Distance to nearest property or lease line (feet): 2200' (Btm. hole)

16. Number of acres in lease: 640

17. Number of acres assigned to this well: 40

18. Distance to nearest well, drilling, completed, or applied for, on this lease (feet): none

19. Proposed Depth: 16,300' TVD/16,950' MD

20. Rotary or cable tools: Rotary

21. Elevations (show whether DF, RT, GR, etc.): Existing Ground 7577.8'

22. Approximate date work will start: Upon approval of application

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8"	54.50#	1,500'	See attached
12-1/4"	9-5/8"	47.0# & 53.0#	9,700'	See attached
8-1/2"	7-5/8" & 7"	39.0# & 32.0#	14,000'	See attached
6"	4-1/2"	13.5#	16,950'	See attached

DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

Anschutz Exploration Corporation proposes to drill a well to a depth of 16,950' MD to test the Phosphoria/Weber, Mission Canyon, and Bighorn formations. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per State of Utah requirements.

See Drilling Program attached.

All operations will be covered under Anschutz' Utah Statewide Bond No. 104253.

CC: 3 - Division of Oil, Gas & Mining-SLC, UT
3 - Anschutz Exploration Corporation - Denver, CO

24.

Name & Signature: Daniel R. Gee Jr. Title: Operations Superintendent Date: 11/10/98

(This space for State use only)

API Number Assigned: 43-043-30321

Approved: 12/7/98

(See Instructions on Reverse Side)

(1\93)

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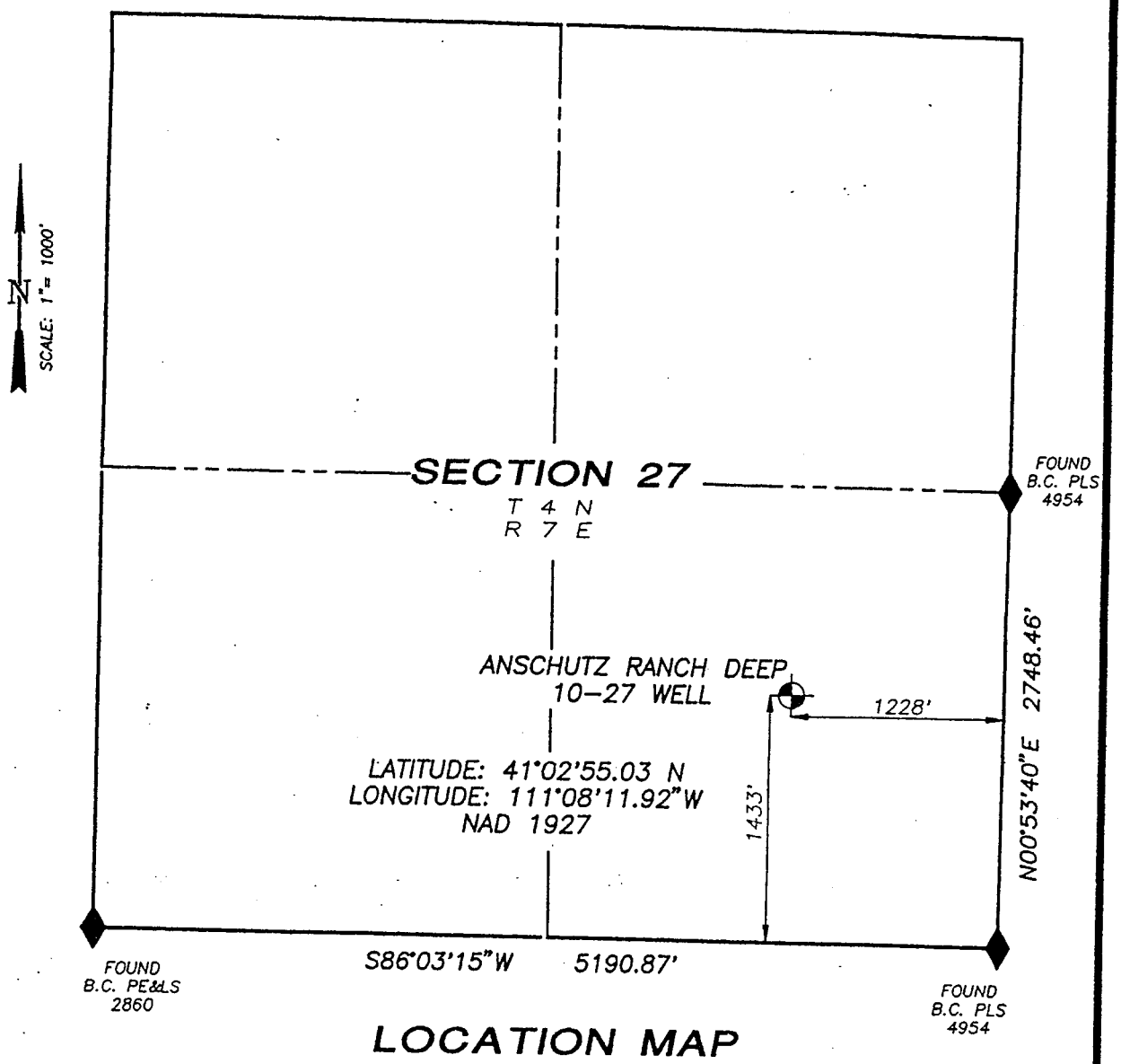


LOCATION MAP

SURVEYED UNDER MY SUPERVISION
IN OCTOBER 1998

LICENSED LAND SURVEYOR
10/12/98
No. 278046
STANTON G. TAGGART
STATE OF UTAH

MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
ANSCHUTZ EXPLORATION
ANSCHUTZ RANCH DEEP 10-27 WELL
1433' FSL 1228' FEL
SECTION 27, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 10/08/98 JOB #: 98-19-03
DISK #: ____ FILE: 98-19-03
DRAWN BY: Travis Martinez

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

November 12, 1998

Susan M. Balano
Anschutz Exploration Corporation
555 17th Street, Suite 2400
Denver, Colorado 80202

Re: Anschutz Ranch Deep 10-27 (APD), Sec. 27, T. 4N, R. 7E, Summit County, Utah

Dear Ms. Balano:

In response to your letter dated November 11, 1998, please be advised that the Division of Oil, Gas and Mining ("Division") has received the Application for Permit to Drill ("APD"), the above referenced well. In addition to the APD, a check in the amount of $50.00 was filed as a "permit fee".

Please be advised that the Division does not require a permit fee. Therefore, check #1301 in the amount of $50.00 is being returned to you at this time.

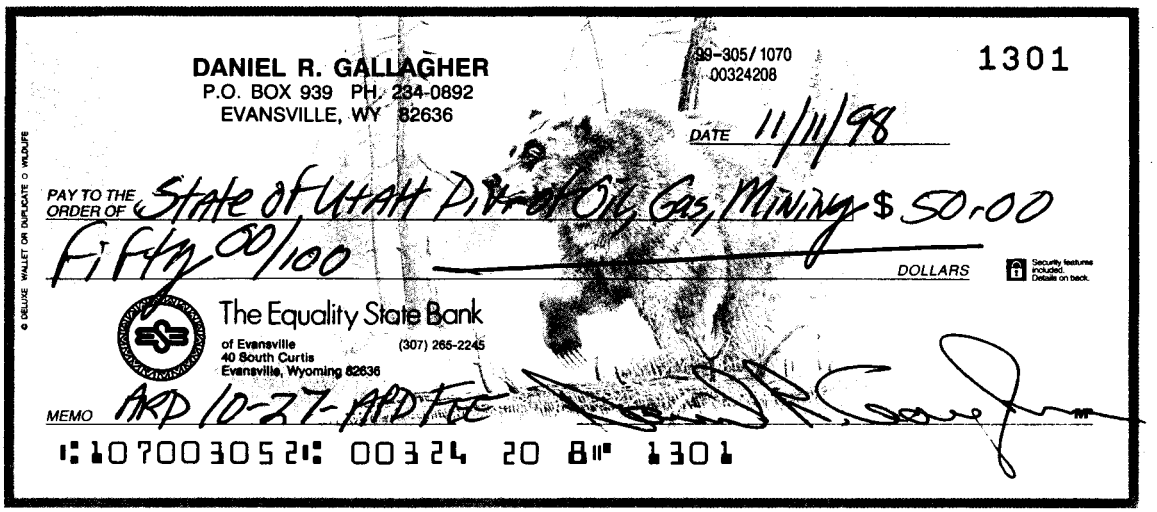
Should you have any questions regarding this matter please contact me at (801)538-5296.

Sincerely,

Lisha Cordova

Lisha Cordova
Engineering Technician

enclosure
cc: Gil Hunt, Technical Services Manager



DANIEL R. GALLAGHER
P.O. BOX 939 PH. 234-0892
EVANSVILLE, WY 82636

39-305/1070
00324208

1301

DATE 11/11/98

PAY TO THE ORDER OF State of Utah Div of Oil, Gas, Mining $ 50.00

Fifty 00/100 DOLLARS

Security features included. Details on back.

© DELUXE WALLET OR DUPLICATE © WILDLIFE

The Equality State Bank
of Evansville (307) 265-2245
40 South Curtis
Evansville, Wyoming 82636

MEMO ARD 10-27-APD Fee

⑈107003052⑈ 00324 20 8⑈ 1301

APPLICATION FOR TEMPORARY CHANGE OF WATER

STATE OF UTAH

Rec. by _____

Fee Paid $ 100.00

Receipt # 98-00223

Microfilmed _____

Roll # _____

For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.

CHANGE APPLICATION NUMBER: t22532 **WATER RIGHT NUMBER:** 35 - 8296

****

This Change Application proposes to change the POINT(S) OF DIVERSION, PLACE OF USE, and NATURE OF USE.

****

1. OWNERSHIP INFORMATION.

A. NAME: Antelope Company **INTEREST:** 100%
ADDRESS: 2400 Anaconda Tower, 555 Seventeenth Street, Denver, CO 90202

B. PRIORITY OF CHANGE: September 8, 1998 **FILING DATE:** September 8, 1998

C. EVIDENCED BY:
Water Right 35-8296

DESCRIPTION OF CURRENT WATER RIGHT:

2. SOURCE INFORMATION.

A. QUANTITY OF WATER: 1.5 cfs

B. SOURCE: Rees Creek **COUNTY:** Summit

C. POINTS OF DIVERSION -- SURFACE:

(1) S 1000 feet E 1250 feet from NW corner, Section 5, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 10 Ditch
SOURCE: Rees Creek

(2) N 200 feet E 825 feet from NW corner, Section 5, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 11 Ditch
SOURCE: Rees Creek

(3) N 2300 feet W 50 feet from S¼ corner, Section 5, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 8 Ditch
SOURCE: Rees Creek

(4) S 1650 feet E 1320 feet from NW corner, Section 5, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 9 Ditch
SOURCE: Rees Creek

(5) S 2150 feet feet from N¼ corner, Section 9, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 4 Ditch
SOURCE: Rees Creek

(6) S 850 feet E 350 feet from NW corner, Section 9, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 7 Ditch
SOURCE: Rees Creek

(7) N 200 feet W 660 feet from SE corner, Section 16, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 1 Ditch
SOURCE: Rees Creek
(8) N 1100 feet W 900 feet from SE corner, Section 16, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 1a Ditch
SOURCE: Rees Creek
(9) N 2300 feet W 1250 feet from SE corner, Section 16, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 1b Ditch
SOURCE: Rees Creek
(10) S 1050 feet W 1300 feet from NE corner, Section 16, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 2 Ditch
SOURCE: Rees Creek
(11) S 500 feet W 1450 feet from NE corner, Section 16, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 3 Ditch
SOURCE: Rees Creek
(12) S 1650 feet W 1700 feet from NE corner, Section 16, T 4N, R 7E, SLBM
DIVERT WORKS: Rees No 3a Ditch
SOURCE: Rees Creek

3. WATER USE INFORMATION.

The Water Right represented by this change application is SUPPLEMENTAL to other Water Rights.

IRRIGATION: from Mar 1 to Nov 1. IRRIGATING: 119.9000 acres.

STOCKWATERING: from Jan 1 to Dec 31. EQUIVALENT LIVESTOCK UNITS: 1.

4. PLACE OF USE. (Which includes all or part of the following legal subdivisions:)

				NORTH-WEST¼					NORTH-EAST¼					SOUTH-WEST¼					SOUTH-EAST¼				
BASE	TOWN	RANG	SEC	NW	NE	SW	SE		NW	NE	SW	SE		NW	NE	SW	SE		NW	NE	SW	SE	
SL	4N	7E	4	X	X	X	X	***	X	X	X	X	***	X	X	X	X	***	X	X	X	X	
			5	X	X	X	X	***	X	X	X	X	***	X	X	X	X	***	X	X	X	X	
			9	X	X	X	X	***	X	X	X	X	***	X	X	X	X	***	X	X	X	X	
			16	X	X	X	X	***	X	X	X	X	***	X	X	X	X	***	X	X	X	X	
SL	5N	7E	32	X	X	X	X	***	X	X	X	X	***	X	X	X	X	***	X	X	X	X	

5. EXPLANATORY.

Weber River Decree No. 296 Proposed Determination No 230a Page 74

THE FOLLOWING CHANGES ARE PROPOSED:

6. SOURCE INFORMATION.

A. QUANTITY OF WATER: 25.0 acre-feet

B. SOURCE: Existing Pond **COUNTY:** Summit

C. **POINT OF DIVERSION -- SURFACE: Changed as Follows:**

(1) N 1407 feet E 1239 feet from SE corner, Section 27, T 4N, R 7E, SLBM
DIVERT WORKS: Pump and a 3-in pipe
SOURCE: Pond

D. **COMMON DESCRIPTION:** Anschutz Ranch

7. **WATER USE INFORMATION.** Changed as Follows:

OIL RECOVERY: from 01/01/98 to 12/31/98. Oil and gas exploration operations.

8. **PLACE OF USE.** Changed as Follows:

(Which includes all or part of the following legal subdivisions:)

				NORTH-WEST¼					NORTH-EAST¼					SOUTH-WEST¼					SOUTH-EAST¼				
BASE	TOWN	RANG	SEC	NW	NE	SW	SE		NW	NE	SW	SE		NW	NE	SW	SE		NW	NE	SW	SE	
SL	4N	7E	26					***					***					***	X	X	X	X	
			27	X	X	X	X	***	X	X	X	X	***	X	X	X	X	***	X	X	X	X	

9. **SIGNATURE OF APPLICANT(S).**

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application, through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

Signature of Applicant(s)

Application for Permit to Drill
Anschutz Exploration Corporation
Anschutz Ranch Deep 10-27
1433' FSL and 1228' FEL (surface location)
2200' FNL and 2550' FWL (BHL @ TD)
Sec. 27, T4N – R7E
Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

1. Estimated Tops/Geologic Markers

The estimated tops of important geologic markers are as follows:

Formation	TVD	MD	Subsea
Wasatch	Surface		
Gannet	3,280'	3,280'	+4,334'
Salt	5,770'	5,770'	+1,844'
Twin Creek	5,820'	5,820'	+1,794'
Nugget	7,465'	7,465'	+ 149'
Ankarah	8,635'	8,635'	- 1,021'
Thaynes	9,635'	9,635'	- 2,021'
Woodside	11,075'	11,075'	- 3,461'
Dinwoody	11,625'	11,625'	- 4,011'
Phosphoria	11,885'	11,855'	- 4,241'
Weber	12,535'	12,535'	- 4,921'
Mission Canyon	13,744'	13,935'	- 6,130'
Lodgepole	14,714'	15,235'	- 7,100'
Darby	15,414'	16,035'	- 7,800'
Bighorn	16,064'	16,685'	- 8,450'
TD	16,300'	16,950'	- 8,680'

2. Estimated Depths and Names of Anticipated Water, Oil, Gas or Other Minerals Bearing Formations.

Substance	Formation	MD
Sour Gas/Condensate	Phosphoria/Weber	11,885'-13,744' (TVD)

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Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

3. Well Control Equipment & Testing Procedures

Anschutz's minimum specifications for pressure control equipment are as follows:
Ram Type: Hydraulic double; 5000 psi w.p.

Anschutz will comply with all requirements pertaining to well control as listed in the Rule R649-3-7 of the Utah Division of Oil, Gas & Mining.

The size and rating of the BOP stack is shown on the attached diagram.

4. Casing Program

The proposed casing program will be as follows:

Purpose	Depth (MD)	Hole Size	O.D.	Weight	Grade	Type
Surface	0-1500'	17-1/2"	13-3/8"	54.50#	J55	BTC
Intermed.	0-9700'	12-1/4"	9-5/8"	47.0#/53#	L80	BTC
Product.	0-3500'	8-~~1/2"~~ 681	7-5/8"	39.0#	L80	SLH
Product.	3500-14,000'	8-1/2" OK	7"	32.0#	L80	SLH
Liner	13,700-TD	6"	4-1/2"	13.5#	L80	SLH

Casing design subject to revision based on geologic conditions encountered.

5. Cement Program

13-3/8" Surface	Type and Amount
0-1500'	± 612 sx Prem Lite lead slurry
	± 595 sx Class G tail slurry
	100 sk Class G topout
	Proposed TOC – Surface

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CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

Intermediate	Type and Amount	
9-5/8"	Stage 1	± 1030 sks Class G
	Stage 2	± 444 sks Prem Lite
	Proposed TOC 4500'	

Production	Type and Amount
7-5/8" & 7"	± 338 sks Class G + silica flour
	Proposed TOC ± 11,000'

Liner	Type and Amount
4-1/2"	± 250 sks Class G + silica flour
	Proposed cement to liner top

Note: Actual volumes to be calculated from caliper log.

6. Drilling Fluids

The proposed circulating mediums to be employed in drilling are as follows:

Interval	Mud Type	Mud Wt.	Visc.	F/L
0-1500'	Spud Mud	8.4-9.0	40-60	N/C
1500-5700'	LSND	8.6-9.1	40-60	<10 cc's
5700-9700'	Saturated Salt	10.0-10.5	40-60	<10 cc's
9700'-T.D.	LSND	9.0-9.5	36-45	<10 cc's

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Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

7. Testing, Logging and Coring

The anticipated type and amount of testing, logging and coring are as follows:

a. The logging program will consist of the following:

DIL-SP-GR	Surface to T.D.
BHC Sonic-GR	Surface to T.D.
Structural Dipmeter	8200' to T.D.
Dipole Sonic-GR	8200' to T.D.
High Resolution LDT-APS	8200' to T.D.
Formation MicroImager-GR	Selected Intervals

b. No cores are anticipated.

8. Anticipated Pressures and H_2S

The maximum anticipated bottom hole pressure is 7250 psi. The Hydrogen Sulfide concentration found in the Phosphoria and Weber formations is estimated to be 15%.

9. Water Source

A water well will be drilled on location. All appropriate water permits will be filed with the Utah Division of Water Resources.

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CONFIDENTIAL – TIGHT HOLE

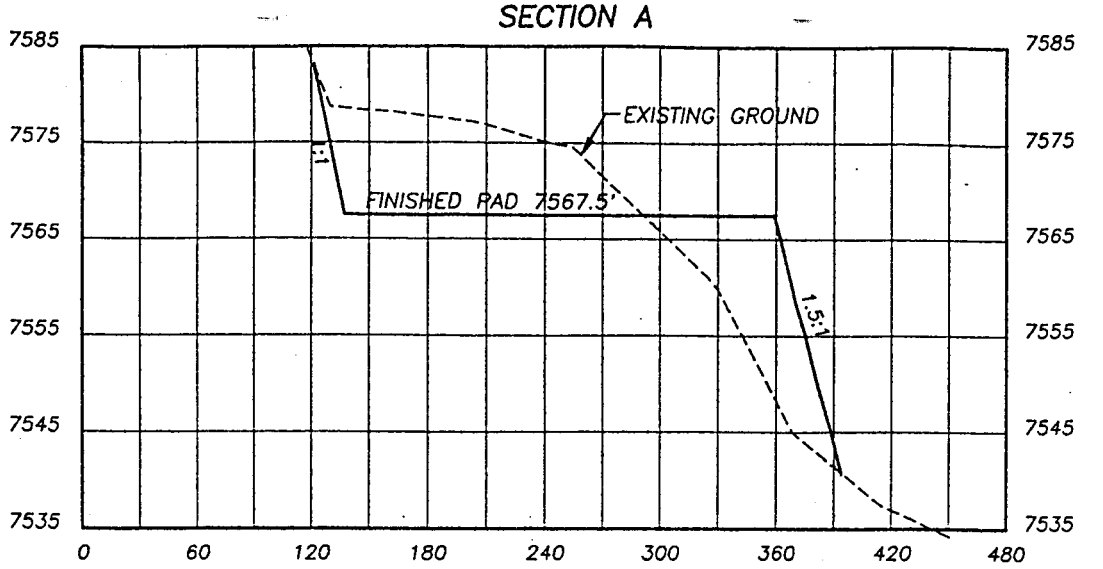
DRILLING PROGRAM

10. Other Information

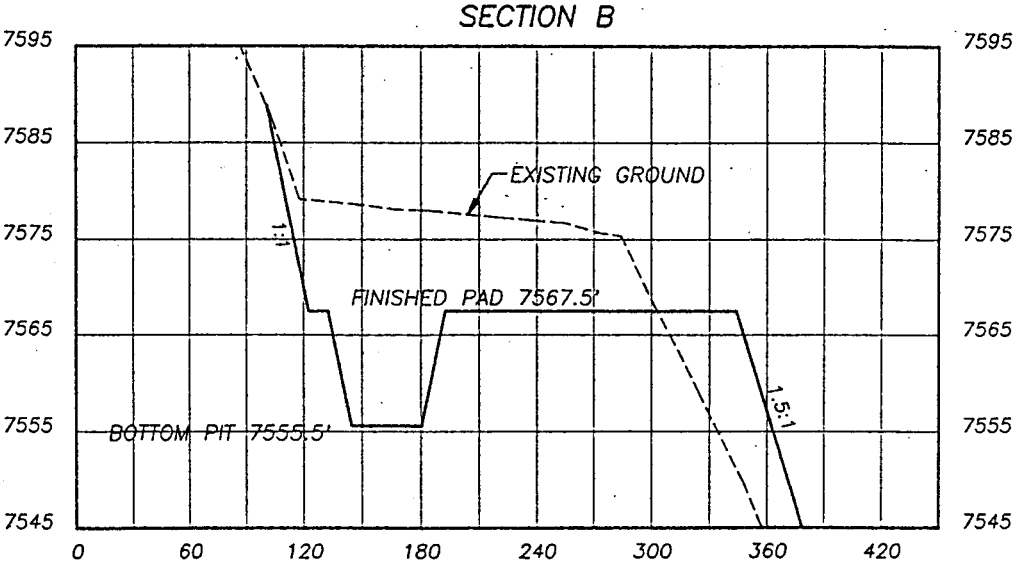
Drilling is planned to commence immediately upon approval of this application.

a. It is anticipated that the drilling of this well will take approximately 150 days.

SECTION A



SECTION B



HORIZ. SCALE: 1"= 100'
VERT. SCALE: 1" = 20"

MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
ANSCHUTZ EXPLORATION
ANSCHUTZ RANCH DEEP 10-27 WELL
1433' FSL 1228' FEL
SECTION 27, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
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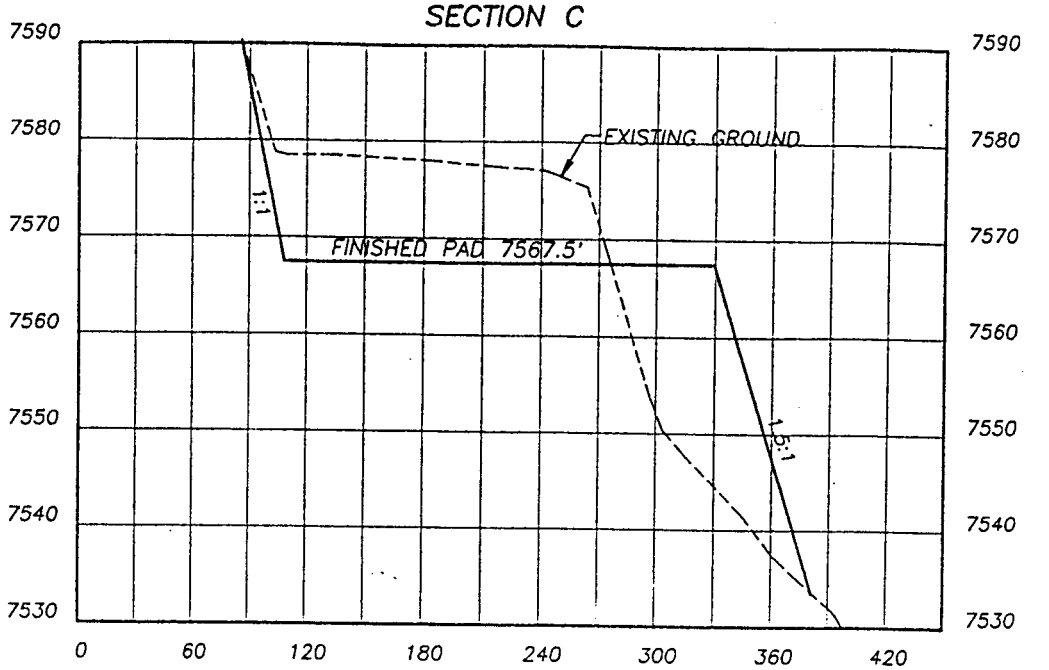
EVANSTON, WYOMING 82930
(307) 789-3602

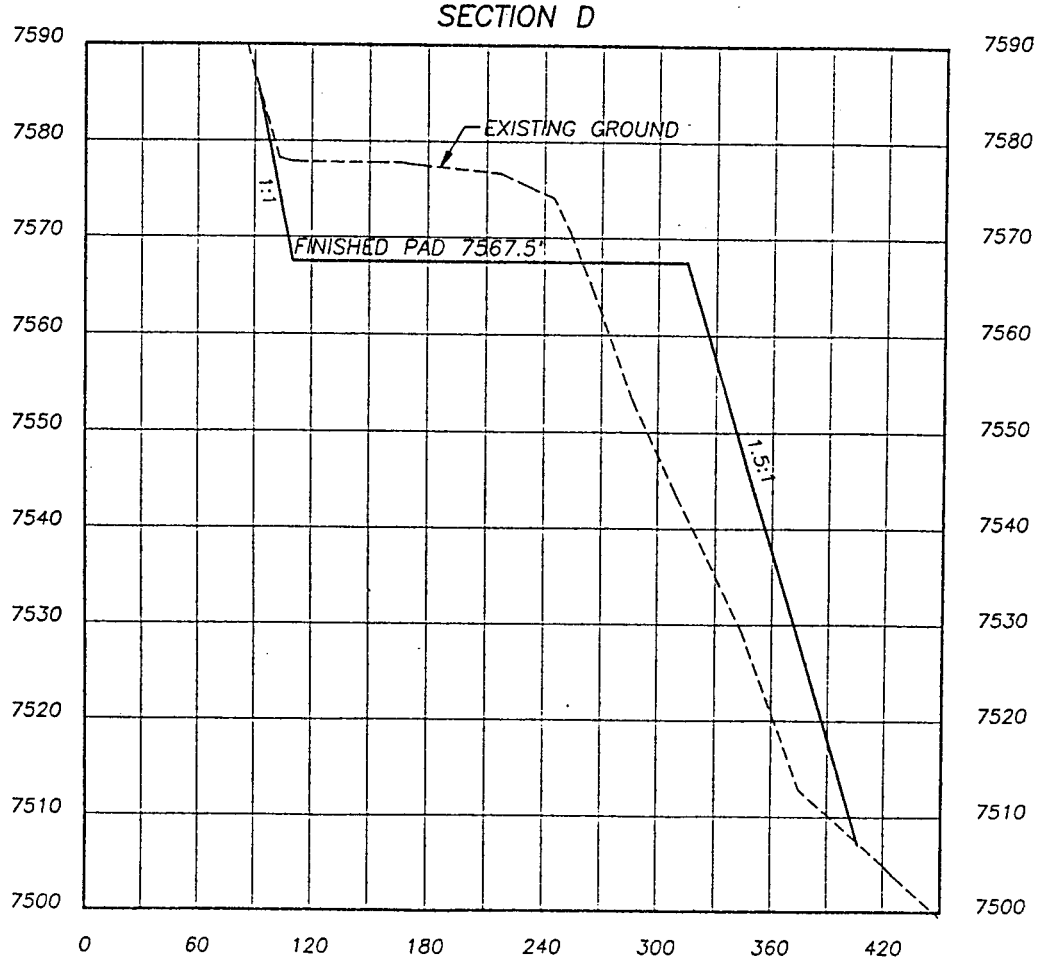
DATE: 10/08/98 JOB #: 98-19-03
DISK #: ____ FILE: 98-19-03
DRAWN BY: Travis Martinez

ALL CUT SLOPES ARE 1 : 1 (UNLESS OTHERWISE NOTED)
ALL FILL SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)

SECTION C



SECTION D



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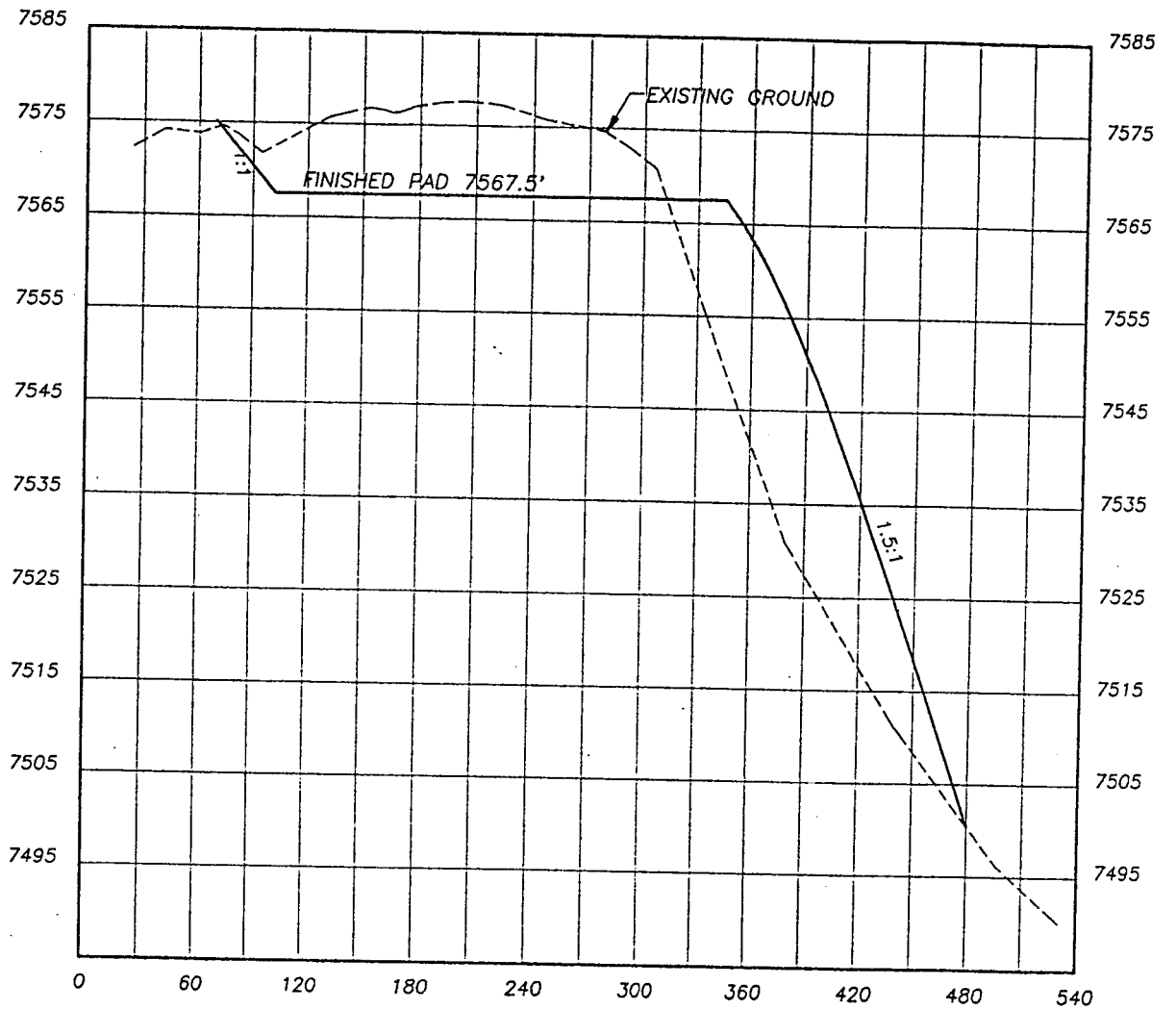
SECTION E



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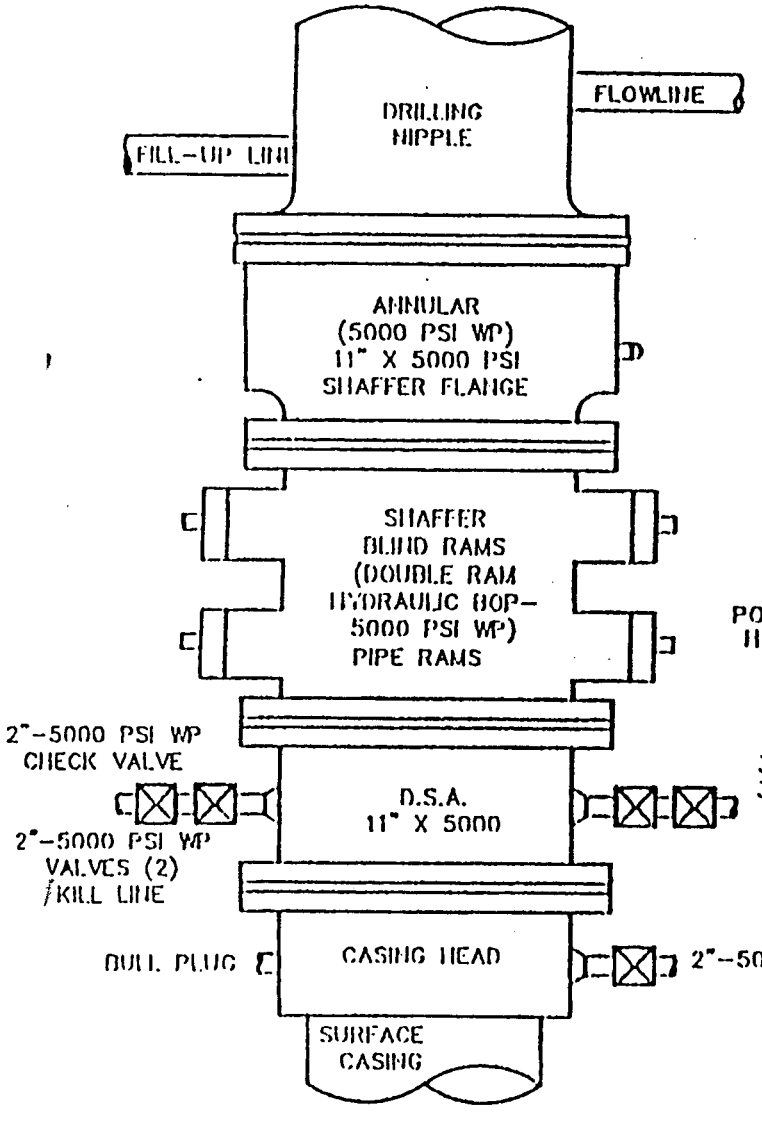
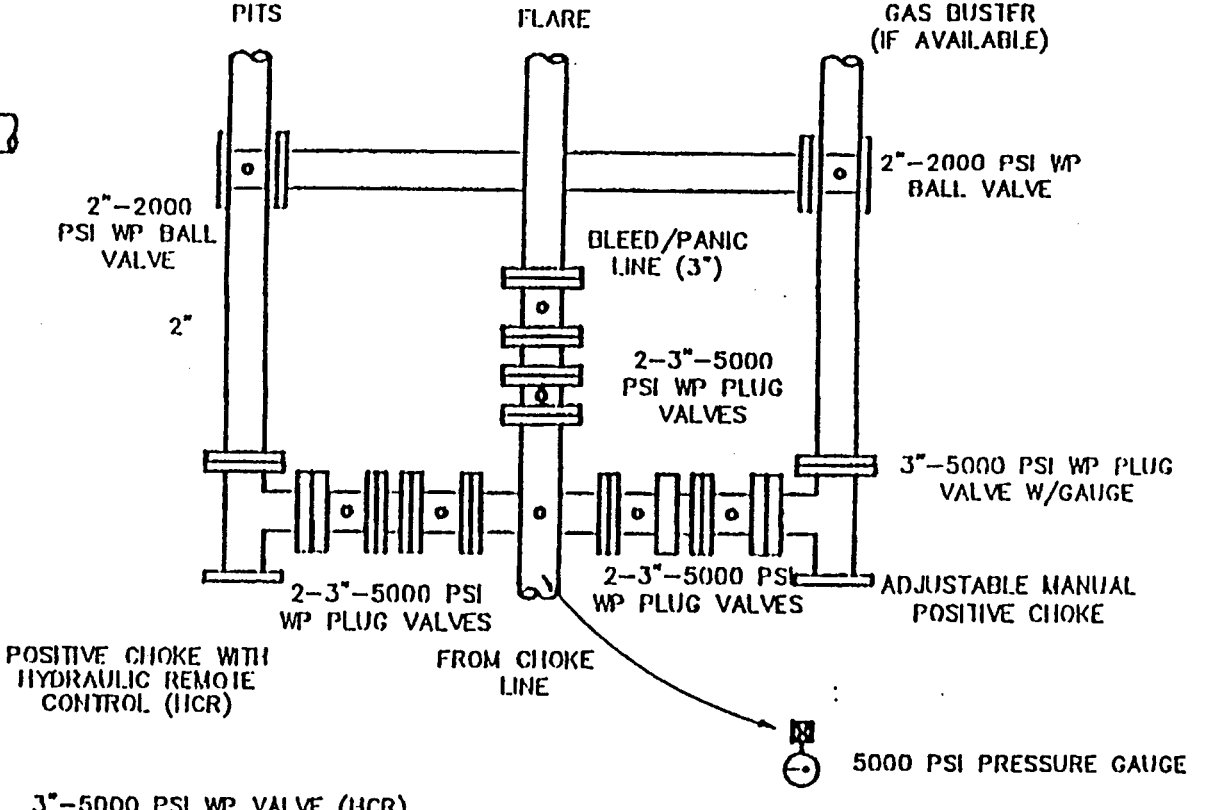
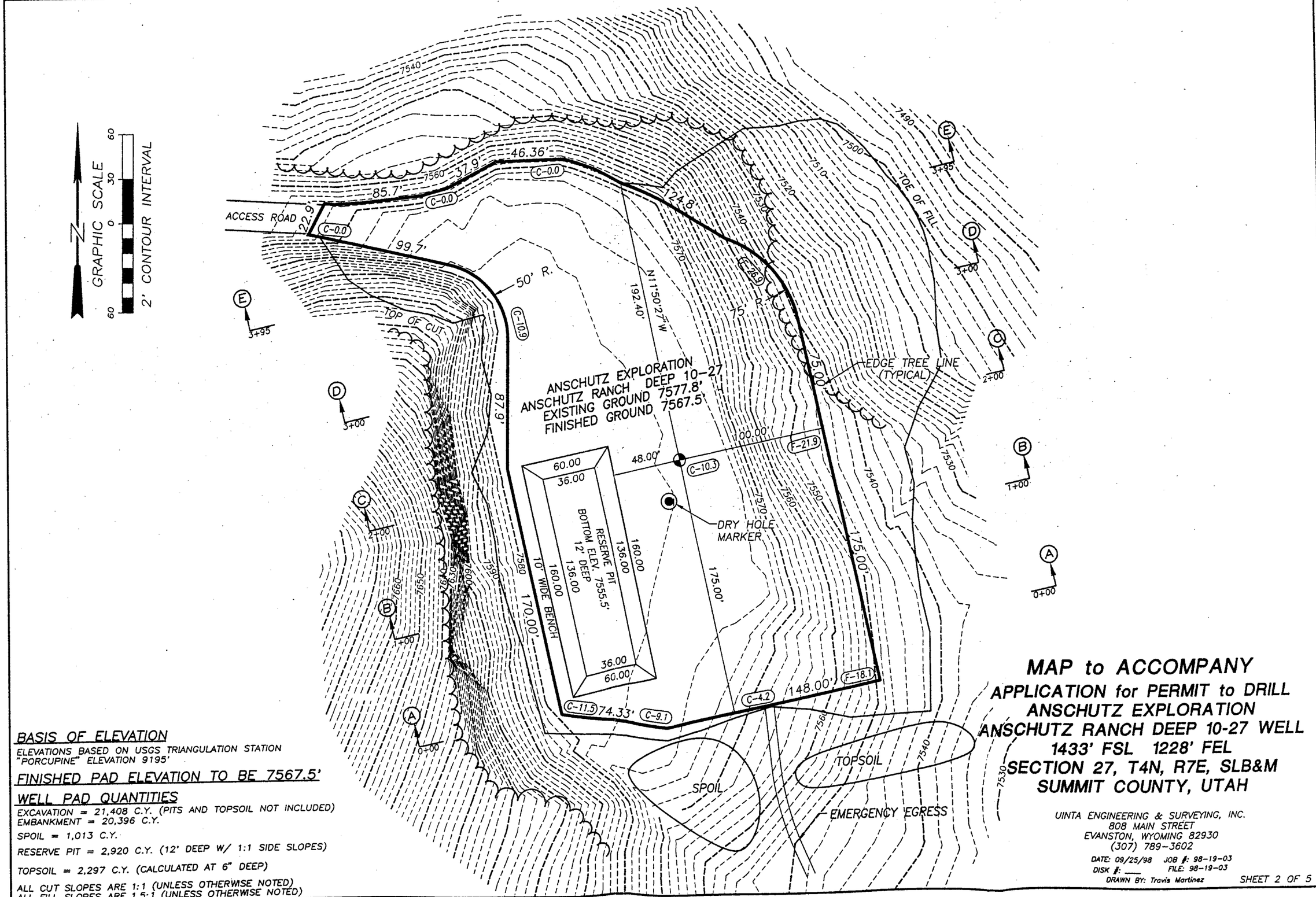
BOP SCHEMATIC
5000 PSI WORKING PRESSURE



PLAN VIEW CHOKE MANIFOLD



THE HYDRAULIC CLOSING UNIT WILL BE LOCATED MORE THAN 30' FROM THE WELLHEAD. CHOKE AND BLEED/PANIC LINES WILL GO TO THE PIT AND FLARE. ALL CONNECTIONS IN CHOKE LINES AND MANIFOLD WILL BE FLANGED OR WELDED. ALL FLANGES SHOULD BE RING JOINT GASKET TYPE. ALL TURNS IN LINES SHALL BE CONSTRUCTED USING TARGETING 90° TEES OR ELLS. ALL LINES SHALL BE ANCHORED.



BASIS OF ELEVATION

ELEVATIONS BASED ON USGS TRIANGULATION STATION "PORCUPINE" ELEVATION 9195'

FINISHED PAD ELEVATION TO BE 7567.5'

WELL PAD QUANTITIES

EXCAVATION = 21,408 C.Y. (PITS AND TOPSOIL NOT INCLUDED)
EMBANKMENT = 20,396 C.Y.

SPOIL = 1,013 C.Y.

RESERVE PIT = 2,920 C.Y. (12' DEEP W/ 1:1 SIDE SLOPES)

TOPSOIL = 2,297 C.Y. (CALCULATED AT 6" DEEP)

ALL CUT SLOPES ARE 1:1 (UNLESS OTHERWISE NOTED)
ALL FILL SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)

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SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 09/25/98 JOB #: 98-19-03
DISK #: ___ FILE: 98-19-03
DRAWN BY: Travis Martinez

FedEx USA Airbill

FedEx Tracking Number 804787826386

Form I.D. No. 0210

SPL21

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1 From

Date 11/11/98

Sender's Name Susan M. Balano Phone (303) 298-1000

Company ANSCHUTZ CORP

Address 555 17TH ST STE 2400

Dept./Floor/Suite/Room

City DENVER State CO ZIP 80202

2 Your Internal Billing Reference Information

3

Recipient's Name DIV. OIL, GAS AND MINING Phone 801 538-5340

Company STATE OF UTAH DEPT OF NATURAL RESOURCES

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Dept./Floor/Suite/Room

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4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

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5 Packaging

☒ FedEx Letter ☐ FedEx Pak ☐ FedEx Box ☐ FedEx Tube ☐ Other Pkg.

Declared value limit $500.

6 Special Handling (One box must be checked)

Does this shipment contain dangerous goods?* ☒ No ☐ Yes (As per attached Shipper's Declaration) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg.

☐ Cargo Aircraft Only

*Dangerous Goods cannot be shipped in FedEx packaging.

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		$ .00	$

* When declaring a value higher than $100 per shipment, you pay an additional charge. See **SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY** section for further information.

Credit Card Auth.

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Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

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ANSCHUTZ EXPLORATION CORPORATION

555 SEVENTEENTH STREET
SUITE 2400
DENVER, COLORADO 80202

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Ms. Lisha Cordova
State of Utah Division of Oil, Gas and Mining
PO Box 145801
Salt Lake City, UT 84114-5801

84114+5801

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/12/98

API NO. ASSIGNED: 43-043-30321

WELL NAME: ANSCHUTZ RANCH DEEP 10-27
OPERATOR: ANSCHUTZ EXPLORATION CORP (N7940)
CONTACT: Pam Kalstrom (303)298-1000

PROPOSED LOCATION:
NESE 27 - T04N - R07E
SURFACE: 1433-FSL-1228-FEL
BOTTOM: 2200-FNL-2550-FWL (SENW)
SUMMIT COUNTY
ANSCHUTZ RANCH FIELD (500)

LEASE TYPE: FEE
LEASE NUMBER:
SURFACE OWNER: Fee
* Castle Rock Land & Livestock
PROPOSED FORMATION: WEBR

INSPECT LOCATION BY: 11/26/98		
TECH REVIEW	Initials	Date
Engineering	RJK	12-3-98
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

✓ Plat
✓ Bond: Federal[] State[] Fee[✓]
(No. 10-42-53)
N Potash (Y/N)
N Oil Shale (Y/N) *190-5(B)
✓ Water Permit
(No. 35-8296)
N RDCC Review (Y/N)
(Date:)

Y Fee Surf Agreement (Y/N)

LOCATION AND SITING:

✓ R649-2-3. Unit Anschutz Ranch Paleozoic
___ R649-3-2. General
___ R649-3-3. Exception
___ Drilling Unit
Board Cause No:
Date:

COMMENTS: * Need Presite (Conducted 12-1-98)

STIPULATIONS: (1) STATEMENT OF BASIS

DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS

Operator Name: Anschutz Exploration Corporation
Name & Number: Anschutz Ranch Deep 10-27
API Number: 43-043-30321
Location: 1/4,1/4 NE SE **Sec.** 27 **T.** 4 N **R.** 7 E **County:** Summit

Geology/Ground Water:
The surface casing proposed for this well will be sufficient to provide protection to the near surface waters found in this area. It is an area of recharge to local aquifers and is a watershed area for the Weber River Drainage, by way of Reese Creek through Echo Canyon. Reese Creek has active water flow all year round and is within 1/4 mile of this location. Major concerns for the Silt entering Reese Creek were expressed by the surface owner, and the operator agreed to keep ample undisturbed ground between the location and the creek to catch silt before it enters the creek.

Reviewer: K. Michael Hebertson **Date:** 1 December 1998

Surface:

This location is in a known area of H2S production and safety was discussed. Safe areas were Agreed to and an alternated escape route was planned. The surface owner from Castle Rock Land and Livestock did not like the placement of the pad after it was shown to intrude on several Aspen trees at the toe of the slope. The suggestion to move the pad about 100' to the southwest was discussed and rejected because of water saturated ground. Stability of the location and siltation were discussed and agreed upon. This pad was previously drilled and is the old location for the 1-27 which was plugged about 2 years ago. The pad will be cut down 11' to make room for the drilling equipment, and the previously cut hillside will be exposed to the additional depth. The reserve pit will be in cut material and lined as salt saturated mud will be used.

Reviewer: K. Michael Hebertson **Date:** 1 December 1998

Conditions of Approval/Application for Permit to Drill:
1. The reserve pit will be lined with a synthetic liner with a minimum thickess of 12 mils.
2. A berm or silt fence will be placed at the toe of the fill slope to prevent siltation of the pond and wetland area.
3. H2S safety training will be provided and monitoring maintained.

State of Utah
On-Site Evaluation
Division of Oil, Gas and Mining

OPERATOR: Anschutz Exploration Corporation

WELL NAME & NUMBER: Anschutz Ranch Deep 10-27

API NUMBER: 43-043-30321

LEASE: Fee Patented **FIELD/UNIT:** Anschutz Ranch

LOCATION: 1/4,1/4 NE SE **Sec:** 27 **TWP:** 4N **RNG:** 7E 1433 **FSL** 1228 **FEL S &** 2200 **FNL** 2550 **FWL BH**

LEGAL WELL SITING: Cause 183-13 Establishes 1000' set back from the exterior boundary of the Unit. Paragraph 4 of the order

GPS COOR (UTM): **SURFACE OWNER:** Castle Rock Land & Livestock

PARTICIPANTS:

Mike Hebertson DOGM, Pamela Kalstrom, William J. Miller, Miles A. Williams
Dan Gakkagher, Larry Williams, Bobby Griffen, Hal Keerner, Anschutz Corp
Gordon Lindley, Dennis Kualski, Lindley Construction,
Dave Allen Castle Rock Land and Livestock

REGIONAL/LOCAL SETTING & TOPOGRAPHY:

Overthrust Belt, on the North flank of the Uintah Mountains and the East flank of the Wasatch Mountains, dominated by moderately steep hills and moderate to deeply incised secondary drainages that are well established. The drainage pattern is generally to the North and East toward Echo Canyon and I80 located about 6 miles North of this site.

SURFACE USE PLAN:

CURRENT SURFACE USE: This is an established well pad, located within the confines of an active cattle ranch. Wildlife is prevalent in the area and will benefit from the reseeding of the location once drilling is completed.

PROPOSED SURFACE DISTURBANCE: This well will be drilled on an existing pad that was once used for the Anschutz Ranch 1-27. Little or no alteration will be required to the existing pad. The access road and pipelines are already in place. The pad will be cut down about 11 feet in order to enlarge the location.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: See the attached well locator plat prepared by the State of Utah.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Pipelines are already in place, and production facilities will be kept on location or already exist within the field.

SOURCE OF CONSTRUCTION MATERIAL: A gravel pad and cap on the location will be purchased from an authorized pit on the Ranch property.

ANCILLARY FACILITIES: These facilities are already in place

WASTE MANAGEMENT PLAN:

All trash garbage and refuse will be placed in wire mesh containers and transported to an approved land fill. All human waste will be contained in portable septic tank or chemical toilet type facilities. Drill cuttings will be contained in the reserve pit and all drainage from the location will be toward the reserve pit.

ENVIRONMENTAL PARAMETERS:

AFFECTED FLOOD PLAINS AND/OR WETLANDS: An active pond and spring area is located just below the pad however the drilling activity will not impact this area and it will be protected

FLORA/FAUNA: Deer, Elk, Moose, Cougar, Eagles, Hawks, Other indigenous bird species, Aspen, Pine, varieties of grasses, Sage Brush, Rabbit Brush other intermontain flora and fauna.

SOIL TYPE AND CHARACTERISTICS: Mostly clay with very little sand, lots of small rocks to larger pit run type gravel and head sized rocks. The pad is covered with a 8-10 gravel cap.

SURFACE FORMATION & CHARACTERISTICS: Wasatch Formation Clay with numerous rocks light gray to medium brown in color. Minor sand and topsoil. Moderate to Poor Permeability.

EROSION/SEDIMENTATION/STABILITY: This location is stable and the added construction and drilling will not change the stability. Erosion and sedimentation will be an issue until the location is reseeded. A siltation berm or fence will be installed until that time

PALEONTOLOGICAL POTENTIAL: None

RESERVE PIT:

CHARACTERISTICS: 160 X 60 X 12 Feet deep located on the West side of the location in cut material. The drilling fluids will be salt saturated at sometime during the drilling process and drill cuttings will be of such a nature that they will need to be contained in the pit and kept out of the environment. The pit will be lined with a synthetic liner.

LINER REQUIREMENTS (Site Ranking Form attached): See attached

SURFACE RESTORATION/RECLAMATION PLAN:
The restoration for this site will be as agreed to in the executed Agreement.

SURFACE AGREEMENT: Has been executed and will cover the restoration.

CULTURAL RESOURCES/ARCHAEOLOGY: None

OTHER OBSERVATIONS/COMMENTS:

This location is in a known area of H2S production and safety was discussed. Safe areas were Agreed to and an alternated escape route was planned. The surface owner from Castle Rock Land and Livestock did not like the placement of the pad after it was shown to intrude on several Aspen trees at the toe of the slope. The suggestion to move the pad about 100' to the southwest was discussed and rejected because of water saturated ground. Stability of the location and siltation were discussed and agreed upon. Changes in the State rules and Regulations were discussed and the operator made aware of the upcoming changes.

ATTACHMENTS:
Photos were taken of this site and will be placed on file.

K. Michael Hebertson — **DOGM REPRESENTATIVE**

1 - December - 1998 11:00 AM — **DATE/TIME**

Evaluation Ranking Criteria and Ranking Score
For Reserve and Onsite Pit Liner Requirements

Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	10
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	10
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	15	0
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	0
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	10
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	15	
TDS >10000 or Oil Base	20	
Mud Fluid containing high levels of hazardous constituents		20
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	10
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	10
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	0
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	10
Final Score (Level III Sensitivity)		80

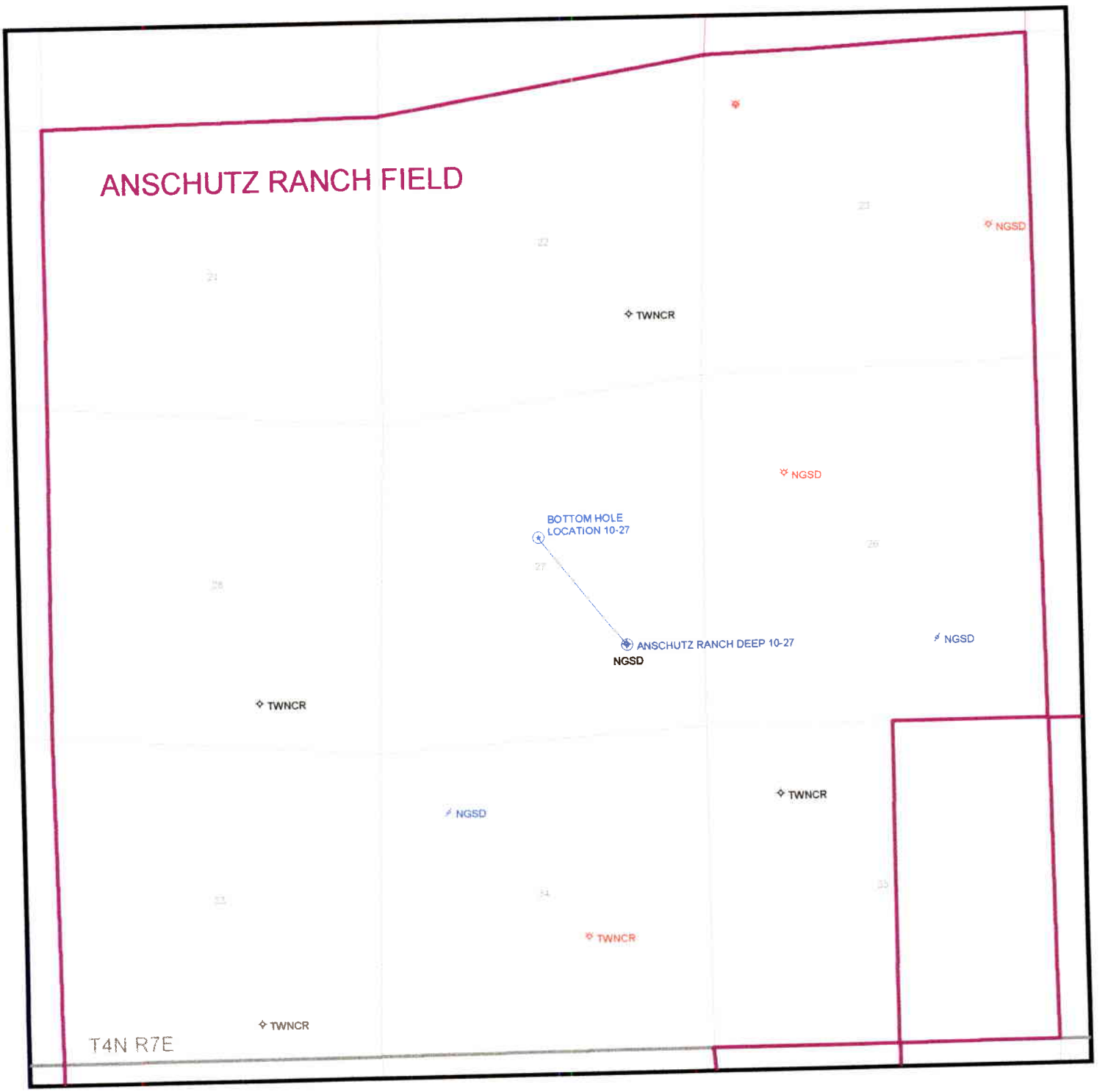
DIVISION OF OIL, GAS & MINING

OPERATOR: ANSCHUTZ EXPLORATION (N7940)

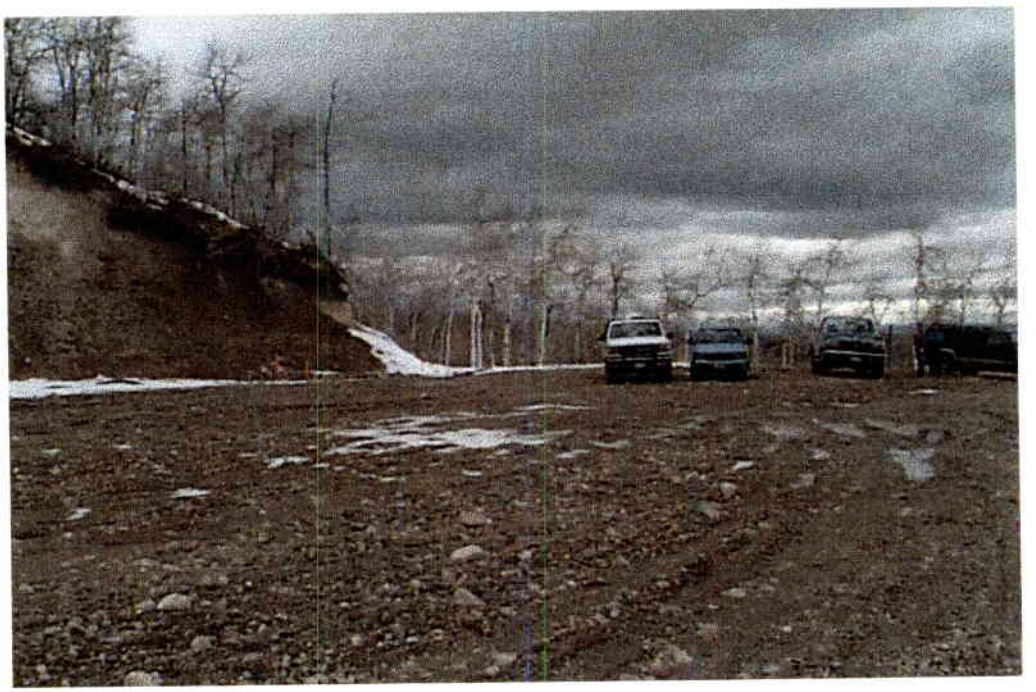
FIELD: ANSCHUTZ RANCH (500)

SEC. 27, TWP 4N, RNG 7E

COUNTY: SUMMIT UNIT: NONE



DATE PREPARED:
18-NOV-1998



Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Conductor
Location:	Summit County

Design parameters:

Collapse
Mud weight: 9.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 521 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 701 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 1,300 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 96 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: Surface

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	1500	13.375	54.50	J-55	Buttress	1500	1500	12.49	161.6

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	701	1130	1.61	701	2735	3.90	71	853	12.04 B

Prepared by: RJK State of Utah
Phone: 538-5274
FAX:
Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 1500 ft, a mud weight of 9 ppg The casing is considered to be evacuated for collapse purposes.
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Intermediate
Location:	Summit County

Design parameters:

Collapse
Mud weight: 10.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 0 psi
Internal gradient: 0.545 psi/ft
Calculated BHP 5,291 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 8,172 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 211 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 7,049 ft

Non-directional string.

Re subsequent strings:
Next setting depth: 9,700 ft
Next mud weight: 9.500 ppg
Next setting BHP: 4,787 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 9,700 ft
Injection pressure 9,700 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	9700	9.625	47.00	L-80	Buttress	9700	9700	8.625	914.2

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	5291	4760	0.90	5291	6870	1.30	384	1086	2.83 B

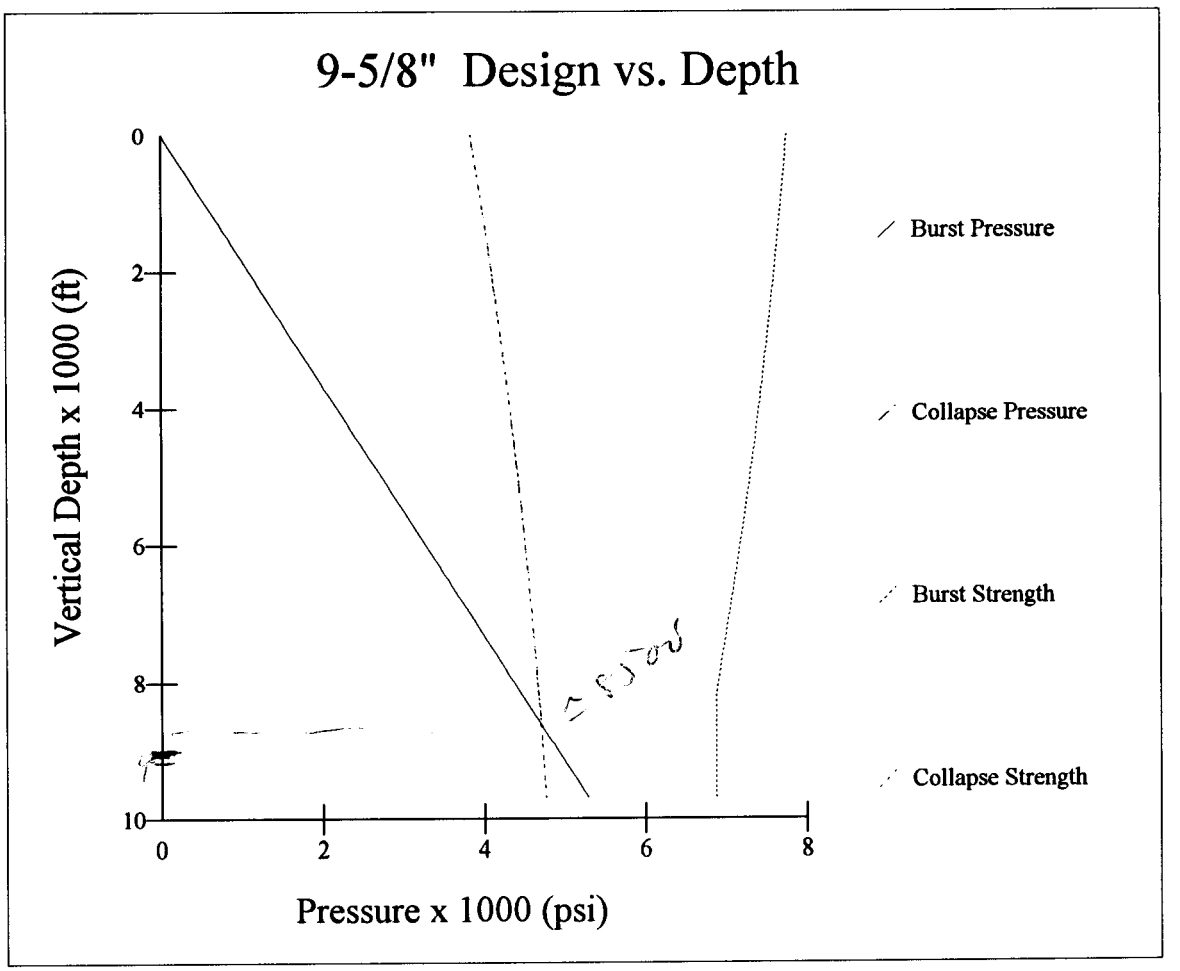
Only good to ~ 8,500'

Prepared by: RJK State of Utah
Phone: 538-5274
FAX:
Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 9700 ft, a mud weight of 10.5 ppg The casing is considered to be evacuated for collapse purposes.
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Anschutz Ranch Deep 10-27 - Intermediate



Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Intermediate
Location:	Summit County

Design parameters:

Collapse

Mud weight: 10.500 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 0 psi
Internal gradient: 0.545 psi/ft
Calculated BHP 5,291 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 8,163 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 211 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 7,049 ft

Non-directional string.

Re subsequent strings:
Next setting depth: 9,700 ft
Next mud weight: 9.500 ppg
Next setting BHP: 4,787 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 9,700 ft
Injection pressure 9,700 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	9700	9.625	53.50	L-80	Buttress	9700	9700	8.5	1047.2

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	5291	6620	1.25	5291	7930	1.50	437	1244	2.85 B

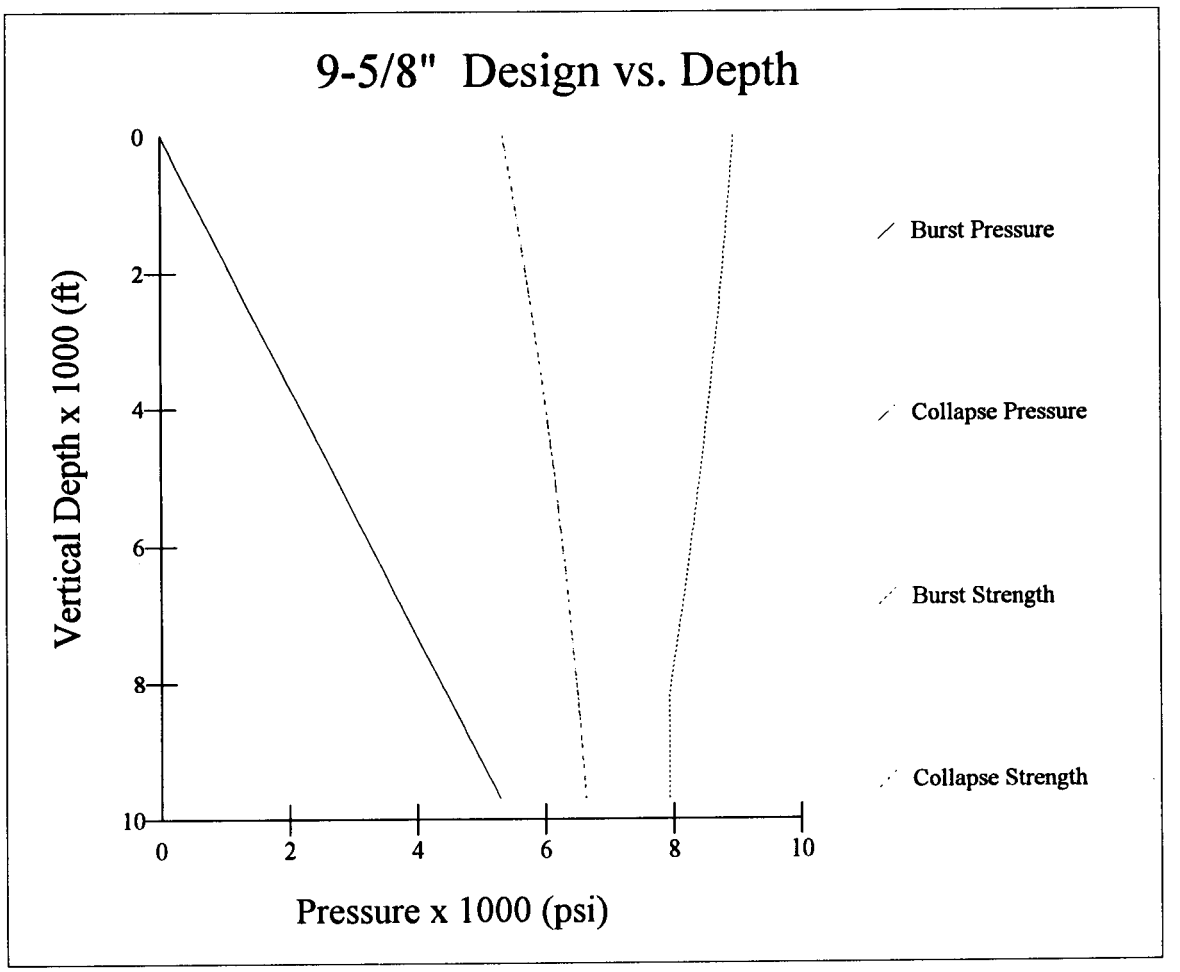
OK to 9700'

Prepared by: RJK, State of Utah
Phone: 538-5274
FAX:
Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 9700 ft, a mud weight of 10.5 ppg The casing is considered to be evacuated for collapse purposes.
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Anschutz Ranch Deep 10-27 - Intermediate



Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Drilling Liner
Location:	Summit County

Design parameters:

Collapse
Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 1,334 psi
Internal gradient: 0.494 psi/ft
Calculated BHP 3,063 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 3,004 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 124 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: Surface

Non-directional string.

Re subsequent strings:
Next setting depth: 9,700 ft
Next mud weight: 9.500 ppg
Next setting BHP: 4,787 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 9,700 ft
Injection pressure 15,117 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	3500	7.625	39.00	L-80	LT&C	3500	3500	6.5	272

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	1727	8820	5.11	3063	9180	3.00	117	786	6.71 J

Prepared by: RJK, State of Utah
Phone: 538-5274
FAX:
Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 3500 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes.
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Drilling Liner
Location:	Summit County

Design parameters:

Collapse

Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: -7 psi
Internal gradient: 0.494 psi/ft
Calculated BHP 6,909 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on buoyed weight.
Neutral point: 12,491 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 271 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 10,619 ft

Liner top: 3,500 ft
Non-directional string.

Re subsequent strings:

Next setting depth:	14,000 ft
Next mud weight:	9.500 ppg
Next setting BHP:	6,909 psi
Fracture mud wt:	30.000 ppg
Fracture depth:	14,000 ft
Injection pressure	21,818 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	10500	7	32.00	L-80	LT&C	14000	14000	6	679.4

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	6909	8610	1.25	6909	9060	1.31	288	661	2.30 J

Prepared by: RJK
State of Utah

Phone: 538-5274
FAX:

Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 14000 ft, a mud weight of 9.5 ppg The casing
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Drilling Liner
Location:	Summit County

Design parameters:

Collapse

Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: -7 psi
Internal gradient: 0.494 psi/ft
Calculated BHP 6,909 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on buoyed weight.
Neutral point: 11,988 ft

Environment:

H2S considered?	No
Surface temperature:	75 °F
Bottom hole temperature	271 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,500 ft
Cement top:	10,935 ft

Non-directional string.

Re subsequent strings:

Next setting depth:	14,000 ft
Next mud weight:	9.500 ppg
Next setting BHP:	6,909 psi
Fracture mud wt:	30.000 ppg
Fracture depth:	14,000 ft
Injection pressure	21,818 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	14000	7	32.00	L-80	Buttress	14000	14000	6	905.8

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	6909	8610	1.25	6909	9060	1.31	384	745	1.94 B

OK

for SLH as not in Database.

Prepared by: RJK
State of Utah

Phone: 538-5274
FAX:

Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 14000 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes.
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Drilling Liner
Location:	Summit County

Design parameters:

Collapse

Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: -7 psi
Internal gradient: 0.494 psi/ft
Calculated BHP 6,909 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.50 (B)

Tension is based on buoyed weight.
Neutral point: 11,988 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 271 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 10,935 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 14,000 ft
Next mud weight: 9.500 ppg
Next setting BHP: 6,909 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 14,000 ft
Injection pressure 21,818 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	14000	7	32.00	L-80	LT&C	14000	14000	6	905.8

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	6909	8610	1.25	6909	9060	1.31	384	661	1.72 J

Prepared by: RJK State of Utah
Phone: 538-5274
FAX:
Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 14000 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes.
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Company**
String type:	Liner: Production
Location:	Summit County

Design parameters:

Collapse
Mud weight: 9.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 0 psi
Internal gradient: 0.494 psi/ft
Calculated BHP 8,143 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 16,107 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature 306 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 13,700 ft

Liner top: 13,700 ft
Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft^3)
1	2800	4.5	13.50	L-80	LT&C	16500	16500	3.795	74.6

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	8143	8540	1.05	8143	9022	1.11	32	257	7.91 J

Prepared by: RJK
State of Utah

Phone: 538-5274
FAX:

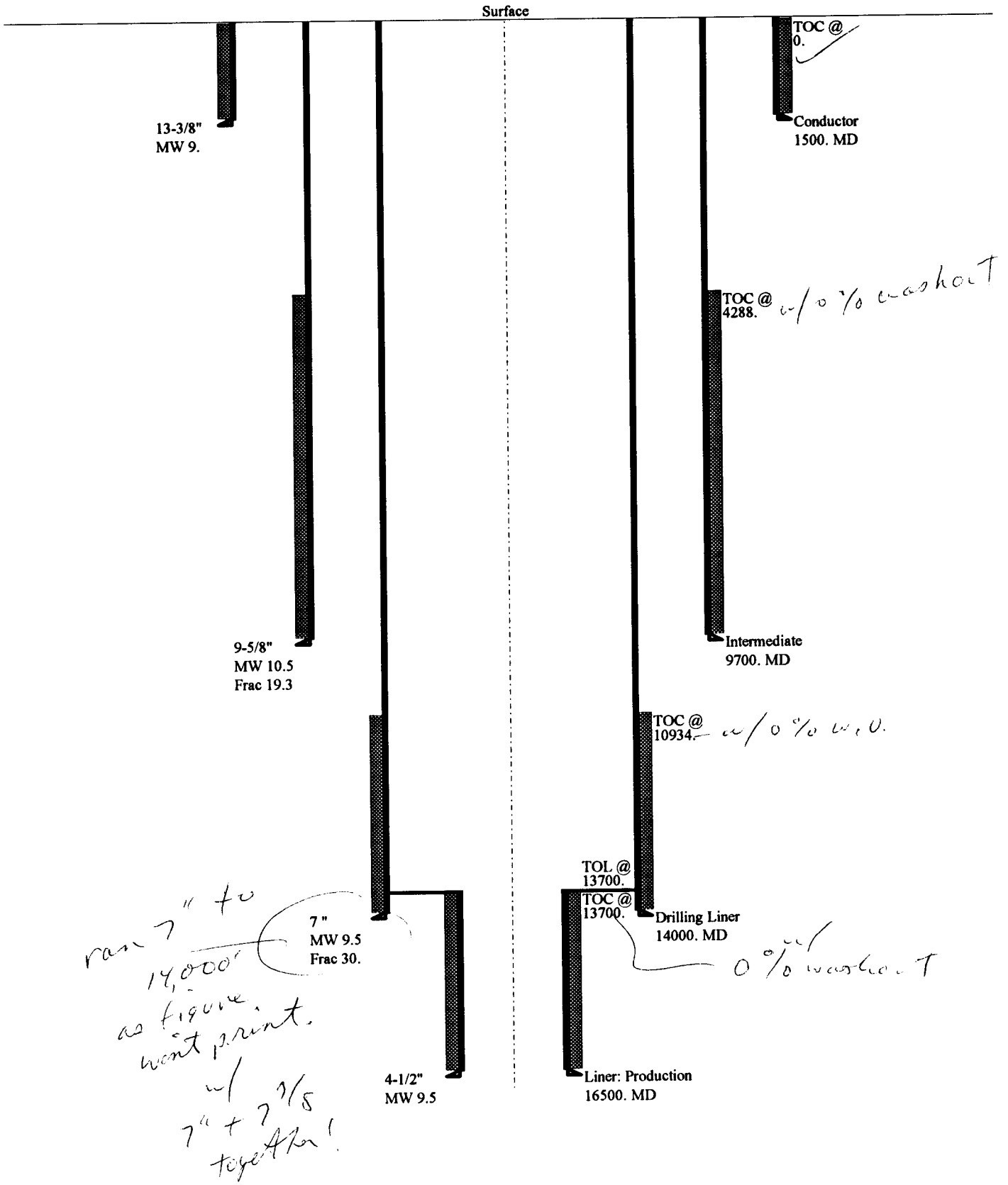
Date: December 3,1998
Salt Lake City, Utah

Engineering Stipulations: NONE
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 16500 ft, a mud weight of 9.5 ppg The casing
In addition, burst strength is biaxially adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Anschutz Ranch Deep 10-27

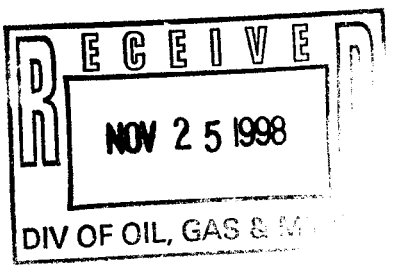
Casing Schematic



ANSCHUTZ
EXPLORATION CORPORATION
555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

November 25, 1998

VIA FACSIMILE 801-359-3940



Michael Hebertson
Utah Division of Oil, Gas and Mining
1594 W. North Temple, #1210
P. O. Box 145801
Salt Lake City, UT 84114-5801

Re: Anschutz Ranch Deep #10-27 Well
1433' FSL, 1228' FEL Sec. 27, T4N-R7E
Summit County, Utah
Surface Agreement Affidavit

It is hereby certified that an appropriate surface use agreement has been established with and approved by the surface landowners of the well site for the above captioned well.

Sincerely,

ANSCHUTZ EXPLORATION CORPORATION

Pamela S. Kalstrom
Sr. Landman, CPL-ESA

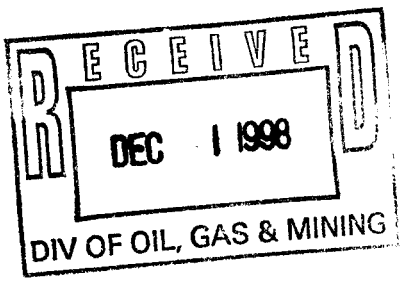
PSK/cv

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Robert L. Morgan
State Engineer

1594 West North Temple, Suite 220
Box 146300
Salt Lake City, Utah 84114-6300
801-538-7240
801-538-7467 (Fax)

November 30, 1998



Antelope Company
2400 Anaconda Tower
555 Seventeenth Street
Denver CO 90202

Re: TEMPORARY CHANGE APPLICATION
NUMBER t22532 (35-8296)

Dear Applicant:

The above referenced Temporary Change Application has been approved. This application will expire November 30, 1999, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it, is with the Regional Engineer, John Mann. The telephone number is (801) 538-7397.

Sincerely,

John R. Mann

for Robert L. Morgan, P.E.,
State Engineer

RLM:ja

Enclosures

STATE ENGINEER'S ENDORSEMENT

TEMPORARY CHANGE APPLICATION NUMBER: t22532 WATER RIGHT NUMBER: 35-8296

1. September 8, 1998 Change Application received by LFQ.

2. November 30, 1998 Application designated for APPROVAL by JRM and KLJ.

3. Comments:

Conditions:
This application is hereby APPROVED, dated November 30, 1998, subject to prior rights and this application will expire on November 30, 1999.

John R. Mann, Regional Engineer
for
Robert L. Morgan, State Engineer

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

December 7, 1998

Anschutz Exploration Corporation
555 17th Street, Suite 2400
Denver, Colorado 80202

Re: Anschutz Ranch Deep 10-27 Well, 1433' FSL, 1228' FEL, NE SE, Sec. 27, T. 4 N., R. 7 E., Summit County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-043-30321.

Sincerely,

John R. Baza
Associate Director

lwp
Enclosures
cc: Summit County Assessor
Bureau of Land Management, State Office

Operator: Anschutz Exploration Corporation

Well Name & Number: Anschutz Ranch Deep 10-27

API Number: 43-043-30321

Lease: Fee **Surface Owner:** Fee

Location: NE SE **Sec.** 27 **T.** 4 N. **R.** 7 E.

Permitted Bottom Hole Location: 2200' FNL, 2550 FWL **Location:** SE NW

Conditions of Approval

1. General

   Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements

   Notify the Division of the following actions during drilling of this well:

   - 24 hours prior to cementing or testing casing
     24 hours prior to testing blowout prevention equipment
   - 24 hours prior to spudding the well
   - within 24 hours of any emergency changes made to the approved drilling program
   - prior to commencing operations to plug and abandon the well

   Division contacts (please leave a voice mail message if person is not available to take the call):

   - Dan Jarvis at (801) 538-5338
   - Robert Krueger at (801) 538-5274 (plugging)
   - Carol Daniels at (801) 538-5284 (spud)

3. Reporting Requirements

   All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

DIVISION OF OIL, GAS AND MINING

CONFIDENTIAL

SPUDDING INFORMATION

Name of Company: ANSCHUTZ EXPLORATION CORP

Well Name: ANSCHUTZ RANCH DEEP 10-27

Api No. 43-043-30321 Lease Type: FEE

Section 27 Township 04N Range 07E County SUMMIT

Drilling Contractor NORTON DRILLING RIG # 18

SPUDDED:

Date 09/15/99

Time 9:00 AM

How DRY HOLE

Drilling will commence

Reported by JIM RADFORD

Telephone # 1-307-783-2978

Date 9/15/99 Signed: CHD

FORM 9

ATE OF UTAH

DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:	Fee
6. If Indian, Allottee or Tribe Name	N/A
7. Unit Agreement Name:	N/A
8. Well Name and Number	Anschutz Ranch Deep 10-27
9. API Well Number:	43-043-30321
10. Field and Pool, or Wildcat	Wildcat

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL ☐ GAS ☒ OTHER: **CONFIDENTIAL**

2. Name of Operator: Anschutz Exploration Corporation

3. Address and Telephone Number: 555 17th Street, Suite 2400, Denver, CO 80292

4. Location of Well

Footages: 1433' FSL and 1228' FEL (Surface Loc.) NESE

QQ, Sec., T., R., M.: 2200' FNL and 2550' FWL (Btm. Hole Loc.) SENW

County: Summit

State: Utah

11. **CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

NOTICE OF INTENT
(Submit in Duplicate)

- ☐ Abandon
- ☐ Repair Casing
- ☒ Change of Plans
- ☐ Convert to Injection
- ☐ Fracture Treat or Acidize
- ☐ Multiple Completion
- ☐ Other

- ☐ New Construction
- ☐ Pull or Alter Casing
- ☐ Recomplete
- ☐ Perforate
- ☐ Vent or Flare
- ☐ Water Shut-Off

Approximate date work will start 9/17/99

SUBSEQUENT REPORT
(Submit Original Form Only)

- ☐ Abandon *
- ☐ Repair Casing
- ☐ Change of Plans
- ☐ Convert to Injection
- ☐ Fracture Treat or Acidize
- ☐ Other

- ☐ New Construction
- ☐ Pull or Alter Casing
- ☐ Perforate
- ☐ Vent or Flare
- ☐ Water Shut-Off

Date of work completion

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This sundry is being submitted to provide notice and gain approval for the following well plan changes:

* Cementing program updated
* Whole cores may be cut
* Water will be provided from a private source and a water well drilled on location
* A closed loop mud system will be used.

Please see the attached, updated drilling program.

SENT TO OPERATOR
9-30-99
CHD

Approved by the Utah Division of Oil, Gas and Mining

Date: 9/28/99

By:

13. Name & Signature: James Oursland /James Oursland Title: Engineering Manager Date: 9/15/99

(This space for State use only)

Engr. OK - RJK 9-22-99

RECEIVED
SEP 16 1999
DIV. OF OIL, GAS & MINING

(5/94) (See Instructions on Reverse Side)

UINTA ENGINEERING & SURVEYING, INC.
P.O. BOX 746
808 MAIN STREET
EVANSTON, WY. 82930

FAX

To: Mike Hebertson
State of Utah
Dept of Natural Resources - Division of Oil, Gas & Mining
fax 801-359-~~9340~~ 3940

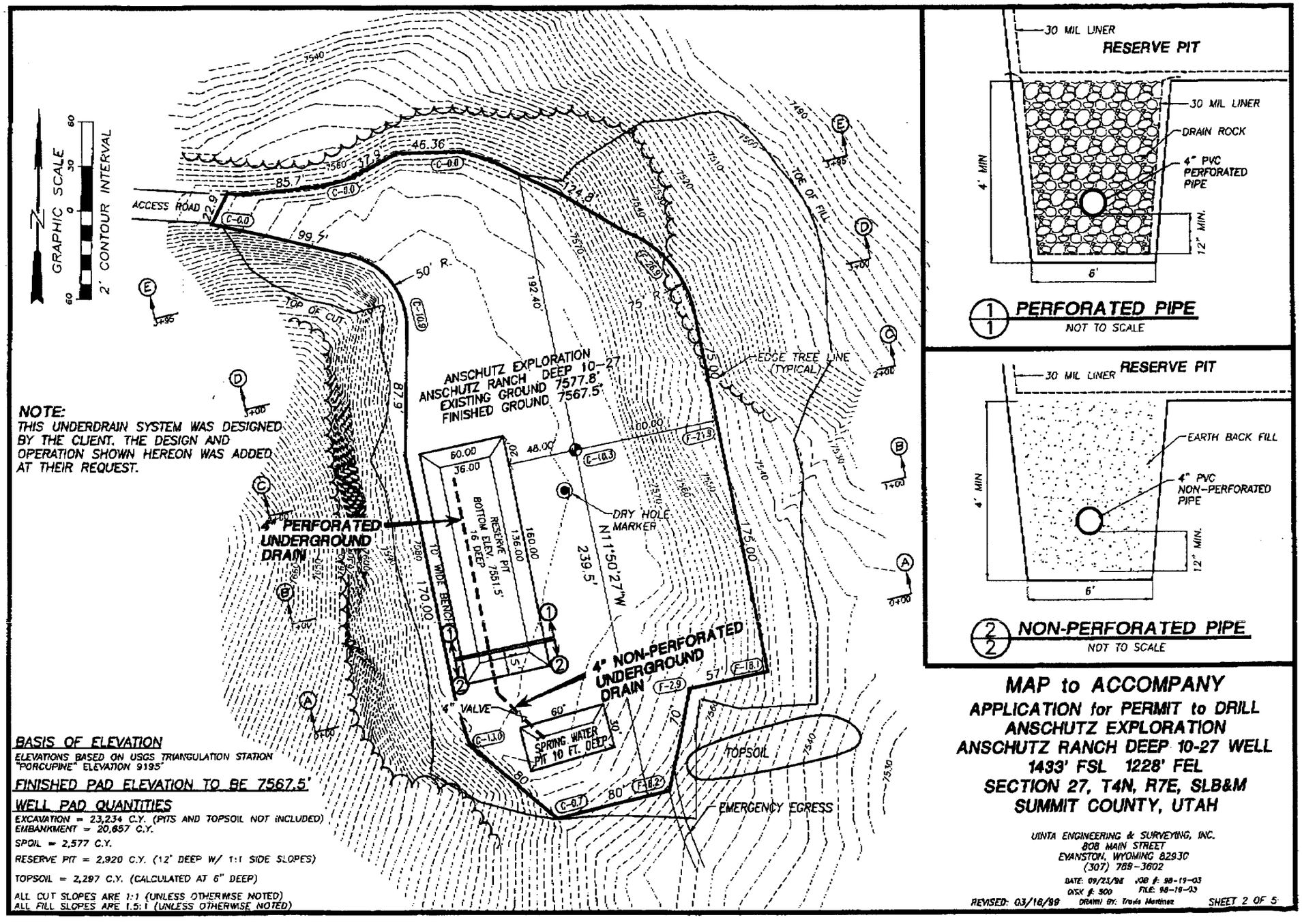
From: ~~STAN TAGGART~~
Bobby Cooper
Anschutz Exp.
307-679-3312

Date: 3/16/99
Number of Pages: 2 (INCLUDING COVER SHEET)
Phone: 307-789-3602
Fax: 307-789-6456

Remarks:

Anschutz Ranch Deep 10-27 drain system

PLEASE CALL IF TRANSMISSION IS INCOMPLETE OR ILLEGIBLE



1/1 PERFORATED PIPE
NOT TO SCALE

2/2 NON-PERFORATED PIPE
NOT TO SCALE

MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
ANSCHUTZ EXPLORATION
ANSCHUTZ RANCH DEEP 10-27 WELL
1433' FSL 1228' FEL
SECTION 27, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 09/23/98 JOB #: 98-19-03
DISK #: 500 FILE: 98-19-03
REVISED: 03/16/99 DRAWN BY: Travis Martinez

MAR-16-1999 15:18 UESI

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR Anschutz Exploration Corp.

ADDRESS 555 17th St., Ste. 2400
Denver, Co. 80202

OPERATOR ACCT. NO. N 7940

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
A	99999	12576	43-043-30321	Anschutz Ranch Deep #10-27	NESE	27	4N	7E	Summit	09/15/99	09/15/99

WELL 1 COMMENTS: 991013 entity added. KDR

CONFIDENTIAL

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

RECEIVED
SEP 16 1999
DIV. OF OIL, GAS & MINING

Signature

Operations Tech. 09/15/99
Title Date

Phone No. 303.298-1000

DOUBLE JACK TESTING & SERVICES, INC.
Phone (307) 789-9213

CONFIDENTIAL

B.O.P. TEST REPORT

B.O.P. TEST PERFORMED ON (DATE) 9-19-99

OIL COMPANY Anschutz

WELL NAME & NUMBER Anschutz Ranch Deep 10-27

SECTION 27 API # 43-043-30321

TOWNSHIP 4N W

RANGE 7E

COUNTY & STATE Summit UT

DRILLING CONTRACTOR Norton 52

OIL COMPANY SITE REPRESENTATIVE Jim Radford

RIG TOOL PUSHER Don Jewey

TESTED OUT OF Evanston WY

NOTIFIED PRIOR TO TEST

COPIES OF THIS TEST REPORT SENT TO: BLM S.L.C. UT

St. of Ut. Dept of Natural Res.

ORIGINAL CHART & TEST REPORT ON FILE AT:

DOUBLE JACK TESTING & SERVICES, INC.
P O BOX 2097
EVANSTON, WY 82930

TESTED BY: Darren Merrick

Double Jack Testing & Services Inc.

FIELD TICKET
Nº 15495

Accounting Office: P.O. Box 516 Shoshoni, WY 82649 • (307) 876-9390

Field Operations:
Shoshoni, WY (307) 876-2308
Rock Springs, WY (307) 382-4020
Evanston, WY (307) 789-9213
Big Piney, WY (307) 276-5265
Vernal, UT (801) 781-0448

DATE 9-19-99
☑ OPERATOR Anschutz
☐ CONTRACTOR Norton 52
WELL NAME Anschutz Ranch Deep 10-27

COUNTY	STATE	SECTION	TOWNSHIP	RANGE
Summit	UT	27	4OW	7E

Items Tested:

	LOW TEST PSI	TIME HELD MINUTES	HIGHTEST PSI	TIME HELD MINUTES
Top Pipe Rams	250	5	5000	10
Bottom Pipe Rams	250	5	5000	10
Blind Rams	250	5	5000	10
Annular B.O.P.	250	5	3100	10
Choke Manifold	266	5	5000	10
Choke Line	250	5	5000	10
Kill Line	250	5	5000	10
Super Choke				
Upper Kelly	250	5	5000	10
Lower Kelly				
Floor Valve	250	5	5000	10
Dart Valve	250	5	5000	10
Casing			1500	30

Closing Unit PSI 3000
Closing Time of Rams 7 sec
Closing Time of Annular 21 sec
Closed Casing Head Valve yes
Set Wear Sleeve

COMMENTS

ADDITIONAL TESTS & COMMENTS

Copy To
BLM SLC
UT State
Anschutz Jim Radford
Norton Don Jenney

TEST PLUG 12" C-22
RET. TOOL OA Loc
TOP SUB. 4½ IF
KELLY SUB.
X-OVER SUB.

RATES

UNIT RATES	7 HR set up charge 3 AM - 10 AM	800.00
ADDITIONAL	15 HRS over set up @ 60 per HR 10 AM - 1 AM	900.00
MILEAGE	50 miles @ 1.50 per mile	75.00
METHANOL	30 gal @ 2.00 per gal	60.00
OTHER		

PURCHASE ORDER #

Jim Radford
COMPANY REPRESENTATIVE

Darrel Merrick
TESTED BY

143
DOUBLE JACK TESTING UNIT NUMBER

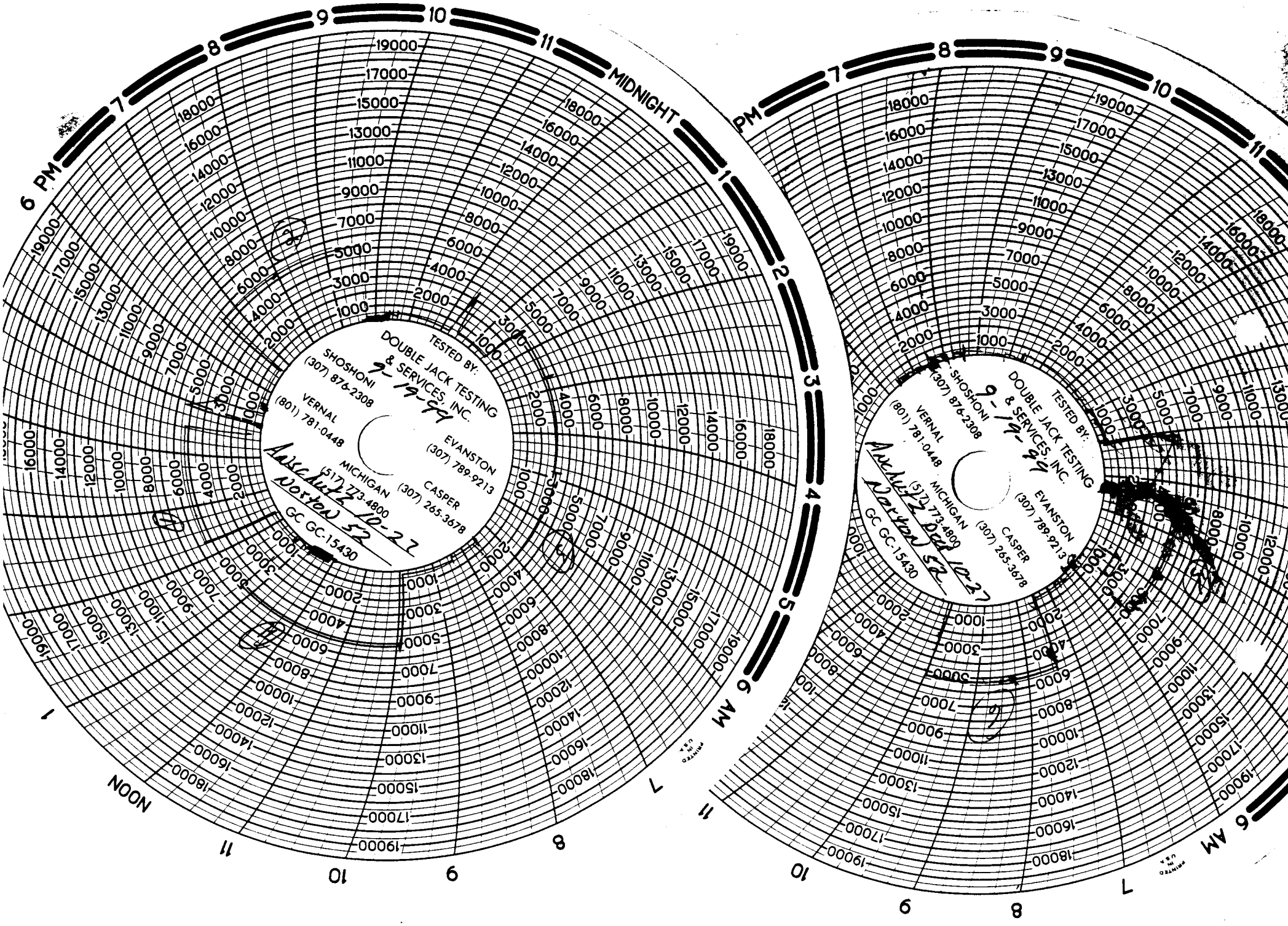
SUBTOTAL 1835.00
TAX
TOTAL

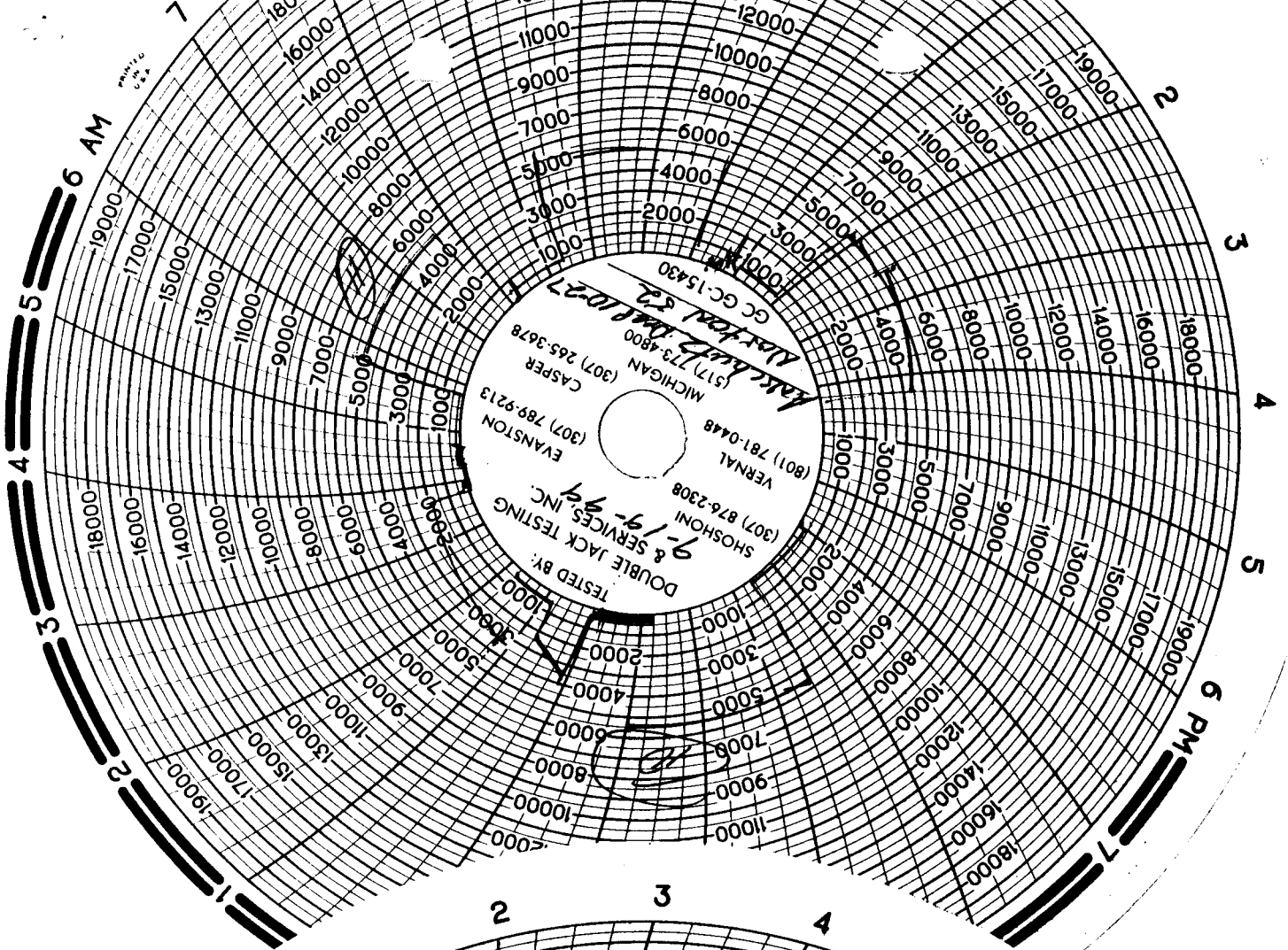
NOTICE TO ALL CUSTOMERS

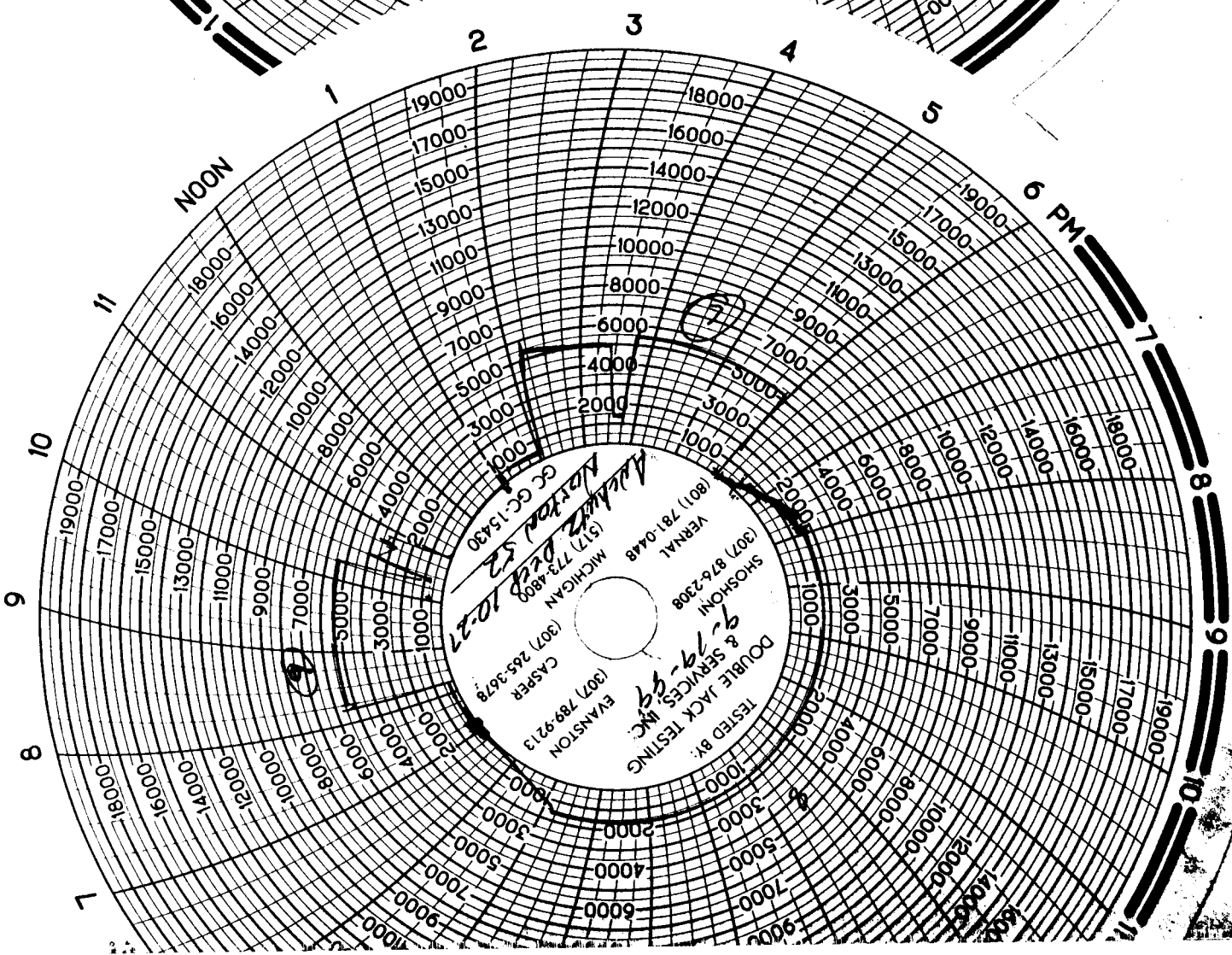
If this account shall not be paid when due and it is placed with an attorney for collection, or if suit be instituted for collection, the undersigned agree(s) to pay in either case, reasonable expense of collection including attorney's fees and court cost in compliance with TRUTH IN LENDING AND THE UNIFORM CONSUMER CREDIT CODE, the following information disclosure, under the terms of our regular accounts, all amounts for service due and payable within THIRTY (30) DAYS from the receipt of an invoice for such services. A LATE CHARGE will be assessed when accounts are not paid when due. THE LATE CHARGE is computed by a "periodic rate" 1-3/4% PER MONTH which is an ANNUAL PERCENTAGE RATE OF 21% to the previous balance in the account on the billing date. No further credit can be extended on unpaid delinquent accounts until the delinquent account is paid in full. The contractor will not be held liable for damages caused by acts of God, or unforeseen circumstances that could not be reasonably anticipated in performing the work done as set forth above.

COMPANY	LEASE & WELL NAME	TEST DATE	RIG# & NAME
Anschutz	Anschutz Ranch Deep 10-27	9-19-99	Norton 52

TEST #	TIME	ITEMS TESTED
1	3:05A	outside manifold valves HCR
2	3:30A	Inside manifold valves HCR
3	6:10A	Hydril, Inside Kill, Inside manifold valves, safety valve
4	7:15A	upper pipe Rams, HCR, Inside Kill safety valve
5	8:05A	upper pipe Rams Inside choke line valve outside Kill line valve
6	9:30	Lower pipe Rams Dart valve
7	11:10A	Blind Rams Inside Kill Inside manifold valves
8	12:05P	CSG
9	2:20P	upper Kelly
10	10:20P	upper pipe Rams HCR outside Kill
11	10:50P	upper Pipe Rams HCR Check valve
12		


DOUBLE JACK TESTING & SERVICES, INC.
TESTED BY:
SHOSHONI (307) 876-2308
VERNAL (801) 781-0448
EVANSTON (307) 789-9213
CASPER (307) 265-3678
MICHIGAN (517) 773-4800
9-19-99
Anschutz 10-27
Norton 52
GC GC-15430
6 PM
MIDNIGHT
NOON
6 AM


6 AM
6 PM
TESTED BY:
DOUBLE JACK TESTING
& SERVICES, INC.
9-19-94
SHOSHONI
(307) 876-2308
VERNAL
(801) 781-0448
MICHIGAN
(517) 773-4800
CASPER
(307) 265-3678
EVANSTON
(307) 789-9213
GC GC-15430
Alarm Pack 10-27
Alarm Pack 52


NOON
6 PM
TESTED BY:
DOUBLE JACK TESTING
& SERVICES, INC.
9-19-94
SHOSHONI
(307) 876-2308
VERNAL
(801) 781-0448
MICHIGAN
(517) 773-4800
CASPER
(307) 265-3678
EVANSTON
(307) 789-9213
GC GC-15430
Alarm Pack 10-27
Alarm Pack 52

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Form 8
3/89

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

CONFIDENTIAL PERIOD EXPIRED 7-31-01

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1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] DRY [ ] OTHER [ ]	6. LEASE DESIGNATION AND SERIAL NO.: FEE
1b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER [ ]	6. IF INDIAN, ALLOTEEE OR TRADE UNIT: N/A
	7. UNIT AGREEMENT NAME: N/A
	8. FARM OR LEASE NAME: ANSCHUTZ RANCH DEEP
2. NAME OF OPERATOR: THE ANSCHUTZ CORPORATION	
3. ADDRESS OF OPERATOR: 555 17th STREET, SUITE 2400, DENVER, COLORADO 80202	9. WELL NO.: 10-27
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface: 1433' FSL and 1228' FEL At top prod. interval, reported below: 2187.5' FSL and 1457.8' FEL At total depth: 3843' FSL and 1812.5' FEL	10. FIELD AND POOL, OR WILDCAT: WILDCAT 11. SEC., T., R., OR BLOCK AND SURVEY OR AREA: Sec. 27 , T 4N R 7E

14. API NO.	DATE ISSUED	12. COUNTY	13. STATE
43-043-30321	12-7-1998	SUMMIT	UTAH

15. DATE SPUDDED	16. DATE TD REACHED	17. DATE COMPL. (Ready to Prod.)	18. ELEVATIONS (DF, RKB, RT, GR, etc.)*	19. ELEV. CASINGHEAD
09-15-1999	02-12-2000	3-21-2000	7,566' G.L.	7,593' K.B.

20. TOTAL DEPTH (Md & TVD)	21. PLUG BACK TD (MD & TVD)	22. IF MULTIPLE COMPL., HOW MANY	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
15,900' MD 15,040' TVD	13,920' MD	N/A	>>>--->	0 to 15,900'	N/A

24. PRODUCING INTERVAL (S), THIS COMPLETION, TOP, BOTTOM, NAME (MD & TVD)
Weber, Top of Completion Interval 12,842' md, 12,644' tvd
Weber, Base of Completion Interval 13,080' md, 12,832' tvd

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: AIT/LDT-CNL/DS/FML-GR Mud Log - 2-28-2000 11-15-99

27. WAS WELL CORED: Yes [ ] No [X]
DRILL STEM TEST: Yes [ ] No [X]

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	54.5	1,502'	17-1/2"	646 sks lite & 632 sks G	0
9-5/8"	44	9,626'	12-1/4"	1,186 sks 'G'	0
7-5/8", 7" Tieback	39, 32	9,134'			0
					0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)
7"	9,135'	13,924'	787 sks 'G'	NA

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	11,758	11,700'
		Iso Packer 12,700'

31. PERFORATION RECORD (Interval, size and number)
12,842-866', 1 SPF, 0° phasing, .31713"
12,910-940', 1 SPF, 0° phasing, .31713"
13,050 - 080', 1 SPF, 0° phasing, .31713"

32. ACID, SHOT, FRAC., CEMENT SQUEEZE, Etc.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
12,842' - 13,080'	ACIDIZED w/5712 gal 7-1/2% HCL

33. PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas, lift, pumping- size & type of pump)	WELL STATUS (prod or shut-in)
WELL SI WO P/L	FLOWING	SI

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N FOR TEST PERIOD >>>--->	OIL - BBL	GAS - MCF	WATER - BBL	GAS-OIL RATIO
03/14/2000	26	27/64		198.1	12,214	177.40	6.759 Bbl/MMcf

FLOW. TUBING PRESS	CASING PRESSURE	CALCULATED 24-HOUR RATE >>>--->	OIL - BBL	GAS - MCF	WATER - BBL	OIL GRAVITY-API (Corr.)
2,600	590		183	11,275	108	80.4

34. DISPOSITION OF GAS (Sold, used for fuel, vented, ect.): GAS TO BE GATHERED BY WGS.
Test Witnessed By:

35. LIST OF ATTACHMENTS: TEST INFORMATION, OPENHOLE LOGS PREVIOUSLY SENT.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

SIGNED: [signature] TITLE: ENGINEERING MANAGER DATE: 10-Apr-00

*See Instructions On Reverse Side

INSTRUCTIONS

This form should be completed with the Utah Oil and Gas Conservation General Rules. If not filed prior to this time, all logs, tests, and directional surveys as required by Utah Rules should be attached and submitted with this report.
ITEM 18: Indicate which elevation is used as reference for depth measurements given in other spaces on this form and on any attachments.
ITEM 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in ITEM 22, and in ITEM 24 show the producing interval, or intervals, top(s), bottoms(s) and name(s) for only the interval reported in ITEM 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.
ITEM 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.
ITEM 33: Submit a separate completion report on this form for each interval to be separately produced (see instruction for ITEMS 22 and 24 above).

37. SUMMARY OF POROUS ZONES:
Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

Formation	Top	Bottom	Description, contents, etc.
Cored Intervals			
Thaynes	9,986'	10,030'	Siltstone, Calcite cemented, occ L.S. beds heal fractures
Thaynes	10,030'	10,059'	Siltstone, Calcite cemented, occ L.S. beds heal fractures
Thaynes	10,536'	10,551	Siltstone, Dolomite and Silica cemented. Heal fractures Limestone 10562-65
Thaynes	10,551	10,570'	Siltstone, Dolomite and Silica cemented. Heal fractures Limestone 10562-66
Thaynes	10,570'	10,600'	80 - 74 Silt 74- 83 Shale 83 - 600 No core
Thaynes	10,600'	10,618'	10600 -07 Limestone Heal Frac 07 -18 No Core
Thaynes	10,618'	10,637'	10618 - 632 Interbed Silt, Lime and Shale 632-37 No core
Thaynes	10,637'	10,649'	Interbedded shale and lime. 46-49 No Core
DST			
DST #1	9,966'	10,059'	No cushion, In. Hyd. 4829.5, 12 min 1st final flow 96.77, 60 min 1st SI 1080.04, 90 min 2nd final flow 75.36, 120 min 2nd SI 500 psi.
DST #2	10,549'	10,649'	No cushion, In. Hyd 4893.7, 12 min 1st final flow 531.9, 60 min 1st SI 858.7, 90 min 2nd final flow 533.6 psi, 120 min 2nd SI 658 psi.

38. GEOLOGIC MARKERS

Name	Top	
	Meas. Depth	True Vert. Depth
Nugget Ss.	7,474'	
Ankareh Red Beds	8,560'	
Thaynes Ls.	9,595'	9,591'
Woodside Red Beds	10,935'	10,930'
Dinwoody Fm.	11,760'	11,736'
Phosphoria	11,860'	11,829'
Weber Anhydrite	12,660'	12,489'
Weber Ss.	12,730'	12,554'

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ANSCHUTZ EXPLORATION CORP

ANSCHUTZ RANCH DEEP 10-27; SUMMIT CO., UTAH

DST: ELECTRONIC MEMORY GAUGE (EMR) REPORT

CUSTOMER:	**ANSCHUTZ EXP. CORP.**
WELL:	**ARD 10-27**
LOCATION:	**SUMMIT COUNTY, UTAH**
LEGAL DESC.:	**NE/SE S27 T4N R7E**
TEST DATE(S):	**DECEMBER 8, 1999**
INTERVAL(S):	**10549 - 10649 FT(MD)**
TYPE TEST	**DST THAYNES FORMATION**
TICKET/JOB#:	**305332**

HES REPORT COPIES HAVE BEEN SENT TO THE FOLLOWING COMPANIES AND/OR INDIVIDUALS:

# COPIES	RECIPIENT(S)
1	JAMES OUSLAND, PE 1221 LAMAR, SUITE 1100 HOUSTON, TX 77010
1	HALLIBURTON ENERGY SERVICES PO BOX 369, 1709 ELK STREET ROCK SPRINGS, WY 82902 (307) 352-3503

The above report is based on sound engineering practices, but because of variable well conditions and other information which must be relied upon, Halliburton makes no warranty, express or implied, as to the accuracy of the data or any calculations or opinions expressed herein. You agree that Halliburton shall not be liable for any loss of damage whether due to negligence or otherwise arising out of or in connection with such data, calculations, or opinion.

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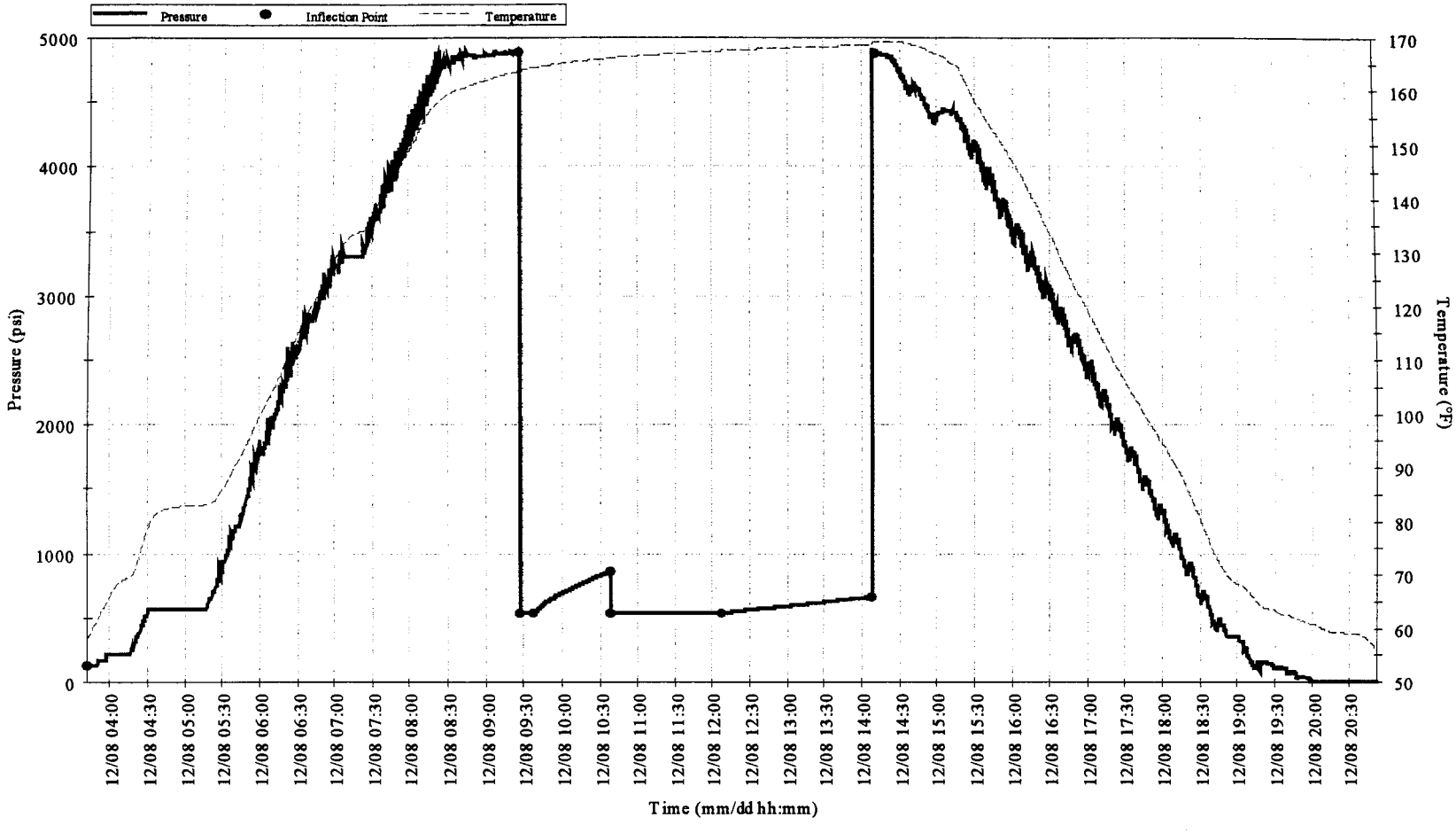
APR 25 2000
DIVISION OF
OIL, GAS AND MINING

ANSCHUTZ EXPLORATION CORP ARD 10-27 DEC. 8, 1999 10549 - 10649 FT(MD) DST TKT: 305332



Pressure & Temperature vs Time: Upper Gauge (Y12 at 10,516')

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ANSCHUTZ EXP. CORP ARD 10-27
DST THAYNES FORMATION DEC. 8, 1999

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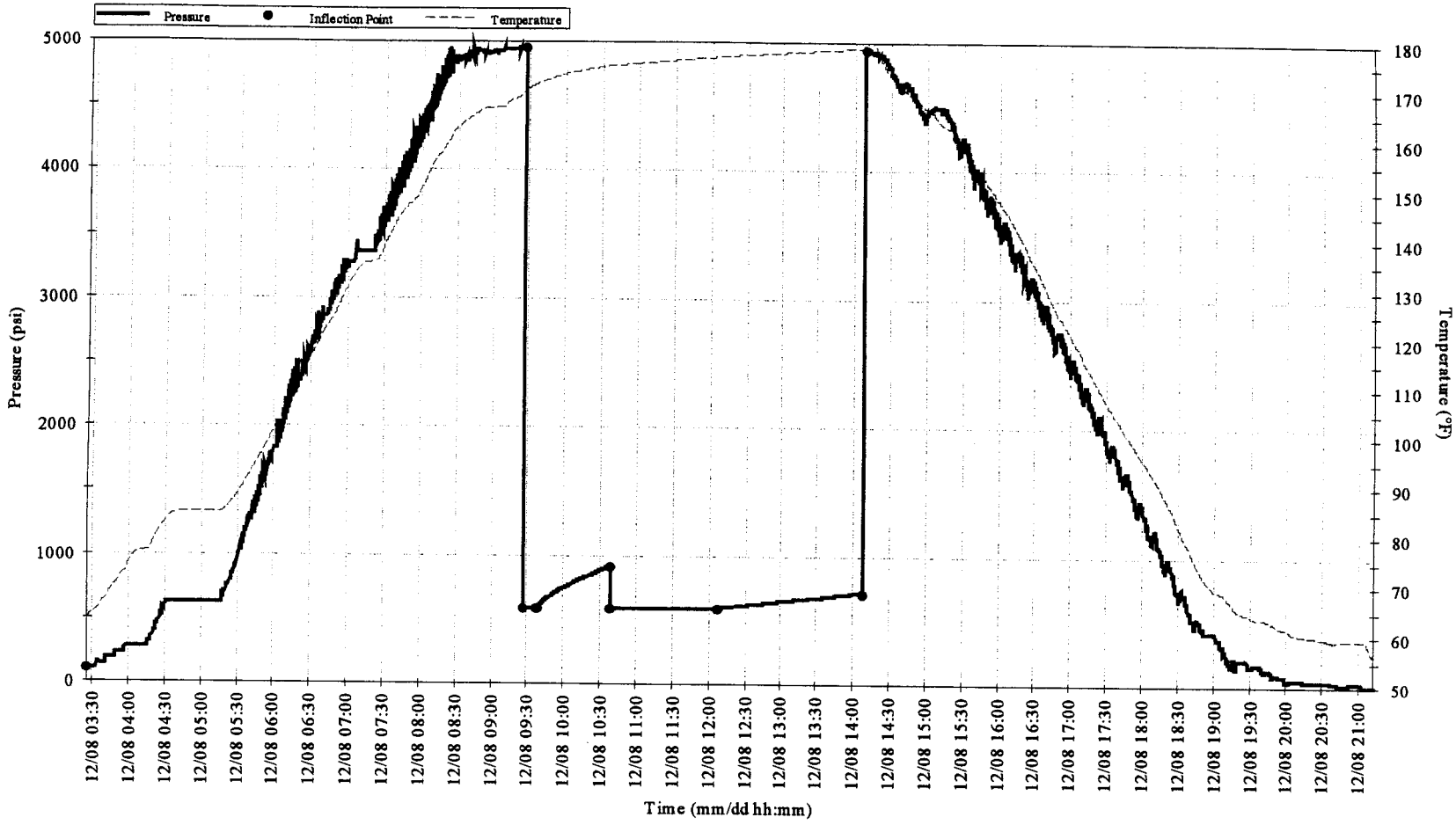

Pressure & Temperature vs Time: Lower Gauge (T76 at 10,645')

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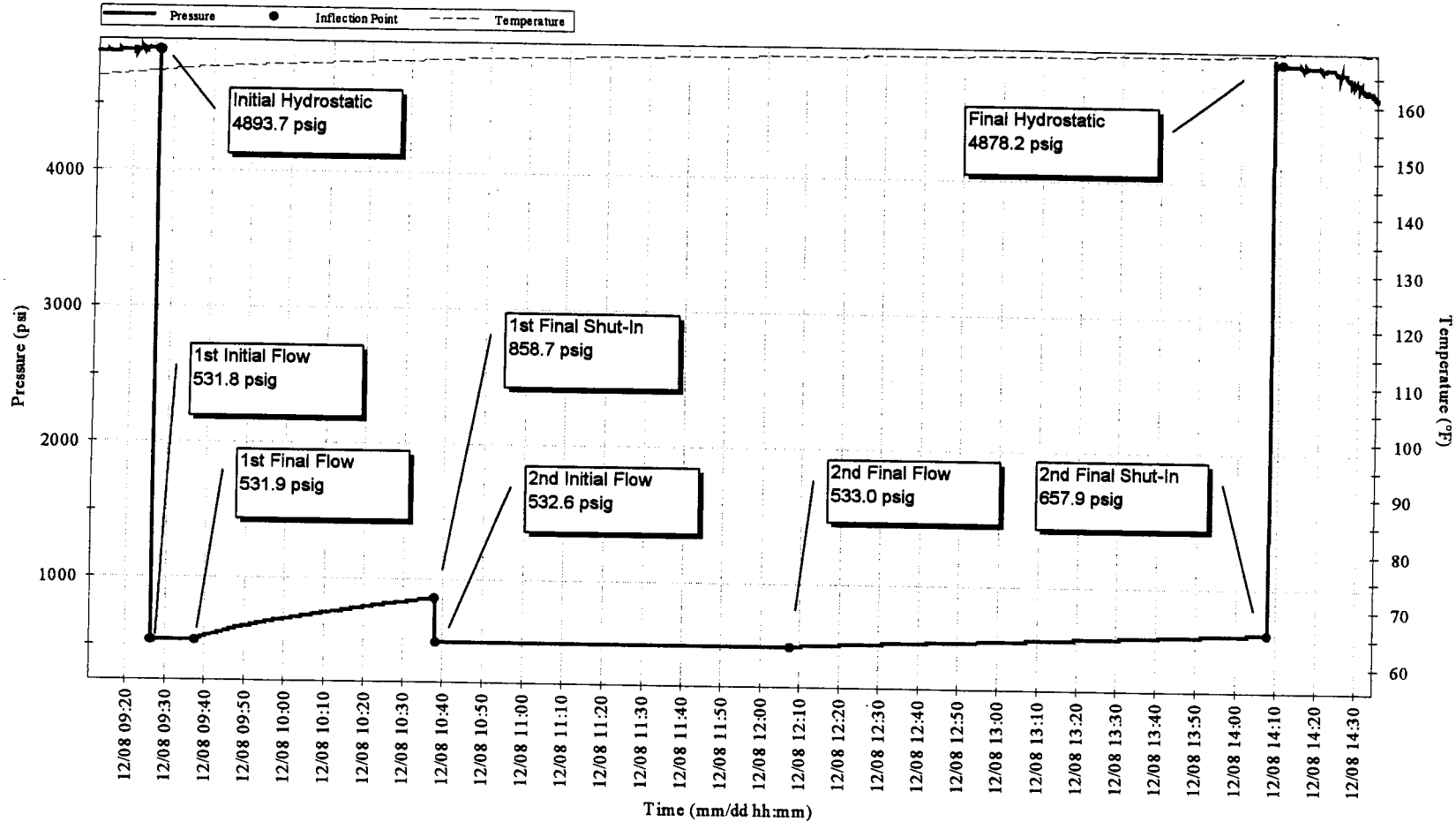
ANSCHUTZ EXP. CORP ARD 10-27
DST THAYNES FORMATION DEC. 8, 1999



Pressure & Temperature vs Time: Upper Gauge (Y12 at 10,516')

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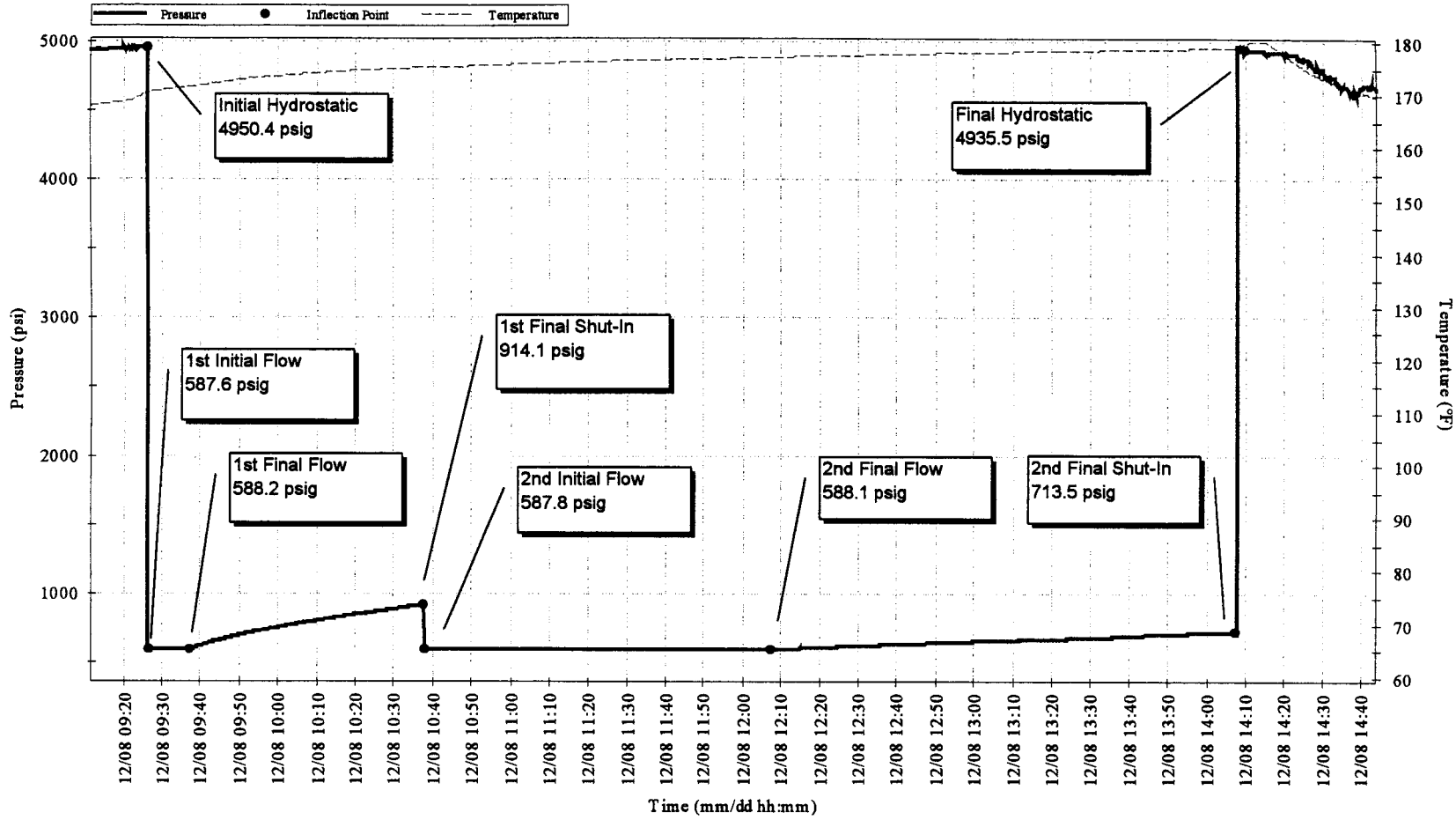
ANSCHUTZ EXP. CORP ARD 10-27
DST THAYNES FORMATION DEC. 8, 1999



Pressure & Temperature vs Time: Lower Gauge (T76 at 10,645')

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DST THAYNES FORMATION DEC. 8, 1999

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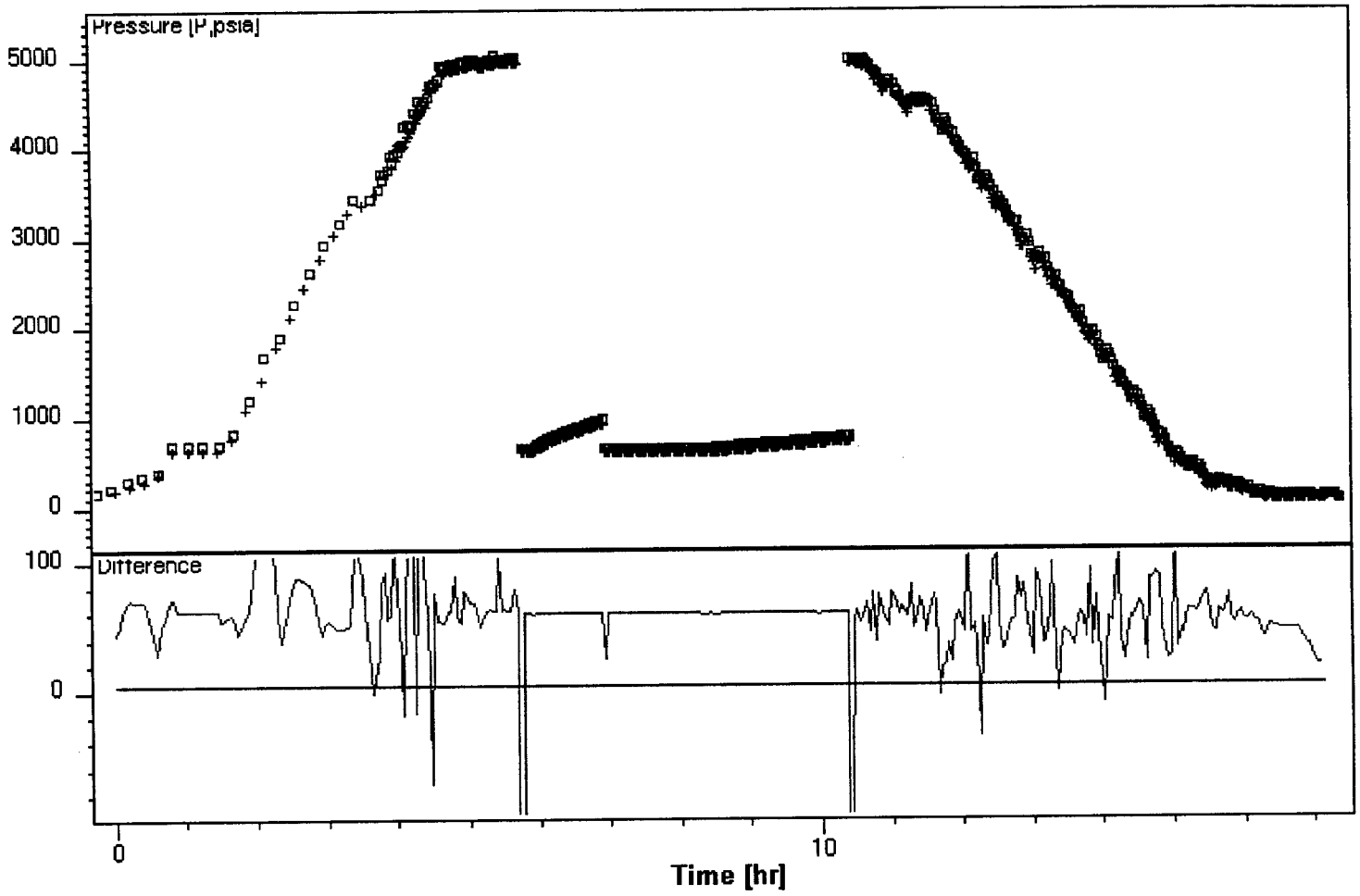

Data Comparison Between Gauges : Holding the Upper Gauge (Y12) Constant

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DST THAYNES FORMATION DEC. 8, 1999

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ANSCHUTZ EXPLORATION CORP

ARD 10-27

ANSCHUTZ RANCH

CUSTOMER:	**ANSCHUTZ EXPLORATION CORP**
WELL:	**ARD 10-27**
FIELD:	**ANSCHUTZ RANCH**
LOCATION:	**SUMMIT COUNTY, UTAH**
TEST DATE(S):	**NOVEMBER 23, 1999**
INTERVAL(S):	**9,966 - 10,059 FT(MD)**
TYPE TEST	**DST**
TICKET/JOB#:	**298282**

HES REPORT COPIES HAVE BEEN SENT TO THE FOLLOWING COMPANIES AND/OR INDIVIDUALS:

# COPIES	RECIPIENT(S)
3	JAMES OURSLAND, PE 1221 LAMAR, SUITE 1100 HOUSTON, TX 77010
1	HALLIBURTON ENERGY SERVICES PO BOX 369, 1709 ELK STREET ROCK SPRINGS, WY 82902 (307) - 352-3503

The above report is based on sound engineering practices, but because of variable well conditions and other information which must be relied upon, Halliburton makes no warranty, express or implied, as to the accuracy of the data or any calculations or opinions expressed herein. You agree that Halliburton shall not be liable for any loss of damage whether due to negligence or otherwise arising out of or in connection with such data, calculations, or opinion.

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ANSCHUTZ EXPLORATION CORP ARD 10-27 NOV. 23, 1999 9,943 - 10,054 FT(MD) DST TKT#: 298282

TICKET NO. 298282 DATE 11/23/99 HALLIBURTON CAMP Evanston

LEASE OWNER ANSCHUTZ EXPLORATION CORP. API NUMBER

LEASE NAME Anschutz Ranch Deep WELL 10-27 TEST NO. 1

LEGAL LOCATION S27-T4N-R7E FORMATION TESTED THYANES

FIELD AREA Anschutz Ranch COUNTY Summit STATE Utah

TYPE OF D.S.T. open hole on bottom

TESTER(S) R.Ripple, Tom Eaton

WITNESS Jim Radford DRILLING CONTRACTOR Norton Drlg #52

DEPTHS MEASURED FROM kb CASING PERFS (FT.)

TYPE AND SIZE OF GAS MEASURING DEVICE 6" positive choke

CUSHION DATA

TYPE NONE AMOUNT none WEIGHT

TYPE AMOUNT WEIGHT

RECOVERY (ft. or b 60 FT SLIGHTLY GAS CUT MUD

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FLUID PROPERTIES

source	resistivity	chlorides (ppm)	source	resistivity	chlorides (ppm)
mud pit	.76 @53	12,000			
DRILL COLLARS	.38 @ 62* F	15,015			

REMARKS:

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OIL, GAS AND MINING

FORMATION DATA (SHEET 1)

CONFIDE

TICKET NO.	298282	DATE	11/23/99
ELEVATION (ft.)	7593'		
TOP OF TESTED INTERVAL (ft.)	9966'	BOTTOM OF TESTED INTERVAL (ft.)	10059
NET PAY (ft.)	93'	TOTAL DEPTH (ft.)	10,059
HOLE OR CASING SIZE (in.)	8.5"	MUD WEIGHT (lb./gal.)	9 # VIS (sec) 42
SURFACE CHOKE (in.)	1/8 bubble hose	BOTTOM CHOKE (in.)	.75"
OIL GRAVITY	@	GAS GRAVITY--ESTIMATED	

SAMPLER DATA

TEMPERTURE (F)

PRESSURE (P.S.I.)	20	CUBIC FT. OF GAS	0.23	ESTIMATE	
C.C.'s OF OIL	0	C.C.'s OF WATER		ACTUAL	171
C.C.'s OF MUD	TRACE	TOTAL LIQUID C.C's		DEPTH (ft.)	

GAS/OIL RATIO (cu. ft. per bbl.)

FROM SAMPLER _____ OTHER _____

RECORDER AND PRESSURE DATA

CHARTS READ BY

DATA APPROVED BY

RECORDERS

GAUGE NUMBER	T76	Y12		
GAUGE TYPE	2	1		
GAUGE DEPTH (ft.)	10,054	9943		
CLOCK NUMBER	EMR	EMR		
CLOCK RANGE (HR.)				

TIMES

(00:00-24:00)	
TOOL OPENED	13:42
DATE	11/23/99
BYPASS OPENED	18:24
DATE	11/23/99

PRESSURES

INITIAL HYDROSTATIC	4824.54	4776.6				PERIOD	MINUTES
INITAIL FLOW	71.44	24.17				XXX	XXX
1st. FINAL FLOW	96.77	46.78				1st.FLOW	12
CLOSED-IN	1080.04	1033.21				1st. C.I.P.	60
INITIAL FLOW	72.64	30.6				XXX	XXX
2nd. FINAL FLOW	75.36	44.41				2nd.FLOW	90
CLOSED-IN	500	464.03				2nd. C.I.P.	120
INITIAL FLOW						XXX	XXX
3RD. FINAL FLOW						3rd.FLOW	
CLOSED-IN						3rd. C.I.P.	
FINAL HYDROSTATIC	4829.62	4726.45				XXX	XXX

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FORMATION TEST DATA (SHEET 2)

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TICKET NO. 298282

TOOL NAME	TOOL NO.	O.D.(IN.)	I.D. (IN.)	LENGTH (FT.)	DEPTH (FT.)
DRILL PIPE	1	5.00	4.276	9455.57	
DRILL COLLARS	3	6.50	2.313	354.20	
REV SUB PO	51	6.00	3.000	1.OO	9809.57
DRILLCOLLAR	3	6.50	2.313	88.54	
REV SUB KO	50	6.00	3.000	1.OO	9899.11
DRILL COLLAR	3	6.50	2.313	29.53	
X-OVER	5	6.25	2.375	1.07	
DCIP SAMPLER	13	5.00	0.750	6.80	
HYDROSPRING	60	5.00	0.750	5.00	9937.51
EMR CASE	87	5.00	2.500	5.10	9943.00
BIG JOHN JARS	15	5.00	1.750	5.00	
VR SAFTY JOINT	16	5.00	1.000	2.80	
IPC PACKER	70	7.75	1.530	5.05	9957.48
NR LONG PACKER	70	7.75	1.530	7.40	9966.00
ANCHOR	20	5.00	2.250	20.00	
X-OVER	5	6.25	2.250	1.01	
DRILL COLLARS	3	6.50	2.313	59.28	
X-OVER	5	6.00	2.000	0.75	
ANCHOR	20	5.00	2.250	5.00	
RUNNING CASE BLANK	87	5.00	2.250	5.10	10056.00
					TD 10,059

TOOL NUMBERS AS ASSIGNED BY TESTER

TOOL NAMES

EQUIPMENT DATA

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TICKET NO. 298282

DATES AND TIMES (00:00-24:00 HRS.)	CHOKE SIZE (IN.)	SURFACE PRESSURE (P.S.I.)	GAS RATE (MCF/D)	LIQUID RATE (BBL./D)	REMARKS
0:00	11/23/99				on loc. Lay down core barrel
2:45					p/u tools f/ dst #1
4:45					tih w/ dc's cut drlg line
9:15					tih w/ drill pipe
13:00					r/u surface equip.
13:42	bubble hose				tool open w/ very weak blow
13:47					1" blow in h2o
13:54					3/4 " blow close tool
14:20					blow died
14:54	bubble hose				open tool w/ blow @ bottom of bucket
14:57		9 oz			
15:04		9 oz			
15:14		9.5 oz			
15:24		9.5 oz			
15:34		9.75 oz			
15:44		9.5 oz			
15:54		9 oz			
16:04		9 oz			
16:14		9 0z			
16:24		9 oz			close tool
18:24					open by pass r/d surface equip
1:00					DRAIN SAMPLER
1:20					break and load tools
5:00					read charts finished w/ job

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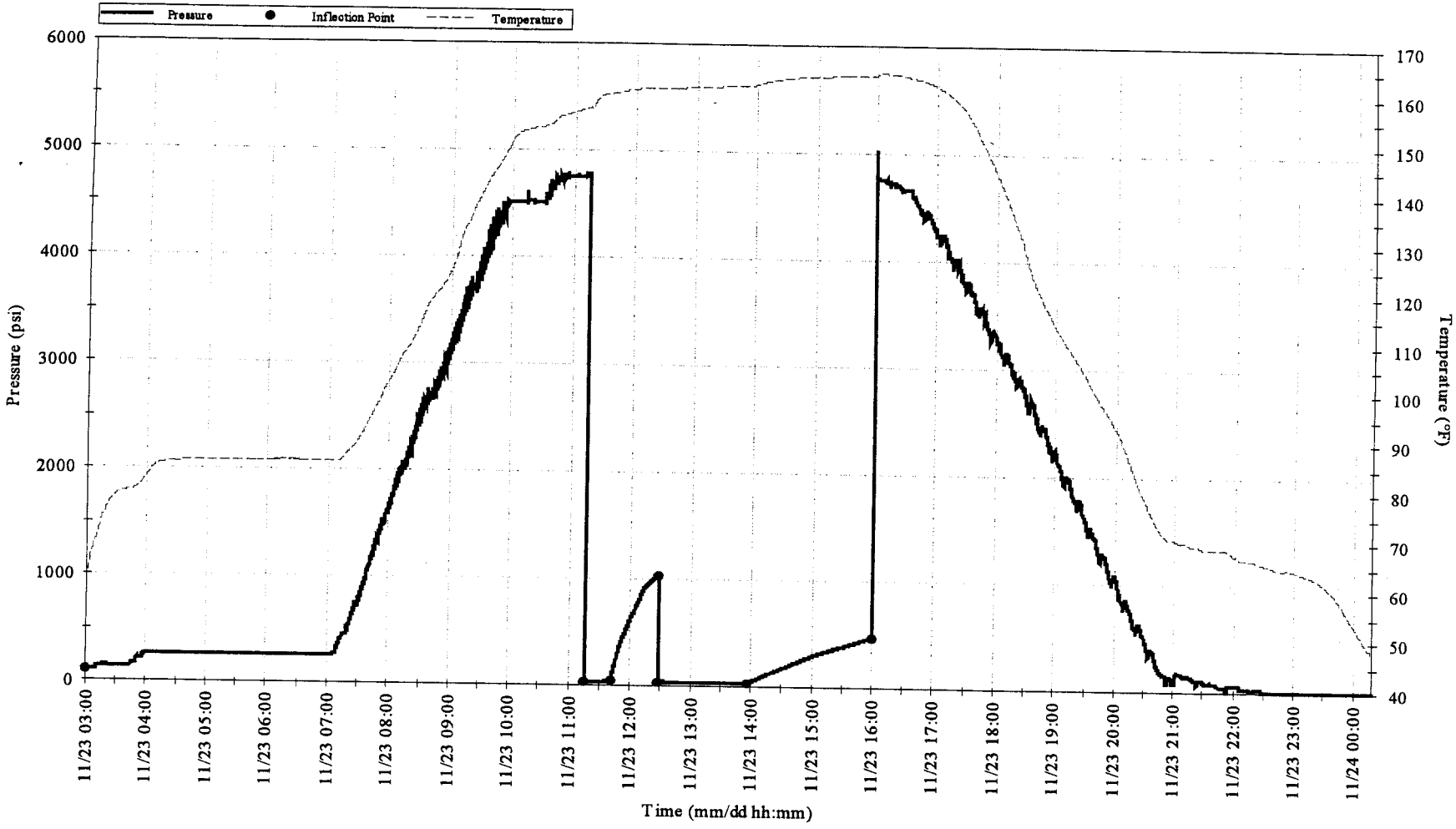
PRODUCTION TEST DATA



Overall Pressure and Temperature Data : Gauge Y12

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ANSCHUTZ EXPLORATION CORP
ARD 10-27/ DST NOV 23, 1999

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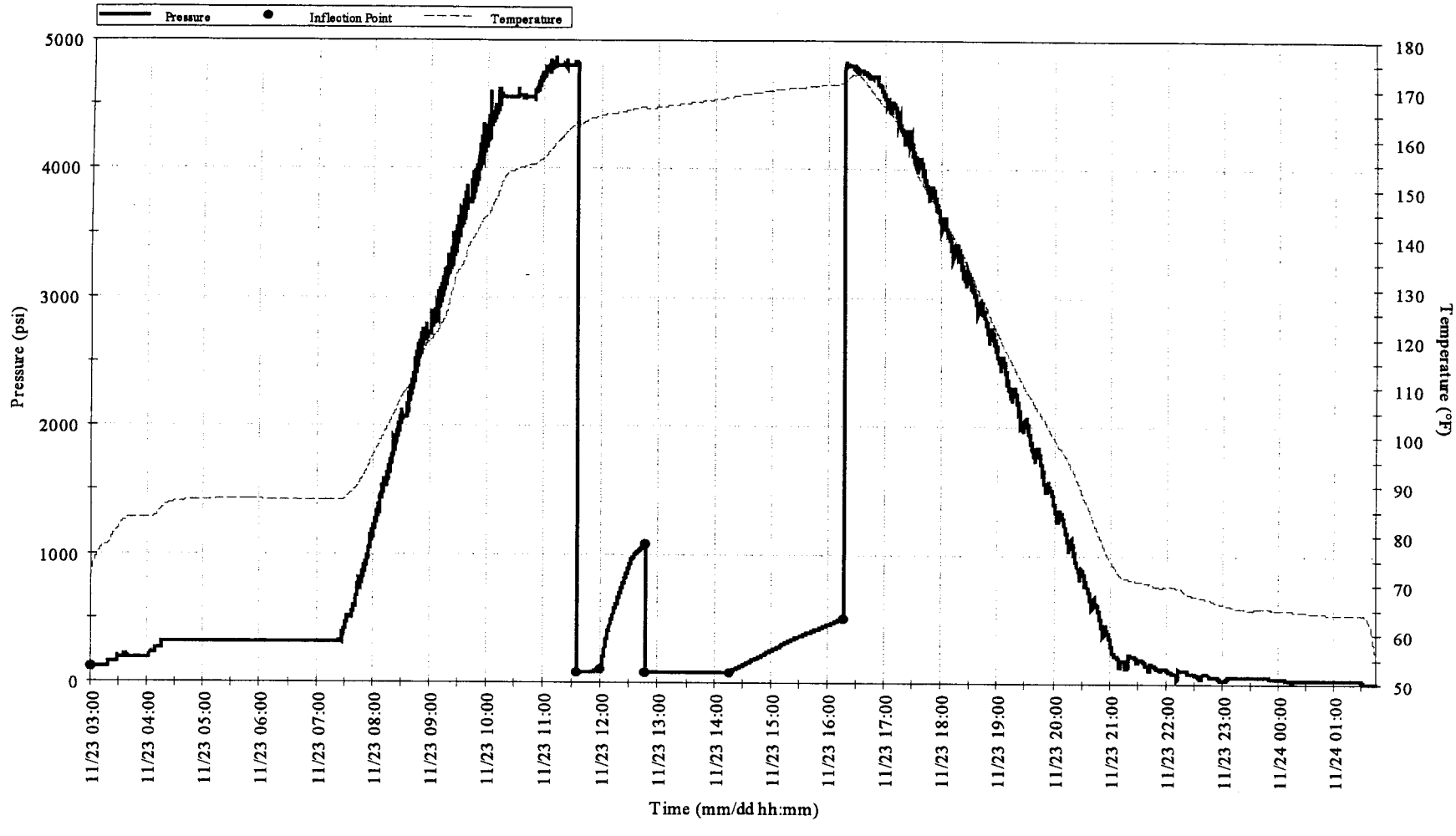

Overall Pressure and Temperature Data : Gauge T76

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ANSCHUTZ EXPLORATION CORP
ARD 10-27/ DST NOV 23, 1999

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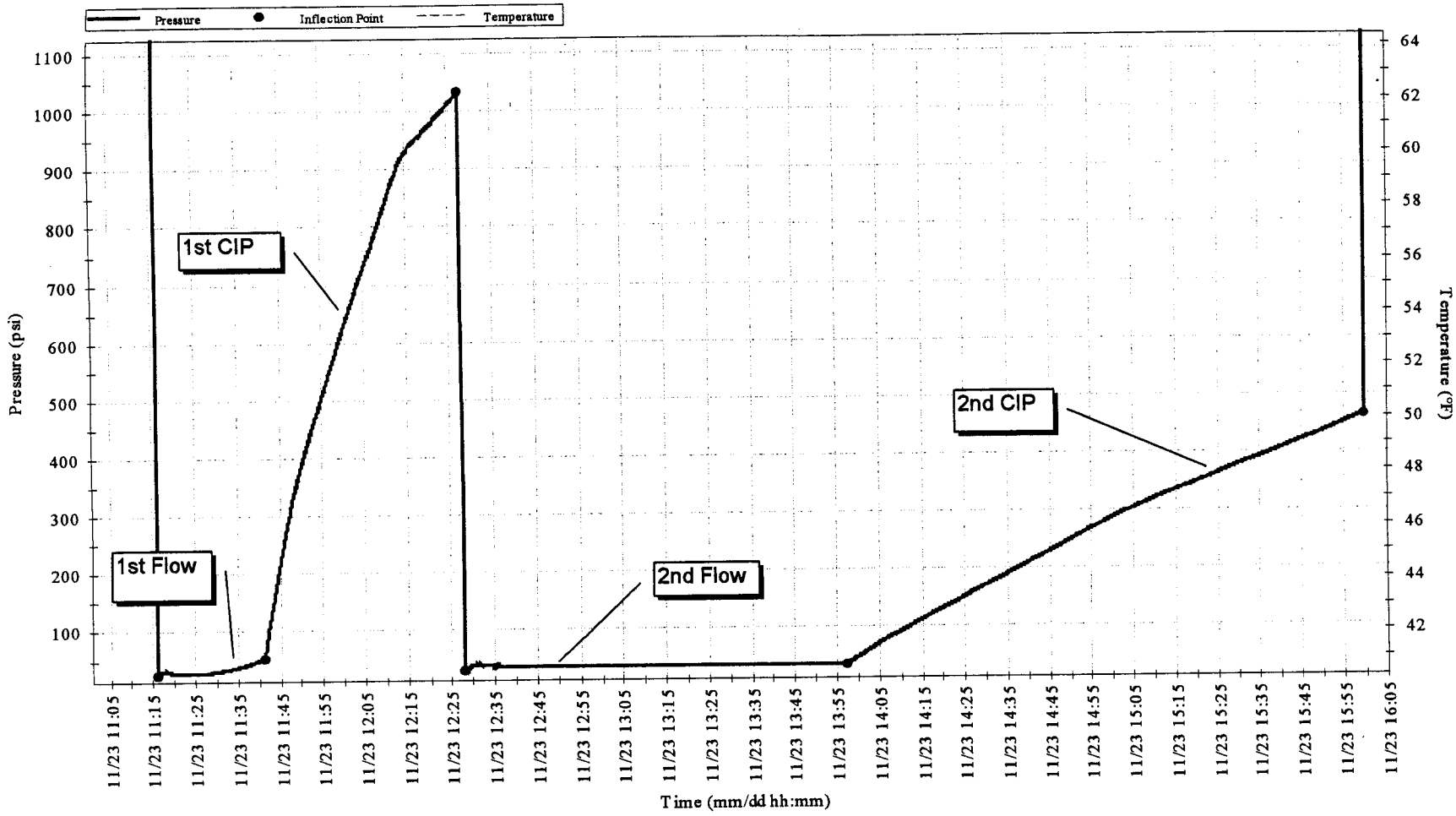

Flow Periods, Pressure vs Time: Gauge Y12

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ARD 10-27/ DST NOV 23, 1999

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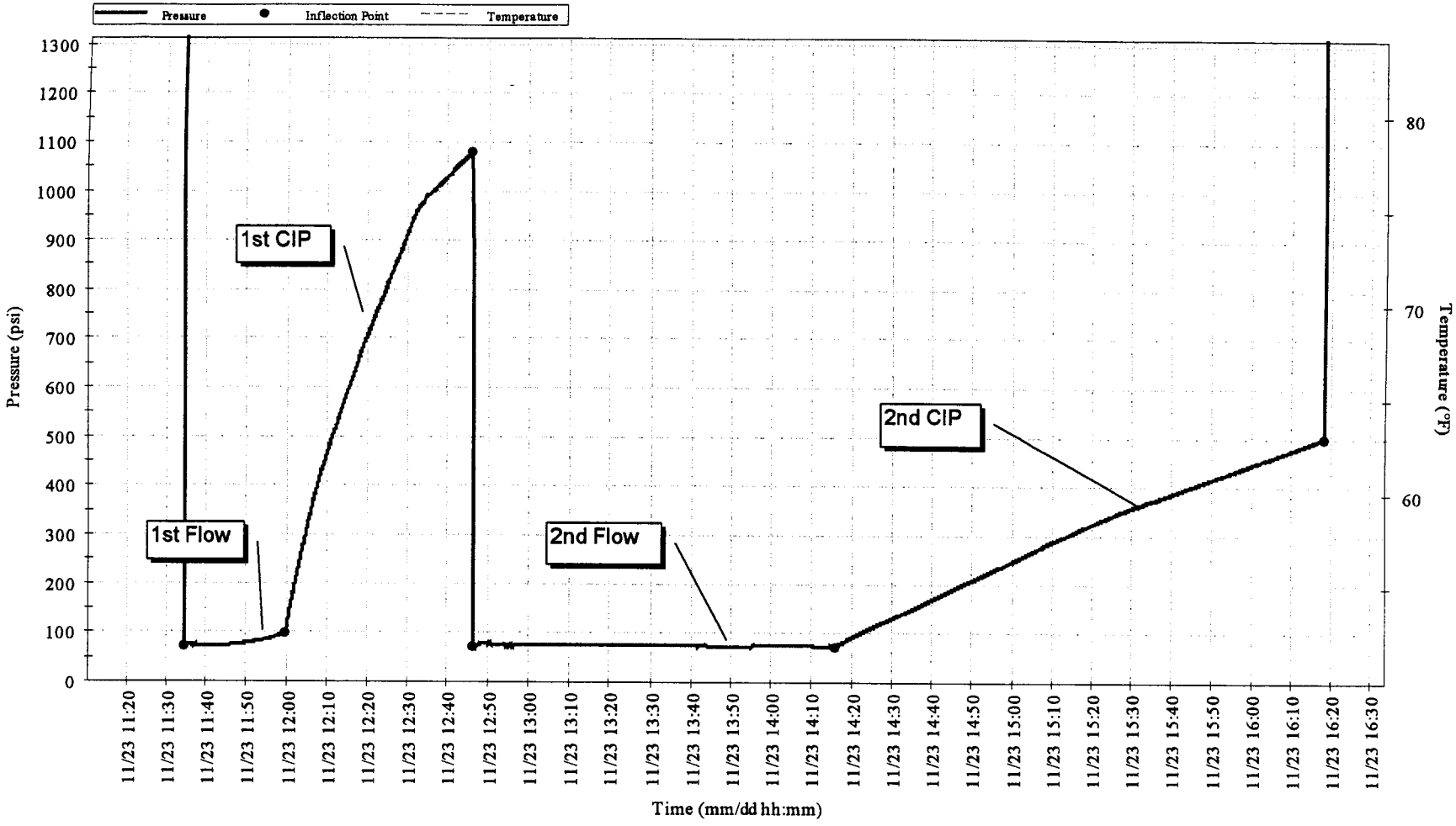

Flow Periods, Pressure vs Time: Gauge T76

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ARD 10-27/ DST NOV 23, 1999

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ANSCHUTZ
EXPLORATION CORPORATION
1221 LAMAR • SUITE 1100 • HOUSTON, TEXAS 77010 • 713-651-0281 • FAX 713-750-0257

April 24, 2000

State of Utah
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

CONFIDENTIAL

Attn: Carol Daniels

RE: Anschutz Ranch Deep 10-27
Summit County, Utah

Dear Ms. Daniels:

Please find the enclosed Well Completion Report, Entity Action Form, test data and DST reports for the above referenced well.

Should you need any additional information or have questions, please feel free to call me at (713) 750-0210.

Sincerely,

Anschutz Exploration Corporation

James Oursland
Engineering Mgr.

Enclosures

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DIVISION OF
OIL, GAS AND MINING

CONFIDENTIAL

ANSCHUTZ
EXPLORATION CORPORATION

555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

May 1, 2000

Via Federal Express

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 W. North Temple, Ste. 1210
Salt Lake City, UT 84114-5801
Attn: Ms. Carol Daniels

RE: *Anschutz Ranch Deep #10-27*
Summit County, Utah
API No. 43-043-30821
Directional Survey

Dear Ms. Daniels:

Enclosed please find a copy of the referenced report for your files. You advised that once you receive the directional survey our reporting for this well will be complete.

Please contact me at (303) 299-1344 with any questions.

Sincerely,

ANSCHUTZ EXPLORATION CORPORATION

Susan M. Balano
Operations Technician

SMB
Attachment

RECEIVED
MAY 02 2000
DIVISION OF
OIL, GAS AND MINING

Schlumberger

Anadrill — Survey Calculation Sheet

Company Anschutz
Well A. R. D. # 10-27
Field
Rig Norton # 52
Anadrill D.D. Glasscock/Campbell

CONFIDENTIAL

Tgt. Inc. 36.13
Mag. Decl. 13.64
Target TVD 15000
Target Az. 353.7
Tgt. Coor. 2436N 268W

Date	No.	DEPTH	INC.	AZM	C.L.	T.V.D.	V.S.	N/S	E/W	DLS	B./D.	BHA
Tie - In		9600	1.05	61.80		9596.44	-3.02	50.97 N	55.24 E			1
12-Dec	1	10009	1.8	21.6	409	10005.32	51.68	58.71 N	60.91 E	0.29	0.18	
	2	10469	1.9	41.3	460	10465.08	63.20	71.16 N	68.60 E	0.14	0.02	
	3	10919	2.5	56.5	450	10914.75	72.72	82.18 N	81.71 E	0.18	0.13	1
	4	10936	2.5	50.9	17	10931.74	73.09	82.62 N	82.30 E	1.44		
	5	10968	2.9	30.7	32	10963.70	74.11	83.76 N	83.26 E	3.20	1.25	
	6	11000	3.5	11.3	32	10995.65	75.69	85.41 N	83.86 E	3.84	1.88	1
12-Dec	7	11031	4.6	0.1	31	11026.58	77.83	87.58 N	84.05 E	4.35	3.55	
13-Dec	8	11062	5.1	349.0	31	11057.47	80.44	90.18 N	83.79 E	3.42	1.61	
	9	11093	6.2	339.9	31	11088.32	83.44	93.10 N	82.95 E	4.57	3.55	1
	10	11124	7.4	339.2	31	11119.10	86.99	96.54 N	81.67 E	3.88	3.87	
	11	11155	8.1	336.2	31	11149.81	91.01	100.40 N	80.08 E	2.61	2.26	
	12	11186	8.4	332.9	31	11180.49	95.21	104.42 N	78.17 E	1.81	0.97	1
13-Dec	13	11217	9.1	332.2	31	11211.13	99.61	108.60 N	75.99 E	2.28	2.26	
14-Dec	14	11248	9.8	331.5	31	11241.71	104.33	113.09 N	73.59 E	2.29	2.26	
	15	11279	10.5	331.4	31	11272.23	109.39	117.89 N	70.98 E	2.26	2.26	1
	16	11310	11.2	330.5	31	11302.67	114.77	122.99 N	68.14 E	2.32	2.26	
14-Dec	17	11342	11.6	330.0	32	11334.04	120.57	128.48 N	65.00 E	1.29	1.25	1
15-Dec	18	11373	12.2	328.8	31	11364.37	126.40	133.98 N	61.75 E	2.09	1.94	2
	19	11404	12.7	330.2	31	11394.65	132.49	139.74 N	58.36 E	1.88	1.61	
	20	11435	13.0	331.2	31	11424.87	138.84	145.75 N	54.99 E	1.20	0.97	
15-Dec	21	11466	13.6	332.2	31	11455.04	145.45	152.03 N	51.61 E	2.07	1.94	2
16-Dec	22	11496	14.2	330.8	30	11484.16	152.12	158.36 N	48.17 E	2.29	2.00	
	23	11528	14.5	329.7	32	11515.16	159.40	165.25 N	44.23 E	1.27	0.94	
	24	11559	14.9	327.7	31	11545.15	166.52	171.97 N	40.14 E	2.08	1.29	2
	25	11591	15.8	328.3	32	11576.00	174.16	179.15 N	35.65 E	2.86	2.81	
	26	11623	17.3	329.3	32	11606.68	182.43	186.95 N	30.94 E	4.77	4.69	
16-Dec	27	11654	19.2	333.6	31	11636.12	191.41	195.48 N	26.32 E	7.51	6.13	2
17-Dec	28	11684	19.6	336.9	30	11664.42	200.86	204.53 N	22.15 E	3.89	1.33	
	29	11716	20.0	339.9	32	11694.52	211.32	214.60 N	18.16 E	3.41	1.25	
	30	11747	20.8	341.8	31	11723.58	221.85	224.81 N	14.62 E	3.35	2.58	2
	31	11778	20.9	342.6	31	11752.55	232.66	235.32 N	11.26 E	0.97	0.32	
	32	11810	21.5	341.3	32	11782.39	243.99	246.32 N	7.66 E	2.38	1.88	
	33	11840	22.0	339.6	30	11810.25	254.81	256.79 N	3.94 E	2.68	1.67	2
	34	11871	22.8	337.4	31	11838.91	266.21	267.78 N	0.39 W	3.74	2.58	
17-Dec	35	11903	24.0	337.4	32	11868.28	278.40	279.51 N	5.28 W	3.75	3.75	2
18-Dec	36	11933	25.5	337.1	30	11895.52	290.45	291.10 N	10.13 W	5.02	5.00	3
	37	11963	27.0	336.8	30	11922.43	303.15	303.30 N	15.33 W	5.02	5.00	
19-Dec	38	11994	28.2	335.7	31	11949.90	316.85	316.45 N	21.12 W	4.21	3.87	3
20-Dec	39	12024	29.0	336.0	30	11976.24	330.52	329.55 N	26.99 W	2.71	2.67	4
	40	12054	30.2	334.7	30	12002.32	344.59	343.02 N	33.17 W	4.54	4.00	
	41	12086	31.5	333.5	32	12029.80	360.04	357.78 N	40.34 W	4.49	4.06	
20-Dec	42	12117	33.1	331.5	31	12056.00	375.48	372.46 N	48.00 W	6.21	5.16	4
21-Dec	43	12147	33.8	331.4	30	12081.03	390.79	386.99 N	55.90 W	2.34	2.33	
21-Dec	44	12178	34.0	331.5	31	12106.76	406.79	402.18 N	64.16 W	0.67	0.65	4
22-Dec	45	12209	34.4	334.1	31	12132.40	423.06	417.67 N	72.12 W	4.89	1.29	5
	46	12239	34.8	334.4	30	12157.09	439.13	433.02 N	79.52 W	1.45	1.33	
22-Dec	47	12270	34.8	333.8	31	12182.55	455.79	448.93 N	87.25 W	1.10		
23-Dec	48	12302	35.0	333.7	32	12208.80	473.00	465.35 N	95.35 W	0.65	0.63	5
	49	12333	35.9	333.6	31	12234.05	489.89	481.46 N	103.33 W	2.91	2.90	

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Anadrill Survey Calculation Sheet

Company Anschutz
Well A. R. D. # 10-27
Field
Rig Norton # 52
Anadrill D.D. Glasscock/Campbell

CONFIDENTIAL

Tgt. Inc. 36.13
Mag. Decl. 13.64
Target TVD 15000
Target Az. 353.7
Tgt. Coor. 2436N 268W

Date	No.	DEPTH	INC.	AZM	C.L.	T.V.D.	V.S.	N/S	E/W	DLS	B./D.	BHA
	50	12364	35.8	333.5	31	12259.18	506.94	497.72 N	111.42 W	0.37	-0.32	
	51	12396	35.7	333.6	32	12285.15	524.49	514.46 N	119.74 W	0.36	-0.31	5
	52	12427	35.9	333.1	31	12310.29	541.49	530.66 N	127.68 W	1.14	0.65	
23-Dec	53	12458	36.3	332.7	31	12335.34	558.57	546.92 N	136.20 W	1.50	1.29	
24-Dec	54	12490	36.3	333.2	32	12361.13	576.28	563.80 N	144.81 W	0.93		5
	55	12521	35.9	332.9	31	12386.17	593.37	580.08 N	153.09 W	1.41	-1.29	
	56	12551	36.4	333.4	30	12410.40	609.94	595.87 N	161.08 W	1.94	1.67	
24-Dec	57	12583	36.7	331.7	32	12436.11	627.72	612.78 N	169.87 W	3.30	0.94	5
25-Dec	58	12612	36.5	333.7	29	12459.39	643.86	628.14 N	177.80 W	4.17	-0.69	6
	59	12643	36.4	335.5	31	12484.32	661.26	644.77 N	185.70 W	3.46	-0.32	
	60	12674	36.3	336.9	31	12509.29	678.78	661.58 N	193.11 W	2.70	-0.32	
25-Dec	61	12705	36.4	337.7	31	12534.26	696.41	678.54 N	200.20 W	1.56	0.32	6
26-Dec	62	12736	36.4	338.1	31	12559.21	714.11	695.58 N	207.12 W	0.77		
	63	12768	36.4	338.4	32	12584.97	732.41	713.22 N	214.16 W	0.56		
	64	12799	36.5	339.4	31	12609.90	750.22	730.40 N	220.79 W	1.94	0.32	6
	65	12831	36.9	339.3	32	12635.56	768.74	748.29 N	227.54 W	1.26	1.25	
	66	12862	37.1	338.9	31	12660.32	786.80	765.72 N	234.19 W	1.01	0.65	
	67	12892	37.5	338.4	30	12684.18	804.35	782.66 N	240.81 W	1.67	1.33	6
26-Dec	68	12923	38.0	338.2	31	12708.69	822.65	800.29 N	247.83 W	1.66	1.61	
27-Dec	69	12954	38.5	338.7	31	12733.04	841.17	818.14 N	254.88 W	1.90	1.61	6
28-Dec	70	12986	38.4	339.8	32	12758.10	860.44	836.75 N	261.93 W	2.16	-0.31	7
	71	13017	37.5	340.9	31	12782.55	878.98	854.70 N	268.34 W	3.63	-2.90	
	72	13049	37.2	340.9	32	12807.98	897.91	873.04 N	274.69 W	0.94	-0.94	
28-Dec	73	13080	37.7	339.5	31	12832.59	916.24	890.78 N	281.08 W	3.18	1.61	7
1-Jan	74	13124	38.3	340.2	44	12867.27	942.54	916.21 N	290.41 W	1.68	1.36	8
2-Jan	75	13154	38.4	339.8	30	12890.79	960.63	933.70 N	296.77 W	0.89	0.33	
	76	13186	38.2	340.6	32	12915.91	979.91	952.36 N	303.49 W	1.67	-0.62	
	77	13217	38.0	342.1	31	12940.30	998.60	970.48 N	309.61 W	3.05	-0.65	
2-Jan	78	13247	37.5	343.2	30	12964.02	1016.62	988.01 N	315.09 W	2.80	-1.67	8
4-Jan	79	13278	37.1	343.0	31	12988.68	1035.09	1005.99 N	320.55 W	1.35	-1.29	10
5-Jan	80	13309	37.0	344.1	31	13013.42	1053.47	1023.90 N	325.84 W	2.16	-0.32	
	81	13340	36.9	346.2	31	13038.20	1071.90	1041.91 N	330.61 W	4.08	-0.32	
	82	13369	37.1	346.8	29	13061.36	1089.21	1058.88 N	334.69 W	1.42	0.69	
5-Jan	83	13399	37.6	346.9	30	13085.21	1107.28	1076.60 N	338.83 W	1.68	1.67	10
6-Jan	84	13431	37.2	347.5	32	13110.63	1126.59	1095.56 N	343.13 W	1.69	-1.25	11
6-Jan	85	13461	37.2	348.7	30	13134.53	1144.64	1113.30 N	346.87 W	2.42		
7-Jan	86	13491	37.9	348.3	30	13158.31	1162.85	1131.22 N	350.52 W	2.47	2.33	
7-Jan	87	13521	38.4	348.8	30	13181.90	1181.31	1149.38 N	354.20 W	1.96	1.67	11
8-Jan	88	13552	38.8	348.8	31	13206.13	1200.58	1168.35 N	357.95 W	1.29	1.29	12
9-Jan	89	13584	39.1	347.3	32	13231.02	1220.60	1188.03 N	362.12 W	3.09	0.94	
10-Jan	90	13615	39.8	348.9	31	13254.95	1240.20	1207.31 N	366.18 W	3.98	2.26	12
	91	13644	39.8	349.3	29	13277.23	1258.70	1225.53 N	369.69 W	0.88		13
	92	13676	39.8	349.5	32	13301.82	1279.13	1245.67 N	373.46 W	0.40		
10-Jan	93	13707	40.1	348.9	31	13325.58	1298.97	1265.22 N	377.19 W	1.58	0.97	13
11-Jan	94	13737	40.8	348.9	30	13348.41	1318.37	1284.32 N	380.93 W	2.33	2.33	14
11-Jan	95	13768	41.1	349.3	31	13371.83	1338.62	1304.27 N	384.78 W	1.29	0.97	
12-Jan	96	13797	41.2	349.1	29	13393.66	1357.64	1323.02 N	388.35 W	0.57	0.34	
	97	13829	41.3	348.6	32	13417.72	1378.67	1343.72 N	392.43 W	1.08	0.31	
	98	13860	41.5	348.8	31	13440.98	1399.09	1363.82 N	396.45 W	0.77	0.65	
12-Jan	99	13892	41.9	348.9	32	13464.87	1420.30	1384.71 N	400.57 W	1.27	1.25	14

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Anadrill Survey Calculation Sheet

Company Anschutz
Well A. R. D. # 10-27
Field
Rig Norton # 52
Anadrill D.D. Glasscock/Campbell

CONFIDENTIAL

Tgt. Inc. 36.13
Mag. Decl. 13.64
Target TVD 15000
Target Az. 353.7
Tgt. Coor. 2436N 268W

Date	No.	DEPTH	INC.	AZM	C.L.	T.V.D.	V.S.	N/S	E/W	DLS	B./D.	BHA
22-Jan	100	13973	42.6	349.2	81	13524.83	1474.58	1438.18 N	410.91 W	0.90	0.86	15
22-Jan	101	14002	42.5	349.7	29	13546.19	1494.14	1457.45 N	414.60 W	1.22	-0.34	
23-Jan	102	14033	42.3	349.5	31	13569.08	1514.99	1478.01 N	418.27 W	0.78	-0.65	15
24-Jan	103	14064	42.0	350.1	31	13592.07	1535.74	1498.49 N	421.96 W	1.62	-0.97	16
	104	14095	41.9	350.8	31	13615.12	1556.43	1518.92 N	425.40 W	1.54	-0.32	
24-Jan	105	14127	41.9	351.4	32	13638.94	1577.78	1540.04 N	428.70 W	1.28		16
25-Jan	106	14159	42.2	350.9	32	13662.70	1599.19	1561.21 N	432.00 W	1.41	0.94	17
	107	14190	41.8	350.7	31	13685.74	1619.91	1581.69 N	435.32 W	1.36	-1.29	
25-Jan	108	14222	42.2	350.2	32	13709.52	1641.29	1602.81 N	438.87 W	1.63	1.25	
26-Jan	109	14253	41.6	351.1	31	13732.59	1661.96	1623.23 N	442.23 W	2.74	-1.94	
26-Jan	110	14285	41.0	350.3	32	13756.63	1683.05	1644.08 N	445.64 W	2.50	-1.88	17
27-Jan	111	14316	41.2	349.7	31	13779.99	1703.39	1664.14 N	449.18 W	1.43	0.65	18
	112	14347	41.3	349.9	31	13803.30	1723.78	1684.26 N	452.80 W	0.53	0.32	
	113	14376	41.3	350.3	29	13825.09	1742.88	1703.12 N	456.09 W	0.91		
27-Jan	114	14407	41.8	350.0	31	13848.29	1763.40	1723.37 N	459.61 W	1.74	1.61	18
28-Jan	115	14439	41.8	350.3	32	13872.14	1784.69	1744.39 N	463.26 W	0.62		19
29-Jan	116	14470	41.3	350.4	31	13895.34	1805.22	1764.66 N	466.71 W	1.63	-1.61	
29-Jan	117	14500	39.6	352.0	30	13918.17	1824.66	1783.89 N	469.69 W	6.64	-5.67	19
30-Jan	118	14532	38.6	353.1	32	13943.00	1844.84	1803.90 N	472.31 W	3.80	-3.13	20
	119	14563	37.6	353.8	31	13967.40	1863.96	1822.90 N	474.49 W	3.51	-3.23	
30-Jan	120	14593	38.3	354.6	30	13991.06	1882.41	1841.26 N	476.35 W	2.85	2.33	
1-Feb	121	14624	38.0	354.6	31	14015.43	1901.56	1860.32 N	478.16 W	0.97	-0.97	
1-Feb	122	14654	38.0	354.3	30	14039.07	1920.03	1878.71 N	479.94 W	0.62		20
3-Feb	123	14686	37.6	354.4	32	14064.36	1939.64	1898.22 N	481.87 W	1.26	-1.25	21
	124	14717	36.9	354.6	31	14089.04	1958.40	1916.90 N	483.67 W	2.29	-2.26	
	125	14748	36.6	354.2	31	14113.87	1976.95	1935.36 N	485.48 W	1.24	-0.97	
3-Feb	126	14780	36.5	352.8	32	14139.58	1996.00	1954.29 N	487.64 W	2.62	-0.31	21
4-Feb	127	14814	36.8	351.7	34	14166.86	2016.29	1974.40 N	490.38 W	2.12	0.88	22
4-Feb	128	14845	36.5	351.8	31	14191.73	2034.78	1992.72 N	493.03 W	0.99	-0.97	
5-Feb	129	14876	36.0	351.5	31	14216.73	2053.10	2010.85 N	495.69 W	1.71	-1.61	
	130	14907	36.9	350.8	31	14241.67	2071.50	2029.05 N	498.53 W	3.20	2.90	
	131	14939	37.0	351.0	32	14267.24	2090.71	2048.04 N	501.57 W	0.49	0.31	
5-Feb	132	14969	37.8	350.5	30	14291.07	2108.91	2066.03 N	504.50 W	2.85	2.67	22
7-Feb	133	15005	39.3	349.9	36	14319.23	2131.30	2088.13 N	508.32 W	4.29	4.17	23
	134	15037	40.2	348.6	32	14343.83	2151.70	2108.24 N	512.14 W	3.83	2.81	
	135	15068	40.8	348.4	31	14367.40	2171.75	2127.96 N	516.15 W	1.98	1.94	
7-Feb	136	15099	40.5	347.8	31	14390.92	2191.86	2147.73 N	520.32 W	1.52	-0.87	23
8-Feb	137	15131	40.2	347.5	32	14415.30	2212.46	2167.97 N	524.74 W	1.28	-1.16	
	138	15161	39.8	347.5	30	14438.29	2231.62	2186.79 N	528.90 W	1.20	-1.20	
	139	15192	39.6	347.4	31	14462.14	2251.31	2206.12 N	533.21 W	0.68	-0.65	23
	140	15222	39.0	347.6	30	14485.36	2270.20	2224.67 N	537.32 W	2.04	-2.00	
8-Feb	141	15253	38.4	347.1	31	14509.55	2289.46	2243.58 N	541.56 W	2.18	-1.94	23
9-Feb	142	15289	38.2	346.6	36	14537.80	2311.61	2265.31 N	546.64 W	1.02	-0.56	24
	143	15320	37.6	346.1	31	14562.27	2330.50	2283.81 N	551.13 W	2.17	-1.94	
	144	15352	37.2	345.7	32	14587.69	2349.75	2302.66 N	555.87 W	1.46	-1.25	
	145	15383	36.9	345.5	31	14612.43	2368.25	2320.75 N	560.51 W	1.04	-0.97	24
	146	15414	36.6	345.4	31	14637.27	2386.60	2338.71 N	565.17 W	0.99	-0.97	
	147	15446	36.3	344.8	32	14663.01	2405.40	2357.08 N	570.06 W	1.46	-0.94	
9-Feb	148	15477	36.0	344.4	31	14688.04	2423.46	2374.71 N	574.92 W	1.23	-0.97	24
10-Feb	149	15509	35.4	345.1	32	14714.03	2441.90	2392.73 N	579.83 W	2.27	-1.88	

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Rig Norton # 52
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Tgt. Inc. 36.13
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Date	No.	DEPTH	INC.	AZM	C.L.	T.V.D.	V.S.	N/S	E/W	DLS	B./D.	BHA
10-Feb	150	15540	35.2	344.5	31	14739.33	2459.60	2410.01 N	584.52 W	1.29	-0.65	24
11-Feb	151	15575	35.4	342.8	35	14767.89	2479.51	2429.42 N	590.22 W	2.86	0.57	25
	152	15607	36.1	342.2	32	14793.86	2497.86	2447.25 N	595.84 W	2.45	2.19	
	153	15638	35.7	341.5	31	14818.97	2515.64	2464.52 N	601.50 W	1.85	-1.29	
	154	15668	35.4	341.5	30	14843.38	2532.69	2481.06 N	607.04 W	1.00	-1.00	25
	155	15700	35.4	341.5	32	14869.47	2550.81	2498.64 N	612.92 W			
	156	15732	34.8	340.5	32	14895.65	2568.76	2516.04 N	618.91 W	2.60	-1.88	
	157	15763	35.9	340.2	31	14920.93	2586.21	2532.93 N	624.94 W	3.59	3.55	25
11-Feb	158	15794	37.2	339.6	31	14945.84	2604.13	2550.26 N	631.28 W	4.26	4.10	
12-Feb	159	15826	37.0	338.8	32	14971.36	2622.82	2568.30 N	638.14 W	1.54	-0.47	
12-Feb	160	15857	35.9	338.3	31	14996.30	2640.60	2585.45 N	644.87 W	3.74	-3.61	25
	161	15900	35.4	338.0	43	15031.24	2664.74	2608.71 N	654.20 W	1.23	-1.16	

RECEIVED
MAY 0 2 2000
DIVISION OF
OIL, GAS AND MINING

Application for Permit to Drill
Anschutz Exploration Corporation
Anschutz Ranch Deep 10-27
1433' FSL and 1228' FEL (surface location)
2200' FNL and 2550' FWL (BHL @ TD))
Sec. 27, T4N – R7E
Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

1. Estimated Tops/Geologic Markers

The estimated tops of important geologic markers are as follows:

Formation	TVD	MD	Subsea
Wasatch	Surface		
Gannet	3,280'	3,280'	+4,334'
Salt	5,770'	5,770'	+1,844'
Twin Creek	5,820'	5,820'	+1,794'
Nugget	7,465'	7,465'	+ 149'
Ankarah	8,635'	8,635'	- 1,021'
Thaynes	9,635'	9,635'	- 2,021'
Woodside	11,075'	11,075'	- 3,461'
Dinwoody	11,625'	11,625'	- 4,011'
Phosphoria	11,885'	11,885'	- 4,241'
Weber	12,535'	12,535'	- 4,921'
Mission Canyon	13,744'	13,935'	- 6,130'
Lodgepole	14,714'	15,235'	- 7,100'
Darby	15,414'	16,035'	- 7,800'
Bighorn	16,064'	16,685'	- 8,450'
TD	16,300'	16,950'	- 8,680'

2. Estimated Depths and Names of Anticipated Water, Oil, Gas or Other Minerals Bearing Formations.

Substance	Formation	MD
Sour Gas/Condensate	Phosphoria/Weber	11,885'-13,744' (TVD)

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Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

3. Well Control Equipment & Testing Procedures

Anschutz's minimum specifications for pressure control equipment are as follows:
Ram Type: Hydraulic double, 5000 psi w.p.

Anschutz will comply with all requirements pertaining to well control as listed in the Rule R649-3-7 of the Utah Division of Oil, Gas & Mining.

The size and rating of the BOP stack is shown on the attached diagram.

4. Casing Program

The proposed casing program will be as follows:

Purpose	Depth (MD)	Hole Size	O.D.	Weight	Grade	Type
Surface	0-1500'	17-1/2"	13-3/8"	54.50#	J55	BTC
Intermed.	0-9700'	12-1/4"	9-5/8"	47.0#/53#	L80	BTC
Product.	0-3500'	8-1/2"	7-5/8"	39.0#	L80	SLH
Product.	3500-14,000'	8-1/2"	7"	32.0#	L80	SLH
Liner	13,700-TD	6"	4-1/2"	13.5#	L80	SLH

Casing design subject to revision based on geologic conditions encountered.

5. Cement Program

13-3/8" Surface	Type and Amount
0-1500'	± 612 sx Prem Lite lead slurry
	± 595 sx Class G tail slurry
	100 sk Class G topout
	Proposed TOC – Surface

Application for Permit to Drill
Anschutz Exploration Corporation
Anschutz Ranch Deep 10-27
1433' FSL and 1228' FEL (surface location)
2200' FNL and 2550' FWL (BHL @ TD))
Sec. 27, T4N – R7E
Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

Intermediate	Type and Amount	
9-5/8"	Stage 1	Lead +/- 495 sks Cl G LW
		Tail +/- 395 sks Cl G
	Stage 2	± 405 sks 35:65 Poz:G – was prem. l. le
	Proposed TOC 4500' same as prev.	

Production	Type and Amount
7-5/8" & 7"	± 338 sks Class G + silica flour
	Proposed TOC ± 11,000'

Liner	Type and Amount
4-1/2"	± 250 sks Class G + silica flour
	Proposed cement to liner top

Note: Actual volumes to be calculated from caliper log.

6. Drilling Fluids

The proposed circulating mediums to be employed in drilling are as follows:

Interval	Mud Type	Mud Wt.	Visc.	F/L
0-1500'	Spud Mud	8.4-9.0	40-60	N/C
1500-5700'	LSND	8.6-9.1	40-60	<10 cc's
5700-9700'	Saturated Salt	10.0-10.5	40-60	<10 cc's
9700'-T.D.	LSND	9.0-9.5	36-45	<10 cc's

Application for Permit to Drill
Anschutz Exploration Corporation
Anschutz Ranch Deep 10-27
1433' FSL and 1228' FEL (surface location)
2200' FNL and 2550' FWL (BHL @ TD))
Sec. 27, T4N – R7E
Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

7. Testing, Logging and Coring

The anticipated type and amount of testing, logging and coring are as follows:

a. The logging program will consist of the following:

DIL-SP-GR	Surface to T.D.
BHC Sonic-GR	Surface to T.D.
Structural Dipmeter	8200' to T.D.
Dipole Sonic-GR	8200' to T.D.
High Resolution LDT-APS	8200' to T.D.
Formation MicroImager-GR	Selected Intervals

b. It is anticipated that two (2) 60' cores will be cut above the Woodside in sweet formations.

8. Anticipated Pressures and H_2S

The maximum anticipated bottom hole pressure is 7250 psi. The Hydrogen Sulfide concentration found in the Phosphoria and Weber formations is estimated to be 15%.

9. Water Source

The water required for drilling operations will be provided from a private source as well as water provided by a private source.

Application for Permit to Drill
Anschutz Exploration Corporation
Anschutz Ranch Deep 10-27
1433' FSL and 1228' FEL (surface location)
2200' FNL and 2550' FWL (BHL @ TD))
Sec. 27, T4N – R7E
Summit County, Utah

CONFIDENTIAL – TIGHT HOLE

DRILLING PROGRAM

10. Other Information

a. It is anticipated that the drilling of this well will take approximately 150 days.

b. A closed loop mud system will be used in place of a reserve pit.

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: Entity No. 12576

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: N/A

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER _____

8. WELL NAME and NUMBER: Anschutz Ranch Deep #10-27

2. NAME OF OPERATOR: THE ANSCHUTZ CORPORATION

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St., #2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Wildcat

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1433' FSL and 1228' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Please change your records to show the correct Operator name for this well.

Previous Operator Name:

ANSCHUTZ EXPLORATION CORPORATION
555 17th St., Ste. 2400
Denver, CO 80202
State of Utah Account No. N7940

Correct Operator Name:

THE ANSCHUTZ CORPORATION
555 17th St., Ste. 2400
Denver, CO 80202
State of Utah Account No. N0060

Please note The Anschutz Corporation as operator effective April 2000.

Eric Root
Rocky Mt. Engineering Mgr.

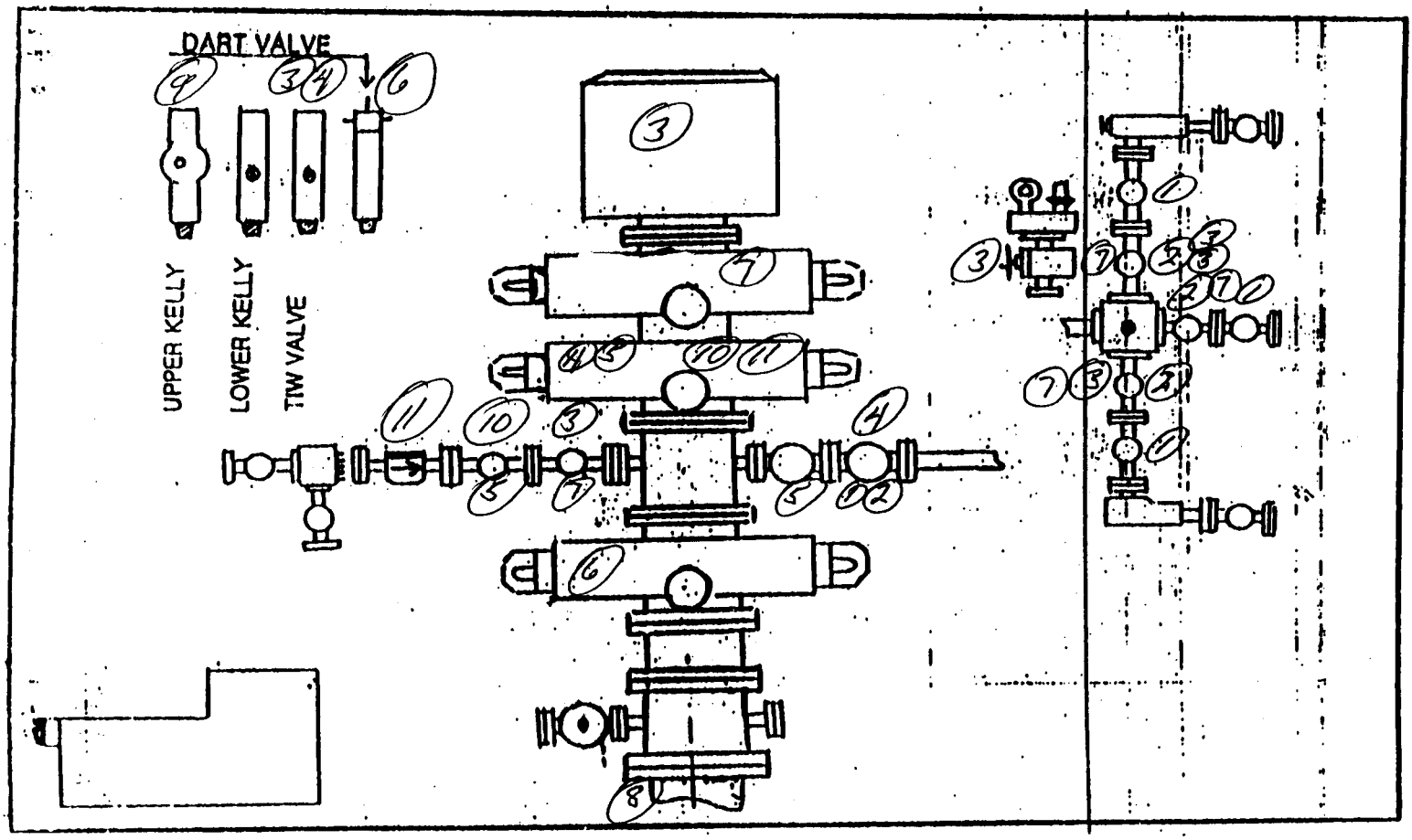
Hal B. Koerner, Jr.
General Manager, Drilling & Production

NAME (PLEASE PRINT) Susan M. Miller TITLE Operations Technician

SIGNATURE _____ DATE 11/9/00

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)


DART VALVE
UPPER KELLY
LOWER KELLY
TIW VALVE

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING		
1. GLH		4-KAS
2. CDW		5-[illegible]
3. JLT		6-FILE

Enter date after each listed item is completed

X Change of Operator (Well Sold) Designation of Agent

Operator Name Change (Only) Merger

The operator of the well(s) listed below has changed, effective: **4-1-2000**

FROM: (Old Operator):	**TO:** (New Operator):
ANSCHUTZ EXPLORATION CORPORATION	ANSCHUTZ CORPORATION, THE
Address: 555 17TH STREET STE 2400	Address: 555 17TH STREET STE 2400
DENVER, CO 80202	DENVER, CO 80202
Phone: 1-(303)-298-1000	Phone: 1-(303)-298-1000
Account No. N7940	Account No. N0060

CA No. **Unit:**

WELL(S)

NAME	API NO.	ENTITY NO.	SEC. TWN RNG	LEASE TYPE	WELL TYPE	WELL STATUS
ANSCHUTZ RANCH DEEP 10-27	43-043-30321	12576	27-04N-07E	FEE	GW	P

OPERATOR CHANGES DOCUMENTATION

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 11/13/2000
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 11/13/2000
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database on:** 11/13/2000
4. Is the new operator registered in the State of Utah: YES Business Number: 580804-0143
5. If **NO**, the operator was contacted contacted on: _____
6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the (merger, name change, or operator change for all wells listed on Federal or Indian leases on: N/A
7. **Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: N/A

8. **Federal and Indian Communization Agreements ("CA"):** The BLM or the BIA has approved the operator change for all wells listed involved in a CA on: N/A

9. **Underground Injection Control ("UIC") Prog:** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 11/13/2000
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 11/13/2000
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: 11/13/2000

STATE BOND VERIFICATION:

1. State well(s) covered by Bond No.: N/A

FEE WELLS - BOND VERIFICATION/LEASE INTEREST OWNER NOTIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed has furnished a bond: YES
2. The **FORMER** operator has requested a release of liability from their bond on: NO
   The Division sent response by letter on: N/A
3. (R649-2-10) The **FORMER** operator of the Fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 11/13/2000

FILMING:

1. All attachments to this form have been **MICROFILMED** on: 2.26.01

FILING:

1. **ORIGINALS/COPIES** of all attachments pertaining to each individual well have been filled in each well file on: _____

COMMENTS:

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: n/a

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER _____

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St., Ste. 2400 CITY Denver STATE Co ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1433' FSL AND 1228' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
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Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation requests approval to plug and abandon the subject well per the attached procedure. The well has watered out and is no longer productive.

RECEIVED
MAY 19 2004
DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) James Oursland TITLE Operations Manager

SIGNATURE James Oursland DATE 5-17-04

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS AND MINING
DATE: 5/25/04
BY: [signature]
*See Conditions of Approval (attached)

COPY SENT TO OPERATOR
Date: 5-26-04
Initials: CHD

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	n/a
7. UNIT or CA AGREEMENT NAME:	n/a
8. WELL NAME and NUMBER:	Anschutz Ranch Deep 10-27
9. API NUMBER:	4304330321
10. FIELD AND POOL, OR WILDCAT:	Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER _____

2. NAME OF OPERATOR: Anschutz Exploration Corporation

3. ADDRESS OF OPERATOR: 555 17th St., Ste. 2400 CITY Denver STATE Co ZIP 80202 PHONE NUMBER: (303) 298-1000

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1433' FSL AND 1228' FEL COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation requests approval to temporarily plug and abandon the subject well per the attached procedure. The well was watered out and no longer productive.

At a later date, an application may be made to convert this well for saltwater disposal.

COPY SENT TO OPERATOR
Date: 6-2-04
Init: CHD

NAME (PLEASE PRINT) James Oursland TITLE Operations Manager

SIGNATURE James Oursland DATE 5-27-04

(This space for State use only)

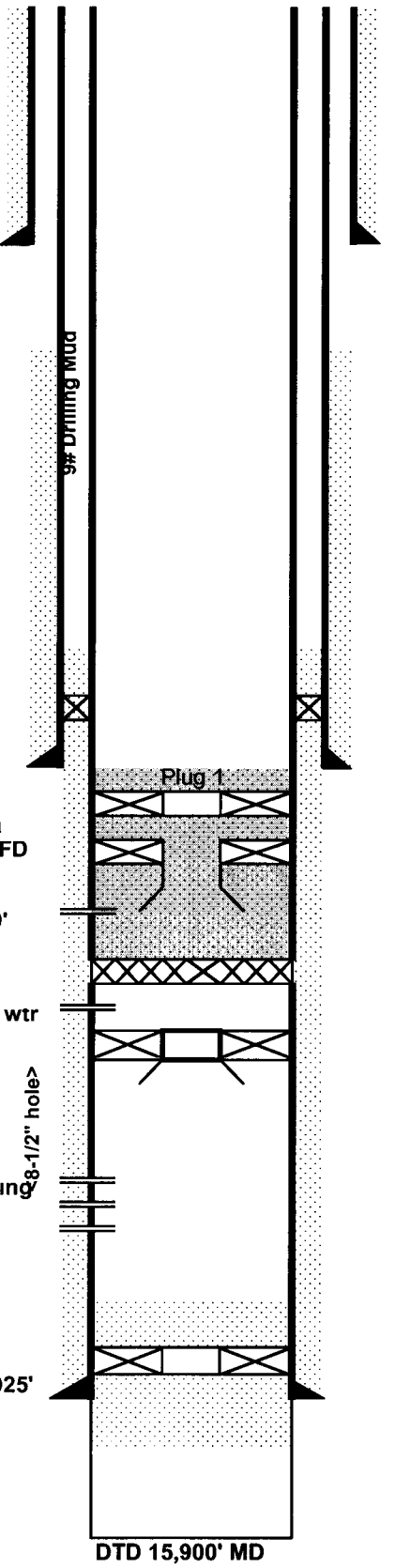
APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS AND MINING
DATE: 6/2/04
BY: [signature]

(See Instructions on Reverse Side)

(5/2000)

RECEIVED
JUN 01 2004
DIV. OF OIL, GAS & MINING

ANSCHUTZ EXPLORATION CORPORATION WELLBORE SCHEMATIC	
SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27 COUNTY, STATE: Summit, Utah
TD: 13,925'	GROUND ELEVATION: 7,566' KB ELEVATION: 7,593'



9-5/8" CIBP @ 200'

13-3/8" @ 1500'

Calc TOC 4,500'

DV Tool @ 6,100'

TOL 9,135'

9-5/8" @ 9,626'

9/12/02 Perforated Upper Phosphoria
12,067-092', acidized, tested 16 MMCFD

9/9/02 Set Schlumber TTCR @ 12,330'
dump bailed 10'+ of cement on plug

7/15/02 perf'd Lower Phophoria
12,642-662', acidized, tested gas and wtr

3/10-11/2000 Perforations
12,842' - 866', 12,910' - 940' and
13,050 - 13,080', 1 spf, 0 degree phasing
2-1/8" PEJ, 14.3g charges

Production Liner
7", 32#, L80 Hydril SLX
(Cmt'd to TOL, returns circulated off of TOL.)

13,925'

DTD 15,900' MD

Cement Calculations:

7" 32# L80 0.20255 ft^3 capacity

(20 sks)(1.18 ft^3/sk) / 0.2026 ft^3/ft = 116.5 ft

Plug 1 - 80 sks "G" cmt below CR
20 sks "G" cmt on CR

Baker ZXP Liner Top Pkr w/7.5 x 12'
Tie-back ext., CMC liner hanger

CR @ 11,650'

Baker Model "D" Packer @ 11,700'
WLREG @ 11,758'

Tubing String
2-7/8", L80, 7.7#, Vam Ace
(See tbg. detail for specifics)

Baker Model "D" Isolation Pkr @ 12,700'
WLREG @ 12,729.5
7/15/02 Set tubing CIBP in tailpipe assembly capped w/ 10' cmt

Baker Cement Retainer
Set @ 13,920', pumped 100 sks
Class G below retainer, left +/- 1 Bbl
on top of retainer

ARD 10-27 P&A PROCEDURE

1. File proper sundry notices and notify proper authorities. Install and test anchors.
2. Install BPV.
3. RU Safety. MI Rig and support equipment.
4. NU BOPE and test.
5. Pull BPV.
6. Fill hole with 2% KCL water.
7. RU laydown machine. Have Vam PTS personnel on location to visually inspect tubing.
8. RU spooler unit to spool SS control lines. POOH laying down 2.875'', 7.7#, L-80 production string. Install thread protectors on box and pin ends. Haul to Tuboscope yard in Evanston for inspection and storage. Send SSSV and methanol injection mandrel to Camco-Houston, Tx. Seal assembly to Baker Oil Tools in Rock Springs.
9. Maintain well control by pumping ¼ to ½ BPM down annulus while POOH.
10. RU wireline. RIH w / 5.969'' gage ring to 11650'. POH. PU 7'', 32# cement retainer. RIH and set @ 11650'. POOH. RD & Release wireline.
11. PU stinger. RIH on 2.875'' work string to CICR.
12. Sting into retainer. Test annulus to 1000#. Establish injection rate.
13. RU cementers. Test lines to 5000#. Pump 100 sx. Class 'G' cement plug. Pump 80 sx. Below retainer, sting out and spot remaining 20 sx. On top of retainer. LD 6 jts. Tbg. and reverse out.
14. POOH w/ tubing.
15. RIH w/ 2000' kill string. ND BOP's, NU Tree.
16. RD and release WO rig.

State of Utah

Department of
Natural Resources

ROBERT L. MORGAN
Executive Director

Division of
Oil, Gas & Mining

LOWELL P. BRAXTON
Division Director

OLENE S. WALKER
Governor

GAYLE F. McKEACHNIE
Lieutenant Governor

CONDITIONS OF APPROVAL TO PLUG AND ABANDON WELL

Well Name and Number:	Anschutz Ranch Deep 10-27
API Number:	43-043-30321
Operator:	Anschutz Exploration Corporation
Reference Document:	Original Sundry Notice Dated May 17, 2004 Received by DOGM on May 19, 2004

Approval Conditions:

1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338.

2. CHANGE PLUG #3 to +/-5,750'-5,650' with CICR +/- 5,700' and place squeeze perfs @ +/- 5,750'; pump 25 sacks below retainer and spot 10 sacks above to protect salt section, isolate Jurassic section and adequately prevent migration of formation fluids R649-3-24.3.6.

3. CHANGE PLUG #4 to +/-3,250'-3,150' with CICR @ +/-3,200' and place squeeze perfs @ +/-3,250'; pump 85 sacks below retainer and spot 10 sacks above to isolate Lower Cretaceous and adequately prevent migration of formation fluids R649-3-24.3.6.

4. CHANGE PLUG #5 to +/- 1,550' – 1,450' with CICR @ +/- 1,500' and place squeeze perfs @ +/- 1,550'; pump 70 sks below retainer and spot 10 sacks above to protect base of surface casing R649-3-24.3.5.

5. All intervals between plugs shall be filled with noncorrosive fluid.

6. Surface reclamation shall be done in accordance with R649-3-34 – Well Site Restoration.

7. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.

8. If there are any changes to the plugging procedure or the wellbore configuration, notify Dustin Doucet at 801-538-5281 prior to continuing with the procedure.

9. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.

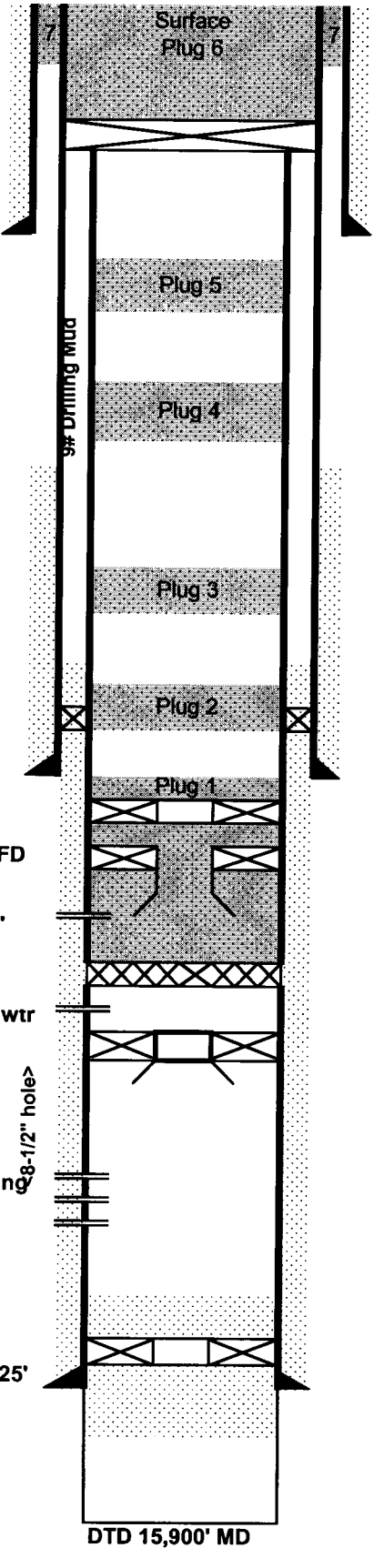
Dustin K. Doucet
Petroleum Engineer

May 25, 2004
Date

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

Utah!
Where ideas connect™

ANSCHUTZ EXPLORATION CORPORATION WELLBORE SCHEMATIC (PROPOSED P&A)	
SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27 COUNTY, STATE: Summit, Utah
TD: 13,925'	GROUND ELEVATION: 7,566' KB ELEVATION: 7,593'



Cement Calculations:
9-5/8" 43.5# L80 BTC 0.41806 ft^3 capacity
7" 32# L80 0.20255 ft^3 capacity

(20 sks)(1.18 ft^3/sk) / 0.2026 ft^3/ft = 116.5 ft
(100sks)(1.18ft^3/sk)/0.41806 ft^3/ft = 282.3 ft

7: 9-5/8" x 13-3/8" annulus 30 sks "G" cmt @ 100'

6: Surface Plug 71 sks "G" cmt @ 200'

Plug 5 - 20 sks "G" cmt (1535' - 1650')

Plug 4 - 20 sks "G" cmt (4035' - 4150')

Plug 3 - 20 sks "G" cmt (6535' - 6650')

Plug 2 - 20 sks "G" cmt (9035' - 9150')

Plug 1 - 80 sks "G" cmt below CR
20 sks "G" cmt on CR

Baker ZXP Liner Top Pkr w/7.5 x 12' Tie-back ext., CMC liner hanger

CR @ 11,650'

Baker Model "D" Packer @ 11,700'
WLREG @ 11,758'

Tubing String
2-7/8", L80, 7.7#, Vam Ace
(See tbg. detail for specifics)

Baker Model "D" Isolation Pkr @ 12,700'
WLREG @ 12,729.5
7/15/02 Set tubing CIBP in tailpipe assembly capped w/ 10' cmt

Baker Cement Retainer
Set @ 13,920', pumped 100 sks Class G below retainer, left +/- 1 Bbl on top of retainer

9/12/02 Perforated Upper Phosphoria 12,067-092', acidized, tested 16 MMCFD

9/9/02 Set Schlumber TTCR @ 12,330' dump bailed 10'+ of cement on plug

7/15/02 perf'd Lower Phophoria 12,642-662', acidized, tested gas and wtr

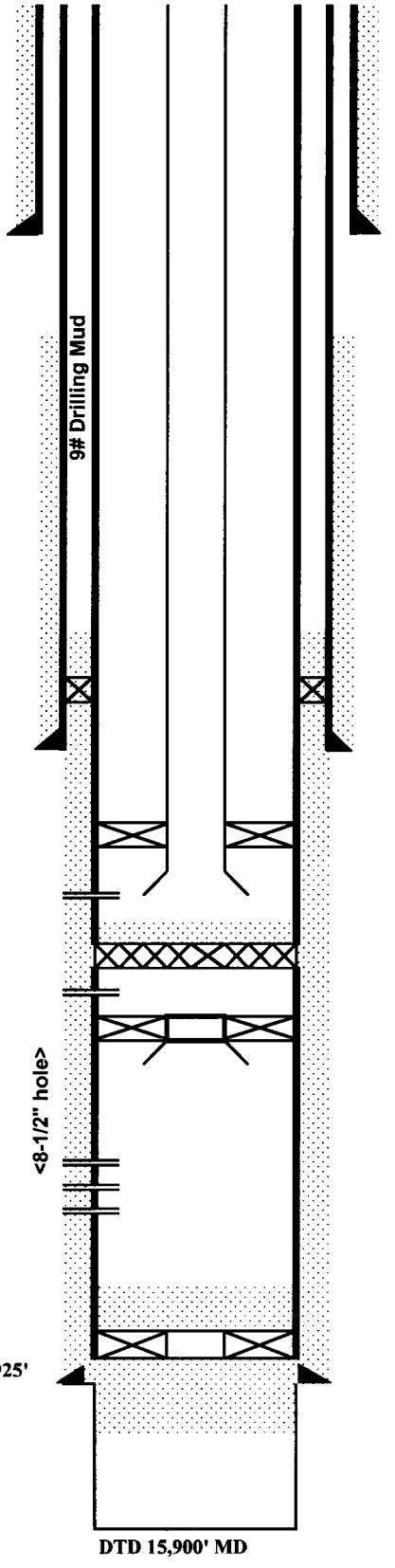
3/10-11/2000 Perforations
12,842' - 866', 12,910' - 940' and 13,050 - 13,080', 1 spf, 0 degree phasing 2-1/8" PEJ, 14.3g charges

Production Liner
7", 32#, L80 Hydril SLX
(Cmt'd to TOL, returns circulated off of TOL.)

ARD 10-27 P&A PROCEDURE

1. File proper sundry notices and notify proper authorities. Install and test anchors.
2. Install BPV.
3. RU Safety. MI Rig and support equipment.
4. NU BOPE and test.
5. Pull BPV.
6. Fill hole with 2% KCL water.
7. RU laydown machine. Have Vam PTS personnel on location to visually inspect tubing.
8. RU spooler unit to spool SS control lines. POOH laying down 2.875", 7.7#, L-80 production string. Install thread protectors on box and pin ends. Haul to Tuboscope yard in Evanston for inspection and storage. Send SSSV and methanol injection mandrel to Camco-Houston, Tx. Seal assembly to Baker Oil Tools in Rock Springs.
9. Maintain well control by pumping ¼ to ½ BPM down annulus while POOH.
10. RU wireline. RIH w / 5.969" gage ring to 11650'. POH. PU 7", 32# cement retainer. RIH and set @ 11650'. POOH. RD & Release wireline.
11. PU stinger. RIH on 2.875" work string to CICR.
12. Mix 550 bbls. 9.3# mud. Circulate 2% KCL out with 9.3# mud. (Hole volume 468 bbls.)
13. Sting into retainer. Test annulus to 1000#. Establish injection rate.
14. RU cementers. Test lines to 5000#. Pump 100 sx. Class 'G' cement plug. Pump 80 sx. Below retainer, sting out and spot remaining 20 sx. On top of retainer. LD 6 jts. Tbg. and reverse out.
15. POOH to 9150'. Pump 20 sx. Class 'G' cement plug. Pull 6 jts. Tbg. Reverse out.
16. POOH to 6650'. Pump 20 sx. class 'G' cement plug. Pull 6 jts. Tbg. Reverse out.
17. POOH to 4150'. Pump 20 sx. class 'G' cement plug. Pull 6 jts. Tbg. Reverse out.
18. POOH to 1650'. Pump 20sx. class 'G' cement plug. Pull 6 jts. Tbg. Reverse out. LD remaining work string.
19. RU wireline. RIH w / 6.5" gage ring to 200'.POOH. RIH to 200' w / 7.625", 39# jet cutter. Cut off 7.625" csg. POOH. RD and release wireline.
20. ND BOPE. ND 7-1/16"x9-5/8" csg. head. Ru csg.equipment and LD 200' 7.625" csg.
21. RU wireline. RIH w / 8.379" gage ring. POOH. PU 9.625", 53.5# CIBP. RIH and set @ 190'. POOH. RD and release wireline.
22. RIH w / 190' 2.875" tbg. RU cementers. Pump 66 sx. class 'G' cement plug w / 1% CaCl. RD and release cementers. POOH LD 190' 2.875" tbg.
23. RD rig and support equipment.
24. Dig out csg. head. Cut off 6' below ground level. RIH w/ 1" and circulate 30 sks of cement in 9-5/8" x 13-3/8" annulus.
25. Weld plate on csg. stub w / weep hole. Weld following information on plate:
    Anschutz Corp. ARD 10-27 Sec. 27 T4N R7E Summit Co., Utah. Date plugged.
25. Reclaim and reseed location. Notify proper authorities.

ANSCHUTZ EXPLORATION CORPORATION WELLBORE SCHEMATIC (CURRENT)	
SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27 COUNTY, STATE: Summit, Utah
TD: 13,925'	GROUND ELEVATION: 7,566' KB ELEVATION: 7,593'



Surface Casing
0 - 45', 13-3/8", 68#, N80, BTC
45' - 1,500', 13-3/8", 54.5#, K55, BTC
(cmt'd to surface, 120 bbls cmt ret.)

1500'

Calc TOC 4,500'

Intermediate Casing
0 - 69', 9-5/8", 53.50#, L80, BTC
69' - 4,754', 9-5/8", 43.5#, L80, BTC
4,754' - 6,021', 9-5/8". 53.50#, L80, BTC
6,021' - 9,626', 9-5/8" 43.50#, L80, BTC
(DV toll at 6,100') cmt'd in 2 stages
Calc TOC 4,500'

DV Tool @ 6,100'

Tieback String
0' - 3,533', 7-5/8", 39#, L80, SLX
3,533' - ?, 7", 32#, L80, STX
? - 9,134', 7", 32#, L80, STL

TOL 9,135'

Baker ZXP Liner Top Pkr w/7.5 x 12'
Tie-back ext., CMC liner hanger

9,626'

9/12/02 Perforated Upper Phosphoria
12,067-092', acidized, tested 16 MMCFD

Baker Model "D" Packer @ 11,700'
WLREG @ 11,758'

9/9/02 Set Schlumber TTCR @ 12,330'
dump bailed 10'+ of cement on plug

Tubing String
2-7/8", L80, 7.7#, Vam Ace
(See tbg. detail for specifics)

7/15/02 perf'd Lower Phophoria
12,642-662', acidized, tested gas and wtr

Baker Model "D" Isolation Pkr @ 12,700'
WLREG @ 12,729.5
7/15/02 Set tubing CIBP in tailpipe assembly
capped w/ 10' cmt

3/10-11/2000 Perforations
12,842' - 866', 12,910' - 940' and
13,050 - 13,080', 1 spf, 0 degree phasing
2-1/8" PEJ, 14.3g charges

Production Liner
7", 32#, L80 Hydril SLX
(Cmt'd to TOL, returns circulated
off of TOL.)

13,925'

Baker Cement Retainer
Set @ 13,920', pumped 100 sks
Class G below retainer, left +/- 1 Bbl
on top of retainer

DTD 15,900' MD

API Well No: 43-043-30321-00-00 **Permit No:** **Well Name/No:** ANSCHUTZ RANCH DEEP 10-27

Company Name: ANSCHUTZ CORPORATION, THE

Location: Sec: 27 T: 4N R: 7E Spot: NESE

Coordinates: X: 488541 Y: 4543926

Field Name: ANSCHUTZ RANCH

County Name: SUMMIT

plug #7 100/(1.18)(2.757) = 31 sks 100 - Surface

plug #6 CICR @ 140' 100 - Surface

Above - 100/(1.18)(2.342) = 61 sks

~~below 50/(1.18)(2.342) = 30 sks~~

Cmt 7" @ 20'

Cement from 1502 ft. to surface

Surface: 13.375 in. @ 1502 ft.

Hole: 17.5 in. @ 1502 ft.

plug #5 protect base Sevier

CICR 1500 perfs @ 1550

1550 - 1450

plug #4 3250 - 3150 Isolate Lower Cret

Above 50/(1.18)(4.937) = 10sks

below (1) 50/(1.18)(4.937) = 10sks

below (0) 100/(1.18)(6.631) = 15sks

below (0) 100/(1.18)(1.485) = 60sks

Calc TOC 4500'

5650 - 5750

plug #3 protect Salt Section (5670 - 5740)

Isolate Jurassic

CICR @ 5700' perf 5750

above - 50/(1.18)(4.937) = 10sks

below (1) 50/(1.18)(4.937) = 10sks

below (0) 100/(1.18)(6.631) = 15sks

Cement from 9626 ft. to 4500 ft.

Intermediate: 9.625 in. @ 9626 ft.

Hole: 12.25 in. @ 9626 ft.

9150 - 9050

plug #2 ~~CICR @ 9100'~~ perfs @ ~~9150~~ protects Wasatch overlap

Isolate Triassic

~~Above 50/(1.18)(4.937) = 10sks~~

below 1 - 50/(1.18)(4.937) = 10sks

below 0 = 100/(1.18)(6.631) = 15sks

20sks

plug #1 CICR @ 11,650 Isolates perfs & Permian Section

Above (20sks)(1.18)(4.937) = 116'

below (50 sks)(1.18)(4.937) = 466'

Isolation Pkr @ 12,700' w/ 10' Cement

Cement from 13924 ft. to 9626 ft.

Packer: @ 11700 ft.

Tubing: 2.875 in. @ 0 ft.

Production: 7 in. @ 13924 ft.

Hole: 7.625 in. @ 13924 ft.

Hole: Unknown

TD: 15900 **TVD:** 15040 **PBTD:** 13920

String Information

String	Bottom (ft sub)	Diameter (inches)	Weight (lb/ft)	Length (ft)		
HOL1	1502	17.5				
SURF	1502	13.375	54.5	1502	1.152	2.757
HOL2	9626	12.25				
I1	9626	9.625	44	9626	2.342	
PROD	0	7.625				6.631
HOL3	13924	7.625				
PROD	13924	7	32		4.937	
T1	0	2.875				
PKR	11700					

[(12.25)(1.2)]² - 9.625² = 1.485

153.35

Cement Information

String	BOC (ft sub)	TOC (ft sub)	Class	Sacks
I1	9626	4500	G	1186
PROD	13924	9626	G	787
SURF	1502	0	HC	646
SURF	1502	0	G	632

plug #5

above - 50/(1.18)(4.937) = 10sks

below (1) 50/(1.18)(4.937) = 10sks

below (0) 100/(1.18)(6.631) = 15 sks

below (0) 50/(1.18)(2.757) = 15 sks

below (0) 50/(1.18)(1.485) = 30 sks

Perforation Information

Formation Information

Formation	Depth	Formation	Depth
NGSD	7474		
ANKH	8560		
THYNS	9595		
WODS	10935		
DNWD	11760		
PSPR	11860		
WEBR	12660		
WEBR	12730		

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CEMENT JOB REPORT

CUSTOMER Anschutz Pinedale Corporation	**DATE** 07-JUN-04	**F.R. #** 213210439	**SERV. SUPV.** ALEXANDER L PIOQUINTO
LEASE & WELL NAME AR-Deep 10-27 Ranch Deep ~~4-27~~ - API 43043303210000	**LOCATION** Sec 27-T4N-R7E		**COUNTY-PARISH-BLOCK** Uinta Wyoming
DISTRICT Rock Springs	**DRILLING CONTRACTOR RIG #** Key 383		**TYPE OF JOB** Squeeze-Hole

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	PHYSICAL SLURRY PROPERTIES						
		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT^3	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
MATERIALS FURNISHED BY BJ								
Fresh Water			8.34				35	
Class G cmt+0.1% R-3+0.003gps FP13L		100	15.8	1.15	4.96		20	11.53
Fresh Water			8.34				63	
						TOTAL	118	11.53

RECEIVED
JUN - 7 2004
DIV OF OIL, GAS & MINING

Available Mix Water 450 Bbl. Available Displ. Fluid 400 Bbl.

HOLE			TBG-CSG-D.P.					COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	GRADE	SHOE	FLOAT	STAGE
7	0	11650	2.875	6.5	TBG	11650	N-80			

LAST CASING				PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID	
SIZE	WGT	TYPE	DEPTH	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
7	32	CSG	11650	Retainer Packer, 7 in, 5.6	11650	12062	12097	2.875	EUE	FRESH WATER	8.3
7.625	38	CSG	3533								

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	
63	BBLS	Fresh Water	8.34	0	150	4000	10570	8456	12460	9968	RIG

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: None

PRESSURE/RATE DETAIL						EXPLANATION
TIME HR:MIN.	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW [X] CO. REP. [X]
						TEST LINES 3000 PSI
						CIRCULATING WELL - RIG [X] BJ [X]
17:45						PRE JOB SAFETY MEETING
18:00	0	0				STING IN INTO RETAINER
18:06	0	200	4	35	WATER	P/UP ANNULUS
18:08	0	200	0	.25	WATER	TEST LINE 3000 PSI
18:12	127	200	4	15	WATER	FRESH WATER/INJECTION RATE
18:16	196	200	4	33	WATER	FRESH WATER/INJECTION RATE
18:19	1380	200	5	45	WATER	SHUTDOWN
18:28	247	200	3.6	10	CMT	SQUEEZE SLURRY
18:30	222	200	2.5	15	CMT	SQUEEZE SLURRY, RATE AND PRESSURE
18:32	171	200	2.6	22	CMT	SQUEEZE SLURRY, RATE AND PRESSURE
18:35	356	200	6.4	10	WATER	DISPLACE/SQUEEZE
18:37	450	200	7.7	20	WATER	DISPLACE/SQUEEZE,RATE AND PRESSURE
18:38	754	200	5.1	30	WATER	DISPLACE/SQUEEZE,RATE AND PRESSURE
18:41	830	200	5.1	50	WATER	DISPLACE/SQUEEZE,RATE AND PRESSURE
18:42	1108	200	5.1	60	WATER	DISPLACE/SQUEEZE,RATE AND PRESSURE
18:44	1674	200	5.1	63	WATER	SHUTDOWN,SQUEEZE 16 BBLS CMT BELOW
						RETAINER
18:46	0	0				PULL 6 JTS TBG,SPOT 4 BBLS CMT TOP RETAINER
19:02	880	0	4.1	10	WATER	REVERSE CIRC,RATE AND PRESSURE
19:04	1513	0	4	20	WATER	REVERSE CIRC, RATE AND PRESSURE
19:06	1539	0	4	30	WATER	REVERSE CIRC,RATE AND PRESSURE
19:09	1549	0	4	40	WATER	REVERSE CIRC, RATE AND PRESSURE

SUPPLEMENTAL CEMENT JOB REPORT

Field Receipt # 213210439

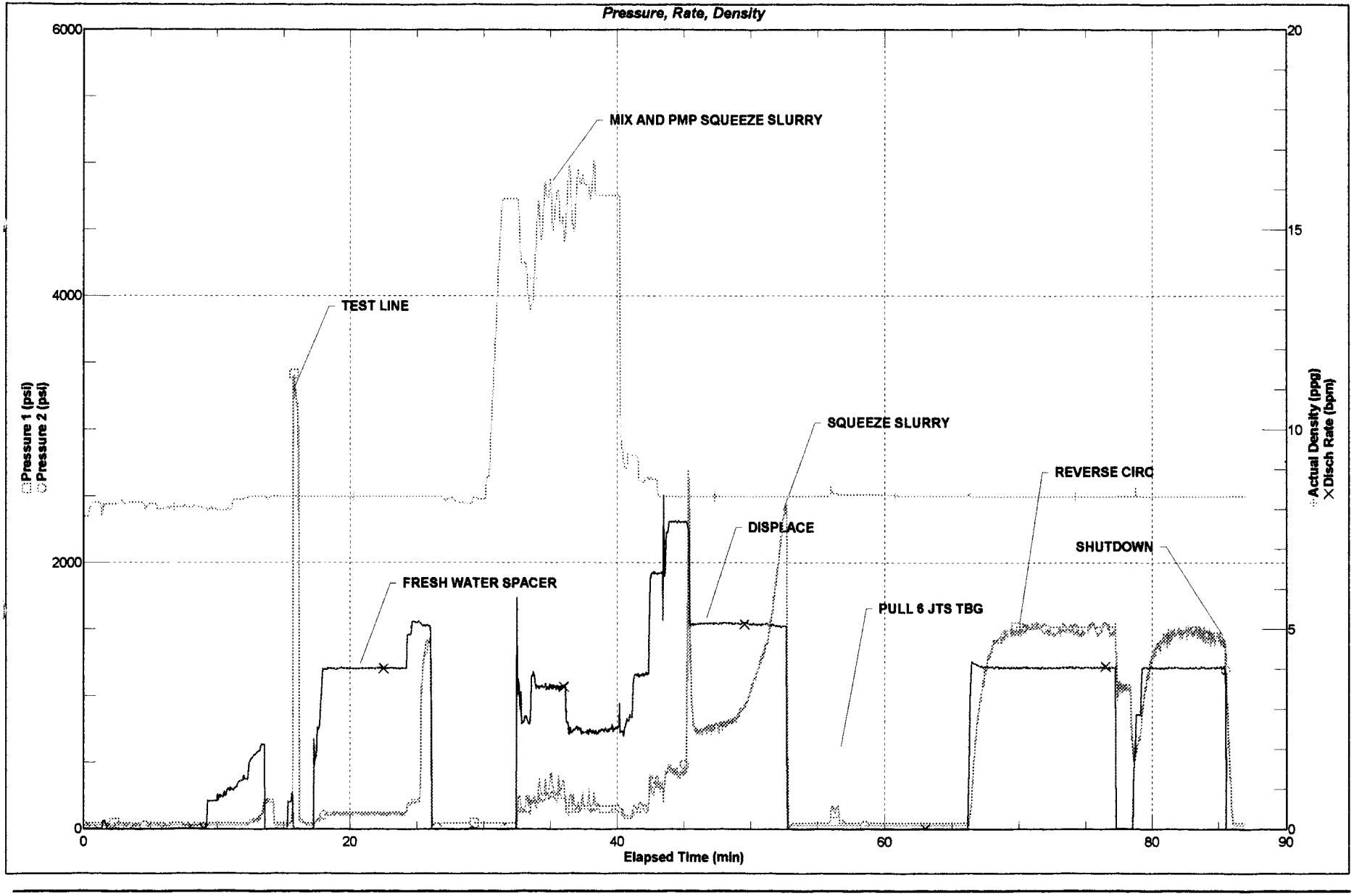
CUSTOMER	DATE	F.R. #	SERV. SUPV.
Anschutz Pinedale Corporation	07-JUN-04	213210439	ALEXANDER L PIOQUINTO
LEASE & WELL NAME - OCSG	**LOCATION**		**COUNTY-PARISH-BLOCK**
Ranch Deep 4-27 - API 43043303210000	Rock Springs		Uinta Wyoming
DISTRICT	**DRILLING CONTRACTOR RIG #**		**TYPE OF JOB**
Rock Springs	Key 383		Squeeze-Hole

PRESSURE/RATE DETAIL

TIME HR:MIN	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	EXPLANATION
19:13	1437	0	4	50	WATER	REVERSE CIRC. RATE AND PRESSURE
19:16	1488	0	4	60	WATER	REVERSE CIRC. RATE AND PRESSURE
19:18	0	0		68	WATER	SHUTDOWN, TRACES OF CMT RETURNS

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERV. SUPV.
Y [N]	0	Y [N]	0	233	0	Y [N]	

BJ Services JobMaster Program Version 3.00
Job Number: 213210439
Customer: ANSCHUTZ EXPLORATION
Well Name: RANCH DEEP 4-27



INSPECTION FORM 7

STATE OF UTAH
DIVISION OF OIL GAS AND MINING
PLUGGING OPERATIONS

Well Name: Anschutz Ranch Deep 10-27 API Number: 43-043-30321

Qtr/Qtr: NESE Section: 27 Township: 4N Range: 7E County: Summit

Company Name: Anschutz Exploration Corp. (N7940)

Lease: State_____ Fee X Federal_____ Indian_____

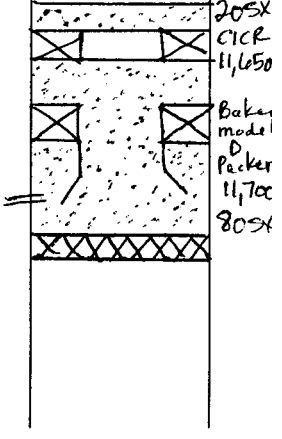
Inspector: Lisha Cordova Date: June 7, 2004

Casing Tested: YES X NO_____ Results: OK

Cementing Company: BJ Services (Key Rig #383/Jim Hill (307)679-6902)

Draw a wellbore diagram as plugged:

COMMENTS: BOP test & 7" 32# Weatherford CICR set @11650' on 6/6/04 (not witn). Witn (Plug 1), at time of arrival RIH on 2.875" work string to retainer @11650' (369 jts/31-32' in hole), stung into retainer. Tested annulus/backside @1000#, tested lines @3000#, pumped 80 sx (16 bbls) Class G/Neat (15.8 wgt, 1.15 yld) cmt @5 bpm below retainer & 20 sx (4 bbls) on top, LD 6 jts, cicr w/68 bbls wtr (traces of cmt returns). Shut down, will POOH w/tbg, RIH w/2000' kill string, ND BOP, NU tree, RD & release WO rig on 6/8/04 (not witn). Inter-Mountain Safety/H2S (Victor) on location. Notified Merit (ARE) & Wahsatch Gas Gathering upon arrival & departure from field, as a safety precaution. Op was going to PA complete well bore however Merit/ARE is interested in buying it for conversion to a WDW.



Attach copy of cement ticket if available.

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

MARY ANN WRIGHT
Acting Division Director

March 3, 2005

CERTIFIED MAIL NO. 7002 0510 0003 8602 5832

Mr. Jim Oursland
Anschutz Corporation
555 17th Street, Suite 2400
Denver, Colorado 80202

Re: Extended Shut-in and Temporarily Abandoned Well Requirements for Fee or State Leases.

Dear Mr. Oursland:

As of March 2005, Anschutz Corporation has one (1) Fee Lease Well (see attachment A) that is in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. Wells SI/TA beyond twelve (12) consecutive months require the filing of a Sundry Notice in accordance with R649-3-36-1 for Utah Division of Oil, Gas & Mining ("Division") approval. Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (R649-3-36-1.3.3).

For extended SI/TA consideration the operator shall provide the Division with the following:

1. Reasons for SI/TA of the well (R649-3-36-1.1).

2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and

3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and

2. Copy of recent casing pressure test, and

3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and

4. Fluid level in the wellbore, and

5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,

Dustin K. Doucet
Petroleum Engineer

DKD:jc
Attachment
cc: John Baza
Well File

ATTACHMENT A

	Well Name	Location	API	Lease Type	Years Inactive
1	Anschutz Ranch Deep 10-27	NESE Sec 27-T4N-R7E	43-043-30321	Fee	1 Year 2 Month

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
9. API NUMBER: 4304330321
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER _____

2. NAME OF OPERATOR: Anschutz Exploration Corporation

3. ADDRESS OF OPERATOR: 555 17th St., Ste. 2400 CITY Denver STATE Co ZIP 80202 PHONE NUMBER: (303) 298-1000

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1433' FSL AND 1228' FEL
COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Extended SI/TA
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation requests permission for extended shut-in or temporarily abandoned status on this well for one year. The P&A report, well sketch, a recent pressure check report are attached.

...NT TO OPERATOR
4-18-05
CHD

NAME (PLEASE PRINT) Mohamed Elhage TITLE Petroleum Engineer

SIGNATURE _____ DATE 4-14-2005

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE 4/15/05
BY: [signature]
*(Statext A) Approval valid through April 1, 2006

(5/2000) (Instructions on Reverse Side)

RECEIVED
APR 14 2005
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
9. API NUMBER: 4304330321
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER
2. NAME OF OPERATOR: Anschutz Exploration Corporation
3. ADDRESS OF OPERATOR: 555 17th St., Ste. 2400 CITY Denver STATE Co ZIP 80202 PHONE NUMBER: (303) 298-1000
4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1433' FSL AND 1228' FEL COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Extended SI/TA
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation requests permission for extended shut-in or temporarily abandoned status on this well for one year. The P&A report, well sketch, a recent pressure check report are attached.

NAME (PLEASE PRINT) Mohamed Elhage TITLE Petroleum Engineer
SIGNATURE DATE 4/15/2005

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

ANSCHUTZ EXPLORATION CORPORATION 555 17TH STREET, SUITE 2400, DENVER, CO 80202

FAX

Date: April 15th, 2005.

Number of pages including cover sheet: 2

To:

Dustin K. Doucet

Division of Oil, Gas & Mining

Department of Natural Resources

State of Utah

Phone: 801-538-5281

Fax: 801-359-3940

CC:

From:

Mohamed Elhage

Phone: 303-298-1000

Fax: 303-299-1518

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

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APR 15 2005

DIV. OF OIL, GAS & MINING

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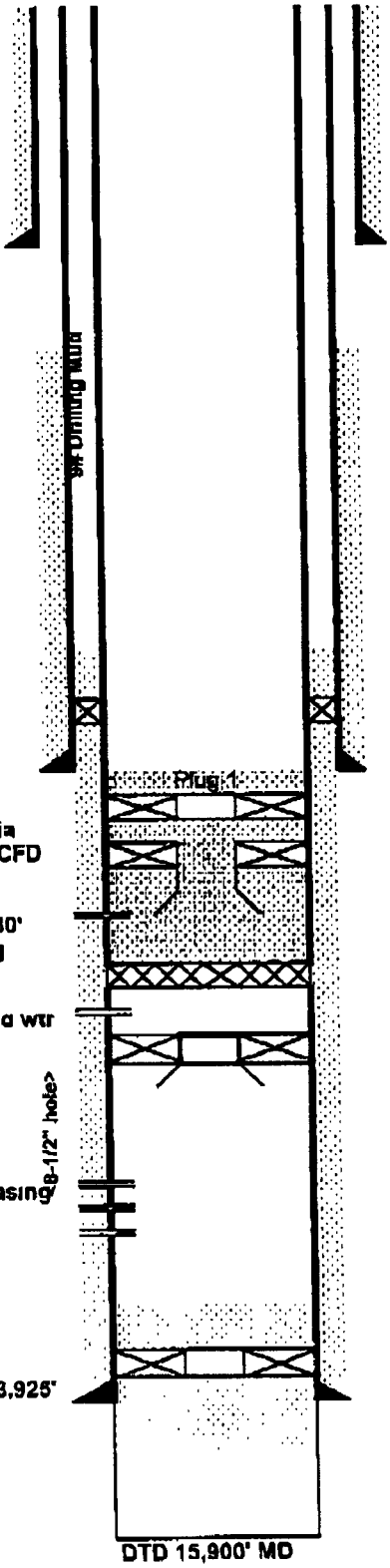
ANSCHUTZ EXPLORATION CORPORATION WELLBORE SCHEMATIC	
SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27 COUNTY, STATE: Summit, Utah
TD: 13,925'	GROUND ELEVATION: 7,566' KB ELEVATION: 7,593'



Cement Calculations:

7" 32# L80 0.20255 ft^3 capacity

(20 sks)(1.18 ft^3/sk) / 0.2026 ft^3/ft = 116.5 ft

9-5/8" CIBP @ 200'

13-3/8" @ 1500'

Calc TOC 4,500'

DV Tool @ 6,100'

TOL 9,135'

9-5/8" @ 9,626'

Plug 1 - 80 sks "G" cmt below CR
20 sks "G" cmt on CR

Baker ZXP Liner Top Pkr w/7.5 x 12'
Tie-back ext., CMC liner hanger

CR @ 11,650'

Baker Model "D" Packer @ 11,700'
WLREG @ 11,758'

9/12/02 Perforated Upper Phosphoria
12,067-092', acidized, tested 16 MMCFD

9/9/02 Set Schlumber TTCR @ 12,330'
dump bailed 10'+ of cement on plug

7/15/02 perfd Lower Phosphoria
12,642-662', acidized, tested gas and wtr

Tubing String
2-7/8", L80, 7.7#, Vam Ace
(See tbg. detail for specifics)

Baker Model "D" Isolation Pkr @ 12,700'
WLREG @ 12,729.5
7/15/02 Set tubing CIBP in tailpipe assembly
capped w/ 10' cmt

3/10-11/2000 Perforations
12,842' - 868', 12,910' - 940' and
13,050 - 13,080', 1 spf, 0 degree phasing
2-1/8" PEJ, 14.3g charges

Production Liner
7", 32#, L80 Hydril SLX
(Cmt'd to TOL, returns circulated
off of TOL.)

13,925'

Baker Cement Retainer
Set @ 13,920', pumped 100 sks
Class G below retainer, left +/- 1 Bbl
on top of retainer

DTD 15,900' MD

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DIV. OF OIL, GAS & MINING

Anschutz Ranch Deep 10-27
Operator: AEC
1433' FSL and 1228' FEL
NESE Section 27, T4N, R7E
Summit County, Utah
Anschutz Ranch Deep
13,050-13,080'; 12,910-12,940';
12,842-12,866' Weber
12,405-490, 12,520-574', 12,642-12,662' Phosphoria
12,067-12,092' Second Phosphoria
TAC WI: 68.88%
TIGHT HOLE

06/01/04 P&A Day 1. Set BPV, set & test anchors, RD rig & support equipment on Island Ranch D-1ST, ready to move in a.m.

06/02/04 P&A Day 2. Move from Island Ranch D-1ST to location, raise derrick, MI 3-500 bbl tanks, haul 400 bbls water, spot support equipment.

06/03/04 P&A Day 3. RU sub, pump 75 bbls down tbg, pull BPV, ND tree, NU BOP equipment & test, haul in and unload work string, RU LD machine, secure well, SDFN.

06/04/04 P&A Day 4. PO: Set cement retainer. Pump 75 bbls water down tbg, sting out, POOH, LD 2.875" 7.7# L-80 VAM Ace prod tbg & spooling SS control lines, RU hotoiler to pump 300 bbls/hr to keep well dead overnight.

06/05/04 P&A Day 5. PO: PU work string. RU OWP wireline, run 5.718" gauge ring to 11,700', POOH, RIH w/ 7", 32# CR, set at 11,650', POOH, RD & release OWP, fill hole & test CR to 1000#, TIH with stinger & tbg, secure well, SD until 6/7/04.

06/06/04 SD until 6/7/04.

06/07/04 P&A Day 6. PO: LD work string. PU 2.875" work string, tag up, sting in, WO BJ 3 hours, pump 100 sx Class "G" 15.8#/gal, displace w/ 63 bbls water, sting out, leave 20 sx on top of CR, pull 6 jts tbg, reverse out 1 bbl gray colored wtr, no cement in returns, POOH, stand back 10 stds, secure well, RD BJ, SDFN.

06/08/04 P&A Day 7. PO: ND BOP, NU tree, rigging down. POOH, stand 21 stds, LD 300 jts 2.875" tbg, LD stinger, RIH w/ 63 jts 2.875" 6.5# N-80 tbg, X-OVER, 2.875" 8rd PIN x 2.875" VAM Ace PIN, VAM Ace coupling, 2'x 2.875" 7.7# VAM Ace pup, sour service extended neck hanger, land tbg, secure well, SDFN.

06/09/04 P&A Day 8. PO: Rigging down. Check well, RD sub, ND BOPs, NU 2-9/16" sour tree, unstring blocks, rigging down.

06/10/04 P&A Day 9. PO: Rigging down. Too muddy to move. Put protectors on VAM tbg. SD.

06/11/04 PO: Rigging down.

06/14/04 PO: Rigged down. Rig moved over to AL&L 14-33ST. **FINAL REPORT.**

F

Mohamed Elhage

From: William K. Wilson

Sent: Thursday, April 14, 2005 8:45 AM

To: Mohamed Elhage

Subject: FW: Thief Creek Wells/Pressure on 10-27 well

Mohamed, The second part of this note tells about the pressure on the ARD 10-27 well. Bottom line is that there is no pressure to be found on this well. William K. Wilson (Kaye)

-----Original Message-----
From: Wilson, William
Sent: Saturday, April 02, 2005 12:39 PM
To: 'Jim.Oursland@aec-denver.com'
Cc: 'Bud.Metcalf@tac-denver.com'; 'Hal.Koerner@aec-denver.com'; Hutchinson, Craig; Woodmansee, Woody
Subject: Thief Creek Wells/Pressure on 10-27 well

Jim, upon receipt of the run tickets of the Thief Creek wells for March I see that we are back up to 5% BS&W in our condensate on these wells. I am in discussion with Rich Ferrin (Champion Chemicals) considering the possibility of the use of a chemical to help with the separation of the water and condensate at the separator on the Merit sight. We may be able to resolve the problem with chemical but at additional cost. This problem has raised its dirty little head once again. I am still of the opinion that we are asking equipment to do a job that it was not designed to do. The ratio of water to condensate is just opposite of the separator's original design.

A pressure test was performed on the ARD 10-27 well on Friday April 1, 2005. Mr. Hillstead installed a gage on the tree to obtain a pressure. The well is on a vacuum.

This is my report, Wilson

ANSCHUTZ EXPLORATION CORPORATION 555 17TH STREET, SUITE 2400, DENVER, CO 80202

FAX

Date: April 14th, 2005.

Number of pages including cover sheet: 5

To:

Dustin K. Doucet

Division of Oil, Gas & Mining

Department of Natural Resources

State of Utah

Phone: 801-538-5281

Fax: 801-359-3940

CC:

From:

Mohamed Elhage

Phone: 303-298-1000

Fax: 303-299-1518

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

Please see the attached documents and advise. The P&A report shows that the well was tested for 1000#, and a recent gauge readings from the well shows no pressure on the well.

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DIV. OF OIL, GAS & MINING

DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS

OPERATOR: The Anschutz Corporation
WELL NAME & NUMBER: Anschutz Ranch Deep 10-27
API NUMBER: 43-043-30321
LOCATION: 1/4,1/4 NESE Sec: 27 TWP: 4N RNG: 7E 1430 FSL 1246 FEL
(Proposed BHL) SENW Sec: 22 TWP: 4N RNG: 7E 2263 FNL 2160 FWL

Geology/Ground Water:

Anschutz will be re-entering "to deepen" an existing shut-in gas well. Surface casing has been set at 1500' and was cemented from TD to surface providing sufficient protection to ground water in this area.

Reviewer: Lisha Cordova **Date:** October 18, 2005

Surface:

Operator and landowner representatives, and dirt contractor were present at the onsite conducted on October 11, 2005. The existing well pad is located within the confines of an active cattle ranch (Castle Rock Land & Livestock) and gas field (Anschutz Ranch/Merit Energy). Surrounding land use is for cattle grazing, wildlife habitat, hunting by landowner permit, and O&G operations. The landowner agreed to allow the additional proposed land disturbance at the well site, however expressed that no additional land disturbance is allowed other than that proposed without further approval. Anschutz/dirt contractor(s) will take extra safety precautions while constructing the extended well pad, and will ensure that the remaining hillside remains stable (some rock outcropping). There is a nearby pond/wetland area, and drainage(s) located east/southeast of the well pad. Berms and diversion ditches will be constructed & maintained to protect the well site, pond/wetland area, and drainage(s). In addition, silt fencing will be placed at the toe of the fill slope(s) to prevent silt from entering the pond/wetland area, and drainage(s). Approval to begin the dirt work "pad extension" was granted on October 11, 2005. Well site restoration will be conducted in accordance with the landowners' agreement between Anschutz & Castle Rock Land & Livestock upon completion of well operations.

Reviewer: Lisha Cordova **Date:** October 18, 2005

Conditions of Approval/Application for Permit to Drill:

1. Berms and diversion ditches will be constructed and maintained to protect the well site and nearby pond/wetland area, and drainage(s).
2. Pad rills will be mended, and silt fencing will be placed at the toe of the fill slope(s) to prevent silt from entering the nearby pond/wetland area, and drainage(s).
3. Form 7 "Report of Water Encountered During Drilling" will be submitted if water is encountered during drilling/deepening operations.
4. A closed system will be used for drilling fluids.

ON-SITE PREDRILL EVALUATION
Division of Oil, Gas and Mining

OPERATOR: The Anschutz Corporation (N0060)
WELL NAME & NUMBER: Anschutz Ranch Deep 10-27
API NUMBER: 43-043-30321
LEASE: Fee **FIELD/UNIT:** Anschutz Ranch / Anschutz Ranch Paleozoic
LOCATION: **1/4,1/4** NESE **Sec:** 27 **TWP:** 4N **RNG:** 7E 1430 FSL 1246 FEL
*Re-surveyed, orig. surface footages 1433 FSL 1228 FEL
BHL SENW **Sec:** 22 **TWP:** 4N **RNG:** 7E 2263 FNL 2160 FWL
LEGAL WELL SITING: 1000' from unit boundary (Cause No. 183-13)
GPS COORD (UTM/SURF): X = 488523 E; Y = 4543974 N
(UTM/BHL): X = 488034 E; Y = 4545869 N

SURFACE OWNER: Fee / Castle Rock Land & Livestock

PARTICIPANTS

Lisha Cordova (DOGM), Larry Williams & Jim Hill (Anschutz), Niles Williams, Jeff Young "Ranch Manager" (Castle Rock Land & Livestock), Mike Denison (Basic Energy Services/Dirt Contractor).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

Overthrust Belt, on the north flank of the Uintah Mountains and east flank of the Wasatch Mountains, dominated by moderately steep hills and moderate to deeply incised secondary drainages that are well established. The drainage pattern is generally to the north & east, toward Echo Canyon. I-80 is approx. 6 miles north of the well site.

SURFACE USE PLAN

CURRENT SURFACE USE: Existing well pad, located within the confines of an active cattle ranch (Castle Rock Land & Livestock) and gas field (Anschutz Ranch/Merit Energy). Surrounding land use is for cattle grazing, wildlife habitat, hunting by landowner permit, and O&G ops.

PROPOSED SURFACE DISTURBANCE: Approx. 10,048 cubic yards of hillside soil/rock material & flora including Aspen trees (1.5:1 slope) from the northwest corner of the existing pad, south of the access road, will be moved south of the existing pad, to accommodate a big rig for deepening ops (+/- 50' extension). The south end of the pad will be extended by approx. 135 feet, and will be constructed of mostly fill material (10,138 cubic yards) and 111 cubic yards of cut (2:1 slope). In addition, an escape road will be constructed at the northwest corner of the south pad extension (see map), that will run 100 yards to a two track road that will lead to main road(s) in the area. No reserve pit will be constructed. The operator will be using a closed system for drilling fluids. Existing pad rills will be mended (see photos), and silt fencing will be placed at the toe of the fill slope to prevent silt from entering the nearby pond/wetland area, and drainage(s) located east/southeast of the pad.

LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS: From the surface

location, there are 3 plugged wells (2/Anschutz & 1/Amoco), 2 producing gas wells (Anschutz), and 2 water disposal wells (Merit). From the proposed BHL, there is one producing gas well (Merit), and one plugged well (Amoco). A review of the Water Rights database reveals that there are two unapproved water rights (t18294, t23687) located in Section 26. A water well has been drilled at the AR Deep 10-27 well site (date & TD unknown), and Anschutz is in the process of obtaining approval from "Water Rights" to operate the well for drilling/deepening ops.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Pipelines and production facilities are already in place, no additional pipelines/facilities are anticipated.

SOURCE OF CONSTRUCTION MATERIAL: Native material from location, and from local sources/contractors.

ANCILLARY FACILITIES: Trailer's for staff will be located on the south end of the pad during drilling/deepening operations, and will be removed when operations are completed.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OR CONCERNS? (EXPLAIN): No, Anschutz has been operating in this area for several years and their operations are on private lands that are mainly inaccessible to the general public. In addition, access to the well/pad is fenced, and the gate is locked when the well is not attended.

WASTE MANAGEMENT PLAN:

Portable chemical toilets will be emptied into the municipal waste treatment system; garbage cans on location will be emptied into centralized dumpsters, which will be emptied into an approved landfill. Drilled cuttings will be contained in a closed system and will be disposed of by a DOGM approved method. Liquids from the closed system will be hauled to an approved facility. Formation water will be confined to storage tanks.

ENVIRONMENTAL PARAMETERS:

AFFECTED FLOODPLAINS AND/OR WETLANDS: There is a pond/wetland area, drainage(s), and buried water transport pipeline located east/southeast of the well pad. Drilling/deepening operations should not impact the area. Silt fencing will be placed at the toe of the fill slope(s) to prevent silt from migrating to the pond/wetland area, and drainages.

FLORA/FAUNA: Flora consists of Aspen & Pine trees, Sage Brush, Rabbit Brush, and various other native plants, grasses, and wild flowers. Fauna consists of Deer, Elk, Moose, Cougar, Eagles, Hawks, and various other bird & animal species.

SOIL TYPE AND CHARACTERISTICS: Mostly clay with a little sand, and small to medium sized rocks & boulders. The pad is covered with a 8-10' gravel cap.

SURFACE FORMATION & CHARACTERISTICS: Wasatch Formation, light gray to

medium brown in color, consisting of clay, sand, and rocks of various sizes, some topsoil. Moderate to poor permeability.

EROSION/SEDIMENTATION/STABILITY: The existing well pad is flat and built in cut material. The site is stable. The northwest pad extension will be constructed in cut material. The south pad extension will be constructed in mostly fill. Some erosion & sedimentation is expected, silt fencing will be placed at the toe of the fill slope(s) to prevent silt from migrating to the nearby pond/wetland area, and drainage(s). Anschutz will ensure that the remaining hillside/rock outcropping remains stable.

PALEONTOLOGICAL POTENTIAL: None observed. A paleo survey is not required (Fee land).

RESERVE PIT

CHARACTERISTICS: A closed system will be used for drilling fluids.

LINER REQUIREMENTS (Site Ranking Form attached): N/A

SURFACE RESTORATION/RECLAMATION PLAN

SURFACE AGREEMENT: The site will be reclaimed in accordance with landowners' (Castle Rock Land & Livestock) agreement. A copy of the agreement has not been filed with DOGM. Landowner representatives "Niles Williams & Jeff Young/Ranch Manager" were present at the onsite and gave Anschutz approval to extend the well pad as proposed, causing additional land disturbance. Anschutz "Larry Williams", and dirt contractor will ensure that the nearby pond/wetland area, drainage(s), and buried water transport line located east/southeast of the pad are not impacted by "pad extension & drilling/deepening ops".

CULTURAL RESOURCES/ARCHAEOLOGY: None observed. A cultural/arch survey is not required (Fee land).

OTHER OBSERVATIONS/COMMENTS:

Sour Gas/Condensate is anticipated in the Phosphoria, Weber, and Madison formations (Cause No. 183-13/Anschutz Ranch Paleozoic Unit). Anschutz submitted a copy of their H2S Contingency Plan on Oct. 13, 2005. Anschutz & dirt contractor(s) will take extra safety precautions during pad extension/hillside removal operations, and will ensure that the remaining hillside/rock outcropping remains stable. A drainage ditch will be constructed at the foot of the hillside slope to divert runoff away from the well pad. The water well on location needs "Division of Water Rights" approval prior to use for drilling/deepening ops.

ATTACHMENTS

Photos of the site were taken at the onsite, and placed on file.

DOGM Representative: Lisha Cordova Date: October 11, 2005

From: Lisha Cordova
To: "larry.r.williams@comcast.net".mime.MNET
Date: 10/7/2005 11:18:51 AM
Subject: Re: Anschutz Ranch Deep 10-27 reentry

Hi Larry,

As discussed over the phone earlier, I need to re-schedule our meeting to next Tuesday (Oct. 11, 2005) at 11:00 am.

Castle Rock Land & Livestock, Ranch manager "Jeff Young" has expressed some land concerns at the site and I'm in the process of re-scheduling our meeting date with him for Tuesday. Therefore, please do not begin dirtwork operations at the site until we meet to discuss land issues.

Thanks for the info. you provided me with today, and sorry for any inconvenience this may have caused you.

See you Tuesday!

>>> "Larry R. Williams" <larry.r.williams@comcast.net> 10/7/2005 10:12 AM >>>
This is to confirm our onsite appointment next Wednesday October 12, 2005 at 10:00 am. Let me know if you want me to bring anything for your review.

Attached is a plat of the cut that will be made for the re-entry. I believe that the slope of the cut will be a 1 1/2 to 1. The cut will be made to accommodate the drilling rig access to the location. We would like to begin cutting preparing the location as soon as possible. Apparently a crew is available beginning tomorrow, so I would like to know if we can begin making the location changes before the meeting on Wednesday. I will call you this afternoon to see, if after looking at the plat, you think it would be ok to begin work before we meet. Let me know if you have any questions.

I understand that the D-1 well reclamation is almost complete but it will not be re-seeded before Wednesday. However, since it is close to the 10-27 we can stop by the location if you would like.

Larry R. Williams
P. O. Box 71313
Salt Lake City, UT 84171
(801) 573-2110
(801) 277-0905 Fax
larry.r.williams@comcast.net
****
****
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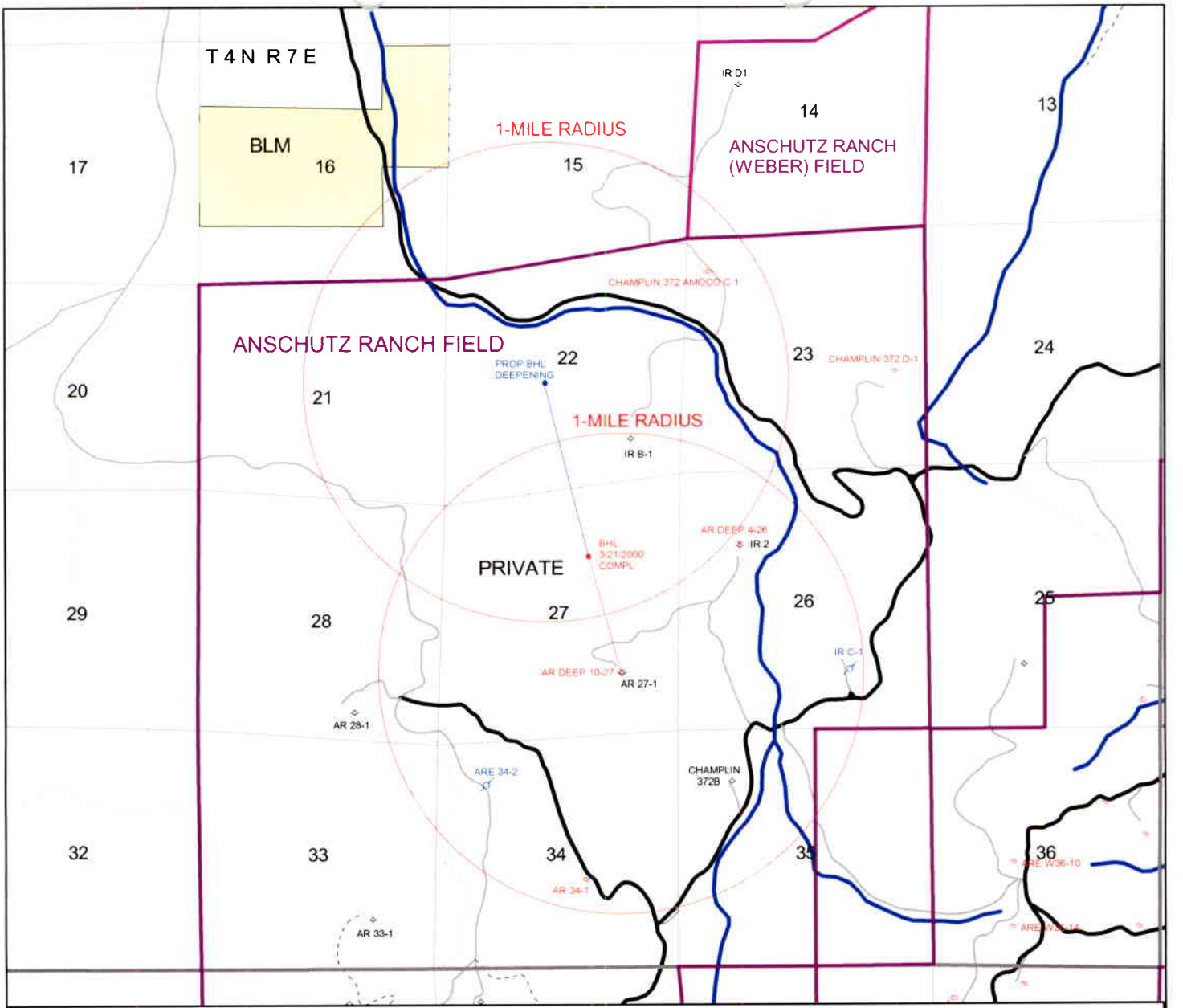


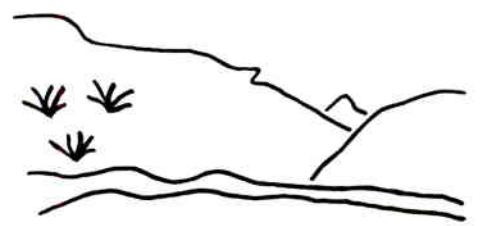
Legend

Wells
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL

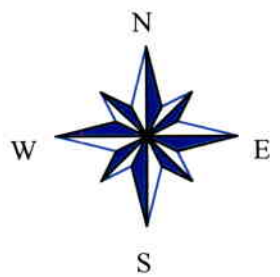
County Boundary

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Sections



Utah Oil Gas and Mining



Prepared by: Lisha Cordova
Date: October 7, 2005

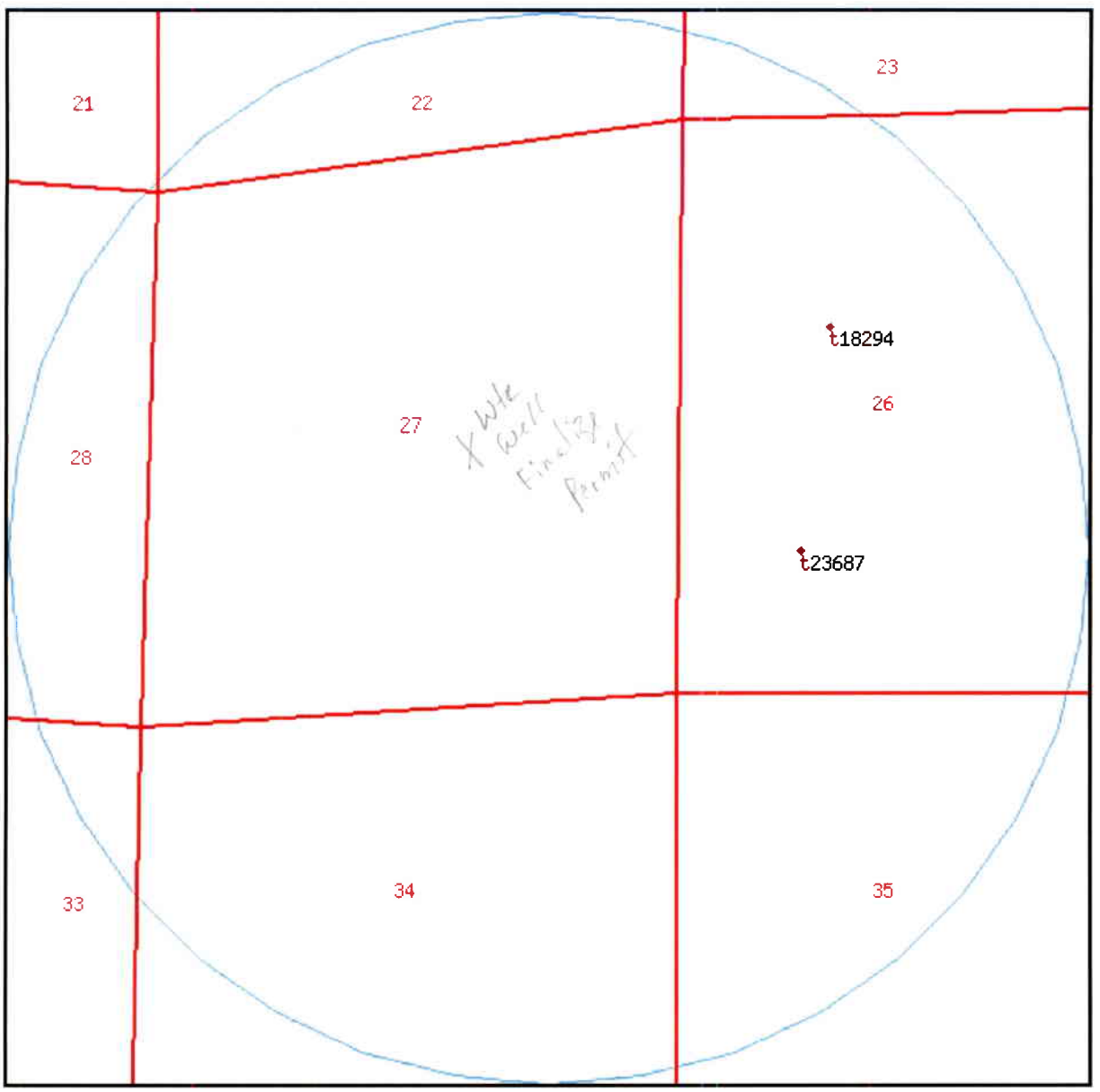
utah.gov State Online Services Agency List Business.utah.gov Search Utah.gov GO

UTAH DIVISION OF WATER RIGHTS

WRPLAT Program Output Listing

Version: 2004.12.30.00 Rundate: 10/07/2005 04:17 PM

Radius search of 5280 feet from a point N1433 W1228 from the SE corner, section 27, Township 4N, Range 7E, SL b&m Criteria:wrtypes=W,C,E podtypes=all status=U,A,P usetypes=all



Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS	ACFT	Owner Name
t18294	Underground S1623 E1328 NW 26 4N 7E SL		U	19980723	O	0.000	25.000	ANTELOPE COMPANY C/O BILL MILLER
t23687	Underground N1407 E1239 SE 27 4N 7E SL		U	19990907	O	0.000	25.000	ANTELOPE COMPANY 2400 ANACONDA TOWER, 555 SEVENTEENTH STREET

Natural Resources | Contact | Disclaimer | Privacy Policy | Accessibility Policy

STATE OF UTAH -- DIVISION OF WATER RIGHTS -- DATA PRINT OUT for t18294(35-8296)

CHANGE: t18294 WATER RIGHT: 35-8296 CERT. NO.:

BASE WATER RIGHTS: 35-8296

RIGHT EVIDENCED BY: 35-8296

CHANGES: Point of Diversion [X], Place of Use [X], Nature of Use [X], Reservoir Storage [ ].

NAME: Antelope Company
ADDR: c/o Bill Miller
2400 Anaconda Tower, 555 Seventeenth Street
Denver CO 80202
INTEREST: 100% REMARKS:

FILED: 07/23/1998	PRIORITY: 07/23/1998	ADV BEGAN:	ADV ENDED:	NEWSPAPER:	
ProtestEnd:	PROTESTED: [No]	HEARNG HLD:	SE ACTION: [ ]	ActionDate:	PROOF DUE:
EXTENSION:	ELEC/PROOF: [ ]	ELEC/PROOF:	CERT/WUC:	LAP, ETC:	PROV LETTER:
RENOVATE:	RECON REQ:	TYPE: [ ]			

Status: Unapproved

HERETOFORE

FLOW: 1.5 cfs

SOURCE: Rees Creek

COUNTY: Summit

Weber River Decree No. 296 Proposed
Determination No 230a Page 74

POINT(S) OF DIVERSION ------>

Point Surface:
(1) S 1650 ft E 1320 ft from NW cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 9 Ditch
Source: Rees Creek
(2) N 2300 ft W 50 ft from S4 cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 8 Ditch
Source: Rees Creek
(3) N 200 ft E 825 ft from NW cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 11 Ditch
Source: Rees Creek
(4) S 1000 ft E 1250 ft from NW cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 10 Ditch
Source: Rees Creek
(5) S 850 ft E 350 ft from NW cor, Sec 09, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 7 Ditch
Source: Rees Creek
(6) S 2150 ft 0 ft from N4 cor, Sec 09, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 4 Ditch
Source: Rees Creek
(7) N 200 ft W 660 ft from SE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 1 Ditch
Source: Rees Creek
(8) N 110 ft W 900 ft from SE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 1a Ditch
Source: Rees Creek
(9) N 2300 ft W 1250 ft from SE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 1b Ditch
Source: Rees Creek
(10) S 1050 ft W 1300 ft from NE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 2 Ditch

HEREAFTER

FLOW: 25.0 acre-feet

SOURCE: Underground Water Well

COUNTY: Summit COM DESC: Anschutz Ranch

SAME AS HERETOFORE, AND IN ADDITION TO: (Click link for WRPLAT)

Source: Rees Creek (11) S 500 ft W 1450 ft from NE cor, Sec 16, T 4N, R 7E, SLBM Dvrting Wks: Rees No 3 Ditch Source: Rees Creek (12) S 1650 ft W 1700 ft from NE cor, Sec 16, T 4N, R 7E, SLBM Dvrting Wks: Rees No 3a Ditch Source: Rees Creek	E 4 9 Solar N 4 4 4 6 10
Point Underground:	Point Underground: (1) S 1623 ft E 1328 ft from NW cor, Sec 26, T 4N, R 7E, SLBM Diameter: 8 ins. Depth: 100 to 500 ft. WELL ID#: COMMENT:

PLACE OF USE ------>

	--NW¼--	--NE¼--	--SW¼--	--SE¼--
	N N S S	N N S S	N N S S	N N S S
	W E W E	W E W E	W E W E	W E W E
Sec 04 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 05 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 09 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 16 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 32 T 5N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*

CHANGED as follows:

	--NW¼--	--NE¼--	--SW¼--	--SE¼--
	N N S S	N N S S	N N S S	N N S S
	W E W E	W E W E	W E W E	W E W E
Sec 26 T 4N R 7E SLBM	*X:X:X:X**	: : : **	: : : **	: : : *

NATURE OF USE ------>

SUPPLEMENTAL to Other Water Rights: Yes

IRR: 119.9000 acs Sol/Sup: acs USED 03/01 - 11/01

STK: 1 Cattle or Equivalent USED 01/01 - 12/31

CHANGED as follows:

SUPPLEMENTAL to Other Water Rights: No

OTH: OIL EXPLORATION: Oil and gas exploration operations USED 08/01 - 08/01

**********END OF DATA**********

STATE OF UTAH -- DIVISION OF WATER RIGHTS -- DATA PRINT OUT for t23687(35-8296)

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 10/07/2005 Page 1

CHANGE: t23687 WATER RIGHT: 35-8296 CERT. NO.:

BASE WATER RIGHTS: 35-8296

RIGHT EVIDENCED BY: Water Right 35-8296

CHANGES: Point of Diversion [X], Place of Use [X], Nature of Use [X], Reservoir Storage [ ].

NAME: **Antelope Company**
ADDR: 2400 Anaconda Tower, 555 Seventeenth Street
Denver CO 90202
INTEREST: 100% REMARKS:

FILED: 09/07/1999	PRIORITY: 09/07/1999	ADV BEGAN: 10/01/1999	ADV ENDED: 10/08/1999	NEWSPAPER: Summit County Bee
ProtestEnd:10/08/1999	PROTESTED: [No Heari]	HEARNG HLD:	SE ACTION: [ ]	ActionDate: / PROOF DUE:
EXTENSION:	ELEC/PROOF: [ ]	ELEC/PROOF:	CERT/WUC:	LAP, ETC: / PROV LETTER:
RENOVATE:	RECON REQ:	TYPE: [ ]		

Status: **Unapproved**

**********H E R E T O F O R E**********

FLOW: 1.5 cfs	
SOURCE: **Rees Creek**	
COUNTY: Summit	
Weber River Decree No. 296 Proposed Determination No 230a Page 74	

**********H E R E A F T E R**********

FLOW: 25.0 acre-feet	
SOURCE: **Underground Water Well**	
COUNTY: Summit	COM DESC: **Anschutz Ranch**

POINT(S) OF DIVERSION ------>	CHANGED AS FOLLOWS: (Click Location link for WRPLAT)
Point Surface:	
(1) S 1000 ft E 1250 ft from NW cor, Sec 05, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 10 Ditch	
Source: Rees Creek	
(2) N 200 ft E 825 ft from NW cor, Sec 05, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 11 Ditch	
Source: Rees Creek	
(3) N 2300 ft W 50 ft from S4 cor, Sec 05, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 8 Ditch	
Source: Rees Creek	
(4) S 1650 ft E 1320 ft from NW cor, Sec 05, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 9 Ditch	
Source: Rees Creek	
(5) S 2150 ft 0 ft from N4 cor, Sec 09, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 4 Ditch	
Source: Rees Creek	
(6) S 850 ft E 350 ft from NW cor, Sec 09, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 7 Ditch	
Source: Rees Creek	
(7) N 200 ft W 660 ft from SE cor, Sec 16, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 1 Ditch	
Source: Rees Creek	
(8) N 1100 ft W 900 ft from SE cor, Sec 16, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 1a Ditch	
Source: Rees Creek	
(9) N 2300 ft W 1250 ft from SE cor, Sec 16, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 1b Ditch	
Source: Rees Creek	
(10) S 1050 ft W 1300 ft from NE cor, Sec 16, T 4N, R 7E, SLBM	
Dvrting Wks: Rees No 2 Ditch	
Source: Rees Creek	

(11) S 500 ft W 1450 ft from NE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 3 Ditch
Source: Rees Creek
(12) S 1650 ft W 1700 ft from NE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 3a Ditch
Source: Rees Creek

Point Underground:

Point Underground:
(1) N 1407 ft E 1239 ft from SE cor, Sec 27, T 4N, R 7E, SLBM
Diameter: 8 ins. Depth: 100 to 500 ft. WELL ID#:
COMMENT:

PLACE OF USE ------>

	NW¼				NE¼				SW¼				SE¼			
	N	W	S	E	N	W	S	E	N	W	S	E	N	W	S	E
Sec 04 T 4N R 7E SLBM	*	X	:	X	*	X	:	X	*	X	:	X	*	X	:	X
Sec 05 T 4N R 7E SLBM	*	X	:	X	*	X	:	X	*	X	:	X	*	X	:	X
Sec 09 T 4N R 7E SLBM	*	X	:	X	*	X	:	X	*	X	:	X	*	X	:	X
Sec 16 T 4N R 7E SLBM	*	X	:	X	*	X	:	X	*	X	:	X	*	X	:	X
Sec 32 T 5N R 7E SLBM	*	X	:	X	*	X	:	X	*	X	:	X	*	X	:	X

CHANGED as follows:

	NW¼				NE¼				SW¼				SE¼			
	N	W	S	E	N	W	S	E	N	W	S	E	N	W	S	E
Sec 26 T 4N R 7E SLBM	*	:	:	:	*	:	:	:	*	:	:	:	*	X	:	X
Sec 27 T 4N R 7E SLBM	*	X	:	X	*	X	:	X	*	X	:	X	*	X	:	X

NATURE OF USE ------>

SUPPLEMENTAL to Other Water Rights: Yes

IRR: 119.9000 acs Sol/Sup: acs USED 03/01 - 11/01

STK: 1 Cattle or Equivalent USED 01/01 - 12/31

CHANGED as follows:

SUPPLEMENTAL to Other Water Rights: No

OTH: OIL RECOVERY: Oil and gas USED 01/01 - 12/31
exploration operations.

PROTESTANTS

NAME: Davis & Weber Counties Canal Company
ADDR: c/o Floyd Baham (late)
138 West 1300 North
Sunset UT 84015-2918

NAME:
ADDR:

**********E N D O F D A T A**********

PETROLEUM PERMITTING
PERMITCO
COMPANY

14421 County Rd. 10 • Ft. Lupton, Colorado 80621 • (303) 857-9999 • FAX (303) 857-0577 • E-MAIL Permitco 1@aol.com

OVERNIGHT DELIVERY

September 30, 2005

RECEIVED
OCT 04 2005
DIV. OF OIL, GAS & MINING

Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Re: Anschutz Exploration Corporation
Anschutz Ranch Deep #10-27
NE SE, 1430' FSL and 1246' FEL Sec. 27
(Surface)
SE NW, 2263' FNL and 2160' FWL Sec. 22
(Btm. Hole)
Summit County, Utah

Gentlemen:

Enclosed please find three copies of the Application for Re-entry and Deepening of the subject well, along with a Wellbore Schematic, BOP Diagram, and revised wellpad layout. Please note that the new survey plat is attached, showing the proposed bottom hole location.

If you have any questions regarding the enclosed material, please contact Keith Bonati, 303-299-1339, or Jason Stewart at 303-299-1246.

Sincerely,

PERMITCO INC.

Lisa Smith
Consultant for
Anschutz Exploration Corporation

Enc.

cc: Anschutz Exploration Corporation - Denver CO

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO.: Fee	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL ☐ REENTER ☐ DEEPEN ☒	7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
B. TYPE OF WELL: OIL ☐ GAS ☒ OTHER _____ SINGLE ZONE ☒ MULTIPLE ZONE ☐	8. UNIT or CA AGREEMENT NAME: ~~N/A~~ Paleozoic Deep
2. NAME OF OPERATOR: Anschutz Exploration Corporation	9. WELL NAME and NUMBER: Anschutz Ranch Deep #10-27
3. ADDRESS OF OPERATOR: 555 - 17th Street, Suite 2400, Denver, CO 80202 — PHONE NUMBER: 303/299-1339	10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch Deep 500
4. LOCATION OF WELL (FOOTAGES) Surf 488523X 41.04898 -111.13656 AT SURFACE: 4543974Y NE SE, 1430' FSL and 1246' FEL (Surface) AT PROPOSED PRODUCING ZONE: SE NW, 2263' FNL and 2160' FWL (Btm. Hole) BHL 488034X 4543869Y 41.06589 -111.14242	11. QTR/QTR, SECTION, TOWNSHIP, RANGE MERIDIAN: Sec. 27, T4N-R7E (Surface) Sec. 22, T4N-R7E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: Approximately 20 miles Southwest of Evanston, WY	12. COUNTY: Summit — 13. STATE: UT

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET)	16. NUMBER OF ACRES IN LEASE:	17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
1246' (Surface)	640	40 Acres
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET):	**19. PROPOSED DEPTH:**	**20. BOND DESCRIPTION:**
None	20,880'	CO-1040
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.):	**22. APPROXIMATE DATE WORK WILL START:**	**23. ESTIMATED DURATION:**
7574' GR	ASAP	60 Days

24. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
17-1/2"	13-3/8", J55, 54.5# (Existing)	1,500'	612 sx Prem Lite lead slurry + 595 sx Class G tail slurry (Existing)
12-1/4"	9-5/8", L80, 47 & 53# (Existing)	9,626'	Stage 1; 1030 sx Class G + Stage 2; 444 sx Prem Lite (Existing)
8-1/2"	7", L80, 39 & 32# (Existing)	13,925'	338 sx Class G + Silica Flour (Existing)
6"	4-1/2", L-80, 13.5#	21,000'	Squeeze Liner - 698 sx Class G + Silica Flour

RECEIVED
OCT 4 2005
DIV. OF OIL, GAS & MINING

25. ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
- ☑ COMPLETE DRILLING PLAN
- ☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

AGENT: PermitCo Inc., 14421 County Road 10, Fort Lupton, CO 80621 — AGENT'S PHONE NO.: 303/857-9999

NAME (PLEASE PRINT): Lisa Smith — TITLE: Agent for Anschutz Exploration Corporation

SIGNATURE: Lisa Smith — DATE: September 30, 2005

(This space for State use only)

API NUMBER ASSIGNED: 43-043-30321

APPROVAL:

Approved by the
Utah Division of
Oil, Gas and Mining
Date: 11-30-05
By:

(11/2001) (See instructions on Reverse Side)

TOWNSHIP 4 NORTH RANGE 7 EAST OF THE SALT LAKE MERIDIAN, UTAH

SALT LAKE DISTRICT 020

SUMMIT COUNTY

STATUS OF PUBLIC DOMAIN LAND AND MINERAL TITLES

OG PLAT

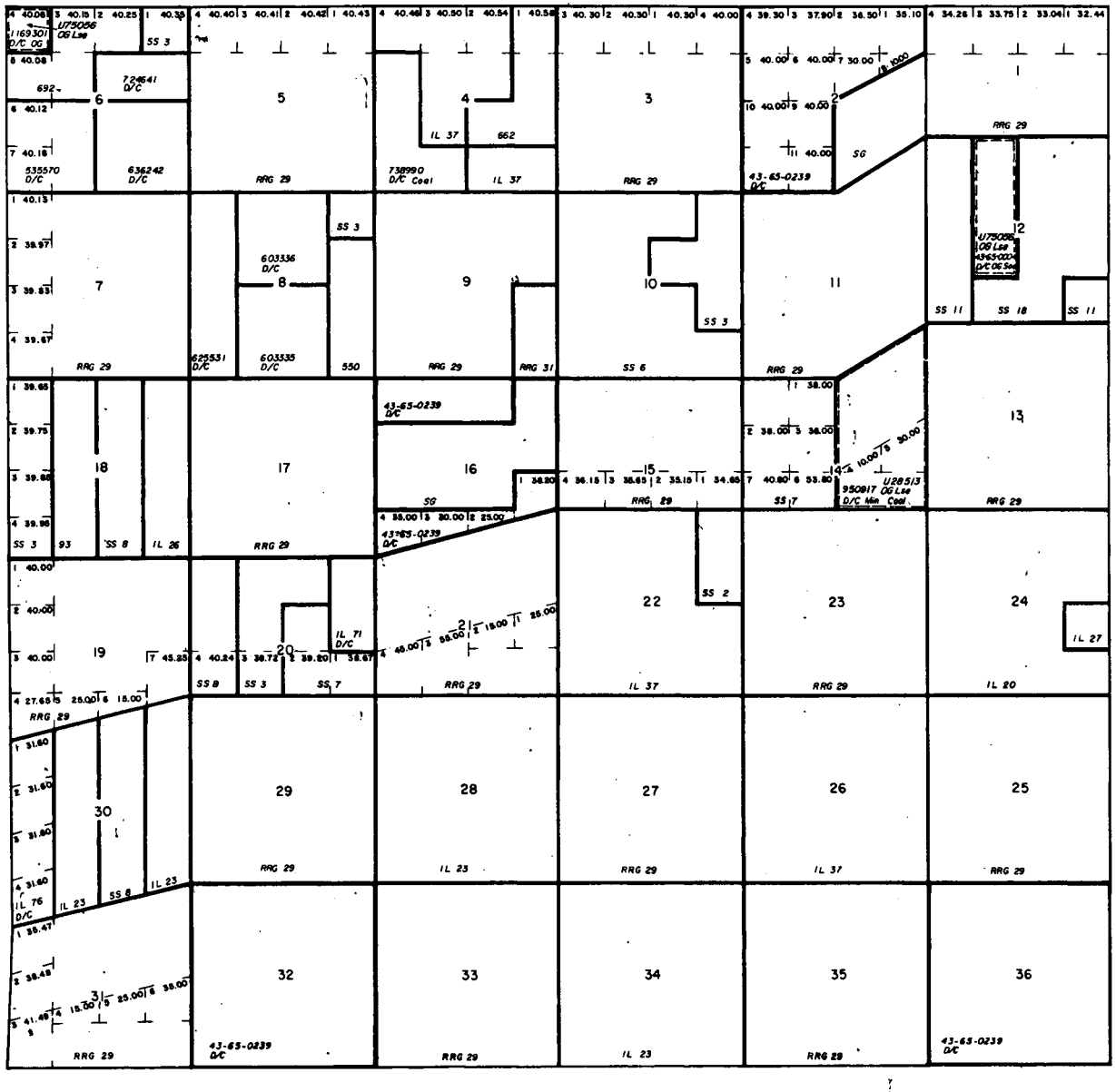
INDEX TO SEGREGATED TRACTS

ORIGINAL SURVEY				
SEGREGATED	T.	R.	SEC.	SUBDIVISION

FOR ORDERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS WITHDRAWN FOR CLASSIFICATION, MINERALS, WATER AND/OR OTHER PUBLIC PURPOSES, REFER TO INDEX OF MISCELLANEOUS DOCUMENTS.

Known Geologic Structure
Sec 11-14: All

Communitization Agreement UTO20P84-85C687
Sec 14: All



SCALE
10 5 0 10 20 30 60
30 Chains to the Inch

179

T 4 N
R 7 E

From: <Michael_Coulthard@blm.gov>
To: "Diana Whitney" <dianawhitney@utah.gov>
Date: 11/28/2005 11:05:26 AM
Subject: Re: Deepening - Paleozoic Deep Unit

Diana,

That was an API unit with no SITLA or Federal Lands in it. John Davis, Pruitt Gushee, was council for the Anschutz Corp. when the unit went before the Board of Oil Gas and Mining for approval and a pooling order.

As the bottom hole location is over a mile from federal minerals I don't see where we would need to be consulted about it.

I have attached the Oil and Gas Plat for 4 north 7 east for your information.

If you need anything else let me know.

Mickey

(See attached file: UT260040N0070E0-6001.tif)

Michael L. Coulthard
Petroleum Engineer
Bureau of Land Management
Phone (801) 539-4042
Fax (801) 539-4200

"Diana Whitney" <dianawhitney@utah.gov> 11/28/2005 10:31 AM

To <mcoultha@ut.blm.gov>

cc

Subject Deepening - Paleozoic Deep Unit

Anschutz Ranch Deep #10-27
NE SE, 1430' FSL and 1246' FEL, Section 27 (Surface)
SE NW, 2263' FNL and 2160' FWL, Section 22 (Btm. Hole)
T4N - R7E
Summit County, Utah

Prepared For:

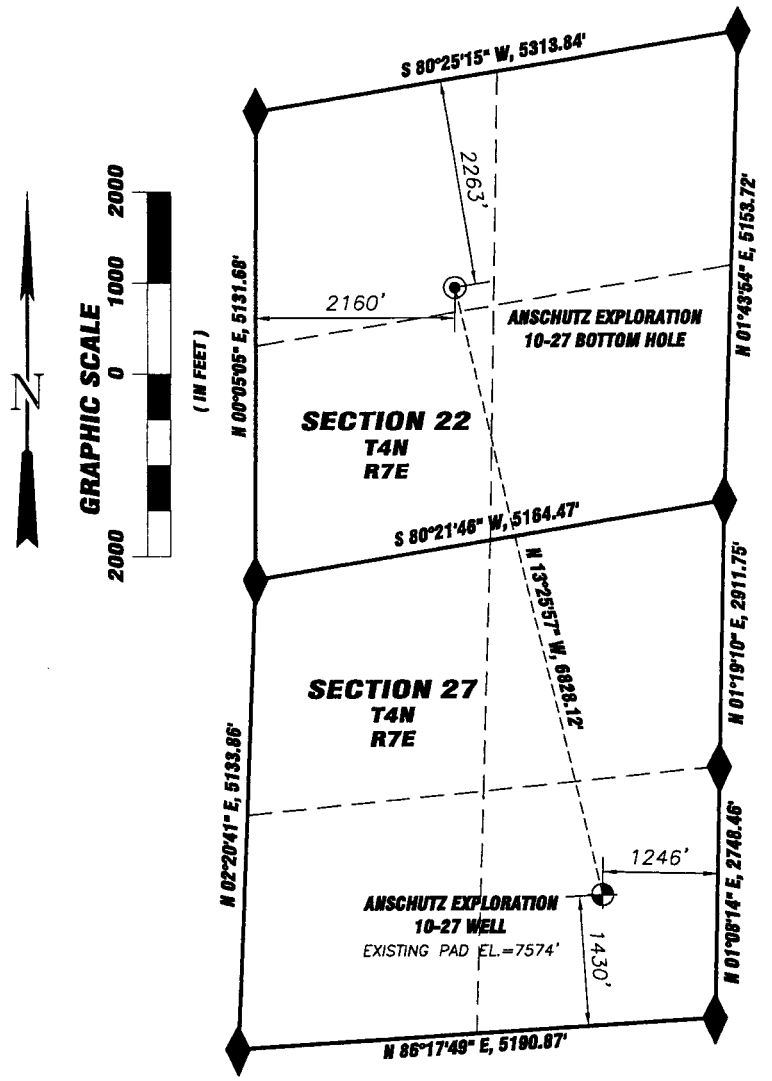
Anschutz Exploration Corporation

By:

PERMITCO INC.
14421 County Road 10
Fort Lupton, CO 80621
303/857-9999

Copies Sent To:

Utah Division of Oil, Gas & Mining - SLC, UT
1 - Utah Division of Oil, Gas & Mining - Roosevelt, UT
1 - Utah Division of State Lands - SLC, UT
2 - Anschutz Exploration Corporation - Denver, CO



BOTTOM HOLE

NAD 83

41°04'00.403" N (41.06678° N)
111°08'35.479" W (111.14319° W)

NAD 27

41°04'00.594" N (41.06683° N)
111°08'32.825" W (111.14245° W)

10-27 WELL

NAD 83

41°02'54.809" N (41.04856° N)
111°08'14.772" W (111.13744° W)

NAD 27

41°02'55.026" N (41.04862° N)
111°08'11.983" W (111.13666° W)

BASIS OF BEARING

S 86°17'49" W, 5190.87' between the SW corner of Section 27 and the SE corner of Section 27.

BASIS OF ELEVATION

GPS observations, NAVD 88 using Geoid 99.

CERTIFICATE OF SURVEYOR

STATE of WYOMING)
COUNTY of UINTA) ss

I, Cloey C. Wall, of Uinta Engineering and Surveying, Inc. hereby state that I am by occupation a Professional Land Surveyor employed by Anschutz Exploration to make the survey of the well described and shown on this plat; that the survey of said works was made under my supervision and under my authority and that such survey is accurately represented hereon.

PROFESSIONAL LAND SURVEYOR
Cloey C. Wall
No. 324872
CLOEY C. WALL
9/29/05
STATE OF UTAH

Map Showing

ANSCHUTZ EXPLORATION
10-27 WELL
1430' FSL, 1246' FEL
NE1/4 SE1/4 of SECTION 27, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING INC.
808 MAIN STREET
EVANSTON, WY 82930
307-789-3602
uinta@uintaengineering.com
FAX: 307-789-6456
UESI
2005

DATE: 09/29/05 JOB #: 05-19-02 FILE: 05-19-02BHLOC
DRAWN BY: Jeff Henderson SURVEYOR: Cloey Wall

Anschutz Ranch Deep #10-27
NE SE, 1430' FSL and 1246' FEL, Section 27 (Surface)
SE NW, 2263' FNL and 2160' FWL, Section 22 (Btm. Hole)
T4N - R7E
Summit County, Utah

Prepared For:

Anschutz Exploration Corporation

By:

PERMITCO INC.
14421 County Road 10
Fort Lupton, CO 80621
303/857-9999

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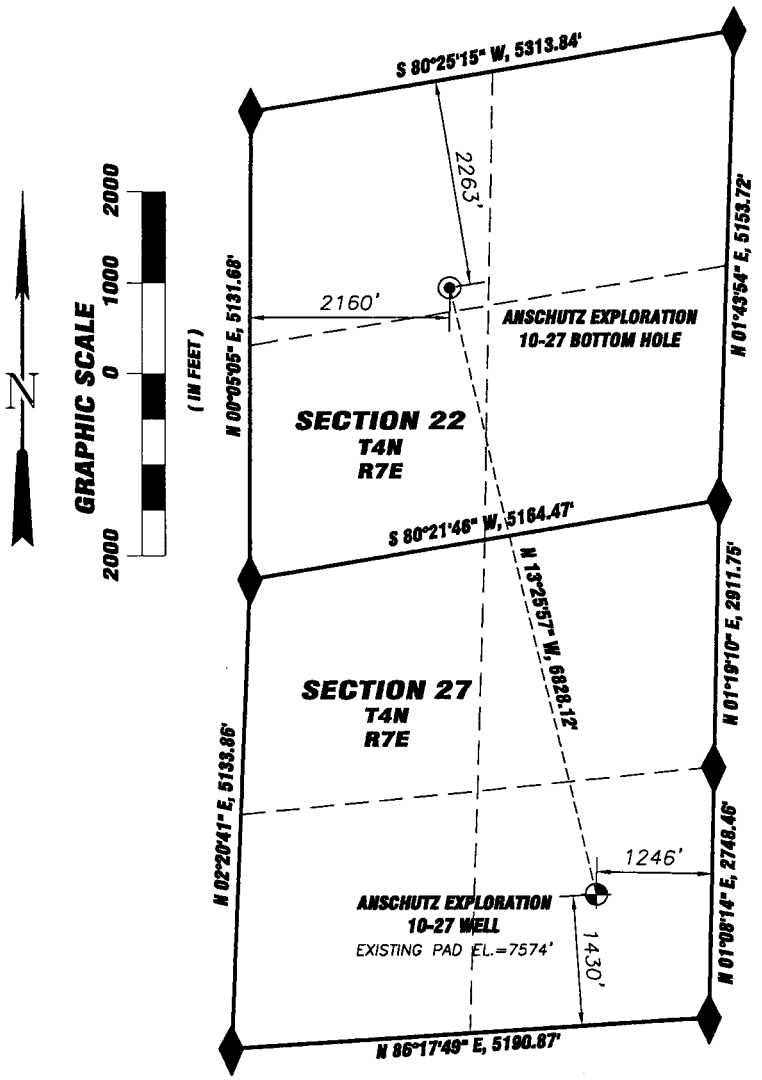

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111°08'35.479" W (111.14319° W)

NAD 27

41°04'00.594" N (41.06683° N)
111°08'32.825" W (111.14245° W)

10-27 WELL

NAD 83

41°02'54.809" N (41.04856° N)
111°08'14.772" W (111.13744° W)

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41°02'55.026" N (41.04862° N)
111°08'11.983" W (111.13666° W)

BASIS OF BEARING

S 86°17'49" W, 5190.87' between the SW corner of Section 27 and the SE corner of Section 27.

BASIS OF ELEVATION

GPS observations, NAVD 88 using Geoid 99.

CERTIFICATE OF SURVEYOR

STATE of WYOMING)
COUNTY of UINTA) ss

I, Cloey C. Wall, of Uinta Engineering and Surveying, Inc. hereby state that I am by occupation a Professional Land Surveyor employed by Anschutz Exploration to make the survey of the well described and shown on this plat; that the survey of said works was made under my supervision and under my authority and that such survey is accurately represented hereon.

PROFESSIONAL LAND SURVEYOR
Cloey C. Wall
No. 324872
CLOEY C. WALL
9/29/05
STATE OF UTAH

Map Showing

ANSCHUTZ EXPLORATION
10-27 WELL
1430' FSL, 1246' FEL
NE1/4 SE1/4 of SECTION 27, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING INC.
808 MAIN STREET
EVANSTON, WY 82930
307-789-3602
uinta@uintaengineering.com
FAX: 307-789-6456

DATE: 09/29/05 JOB #: 05-19-02 FILE: 05-19-02BHLOC
DRAWN BY: Jeff Henderson SURVEYOR: Cloey Wall

H_2S Contingency Plan

for

ANSCHUTZ RANCH DEEP #10-27

Section 27, T4N, R7E
Summit County, Utah

Anschutz Exploration Corporation
555 17th Street, Suite 2400
Denver, Colorado 80202

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Anschutz Ranch Deep #10-27
Summit County, Utah
H_2S Contingency Plan

10/13/05

Introduction

It is the policy of Anschutz Exploration Corporation to provide a safe and healthful work environment for all of its employees as well as contractors that may work on Anschutz leases. Anschutz Exploration Corporation makes a continued effort to comply with laws and regulations relative to worker safety and health, and to manage all operations in a manner to reduce risk.

The following is a H_2S Contingency Plan for the Anschutz Ranch Deep #10-27 well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling and/or completion operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the well site in the event of a sudden release of hydrogen sulfide H_2S. All personnel working on the well site as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the drilling operation is necessary for this plan to be effective.

This plan shall incorporate the existing Emergency Response Plan of the Union Pacific Resources Wahsatch Gathering System as it pertains to the public safety in the event of any atmospheric release of H_2S. It is imperative that the WGS Control Room be contacted as soon as possible in the event of any release so this plan can be implemented.

Directions to location:

Traveling south on Harrison Blvd / Overthrust Rd travel 18.8 miles just past the ARE plant. Just past the plant turn right and travel ½ mile to a tee in the road at the tee turn left and travel ½ mile to an intersection at the bottom of the hill adjacent to the beaver ponds. Stay right on road # 4 and travel 3.7 miles down into the Westside of Anschutz ranch. From that point follow rig signs to location.

I. Duties & Responsibilities

In order to assure proper execution of the contingency plan, it is essential that one person be responsible and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. Anschutz Exploration Corporation drilling representative on location. If unable to perform his/her duties,
2. alternate Anschutz representative. If unable to perform his/her duties,
3. rig Toolpusher/Supervisor. If unable to perform his/her duties,
4. safety consultant representative, if available.

A. All Personnel

1. Always be alert for possible H_2S alarms - both audible and visual.
2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.
3. Develop a "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas, should there be no wind.
4. Familiarize yourself with nearest escape routes for safe evacuation.
5. Should H_2S alarm sound, DON'T PANIC. Remain calm and follow instructions of person in charge.
6. If the H_2S alarms sound:
   a. Essential personnel shall don the appropriate respiratory protective equipment and follow company procedures. Essential personnel will continue to wear respiratory protective equipment until the area is deemed safe (H_2S concentration less than 10 ppm).
   b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape breathing systems. Wait there for further instructions from Anschutz drilling representative.
   c. Initiate rescue protocol if necessary, following training procedures.

B. Drilling Foreman

1. The Anschutz drilling foreman will confirm that all personnel on location are trained in H_2S safety and aware of the above list of duties when the H_2S plan becomes effective at 300 feet above the Dinwoody Formation.

2. The Anschutz foreman will ensure that all personnel observe all safety and emergency procedures.

3. The Anschutz foreman will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.

4. Should any extreme danger condition exist, the Anschutz foreman will:

   a. Assess the situation and advise all personnel by appropriate means of communication.
   b. Be responsible for determining that the extreme danger condition is warranted and the red flag shall be posted at location entrance.
   c. Go to safe briefing area and give clear instructions relative to hazard on location, and actions for personnel to follow.
   d. Notify company and regulatory groups of current situation as outlined in company protocol. Notify WGS Control room to activate WGS Emergency Response Plan.
   e. Proceed to rig floor and supervise operations with rig supervisor. Take action to control and reduce the H_2S hazard.
   f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
   g. Be responsible for authorizing evacuation of persons/residents in area surrounding the drilling location.
   h. Commence any ignition procedures if ignition criteria are met.

C. Rig Supervisor - Toolpusher

1. If the Anschutz drilling foreman is unable to perform his/her duties, and the alternate drilling foreman is also unable or unavailable to perform his duties, the drilling rig Toolpusher will assume command of well site operations and all responsibilities listed above for the drilling foreman.

2. Ensure that all rig personnel are properly trained to work in H_2S environment and fully understand purpose of H_2S alarms and actions to take when alarms activate. Ensure that all crew personnel understand the buddy system, safe briefing areas (SBA), and individual duties as well as emergency evacuation procedures.

3. Should an extreme danger operational condition arise, the rig Toolpusher shall assist the Anschutz foreman by:

   a. Proceeding to the rig floor and assist in supervising rig operations.
   b. Ensure that only essential working personnel remain in hazardous areas.
   c. Ensure that all crew members that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
   d. Assign rig crew member or other service representative to block entrance to location. No unauthorized personnel will be allowed entry to location.
   e. Help to determine hazardous "danger zones" on location using portable detection equipment and position electric fans to move gas in any high concentration areas.

D. Safety Consultant

1. During normal operations (no H_2S present), the safety consultant will be responsible for the following:

   a. Ensure that all well site safety equipment is in place and operational.
   b. Ensure that all well site personnel are familiar with location safety layout and operation of all safety equipment.
   c. Assist the Anschutz foreman in performing weekly H_2S drills for location personnel.

2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:

   a. Account for all well site personnel.
   b. Assess any injuries and direct first aid measure.
   c. Ensure that all safety and monitoring equipment is functioning properly and available.
   d. Monitor the safety of well site personnel.
   e. Maintain a close communication with Anschutz foreman.
   f. Be prepared to assist Anschutz foreman with support for rig crew or other personnel using breathing equipment.
   g. Be prepared to assist Anschutz foreman with emergency procedures including possible well ignition.
   h. Be prepared to assist with evacuation of any area residents or other personnel working in the immediate area.

E. Wahsatch Gathering System Office

1. Wahsatch Gathering System operations control room will be notified of any release of H_2S by the Anschutz Operations Superintendent as well as other Anschutz Exploration Corporation supervisory personnel. Wahsatch Gathering System Operations Control room will be responsible for notifying and maintaining contact with the Uinta County Fire Protection Agency in the event of a H_2S release. A Memorandum of Understanding between Summit County, Utah and Uinta County, Wyoming, states that the primary responder to any event pertaining to the Wahsatch Gathering System (WGS) will be the Uinta County Fire Protection Agency.

2. The Anschutz drilling foreman will maintain communications with the WGS control room to coordinate with any other assistance that might be required.

3. Travel to well site if appropriate.

II. Drilling Rig Layout

A. Location

1. All respiratory protective equipment and H_2S detection equipment will be rigged up 3 days or 500 feet prior to entering the first zone suspected to contain hydrogen sulfide. The rig crews and other service personnel will be trained at this time.

2. The drilling rig will be situated on location to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the BOP's to the circulation tanks.

3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.

4. A minimum of 2 safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These will be located at least 150 ft. or as practical, from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated safe briefing area (SBA) for instructions.

5. Smoking areas will be established and "No Smoking" signs will be posted around the location.

6. Reliable 24 hour radio and telephone communications will be available at the drilling foremen's office.

7. A mud-gas separator will be rigged up and manifolded to the choke system.

8. All equipment that might come in to contact with hydrogen sulfide - drill pipe, drill stem test tools, blowout preventers, casing, choke system will meet Anschutz' metallurgy requirements for H_2S service.

9. The drilling rig will have a continuous electronic H_2S detection system that automatically with activate visible and audible alarms if hydrogen sulfide is detected. The visible light W11 activate if 10 ppm H_2S is present. The audible siren will activate if 15 ppm or higher concentration is present. There will be at least 4 H_2S sensors in place on the drilling rig. They will be located to detect the presence of hydrogen sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, and 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time.

10. The H_2S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.

11. A least 4 windsocks will be placed around the drill site to ensure that everyone on the drilling location can readily determine wind direction. One windsock will be mounted on or near the rig floor to be readily visible to rig crews when tripping pipe.

12. All respiratory protective equipment will be NIOSH/ MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air. Battery powered voice mikes will be available for communication when wearing masks.

13. Both 30 minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have 1 piece of equipment available to them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32°F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.

14. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.
15. H_2S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the driller's log.

III. Safety Procedures

A. Training

All personnel who come onto the drilling location must be properly trained in hydrogen sulfide (H_2S), nitrogen, and oxygen deficient atmosphere safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide (H_2S), nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.
2. Proper use, care and limitations of respiratory protective equipment with hands on practice.
3. Use of both fixed and portable detection toxic gas equipment.
4. Work practices to reduce opportunities for toxic gas exposure as well as confined space procedures.
5. First aid for toxic gas exposure and resuscitation equipment.
6. The buddy system.
7. Emergency evacuation procedures.
8. A review of the contingency plan for the well.

B. Operating Conditions

A three color flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the well site. This system is in compliance with BLM 0.0. # 6 and follows industry standards.

Green Flag Potential Danger

Yellow Flag Moderate Danger

Red Flag Extreme Danger - Do not approach if red flag is flying.

C. Evacuation Plan

There are no permanent residents within a 1-mile radius of the drill site. Anschutz Exploration Corporation and Union Pacific Resources Company have operations within this area and travel the roads in the immediate area.

According to the Union Pacific Resources Company – Wahsatch Gathering System Emergency Response Plan, any evacuation will be conducted under the direction of Jon Lunsford, Chief, Uinta County Fire Protection Agency.

All regulatory agencies will be notified as soon as possible.

D. Emergency Rescue Procedures

Well site personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide should **not attempt to rescue without donning the proper breathing equipment.** When making an emergency rescue always use the following procedures:

1. Don rescue breathing equipment before attempting to rescue someone.
2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.
3. If the victim is not breathing, initiate mouth-to mouth resuscitation immediately. Follow CPR guidelines and replace mouth to mouth with a bag mask resuscitator if available.
4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.
5. Any personnel who experience hydrogen sulfide (H_2S) exposure must be taken to a hospital for examination and their supervisor notified of the incident.

IV. H_2S Safety Equipment on Drilling Location

Item	Amount	Description
1.	One (1)	Safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high pressure regulators.
2.	At least 1000 ft.	Low pressure airline equipped with Hansen locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	Scott 30 minute self-contained breathing apparatuses (SCBA).
4.	Twelve (12)	Scott airline units with emergency escape cylinders.
5.	One (1)	4 channel continuous electronic H_2S monitor with audible and visual alarms. The set points for these alarms are 10 PPM for the low alarm and 15 PPM for the high alarm.
6.	Two (2)	Sensidyne portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)	Oxygen resuscitator with spare oxygen cylinder.
8.	One (1)	Trauma first aid kit.
9.	One (1)	Stokes stretcher and one (1) KED.
10.	Four (4)	Wind socks.
11.	At least one (1)	Well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs.
13.	One (1)	Fire blanket.
14.	One (1)	Set air splints.
15.	Two (2)	Electric explosion proof fans.
16.	One (1)	Bullhorn and chalk board.
17.	Three (3)	300 cu. ft. air bottles for the safe briefing area.
18.	Two (2)	30# fire extinguishers.
19.	Six (6)	Battery powered voice mikes for communication when wearing air masks.
20.	One (1)	Battery powered combustible gas meter.

A drawing of the drilling location will be inserted in this page showing the actual placement of all safety equipment relative to the other equipment on the drill site. This drawing will be completed within 2 weeks of the drilling rig being in place and the location fully constructed to assure that all equipment, pits and roads are accurately located on the map.

V. Well Ignition Procedures

If it should become apparent that a uncontrolled release of hydrogen sulfide to the atmosphere may endanger the health and safety of the public or well site personnel, the Anschutz drilling foreman will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition Equipment

The following equipment will be available on-site for use by the ignition team.

1. Two (2) 12 gauge flare guns with flare shells.
2. Two (2) 500 ft. fire resistant retrieval ropes.
3. One (1) portable combustible gas meter.
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. One (1) backup vehicle with communication equipment.

B. Ignition Procedures

1. The Anschutz drilling foreman will ensure that well site personnel are evacuated to a safe area upwind of the wellbore prior to any ignition action.

2. The Anschutz foreman and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.

3. The backup crew will be positioned near a radio equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.

4. The partner of the ignition team will carry a combustible gas/hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.

5. The Anschutz foreman will carry the flare gun and shells.

6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with the flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 degree angles to the gas source, but DO NOT approach closer to the leak.

7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.
8. Notify the Wahsatch Gathering System Control Room of any flaring of H_2S gas on location.

VI. Residents - Public in R.O.E.

There are no residents within a 2-mile radius of the well site. The Anschutz Corporation may have personnel working in the area and those people will be able to be reached through the ARE plant. The surrounding area is federally owned and maintained by the BLM. This land may be used for recreational purposes including hunting and recreational vehicles any time during the drilling or completion of this well.

Anschutz Exploration Corp.

Jim Oursland (Operations Manager) .....303-299-1228 (Office)
303-887-1427 (Mobile)

Jim Hill (Drilling Foreman).....307-783-2983 (Office)
307-783-2985
307-789-7146 (Residence)

AWGS Control Room (Evanston)..... .(307) 789-1573

VII. Emergency Phone Directory

A. Anschutz Exploration Corp.
555 17th Street (Suite 2400)
Denver, CO 80202
(303) 298-1000

Title	Name		Phone
Operations Supervisor	Jim Oursland	Office	(303) 299-1228
		Mobile	(303) 887-1427
Drilling Foreman	Jim Hill	Office	307-783-2983
			307-783-2985
		Residence	307-789-7146
AWGS	Kaye Wilson	Office	307-783-1573
		Mobile	307-799-5740
Operations Center Foreman	Bruce J. Williams	Office	(307) 783-2400
		Mobil	(307) 679-1306
Anschutz Process Control			(307) 783-2430
			(307) 783-2469
Merit Field Foreman	Alan Karsky	Office	(307) 783-2421
		Mobil	(307) 679-1345
Drilling & Completion Safety Engineer	Ruth Duval	Office	(307) 783-2405
		Mobil	(307) 679-1307

B. Emergency Services Phone List

1. IHC Memorial Hospital - Evanston, WY.		**(307) 789-3636**
2. Ambulance Services (BP Plant Anschutz)		(307) 783-2430
Ambulance Services - Uinta County, WY.		(307) 789-2331
3. Summit County Sheriff		(435) 615-3500
4. Sheriff Department- Uinta County, WY.		(307) 789-2331
5. Highway Patrol - Wyoming		(800) 442-9090
6. Fire Department - Uinta County, WY.	911 or	(307) 789-2331
7. Bureau of Land Management - Kemmerer, WY.		(307) 877-3933
Wyoming State Office		
8. Medical Helicopter - Air Med - Salt Lake City, UT		(800) 453-0120

PROPERTIES OF GAS

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide (H_2S), and Methane.

TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity of Air = 1	1 Threshold Limit	2 Hazardous Limit	3 Lethal Concern
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr.	300 ppm
Hydrogen Sulfide	H_2S	1.18	10 ppm	250 ppm/hr.	600 ppm
Sulfur Dioxide	SO_2	2.21	5 ppm	--	1000 ppm
Chlorine	CL_2	2.45	1 ppm	4 ppm/hr.	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO_2	1.52	5000 ppm	5%	10%
Methane	CH_4	0.55	90000 ppm	Combustible Above 5% in Air	--

[1]Threshold Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

[2]Hazardous Concentration that may cause death.

[3]Lethal Concentration that will cause death with short-term exposure.

HYDROGEN SULFIDE

GENERAL PROPERTIES

Hydrogen Sulfide (H_2S) is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide (H_2S), which is more toxic than Carbon Monoxide. Common names: sour gas, acid gas, rotten egg gas, sulfur gas, sulfurated gas, sweet gas. H_2S is a sweet tasting gas, but often the word "tasting" is left out.

PHYSICAL - CHEMICAL Properties

1. Specific Gravity (Air = 1.000)	1.193 (@77° F)
2. Color	None
3. Odor	Compare to rotten eggs.
4. Odor Threshold	0.13 part of I ppm.
5. Corrosivity	Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water	4.0 to I in H_20 @ 32°F 2.6 to I in H_20 @ 68°F
7. Effects on Humans	Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure	19.6 atmospheres at 25°C.
9. Explosive Limits	4.3% to 46% by volume in air.
10. Ignition Temperature	18°F (burns with pale flame).
11. Molecular Weight	34.08
12. Conversion Factors	I mg/1 of air = 717 ppm (at 25°C and 760 mm HG). I ppm = 0.00139 mg/1 of air.
13. pH	3 in water.
14. Conversion Factors	I mg/1 of air = 717 ppm (at 25°C and 760 mm HG). I ppm = 0.00139 mg/1 of air.

INDUSTRIAL OCCURRENCES

Hydrogen Sulfide (H_2S) exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, canneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in swampy or filled ground. It is produced when sulfur-containing organic material decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manholes, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

TOXIC PROPERTIES

Hydrogen Sulfide (H_2S) is an extremely toxic and irritating gas. Free Hydrogen Sulfide (H_2S) in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations cause blocking of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide (H_2S) is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about three days, have occurred after acute exposures to Hydrogen Sulfide (H_2S).

At low concentrations the predominant effect of Hydrogen Sulfide (H_2S) is on the eyes and respiratory tract. Eye irritation, conjunctivitis pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide (H_2S) result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposures to Hydrogen Sulfide (H_2S) do not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide (H_2S) on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor (H_2S), some victims of sudden acute overexposure have reported a brief, sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide (H_2S) have been summarized as follows:

0.02 ppm: No odor.

0.13 ppm:	Minimal perceptible odor.
0.77 ppm:	Faint, but readily perceptible odor.
4.60 ppm:	Easily detectable, moderate odor.
27.0 ppm:	Strong, unpleasant odor, but not intolerable.

Physiological responses to various concentrations of Hydrogen Sulfide (H_2S) have been reported as follows:

10 ppm:	Beginning eye irritation.
50 - 100 ppm:	Slight conjunctivitis, respiratory tract irritation after I hour exposure.
100 ppm:	Coughing, eye irritation, loss of sense of smell after 2 to 15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15 to 30 minutes, followed by throat irritation after I hour. Several hours of exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours.
200 - 300 ppm:	Marked conjunctivitis and respiratory tract irritation after I hour of exposure.
500 - 700 ppm:	Loss of consciousness and possibly death in 30 minutes to I hour.
700 - 1000 ppm:	Rapid unconsciousness, cessation of respiration, and death.
1000 - 2000 ppm:	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

ACCEPTABLE CONCENTRATIONS

Acceptable Eight Hour Time-Weighted Average

To avoid discomfort, the time-weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

Acceptable Ceiling Concentrations

The acceptable concentration for protection of health for an eight-hour, five-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

Acceptable Maximum for Peaks Above Acceptable Base Line For Continuous Exposure

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

H_2S EQUIVALENTS

Parts Per Million	Percents %	Grains per 100 cu. Ft.
1	.0001	0.055
10	.0010	0.550
18	.0018	1.000
100	.0100	5.500
1000	.1000	55.500
10000	1.0000	555.500

Grains per 100 cu. ft. = % by volume Mole 636.4
1% by volume = 10.000 ppm

SULFUR DIOXIDE

Sulfur Dioxide (SO_2) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide (SO_2) is produced during the burning of H_2S. Although SO_2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide (SO_2) is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

CONCENTRATIONS		EFFECTS
% SO_2	ppm	
.0005	5	Pungent odor. Normally a person can detect SO_2 in this range.
.001	10	Safe for (8) eight hour exposure.
.0012	12	Throat irritation, coughing, and constriction of the chest, tearing and smarting of the eyes.
.015	150	So irritating that it can be endured for only a few minutes.
.05	500	Causes sense of suffocation, even with the first breath.

PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula	SO_2
1. Specific Gravity	2.212
2. Color	None
3. Flammable	No
4. Odor	Pungent odor gives ample warning of its presence.
5. Corrosivity	Dry, not corrosive to ordinary metals. Wet-corrosive to most common metals.
6. Allowable Concentrations	5 ppm (ACGIH) 5 ppm (OSHA)
7. Effects on Humans	Eyes, throat and upper respiratory irritation.

TOXIC PROPERTIES

Sulfur Dioxide (SO_2) is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide (SO_2) contaminated atmosphere unless he were unconscious or trapped.

Sulfur Dioxide gas (SO_2) is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is extremely irritating, and can be endured for only a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide (SO_2), there are few references that would indicate pneumonia as an after effect.

From: "Larry R. Williams" <larry.r.williams@comcast.net>
To: <lishacordova@utah.gov>
Date: 10/26/2005 3:37:10 PM
Subject: Anschutz 10-27 reentry - Water Permit #

I have received a new temporary change permit for the water well for the 10-27 well.

The new number is t30742 43-043-30321

The file has been reviewed by staff and recommended for approval and has been forwarded to Mr. Mann for final approval.

Larry R. Williams
P. O. Box 71313
Salt Lake City, UT 84171
(801) 573-2110
(801) 277-0905 Fax
larry.r.williams@comcast.net

****
****
CONFIDENTIALITY NOTE: The information contained in this message and documents that follow are for the exclusive use of the addressee and may contain confidential, privileged, proprietary, and non-disclosable information. If the recipient of this message is not the addressee, or person responsible for delivering this message to the addressee, such recipient is strictly prohibited from reading, printing, photocopying, distributing, or otherwise using this message transmission, or its contents, in any way. If the recipient has received this message in error, please call the above number immediately, delete the message and destroy any printed copies. You will be reimbursed for any telephone or other expenses. Thank you.
****
****

STATE OF UTAH -- DIVISION OF WATER RIGHTS -- DATA PRINT OUT for t30742(35-8296)

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 10/31/2005 Page 1

CHANGE: t30742 WATER RIGHT: 35-8296 CERT. NO.: AMENDATORY? No

BASE WATER RIGHTS: 35-8296

RIGHT EVIDENCED BY: Water Right 35-8296

CHANGES: Point of Diversion [X], Place of Use [X], Nature of Use [X], Reservoir Storage [ ].

NAME: Antelope Company
ADDR: P O Box 71313
Salt Lake City, UT 84171
INTEREST: 100% REMARKS:

FILED: 10/20/2005	PRIORITY: 10/20/2005	ADV BEGAN:	ADV ENDED:	NEWSPAPER: No Adv Required	
ProtestEnd:	PROTESTED: [No]	HEARNG HLD:	SE ACTION: [ ]	ActionDate:	PROOF DUE:
EXTENSION:	ELEC/PROOF: [ ]	ELEC/PROOF:	CERT/WUC:	LAP, ETC:	PROV LETTER:
RENOVATE:	RECON REQ:	TYPE: [ ]			

Status: Unapproved
Related Distribution System: 62-WEBER RIVER (UPPER SUMMIT)

HERETOFORE

FLOW: 25.0 acre-feet

SOURCE: Rees Creek

COUNTY: Summit

Weber River Decree No. 296 Proposed
Determination No 230a Page 74

POINT(S) OF DIVERSION ------>

Point Surface:

(1) N 200 ft E 825 ft from NW cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 11 Ditch
Source: Rees Creek

(2) S 1000 ft E 1250 ft from NW cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 10 Ditch
Source: Rees Creek

(3) N 2300 ft W 50 ft from S4 cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 8 Ditch
Source: Rees Creek

(4) S 1650 ft E 1320 ft from NW cor, Sec 05, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 9 Ditch
Source: Rees Creek

(5) S 2150 ft 0 ft from N4 cor, Sec 09, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 4 Ditch
Source: Rees Creek

(6) S 850 ft E 350 ft from NW cor, Sec 09, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 7 Ditch
Source: Rees Creek

(7) N 200 ft W 660 ft from SE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 1 Ditch
Source: Rees Creek

(8) N 1100 ft W 900 ft from SE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 1a Ditch
Source: Rees Creek

(9) N 2300 ft W 1250 ft from SE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 1b Ditch
Source: Rees Creek

(10) S 1050 ft W 1300 ft from NE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 2 Ditch

HEREAFTER

FLOW: 25.0 acre-feet

SOURCE: Underground Water Well

COUNTY: Summit COM DESC: Anschutz Ranch

CHANGED AS FOLLOWS: (Click Location link for WRPLAT)

Source: Rees Creek
(11) S 500 ft W 1450 ft from NE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 3 Ditch
Source: Rees Creek
(12) S 1650 ft W 1700 ft from NE cor, Sec 16, T 4N, R 7E, SLBM
Dvrting Wks: Rees No 3a Ditch
Source: Rees Creek

Point Underground:

Point Underground:
(1) N 1407 ft E 1239 ft from SE cor, Sec 27, T 4N, R 7E, SLBM
Diameter: 8 ins. Depth: 100 to 500 ft. WELL ID#:
COMMENT:

PLACE OF USE ------>

	--NW¼--	--NE¼--	--SW¼--	--SE¼--
	N N S S	N N S S	N N S S	N N S S
	W E W E	W E W E	W E W E	W E W E
Sec 04 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 05 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 09 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 16 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*
Sec 32 T 5N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*

CHANGED as follows:

	--NW¼--	--NE¼--	--SW¼--	--SE¼--
	N N S S	N N S S	N N S S	N N S S
	W E W E	W E W E	W E W E	W E W E
Sec 27 T 4N R 7E SLBM	*X:X:X:X**	X:X:X:X**	X:X:X:X**	X:X:X:X*

NATURE OF USE ------>

SUPPLEMENTAL to Other Water Rights: Yes

IRR: 119.9000 acs Sol/Sup: acs USED 03/01 - 11/01

STK: 1 Cattle or Equivalent USED 01/01 - 12/31

CHANGED as follows:

SUPPLEMENTAL to Other Water Rights: No

OTH: OIL RECOVERY: Oil and gas exploration operations. USED 01/01 - 12/31

**********E N D O F D A T A**********

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/4/05

API NO. ASSIGNED: 43-043-30321

WELL NAME: ANSCHUTZ RANCH DEEP 10-27
OPERATOR: ANSCHUTZ EXPLORATION (N7940)
CONTACT: LISA SMITH

PHONE NUMBER: 303-857-9999

PROPOSED LOCATION:

NESE 27 040N 070E
SURFACE: 1430 FSL 1246 FEL
BOTTOM: 2263 FNL 2160 FWL Sec 22
SUMMIT
ANSCHUTZ RANCH (500)

LEASE TYPE: 4 - Fee
LEASE NUMBER: FEE
SURFACE OWNER: 4 - Fee
PROPOSED FORMATION: CMBRN
COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DRD	11/29/05
Geology		
Surface		

LATITUDE: 41.04839
LONGITUDE: -111.1364

RECEIVED AND/OR REVIEWED:

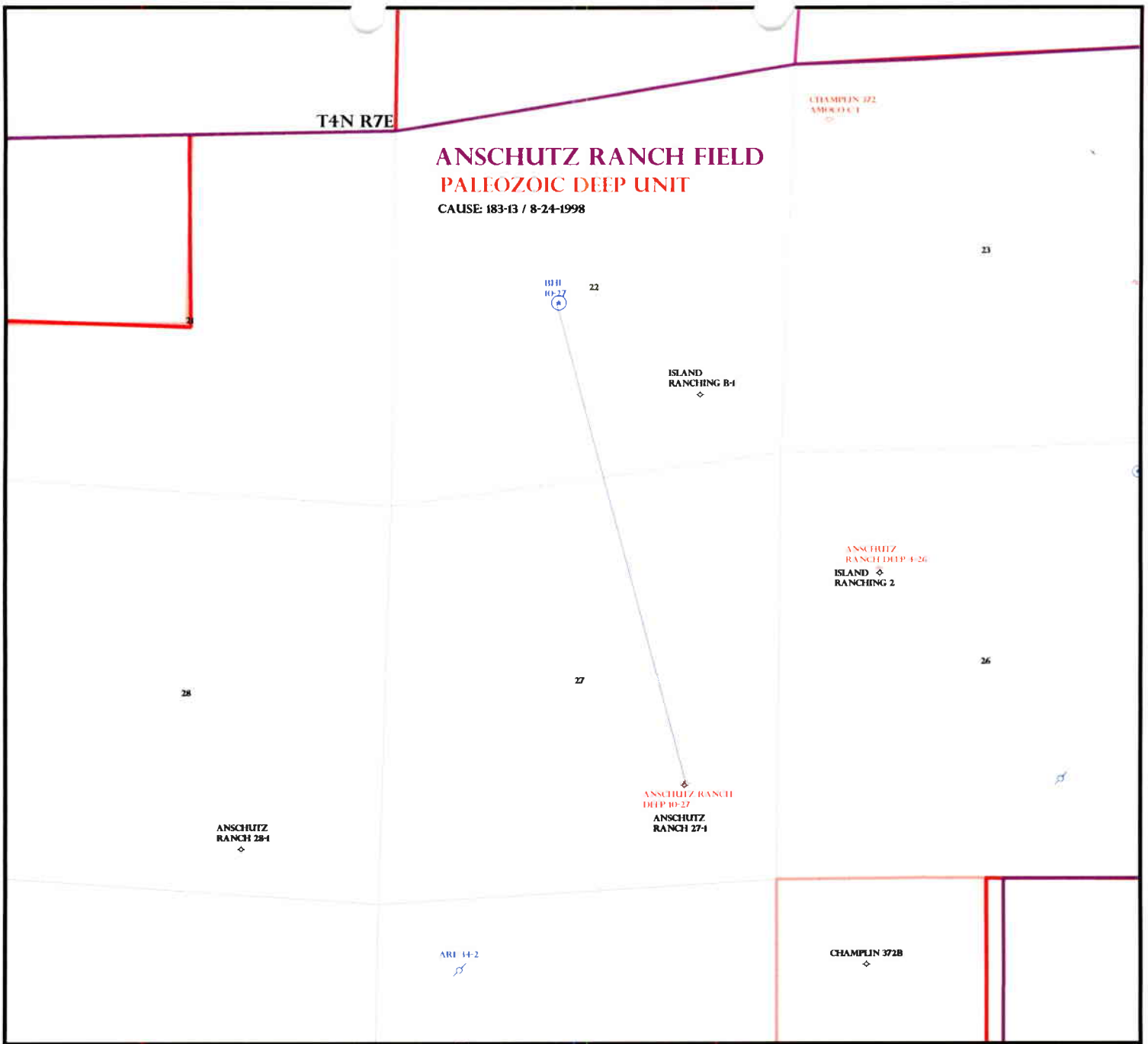
✓ Plat
✓ Bond: Fed[] Ind[] Sta[] Fee[]
(No. 965001810)
N Potash (Y/N)
N Oil Shale 190-5 (B) or 190-3 or 190-13
✓ Water Permit
(No. T23687)
N RDCC Review (Y/N)
(Date:)
Y Fee Surf Agreement (Y/N)
NA Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.
Unit ANSCHUTZ RANCH PAOZ
___ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells
___ R649-3-3. Exception
✓ Drilling Unit
Board Cause No: 183-13
Eff Date: 8-24-1998
Siting: 1,000' fr ext u bdrg
___ R649-3-11. Directional Drill

COMMENTS: Needs Presite (10/18/05)

STIPULATIONS: 1 - STATEMENT OF BASIS



OPERATOR: ANSCHUTZ EXPL CORP (N7940)

SEC: 27 T. 4S R. 7E

FIELD: ANSCHUTZ RANCH (500)

COUNTY: SUMMIT

CAUSE: 183-13 / 8-24-1998

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING

Utah Oil Gas and Mining

N
W E
S

PREPARED BY: DIANA WHITNEY
DATE: 28-NOVEMBER-2005

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: The Anschutz Corporation N0060

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St., Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Change Co. Name
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The name of the operator should be changed from The Anschutz Corproration to Anschutz Exploration Corporation.

N7940

effective Sept 1, 2005
Bond # 965 001 810

NAME (PLEASE PRINT) DeVon M. Rester TITLE Operations Technician

SIGNATURE DeVon M. Rester DATE 11/1/2005

(This space for State use only)

APPROVED 11/22/05
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

(5/2000)

RECEIVED
NOV 02 2005
DIV. OF OIL, GAS & MINING

Division of Oil, Gas and Mining

ROUTING
1. DJJ
2. CDW

OPERATOR CHANGE WORKSHEET

Change of Operator (Well Sold) — Designation of Agent/Operator

X Operator Name Change — Merger

The operator of the well(s) listed below has changed, effective:	**9/1/2005**
FROM: (Old Operator):	**TO:** (New Operator):
N0060-Anschutz Corporation 555 17th St, Suite 2400 Denver, CO 80202 Phone: 1-(303) 298-1000	N7940-Anschutz Exploration Corporation 555 17th St, Suite 2400 Denver, CO 80202 Phone: 1-(303) 298-1000

CA No. **Unit:**

WELL(S)

NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
ANSCHUTZ RANCH DEEP 10-27	27	040N	070E	4304330321	12576	Fee	GW	S

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 11/2/2005
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 11/2/2005

3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 8/4/2004
4. Is the new operator registered in the State of Utah: YES Business Number: 1242619-0143
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE

6b. Inspections of LA PA state/fee well sites complete on: n/a

6c. Reports current for Production/Disposition & Sundries on:

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: n/a

8. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 11/22/2005
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 11/22/2005
3. Bond information entered in RBDMS on: 11/22/2005
4. Fee/State wells attached to bond in RBDMS on: 11/22/2005
5. Injection Projects to new operator in RBDMS on: n/a
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: n/a

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: n/a

FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 965001810

2. The **FORMER** operator has requested a release of liability from their bond on: n/a Bond is shared
The Division sent response by letter on:

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 11/22/2005

COMMENTS:

ANSCHUTZ
EXPLORATION CORPORATION
555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

November 30, 2005

Ms. Lisha Cordova
State of Utah Division of Oil, Gas and Mining
PO Box 145801
Salt Lake City, UT 84114-5801

VIA FACSIMILE
801/359-3940
and US Mail

Re: Anschutz Ranch Deep #10-27
Directional Drilling R649-3-11
NESE, 1430' FSL and 1246' FEL Sec 27 (Surface)
SENW, 2263' FNL and 2160 FWL Sec. 22 (Bottom Hole)
Summit County, Utah

Dear Ms. Cordova:

Pursuant to the filing of Anschutz Exploration Corporation's ("Anschutz") Application for Permit to Drill regarding the above referenced well on September 30, 2005, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Anschutz Ranch Deep #10-27 is located within a pooled area including, among other lands, all of Sections 22 and 27 of T4N, R7E, Summit County, Utah.

- Anschutz is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Anschutz will be able to utilize the existing pad, road and pipelines in the area.

- Furthermore, Anschutz hereby certifies that the working interest ownership covering the lands located within 460 feet of the entire directional well bore are subject to that certain Declaration of Pooling and Agreement dated July 22, 1998.

RECEIVED
DEC 02 2005
DIV. OF OIL, GAS & MINING

Therefore, based on the above stated information, Anschutz requests the permit be granted pursuant to R649-3-11.

Sincerely,

ANSCHUTZ EXPLORATION CORPORATION

Keith V. Bonati
Senior Landman

KVB/sbc

ANSCHUTZ
EXPLORATION CORPORATION
555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 - 303-298-1000 • FAX 303-298-8881

November 30, 2005

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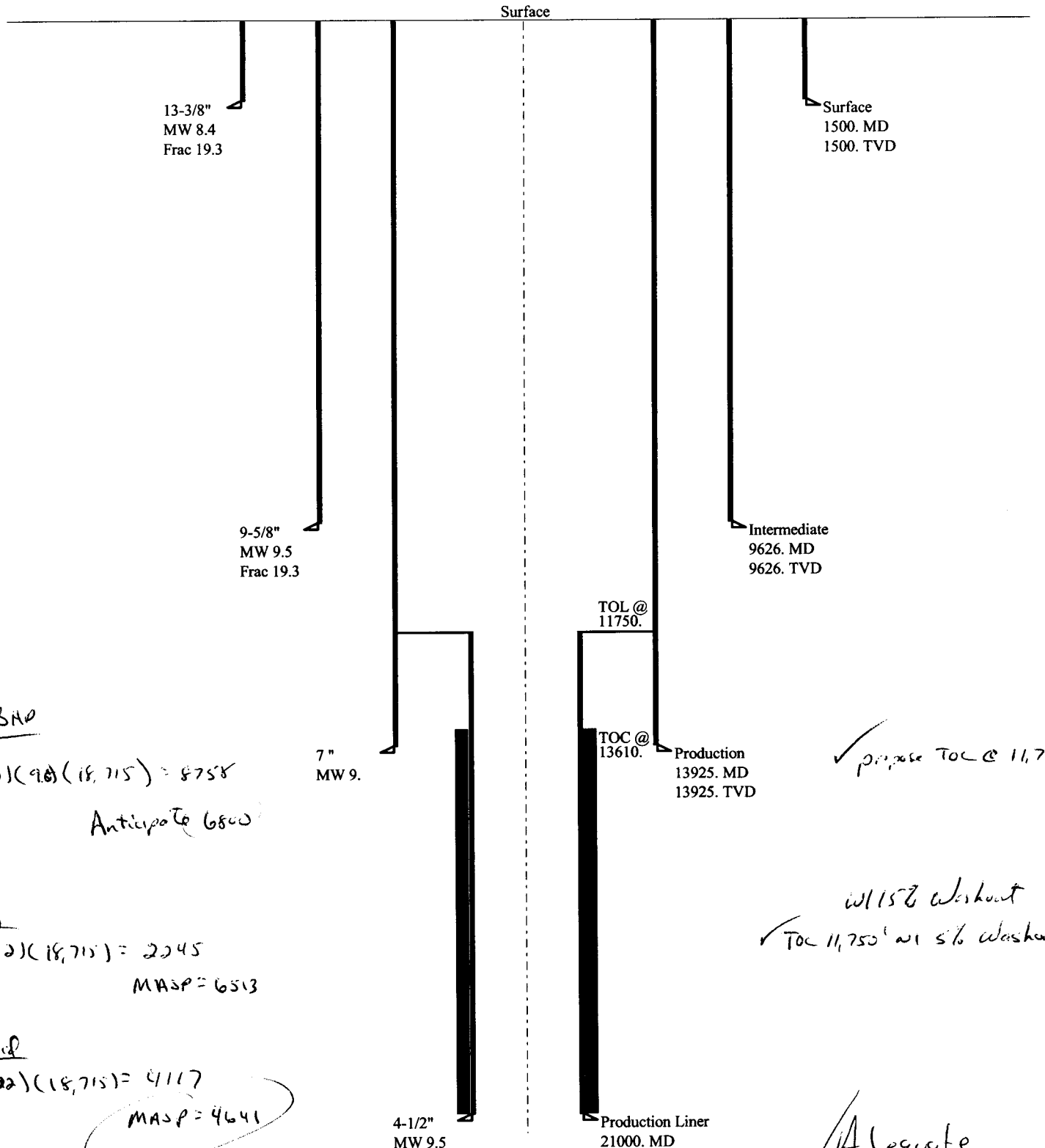
Keith V. Bonati
Senior Landman

KVB/sbc

11-05 Anschutz Ranch Deep #0-27

Casing Schematic



BHP

(.050)(9.8)(18,715) = 8758

Anticipate 6800

Gas

(.12)(18,715) = 2245

MASP = 6513

fluid

(.22)(18,715) = 4117

MASP = 4641

BOPE - 5,000 ✓

propose TOC @ 11,750'

w/15% washout

✓ TOC 11,750' w/ 5% washout

✓ Adequate

DWD

11/29/05

Prod csg - 9060

70% - 6342

Mat pressure @ prod shoe = 7705

Test to 6300 ✓

Well name:	**11-05 Anschutz Ranch Deep 10-27**
Operator:	**Anschutz Exploration Corporation**
String type:	Production Liner
Project ID:	43-043-30321
Location:	Summit County, Utah

Design parameters:

Collapse
Mud weight: 9.000 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 6,504 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 8,750 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 19,408 ft

Environment:
H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 327 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 13,610 ft

Liner top: 11,750 ft
Directional well information:
Kick-off point 400 ft
Departure at shoe: 4828 ft
Maximum dogleg: 2.18 °/100ft
Inclination at shoe: 54.76 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
2	4000	4.5	13.50	L-80	LT&C	15646	15800	3.795	106.5
1	5200	4.5	13.50	HCL-80	LT&C	18715	21000	3.795	138.5

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
2	7315	8084	1.105	8382	9020	1.08	93	257	2.75 J
1	8750	10380	1.186	8750	9020	1.03	41	270	6.52 J

OK expected pressure

Prepared by: Clinton Dworshak
Utah Div. of Oil & Mining
Phone: (801) 538-5281
FAX: (801)359-3940
Date: November 28,2005
Salt Lake City, Utah

ENGINEERING STIPULATIONS -
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

This will be a re-entry of the Anschutz Ranch Deep #10-27 which was previously shut-in January of 2004. The original location was drilled to the Nugget formation, however Anschutz Exploration Corporation requests to deepen the well to drill the Big Horn formation.

1. ESTIMATED TOPS/GEOLOGIC MARKERS

The estimated tops of important geologic markers are as follows:

Formation	*Depth (MD)*	*Subsea*
Wasatch	Surface	+7,578'
Gannet	3,280'	+4,334'
Salt	5,770'	+1,844'
Twin Creek	5,820'	+1,794'
Nugget	7,465'	+149 '
Ankarah	8,635'	-1,021'
Thaynes	9,635'	-2,021'
Woodside	11,075'	-3,461'
Dinwoody	11,625'	-4,011'
Phosphoria	11,885'	-4,241'
Weber	12,535'	-4,921'
Mission Canyon	13,935'	-6,130'
Lodgepole	15,235'	-7,100'
TD - Original Hole	15,880'	-8,266'
Madison - Lodgepole	16,280'	-8,666'
Darby	17,080'	-9,466'

PETROLEUM PERMITTING
PERMITCO
COMPANY

Formation	*Depth (MD)*	*Subsea*
Bighorn Dolomite	17,880'	-10,266'
Thrust Fault in Bighorn Dolomite	19,680'	-12,066'
Cambrian	20,680'	-13,066'
TD	21,000'	-13,266'

2. ESTIMATED DEPTHS AND NAMES OF ANTICIPATED WATER, OIL, GAS OR OTHER MINERALS BEARING FORMATIONS.

Substance	*Formation*	*Depth*
Sour Gas/Condensate	Phosphoria/Weber	11,885'-13,744' TVD
Gas	Bighorn	17,880'

3. WELL CONTROL EQUIPMENT & TESTING PROCEDURES

Anschutz Exploration Corporation's minimum specifications for pressure control equipment are as follows:

Ram Type: 11" Hydraulic double with Annular, 5,000 psi w.p.

Anschutz will comply will all requirements pertaining to well control as listed in the Rule R649-3-7 of the Utah Division of Oil, Gas & Mining.

The size and rating of the BOP stack is shown on the attached diagram.

4. CASING PROGRAM

The existing and proposed casing program will be as follows:

Purpose	*Depth*	*Hole Size*	*O.D.*	*Weight*	*Grade*	*Type*	*New/Used*
Surface	0-1,500'	17-1/2"	13-3/8"	54.5#	K55	BTC	Existing
Intermediate	0-9,626'	12-1/4"	9-5/8"	43.5# & 53.5#	L80	BTC	Existing
Production	0-13,925'	8-1/2"	7 & 7-5/8"	32# & 39#	L80	Hyd SLX	Existing
Liner	11,750'-15,800'	6"	4-1/2"	13.5#	L80	LTC	New
Liner	15,800'- 21,000'	6"	4-1/2"	13.5#	HCL80	LTC	New

Casing design subject to revision based on geologic conditions encountered.

5. PROPOSED CEMENTING PROGRAM

Type/String	*Type and Amount*
Squeeze Liner	***Type and Amount***
12,842-866, 12,910-40' & 13,050-80'	As Necessary, 80 sks 15.8 ppg Class G cement with additives to squeeze old perforations.
12,642 - 662'	***As necessary, 50 sks 15.8 ppg Class G cement with additives to squeeze old perforations.***

PETROLEUM PERMITTING
PERMITCO
COMPANY

Type/String	*Type and Amount*
Squeeze Liner	***Type and Amount***
12,067-092'	As necessary, 50 sks 15.8 ppg Class G cement with addiives to sqeeze old perforations.
Liner	***Type and Amount***
TOC @ liner top	Single Slurry: 17,000' - Liner Top. 698 sacks of Class G w/ , 0.4% fluid loss, 0.2% retarder, 0.3% dispersant. Yield 1.58 cu ft/sk.

6. DRILLING FLUIDS

The proposed circulating mediums to be employed in drilling are as follows:

Interval	*Mud Type*	*Mud Wt.*	*Visc.*	*F/L*
13,925' - 21,000'	LSND	8.6 - 9.0	10-15	8-10

7. TESTING, LOGGING AND CORING

The anticipated type and amount of testing, logging and coring are as follows:

a. No drill stem tests are anticipated.

b. The following logs will be run from 13, 925' MD - TD:
DIL-SP-GR
BHC Sonic-GR
Structural Dipmeter
Dipole Sonic-GR
High Resolution LDT-APS
Formation Micro Imager-GR

c. No cores are anticipated.

PETROLEUM PERMITTING
PERMITCO
COMPANY

8. ANTICIPATED PRESSURES AND H_2S

a. No H_2S is expected. The maximum anticipated bottom hole pressure is 6800 psi @ 14,739' TVD.

9. WATER SOURCE

a. Anschutz Exploration Corporation will use the existing water well on location, Permit No.T23687.

10. OTHER INFORMATION

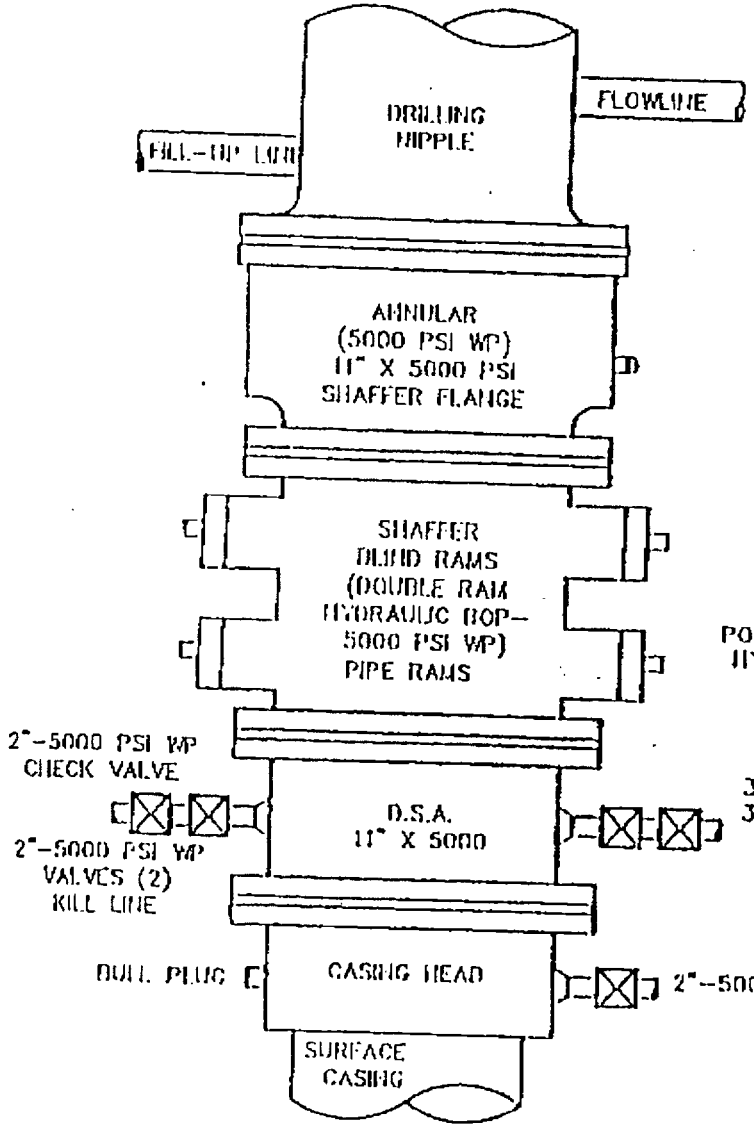
a. Drilling is planned to commence on November 1, 2005.

b. It is anticipated that the drilling of this well will take approximately 60 days.

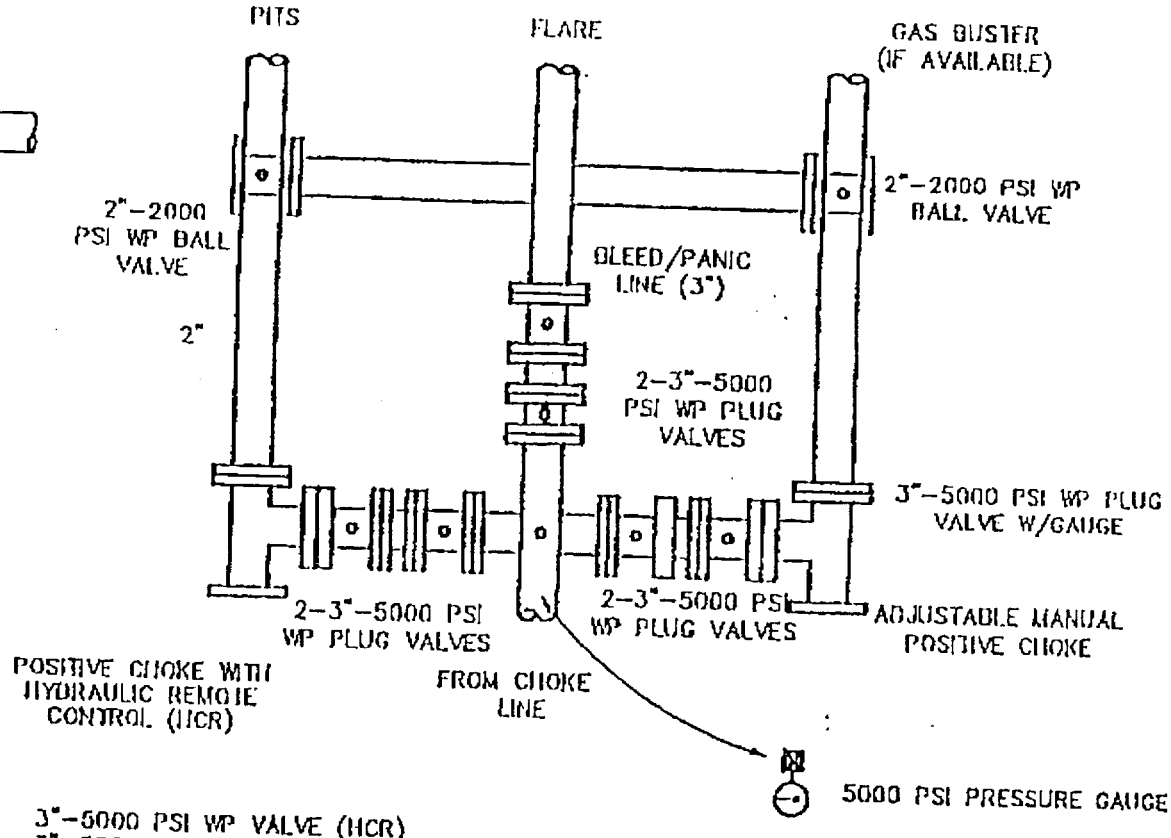
c. Lining of the reserve pit will be done if deemed necessary by the Utah Division of Oil, Gas and Mining.

d. At the end of drilling operations the location will be reclaimed and re-seeded as requested by the surface owner.

BOP SCHEMATIC
5000 PSI WORKING PRESSURE

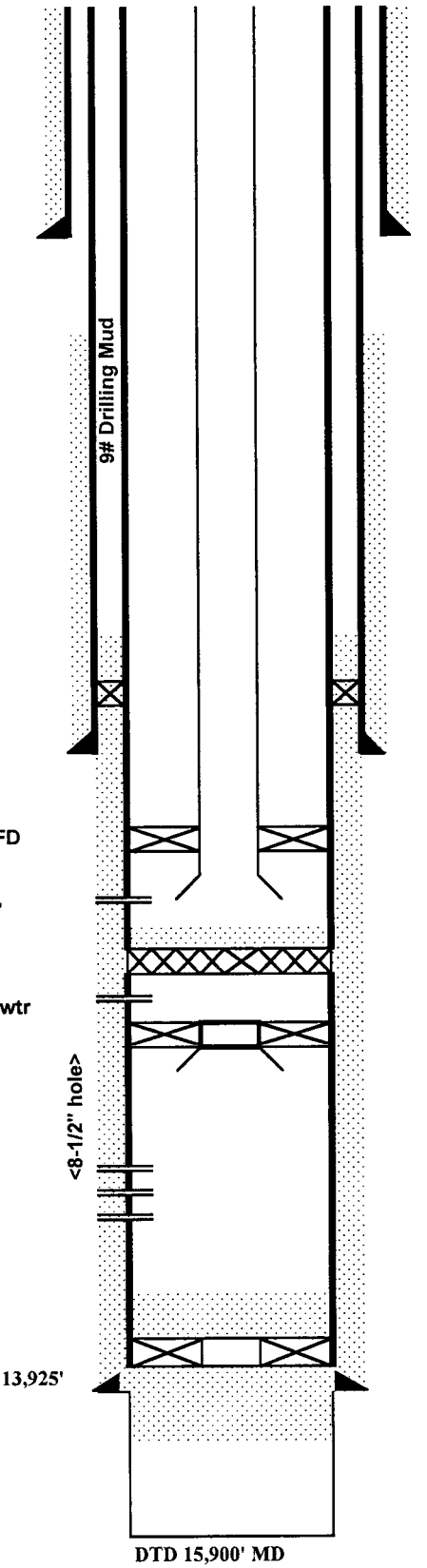


PLAN VIEW CHOKE MANIFOLD



THE HYDRAULIC CLOSING UNIT WILL BE LOCATED MORE THAN 30' FROM THE WELLHEAD. CHOKE AND BLEED/PANIC LINES WILL GO TO THE PIT AND FLARE. ALL CONNECTIONS IN CHOKE LINES AND MANIFOLD WILL BE FLANGED OR WELDED. ALL FLANGES SHOULD BE RING JOINT GASKET TYPE. ALL TURNS IN LINES SHALL BE CONSTRUCTED USING TARGETING 90° TEES OR ELLS. ALL LINES SHALL BE ANCHORED.

ANSCHUTZ EXPLORATION CORPORATION WELLBORE SCHEMATIC (CURRENT)	
SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27 COUNTY, STATE: Summit, Utah
TD: 13,925'	GROUND ELEVATION: 7,566' KB ELEVATION: 7,593'



Surface Casing
0 - 45', 13-3/8", 68#, N80, BTC
45' - 1,500', 13-3/8", 54.5#, K55, BTC
(cmt'd to surface, 120 bbls cmt ret.)

1500'

Calc TOC 4,500'

Intermediate Casing
0 - 69', 9-5/8", 53.50#, L80, BTC
69' - 4,754', 9-5/8", 43.5#, L80, BTC
4,754' - 6,021', 9-5/8". 53.50#, L80, BTC
6,021' - 9,626', 9-5/8" 43.50#, L80, BTC
(DV toll at 6,100') cmt'd in 2 stages
Calc TOC 4,500'

DV Tool @ 6,100'

Tieback String
0' - 3,533', 7-5/8", 39#, L80, SLX
3,533' - ?, 7", 32#, L80, STX
? - 9,134', 7", 32#, L80, STL

TOL 9,135'

Baker ZXP Liner Top Pkr w/7.5 x 12'
Tie-back ext., CMC liner hanger

9,626'

9/12/02 Perforated Upper Phosphoria
12,067-092', acidized, tested 16 MMCFD

Baker Model "D" Packer @ 11,700'
WLREG @ 11,758'

9/9/02 Set Schlumber TTCR @ 12,330'
dump bailed 10'+ of cement on plug

Tubing String
2-7/8", L80, 7.7#, Vam Ace
(See tbg. detail for specifics)

7/15/02 perf'd Lower Phophoria
12,642-662', acidized, tested gas and wtr

Baker Model "D" Isolation Pkr @ 12,700'
WLREG @ 12,729.5
7/15/02 Set tubing CIBP in tailpipe assembly
capped w/ 10' cmt

3/10-11/2000 Perforations
12,842' - 866', 12,910' - 940' and
13,050 - 13,080', 1 spf, 0 degree phasing
2-1/8" PEJ, 14.3g charges

Production Liner
7", 32#, L80 Hydril SLX
(Cmt'd to TOL, returns circulated
off of TOL.)

13,925'

Baker Cement Retainer
Set @ 13,920', pumped 100 sks
Class G below retainer, left +/- 1 Bbl
on top of retainer

DTD 15,900' MD

ANSCHUTZ EXPLORATION CORPORATION

Location:	UTAH	**Slot:**	Slot #1 RANCH DEEP 10-27
Field:	SUMMIT COUNTY	**Well:**	RANCH DEEP 10-27
Installation:	SEC.27-T4N-R7E	**Wellbore:**	RANCH DEEP 10-27 (PWB)

Created by : Planner
Date plotted : 21-Sep-2005
Plot reference is RANCH DEEP 10-27 (PWB).
Ref wellpath is RANCH DEEP 10-27 (PWP#1).
Coordinates are in feet reference Slot #1 RANCH DEEP 10-27.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Datum #1
Rig Datum to Mean Sea Level: 7593.00 ft.
Plot North is aligned to TRUE North.

BAKER HUGHES INTEQ

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
KOP	15540.00	35.20	344.50	14739.29	2410.08	-584.52	0.00	2479.94
End of Build/Turn	16521.51	54.76	346.84	15430.22	3079.54	-753.06	2.00	3170.24
Target 10-27 TARGET	17843.58	54.76	346.84	16193.00	4131.00	-999.00	0.00	4250.06
T.D. & Target	21000.00	54.76	346.84	18014.11	6641.33	-1586.17	0.00	6828.12

Installation Data

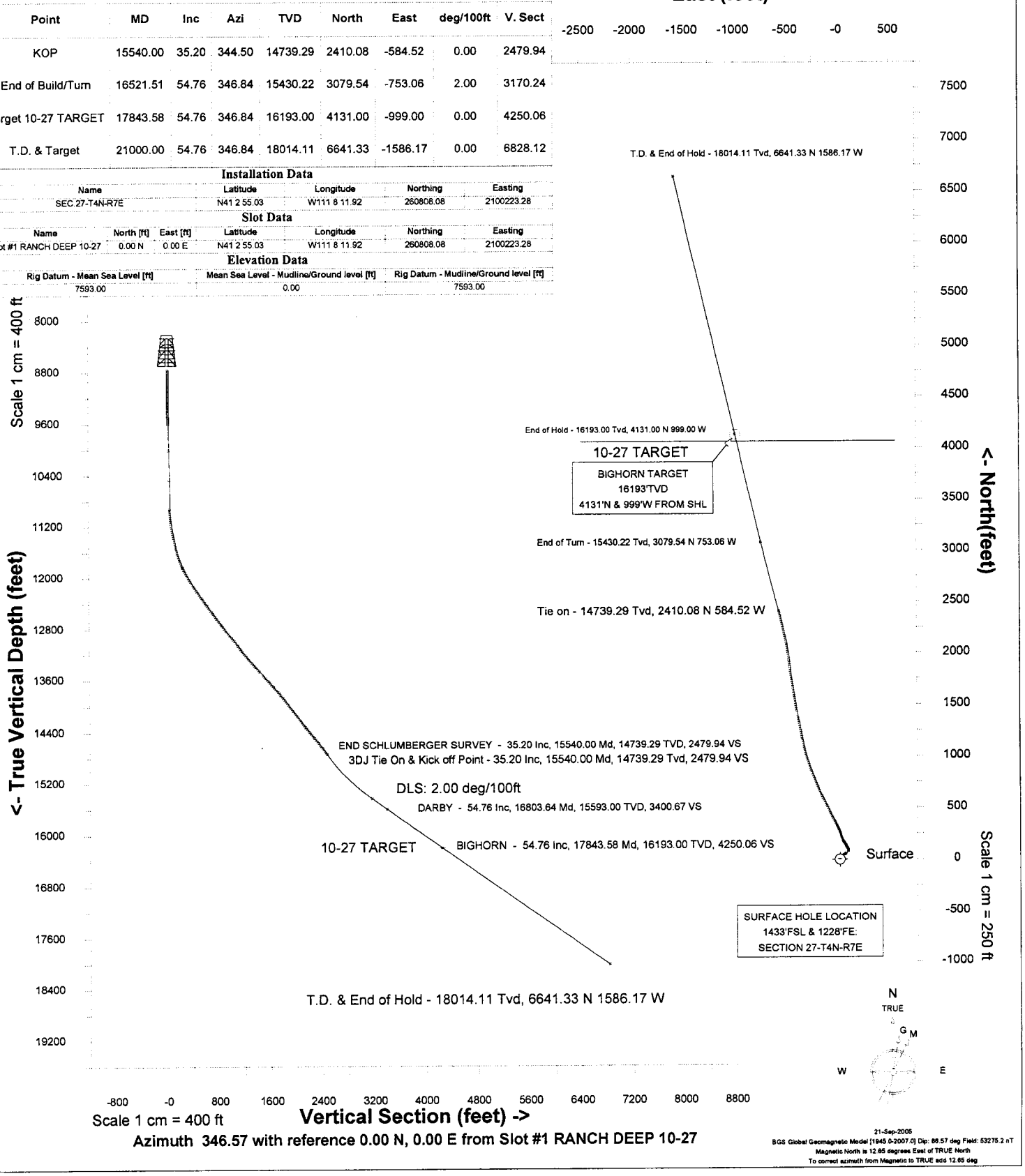
Name	Latitude	Longitude	Northing	Easting
SEC.27-T4N-R7E	N41 2 55.03	W111 8 11.92	260808.08	2100223.28

Slot Data

Name	North [ft]	East [ft]	Latitude	Longitude	Northing	Easting
Slot #1 RANCH DEEP 10-27	0.00 N	0.00 E	N41 2 55.03	W111 8 11.92	260808.08	2100223.28

Elevation Data

Rig Datum - Mean Sea Level [ft]	Mean Sea Level - Mudline/Ground level [ft]	Rig Datum - Mudline/Ground level [ft]
7593.00	0.00	7593.00



21-Sep-2005
BGS Global Geomagnetic Model [1945.0-2007.0] Dip: 66.57 deg Field: 53275.2 nT
Magnetic North is 12.65 degrees East of TRUE North
To correct azimuth from Magnetic to TRUE add 12.65 deg

CORPORATION,Slot #1 RANCH DEEP 10-27
SEC.27-T4N-R7E,
SUMMIT COUNTY,UTAH

PROPOSAL LISTING Page 1
Wellbore: RANCH DEEP 10-27 (PWB)
Wellpath: RANCH DEEP 10-27 (PWP#1)
Date Printed: 21-Sep-2005

BAKER HUGHES INTEQ

Wellbore

Name	Created	Last Revised
RANCH DEEP 10-27 (PWB)	21-Sep-2005	21-Sep-2005

Well

Name	Government ID	Last Revised
RANCH DEEP 10-27		21-Sep-2005

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #1 RANCH DEEP 10-27	260808.0816	2100223.2780	N41 2 55.0300	W111 8 11.9200	0.00N	0.00E

Installation

Name	Easting	Northing	Coord System Name	North Alignment
SEC.27-T4N-R7E	2100223.2780	260808.0816	UT-N on NORTH AMERICAN DATUM 1927 datum	True

Field

Name	Easting	Northing	Coord System Name	North Alignment
SUMMIT COUNTY	2000000.0000	3467958.4861	UT-N on NORTH AMERICAN DATUM 1927 datum	True

Created By

Comments

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 7593.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 346.57 degrees
Bottom hole distance is 6828.12 Feet on azimuth 346.57 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
8760.00	0.88	96.50	8756.60	45.98N	40.88E	0.00	35.23
8780.00	1.09	89.50	8776.60	45.96N	41.22E	1.21	35.13
8800.00	1.08	99.20	8796.59	45.94N	41.60E	0.92	35.02
8820.00	1.20	94.80	8816.59	45.89N	41.99E	0.74	34.88
8840.00	1.02	95.30	8836.59	45.85N	42.38E	0.90	34.75
8860.00	0.88	92.30	8856.58	45.83N	42.71E	0.74	34.66
8880.00	0.95	93.00	8876.58	45.82N	43.03E	0.35	34.57
8900.00	1.04	89.70	8896.58	45.81N	43.38E	0.53	34.48
8920.00	1.10	90.00	8916.57	45.81N	43.75E	0.30	34.39
8940.00	1.08	77.70	8936.57	45.85N	44.13E	1.17	34.35
8960.00	1.05	82.40	8956.57	45.91N	44.49E	0.46	34.32
8980.00	1.00	82.70	8976.56	45.96N	44.85E	0.25	34.29
9000.00	0.89	84.30	8996.56	46.00N	45.17E	0.57	34.25
9020.00	1.01	78.00	9016.56	46.05N	45.50E	0.79	34.22
9040.00	0.93	80.60	9036.56	46.11N	45.83E	0.46	34.21
9060.00	0.85	83.60	9056.55	46.16N	46.14E	0.46	34.18
9080.00	0.87	81.50	9076.55	46.20N	46.44E	0.19	34.14
9100.00	0.88	94.30	9096.55	46.21N	46.74E	0.98	34.08
9120.00	1.03	87.60	9116.55	46.20N	47.08E	0.93	34.00
9140.00	1.25	89.90	9136.54	46.21N	47.47E	1.12	33.92
9160.00	1.07	86.40	9156.54	46.22N	47.88E	0.97	33.84
9180.00	1.20	93.20	9176.53	46.22N	48.27E	0.93	33.74
9200.00	1.29	81.50	9196.53	46.24N	48.70E	1.35	33.67
9220.00	1.13	79.80	9216.52	46.31N	49.12E	0.82	33.63
9240.00	1.15	74.00	9236.52	46.40N	49.51E	0.59	33.63
9260.00	1.12	65.20	9256.52	46.54N	49.88E	0.88	33.68
9280.00	1.09	70.60	9276.51	46.69N	50.24E	0.54	33.74
9300.00	1.03	67.90	9296.51	46.82N	50.58E	0.39	33.79
9320.00	1.17	77.60	9316.51	46.93N	50.95E	1.16	33.81
9340.00	1.35	66.10	9336.50	47.07N	51.36E	1.55	33.85
9360.00	1.52	54.80	9356.50	47.31N	51.80E	1.65	33.99
9380.00	1.64	56.80	9376.49	47.63N	52.25E	0.66	34.18
9400.00	1.51	48.40	9396.48	47.96N	52.69E	1.32	34.41
9420.00	1.37	42.40	9416.47	48.31N	53.05E	1.03	34.66
9440.00	1.39	36.00	9436.47	48.68N	53.35E	0.78	34.96
9460.00	1.31	41.90	9456.46	49.05N	53.65E	0.80	35.24
9480.00	1.35	27.90	9476.46	49.43N	53.91E	1.63	35.55
9500.00	0.99	31.10	9496.45	49.78N	54.11E	1.83	35.85
9520.00	0.93	27.70	9516.45	50.07N	54.27E	0.41	36.10
9540.00	0.97	41.70	9536.45	50.34N	54.46E	1.17	36.32
9560.00	0.78	38.40	9556.44	50.58N	54.66E	0.98	36.50
9580.00	1.08	59.50	9576.44	50.78N	54.90E	2.25	36.64
9600.00	1.05	61.80	9596.44	50.96N	55.23E	0.26	36.74
10009.00	1.80	21.60	10005.32	58.70N	60.90E	0.29	42.95
10469.00	1.90	41.30	10465.08	71.15N	68.59E	0.14	53.27
10919.00	2.50	56.50	10914.75	82.17N	81.70E	0.18	60.95
10936.00	2.50	50.90	10931.74	82.61N	82.29E	1.44	61.23
10968.00	2.90	30.70	10963.70	83.75N	83.25E	3.20	62.12
11000.00	3.50	11.30	10995.65	85.40N	83.85E	3.84	63.59
11031.00	4.60	0.10	11026.58	87.57N	84.04E	4.35	65.65
11062.00	5.10	349.00	11057.47	90.17N	83.78E	3.42	68.24
11093.00	6.20	339.90	11088.32	93.09N	82.94E	4.57	71.28

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Vertical Section is from 0.00N 0.00E on azimuth 346.57 degrees
Bottom hole distance is 6828.12 Feet on azimuth 346.57 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
11124.00	7.40	339.20	11119.10	96.53N	81.66E	3.88	74.92
11155.00	8.10	336.20	11149.81	100.40N	80.07E	2.61	79.05
11186.00	8.40	332.90	11180.49	104.41N	78.15E	1.81	83.40
11217.00	9.10	332.20	11211.13	108.59N	75.98E	2.28	87.97
11248.00	9.80	331.50	11241.71	113.08N	73.58E	2.29	92.90
11279.00	10.50	331.40	11272.23	117.88N	70.97E	2.26	98.17
11310.00	11.20	330.50	11302.67	122.98N	68.13E	2.32	103.79
11342.00	11.60	330.00	11334.04	128.47N	64.99E	1.29	109.86
11373.00	12.20	328.80	11364.37	133.97N	61.74E	2.09	115.97
11404.00	12.70	330.20	11394.64	139.73N	58.35E	1.88	122.35
11435.00	13.00	331.20	11424.87	145.74N	54.97E	1.20	128.99
11466.00	13.60	332.20	11455.04	152.02N	51.59E	2.07	135.88
11496.00	14.20	330.80	11484.16	158.35N	48.15E	2.29	142.84
11528.00	14.50	329.70	11515.16	165.24N	44.22E	1.27	150.45
11559.00	14.90	327.70	11545.15	171.96N	40.13E	2.08	157.93
11591.00	15.80	328.30	11576.00	179.14N	35.64E	2.86	165.96
11623.00	17.30	329.30	11606.68	186.94N	30.92E	4.77	174.64
11654.00	19.20	333.60	11636.12	195.47N	26.30E	7.51	184.01
11684.00	19.60	336.90	11664.41	204.52N	22.14E	3.89	193.78
11716.00	20.00	339.90	11694.52	214.60N	18.15E	3.41	204.51
11747.00	20.80	341.80	11723.58	224.80N	14.61E	3.35	215.26
11778.00	20.90	342.50	11752.55	235.31N	11.23E	0.87	226.26
11810.00	21.50	341.30	11782.38	246.30N	7.63E	2.31	237.79
11840.00	22.00	339.60	11810.25	256.78N	3.91E	2.68	248.85
11860.00	22.51	338.20	11828.76	263.84N	1.18E	3.68	256.35
11871.00	22.80	337.40	11838.91	267.77N	0.42W	3.85	260.54
11903.00	24.00	337.40	11868.28	279.50N	5.30W	3.75	273.09
11933.00	25.50	337.10	11895.52	291.08N	10.16W	5.02	285.48
11963.00	27.00	336.80	11922.43	303.29N	15.36W	5.02	298.56
11994.00	28.20	335.70	11949.90	316.43N	21.15W	4.21	312.69
12024.00	29.00	336.00	11976.24	329.54N	27.02W	2.71	326.80
12054.00	30.20	334.70	12002.32	343.00N	33.20W	4.54	341.33
12086.00	31.60	333.50	12029.78	357.78N	40.38W	4.78	357.38
12117.00	33.10	331.80	12055.97	372.51N	48.01W	5.66	373.47
12147.00	33.80	331.40	12081.00	387.06N	55.87W	2.45	389.45
12178.00	34.00	331.50	12106.73	402.25N	64.14W	0.67	406.14
12209.00	34.40	334.10	12132.37	417.74N	72.10W	4.89	423.06
12239.00	34.80	334.40	12157.06	433.08N	79.50W	1.45	439.71
12270.00	34.80	333.80	12182.52	449.00N	87.23W	1.10	456.98
12302.00	35.00	333.70	12208.76	465.42N	95.32W	0.65	474.83
12333.00	35.90	333.60	12234.02	481.53N	103.30W	2.91	492.36
12364.00	35.80	333.50	12259.15	497.79N	111.39W	0.37	510.05
12396.00	35.70	333.60	12285.12	514.53N	119.72W	0.36	528.26
12427.00	35.90	333.10	12310.26	530.73N	127.85W	1.14	545.91
12458.00	36.30	332.70	12335.31	546.99N	136.17W	1.50	563.66
12490.00	36.30	333.20	12361.10	563.87N	144.79W	0.93	582.07
12521.00	35.90	332.90	12386.14	580.15N	153.07W	1.41	599.83
12551.00	36.40	333.40	12410.37	595.94N	161.06W	1.94	617.05
12583.00	36.70	331.70	12436.08	612.85N	169.84W	3.30	635.53
12612.00	36.50	333.70	12459.36	628.21N	177.77W	4.17	652.32
12643.00	36.40	335.50	12484.29	644.84N	185.67W	3.46	670.33
12674.00	36.30	336.90	12509.26	661.65N	193.09W	2.70	688.41

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Vertical Section is from 0.00N 0.00E on azimuth 346.57 degrees
Bottom hole distance is 6828.12 Feet on azimuth 346.57 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
12705.00	36.40	337.70	12534.23	678.60N	200.18W	1.56	706.54
12736.00	36.40	338.10	12559.18	695.65N	207.10W	0.77	724.73
12768.00	36.40	338.40	12584.94	713.29N	214.14W	0.56	743.52
12799.00	36.50	339.40	12609.87	730.47N	220.77W	1.94	761.77
12831.00	36.90	339.30	12635.53	748.36N	227.51W	1.26	780.74
12862.00	37.10	338.90	12660.29	765.79N	234.16W	1.01	799.24
12892.00	37.50	338.40	12684.15	782.72N	240.78W	1.67	817.25
12923.00	38.00	338.20	12708.66	800.36N	247.80W	1.66	836.03
12954.00	38.50	338.70	12733.01	818.21N	254.85W	1.90	855.03
12986.00	38.40	339.80	12758.07	836.82N	261.90W	2.16	874.76
13017.00	37.50	340.90	12782.51	854.77N	268.31W	3.63	893.71
13049.00	37.20	340.90	12807.95	873.11N	274.67W	0.94	913.03
13080.00	37.70	339.50	12832.56	890.85N	281.05W	3.18	931.77
13124.00	38.30	340.20	12867.24	916.28N	290.38W	1.68	958.67
13154.00	38.40	339.80	12890.76	933.77N	296.75W	0.89	977.16
13186.00	38.20	340.60	12915.88	952.43N	303.47W	1.67	996.87
13217.00	38.00	342.10	12940.27	970.55N	309.58W	3.05	1015.92
13247.00	37.50	343.20	12963.99	988.08N	315.06W	2.80	1034.24
13278.00	37.10	343.00	12988.65	1006.06N	320.52W	1.35	1052.99
13309.00	37.00	344.10	13013.40	1023.97N	325.81W	2.16	1071.64
13340.00	36.90	346.20	13038.17	1041.98N	330.59W	4.08	1090.27
13369.00	37.10	346.80	13061.33	1058.95N	334.66W	1.42	1107.72
13399.00	37.60	346.90	13085.18	1076.67N	338.80W	1.68	1125.92
13431.00	37.20	347.50	13110.60	1095.63N	343.11W	1.69	1145.36
13461.00	37.20	348.70	13134.50	1113.37N	346.85W	2.42	1163.49
13491.00	37.90	348.30	13158.28	1131.29N	350.49W	2.47	1181.76
13521.00	38.40	348.80	13181.87	1149.45N	354.17W	1.96	1200.28
13552.00	38.80	348.80	13206.10	1168.42N	357.93W	1.29	1219.61
13584.00	39.10	347.30	13230.99	1188.10N	362.09W	3.09	1239.72
13615.00	39.80	348.90	13254.92	1207.38N	366.15W	3.98	1259.40
13644.00	39.80	349.30	13277.20	1225.60N	369.66W	0.88	1277.95
13676.00	39.80	349.50	13301.79	1245.74N	373.43W	0.40	1298.41
13707.00	40.10	348.90	13325.55	1265.29N	377.16W	1.58	1318.29
13737.00	40.80	348.90	13348.38	1284.39N	380.91W	2.33	1337.74
13768.00	41.10	349.30	13371.80	1304.34N	384.75W	1.29	1358.04
13797.00	41.20	349.10	13393.63	1323.09N	388.33W	0.57	1377.10
13829.00	41.30	348.60	13417.69	1343.79N	392.41W	1.08	1398.18
13860.00	41.50	348.80	13440.95	1363.89N	396.42W	0.77	1418.67
13892.00	41.90	348.90	13464.84	1384.78N	400.54W	1.27	1439.94
13973.00	42.60	349.20	13524.80	1438.24N	410.88W	0.90	1494.35
14002.00	42.50	349.70	13546.16	1457.52N	414.48W	1.22	1513.93
14033.00	42.30	349.50	13569.05	1478.08N	418.25W	0.78	1534.81
14064.00	42.00	350.10	13592.04	1498.56N	421.93W	1.62	1555.58
14095.00	41.90	350.80	13615.09	1518.99N	425.37W	1.54	1576.25
14127.00	41.90	351.40	13638.91	1540.11N	428.68W	1.25	1597.56
14159.00	42.20	350.90	13662.67	1561.28N	431.98W	1.41	1618.92
14190.00	41.80	350.70	13685.71	1581.76N	435.29W	1.36	1639.61
14222.00	42.20	350.20	13709.49	1602.88N	438.84W	1.63	1660.97
14253.00	41.60	351.10	13732.56	1623.30N	442.21W	2.74	1681.62
14285.00	41.00	350.30	13756.60	1644.15N	445.62W	2.50	1702.69
14316.00	41.20	349.70	13779.96	1664.21N	449.16W	1.43	1723.03
14347.00	41.30	349.90	13803.27	1684.33N	452.78W	0.53	1743.43

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Bottom hole distance is 6828.12 Feet on azimuth 346.57 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
14376.00	41.30	350.30	13825.06	1703.18N	456.07W	0.91	1762.54
14407.00	41.80	350.00	13848.26	1723.44N	459.59W	1.74	1783.06
14439.00	41.80	350.30	13872.11	1744.46N	463.24W	0.62	1804.35
14470.00	41.30	350.40	13895.31	1764.73N	466.68W	1.63	1824.86
14500.00	39.60	352.00	13918.14	1783.96N	469.67W	6.64	1844.26
14532.00	38.60	353.10	13942.98	1803.97N	472.28W	3.80	1864.33
14563.00	37.60	353.80	13967.37	1822.97N	474.47W	3.51	1883.32
14593.00	38.30	354.60	13991.03	1841.33N	476.33W	2.85	1901.61
14624.00	38.00	354.60	14015.40	1860.39N	478.13W	0.97	1920.57
14654.00	38.00	354.30	14039.04	1878.78N	479.92W	0.62	1938.86
14686.00	37.60	354.40	14064.33	1898.29N	481.85W	1.26	1958.30
14717.00	36.90	354.60	14089.00	1916.97N	483.65W	2.29	1976.88
14748.00	36.60	354.20	14113.84	1935.43N	485.46W	1.24	1995.26
14780.00	36.50	352.80	14139.55	1954.36N	487.62W	2.62	2014.17
14814.00	36.80	351.70	14166.83	1974.47N	490.35W	2.12	2034.37
14845.00	36.50	351.80	14191.70	1992.79N	493.01W	0.99	2052.80
14876.00	36.00	351.50	14216.70	2010.92N	495.67W	1.71	2071.05
14907.00	36.90	350.80	14241.64	2029.12N	498.50W	3.20	2089.41
14939.00	37.00	351.00	14267.21	2048.11N	501.55W	0.49	2108.59
14969.00	37.80	350.50	14291.04	2066.10N	504.48W	2.85	2126.77
15005.00	39.30	349.90	14319.20	2088.20N	508.30W	4.29	2149.16
15037.00	40.20	348.60	14343.80	2108.30N	512.12W	3.83	2169.59
15068.00	40.80	348.40	14367.37	2128.03N	516.13W	1.98	2189.72
15099.00	40.50	347.80	14390.89	2147.79N	520.29W	1.59	2209.90
15131.00	40.20	347.50	14415.28	2168.03N	524.72W	1.12	2230.62
15161.00	39.80	347.50	14438.26	2186.86N	528.90W	1.33	2249.90
15192.00	39.60	347.40	14462.11	2206.19N	533.20W	0.68	2269.70
15222.00	39.00	347.60	14485.33	2224.74N	537.31W	2.04	2288.70
15253.00	38.40	347.10	14509.52	2243.65N	541.56W	2.18	2308.08
15289.00	38.20	346.60	14537.77	2265.38N	546.63W	1.02	2330.39
15320.00	37.60	346.10	14562.23	2283.88N	551.13W	2.17	2349.43
15352.00	37.20	345.70	14587.65	2302.73N	555.86W	1.46	2368.87
15383.00	36.90	345.50	14612.40	2320.82N	560.51W	1.04	2387.54
15414.00	36.60	345.40	14637.23	2338.78N	565.16W	0.99	2406.09
15446.00	36.30	344.80	14662.97	2357.15N	570.05W	1.46	2425.09
15477.00	36.00	344.40	14688.01	2374.78N	574.91W	1.23	2443.37
15509.00	35.40	345.10	14713.99	2392.80N	579.82W	2.27	2462.03
15540.00	35.20	344.50	14739.29	2410.08N	584.52W	1.29	2479.94
15600.00	36.39	344.70	14787.96	2443.92N	593.84W	2.00	2515.01
15700.00	38.39	345.01	14867.41	2502.53N	609.70W	2.00	2575.70
15800.00	40.38	345.29	14944.70	2563.86N	625.95W	2.00	2639.13
15900.00	42.37	345.56	15019.73	2627.82N	642.58W	2.00	2705.21
16000.00	44.36	345.80	15092.43	2694.35N	659.57W	2.00	2773.86
16100.00	46.36	346.02	15162.69	2763.36N	676.88W	2.00	2845.01
16200.00	48.35	346.23	15230.43	2834.77N	694.51W	2.00	2918.56
16300.00	50.34	346.43	15295.58	2908.48N	712.43W	2.00	2994.42
16400.00	52.34	346.62	15358.04	2984.42N	730.63W	2.00	3072.50
16500.00	54.33	346.80	15417.75	3062.48N	749.07W	2.00	3152.71
16521.51	54.76	346.84	15430.23	3079.54N	753.06W	2.00	3170.24
16600.00	54.76	346.84	15475.51	3141.97N	767.66W	0.00	3234.35
16700.00	54.76	346.84	15533.21	3221.50N	786.26W	0.00	3316.02
16800.00	54.76	346.84	15590.90	3301.03N	804.87W	0.00	3397.70

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Calculation method uses Minimum Curvature method
Prepared by Baker Hughes INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
16900.00	54.76	346.84	15648.60	3380.56N	823.47W	0.00	3479.38
17000.00	54.76	346.84	15706.29	3460.09N	842.07W	0.00	3561.05
17100.00	54.76	346.84	15763.99	3539.62N	860.67W	0.00	3642.73
17200.00	54.76	346.84	15821.68	3619.15N	879.28W	0.00	3724.41
17300.00	54.76	346.84	15879.38	3698.68N	897.88W	0.00	3806.08
17400.00	54.76	346.84	15937.07	3778.22N	916.48W	0.00	3887.76
17500.00	54.76	346.84	15994.77	3857.75N	935.09W	0.00	3969.44
17600.00	54.76	346.84	16052.47	3937.28N	953.69W	0.00	4051.11
17700.00	54.76	346.84	16110.16	4016.81N	972.29W	0.00	4132.79
17800.00	54.76	346.84	16167.86	4096.34N	990.89W	0.00	4214.47
17843.58	54.76	346.84	16193.00	4131.00N	999.00W	0.00	4250.06
17900.00	54.76	346.84	16225.55	4175.87N	1009.50W	0.00	4296.14
18000.00	54.76	346.84	16283.25	4255.40N	1028.10W	0.00	4377.82
18100.00	54.76	346.84	16340.94	4334.93N	1046.70W	0.00	4459.50
18200.00	54.76	346.84	16398.64	4414.46N	1065.30W	0.00	4541.17
18300.00	54.76	346.84	16456.33	4493.99N	1083.91W	0.00	4622.85
18400.00	54.76	346.84	16514.03	4573.53N	1102.51W	0.00	4704.53
18500.00	54.76	346.84	16571.72	4653.06N	1121.11W	0.00	4786.20
18600.00	54.76	346.84	16629.42	4732.59N	1139.71W	0.00	4867.88
18700.00	54.76	346.84	16687.12	4812.12N	1158.32W	0.00	4949.56
18800.00	54.76	346.84	16744.81	4891.65N	1176.92W	0.00	5031.23
18900.00	54.76	346.84	16802.51	4971.18N	1195.52W	0.00	5112.91
19000.00	54.76	346.84	16860.20	5050.71N	1214.12W	0.00	5194.59
19100.00	54.76	346.84	16917.90	5130.24N	1232.73W	0.00	5276.26
19200.00	54.76	346.84	16975.59	5209.77N	1251.33W	0.00	5357.94
19300.00	54.76	346.84	17033.29	5289.31N	1269.93W	0.00	5439.62
19400.00	54.76	346.84	17090.98	5368.84N	1288.53W	0.00	5521.29
19500.00	54.76	346.84	17148.68	5448.37N	1307.14W	0.00	5602.97
19600.00	54.76	346.84	17206.37	5527.90N	1325.74W	0.00	5684.65
19700.00	54.76	346.84	17264.07	5607.43N	1344.34W	0.00	5766.32
19800.00	54.76	346.84	17321.76	5686.96N	1362.94W	0.00	5848.00
19900.00	54.76	346.84	17379.46	5766.49N	1381.55W	0.00	5929.68
20000.00	54.76	346.84	17437.16	5846.02N	1400.15W	0.00	6011.35
20100.00	54.76	346.84	17494.85	5925.55N	1418.75W	0.00	6093.03
20200.00	54.76	346.84	17552.55	6005.08N	1437.35W	0.00	6174.71
20300.00	54.76	346.84	17610.24	6084.61N	1455.96W	0.00	6256.38
20400.00	54.76	346.84	17667.94	6164.15N	1474.56W	0.00	6338.06
20500.00	54.76	346.84	17725.63	6243.68N	1493.16W	0.00	6419.74
20600.00	54.76	346.84	17783.33	6323.21N	1511.76W	0.00	6501.41
20700.00	54.76	346.84	17841.02	6402.74N	1530.37W	0.00	6583.09
20800.00	54.76	346.84	17898.72	6482.27N	1548.97W	0.00	6664.77
20900.00	54.76	346.84	17956.42	6561.80N	1567.57W	0.00	6746.44
21000.00	54.76	346.84	18014.11	6641.33N	1586.17W	0.00	6828.12

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Bottom hole distance is 6828.12 Feet on azimuth 346.57 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes INTEQ

Comments

MD[ft]	TVD[ft]	North[ft]	East[ft]	Comment
15540.00	14739.29	2410.08N	584.52W	END SCHLUMBERGER SURVEY
16803.64	15593.00	3303.92N	805.54W	DARBY
17843.58	16193.00	4131.00N	999.00W	BIGHORN

Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Easting	Northing	Last Revised
10-27 TARGET	4131.00N	999.00W	16193.00	N41 3 35.8469	W111 8 24.9603	2099207.05	264934.71	21-Sep-2005

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
565277	Log #1	15540.00	14739.29	No Tool	

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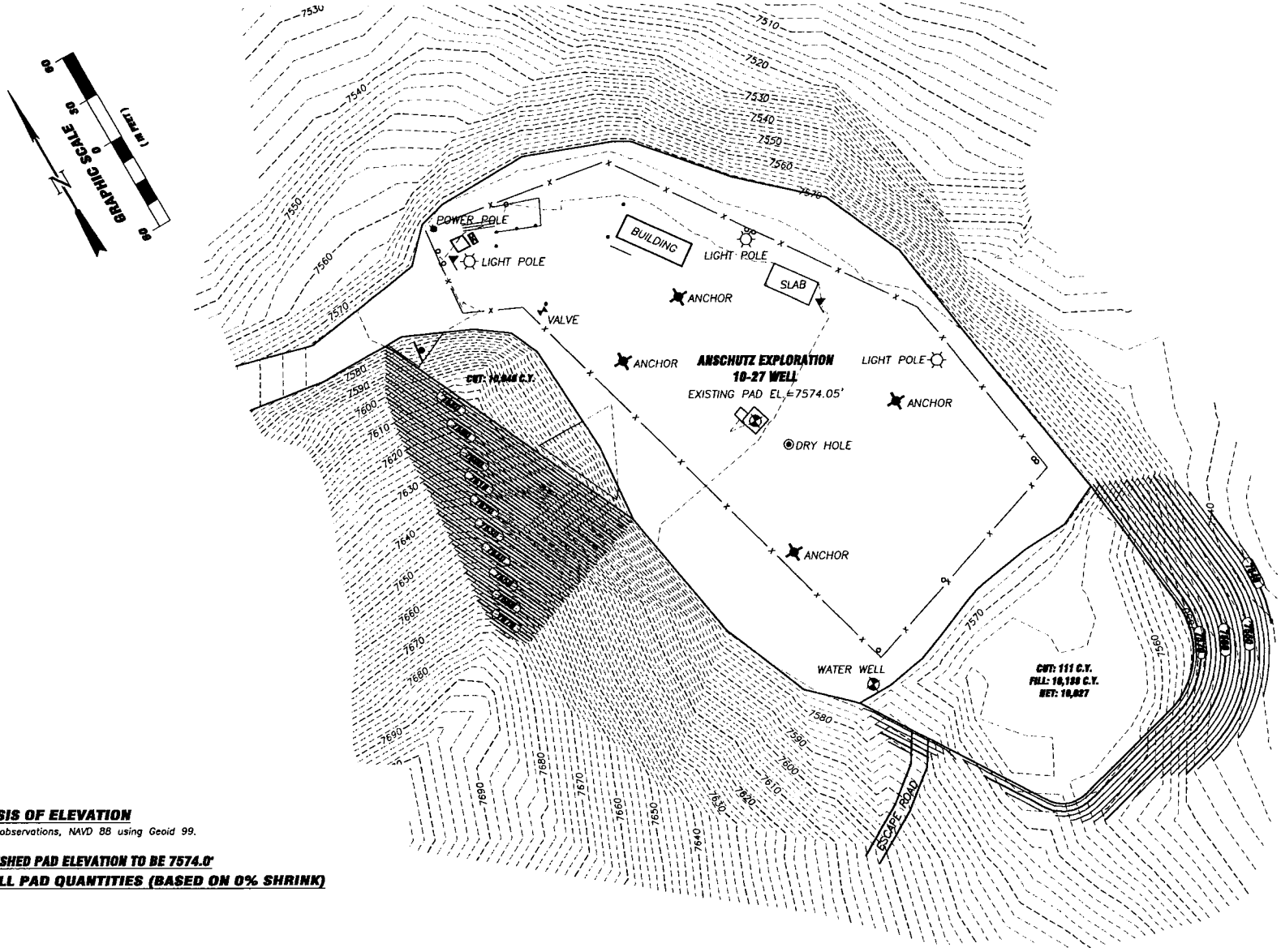


BASIS OF ELEVATION

GPS observations, NAVD 88 using Geoid 99.

FINISHED PAD ELEVATION TO BE 7574.0'

WELL PAD QUANTITIES (BASED ON 0% SHRINK)

MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
ANSCHUTZ EXPLORATION 10-27 WELL
1430' FSL 1246' FEL
SECTION 27, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

WELLPAD DETAIL

SHEET 5 of 7

State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

November 30,2005

Anschutz Exploration Corporation
555 - 17th Street, Suite 2400
Denver, CO 80202

Re: Anschutz Ranch Deep #10-27 Well, 1430' FSL, 1246' FEL, NE SE, Sec. 27, T. 4 North, R. 7 East, Bottom Location 2263' FNL, 2160' FWL, SE NW, Sec. ~~22~~ 27, T. 4 North, R. 7 East, Summit County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-043-30321.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Summit County Assessor

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

5. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

Operator: Anschutz Exploration Corporation

Well Name & Number Anschutz Ranch Deep #10-27

API Number: 43-043-30321

Lease: Fee

Location:	NE SE	**Sec.** 27	**T.** 4 North	**R.** 7 East
Bottom Location:	SE NW	**Sec.** 22	**T.** 4 North	**R.** 7 East

Conditions of Approval

1. General

   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

   The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

   - 24 hours prior to cementing or testing casing
   - 24 hours prior to testing blowout prevention equipment
   - 24 hours prior to spudding the well
   - within 24 hours of any emergency changes made to the approved drilling program
   - prior to commencing operations to plug and abandon the well

   The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

   - Dan Jarvis at (801) 538-5338
   - Carol Daniels at (801) 538-5284 (spud)

3. Reporting Requirements

   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St., Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 4/11/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: construct cuttings pit
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

With this sundry Anschutz Exploration would like to request permission to construct a cuttings pit for use in the deepening of the Anschutz Ranch Deep 10-27.

Location constraints would not allow a reserve pit to be constructed at the Anschutz Ranch Deep 10-27 wellsite. It is proposed that this cuttings pit be constructed on an offset wellsite, the Anschutz Ranch Deep 4-26. Anschutz Exploration has a surface use agreement in place with the surface owner, Castle Rock Land and Livestock Company, which allows us to use the Anschutz Ranch Deep 4-26 site for this purpose. A copy of the letter providing notice to Castle Rock is attached.

A pad diagram is also attached which details the location and size (24' wide x 100' long x 8' deep) of the proposed cuttings pit. The Anschutz Ranch Deep 10-27 deepening will be performed closed loop, utilizing a freshwater mud system. It is proposed that the cuttings pit be lined.

COPY SENT TO OPERATOR
4-13-06
CHD

NAME (PLEASE PRINT) James Oursland TITLE Operations Manager

SIGNATURE [signature] DATE 4/6/2006

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS AND MINING
DATE: 4/16/06
BY: [signature]

RECEIVED
APR 07 2006
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

INSTRUCTIONS

This form shall be submitted by the operator to show the intention and/or completion of the following:

- miscellaneous work projects and actions for which other specific report forms do not exist;
- all other work and events as identified in section 11, Type of Action, or as required by the Utah Oil and Gas Conservation General Rules, including:
  - minor deepening of an existing well bore,
  - plugging back a well,
  - recompleting to a different producing formation within an existing well bore (intent only),
  - reperforating the current producing formation,
  - drilling a sidetrack to repair a well,
  - reporting monthly the status of each drilling well.

This form is not to be used for <u>proposals</u> to

- drill new wells,
- reenter previously plugged and abandoned wells,
- significantly deepen existing wells below their current bottom-hole depth,
- drill horizontal laterals from an existing well bore,
- drill hydrocarbon exploratory holes such as core samples and stratigraphic tests.

Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the <u>results</u> of the following operations:

- completing or plugging a new well,
- reentering a previously plugged and abandoned well,
- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

FILE COPY

ANSCHUTZ
EXPLORATION CORPORATION

555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

March 31, 2006

Christopher F. Robinson
Castle Rock Land and Livestock Company
P. O. Box 540478
North Salt Lake, UT 84054

VIA FAX (801) 328-1616

RE: Use of ARD 4-26 Pad
for ARD 10-27 cuttings
Township 4 North, Range 7 East
Summit County, Utah

Dear Mr. Robinson:

As you are aware, Anschutz Exploration Corporation modified the ARD 10-27 well pad to accommodate a drilling rig to re-enter the borehole. Anschutz has moved a rig on to the location and is the process of rigging up to deepen the well.

Given the tight location on the ARD 10-27 pad, Anschutz will not be able to construct a reserve pit on site. The State of Utah will allow us to land-farm our cuttings in an area offsite using an approved method that basically requires building a reserve pit. In accordance with the Surface Use Agreement with Castle Rock Land and Livestock, Anschutz is planning on utilizing the currently active ARD 4-26 pad for such use.

As per our drilling department, the ARD 10-27 will be drilled with freshwater so the cuttings won't be contaminated with saltwater or oil, and based on our hole size and the projected amount of cuttings, the pit will be relatively small.

Our plans are to begin utilizing the ARD 4-26 pad for this use as early as April 4, 2006. Should you have any concerns and/or objections, please contact me at 303-299-1339.

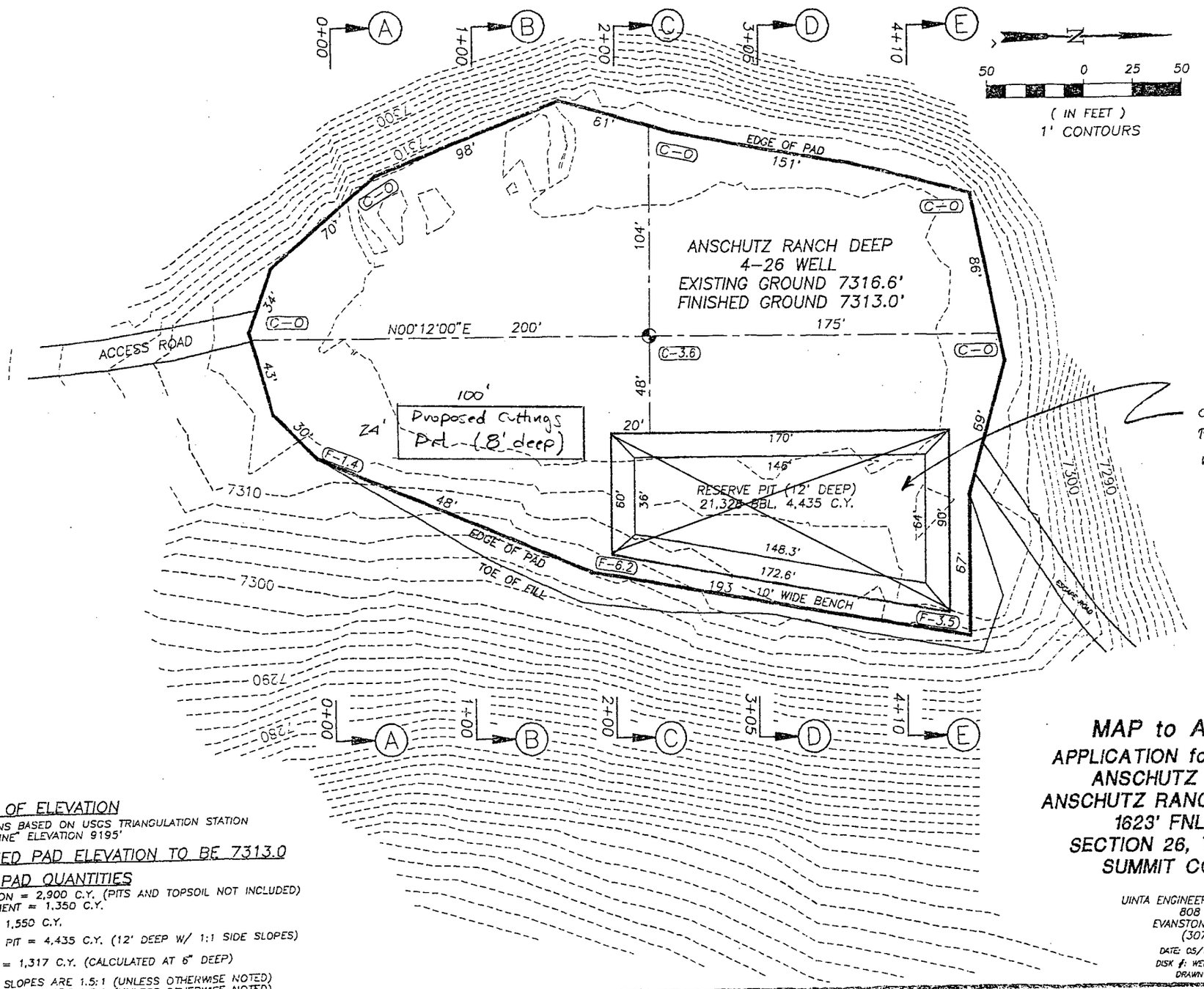
Sincerely,

Anschutz Exploration Corporation

Keith Bonati
Sr. Landman

KVB/dsw

cc: Jim Oursland



RECEIVED
APR 07 2006
DIV. OF OIL, GAS & MINING

BASIS OF ELEVATION

ELEVATIONS BASED ON USGS TRIANGULATION STATION "PORCUPINE" ELEVATION 9195'

FINISHED PAD ELEVATION TO BE 7313.0

WELL PAD QUANTITIES

EXCAVATION = 2,900 C.Y. (PITS AND TOPSOIL NOT INCLUDED)
EMBANKMENT = 1,350 C.Y.

SPOIL = 1,550 C.Y.

RESERVE PIT = 4,435 C.Y. (12' DEEP W/ 1:1 SIDE SLOPES)

TOPSOIL = 1,317 C.Y. (CALCULATED AT 6" DEEP)

ALL CUT SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)
ALL FILL SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)

MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
ANSCHUTZ EXPLORATION
ANSCHUTZ RANCH DEEP 4-26 WELL
1623' FNL 1328' FWL
SECTION 26, T4N, R7E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 05/11/98 JOB #: 98-19-02
DISK #: WELL10 FILE: 98-19-02
DRAWN BY: Travis Martinez

DOUBLE JACK TESTING & SERVICES/IPS
Phone (307) 789-9213

B.O.P TEST REPORT

B.O.P. TEST PERFORMED ON (DATE) 4/5/06-4/6/06

OIL COMPANY Anschutz

WELL NAME & NUMBER ARD ~~16-27~~ 10-27 43-043-30321

SECTION 27

TOWNSHIP 4N

RANGE 7E

COUNTY & STATE Summit County, Utah

DRILLING CONTRACTOR DHS #1

OIL COMPANY SITE REPRESENTATIVE Jim Hill

RIG TOOL PUSHER

TESTED OUT OF Evanston, Wyoming

NOTIFIED PRIOR TO TEST

COPIES OF THIS TEST REPORT SENT TO: State of Utah Division of Oil, Gas & Mining

BLM- Salt Lake City Resource Area

ORIGINAL CHART & TEST REPORT ON FILE AT:

DOUBLE JACK TESTING & SERVICES/IPS
PO BOX 2097
EVANSTON, WY 82930

TESTED BY: Joe Bruce and Mike Fisher

RECEIVED
APR 13 2006
DIV. OF OIL, GAS & MINING

IPS / dba Double Jack Testing

IPS

FIELD TICKET 24699

Accounting Office: PO Drawer 2080 • Riverton, WY 82501 • (307) 857-0076

Field Operations:

Riverton, WY	(307) 857-0077
Evanston, WY	(307) 789-9213
Rock Springs, WY	(307) 382-4020
Big Piney, WY	(307) 276-5265
Vernal, UT	(435) 781-0448

DATE 5-5,6-06

☒ OPERATOR Anschutz

☐ CONTRACTOR DHS Drilling Rig #1

WELL NAME ARD #16-27

COUNTY	STATE	SECTION	TOWNSHIP	RANGE
Summit	Utah	27	4N	7E

Items Tested:

	LOW TEST PSI	TIME HELD MINUTES	HIGHTEST PSI	TIME HELD MINUTES
Top Pipe Rams	250	5	10,000	10
Bottom Pipe Rams	250	5	10,000	10
Blind Rams	250	5	10,000	10
Annular B.O.P.	250	5	2500	10
Choke Manifold	250	5	10,000	10
Choke Line	250	5	10,000	10
Kill Line Valves	250	5	10,000	10
Super Choke	—	—	10,000	2
Upper Kelly	250	5	5,000	10
Lower Kelly	250	5	5,000	10
Floor Valve	250	5	5,000	10
Dart Valve	250	5	10000	10
Casing	—	—	—	—

Closing Unit PSI 1600PSI

Closing Time of Rams 5sec

Closing Time of Annular 12sec

Closed Casing Head Valve yes

Set Wear Sleeve NO

COMMENTS

CoMan Jim Hill

Push BoBBy

ADDITIONAL TESTS & COMMENTS DRILLING ☒ COMPLETION ☐

		CHARGES
8Hrs Time For 1 man + Truck + Tools to Torque Flanges @ $95.00 Hr.		$760.00
8Hrs Time for 2nd man to Torque @ $65.00 Hr.		$520.00
4 Flanges 11" 10M charge per flange @ $175.00 per flange		$700.00
12 Flanges Choke line, Kill, + Blind Flanges @ $60.00 per flange		$720.00
(7:30pm - 3:30am)		
TEST PLUG	11"C-22 4½ IF	$165.00
TOP SUB.	4" FH	$65.00
KELLY SUB.	4" FH	$65.00
X-OVER SUB.	4½ IF Pax 4" FH Box	$50.00
OTHER		

QUANTITY	RATES		
1 unit	UNIT RATES	to test BOPs + Valves to 10M 3:30pm - 7:30pm	$1,700.00
16	ADDITIONAL	Time over 7Hr. setup @ $95.00 Hr.	$1520.00
50 miles	MILEAGE	to + from location @ $2.50 per mile	$125.00
160 gal	ANTIFREEZE	Fluid 50/50 mix @ $3.00 gal.	480.00
	OTHER	Fuel Surcharge 5% Fuel surcharge .05%	345.50

X Joe Brace, Mike Fisher

TESTED BY

SUBTOTAL 7213.50

TAX

TOTAL

PURCHASE ORDER #

Jim Hill

COMPANY REPRESENTATIVE

NO ACCIDENTS

196

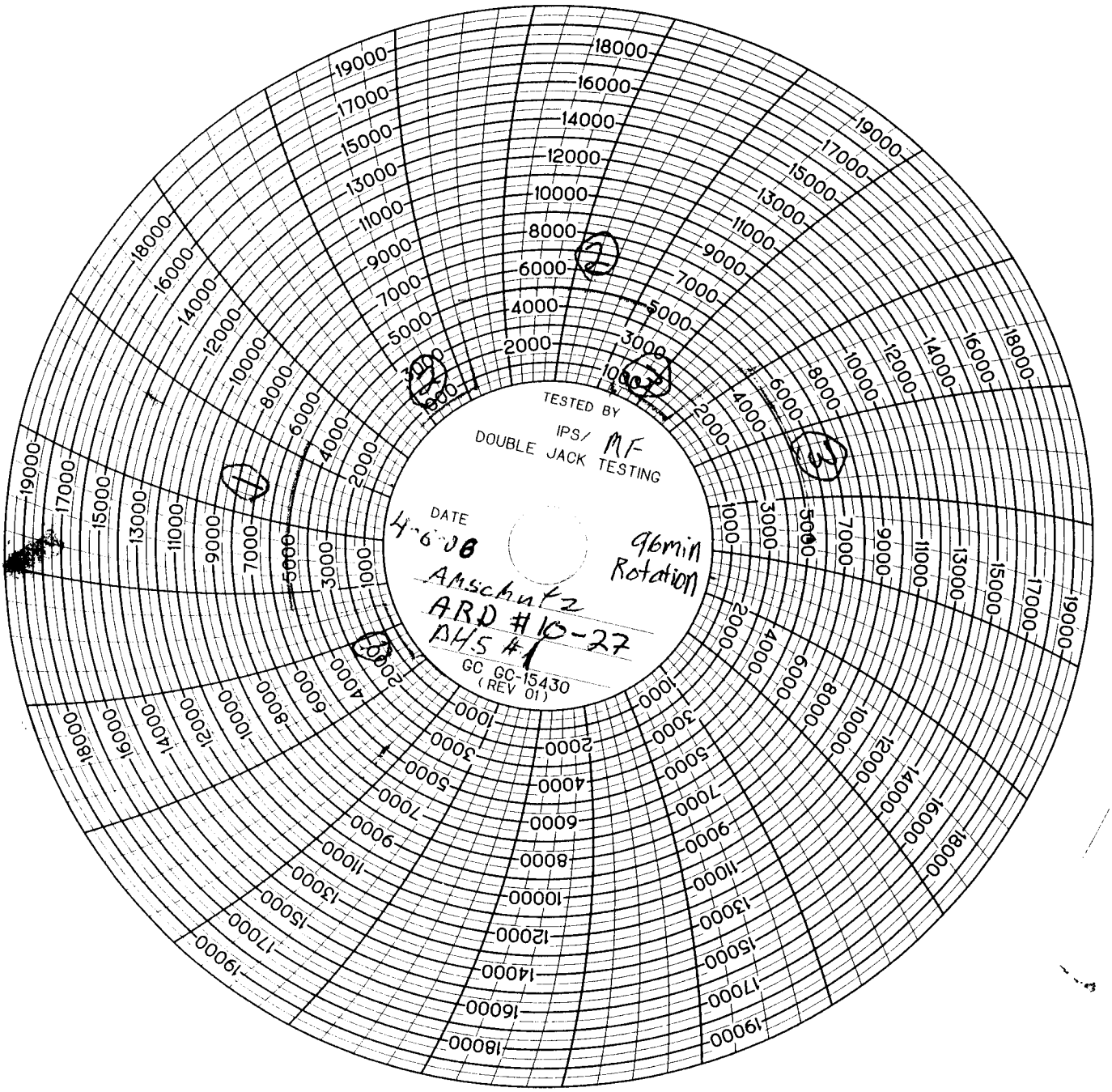
DOUBLE JACK TESTING UNIT NUMBER

NOTICE TO ALL CUSTOMERS

If this account shall not be paid when due and it is placed with an attorney for collection, or if suit be instituted for collection, the undersigned agree(s) to pay in either case, reasonable expense of collection including attorney's fees and court cost in compliance with TRUTH IN LENDING AND THE UNIFORM CONSUMER CREDIT CODE, the following information disclosure, under the terms of our regular accounts, all amounts for service due and payable within THIRTY (30) DAYS from the receipt of an invoice for such services. A LATE CHARGE will be assessed when accounts are not paid when due. THE LATE CHARGE is computed by a "periodic rate" 1-3/4% PER MONTH which is an ANNUAL PERCENTAGE RATE OF 21% to the previous balance in the account on the billing date. No further credit can be extended on unpaid delinquent accounts until the delinquent account is paid in full. The contractor will not be held liable for damages caused by acts of God, or unforeseen circumstances that could not be reasonably anticipated in performing the work done as set forth above.

IPS/DOUBLE JACK TESTING & SERVICES

COMPANY		LEASE & WELL NAME	TEST DATE	RIG NAME & #
Anschutz		ARD 10-27	4/5/06-4/6/06	DHA #1
TEST	TIME	ITEMS TESTED		
		96 minute rotation		
1	5:30 am	TIW		
2	5:47	Lower Kelly		
3	6:15	Upper Kelly		
4	8:00	Bottom pipe rams, manual, inside kill valve		
5	8:23	Bottom pipe rams, HCR, outside kill valve		
6	8:40	Top pipe rams, check, inside choke manifold valves		
7	9:00	Top pipe rams, outside choke manifold valves		
8	9:20	Super chokes		
9	9:38	Annular		
	10:00	Did function test		
10	12:20 pm	Second floor valve		
11	12:40	Second lower Kelly valve		
12	1:00	Dart valve		
13	2:20	Blind rams		
14	2:40	Manual valve on blinds		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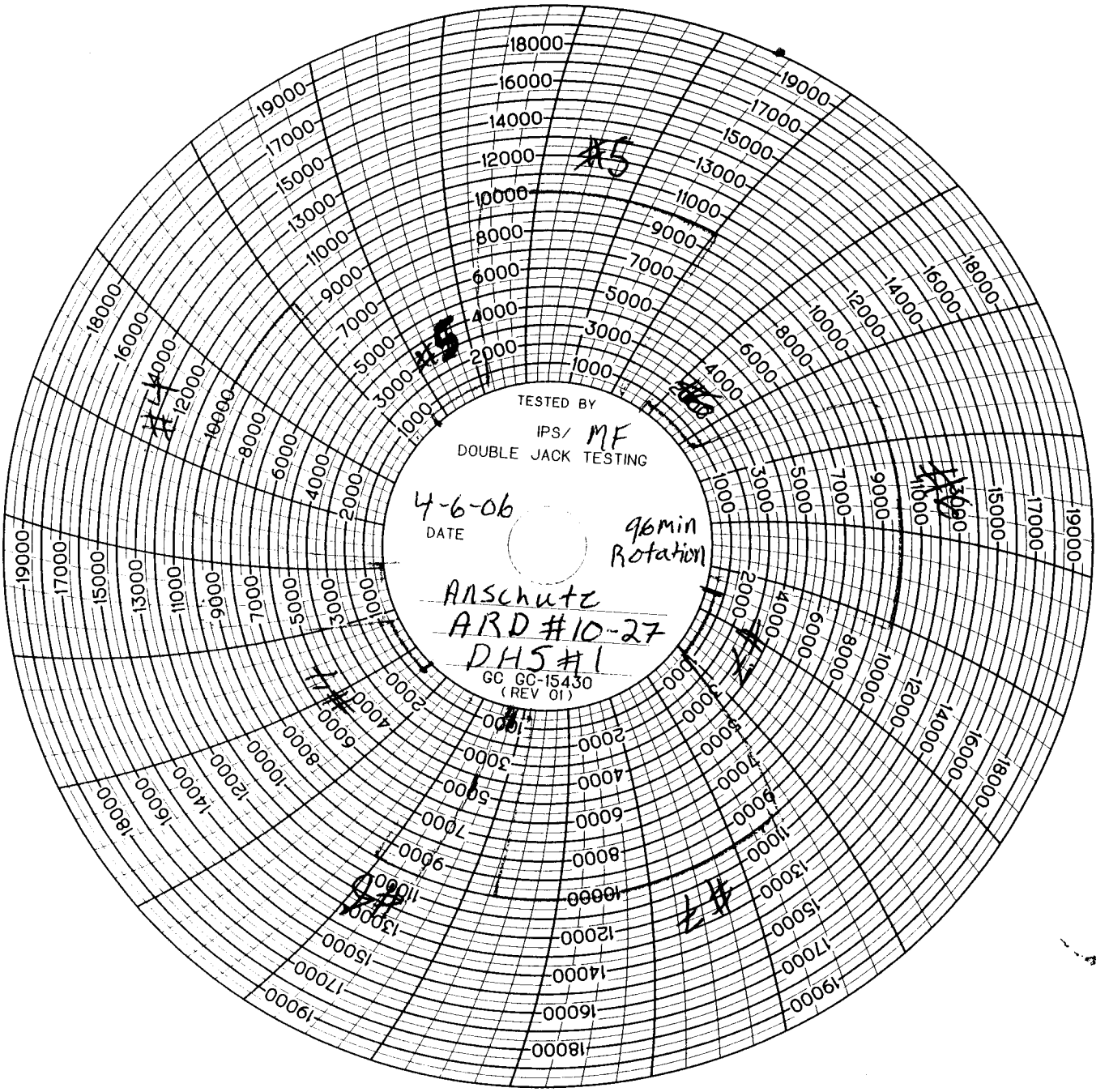
IPS/ MF
DOUBLE JACK TESTING
DATE
4-6-08
96min
Rotation
Amschutz
ARD #10-27
AHS #1
GC GC-15430
(REV 01)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Anschutz
ARD #10-27
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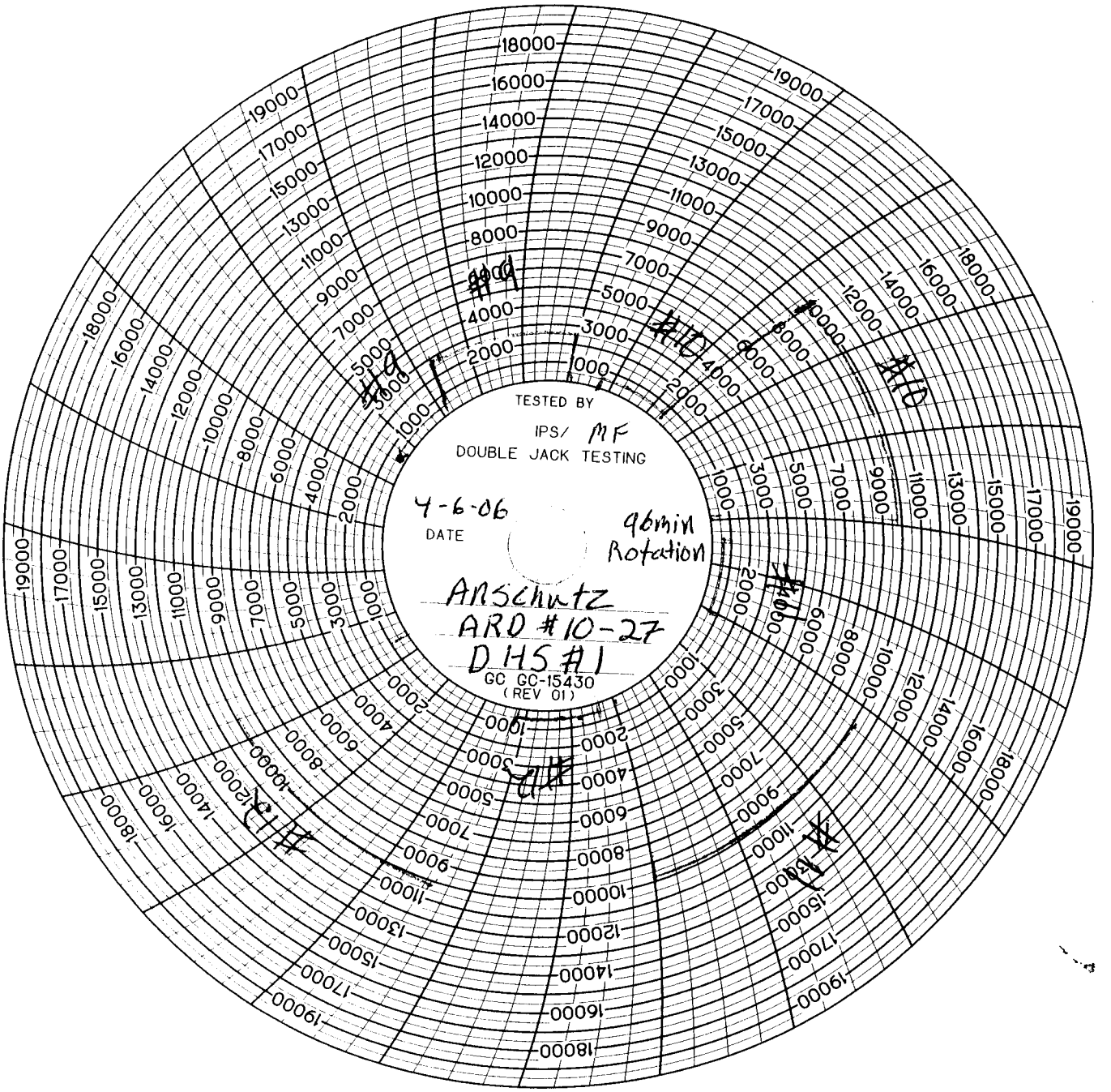
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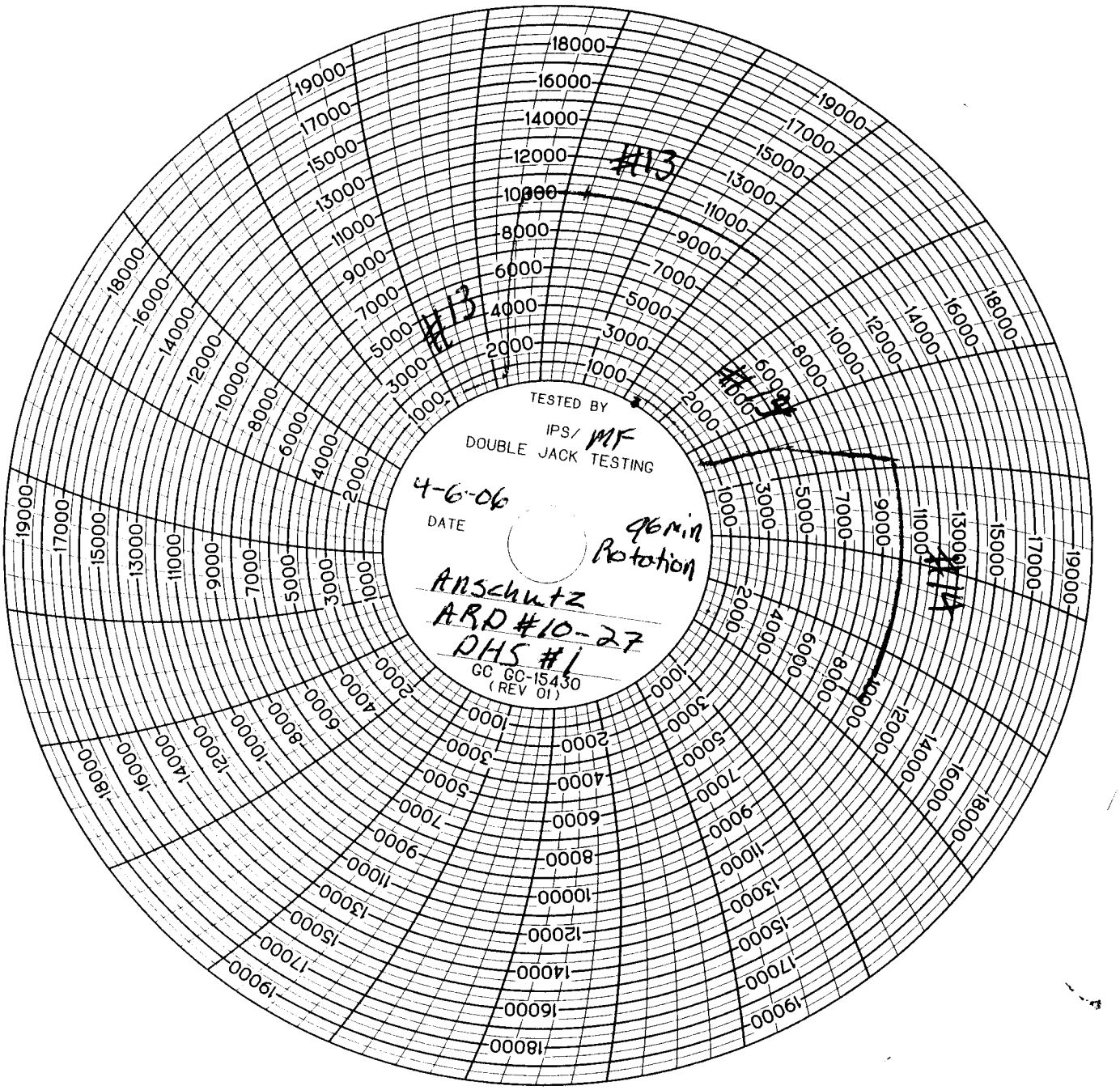
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IPS/ MF
DOUBLE JACK TESTING
4-6-06
DATE
96 min
Rotation
Anschutz
ARD #10-27
DHS #1
GC GC-15430
(REV 01)

WELLSITE GEOLOGIST'S REPORT

TIGHT HOLE

DIRECTIONAL HOLE

MICROFICHE

T. M. McCOY & CO., INC.
CONSULTING GEOLOGISTS

SKYLINE RANCH • P.O. BOX 608 • WILSON, WYOMING 83014 • 307 733-4332

ANSCHUTZ EXPLORATION CORPORATION

ANSCHUTZ RANCH DEEP #10-27

NE SE SEC 27 T4N R7E

SUMMIT COUNTY, UTAH

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SUMMARY

Anschutz Exploration Corporation is completing the Anschutz Ranch Deep #10-27 as a Permian Phosphoria Formation and Pennsylvanian Weber Sandstone sour gas well. The well was plugged back to the 7" liner set at 13925' after reaching TD in the Mississippian Mission Canyon Formation at 15900'. Evaluation included 1-ft computerized drilling time and high quality samples as well as computerized hot-wire total gas and manually logged FID chromatography from a 2-person mud logging unit. Schlumberger ran induction, laterolog, neutron, density, sonic, FMI full bore micro-imager and FMS formation micro-scanner, dipmeter, and directional logs. Two intervals of the Thaynes Limestone were investigated with 8 cores and two DSTs.

Prospect

The principal deeper-pool objectives were the Phosphoria and Weber at the Anschutz Ranch field, part of the western trend of Paleozoic sour gas production of the Utah-Wyoming thrust belt. The Mission Canyon Formation was secondary.

The Anschutz Ranch Deep #10-27 was drilled from the same pad as the 1979 Anschutz Corporation Anschutz Ranch #27-1 that produced from Jurassic Twin Creek Limestone and Nugget Sandstone. The 1980 Anschutz Corporation Anschutz Ranch #34-2, NW NW SEC 34 T4N R7E, and the 1998 Anschutz Ranch Deep #4-26, SE NW SEC 26 T4N R7E, were used for correlation below the Nugget and lie 1 mile to the south-southwest and 3/4 mile to the northeast. The Amoco Island Ranching D1, NW SEC 14 T4N R7E, and the Fawcett & Sons #1, NW SEC 36 T5N R7E, were referenced for the Pennsylvanian Morgan Formation and the Mississippian.

Drilling and Logging

13 3/8" surface casing was set in the Wasatch at 1500'. Salt-saturated mud was run for possible Preuss Salt. No clean salt was found and no difficulty was encountered through the unstable equivalent section. 9 5/8" casing was set into the top of the Thaynes at 9626'. As at the Anschutz Ranch Deep #4-26, this casing contributed to remarkably good hole conditions. A 7" liner was run to 13925' in the Weber Sandstone/Morgan Formation.

Mud losses, including seepage in the Nugget, were low compared to many thrust belt wells and were prevented or controlled by LCM pills. Notable losses were limited to 300 B in the Twin Creek, 250 B in the Phosphoria, 580 B in the Weber, and 800 B in the top of the Mission Canyon.

The well is located near the crest of the structure in gentle W dips at the Twin Creek horizon. This structural position and the 60/90-ft pendulum BHA resulted in a straight hole—maximum 4 deg—until directional drilling began at 10960' in the Woodside Red Beds. The well was steered to the NNW, targeting higher structural positions mapped in the Weber and the Mission Canyon. Maximum deviation is 43 deg. Bottom hole location is 2689 ft to the NNW, azimuth 346 deg.

Principal drilling challenge was directionally drilling to the north in the abrasive Weber Sandstone. Below 13500' in the 8 1/2" hole it was no longer possible to slide. No attempt was made to slide in the 6" hole in order to prolong the life of bits in short supply (all appropriate hard US bits were used, two were obtained from Canada, and those ordered from Bolivia did not clear customs—hole size was finally decreased to 5 7/8" due to bit availability). Twenty-one bits were needed to drill the 3230 ft from Weber top to TD.

H2S was controlled by zinc oxide scavenger, maintaining high pH, and vigilant monitoring that the hole was full. No H2S was detected during drilling or logging. Logs were run conventionally to bottom; TLC tools on drill pipe were not needed.

SUMMARY

Well Surveys

This report includes a composite survey comprising: 1) Schlumberger wireline directional survey from 1500' to 9600' and 2) Schlumberger Anadrill MWD surveys from 9600' – 15900' TD. Log TVD tops and subsea elevations are interpolated from this composite.

Structure

To 12100' in the Phosphoria, wellsite evidence agrees with the structural cross section prepared for the test and with FMI dipmeter data that show the well is near the crest on the southern part of the Anschutz Ranch structure. 1) There are few unexpected increases in apparent thickness. 2) Two instances of elongated section are a) the imbrication of Woodside red beds with gray strata of the Dinwoody Formation where the dipmeter indicates localized faulting and b) repeated section due to thrust faulting in the upper Phosphoria. 3) Sharp increase in dogleg severity and "lack of build" are found where the dipmeter analyst noted faults. 4) 250 B mud loss at 12096' in the Phosphoria corresponds to another fault noted by the dipmeter analyst.

Below 12100' dips on the field logs become sparse and dips hand-picked from a viewing station are required to complete the presentation. Below 12100' some wellsite evidence has not been reconciled with the gentle dips of the FMI and FMS. 1) During directional drilling the hole commonly tended to build angle, suggesting steeper dips, rather than drop angle as expected in gentle dips. 2) Apparent thickness was sometimes greater than that accounted for by dip/hole angle calculations, e.g., the distinctive 86-ft thick dolomite at 12964' – 13050' is 29 ft thick (12517' – 12488') at the Anschutz Ranch Deep #4-26 and is 24 ft thick (13002' – 13026') at the Anschutz Ranch #34-2. 3) Projections based upon gentle dips had to be revised deeper. The 7" liner was set expecting the Mission Canyon in the next 150 ft; it was found 650 ft deeper. The Mississippian Lodgepole Formation was expected in the last bit run but was not reached. Some problems will be resolved as more repeated section is identified and updated cross sections are prepared by Paul Lamerson and other workers at Anschutz Exploration. Others questions will likely remain unanswered.

One important note: the final FMS field dipmeter shows numerous high quality (black) tadpoles at 14900' and smaller clusters elsewhere are a **dipmeter artifact** termed "mirror imaging" by Schlumberger: dip magnitude equals hole inclination but dip direction is opposite hole azimuth.

Compared to the Anschutz Ranch Deep #4-26, the well is 192 ft low at the Nugget, 46 ft low at the Phosphoria, 188 ft low at the Weber Sandstone, 295 ft low at the first dolomite marker (12964'), and 482 ft low at the second dolomite marker (13704'). The Anschutz Ranch Deep #4-26 does not penetrate the Mission Canyon, however, mapping suggests the well is at least 400 ft low and perhaps as much as 550 ft low to the highest Mission Canyon in the vicinity of the Anschutz Ranch Deep #4-26.

Twin Creek Limestone

Minor to moderate gas shows were found in the Watton Canyon Member (61 units at best). Gas shows were associated with trace sample evidence of open fractures and slight to good drilling breaks. 300 B of mud were lost at 6909'.

SUMMARY

Nugget Sandstone

Nugget sandstone yielded slight sample shows uphole and a 200-ft thick gas show interval (60 to 452 units at best). Hole deviation is minimal at the Nugget, as at the Twin Creek, and the well bore is still close to the old producer. Gas shows decrease at approximately the same structural datum as at the Anschutz Ranch #4-26.

Thaynes Limestone

Intervals 9986' – 10059' (73 ft) and 10536' – 10649' (113 ft) were selected in advance to be cored. A total of 8 aluminum-sleeved cores were cut. The cores show numerous healed fractures; open fractures and sample shows are rare. DSTs of each of the cored intervals confirm the intervals are tight. Maximum trip gas for the well (1551 units) followed DST #1. Elsewhere, five slight to moderate gas shows (72 units at best) and rare slight to fair sample shows were found. The Thaynes is noncommercial due to lack of open fractures.

Phosphoria Formation

Best show is at the top: 339 units from dolomite and silicified dolomite displaying some small vug and intercrystalline porosity and a good fast drilling break. Nine additional gas shows ranged from 58 to 273 units. The final FMI also indicates better potential from fractures than at the Anschutz Ranch Deep #4-26.

Weber Sandstone/Morgan Formation Undivided

Best show is in dolomite at 13018': 230 units from some fair intercrystalline and vug porosity and a good fast drilling break. Between 12830' and 13250' four additional shows ranged from 121 to 67 units and were found in siliceous, non- to moderately dolomitic, tight to slightly porous sandstone and fair drilling breaks. 250 B of mud were lost at 13616' and 125 B more at 13625'.

No sandstone in the Weber at the Anschutz Ranch Deep #10-27 approaches the high matrix porosity found at 13280' – 13360' at the Anschutz Ranch Deep #4-26. Nevertheless, the Weber is expected to also produce gas.

Mission Canyon Formation

800 B of mud were lost at the top of the Mission Canyon. There were no other major losses. Samples and logs show matrix porosity is low. Maximum total gas is 38 units. The decision to plug back to the 7" liner was based mainly upon the final FMS that shows limited open fractures. Additionally, decreasing resistivity in those fractures suggests water rather than gas might be produced.

T. M. McCoy
Consulting Geologist
3 March 2000

WELL DATA

OPERATOR:	Anschutz Exploration Corporation
WELL NAME:	Anschutz Ranch Deep #10-27
LOCATION:	1433' FSL & 1228' FEL NE SE Section 27 T4N R7E Summit County, Utah
LATITUDE & LONGITUDE:	41.04862 deg N & 111.13664 deg W
BOTTOM HOLE LOCATION:	2609' N & 654' W of surface location (projection to 15900' TD)
ELEVATIONS:	7578' old graded GL 7566' new graded GL 7593' KB
API NUMBER:	43-043-30321
FIELD:	Anschutz Ranch
ROAD DIRECTIONS:	From underpass at exit 3 from I-80 in Evanston, S 17.4 miles on pavement. Segments include Overthrust Road, virtually unmarked Yellow Creek Road, Uinta County Road 151, unmarked Summit County Utah road, and Uinta County Road 153. At entrance to Anschutz Ranch facilities, go straight 0.6 mile on gravel road. Right 0.5 mile, passing above Amoco plant still on right. Left 0.5 mile. Right 2.3 miles on Road 4; at top of hill go straight 1.4 miles more. Left 1.5 miles. At IR #2 & Tidewater sign, right 0.6 mile. Left 0.7 mile up hill to location.
SURFACE CASING:	13 3/8" set at 1500' KB (34 joints K55 54.5# and 1 joint N80 68#)
INTERMEDIATE CASING:	9 5/8" 43.5# and 53.5# set at 9626' KB
INTERMEDIATE CASING:	7" 32# liner set at 13925' KB
SPUD DATE:	15 September 1999 9:00 AM
DRILLING COMPLETED:	12 February 2000 4:30 AM
TOTAL DEPTH:	15900' Driller 15880' Logger
MAXIMUM TEMPERARUE:	228 deg F
LAST FM. PENETRATED:	Mississippian Mission Canyon Formation
WELL STATUS:	Plugged back to 7" intermediate casing for completion as Weber/Phosphoria gas well.
REPRESENTATIVES:	Ed Dolly – Geology Lorraine Druyff – Petrography Monte Fryt – Log Analysis Hal Koerner and Jim Oursland– Engineering Dan Gallagher – Drilling/Operations

FORMATION TOPS

Formation	Log Top	TVD	Datum
KB			7593
TERTIARY			
Wasatch Group	Surface		
TERTIARY/UPPER CRETACEOUS			
Evanston Fm.	3016 ?	3016	4577
LOWER CRETACEOUS/JURASSIC			
Gannett Group	3244	3244	4349
JURASSIC			
Preuss Fm.	5090	5089	2504
Preuss Salt Equivalent	5768	5767	1826
Twin Creek Ls.			
Giraffe Creek/Leeds Creek Mbrs.	5818	5817	1776
Watton Canyon Mbr.	6606	6604	989
Boundary Ridge Mbr.	6950	6948	645
Rich Mbr.	6998	6996	597
Slide Rock Mbr.	7288	7286	307
Gypsum Spring Mbr.	7388	7385	208
JURASSIC/TRIASSIC			
Nugget Ss.	7470	7467	126
TRIASSIC			
Ankareh Red Beds	8554	8551	-958
Thaynes Ls.	9580	9576	-1983
Woodside Red Beds	10942	10938	-3345
Fault/Dinwoody Fm.	11772	11747	-4154
PERMIAN			
Phosphoria Fm.	11868	11836	-4243
PENNSYLVANIAN			
Weber Anhydrite	12671	12507	-4914
Weber Ss./Morgan Fm. Undivided	12773	12589	-4996
MISSISSIPPIAN			
Mission Canyon Ls.	14614	14008	-6415
TD Driller	15900	15031	-7438
TD Logger	15880	15015	-7422

LITHOLOGY AND SHOWS

The following descriptions are interpretive and are tied to drilling time at points of good correlation. Mud loggers collected lagged 30-ft samples to 4950' and lagged 10-ft samples to 15900' TD. Sample quality was generally very good.

Grain size was determined by use of the American Stratigraphic Company comparator. Colors of dry cuttings were determined from the Rock-Color Chart distributed by the Geological Society of America. 10% HCl was used in acid reaction tests.

Cut tests for hydrocarbons were performed with trichloroethylene. Significant shows are marked in the left margin; lesser indications of hydrocarbons are contained in sample descriptions. Samples were examined for fluorescence with a Corvascope.

WASATCH FM.

Surface Casing:	13 3/8" set at 1500' KB.
1500' – 1560'	60% **Mudstone**; light gray, tinted light greenish gray, trace pale reddish brown; soft to pasty; calcareous--chips quickly decrepitate to powdery insoluble residue; rounded. 40% - 20% **Sand**; fine to very coarse grained, some granules to 4 mm; freshly angular to some round; resistant lithics include light colored quartzitic sandstone and black probable volcanics. Trace – 20% **Cement**; firm. No sample show. Trace total gas.
1560' – 1590'	100% **Mudstone**; pale red to light brown; soft, tacky when wet; calcareous—chips decrepitate to powdery insoluble residue; rounded, subblocky. No sample show. Trace total gas.
1590' – 1620'	100% **Sandstone**; overall medium light gray; individual grains are clear, light to dark gray and black, minor brown; recovered as loose fine to coarse and minor very coarse sand; freshly angular to some round; grains of quartz, feldspar, chert, and dark probable volcanic lithics. No sample show. Total gas trace to 3 units.
1620' – 1650'	70% **Mudstone**; pale reddish brown to light brown; soft to pasty; calcareous—chips quickly decrepitate to powder in acid; rounded subblocky chips and paste. Mixed with 30% **Sand**; clear, light to dark gray, and black; mostly fine to coarse grained. No sample show. Total gas trace to 3 units.
1650' – 1680'	80% **Mudstone**; light gray, tinted light greenish gray, some pale red to pale reddish brown; soft and tacky when wet, little is firm; calcareous—decrepitates to powder in acid; trace hexagonal biotite suggests volcanic source; rounded, little is subblocky to platy. 20% **Sand**. No sample show. Total gas trace to 3 units.
1680' – 1710'	100% **Sand**; overall light gray; individual grains are clear, light to dark gray, black, some brown, and minor orange; mostly fine to medium grains, lesser coarse to very coarse; angular to some round. No sample show. Total gas trace to 3 units.

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1710' – 1740'	70% **Mudstone**; light gray, tinted light greenish gray, and pale reddish brown to light brown; part sandy; soft and tacky to pasty when wet, little is firm; calcareous—chips and masses decrepitate to powder in acid; minor light gray chips contain chaotic medium sand-size hexagonal biotite; rounded, little is platy to subblocky. 30% **Sand**; loose fine to coarse grains. No sample show. Trace total gas.
1740' – 1800'	100% **Sandstone**; overall medium gray; individual grains are clear, light to dark gray and black, some brownish gray to yellowish brown, rare orange; recovered as loose fine to coarse and minor very coarse sand; includes quartz, feldspar, chert, and dark probable volcanic lithics. No sample show. Trace to 3 units.
1800' – 1920'	Interbedded. 70% - 30% **Sandstone**; coated with light brown mud—likely medium light gray overall; individual grains are clear, light to dark gray, black, and some brown; mostly fine to coarse grains, some very coarse grains and few granules; freshly angular to some round; recovered as loose sand. 30% - 70% **Mudstone**; light gray, tinted light greenish gray, and pale red, pale reddish brown, and light brown; part sandy; soft, tacky to pasty when wet, little is firm; most is calcareous—decrepitates to powder in acid; minor light gray is slightly calcareous, firm, and contains medium sand-size biotite—likely volcanic-sourced; most is rounded, little is platy to subblocky. No sample show. Total gas trace to 4 units.
1920' – 1950'	100% **Sandstone**; overall medium light gray; individual grains are clear, light to dark gray, black, yellowish brown to brownish gray, and minor yellowish orange; recovered as loose fine and medium to some coarse sand; freshly angular to subround. No sample show. Total gas 4 to 2 units.
1950' – 1980'	60% **Sandstone**; recovered as loose fine to medium and lesser coarse to very coarse grained sand coated and mixed with light brown mud. 40% **Mudstone**; pale reddish brown to light brown and light gray tinted greenish gray. No sample show. Total gas 2 to 6 units.
1980' – 2370'	Interbedded. 70% - 100% **Mudstone** and **Claystone**; pale reddish brown to light brown mudstone and light gray to light greenish gray claystone; mudstone is partly sandy, soft to pasty, and calcareous—decrepitates quickly in acid to powder; claystone is commonly waxy, soft to firm, slightly to moderately calcareous, and contains some biotite. Mixed with 30% - Trace **Sand**; loose fine and medium to some coarse grains; angular to subround; quartz and lithic fragments. No sample show. Total gas trace to 5 units.
2370' – 2400'	80% **Sandstone/Conglomerate**; overall medium gray; individual grains are clear, light to dark gray, black, and minor brown; angular to subround; moderately to poorly sorted; recovered mostly as loose grains, few calcareous firm clusters; resistant lithics include chert, gray quartzitic sandstone, and dark probable volcanics. 20% **Mudstone**; pale reddish brown to light brown. No sample show. Total gas 2 to 4 units.
2400' – 2490'	60% - 20% **Sandstone**; recovered as loose fine to very coarse grains and minor granules coated with light brown mud. 40% - 80% **Mudstone** and **Claystone**; pale reddish brown to light brown mudstone and light gray to light greenish gray claystone; parts sandy; soft to pasty mudstone is calcareous and quickly decrepitates in acid to powder; soft to some firm claystone is slightly to moderately calcareous

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and remains partly intact in acid; some light greenish gray claystone appears volcanic-sourced, contains fine to medium sand-size biotite, and is partly waxy; rounded, some platy to subblocky. No sample show. Total gas trace to 6 units.

2490' – 2543' — 70% **Sandstone/Conglomerate**; overall medium light gray; individual grains are clear, light to dark gray, black, minor brown and orange; fine to very coarse grains and pebble fragments to 5 mm; freshly angular to subround; poorly sorted; resistant lithic fragments include very light gray to orange-stained quartzitic sandstone, dark probable volcanics, lesser chert and trace brownish gray carbonate. 30% **Mudstone**. No sample show. Total gas trace to 4 units.

Remark: — Tripped at 2543' for new bit #4 Hughes GT-09. Trip gas 3 units.

2543' – 2580' — 90% **Sandstone**; light brown overall—partly due to coating of mud; loose fine to very coarse sand and minor granules; freshly angular to subround; poorly sorted. 10% **Mudstone**; pale reddish brown to light brown. No sample show. Total gas 3 units.

2580' – 2700' — 70% - 50% **Mudstone**; pale reddish brown to light brown; part sandy; soft and pasty, minor firm chips; calcareous; rounded, some subblocky. 30% - 50% **Sand**; loose fine to coarse grains, some very coarse grains to granules; most is likely washed from mudstone, some from bedded sandstone. No sample show. Total gas trace to 3 units.

2700' – 2760' — 100% **Sandstone/Conglomerate**; light brown overall; individual grains are clear, light to dark gray, black, yellowish orange to yellowish brown, trace reddish orange; loose fine to very coarse grained sand, granules, and fragments of small pebbles; freshly angular to subround; resistant lithics include quartzitic sandstone, chert, and dark probable volcanics. No sample show. Total gas trace to 3 units.

2760' – 2880' — 60% - 90% **Mudstone**; light brown to pale reddish brown, some grayish red; part sandy; some firm chips to entirely pasty samples; calcareous—masses and chips decrepitate quickly in acid to powder; rounded, minor subblocky chips. 40% - 10% **Sand**; loose fine to very coarse grains; lack of drilling breaks suggests most is washed from mudstone. No sample show. Total gas trace to 3 units.

2880' – 2970' — 20% - 30% **Limestone**; light brownish gray, some tinted pale red; cryptocrystalline, earthy; firm; argillaceous; no porosity visible. 70% **Mudstone**; some pale reddish brown, grayish red to pale red, light brownish gray; part sandy; soft and pasty to firm; moderately to very calcareous—grades to argillaceous limestone; rounded masses and subblocky chips. 10% **Sand**; loose fine to very coarse grains. No sample show. Total gas trace to occasional 3 units.

2970' – 3030' — 30% - 50% **Sandstone/Conglomerate**; overall sample is brownish due to mud; fine to very coarse sand grains, granules, and pebble fragments; freshly angular to subround—some surfaces are clearly weathered; resistant lithics include very light gray to yellow and orange-stained quartzitic sandstone, some dark probable volcanic fragments and chert. 70% - 50% **Mudstone**; light brown, some pale reddish brown, light brownish gray; part sandy; soft and pasty to some firm chips; calcareous; rounded to subblocky. No sample show. Total gas trace.

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EVANSTON FM?	LOG TOP: 3016'	TVD: 3016'	DATUM: +4577'	
Remark:	No recovery of diagnostic carbonaceous shales and dirty sandstones. Color change from reddish brown of Wasatch to gray may mark top of Evanston Fm.			
3030' – 3060'	**Shale**; medium to medium dark gray; silty, some very fine grained sandy; most is pulverized in pasty sample, some firm moderately calcareous chips. No sample show. Total gas trace to 3 units.			
3060' – 3090'	Questionable sample quality. **Shale**; medium to medium dark gray appears mixed with pale reddish brown Wasatch mudstones. No sample show. Total gas trace to 3 units.			
3090' – 3240'	80% - 100% **Sandstone/Conglomerate**; overall brownish gray, individual grains and fragments are clear, light to dark gray, black, grayish orange to yellowish brown, trace green and reddish orange; recovered as loose fine to very coarse sand, granules and pebble fragments to 6 mm; freshly angular to some rounded; some outer surfaces are weathered and pitted; resistant lithics are mostly quartzitic sandstone and quartzite and lesser chert and dark probable volcanics; fast drilling break. No sample show. Total gas 4 to 22 units.			
GANNETT GROUP	LOG TOP: 3244'	TVD: 3244'	DATUM: +4349'	
3240' – 3270'	100% **Sandstone**; pale yellowish orange; fine to medium grained loose sand and very small clusters; subangular, subround. No sample show. Total gas 10 to 19 units.			
3270' – 3300'	60% **Sandstone**; light gray to light brownish gray and yellowish brown; very fine to medium grained; subangular, subround; moderately well sorted; firm to medium hard; calcareous; no to slight porosity visible. 30% **Shale** and **Mudstone**; pale reddish brown, some grayish red, light greenish gray, and light brownish to brownish gray. 10% **Conglomeratic** fragments; perhaps caving. Several chips of **Calcite**; white; loose and attached *fracture fill*. No sample show. Total gas 14 to 22 units.			
3300' – 3330'	Interbedded. 80% **Siltstone** and **Shale**; medium light gray, light brownish gray to dark grayish brown; argillaceous partly sandy siltstone and partly silty shale; firm; calcareous; subblocky. 20% **Sandstone**; medium light gray to light brownish gray; silty; commonly argillaceous; firm; calcareous; no porosity visible. No sample show. Total gas 10 to 25 units.			
Remark:	Sample 3300' – 3330' is last muddy, pasty sample.			
3330' – 3450'	60% - 90% **Sandstone**; light gray, light brownish gray; very fine and fine grained to some medium grained; subangular, subround; moderately well sorted; firm to some medium hard, some loose grains downhole; calcareous; no to slight porosity visible. 40% - 10% **Shale** and **Siltstone**; pale reddish brown to dark reddish brown, some			

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grayish red. Few chips of **Calcite**; white; loose and attached *fracture fill*. No sample show. Total gas 6 to 22 units.

3450' – 3570' Interbedded. 70% - 30% **Shale**; dark grayish red, medium dark gray tinted grayish red in part, trace tinted grayish red purple, some dark brownish gray, and rare greenish gray reduction streaks; pale reddish brown is largely caving from Wasatch; smooth and slightly waxy in minor part to silty and sandy; firm; calcareous—slight odor upon acidization; platy to subblocky. 30% - 70% **Sandstone**; very light gray to light brownish gray; very fine to medium grained; subangular, subround; moderately well sorted; firm to some medium hard, some loose sand in part; calcareous; mostly no porosity visible. Trace **Limestone**; light brownish to brownish gray, part tinted/mottled grayish red to pale red; cryptocrystalline; medium hard, dense; staining on outer surfaces suggests nodules or clasts rather than bedded limestone; no porosity visible. No sample show. Total gas 22 to 3 units.

3570' – 3600' 95% **Shale**; grayish red, medium dark gray partly streaked grayish red, rare greenish gray reduction mottling; smooth to silty—grades to minor **siltstone**; firm; calcareous; platy, subblocky. Few chips of **Calcite**; white; loose *fracture fill*. 5% **Sandstone** and loose **Sand**. No sample show. Total gas 4 to 3 units.

3600' – 3630' 70% **Shale** and lesser **Siltstone**; medium dark gray, brownish gray, minor grayish red and likely caving pale reddish brown; moderately smooth to silty and very fine grained sandy shale; partly argillaceous and very fine grained sandy siltstone; firm; calcareous; subblocky. 30% **Sandstone**; medium light gray to light brownish gray; very fine to some fine grained; moderately well sorted; firm; calcareous; no porosity visible. Few chips **Calcite**; white; loose *fracture fill*. No sample show. Total gas 3 units.

3630' – 3690' 60% - 80% **Sandstone**; minor clusters are light brownish gray—partly stained yellowish orange and grayish red; recovered mostly as loose fine to medium grained sand; subangular, subround; moderately well sorted; clusters are firm to medium hard and calcareous; mostly no porosity visible. 40% - 20% **Shale** and minor **Siltstone**; grayish red, medium dark gray—gray and red hues mixed in part, some likely caving pale reddish brown; firm; calcareous; platy, subblocky. Trace **Limestone**; light brownish gray, yellowish brown; cryptocrystalline; medium hard; dense. Few chips **Calcite**; white; loose *fracture fill*. No sample show. Total gas 3 to 9 units.

3690' – 3870' 70% - 40% **Sandstone**; some very light gray, much is stained pale red to some reddish orange; some small very fine and fine grained clusters, much loose fine to medium grained sand; slightly friable to firm clusters; calcareous. 30% - 60% **Shale** and lesser **Siltstone**; grayish red to dark grayish red, some tinted reddish brown, medium dark gray, minor grayish brown, rarely tinted grayish red purple; smooth to silty and sandy shale; argillaceous and partly sandy siltstone; firm; calcareous; platy, subblocky. Trace **Limestone**; light brownish to brownish gray, some outer surfaces stained pale red to grayish red; cryptocrystalline; medium hard; rounded clasts or nodules suggested; no porosity visible. Several chips **Calcite**; white; loose *fracture fill*. No sample show. Total gas 3 to 16 units.

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3870' – 3930'	80% - 100% **Sandstone**; light gray; some small very fine to fine grained clusters and abundant loose fine to medium to minor lower coarse grained sand; firm to slightly friable clusters; slightly to moderately calcareous; questionable minute black stain may be remnants of black carbonaceous inclusions; slight porosity visible; fast drilling break to 0.4 min/ft suggests coarsening downward. 20% - Trace **Shale** and lesser **Siltstone**. No sample show—no fluorescence or cut fluorescence from questionable black stain. Total gas 14 to 25 units.
3930' – 3960'	80% **Shale** and minor **Siltstone**; grayish to dark grayish red—some tinted dark reddish brown, medium dark gray—rarely tinted grayish red purple, gray and red hues mixed in part; smooth to silty and sandy shale; partly argillaceous, partly sandy siltstone; firm; calcareous; platy, subblocky. 20% **Sandstone**; mostly as loose grains. Trace **Limestone**; light brownish to brownish gray, some stained pale red to grayish red; cryptocrystalline; dense. Few chips **Calcite**; white; loose *fracture fill*. No sample show. Total gas 14 to 22 units.
3960' – 4020'	60% - 80% **Sandstone**; light gray, light brownish gray; some small very fine to medium grained clusters and abundant loose fine to medium to minor coarse grained sand; some angular, mostly subangular to subround, rarely round; moderately well sorted; firm; calcareous; some gray chert grains and undetermined black lithics; no to slight porosity visible; thin drilling break to 1 min/ft at 4005'. 40% - 20% **Shale** and minor **Siltstone**. No sample show. Total gas 14 to 20 units.
4020' – 4110'	80% **Shale** and minor **Siltstone**; grayish to dark grayish red—some faintly reddish brown and medium to medium dark gray—trace tinted grayish red purple; smooth to silty and very fine to fine grained sandy; firm; calcareous; platy, subblocky. 20% **Sandstone**. Trace **Limestone**; light brownish gray, tinted and grading to pale red and grayish red; cryptocrystalline; medium hard; dense. Several chips of **Calcite**; white; loose *fracture fill*. No sample show. Total gas 12 to 38 units.
4110' – 4170'	60% - 80% **Sandstone**; very light gray to light brownish gray; very fine and fine grained to some medium grained clusters and fine to medium to minor coarse grained loose sand; angular to subround; well to some moderately sorted; firm; calcareous; some gray chert grains and black undetermined lithics common in some clusters, rare in others; no to slight porosity visible; series of thin 1 to 5-ft fast breaks to 0.5 min/ft at best. 40 – 20% **Shale** and minor **Siltstone**. Trace **Limestone**; light brownish gray, stained and grading to pale red and grayish red; cryptocrystalline; dense; likely rounded clasts or nodules rather than bedded limestone; no porosity visible. Trace **Calcite**; white; loose and attached *fracture fill*; some cuts sandstone. No sample show. Total gas 16 to 32 units.
4170' – 4230'	70% **Shale** and minor **Siltstone**; grayish to dark grayish red and medium dark gray—hues mixed in part; smooth to silty and very fine to fine grained sandy; firm; calcareous; platy, subblocky. 30% **Sandstone**; very light gray to light brownish gray; very fine to fine grained clusters and loose fine to medium grained sand; calcareous; mostly no porosity visible. Trace **Limestone**; light gray to light brownish gray; stained orange pink, pale red, and grayish red; cryptocrystalline; dense. Several chips **Calcite**; white; *fracture fill*. No sample show. Total gas 26 to 14 units.

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4230' – 4507'	80% to rarely 40% **Shale** and minor **Siltstone**; grayish red to dark grayish red with trace faintly greenish gray reduction mottling, lesser medium dark gray—part tinted grayish red purple; moderately smooth to silty and very fine to fine grained sandy shale; argillaceous and very fine grained sandy siltstone; firm; calcareous; platy, subblocky. Trace to 2% **Limestone**; light brownish gray to brownish gray, partly tinted and grading to pale red and grayish red; cryptocrystalline; medium hard; quite clean; some rounded and red-stained argillaceous rims suggest transported clasts or nodules rather than bedded limestone; no porosity visible. 20% - 40% **Sandstone**; very light to light gray, stained pale red to moderately orange pink in part; very fine to fine grained clusters, loose fine to medium grained sand in part; firm, some medium hard; calcareous; non- to some moderately peppered; mostly no porosity visible, no good drilling breaks. Few chips to trace **Calcite**; white; broken cleavage blocks of *fracture fill*—no crystal faces evident which would indicate open fractures. No sample show. Total gas mostly 10 to 20 units.
Remarks:	Tripped for new bit #5 Hughes GT-09 at 4507'. Calibration of total gas detector and chromatograph were checked during trip—OK. Trip gas 119 units total gas; low corresponding chromatography indicates minimal hydrocarbons and possible H2. Loggers have tried numerous locations at shaker to find sample collection point that minimizes loose sand and recovers most representative cuttings.
4507' – 4590'	20% - 50% **Sandstone**; pale red, some very light gray; very fine to fine grained clusters and some loose fine to minor medium grained sand; subangular, subround; moderately well sorted; firm, some medium hard; calcareous; no to some slight porosity visible; thin drilling breaks to 0.5 min/ft at best. 80% - 50% **Shale** and lesser **Siltstone**; grayish red to dark grayish red, some medium dark gray tinted grayish red purple, some siltstone is pale reddish brown; smooth to silty, sandy shale; argillaceous and very fine grained sandy siltstone; firm; calcareous; platy to subblocky. Trace **Limestone**; grayish red to pale red, light brownish gray; cryptocrystalline; medium hard; dense. Trace **Calcite**; white, trace stained grayish red; *fracture fill*. No sample show. Total gas 9 – 22 units.
4590' – 4620'	30% **Limestone**; light brownish to brownish gray; cryptocrystalline; medium hard; argillaceous—grades to calcareous dense claystone; probably bedded rather than clastic or nodular; no porosity visible. 70% **Shale** and lesser **Siltstone**; grayish red, some medium dark gray tinted grayish red purple. Trace **Calcite**; *fracture fill*. No sample show. Total gas 15 – 22 units.
4620' – 4808'	80% - 100% **Shale** and lesser **Siltstone**; grayish red to dark grayish red—tinted grayish red purple in part, uphole some medium dark gray tinted grayish red purple, rare faintly greenish gray reduction streaks; smooth to silty and very fine to fine grained sandy shale; argillaceous and very fine grained sandy siltstone; firm; calcareous; platy, subblocky, some irregular; rare probable *slickensides* in several samples. Trace – 20% **Sandstone**; medium light to medium gray—part pale red; very fine to fine grained; commonly argillaceous; slightly to moderately calcareous; no porosity visible; few thin drilling breaks. Trace **Calcite**; white, some stained red; *fracture fill*—blocks and thin plates. 10% to mostly Trace **Limestone**; light brownish to brownish gray, some stained pale red to grayish red; cryptocrystalline; medium hard; probable transported clasts or nodules rather than beds except uphole. No sample show. Total gas 16 to 32 units.

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Remark:	Began salting-up at approximately 4800' for salt-saturated mud.
4808' – 4834'	50% **Sandstone**; pale red, some grayish orange pink, rare nearly white streaks; very fine to fine grained clusters, lesser loose fine to some medium grained sand; subangular, subround; moderately well sorted; firm to medium hard; moderately to some slightly calcareous; no to some fair porosity visible; fast drilling break averages 1.5 min/ft, at best 0.6 min/ft. 50% **Shale** and lesser **Siltstone**; grayish red to dark grayish red, minor medium dark to dark gray tinted grayish red purple. Trace **Limestone**. Trace **Calcite**; white, some stained pale red; *fracture fill*. No sample show.
Slight gas show:	Total gas 22 to 58 to 38 units.
4834' – 4920'	80% - 100% **Shale** and minor **Siltstone**; grayish red to dark grayish red, some medium to medium dark gray, much of red and gray is tinted dark grayish red purple; smooth—little is subwaxy to some silty and very fine grained shale; firm, some medium hard; noncalcareous to some moderately calcareous/dolomitic; platy, subblocky, some irregular. 20% **Sandstone**; pale red; most is from overlying sandstone. Trace **Limestone**; pale red to grayish red, some light brownish gray; cryptocrystalline; dense. Trace **Calcite**; white, some stained red; loose and attached cleavage blocks, plates, and splintery *fracture fill*; single 1 cm long chip of grayish red silty very fine grained sandstone displays *face of open fracture lined with calcite crystals*. No sample show. Total gas 40 to 4 units.
4920' – 4970'	40% - 60% **Sandstone/Conglomerate**; overall grayish red to pale red; very fine to very coarse grained sand and sandstone clusters; subangular to some rounded larger grains; poorly sorted; numerous grayish red- and yellowish orange-stained fragments of **chert pebbles**, minor dark gray to brownish fractured gray chert fragments; fast erratic drilling breaks 4921' – 4938' and 4948' – 4964' average 2 to 1.5 min/ft, at best 0.7 min/ft. 60% - 40% **Shale** and minor **Siltstone**; mostly grayish red. Trace **Limestone**. Trace **Calcite**; white; loose and attached *fracture fill*. No sample show. Total gas 6 to 3 units.
Remark:	Good sample quality.
4970' – 4990'	90% **Shale** and minor **Siltstone**; grayish red to much dark grayish red, minor medium dark gray, both red and gray commonly tinted dark grayish red purple; smooth and slightly waxy in part to some silty to sandy shale; firm; non- to some slightly calcareous; some waxy to glazed *probable slickensides—few with thin veneer of calcite*; platy, subblocky, and irregular. 8% - 10% **Sandstone**; as above. 2% - Trace **Limestone**; pale red to grayish red, some light brownish gray; cryptocrystalline; medium hard; slightly argillaceous; no porosity visible. Trace **Calcite**; white; *fracture fill*. No sample show. Total gas 4 to 6 units.
4990' – 5005'	40% - 60% **Sandstone/Conglomerate**; medium light gray to pale red overall; very fine to medium grained clusters and loose medium to very coarse sand-size grains and pebble fragments; freshly angular to some rounded surfaces; overall poorly

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sorted (some moderately well sorted fine clusters are probably matrix); medium hard; non- to slightly calcareous; siliceous fragments include gray, brownish gray, reddish orange, and decreased yellowish orange **chert**; mostly no porosity visible in clusters; fast drilling break averages 1.5 min/ft, at best 1 min/ft. 60% - 40% **Shale** and **Mudstone**; mostly grayish red to dark grayish red, some purple-tinted medium dark gray. Minor **Limestone**; pale red to grayish red, light brownish gray; cryptocrystalline; dense. Trace **Calcite**; white; *fracture fill*. Total gas 6 to 7 units.

5005' – 5060' 90% - 100% **Mudstone**; moderate reddish brown (10 R 4/6 from rock color chart—informally bright reddish brown); recovered as soft/tacky/mushy masses to firm chips; calcareous—much decrepitates quickly in acid to powder; part sandy. Lesser **Shale**; dark grayish red to some grayish red, part tinted grayish red purple—rarely mottled off-white; smooth to silty and sandy; firm; non- to slightly calcareous; platy, subblocky, irregular. Trace **Limestone**. Trace **Calcite**; white; *fracture fill*. 10% - Trace **Sandstone**; likely from above. No sample show. Total gas 3 to 10 units.

Remarks: Tripped for new bit #6 Smith F10T at 5039' due to slower drilling. Trip gas 17 units.

Final sandstone/conglomerate of Gannett shown on the Anschutz Ranch #27-1 at 5026' – 5042' is not evident in samples or from drilling time at the Anschutz Ranch Deep #10-27. Instead, samples here show sharp change to mostly bright reddish brown partly mushy mudstone. Drilling slowed to 6 to 8 min/ft both with old bit (not badly worn) and with new bit.

5060' – 5090' 100% **Mudstone**; moderate reddish brown (10 R 4/6); recovered as soft/tacky/mushy masses to firm chips; calcareous—much decrepitates quickly in acid to powder; pulverized round masses to subblocky; and lesser **Shale**; dark reddish brown; smooth to silty; firm; calcareous; subblocky, some platy. Trace **Calcite**; white; commonly pulverized to opaque powder, some loose and attached *fracture fill*—no evidence of open fractures. No sample show. Total gas 4 to 6 units.

PREUSS FM. LOG TOP: 5090' TVD: 5089' DATUM: +2504'

Remark: Sample top is based on first appearance of *grayish brown* shale and siltstone that contrasts with moderate *reddish* brown mudstone and dark *reddish* brown shale that is considered lowermost Gannett.

5090' – 5120' 30% - 60% **Shale** and minor **Siltstone**; grayish brown (5 YR 3/2); moderately smooth to silty and some very fine grained sandy shale; argillaceous and partly very fine grained sandy siltstone; firm, some medium hard; slightly calcareous (stronger initial effervescence is due to calcareous muddy coating on many chips); samples gradually become easier to wash clean; subblocky. 70% - 40% **Mudstone** and **Shale**; likely from lower Gannett. No sample show. Total gas 6 to 7 units.

5120' – 5250' Interbedded. Variable 90% - 60% **Shale**; grayish brown (5 YR 3/2); moderately smooth to silty and some very fine grained sandy; firm; slightly calcareous; subblocky, some irregular. 10% - 40% **Siltstone**; pale brown (5 YR 6/2 to 5 YR

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5/2); commonly argillaceous, partly very fine grained sandy; firm to medium hard; slightly to moderately calcareous; subblocky. Trace **Sandstone**; grayish orange pink (5 YR 7/2) to pale brown (5 YR 6/2); very fine to some fine grained; subangular, subround; moderately well sorted; firm to medium hard; calcareous; minor black undetermined grains; no porosity visible. Trace **Calcite**; white; *microfracture fill* and some loose cleavage blocks. No sample show. Total gas 4 to 14 units.

Remark: Continued good sample quality. Color changes are seen easily without microscope.

5250' – 5300' Interbedded, gradational. 60% - 30% **Shale**; grayish brown; smooth to silty and very fine grained sandy; firm, some medium hard; slightly calcareous; platy, subblocky, some irregular. 30% - 40% **Siltstone**; pale brown; commonly argillaceous, part very fine grained sandy; firm to medium hard; slightly to moderately calcareous; some smooth brownish gray shale laminae; subblocky. 10% - 30% **Sandstone**; grayish orange pink to pale brown; very fine to fine grained, rare dispersed medium grains; subangular, subround; moderately well to some moderately sorted; firm to medium hard; calcareous; undetermined black grains, dispersed and occasionally concentrated along bedding planes; mostly no porosity visible. Trace **Calcite**; white; *fracture fill* cutting all rock types. No sample show. Total gas 8 to 5 units.

Remark: Caliper from offset well Anschutz Ranch #27-1 shows major washout in the Preuss Formation to 5240'. Less washout below 5240' in that well correlates to increased siltstone and sandstone at the Anschutz Ranch Deep #10-27.

5300' – 5450' Interbedded, gradational; variable rock types reflected in erratic drilling at 3 to 12 min/ft. 30% - 50% **Sandstone**; grayish orange pink (5 YR 7/2) to pale brown (5 YR 6/2); very fine to medium grained clusters with rare dispersed coarse grains; some loose fine to medium grained sand; subangular to some round; moderately well to rarely poorly sorted; medium hard; calcite and silica cement; argillaceous and silty to moderately clean; undetermined dispersed black grains, occasionally concentrated along bedding planes; minor orange grains evident where lighter colored; mostly no porosity visible. 20% - 30% **Siltstone**; pale brown; part argillaceous, commonly very fine grained sandy; firm to medium hard; slightly to moderately calcareous; occasional contacts with grayish brown shale laminae; subblocky, blocky. 50% - 20% **Shale**; grayish brown; smooth to silty and very fine to fine grained sandy; firm, some medium hard; slightly calcareous; platy, subblocky; rare probable *slickensides* in smooth shale. Trace **Calcite**; white; *fracture fill* cutting all rock types and few loose cleavage blocks up to 3 mm. Increased cavings from Gannett in part. No sample show. Total gas 2 to 16 units.

5450' – 5505' Interbedded, gradational. 60% - 20% **Sandstone**; grayish orange pink (5 YR 7/2) to pale brown (5 YR 6/2); very fine to medium grained clusters with rare dispersed coarse grains; minor loose fine to medium grained sand; subangular to some round; moderately well to trace poorly sorted; firm to medium hard; calcite and silica cement; argillaceous and silty to moderately clean; some black grains; mostly no porosity visible. 20% - 30% **Siltstone**; pale brown; part argillaceous, commonly very fine grained sandy; firm, medium hard; calcareous; subblocky, blocky. 20% - 50% **Shale**; grayish brown; smooth, some silty to fine grained sandy; firm; slightly calcareous, some flakes apart in acid; occasional sharp contacts with siltstone and sandstone; some probable *slickensides* where smooth textured; platy, subblocky. Trace **Calcite**; white; *fracture fill* cutting and attached to all rock types, few loose

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small cleavage blocks. No stain, fluorescence, or cut fluorescence from sandstone or from brown shale. Minor mineral fluorescence from calcite fracture fill—no cut fluorescence. Some cavings from Gannett. Total gas 6 to 10 units.

Remark: Tripped at 5505' for new bit #7 Reed EHP43H. Trip gas 19 units (maximum gas recorded very early in circulation, not from bottom of hole).

5505' – 5647' Interbedded, gradational. 20% - 40% **Sandstone**; grayish orange pink to pale brown (5 YR 7/2 to 5 YR 5/3); very fine and fine to minor medium grained clusters; moderate loose fine to medium grained sand in some samples; subangular to some round; moderately well to moderately sorted; firm to medium hard; calcite, silica, and some anhydrite cement; some black grains; mostly no porosity visible. 40% **Siltstone**; pale brown; commonly argillaceous and/or sandy; firm to medium hard; calcareous; subblocky, some blocky. 40% - 20% **Shale**; grayish brown; smooth to silty and sandy; firm; slightly calcareous; both sharp and gradational contacts with siltstone and sandstone; some probable *slickensides*; platy, subblocky, some irregular. Trace **Calcite/Dolomite**, **Anhydrite**, and **Silica**; white to clear; *fracture fill* cutting all rock types; some individual chips contain several of these fracture filling minerals. Rare **Silica/Chalcedony**; bright pink-orange to red orange, occasionally contacting white to clear patches or bands; hard. No sample show. Total gas 6 to 12 units (but chromatography shows only sporadic trace C1).

Remarks: No rig or formation salt has been observed yet in samples. Starting at 5600' mud loggers began examining an additional sample every 10 ft that is minimally washed to make sure salt is not being washed from samples.

Tripped at 5647' for new bit #8 Hughes GT-18. Trip gas 20 units. Mixed additional salt before drilling ahead. Observed no circulated intact rig salt across shaker but mud was so saline that new hopper-shaped salt crystals formed on surface of mud samples within a few minutes after standing.

5647' – 5670' 20% **Sandstone**; pale brown, some grayish orange pink; very fine and fine grained to minor medium grained; clusters and some loose sand; subangular to some round; moderately well to some moderately sorted; firm; moderately calcareous, anhydritic; silty and argillaceous, little is moderately clean; mostly no porosity visible. 70% - 50% **Siltstone**; pale brown, some brownish gray; commonly argillaceous and sandy; firm; slightly to moderately calcareous, anhydritic; subblocky. 10% - 30% **Shale**; grayish brown; much is silty, some sandy, some smooth; firm; slightly calcareous; trace probable *slickensides*; platy, subblocky, some irregular. Trace **Calcite** and **Anhydrite**; white, clear; *fracture fill*. No sample show. Total gas 3 to 9 units.

Remark: First rig salt circulated across shaker is in sample 5670' – 5680'.

5670' – 5730' 20% - 50% - 0% **Rig Salt**; clear; coarse to very coarse sand-size; rounded; moderately water-washed samples.

Interbedded, gradational. Formation percentages (rig salt excluded): 20% - 50% **Sandstone**; grayish orange pink, some pale brown; very fine and fine grained to minor medium grained clusters; minor loose sand; subangular to some round; moderately well to moderately sorted; firm; moderately calcareous; anhydritic; moderately clean to argillaceous and silty; mostly no porosity visible; no drilling

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breaks. 50% **Siltstone**; pale brown; much is very fine grained sandy, some argillaceous; firm; slightly to moderately calcareous; anhydritic; subblocky. 30% - Trace **Shale**; grayish brown; smooth to silty and sandy; firm; slightly calcareous; platy, subblocky, some irregular. No sample show. Total gas 3 to 7 units.

5730' – 5740' — 100% **Rig Salt** in minimally washed sample; 70% **Rig Salt** in well-washed sample. Formation is interbedded, gradational **sandstone**, **siltstone**, and **shale**.

5740' – 5771' — Interbedded, gradational. 50% - 10% **Sandstone**; grayish orange pink to pale brown; very fine and fine grained to some medium grained—abundant loose sand and minor clusters; subangular to some round; moderately well to moderately sorted; firm; calcareous; anhydritic; some black grains; clusters are commonly silty and partly argillaceous; mostly no porosity visible. 40% - 80% **Siltstone**; pale brown (5 YR 6/2 to 5 YR 5/3); commonly argillaceous and very fine to fine grained sandy; firm, part soft and smeared or pulverized by drilling; calcareous—part disintegrates to powder; subblocky, rounded. 10% **Shale**; grayish brown; smooth to silty and sandy; slightly calcareous. Trace **Calcite** and **Anhydrite**; white; *fracture fill*, part of anhydrite appears patchy and diagenetic. Rare **Silica/Chalcedony**; bright orange pink and white to very light gray. No sample show. Total gas trace to 6 units.

Remark: — Tripped for new bit #9 Smith F15 at 5771'. Inspected BHA—7 drill collars cracked. Trip gas 9 units.

5771' – 5820' — Interbedded, gradational. 30% - 10% **Sandstone**; pale brown (5 YR 6/2 to 5 YR 5/3), trace grayish orange pink; very fine to medium grained; subangular to some round; moderately well to moderately sorted; firm to medium hard clusters and loose fine and medium to rare coarse sand; calcareous; anhydritic; some undetermined black grains; no porosity visible. 50% - 80% **Siltstone**; pale brown—increasingly tinted moderate brown to reddish brown; commonly argillaceous and very fine to fine grained sandy in part—trace floating medium to coarse sand grains; calcareous; anhydritic; subblocky, much is pulverized downhole to rounded masses. 20% - 10% **Shale**; grayish brown, smooth to silty, some sandy; firm; slightly calcareous; platy, subblocky; trace *slickensides*. Trace **Anhydrite**; white, nearly clear; microcrystalline to earthy; part may be *fracture fill.* Rare **Calcite**; white; *fracture fill.* Trace **Silica/Chalcedony**; bright red orange, white to very light gray. No sample show. Total gas mainly 2 to 4 units.

Remarks: — No rig salt or formation salt is present in samples. The 1-ft drilling time log shows no fast break indicating clean salt; fastest single feet are at 5773' (7.8 min/ft) and at 5787' (7.9 min/ft). No sample or drilling time top of the Preuss Salt can be picked.

The Preuss Salt section at the Anschutz #27-1 is poorly developed compared to the clean salt shown on the gamma and by 2 min/ft drilling at the Anschutz Ranch Deep #4-26. The Preuss Salt section at the Anschutz Ranch #10-27—if shown on logs at all—will be poorly developed.

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TWIN CREEK LS.	LOG TOP: 5818' TVD: 5817' DATUM: +1776'
5820' – 5830'	40% **Limestone**; light brownish to brownish gray, part faintly reddish brown from proximity to Preuss; very fine to fine grained oolitic; firm, some medium hard; very fine to some fine grained sandy; clean to some argillaceous; no porosity visible. Trace **Shale**; dark brownish gray; cryptocrystalline appearance in part; calcareous; silty; coarse platy. 60% **Cavings**; Preuss siltstone and shale. No sample show. Total gas 3 units.
5830' – 5850'	60% - 50% **Sandstone**; light to some medium light gray; very fine grained; subangular, subround; well sorted; firm, some medium hard; very calcareous; chips remain intact in acid but become fragile—many chips disintegrate to loose grains (estimated to be more than 50% sand by bulk volume); rare green grains; no porosity visible. Grades to 30% **Siltstone**; light to some medium light gray; very fine grained sandy; firm, some medium hard; very calcareous; subblocky. Trace – 10% **Limestone**; light brownish gray; very fine to fine grained oolitic; firm; very fine to some fine grained sandy; slightly argillaceous; no porosity visible. 10% **Cavings**; mostly from Preuss. Rare **Calcite** and **Silica**; white; *fracture fill* cutting sandstone and siltstone. No sample show. Total gas 2 to 3 units.
5850' – 5860'	50% **Sandstone** and **Siltstone**; light to medium light gray. 50% **Cavings**; mostly brown to reddish brown Preuss. No sample show. Total gas 3 to 4 units.
5860' – 5880'	60% - 30% **Sandstone**; light to some medium light gray; very fine grained; well sorted; firm, some medium hard; very calcareous; some chips remain intact in acid but become fragile, some disintegrate to loose sand grains; rare possible glauconite; grades to minor sandy **limestone**; no porosity visible. 40% - 60% **Siltstone**; light to medium light gray; much is very fine grained sandy, some argillaceous; very calcareous; in acid chips remain intact or disintegrate; subblocky; grades to lesser impure **limestone**. Trace – 10% **Cavings**; mostly from Preuss. No sample show. Total gas 3 units.
5880' – 5900'	40% **Shale**; medium to medium dark gray; silty; very calcareous—chips remain intact in acid or disintegrate to silty argillaceous insoluble residue; grades to minor impure **limestone**. 40% **Siltstone**; light to medium light gray; commonly argillaceous, some very fine grained sandy; very calcareous. 10% **Sandstone**; light gray; very fine grained; very calcareous. Trace **Limestone**; medium gray; very fine to fine grained dark ooliths; fine grained sandy; no porosity visible. 10% **Cavings**. No sample show. Total gas 3 to 6 units.
5900' – 5930'	20% - 60% **Sandstone**; light gray, some medium light gray; very fine grained; well sorted; firm, some medium hard; very calcareous; most chips remain intact in acid, some disintegrate to loose grains; rare possible glauconite; no porosity visible. 50% - 30% **Siltstone**; light to medium light gray; commonly very fine grained sandy, part argillaceous; very calcareous; most chips remain intact in acid, part disintegrates and may grade to impure **limestone**; subblocky. 20% - Trace **Shale**; medium to medium dark gray; silty; very calcareous; coarse platy, subblocky. 10% **Cavings**. Trace **Calcite**; white; *fracture fill* cutting all rock types. No sample show. Total gas 3 to 4 units.

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5930' – 6010'	40% - 90% **Sandstone** and lesser **Siltstone**; light to medium light gray; very fine to some lower fine grained sandstone; well sorted; firm; very calcareous; most chips remain intact in acid—minor part grades to sandy or silty limestone; trace probable glauconite; no porosity visible; no drilling breaks. Highly variable, 60% - 10% **Cavings**; Preuss and Gannett. No sample show. Total gas 3 to 6 units.
Remark:	Short tripped 4 stands at 5979' through Preuss salt equivalent—OK. Short trip gas 10 units. Cavings decreased immediately following short trip.
6010' – 6020'	60% **Sandstone**; light to medium light gray; very calcareous; grades to subordinate calcareous **siltstone**. 10% **Limy Shale** and **Shaly Limestone**; medium dark gray; as below. 30% **Cavings**; Preuss and Gannett. No sample show. Total gas 4 to 6 units.
Remark:	Increase in argillaceous content correlates with increased neutron-density separation shown on offset Anschutz #27-1 at 5998'.
6020' – 6080'	90% - 50% **Limy Shale** and **Shaly Limestone**; medium dark gray, some tinted brownish gray, minor lighter colored chips appear partly pulverized and may be artifact of drilling; firm, little is medium hard; very calcareous shale and argillaceous limestone; most chips disintegrate in acid leaving abundant powdery insoluble residue; coarse platy, subblocky. Trace **Calcite**; white; *fracture fill* cutting and attached to shale (no open fractures indicated). Variable 10% - 50% **Cavings**; Preuss and Gannett. No sample show. Total gas 4 to 7 units.
6080' – 6220'	40% - 90% **Limy Shale** and **Shaly Limestone**; medium dark gray, some medium light to medium gray; lighter colored chips are chalky and may be partly pulverized and artifact of drilling; firm, little is medium hard; very calcareous shale and argillaceous limestone; most chips disintegrate in acid leaving abundant clayey powder, some remain intact in acid but are fragile; platy; subblocky; no drilling breaks. Minor streaks of **Siltstone** and **Sandstone**; light to medium light gray; very fine grained sandstone; partly sandy and argillaceous siltstone; very calcareous; thin beds and laminae or cavings. Trace **Calcite**; white; *fracture fill* attached to or cutting limy shale and shaly limestone; two chips from entire interval contain euhedral crystals lining vugs within fracture fill—one mass of crystals is stained orange pink. Highly variable 60% - 10% **Cavings**; Preuss and Gannett. No sample show. Total gas 4 to 9 units.
6220' – 6290'	90% - 100% **Limy Shale** and **Shaly Limestone**; medium dark gray, some medium to medium light gray; lighter colored chips commonly appear pounded; firm, little is medium hard; very calcareous shale and argillaceous limestone; most chips disintegrate in acid leaving abundant clayey insoluble residue; platy, subblocky. Trace **Shale**; medium light gray—faintly tinted greenish gray; slightly waxy and bentonitic; few biotite flecks; flakes apart and swells slightly in acid with much less effervescence than dominant medium dark gray limy shale. Trace **Calcite**; white *microfracture fill* and few chips to 5 mm of moderate orange pink mixed **calcite/anhydrite** *fracture fill* that is loose and attached to medium dark gray shale. 10% - Trace **Cavings**. No sample show. Total gas 3 to 6 units.
Remark:	Tripped at 6261' for new bit #10 Reed EHP43H. Trip gas 22 units.

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6290' – 6350'	60% - 90% **Limy Shale** and **Shaly Limestone**; medium dark gray to some medium light gray; part of lighter colored chips appears pounded, part is silty; firm, little is medium hard; very calcareous shale and argillaceous limestone; many chips disintegrate in acid leaving abundant clayey insoluble residue, silty chips tend to remain intact; platy, subblocky. 10% - Trace **Siltstone**; medium light gray to medium gray; argillaceous; calcareous; platy, subblocky. 30% - 10% **Cavings**; Preuss and lesser Gannett. Trace **Calcite**; white; mostly *microfracture* fill. No sample show. Total gas 5 to 8 units.
6350' – 6420'	Trace – 60% **Siltstone** and lesser **Sandstone**; medium light gray to light gray mottled off-white; argillaceous and partly very fine grained sandy siltstone; argillaceous and partly silty very fine grained sandstone; firm, some medium hard downhole; calcareous but chips remain intact in acid, varying from firm to medium hard after dissolution of carbonate—some hard enough to scrape steel from probe; minute brown biotite flecks and undetermined wisps in some chips; may be *tuffaceous* and likely correlates to increased gamma streaks on offset log; no porosity visible. 90% - 40% **Limy Shale** and **Shaly Limestone**; medium dark to some medium gray; many chips disintegrate in acid leaving clayey to flaky residue, some remain intact but are fragile after dissolution of carbonate; platy, subblocky. Trace **Limestone**; medium dark gray to light brownish gray; fine to medium grained faintly oolitic; very to slightly argillaceous; no porosity visible. Trace **Calcite**; white; mostly *microfracture fill*; few chips stained moderate orange pink. 10% - Trace **Cavings**. No sample show. Total gas 5 to 8 units.
6420' – 6500'	80% - 60% **Limy Shale** and **Shaly Limestone**; medium dark gray to some medium gray; firm, some medium hard; many chips disintegrate in acid leaving abundant clayey to flaky residue, some remain intact in acid but are fragile; platy, subblocky. 20% - Trace – 40% **Siltstone** and minor **Sandstone**; medium to light gray; argillaceous and partly very fine grained sandy siltstone; argillaceous and partly silty very fine grained sandstone; calcareous but chips remain intact in acid; part may be tuffaceous; no porosity visible. Trace **Shale**; light greenish gray to greenish gray; slightly waxy in part; firm; slightly to moderately calcareous; probable biotite flecks in part. Few chips of **Claystone/Bentonite**; yellowish green; waxy; firm to soft; minute probable biotite flecks; below 6470'. Trace **Calcite**; white, some stained moderate orange pink where mixed with **anhydrite**; *fracture fill* cutting across or attached to shale and siltstone, few loose larger chips. Trace **Cavings**. No sample show. Total gas 5 to 9 units.
Remark:	Tripped at 6506' for new bit #11 Security SS82F. Trip gas 15 units.
6500' – 6540'	70% - 30% **Siltstone**; light to medium light gray; partly argillaceous, some very fine grained sandy streaks; firm to medium hard; calcareous—chips remain intact in acid; subblocky, blocky. 30% - 70% **Limy Shale** and lesser **Shaly Limestone**; medium to increasingly medium dark gray. Trace **Calcite**; white, few chips stained moderate orange pink where mixed with **anhydrite**; *fracture fill* cutting across or attached to siltstone and shale, few loose larger chips; single face lined with some euhedral crystals indicating *open fracture*. No sample show. Total gas 3 to 5 units.
6540' – 6590'	80% **Limy Shale** and minor **Shaly Limestone**; mostly smooth textured, some silty streaks; firm, some medium hard; calcareous; many chips disintegrate in acid to

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powdery insoluble residue, some remain intact but are fragile; platy, subblocky. 20% **Siltstone**; medium light to light gray. Trace **Calcite**; white; mostly *microfracture fill*. No sample show. Total gas 5 to 6 units.

6590' – 6610'

50% - 60% **Siltstone**; light to some medium light gray; some very fine grained sandy streaks, part argillaceous; firm to medium hard; calcareous; chips remain intact in acid; subblocky, some blocky. 50% - 40% **Limy Shale** and lesser **Shaly Limestone**; medium dark gray. Trace **Calcite**; white, rarely stained moderate orange pink where mixed with **anhydrite**; mostly microfracture fill, few loose larger chips. No sample show. Total gas 5 to 6 units.

WATTON CANYON MBR.

LOG TOP: 6606' TVD: 6604' DATUM: +989'

6610' – 6750'

Variable 40% - 10% **Siltstone**; light to medium gray; some very fine grained sandy streaks; part argillaceous; firm to medium hard; calcareous; chips remain intact in acid; subblocky, some blocky. 60% - 90% **Limy Shale** and **Shaly Limestone**; medium dark gray, some tinted brownish gray, some lighter colored streaks appear partly pounded; firm to medium hard; very calcareous shale—in acid chips disintegrate leaving abundant clayey residue or remain intact and are fragile; platy, subblocky. Trace **Calcite** and **Anhydrite**; white; anhydrite commonly occurs in microcrystalline patches mixed with calcite; *fracture fill* cutting across and attached to chips. No sample show. Total gas 5 to 8 units.

6750' – 6880'

80% - 100% **Limestone** and rapidly decreasing **Limy Shale**; medium dark gray to brownish gray and subordinate medium light to light gray—rare contacts of medium dark gray and brownish gray with light gray; cryptocrystalline, some earthy, lighter colored streaks are chalky; medium hard, some firm where chalky; moderately to some slightly argillaceous limestone; rare dark brownish gray shaly partings; virtually no porosity visible but faster drilling downhole in thin fractured intervals: 5.5 min/ft uphole to 2.1 min/ft downhole. 20% - Trace **Siltstone**; light to medium light gray; part argillaceous, some very fine grained sandy streaks; calcareous; subblocky. Trace to 1% **Calcite** and minor **Anhydrite**; *fracture fill*; cutting across or attached to chips, increased loose calcite cleavage blocks downhole; several chips from show interval 6854' – 6872' exhibit euhedral calcite crystals indicating *open fractures*. No sample show. Total gas background 6 to 10 units; brief increases to 18 to 32 units from fractured intervals.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	8	95%	5%			5.4	6780'
Maximum	22	97%	3%			4.4	6784'
After	9	100%				4.8	6788'

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	8	95%	5%			4.5	6850'
Maximum	19	93%	7%			2.3-3.4	6858'
After	8	90%	10%			5.6	6864'

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Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	8	90%	10%			5.6	6864
Maximum	32	93%	7%			3.4	6872'
After	13	94%	6%			4.2	6874'

6880' – 6920'

100% **Limestone**; medium dark gray to brownish gray, lesser medium light to light gray; cryptocrystalline and partly earthy where dark, chalky where light colored; trace medium grained oolitic; medium hard, some firm where chalky; moderately to slightly argillaceous; trace dark brownish gray to dusky brown shaly partings; rare small patches of micropyrite; forms few larger filmy bubbles in acid; platy to blocky; no porosity visible in limestone. Trace **Limy Shale**; medium dark gray. Trace to 1% **Calcite** and rare **Anhydrite**; white, some clear; *fracture fill* cutting across and attached to limestone; some loose calcite blocks/masses—one chip 6 mm long; few chips exhibit euhedral crystals indicating *open fractures* and rare intercrystalline porosity. No sample show. Total gas background 5 to 7 units, maximum 34 units.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	8	95%	5%			4.9	6886'
Maximum	34	93%	7%			1.3	6908'
After	11	100.0%				4.2	6912'

Remarks:

Worked pipe at 6909' in fractured interval that correlates to caliper washout in clean limestone in Anschutz #27-1 at 6888' – 6900'. Lost total 300 B.

Tripped at 6910' for pressure loss; found hole in middle of 3rd joint of drill pipe above drill collars.

Recovered from 3-pt reamer a 3" chunk of Twin Creek Limestone cut by high angle calcite-filled *fractures* that are stained orange pink.

Ran new bit #12 Security ERA17. Trip gas 11 units.

6920' – 6950'

90% - 50% **Limestone**; brownish gray to some light brownish gray, medium dark gray to some light gray; cryptocrystalline where darker, chalky where light gray; part fine to medium grained peloidal to distinctly oolitic; medium hard, some firm; slightly to very argillaceous—moderately clean where oolitic; forms trace filmy bubbles in acid; no matrix porosity visible; erratic drilling time to 3.3 min/ft at best. 10% - 50% **Siltstone**; medium light to light gray; partly argillaceous; firm; calcareous—chips remain intact in acid; subblocky, some rounded. Trace **Calcite**; white; *fracture fill*; *rare chips show intercrystalline and small vug porosity along fracture faces*. No sample show. Total gas 6 to 61 units.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	6	97%	3%			6.4	6928'
Maximum	61	94%	6%			4.9-3.3	6932'
After	16	100%				9.5	6950'

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BOUNDARY RIDGE MBR.	LOG TOP: 6950'	TVD: 6948'	DATUM: +645'

Remark: Top of Boundary Ridge as picked from increased gamma begins with gray siltstone and shale; diagnostic reddish siltstone begins 20 ft deeper.

6950' – 6970': 15% - 30% **Siltstone**; medium light to some light gray; part argillaceous, some very fine grained sandy; medium hard; calcareous; biotite in part; subblocky. 15% - 30% **Shale**; medium dark gray, some faintly drab tinted; smooth to silty; firm; slightly to moderately calcareous—chips remain intact in acid; coarse platy, subblocky. 70% - 40% **Limestone**; most is likely late-circulated cuttings from Watton Canyon Mbr. Trace **Calcite** and **Anhydrite**; white; calcite as *fracture fill* cutting and attached to chips, some loose; anhydrite occurs mainly in microcrystalline patches. No sample show. Total gas 16 to 8 units.

6970' – 7000': Trace – 60% **Red Beds**: **Siltstone** and minor **Shale**; grayish red to some pale red siltstone, dark grayish red shale; argillaceous and occasionally very fine grained sandy siltstone; silty shale; moderately soft—part pulverized to round masses to some medium hard; slightly to moderately calcareous/dolomitic siltstone; slightly calcareous/dolomitic shale; subblocky, some rounded. 100% - 40% **Gray Beds**; shale, siltstone, and minor limestone—all likely late circulated. No sample show. Total gas 10 – 3 units.

RICH MBR.	LOG TOP: 6998'	TVD: 6996'	DATUM: +597'

7000' – 7020': Trace – 10% **Limestone**; overall light brownish gray—dark brownish gray peloids and ooliths set in nearly white microcrystalline **dolomite/anhydrite** matrix; fine and medium to some lower coarse grained peloids and ooliths; moderately well sorted; mud- to some grain-supported; anhydrite is so abundant in part that chips remain intact in acid; no porosity visible. 40% - 90% **Limestone** and **Limy Shale**; medium dark gray to brownish gray, minor light brownish gray to light gray; cryptocrystalline to earthy; some fine to medium grained peloidal and oolitic; minor silty streaks; medium hard, some firm; moderately to very argillaceous—grades to limy shale where chips remain intact in acid; no porosity visible. Trace **Calcite** and **Anhydrite**; calcite *fracture fill,* anhydrite in microcrystalline patches. 60% - Trace **Red Beds**; late circulated from Boundary Ridge Mbr. No sample show. Total gas 4 to 9 units.

7020' – 7070': Interbedded, gradational. 100% **Shaly Limestone** and **Limy Shale**; medium dark to some dark gray, brownish gray, minor light gray to light brownish gray; mostly cryptocrystalline to earthy; some fine to medium grained peloidal and oolitic, chalky where light colored; medium hard, some firm; chips disintegrate in acid leaving clayey to silty residue or remain intact but are fragile due to dissolution of carbonate; forms few filmy bubbles in acid; no porosity visible. Trace **Calcite** and minor **Anhydrite**; white; calcite as *fracture fill*, anhydrite is microcrystalline and patchy or mixed with calcite. No sample show. Total gas 6 to 10 units.

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Remark: Tripped at 7091' for 100 psi pump pressure decrease. Found crack in 8" drill collar. Tripped in new bit #13 Smith F15T. Trip gas 19 units.

7070' – 7200' 100% **Shaly Limestone** and **Limy Shale**; medium dark gray to dark gray, little tinted brownish gray, minor light to medium light gray; cryptocrystalline to earthy, chalky where light colored; mostly medium hard; chips disintegrate in acid leaving abundant flaky to powdery residue or remain intact but are fragile due to dissolution of carbonate; no porosity visible. Trace **Calcite**, uphole rare **Anhydrite** and **Silica**; white; *fracture fill*. No sample show. Total gas 2 to 15 units.

7200' – 7300' 100% **Limy Shale** grading from lesser **Shaly Limestone**; dark to medium dark gray, little is tinted brownish gray, minor light to medium light gray; cryptocrystalline to earthy, chalky where light colored; medium hard, firm where chalky; most chips remain intact in acid but become fragile or soft due to dissolution of carbonate; rare small patches of micropyrite; platy, subblocky. Rare **Calcite**; white; *fracture fill* cutting or attached to chips—virtually no evidence of open fractures. No sample show. Total gas 3 to 16 units.

SLIDE ROCK MBR. LOG TOP: 7288' TVD: 7286' DATUM: +307'

Remark: Drilling time top is 7293'; first appearance in samples is 7300' – 7310'.

7300' – 7390' 100% - 99% **Limestone**; dark brownish gray to dark gray with streaks of medium light gray to light brownish gray; cryptocrystalline, earthy to chalky where light colored; some medium to coarse grained peloidal and oolitic near base; medium hard to hard, firm where chalky and lighter colored; moderately clean—almost all chips dissolve in acid leaving slight to moderate clayey residue, some thin intervals are very argillaceous; in acid forms few filmy bubbles to brownish gray film that covers acid; dense, no porosity visible; no good drilling breaks, average 6 min/ft. Trace to 1% **Calcite**; white; mostly *microfracture fill* cutting or attached to chips; staining in Alizarin Red shows trace white undetermined patches that are not calcite; no evidence of open fractures. No fluorescence or stain. Dark limestone yields very slow nonstreaming extremely weak cut fluorescence—virtually no sample show. Total gas 18 to 3 units.

GYPSUM SPRING MBR. LOG TOP: 7388' TVD: 7385' DATUM: +208'

Remark: First flecks of reddish shale and siltstone are in 7380' – 7390' sample and are interpreted as thin beds from lower Slide Rock Mbr. Drilling time top is 7392'.

7390' – 7440' Trace – 70% **Siltstone** and increasing **Shale**; grayish red, pale reddish brown to pale red where soft and apparently pulverized, rare contacts with greenish gray streaks;

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argillaceous and partly sandy siltstone uphole; smooth to silty shale throughout; very soft to firm, little is medium hard; slightly to moderately calcareous/dolomitic—soft reddish brown rounded masses disintegrate rapidly in acid to powder; platy, subblocky, rounded. No to 1% **Anhydrite**; white, trace clear; soft rounded amorphous masses, trace firm microcrystalline patches and chips. No to 4% **Siltstone**; light brownish to brownish gray; argillaceous; dolomitic—grades to impure dolomite. 100% - 25% **Limestone**; most is likely caving and late-circulated Slide Rock Mbr. of Twin Creek Limestone. No sample show. Total gas 4 to 9 units.

Remark: Tripped at 7442' for new bit #14 Smith F20T due to increased torque. Trip gas 22 units.

7440' – 7470' Temporarily reduced sample quality following trip. Trace to 30% **Dolomite**; light brownish gray to dark brownish gray, hues commonly mixed; microcrystalline; firm, some medium hard; slightly argillaceous; part very anhydritic; no to some slight intercrystalline porosity visible. 60% - 30% **Siltstone** and **Shale**; grayish red, pale reddish brown, minor associated greenish gray; much is likely caving. 40% **Limy Shale** and **Limestone**; medium dark gray, dark brownish gray; much is likely caving from overlying members of Twin Creek—some may be from basal Gypsum Spring Member particularly where drab tinted. Total gas 4 to 12 units.

Trace sample show: No definite stain. Few chips of dolomite exhibit moderately bright spotty bluish yellow fluorescence along faces of chips or along fracture fill. Moderately fast non- to slightly streaming cut fluorescence dries to fair yellow fluorescent halos. Under white light, no cut or oil ring.

NUGGET SS. LOG TOP: 7470' TVD: +7467' DATUM: +126'

Remark: Stair-step drilling time within 7470' – 7480' interval appears to correlate to offset logs which show tighter sandstone at top, becoming more porous downhole. Total gas starts increasing at 7474'.

7470' – 7490' 10% - 20% **Sandstone**; as below. 90% - 80% **Cavings**. No to slight sample show. Total gas 4 to 140 units.

7490' – 7540' 60% - 90% **Sandstone**; white near top, increasingly tinted very pale orange (10 YR 8/1 to 10 YR 8/2); fine to lower medium grained, some dispersed upper medium to coarse grains; subround to round, trace well rounded; well to moderately well sorted—some good examples of bimodal grain sizes; abundant loose sand and friable to medium hard clusters; mostly silica cement; some calcareous/dolomitic or anhydritic streaks uphole are commonly white; small medium to light gray patches are associated with micropyrite; slight to some good porosity visible in clusters; drilling time varies from 4.7 to 13 min/ft, average 8 min/ft. 40% - 10% **Cavings**.

Hot-wire/FID gas: Total gas fluctuates from 60 to 345 units. Please see following gas table.

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Slight sample show: No definite stain but tightest streaks are white whereas porous sandstone is tinted very pale orange. No fluorescence. Moderately fast but weak bluish yellow cut fluorescence dries to weak yellow fluorescent halos and fluorescence concentrated on upper surfaces of chips. Under white light, no cut or oil ring.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	4	85%	11%	0%	0%	11.9	7474'
During	139	88%	9%	2%	0%	8.4	7480'
Maximum	345	82%	13%	5%	1%	5.8	7500'
After	88	90%	7%	2%	0%	8.4	7508'

7540' – 7670' 100% to occasionally 70% **Sandstone**; tinted very pale orange (10 YR 8/2); some upper very fine to mostly fine and lower medium grained, minor upper medium to lower coarse grains; subround to some round; well to moderately well sorted; almost all loose sand grains in some samples, mixed sandstone clusters and abundant loose sand in others; firm to friable clusters, rare hard white to very light gray tight streaks; dominantly silica cement; staining and reaction in acid show some chips are slightly dolomitic, rarely slightly calcitic; clean; trace micropyrite is associated with minor gray patches and rare black intergranular stain/fill; slight to good porosity visible. Trace **Rock Flour**; white. Rare **Silica**; white; *fracture fill.*

Slight sample show: No definite stain but tightest streaks are white to neutral very light gray. Rare very spotty black stain/fill is associated with micropyrite—not definitely hydrocarbon stain/fill. No fluorescence. Moderately slow weak nonstreaming bluish yellow cut fluorescence dries to weak fluorescent yellow halos with fluorescence also concentrated on upper surfaces of chips. Under white light, no cut or oil ring.

Hot-wire gas: Total gas increases correlate with drilling breaks; total gas decreases correlate with slower drilling. Total gas fell quickly as intervals of circulating and working tight hole (non-drilling periods) were circulated. Representative gas increases:

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	123	85%	10%	3%	0%	9.4	7520'
During	321	83%	11%	6%	0%	8.0	7524'
Maximum	336	81%	14%	5%	0%	6.1	7548'
After	103	82%	13%	5%	0%	10.6	7556'

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	168	82%	12%	5%	0%	8.6	7568'
During	391	79%	16%	4%	1%	6.0	7578'
Maximum	452	75%	18%	6%	1%	3.4	7594'
During	341	76%	17%	5%	0%	5.2	7606'
During	287	80%	15%	5%	1%	4.3-3.4	7642'
After	109	78%	17%	5%	0%	8.9	7670'

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7670' – 7710'	100% **Sandstone**; tinted very pale orange; lithologically as above. Faint cut fluorescence as above. Total gas decreases; 110 to 28 units, even during drilling break at 4.5 to 5.8 min/ft for 7695' – 7717'.
7710' – 7920'	98% - 100% **Sandstone**; tinted very pale orange (10 YR 8/2); some upper very fine grained to mostly fine to lower medium grained, lesser dispersed upper medium and lower coarse grains; subround to round; well to moderately well sorted; abundant loose sand and friable to firm clusters—increases in loose sand do not correlate well with faster drilling; dominantly silica cement, minor part is slightly dolomitic particularly in white patches; trace small neutral gray patches are associated with micropyrite; slight undetermined white intergranular fill and possibly altered grains; slight to fair to some good porosity visible; average 8 min/ft to 7820', 5 min/ft to 7920', at best 3.3 min/ft. 2% - Trace **Rock Flour**; white, some gray streaks; curved surfaces suggest much is artifact of drilling; rare chips show identical opaque white fill cutting across sandstone chips; *fracture fill,* tests negative for carbonate and anhydrite. Total gas 28 to 6 units, average 15 units.
Slight sample show:	No definite hydrocarbon stain. No fluorescence. Moderately slow nonstreaming weak bluish yellow cut fluorescence dries to faint fluorescent halos with fluorescence also concentrated on upper surfaces of chips. Under white light, no cut or oil ring. Rare patchy black to gray intergranular fill/stain is associated with micropyrite.
7920' – 7964'	90% - 98% **Sandstone**; tinted very pale orange; as above. Trace – 2% **Rock** Flour; white, some gray streaks. 10% - Trace **Cavings**. Slight cut fluorescence as above. Total gas 6 to 28 units—slight increase from drilling break to 3 min/ft at 7925' – 7930'.
Remark:	Tripped at 7966' for new bit #15 Smith F4P. Inspected BHA; found 4 cracked drill collars. Washed and reamed slightly undergauge hole from 7843' – 7966' in 5 hrs. Trip gas 71 units after 50 min of reaming, 17 units from bottoms up.
7964' – 8150'	80% - 98% **Sandstone**; tinted very pale orange to pinkish gray (10 YR 8/2 to 10 YR 8/1), minor light gray; mostly fine to lower medium grained, lesser dispersed upper medium and lower coarse grains; subround, some round; well to moderately well sorted—some chips bimodal; abundant loose sand and firm to some medium hard clusters; dominantly silica cement, much is slightly dolomitic, staining in Alizarin Red shows virtually no calcite; trace small gray patches are micropyritic; trace to minor undetermined white intergranular fill and possibly altered grains; slight to fair to some good porosity visible; 4.5 min/ft average, at best 2.4 min/ft, to 8100'; 5.5 min/ft average below 8100'. 2% to rarely 5% **Rock Flour**; white, some gray streaks; tests negative for substantial carbonate or anhydrite; commonly bit- or pipe-marked. 18% to Trace **Cavings**; sample quality improves downhole. No fluorescence or stain; virtually no cut fluorescence. Total gas 7 to 28 units, average 12 units.
8150' – 8350'	98% - 100% **Sandstone**; tinted pinkish gray (10 YR 8/2), part nearly white downhole where tighter; some upper very fine grained to mostly fine to lower medium grained, dispersed upper medium to lower coarse grains decrease downhole; subround to some round; moderately well sorted; abundant loose sand and clusters

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uphole, mostly clusters downhole; firm to increasingly medium hard; dominantly silica cement and minor dolomite cement in part; tests negative for anhydrite and calcite; increased glassy broken quartz grains; trace small gray micropyritic patches; trace to minor opaque white intergranular fill and apparently altered grains; rare reddish orange and green stained grains; slight to fair porosity visible, some streaks completely siliceous and tight; overall slower drilling averages 7.5 min/ft but is highly variable from 2.5 to 13 min/ft. 2% - Trace **Rock Flour**; white, some gray streaks; tests negative for substantial carbonate or anhydrite. No stain, fluorescence, or cut fluorescence. Total gas 5 to 18 units, average 12 units.

Remark: Tripped at 8360' for new bit #16 Smith F4PS. Early trip gas 72 units (very low corresponding chromatography—possible hydrogen); bottoms up trip gas 32 units.

8350' – 8434' 90% - 100% **Sandstone**; nearly white to very light gray, few chips stained pale red to orange pink toward base; upper very fine to fine grained; well sorted; recovered as medium hard to increasingly hard clusters, minimal loose sand; silica cement, increased glassy broken quartz grains—part quartzitic; part slightly dolomitic; tests negative for calcite and anhydrite; small gray patches are micropyritic; trace undetermined opaque white intergranular fill and altered grains; rare reddish orange grains; slight to no porosity visible; few chips exhibit probable *fracture faces—slickensided* or lined with numerous micropyritic patches. Trace **Rock Flour**; white, some gray streaks. 10% - Trace **Cavings**. No sample show. Total gas 16 – 11 units.

8434' – 8450' 100% **Sandstone**; pale red to grayish orange pink (10 R 6/2 to 10 R 8/2), some faintly moderate orange pink (5 YR 8/3); nearly white is likely from overlying sandstone; some upper very fine to mostly fine grained, some dispersed medium grains; subround, some round; well to moderately well sorted; firm to medium hard; silica and lesser dolomite cement; minor but increased black grains where pale red to orange pink; rare orange stained grains; trace gray micropyritic patches; slight to fair porosity visible; fair drilling break averages 3.5 min/ft, at best 2.4 min/ft. Virtually no sample show. Total gas 16 to 19 units.

Remark: Fair drilling break 8434' – 8455' likely correlates to sonic porosity increase at 7986' – 8006' at the Anschutz Ranch Deep #4-26.

8450' – 8540' 98% - 100% **Sandstone**; tinted moderate orange pink (5 YR 8/3), decreasing off white to very light gray, trace pale red downhole; upper very fine to lower fine grained; subround; well sorted; firm to mostly medium hard, increasingly hard below 8520'; subordinate loose sand and small clusters decrease below 8520'; silica and no to minor dolomite cement, tests negative for calcite and anhydrite cement; part quartzitic; black grains and flecks more common where orange pink, less common where off white; trace orange grains; trace gray micropyritic patches; slight to no porosity visible; few chips exhibit *fracture faces* lined with anhydrite or calcite—single *euhedral calcite crystal indicates open fracture*. 2% - Trace **Rock Flour**; white, streaks of gray. No sample show. Total gas 16 decreasing to 7 units.

8540' – 8560' 100% **Sandstone**; tinted moderate orange pink (5 YR 8/3) to some pale red, minor off white; very fine to lower fine grained; well sorted; medium hard to hard; silica and minor dolomite cement; increased black grains and flecks where pale red; mostly no porosity visible. No sample show. Total gas 7 to 12 units.

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Remark: Tripped at 8561' for new bit #17 Smith F4OD. Early trip gas 62 units (possible hydrogen), downhole trip gas 26 units.

ANKAREH RED BEDS LOG TOP: 8554' TVD: 8551' DATUM: -958'

Remark: Trip for bit near top of Ankareh, possible cavings from uphole red beds after trip, and changing weight on bit as bit was broken in make pick somewhat questionable.

8560' – 8600' 60% - 40% **Red Beds**: **Shale** and **Siltstone**; grayish red (5 R 4/2 to 5 R 3/2), reddish brown (10 R 5/3 to rarely 10 R 3/4), and minor greenish gray reduced patches and streaks; smooth to silty shale, argillaceous and partly very fine grained sandy siltstone; firm, some medium hard; slightly calcareous/dolomitic; platy, subblocky. 40% - 60% **Sandstone**; off white, light greenish gray, part tinted moderate orange pink (some may be caving); upper very fine to lower fine grained; well sorted; firm to hard; mostly silica cement, minor dolomite cement in part; slight to no porosity visible. No sample show. Total gas 14 to 8 units.

8600' – 8610' 70% **Sandstone**; light gray, light greenish gray, pinkish gray (buff); very fine grained; well sorted; medium hard to hard; silica and slight to moderate dolomite cement; no porosity visible. 30% **Red Beds**. Rare **Silica**; opaque white; *fracture fill.* No sample show. Total gas 8 to 6 units.

8610' – 8680' 60% - 80% **Red Beds**: **Shale** and lesser **Siltstone**; grayish red (5 R 4/2 to 5 R 3/2), some tinted dark reddish brown (10 R 3/4), some pale reddish brown where pulverized, minor greenish gray to dark greenish gray reduced streaks, trace tinted grayish red purple; much is smooth, some silty to very fine grained sandy; mostly medium hard; slightly to some moderately dolomitic—some as white microcrystalline patches; platy, subblocky, some irregular. 40% - 20% **Sandstone**; off white, light gray, light greenish gray, some tinted orange pink; very fine grained; well sorted; some firm, mostly medium hard to hard; silica cement, some slightly to moderately dolomitic; quite clean; no porosity visible. No sample show. Total gas 5 to 16 units, average 8 units.

8680' – 8754' 90% - 100% **Red Beds**: **Shale** and lesser **Siltstone**; reddish brown (10 R 4/4 to 10 R 4/3) to grayish red (5 R 4/2 to 5 R 3/2), minor greenish gray and rare dark greenish gray reduction spots and streaks; smooth to some silty shale; argillaceous and partly very fine grained sandy siltstone; firm to medium hard, some pale reddish brown round masses where pulverized; non- to moderately dolomitic—minor part is mottled white with patches of micro- to fine crystalline dolomite; platy, subblocky, some irregular. Trace mixed **Dolomite** and lesser **Calcite** and **Silica**; white; *microfracture fill.* 10% - Trace **Sandstone**; off white, light gray, light greenish gray; very fine grained; well sorted; firm to hard; slightly dolomitic, streaks thoroughly siliceous; no porosity visible. No sample show. Total gas 5 to 11 units.

Remarks: Tripped at 8758' for new bit #18 Smith F4P. Offset logs show this part of upper Ankareh is prone to washing out.

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8754' – 8780' 100% **Red Beds**; **Shale** and minor **Siltstone**; grayish red to reddish brown, trace greenish gray reduction streaks; smooth to some silty and rarely very fine grained sandy shale; argillaceous and partly very fine grained sandy siltstone; firm to medium hard, trace hard siliceous sandy siltstone; slightly dolomitic—trace mottled white with micro- to fine crystalline dolomite; platy, subblocky. Trace mixed **Dolomite** and **Silica**; white, clear to light gray; *fracture fill.* Trace **Sandstone**; white to light gray. No sample show. Total gas 5 to 8 units.

8780' – 8810' 100% **Red Beds**: **Shale** and minor **Siltstone**; grayish red to reddish brown (10 R 3/3), some tinted grayish red purple (5 RP 3/1), rare greenish gray reduction streaks; smooth to silty shale and minor argillaceous siltstone; non- to slightly dolomitic—some grayish red purple shale flakes apart in acid with minimal effervescence; firm to medium hard chips and increased soft clayey masses—suggests pulverization of softer shale during slow drilling, up to 25 min/ft; platy, subblocky, some rounded. Trace **Siltstone**; mottled pale reddish brown, pale red, orange pink; dolomitic—microcrystalline carbonate appearance; platy. Trace **Sandstone**; white to medium light gray, light greenish gray. No sample show. Total gas 5 to 10 units.

8810' – 8840' 100% **Red Beds**: **Shale** and lesser **Siltstone**; grayish red to reddish brown (10 R 3/3 to 10 R 4/4), trace tinted grayish red purple, rare greenish gray reduction streaks; smooth to silty shale; argillaceous and partly very fine grained sandy siltstone; non- to moderately dolomitic/calcareous; firm to medium hard; platy, subblocky, little blocky; rare black *microfracture stain* does not fluoresce or yield cut fluorescence. No sample show. Total gas 7 to 11 units.

8840' – 8850' 20% **Sandstone**; much is tinted red or coated with reddish brown clay; recovered mostly as loose fine to some medium grained sand and very small clusters; sand/sandstone is difficult to see in samples. 80% **Red Beds**. No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	7	84%	5%	6%	0%	13.6	8838'
Maximum	27	86%	11%	3%	0%	7.1	8846'
After	5	85%	10%	5%	0%	11.6	8852

8850' – 8870' 20% **Sandstone**; brownish gray (5 YR 4/1), some tinted light brown (5 YR 6/3), trace grayish red; very fine to fine grained, some loose sand that is difficult to see in samples; medium hard to hard; silica cement—numerous glassy broken quartz grains—and minor dolomite/calcite cement; much is argillaceous, some moderately clean; no porosity visible; rare *calcite/dolomite filled microfractures.* 80% **Red Beds**: **Shale** and lesser **Siltstone**; grayish red to reddish brown. Virtually no sample show from sandstone; no fluorescence; very slow faint nonstreaming cut fluorescence dries to very weak yellow fluorescent halo. Total gas 4 to 8 units.

8870' – 8898' 50% - 70% **Sandstone**; very light gray, grayish orange pink, pale red, light brownish gray, trace tinted grayish red purple; very fine and fine grained, some dispersed

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lower medium grains; subangular, subround; well to some moderately sorted; firm to medium hard clusters, most loose sand is in 8880' – 8890' sample; silica cement, minor dolomite cement in part; trace gray micropyritic patches (similar to those in Nugget Sandstone); mostly no porosity visible; average 8.5 min/ft, at best 6.3 min/ft. 50% - 30% **Red Beds**.

Trace sample show: Dominantly no stain, no fluorescence, and virtually no cut fluorescence. Few chips exhibit black stain in *microfractures* that does not fluoresce or yield cut fluorescence. Few chips exhibit yellow fluorescence along *inferred fracture faces* that yields yellow cut fluorescence and dries to fair yellow fluorescent halos.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	5	86%	12%	0%	0%	9.2	8882'
Maximum	33	86%	11%	3%	0%	8.8-12	8886'
During	18	85%	12%	3%	0%	6.4	8896'
After	8	88%	9%	0%	0%	15.4	8900'

8898' – 8907' **Shale**; inferred from slow drilling that correlates to shale best shown on sonic log at 8470' – 8478' at Anschutz Ranch Deep #4-26; clay was chiseled from bit. Total gas 7 units.

From base of overlying sandstone: 70% **Sandstone**; increased brownish gray, some light brownish gray, light gray, grayish red, orange pink, and trace grayish red purple; very fine to fine grained; medium hard to hard; silica and minor dolomite cement; some gray micropyritic patches; rare black stain does not fluoresce or yield cut fluorescence; mostly no porosity visible; likely correlates to less clean gamma and low sonic porosity at 8462' – 8470' at Anschutz Ranch Deep #4-26. Virtually no sample show.

Remark: Tripped at 8907' for new bit #19 Hughes ATJ44. Early trip gas 43 units, bottoms-up trip gas 19 units.

8907' – 8930' 20% - 30% **Sandstone**; white to medium light gray, light brownish to brownish gray, pale red, trace tinted grayish red purple; very fine to fine grained, rare medium grains; subangular, subround; moderately well sorted; firm to some hard; silica cement, minor dolomite cement in part; some gray micropyritic patches and streaks along *apparent microfractures*. 80% - 70% **Red Beds**: **Shale** and minor **Siltstone**; grayish red to reddish brown, minor greenish gray reduction streaks, minor grayish red purple; smooth to some silty shale; argillaceous siltstone; firm to some hard; non- to slightly dolomitic; platy to some blocky. No sample show. Total gas 9 to 6 units.

8930' – 8970' 80% - 70% **Red Beds**: **Shale** and minor **Siltstone**; reddish brown, lesser grayish red, some grayish red purple (5 RP 3/2) and greenish gray reduction streaks; smooth to silty shale, minor argillaceous siltstone; *abundant clay from pulverized shale*— prolonged washing required to see remaining chips clearly: firm to some medium hard; non- to slightly dolomitic; platy, subblocky. 20% - 30% **Sandstone**; grayish red purple, greenish gray, white to pinkish gray; very fine to fine grained; soft to hard; varies from extremely clayey to siliceous; non- to slightly dolomitic; no

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porosity visible but thin drilling breaks to 7.2 and 4.8 min/ft at best. No sample show. Total gas increases from 6 to 20 units, then 40 units at base.

8970' – 9046' Interbedded. 30% - 60% **Sandstone**; white to medium light gray, much is tinted grayish red purple, reddish brown, brownish gray, or rarely orange pink; very fine to medium grained, trace coarse to very coarse grained; subangular, subround; well and moderately sorted, trace poorly sorted—some may be conglomeratic; firm to hard clusters, loose sand common; silica cement—glassy broken quartz grains common; moderately clean to some very argillaceous; gray micropyritic patches in part; trace yellowish orange to yellowish brown possible limonite staining; no porosity visible; no drilling breaks. 70% - 40% **Red Beds**: **Shale** and lesser **Siltstone**; grayish red to reddish brown, some tinted grayish red purple, trace greenish gray reduction streaks; trace yellowish orange to yellowish brown possible limonite staining; smooth to silty and sandy shale; argillaceous and partly sandy siltstone; firm to medium hard, less clayey samples overall; non- to some moderately dolomitic/calcareous; trace *dolomitic/calcitic microfracture fill*; platy to some blocky. Total gas 12 to 4 units.

Trace sample show: Few chips of sandstone are stained dark brown to black. Stained chips do not fluoresce but yield very slow nonstreaming faint yellowish blue cut fluorescence that dries to weak dull yellow fluorescent halo. Under white light, no cut or oil ring.

Remark: Tripped at 9046' for new bit #20 Hughes ATJ44. Early trip gas 19 units; virtually no bottoms-up trip gas.

9046' – 9070' 20% - 50% **Siltstone**; pale reddish brown, some tinted moderate reddish orange; argillaceous, part very fine grained sandy; firm, medium hard; calcareous; subblocky. 50% - 30% **Shale**; dark reddish brown, decreasing grayish red purple (may be caving), trace greenish gray reduction streaks; smooth to silty; firm; slightly calcareous to noncalcareous; platy to some irregular. 30% - 20% **Sandstone**; much is tinted grayish red purple, some very light to light gray; very fine to medium grained; well to moderately sorted; medium hard to hard; much is siliceous, some slightly dolomitic/calcareous; much may be caving. No sample show. Total gas 3 to 9 units.

9070' – 9140' 100% **Red Beds**: 70% - 50% **Siltstone**; pale reddish brown to grayish red (10 R 5/4 to 10 R 4/3); slightly to very argillaceous; part very fine grained sandy; firm, medium hard; calcareous/dolomitic, slightly anhydritic; some very micaceous partings; subblocky. 20% - 30% **Shale**; grayish red, tinted dark reddish brown (10 R 3/3); smooth to silty; firm; slightly calcareous/dolomitic; some micromicaceous; platy, subblocky. 10% - 20% **Sandstone**; pale reddish brown, some tinted moderate reddish orange; very fine to some fine grained; firm, some medium hard; calcareous/dolomitic, slightly anhydritic; no porosity visible. No sample show. Rare **Calcite**; white; *microfracture fill*. Total gas 10 falling to 2 units.

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9140' – 9170'

100% **Red Beds**: 20% - 30% **Sandstone**; pale reddish brown, some tinted moderate reddish orange, minor pinkish gray to faintly grayish red purple; very fine to some fine grained; subangular, subround; well to moderately sorted; firm, medium hard; non- to moderately calcareous/dolomitic; slightly anhydritic in part; mostly no porosity visible. 50% - 40% **Siltstone**; pale reddish brown to grayish red; argillaceous, some very fine grained sandy; firm to medium hard; calcareous/dolomitic; some micaceous partings; subblocky. 30% **Shale**; grayish red, tinted dark reddish brown in part; smooth to silty; firm; slightly calcareous/dolomitic; platy, subblocky. No sample show. Total gas 1 to 6 units.

9170' – 9230'

80% - 100% **Red Beds**: 20% - 10% **Sandstone**; pale reddish brown; very fine grained. 50% **Siltstone**; pale reddish brown, grayish red. 30% - 40% **Shale**; grayish red, some tinted dark reddish brown. 20% - Trace **Gray Beds**: **Siltstone** and **Sandstone**; very light to light gray, some faintly greenish gray; moderately clean siltstone and very fine grained sandstone; firm, medium hard; calcareous; no porosity visible. No sample show. Total gas 6 to 1 units.

9230' – 9250'

20% - 40% **Gray Beds**: **Sandstone** and **Siltstone**; very light to medium dark gray and brownish gray due to variable probable hydrocarbon staining; apparent bleaching of normal red bed strata due to migration of hydrocarbons; moderately clean siltstone; very fine to some fine grained sandstone; firm to medium hard; noncalcareous where least stained or where clay filled; moderately calcareous where more extensively stained; no to slight porosity visible; thin slight drilling break at 9236' – 9243', 7.8 min/ft at best. 80% - 60% **Red Beds**. Total gas 1 to 4 units.

Slight sample show:

Spotty to nearly uniform dark brown to black probable hydrocarbon stain. Virtually no fluorescence. Moderately fast, non- to slightly streaming cut fluorescence dries to fair yellow fluorescent halos with fluorescence also concentrated on upper surfaces of chips. Under white light, no cut and virtually no oil ring.

9250' – 9320'

100% - 60% **Red Beds**: 40% - 10% **Shale**; dark grayish red to grayish brown (10 R 3/2 to 5 R 3/2), little is tinted dark reddish brown (10 R 3/4); smooth to silty; firm, some medium hard; non- to slightly calcareous/dolomitic; some bedding planes very micaceous; platy, subblocky. 60% - 40% **Siltstone**; pale reddish brown, pale red, some tinted orange pink; much is argillaceous, some very fine grained sandy; firm to medium hard; calcareous/dolomitic; slightly anhydritic; some micaceous; subblocky. Trace – 10% **Sandstone**; pale red, pale reddish brown, some tinted orange pink; very fine to some fine grained; firm, medium hard; calcareous/dolomitic; slightly anhydritic; no porosity visible. No sample show.

Trace – 40% **Gray Beds**: **Siltstone** and lesser **Sandstone**; pinkish gray, light gray to mottled dark gray and brownish gray depending upon apparent hydrocarbon stain; moderately clean to argillaceous siltstone; very fine to some fine grained sandstone; firm, medium hard; calcareous/dolomitic; mostly no porosity visible. Total gas 2 to 12 units.

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Slight to trace shows:	Spotty to nearly uniform dark brown to black probable hydrocarbon stain. Virtually no hydrocarbon fluorescence. Moderately fast to rather slow, non- to faintly streaming cut fluorescence dries to fair to weak yellow fluorescent halos. Under white light, no cut or oil ring.
9320' – 9340'	50% - 60% **Gray Beds**: **Siltstone** and **Sandstone**; very light to light gray, part faintly light greenish gray, minor dark gray to brownish gray apparent residual hydrocarbon staining; moderately clean siltstone; very fine to some fine grained sandstone; firm to medium hard; staining in Alizarin Red and reaction in acid shows slight mixed calcite and dolomite cement; slightly anhydritic; trace mica; slow drilling at 12 to 18 min/ft. 50% - 40% **Red Beds**: **Siltstone** and minor **Shale**; few sharp and gradational contacts with gray siltstone. Total gas 9 to 3 units.
Trace sample show:	Trace dark brown to black residual hydrocarbon staining is spotty to rarely uniform. Few chips exhibit dark stain along *microfractures*. Virtually no hydrocarbon fluorescence. Moderately slow weak mostly nonstreaming cut fluorescence dries to rather weak to faint yellow fluorescent halos.
9340' – 9356'	80% - 70% **Red Beds**: **Siltstone**, lesser **Sandstone**, minor **Shale**. 20% - 30% **Gray Beds**: **Siltstone** and **Sandstone**; some very light to mostly light gray; moderately clean siltstone; very fine to some fine grained sandstone with rare floating medium round quartz grains. Virtually no sample show. Total gas 6 to 1 units.
Remark:	Tripped at 9359' for new bit #21 Hughes ATJS44. Early trip gas 16 units (hydrogen?); bottoms-up trip gas 10 units.
9356' – 9360'	40% **Gray Beds**: **Sandstone** and lesser **Siltstone**; white to light gray; very fine to fine grained sandstone with trace dispersed lower medium round grains in part; well to some moderately sorted; moderately clean siltstone; medium hard to hard; silica and some dolomite cement; no porosity visible. 60% **Red Beds**: **Siltstone** and lesser **Shale**. No sample show. Total gas 1 to 10 units (trip gas influence).
9360' – 9380'	100% **Red Beds**: 80% **Siltstone**; pale reddish brown to grayish red; argillaceous to some moderately clean, some very fine grained sandy; firm to medium hard; calcareous/dolomitic; micromicaceous partings; subblocky. 10% **Shale**; grayish red, dark grayish red; smooth to silty; firm, medium hard; slightly calcareous/dolomitic; some bedding planes very micaceous; platy, subblocky. 10% **Sandstone**; pale reddish brown, pale red, some tinted moderate orange pink, trace white to light gray; very fine to some fine grained; medium hard, some hard; calcareous/dolomitic; no porosity visible. No sample show. Total gas 8 to 1 units.
9380' – 9480'	Nearly 100% **Red Beds**: Mostly 70% - 80% **Siltstone**; pale reddish brown, some grayish red argillaceous streaks; some moderately clean to commonly argillaceous, some very fine grained sandy; firm, medium hard; slightly to moderately calcareous/dolomitic; slightly anhydritic; rare small white microcrystalline patches

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of anhydrite; platy, subblocky. 10% - 20% **Shale**; dark grayish red, some tinted dark reddish brown, rare greenish gray reduction streaks; smooth to silty; firm, medium hard; slightly calcareous/dolomitic; micromicaceous bedding planes; platy, subblocky. 20% - Trace **Sandstone**; light brown to faintly moderate orange pink (5 YR 6/4 to 5 YR 7/4); questionable sample quality with increase to 30% very light to light gray sandstone at 9410' – 9420', very fine to minor fine grained with trace floating round medium grains; well to some moderately sorted; firm, medium hard; slightly to moderately calcareous/dolomitic; slightly anhydritic; moderately clean, some silty; no porosity visible. Erratic drilling from 7 to 20+ min/ft. No sample show. Total gas 1 to 11 units.

9480' – 9590'

100% **Red Beds**: 80% - 90% **Siltstone**; pale reddish brown, some grayish red argillaceous streaks, rare light gray to greenish gray reduction patches and streaks; commonly argillaceous, some very fine grained sandy and moderately clean; firm, some medium hard; slightly calcareous/dolomitic; slightly anhydritic; trace white patchy microcrystalline anhydrite; some micromicaceous argillaceous partings; subblocky, some rounded. 20% - 10% **Shale**; dark grayish red; smooth to silty; firm; slightly calcareous/dolomitic; platy to irregular blocky. Trace **Anhydrite**; white; microcrystalline; *microfracture fill*. No sample show. Total gas 1 to 12 units.

Remark:

Brief high rotary torque at 9589'.

THAYNES LS.

LOG TOP: 9580' TVD: 9576' DATUM: -1983'

Remarks:

Good sample quality. Collected 5-ft samples from 9600' – 9626'. Exact drilling time/sample top lies within 9590' – 9610' interval. Thin beds and erratic drilling time reduce reliability of correlation with offset logs.

Pale red hematite-stained siltstone and lower very fine grained sandstone—here favored as marking top of Thaynes—appear transitional from the dominant reddish brown siltstone of Ankareh to the diagnostic light gray siltstone and lower very fine grained sandstone of the main body of Thaynes.

9590' – 9610'

40% - 50% **Siltstone/Sandstone**; pale red, minor grayish pink; coarse silt and lower very fine grained sand; firm to medium hard; dolomitic, chips remain intact in acid—10% to 25% carbonate cement; quartz grains are best seen by dissolving carbonate cement, washing in acetone, and viewing dry at 40X; tests negative for significant anhydrite; common grayish red to blackish red silt- to fine sand-size spots of probable hematite; mostly no porosity visible. Trace **Dolomite**; mottled light gray, light brownish gray, pale red to grayish red; cryptocrystalline; part silty; few silicified chips; medium hard; no porosity visible. 60% - 50% **Red Beds**; Ankareh. Several chips contain black probable hydrocarbon stain along *microfractures*. No fluorescence or cut fluorescence. Total gas 6 to 3 units.

9610' – 9626'

60% - 70% **Siltstone/Sandstone**; increasing very light to light gray, decreasing pale red; coarse silt and lower very fine grained sand; dolomitic, chips remain intact in acid—10% to 15% carbonate cement; light gray is anhydritic—contrasts with

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overlying pale red siltstone/very fine grained sandstone; diminishing specks of grayish red to blackish red probable hematite; rare patches of micropyrite; no porosity visible. 40% - 30% **Cavings**; Ankareh Red Beds. Virtually no sample show. Total gas 6 to 1 units.

Remarks: Tripped out for logs at 9626'. 107 ft of BHA (bit, bit sub, shock, two 9" drill collars, one 3-pt reamer, and one 9" drill collar) were twisted off and left in hole. Inspected BHA on trip in to fish. Recovered BHA.

Tripped in with globe basket to fish for survey tool that was dropped before trip out for logs. Recovered no metal or formation. Ran intermediate logs.

Intermediate casing: 9 5/8" set at 9626'.

Remarks: Drilled cement with retip milltooth bit. Made three runs with mills to grind up pieces of float, guide shoe, and survey tool. Milled 9626' – 9631'.

9626' – 9631' **Siltstone** and **Sandstone**; very light gray; coarse silt and lower very fine grained sand; medium hard—thin platy cuttings with smeared surfaces from milling; slightly dolomitic; tests negative for anhydrite; no porosity visible. 30% **Metal**. Also **Cement** and **LCM Mica**. No sample show.

9631' – 9650' 30% - Trace **Cement**. 70% - 98% **Siltstone** and **Sandstone**; very light to light gray; coarse silt and very fine grained sand; firm to medium hard; dolomitic; chips remain intact in acid—10% to 15% carbonate cement; some *fractures* are indicated by calcitic faces that stain in Alizarin Red; no porosity visible but 4-ft drilling break to 2 min/ft at best. Trace – 2% **Metal**. No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	11	60%	0%	0%	0%	7.1	9632'
Maximum	57	90%	7%	2%	0%	2.2	9634'
After	14	83%	13%	4%	0%	7.7	9636'

9650' – 9670' 98% - 90% **Siltstone** and **Sandstone**; very light and light gray to minor medium gray; coarse silt and very fine grained sand; firm to hard; dolomitic; chips remain intact in acid but up to 15% - 30% dolomite cement; some siliceous streaks; no porosity visible; 8 to 19 min/ft. Trace **Shale**; medium dark gray; smooth, slightly waxy; firm; nondolomitic; platy. 2% - 10% **Dolomite**; light to medium light gray, slightly mottled medium dark gray in part; cryptocrystalline; faint fine grained peloidal texture in part; firm, medium hard; silty to very fine grained sandy—chips disintegrate in acid; no porosity visible.

Remark: Depth change made at connection: 9655' became 9665'. 10 ft on mud log and 7 ft on geologist's drilling time log have no reasonable drilling times recorded.

9670' – 9680' 98% **Siltstone** and **Sandstone**; very light to light gray; coarse silt and lower very fine grained sand; firm, medium hard; dolomitic, chips remain intact in acid, chips

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exhibit no staining in Alizarin Red; platy; no porosity visible. 2% **Metal**. No sample show. Total gas 7 to 14 units.

Remark: Tripped at 9682' for new bit #24 Hughes ATJ44C. Trip gas 14 units.

9680' – 9690' 99% **Siltstone**; subtle pinkish gray (buff) tint overall, individual chips pinkish gray to very light and light gray; lower very fine grained sand in part; firm to medium hard; dolomitic, chips remain intact in acid, 5% to 15% carbonate cement; platy. 1% **Metal**. Total gas 14 to 7 units including trip gas.

Rare sample show: Black residual hydrocarbon stain appears solid and is restricted to faces of chips—some flakes apart with minute specks floating in solvent. No fluorescence. Fast streaming yellow cut fluorescence dries to dull goldish yellow fluorescent halo. Under white light, faintly streaming light brown cut dries to brown oil ring.

9690' – 9720' 100% **Siltstone**; very light and light gray to minor medium light gray, some pinkish gray; some lower very fine grained sandy streaks; firm and medium hard, trace hard where more siliceous; dolomitic, chips remain intact in acid, no staining in Alizarin Red; platy. Virtually no sample show—few chips exhibit black residual hydrocarbon stain as above. Total gas 6 to 12 units.

9720' – 9730' 30% **Dolomite**; grayish orange pink to moderate orange pink (5 YR 7/2 to 5 YR 8/3) and light gray; cryptocrystalline, some faint fine grained peloidal texture; firm; moderately clean to silty; much is platy; no porosity visible. 70% **Siltstone**; very light to light gray, minor medium light gray; firm to medium hard; dolomitic; platy, subblocky. No sample show. Total gas 10 to 6 units.

9730' – 9750' 90% - 100% **Siltstone**; pale red—some tinted orange pink uphole—to grayish red; quite clean to argillaceous; some lower very fine grained sandy; dolomitic—grades to minor silty **dolomite**; anhydritic; platy to irregular. 10% - Trace **Shale**; dark grayish red; slightly dolomitic; micromicaceous; platy. Few chips of **Anhydrite**; clear; sparry possible fracture fill. No sample show. Total gas 6 to 7 units.

Correlation: Red siltstone sample 9730' – 9740' at the Anschutz Ranch Deep #10-27 correlates to red siltstone sample 9350' – 9360' at the Anschutz Ranch Deep #4-26.

9750' – 9790' 100% **Siltstone**; very light and light gray to trace medium gray; some silt-size grayish red specks at 9770' – 9780'; firm to medium hard; dolomitic, chips remain intact in acid, variable 5% to 30% carbonate cement; moderately clean, minor argillaceous streaks; platy, some subblocky; few white anhydrite/dolomite-faced *fractures*—no evidence of open fractures. No sample show. Total gas 6 – 14 units.

9790' – 9800' 95% **Siltstone**; very light and light gray to trace medium gray; dolomitic; few white anhydrite/dolomite-faced *fractures*—no evidence of open fractures. 5% **Shale**; medium dark gray; slightly waxy to silty; slightly dolomitic; micromicaceous; platy. No sample show. Total gas 12 – 7 units.

9800' – 9810' 100% **Siltstone**; light to some medium dark gray; moderately clean to argillaceous where darker; firm to medium hard; dolomitic, chips remain intact in acid, no

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staining in Alizarin Red; platy, subblocky, some sharp irregular. Trace **Shale**; medium dark gray; silty. No sample show. Total gas 9 units.

9810' – 9830'

30% - 10% **Limestone**; light gray mottled medium dark gray; chalky, commonly smeared or bit-marked, faint fine to lower medium grained texture in part; firm, trace medium hard; silty to very fine grained sandy; part slightly argillaceous; no porosity visible. 70% - 90% **Siltstone** and lesser **Sandstone**; light to medium dark gray; coarse silt and very fine grained sand; firm to medium hard; increasingly calcareous—overall 80% of samples exhibits some degree of staining in Alizarin Red—some mixed calcite and dolomite cement; moderately clean to argillaceous; platy, subblocky. Few *calcite-filled microfractures*. No fluorescence or cut fluorescence from chips with dark specks--no sample show. Total gas 9 – 12 units.

Remarks:

Began 5-ft samples at 9830' for picking first core point.

Sample 9820' – 9830' is darkest overall and correlates roughly with sample 9430' – 9440' at the Anschutz Ranch Deep #4-26 (390 ft drilled depth difference).

9830' – 9850'

100% **Siltstone**; light to medium gray, trace medium dark gray, minor part tinted grayish orange pink to moderate orange pink; firm to some hard; dolomitic—only 10% of samples exhibit any staining in Alizarin Red; some sharp siliceous chips; platy, subblocky, some irregular; inferred *fractures* for 1-ft and 4-ft fast drilling breaks at 9834' and 9841' – 9845'. Several minute chips of **Calcite**; white; loose *fracture fill.* No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	10	100%	0%	0%	0%	12.3	9830'
During	28	86%	12%	2%	0%	10-6.2	9834'
Maximum	36	84%	14%	2%	0%	3.9	9842'
After	14	87%	13%	0%	0%	8	9848'

Remark:

Tripped at 9854' for pressure loss. Found hole in 2nd joint of pipe above drill collars. Ran in new bit #25 Hughes HR44C at 9854'. Trip gas 13 units.

9850' – 9860'

100% **Siltstone**; light to medium gray; firm to medium hard; dolomitic, 5% - 20% dolomite cement; platy, some subblocky. Downhole, Trace **Shale**; medium dark gray. No sample show. Total gas 16 to 6 units.

9860' – 9865'

60% **Shale**; medium dark gray, greenish gray tint evident when wet; smooth, some silty; firm; slightly dolomitic; platy. 40% **Siltstone**; very light to some light gray; clean; medium hard; dolomitic, 10% - 25% dolomite cement; platy. No sample show. Total gas 6 to 15 units.

9865' – 9875'

Siltstone and lesser **Dolomite**; pinkish gray to light brownish gray (5 YR 8/2 to 5 YR 6/2) uphole, mixed with light to some medium gray downhole; dolomitic siltstone; crypto- to microcrystalline silty dolomite; firm to medium hard; no

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porosity visible. No sample show. Total gas 28 units at 9866' – 9868'; 7 units background.

Remark: Pinkish gray to light brownish gray sample 9865' – 9870' best matches sample 9480' – 9490' at the Anschutz Ranch Deep #4-26 and likely correlates to clean gamma on logs at 9475' at that well.

9875' – 9895': 100% - 90% **Siltstone**; light to some medium gray; moderately clean; firm to medium hard; dolomitic; platy, some subblocky. Trace increasing to 10% **Shale**; medium dark gray, greenish gray tint in part; silty, some smooth; firm to medium hard; slightly to moderately dolomitic, little is partly calcitic downhole; commonly micaceous; platy, subblocky. No to rare sample show. Total gas averages 7 to 10 units; please see 52 unit increase detailed in table below.

Rare sample show: 9875' – 9880': Few chips of siltstone exhibit medium bright to dull yellow fluorescence that yields moderately fast, non- to faintly streaming cut fluorescence, and dries to weak yellow fluorescent halo.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	7	82%	11%	0%	0%	7.1	9876'
Maximum	52	85%	10%	5%	0%	4.5	9878'
After	10	90%	10%	0%	0%	7.7	9880'

9895' – 9900': 90% **Shale**; medium dark gray, commonly tinted dark greenish gray, minor grayish red to grayish brown; smooth, some silty; firm; slightly dolomitic, moderately dolomitic where red to brown; micaceous; conspicuous copper-red mica where shale is red to brown; coarse platy, some subblocky. 10% **Siltstone**; grayish red to grayish brown; argillaceous; copper-red mica; subblocky. No sample show. Total gas 9 to 10 units.

9900' – 9905': 95% **Siltstone**; very light to light gray; medium hard; staining shows moderate dispersed silt-size specks of calcite cement mixed with dolomite cement indicated by prolonged effervescence—5% to 15% carbonate cement; much is platy; few chips are cut by white *dolomite-filled fractures*. 5% **Shale**; gray, tinted dark greenish gray in part. No sample show. Total gas 9 to 10 units.

Remark: Very light to light gray siltstone appears to have drilled more slowly than shale and correlates to clean gamma at 9505' at the Anschutz Ranch Deep #4-26.

9905' – 9925': 60% - 90% **Shale**; grayish brown (5 YR 3/2), near base some medium dark gray to dark greenish gray; smooth, some silty; firm; non- to slightly calcareous/dolomitic; some chips contain conspicuous copper-red mica; platy. Grades to minor **Siltstone**; pale brown (5 YR 5/2); argillaceous; copper-red mica in part; firm; slightly calcareous/dolomitic; platy, subblocky. 40% - 10% **Siltstone**; light to medium gray; increasingly calcareous; platy. At base, Trace **Limestone**; light gray mottled medium to medium dark gray; microcrystalline; some gray to black peloids or obscure fossil fragments. No sample show. Total gas 9 to 12 units.

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9925' – 9930'	80% **Siltstone**; light to medium dark gray; quite clean to argillaceous; calcareous; platy, subblocky; few gray to black possible fossil fragments. 20% **Limestone**; very light to light gray; microcrystalline; firm; silty; few gray to black possible fossil fragments; no porosity visible. Rare **Calcite**; white; *fracture fill* attached to siltstone and silty limestone—no evidence of open fractures. No sample show. Total gas 10 to 12 units.
9930' – 9935'	100% **Shale** and **Siltstone**; grayish brown and medium dark gray to dark greenish gray. No sample show. Total gas 10 to 12 units.
9935' – 9940'	30% **Limestone**; light gray mottled white and medium dark gray, pinkish gray to some light brownish gray; microcrystalline, some faint fine to lower medium grained texture; firm; commonly silty; some possible gray to black obscure fossil fragments; no porosity visible. 70% **Siltstone**; light to medium dark gray, pinkish gray to light brownish gray; mostly calcareous—overall 80% of sample exhibits some degree of staining in Alizarin Red. No sample show. Total gas 12 to 14 units.
9940' – 9950'	90% **Shale**; grayish brown; smooth to silty; firm; slightly calcareous/dolomitic; some micromicaceous; platy. 10% **Siltstone**. No sample show. Total gas 14 to 12 units.
9950' – 9955'	60% **Limestone**; very light to light gray, mottled medium dark gray; much is chalky, microcrystalline; some possible gray to black obscure fossil fragments; firm; quite clean, slight gray insoluble residue; no porosity visible; rare attached white calcite *fracture fill*. 20% **Shale**. 20% **Siltstone**. No sample show. Total gas 12 units.
9955' – 9960'	80% **Shale** and lesser **Siltstone**; brownish gray to some light brownish gray, minor medium dark gray to dark greenish gray; some smooth, much is silty; firm to medium hard; dolomitic; some copper-red mica; platy to subblocky. Trace mixed **Calcite/Dolomite**; loose and attached *fracture fill*; no evidence of open fractures. No sample show. Total gas 12 units.
9960' – 9970'	95% **Siltstone**; light to medium dark gray; quite clean to some argillaceous; firm to medium hard; staining shows slight to moderate calcite cement mixed with dolomite cement indicated by prolonged effervescence; platy to subblocky. 4% **Shale**. 1% **Dolomite**; white; *microfracture fill* cutting across siltstone to loose cleavage blocks to 3 mm; some appears mixed with silica where steel is scraped from probe on fracture fill. Total gas 12 units.
Rare sample show:	No stain. Few chips of *fracture fill* fluoresce dull to medium bright yellow and yield slow weak nonstreaming cut fluorescence that dries to faint yellow fluorescent halos.
9970' – 9975'	20% **Limestone**; overall light gray, mottled white, medium dark gray, some tinted light brownish gray; microcrystalline, some faint fine to medium grained texture may result from ghosts of fossil fragments; firm; quite clean, minor gray insoluble residue. 80% **Siltstone**; light to some medium dark gray; clean to some argillaceous; firm to medium hard; mixed calcite and dolomite cement, some entirely calcareous;

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platy, subblocky. Trace **Calcite** and **Dolomite**; white; loose *fracture fill*. Virtually no sample show. Total gas 12 to 10 units.

9975' – 9980' — 97% **Siltstone**; light to medium light gray, some tinted pinkish gray (buff); firm to medium hard; staining shows slight to moderate calcite cement mixed in part with dolomite cement shown by prolonged effervescence—80% shows some degree of staining in Alizarin Red; platy, subblocky. 2% **Shale**; grayish brown, some tinted grayish red. 1% **Dolomite**; white; loose and attached *fracture fill*—no evidence of open fractures. No sample show. Total gas 10 to 9 units.

9980' – 9986' — 30% **Shale**; brownish gray (5 YR 4/1), medium dark gray commonly tinted dark greenish gray, lesser grayish brown (5 YR 3/2); smooth to silty; firm, some medium hard; slightly calcareous/dolomitic; platy, some subblocky; correlates to slightly faster drilling. 70% **Siltstone**; light gray to some medium dark gray; firm to medium hard; staining shows slight to moderate calcite cement mixed with dolomite cement shown by prolonged effervescence; platy, subblocky. Trace **Dolomite**; white; small loose cleavage blocks and attached *fracture fill*. No sample show. Total gas 10 to 7 units.

CORE #1: — 9986' – 10030'. Cut 44 ft; full recovery. Core point was picked using 155 ft of 5-ft samples that provided remarkably good lithologic definition. *Sample quality is excellent.* Drilling time supports the correlation at several key beds but provides much less definition than do samples.

Remarks: — Trip gas 49 units after tripping in for core #1. Continued 5-ft samples. The following descriptions are of cuttings recovered during coring. Please see "CORES" in this report for description of hand samples.

9986' – 9990' — 80% **Siltstone**; light to medium gray, minor medium dark gray; firm and medium hard, trace hard; staining shows mixed calcite and dolomite cement, roughly half is entirely dolomitic; minor part laminated with gray shale; platy, subblocky. 20% **Shale**; medium dark gray, grayish brown (5 YR 3/2); smooth to silty. Trace **Dolomite**; white; loose and attached *fracture fill*—no crystal faces indicating open fractures. No sample show. Total gas decreases to 20 units, still under influence of trip gas.

9990' – 10005' — 90% - 98% **Siltstone**; some very light gray, mostly light to medium gray; firm to some hard; uphole, entirely dolomite to subordinate mixed calcite and dolomite cement; downhole, staining shows mostly mixed calcite and dolomite cement; thin platy, some subblocky uphole. 10% - 2% **Shale**; medium dark gray—greenish gray tint evident when wet, grayish brown; slightly calcareous/dolomitic; platy. Trace **Calcite** and lesser **Dolomite**; white; loose small cleavage blocks and attached *fracture fill*—no evidence of open fractures but cuttings are small (coarse to very coarse sand-size). Trace **Dolomite** and rare **Limestone**; overall light gray, mottled white to medium dark gray. No sample show. Total gas 14 to 22 units.

Remark: — Small cuttings but overall continued good sample quality.

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10005' – 10010'	98% **Siltstone**; light to medium gray; firm; mixed calcite/dolomite cement, some entirely dolomite—10% to 25% carbonate cement; thin platy chips. 2% **Shale**. Trace **Calcite** and **Dolomite**; white; loose and attached *fracture fill*. No sample show. Total gas 12 to 16 units.
10010' – 10020'	20% - 30% **Shale**; medium dark gray, tinted dark greenish gray in part, some medium light gray chips appear to be smeared or bit-marked shale, minor grayish brown may be caving; smooth and slightly waxy in part, some silty; firm; slightly calcareous/dolomitic; some micaceous; platy, some subblocky to irregular; *rare possible slickensides*. 80% - 70% **Siltstone**; light to medium gray; some lower very fine grained sand; firm, some medium hard; dolomite and lesser mixed calcite/dolomite cement—10% to 25% carbonate cement; some micaceous; thin platy. Trace **Dolomite** and lesser **Calcite**; white; loose and attached *fracture fill*. Total gas 12 units to brief peak of 36 units (possible hydrogen).
Rare sample show:	Several chips of siltstone at 10015' – 10020' exhibit black apparently solid residual hydrocarbon stain restricted to faces of chips. No fluorescence. Fast moderately streaming yellow cut fluorescence dries to dull goldish yellow fluorescent halo.
10020' – 10030'	85% - 98% **Siltstone**; light to medium gray; some lower very fine grained sand; firm, some medium hard; uphole some entirely dolomitic, downhole staining in Alizarin Red shows mixed calcite/dolomite cement—10% to 25% carbonate cement; minute black specks common; mostly thin platy. 15% decreasing to 2% **Shale**; medium dark gray, part tinted dark greenish gray. Trace **Dolomite** and **Calcite**; white; *fracture fill*. Total gas 18 to 26 units.
Rare sample show:	Several chips of siltstone at 10025' – 10030' exhibit black apparently solid residual hydrocarbon stain restricted to faces of chips. No fluorescence. Fast moderately streaming yellow cut fluorescence dries to dull goldish yellow fluorescent halo. Single large piece of calcite fracture fill from 10025' – 10030' exhibits no stain but moderate yellow fluorescence and moderately fast faintly streaming yellow cut fluorescence that dries to weak yellow fluorescent halo.
CORE #2:	10030' – 10059'. Cut 29 ft; recovered 28 ft. Continued 5-ft samples. The following descriptions are of cuttings recovered during coring. Early trip gas 86 units, bottoms up trip gas 49 units (possible large hydrogen component in both).
10030' – 10040'	**Siltstone**; light to medium gray; conspicuous minute peppering throughout; dominantly firm very thin platy cuttings, minor medium hard subblocky to irregular chips; staining shows abundant to moderate calcite cement, apparently minor dolomite and silica cement—15% to 30% total carbonate; minor medium dark gray argillaceous streaks and patches. Trace **Calcite**; white; loose and attached *fracture fill*. No sample show. Total gas 13 to 19 units.

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10040' – 10045'	**Siltstone**; light to medium gray, continued minute peppering; firm, due to thinness of platy cuttings; moderate to slight calcite cement, some mixed dolomite cement, some minute, siliceous streaks—5% to 20% total carbonate cement. Trace **Calcite**; white; *fracture fill*. No sample show. Total gas 16 units.
10045' – 10059'	**Siltstone**; light to medium gray, some medium dark gray, less conspicuously peppered; firm where thin, minor medium hard to hard where siliceous; staining shows moderate to no calcite cement, some dolomite cement, few chips largely siliceous, cherty—most chips contain 10% to 20% total carbonate, rarely less than 5% where siliceous. Trace **Calcite** and lesser **Dolomite** and **Silica**; white to clear; loose and attached *fracture fill*. No sample show. Total gas 16 to 26 units.
DST #1:	Rig depth 9966' – 10059'; approximately 9960' - 10053' log depth; 92 ft open. Times: 10-60-90-120 min. Recovered 60 ft of slightly gas cut mud. No gas to surface. 20 psi or 0.23 cubic ft of gas in sample chamber.
Remark:	Reran bit #25 Hughes HR44C at 10059'. Trip gas 1551 units; 64% C1, 21% C2, 13% C3, trace C4.
10059' – 10130'	90% - 80% **Siltstone**; light to medium gray, some medium dark gray; quite clean to some argillaceous; firm to medium hard; very to moderately calcareous, subordinate siliceous and possibly dolomitic streaks—5% to 50% carbonate content; platy, subblocky. 10% **Limestone**; light to medium gray, pinkish gray (buff), hues commonly mixed; small dark gray to black specks uphole; crypto- to microcrystalline, some chalky; much is very silty; part siliceous/cherty—opaque off-white micro-matrix to thoroughly siliceous streaks; some chips with carbonate appearance do not dissolve at all; no porosity visible. At base 10% **Shale**; medium dark gray to brownish gray; fine silty; firm to medium hard; platy. Trace **Chert**; very light gray to medium dark gray. No sample show. Total gas 7 to 10 units background; brief increases to 16 to 22 units at 10094' and 10124'.
10130' – 10140'	30% **Shale**; medium dark gray, part tinted brownish gray; smooth to silty; firm, medium hard; calcareous; platy, subblocky. 60% **Siltstone**; light to medium gray, some medium dark gray; very calcareous—up to 50% carbonate. 10% **Limestone**; light to medium gray, pinkish gray (buff); commonly mottled. Trace **Chert**. No sample show. Total gas 8 to 14 units.
Remark:	Shale correlates to shale 9720' – 9730' at the Anschutz Ranch Deep #4-26'.
10140' – 10170'	80% - 70% **Siltstone**; pinkish gray (buff), light to medium dark gray; firm and medium hard, minor part hard where siliceous; very to moderately calcareous; quite clean to argillaceous; some dark argillaceous laminae; minor siliceous/cherty streaks; platy, some subblocky. 20% - 30% **Limestone**; pinkish gray to medium gray, mixed hues common; some faint very fine to medium grained texture includes black specks; crypto- to microcrystalline; moderately clean to very silty; minor siliceous/cherty patches; no porosity visible. Trace – 1% **Chert**; light to medium dark gray, some tinted brownish gray. Trace **Shale**; medium dark gray to brownish black. No sample show. Total gas 11 to 16 units.
10170' – 10240'	70% - 90% **Limestone**; pinkish gray (buff) to light brownish gray, commonly mottled medium dark gray; some very fine to lower coarse grained texture is

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	apparently due to pellets, obscure fossils fragments, and shale clasts; clean, some dark argillaceous streaks, some silty; trace cherty; no porosity visible except for several small vugs in a few chips uphole. 30% - 10% **Siltstone**; light to medium dark gray; calcareous; platy, some subblocky. Trace – 2% **Chert**; light to medium dark gray, some tinted brownish gray; hard, sharp. Trace **Shale**; dark brownish gray. No sample show. Total gas 14 to 8 units.
Remark:	Tripped at 10197' due to plugged jet. Ran new bit #26 Smith F47ODP. Trip gas 93 units; 87% C1, 10% C2, 2% C3.
10240' – 10260'	80% - 70% **Limestone**; pinkish gray (buff) to light brownish gray, commonly mottled medium dark gray; some very fine to coarse grained texture is due to pellets, obscure fossils fragments, and shale clasts; moderately clean, some dark argillaceous streaks, part silty; trace cherty; no porosity visible. 20% - 30% **Siltstone**; light to medium dark gray; calcareous; platy, some subblocky. Trace **Chert**; light to medium dark gray, some tinted brownish gray; hard, sharp. Trace **Shale**; dark brownish gray. Trace **Calcite** and lesser **Dolomite**; white; loose and attached *fracture fill.* No sample show. Total gas 6 to 16 units.
10260' – 10290'	Interbedded. 60% - 40% **Limestone**; pinkish gray to light brownish gray, trace brownish—commonly mottled medium dark gray; crypto- to microcrystalline matrix; some very fine to coarse grains are pellets, obscure fossil fragments, and shale clasts; moderately clean to silty, some dark argillaceous streaks; trace cherty. 40% - 60% **Siltstone**; light to medium dark gray; moderately to slightly calcareous—lack of staining and prolonged effervescence indicates some dolomite cement. Trace **Calcite** and lesser **Dolomite**; white; loose and attached *fracture fill.* No sample show. Total gas 8 to 12 units.
10290' – 10310'	90% - 70% **Siltstone**; minor light gray to mostly medium dark gray; increasingly medium hard, some hard; staining shows moderate to slight calcite cement, some dolomite cement, part siliceous; platy to sharp blocky. 10% - 30% **Limestone**; pinkish gray (buff) to light brownish gray, minor brownish gray—part mottled medium dark gray; crypto- to microcrystalline; some fine to coarse grained texture—obscure fossil fragments; some dark brownish gray argillaceous streaks; trace light to medium dark gray cherty patches; no porosity visible. Rare **Calcite** and few chips of **Dolomite**; white; *fracture fill.* No sample show. Total gas 12 to 16 units.
10310' – 10320'	No sample—washed away by mud over shaker when light plant went down.
Remark:	Lighter colored samples are partly stained brown by mud, particularly on upper surfaces of chips.
10320' – 10360'	90% - 60% **Siltstone**; light to medium gray, decreased medium dark gray; firm to medium hard, some hard; calcareous, minor part siliceous; quite clean to some argillaceous. 10% - 40% **Limestone**; pinkish gray (buff) to light brownish gray; crypto- to microcrystalline matrix; minor fine to coarse grained texture due to fossil fragments; commonly silty; no porosity visible. Rare **Calcite** grading to **Dolomite** and **Anhydrite**; white to clear; mostly loose *fracture fill.* No sample show. Total gas 10 to 21 units.

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10360' – 10370' 10% **Shale**; medium dark gray—tinted dark greenish gray—some dark brownish gray; smooth, brownish gray is silty; firm; non- to slightly calcareous/dolomitic; coarse platy. 40% **Limestone**; pinkish gray (buff) to light brownish gray, minor brownish gray—medium dark gray mottling in part; crypto- to microcrystalline matrix, commonly chalky; some fine to coarse grained obscure fossil fragments; moderately clean, some silty, some dark brownish gray argillaceous streaks; no porosity visible. 50% **Siltstone**; light to medium dark gray; calcareous; some argillaceous streaks. Rare **Dolomite** and **Anhydrite**; white; *fracture fill.* No sample show. Total gas 14 to 18 units.

10370' – 10380' 50% **Siltstone**; pale red to some grayish red; firm, some medium hard; slightly to moderately dolomitic/calcareous; argillaceous; coarse platy, subblocky. 40% **Siltstone**; light to medium dark gray, some tinted light brownish gray; firm to medium hard; mixed calcite and lesser dolomite cement; platy, subblocky. 10% **Limestone**; light brownish gray, mottled gray; crypto- to microcrystalline; some gray to black fossil fragments. Rare **Dolomite** and **Anhydrite**; white; loose and attached *fracture fill.* No sample show. Total gas 10 to 12 units.

Remark: Collected 5-ft samples at 10380' – 10400' for uphole marker for core #3.

10380' – 10385' 70% **Siltstone**; pinkish gray (buff) and light gray to medium dark gray; firm to medium hard; calcareous/dolomitic; some dark argillaceous streaks; some lower very fine grained sandy streaks; platy, subblocky. 30% **Limestone** and **Dolomite**; pinkish gray to light brownish gray, part mottled medium dark gray; crypto- to microcrystalline, part chalky; firm to medium hard; silty to some lower very fine grained sandy; some dark argillaceous streaks; no porosity visible. Rare **Dolomite** and **Anhydrite**; white; *fracture fill.* No sample show. Total gas 12 to 14 units.

10385' – 10395' 70% - 40% **Dolomite**; pinkish gray (buff) to light brownish gray, some partly pale yellowish brown; pulverized to chalky chips are stained light brown by mud; firm, some medium hard; staining shows part is calcitic; silty to very fine grained sandy—some difficult to distinguish from broken siliceous fractions; no to rare small vug porosity visible. 30% to 60% **Siltstone**; light to medium light gray, minor medium dark gray; dolomitic, some calcareous; medium hard; moderately clean; platy, some subblocky. Trace **Anhydrite**; white; loose *fracture fill.* No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	12	78%	13%	0%	0%	7.9	10388'
Maximum	72	91%	8%	2%	0%	4.9	10392'
After	10	92%	8%	0%	0%	6.8-8.3	10394'

10395' – 10400' 90% **Siltstone**; light to medium gray; medium hard, some hard; dolomitic, little is calcareous, some siliceous—10% to 30% total carbonate content; moderately clean; platy to some blocky. 10% **Dolomite**. No sample show. Total gas 12 units.

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10400' – 10440'	100% - 80% **Siltstone**; light gray—some tinted pinkish gray—to medium gray, minor medium dark gray; dolomitic, some partly calcitic, partly siliceous; firm to medium hard; moderately clean, minor dark argillaceous streaks; platy to some blocky. Trace – 15% **Dolomite** and **Limestone**; pinkish gray to light brownish gray, trace brownish gray; crypto- to microcrystalline; some very fine to fine grained texture—possible medium dark gray to black fossil fragments and pellets; firm, some medium hard; silty, some slightly argillaceous; some partly silicified; no porosity visible. Toward base, Trace – 5% **Shale**; dark grayish red (5 R 3/2); smooth, some silty; firm; slightly dolomitic; coarse platy. No sample show. Total gas 12 to 4 units.
Remark:	Collected 5-ft samples starting at 10440' for core #3.
10440' – 10460'	90% **Siltstone**; light to medium gray, minor medium dark gray; firm to medium hard, little hard where siliceous/cherty; mixed calcite and lesser dolomite cement—30% to 15% total carbonate; some dark gray acid-insoluble inclusions; some micaceous; platy, some subblocky. 10% **Limestone** and minor **Dolomite**; pinkish gray (buff) to light brownish gray, some mottled medium dark gray; crypto- to microcrystalline; minor fine to coarse grained texture due to obscure fossil fragments; firm; quite clean to silty, slightly argillaceous; no porosity visible. Trace **Chert**; light to medium gray; hard. No sample show. Total gas 7 to 10 units.
10460' – 10475'	100% - 90% **Siltstone**; light to medium dark gray; firm and medium hard, little hard where siliceous; mixed calcite and dolomite cement to entirely dolomitic—10% to 20% total carbonate; part anhydritic; platy, subblocky, little blocky. Trace to 10% **Dolomite** and minor **Limestone**; pinkish gray (buff) to light brownish gray, some brownish gray, mottled medium dark to dark gray in part; firm to medium hard; Trace **Calcite** and **Dolomite**; white; loose *fracture fill, some filled microfractures* cutting across siltstone. No sample show. Total gas 9 to 6 units.
10475' – 10480'	10% **Red Beds**: **Siltstone**; grayish red; argillaceous; firm, some medium hard; slightly dolomitic; anhydritic; some micaceous; platy, subblocky and minor **Shale**; dark grayish red (5 R 3/2); smooth to silty; firm; slightly dolomitic; several chips cut by white *dolomite-filled microfractures*; platy. 80% **Siltstone**; minor light gray, mostly medium to medium dark gray; moderately clean to some argillaceous; firm to some hard; dolomitic—10% to 15% carbonate; some siliceous streaks; minor dark gray shaly laminae; part micaceous; platy to some blocky. 10% **Dolomite**; pinkish gray (buff) to light brownish gray, some mottled medium dark gray; microcrystalline, some faintly fine grained; firm to medium hard; silty; no porosity visible. Trace **Chert**. No sample show. Total gas 6 to 4 units.
Correlation:	Red beds starting near 10480' correlate to red beds starting at 10096' at the Anschutz Ranch Deep #4-26.
10480' – 10485'	40% **Red Beds**: **Siltstone**; grayish red—part tinted reddish brown and minor **Shale**; dark grayish red. 50% **Siltstone**; light to medium dark gray. 10% **Dolomite** and lesser **Limestone**; pinkish gray (buff) to light brownish gray; microcrystalline to chalky; some faintly fine grained; no porosity visible. No sample show. Total gas 4 to 7 units.

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Remark:	Stopped circulating for 40 min at 10482' for repair of pump #1 (pump #2 was also down and not available).
10485' – 10495'	80% to 60% **Red Beds**: **Siltstone**; reddish brown, tinted grayish red (10 R 4/3); moderately to some slightly argillaceous; firm, some medium hard; dolomitic, anhydritic; some micaceous; subblocky. Subordinate **Shale**; dark grayish red (5 R 3/2); smooth to silty; firm; non- to slightly dolomitic; some micromicaceous; platy, trace splintery. 15% - 30% **Siltstone**; light to medium dark gray; dolomitic; may be caving. 5% - 10% **Dolomite** and **Limestone**; pinkish gray to light brownish gray, some mottled medium dark gray; may be caving. No sample show. Total gas 6 units.
10495' – 10500'	70% **Red Beds**: **Shale**; dark grayish red; smooth, some silty; firm; slightly dolomitic; some micromicaceous; platy, some splintery. Minor **Siltstone**; grayish red to reddish brown; argillaceous; some micaceous; subblocky; part appears pounded and lighter colored. 30% **Gray Beds**: **Siltstone**; light to medium gray. **Shale**; medium dark gray. No sample show. Total gas 6 units.
10500' – 10505'	80% **Red Beds**: **Siltstone**; reddish brown, tinted grayish red (10 R 5/3 to 10 R 4/3); moderately to very argillaceous; firm, some medium hard—part is pulverized to round light brown masses that disintegrate quickly in acid with minimal effervescence; dolomitic, anhydritic; subblocky. Lesser **Shale**; dark grayish red; smooth to silty; firm; non- to slightly dolomitic; trace cut by white *dolomite-filled microfractures*; platy, trace splintery. 20% **Gray Beds**: **Siltstone** and lesser **Carbonate**; may be caving. No sample show. Total gas 6 to 4 units.
10505' – 10510'	70% **Red Beds**: **Shale**; dark grayish red; smooth, some silty; firm; non- to slightly dolomitic; some micromicaceous; platy, some subblocky. Also **Siltstone**; reddish brown, tinted grayish red (10 R 4/3); commonly argillaceous; firm, some medium hard—part is pulverized to soft round masses; dolomitic; anhydritic; some micaceous; subblocky. 30% **Gray Beds**: **Siltstone**; medium light gray; firm and medium hard; dolomitic, some with mixed calcite cement; trace siliceous/cherty; platy, some subblocky. Minor **Limestone** and lesser **Dolomite**; pinkish gray (buff) to light brownish gray, some mottled medium to dark gray; crypto- to microcrystalline; some faint fossil fragments; few styolites; no porosity visible. Trace **Dolomite** and **Anhydrite**; white; attached *fracture fill.* No sample show. Total gas 4 to 7 units.
10510' – 10530'	70% - 90% **Red Beds**: **Siltstone**; pale reddish brown to reddish brown (10 R 5/4 to 10 R 4/3); slightly to very argillaceous; firm to some medium hard, part soft and pulverized; dolomitic; anhydritic; subblocky, some rounded. Trace **Shale**; dark grayish red; silty, some smooth; firm; slightly dolomitic; platy, subblocky. 30% - 10% **Gray Beds**: **Siltstone** and minor **Carbonate**. No sample show. Total gas 7 to 4 units.
10530' – 10535'	95% **Red Beds**: 30% **Shale**; dark grayish red (5 R 3/2); smooth, some silty; firm; non- to slightly dolomitic; some micromicaceous; platy, some subblocky; correlates to slightly faster drilling. 70% **Siltstone**; pale reddish brown to reddish brown (10 R 5/4 to 10 R 4/3); slightly to very argillaceous; firm to some medium hard, part soft and pulverized; dolomitic; anhydritic; subblocky, some rounded. 5% **Gray Beds**.

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Rare **Anhydrite**; white; attached *fracture fill.* No sample show. Total gas 7 to 6 units.

Remarks: Attempted to cut core #3 at 10535'. Trip gas 20 units. Would not core (cut 1 ft in 1 hr—no recovery). Worked pipe and core bit for 3 hrs more. Pressured up due to core catcher backing off and restricting throat of core bit. Tripped out; ran new core bit to resume core #3 in Thaynes at 10536'.

10535' – 10536' No recovery.

CORE #3: 10536' – 10551'. Cut 15 ft; recovered 14 ft. Continued 5-ft samples. Trip gas 7 units. The following descriptions are of cuttings taken during coring.

10536' – 10551' *Significant gray cavings compared to reddish brown to grayish red 5-ft hand samples from core. Increased cavings result from slower penetration rate during core #3 compared to preceding cores.*

80% **Siltstone**; pale reddish brown to reddish brown, light to medium gray. 10% **Shale**; dark grayish red, medium dark gray. 10% **Limestone** and minor **Dolomite**; pinkish gray to light brownish gray, commonly mottled medium dark gray. Trace **Chert**. No sample show. Total gas 4 to 6 units.

Remark: Tripped in new core bit at 10551'. Trip gas 4 units.

CORE #4: 10551' – 10570'. Cut 19 ft'; recovered 15 ft. Continued 5-ft samples. The following descriptions are of cuttings taken during coring.

10551' – 10560' *Mixed colors and rock types are likely due to significant cavings.* 60% - 80% **Siltstone**; pale reddish brown to grayish red, light to medium gray, pale yellowish brown (10 YR 6/2). 30% - 10% **Shale**; brownish gray, dark grayish red, medium dark gray. 10% **Limestone**; pinkish gray to light brownish gray, mottled medium dark gray. No sample show. Total gas 4 units after line was unplugged.

10560' – 10570' 80% **Siltstone**; light to medium gray, some minute black specks; firm thin platy cuttings; staining shows carbonate cement varies from entirely dolomitic to some largely calcitic. 10% **Shale**; brownish gray, dark grayish red, medium dark gray. 10% **Limestone**; pinkish gray to light brownish gray, mottled medium dark gray in part. No sample show. Total gas 4 units.

Remark: Tripped in new core bit at 10570'. Trip gas 36 units.

CORE #5: 10570' - 10600'. Cut 30 ft; recovered 13 ft. Continued 5-ft samples. The following descriptions are of cuttings taken during coring.

10570' – 10575' 80% **Siltstone**; light to medium gray, minor medium dark gray; firm very thin cuttings; mostly dolomitic, bulk staining shows some largely calcitic; platy. 10% **Shale**; medium dark gray; smooth; firm; non- to slightly dolomitic; platy. 10%

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Limestone; pinkish gray to light brownish gray, some mottled medium dark gray. No sample show. Total gas decreases from 36 units trip gas to 3 units.

10575' – 10580' 75% **Siltstone**; light to medium gray, minor medium dark gray, some reddish brown—likely caving; firm where very thin platy, medium hard where thicker and subblocky; carbonate cement varies from mostly dolomitic to some calcitic. 20% **Shale**; medium dark gray, faintly tinted greenish gray; smooth; firm; non- to slightly dolomitic; platy. 5% **Limestone**; pinkish gray to light brownish gray, some mottled medium dark gray. Several minute chips of **Calcite**; white; *probable fracture fill.* No sample show. Total gas 3 to 22 to 6 units.

Slight gas show: Total gas peak of 22 units at 10576' lacks corresponding increase in chromatography. (Total gas detector and chromatograph were calibrated before core #5—OK.)

10580' – 10585' 50% **Shale**; medium dark gray, commonly tinted greenish gray; smooth, some slightly waxy; firm; mostly noncalcareous/nondolomitic; platy, some subblocky. Trace **Bentonite**; light olive gray; waxy; firm; noncalcareous; minute biotite flecks. 40% **Siltstone**; light to medium gray; minutely peppered; firm, thin platy chips; staining shows carbonate cement varies from entirely dolomitic to partly calcitic. 10% **Limestone**; pinkish gray to light brownish gray, some mottled medium dark gray; most easily determined by bulk staining in Alizarin Red. No sample show. Total gas 6 to 3 units.

10585' – 10595' 60% - 50% **Siltstone**; light to medium gray, minor medium dark gray; firm where thin platy, medium hard where subblocky to blocky; carbonate cement varies from entirely dolomitic to parts that are largely calcitic; minutely peppered; some brown biotite flecks. 30% - 40% **Shale**; medium dark gray; smooth; single *glazed slickenside.* 10% **Limestone**; pinkish gray to light brownish gray, some mottled medium dark gray. Trace **Dolomite**, **Anhydrite**, and lesser **Calcite**; white to clear; loose *fracture fill*—cleavage blocks and very fine crystalline masses, no euhedral crystals. No sample show. Total gas 4 to 12 units.

10595' – 10600' 60% **Siltstone**; light to medium gray, minor medium dark gray; clean to some dark argillaceous streaks; firm where thin platy, medium hard where subblocky; staining shows increased calcite cement, some largely dolomitic—10% to 30% total carbonate cement. 20% **Limestone**; pinkish gray to light brownish gray, minor brownish gray, lighter colored chips mottled medium dark gray in part; crypto- to microcrystalline; firm to medium hard; quite clean, some argillaceous streaks; trace cherty; no porosity visible. 20% **Shale**; medium dark gray, faintly greenish gray in part; smooth; likely caving. Trace **Dolomite**, **Anhydrite**, and lesser **Calcite**; white to clear; loose small cleavage blocks. No sample show. Total gas 7 to 10 units.

Remark: Made clean-out run with mill tooth bit prior to core #6. Trip gas 14 units from clean-out run. Trip gas 23 units on trip in for core #6.

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CORE #6:	10600' – 10618'. Cut 18 ft; recovered 8 ft. Continued 5-ft samples. The following descriptions are of cuttings taken during coring.
10600' – 10605'	50% **Shale**; medium dark gray, commonly tinted greenish gray; smooth, some silty; firm; non- to slightly dolomitic; platy, subblocky. 30% **Siltstone**; light to medium dark gray; moderately clean to argillaceous; firm where thin platy, medium hard where subblocky; staining shows carbonate cement is dolomite and calcite; minutely peppered. 20% **Limestone**; pinkish gray to light brownish gray, mottled medium dark gray in part, minor brownish gray; crypto- to microcrystalline; firm; quite clean; trace undetermined spar; no porosity visible. No sample show. Total gas 23 units trip gas to 2 units.
10605' – 10610'	50% **Limestone**; pinkish gray to light brownish gray, part mottled medium dark gray; crypto- to microcrystalline; firm; quite clean; trace undetermined spar; rare green mineralization; cuttings are partly stained brown on upper surfaces by residual mud as samples dry; no porosity visible. 30% **Siltstone**; light to some medium gray; minutely peppered; staining shows carbonate cement varies from mostly calcite to some entirely dolomite; thin platy to some subblocky. 20% **Shale**; medium dark gray, part tinted greenish gray; smooth, some silty; firm; non- to slightly calcareous/dolomitic; platy, subblocky. Trace **Calcite**; white; loose small cleavage blocks of *fracture fill*. No sample show. Total gas 3 to 4 units.
10610' – 10618'	Samples not definitive: **Siltstone**, **Shale**, and **Limestone**; as above. No sample show. Total gas 2 to 6 units.
Remark:	Rotary torque increased and varied more widely from 10615' to 10618'.
CORE #7:	10618' – 10637'. Cut 19 ft; recovered 13 ft. Trip gas 14 units. Continued 5-ft samples. The following descriptions are of cuttings taken during coring.
10618' – 10625'	60% **Limestone**; pinkish gray to light brownish gray, medium light gray, some mottled medium dark to dark gray; crypto- to microcrystalline, chalky chips may be artifact of coring; quite clean, some argillaceous streaks; no porosity visible. 20% **Siltstone**; light to medium gray. 20% **Shale**; medium dark gray, some tinted greenish gray, dark grayish red; all likely caving. Trace **Calcite** and lesser **Dolomite**; white; small cleavage blocks of *fracture fill*. Virtually no sample show. Total gas 14 units trip gas, then 3 to 5 units.
10625' – 10635'	70% - 60% **Limestone**; medium light to medium gray, part tinted light brownish gray, some mottled medium dark to dark gray; crypto- to microcrystalline, some is chalky and may be artifact of coring; firm to medium hard; quite clean, minor silty and argillaceous insoluble residue; trace light gray cherty/siliceous streaks; no porosity visible. 20% **Siltstone**; light to medium gray, some medium dark gray. 10% - 20% **Shale**; medium dark gray, some tinted greenish gray, some dark grayish red—likely caving; smooth, some silty; firm. Trace **Calcite**; white; small cleavage blocks of probable *fracture fill*. Total gas 5 to 10 units.

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Slight to trace shows:	No stain. Some moderately bright light yellow spotty hydrocarbon fluorescence in limestone. Downhole, more uniform dull goldish yellow fluoresce is largely mineral fluorescence. Moderately fast but nonstreaming cut fluorescence from fluorescent limestone chips dries to fair (10625' – 10630') to very faint fluorescent halos. Under white light, no cut or oil ring. One chip of calcite exhibits moderately bright light yellow fluorescence and yields brief cut fluorescence.
Remark:	Die from drill collar slips fell in hole on trip out with core #7. Made clean-out run with mill at 10637'. Trip gas 20 units. Good recovery of die in junk basket.
CORE #8:	10637' – 10649'. Cut 12 ft; recovered 9 ft. Trip gas 6 units. Continued 5-ft samples. The following descriptions are of cuttings taken during coring.
10635' – 10645'	50% **Shale**; medium dark to some dark gray, part tinted greenish gray, minor caving dark grayish red; smooth, some silty; firm to medium hard; non- to slightly calcareous/dolomitic; platy, subblocky. 30% - 20% **Siltstone**; light to medium gray, some medium dark gray; clean to argillaceous; firm thin platy chips to medium hard where subblocky; staining shows mostly calcite cement, some siliceous streaks. 20% - 30% **Limestone**; pinkish gray to light brownish gray, some neutral medium gray; part mottled medium dark to dark gray, some very fine to fine grained dark pelloids and dark gray probable fossil fragments. Virtually no sample show. Total gas 1 to 3 units after trip gas influence passed.
10645' – 10649'	70% **Limestone**; pinkish gray to light brownish gray to some medium dark gray; much is peppered by very fine to fine dark gray pelloids and probable fossil fragments; mostly firm and thin platy, some medium hard where subblocky; quite clean, minor argillaceous HCl-insoluble residue is associated with pelloids and probable fossil fragments; no porosity visible. 20% **Shale**. 10% **Siltstone**.
Trace sample show:	No stain. Minor dull yellow fluorescence and moderately slow nonstreaming cut fluorescence that dries to weak yellow fluorescent halo.
Slight gas show:	Total gas increased from 3 to 9 units downhole.
DST #2:	10539' – 10649' rig depth; approximately 10537' - 10647' log depth; 110 ft open. Recovered water cushion, trace of drilling mud, and virtually no gas.
Remark:	Tripped in new bit #27 Smith F47ODP at 10649' after DST #2. Trip gas 471 units; 76% C1, 14% C2, 8% C3.
10649' – 10800'	80% to occasionally 60% **Siltstone**; light and medium light gray to medium dark gray; moderately clean to argillaceous; staining in Alizarin Red shows some calcite mixed with dolomite cement uphole, downhole largely calcite cement; firm where thin platy, medium hard where subblocky; minor medium dark to dark gray shaly laminae. 20% to occasionally 40% **Limestone**; pinkish gray (buff) to light brownish gray, light to some medium gray; crypto- to microcrystalline, common chalky texture may be artifact of drilling; very fine and fine to trace upper medium grained

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texture in part—medium dark to dark gray pelloids (rare ooliths where concentricity is evident) and **fossil fragments**; firm to medium hard; quite clean, some silty and slightly argillaceous; rare micropyrite; no porosity visible. Few chips **Chert**; light gray, light brownish gray. Rare to trace **Calcite** and lesser **Dolomite**; white; loose cleavage blocks, attached *fracture fill*, some *filled microfractures* cutting across siltstone. Virtually no sample show—rare fracture fill fluoresces light yellow to bluish yellow and yields faint cut fluorescence. Total gas 3 to 7 units.

10800' – 10810' 95% **Siltstone**; light to medium dark gray; moderately clean to argillaceous; medium hard, some hard; staining shows moderate calcite cement mixed with lesser dolomite cement except where argillaceous; platy, subblocky. 5% **Limestone**. No sample show. Total gas 3 units.

10810' – 10830' 30% increasing to 60% **Limestone**; pinkish gray, light gray to minor medium gray; crypto- to microcrystalline, part chalky—possible artifact of drilling; some faint fine to coarse grained texture is likely due to fossil fragments; quite clean; no porosity visible. 70% to 40% **Siltstone**; light to dark gray; moderately clean to very argillaceous; calcareous; platy, subblocky. No sample show. Total gas 3 to 10 units.

10830' – 10840' 70% **Siltstone**; light to medium gray, lesser medium dark gray, trace dark gray; quite clean where lighter colored, argillaceous where dark; medium hard, some hard; very calcareous where clean, less calcareous where argillaceous; platy, subblocky. 30% **Limestone**. No sample show. Total gas 10 to 3 units.

10840' – 10870' Interbedded. 80% - 60% **Limestone**; pinkish gray to some grayish orange pink (5 YR 7/3) uphole, some light gray downhole; chalky to cryptocrystalline; firm to medium hard; clean; no porosity visible. 20% to 40% **Siltstone**; light to medium gray, trace medium dark gray; moderately clean, some argillaceous; calcareous; platy, subblocky. Rare **Calcite**; white to pinkish gray; *fracture fill*. No sample show. Total gas 4 to 12 units.

Remark: Chalky chips are partly stained orange by mud particularly on upper surfaces; some cryptocrystalline chips are naturally grayish orange pink.

10870' – 10910' 70% - 30% **Limestone**; pinkish gray to light gray, some mottled medium dark to dark gray by probable fossil fragments, *downhole fine to coarse grained* ***fossil fragments*** *are stained grayish red*; crypto- to microcrystalline, some chalky; quite clean, minor silty and argillaceous insoluble residue in part; firm, some medium hard; few dark gray **gastropod fragments** 1 mm long displaying 3 to 4 turns of the elongate shell spiral—fragments displaying only 1 turn of shell spiral are common; no porosity visible but slightly faster drilling to 5 min/ft at best (Pason rig monitor down part of time). 30% - 70% **Siltstone**; light to medium gray, minor medium dark gray; moderately clean, some argillaceous where darker; medium hard; staining shows carbonate cement varies from mostly calcite to mixed calcite/dolomite; platy, subblocky.

Fair to trace shows: No stain. 30% to 5% of limestone fluoresces moderately bright light yellow when viewed at 10X and fades as samples dry. Fluorescence is spotty; some is planar or restricted to apparent microfractures. Fluorescent chips yield moderately fast,

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slightly to nonstreaming cut fluorescence that dries to fair to faint yellow fluorescent halos. Under white light, no cut or oil ring.

Hot-wire gas: Total gas 7 units; increases to 18 and 36 units at 10880' and 10888'; 4 to 6 units thereafter.

10910' – 10935' 20% - Trace **Limestone**; pinkish gray, some light to medium light gray; crypto- to microcrystalline, part chalky, some fine to coarse grained pelloids and fossil fragments; quite clean; no porosity visible. 0% - 30% **Dolomite**; light to medium light gray, minor pinkish gray; crypto- to microcrystalline, minor fine to coarse grained pelloids and fossil fragments as in limestone; quite clean to some silty and argillaceous; trace minute black powdery to dendritic stain; no porosity visible. 80% to 70% **Siltstone**; light to medium gray, minor medium dark gray; much is quite clean, argillaceous where darker; medium hard; mixed calcite and dolomite cement uphole, largely dolomite cement downhole. Virtually no sample show. Total gas 6 to 20 units.

WOODSIDE
RED BEDS LOG TOP: 10942' TVD: 10938' DATUM: -3345'

Remark: Collected 5-ft samples from 10890' to 10960' for Woodside top.

10935' – 10960' 30% - 50% - 80% **Red Beds**: **Siltstone**; pale red (10 R 5/3) to grayish red—tinted reddish brown in part; argillaceous, some streaks moderately clean; firm, some medium hard; slightly dolomitic; anhydritic; rounded chips appear pounded and decrepitate quickly in acid with slight effervescence; subblocky. Lesser **Shale**; grayish red; moderately smooth to silty; some micromicaceous; nondolomitic; rare greenish gray reduction spots; coarse platy. No sample show. Total gas 6 to 4 units.

Remark: Tripped at 10960' to pick up MWD tools and 1.83 deg motor to begin directional drilling. Ran new bit #28 Hughes ATJ44C. Trip gas 23 units.

10960' – 11100' 80% - 100% **Siltstone**; pale reddish brown, some grayish red; moderately clean to argillaceous; firm, some medium hard; slightly dolomitic; anhydritic; part appears pounded and disintegrates in acid with minimal effervescence; some micaceous bedding planes; rare white patches of microcrystalline anhydrite; subblocky; some rounded. 20% - Trace **Shale**; grayish red to dark grayish red; smooth; firm; non- to slightly dolomitic; coarse platy. Rare **Anhydrite**; white; *fracture fill*. No sample show. Total gas 3 to 10 units, average 6 units.

11100' – 11150' 90% **Siltstone**; pale reddish brown, some grayish red (10 R 6/3 to 10 R 4/3); some moderately clean, much is argillaceous; firm, some medium hard—softer rounded chips appear pounded; slightly dolomitic; anhydritic; slightly micaceous; subblocky. 10% **Shale**; grayish to dark grayish red (5 R 4/2 to 5 R 3/2); smooth, some silty;

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firm; non- to slightly dolomitic; part micromicaceous; coarse platy. Rare **Anhydrite**; white; *microfracture fill*. No sample show. Total gas 6 to 10 units.

11150' – 11160' — 30% **Sandstone**; pale red to pale reddish brown (10 R 6/3); lower very fine grained; silty; firm; dolomitic; anhydritic; no porosity visible. 60% **Siltstone**; pale reddish brown where moderately clean, some tinted grayish red where more argillaceous. 10% **Shale**; grayish red to dark grayish red. Rare **Anhydrite**; white to clear; probable *fracture fill*. No sample show. Total gas 9 to 22 units.

Remark: — Likely correlates to 10802' – 10812' cleaner gamma at the A.R.D. #4-26.

11160' – 11280' — 50% - 20% **Shale**; grayish red to dark grayish red; smooth, some silty; firm; non- to slightly dolomitic; coarse platy, trace splintery. 50% to 80% **Siltstone**; pale reddish brown, some tinted grayish red where more argillaceous; firm, some medium hard—softer rounded chips appear pounded and are likely artifact of drilling; dolomitic; anhydritic; subblocky. Rare to trace **Anhydrite**; white, clear; microcrystalline and firm or amorphous and soft; attached *fracture fill*, some loose rounded masses. No sample show. Total gas 10 to 3 units.

11280' – 11290' — 50% **Shale**; grayish red to dark grayish red. 50% **Siltstone**; pale reddish brown, part tinted grayish red where more argillaceous. Trace **Anhydrite**; white. No sample show. Total gas 5 to 3 units.

11290' – 11310' — Trace – 20% **Siltstone**; light gray to pale red; firm to medium hard; dolomitic; anhydritic; subblocky. 68% - 48% **Siltstone**; pale reddish brown, some tinted grayish red; moderately clean to commonly argillaceous; dolomitic; anhydritic; subblocky. 2% **Anhydrite**; white; soft rounded or smeared amorphous masses, trace spar; probable *fracture fill*, some may be bedded. 30% **Shale**; grayish red to dark grayish red; smooth to silty; firm; non- to slightly dolomitic; coarse platy, subblocky. No sample show. Total gas 2 to 3 units; brief increase to 21 units at 11298' (C1 only).

11310' – 11384' — 80% - 60% **Siltstone**; pale reddish brown to some grayish red; some moderately clean, much is argillaceous; firm to medium hard; dolomitic; anhydritic; subblocky. 20% - 40% **Shale**; grayish red to dark grayish red; smooth, some silty; firm; non- to slightly dolomitic; coarse platy, subblocky. Trace **Anhydrite**; white, trace clear; soft rounded and smeared masses, minor firm microcrystalline chips and attached *fracture fill*. No sample show. Total gas 2 to 5 units; brief increase to 45 units at 11320' (C1 only).

Remarks: — Tripped at 11384' for new motor. Ran new bit #29 Smith MF47ODL. Trip gas 29 units. Began running zinc oxide as preventative H2S scavenger.

11384' – 11430' — 70% - 50% **Siltstone**; pale reddish brown, some tinted grayish red; commonly argillaceous, some lower very fine grained sandy; firm, some medium hard; dolomitic; anhydritic; rare patches of white microcrystalline anhydrite; subblocky. 30% - 50% **Shale**; dark grayish red; smooth; firm; non- to slightly dolomitic; coarse platy, subblocky. Trace **Anhydrite**; white. No sample show. Total gas 2 to 9 units.

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11430' – 11480'	50% - 70% **Shale**; grayish red to dark grayish red; smooth, some silty; firm; non- to slightly dolomitic; coarse platy, subblocky. 50% - 30% **Siltstone**; pale reddish brown to grayish red; increasingly argillaceous; firm, some soft rounded masses appear pounded; dolomitic; anhydritic; part micaceous; subblocky. Trace **Anhydrite**; white, clear; loose and attached firm probable *fracture fill*, some soft rounded amorphous masses. No sample show. Total gas 9 to 3 units; brief increase to 16 units at 11472'.
Remark:	Starting at 11480', samples became more difficult to wash clean and are tacky and clumpy when damp. Dried chips are commonly coated with reddish brown silty clay that makes distinction between siltstone and shale difficult unless fresh breaks are observed.
11480' – 11550'	70% - 90% **Shale**; grayish to dark grayish red; smooth, some silty; firm, some soft masses appear pounded or smeared; non- to slightly dolomitic; coarse platy, subblocky. 30% - 10% **Siltstone**; pale reddish brown to grayish red; increasingly argillaceous; firm, some soft masses appear pounded or smeared; dolomitic; anhydritic; subblocky. Trace **Anhydrite**; white, rarely clear; loose and attached *fracture fill* and soft amorphous masses. No sample show. Total gas 6 to 3 units.
11550' – 11620'	100% **Red Beds**: **Shale**; grayish to dark grayish red, some reddish brown where pulverized to soft round masses; smooth, some silty; firm where chips are intact; non- to slightly dolomitic; coarse platy, subblocky. Minor **Siltstone**; pale reddish brown, some tinted grayish red; argillaceous; dolomitic; anhydritic; subblocky, some rounded. Trace **Anhydrite**; white; soft round amorphous masses, smeared thin streaks, and minor firm microcrystalline chips or *attached fracture fill*. At base, trace **Gray Beds**: **Siltstone**; brownish gray, medium gray; argillaceous; medium hard; dolomitic; subblocky. No sample show. Total gas 5 to 8 units.
11620' – 11640'	20% - 60% **Gray Beds**: **Shale**; medium dark gray—tinted olive gray in part—where chips are intact and firm to medium hard, *abundant light gray soft pulverized round masses*; dolomitic; platy where intact. Minor **Siltstone**; light to medium gray; part argillaceous; dolomitic. Trace **Dolomite**; brownish gray; microcrystalline; firm; silty. 80% - 40% **Red Beds**: **Shale** and lesser **Siltstone**. No sample show. Total gas 5 to 8 units.
Remark:	Sample 11630' – 11640' contains abundant gray shale that was *pulverized in slow drilling while sliding (29 min/ft at slowest) and/or during faulting.* Rewetting samples causes extreme flaking/disintegration of cuttings from this depth. Collected 5-ft samples where practical.
11640' – 11680'	80% - 100% **Red Beds**: **Shale**; grayish to dark grayish red where chips are intact, some reddish brown where pulverized; smooth, some silty; firm; non- to slightly dolomitic; coarse platy, subblocky. Also **Siltstone**; pale reddish brown, some tinted grayish red; argillaceous; dolomitic; anhydritic; firm to soft and partly pulverized; subblocky, some rounded. Trace **Anhydrite**; white; *microfracture fill* and some loose soft amorphous masses. No sample show. Total gas 5 to 12 units.

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11680' – 11690'	100% **Gray Beds**: **Shale**; medium dark gray, part tinted olive gray; smooth, some silty; firm; slightly dolomitic; some micaceous surfaces; platy, subblocky. Lesser **Siltstone**; light to medium light gray; medium hard; dolomitic; anhydritic; coarse platy to subblocky. No sample show. Total gas 6 to 8 units.
11690' – 11710'	100% **Gray Beds**: **Siltstone**; light to medium gray, part faintly light olive gray; moderately clean to argillaceous; medium hard; dolomitic; anhydritic; some medium dark gray shale laminae; coarse platy, subblocky. Minor **Shale**; medium dark gray. Rare **Anhydrite**; white; *thin attached fracture fill*. No sample show. Total gas 9 to 12 units.
11710' – 11725'	100% - 80% **Red Beds**: **Siltstone**; pale red—tinted pale reddish brown—to some grayish red; part argillaceous; moderately soft to medium hard; dolomitic; anhydritic; subblocky. Lesser **Shale**; grayish red to dark grayish red. 0% - 20% **Gray Beds**: **Siltstone**; light to medium gray; moderately clean to argillaceous; medium hard; dolomitic; some medium dark gray shaly streaks; coarse platy, subblocky. Rare **Anhydrite**; white; *microfracture fill*. No sample show. Total gas 12 to 10 units.
11725' – 11760'	100% **Red Beds**: **Shale**; grayish to dark grayish red; mostly smooth; intact chips are firm; part is soft due to pulverization or anhydrite content—disintegrates quickly in acid with minimal effervescence; coarse platy, subblocky, rounded where soft. Minor to subequal **Siltstone**; pale reddish brown, some grayish red. Trace – 1% **Anhydrite**; white; soft amorphous round masses and streaks, minor *microfracture fill*. No sample show. Total gas 10 to 2 units (gas trap cleaned and detector zeroed).
CORRELATION:	Extended thickness of *red beds* with interspersed *gray beds* suggests thin slices of Dinwoody imbricated with basal Woodside. When these rocks are compared to samples from the Anschutz Ranch Deep #4-26 a depositional cause of alternating red and gray strata appears less likely than a structural cause. The following top of "solid" Dinwoody is dolomite that is found *halfway* into the normal Dinwoody sequence, equivalent to 12022' at the Anschutz Ranch #34-2 and 11550' at the Anschutz Ranch Deep #4-26.
DINWOODY FM.	LOG TOP: 11772' TVD: 11747' DATUM: -4154'
11760' – 11770'	80% **Gray Beds**: Mostly **Dolomite**; light brownish gray to brownish gray, medium dark gray; cryptocrystalline; faint to some conspicuous fine to lower coarse grained oolitic; many ooliths are rimmed by black possible sulfide stain; medium hard; clean to slightly argillaceous; no porosity visible. 20% **Red Beds**. No sample show. Total gas 4 units.
11770' – 11800'	100% **Gray Beds**: **Siltstone**; overall medium dark gray; some moderately clean to commonly argillaceous; medium hard; very to slightly dolomitic—in acid chips

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remain intact and become firm to friable; anhydritic; medium dark gray to dark gray shaly streaks increase downhole; platy, subblocky. Rare **Anhydrite**; white, nearly clear; loose and attached *fracture fill*. Total gas 4 to 46 to 5 units; please see gas table below.

Slight sample show: No definite hydrocarbon stain. No fluorescence. Slow weak nonstreaming cut fluorescence dries to faint yellow fluorescent halo.

Hot-wire Gas:	Total	C1	C2	C3	C4	Min/Ft	Mud Log
Before	11	85%	10%	4%	0%	3.8	11782'
Maximum	46	85%	12%	3%	0%	3.1	11786'
After	5	86%	12%	2%	0%	8.3	11794'

11800' – 11830' 100% **Gray Beds**: **Shale**; medium dark gray, minor dark gray; smooth; firm to medium hard; slightly to some moderately dolomitic; rare micropyrite filled *microfractures*; coarse platy, subblocky. Minor **Siltstone**. Rare **Anhydrite** and **Dolomite**; loose and attached *fracture fill*. No sample show. Total gas 5 to 8 units.

11830' – 11860' 100% **Gray Beds**: 50% - 10% **Dolomite**; some light gray to mostly medium gray with patches of medium dark gray; cryptocrystalline to some microcrystalline, much is earthy; firm to medium hard; moderately clean to argillaceous; trace styolites; dark filled *microfractures* are common; no porosity visible. 50% - 90% **Shale**; medium dark gray to some dark gray; smooth; firm, some medium hard; slightly dolomitic; coarse platy, subblocky. Trace **Dolomite** and **Silica**; white; *loose and attached fracture fill to 5 mm*. No sample show. Total gas 4 to 7 units.

PHOSPHORIA FM. LOG TOP: 11868' TVD: 11836' DATUM: -4243'

11860' – 11880' 80% - 100% **Dolomite**; some medium dark gray and brownish gray, increasingly light brownish gray to some light to medium light gray—overall lighter colored downhole and lighter colored than basal Dinwoody; some dark gray sand-size undetermined spots uphole; uphole some is micro- to very fine crystalline, slightly sucrosic, and partly silicified; mostly cryptocrystalline to chalky/earthy; medium hard, some firm; some small vug and intercrystalline porosity uphole is best seen at 40X, increasingly no visible porosity downhole. Virtually no sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	4	95%	0%	0%	0%	10.0	11858'
Maximum	339	85%	12%	3%	0%	1.9	11868'
After	10	87%	12%	1%	0%	3.5	11882'

11880' – 11920' Interbedded. **Dolomite**; light to medium dark gray, hues mixed in many chips; crypto- to microcrystalline; medium hard, some hard; part silty; slightly to

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moderately argillaceous, some quite clean; uphole insoluble residue includes minute undetermined black flecks and powder; some partly silicified; trace micro- to fine sand-size pyrite; mostly no porosity visible, rare small vug porosity visible. Also **Siltstone**; light to medium dark gray, hues mixed as in dolomite; carbonate appearance but chips largely remain intact in acid; slightly argillaceous; partly silicified; platy to blocky. No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	23	87%	10%	3%	0%	6.2	11884'
Maximum	256	83%	13%	4%	0%	3.0	11890'
After	15	88%	11%	2%	0%	2.5	11910'

11920' – 11930'

10% **Chert**; light brownish to brownish gray, some neutral light to medium dark gray; hard, sharp chips; slight dolomitic effervescence along some *microfractures*. 70% **Siltstone**; medium to medium dark gray, lesser light to medium light gray, hues commonly mixed; medium hard, some hard; dolomitic—chips remain intact in acid but vary from firm to fragile following acidization, up to 40 % dolomite cement; some siliceous; platy to blocky. 20% **Dolomite**. Rare **Silica** and lesser **Dolomite**; white; *mixed mineral fracture fill*. No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	11	86%	13%	0%	0%	6.2	11922'
Maximum	79	88%	9%	2%	0%	4.7-3.2	11924'
After	11	90%	10%	0%	0%	5.5	11930'

11930' – 11945'

90% **Siltstone**; medium to medium dark gray, some light to medium light gray, part mottled; medium hard, some hard; dolomitic—chips remain intact in acid, 40% to 10% dolomite cement; moderately clean to argillaceous; some medium dark gray shaly laminae; platy to blocky. Trace **Chert**. 10% **Dolomite**. Trace **Dolomite** and **Silica**; white; *mixed mineral fracture fill; 5 clusters of euhedral fine to coarse crystalline dolomite 1 to 3 mm long indicate* ***open fractures***—perhaps late recovery from overlying gas show. No sample show. Total gas 12 to 8 units.

Remark:

Tripped at 11946' for new bit #30 Hughes HR40 and new motor. Trip gas 29 units.

11945' – 11960'

80% **Siltstone**; some medium gray to mostly medium dark to dark gray; commonly argillaceous; medium hard, some hard; dolomitic; platy to blocky. Downhole, 10% **Shale**; dark gray to grayish black; silty; dolomitic; may be phosphatic—likely correlates to first hot gamma in Phosphoria; coarse platy, subblocky. 10% **Dolomite**; medium gray, part tinted brownish gray. Trace **Silica** and **Dolomite**; white to very light gray, some translucent; loose and attached *mixed mineral fracture fill*. No sample show. Total gas 6 to 1 units.

11960' – 11970'

70% **Dolomite**; medium light to medium gray, part tinted light brownish to brownish gray; crypto- to microcrystalline, some faintly fine grained peloidal; moderately to

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slightly argillaceous; silty in part; firm, some medium hard; no porosity visible. 30% **Siltstone**; medium to medium dark gray; dolomitic. Trace **Chert**; light to medium gray, light brownish gray. Trace **Silica** and **Dolomite**; white to very light gray; *mixed mineral fracture fill*—no evidence of open fractures but gradually faster drilling to 2.2 min/ft. No sample show. Total gas 1 to 152 units; please see gas table below.

11970' – 11990'

100% - 95% **Dolomite**; light brownish gray to brownish gray, minor neutral medium light to medium gray; cryptocrystalline, partly lithographic, little is chalky where neutral gray; slight brownish gray clayey HCl-insoluble residue; medium hard to hard; some is siliceous—scrapes steel from probe; *dark stained microfractures* are common; virtually no porosity visible but faster drilling to 1.8 min/ft at best. Trace **Chert**. Trace to 5% **Anhydrite**, **Dolomite**, and **Silica**; white, some clear; *mixed mineral fracture fill*; some firm and attached, significant pulverized soft white masses of anhydrite and dolomite downhole. No sample show. Total gas 116 to 1 units.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	1	94%	5%	0%	0%	6.4	11962'
Maximum	152	82%	11%	7%	0%	4.3-1.3	11966'-76'
After	5	100%	0%	0%	0%	2.5-5.7	11978'-80'

Remark: Dolomite correlates to 11770' – 11790' at the Anschutz Ranch Deep #4-26 where a similar gas increase to 135 units was recorded.

11990' – 12020'

80% - 100% **Siltstone**; some light gray, mostly medium light to medium dark gray; firm to medium hard; moderately to slightly dolomitic; anhydritic; some dark gray argillaceous streaks; coarse platy, subblocky. 20% - Trace **Dolomite**; light brownish to brownish gray. Trace **Chert**. No sample show. Total gas 1 to 6 units.

12020' – 12050'

50% - 70% - 100% **Dolomite**; light to medium gray, light brownish gray to some brownish gray, hues commonly mixed; firm, some medium hard; some silty and slightly argillaceous to moderately clean downhole; some siliceous, part anhydritic; subblocky to increasingly thin platy downhole. 50% - Trace **Siltstone**; light to medium dark gray; dolomitic; subblocky. Rare to Trace **Silica**; white, part translucent; *loose and attached fracture fill*. No sample show. Total gas 2 to 8 units.

Remark: Tripped at 12057' for new bit #31 Smith F57ODPS. Old bit Hughes HR40 was thoroughly worn. Trip gas 19 units.

12050' – 12060'

100% **Dolomite**; light brownish to brownish gray; crypto- to microcrystalline; firm, medium hard; moderately clean; no porosity visible. No sample show. Total gas 4 to 16 units.

12060' – 12095'

50% - 20% **Sandstone**; medium to medium dark gray, light brownish gray to brownish gray; very fine to lower fine grained; well sorted; medium hard to hard; siliceous—glassy broken quartz grains common; dolomitic; no porosity visible. 50% - 80% **Chert**; light to medium gray, some medium dark gray, light brownish gray, hues mixed in part; numerous minute brown spots and blades; slightly dolomitic;

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hard; sharp; some dark stained *microfractures;* gradually faster drilling downhole to 2 min/ft at best. No sample show. Total gas 10 to 45 units at 12068', decreasing to 6 units at base.

12095' – 12100' Single 5-ft sample following lost circulation appears nonrepresentative: 30% **Red Beds**. 70% **Dolomite**; brownish gray; cryptocrystalline; no porosity visible. Trace **Calcite**; pink orange. Total gas 6 to 12 units.

Lost Circulation: Lost 250 B mud at 12096' connection. Pumped LCM.

12100' – 12140' 20% - Trace **Dolomite**; brownish gray; cryptocrystalline; medium hard, hard; no porosity visible except *some faces appear to be lined with silt-size euhedral crystals suggesting open fractures*. 40% - 20% **Sandstone**; brownish gray, medium to medium dark gray; very fine to lower fine grained; hard; part thoroughly siliceous; slightly to moderately dolomitic; part appears argillaceous; some pyritic; no porosity visible except *some faces are lined with undetermined minute euhedral crystals indicating open fractures*. 40% - 80% **Chert**; some light gray, mostly medium light and medium gray, some medium dark gray; minute brown spots and blades in part; hard; sharp. Rare to Trace **Silica**, **Dolomite**, **Calcite**, and **Anhydrite**; loose and attached mixed mineral *fracture fill* to 3 mm. No sample show. Total gas 7 to 138 to 3 units.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	12	83%	13%	2%	0%	3.1	12106'
Maximum	138	88%	10%	2%	0%	2.0	12110'
After	10	94%	6%	0%	0%	4.4	12120'

Remark: High rotary and motor torque (increased pump pressure) at 12109'

12140' – 12160' 30% - 10% **Chert**; dark gray, grayish black; slightly dolomitic in part; hard, sharp, blocky to irregular chips. 70% **Shale**; dark gray, grayish black; hard, medium hard; much is so thoroughly siliceous that distinction from chert is difficult; appears silty downhole; most is sharp, irregular. 0% - 20% **Siltstone/Sandstone**; medium dark to dark gray, minutely mottled white; medium hard, hard; dolomitic, siliceous; appears argillaceous; no porosity visible. No sample show. Total gas 4 to 84 units at 12142', falling to 10 units.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	4	90%	8%	0%	0%	6.3	12138'
Maximum	84	86%	12%	2%	0%	1.3	12142'
After	9	88%	12%	0%	0%	3.5	12164'

Remark: High rotary and motor torque (increased pump pressure) at 12142'.

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12160' – 12170'	100% **Shale**; grayish black; silty texture; medium hard; slightly to some moderately dolomitic; trace probable micropyrite; may be phosphatic but no diagnostic tests have been run; will likely correlate to well developed "hot black shale" on gamma log. No sample show. Total gas 8 to 10 units.
CORRELATION:	Grayish black shale 12160' – 12180' correlates to hot gamma 11920' – 11932' at the Anschutz Ranch Deep #4-26: at this point the Anschutz Ranch Deep #10-27 is 92 ft low (-4507') compared to the Anschutz Ranch Deep #4-26 (-4415').
12170' – 12180'	90% **Shale**; dark gray, some grayish black; silty; hard; siliceous; slightly dolomitic; sharp cuttings; trace white to light gray, translucent to opaque, *silica fracture fill.* 10% **Siltstone/Sandstone**; medium dark gray to dark gray; silt and lower very fine grained sand; argillaceous; medium hard, hard; siliceous, slightly dolomitic; platy to sharp irregular. Trace **Chert**. No sample show. Total gas 16 to 6 units.
12180' – 12200'	60% - 90% **Sandstone** and lesser **Siltstone**; medium dark gray to medium light gray, some light gray and light brownish gray downhole; very fine to fine to rarely lower medium grained sandstone; medium hard to hard; thoroughly siliceous to very dolomitic; in acid most chips remain intact but vary from hard to fragile, 5% to 30% dolomite cement; rare pyrite; no porosity visible. 40% - 10% **Shale**; dark gray; silty; siliceous; slightly dolomitic. Trace **Dolomite**; medium gray; cryptocrystalline; medium hard; *slight small vug porosity lined with minute undetermined crystals*. No sample show. Total gas 5 to 26 to 4 units.
12200' – 12230'	20% -10% **Sandstone**; medium light to medium dark gray, very fine to fine grained; medium hard to hard; siliceous, dolomitic; part argillaceous; no porosity visible. 30% - 20% **Siltstone**; medium light to medium gray; argillaceous; medium hard; dolomitic; trace micropyrite; platy, subblocky. 45% - 65% **Shale**; dark gray; medium hard to hard; significant fine silt content is best seen after acidization and washing in acetone; part siliceous; slightly to moderately dolomitic—carbonate appearance in part but chips remain intact in acid; subblocky to sharp irregular. 5% **Chert**; very light gray to medium dark gray, light brownish gray, pale yellowish brown; hard; part slightly dolomitic; sharp irregular. Trace **Dolomite**; brownish gray; cryptocrystalline; slightly argillaceous; no porosity visible. No sample show. Total gas 10 to 3 units.
12230' – 12248'	100% **Shale**; grayish black to brownish black, minor dark gray uphole; intact chips are firm; much of sample appears pounded and is pulverized to soft, tacky, round masses; sample wash water turned brownish black due to increased fines and much of bulk sample is lost during washing; may be organic rich or phosphatic but no diagnostic test have been run; dark gray is hard and siliceous; increasingly abundant round masses of rock flour, some platy intact chips. No fluorescence; no cut fluorescence. Total gas 3 to 4 units.
Remark:	Tripped at 12248' for new bit #32 Smith F67ODPS and new motor. New motor set at 1.5 deg. Trip gas 13 units.
12248' – 12320'	99% - 100% **Shale**; grayish black; some moderately smooth, much is silty; slightly dolomitic; intact chips are firm to medium hard; much of sample is lost during washing and is ground to small cuttings of medium to coarse sand-size; in washed samples less is recovered as soft, tacky, round masses of rock flour than before trip;

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platy and subblocky, little blocky; slow, ratty drilling. 1% to trace **Silica** and lesser **Calcite**; white, some clear; *loose and attached fracture fill.* No sample show. Total gas 6 to 15 to 3 units.

12320' – 12370' 100% **Shale**; grayish black; slightly silty; slightly dolomitic; platy, subblocky, trace splintery; minor shiny to glazed surfaces toward base—probable *slickensides*; much will likely correlate to "hot black shale" shown on gamma log. Trace **Silica** and **Calcite**; white, clear; *loose and attached fracture fill.* No sample show. Total gas 3 to 12 units.

12370' – 12380' 60% **Shale**; grayish black. 40% **Siltstone** and **Sandstone**; medium to dark gray; silt and very fine to minor fine grained sand; medium hard; slightly to very siliceous—numerous glassy broken quartz grains; slightly to very dolomitic; no porosity visible. Trace **Calcite** and **Silica**; white, clear; *loose and attached fracture fill.* No sample show. Total gas 9 to 18 units.

CORRELATION: At the top of the following dolomite, the Anschutz Ranch Deep #10-27 is 65 ft low (-4679') compared to the Anschutz Ranch Deep #4-26 (-4614').

12380' – 12410' 60% - 80% **Dolomite**; light brownish to brownish gray and medium to medium dark gray, minor off-white mottling in part; crypto- and micro- to some very fine crystalline; quite clean, minor brownish gray argillaceous HCl-insoluble residue; mostly no to trace intercrystalline porosity that is black stained but does not fluoresce or yield cut fluorescence. Please see gas table below.

12410' – 12440' 100% - 88% **Dolomite**; brownish gray to dark gray; microcrystalline; medium hard; increasingly argillaceous and slightly silty; much appears shaly but few chips remain intact after acidization; no porosity visible. Trace – 10% **Shale**; dark gray, grayish black. Trace – 2% **Silica** and **Calcite**; white, clear; *loose and attached fracture fill.*

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	7	93%	7%	0%	0%	3.9	12390'
Maximum	91	90%	9%	2%	0%	2.2	12396'
During	61	90%	10%	1%	0%	2.1	12410'
After	10	90%	10%	0%	0%	4.4	12434'

12440' – 12480' 100% - 78% **Dolomite**; uphole light brownish to brownish gray and minor gray, downhole medium dark to dark gray tinted brownish gray in part; micro- to some very fine crystalline uphole, microcrystalline to earthy downhole; firm to medium hard; moderately to very argillaceous, much appears shaly downhole but few chips remain intact in acid; mostly no porosity visible; *rare micro- to very fine undetermined euhedral crystals line probable open fracture faces.* Trace – 20% **Shale**; dark gray; dolomitic. Rare increasing to 2% **Silica** and rare **Calcite**; *loose and attached fracture fill.* No sample show. Total gas mainly 10 to 15 units, 58 units peak at 12480'—please see gas table below.

12480' – 12490' 70% **Shale/Siltstone/Sandstone**; grayish black; sample initially appears to be entirely shale but after reaction in acid is complete rock types are seen to vary from silty, sandy shale to argillaceous sandstone; medium hard to some hard where

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siliceous—part scrapes steel from probe as well as being scratched; slightly to very dolomitic; platy to some blocky and sharp irregular; "hot gamma" expected. 30% **Dolomite**; grayish black; argillaceous, part silty and sandy. No sample show but *forms some large bubbles during reaction with acid.*

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	13	88%	11%	1%	0%	5.5	12476'
Maximum	58	95%	5%	0%	0%	3.0	12480'
After	15	96%	4%	0%	0%	3.6	12490'

Remark: Slight increase in motor torque (increased pump pressure).

12490' – 12530'

70% - 100% **Siltstone** and lesser **Shale**; some grayish black to increasingly dark to medium dark gray; argillaceous siltstone and silty shale; medium hard; very to slightly dolomitic; forms slight brown film that floats on acid; subblocky, platy. 20% - 0% **Sandstone**; medium dark to dark gray; very fine to some fine grained; grades to siltstone; medium hard, some hard; dolomitic with siliceous streaks—glassy broken quartz grains common; no porosity visible. 10% - 0% **Dolomite**; grayish black to dark gray. 2% - Trace **Calcite** and lesser **Silica**; white; *loose and attached mixed mineral fracture fill.* No sample show. Total gas 16 to 9 units; peak of 273 units at 12520'.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	13	90%	10%	0%	0%	11.4	12518'
Maximum	273	82%	13%	5%	0%	6.6	12520'
After	10	90%	10%	0%	0%	6.8	12530'

Remark: Increased rotary torque and motor torque (increased pump pressure). Picked up and reamed back down at 12519'.

12530' – 12550'

70% **Dolomite**; light brownish gray to brownish gray, some medium dark gray; crypto- to microcrystalline; very fine to fine grained sandy in part; some thoroughly silicified; mostly no to trace minute vug and intercrystalline porosity that is stained black but does not fluoresce or yield cut fluorescence. Grades to 30% **Sandstone**; light brownish gray to brownish gray; very fine to lower fine grained; quite clean to some argillaceous; dolomitic; some silicified; mostly no porosity visible but some black intergranular stain that does not fluoresce or yield cut fluorescence. No sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	13	87%	12%	1%	0%	6	12532'
Maximum	106	90%	9%	1%	0%	2.3	12538'
After	10	95%	5%	0%	0%	4.1	12546'

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12550' – 12570' Gradational. 80% - 60% **Sandstone**; light brownish to brownish gray, some medium dark; very fine grained; very dolomitic; slightly argillaceous; no porosity visible but trace black intergranular stain that does not fluoresce or yield cut fluorescence. 20% - 40% **Dolomite**; light brownish to brownish gray, some medium gray; commonly very fine grained sandy; slightly argillaceous; no porosity visible. Uphole, trace **Sandstone**; very light gray; clean; dolomitic, siliceous; no porosity visible. No sample show. Total gas 3 to 46 units.

12570' – 12610' 80% - 100% **Dolomite**; light brownish to brownish gray, some medium dark gray; part very fine grained sandy to silty; slightly to moderately argillaceous; rock flour at base is carbonate, contains minimal anhydrite; mostly no porosity visible, trace small vug and intercrystalline porosity, *minor open fractures are indicated by rare chips lined with minute undetermined euhedral crystals*. 20% - Trace **Siltstone**; brownish gray; dolomitic; argillaceous; platy, subblocky. No sample show. Total gas 4 to 48 units.

12610' – 12626' 50% **Sandstone**; trace light gray, mostly medium light to medium gray, minor medium dark gray; very fine to fine grained; well sorted; medium hard to hard; dolomitic; some thoroughly siliceous, glassy broken quartz grains common; no porosity visible. 40% **Dolomite**; light brownish gray to brownish gray and medium dark gray. 10% **Shale**; medium dark gray; dolomitic. No sample show. Total gas 50 to 9 units.

Remark: Tripped at 12626' for new bit #33 Smith F676ODPS. Trip gas 32 units.

12626' – 12650' 80% **Dolomite**; light brownish to brownish gray; crypto- to microcrystalline; medium hard; slightly argillaceous and silty, some very fine grained sandy; mostly no porosity visible. 10% **Sandstone**; very light gray, light brownish gray; very fine grained; siliceous, dolomitic; no porosity visible. 10% **Siltstone**; light brownish gray; slightly argillaceous; dolomitic; platy, subblocky. No sample show. Total gas 6 to 28 units.

12650' – 12660' 60% **Sandstone**; light to medium gray; very fine to some fine grained; slightly to moderately dolomitic; part siliceous—glassy broken quartz grains common; minor part is argillaceous; no porosity visible. 40% **Dolomite**; light brownish to brownish gray. No sample show. Total gas 20 – 7 units.

WEBER ANHYDRITE LOG TOP: 12671' TVD: 12507' DATUM: -4914'

Remark: A pinkish gray (buff) tint is seen in the first 40 ft when samples are viewed without magnification.

12660' – 12670' 80% **Sandstone**; light to medium gray, minor medium dark gray; very fine to fine grained; well to moderately well sorted; subround; medium hard; abundant silica and minor to moderate dolomite cement; quite clean to some argillaceous; no porosity visible. 10% **Siltstone**; medium light to medium gray; dolomitic. 10% **Anhydrite**;

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white to mud-stained; soft amorphous masses. No sample show. Total gas 7 to 10 units.

12670' – 12700' — 70% - 100% **Sandstone**; very light to some medium light gray; very fine to some fine grained, minor loose and floating medium to lower coarse grains; subround, larger grains are rounded; well to some moderately sorted—part bimodal; firm to some medium hard uphole, increasingly friable to loose downhole; slightly dolomitic; anhydritic; no porosity visible. 20% - Trace **Anhydrite**; white, slightly mud-stained; soft, amorphous masses. 10% - 0% **Dolomite**; light brownish gray; microcrystalline; anhydritic; no porosity visible. No sample show. Total gas 9 to 10 units.

12700' – 12730' — 70% - 90% **Sandstone**; very light gray, increasingly pale red to grayish orange pink; very fine to upper medium grained, rare coarse grains; larger grains are rounded; small friable clusters and abundant loose grains; slightly dolomitic; appears anhydritic; clean where very light gray, silty and slightly argillaceous in part where red; no porosity visible. 30% - Trace **Siltstone**; pale reddish brown (10 R 5/3); very fine grained sandy; part argillaceous; slightly dolomitic and anhydritic; firm to friable. Trace – 10% **Anhydrite**; white; soft pounded masses, rarely firm and microcrystalline. No sample show. Total gas 7 to 10 units.

12730' – 12750' — 100% **Sandstone**; overall grayish orange pink (10 R 8/2), individual grains and small clusters vary from orange pink to nearly white; some very fine, mostly fine to medium grained with rare dispersed lower coarse grains; larger grains are commonly rounded and frosted; non- to slightly dolomitic; no porosity visible but clusters are very small and loose sand is abundant. Trace **Anhydrite**; white. No sample show. Total gas 9 to 7 units.

Remark: The preceding 50-ft section of red to pink siltstone and sandstone is not found at the Anschutz Ranch Deep #4-26.

12750' – 12760' — Single poor sample; some white amorphous **anhydrite**. Total gas 7 to 3 units.

12760' – 12770' — 90% **Sandstone**; white to very light gray; very fine and fine grained, lesser dispersed rounded and frosted medium grains; firm to friable; non- to slightly dolomitic; anhydritic; no porosity visible. 10% **Anhydrite**; white to mud-stained; soft amorphous masses; may included rock flour from sandstone. No sample show. Total gas 3 to 2 units.

WEBER SS./ MORGAN FM. UNDIVIDED — LOG TOP: 12773' TVD: 12589' DATUM: -4996'

Remark: Sample top was questionable due to low recovery of overlying anhydrite markers.

12770' – 12790' — 90% - 80% **Sandstone**; very light to medium light gray, some medium to trace medium dark gray downhole; very fine and fine grained, lesser dispersed rounded and frosted medium grains; firm to medium hard; slightly to some moderately

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dolomitic; anhydritic; part siliceous, some glassy broken quartz grains; slightly pyritic; no porosity visible. 10% **Rock Flour**; white, mud-stained in part; may be largely anhydrite uphole. Trace – 10% **Dolomite**; light brownish gray to medium gray; cryptocrystalline; medium hard; sandy; no porosity visible. No sample show. Total gas 2 to 5 units.

12790' – 12810' 90% - 70% **Dolomite**; light brownish to brownish gray; crypto- to microcrystalline; medium hard; very fine to lower coarse grained sandy in part; some pyritic; no porosity visible. 10% - 30% **Sandstone**; light brownish gray, light gray, hues commonly mixed; very fine and fine to some medium grained; subround, round; well to moderately sorted; medium hard, some hard; very dolomitic to some thoroughly siliceous; trace pyritic; no porosity visible. No sample show. Total gas 2 to 12 units.

12810' – 12830' 70% - 80% **Sandstone**; some pinkish gray (buff) to mostly light brownish gray; very fine to fine grained with some dispersed medium to lower coarse rounded grains; very to slightly dolomitic—chips disintegrate to individual grains or remain intact in acid; some very siliceous—numerous glassy broken quartz grains in part; no porosity visible. Grades to 30% - 20% **Dolomite**; pinkish gray to light brownish gray; microcrystalline; firm to medium hard; sandy; no porosity visible. No sample show. Total gas 2 to 5 units.

12830' – 12870' 100% **Sandstone**; very light to light gray, some medium light gray; upper very fine to fine grained, some dispersed medium grains; uphole, larger grains are less frosted and less rounded—quartz overgrowths more common than above; siliceous uphole—numerous glassy broken quartz grains; slightly dolomitic uphole, part moderately dolomitic downhole; some slightly anhydritic; virtually no porosity visible. **Rock Flour**; white, stained brown by mud in part; significant carbonate content. Uphole, slight spotty brown to black intergranular stain appears argillaceous where thin, solid and powdery in sand-size masses; stain decreases downhole as sandstone becomes less siliceous. Virtually no fluorescence or cut fluorescence.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	5	94%	6%	0%	0%	8.0	12834'
Maximum	121	89%	9%	2%	0%	3.7	12842'
After	15	89%	11%	0%	0%	5.9	12870'

12870' – 12890' 80% **Chert**; very light gray, some streaks light brownish gray; hard, sharp; trace black to brown stain along *microfractures* does not fluoresce or yield cut fluorescence; faster drilling to 1.8 min/ft. 20% - 40% **Sandstone**; very light to light gray. Virtually no sample show. Total gas 13 to 32 units.

12890' – 12900' 100% **Sandstone**; light to medium light gray; very fine to fine grained; medium hard, some hard; siliceous; slightly to some moderately dolomitic; no porosity visible. Trace **Chert**. Virtually no sample show—forms some large bubbles during reaction in acid. Total gas 12 to 16 units.

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12900' – 12950'

90% - 100% **Sandstone**; light to medium gray, part tinted light brownish to brownish gray; upper very fine to fine grained with some dispersed medium grains; medium hard to hard; increasingly siliceous—numerous glassy broken quartz grains; non- to slightly dolomitic; very slightly to nonanhydritic; no to some slight intergranular porosity visible. 10% - Trace **Chert**; very light to light gray; hard, sharp. 30% - 50% of sandstone exhibits spotty stain that appears brownish gray and argillaceous where thin, black and solid and powdery where it fills pores. Virtually no fluorescence or cut fluorescence from stained chips. Please see gas table below.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	12	90%	10%	0%	0%	5.6	12898'
During	71	89%	8%	2%	0%	3.9	12904'
Maximum	111	89%	9%	2%	0%	3.5	12926'
After	55	91%	7%	3%	0%	5.6	12950'

Remark:

Increased rotary torque and motor torque (increased pump pressure) at 12914' and 12927'. Picked up and reamed back to bottom.

12950' – 13000'

60% - 90% **Dolomite**; very light gray to pinkish gray uphole, also light gray to some medium dark gray downhole as staining increases; crypto- to some fine crystalline uphole, much fine to lower medium crystalline downhole; slightly sucrosic downhole, occasional perfect rhombs; rarely pyritic; no to slight intercrystalline porosity visible uphole, rare fair intercrystalline porosity downhole. 20% - Trace **Sandstone**. Trace **Chert**. 20% - 10% **Rock Flour**. Trace increasing to 30% to 50% of dolomite exhibits very spotty brownish gray to black intercrystalline stain—occasional larger pores show "stain" is solid and powdery rather than asphaltic and may be a sulfide. Virtually no fluorescence or cut fluorescence even from heavily "stained" chips. Total gas 80 to 10 units.

Remarks:

Worked tight hole for 1 hr at 12970' during slide. Increased motor torque at 12972'; increased rotary and motor torque at 12975' and at 12995'; increased motor torque at 12999' and 13000'.

Tripped at 13000' for new bit #34 Smith F67ODPS. Old bit #33 Smith F67ODPS had one slightly loose cone and showed several skidding flat spots on cone #3. Some of these bit wear features may be related to increased torque noted above. Trip gas 12 units.

Dolomite topped at 12950' correlates to dolomite at 12488' at the Anschutz Ranch Deep #4-26. At this marker within the Weber, the Anschutz Ranch Deep #10-27 is roughly 290 ft low compared to the Anschutz Ranch Deep #4-26. This is due to the Anschutz Ranch Deep #10-27 being more similar to the Anschutz Ranch #34-2 in the upper Weber (200 ft from base of last Weber anhydrite to dolomite marker) than to the Anschutz Ranch Deep #4-26 (50 ft from base of last Weber anhydrite to dolomite marker).

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13000' – 13040'

100% - 80% **Dolomite**; pinkish gray to pale yellowish brown and very light gray to some medium dark gray depending upon degree of staining; crypto- and microcrystalline where pinkish gray to pale yellowish brown; very fine to lower medium crystalline where neutral gray; slightly sucrosic in part; firm to medium hard; clean to some slightly argillaceous; no to some fair intercrystalline and vug (to 1 mm) porosity visible—best porosity from 13010' – 13020' where 1-ft drilling times reached 1.2 min/ft at best and where gas show is greatest. At base, 20% **Chert**; light gray to medium dark gray, brownish gray; hard; sharp. 40% to 10% of dolomite is stained spotty brownish gray to black in intercrystalline and vug porosity; exhibits virtually no fluorescence; and yields no cut fluorescence: virtually no sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	22	91%	7%	2%	0%	11.6	13008'
Maximum	230	87%	8%	4%	0%	1.6	13018'
After	6	87%	8%	5%	0%	3.4	13024'

13040' – 13050'

60% **Sandstone**; very light to medium dark gray; very fine and fine grained, minor dispersed lower medium rounded and frosted grains; moderately well sorted; medium hard, some hard; much is thoroughly siliceous, numerous glassy broken quartz grains; part slightly dolomitic; trace pyritic; no to some slight intergranular porosity. 30% **Dolomite**; as above. 10% **Chert**. 30% of sandstone exhibits spotty brownish gray to black stain that appears dry, solid, and powdery. Virtually no fluorescence and no cut fluorescence. Please see gas show below.

13050' – 13060'

100% **Sandstone**; very light to light gray; upper very fine to fine grained; well sorted; medium hard, some hard; siliceous, most is also slightly dolomitic; clean; trace pyrite; mostly no porosity visible. Trace black stain—virtually no sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	7	87%	10%	2%	1%	6.4	13038'
Maximum	78	90%	9%	1%	Tr	3.1	13046'
After	9	90%	10%	0%	0%	7.5	13064'

13060' – 13150'

100% **Sandstone**; very light to light gray; very fine to fine grained, rare dispersed or floating medium grains; well sorted; medium hard, some hard; slightly dolomitic, minor part is thoroughly siliceous; clean; trace pyrite; mostly no porosity visible. Trace **Chert**; light gray. Trace black stain—virtually no sample show. Total gas 24 to 2 units; brief increase to 55 units at 13092' and 16 units at 13148'.

Remarks:

Tripped at 13150' due to increased rotary torque and increased motor torque (pump pressure spikes between 13149' and 13150'). Bit #34 Smith F67ODPS was thoroughly worn and undergauge. Laid down downhole motor and reamed to 13150' with new bit #35 Smith F8ODPS. Trip gas 13 units.

Tripped out at 13150' and ran FMI dipmeter due to increased apparent thicknesses indicating possible steep dips. Telemetry section failed on first run. Stuck logging tool at 13015' for 5 min—logged from 13000' to base of intermediate casing on

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second run. Tripped in to base of intermediate casing with open-ended drill pipe and circulated hole while high clutch on rig was repaired. Trip gas 4 units. Tripped for new bit #36 Smith F8ODR at 13150'. Trip gas 49 units.

13150' – 13160' Poor sample quality—first sample after trip.

13160' – 13230' 100% **Sandstone**; very light to minor light gray; very fine to fine grained, trace dispersed medium grains; well sorted; medium hard to hard; dominantly silica cement—numerous glassy broken quartz grains, grain boundaries commonly indistinct; part is slightly to moderately dolomitic; clean; trace pyrite; no porosity visible. Trace **Chert**; light gray. Trace spotty black intergranular and microfracture staining—virtually no sample show. Total gas 3 to 6 units, brief increases of 15 to 25 units.

Remarks: Good sample quality. Overall, samples are lighter colored and faintly tinted pinkish gray (buff) in contrast to the somewhat darker colored and dominantly neutral gray samples from the Anschutz Ranch Deep #4-26. Significant metal in all samples.

13230' – 13250' 100% **Sandstone**; light gray—much is faintly tinted light brownish gray; some very light gray downhole; very fine to fine grained, trace dispersed medium grains; well sorted; medium hard to hard; mostly silica cement—numerous glassy broken quartz grains and indistinct grain boundaries; part is slightly dolomitic; quite clean; trace pyrite; trace porosity suggested by brownish gray to black spotty intergranular and *microfracture* stain in 30% of sandstone. Virtually no sample show. Brief gas increases of 25 to 67 units.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	4	98%	2%	0%	0%	4.7	13230'
Maximum	67	89%	7%	4%	0%	6.0	13232'
After	4	93%	7%	0%	0%	8.0	13244'

13250' – 13318' 100% - 90% **Sandstone**; very light gray to light gray—faintly tinted light brownish gray and some medium light gray in middle of interval; very fine to fine grained, trace medium grains; mostly silica cement—numerous glassy broken quartz grains and indistinct grain boundaries; part is slightly to moderately dolomitic; most is clean; trace pyrite; trace to occasionally 20% of sandstone exhibits brownish gray to black spotty intergranular and *microfracture* stain that varies from apparently argillaceous film to powdery and solid. At 13280' – 13290', 10% **Shale**; brownish black to dark gray, mottled opaque very light gray by streaks of *silica fracture fill*; hard, sharp chips scrape steel from probe—grades to **chert**. No cut fluorescence from stained sandstone—virtually no sample show. Total gas 2 to 3 units background, brief increases of 10 to 16 units.

Remarks: Continued significant metal in all samples. Tripped at 13318' for new bit #37 due to increasing rotary torque (motor torque OK as indicated by steady pump pressure) and lack of directional response.

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Reamed to bottom with motor and new bit #37 Smith F8ODR but did not drill new hole; motor was stalling with little weight on bit. Trip gas 15 units. Tripped for new bit #38 Smith F8ODPS at 13318'. Trip gas 23 units.

13318' – 13340' 100% **Sandstone**; some very light gray, mostly light gray; very fine to fine grained; well sorted; medium hard to hard; siliceous—numerous glassy broken quartz grains and indistinct grain boundaries; part slightly dolomitic; trace pyritic; no porosity visible. Trace brownish gray to black stain exhibits no fluorescence or cut fluorescence—virtually no sample show. Total gas 4 to 20 to 6 units.

13340' – 13370' 85% - 100% **Sandstone**; some very light gray, mostly light gray faintly tinted light brownish gray in part; very fine to fine grained; well sorted; medium hard to hard; part is thoroughly siliceous—numerous glassy broken quartz grains and indistinct grain boundaries; some slightly to moderately dolomitic; trace pyritic; mostly no porosity visible. 10% - Trace **Chert**; light to medium dark gray, some tinted brownish gray; hard, sharp; some pyritic. 5% - 0% **Dolomite**; light gray; microcrystalline; very fine to fine grained sandy; trace pyrite; no porosity visible. Trace brownish gray to black stain—appears argillaceous where very thin and faintly highlighting grains to solid, powdery intergranular black pore fill. Virtually no fluorescence; no cut fluorescence. Total gas 3 to 7 units.

13370' – 13430' 100% **Sandstone**; some very light gray, mostly light gray faintly tinted light brownish gray in part; very fine to lower fine grained; well sorted; medium hard to hard; some is thoroughly siliceous—numerous glassy broken quartz grains and indistinct grain boundaries; much is slightly dolomitic, little is moderately dolomitic; trace pyrite; mostly no porosity visible, rare slight porosity associated with drusy quartz. Trace **Chert**. Trace to 5% brownish gray to black stain; fair correlation of increased stain and minor total gas increases—virtually no sample show. Total gas 3 to 20 units.

13430' – 13451' 95% - 100% **Sandstone**; light gray, partly tinted light brownish gray; very fine to lower fine grained; well sorted; medium hard to hard; quartzitic; dominantly silica cement, commonly slightly dolomitic—trace very dolomitic grading to trace sandy **dolomite**; trace pyrite; fast drilling break at 13439' to 1.8 min/ft at best; mostly no porosity visible, rare slight porosity visible where black stained. 5% - Trace **Chert**; white to light gray, trace medium dark gray; hard, sharp. 5% to 2% of sandstone exhibits very spotty black intergranular and *microfracture* stain; most of chert exhibits black stained *microfractures*—stain does not fluoresce or yield cut fluorescence. No other sample show. Total gas 5 to 16 units.

Remark: Tripped at 13451' for bit. Old bit #38 Smith F8ODPS was flat crested, slightly undergauge, and worn on shirttails. Found cracked motor. Reran bit #37 Smith F8ODR at 13451'. Trip gas 73 units.

13451' – 13460' 60% **Dolomite**; pinkish gray (buff) to light gray, minor light brownish gray; cryptocrystalline to microcrystalline; medium hard to firm; very fine grained sandy—grades to very dolomitic sandstone; some silicified; tests negative for anhydrite; no porosity visible. 40% **Sandstone**; pinkish gray (buff) to very light gray and light gray; very fine to lower fine grained; medium hard to hard; very dolomitic to increasingly siliceous; no porosity visible. Trace **Chert**; very light to light gray. Trace black stained *microfractures* in dolomite and rare black intergranular and

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microfracture stain in sandstone; faint dull yellow fluorescence in dolomite is mineral fluorescence—no cut fluorescence; no other sample show. Total gas 4 to 6 units.

Remark: Dolomite was confirmed by two 5-ft samples at 13455' and 13460'.

13460' – 13490' 100% **Sandstone**; light gray—commonly tinted light brownish gray—to minor very light gray; appears very fine to lower fine grained—grain boundaries indistinct; hard; siliceous, quartzitic—abundant glassy broken quartz grains; non- to slightly dolomitic; trace pyrite; no porosity visible. Trace black intergranular and *microfracture* stain does not fluoresce and yields no cut fluorescence; virtually no sample show. Total gas 5 to 20 units.

13490' – 13520' 100% **Sandstone**; pinkish gray (buff) to light brownish gray, some very light to light gray; very fine to some lower fine grained; well sorted; firm to hard; staining and reaction in acid show mixed calcite and dolomite cement; subordinate parts are very siliceous; trace pyrite; no porosity visible. Trace **Dolomite**; pinkish gray to light brownish gray; crypto- to microcrystalline; part very fine grained sandy. Trace black nonhydrocarbon stain; no other sample show. Total gas 5 to 20 units.

13520' – 13550' 80% **Sandstone**; pinkish gray (buff) to light brownish gray, lesser neutral very light to light gray; very fine to lower fine grained with rare dispersed medium grains; well to some moderately sorted; firm to some medium hard; staining in Alizarin Red and reaction in acid show much calcite and lesser dolomite cement; minor part is dominantly silica cemented and hard; trace pyrite; no porosity visible. Grades to 10% **Limestone** and **Dolomite**; light brownish gray; crypto- to microcrystalline; very fine to rarely medium grained sandy; firm to medium hard; trace pyrite; no porosity visible. 10% **Chert**; very light to light gray, brownish gray; hard, sharp. Trace black stain—virtually no sample show. Total gas 4 to 7 units, brief increase to 12 units.

Remark: Good sample quality.

13550' – 13570' 100% **Sandstone**; pinkish gray (buff), some light gray; very fine to lower fine grained; well sorted; firm to some medium hard; staining in Alizarin Red and reaction in acid show much calcite and lesser dolomite cement; minor part is dominantly silica cemented and hard; trace pyrite; no porosity visible. Grades to Trace **Limestone** and **Dolomite**; pinkish gray; crypto- to microcrystalline; sandy; no porosity visible. Trace **Chert**; very light to light gray; staining shows calcite along *microfractures*. Trace black stain—virtually no sample show. Total gas 4 to 8 units.

Remarks: No longer possible to slide. Tripped at 13573' for new bit #39 Smith F8ODR. Trip gas 209 units.

13570' – 13580' Single trashy sample following trip. 40% **Cavings**; black and red shale. 60% **Sandstone**. Total gas 6 to 3 units.

13580' – 13600' 90% - 100% **Sandstone**; some pinkish gray, increasingly very light to light gray; very fine to lower fine grained; well sorted; some firm to medium hard, increasingly hard; uphole, some moderately to slightly dolomitic; downhole, increasingly siliceous and quartzitic—abundant glassy broken quartz grains and indistinct grain

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boundaries; trace pyrite. 10% - 0% **Dolomite**; pinkish gray; microcrystalline; firm to medium hard; very fine to lower fine grained sandy, rare rounded lower medium quartz grains; no porosity visible. Trace brownish gray to black stain—virtually no sample show. Total gas 3 to 6 units.

Remark: Currently converting entire mud system to "slick mud" in an attempt to make directional slides possible.

13600' – 13616' 100% **Sandstone**; very light to light gray; very fine to lower fine grained; well sorted; medium hard to hard; much is siliceous—glassy broken quartz grains and indistinct grain boundaries common; non- to slightly dolomitic, little is moderately dolomitic; trace pyrite; no porosity visible. Trace black nonhydrocarbon stain; virtually no sample show. Total gas 4 to 9 units.

Lost circulation: Lost 250 B at 13616'.

13616' – 13625' 95% - 100% **Sandstone**; very light to light gray; very fine to lower fine grained, rare dispersed or floating medium grains; varies from firm to hard; staining and reaction in acid show part contains up to 10% mixed calcite and dolomite cement; some thoroughly siliceous; mostly no porosity visible. 5% - Trace **Dolomite** and **Limestone**; minor pinkish gray, mostly light brownish gray to some brownish gray; crypto- to microcrystalline; firm to medium hard; very fine grained sandy—grades to very dolomitic or very calcareous sandstone; trace pyrite; no porosity visible. Virtually no sample show. Total gas 3 to 6 units.

NOTE: Samples contain up to 30% **acid-soluble LCM Limestone**; moderate orange pink, grayish orange pink, moderate red; crypto- to microcrystalline; medium hard; clean; dense; up to 0.8 cm out of sack, circulated as cutting-size chips.

Lost circulation: Lost 125 B at 13625'.

13625' – 13631' 100% **Sandstone**; very light to light gray; very fine to lower fine grained, rare medium rounded grains; well sorted; medium hard to hard; most is siliceous, quartzitic; trace pyrite; no porosity visible except *single medium sand-size chip of light gray very fine grained sandstone containing minute euhedral dolomite crystals.* Virtually no sample show. Total gas 4 to 8 units.

Remarks: Tripped at 13625' for new motor and new bit #40 Smith F8ODR. Trip gas 32 units. Fast footage immediately prior to trip remains questionable. 13631' became 13629'.

13629' – 13650' 100% **Sandstone**; very light to light gray; very fine to some lower fine grained; well sorted; hard to medium hard; much is siliceous, quartzitic; some dolomitic; finely pyritic; mostly no porosity visible. Trace **Dolomite**; pinkish gray, light gray; microcrystalline; firm to medium hard; very fine grained sandy; thin platy; no porosity visible. Trace **Shale**; medium gray—tinted greenish gray to bluish gray; firm; smooth; trace micropyrite; platy, *few possible slickensides*. Trace black nonhydrocarbon stain in sandstone; no other sample show. Total gas 3 to 4 units.

13650' – 13670' 95% **Sandstone**; very light to light gray, some faintly light brownish gray; very fine to some lower fine grained; well sorted; firm to hard; slightly to some moderately dolomitic; part thoroughly siliceous and quartzitic; slightly pyritic; no to rare slight

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porosity visible. 5% **Dolomite**; pinkish gray, light brownish gray; microcrystalline; firm to medium hard; very fine grained sandy in part; no porosity visible. Trace **Shale**; medium gray—tinted greenish to bluish gray; smooth; firm; trace micropyrite; platy, subblocky. Virtually no sample show. Total gas 4 to 6 units, brief increase to 26 units at 13664'.

13670' – 13710'

30% - 20% **Dolomite**; pinkish gray to light brownish gray; microcrystalline to fine and lower medium crystalline; firm, medium hard; part sandy; some cherty; clean; no to some slight intercrystalline porosity visible. 65% - 70% **Sandstone**; light gray, light brownish gray; very fine to fine grained; firm to medium hard; slightly to very dolomitic; trace pyrite; no porosity visible. 5% - 10% **Chert**; light gray, light brownish gray; part dolomitic. Trace **Shale**; medium gray—tinted greenish to bluish gray; smooth; firm; minutely pyritic; platy. Rare black nonhydrocarbon stain; virtually no sample show. Total gas 4 to 6 units.

13710' – 13780'

30% increasing quickly to 80% **Dolomite**; pinkish gray to some light brownish gray, much very light to medium gray depending in part upon degree of black staining; much brownish gray to pale yellowish brown at 13720' to 13730'—grades to partly dolomitic **chert**; crypto- and microcrystalline to upper fine crystalline and rare lower medium crystalline; part sucrosic; firm to medium hard; clean, little is slightly argillaceous, more sandy near top and bottom of interval than at mid-interval; part finely pyritic; no to some fair intercrystalline and lesser vug porosity visible; faster drilling to 1.9 min/ft at best from 13720' – 13775'. 10% - Trace **Chert**; very light to light gray, some light brownish gray; brownish gray at 13720' – 13730'. 60% decreasing quickly to 20% **Sandstone**; light to very light gray; dolomitic uphole, increasingly siliceous and quartzitic at base.

5% - 40% of dolomite exhibits spotty black to brownish gray nonhydrocarbon stain in intercrystalline and vug porosity, minor black staining in microfractures in chert; virtually no fluorescence and no cut fluorescence from stained chips. Total gas 6 to 12 units.

Remarks:

Tripped at 13780' for new bit #41 Smith F8ODLPS. Trip gas 29 units.

Dolomite at 13710' – 13780' more closely resembles dolomite at 12950' – 13040' in this well than dolomite at 13112' – 13135' log depth (13130' – 13160' rig depth) at the Anschutz Ranch Deep #4-26.

13780' – 13830'

QUESTIONABLE SAMPLE QUALITY—SAMPLES *APPEAR* VERY TRASHY.

Interpretation: 20% to 30% **Shale/Claystone**; light brownish gray to medium gray; smooth to waxy matrix; commonly very fine and fine grained sandy, rare floating medium grains; firm to moderately soft chips—much of sample is lost during washing; non- to very calcareous/dolomitic (part stains in Alizarin Red); platy to irregular; rock type is consistent with slow drilling at 4 ft/hr with the "hard" 8 type Smith F8ODLPS bit. No sample show. Total gas 6 to 9 units.

Apparent **Cavings**: **Shale**, red, black, greenish to bluish gray; **Sandstone**; very light to light gray; **Dolomite**; very light to medium light gray and pinkish gray to light brownish gray; trace **Chert**.

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13830' – 13870' RESUME GOOD SAMPLE QUALITY.

80% **Red Beds**: **Shale** and lesser **Siltstone**; grayish red (5 R 4/2) and moderate reddish brown (10 R 4/5); silty and very fine to fine grained sandy shale—rare floating medium to coarse sand grains; argillaceous siltstone; grayish red chips are firm; moderate reddish brown is pulverized to soft round masses or clayey coating on other chips; grayish red is non- to slightly calcareous/dolomitic; moderate reddish brown masses disintegrate immediately in acid with flash of effervescence; platy, subblocky; slightly faster drilling at 6 ft/hr. Trace **Anhydrite**; white soft amorphous masses and rare clear to white microcrystalline firm chips and *fracture lining.* No sample show. Total gas 10 to 6 units.

Remark: Current red beds are more shaly than red beds found earlier within Weber Anhydrite at 12700' – 12730'.

13870' – 13890' 60% **Red Beds**: **Shale**, lesser **Siltstone**, trace **Sandstone**; grayish red to some moderate reddish brown; silty and very fine to some fine grained sandy shale, trace smooth; argillaceous to very fine grained sandy siltstone—grades to trace very fine grained sandstone; firm, some medium hard; non- to some slightly calcareous/dolomitic; platy, some subblocky. 30% **Shale**; medium to medium dark gray, partly drab tinted; mostly smooth to some silty, very fine grained sandy; firm where chips are intact, much is pulverized to soft round masses; platy, subblocky. 5% **Siltstone/Shale**; yellowish gray (5 Y 8/1), some tinted light greenish gray; waxy to *bentonitic appearance* common; moderately soft to some firm; noncalcareous, some siliceous; minute brown flecks; dispersed pyrite and pyritic *microfractures;* platy. 5% **Limestone**; light brownish gray to pinkish gray, light gray; cryptocrystalline; medium hard; clean; no porosity visible. No sample show. Total gas 7 to 22 units.

13890' – 13900' 20% **Red Beds**. 60% **Gray Beds**: **Shale**, medium to medium dark gray, some yellowish gray where bentonitic; minor **Siltstone**; some **Sandstone**; very light gray to light brownish gray; clean to argillaceous. 20% **Limestone**; pinkish gray to light brownish gray, some pale yellowish brown; cryptocrystalline; medium hard; clean; no porosity visible. No sample show. Total gas 10 to 14 units.

13900' – 13920' 80% - 70% **Limestone**; pinkish gray to light brownish gray, minor pale yellowish brown; cryptocrystalline to earthy—chalky texture in part may be artifact of drilling; firm to medium hard; clean; rare sparry calcite; staining shows minor part grades to dense **dolomite**; few glazed surfaces may be *slickensides; several chips of calcite fracture fill*; no porosity visible. Trace **Chert**; very light gray. 10% - 20% **Red Beds**. 10% **Gray Beds**. No sample show. Total gas 7 to 13 units.

13920' – 13962' Interbedded. **Dolomite** and lesser **Limestone**; pinkish gray to light brownish gray, some brownish gray; cryptocrystalline, part chalky, rare upper fine crystalline; clean, some slightly argillaceous; mostly no porosity visible but gradually faster, erratic drilling from 6 to 2 min/ft. Also, **Sandstone**; very light to medium gray, light brownish gray, trace tinted reddish brown; very fine to fine grained; hard; siliceous, quartzitic; part slightly dolomitic; some slightly pyritic; no porosity visible. Uphole,

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trace mixed **Dolomite** and **Silica**; clear to white; *fracture lining with few perfect dolomite rhombs and rare black nonhydrocarbon stain.* Virtually no sample show.

Hot-wire/FID Gas:	Total	C1	C2	C3	C4	Min/Ft	Rig Depth
Before	9	96%	4%	0%	0%	10.0	13920'
Maximum	49	89%	7%	3%	1%	3.5-5.8	13924'
During	42	91%	6%	3%	0%	8.2-3.2	13932'
During	42	86%	11%	3%	0%	7.2-2.4	13960'
After	12	92%	8%	0%	0%	4.3	13962'

Remarks: Increased rotary and motor torque at 13936', 13957', and 13962'. Tripped and found motor to be failing; bit OK. Ran intermediate logs at 13962'.

Intermediate casing: 7" liner set at 13925'. Drilled cement with milltooth bit #42 Smith FDS+.

13962' – 13965': 20% **Cement**; firm; contains chips of coal (not gilsonite) that yield slow bluish cut fluorescence; rare medium sand grains floating in cement are likely from shoe. 50% **Red Beds**: **Shale** and minor **Siltstone**; likely trash from rathole beneath casing shoe (13924' – 13962'). 30% **Siltstone/Shale**; nearly white to light gray, greenish gray; argillaceous and possibly silicified siltstone where white to light gray; partly silty greenish gray shale; trace dispersed pyrite; *microfractures filled with pyrite.* No sample show. Total gas 40 to 45 units (largely inferred hydrogen, minimal hydrocarbons detected on chromatograph).

Remark: Tripped at 13965' to pick up new bit #43 Smith MF57ODL and directional tools. Trip gas 254 units (almost entirely inferred hydrogen, virtually no hydrocarbons detected on chromatograph).

13965' – 13970': 60% **Cement**; firm; contains chips of coal that are source of trace free coal in samples. 30% **Red Beds**: **Shale** and minor **Siltstone**; much is likely trash from rathole beneath casing shoe (13924' – 13962'). 10% **Sandstone**; very light to medium light gray; very fine to lower fine grained; well sorted; medium hard; siliceous, slightly dolomitic, staining shows rare calcite cement and microfracture faces; clean to slightly argillaceous; no porosity visible. Trace **Shale/Siltstone**; nearly white to light gray, greenish gray; argillaceous and possibly silicified siltstone; part appears bentonitic; trace dispersed pyrite and pyrite-filled *microfractures*. No sample show. Total gas 45 to 90 units (almost entirely inferred hydrogen).

13970' – 13990': 20% - Trace **Cement**. 20% - Trace **Red Beds**: **Shale** and minor **Siltstone**. 40% - 60% **Sandstone**; very light to medium light gray; very fine to fine grained, rare medium grains; well sorted; medium hard, some hard; siliceous and partly quartzitic, non- to moderately dolomitic; clean to some argillaceous; no porosity visible. 10% - 30% **Dolomite**; pinkish gray to some light brownish gray; crypto- to lower medium crystalline; firm; clean; some sandy; no to very rare small vug porosity visible. Trace – 10% **Shale**; medium gray, some greenish gray; much of gray appears pulverized. No sample show. Total gas 90 to 18 units (almost entirely inferred hydrogen).

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13990' – 14000' — 10% **Cement**. 80% **Sandstone**; some very light gray, mostly light to medium gray; very fine to some fine grained; well sorted; medium hard; silica cement, much is also slightly dolomitic; slightly argillaceous; part is slightly pyritic; grades to **siltstone**; no porosity visible. 10% **Dolomite**; pinkish gray, light brownish gray, pale yellowish brown; cryptocrystalline to some medium crystalline; clean; no porosity visible. Trace **Shale/Rock Flour**; medium gray, much is pulverized. Trace **Calcite**; white; probable *fracture fill*. No sample show. Total gas 18 to 12 units.

14000' – 14060' — 100% **Sandstone**; some very light to medium gray, much is tinted light brownish to some brownish gray; trace stained grayish pink; very fine to some upper fine grained, rare rounded and frosted dispersed medium grains; mostly well sorted; medium hard to hard; siliceous and quartzitic—abundant glassy broken quartz grains and indistinct grain boundaries; non- to slightly dolomitic; dispersed brownish gray clay or stain is best seen in chips immersed in water and appears to grade to minor black intergranular stain; trace pyrite; mostly no porosity visible, very rare small sand-size isolated pores. Trace **Dolomite**; grayish pink, light brownish gray to yellowish brown; crypto- to lower fine crystalline; clean; no porosity visible. No fluorescence and no cut fluorescence from stained chips; dolomitic sandstone forms few large bubbles in acid suggesting trace hydrocarbons. Total gas 12 to 2 units.

Remarks: Slight decrease in flow out—minor mud loss and possible fracture at 14036'.

Tripped at 14064' for new bit #44 Hughes STR-70. Trip gas 17 units.

14060' – 14110' — 100% **Sandstone**; some very light gray to medium light gray, much is tinted light brownish gray; very fine to fine grained with some dispersed round frosted medium grains; well to some moderately sorted; medium hard to hard; siliceous and quartzitic—abundant glassy broken quartz grains and numerous indistinct grain boundaries; non- to slightly dolomitic, staining in Alizarin Red shows trace calcite cement or microfracture fill; brownish gray intergranular clay or stain appears to grade to minor black solid stain and inclusions; trace pyrite; no porosity visible. Trace **Dolomite**. No sample show. Total gas 3 to 2 units.

14110' – 14120' — 95% **Sandstone**; some very light gray to medium gray, much is tinted light brownish gray; very fine to fine grained with some dispersed medium grains; well to some moderately sorted; medium hard to hard; siliceous and quartzitic; most is slightly dolomitic, some nondolomitic; brownish gray intergranular clay or stain appears to grade to minor dark brownish gray and black solid stain and inclusions; rare pyrite; no porosity visible. 5% **Dolomite**; some very light to light gray, much pinkish gray to light brownish gray, trace grayish pink; crypto- to microcrystalline; firm to medium hard; dense; no porosity visible; rare black-stained *fracture faces*. No sample show. Total gas 3 to 2 units.

14120' – 14130' — 90% **Sandstone**; as above. 10% **Dolomite**; as below. No sample show. Total gas 2 units.

14130' – 14150' — 50% - 30% **Dolomite**; very light gray to pinkish gray (5 Y 8/1), very pale orange (10 YR 8/2) to pale yellowish brown (10 YR 6/2), minor pale brown (5 YR 5/2); crypto- to microcrystalline; some slightly sucrosic; firm, medium hard; clean; no porosity visible; slightly faster drilling from 14128' – 14149', 4.7 min/ft at best, average 6.2 min/ft. 50% - 70% **Sandstone**; light to medium gray, much is tinted light brownish

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gray; very fine to fine grained with some dispersed medium grains; well to some moderately sorted; medium hard to hard; most is slightly dolomitic, some nondolomitic; thin film of brownish gray intergranular clay or stain highlights many grains; trace pyrite; no porosity visible. No sample show. Total gas 2 units.

14150' – 14160' — 80% **Sandstone**; very light gray to medium light gray; very fine and fine grained with some dispersed and loose subround to round, frosted, commonly sheared medium grains; well to some moderately sorted; firm to hard; much of very fine grained sandstone is very dolomitic—chips commonly disaggregate in acid—slightly pyritic, grades to coarse **siltstone**; balance of sandstone is siliceous to quartzitic and slightly dolomitic; no porosity visible. 20% **Dolomite**; pinkish gray to pale yellowish brown and light brownish gray; crypto- to microcrystalline; no porosity visible. No sample show. Total gas 2 to 3 units.

14160' – 14162' — 90% **Sandstone**; very light gray to medium gray, part tinted light brownish gray; very fine and fine grained with some dispersed and loose subround to round, commonly sheared, lower to upper medium grains; increasingly siliceous and quartzitic; most is non- to slightly dolomitic, decreased very dolomitic very fine grained sandstone; trace pyrite; no porosity visible. 10% **Dolomite**; pinkish gray to light brownish gray, some tinted pale yellowish brown; crypto- to microcrystalline; no porosity visible. No sample show. Total gas 3 units.

Remark: — Sharp increase in rotary and motor torque (motor stalled) at 14169'. Tripped and found old bit #44 Hughes STR-70 well worn but cones not locked; motor may have been failing. Ran new bit #45 Hughes STR-70 and new motor at 14169'. Trip gas 19 units. Cuttings 14162' – 14169' circulated after trip.

14162' – 14230' — 90% - 100% **Sandstone**; some very light gray to medium gray, much is tinted light brownish gray; very fine and fine grained with some dispersed or loose medium grains; well to some moderately sorted; medium hard, hard; most is siliceous to quartzitic—numerous glassy broken quartz grains, grain boundaries often indistinct; non- to slightly dolomitic; thin film of brownish gray intergranular clay or stain commonly outlines grains and appears to grade to minor dark brownish gray to black intergranular stain; trace pyrite; no to some slight porosity visible. 10% - Trace **Dolomite**; light brownish gray, some pinkish gray; crypto- to microcrystalline; medium hard; clean, some very fine grained sandy; no porosity visible. Virtually no sample show; black intergranular stain increases downhole but yields no cut fluorescence or cut. Total gas 3 to 7 units.

14230' – 14260' — 20% - 40% - 20% **Dolomite**; some very light to light gray, mostly pinkish gray (5 YR 8/1) to pale yellowish brown (10 YR 6/2) and dark yellowish brown (10 YR 4/2), trace pale brown (5 YR 5/2); crypto- to microcrystalline, minor part slightly sucrosic; medium hard, little is firm; clean; staining with Alizarin Red shows rare *calcite-faced microfractures*; mostly no porosity visible, only several small vugs; faster drilling to 2.8 min/ft at best. 80% - 60% - 80% **Sandstone**; minor very light gray, light to medium gray, much is tinted light brownish gray to brownish gray; very fine to fine grained with dispersed and loose lower to upper medium grains; well to moderately sorted; medium hard, hard; siliceous and quartzitic—numerous glassy broken quartz grains; non- to slightly dolomitic; no to some slight porosity visible. Some spotty black intergranular stain in sandstone and trace planar *fracture* stain in dolomite: no fluorescence or cut fluorescence. Total gas 5 to 26 to 10 units.

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14260' – 14270'	90% **Sandstone**. 10% **Dolomite**. Trace **Shale**; medium gray; inferred from round pulverized masses; slight increase in other rock flour; slow drilling to 18 min/ft. No sample show. Total gas 18 to 5 units.
14270' – 14290'	80% **Dolomite**; pale yellowish brown (10 YR 6/2) to brownish gray (5 YR 4/1); crypto- to microcrystalline; medium hard, dense; clean; no porosity visible but black stained *microfractures* and *fracture faces* are common; faster drilling averages 4 min/ft, 2.3 min/ft at best. Few chips of **Calcite**; white *fracture fill*. 20% **Sandstone**; minor very light gray to mostly light to medium gray—commonly tinted light brownish gray to brownish gray; as above. No sample show. Total gas 10 to 18 units.
14290' – 14330'	70% - 95% **Sandstone**; minor very light gray to mostly light to medium gray—commonly tinted light brownish gray to brownish gray; very fine to fine grained with dispersed lower to upper medium grains; well to some moderately sorted; medium hard, hard; siliceous to quartzitic—numerous glassy broken quartz grains and indistinct grain boundaries; non- to slightly dolomitic; thin film of brownish gray clay or stain commonly highlights grains and appears to grade to minor black solid intergranular and fracture stain/fill; staining in Alizarin Red shows rare calcite likely associated with *microfractures;* mostly no porosity visible. 30% - 5% **Dolomite**; pale yellowish brown to brownish gray; crypto- to microcrystalline; dense; no porosity visible but some black stained *microfractures and fracture faces*. No sample show. Total gas 10 to 5 units.
Remarks:	Continued very small cuttings are coarse sand-size at best. Otherwise, good sample quality is shown by well-defined lithologic changes. Tripped at 14345' for new bit #46 Hughes STR-70 due to increased rotary torque and motor torque. Bit #45 was well worn but cones were not locked. Trip gas 19 units.
14330' – 14360'	95% **Sandstone**; very light to medium gray—commonly tinted light brownish gray; very fine to fine grained with dispersed and loose lower to upper medium, subround to round grains; well to some moderately sorted; much is hard; siliceous to quartzitic—numerous glassy broken quartz grains and indistinct grain boundaries; non- to slightly dolomitic; thin film of intergranular brownish gray clay or stain appears to grade to trace solid black stain/fill; rare minute patches of calcite may be *microfracture fill*; trace micropyrite; no porosity visible. 5% **Dolomite**; pale yellowish brown to brownish gray; crypto- to microcrystalline; dense; no porosity visible; rare black stain. No sample show. Total gas 4 units to trace.
14360' – 14380'	30% - 40% **Dolomite**; some very light gray, mostly pinkish gray to light brownish gray, trace grayish pink; crypto- to microcrystalline, some slightly sucrosic; medium hard, some firm; clean; virtually no porosity visible; slightly faster drilling uphole to 3 min/ft at best, 10 – 11 min/ft downhole. 70% - 60% **Sandstone**; some very light gray, mostly light to medium gray—commonly tinted light brownish gray; siliceous to quartzitic; most is slightly dolomitic; no porosity visible. No sample show. Total gas trace.
Remark:	Slow, steady drilling from 14370' – 14380' suggested possible anhydrite. None was detected in drill chips, rock flour, or in two mud samples (high pH of mud, however, would not favor anhydrite being dissolved in mud).

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14380' – 14390' 70% **Sandstone**; minor very light gray, mostly light to medium gray, some patches medium dark gray—commonly tinted light brownish gray; very fine to fine grained with some dispersed medium grains; well to some moderately sorted; much is hard, siliceous to quartzitic, and slightly dolomitic; some is firm to medium hard, less siliceous, and moderately dolomitic; trace pyrite; thin film of intergranular brownish gray clay or stain appears to grade to rare solid black stain/film; no porosity visible. 30% **Dolomite**; some very light gray, mostly pinkish gray to light brownish gray, some tinted pale yellowish brown; crypto- to microcrystalline; little is slightly sucrosic; clean; rare floating medium sand grains; staining shows rare patches and faces of calcite that may be *microfracture fill*; no porosity visible. No sample show. Total gas 2 units.

14390' – 14420' 70% - 90% **Dolomite**; some very light gray, mostly pinkish gray to light brownish gray, some tinted pale yellowish brown; crypto- to microcrystalline; some firm where slightly sucrosic, mostly medium hard; clean; staining in Alizarin Red shows *trace patches of calcite that is likely microfracture fill*; mostly no porosity visible, slight porosity where sucrosic; trace black solid stain along *probable fractures*. 30% - 10% **Sandstone**; minor very light gray, mostly light to medium gray—tinted light brownish gray in part; very fine and fine grained, some dispersed medium grains; siliceous and quartzitic to some moderately to very dolomitic; no porosity visible. No sample show. Total gas 3 to 4 units.

14420' – 14468' Variable 70% - 90% **Sandstone**; some very light gray, mostly light to medium light gray, some medium gray—part tinted light brownish gray; very fine and fine grained with some dispersed and loose lower to upper medium, subround to round grains; well to some moderately sorted; some firm where moderately to very dolomitic; much is medium hard to hard where siliceous to quartzitic and slightly dolomitic; thin film of intergranular clay or stain highlights grains in many chips and is best seen in chips immersed in water; mostly no porosity visible, minor slight intergranular porosity; trace solid black stain/fill. 30% - 10% **Dolomite**; some very light gray, mostly pinkish gray to light brownish gray; crypto- to microcrystalline; some slightly sucrosic; clean; no porosity visible. No sample show. Total gas 6 to 3 units.

Remark: Tripped at 14473' for new bit #47 Hughes STR-70. Bit #46 was well worn; one cone was loose. Trip gas 9 units.

14468' – 14520' 90% - 100% **Sandstone**; very light to medium light gray, some tinted light brownish gray; very fine and fine grained with some loose and dispersed lower to upper medium, subround to round, frosted grains; well to some moderately sorted; mostly hard; siliceous to quartzitic—numerous glassy broken quartz grains and indistinct grain boundaries; non- to slightly dolomitic; thin film of gray to brownish gray clay or stain highlights some grains and is best seen in chips immersed in water; trace pyrite; no porosity visible. 10% - Trace **Dolomite**; some very light gray, mostly pinkish gray to light brownish gray; crypto- to microcrystalline, minor part slightly sucrosic; medium hard, some firm; clean; no porosity visible. No sample show. Total gas 6 units to trace.

14520' – 14530' 60% **Dolomite**; very light gray, pinkish gray to light brownish gray, some tinted pale yellowish brown; crypto- to microcrystalline, some very fine crystalline; part slightly sucrosic; clean; no to trace intercrystalline porosity visible. 40% **Sandstone**; very

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light to medium light gray, some tinted light brownish gray. No sample show. Total gas trace to 10 units.

14530' – 14550' — 90% **Sandstone**; some very light gray, most is light brownish to brownish gray; very fine and fine grained with some dispersed medium grains; siliceous to quartzitic—numerous glassy broken quartz grains and indistinct grain boundaries; much is nondolomitic, lesser part is slightly dolomitic; abundant brownish gray to some black intergranular clay or nonhydrocarbon stain—some dry, solid, powdery fill and inclusions; no to trace porosity visible. 10% **Dolomite**; very light gray, pinkish gray to light brownish gray; crypto- to microcrystalline; no porosity visible. No sample show. Total gas 16 to 3 units.

Remark: — Tripped at 14566' for new bit #48 Hughes STR-70. Bit #47 was well worn and was starting to be cored out. Trip gas 12 units.

14550' – 14580' — 90% - 100% **Sandstone**; some very light gray, most is light brownish to brownish gray; very fine and fine grained with some dispersed medium grains; medium hard to hard; siliceous to quartzitic—numerous glassy broken quartz grains and indistinct grain boundaries; mostly nondolomitic; abundant brownish gray to black intergranular clay/stain/fill; no porosity visible. 10% - Trace **Dolomite**; very light gray, pinkish gray to light brownish gray. No sample show. Total gas trace to 3 units.

14580' - 14600' — 100% - 80% **Sandstone**; very light to medium light gray—decreased brownish gray tint and only minor black nonhydrocarbon stain/fill; very fine to fine grained with dispersed lower to upper medium, subround to round grains; mostly hard; siliceous to quartzitic—abundant glassy broken quartz grains and indistinct grain boundaries; nondolomitic to some slightly dolomitic; gray to some brownish gray intergranular clay/stain highlights some grains; no porosity visible. Trace – 20% **Dolomite**; some very light gray, mostly light brownish gray (5 YR 7/1 to 5 YR 5/1); crypto- to microcrystalline; minor part slightly sucrosic; medium hard, little is firm; clean; no porosity visible. No sample show. Total gas trace to 3 units.

14600' – 14610' — 70% **Sandstone**; some very light gray, mostly light to medium gray—part tinted brownish gray; very fine to fine grained with some dispersed medium grains; well to some moderately sorted; mostly hard; siliceous to quartzitic; slightly dolomitic, some nondolomitic; gray to some brownish gray intergranular clay/stain highlights some grains; trace pyrite; no porosity visible. 30% **Dolomite**; minor very light gray, mostly pinkish gray to light brownish gray, some tinted pale brown; crypto- to microcrystalline; little is slightly sucrosic and firm, mostly medium hard; clean; staining in Alizarin Red shows rare patches of calcite likely associated with microfractures; no porosity visible but sample contains 2 ft of fast drilling break averaging 3.5 min/ft. No sample show. Total gas trace to 2 units.

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MISSION CANYON LS. LOG TOP: 14614' TVD: 14008' DATUM: -6415'

LOST CIRCULATION: Lost 800 B starting from connection at 14635' to 14638'. Spotted two LCM pills. Pulled into casing and rebuilt mud volume while waiting on repair of light plant.

14610' – 14638' QUESTIONABLE TOTAL GAS AND SAMPLE QUALITY: Low sample volume; part of recovery comes from circulating surface system while rebuilding mud volume; mud level at gas trap fluctuated. 80% - 95% **Sandstone**; some very light to mostly light to medium light gray; very fine to some medium grained—*increasingly small cuttings and loose sand*; otherwise as above. 20% - 5% **Dolomite**; minor very light gray, mostly pinkish gray to light brownish gray; crypto- to microcrystalline; *similar to overlying Weber/Morgan dolomites and lighter colored than dolomite from the Mission Canyon at the Amoco Island Ranching D1, SEC 14, T4N, R7E.* Variable but overall faster drilling from 4.8 to 1.2 min/ft. No sample show. Total gas trace to 5 units.

Remark: Short trip gas after regaining circulation and repair of light plant: 4 units.

14638' – 14640' Poor sample quality: sandstone, minor dolomite, and mixed trash from mud tanks.

Remark: RESUME EXCELLENT TO GOOD SAMPLE QUALITY. Cutting size is larger than before circulation was lost at 14638'.

14640' – 14670' 95% **Dolomite**; some very light gray to pinkish gray, mostly light brownish gray (5 YR 7/1 to 5 YR 5/1) and pale yellowish brown (10 YR 6/2 to 10 YR 5/2); crypto- and micro- to some very fine crystalline; some sucrosic and firm; mostly medium hard and dense; clean; no to some slight intercrystalline porosity visible; variable fast drilling from 4 to 1.3 min/ft. Trace **Calcite**; white; thin facing on dolomite chips and rare loose blocks to 1 mm; *fracture fill; rare glazed surfaces are likely slickensides, not bit marks.* 5% **Sandstone**; very light gray to medium light gray; very fine and fine grained, some medium grains; siliceous to quartzitic; slightly dolomitic; no porosity visible. Trace black nonhydrocarbon stain on *fracture faces* of dolomite, rarely on calcite fill. Dull mineral fluorescence from dolomite; no cut fluorescence from black-stained or unstained chips. Total gas trace to 2 units.

14670' – 14680' 30% **Sandstone**; some very light gray, mostly light to medium light gray—tinted light brownish gray in part; very fine to medium grained; larger grains are subround to round; well to moderately sorted; firm to hard; much is hard to medium hard where siliceous to quartzitic and slightly to moderately dolomitic; some firm where very dolomitic—grades to some fine to medium grained sandy dolomite; mostly no porosity visible; slower drilling at 5.5 to 8.8 min/ft. 70% **Dolomite**; mostly light brownish gray, some pale yellowish brown; as above but part fine to medium grained sandy. Trace **Calcite**; white; thin facing along *fractures.* No sample show. Total gas 2 to 3 units.

14680' – 14690' 10% **Anhydrite**; white, some clear; micro- to very fine crystalline firm platy chips; also opaque amorphous soft round masses. 70% **Dolomite**; some very light gray to pinkish gray, mostly light brownish gray to pale yellowish brown; crypto- and microcrystalline; mostly medium hard and dense, some firm where slightly sucrosic; clean; no to some slight intercrystalline porosity visible; 4.3 to 6.8 min/ft. 20% **Sandstone**; very light to medium gray; very fine to medium grained; well to

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moderately sorted; most is medium hard to hard and siliceous to quartzitic; slightly to moderately dolomitic; no porosity visible. No sample show. Total gas 3 to 5 units.

Remarks: At 14703' pulled into base of casing to wait on relief crew. Circulated across top of hole (not down drill pipe). Tripped for new bit #49 Hughes STR-70 at 14703'. Trip gas 9 units. Cuttings 14690' – 14703' were circulated after trip.

Dolomite is still similar to Weber/Morgan dolomites and remains overall lighter colored than dolomite from the Mission Canyon at the Amoco Island Ranching D1.

14690' – 14710' 30% - 20% **Sandstone**; very light to medium light gray, some tinted light brownish gray; very fine to medium grained; well to moderately sorted; most is medium hard to hard; siliceous to quartzitic; slightly to moderately dolomitic; thin film of gray to brownish gray intergranular clay/stain highlights some grains; no porosity visible. 70% **Dolomite**; some very light gray to pinkish gray, mostly light brownish gray to pale yellowish brown; crypto- to microcrystalline; medium hard and dense, some firm where slightly sucrosic and platy; clean; part sandy; *rare black nonhydrocarbon stained microfractures and fracture faces*; mostly no to some slight intercrystalline porosity visible. Trace – 10% **Anhydrite**. No sample show. Total gas 3 to 2 units.

14710' – 14745' 60% **Dolomite**; pinkish gray to light brownish gray, some tinted pale yellowish brown; crypto- to microcrystalline; some firm where slightly sucrosic and lighter colored; mostly medium hard and dense; clean, some sandy; mostly no porosity visible, some slight intercrystalline porosity where sucrosic. 20% **Anhydrite**; white, some clear; microcrystalline firm to friable platy chips and some soft opaque amorphous rounded masses. 20% **Sandstone**; very light to medium light gray, some tinted light brownish gray; very fine to medium grained; well to moderately sorted; medium hard to hard; siliceous to quartzitic—glassy broken quartz grains and indistinct grain boundaries common; slightly to moderately dolomitic; thin film of gray to brownish gray clay/stain highlights some grains; much is broken to loose grains and clusters consisting of only several grains; no porosity visible. No sample show. Total gas trace to 3 units.

Remark: Samples 14710' – 14740' are lighter colored overall compared to samples 50 ft above and below.

14745' – 14765' 90% **Dolomite**; some very light and light gray, pinkish gray to light brownish gray, increased pale yellowish brown to some dark yellowish brown; crypto- to microcrystalline; much is medium hard and dense; some firm where lighter colored and slightly sucrosic; clean, generally not sandy; staining shows rare edging and patches of calcite in lighter colored chips; some probable anhydrite *fracture fill* in yellowish brown chips; mostly no porosity visible but faster drilling averages 4 min/ft, 2.3 min/ft at best. 5% **Anhydrite**; white, some clear. 5% **Sandstone**. No sample show. Total gas 2 to 5 units.

Remark: Collected two 5-ft samples to confirm slower drilling was sandstone.

14765' – 14790' 50% - 80% **Sandstone**; very light to medium light gray, minor medium gray—light brownish gray tint in part; some very fine, mostly fine to upper medium grained, rare lower coarse grains; well to moderately sorted; much appears very hard; siliceous to quartzitic—abundant glassy broken quartz grains and indistinct grain boundaries;

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	slightly dolomitic; thin film of gray to brownish clay/stain highlights some grains; no porosity visible. 50% - 20% **Dolomite**; pinkish gray to light brownish gray, minor yellowish brown; crypto- to microcrystalline; downhole portion is partly sandy; mostly no porosity visible. Trace **Anhydrite**; white, some clear. No sample show. Total gas 5 to 6 units.
14790' – 14810'	100% **Dolomite**; pinkish gray to light brownish gray (5 YR 8/1 to (5 YR 5/1) and pale to dark yellowish brown (10 YR 7/2 to 10 YR 4/2); crypto- to microcrystalline; some firm and slightly sucrosic where lighter colored; much is medium hard and dense; clean; rarely sandy; mostly no porosity visible, some slight intercrystalline porosity where sucrosic; average 4 min/ft, 2.9 min/ft at best. Trace **Sandstone**. No sample show. Total gas 6 to 8 units.
Remark:	Total gas detector was zeroed at 14812': gas decreased from 8 to 2 units.
14810' – 14826'	30% - 20% **Sandstone**; very light to medium light gray—part tinted light brownish gray; very fine to upper medium grained; larger grains are subround to round; well to moderately sorted; larger grains are commonly broken with frosted exteriors contrasting with clear glassy interiors; firm to hard; siliceous to quartzitic; slightly to some very dolomitic; no porosity visible. 70% **Dolomite**; pinkish gray to light brownish gray and pale to dark yellowish brown; crypto- to microcrystalline; some firm and slightly sucrosic where lighter colored; mostly medium hard and dense; clean; part very fine to medium grained sandy; mostly no porosity visible; some slight intercrystalline porosity where sucrosic; some probable anhydrite *fracture fill*. Trace increasing to 10% **Anhydrite**; white, some clear; microcrystalline firm to friable platy chips and some soft opaque amorphous rounded masses. No sample show. Total gas 8 units to trace.
Remark:	Tripped for new bit #50 Hughes STR-70 at 14848'. Bit #49 shows less severe wear due to reduced amount of very abrasive sandstone. Samples 14826' – 14848' were circulated after trip. Trip gas 35 units—largely inferred H2 (chromatograph shows minimal hydrocarbons).
14826' – 14850'	90% -70% **Dolomite**; pinkish gray to light brownish gray and pale yellowish brown to some dark yellowish brown; crypto- to microcrystalline; firm where lighter colored, slightly sucrosic, and platy; much is medium hard and dense; clean; thin facing on some chips is likely *anhydrite fracture fill*; no porosity visible. 10% - 30% **Sand/Sandstone**; clear to medium light gray; very fine to medium grained; well to moderately sorted; abundant loose broken grains, some larger grains are subround to round and frosted; clusters consists of small number of grains and are siliceous and slightly dolomitic; no porosity visible. Trace **Anhydrite**; white, clear; microcrystalline firm to friable chips and soft round amorphous masses. No sample show. Total gas trace to 3 units.
14850' – 14890'	90% - 80% **Dolomite**; pinkish gray to light brownish gray and pale yellowish brown to some dark yellowish brown; crypto- to microcrystalline; firm where lighter colored, slightly sucrosic, and platy; much is medium hard and dense; clean; thin facing on some chips is likely *anhydrite fracture fill*; no porosity visible. Trace – 10% **Anhydrite**; white, clear; microcrystalline firm to friable platy chips and minor soft round amorphous masses. 10% **Sand/Sandstone**; clear to some medium light gray; very fine to upper medium grained; abundant loose broken grains and very

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small siliceous, dolomitic clusters; no porosity visible. No sample show. Total gas 6 units to trace.

14890' – 14930' Variable 20% - 40% **Sandstone**; nearly white to pinkish gray, some tinted light brownish gray; upper very fine to fine grained with some dispersed upper medium grains; well to moderately sorted; friable to brittle thin platy chips, minor medium hard to hard siliceous chips, and substantial loose sand; very dolomitic/anhydritic to some quartzitic; rare red to orange-pink staining around some quartz grains and similarly stained patches within chips; no porosity visible. 70% - 50% **Dolomite**; very light gray to pinkish gray and light brownish gray, also some pale yellowish brown to lesser dark yellowish brown; crypto- to microcrystalline; friable to firm where lighter colored, thin platy, and slightly sucrosic; medium hard where darker colored, dense, and subblocky to blocky; mostly no to some slight intercrystalline porosity where sucrosic; *numerous anhydrite-faced edges and some anhydrite microfracture fill.* 10% **Anhydrite**; white, clear; mostly microcrystalline friable to firm chips, lesser soft rounded amorphous masses. No sample show. Total gas 2 to 3 units.

14930' – 14950' 70% - 80% **Dolomite**; minor very light to light gray, much light brownish gray to lesser brownish gray, minor pale yellowish brown to dark yellowish brown; crypto- to microcrystalline; clean, some sandy; mostly no porosity visible. 20% - 10% **Sand/Sandstone**; clear, nearly white; mostly fine to medium grained; much is loose; clusters are dolomitic/anhydritic, few chips are siliceous to quartzitic; no porosity visible. 10% **Anhydrite**; white, clear. No sample show. Total gas 3 units to trace.

14950' – 14960' 90% **Dolomite**; minor very light gray to pinkish gray, mostly light brownish gray and pale to dark yellowish brown, minor dusky yellowish brown; crypto- to microcrystalline; some firm where lighter colored, slightly sucrosic, and thin platy; much is medium hard and dense; clean; generally not sandy; *anhydrite-faced chips common.* 10% **Anhydrite**; white, clear. No sample show. Total gas trace to 3 units.

14960' – 14970' 90% **Dolomite**; some very light to light gray, pinkish gray to light brownish gray, and pale to dark yellowish brown; crypto- to microcrystalline; some firm to slightly friable where lighter colored and sucrosic; much is medium hard and dense; clean to slightly argillaceous; generally not sandy; *anhydrite-faced chips common—probable fracture fill*; mostly no porosity visible but faster drilling to 2.1 min/ft at best. 10% **Anhydrite**; white, clear; firm to friable microcrystalline chips, minor soft white amorphous round masses. No sample show. Total gas trace to 3 units.

14970' – 15016' 90% - 95% - 100% **Dolomite**; some very light to light gray, pinkish gray to light brownish gray, increasing pale to dark yellowish brown and minor dusky yellowish brown; crypto- to microcrystalline; some firm, mostly medium hard; clean to slightly argillaceous; no porosity visible except some slight intercrystalline porosity and *few small vugs in several chips*; *anhydrite-faced and some calcite-faced chips common—probable fracture fill*; continued fast drilling averaging 3 min/ft. 10% - 5% - Trace **Anhydrite**; white to clear; firm to friable microcrystalline chips, minor soft white amorphous round masses. Very rare black nonhydrocarbon staining. No sample show.

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Slight gas show: 3 increasing to 14 units at 14974', then 5 to 3 units background below 14984'.

15016' – 15019' 100% **Dolomite**; increased light brownish gray, also pale yellowish brown to some dusky yellowish brown; as above. Trace **Sandstone**; very light to light gray; very fine to medium grained; moderately sorted; medium hard to hard; siliceous to quartzitic—numerous glassy broken quartz grains; slightly to moderately dolomitic, may also be anhydritic; no porosity visible. Trace **Anhydrite**; white, clear. No sample show. Total gas 5 units.

Remarks: Preceding 3-ft sample and spot sample at end of circulation were collected to isolate slow drilling break (3 min/ft to 15 min/ft)—*only trace hard sandstone recovered.* Bit and motor were OK; mechanical cause of abrupt slow footage is unlikely.

Short trip gas of 4 units at 15019'.

Part of dolomite below 14950' is dark brown enough to better match selected chips of Mission Canyon from Amoco Island Ranching D1. Samples still lack neutral dark gray to grayish black dolomite that is recorded on mud log from Anschutz Ranch #34-2 starting at 130 ft into the Mission Canyon and that is found in selected chips from Amoco Island Ranching D1 starting within the first 100 ft of Mission Canyon.

Ran new bit #51 Hughes STR-70 in at 15019' after running FMS dipmeter. Trip gas 35 units (largely inferred hydrogen, minimal hydrocarbons on chromatograph).

15019' – 15023' Trace **Sandstone**; very light to light gray; very fine to lower medium grained; well to moderately sorted; medium hard to hard; siliceous to quartzitic in part—glassy broken quartz grains in all chips; slightly to moderately dolomitic/anhydritic; thin platy cuttings; no porosity visible; probable cause of slow drilling break to 20 min/ft. Trace **Anhydrite**. 100% **Dolomite**. No sample show. Total gas 3 units.

Remark: Low recovery of tight sandstone in 4-ft sample caught to isolate slow drilling break indicates cuttings lag slightly behind carbide gas. Tight sandstone increases slightly in following sample.

15023' – 15040' 10% - Trace **Sandstone**; very light to light gray; very fine to lower medium grained; well to moderately sorted; medium hard to hard; siliceous to quartzitic in part—glassy broken quartz grains in all chips and in loose sand; slightly to moderately dolomitic/anhydritic; no porosity visible; likely from slow drilling above. 90% - 100% **Dolomite**; light brownish gray to some brownish gray, much pale to dark yellowish brown; crypto- to microcrystalline; no porosity visible. Trace **Anhydrite**; white, clear. No sample show. Total gas 3 to 7 units.

15040' – 15070' 100% **Dolomite**; minor light gray, light brownish gray to some brownish gray, pale to much dark yellowish brown, minor dusky yellowish brown; crypto- to microcrystalline, minor very fine crystalline where sucrosic; medium hard, some firm where sucrosic; trace hard and siliceous—scrapes steel from probe; *thin veneer of anhydrite on faces and edges of some chips, some anhydrite microfracture fill; rare calcite fracture fill*; no porosity visible increasing to trace chips exhibiting fair intercrystalline porosity where micro- to fine crystalline euhedral dolomite rhombs

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	are found—trace black nonhydrocarbon stain and fill associated with slight porosity; faster drilling averages 3.5 min/ft, at best 1.8 min/ft. No significant free anhydrite. No sample show. Total gas 7 to 3 units.
15070' – 15120'	100% **Dolomite**; increase in light brownish gray to brownish gray, minor pale yellowish brown, some dark yellowish brown to minor dusky yellowish brown; crypto- to microcrystalline; medium hard; most is not sandy; *thin veneer of anhydrite on faces and edges of some chips, some anhydrite microfracture fill*; *rare calcite fracture fill*; mostly no porosity visible; slightly slower drilling averages 5 to 6 min/ft. No sample show. Total gas 3 to 5 units.
Remark:	No good sample evidence of cause of slow drilling to 23 min/ft for 15104' – 15108'. Few chips of hard sandstone and rare glassy broken quartz grains in light colored dolomite.
15120' – 15160'	100% **Dolomite**; some light brownish gray to mostly brownish gray and dark yellowish brown, some dusky yellowish brown; crypto- to microcrystalline, minor very fine crystalline; mostly medium hard, some firm where lighter colored and slightly sucrosic; clean, not sandy; *thin veneer of anhydrite on faces and edges of some chips, some anhydrite microfracture fill*; mostly no porosity visible to some slight intercrystalline porosity visible; faster drilling averages 3.5 min/ft. No sample show. Total gas 5 units to trace.
15160' – 15200'	100% **Dolomite**; minor light gray, some light brownish gray, increasing brownish gray, much pale yellowish brown to increasing dark yellowish brown (10 YR 6/2 to 10 YR 3/2), some dusky yellowish brown; crypto- to microcrystalline; medium hard, some firm; clean to slightly argillaceous; not sandy; *anhydrite patches, faces and microfracture fill common*; mostly no porosity visible, very rare intercrystalline porosity visible where dolomite euhedral rhombs are found; average 4 min/ft. No sample show. Total gas trace to 3 units.
15200' – 15240'	100% **Dolomite**; increased light brownish gray and pale yellowish brown, some dark yellowish brown, decreasing dark yellowish brown and dusky yellowish brown; crypto- to microcrystalline; mostly medium hard and dense, some firm and slightly sucrosic; clean, some slightly argillaceous; not sandy; *anhydrite patches, faces and microfracture fill common*; mostly no porosity visible; average 4 min/ft. No sample show. Total gas 3 to 5 units.
15240' – 15260'	100% **Dolomite**; increased brownish gray to dark yellowish brown, lesser light brownish gray and pale yellowish brown; slightly more argillaceous than above; no porosity visible; average 4 min/ft. No sample show. Total gas 3 to 2 units.
15260' – 15300'	100% **Dolomite**; uphole some light gray to pinkish gray and much pale yellowish brown; middle is mostly dark yellowish brown; base is partly medium gray; crypto- to microcrystalline, little is slightly sucrosic; mostly medium hard and dense, little is firm; some hard and partly siliceous—scrapes steel from probe but almost all chips still dissolve in acid; quite clean; not sandy; *some anhydrite patches, faces and microfracture fill*; mostly no porosity visible; varies from 3 to 7 min/ft with undetermined 3-ft hard streak to 13.5 min/ft. No sample show. Total gas 5 to 2 units.

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Remark:	Tripped at 15319' for new bit #52 Hughes STR-70. Trip gas 27 units (mostly inferred hydrogen, minimal hydrocarbons shown on chromatograph).
15300' – 15360'	100% **Dolomite**; minor light gray; mostly light brownish gray, pale yellowish brown—some mottled medium gray—and dark yellowish brown; minor dusky yellowish brown; crypto- to microcrystalline; firm to medium hard; quite clean to slightly argillaceous; generally not sandy; *some anhydrite patches, faces and microfracture fill*; small cuttings; mostly no porosity visible. In samples lagged after trip and in first several samples drilled with new bit: Trace **Sandstone**; very light gray to medium gray; very fine to fine grained; hard, tight; glassy broken quartz grains common; may account for slow drilling at start of bit run. No sample show. Total gas 2 to 6 units.
15360' – 15420'	100% **Dolomite**; some light brownish gray to pale yellowish brown, mostly brownish gray tinted dark yellowish brown in part, some dusky yellowish brown toward base; some cryptocrystalline, mostly micro- to some very fine crystalline; firm, little is medium hard; quite clean to slightly argillaceous; not sandy; *staining shows minor anhydrite and trace calcite probable microfracture fill as thin veneer on faces and edges of chips*; small cuttings; no to some slight intercrystalline porosity where slightly sucrosic; faster drilling averages 3 to 4 min/ft. No sample show.
Slight gas show:	Total gas increased briefly from 5 to 33 units peak at 15366', then 6 to 10 units.
15420' – 15450'	100% **Dolomite**; some light brownish gray, mostly brownish gray—tinted dark yellowish brown in part—and dusky yellowish brown to brownish black; crypto- to microcrystalline; firm to medium hard; quite clean to slightly more argillaceous than overlying dolomite; mostly no porosity visible; slightly slower drilling averages 4.5 min/ft. No sample show. Total gas 9 to 3 units.
15450' – 15530'	100% **Dolomite**; mixed light brownish gray to brownish gray and dark yellowish brown uphole, mostly light brownish gray downhole; crypto- to microcrystalline; medium hard, some firm; quite clean to slightly argillaceous; staining shows *minor anhydrite and trace calcite probable microfracture fill*; mostly no porosity visible; drilling time averages 3.5 to 4 min/ft. No sample show. Total gas trace to 6 units.
15530' – 15560'	100% **Dolomite**; much brownish gray to some brownish black and dark gray to grayish black, lesser light brownish gray; crypto- to microcrystalline; medium hard, some firm, minor part is hard and partly silicified; much is quite clean to some moderately argillaceous; staining shows *minor calcite and rare anhydrite microfracture fill—few chips of loose calcite cleavage blocks to 0.5 mm;* mostly no porosity visible. Trace **Shale**; grayish black; smooth; firm; slightly dolomitic; coarse platy. No sample show. Total gas 3 to 5 units.
15560' – 15580'	Trace – 5% **Chert**; brownish black, dark brownish gray, some medium light gray streaks; hard, sharp irregular to blocky chips. 100% - 95% **Dolomite**; much brownish gray to some brownish black and grayish black, lesser light brownish gray

LITHOLOGY AND SHOWS

and pale to dark yellowish brown; quite clean to some moderately argillaceous; staining shows rare calcite and some white undetermined microfracture fill; mostly no porosity visible. Few chips of **Shale**; grayish black; smooth, some glazed surfaces are probable *slickensides*. No sample show. Total gas 4 to 6 units.

Remarks: Samples 15420' – 15450' and 15530' – 15580' are darkest samples to this depth in the Mission Canyon. Such late appearance of substantial dark dolomite compared to selected chips from the Amoco Island Ranching D1 suggests *continued substantial stretch* of normal thickness due to dip/hole angle and/or stacking/faulting.

Change to dark cuttings in last five samples is seen easily without microscope and proves continued good sample quality.

Tripped at 15590' for new bit #53 Smith F7ODPD. Bit #52 had no inserts left on outer rows. Trip gas 53 units (largely inferred hydrogen, minimal hydrocarbons).

15580' – 15630' 100% **Dolomite**; much brownish gray to some brownish black, lesser light brownish gray and minor pale to dark yellowish brown; minor cryptocrystalline, mostly micro- to some very fine crystalline; medium hard to some firm; slightly argillaceous; *some white anhydrite and rare to subequal calcite microfracture fill*; no to some slight intercrystalline porosity visible. Uphole, few chips of **Chert**; brownish black; hard, sharp. Downhole, few chips of **Shale**; grayish black; smooth, some probable *slickensides*. No sample show. Total gas fluctuates from 2 to 28 units.

Remark: Continued mild phosphatic odor from samples when heated.

15630' – 15650' 98% - 100% **Dolomite**; much brownish gray to some brownish black, lesser light brownish gray and minor pale to dark yellowish brown, some medium dark to dark gray; mostly micro- to very fine crystalline; medium hard to firm; slightly argillaceous; no to some slight intercrystalline porosity; trace to moderate black solid stain/fill does not fluoresce or yield cut fluorescence. 2% - Trace **Calcite**; white; *loose cleavage blocks and attached fracture fill.* No sample show. Total gas 8 to 35 units.

15650' – 15700' 100% **Dolomite**; light to dark brownish gray; some brownish black, light gray to dark gray, and pale yellowish brown; minor cryptocrystalline, mostly micro- to upper very fine crystalline; firm to medium hard; slightly argillaceous; no to slight intercrystalline porosity, rarely fair intercrystalline porosity where euhedral dolomite rhomb clusters are found; common black solid intercrystalline stain/fill does not fluoresce or yield cut fluorescence. Trace **Calcite**; few loose cleavage blocks, some *microfracture fill*. No sample show. Total gas 33 gradually falling to 7 units.

15700' – 15770' 100% **Dolomite**; light brownish gray to brownish gray, decreasing brownish black to grayish black, some neutral light gray to medium dark gray; some cryptocrystalline appears siliceous, mostly micro- to fine crystalline; firm to some hard; clean to slightly argillaceous; no to some fair intercrystalline porosity—some euhedral dolomite rhombs in clusters, rarely along probable fracture faces—rare isolated small vug porosity; common black solid intercrystalline stain/fill does not fluoresce or yield cut fluorescence. Trace **Calcite**; few loose cleavage blocks, some *microfracture fill*. No sample show. Total gas 9 to 3 units, then increase to 22 units at 15760' – 15770'.

LITHOLOGY AND SHOWS

15770' – 15790'	100% **Dolomite**; light brownish gray to dark brownish gray, minor brownish black, minor yellowish brown; some crypto- to mostly micro- to very fine crystalline; firm to medium hard, little hard and partly silicified; slightly argillaceous; no to some slight intercrystalline porosity; decreasing but still common black solid intercrystalline and microfracture stain/fill. Trace **Calcite**. Trace **Chert**; light to medium gray, dark brownish gray, brownish black; hard, sharp. No sample show. Total gas variable 20 to 3 units.
15790' – 15830'	100% **Dolomite**; light brownish gray to dark brownish gray, minor brownish black, minor neutral light to dark gray; some cryptocrystalline that is partly silicified, mostly micro- to fine crystalline; clean to slightly argillaceous; firm to hard; no to some slight intercrystalline porosity visible—rarely fair intercrystalline porosity where euhedral dolomite rhombs are found; some black solid intercrystalline stain/fill. At top, Trace **Shale**; medium dark gray to dark gray; moderately smooth; firm; nondolomitic. Few chips of **Chert**; light to medium gray, brownish gray. Trace **Calcite**; white; *fracture fill.* No sample show. Total gas 6 to 38 units maximum at 15800', then 5 to 12 units.
15830' – 15880'	100% **Dolomite**; decreased light brownish gray, much brownish gray to dark brownish gray, increased brownish black; minor cryptocrystalline, mostly micro- to very fine crystalline, some fine crystalline; firm to some hard—trace siliceous streaks; slightly to some moderately argillaceous; single possible light brownish gray **crinoid columnal** at 15880'; no to slight intercrystalline porosity visible; some black solid intercrystalline fill/stain. Trace **Calcite**; white; loose cleavage blocks and *microfracture fill.* No sample show. Total gas 8 to 2 units.
15880' – 15900' TD	100% **Dolomite**; increased light brownish gray, also brownish gray to some brownish black; minor cryptocrystalline, mostly micro- to some fine crystalline; firm to hard—trace siliceous streaks; slightly argillaceous; *staining reveals no calcitic dolomite or limestone;* no to slight intercrystalline porosity visible; some black solid intercrystalline fill/stain. Trace **Chert**; dark brownish gray, grayish black, few chips light gray; hard, sharp. Trace **Calcite**; white; *loose cleavage blocks and microfracture fill.* No sample show. Total gas 3 to 6 units.
Remarks:	Ran FMS dipmeter at 15900'. Made trip to circulate out potential gas buildup after delays due to first Schlumberger logging truck running off rig road and second logging truck losing hydraulic power. Trip gas 36 units. Released mud logging unit. Ran final Platform Express dual laterolog-neutron-density stacked tools at 15900' on 14 February 2000.

CORES

CORE #1: Thaynes Limestone 9986' – 10030'. Cut 44 ft; full recovery. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. All samples were checked for stain, fluorescence, and cut fluorescence. No hydrocarbon odor was detected when taking chip samples.

9986' **Shale**; medium dark gray; firm to medium hard; some fine silt; slightly dolomitic; several white *dolomite-filled vertical microfractures (less than 0.2 mm wide)*. No show.

9990' **Siltstone**; medium gray, some tinted light brownish gray; quite clean; medium hard; staining shows moderate calcite cement, prolonged effervescence indicates some dolomite cement as well as silica cement; after reaction in acid chips are firm to medium hard—10% to 15% total carbonate; trace mica, some copper-red; one clear, white, and light gray *dolomite-faced vertical fracture appears mostly open*, partly healed or slickensided on one side of hand sample. No show.

9995' **Siltstone**; medium gray; medium hard; staining shows minor calcite cement (dispersed silt-size specks) mixed with dolomite and silica cement—larger patchy calcite is due to limy inclusions and/or microfracture fill; after reaction in acid chips vary from firm to medium hard—5% to 25% total carbonate; *slickensided calcite-fracture fill displays 20 deg apparent dip*. No show.

10000' **Siltstone**; medium dark to medium gray, lighter colored on thin edges and after reaction in acid; medium hard; staining shows minor calcite cement mixed with dolomite cement and silica cement; chips remain medium hard after reaction in acid—5% to 10% total carbonate cement; crushes to sharp irregular and subblocky chips; one 1 mm wide *calcite-faced fracture*, no euhedral crystals showing open fracture. No show.

10005' **Siltstone**; medium dark gray; some dark gray argillaceous wisps and laminae; medium hard; staining shows dolomite cement and subordinate patchy calcitic lenses or inclusions; chips are firm to medium hard after reaction in acid; one 2 mm wide vertical white *dolomite-filled fracture* and opposing vertical white filled *microfracture*. No show.

10010' **Siltstone**; medium dark to medium light gray, some tinted light brownish gray; medium hard; staining shows mixed calcite/dolomite cement and silica cement; chips become firm or remain medium hard following dissolution of 10% carbonate cement; one 2 mm wide vertical white *dolomite-filled fracture*. No show.

10015' **Shale**; medium dark gray; fine silty; medium hard; slightly dolomitic; crushes with pliers to sharp irregular pieces. No show.

10020' **Shale**; medium dark gray, some surfaces dark gray; fine silty; medium hard; slightly dolomitic; crushes with pliers to subblocky and sharp irregular pieces; apparent dip of *slickenside* is 45 deg. No show.

10025' **Siltstone**; medium gray; medium hard; mixed calcite and dolomite cement, some silica cement—chips remain intact in acid but are firm to friable after dissolution of carbonate cement; some dark gray undetermined inclusions; sample exhibits one

CORES

fracture faced with white calcite and minor dolomite and is cut by white *filled fracture* 1 mm wide, no evidence of open fractures. No show.

10029' **Siltstone**; medium dark to medium gray, lighter on thin edges; slightly argillaceous; medium hard; staining shows mixed calcite and dolomite cement; white *calcite-faced fracture* lacks euhedral crystals indicating open fracture. No show.

10030' **Siltstone**; medium dark gray, medium gray to light gray on thin edges and after acidization; slightly argillaceous; medium hard; staining in Alizarin Red shows moderate calcite cement, prolonged effervescence suggests mixed dolomite cement as well—15% to 20% total carbonate cement; some siliceous streaks; no porosity visible. No fluorescence; virtually no cut fluorescence.

CORE #2: Thaynes Limestone 10030' – 10059'. Cut 29 ft; recovered 28 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. No stain, minor light yellow fluorescence along fractures but virtually no cut fluorescence. No hydrocarbon odor was detected when taking chip samples except possibly at base of core. Odor from cut-off saw "grinding blade" lingers.

10033' **Limestone**; medium gray, mottled light gray and faintly light brownish gray; crypto- to microcrystalline; firm, medium hard; quite clean, minor insoluble residue is quartz silt, lower very fine grained sand, and dark gray to black argillaceous, fine silty masses; no porosity visible; one *calcite-filled fracture*. No show.

10038' **Siltstone**; medium dark gray; medium hard; moderately calcareous, prolonged effervescence in acid suggests some dolomite cement as well—15% to 20% total carbonate cement; after reaction in acid chips are firm, some medium hard; minor dark argillaceous streaks; 1 mm *calcite-filled* fracture. No show.

10043' **Siltstone**; medium to medium dark gray; medium hard, some hard; staining shows slight to moderate calcite cement, prolonged effervescence suggests some dolomite cement—10% total carbonate content; after reaction in acid most chips remain medium hard due to silica cement and some micro-streaks that are cherty; *vertical fracture face contains slickensided or smeared calcite fracture fill, may be open but no euhedral crystals; apparent dip of second calcite-filled fracture is 20 to 30 deg.* Minor spotty light yellow fluorescence is associated with calcite fracture fill—no cut fluorescence. No show from chips crushed with pliers.

10048' **Siltstone**; medium dark to dark gray; argillaceous laminae; medium hard; moderately calcareous, prolonged effervescence in acid indicates dolomite cement as well as silica cement; after reaction in acid most chips remain medium hard, some are firm—10% total carbonate content; trace muscovite; *calcite-lined fracture face* exhibits abundant cleaved calcite—no definite euhedral crystals indicating open fracture. Some patchy light yellow cut fluorescence along fracture face when fresh but no cut fluorescence. No fluorescence from crushed chips but extremely faint slow nonstreaming cut fluorescence dries to virtually no fluorescent halo—may reflect some organic content of dark argillaceous laminae.

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10053' **Siltstone**; medium dark gray; slightly argillaceous; medium hard; moderately calcareous; after reaction in acid chips become firm or remain medium hard—10% to 15% total carbonate; several thin 0.2 to 0.6 mm *calcite-filled vertical fractures.* No to faint yellow cut fluorescence along fractures; no cut fluorescence.

10058' **Siltstone**; medium gray; medium hard to some hard; staining shows dominant calcite cement—15% to 30% total carbonate content; some streaks are thoroughly siliceous, cherty, hard, and scrape steel from probe; several 2 to 3 mm wide ovoid *fossil molds*; two white *dolomite-filled thin fractures* 0.1 and 0.3 mm wide. No stain. Some patchy light yellow fluorescence at base of hand sample and along filled fractures but no cut fluorescence. Crushed chips do not fluoresce or yield cut fluorescence.

CORE #3: Thaynes Limestone 10536' – 10551'. Cut 15 ft; recovered 14 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. No hydrocarbon odor from fresh chips. No stain, fluorescence, or cut fluorescence.

10536' **Siltstone**; pale reddish brown to grayish red (10 R 5/3 to 10 R 4/2), lighter colored on thin edges; medium hard; slightly dolomitic and anhydritic cement—chips remain intact and medium hard after reaction in acid; minor small white to clear patches of microcrystalline anhydrite; trace minute black grains; slightly argillaceous; several *anhydrite-filled microfractures.* No sample show.

10539' **Siltstone**; pale reddish brown on thin edge to overall grayish red; medium hard; slightly dolomitic and anhydritic cement—chips remain intact and medium hard after reaction in acid—5% dolomite; trace minute black grains; slightly argillaceous; *low angle anhydrite-lined fracture/slickenside* developed along dark grayish red shale lamina. No sample show.

10544' **Siltstone**; pale reddish brown on thin edge to overall grayish red; medium hard; slightly dolomitic and anhydritic cement—chips remain intact and medium hard after reaction in acid—5% dolomite; trace minute black grains; slightly argillaceous; *vertical fracture faced with anhydrite*—no definite evidence of open fracture. No sample show.

10549' **Siltstone**; pale brown to grayish brown (5 YR 5/2 to 5 YR 4/2); moderately clean to argillaceous; medium hard; slightly dolomitic but not anhydritic cement—chips remain intact and medium hard after reaction in acid—5% dolomite. Increased **Shale**; grayish brown (5 YR 3/2); smooth, thin laminae; some thicker gradational very silty streaks; slightly dolomitic; micaceous. No sample show.

10550' **Siltstone**; grayish brown (5 YR 4/2)—faintly reddish brown on thin edge; argillaceous; medium hard; slightly dolomitic but not anhydritic cement—5% dolomite; some grayish brown (5 YR 3/2) shaly laminae; *vertical fracture faced with white to clear very fine to lower fine crystalline anhydrite and minor dolomite* exhibiting numerous good cleavage faces but no definite evidence of open fracture. No sample show.

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CORE #4: Thaynes Limestone 10551' – 10570'. Cut 19 ft; recovered 15 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. No hydrocarbon odor from fresh chips. No stain, fluorescence, or cut fluorescence.

10551' **Siltstone**; grayish red to grayish brown (5 R 4/2 to 5 YR 4/2); argillaceous; medium hard, some hard siliceous laminae; slightly dolomitic, nonanhydritic, chips remain intact and medium hard after reaction in acid; several grayish brown micaceous shaly laminae; several *vertical fractures faced or filled with anhydrite and lesser mixed calcite/dolomite*. No sample show.

10555' **Siltstone**; pale yellowish brown (10 YR 6/2); medium hard; quite clean; dolomitic, nonanhydritic, chips remain intact in acid—5% to 20% total carbonate; several *vertical fractures faced or filled with white to clear very fine to fine crystalline anhydrite*. No sample show.

10560' **Siltstone**; medium to medium dark gray; medium hard; dolomitic, nonanhydritic, chips remain intact and firm after reaction in acid—10% to 20% carbonate cement; some dark gray argillaceous streaks. No sample show.

10565' **Siltstone/Shale**; medium dark gray to some dark gray laminae; argillaceous siltstone and silty shale; medium hard; dolomitic, nonanhydritic; chips remain intact in acid but are fragile to firm after reaction in acid—10% to 20% carbonate. No sample show.

10566' **Siltstone**; medium dark gray; argillaceous; medium hard; dolomitic, chips remain intact after reaction in acid. No sample show.

CORE #5: Thaynes Limestone 10570' - 10600'. Cut 30 ft; recovered 13 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. No hydrocarbon odor from fresh chips.

10572' **Siltstone**; medium gray; trace dark argillaceous streaks and inclusions; medium hard; dolomitic; *vertical fracture face is partly lined with micro- to very fine crystalline anhydrite; dolomite fracture lining, if any, is not distinguished from dolomitic cement in siltstone; **fracture may be partly open***. Thin, micro-edges along fracture face are tinted pale yellowish brown. Streaky, weak yellow fluorescence along fracture face fades in 1 hr—suggests some hydrocarbons—but yields virtually no cut fluorescence either from solvent applied to whole fracture face or from chips crushed with pliers.

10577' **Shale**; medium dark gray; fine silty; medium hard; slightly dolomitic; crushes with pliers to sharp irregular chips, some subblocky; *35 deg apparent dip of slickenside*. No sample show.

10582' **Shale**; medium dark gray; moderately smooth; firm; slightly dolomitic. No sample show.

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10583' **Siltstone**; medium dark gray; fine silt, argillaceous; medium hard; dolomitic—chips are firm to medium hard after reaction in acid—10% dolomite cement; *white noncalcite-filled microfracture*. No sample show.

CORE #6: Thaynes Limestone 10600' - 10618'. Cut 18 ft; recovered 8 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. No hydrocarbon odor from fresh chips.

10604' **Siltstone**; medium dark gray; fine silt; argillaceous; firm to medium hard; effervescence suggests mixed calcite/dolomite—no staining detected in Alizarin Red; slightly micaceous; breaks to irregular pieces when crushed with pliers, no fissility in hand sample. No sample show.

10609' **Limestone**; medium light gray, tinted light brownish gray on some micro-edges; microcrystalline; firm; quite clean, moderately silty; anhydrite spar to 1 mm, part associated with *anhydrite-filled microfracture*; no porosity visible. No stain. Weak light yellow fluorescence along microfracture but no cut fluorescence when solvent is applied along microfracture. Virtually no show.

10610' **Siltstone**; medium dark gray; argillaceous; some muscovite and biotite; medium hard; dolomitic; white *calcite and dolomite-faced fracture*, no evidence that fracture is open. No sample show.

CORE #7: Thaynes Limestone 10618' - 10637'. Cut 19 ft; recovered 13 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 5 ft. No hydrocarbon odor from fresh chips.

10620' **Limestone**; medium light gray, tinted light brownish gray; crypto- to microcrystalline; medium hard; clean; several 2 to 6 mm long curved surfaces are probable **shell fragments**; several possible *slickensides*; no porosity visible.

Slight to fair show: No definite hydrocarbon stain. 20% to 50% of surfaces of hand samples display moderate dull yellow to rarely bright light yellow large patches of fluorescence. Slight immediate cut fluorescence is obtained by applying solvent to hand sample surfaces. From chips crushed with pliers, cut fluorescence is moderately fast, rather weak, nonstreaming, and dries to fair yellow fluorescent halo. Under white light, no cut or oil ring.

10625' **Limestone**; medium light to medium gray, tinted light brownish gray in part; crypto- to microcrystalline; medium hard; quite clean, trace argillaceous insoluble residue; trace dark gray argillaceous streaks and inclusions; one 2 mm light brownish gray **shell fragment**; no porosity visible.

Trace show: No hydrocarbon stain. 2 square centimeter area is cut by *5 microfractures* that fluoresce moderately bright yellow and yield trace cut fluorescence—fluorescence

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along microfractures nearly vanishes after solvent is applied to surface of hand sample. Virtually no show from chips crushed with pliers.

10630' **Limestone**; medium light gray to some streaks medium dark gray; crypto- to microcrystalline; minor dark gray to dark brownish gray argillaceous partings are best seen under UV light which highlights the wavy to irregular fabric; several curved surfaces are probable **shell fragments**; chips vary from quite clean to silty/siliceous and argillaceous; contacts 4 mm thick dark gray shaly lamina; no porosity visible. Virtually no show. Weak dull goldish yellow fluorescence is largely mineral fluorescence—yields only trace residual fluorescent halo.

10630.8' **Limestone**; overall medium gray; crypto- to microcrystalline; medium hard; moderately clean, insoluble residue is argillaceous and silty with trace cherty streaks/inclusions; no porosity visible. Virtually no show. Weak dull goldish yellow fluorescence is largely mineral fluorescence—yields only trace residual fluorescent halo.

10631' **Limestone**; medium gray; as above. Single 2 cm wide block of **Shale**; medium dark gray; smooth; firm; noncalcareous. Virtually no show.

CORE #8: Thaynes Limestone 10637' - 10649'. Cut 12 ft; recovered 9 ft. The following descriptions are of hand samples taken where the aluminum-sleeved core was cut every 6 ft (sic). No hydrocarbon odor from fresh chips.

10637' **Siltstone**; medium dark gray; moderately clean to very argillaceous laminae; some dark gray shaly laminae; medium hard; staining shows moderate calcite cement mixed with substantial silica cement where clean, trace calcite where argillaceous; in acid chips remain intact and medium hard to firm—5% to 10% carbonate content; micromicaceous; trace *microfractures are at least partly filled with calcite* shown by stained faces in chips crushed with pliers; hand sample displays *single high angle fracture faced with mixed calcite/dolomite—no evidence of fracture being open.*

Trace show? No stain. Moderately bright light yellow fluorescence along fracture face yields virtually no cut fluorescence when crushed with pliers. Color of fluorescence, however, is identical to that which yields cut fluorescence in other chips.

10639' **Shale**; medium dark to dark gray (N 3.5); moderately smooth, some dispersed fine silt; firm; slightly calcareous/dolomitic; micromicaceous. No sample show.

10645' **Limestone**; light brownish gray to medium dark gray; crypto- to microcrystalline matrix with conspicuous very fine to fine grained dark gray pelloids and possible minute **fossil fragments** (perhaps individual whorls from tiny gastropods); medium hard; clean, trace HCl-insoluble argillaceous coatings from dark gray carbonate

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grains; no matrix porosity visible; several *fluorescent microfractures exhibit no fracture fill at 10X.*

Slight show: No stain. Several microfractures in hand samples fluoresce moderately bright light yellow. Chips crushed with pliers to normal drill cuttings size commonly display at 10X moderately bright yellow spotty to planar fluorescence that yields moderately slow nonstreaming cut fluorescence and weak to fair yellow fluorescent halos. Under white light, no cut or oil ring. Trace hydrocarbons are also indicated by large bubbles forming in acid.

10646' **Siltstone**; medium dark gray; within 1 cm thick section chips vary from clean to moderately argillaceous; medium hard; staining and reaction in acid shows mainly calcite cement; chips remain intact in acid but become firm to fragile—20% to 40% carbonate content; acid bleaches chips to very light gray where clean or light brownish gray where argillaceous; silt to sand-size voids following acidization suggest some pellets or fossil fragments; no porosity visible; hand sample is cut by six irregular and bifurcating *white calcite-filled microfractures* that fluoresce bluish white to light yellow but yield no cut fluorescence. No show from chips crushed with pliers.

DRILL STEM TEST #1

Halliburton ran conventional open hole test of Thaynes Limestone on 23 November 1999. Ran long lower packer and standard upper packer. No water cushion.

TEST INTERVAL: 9966' - 10059' rig depth; approximately 9960' – 10053' log depth

PACKERS:
Upper Packer: 9957'
Lower Packer: 9966'
TD at test: 10059'

PRESSURES (psi):	Gauge Depth: 9943'	Gauge Depth: 10054'	TIMES:
Initial Hydrostatic:	4777	4825	
Initial Flow:	24 - 47	71 - 97	10 min
Initial Shut-In:	1033	1080	60 min
Final Flow:	31 - 44	73 - 75	90 min
Final Shut-In:	464	500	120 min
Final Hydrostatic:	4726	4830	

PRESS. GRADIENT: N/A

RECOVERY: 60 ft of slightly gas cut mud

SAMPLER: 20 psi (0.23 cf gas) OIL CUT: 0% GRAVITY: N/A
0 cc oil
0 cc water
Trace mud

BLOW: Tool opened with surface bubbles; 1" at 5 min; 3/4" at 10 min. Shut tool in; blow dead in 25 min. Reopened tool with blow from bottom of bucket; 9 oz. at 5 min; 9 oz. at 10 min; 9 oz. at 15 min; 9.5 oz. at 20 min; 9.5 oz. at 30 min; 9.75 oz. at 40 min; 9.5 oz. at 50 min; 9 oz. at 60 through 90 min. No gas to surface.

TEMPERATURE: 171 deg F at 10054'

RESISTIVITY: 0.38 ohm-m at 62 deg F; calculated 15000 ppm NaCl by Halliburton tester.

REMARKS: Mechanically valid test.

TEST RATES: N/A

DRILL STEM TEST #2

Halliburton ran conventional open hole test of Thaynes Limestone on 8 December 1999. Ran long lower packer and standard upper packer. 1200 ft of water cushion.

TEST INTERVAL:	10539' - 10649' rig depth; approximately 10537' – 10647' log depth		
PACKERS:			
Upper Packer:	10530'		
Lower Packer:	10539'		
TD at test:	10649'		
PRESSURES (psi):	Gauge Depth: 10516'	Gauge Depth: 10645'	TIMES:
Initial Hydrostatic:	4894	4951	
Initial Flow:	532 - 532	588 - 589	10 min
Initial Shut-In:	859	914	60 min
Final Flow:	533 - 533	588 - 588	90 min
Final Shut-In:	658	714	120 min
Final Hydrostatic:	4878	4936	
PRESS. GRADIENT:	N/A		
RECOVERY:	Trace of drilling mud		
SAMPLER:	25 psi 0 cc oil 0 cc water 2650 cc mud	OIL CUT: 0%	GRAVITY: N/A
BLOW:	Tool opened with surface bubbles in bucket; surface bubbles at 1, 5, and 10 min. Shut tool in. Tool reopened with no blow and remained dead for 90 min.		
TEMPERATURE:	180 deg F at 10645'		
RESISTIVITY:	0.6 ohm-m at 50 deg F; calculated 14000 ppm NaCl by Halliburton tester.		
REMARKS:	Mechanically valid test.		
TEST RATES:	N/A		

SERVICES

CONTRACTOR: Toolpushers:	Norton Drilling Rig #52 Don Jevne Robert "Rick" Rosenthal Dan "Dutch" Tjalma	Rock Springs, WY (307) 362-9132
Drillers:	G. C. Long Steve Gault Dan Tjalma Alan McDonald Frank Midkiff Brett Thompson Kenny Barnes Jimmy Jackson Stan Thompson Rick Jevne	
Depth Recorder:	Pason Penless	
SUPERVISION:	James Radford	Flint, TX (903) 561-5498
DIRECTIONAL DRILLING:	Schlumberger Anadrill Burley Glasscock Tom Masquat Jim Campbell	Casper, WY (307) 472-3113
MWD:	Schlumberger Anadrill John Robb D. Lopez K. Colony George Basse	Casper, WY (307) 472-3113
MUD:	Newpark Drilling Fluids, Inc. Don Jackson Ryan Shursen Doug Moore Estes Ward Don Sparks Craig Lamoureux	Denver, CO (303) 623-2205
MUD LOGGING:	NorAm Wellsite Services Scott Olson Linda Klause Tony Baeten Matt Berg – Trainee Jim Roberts	Billings, MT (406) 652-3922
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc. Tim McCoy	Wilson, WY (307) 733-4332

SERVICES

RIG MONITOR:	Martin-Decker-Totco Mark Blair – Field Service Tech Randy Neal – Associate Sales Engineer (OK)	Vernal, UT (435) 790-7756 (405) 677-8301
H2S SAFETY:	Intermountain Safety Victor Steier Jon Thorpe Scott Hawkins Thomas "Lanny" Bergen Larry Hoggatt John Baker David Fleming	Evanston, WY (307) 789-3882
CORES:	Diamond Products International (DPI) Don Brock Sam Roberts	Casper, WY (307) 234-8560
CORE ANALYSIS:	Precision Core Analysis Steve Leeds Grant Koenenkamp	Denver, CO (303) 778-6060
DRILL STEM TESTS:	Halliburton Tom Eaton – DST #1 Randy Ripple – DST #1 Tom Eaton – DST #2 Rob Short – DST #2 Jim Ruck – DST #2	Casper, WY (307) 473-8200
LOGS:	Schlumberger Bill Anthony – Run 1: 9 5/8" intermediate csg. Fernando Ortiz – Run 2: FMI dipmeter Valerie Zimmer – Run 3: 7" intermediate csg. Casey T'Kindt – Run 4: FMS dipmeter Casey T'Kindt – Run 5: TD	Rock Springs, WY 307-362-9350
LIVING QUARTERS:	Amerikan Craig Kelsey Hector Martinez	Duschene, UT (435) 738-2376 (307) 789-9202
	Bob's Equipment Rental	Casper, WY (307) 237-2821

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
0	9/15	70	0	9:00	2.0	Work on closed mud system.
				14:00	5.0	Drill 17 1/2" surface hole: 70' - 221'.
				14:30	0.5	Survey: 219'--1/2 deg.
				15:30	1.0	Try to unplug bit.
				18:00	2.5	Trip out. Unplug jets.
				19:30	1.5	Trip in.
				20:00	0.5	Wash 40 ft to bottom; 15 ft of fill.
				2:00	6.0	Drill 221' - 524'.
				2:30	0.5	Survey: 476'--1 deg.
				5:00	2.5	Drill 524' - 627'.
				6:00	1.0	Trip into conductor pipe.
				7:00	1.0	Fix drain plug on conductor pipe.
1	9/16	627	557	7:30	0.5	Trip in.
				10:00	2.5	Drill 627' - 761'.
				10:30	0.5	Survey: 761'--1 1/4 deg.
				15:30	5.0	Drill 761' - 1036'.
				16:00	0.5	Survey: 1036'--1 deg.
				3:00	11.0	Drill 1036' - 1420'.
				3:30	0.5	Survey: 1371'--2 deg.
				4:30	1.0	Drill 1420' - 1442'.
				7:00	2.5	Trip for new bit #2.
2	9/17	1442	815	10:00	3.0	Trip for new bit #2 Smith SDT in at 1442'.
				12:00	2.0	Drill 1442' - 1500'.
				13:00	1.0	Circulate.
				16:00	3.0	Trip out. Survey: 1500'--2 deg.
				21:30	5.5	Rig up casers and run 34 joints 13 3/8" K55 54.5# and 1 joint N80 68#.
				23:00	1.5	Rig up Dowell and circulate casing.
				2:00	3.0	Cement.
				7:00	5.0	Wait on cement.
3	9/18	1500	58	12:00	5.0	Wait on cement.
				15:30	3.5	Cut off. Weld on head. Test head.
				5:00	13.5	Nipple up BOP. Replace both sets of pipe rams.
				7:00	2.0	Pressure test BOP equipment.
4	9/19	1500	0	19:00	12.0	Pressure test BOP equipment. Replace upper and lower kelly valves. Replace kill line outside valve and check valve. Try to test back to mud pump. Rebuild 4" valves on pumps.
				1:00	6.0	Pressure test surface equipment.
				1:30	0.5	Set wear bushing.
				2:30	1.0	Repair reverse shifter.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				4:30	2.0	Pick up BHA.
				6:00	1.5	Wait on bit sub.
				7:00	1.0	Pick up new bit #3 Reed HP13 and BHA.
5	9/20	1500	0	9:00	2.0	Wait on bit sub.
				11:00	2.0	Pick up BHA. Trip in.
				13:00	2.0	Drill cement 1411' - 1500'.
				13:30	0.5	Drill 1500' - 1505'. Run leak-off test at 250 psi.
				17:00	3.5	Drill 1505' - 1727'.
				17:30	0.5	Survey: 1727'--1 3/4 deg.
				23:30	6.0	Drill 1727' - 1977'.
				0:00	0.5	Survey: 1929'--1/2 deg.
				4:00	4.0	Drill 1977' - 2102'.
				4:30	0.5	Service rig. Clean oil screens.
				5:00	0.5	Drill 2102' - 2128'.
				5:30	0.5	Repair #1 pump.
				7:00	1.5	Drill 2128' - 2160'.
6	9/21	2160	660	12:00	5.0	Drill 2160' - 2297'.
				12:30	0.5	Service rig.
				17:30	5.0	Drill 2297' - 2457'.
				18:00	0.5	Survey: 2457'--1/2 deg.
				21:00	3.0	Drill 2457' - 2543'.
				5:00	8.0	Trip for new bit #4 Hughes GT-09 at 2543'. Drill collar connections tight.
				7:00	2.0	Drill 2543' - 2617'.
7	9/22	2617	457	10:30	3.5	Drill 2617' - 2714'.
				11:00	0.5	Survey: 2661'--1 deg.
				15:30	4.5	Drill 2714' - 2863'.
				16:00	0.5	Service rig.
				22:00	6.0	Drill 2863' - 3064'.
				22:30	0.5	Survey: 3016'--1 deg.
				1:00	2.5	Drill 3064' - 3192'.
				1:30	0.5	Service rig.
				7:00	5.5	Drill 3192' - 3333'.
8	9/23	3333	716	15:00	8.0	Drill 3333' - 3509'.
				15:30	0.5	Survey: 3459'--1 1/4 deg.
				16:00	0.5	Service rig.
				1:30	9.5	Drill 3509' - 3732'.
				2:00	0.5	Service rig.
				7:00	5.0	Drill 3732' - 3842'.
9	9/24	3842	509	16:30	9.5	Drill 3842' - 4052'.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				17:30	1.0	Survey: 4004'--3/4 deg.
				3:00	9.5	Drill 4052' - 4240'.
				3:30	0.5	Service rig.
				7:00	3.5	Drill 4240' - 4307'.
10	9/25	4307	465	11:30	4.5	Drill 4307' - 4399'.
				12:00	0.5	Service rig.
				18:00	6.0	Drill 4399' - 4507'.
				18:30	0.5	Pump slug.
				19:00	0.5	Drop survey: 4507'--1 deg.
				22:00	3.0	Trip out.
				23:30	1.5	Change bottom 3-pt reamer.
				2:30	3.0	Trip in with new bit #5 Hughes GT-09 at 4507'.
				3:00	0.5	Wash 60 ft to bottom.
				7:00	4.0	Drill 4507' - 4583'.
11	9/26	4583	276	16:30	9.5	Drill 4583' - 4776'.
				17:00	0.5	Service rig.
				2:00	9.0	Drill 4776' - 4931'. Began salt-up.
				2:30	0.5	Service rig.
				7:00	4.5	Drill 4931' - 5014'.
12	9/27	5014	431	10:00	3.0	Drill 5014' - 5039'.
				11:30	1.5	Mix and pump slug--no good. Pump 2nd slug.
				12:00	0.5	Trip out.
				14:00	2.0	Circulate heavy mud out of hole. Pump 3rd slug.
				19:00	5.0	Trip out.
				20:30	1.5	Change 3-pt reamer.
				23:30	3.0	Trip in with new bit #6 Smith F10T at 5039'.
				0:00	0.5	Wash and ream 60 ft to bottom; 10 ft of fill.
				7:00	7.0	Drill 5039' - 5089'.
13	9/28	5089	75	14:30	7.5	Drill 5089'- 5153'.
				15:00	0.5	Service rig.
				3:00	12.0	Drill 5153' - 5247'.
				3:30	0.5	Service rig.
				7:00	3.5	Drill 5247' - 5277'.
14	9/29	5277	188	14:30	7.5	Drill 5277' - 5339'.
				15:00	0.5	Service rig.
				2:30	11.5	Drill 5339' - 5431'.
				3:00	0.5	Service rig.
				7:00	4.0	Drill 5431' - 5468'.
15	9/30	5468	191	11:30	4.5	Drill 5468' - 5505'.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				12:00	0.5	Mix and pump pill.
				12:30	0.5	Drop survey: 5505'--2 deg.
				16:30	4.0	Trip out.
				21:00	4.5	Trip in with new bit #7 Reed EHP43H at 5505'. Changed bottom 3-pt reamer.
				23:00	2.0	Cut drilling line.
				1:00	2.0	Trip in.
				2:30	1.5	Wash and ream 84 ft to bottom; 10 ft of fill.
				7:00	4.5	Drill 5505' - 5532'.
16	10/1	5532	64	14:00	7.0	Drill 5532' - 5594'.
				14:30	0.5	Service rig.
				4:00	13.5	Drill 5594' - 5647'.
				4:30	0.5	Mix and pump pill.
				5:00	0.5	Drop survey: 2 1/2 deg.
				7:00	2.0	Trip out.
17	10/2	5647	115	9:30	2.5	Trip out.
				11:00	1.5	Change bits and shock sub.
				15:00	4.0	Trip in with new bit #8 Hughes GT-18 at 5647'.
				16:00	1.0	Wash and ream 60 ft to bottom.
				7:00	15.0	Circulate. Mix salt.
18	10/3	5647	0	8:00	1.0	Circulate. Mix salt. No rig salt circulated yet.
				15:30	7.5	Drill 5647' - 5689'. Circulated rig salt at 5670'.
				16:00	0.5	Service rig.
				5:00	13.0	Drill 5689' - 5750'.
				5:30	0.5	Service rig.
				7:00	1.5	Drill 5750' - 5755'.
19	10/4	5755	108	12:00	5.0	Drill 5755' - 5771'.
				12:30	0.5	Mix and pump pill.
				13:00	0.5	Drop survey: 5750'--2 deg.
				15:30	2.5	Trip out.
				19:00	3.5	Replace kelly.
				5:30	10.5	Inspect BHA. Laid down 7 cracked drill collars.
				7:00	1.5	Trip in with new bit #9 Smith F15 at 5771'.
20	10/5	5771	16	8:00	1.0	Pick up 3-pt reamers. Trip in 9" drill collars.
				9:30	1.5	Wait on replacement drill collars.
				10:30	1.0	Unload new drill collars. Load out cracked collars.
				15:30	5.0	Trip in. Picked up (1) 9" drill collar, (3) 6" drill collars, & jars.
				16:30	1.0	Wash and ream to bottom. No fill.
				7:00	14.5	Drill 5771' - 5833'.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
21	10/6	5833	62	15:30	8.5	Drill 5833' - 5882'.
				16:00	0.5	Service rig.
				7:00	15.0	Drill 5882' - 5970'.
22	10/7	5970	137	8:30	1.5	Drill 5970' - 5979'.
				9:00	0.5	Short trip 4 stands through Preuss salt interval.
				12:30	3.5	Drill 5979' - 6004'.
				13:00	0.5	Service rig.
				5:30	16.5	Drill 6004' - 6097'.
				6:00	0.5	Service rig.
				7:00	1.0	Drill 6097' - 6103'.
23	10/8	6103	133	15:30	8.5	Drill 6103' - 6157'.
				16:00	0.5	Service rig.
				2:00	10.0	Drill 6157' - 6218'.
				2:30	0.5	Service rig.
				7:00	4.5	Drill 6218' - 6252'.
24	10/9	6252	149	8:00	1.0	Drill 6252' - 6261'.
				8:30	0.5	Drop survey: 6261'--3 3/4 deg.
				13:00	4.5	Trip out. Lay down (2) joints drill pipe, (4) 6" drill collars, 6" jars, and (2) 3-pt reamers.
				19:00	6.0	Trip in new bit #10 Reed EHP43H. Pick up (1) 9" drill collar, (2) 3-pt reamers, 8" jars, non-rotating stabilizer, and (2) 8" drill collars.
				21:30	2.5	Trip in.
				22:30	1.0	Wash and ream 87 ft to bottom. No fill.
				7:00	8.5	Drill 6261' - 6327'.
25	10/10	6327	75	15:30	8.5	Drill 6327' - 6405'.
				16:00	0.5	Service rig.
				4:00	12.0	Drill 6405' - 6506'.
				5:00	1.0	Mix and pump slug.
				5:30	0.5	Drop survey: 6477'--2 deg.
				7:00	1.5	Trip out.
26	10/11	6506	179	9:30	2.5	Trip out.
				13:00	3.5	Trip in with new bit #11 Security SS82F at 6506'.
				13:30	0.5	Wash and ream 30 ft to bottom. No fill.
				2:00	12.5	Drill 6506' - 6619'.
				2:30	0.5	Service rig.
				7:00	4.5	Drill 6619' - 6657'.
27	10/12	6657	151	14:30	7.5	Drill 6657' - 6741'.
				15:00	0.5	Service rig.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				2:00	11.0	Drill 6741' - 6863'.
				2:30	0.5	Service rig.
				5:30	3.0	Drill 6863' - 6910'.
				7:00	1.5	Spot LCM pill in loss zone at bottom.
28	10/13	6910	253	9:30	2.5	Mix and pump LCM pill.
				17:00	7.5	Trip out for hole in 3rd joint of pipe above collars.
				19:00	2.0	Change bit and shock sub.
				0:00	5.0	Trip in new bit #12 Security ERA17 at 6910'.
				1:30	1.5	Wash and ream 90 ft to bottom. 3 ft of fill.
				7:00	5.5	Drill 6910' - 6952'.
29	10/14	6952	42	13:00	6.0	Drill 6952' - 6984'.
				13:30	0.5	Service rig.
				3:00	13.5	Drill 6984' - 7076'.
				3:30	0.5	Service rig.
				4:30	1.0	Drill 7076' - 7087'.
				5:30	1.0	Circulate. Go through pumps.
				6:00	0.5	Drill 7087' - 7091'.
				6:30	0.5	Circulate. Pump flag for pressure loss of 100 psi.
				7:00	0.5	Drop survey: 7091'--2 3/4 deg.
30	10/15	7091	139	13:30	6.5	Trip out looking for washout. Found cracked box in 8" drill collar.
				15:00	1.5	Change bit and shock sub.
				17:30	2.5	Trip in with new bit #13 Smith F15T at 7091'.
				19:30	2.0	Cut and slip 110 ft of drilling line.
				22:00	2.5	Trip in.
				0:00	2.0	Wash and ream 6974' - 7091'.
				7:00	7.0	Drill 7091' - 7147'.
31	10/16	7147	56	13:00	6.0	Drill 7147' - 7200'.
				13:30	0.5	Service rig.
				1:30	12.0	Drill 7200' - 7291'.
				2:00	0.5	Service rig.
				7:00	5.0	Drill 7291' - 7338'.
32	10/17	7338	191	12:00	5.0	Drill 7338' - 7382'.
				12:30	0.5	Service rig.
				19:00	6.5	Drill 7382' - 7439'.
				23:00	4.0	Short trip 3 stands due to torque; ream to bottom.
				23:30	0.5	Drill 7439' - 7442'.
				0:00	0.5	Mix and pump pill.
				0:30	0.5	Drop survey: 7430'--4 deg.
				5:00	4.5	Trip out.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				7:00	2.0	Trip in with new bit #14 Smith F20T at 7442'.
33	10/18	7442	104	10:00	3.0	Trip in.
				10:30	0.5	Wash and ream 49 ft to bottom.
				3:00	16.5	Drill 7442' - 7536'.
				3:30	0.5	Service rig.
				7:00	3.5	Drill 7536' - 7564'.
34	10/19	7564	122	8:30	1.5	Work tight hole. Lay down 1 joint and ream 60 ft.
				17:00	8.5	Drill 7564' - 7629'.
				17:30	0.5	Service rig.
				4:00	10.5	Drill 7629' - 7721'.
				4:30	0.5	Service rig.
				7:00	2.5	Drill 7721' - 7740'.
35	10/20	7740	176	13:00	6.0	Drill 7740' - 7772'.
				13:30	0.5	Service rig.
				3:30	14.0	Drill 7772' - 7937'.
				4:00	0.5	Service rig.
				7:00	3.0	Drill 7937' - 7965'.
36	10/21	7965	225	7:30	0.5	Drill 7965' - 7966'.
				8:30	1.0	Mix and pump slug.
				9:00	0.5	Drop survey: 7966'--2 deg.
				11:30	2.5	Trip out.
				20:00	8.5	Inspect BHA. Laid down 4 cracked drill collars.
				4:00	8.0	Pick up (2) new 3-pt reamers and new nonrotating stabilizer. Trip in new bit #15 Smith F4P at 6966'.
				7:00	3.0	Wash and ream undergauge hole 7843' - 7900'.
37	10/22	7966	1	9:00	2.0	Wash and ream undergaue hole 7900' - 7966'.
				17:30	8.5	Drill 7966' - 8059'.
				18:00	0.5	Service rig.
				6:00	12.0	Drill 8059' - 8182'.
				6:30	0.5	Service rig.
				7:00	0.5	Drill 8182' - 8188'.
38	10/23	8188	222	10:00	3.0	Drill 8188' - 8214'.
				10:30	0.5	Service rig.
				14:30	4.0	Drill 8214' - 8253'.
				15:00	0.5	Repair rig.
				3:00	12.0	Drill 8253' - 8360'.
				4:00	1.0	Mix and pump slug. Drop survey: 8360'--1 deg.
				7:00	3.0	Trip out.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
39	10/24	8360	172	8:30	1.5	Trip out.
				14:00	5.5	Trip in new bit #16 Smith F4PS at 8360'.
				15:30	1.5	Wash and ream 8276' - 8360'.
				0:00	8.5	Drill 8360' - 8428'.
				0:30	0.5	Service rig.
				7:00	6.5	Drill 8428' - 8498'.
40	10/25	8498	138	14:00	7.0	Drill 8498' - 8561'.
				15:00	1.0	Mix and pump slug.
				21:30	6.5	Trip out. Pick up new bit #17 Smith F4OD at 8561'.
				23:30	2.0	Slip and cut 96 ft of drilling line.
				1:30	2.0	Trip in.
				2:00	0.5	Wash and ream 27 ft to bottom. 4 ft of fill.
				7:00	5.0	Drill 8561' - 8595'.
41	10/26	8595	97	13:00	6.0	Drill 8595' - 8623'.
				13:30	0.5	Check #1 light plant.
				0:30	11.0	Drill 8623' - 8678'.
				1:00	0.5	Service rig.
				7:00	6.0	Drill 8678' - 8704'.
42	10/27	8704	109	14:30	7.5	Drill 8704' - 8741'.
				15:00	0.5	Service rig.
				19:30	4.5	Drill 8741' - 8758'.
				20:00	0.5	Mix and pump slug. Drop survey: 8758'--1 deg.
				3:00	7.0	Trip out. Replace bit, shock-sub, and bottom 3-pt.
				7:00	4.0	Trip in with new bit #18 Smith F4P at 8758'.
43	10/28	8758	54	10:00	3.0	Trip in. Tight 7700' - 8758'.
				10:30	0.5	Wash and ream 40 ft to bottom. 5 ft of fill.
				23:00	12.5	Drill 8758' - 8802'.
				23:30	0.5	Service rig.
				7:00	7.5	Drill 8802' - 8836'
44	10/29	8836	78	12:30	5.5	Drill 8836' - 8863'.
				13:00	0.5	Service rig.
				21:30	8.5	Drill 8863' - 8907'.
				22:00	0.5	Mix and pump slug.
				22:30	0.5	Drop survey--misrun.
				4:00	5.5	Trip out.
				5:00	1.0	Change bit and upper 3-pt reamer.
				7:00	2.0	Trip in with new bit #19 Hughes ATJ44 at 8907'.
45	10/30	8907	71	10:00	3.0	Trip in.
				10:30	0.5	Wash and ream 60 ft to bottom.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				16:30	6.0	Drill 8907' - 8924'.
				17:00	0.5	Service rig.
				0:30	7.5	Drill 8924' - 8954'.
				1:00	0.5	Service rig.
				7:00	6.0	Drill 8954' - 8992'.
46	10/31	8992	85	18:00	11.0	Drill 8992' - 9046'.
				18:30	0.5	Service rig.
				19:00	0.5	Mix and pump slug.
				19:30	0.5	Drop survey: 9046'--1 deg.
				0:00	4.5	Trip out.
				1:00	1.0	Change bits.
				5:30	4.5	Trip in with new bit #20 Hughes ATJ44.
				7:00	1.5	Wash and ream 60 ft to bottom.
47	11/1	9046	54	13:00	6.0	Drill 9046' - 9078'.
				13:30	0.5	Service rig.
				2:30	13.0	Drill 9078' - 9140'.
				3:00	0.5	Service rig.
				7:00	4.0	Drill 9140' - 9156'.
48	11/2	9156	110	16:00	9.0	Drill 9156' - 9201'.
				16:30	0.5	Service rig.
				4:30	12.0	Drill 9201' - 9263'.
				5:00	0.5	Service rig.
				7:00	2.0	Drill 9263' - 9275'.
49	11/3	9275	119	10:30	3.5	Drill 9275' - 9292'.
				11:00	0.5	Service rig.
				3:00	16.0	Drill 9292' - 9359'.
				4:30	1.5	Mix and pump slug.
				5:00	0.5	Drop survey: 9359'--1 3/4 deg.
				7:00	2.0	Trip out.
50	11/4	9359	84	10:30	3.5	Trip out.
				12:00	1.5	Inspect wear bushing. In good shape--left out.
				14:30	2.5	Trip in at 9359' with new bit #21 Hughes ATJS44.
				16:00	1.5	Slip and cut 104 ft of drilling line.
				18:30	2.5	Trip in.
				19:00	0.5	Wash and ream 60 ft to bottom.
				21:30	2.5	Drill 9359' - 9365'.
				22:00	0.5	Service rig.
				7:00	9.0	Drill 9365' - 9398'.
51	11/5	9398	39	10:00	3.0	Drill 9398' - 9413'.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				10:30	0.5	Repair #1 pump.
				7:00	20.5	Drill 9413' - 9498'.
52	11/6	9498	100	15:00	8.0	Drill 9498' - 9541'.
				15:30	0.5	Service rig.
				3:30	12.0	Drill 9541' - 9604'.
				4:00	0.5	Service rig.
				7:00	3.0	Drill 9604' - 9620'.
53	11/7	9620	122	8:30	1.5	Drill 9620' - 9626'.
				9:00	0.5	Circulate samples.
				11:00	2.0	Short trip 25 stands--OK.
				12:30	1.5	Circulate bottoms up.
				13:00	0.5	Drop survey--misrun.
				19:00	6.0	Trip out for logs without rotating. SLM 9621'; board 9626'; no correction. Found 107 ft of BHA was twisted off and left in hole. Released loggers.
				20:30	1.5	Wait on Magnaflux and fishing tools.
				1:00	4.5	Inspect BHA.
				2:30	1.5	Pick up overshot.
				7:00	4.5	Inspect BHA. Pick up jars.
54	11/8	9626	6	8:00	1.0	Inspect BHA.
				9:00	1.0	Pick up two 8" drill collars.
				13:00	4.0	Trip in with overshot.
				15:00	2.0	Fish.
				19:00	4.0	Trip out wet to drill collars.
				0:00	5.0	Trip out with fish. Lay down fish.
				7:00	7.0	Pick up globe basket to fish for survey tool.
55	11/9	9626	0	9:00	2.0	Ream 190 ft to fish.
				11:30	2.5	Cut 2 ft of new hole with globe basket.
				15:30	4.0	Trip out.
				17:00	1.5	Break out fishing tools. No recovery of survey tool or formation.
				17:30	0.5	Pick up mill and 2 junk baskets.
				18:00	0.5	New orders--no more hole before logs. Lay down junk baskets and mill.
				19:00	1.0	Trip in with rerun bit #20.
				21:00	2.0	Cut drilling line.
				0:00	3.0	Trip in.
				1:00	1.0	Wash and ream to bottom.
				3:00	2.0	Circulate for logs.
				7:00	4.0	Trip out.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
56	11/10	9626	0	7:30	0.5	Trip out. SLM: 9621'; board 9626'; no correction.
				21:00	13.5	Rig up Schlumberger and log. Run #1: array induction (TD - 1500'), sonic (TD - 0'), neutron-density (TD - 5700'), gamma (TD - 0'), one-arm caliper. Run #2: SHDT dipmeter, gamma, two-arm caliper, and directional survey (TD - 1500').
				0:00	3.0	Trip in.
				1:00	1.0	Fill pipe. Ream to bottom.
				3:00	2.0	Circulate for casing.
				5:30	2.5	Trip out.
				7:00	1.5	Lay down 8" drill collars and jars.
57	11/11	9626	0	8:00	1.0	Lay down BHA.
				21:30	13.5	Rig up casing crew. Run 9 5/8" casing to 9626'.
				0:30	3.0	Rig up Schlumberger-Dowell. Circulate casing.
				5:00	4.5	Cement 1st stage.
				7:00	2.0	Circulate casing.
58	11/12	9626	0	8:00	1.0	Circulate casing.
				11:00	3.0	Cement 2nd stage.
				14:30	3.5	Nipple down.
				19:00	4.5	Set slips and cut off casing.
				6:00	11.0	Nipple up B section and BOP equipment.
				7:00	1.0	Pressure test BOP equipment.
59	11/13	9626	0	15:30	8.5	Pressure test BOP equipment.
				17:30	2.0	Pick up new BHA.
				21:00	3.5	Trip in to 6094'.
				23:00	2.0	Drill plug and DV tool.
				23:30	0.5	Pressure test casing to 2000 psi.
				3:00	3.5	Trip in. Tag plug at 9137'--plug had risen.
				4:30	1.5	Drill plug and cement 9137' - 9197'.
				5:00	0.5	Trip in.
				7:00	2.0	Drill cement 9300' - 9400'.
60	11/14	9626	0	10:00	3.0	Drill cement 9400' - 9570'.
				10:30	0.5	Pressure test casing at 2000 psi.
				12:30	2.0	Drill cement 9570' - 9626'.
				13:00	0.5	Circulate and pump pill.
				17:00	4.0	Trip out.
				20:00	3.0	Wait on mill and junk basket.
				23:30	3.5	Trip in.
				4:30	5.0	Mill on junk/survey tool.
				7:00	2.5	Trip out.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
61	11/15	9626	0	8:30	1.5	Trip out.
				9:30	1.0	Replace mill and clean junk basket.
				13:00	3.5	Trip in with mill.
				19:00	6.0	Mill on junk/survey tool.
				20:30	1.5	Mill and work junk basket.
				0:30	4.0	Trip out.
				1:30	1.0	Replace mill and clean junk basket.
				5:00	3.5	Trip in with mill.
				7:00	2.0	Mill on junk/survey tool.
62	11/16	9631	5	7:30	0.5	Mill 9626' - 9628'.
				8:00	0.5	Mix and pump slug.
				12:00	4.0	Trip out with mill #3.
				13:00	1.0	Clean junk basket. Lay down mill.
				14:00	1.0	Set wear ring.
				15:00	1.0	Trip in bit, BHA, and 4 stands of pipe.
				17:00	2.0	Cut and slip 116 ft of drilling line.
				19:00	2.0	Trip in.
				19:30	0.5	Ream to bottom.
				6:30	11.0	Drill 9626' - 9683'.
				7:00	0.5	Mix and pump slug.
63	11/17	9683	52	15:30	8.5	Trip for new bit #24 Hughes ATJ44C at 9683'.
				16:00	0.5	Wash and ream 50 ft to bottom. No fill.
				7:00	15.0	Drill 9683' - 9770'.
64	11/18	9770	87	15:30	8.5	Drill 9770' - 9816'.
				16:00	0.5	Service rig.
				22:00	6.0	Drill 9816' - 9854'.
				22:30	0.5	Pump flag for pressure loss.
				4:00	5.5	Trip out without rotating. Found hole in 2nd joint of pipe above drill collars.
				5:00	1.0	Pick up (2) 3-pt reamers.
				7:00	2.0	Trip in new bit #25 Hughes HR44C at 9854'.
65	11/19	9854	84	8:30	1.5	Trip in new bit #25.
				9:00	0.5	Wash and ream 85 ft to bottom. No fill.
				18:00	9.0	Drill 9854' - 9918'.
				18:30	0.5	Service rig.
				4:30	10.0	Drill 9918' - 9986'.
				6:00	1.5	Circulate samples.
				7:00	1.0	Trip out. Drop survey: 9936'--2 deg.
66	11/20	9986	132	11:00	4.0	Trip out for core #1 in Thaynes.
				13:30	2.5	Pick up core barrel.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				19:00	5.5	Trip in for core #1.
				7:00	12.0	Core 9986' - 10014'.
67	11/21	10014	28	14:30	7.5	Core 10014' - 10030'.
				15:00	0.5	Pump slug.
				21:00	6.0	Trip out with core #1.
				1:00	4.0	Lay down aluminum-sleeved core and cut into 5-ft sections. Cut 44 ft; full recovery.
				5:30	4.5	Trip in for core #2 in Thaynes.
				6:30	1.0	Circulate and condition mud.
				7:00	0.5	Core.
68	11/22	10030	16	18:00	11.0	Core 10030' - 10059'.
				19:00	1.0	Pump slug.
				23:30	4.5	Trip out with core #2.
				2:30	3.0	Lay down and cut aluminum-sleeved core. Cut 29 ft; recovered 28 ft.
				5:00	2.5	Pick up test tools for DST #1 of cored interval.
				6:30	1.5	Trip in drill collars.
				7:00	0.5	Cut and slip 108 ft of drilling line.
69	11/23	10059	29	9:30	2.5	Cut and slip drilling line.
				14:00	4.5	Trip in for DST #1.
				18:30	4.5	DST #1: 9966' - 10059'. Times: 10-60-90-120 min.
				1:30	7.0	Trip out with DST #1.
				4:00	2.5	Lay down test tools.
				7:00	3.0	Trip in rerun bit #25 Hughes HR44C at 10059'.
70	11/24	10059	0	9:00	2.0	Trip in.
				10:00	1.0	Wash and ream 85 ft to bottom.
				2:00	16.0	Drill 10059' - 10165'.
				2:30	0.5	Service rig.
				6:00	3.5	Drill 10165' - 10197'.
				7:00	1.0	Try to unplug jets.
71	11/25	10197	138	13:00	6.0	Trip out for plugged bit.
				13:30	0.5	Service rig.
				20:30	7.0	Trip in new bit #26 Smith F47ODP at 10197'.
				21:00	0.5	Wash and ream 34 ft to bottom.
				1:00	4.0	Drill 10197' - 10225'.
				1:30	0.5	Service rig.
				7:00	5.5	Drill 10225' - 10261'.
72	11/26	10261	64	10:30	3.5	Drill 10261' - 10287'.
				11:00	0.5	Service rig.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				0:00	13.0	Drill 10287' - 10381'.
				0:30	0.5	Service rig.
				7:00	6.5	Drill 10381' - 10421'.
73	11/27	10421	160	16:00	9.0	Drill 10421' - 10481'.
				16:30	0.5	Service rig.
				1:30	9.0	Drill 10481' - 10535'.
				3:00	1.5	Circulate samples for core #3 in Thaynes.
				3:30	0.5	Drop survey: 10535'--2 1/2 deg.
				7:00	3.5	Trip out for core #3.
74	11/28	10535	114	8:30	1.5	Trip out for core #3.
				9:30	1.0	Change kelly bushings.
				11:30	2.0	Pick up core barrel.
				15:00	3.5	Trip in for core #3.
				15:30	0.5	Circulate.
				16:30	1.0	Ream 30 ft to bottom.
				17:30	1.0	Core 10535' - 10536'.
				20:30	3.0	Work pipe--pressuring up off bottom.
				21:00	0.5	Pump slug.
				1:30	4.5	Trip out with core #3. Catcher had backed off, restricted throat of core bit.
				3:00	1.5	Check core barrel and change core bits.
				7:00	4.0	Trip in with new core bit at 10536'.
75	11/29	10536	1	8:00	1.0	Wash and ream to bottom.
				19:00	11.0	Core 10536' - 10551'.
				22:30	3.5	Pump slug.
				3:30	5.0	Trip out with core #3.
				5:00	1.5	Lay down and cut aluminum-sleeved core. Cut 15 ft; recovered 14 ft.
				6:00	1.0	Pull wear ring.
				7:00	1.0	Pick up aluminum inner barrel and new bit.
76	11/30	10551	15	8:00	1.0	Load inner barrel.
				9:00	1.0	Trip in drill collars.
				10:30	1.5	Cut and slip 107 ft of drilling line.
				13:30	3.0	Trip in for core #4 in Thaynes.
				14:30	1.0	Wash and ream to bottom.
				5:00	14.5	Core 10551' - 10570'.
				6:00	1.0	Pump slug.
				7:00	1.0	Trip out.
77	12/1	10570	19	10:30	3.5	Trip out with core #4.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				13:00	2.5	Lay down and cut aluminum-sleeved core. Cut 19 ft; recovered 15 ft. Rebuild core barrel.
				17:00	4.0	Trip in for core #5 in Thaynes.
				7:00	14.0	Core 10570' - 10585'.
78	12/2	10585	15	17:30	10.5	Core 10585' - 10600'.
				19:00	1.5	Work tight hole, pulling 100K over string weight.
				20:00	1.0	Core--no progress.
				21:30	1.5	Pump slug.
				2:30	5.0	Trip out with core #5.
				6:00	3.5	Lay down and cut aluminum-sleeved core. Cut 30 ft; recovered 13 ft. Inspect and rebuild core barrel.
				7:00	1.0	Trip in mill tooth bit for clean-out run.
79	12/3	10600	15	11:00	4.0	Trip in.
				12:00	1.0	Ream 10505' - 10600'.
				13:30	1.5	Circulate bottoms up.
				19:00	5.5	Trip out for core #6 in Thaynes. SLM--no change.
				0:30	5.5	Trip in for core #6.
				1:30	1.0	Pick up 2 joints of pipe & pup joint. Tag bottom.
				7:00	5.5	Core 10600' - 10605'.
80	12/4	10605	5	16:30	9.5	Core 10605' - 10618'.
				17:00	0.5	Pump slug.
				22:00	5.0	Trip out with core #6. Pressure fluctuated--possibly grinding up core.
				1:00	3.0	Lay down and cut aluminum-sleeved core. Cut 18 ft; recovered 8 ft. Rebuild core barrel.
				7:00	6.0	Trip in for core #7. Change jars.
81	12/5	10618	13	20:30	13.5	Core 10618' - 10637'.
				3:30	7.0	Pump slug. Trip out with core #7.
				4:30	1.0	Lay down and cut-aluminum sleeved core. Cut 19 ft; recovered 13 ft.
				7:00	2.5	Slip and cut drilling line.
82	12/6	10637	19	8:00	1.0	Slip and cut drilling line.
				12:00	4.0	Trip in with mill. On trip out with core #7 a die from drill collar slips had fallen in hole.
				12:30	0.5	Ream 10544' - 10637'.
				15:30	3.0	Mill at 10637'.
				20:00	4.5	Pump pill. Trip out.
				22:30	2.5	Clean junk basket. Good recovery of die.
				3:00	4.5	Trip in for core #8.
				4:00	1.0	Wash and ream 30 ft to bottom.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				7:00	3.0	Core at 10637'.
83	12/7	10637	0	12:00	5.0	Core 10637' - 10649'.
				12:30	0.5	Mix pill.
				17:30	5.0	Trip out with core #8 without rotating.
				19:00	1.5	Lay down and cut aluminum-sleeved core. Cut 12 ft; recovered 9 ft.
				21:00	2.0	Trip in drill collars.
				1:00	4.0	Inspect BHA.
				3:00	2.0	Pick up test tool for DST #2 in Thaynes.
				7:00	4.0	Trip in. Add 1200 ft of water cushion.
84	12/8	10649	12	9:30	2.5	Trip in for DST #2.
				14:00	4.5	Test 10539' - 10649'. Times 10-60-90-120 min.
				20:30	6.5	Trip out with DST #2.
				22:30	2.0	Break and lay down test tools.
				23:00	0.5	Set wear bushing.
				3:00	4.0	Trip in new bit #27 Smith F47ODP at 10649'.
				4:00	1.0	Ream 50 ft to bottom.
				7:00	3.0	Drill 10649' - 10669'.
85	12/9	10669	20	10:00	3.0	Drill 10669' - 10688'.
				10:30	0.5	Service rig.
				18:00	7.5	Drill 10688' - 10736'.
				18:30	0.5	Repair light plant.
				7:00	12.5	Drill 10736' - 10816'.
86	12/10	10816	147	14:30	7.5	Drill 10816' - 10874'.
				15:00	0.5	Service rig.
				3:00	12.0	Drill 10874' - 10960'.
				4:00	1.0	Circulate samples.
				7:00	3.0	Trip out to pick up directional tools.
87	12/11	10960	144	9:00	2.0	Trip out to pick up directional tools.
				11:00	2.0	Cut and slip drilling line.
				12:00	1.0	Trip out BHA.
				15:00	3.0	Wait on directional tools.
				21:00	6.0	Pick up MWD tools & 1.83 deg motor.
				3:00	6.0	Trip in new bit #28 Hughes ATJ44C at 10960'.
				4:30	1.5	Survey with MWD below casing on trip in.
				7:00	2.5	Drill 10960' - 10969' (slide).
88	12/12	10969	9	8:30	1.5	Drill 10969' - 10978' (rotate).
				9:00	0.5	Survey: 10936'--2.5 deg, 50.9 azimuth.
				13:00	4.0	Drill 10978' - 10990' (slide); 10990' - 11010' (rotate).

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				13:30	0.5	Survey: 10968'--2.9 deg, 30.7 azimuth.
				18:00	4.5	Drill 11010' - 11022' (slide); 11022' - 11042' (rotate).
				18:30	0.5	Survey: 11000'--3.5 deg, 11.3 azimuth.
				22:00	3.5	Drill 11042' - 11054' (slide); 11054' - 11073' (rotate).
				22:30	0.5	Survey: 11031'--4.6 deg, 0.1 azimuth.
				2:30	4.0	Drill 11073' - 11084' (slide); 11084' - 11104' (rotate).
				3:00	0.5	Survey: 11062'--5.1 deg, 349.0 azimuth.
				7:00	4.0	Drill 11104' - 11116' (slide); 11116' - 11135' (rotate).
89	12/13	11135	166	11:30	4.5	Drill 11135' - 11145' (slide); 11145' - 11166' (rotate).
				12:00	0.5	Survey: 11124'--7.4 deg, 339.2 azimuth.
				15:30	3.5	Drill 11166' - 11176' (slide); 11176' - 11197' (rotate).
				16:00	0.5	Survey: 11155'--8.1 deg, 336.2 azimuth.
				19:00	3.0	Drill 11197' - 11208' (slide); 11208' - 11228' (rotate).
				19:30	0.5	Survey: 11186'--8.4 deg, 332.9 azimuth.
				22:30	3.0	Drill 11228' - 11240' (slide); 11240' - 11259' (rotate).
				23:00	0.5	Survey: 11217'--9.1 deg, 332.2 azimuth.
				2:30	3.5	Drill 11259' - 11271' (slide); 11271' - 11290' (rotate).
				3:00	0.5	Survey: 11248'--9.8 deg, 331.5 azimuth.
				5:30	2.5	Drill 11290' - 11302' (slide); 11302' - 11321' (rotate).
				6:00	0.5	Survey: 11279'--10.5 deg, 331.4 azimuth.
				7:00	1.0	Drill 11321' - 11324' (slide).
90	12/14	11324	189	9:30	2.5	Drill 11324' - 11335' (slide); 11335' - 11352' (rotate).
				10:00	0.5	Survey: 11310'--11.2 deg, 330.5 azimuth.
				13:30	3.5	Drill 11352' - 11366' (slide); 11366' - 11384' (rotate).
				14:00	0.5	Survey: 11342'--11.6 deg, 330.0 azimuth.
				15:00	1.0	Mix and pump slug.
				20:00	5.0	Trip out.
				22:30	2.5	Check MWD. Pick up new motor, still 1.83 deg.
				5:00	6.5	Trip in new bit #29 Smith MF47ODL at 11384'.
				5:30	0.5	Circulate.
				6:00	0.5	Orient tools.
				6:30	0.5	Drill 11384' - 11386' (slide).
				7:00	0.5	Circulate air bubble. Trip gas 29 units.
91	12/15	11386	62	9:00	2.0	Drill 11386' - 11398' (slide).
				10:00	1.0	Drill 11398' - 11415' (rotate).
				10:30	0.5	Survey: 11373'--12.2 deg, 328.8 azimuth.
				12:00	1.5	Drill 11415' - 11427' (slide).
				13:30	1.5	Drill 11427' - 11446' (rotate).
				14:00	0.5	Survey: 11404'--12.7 deg, 330.2 azimuth.
				16:00	2.0	Drill 11446' - 11466' (slide).
				17:00	1.0	Drill 11466' - 11477' (rotate).
				17:30	0.5	Survey: 11435'--13.0 deg, 331.2 azimuth.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				20:30	3.0	Drill 11477' - 11497' (slide).
				21:30	1.0	Drill 11497' - 11508' (rotate).
				22:00	0.5	Survey: 11466'--13.6 deg, 332.2 azimuth.
				1:00	3.0	Drill 11508' - 11528' (slide).
				1:30	0.5	Drill 11528' - 11538' (rotate).
				2:00	0.5	Survey: 11496'--14.2 deg, 330.8 azimuth.
				5:00	3.0	Drill 11538' - 11563' (slide).
				5:30	0.5	Drill 11563' - 11570' (rotate).
				6:00	0.5	Survey: 11528'--14.5 deg, 329.7 azimuth.
				7:00	1.0	Drill 11570' - 11576' (slide).
92	12/16	11576	190	10:00	3.0	Drill 11576' - 11601' (slide).
				10:30	0.5	Survey: 11559'--14.9 deg, 327.7 azimuth.
				14:30	4.0	Drill 11601' - 11633' (slide).
				15:00	0.5	Survey: 11591'--15.8 deg, 328.3 azimuth.
				19:30	4.5	Drill 11633' - 11665' (slide).
				20:00	0.5	Survey: 11623'--17.3 deg, 329.3 azimuth.
				21:30	1.5	Drill 11665' - 11696' (rotate).
				22:30	1.0	Ream 11621' - 11680' through 7.5 deg dogleg.
				23:30	1.0	Drill 11696' - 11708' (slide).
				1:00	1.5	Drill 11708' - 11726' (rotate).
				1:30	0.5	Survey: 11684'--19.6 deg, 336.9 azimuth.
				3:00	1.5	Drill 11726' - 11738' (slide).
				5:00	2.0	Drill 11738' - 11758' (rotate).
				5:30	0.5	Survey: 11716'--20.0 deg, 339.9 azimuth.
				7:00	1.5	Drill 11758' - 11775' (slide).
93	12/17	11775	199	8:00	1.0	Drill 11775' - 11789' (rotate).
				8:30	0.5	Survey: 11747'--20.8 deg, 341.8 azimuth.
				10:00	1.5	Drill 11789' - 11803' (slide).
				11:00	1.0	Drill 11803' - 11820' (rotate).
				11:30	0.5	Survey: 11778'--20.9 deg, 342.6 azimuth.
				13:00	1.5	Drill 11820' - 11834' (slide).
				14:00	1.0	Drill 11834' - 11852' (rotate).
				14:30	0.5	Survey: 11810'--21.5 deg, 341.3 azimuth.
				16:00	1.5	Drill 11852' - 11866' (slide).
				17:00	1.0	Drill 11866' - 11882' (rotate).
				17:30	0.5	Survey: 11840'--22.0 deg, 339.6 azimuth.
				19:00	1.5	Drill 11882' - 11902' (slide); 11902' - 11913' (rotate).
				20:30	1.5	Drill 11913' - 11929' (slide).
				22:00	1.5	Drill 11929' - 11945' (rotate).
				22:30	0.5	Survey: 11871'--22.8 deg, 337.4 azimuth.
				23:00	0.5	Drill 11945' - 11946' (slide).
				6:00	7.0	Trip out. Survey: 11903'--24.0 deg, 337.4 azimuth.
				7:00	1.0	Lay down MWD and motor.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
94	12/18	11946	171	9:00	2.0	Pick up MWD and motor.
				10:00	1.0	Trip in new bit #30 Hughes HR40C at 11946'.
				10:30	0.5	Fill pipe. Check MWD.
				11:30	1.0	Trip in 36 stands.
				12:00	0.5	Fill pipe. Check MWD.
				13:00	1.0	Trip in 36 stands.
				13:30	0.5	Fill pipe. Check MWD.
				15:00	1.5	Trip in 36 stands.
				15:30	0.5	Fill pipe. Check MWD.
				16:00	0.5	Trip in 8 stands.
				17:30	1.5	Circulate air bubble. Trip gas 28 units.
				18:00	0.5	Trip in.
				21:00	3.0	Drill 11946' - 11962' (slide).
				22:00	1.0	Drill 11962' - 11975' (rotate).
				22:30	0.5	Survey: 11933'--25.5 deg, 337.1 azimuth.
				23:30	1.0	Drill 11975' - 11987' (slide).
				0:30	1.0	Drill 11987' - 12005' (rotate).
				1:00	0.5	Survey: 11963'--27 deg, 336.8 azimuth.
				3:30	2.5	Drill 12005' - 12018' (slide).
				5:00	1.5	Drill 12018' - 12035' (rotate).
				5:30	0.5	Survey: 11994'--28.2 deg, 335.7 azimuth.
				7:00	1.5	Drill 12035' - 12042' (slide).
95	12/19	12042	96	8:00	1.0	Drill 12042' - 12046' (slide).
				9:30	1.5	Drill 12046' - 12057' (rotate).
				10:00	0.5	Mix and pump slug.
				17:00	7.0	Trip out.
				18:00	1.0	Change bits. Pull MWD. Function blinds.
				18:30	0.5	Service rig.
				19:00	0.5	Repair rig--replace rotary bushing.
				20:00	1.0	Trip in new bit #31 Smith F57ODPS at 12057'. Pick up MWD tools and motor.
				20:30	0.5	Check MWD.
				21:30	1.0	Trip in 38 stands.
				22:00	0.5	Fill pipe.
				23:00	1.0	Trip in 36 stands.
				23:30	0.5	Fill pipe.
				1:30	2.0	Cut 102 ft of drilling line.
				2:30	1.0	Install drive bushing on kelly.
				4:00	1.5	Trip in 43 stands.
				6:00	2.0	Circulate bottoms up.
				7:00	1.0	Trip in.
96	12/20	12057	15	7:30	0.5	Wash and ream 31 ft to bottom.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				9:30	2.0	Drill 12057' - 12066' (rotate).
				10:00	0.5	Survey: 12024'--29.0 deg, 336.0 azimuth.
				11:00	1.0	Drill 12066' - 12080' (slide).
				12:00	1.0	Drill 12080' - 12096' (rotate).
				16:00	4.0	Lost 250 bbls. Pump LCM.
				17:00	1.0	Drill 12096' - 12106' (slide).
				18:30	1.5	Drill 12106' - 12128' (rotate).
				20:00	1.5	Drill 12128' - 12139' (slide).
				21:00	1.0	Drill 12139' - 12159' (rotate).
				21:30	0.5	Survey: 12117'--33.1 deg, 331.5 azimuth.
				0:00	2.5	Drill 12159' - 12189' (rotate).
				0:30	0.5	Survey: 12147'--33.8 deg, 331.4 azimuth.
				2:00	1.5	Drill 12189' - 12200' (slide).
				3:30	1.5	Drill 12200' - 12220' (rotate).
				4:00	0.5	Survey: 12178'--34.0 deg, 331.5 azimuth.
				5:30	1.5	Drill 12220' - 12231' (slide).
				7:00	1.5	Drill 12231' - 12236' (rotate).
97	12/21	12236	179	9:00	2.0	Drill 12236' - 12248' (rotate).
				10:00	1.0	Circulate and spot LCM pill prior to trip.
				11:00	1.0	Trip out 8 stands.
				11:30	0.5	Mix and pump slug.
				17:00	5.5	Trip out.
				19:00	2.0	Change bits and pick up new 1.5 deg motor.
				19:30	0.5	Meet with H2S safety trainer.
				21:00	1.5	Orient and replace MWD.
				3:30	6.5	Trip in new bit #32 Smith F67ODPS at 12248'. Fill pipe every 36 stands.
				5:00	1.5	Circulate bottoms up.
				6:30	1.5	Wash 59 ft to bottom.
				7:00	0.5	Drill 12248' - 12249' (rotate).
98	12/22	12249	13	21:00	14.0	Drill 12249' - 12312' (rotate).
				21:30	0.5	Survey: 12270'--34.8 deg, 333.8 azimuth.
				7:00	9.5	Drill 12312' - 12328' (slide); 12328' - 12336' (rotate).
99	12/23	12336	87	7:30	0.5	Pump 30 B LCM & pipe-slick pill.
				9:00	1.5	Drill 12336' - 12344' (rotate).
				9:30	0.5	Survey: 12302'--35.0 deg, 333.7 azimuth.
				14:00	4.5	Drill 12344' - 12375' (rotate).
				14:30	0.5	Survey: 12333'--35.9 deg, 333.6 azimuth.
				16:30	2.0	Drill 12375' - 12406' (rotate).
				17:00	0.5	Survey: 12364'--35.8 deg, 333.5 azimuth.
				18:30	1.5	Drill 12406' - 12438' (rotate).
				19:00	0.5	Survey: 12396'--35.7 deg, 333.6 azimuth.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				20:30	1.5	Drill 12438' - 12469' (rotate).
				21:00	0.5	Survey: 12427'--35.9 deg, 333.1 azimuth.
				23:00	2.0	Drill 12469' - 12500' (rotate).
				23:30	0.5	Survey: 12458'--36.3 deg, 332.7 azimuth.
				3:00	3.5	Drill 12500' - 12532' (rotate).
				3:30	0.5	Survey: 12490'--36.3 deg, 333.2 azimuth.
				6:00	2.5	Drill 12532' - 12563' (rotate).
				6:30	0.5	Survey: 12521'--35.9 deg, 332.9 azimuth.
				7:00	0.5	Drill 12563' - 12566' (rotate).
100	12/24	12566	230	9:00	2.0	Drill 12566' - 12593' (rotate).
				9:30	0.5	Survey: 12551'--36.4 deg, 333.4 azimuth.
				10:30	1.0	Drill 12593' - 12604' (slide).
				12:30	2.0	Drill 12604' - 12626' (rotate).
				13:30	1.0	Spot LCM and pipe-slick pill.
				14:30	1.0	Trip out 8 stands.
				15:00	0.5	Mix and pump slug.
				21:00	6.0	Trip out. Lay down jars and MWD.
				22:30	1.5	Change bits. Pick up MWD.
				5:00	6.5	Trip in new bit #33 Smith F67ODPS at 12626'. Fill pipe every 36 stands.
				7:00	2.0	Circulate air out of mud.
101	12/25	12626	60	7:30	0.5	Trip in 5 stands.
				8:00	0.5	Wash and ream 46 ft to bottom.
				8:30	0.5	Orient tools.
				9:30	1.0	Drill 12626' - 12636' (slide).
				10:00	0.5	Drill 12636' - 12654' (rotate).
				10:30	0.5	Survey: 12612'--36.5 deg, 333.7 azimuth.
				14:30	4.0	Drill 12654' - 12664' (slide); 12664' - 12685' (rotate).
				15:00	0.5	Survey: 12643'--36.4 deg, 335.5 azimuth.
				18:30	3.5	Drill 12685' - 12691' (slide); 12691' - 12716' (rotate).
				19:00	0.5	Survey: 12674'--36.3 deg, 336.9 azimuth.
				22:00	3.0	Drill 12716' - 12724' (slide); 12724' - 12747' (rotate).
				22:30	0.5	Survey: 12705'--36.4 deg, 337.7 azimuth.
				3:30	5.0	Drill 12747' - 12755' (slide); 12755' - 12778' (rotate).
				4:00	0.5	Survey: 12736'--36.4 deg, 338.1 azimuth.
				7:00	3.0	Drill 12778' - 12786' (slide); 12786' - 12810' (rotate).
102	12/26	12810	184	7:30	0.5	Survey: 12768'--36.4 deg, 338.4 azimuth.
				11:00	3.5	Drill 12810' - 12818' (slide); 12818' - 12841' (rotate).
				11:30	0.5	Survey: 12799'--36.5 deg, 339.4 azimuth.
				13:30	2.0	Drill 12841' - 12873' (rotate).
				14:00	0.5	Survey: 12831'--36.9 deg, 339.3 azimuth.
				16:00	2.0	Drill 12873' - 12904' (rotate).

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				16:30	0.5	Survey: 12862'--37.1 deg, 338.9 azimuth.
				19:30	3.0	Drill 12904' - 12914' (slide); 12914' - 12934' (rotate).
				20:00	0.5	Survey: 12892'--37.5 deg, 338.4 azimuth.
				22:30	2.5	Drill 12934' - 12944' (slide); 12944' - 12965' (rotate).
				23:00	0.5	Survey: 12923'--38.0 deg, 338.2 azimuth.
				0:00	1.0	Drill 12965' - 12970' (slide).
				0:30	0.5	Work tight hole.
				5:00	4.5	Drill 12970' - 12975' (slide); 12975' - 12996' (rotate).
				5:30	0.5	Survey: 12954'--38.5 deg, 338.7 azimuth.
				6:00	0.5	Drill 12996' - 13000'.
				6:30	0.5	Pump LCM pill.
				7:00	0.5	Trip out 8 stands.
103	12/27	13000	190	7:30	0.5	Trip out 8 stands.
				8:30	1.0	Mix and pump slug.
				14:30	6.0	Trip out.
				16:00	1.5	Change bits and MWD.
				16:30	0.5	Trip in new bit #34 Smith F67ODPS at 13000'.
				17:00	0.5	Fill pipe. Test MWD.
				18:30	1.5	Trip in 36 stands.
				19:00	0.5	Fill pipe. Test MWD.
				22:00	3.0	Trip in. Fill pipe every 36 stands.
				0:00	2.0	Circulate air out of mud at 12530'.
				1:00	1.0	Trip in.
				5:00	4.0	Ream undergauge hole 12901' - 13000'.
				6:00	1.0	Survey.
				7:00	1.0	Drill 13000' - 13004' (slide).
104	12/28	13004	4	8:00	1.0	Drill 13004' - 13010' (slide).
				8:30	0.5	Drill 13010' - 13028' (rotate).
				9:00	0.5	Survey: 12986'--38.4 deg, 339.8 azimuth.
				10:00	1.0	Drill 13028' - 13038' (slide).
				11:30	1.5	Drill 13038' - 13059' (rotate).
				12:00	0.5	Survey: 13017'--37.5 deg, 340.9 azimuth.
				13:00	1.0	Drill 13059' - 13067' (slide).
				14:30	1.5	Drill 13067' - 13091' (rotate).
				15:00	0.5	Survey: 13049'--37.2 deg, 340.9 azimuth.
				16:00	1.0	Drill 13091' - 13099' (slide).
				18:30	2.5	Drill 13099' - 13122' (rotate).
				19:00	0.5	Survey: 13080'--37.7 deg, 339.5 azimuth.
				21:00	2.0	Drill 13122' - 13134' (slide).
				22:30	1.5	Drill 13134' - 13150' (rotate). Motor stalled.
				23:30	1.0	Mix and spot LCM pill on bottom.
				0:30	1.0	Trip out 10 stands.
				1:00	0.5	Mix and pump slug.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				7:00	6.0	Trip out. Lay down 17 joints of drill pipe.
105	12/29	13150	146	9:00	2.0	Trip out.
				10:00	1.0	Lay down motor and MWD.
				11:00	1.0	Cut and slip drilling line.
				11:30	0.5	Strap drill pipe.
				13:30	2.0	Trip in new bit #35 Smith F8ODPS at 13150' to ream undergauge hole.
				14:30	1.0	Pick up 15 joints E 19.50# drill pipe.
				18:30	4.0	Trip in.
				5:30	11.0	Ream undergauge hole 12947' - 13150'.
				7:00	1.5	Circulate and wait on orders.
106	12/30	13150	0	8:00	1.0	Circulate.
				16:30	8.5	Trip out. Lay down 13 joints X-95 25.60# pipe.
				18:00	1.5	Rig up Schlumberger.
				5:30	11.5	Run FMI dipmeter. Telemetry failed first run. Stuck 5 min at 13015'. Replace telemetry and gamma tools. Logged from 13000' second run.
				7:00	1.5	Trip in open-ended drill pipe to casing shoe.
107	12/31	13150	0	9:30	2.5	Trip in to 9600'. Pick up 13 joints G pipe.
				16:00	6.5	Wait on orders. Circulate at 9600'.
				19:00	3.0	Install high drum clutch.
				0:00	5.0	Dial in hydromatic and install guards.
				5:30	5.5	Trip out for directional tools.
				7:00	1.5	Pick up downhole motor and MWD tools.
108	1/1	13150	0	7:30	0.5	Orient MWD.
				15:00	7.5	Trip in new bit #36 Smith F8ODR at 13150'.
				17:00	2.0	Circulate air out of mud. Trip gas 49 units.
				17:30	0.5	Trip in.
				18:30	1.0	Wash and ream 110 ft to bottom.
				21:30	3.0	Drill 13150' - 13176' (rotate).
				22:00	0.5	Survey: 13124'--38.3 deg, 340.2 azimuth.
				0:00	2.0	Drill 13176' - 13188' (slide).
				2:00	2.0	Drill 13188' - 13206' (rotate).
				2:30	0.5	Survey: 13154'--38.4 deg, 339.8 azimuth.
				3:30	1.0	Drill 13206' - 13218' (slide).
				6:00	2.5	Drill 13218' - 13238' (rotate).
				6:30	0.5	Survey: 13186'--38.2 deg, 340.6 azimuth.
				7:00	0.5	Drill 13238' - 13243' (slide).
109	1/2	13243	93	7:30	0.5	Drill 13243' - 13250' (slide).
				9:30	2.0	Drill 13250' - 13269' (rotate).

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				10:00	0.5	Survey: 13217'--38.0 deg, 342.1 azimuth.
				11:30	1.5	Drill 13269' - 13281' (slide).
				13:00	1.5	Drill 13281' - 13299' (rotate).
				13:30	0.5	Survey: 13247'--37.5 deg, 343.2 azimuth.
				16:00	2.5	Drill 13299' - 13318' (slide).
				17:00	1.0	Mix and pump pill.
				18:00	1.0	Trip out.
				19:30	1.5	Pump slug.
				6:00	10.5	Trip out. Magnaflux drill collars.
				6:30	0.5	Lay down one 6 1/4" cracked drill collar.
				7:00	0.5	Service MWD.
110	1/3	13318	75	7:30	0.5	Service MWD.
				8:30	1.0	Change out 6 1/2 drill collar.
				15:00	6.5	Trip in new bit #37 Smith F8ODR at 13318'. Fill at 650', 2625', 5900', 9175', and 12860'.
				19:00	4.0	Ream 77 ft to bottom.
				21:00	2.0	Attempt to drill, motor stalling with little weight.
				21:30	0.5	Mix and pump pill.
				5:00	7.5	Trip out.
				7:00	2.0	Pull MWD and change downhole motor.
111	1/4	13318	0	12:00	5.0	Trip in new bit #38 Smith F8ODPS at 13318'.
				13:00	1.0	Cut 124 ft of drilling line.
				15:00	2.0	Trip in.
				17:00	2.0	Circulate air out of mud. Wash 107 ft to bottom.
				19:00	2.0	Drill 13318' - 13325' (slide).
				20:00	1.0	Drill 13325' - 13330' (rotate).
				20:30	0.5	Survey: 13278'--37.1 deg, 343.0 azimuth.
				1:00	4.5	Drill 13330' - 13337' (slide); 13337' - 13361' (rotate).
				1:30	0.5	Survey: 13309'--37.0 deg, 344.1 azimuth.
				6:00	4.5	Drill 13361' - 13369' (slide); 13369' - 13392' (rotate).
				6:30	0.5	Survey: 13340'--36.9 deg, 346.2 azimuth.
				7:00	0.5	Drill 13392' - 13395' (slide).
112	1/5	13395	77	11:00	4.0	Drill 13395' - 13399' (slide); 13399' - 13421' (rotate).
				11:30	0.5	Survey: 13369'--37.1 deg, 346.8 azimuth.
				15:30	4.0	Drill 13421' - 13429' (slide); 13429' - 13451' (rotate).
				16:00	0.5	Survey: 13399'--37.6 deg, 346.9 azimuth.
				16:30	0.5	Mix and pump pill.
				0:30	8.0	Trip out.
				7:00	6.5	Trip in rerun bit #37 Smith F8ODR at 13451'. Test MWD and fill pipe every 36 stands.
113	1/6	13451	56	9:30	2.5	Trip in. Fill pipe every 36 stands.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				14:00	4.5	Wash and ream 59 ft to bottom. Circulate air out.
				14:30	0.5	Survey.
				19:00	4.5	Drill 13451' - 13473' (rotate).
				5:30	10.5	Drill 13473' - 13573' (try to slide, then rotate).
				6:00	0.5	Surveys: 13431'--37.2 deg, 347.5 azimuth; 13461'--37.2 deg, 348.7 azimuth; 13491'--37.9 deg, 348.3 azimuth; 13521'--38.4 deg, 348.8 azimuth.
				7:00	1.0	Mix and pump pill.
114	1/7	13573	122	13:30	6.5	Trip out.
				15:30	2.0	Pick up new bit #39 Smith F8ODR at 13573'. Change downhole motors and orient MWD.
				22:00	6.5	Trip in. Fill pipe every 36 stands. Test MWD.
				23:00	1.0	Ream 59 ft to bottom.
				0:30	1.5	Circulate bottoms up. Trip gas 209 units.
				4:30	4.0	Drill 13573' - 13604' (rotate).
				5:00	0.5	Survey: 13552'--38.8 deg, 348.8 azimuth.
				7:00	2.0	Drill 13604' - 13610' (slide).
115	1/8	13610	37	8:00	1.0	Drill 13610' - 13616' (rotate).
				12:00	4.0	Lost 250 B at 13616'.
				13:00	1.0	Drill 13616' - 13625' (rotate).
				16:00	3.0	Work tight hole and lost circulation. Lost 125 B.
				17:30	1.5	Drill 13625' - 13631'???
				19:00	1.5	Pump LCM pill.
				20:30	1.5	Trip out 12 stands. Pump slug.
				21:30	1.0	Pump slug.
				3:30	6.0	Trip out.
				5:00	1.5	Pick up new bit #40 Smith F8ODR at 13631' and new downhole motor (1.15 deg).
				7:00	2.0	Trip in.
116	1/9	13631	21	10:30	3.5	Trip in. Fill pipe every 36 stands.
				12:30	2.0	Cut drilling line.
				14:30	2.0	Trip in. Fill pipe 12 stands off bottom.
				15:30	1.0	Wash and ream 54 ft to bottom.
				16:30	1.0	Circulate bottoms up. 13631' became 13629'.
				20:00	3.5	Drill 13629' - 13636' (rotate).
				20:30	0.5	Survey: 13584'--39.1 deg, 347.3 azimuth.
				0:30	4.0	Drill 13636' - 13666' (rotate).
				1:00	0.5	Survey: 13615'--39.8 deg, 348.9 azimuth.
				4:00	3.0	Drill 13666' - 13696' (rotate).
				4:30	0.5	Survey: 13644'--39.8 deg, 349.3 azimuth.
				7:00	2.5	Drill 13696' - 13716' (rotate).

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
117	1/10	13716	85	8:00	1.0	Drill 13716' - 13728' (rotate).
				8:30	0.5	Survey: 13676'--39.8 deg, 349.5 azimuth.
				10:30	2.0	Drill 13728' - 13759' (rotate).
				11:00	0.5	Survey: 13707'--40.1 deg, 348.9 azimuth.
				14:00	3.0	Drill 13759' - 13780' (rotate).
				14:30	0.5	Pump LCM pill.
				15:30	1.0	Trip out 13 stands.
				16:30	1.0	Pump slug.
				23:00	6.5	Trip out.
				6:00	7.0	Trip in new bit #41 Smith F8ODLPS at 13780'. Fill pipe every 36 stands.
				7:00	1.0	Wash and ream to bottom.
118	1/11	13780	64	8:00	1.0	Wash and ream 60 ft to bottom.
				8:30	0.5	Circulate.
				9:30	1.0	Wash and ream 36 ft to bottom.
				11:30	2.0	Drill 13780' - 13789' (rotate).
				12:00	0.5	Survey: 13737'--40.8 deg, 348.9 azimuth.
				20:00	8.0	Drill 13789' - 13820' (rotate).
				20:30	0.5	Survey: 13768'--41.1 deg, 349.3 azimuth.
				2:00	5.5	Drill 13820' - 13849' (rotate).
				2:30	0.5	Survey: 13797'--41.2 deg, 349.1 azimuth.
				7:00	4.5	Drill 13849' - 13873' (rotate).
119	1/12	13873	93	9:30	2.5	Drill 13873' - 13881' (rotate).
				10:00	0.5	Survey: 13829'--41.3 deg, 348.6 azimuth.
				15:30	5.5	Drill 13881' - 13912' (rotate).
				16:00	0.5	Survey: 13860'--41.5 deg, 348.8 azimuth.
				19:00	3.0	Drill 13912' - 13944' (rotate).
				19:30	0.5	Survey: 13892'--41.9 deg, 348.9 azimuth.
				20:30	1.0	Drill 13944' - 13962' (rotate).
				22:30	2.0	Circulate bottoms up. Pump pill.
				1:00	2.5	Trip out 48 stands.
				2:30	1.5	Cut 72 ft of drilling line.
				5:30	3.0	Trip in. Wash 56 ft to bottom.
				7:00	1.5	Circulate bottoms up.
120	1/13	13962	89	7:30	0.5	Pump slug.
				17:00	9.5	Trip out for logs.
				4:30	11.5	Rig up and log with Schlumberger. Run #1: FMI dipmeter TD - 12500'. Run #2: Platform Express dual laterolog, BHC sonic, neutron-density.
				6:00	1.5	Rig down Schlumberger.
				7:00	1.0	Lay down Monel drill collars and motor.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
121	1/14	13962	0	8:30	1.5	Lay down directional tools.
				11:00	2.5	Trip in. Pick up new jars.
				11:30	0.5	Service rig.
				17:00	5.5	Trip in rerun bit #41 Smith F8ODLPS.
				20:30	3.5	Wash and ream 13837' - 13962'.
				21:00	0.5	Mix and pump pill.
				23:30	2.5	Trip out to 9647'.
				7:00	7.5	Circulate. Wait on Dowell cementers.
122	1/15	13962	0	7:00	24.0	Circulate. Wait on Dowell cementers.
123	1/16	13962	0	11:30	4.5	Circulate. Wait on Dowell cementers.
				14:00	2.5	Trip in.
				15:30	1.5	Wash and ream 13913' - 13962'.
				16:30	1.0	Trip out 7 stands.
				17:00	0.5	Pump slug.
				0:00	7.0	Trip out. SLM: 13959'.
				7:00	7.0	Rig up casers and run 7" liner.
124	1/17	13962	0	11:00	4.0	Run 7" liner.
				12:30	1.5	Circulate air out of casing.
				17:30	5.0	Trip in to set 7" liner.
				18:00	0.5	Make up circulating head on drill pipe.
				19:30	1.5	Trip in & set 7" 32# liner at 9135' - 13925'.
				20:00	0.5	Rig up circulating head.
				22:00	2.0	Circulate bottoms up.
				3:00	5.0	Cement 7" casing: 182 sx lead, 605 sx tail. Circulated 32 B contaminated cement.
				3:30	0.5	Mix and pump pill.
				7:00	3.5	Trip out.
125	1/18	13962	0	9:00	2.0	Lay down liner hanger and cementing head.
				13:00	4.0	Trip in 6 3/4" drill collars and 7300 ft of 5" pipe.
				14:30	1.5	Wait on and rig up lay down machine. Pump pill.
				15:00	0.5	Lay down pipe.
				16:30	1.5	Set pipe tubs to lay 5" drill pipe in.
				0:00	7.5	Lay down drill pipe and drill collars.
				7:00	7.0	Change bottom BOP rams to 3 1/2".
126	1/19	13962	0	17:00	10.0	Pressure test BOP.
				17:30	0.5	Set wear bushing.
				19:00	1.5	Unload 3 1/2" drill pipe and put on racks. Strap drill collars.
				7:00	12.0	Pick up new BHA. Trip in new bit #42 6" Smith FDS+ at 13962' to drill cement.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
127	1/20	13962	0	8:30	1.5	Trip in 3 1/2" drill pipe.
				9:30	1.0	Rig down lay down machine.
				14:30	5.0	Trip in.
				16:30	2.0	Circulate bottoms up.
				19:00	2.5	Trip in. Tagged cement at 13755'.
				0:00	5.0	Drill cement.
				0:30	0.5	Test casing at 1500 psi for 15 min.
				4:30	4.0	Drill cement and shoe; rathole below shoe, and 3 ft of new formation.
				6:30	2.0	Circulate bottoms up.
				7:00	0.5	Test formation at 500 psi for 15 min.
128	1/21	13965	3	15:30	8.5	Lay down 18 joints of drill pipe. Trip out.
				18:00	2.5	Pick up nonmagnetic drill collar, nonmagnetic pony drill collar, and motor. Test MWD.
				2:00	8.0	Trip in new bit #43 Smith MF57ODL at 13965'. Fill hole every 36 stands. Put wear rubbers on every other joint of 3 1/2" drill pipe.
				4:00	2.0	Cut 130 ft of drilling line.
				7:00	3.0	Trip in.
129	1/22	13965	0	7:30	0.5	Trip in.
				9:30	2.0	Drill 13965' - 13979' (rotate).
				10:00	0.5	Circulate air out.
				11:00	1.0	Drill 13979' - 13985' (rotate).
				11:30	0.5	Survey: no good--magnetic influence of casing.
				17:00	5.5	Drill 13985' - 14015' (rotate).
				17:30	0.5	Survey: 13973'--42.6 deg, 349.2 azimuth.
				22:00	4.5	Drill 14015' - 14044' (rotate).
				22:30	0.5	Survey: 14002'--42.5 deg, 349.7 azimuth.
				3:00	4.5	Drill 14044' - 14064' (rotate).
				4:00	1.0	Mix and pump pill.
				7:00	3.0	Trip out.
130	1/23	14064	99	19:30	12.5	Trip for new bit #44 Hughes STR-70 at 14064'.
				20:00	0.5	Wash and ream 64 ft to bottom.
				22:00	2.0	Drill 14064' - 14072' (rotate).
				22:30	0.5	Circulate air out. Trip gas 17 units.
				23:30	1.0	Drill 14072' - 14075' (rotate).
				0:00	0.5	Survey: 14033'--42.3 deg, 349.5 azimuth.
				4:30	4.5	Drill 14075' - 14106' (rotate).
				5:00	0.5	Survey: 14064'--42.0 deg, 350.1 azimuth.
				7:00	2.0	Drill 14106' - 14114' (rotate).
131	1/24	14114	50	9:30	2.5	Drill 14114' - 14137' (rotate).

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				10:00	0.5	Survey: 14095'--41.9 deg, 350.8 azimuth.
				15:00	5.0	Drill 14137' - 14169' (rotate).
				15:30	0.5	Survey: 14127'--41.9 deg, 351.4 azimuth. Mix and pump pill.
				0:00	8.5	Trip out for new bit #45 Hughes STR-70 at 14169'.
				1:00	1.0	Trip in. Check MWD; didn't work.
				2:00	1.0	Trip out.
				4:00	2.0	Change MWD.
				7:00	3.0	Trip in.
132	1/25	14169	55	12:30	5.5	Trip in. Ream 90 ft to bottom.
				15:30	3.0	Drill 14169' - 14201' (rotate).
				16:00	0.5	Survey: 14159'--42.2 deg, 350.9 azimuth.
				19:00	3.0	Drill 14201' - 14232' (rotate).
				19:30	0.5	Survey: 14190'--41.8 deg, 350.7 azimuth.
				22:30	3.0	Drill 14232' - 14264' (rotate).
				23:00	0.5	Survey: 14222'--42.2 deg, 350.2 azimuth.
				2:00	3.0	Drill 14264' - 14295' (rotate).
				2:30	0.5	Survey: 14253'--41.6 deg, 351.1 azimuth.
				5:30	3.0	Drill 14295' - 14327' (rotate).
				6:00	0.5	Survey: 14285'--41.0 deg, 350.3 azimuth.
				7:00	1.0	Drill 14327' - 14336' (rotate).
133	1/26	14336	167	7:30	0.5	Drill 14336' - 14345' (rotate).
				14:30	7.0	Pump pill. Trip out.
				15:30	1.0	Drain motor. Change bits.
				18:00	2.5	Trip in with new bit #46 Hughes STR-70 at 14345'. Check MWD.
				20:00	2.0	Repair derrick lights.
				21:00	1.0	Trip in.
				23:30	2.5	Cut drilling line.
				3:30	4.0	Trip in.
				4:30	1.0	Wash and ream 14282' - 14345' to bottom.
				6:00	1.5	Drill 14345' - 14358' (rotate).
				6:30	0.5	Survey: 14316'--41.2 deg, 349.7 azimuth.
				7:00	0.5	Drill 14358' - 14364' (rotate).
134	1/27	14364	28	9:30	2.5	Drill 14364' - 14389' (rotate).
				10:00	0.5	Survey: 14347'--41.3 deg, 349.9 azimuth.
				12:30	2.5	Drill 14389' - 14418' (rotate).
				13:00	0.5	Survey: 14376'--41.3 deg, 350.3 azimuth.
				17:30	4.5	Drill 14418' - 14449' (rotate).
				18:00	0.5	Survey: 14407'--41.8 deg, 350.0 azimuth.
				22:00	4.0	Drill 14449' - 14473' (rotate).
				23:00	1.0	Survey. Pump pill.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				7:00	8.0	Trip out.
135	1/28	14473	109	9:00	2.0	Pick up new bit #47 Hughes STR-70 at 14473'.
				16:30	7.5	Trip in. Fill pipe twice.
				18:30	2.0	Ream 90 ft to bottom.
				19:30	1.0	Drill 14473' - 14481' (rotate).
				20:00	0.5	Survey: 14439'--41.8 deg, 350.3 azimuth.
				1:00	5.0	Drill 14481' - 14512' (rotate).
				1:30	0.5	Survey: 14470'--41.3 deg, 350.4 azimuth.
				6:00	4.5	Drill 14512' - 14544' (rotate).
				6:30	0.5	Survey: 14500'--39.6 deg, 352.0 azimuth.
				7:00	0.5	Drill 14544' - 14546' (rotate).
136	1/29	14546	73	10:00	3.0	Drill 14546' - 14566' (rotate).
				15:30	5.5	Pump pill. Trip out.
				16:30	1.0	Pick up new bit #48 Hughes STR-70 at 14566'.
				17:00	0.5	Trip in.
				17:30	0.5	Check MWD.
				0:00	6.5	Trip in. Fill pipe twice.
				1:30	1.5	Wash and ream 90 ft to bottom.
				3:00	1.5	Drill 14566' - 14574' (rotate).
				3:30	0.5	Survey: 14532'--38.6 deg, 353.1 azimuth.
				6:30	3.0	Drill 14574' - 14605' (rotate).
				7:00	0.5	Survey: 14563'--37.6 deg, 353.8 azimuth.
137	1/30	14605	59	9:30	2.5	Drill 14605' - 14638' (rotate).
				10:00	0.5	Survey: 14593'--38.3 deg, 354.6 azimuth.
				13:30	3.5	Lost circulation--800 B. Spot LCM pill #1 on btm.
				14:30	1.0	Spot LCM pill #2 on bottom.
				15:00	0.5	Pull 9 stands into casing.
				1:00	10.0	Rebuild mud volume. Circulate across top of hole.
				7:00	6.0	Rig repair. Wait on parts for light plant.
138	1/31	14638	33	7:00	24.0	Rig repair. Replace light plant. Circulate across top of hole. Circulate down drill pipe for 5 min/hr.
139	2/1	14638	0	14:00	7.0	Rig repair. Replace light plant. Circulate across top of hole. Circulate down drill pipe for 5 min/hr.
				14:30	0.5	Trip in 9 stands.
				16:00	1.5	Wash and ream to bottom.
				17:30	1.5	Drill 14638' - 14667' (rotate).
				18:00	0.5	Survey: 14624'--38.0 deg, 354.6 azimuth.
				21:00	3.0	Drill 14667' - 14696' (rotate).
				21:30	0.5	Survey: 14654'--38.0 deg, 354.3 azimuth.
				22:00	0.5	Drill 14696' - 14703' (rotate). Spot LCM on bottom.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				23:00	1.0	Trip out 8 stands.
				7:00	8.0	Wait on crew. Circulate across top of hole.
140	2/2	14703	65	8:00	1.0	Circulate. Mix and pump slug.
				19:00	11.0	Trip for new bit #49 Hughes STR-70 at 14703'.
				2:00	7.0	Trip in. Fill pipe and check MWD.
				3:30	1.5	Wash and ream 14614' - 14703'.
				7:00	3.5	Drill 14703' - 14728' (rotate).
141	2/3	14728	25	7:30	0.5	Survey: 14686'--37.6 deg, 354.4 azimuth.
				10:00	2.5	Drill 14728' - 14759' (rotate).
				10:30	0.5	Survey: 14717'--36.9 deg, 354.6 azimuth.
				14:30	4.0	Drill 14759' - 14790' (rotate).
				15:00	0.5	Survey: 14748'--36.6 deg, 354.2 azimuth.
				18:30	3.5	Drill 14790' - 14822' (rotate).
				19:00	0.5	Survey: 14780'--36.5 deg, 352.8 azimuth.
				21:00	2.0	Drill 14822' - 14848' (rotate).
				4:30	7.5	Trip out.
				7:00	2.5	Trip in new bit #50 Hughes STR-70 at 14848'.
142	2/4	14848	120	10:30	3.5	Trip in. Test MWD at 1000' and 7500'.
				11:30	1.0	Slip and cut drilling line.
				15:30	4.0	Trip in. Test MWD 36 stands off bottom.
				16:00	0.5	Wash and ream 37 ft to bottom.
				17:00	1.0	Drill 14848' - 14856' (rotate).
				17:30	0.5	Survey: 14814'--36.8 deg, 351.7 azimuth.
				18:00	0.5	Drill 14856' - 14859' (rotate).
				18:30	0.5	Circulate air out of mud.
				21:00	2.5	Drill 14859' - 14887' (rotate).
				21:30	0.5	Survey: 14845'--36.5 deg, 351.8 azimuth.
				1:30	4.0	Drill 14887' - 14918' (rotate).
				2:00	0.5	Survey: 14876'--36.0 deg, 351.5 azimuth.
				5:30	3.5	Drill 14918' - 14949' (rotate).
				6:00	0.5	Survey: 14907'--36.9 deg, 350.8 azimuth.
				7:00	1.0	Drill 14949' - 14962' (rotate).
143	2/5	14962	114	8:00	1.0	Drill 14962' - 14981' (rotate).
				8:30	0.5	Survey: 14939'--37.0 deg, 351.0 azimuth.
				10:30	2.0	Drill 14981' - 15011' (rotate).
				11:00	0.5	Service rig.
				11:30	0.5	Survey: 14969'--37.8 deg, 350.5 azimuth.
				12:30	1.0	Drill 15011' - 15019' (rotate).
				14:30	2.0	Circulate bottoms up.
				15:30	1.0	Trip out 12 stands to casing.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				0:00	8.5	Circulate across top of hole and down drill pipe 5 min each hour.
				0:30	0.5	Trip in.
				3:30	3.0	Circulate bottoms up.
				7:00	3.5	Pump pill. Trip out.
144	2/6	15019	57	11:00	4.0	Trip out.
				13:00	2.0	Wait on Schlumberger.
				20:30	7.5	Rig up loggers and run FMS dipmeter.
				23:30	3.0	Install rotating head.
				2:00	2.5	Trip in new bit #51 Hughes STR-70 & new motor.
				2:30	0.5	Test MWD.
				7:00	4.5	Trip in.
145	2/7	15019	0	9:30	2.5	Trip in.
				10:00	0.5	Wash and ream 17 ft to bottom.
				12:00	2.0	Drill 15019' - 15031' (rotate).
				12:30	0.5	Circulate air out of mud.
				13:30	1.0	Drill 15031' - 15047' (rotate).
				14:00	0.5	Survey: 15005'--39.3 deg, 349.9 azimuth.
				16:30	2.5	Drill 15047' - 15079' (rotate).
				17:00	0.5	Survey: 15037'--40.2 deg, 348.6 azimuth.
				20:00	3.0	Drill 15079' - 15110' (rotate).
				20:30	0.5	Survey: 15068'--40.8 deg, 348.4 azimuth.
				22:30	2.0	Drill 15110' - 15141' (rotate).
				23:00	0.5	Survey: 15099'--40.5 deg, 347.8 azimuth.
				1:30	2.5	Drill 15141' - 15173' (rotate).
				2:00	0.5	Survey: 15131'--40.2 deg, 347.5 azimuth.
				3:30	1.5	Drill 15173' - 15203' (rotate).
				4:00	0.5	Survey: 15161'--39.8 deg, 347.5 azimuth.
				6:00	2.0	Drill 15203' - 15234' (rotate).
				6:30	0.5	Survey: 15192'--39.6 deg, 347.4 azimuth.
				7:00	0.5	Drill 15234' - 15243' (rotate).
146	2/8	15243	224	8:30	1.5	Drill 15243' - 15264' (rotate).
				9:00	0.5	Survey: 15222'--39.0 deg, 347.6 azimuth.
				11:30	2.5	Drill 15264' - 15295' (rotate).
				12:00	0.5	Survey: 15253'--38.4 deg, 347.1 azimuth.
				14:00	2.0	Drill 15295' - 15319' (rotate).
				14:30	0.5	Pump pill.
				21:00	6.5	Trip out.
				23:00	2.0	Trip in new bit #52 Hughes STR-70 at 15319'.
				0:00	1.0	Pick up 6 joints 3 1/2" drill pipe.
				5:00	5.0	Trip in.
				6:00	1.0	Wash and ream to bottom.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				7:00	1.0	Drill 15319' - 15328' (rotate).
147	2/9	15328	85	8:00	1.0	Drill 15328' - 15331' (rotate).
				8:30	0.5	Survey: 15289'--38.2 deg, 346.6 azimuth.
				11:00	2.5	Drill 15331' - 15362' (rotate).
				11:30	0.5	Survey: 15320'--37.6 deg, 346.1 azimuth.
				14:00	2.5	Drill 15362' - 15394' (rotate).
				14:30	0.5	Survey: 15352'--37.2 deg, 345.7 azimuth.
				16:00	1.5	Drill 15394' - 15425' (rotate).
				16:30	0.5	Survey: 15383'--36.9 deg, 345.5 azimuth.
				18:30	2.0	Drill 15425' - 15456' (rotate).
				19:00	0.5	Survey: 15414'--36.6 deg, 345.4 azimuth.
				20:30	1.5	Drill 15456' - 15488' (rotate).
				21:00	0.5	Survey: 15446'--36.3 deg, 344.8 azimuth.
				23:30	2.5	Drill 15488' - 15519' (rotate).
				0:00	0.5	Survey: 15477'--36.0 deg, 344.4 azimuth.
				1:30	1.5	Drill 15519' - 15551' (rotate).
				2:00	0.5	Survey: 15509'--35.4 deg, 345.1 azimuth.
				5:30	3.5	Drill 15551' - 15582' (rotate).
				6:00	0.5	Survey: 15540'--35.1 deg, 344.5 azimuth.
				6:30	0.5	Drill 15582' - 15590' (rotate).
				7:00	0.5	Mix pill.
148	2/10	15590	262	7:30	0.5	Pump pill.
				10:30	3.0	Trip out.
				11:00	0.5	Service rig.
				16:00	5.0	Trip out.
				18:00	2.0	Trip in new bit #53 Smith F7ODPD at 15590'.
				18:30	0.5	Test MWD.
				21:30	3.0	Trip in.
				22:00	0.5	Fill pipe.
				23:00	1.0	Cut drilling line. Repair water line to brake.
				0:30	1.5	Install new 1" water line through drum.
				1:30	1.0	Replace guards on drawworks.
				4:30	3.0	Trip in. Fill pipe.
				5:00	0.5	Wash and ream 30 ft to bottom.
				7:00	2.0	Drill 15590' - 15617' (rotate).
149	2/11	15617	27	7:30	0.5	Survey: 15575'--35.4 deg, 342.8 azimuth.
				10:30	3.0	Drill 15617' - 15649' (rotate).
				11:00	0.5	Survey: 15607'--36.1 deg, 342.2 azimuth.
				12:30	1.5	Drill 15649' - 15680' (rotate).
				13:00	0.5	Survey: 15638'--35.7 deg, 341.5 azimuth.
				14:30	1.5	Drill 15680' - 15710' (rotate).
				15:00	0.5	Service rig.

DAILY OPERATIONS

Day	Date	Depth	Ft Cut	To Time	Hrs	Activity
				15:30	0.5	Survey: 15668'--35.4 deg, 341.5 azimuth.
				16:30	1.0	Drill 15710' - 15742' (rotate).
				17:00	0.5	Survey: 15700'--35.4 deg, 341.5 azimuth.
				19:00	2.0	Drill 15742' - 15774' (rotate).
				19:30	0.5	Survey: 15732'--34.8 deg, 340.5 azimuth.
				21:00	1.5	Drill 15774' - 15805' (rotate).
				21:30	0.5	Survey: 15763'--35.9 deg, 340.2 azimuth.
				23:30	2.0	Drill 15805' - 15836' (rotate).
				0:00	0.5	Survey: 15794'--37.2 deg, 339.6 azimuth.
				2:30	2.5	Drill 15836' - 15868' (rotate).
				3:00	0.5	Survey: 15826'--37.0 deg, 338.8 azimuth.
				4:30	1.5	Drill 15868' - 15900' TD (rotate).
				5:00	0.5	Survey: 15857'--35.9 deg, 338.3 azimuth.
				7:00	2.0	Circulate bottoms up. Had to pump back through both pumps.
150	2/12	15900	283	8:00	1.0	Circulate bottoms up.
				15:30	7.5	Trip out for logs.
				17:30	2.0	Lay down Anadrill directional tools.
				6:00	12.5	Wait on Schlumberger. First truck ran off rig road. Circulate across top of hole every 30 min.
				7:00	1.0	Rig up Schlumberger.
151	2/13	15900	0	17:30	10.5	Run 1: FMS dipmeter. Truck lost hydraulic power; stopped in casing at 8700' coming out. Repaired truck and pulled out.
				21:00	3.5	Trip in.
				21:30	0.5	Fill pipe.
				22:30	1.0	Trip in.
				23:00	0.5	Fill pipe.
				0:00	1.0	Trip in.
				1:00	1.0	Wash and ream 3 joints to bottom.
				3:30	2.5	Circulate. Trip gas 36 units. Slug pipe.
				7:00	3.5	Trip out for final logs.
152	2/14	15900	0	11:00	4.0	Trip out for final logs.
				12:00	1.0	Rig up Schlumberger.
				16:00	4.0	Run 2: dual laterolog-neutron-density.
				0:00	8.0	Trip in to base of 7" casing. Wait on orders. Prepare to plug back to 7" liner for completion as Weber/Phosphoria gas well.

Anschutz Exploration Corporation
Anschutz Ranch Deep #10-27

MUD RECORD

Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
9/16	627	8.8	33	5	5	2/4	18.0	1	3.5	0	96.5	0	8.5	0.05	0.15	500	60	0%	----	No losses.
9/17	1419	8.9	33	5	6	2/3	20.8	2	3.9	0	96.1	0	8.0	0.0	0.25	500	80	0%	----	No losses.
9/18	1500	8.8	33	5	6	2/8	18.8	2	3.6	0	96.4	0	8.0	0.0	0.30	500	80	0%	----	No losses.
9/19	1500																			13 3/8" at 1500'.
9/20	1500																			
9/21	2137	8.7	32	4	4	1/2	12.0	1	2.8	0	97.2	0	9.5	0.15	0.30	600	80	0%	----	No losses.
9/22	2548	8.8	35	6	7	2/4	12.0	1	3.5	0	96.5	0	8.5	0.05	0.12	500	40	0%	----	No losses.
9/23	3315	8.9	37	7	9	2/4	9.2	1	4.3	0	95.7	0	9.0	0.10	0.25	500	40	0%	----	No losses.
9/24	3815	9.0	36	5	6	2/3	8.8	1	4.8	0	95.2	0	9.5	0.10	0.20	500	40	0%	----	No losses.
9/25	4285	9.2	36	6	6	3/5	8.8	1	6.6	0	93.4	0	9.5	0.10	0.35	500	40	0%	20.0	No losses.
9/26	4550	9.2	34	5	5	2/4	8.2	2	6.5	0	93.5	0	9.2	0.05	0.30	440	60	0%	17.5	No losses.
9/27	4985	9.7	40	6	18	15/19	16.8	4	10.0	0	90.0	0	9.8	0.10	0.35	72000	560	0%	16.3	No losses.
9/28	5082	9.9	42	12	13	15/19	14.5	4	11.5	0	88.5	0	10.1	0.70	1.25	142000	80	0%	16.3	No losses.
9/29	5270	9.9	42	8	12	15/19	14.5	4	11.5	0	88.5	0	10.6	1.25	1.50	148000	60	0%	15.0	No losses.
9/30	5460	9.9	40	10	5	4/6	9.8	4	11.5	0	88.5	0	10.4	1.00	1.30	142000	60	0%	15.0	No losses.
10/1	5525	10.0	42	10	8	5/9	8.6	2	12.0	0	88.0	0	10.5	0.90	1.50	145000	40	0%	15.0	No losses.
10/2	5649	10.0	42	9	8	6/9	7.8	2	13.0	0	87.0	0	10.2	0.50	1.20	172000	40	0%	13.3	No losses.
10/3	5649	10.5	38	6	6	3/5	7.8	2	15.0	0	85.0	0	10.4	0.70	1.30	206000	100	0%	12.5	No losses.
10/4	5750	10.6	38	8	6	3/5	6.6	2	16.0	0	84.0	0	10.4	0.70	1.30	204000	60	0%	12.5	No losses.
10/5	5771	10.6	38	8	7	3/5	6.0	2	16.0	0	84.0	0	10.2	0.60	1.10	206000	60	0%	11.3	No losses.
10/6	5820	10.6	42	10	10	3/6	6.0	2	16.0	0	84.0	0	10.2	0.61	1.10	202000	60	0%	11.3	No losses.
10/7	5960	10.5	37	8	6	2/4	8.2	2	15.0	0	85.0	0	10.0	0.30	0.80	196000	100	0%	10.0	No losses.
10/8	6095	10.2	40	10	9	2/4	7.6	2	13.5	0	86.5	0	10.2	0.50	0.80	178000	100	0%	10.0	No losses.
10/9	6242	9.7	41	6	10	2/4	7.6	2	10.0	0	90.0	0	9.7	0.15	0.35	112000	120	0%	8.8	No losses.
10/10	6315	9.9	40	7	10	5/6	8.0	2	11.0	0	89.0	0	9.5	0.15	0.40	102000	160	0%	11.3	No losses.

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Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
10/11	6509	9.8	40	8	12	4/5	8.0	2	10.4	0	89.6	0	9.5	0.20	0.50	90000	160	0%	11.3	No losses.
10/12	6650	9.8	40	9	10	3/5	7.6	2	10.4	0	89.6	0	9.5	0.25	0.80	86000	200	0%	10.5	No losses.
10/13	6908	9.8	41	7	10	3/4	7.6	2	10.1	0	89.9	0	10.0	0.35	0.70	80000	240	0%	10.5	No losses.
10/14	6943	9.5	38	7	9	2/4	8.8	2	9.0	0	91.0	0	10.0	0.30	0.70	70000	120	Pills	10.5	Lost 300 B/24 hrs.
10/15	7089	9.4	41	4	10	2/4	8.4	2	7.5	0	92.5	0	10.0	0.25	0.60	64000	100	0%	12.5	No losses.
10/16	7135	9.5	41	5	10	2/4	8.0	2	8.0	0	92.0	0	10.0	0.25	0.45	55000	120	Tr	12.5	No losses.
10/17	7317	9.4	39	8	11	5/7	7.6	2	7.3	0	92.7	0	10.0	0.25	0.85	46000	360	Tr	13.8	No losses.
10/18	7442	9.4	40	10	11	5/8	7.6	2	7.3	0	92.7	0	10.5	0.30	0.65	44000	480	Tr	13.8	No losses.
10/19	7556	9.4	43	10	11	5/8	7.2	2	7.0	0	93.0	0	10.5	0.30	0.70	44000	320	Tr	12.5	No losses.
10/20	7729	9.3	44	10	12	6/10	8.8	2	7.5	0	92.5	0	10.5	0.25	0.65	42000	160	Sweeps	12.5	Lost 25 B/24 hrs.
10/21	7952	9.3	41	10	10	6/10	7.8	2	7.0	0	93.0	0	10.7	0.30	0.80	39000	60	Sweeps	12.5	Lost 15 B/24 hrs.
10/22	7966	9.3	41	10	11	6/11	7.8	2	7.0	0	93.0	0	10.4	0.25	0.80	39000	60	Sweeps	12.5	No losses.
10/23	8177	9.2	43	9	11	6/10	7.2	2	6.5	0	93.5	0	10.2	0.25	0.85	37000	60	Sweeps	12.5	No losses.
10/24	8360	9.3	43	10	12	6/12	8.4	2	6.7	0	93.3	0	10.2	0.20	0.70	35000	80	Sweeps	13.3	Lost 22 B/24 hrs.
10/25	8484	9.2	42	10	10	6/12	8.8	2	6.5	0	93.5	0	10.4	0.30	0.80	36000	60	Sweeps	12.5	Lost 40 B on trip.
10/26	8573	9.2	41	11	13	6/12	8.0	2	6.3	0	93.7	0	10.2	0.25	0.80	36000	100	Sweeps	12.5	No losses.
10/27	8696	9.2	42	11	14	6/12	8.4	2	6.3	0	93.7	0	10.4	0.30	0.80	34000	100	Sweeps	13.8	No losses.
10/28	8758	9.2	43	12	14	6/10	8.0	2	6.3	0	93.7	0	10.3	0.30	0.85	32000	80	Tr	13.8	No losses.
10/29	8828	9.3	41	11	14	6/10	8.0	2	6.7	0	93.3	0	10.4	0.30	0.85	30000	100	Tr	15.0	No losses.
10/30	8908	9.2	42	12	13	5/9	8.8	2	6.3	0	93.7	0	10.2	0.30	0.85	28000	100	Tr	15.0	No losses.
10/31	9046	9.3	54	18	24	8/12	7.2	2	6.7	0	93.3	0	10.7	0.75	1.90	26000	100	Tr	16.3	No losses.
11/1	9046	9.2	50	18	18	7/12	7.6	2	6.4	0	93.7	0	10.7	0.70	1.90	24000	60	Tr	16.3	No losses.
11/2	9150	9.3	54	20	22	5/10	6.0	2	7.1	0	92.9	0	10.8	0.95	2.00	24000	40	Tr	16.3	No losses.
11/3	9265	9.2	49	16	20	4/8	6.4	0	6.0	0	94.0	0	10.5	0.70	1.90	24000	40	0	16.3	No losses.
11/4	9358	9.2	49	18	19	4/8	6.4	2	6.5	0	93.5	0	10.5	0.60	1.65	23000	40	0	16.3	No losses.

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Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
11/5	9392	9.2	49	20	21	4/8	6.0	1	6.0	0	94.0	0	10.5	0.55	1.55	19000	40	Tr	16.3	No losses.
11/6	9496	9.2	49	21	19	4/10	6.4	1	6.3	0	93.7	0	10.8	0.40	1.30	19000	80	Tr	16.3	No losses.
11/7	9614	9.3	48	18	17	3/8	6.8	1	6.8	0	93.2	0	10.8	0.35	1.20	19000	40	0	16.3	No losses.
11/8	9626	9.3	49	18	17	3/11	7.0	1	6.8	0	93.2	0	10.0	0.20	1.00	19000	40	0	16.3	Twisted off before logs.
11/9	9626	9.3	47	16	16	3/8	7.4	1	6.7	0	93.3	0	9.5	0.15	0.90	23000	80	0	16.3	No losses.
11/10	9626	9.2	45	12	12	3/6	8.4	1	6.3	0	93.7	0	9.0	0.05	0.90	23000	160	0	15.0	Log.
11/11	9626	9.2	48	15	15	4/8	7.6	1	6.3	0	93.7	0	9.5	0.15	0.90	23000	80	0	16.3	9 5/8" casing set at 9626'.
11/12	9626	9.2	44	12	12	3/6	8.0	1	6.4	0	93.6	0	9.5	0.15	0.95	22000	120	0	15.0	Nipple up.
11/13	9626									No check.										Test BOP.
11/14	9626									No check.										Drill cement.
11/15	9629	9.1	33	3	4	0/1	12.8	1	5.6	0	94.4	0	11.5	0.90	1.60	20000	80	0	15.0	Mill survey tool.
11/16	9631	9.2	34	5	6	0/1	12.0	1	5.6	0	94.4	0	11.1	0.65	1.60	21000	80	0	15.0	No losses.
11/17	9680	9.2	35	5	6	1/3	10.0	1	6.4	0	93.6	0	11.2	0.70	1.50	21000	80	0	16.3	No losses.
11/18	9680	9.2	35	5	6	1/3	10.0	1	6.4	0	93.6	0	11.2	0.70	1.50	21000	80	0	16.3	No losses.
11/19	9854	9.1	40	9	9	1/3	10.8	1	5.3	0	94.7	0	11.2	0.65	1.50	19000	140	0	17.5	No losses.
11/20	9986	9.0	43	12	12	3/5	10.8	1	4.6	0	95.4	0	11.0	0.45	1.80	13000	180	0	17.5	No losses. Core #1.
11/21	10010	9.0	46	14	15	6/10	10.8	1	4.6	0	95.4	0	11.4	0.70	2.15	14000	100	0	17.5	No losses. Core #1.
11/22	10029	9.0	40	12	12	4/7	8.8	1	4.6	0	95.4	0	11.2	0.65	2.00	12000	100	0	17.5	No losses. Core #2.
11/23	10059	9.0	42	13	11	3/6	8.0	1	4.9	0	95.1	0	11.2	0.70	2.00	12000	80	0	11.0	No losses. DST #1.
11/24																				
11/25	10169	9.1	40	10	8	1/4	8.8	1	5.3	0	94.7	0	11.6	1.15	2.50	12000	60	0	17.5	No losses.
11/26	10254	9.0	40	10	8	1/4	9.2	1	5.0	0	95.0	0	11.5	1.15	2.50	11000	60	0	18.8	No losses.
11/27	10414	8.9	41	10	10	1/4	8.0	1	4.4	0	95.6	Tr	11.5	1.60	2.60	13000	40	0	18.8	No losses.
11/28	10535	9.0	42	11	11	1/5	7.6	1	4.7	0	95.3	Tr	11.5	1.40	3.40	13000	60	0	19.5	No losses. Core #3.
11/29	10536	9.0	43	11	11	1/3	11.5	1	4.4	0	95.6	Tr	11.5	1.00	2.50	13500	100	0	19.5	No losses. Core #3.

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Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
11/30	10551	8.9	41	10	12	1/3	7.6	1	4.1	0	95.9	Tr	11.0	1.00	2.70	13500	100	0	19.5	No losses. Core #4.
12/1	10569	9.0	43	11	12	1/3	7.6	1	4.4	0	95.6	Tr	11.0	0.90	2.70	13200	160	0	19.5	No losses. Core #5.
12/2	10584	9.0	41	11	12	1/2	7.6	1	3.9	0	96.1	Tr	11.0	0.90	2.50	13200	160	0	17.5	No losses. Core #5.
12/3	10601	9.0	40	11	10	1/2	7.2	1	4.0	0	96.0	0	11.0	1.00	2.50	13200	100	0	18.0	No losses. Core #6.
12/4	10603	9.0	40	10	11	1/2	7.2	1	4.0	0	96.0	0	11.0	1.00	2.70	13200	100	0	16.3	No losses. Core #6.
12/5	10618	9.0	40	10	11	1/2	7.0	1	4.0	0	96.0	0	11.0	1.20	3.00	12800	120	0	16.3	No losses. Core #7.
12/6	10637	9.0	41	11	10	1/2	6.8	1	4.0	0	96.0	0	11.0	1.10	2.90	11500	120	0	16.3	Mill drill slips die.
12/7	10638	9.0	41	11	11	1/2	7.0	1	4.0	0	96.0	0	11.5	1.20	3.10	11000	100	0	16.3	No losses. Core #8.
12/8	10649	9.0	42	10	13	2/3	6.6	1	4.0	0	96.0	0	11.5	1.10	3.10	11000	100	0	16.3	No losses. DST #2.
12/9	10650	9.0	43	12	12	2/3	6.8	1	4.0	0	96.0	0	11.0	0.90	2.80	11000	80	0	16.3	No losses.
12/10	10809	9.0	39	8	10	1/2	7.0	1	4.0	0	96.0	0	11.0	0.90	2.90	11000	60	0	15.0	No losses.
12/11	10960	9.0	41	11	9	2/4	7.0	1	4.0	0	96.0	0	11.0	0.80	2.40	10500	80	0	15.0	No losses.
12/12	10966	9.0	42	10	10	3/4	7.4	1	4.0	0	96.0	0	11.0	0.70	2.10	11000	60	0	15.0	No losses.
12/13	11120	8.9	42	10	10	3/5	7.2	1	3.9	0	96.1	0	11.0	0.80	2.10	10500	80	0	16.3	No losses.
12/14	11323	8.9	42	12	10	2/5	7.2	1	3.9	0	96.1	0	11.5	0.70	2.00	10000	160	0	16.3	No losses.
12/15	11384	9.0	42	11	11	2/3	7.2	1	4.2	0	95.8	0	11.5	0.70	1.90	9500	120	0	16.3	No losses.
12/16	11570	9.0	41	12	10	1/3	7.8	1	4.4	0	95.6	0	11.5	0.60	1.50	9500	180	0	16.3	No losses.
12/17	11755	9.0	42	11	11	2/3	7.6	1	4.7	0	95.3	0	11.5	0.60	1.50	9000	160	0	15.0	No losses.
12/18	11945	9.1	42	11	11	1/3	7.6	1	5.0	0	95.0	0	11.5	0.50	1.30	9500	160	0	15.0	No losses.
12/19	12035	9.1	42	14	11	2/3	8.0	1	5.4	0	94.6	0	11.0	0.50	1.50	9000	120	0	15.0	No losses.
12/20	12056	9.2	41	12	8	1/2	7.8	1	5.7	0	94.3	0	10.5	0.40	1.30	8500	200	0	15.0	No losses.
12/21	12225	9.1	42	13	10	2/4	7.6	1	5.5	0	94.5	0	11.5	0.70	1.90	9000	120	0	16.3	Lost 250 B at 12096'.
12/22	12248	9.1	44	13	11	2/5	7.2	1	5.5	0	94.5	0	11.8	0.90	1.80	8800	120	Pills	17.5	No losses.
12/23	12300	9.1	42	11	11	2/6	7.0	1	5.0	0	95.0	0	12.0	1.00	1.80	8400	100	Pills	18.8	No losses.
12/24	12555	9.0	42	12	13	2/8	6.6	1	4.5	0	95.5	0	12.0	1.00	1.60	8000	120	Pills	17.5	No losses.

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Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
12/25	12627	9.1	43	12	13	2/8	6.4	1	5.0	0	95.0	0	12.0	1.10	1.50	7900	140	Pills	17.5	No losses.
12/26	12790	9.1	42	12	12	2/6	6.2	1	5.0	0	95.0	0	11.8	0.90	1.40	7700	160	Pills	16.8	No losses.
12/27	12920	9.1	42	11	10	2/5	6.8	1	5.0	0	95.0	0	12.0	1.00	1.40	7600	180	Pills	16.8	Lost 35 B/24 hrs.
12/28	13000	9.1	43	12	10	2/5	6.6	1	5.0	0	95.0	0	12.0	1.00	1.40	7600	180	Pills	16.5	No losses.
12/29	13150	9.1	42	12	9	2/6	6.4	1	5.0	0	95.0	0	12.0	1.00	1.50	7500	180	Pills	16.0	Lost 35 B/24 hrs.
12/30	13150	9.0	44	11	12	2/6	6.2	1	5.0	0	95.0	0	12.0	1.00	1.50	7500	120	Pills	16.0	Lost 35 B/24 hrs.
12/31	13150	9.0	42	9	9	1/3	6.6	1	5.0	0	95.0	0	11.5	0.70	1.50	7000	120	Pills	16.0	No losses.
1/1	13150	9.0	42	10	9	2/3	6.6	1	5.0	0	95.0	0	12.0	0.80	1.50	7000	120	Pills	16.0	No losses.
1/2	13227	9.0	41	10	10	1/3	7.0	1	5.0	0	95.0	0	12.0	0.80	1.50	7000	280	Pills	17.5	No losses.
1/3	13318	9.0	39	8	8	1/2	7.0	1	4.7	0	95.3	0	12.0	0.80	1.50	6500	200	Pills	16.3	No losses.
1/4	13318	9.0	38	7	7	1/2	7.4	1	4.7	0	95.3	0	12.0	0.80	1.70	6000	80	Pills	16.3	No losses.
1/5	13381	9.0	41	9	9	2/3	6.4	1	4.9	0	95.1	0	12.0	0.90	2.00	6000	60	Pills	17.5	No losses.
1/6	13451	9.0	42	9	9	1/3	6.4	1	5.0	0	95.0	0	12.0	1.10	2.30	5500	60	Pills	17.5	No losses.
1/7	13554	9.0	40	9	8	1/3	6.2	1	5.0	0	95.0	0	12.0	1.15	2.30	5500	80	Pills	17.5	No losses.
1/8	13600	9.0	44	8	12	1/3	6.2	1	5.0	0	95.0	0	12.0	1.20	2.40	5500	80	Pills	19.5	No losses.
1/9	13629	8.9	41	14	9	1/3	6.2	1	4.5	0	95.5	0	12.0	1.20	2.40	5500	80	Pills	17.5	Lost 375 B/24 hrs.
1/10	13693	9.0	41	9	10	1/3	6.8	1	4.5	0	95.5	0	11.5	1.10	2.20	5000	60	Pills	16.5	Lost 205 B/24 hrs.
1/11	13780	9.0	42	11	10	1/3	6.5	1	5.0	0	95.0	0	11.5	1.10	2.20	5000	60	3.0%	17.0	
1/12	13861	9.0	41	11	9	1/3	6.2	1	5.0	0	95.0	0	12.0	1.30	2.50	5000	80	3.0%	16.5	Lost 30 B/24 hrs.
1/13	13962	9.0	40	11	8	1/3	7.0	1	5.0	0	95.0	0	12.0	1.50	2.80	4500	80	1.5%	16.5	Lost 30 B/24 hrs.
1/14	13962	9.1	42	11	9	1/2	6.6	1	5.3	0	94.7	0	12.0	1.50	2.60	4500	80	1.5%	17.5	Lost 42 B/24 hrs.
1/15	13962	9.2	43	13	10	2/3	6.8	1	5.5	0	94.5	0	12.0	1.60	2.65	4500	80	1.5%	18.8	No losses.
1/16	13962	9.2	42	11	9	2/3	6.6	1	5.3	0	94.7	0	12.0	1.60	2.60	4400	100	1.5%	18.8	Lost 40 B/24 hrs.
1/17	13962	9.2	43	13	10	1/3	6.6	1	5.5	0	94.5	0	11.9	1.40	2.60	4000	60	1.5%	18.8	Lost 25 B/24 hrs.
1/18	13962	9.2	43	11	9	1/3	6.6	1	5.3	0	94.7	0	12.0	1.20	2.40	4000	40	1.5%	18.8	Lost 35 B/24 hrs.

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Anschutz Ranch Deep #10-27

MUD RECORD

Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
1/19	13962	9.1	36	9	7	1/2	8.2	1	5.2	0	94.8	0	12.0	1.10	2.50	3700	80	----	15.0	7" liner set at 13925'.
1/20	13962	9.0	35	6	6	1/2	7.8	2	4.8	0	95.2	0	11.8	1.10	2.50	3700	60	----	15.0	
1/21	13962	8.9	39	6	8	1/2	7.8	1	4.5	0	95.5	0	11.7	1.10	2.50	3700	140	----	15.0	
1/22	13965	8.9	39	6	8	1/2	7.8	1	4.5	0	95.5	0	11.7	1.10	2.50	3700	140	----	15.0	
1/23	14065	8.9	41	7	8	1/4	7.4	1	4.5	0	95.5	0	11.8	1.10	2.30	3500	120	Pills	16.0	Minor loss at 14036'
1/24	14106	8.9	43	10	10	1/4	7.8	1	4.8	0	95.2	0	11.8	1.30	2.50	3400	80	Pills	16.0	No losses.
1/25	14169	8.9	43	10	10	1/4	7.5	1	4.8	0	95.2	0	11.8	1.30	2.50	3400	80	Pills	16.0	No losses.
1/26	14327	9.0	43	13	8	1/4	7.2	1	5.0	0	95.0	0.15	11.9	1.30	2.50	3200	80	Pills	15.5	No losses.
1/27	14345	9.0	44	13	8	1/4	7.2	1	5.0	0	95.0	0.15	11.8	1.20	2.40	3150	80	Pills	15.5	Lost 40 B/24 hrs.
1/28	14473	9.0	43	12	10	1/4	7.4	1	5.0	0	95.0	0.25	11.9	1.30	2.40	3100	80	Pills	16.0	Lost 40 B/24 hrs.
1/29	14536	9.0	44	13	10	1/4	7.2	1	5.0	0	95.0	0.25	11.9	1.50	2.60	3000	80	Pills	16.5	Lost 40 B/24 hrs.
1/30	14582	9.0	43	11	10	1/4	7.2	1	5.0	0	95.0	0.25	12.0	1.50	2.60	2900	80	Pills	16.5	No losses.
1/31	14638	8.7	42	10	9	1/3	8.0	1	2.7	0	97.3	0	12.0	1.70	3.00	1000	120	Pills	16.0	Lost 800 B at 14638'.
2/1	14638	8.7	43	12	10	2/4	8.0	1	2.7	0	97.3	0	12.0	1.70	3.00	1000	120	Pills	16.5	Lost 50 B/24 hrs.
2/2	14703	8.7	43	9	10	2/4	8.0	1	2.7	0	97.3	0	12.0	1.70	3.00	800	120	Pills	16.5	Lost 30 B/24 hrs.
2/3	14712	8.7	44	10	9	2/4	8.6	1	2.7	0	97.3	0	12.0	1.50	2.50	600	60	Pills	15.0	Lost 50 B/24 hrs.
2/4	14848	8.8	38	7	7	1/3	8.2	1	3.2	0	96.8	0	12.0	1.40	1.90	900	80	Pills	16.3	Lost 68 B/24 hrs.
2/5	14938	8.9	43	10	9	2/3	7.8	1	3.9	0	96.1	0	12.0	1.40	1.90	1400	160	Pills	20.0	Lost 86 B/24 hrs.
2/6	15019	8.9	44	12	10	2/3	8.0	1	4.3	0	95.7	0	12.0	1.20	1.70	1900	160	Pills	20.0	Lost 47 B/24 hrs.
2/7	15019	8.9	43	10	9	1/2	7.6	1	4.3	0	95.7	0	11.5	0.80	1.40	1900	200	Pills	20.0	No losses.
2/8	15225	9.0	43	12	8	1/2	7.6	1	4.9	0	95.1	0	12.0	0.90	1.40	2500	120	Pills	17.5	Lost 80 B/24 hrs.
2/9	15319	9.0	43	13	8	1/2	7.4	1	4.9	0	95.1	0	12.0	0.90	1.40	2700	160	Pills	17.5	Lost 67 B/24 hrs.
2/10	15572	9.1	43	15	7	1/3	7.2	1	5.2	0	94.8	0	12.0	0.90	1.40	2650	160	Pills	18.0	Lost 20 B/24 hrs.
2/11	15592	9.1	41	15	7	1/3	7.4	1	5.2	0	94.8	0	12.0	0.90	1.40	2700	160	Pills	17.5	Lost 50 B/24 hrs.
2/12	15900	9.2	47	16	8	1/5	7.0	1	5.8	0	94.2	0	12.0	1.00	1.50	2700	160	Pills	18.0	Lost 40 B/24 hrs.

Anschutz Exploration Corporation
Anschutz Ranch Deep #10-27

MUD RECORD

Date	Depth	Wt	Vis	PV	YP	Gels	FL	Cake	Sol	Oil	H2O	Sd	pH	Pf	Mf	Cl	Ca	LCM	Bent	Remarks
2/13	15900	9.2	47	16	8	1/5	7.0	1	5.8	0	94.2	0	12.0	1.00	1.50	2700	160	Pills	18.0	Lost 40 B/24 hrs.
2/14	15900	9.3	48	17	8	2/6	7.0	1	6.2	0	93.8	0	12.0	1.00	1.50	2700	160	Pills	18.0	No losses.
2/15	15900	9.4	47	15	11	2/6	7.0	1	6.2	0	93.8	0	12.0	1.00	1.50	2550	120	Pills	18.0	No losses.

ABBREVIATIONS & UNITS

Weight (Wt)	lbs/gal
Viscosity (Vis)	sec/qt
Plastic Viscosity (PV)	centipoise
Yield Point (YP)	lbs/100 sq ft
Gel Strengths (Gels)	lbs/100 sq ft (10 sec / 10 min)
Filtrate (FL)	ml/30 min
Cake	32nds inch
Solids (Sol)	% by volume
Oil	% by volume
Water Content (H2O)	% by volume
pH	
Sand (Sd)	% by volume
Alkalinity (Pf, Mf)	ml of N-50 H2SO4
Chlorides (Cl)	mg/l
Calcium (Ca)	mg/l
Lost Circulation Material (LCM)	% by volume
Bentonite (Bent)	lbs/bbl bentonite equiv.

Anschutz Exploration Corporation
Anschutz Ranch Deep #10-27

BIT RECORD

Run	Bit	Size	Make	Type	Depth	Ft	Hrs	Ft/Hr	Noz. 32nds	WOB	RPM		Pressure	Pump	Cutting Struc.				Brng	Gage	Other	Reason
					Out	Cut					Table	Motor	Off/On	SPM	I	O	Dull	Loc	Seals	16ths	Char	Pulled
1	1	17 1/2	Reed	MS11G	1442	1372	33.0	41.6	15-15-15-18	20-50	75-110	N/A	400-1000	120					8			PR
2	2	17 1/2	Smith	SDT	1500	58	2.0	29.0	open	50	105	N/A	1000	90+90	1	1						TD
3	3	12 1/4	Reed	HP13	2543	1043	28.5	36.6	18 18 18	35-40	100	N/A	2000-1800	90+90	6	6	FC	A	6			PR
4	4	12 1/4	Hughes	GT-09	4507	1964	80.0	24.6	18 18 18	38-40	90	N/A	1800-2000	90+90	3	8	BT	A	2		FC	OTH
5	5	12 1/4	Hughes	GT-09	5039	532	30.0	17.7	18 18 18	40-45	90	N/A	2100-2300	90+90	2	2	BT	M	2		FC	PP
6	6	12 1/4	Smith	F10T	5505	466	57.5	8.1	18 18 18	40	80	N/A	2070	88+88	2	4	BT	M	2		FC	PR
7	7	12 1/4	Reed	EHP43H	5647	142	25.0	5.7	18 18 18	40	80	N/A	2150	90+90	8	8	BT	A	2			PR
8	8	12 1/4	Hughes	GT-18	5771	124	27.0	4.6	18 18 18	40-45	75-80	N/A	2150	78+78	2	3	BT	M	2		FC	PR
9	9	12 1/4	Smith	F15	6261	490	84.5	5.8	18 18 18	40-45	65-75	N/A	2100-2200	78+78	2	3	FC		2			HRS
10	10	12 1/4	Reed	EHP43H	6506	245	29.0	8.4	18 18 18	40-45	75-80	N/A	2150-2400	78+78	2	2	FC	A	2			PR
11	11	12 1/4	Security	SS82F	6910	404	38.5	10.5	18 18 20	45	80	N/A	2100-2200	80+80	2	5	BT	M	3			DSF
12	12	12 1/4	Security	ERA17	7091	181	26.5	6.8	18-18-18-16	45	80	N/A	1900-1850	80+80	2	2			2	4		PP
13	13	12 1/4	Smith	F15T	7442	351	42.0	8.4	20 20 18	40-45	60-70	N/A	1975	80+80	2	3	BT		3			TQ
14	14	12 1/4	Smith	F20T	7966	524	65.0	8.1	20 20 18	38-45	65-70	N/A	2000	80+80	8	8	BT	A	5	3	FC	HRS
15	15	12 1/4	Smith	F4P	8360	394	40.0	9.9	20 20 18	45	65	N/A	1950-2000	80+80	7	7	FC	A	4	2		TQ
16	16	12 1/4	Smith	F4PS	8561	201	22.0	9.1	20 20 20	45-50	65-55	N/A	2000	80+80	4	4	FC	A	3	1	BT	PR
17	17	12 1/4	Smith	F4OD	8758	197	40.0	4.9	20 20 20	45-50	55-60	N/A	2000	80+80	6	7	FC	A	3	0	BT	PR
18	18	12 1/4	Smith	F4PS	8907	149	34.0	4.4	20 20 20	50	60	N/A	1975	80+80	2	3	FC	A	3	1	BT	PR
19	19	12 1/4	Hughes	ATJ44	9046	139	30.5	4.6	20 20 20	50	60	N/A	2000-2050	80+80	2	2	FC	A	2	1		TQ
20	20	12 1/4	Hughes	ATJ44	9359	313	65.5	4.8	22 22 22	50	60	N/A	2000-2100	80+80	8	7	BT	A	3	1	FC	PR
21	21	12 1/4	Hughes	ATJS44	9626	267	60.0	4.5	20 20 20	50-55	60-65	N/A	1800	75+75	3	3	FC	A	2	1	BT	TD
22	22	8 1/2	Hughes		9626	0																
Mills 1-3		8 1/2			9628	2																
23	23	8 1/2	Smith	F4PS	9683	55	11.0	5.0	12 12 12	35-40	60	N/A	2350	120	8	8	BT	M	4	3	FC	PR
24	24	8 1/2	Hughes	ATJ44C	9854	171	29.5	5.8	11 11 12	35-40	60	N/A	2400-2350	120	2	2	FC	A	3	1	BT	DSF
25	25	8 1/2	Hughes	HR44C	9986	132	19.0	6.9	11 11 12	35-40	60	N/A	2400-2350	120	2	2			1			CP
Core 1		8 1/2	DPI		10030	44	19.5	2.3	TFA 0.3	14-16	50	N/A	1300	86								
Core 2		8 1/2	DPI		10059	29	11.5	2.5	TFA 0.3	14-16	50	N/A	1300	86								
26	25RR	8 1/2	Hughes	HR44C	10197	211	19.5	10.8	11 12 12	40	57	N/A	2400	115	2	2	FC	A	2	1		PP

Anschutz Exploration Corporation
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BIT RECORD

Run	Bit	Size	Make	Type	Depth	Ft	Hrs	Ft/Hr	Noz. 32nds			WOB	RPM		Pressure	Pump	Cutting Struc.				Brng	Gage	Other	Reason
					Out	Cut							Table	Motor	Off/On	SPM	I	O	Dull	Loc	Seals	16ths	Char	Pulled
27	26	8 1/2	Smith	F47ODP	10535	338	50.5	6.7	12	12	12	34-42	55	N/A	2100	110	3	3	FC	A	2	1	BT	CP
Core 3		8 1/2	DPI		10551	16	12.0	1.3				15	50	N/A	1300	90								
Core 4		8 1/2	DPI		10570	19	14.5	1.3				8-15	50	N/A	1350	88								
Core 5		8 1/2	DPI		10600	30	25.5	1.2				10	50	N/A	1350	86								
Core 6		8 1/2	DPI		10618	18	15.0	1.2				10	50	N/A	1300	83								
Core 7		8 1/2	DPI		10637	19	13.5	1.4				15	50	N/A	1500	92								
Core 8		8 1/2	DPI		10649	12	8.0	1.5				15	50	N/A	900	68								
28	27	8 1/2	Smith	F47ODP	10960	311	46.0	6.8	12	12	12	40-45	55-52	N/A	2100/2150	105	2	4	BT	S	3	1	FC	BHA
29	28	8 1/2	Hughes	ATJ44C	11384	424	51.0	8.3	18	18	18	28-40	40	110	1850/1950	110	3	3	FC	A	3	1	BT	BHA
30	29	8 1/2	Smith	MF47ODL	11946	562	55.5	10.1	18	18	18	45-55	40	110	1800/1925	110	7	7	BT	A	2	1	FC	DTF
31	30	8 1/2	Hughes	HR40C	12057	111	14.0	7.9	18	18	18	45-53	40	110	1750/1875	114	8	8	BT	A	3	2	FC	TQ
32	31	8 1/2	Smith	F57ODPS	12248	191	19.5	9.8	18	18	18	20-50	40	110	1750/1950	110	6	6	FC	A	2	1	BT	PR
33	32	8 1/2	Smith	F67ODPS	12626	378	48.5	7.8	18	18	18	45-70	40-50	110	1750/1850	110	2	3	FC	A	4	1	BT	PR
34	33	8 1/2	Smith	F67ODPS	13000	374	39.0	9.6	18	18	18	40-60	50-45	110	1750/1850	110	8	8	BT	A	8	2	FC	PR
35	34	8 1/2	Smith	F67ODPS	13150	150	14.5	10.3	18	18	18	35-60	45	110	1750/1850	110	8	8	BT	A	8	2	FC	PR
36	35	8 1/2	Smith	F8ODPS	13150	0	11.0	0.0	18	18	18						1	1			1			OTH
37	36	8 1/2	Smith	F8ODR	13318	168	19.0	8.8	18	18	18	30-58	50	110	1850/1950	110	7	8	FC	A	2	2	BT	PR
38	37	8 1/2	Smith	F8ODR	13318	0	2.0	0.0	18	18	18	2-4	55	110	1850/1950	110	1	1			0			
39	38	8 1/2	Smith	F8ODPS	13451	133	20.5	6.5	18	18	18	35-60	45	110	1750/1825	110	7	7	FC	A	3	2	BT	PR
40	37RR	8 1/2	Smith	F8ODR	13573	122	15.0	8.1	18	18	18	35-40	50	110	1700/1750	110	7	8	FC	A	3	2	BT	TQ
41	39	8 1/2	Smith	F8ODR	13629	56	9.5	5.9	18	18	18	30-40	50	110	1500/1600	110	6	7	FC	A	2	1	BT	TQ
42	40	8 1/2	Smith	F8ODR	13780	151	19.0	7.9	18	18	18	20-40	50	110	1750/1800	110	4	4	FC	A	2	1	NO	PR
43	41	8 1/2	Smith	F8ODLPS	13962	182	32.0	5.7	18	18	18	45	50-56	110	1700/1800	110	2	2	FC	A	2	2	NO	TD
44	42	6	Smith	FDS+	13965	3	0.5	6.0	24	24	24						6	4	FC	A	3	1	BT	TD
45	43	6	Smith	MF57ODL	14064	99	17.5	5.7	24	24	24	18	50	100	1850/1950	110	7	7	FC	A	2	1	BT	PR
46	44	6	Hughes	STR-70	14169	105	17.0	6.2	20	20	20	18	50	100	1825/1875	110	8	8	FC	A	2	2	BT	TD
47	45	6	Hughes	STR-70	14345	176	16.5	10.7	20	20	20	18	40	100	1825/1925	110	7	7	FC	A	2	2	BT	TD
48	46	6	Hughes	STR-70	14473	128	15.5	8.3	20	20	20	18	40-45	100	1825/1900	110	8	8	FC	A	8	2	BT	PR
49	47	6	Hughes	STR-70	14566	93	14.0	6.6	20	20	20	18	45	100	1850/1900	110	8	8	FC	A	4	3	BT	HRS

Anschutz Exploration Corporation
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BIT RECORD

Run	Bit	Size	Make	Type	Depth	Ft	Hrs	Ft/Hr	Noz. 32nds			WOB	RPM		Pressure	Pump	Cutting Struc.				Brng	Gage	Other	Reason
					Out	Cut							Table	Motor	Off/On	SPM	I	O	Dull	Loc	Seals	16ths	Char	Pulled
50	48	6	Hughes	STR-70	14703	137	12.0	11.4	20	20	20	16-18	45	100	1850/1900	110	4	7	FC	A	2	1	BT	HRS
51	49	6	Hughes	STR-70	14848	145	15.5	9.4	20	20	20	18	45	100	1625/1700	110	3	3	FC	A	3	1	NO	HRS
52	50	6	Hughes	STR-70	15019	171	16.5	10.4	20	20	20	18	45	100	1700/1775	110	3	4	FC	S	2	1	NO	PR
53	51	6	Hughes	STR-70	15319	300	23.0	13.0	20	20	20	18	45	100	2000/2050	110	3	7	BT	A	2	1	FC	HRS
54	52	6	Hughes	STR-70	15590	271	20.0	13.6	20	20	20	18	45	100	2000/2050	110	7	8	FC	A	3	2	BT	TQ
55	53	5 7/8	Smith	F7ODPD	15900	310	18.5	16.8	20	20	20	18	45	100	2000/2050	110	3	4	FC	A	1	I	BT	TD

DEVIATIONS

Depth	Degree	Direction	Depth	Degree	Direction
219	1/2				
476	1 ----				
761	1 1/4				
1036	1 ----				
1371	2 ----				
1500	2 ----				
1727	1 3/4				
1929	1/2				
2457	1/2				
2666	1 ----				
3016	1 ----				
3459	1 1/4				
4004	3/4				
4507	1 ----				
5039	1/2				
5505	2 ----				
5625	2 1/2				
5750	2 ----				
6261	3 3/4				
6477	2 ----				
7091	2 3/4				
7430	4 ----				
7966	2 ----				
8360	1 ----				
8758	1 ----				
9046	1 ----				
9359	1 3/4				
9936	2 ----				
10535	2 1/2				

Please see Well Survey in this report for Schlumberger Anadrill MWD surveys.

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
		SCHLUMBERGER WIRELINE SURVEY					
1500	0.5	331.2	1500.00	6093	0.00	0.00 -	
1520	1.0	272.2	1520.00	6073	0.09	-0.21	4.17
1540	1.1	271.0	1540.00	6053	0.10	-0.57	0.49
1560	1.2	274.1	1559.99	6033	0.12	-0.97	0.83
1580	1.3	274.5	1579.99	6013	0.15	-1.41	0.47
1600	1.2	276.9	1599.98	5993	0.19	-1.85	0.63
1620	1.2	274.6	1619.98	5973	0.23	-2.26	0.29
1640	1.1	271.7	1639.97	5953	0.26	-2.66	0.40
1660	1.2	271.0	1659.97	5933	0.27	-3.06	0.34
1680	1.3	271.1	1679.96	5913	0.27	-3.48	0.39
1700	1.3	267.8	1699.96	5893	0.27	-3.93	0.42
1720	1.3	267.6	1719.95	5873	0.25	-4.38	0.11
1740	1.1	272.1	1739.95	5853	0.25	-4.81	1.12
1760	1.2	272.4	1759.95	5833	0.26	-5.21	0.35
1780	1.2	279.5	1779.94	5813	0.31	-5.63	0.79
1800	1.0	268.8	1799.94	5793	0.34	-6.01	1.60
1820	1.1	271.3	1819.93	5773	0.34	-6.38	0.83
1840	1.0	277.2	1839.93	5753	0.36	-6.75	1.12
1860	1.1	275.8	1859.93	5733	0.41	-7.10	0.74
1880	1.0	273.1	1879.92	5713	0.43	-7.46	0.73
1900	1.3	284.2	1899.92	5693	0.50	-7.84	1.80
1920	1.0	278.8	1919.92	5673	0.58	-8.23	1.28
1940	0.8	282.1	1939.91	5653	0.63	-8.55	0.89
1960	1.0	282.7	1959.91	5633	0.70	-8.86	0.76
1980	1.1	287.3	1979.91	5613	0.80	-9.21	0.54
2000	1.2	280.6	1999.90	5593	0.89	-9.59	0.89
2020	1.4	278.8	2019.90	5573	0.97	-10.04	1.26
2040	1.4	282.7	2039.89	5553	1.06	-10.53	0.48
2060	1.6	279.9	2059.89	5533	1.16	-11.05	0.92
2080	1.6	285.1	2079.88	5513	1.28	-11.59	0.72
2100	1.6	282.4	2099.87	5493	1.41	-12.13	0.39
2120	1.6	283.2	2119.86	5473	1.54	-12.66	0.28
2140	1.5	285.2	2139.86	5453	1.67	-13.19	0.27
2160	1.6	283.2	2159.85	5433	1.80	-13.71	0.30
2180	1.5	286.5	2179.84	5413	1.94	-14.23	0.59

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
2200	1.5	290.0	2199.83	5393	2.10	-14.72	0.45
2220	1.5	286.3	2219.83	5373	2.26	-15.22	0.49
2240	1.5	293.1	2239.82	5353	2.44	-15.71	0.89
2260	1.4	286.4	2259.81	5333	2.61	-16.19	0.94
2280	1.4	286.7	2279.81	5313	2.75	-16.66	0.06
2300	1.5	289.0	2299.80	5293	2.91	-17.14	0.60
2320	1.3	287.0	2319.80	5273	3.06	-17.60	1.22
2340	1.4	283.7	2339.79	5253	3.18	-18.04	0.63
2360	1.3	287.1	2359.79	5233	3.30	-18.49	0.61
2380	1.4	287.6	2379.78	5213	3.44	-18.93	0.42
2400	1.2	302.0	2399.78	5193	3.62	-19.33	1.82
2420	1.5	291.2	2419.77	5173	3.82	-19.75	2.18
2440	1.2	295.5	2439.76	5153	4.01	-20.19	1.64
2460	1.3	289.8	2459.76	5133	4.18	-20.60	0.73
2480	1.4	294.5	2479.75	5113	4.36	-21.03	0.78
2500	0.9	299.7	2499.75	5093	4.54	-21.39	2.68
2520	1.1	291.3	2519.75	5073	4.68	-21.70	1.34
2540	1.0	299.7	2539.74	5053	4.83	-22.03	1.08
2560	1.1	302.1	2559.74	5033	5.02	-22.33	0.66
2580	0.8	295.0	2579.74	5013	5.17	-22.61	1.52
2600	0.9	299.9	2599.74	4993	5.31	-22.88	0.73
2620	1.0	300.8	2619.73	4973	5.48	-23.17	0.37
2640	1.0	298.4	2639.73	4953	5.66	-23.47	0.28
2660	1.1	293.5	2659.73	4933	5.82	-23.80	0.46
2680	1.1	295.5	2679.72	4913	5.97	-24.14	0.31
2700	1.1	297.8	2699.72	4893	6.14	-24.49	0.25
2720	1.0	297.0	2719.72	4873	6.31	-24.81	0.48
2740	0.9	306.8	2739.71	4853	6.48	-25.09	0.91
2760	0.9	300.0	2759.71	4833	6.65	-25.35	0.54
2780	1.1	298.5	2779.71	4813	6.82	-25.65	0.99
2800	1.2	299.8	2799.70	4793	7.02	-25.99	0.61
2820	1.2	298.3	2819.70	4773	7.22	-26.36	0.18
2840	1.2	302.5	2839.70	4753	7.43	-26.72	0.50
2860	1.4	302.0	2859.69	4733	7.67	-27.11	0.81
2880	1.2	300.2	2879.68	4713	7.91	-27.50	0.78
2900	1.3	295.5	2899.68	4693	8.11	-27.88	0.52
2920	1.5	295.6	2919.67	4673	8.32	-28.31	1.01

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
2940	1.2	298.7	2939.67	4653	8.53	-28.72	1.45
2960	1.1	298.5	2959.67	4633	8.72	-29.07	0.22
2980	1.1	295.0	2979.66	4613	8.89	-29.42	0.39
3000	1.2	296.0	2999.66	4593	9.06	-29.77	0.33
3020	1.3	294.6	3019.65	4573	9.24	-30.16	0.81
3040	1.2	292.3	3039.65	4553	9.42	-30.57	0.43
3060	1.2	293.8	3059.64	4533	9.59	-30.97	0.17
3080	1.3	295.8	3079.64	4513	9.78	-31.36	0.27
3100	1.4	295.0	3099.63	4493	9.97	-31.78	0.48
3120	1.4	299.6	3119.63	4473	10.19	-32.20	0.55
3140	1.3	310.0	3139.62	4453	10.46	-32.59	1.23
3160	1.3	312.7	3159.62	4433	10.76	-32.93	0.47
3180	1.1	319.6	3179.61	4413	11.06	-33.22	0.95
3200	1.2	312.2	3199.61	4393	11.35	-33.50	0.84
3220	1.3	307.6	3219.60	4373	11.63	-33.84	0.83
3240	1.4	306.6	3239.60	4353	11.92	-34.22	0.30
3260	1.4	307.6	3259.59	4333	12.22	-34.61	0.13
3280	1.3	306.4	3279.59	4313	12.49	-34.98	0.60
3300	1.4	313.1	3299.58	4293	12.79	-35.33	0.86
3320	1.2	313.8	3319.58	4273	13.10	-35.66	0.63
3340	1.2	308.2	3339.57	4253	13.38	-35.98	0.60
3360	1.2	318.5	3359.57	4233	13.67	-36.29	1.12
3380	1.1	319.7	3379.56	4213	13.98	-36.56	0.59
3400	1.3	319.6	3399.56	4193	14.31	-36.84	0.99
3420	1.3	314.5	3419.55	4173	14.64	-37.15	0.63
3440	1.3	316.9	3439.55	4153	14.97	-37.46	0.28
3460	1.4	313.8	3459.54	4133	15.30	-37.79	0.63
3480	1.3	317.8	3479.54	4113	15.63	-38.11	0.82
3500	1.4	312.8	3499.53	4093	15.95	-38.43	0.75
3520	1.5	314.6	3519.53	4073	16.29	-38.79	0.58
3540	1.4	310.5	3539.52	4053	16.63	-39.16	0.56
3560	1.2	309.9	3559.51	4033	16.92	-39.51	0.93
3580	1.2	311.5	3579.51	4013	17.19	-39.82	0.33
3600	1.1	304.8	3599.51	3993	17.44	-40.14	0.71
3620	0.9	304.5	3619.50	3973	17.64	-40.43	1.01
3640	1.0	308.6	3639.50	3953	17.84	-40.69	0.48
3660	0.9	308.6	3659.50	3934	18.04	-40.95	0.54

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
3680	0.6	321.7	3679.50	3914	18.22	-41.13	1.64
3700	0.4	300.2	3699.49	3894	18.34	-41.26	1.22
3720	0.4	267.3	3719.49	3874	18.37	-41.40	1.24
3740	0.4	265.5	3739.49	3854	18.36	-41.56	0.07
3760	0.6	267.3	3759.49	3834	18.35	-41.74	0.81
3780	0.5	267.7	3779.49	3814	18.34	-41.93	0.37
3800	0.6	263.5	3799.49	3794	18.33	-42.12	0.27
3820	0.4	279.0	3819.49	3774	18.33	-42.29	1.01
3840	0.7	271.8	3839.49	3754	18.34	-42.48	1.45
3860	0.9	274.9	3859.49	3734	18.36	-42.75	1.01
3880	0.8	283.1	3879.49	3714	18.40	-43.03	0.88
3900	0.5	287.3	3899.48	3694	18.46	-43.24	1.44
3920	0.6	300.1	3919.48	3674	18.53	-43.41	0.78
3940	0.6	287.0	3939.48	3654	18.61	-43.60	0.71
3960	0.7	276.4	3959.48	3634	18.66	-43.82	0.66
3980	0.6	283.1	3979.48	3614	18.69	-44.03	0.60
4000	0.2	305.5	3999.48	3594	18.74	-44.16	1.83
4020	0.9	292.7	4019.48	3574	18.83	-44.34	3.23
4040	0.8	282.5	4039.48	3554	18.91	-44.62	0.85
4060	0.5	277.1	4059.47	3534	18.96	-44.85	1.36
4080	0.6	270.9	4079.47	3514	18.97	-45.04	0.42
4100	0.5	282.0	4099.47	3494	18.99	-45.24	0.61
4120	0.3	315.7	4119.47	3474	19.05	-45.37	1.61
4140	0.3	312.0	4139.47	3454	19.12	-45.45	0.17
4160	0.4	302.3	4159.47	3434	19.20	-45.54	0.56
4180	0.3	324.9	4179.47	3414	19.28	-45.63	0.80
4200	0.4	309.4	4199.47	3394	19.36	-45.71	0.53
4220	0.4	351.5	4219.47	3374	19.48	-45.77	1.51
4240	0.2	349.6	4239.47	3354	19.59	-45.79	1.11
4260	0.3	15.2	4259.47	3334	19.69	-45.78	0.78
4280	0.2	360.0	4279.47	3314	19.78	-45.77	0.69
4300	0.2	58.2	4299.47	3294	19.83	-45.74	0.91
4320	0.2	32.9	4319.47	3274	19.87	-45.70	0.45
4340	0.2	26.7	4339.47	3254	19.93	-45.67	0.21
4360	0.1	13.3	4359.47	3234	19.97	-45.65	0.33
4380	0.2	336.3	4379.47	3214	20.01	-45.66	0.48
4400	0.4	333.4	4399.47	3194	20.09	-45.70	1.10

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
4420	0.2	343.1	4419.47	3174	20.19	-45.74	0.72
4440	0.2	321.4	4439.47	3154	20.26	-45.77	0.47
4460	0.2	320.1	4459.47	3134	20.31	-45.82	0.03
4480	0.2	345.3	4479.47	3114	20.38	-45.85	0.53
4500	0.2	6.1	4499.47	3094	20.45	-45.86	0.50
4520	0.1	12.2	4519.47	3074	20.50	-45.85	0.24
4540	0.2	218.2	4539.47	3054	20.50	-45.86	1.39
4560	0.1	227.9	4559.47	3034	20.47	-45.89	0.29
4580	0.1	134.9	4579.47	3014	20.45	-45.89	0.69
4600	0.1	334.4	4599.47	2994	20.45	-45.89	0.82
4620	0.1	263.1	4619.47	2974	20.46	-45.91	0.49
4640	0.0	321.6	4639.47	2954	20.46	-45.93	0.40
4660	0.1	30.9	4659.47	2934	20.48	-45.92	0.50
4680	0.1	346.5	4679.47	2914	20.51	-45.92	0.38
4700	0.2	52.1	4699.47	2894	20.54	-45.89	1.06
4720	0.2	38.3	4719.47	2874	20.59	-45.84	0.45
4740	0.3	44.0	4739.47	2854	20.64	-45.79	0.67
4760	0.3	49.6	4759.47	2834	20.71	-45.72	0.16
4780	0.1	40.2	4779.47	2814	20.76	-45.67	0.69
4800	0.0	250.3	4799.47	2794	20.77	-45.66	0.79
4820	0.1	161.3	4819.47	2774	20.76	-45.66	0.41
4840	0.2	157.0	4839.47	2754	20.71	-45.64	0.78
4860	0.3	194.4	4859.47	2734	20.62	-45.63	0.86
4880	0.2	122.7	4879.47	2714	20.55	-45.61	1.56
4900	0.2	100.5	4899.47	2694	20.52	-45.54	0.47
4920	0.1	71.6	4919.47	2674	20.53	-45.47	0.55
4940	0.1	329.9	4939.47	2654	20.55	-45.46	0.99
4960	0.3	16.9	4959.47	2634	20.62	-45.45	1.25
4980	0.1	6.1	4979.47	2614	20.68	-45.44	1.19
5000	0.2	341.7	4999.47	2594	20.73	-45.45	0.92
5020	0.3	332.6	5019.47	2574	20.83	-45.49	0.44
5040	0.3	332.1	5039.47	2554	20.91	-45.53	0.37
5060	0.4	310.6	5059.47	2534	20.99	-45.60	0.76
5080	0.4	310.8	5079.47	2514	21.08	-45.71	0.42
5100	0.7	310.3	5099.46	2494	21.22	-45.86	1.45
5120	1.0	310.8	5119.46	2474	21.41	-46.09	1.37
5140	1.3	320.5	5139.46	2454	21.70	-46.36	1.68

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
5160	1.5	320.0	5159.45	2434	22.07	-46.68	1.15
5180	1.9	324.3	5179.44	2414	22.54	-47.04	2.01
5200	2.0	325.7	5199.43	2394	23.10	-47.43	0.73
5220	2.1	328.2	5219.42	2374	23.71	-47.82	0.57
5240	2.4	324.8	5239.40	2354	24.36	-48.26	1.71
5260	2.6	324.7	5259.38	2334	25.07	-48.76	0.71
5280	2.5	324.8	5279.36	2314	25.79	-49.27	0.12
5300	2.7	334.9	5299.34	2294	26.58	-49.72	2.39
5320	2.7	341.6	5319.32	2274	27.45	-50.07	1.61
5340	2.7	342.4	5339.30	2254	28.36	-50.36	0.21
5360	2.7	342.3	5359.28	2234	29.26	-50.65	0.16
5380	2.6	339.8	5379.25	2214	30.15	-50.95	0.66
5400	2.7	337.5	5399.23	2194	31.01	-51.29	0.54
5420	2.6	337.3	5419.21	2174	31.85	-51.64	0.41
5440	2.6	327.6	5439.19	2154	32.65	-52.06	2.19
5460	2.5	334.6	5459.17	2134	33.43	-52.49	1.58
5480	2.3	346.8	5479.15	2114	34.23	-52.77	2.79
5500	2.3	0.7	5499.14	2094	35.02	-52.86	2.82
5520	2.3	7.2	5519.12	2074	35.82	-52.81	1.33
5540	2.3	7.7	5539.11	2054	36.62	-52.70	0.14
5560	2.3	10.2	5559.09	2034	37.43	-52.57	0.51
5580	2.4	14.4	5579.07	2014	38.24	-52.40	0.94
5600	2.3	11.6	5599.05	1994	39.05	-52.21	0.66
5620	2.3	10.6	5619.04	1974	39.85	-52.05	0.28
5640	2.1	10.4	5639.02	1954	40.61	-51.91	0.97
5660	1.9	11.4	5659.01	1934	41.30	-51.78	1.04
5680	2.0	13.8	5679.00	1914	41.96	-51.63	0.50
5700	1.9	11.4	5698.99	1894	42.62	-51.48	0.46
5720	1.8	17.7	5718.98	1874	43.25	-51.32	1.27
5740	1.6	24.7	5738.97	1854	43.81	-51.11	1.24
5760	1.6	33.4	5758.96	1834	44.31	-50.83	1.25
5780	1.9	38.5	5778.95	1814	44.81	-50.46	1.51
5800	2.1	22.9	5798.94	1794	45.41	-50.11	3.00
5820	2.0	27.3	5818.92	1774	46.07	-49.80	1.07
5840	1.8	49.6	5838.91	1754	46.58	-49.41	3.83
5860	1.9	53.8	5858.90	1734	46.97	-48.91	0.82
5880	1.9	55.5	5878.89	1714	47.35	-48.37	0.45

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
5900	2.0	61.0	5898.88	1694	47.71	-47.79	0.98
5920	2.0	64.9	5918.87	1674	48.03	-47.17	0.73
5940	2.1	66.5	5938.86	1654	48.33	-46.51	0.43
5960	2.1	71.8	5958.84	1634	48.59	-45.82	0.99
5980	2.3	74.0	5978.83	1614	48.82	-45.08	0.96
6000	2.5	75.1	5998.81	1594	49.04	-44.27	1.14
6020	2.4	77.9	6018.79	1574	49.25	-43.43	0.82
6040	2.5	78.8	6038.77	1554	49.42	-42.59	0.48
6060	2.5	83.4	6058.75	1534	49.55	-41.72	1.02
6080	2.6	84.6	6078.73	1514	49.65	-40.83	0.50
6100	2.8	82.2	6098.71	1494	49.76	-39.90	0.97
6120	2.8	82.8	6118.69	1474	49.88	-38.94	0.32
6140	2.8	85.1	6138.66	1454	49.99	-37.96	0.55
6160	2.9	85.5	6158.64	1434	50.07	-36.96	0.42
6180	3.0	81.7	6178.61	1414	50.18	-35.93	1.06
6200	3.1	81.1	6198.58	1394	50.34	-34.89	0.29
6220	3.1	84.0	6218.55	1374	50.48	-33.82	0.85
6240	3.1	86.8	6238.53	1354	50.57	-32.74	0.78
6260	3.1	83.1	6258.50	1335	50.66	-31.66	1.02
6280	3.3	82.6	6278.47	1315	50.80	-30.55	0.67
6300	3.2	81.1	6298.43	1295	50.96	-29.44	0.59
6320	3.2	78.3	6318.40	1275	51.16	-28.35	0.76
6340	3.1	81.6	6338.37	1255	51.35	-27.27	1.13
6360	3.0	95.0	6358.35	1235	51.38	-26.23	3.54
6380	2.9	72.5	6378.32	1215	51.49	-25.23	5.74
6400	2.7	66.2	6398.30	1195	51.84	-24.31	1.88
6420	2.9	66.2	6418.27	1175	52.23	-23.42	0.66
6440	2.6	65.4	6438.25	1155	52.62	-22.55	1.21
6460	2.4	64.0	6458.23	1135	52.99	-21.77	1.37
6480	2.2	65.9	6478.21	1115	53.33	-21.04	0.69
6500	2.1	66.5	6498.20	1095	53.64	-20.34	0.49
6520	1.9	57.4	6518.19	1075	53.97	-19.72	1.94
6540	2.0	55.5	6538.18	1055	54.35	-19.15	0.60
6560	2.1	60.2	6558.16	1035	54.73	-18.53	1.03
6580	2.0	60.3	6578.15	1015	55.09	-17.90	0.55
6600	1.9	60.4	6598.14	995	55.44	-17.30	0.53
6620	1.9	50.3	6618.13	975	55.82	-16.75	1.69

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
6640	1.7	44.4	6638.12	955	56.25	-16.28	1.43
6660	1.7	37.1	6658.11	935	56.70	-15.89	1.09
6680	1.8	41.3	6678.10	915	57.17	-15.50	0.89
6700	1.8	40.8	6698.09	895	57.64	-15.09	0.14
6720	1.6	38.1	6718.08	875	58.09	-14.72	1.11
6740	1.4	44.7	6738.07	855	58.48	-14.38	1.30
6760	1.3	43.6	6758.07	835	58.81	-14.06	0.66
6780	1.3	41.9	6778.06	815	59.14	-13.75	0.34
6800	1.3	38.5	6798.06	795	59.49	-13.46	0.39
6820	1.4	58.2	6818.05	775	59.80	-13.11	2.34
6840	1.5	56.7	6838.04	755	60.07	-12.69	0.44
6860	1.8	60.4	6858.04	735	60.37	-12.20	1.69
6880	1.9	60.0	6878.03	715	60.69	-11.64	0.50
6900	2.0	44.4	6898.02	695	61.10	-11.11	2.64
6920	2.3	36.4	6918.00	675	61.66	-10.64	2.11
6940	1.9	51.5	6937.99	655	62.18	-10.15	3.33
6960	2.0	34.4	6957.98	635	62.68	-9.69	3.03
6980	1.8	52.2	6977.97	615	63.16	-9.24	3.21
7000	1.9	56.7	6997.96	595	63.54	-8.72	0.88
7020	2.0	57.8	7017.94	575	63.90	-8.15	0.36
7040	2.0	54.3	7037.93	555	64.29	-7.58	0.63
7060	2.4	61.7	7057.92	535	64.69	-6.93	2.26
7080	2.8	63.2	7077.90	515	65.10	-6.14	2.12
7100	2.5	63.1	7097.88	495	65.52	-5.32	1.58
7120	2.7	63.1	7117.86	475	65.92	-4.53	0.96
7140	2.6	75.7	7137.84	455	66.24	-3.68	2.89
7160	2.5	76.7	7157.82	435	66.45	-2.82	0.58
7180	2.7	81.0	7177.80	415	66.62	-1.93	1.68
7200	3.0	86.2	7197.77	395	66.73	-0.94	1.77
7220	3.0	83.7	7217.74	375	66.82	0.10	0.65
7240	3.3	86.1	7237.71	355	66.92	1.19	1.66
7260	3.2	91.0	7257.68	335	66.95	2.32	1.53
7280	3.3	101.8	7277.65	315	66.82	3.44	3.10
7300	3.5	93.1	7297.62	295	66.67	4.61	2.87
7320	3.6	91.9	7317.58	275	66.62	5.85	0.37
7340	3.5	90.6	7337.54	255	66.59	7.08	0.66
7360	3.7	113.0	7357.50	235	66.33	8.27	7.02

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
7380	3.7	107.5	7377.46	216	65.89	9.48	1.81
7400	4.0	108.4	7397.41	196	65.48	10.75	1.21
7420	4.4	112.1	7417.36	176	64.97	12.12	2.61
7440	4.1	82.1	7437.31	156	64.78	13.53	11.07
7460	4.0	82.2	7457.26	136	64.97	14.93	0.34
7480	3.9	106.6	7477.21	116	64.87	16.28	8.37
7500	3.5	111.9	7497.17	96	64.45	17.50	2.73
7520	3.2	122.8	7517.14	76	63.92	18.54	3.50
7540	3.1	118.7	7537.11	56	63.35	19.48	1.20
7560	2.6	111.7	7557.08	36	62.92	20.39	3.04
7580	2.7	115.6	7577.06	16	62.55	21.24	0.93
7600	3.4	140.8	7597.03	-4	61.89	22.03	7.37
7620	2.7	126.8	7617.01	-24	61.15	22.78	4.93
7640	3.2	140.6	7636.98	-44	60.44	23.51	4.37
7660	2.9	146.2	7656.95	-64	59.58	24.15	2.15
7680	2.4	140.3	7676.93	-84	58.84	24.69	3.11
7700	2.6	70.6	7696.91	-104	58.68	25.38	14.10
7720	2.4	156.0	7716.90	-124	58.44	25.98	16.95
7740	2.4	159.0	7736.88	-144	57.66	26.30	0.62
7760	2.4	151.0	7756.87	-164	56.90	26.65	1.68
7780	2.1	154.9	7776.85	-184	56.21	27.01	1.99
7800	1.9	147.6	7796.84	-204	55.61	27.34	1.55
7820	2.5	160.0	7816.82	-224	54.93	27.66	3.87
7840	1.9	141.4	7836.81	-244	54.26	28.02	4.48
7860	2.0	138.9	7856.80	-264	53.73	28.45	0.44
7880	1.9	139.0	7876.79	-284	53.23	28.89	0.48
7900	1.9	128.4	7896.78	-304	52.78	29.36	1.75
7920	2.3	136.6	7916.76	-324	52.28	29.90	2.63
7940	1.6	127.6	7936.75	-344	51.81	30.41	3.87
7960	1.8	122.5	7956.74	-364	51.47	30.90	1.26
7980	1.5	130.6	7976.73	-384	51.13	31.36	2.08
8000	1.5	117.8	7996.73	-404	50.84	31.79	1.69
8020	1.5	123.2	8016.72	-424	50.57	32.25	0.73
8040	1.8	127.4	8036.71	-444	50.23	32.73	1.52
8060	1.5	123.8	8056.70	-464	49.89	33.20	1.76
8080	1.3	122.9	8076.70	-484	49.63	33.59	1.15
8100	1.8	138.9	8096.69	-504	49.27	33.99	3.65

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
8120	0.9	126.4	8116.68	-524	48.92	34.34	4.74
8140	1.2	141.6	8136.68	-544	48.66	34.60	1.96
8160	1.2	141.4	8156.68	-564	48.33	34.86	0.19
8180	1.2	143.7	8176.67	-584	48.01	35.11	0.24
8200	0.8	168.1	8196.67	-604	47.71	35.26	2.88
8220	1.0	153.6	8216.67	-624	47.42	35.37	1.72
8240	1.1	134.5	8236.66	-644	47.13	35.58	1.74
8260	1.0	137.1	8256.66	-664	46.87	35.83	0.49
8280	0.9	136.1	8276.66	-684	46.64	36.05	0.48
8300	0.9	132.1	8296.65	-704	46.42	36.27	0.31
8320	0.7	125.7	8316.65	-724	46.25	36.49	0.84
8340	0.7	122.1	8336.65	-744	46.11	36.70	0.23
8360	0.6	117.9	8356.65	-764	45.99	36.90	0.61
8380	0.7	108.9	8376.65	-784	45.90	37.11	0.77
8400	0.6	103.1	8396.65	-804	45.83	37.33	0.80
8420	0.6	98.4	8416.65	-824	45.79	37.54	0.36
8440	0.5	95.2	8436.65	-844	45.77	37.73	0.71
8460	0.4	87.4	8456.64	-864	45.77	37.90	0.42
8480	0.5	79.1	8476.64	-884	45.79	38.06	0.57
8500	0.5	75.9	8496.64	-904	45.83	38.25	0.15
8520	0.6	67.0	8516.64	-924	45.89	38.44	0.70
8540	0.7	70.5	8536.64	-944	45.98	38.65	0.22
8560	0.6	74.2	8556.64	-964	46.04	38.86	0.35
8580	0.7	63.6	8576.64	-984	46.12	39.07	0.62
8600	0.7	73.6	8596.64	-1004	46.21	39.28	0.61
8620	0.8	78.0	8616.64	-1024	46.27	39.53	0.49
8640	0.7	87.3	8636.63	-1044	46.30	39.79	0.68
8660	0.7	79.9	8656.63	-1064	46.33	40.02	0.51
8680	0.6	92.0	8676.63	-1084	46.34	40.23	0.82
8700	0.7	97.3	8696.63	-1104	46.33	40.45	0.86
8720	0.7	86.5	8716.63	-1124	46.32	40.69	0.71
8740	0.7	97.6	8736.63	-1144	46.31	40.94	0.78
8760	0.9	96.5	8756.62	-1164	46.27	41.22	0.71
8780	1.1	89.5	8776.62	-1184	46.26	41.56	1.21
8800	1.1	99.2	8796.62	-1204	46.23	41.94	0.92
8820	1.2	94.8	8816.61	-1224	46.18	42.33	0.75
8840	1.0	95.3	8836.61	-1244	46.15	42.72	0.87

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
8860	0.9	92.3	8856.61	-1264	46.12	43.05	0.78
8880	1.0	93.0	8876.61	-1284	46.11	43.37	0.38
8900	1.0	89.7	8896.60	-1304	46.10	43.71	0.54
8920	1.1	90.0	8916.60	-1324	46.10	44.09	0.29
8940	1.1	77.7	8936.60	-1344	46.14	44.46	1.16
8960	1.0	82.4	8956.59	-1364	46.21	44.83	0.47
8980	1.0	82.7	8976.59	-1384	46.25	45.18	0.22
9000	0.9	84.3	8996.59	-1404	46.29	45.51	0.57
9020	1.0	78.0	9016.58	-1424	46.34	45.84	0.80
9040	0.9	80.6	9036.58	-1444	46.41	46.17	0.48
9060	0.8	83.6	9056.58	-1464	46.45	46.48	0.47
9080	0.9	81.5	9076.58	-1484	46.49	46.78	0.20
9100	0.9	94.3	9096.57	-1504	46.50	47.08	0.98
9120	1.0	87.6	9116.57	-1524	46.50	47.41	0.93
9140	1.3	89.9	9136.57	-1544	46.50	47.81	1.12
9160	1.1	86.4	9156.56	-1564	46.52	48.21	0.99
9180	1.2	93.2	9176.56	-1584	46.52	48.61	0.94
9200	1.3	81.5	9196.55	-1604	46.54	49.04	1.35
9220	1.1	79.8	9216.55	-1624	46.61	49.46	0.86
9240	1.2	74.0	9236.55	-1644	46.70	49.85	0.59
9260	1.1	65.2	9256.54	-1664	46.83	50.22	0.88
9280	1.1	70.6	9276.54	-1684	46.98	50.58	0.54
9300	1.0	67.9	9296.53	-1704	47.11	50.92	0.38
9320	1.2	77.6	9316.53	-1724	47.22	51.29	1.16
9340	1.3	66.1	9336.53	-1744	47.36	51.71	1.54
9360	1.5	54.8	9356.52	-1764	47.61	52.14	1.65
9380	1.6	56.8	9376.51	-1784	47.92	52.59	0.68
9400	1.5	48.4	9396.50	-1804	48.25	53.03	1.34
9420	1.4	42.4	9416.50	-1823	48.60	53.39	1.03
9440	1.4	36.0	9436.49	-1843	48.98	53.70	0.78
9460	1.3	41.9	9456.49	-1863	49.34	53.99	0.81
9480	1.4	27.9	9476.48	-1883	49.72	54.25	1.64
9500	1.0	31.1	9496.48	-1903	50.08	54.45	1.82
9520	0.9	27.7	9516.47	-1923	50.37	54.62	0.44
9540	1.0	41.7	9536.47	-1943	50.64	54.81	1.18
9560	0.8	38.4	9556.47	-1963	50.87	55.00	0.97
9580	1.1	59.5	9576.47	-1983	51.07	55.25	2.25

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
9600	1.0	61.8	9596.46	-2003	51.26	55.57	0.27
	ANADRILL MWD SURVEYS TIED TO SCHLUMBERGER SURVEYS AT 9600'						
9600	1.1	61.8	9596.44	-2003	50.97	55.24	
10009	1.8	21.6	10005.32	-2412	58.71	60.91	0.29
10469	1.9	41.3	10465.09	-2872	71.16	68.60	0.14
10919	2.5	56.5	10914.76	-3322	82.18	81.71	0.18
10936	2.5	50.9	10931.74	-3339	82.62	82.30	1.44
10968	2.9	30.7	10963.70	-3371	83.76	83.26	3.20
11000	3.5	11.3	10995.66	-3403	85.41	83.86	3.84
11031	4.6	0.1	11026.58	-3434	87.58	84.05	4.35
11062	5.1	349.0	11057.47	-3464	90.18	83.79	3.42
11093	6.2	339.9	11088.32	-3495	93.10	82.95	4.57
11124	7.4	339.2	11119.10	-3526	96.54	81.67	3.88
11155	8.1	336.2	11149.82	-3557	100.40	80.08	2.61
11186	8.4	332.9	11180.49	-3587	104.42	78.17	1.81
11217	9.1	332.2	11211.13	-3618	108.60	75.99	2.28
11248	9.8	331.5	11241.71	-3649	113.09	73.59	2.29
11279	10.5	331.4	11272.23	-3679	117.89	70.98	2.26
11310	11.2	330.5	11302.67	-3710	122.99	68.14	2.32
11342	11.6	330.0	11334.04	-3741	128.48	65.00	1.29
11373	12.2	328.8	11364.38	-3771	133.98	61.75	2.09
11404	12.7	330.2	11394.65	-3802	139.74	58.36	1.88
11435	13.0	331.2	11424.87	-3832	145.75	54.99	1.20
11466	13.6	332.2	11455.04	-3862	152.03	51.61	2.07
11496	14.2	330.8	11484.16	-3891	158.36	48.17	2.29
11528	14.5	329.7	11515.16	-3922	165.25	44.23	1.27
11559	14.9	327.7	11545.15	-3952	171.97	40.14	2.08
11591	15.8	328.3	11576.01	-3983	179.15	35.65	2.86
11623	17.3	329.3	11606.68	-4014	186.95	30.94	4.77
11654	19.2	333.6	11636.12	-4043	195.48	26.31	7.51
11684	19.6	336.9	11664.42	-4071	204.53	22.15	3.89
11716	20.0	339.9	11694.53	-4102	214.60	18.16	3.41
11747	20.8	341.8	11723.58	-4131	224.81	14.62	3.35
11778	20.9	342.6	11752.55	-4160	235.32	11.25	0.97
11810	21.5	341.3	11782.39	-4189	246.32	7.66	2.38
11840	22.0	339.6	11810.25	-4217	256.79	3.94	2.68
11871	22.8	337.4	11838.91	-4246	267.78	-0.39	3.74

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
11903	24.0	337.4	11868.28	-4275	279.51	-5.28	3.75
11933	25.5	337.1	11895.52	-4303	291.10	-10.14	5.02
11963	27.0	336.8	11922.43	-4329	303.30	-15.33	5.02
11994	28.2	335.7	11949.90	-4357	316.45	-21.12	4.21
12024	29.0	336.0	11976.24	-4383	329.55	-26.99	2.71
12054	30.2	334.7	12002.32	-4409	343.02	-33.18	4.54
12086	31.5	333.5	12029.80	-4437	357.78	-40.35	4.49
12117	33.1	331.5	12056.00	-4463	372.46	-48.00	6.21
12147	33.8	331.4	12081.03	-4488	386.99	-55.90	2.34
12178	34.0	331.5	12106.76	-4514	402.18	-64.17	0.67
12209	34.4	334.1	12132.40	-4539	417.67	-72.13	4.89
12239	34.8	334.4	12157.10	-4564	433.02	-79.53	1.45
12270	34.8	333.8	12182.55	-4590	448.93	-87.25	1.10
12302	35.0	333.7	12208.80	-4616	465.35	-95.35	0.65
12333	35.9	333.6	12234.05	-4641	481.46	-103.33	2.91
12364	35.8	333.5	12259.18	-4666	497.72	-111.42	0.37
12396	35.7	333.6	12285.15	-4692	514.46	-119.75	0.36
12427	35.9	333.1	12310.29	-4717	530.66	-127.88	1.14
12458	36.3	332.7	12335.34	-4742	546.92	-136.20	1.50
12490	36.3	333.2	12361.13	-4768	563.80	-144.82	0.93
12521	35.9	332.9	12386.17	-4793	580.08	-153.09	1.41
12551	36.4	333.4	12410.40	-4817	595.87	-161.09	1.94
12583	36.7	331.7	12436.11	-4843	612.78	-169.87	3.30
12612	36.5	333.7	12459.39	-4866	628.14	-177.80	4.17
12643	36.4	335.5	12484.33	-4891	644.77	-185.70	3.46
12674	36.3	336.9	12509.29	-4916	661.58	-193.12	2.70
12705	36.4	337.7	12534.26	-4941	678.54	-200.21	1.56
12736	36.4	338.1	12559.21	-4966	695.58	-207.13	0.77
12768	36.4	338.4	12584.97	-4992	713.22	-214.16	0.56
12799	36.5	339.4	12609.91	-5017	730.40	-220.79	1.94
12831	36.9	339.3	12635.56	-5043	748.29	-227.54	1.26
12862	37.1	338.9	12660.32	-5067	765.72	-234.19	1.01
12892	37.5	338.4	12684.18	-5091	782.66	-240.81	1.67
12923	38.0	338.2	12708.70	-5116	800.29	-247.83	1.66
12954	38.5	338.7	12733.04	-5140	818.14	-254.88	1.90
12986	38.4	339.8	12758.10	-5165	836.75	-261.93	2.16
13017	37.5	340.9	12782.55	-5190	854.70	-268.34	3.63

WELL SURVEY

MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
13049	37.2	340.9	12807.98	-5215	873.04	-274.69	0.94
13080	37.7	339.5	12832.60	-5240	890.78	-281.08	3.18
13124	38.3	340.2	12867.27	-5274	916.21	-290.41	1.68
13154	38.4	339.8	12890.80	-5298	933.70	-296.78	0.89
13186	38.2	340.6	12915.91	-5323	952.36	-303.50	1.67
13217	38.0	342.1	12940.30	-5347	970.48	-309.61	3.05
13247	37.5	343.2	12964.02	-5371	988.01	-315.09	2.80
13278	37.1	343.0	12988.68	-5396	1005.99	-320.55	1.35
13309	37.0	344.1	13013.43	-5420	1023.90	-325.84	2.16
13340	36.9	346.2	13038.20	-5445	1041.91	-330.62	4.08
13369	37.1	346.8	13061.36	-5468	1058.88	-334.69	1.42
13399	37.6	346.9	13085.21	-5492	1076.60	-338.83	1.68
13431	37.2	347.5	13110.63	-5518	1095.56	-343.14	1.69
13461	37.2	348.7	13134.53	-5542	1113.30	-346.88	2.42
13491	37.9	348.3	13158.31	-5565	1131.22	-350.52	2.47
13521	38.4	348.8	13181.90	-5589	1149.38	-354.20	1.96
13552	38.8	348.8	13206.13	-5613	1168.35	-357.96	1.29
13584	39.1	347.3	13231.02	-5638	1188.03	-362.12	3.09
13615	39.8	348.9	13254.96	-5662	1207.31	-366.18	3.98
13644	39.8	349.3	13277.24	-5684	1225.53	-369.69	0.88
13676	39.8	349.5	13301.82	-5709	1245.67	-373.46	0.40
13707	40.1	348.9	13325.59	-5733	1265.22	-377.19	1.58
13737	40.8	348.9	13348.41	-5755	1284.32	-380.94	2.33
13768	41.1	349.3	13371.83	-5779	1304.27	-384.78	1.29
13797	41.2	349.1	13393.67	-5801	1323.02	-388.36	0.57
13829	41.3	348.6	13417.72	-5825	1343.72	-392.44	1.08
13860	41.5	348.8	13440.98	-5848	1363.82	-396.45	0.77
13892	41.9	348.9	13464.87	-5872	1384.71	-400.57	1.27
13973	42.6	349.2	13524.83	-5932	1438.18	-410.91	0.90
14002	42.5	349.7	13546.19	-5953	1457.45	-414.50	1.22
14033	42.3	349.5	13569.08	-5976	1478.01	-418.28	0.78
14064	42.0	350.1	13592.07	-5999	1498.49	-421.96	1.62
14095	41.9	350.8	13615.12	-6022	1518.92	-425.40	1.54
14127	41.9	351.4	13638.94	-6046	1540.04	-428.71	1.25
14159	42.2	350.9	13662.70	-6070	1561.21	-432.00	1.41
14190	41.8	350.7	13685.74	-6093	1581.69	-435.32	1.36
14222	42.2	350.2	13709.52	-6117	1602.81	-438.87	1.63

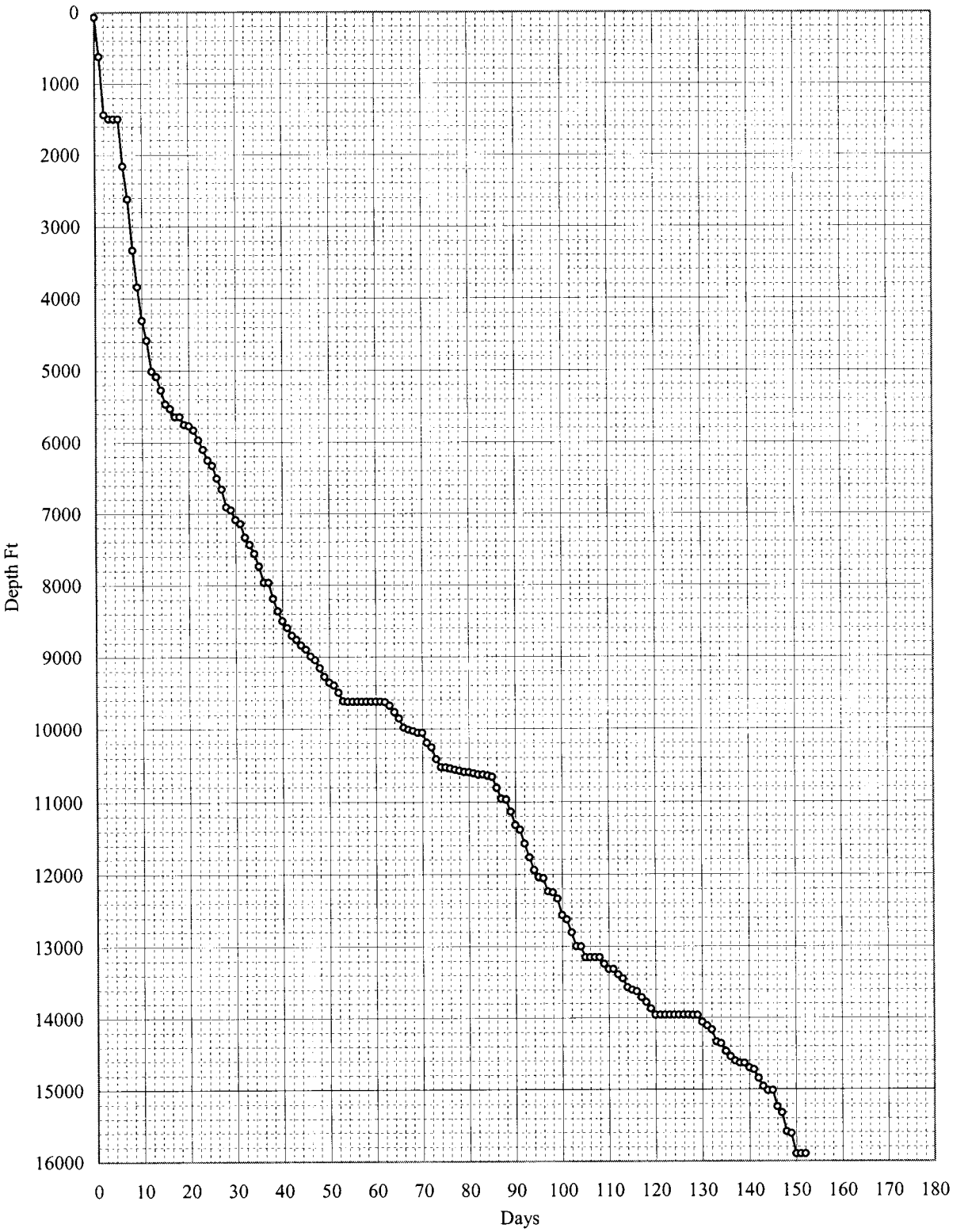
WELL SURVEY

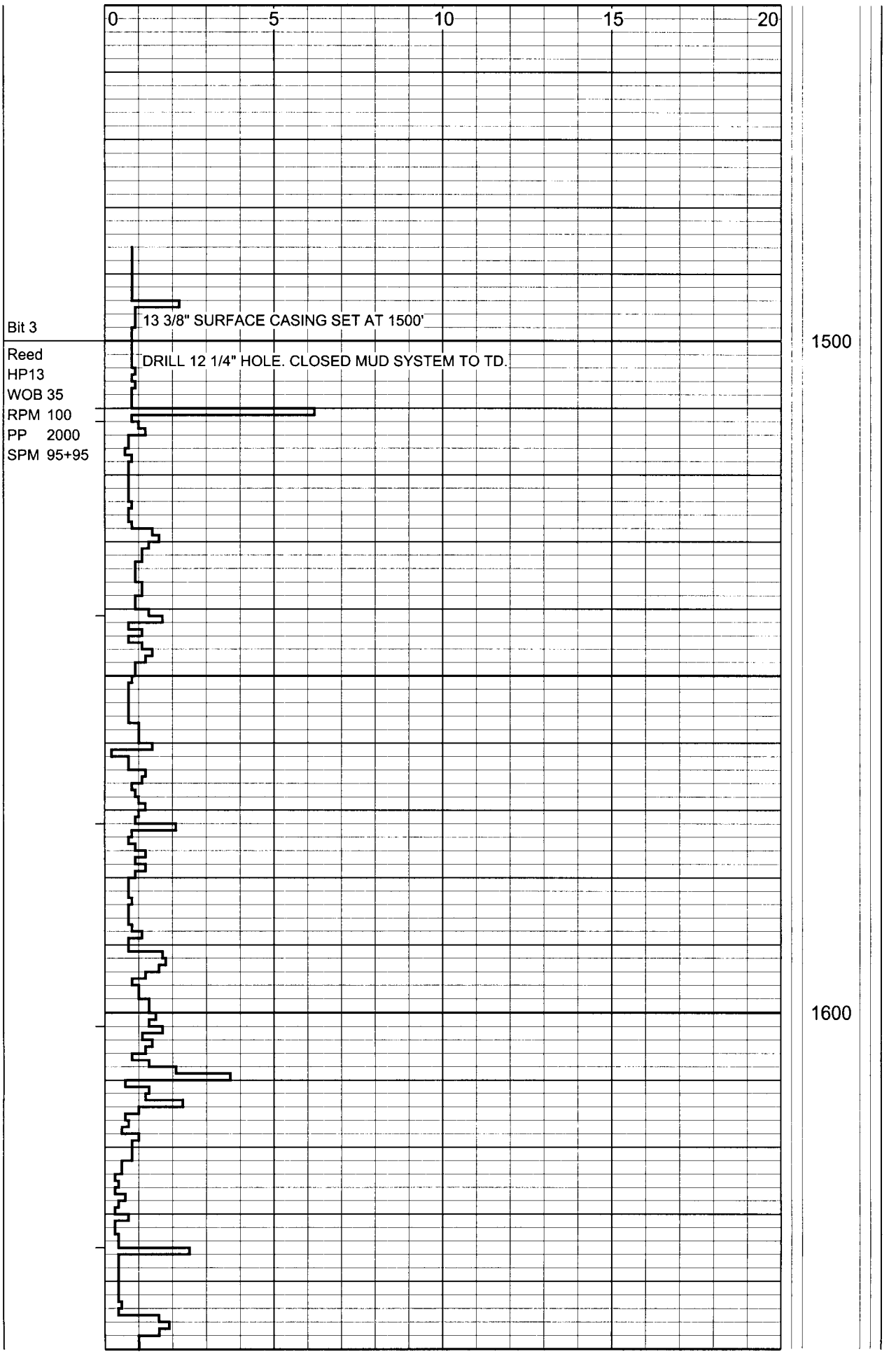
MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
14253	41.6	351.1	13732.59	-6140	1623.23	-442.24	2.74
14285	41.0	350.3	13756.63	-6164	1644.08	-445.65	2.50
14316	41.2	349.7	13780.00	-6187	1664.14	-449.19	1.43
14347	41.3	349.9	13803.30	-6210	1684.26	-452.81	0.53
14376	41.3	350.3	13825.09	-6232	1703.12	-456.10	0.91
14407	41.8	350.0	13848.29	-6255	1723.37	-459.62	1.74
14439	41.8	350.3	13872.14	-6279	1744.39	-463.26	0.62
14470	41.3	350.4	13895.34	-6302	1764.66	-466.71	1.63
14500	39.6	352.0	13918.17	-6325	1783.89	-469.69	6.64
14532	38.6	353.1	13943.01	-6350	1803.90	-472.31	3.80
14563	37.6	353.8	13967.40	-6374	1822.90	-474.50	3.51
14593	38.3	354.6	13991.06	-6398	1841.26	-476.36	2.85
14624	38.0	354.6	14015.44	-6422	1860.32	-478.16	0.97
14654	38.0	354.3	14039.08	-6446	1878.71	-479.95	0.62
14686	37.6	354.4	14064.36	-6471	1898.22	-481.88	1.26
14717	36.9	354.6	14089.04	-6496	1916.90	-483.68	2.29
14748	36.6	354.2	14113.88	-6521	1935.36	-485.49	1.24
14780	36.5	352.8	14139.58	-6547	1954.29	-487.64	2.62
14814	36.8	351.7	14166.86	-6574	1974.40	-490.38	2.12
14845	36.5	351.8	14191.73	-6599	1992.72	-493.04	0.99
14876	36.0	351.5	14216.73	-6624	2010.85	-495.70	1.71
14907	36.9	350.8	14241.67	-6649	2029.05	-498.53	3.20
14939	37.0	351.0	14267.24	-6674	2048.04	-501.57	0.49
14969	37.8	350.5	14291.07	-6698	2066.03	-504.50	2.85
15005	39.3	349.9	14319.23	-6726	2088.13	-508.32	4.29
15037	40.2	348.6	14343.83	-6751	2108.24	-512.14	3.83
15068	40.8	348.4	14367.40	-6774	2127.96	-516.16	1.98
15099	40.5	347.8	14390.92	-6798	2147.72	-520.32	1.59
15131	40.2	347.5	14415.31	-6822	2167.96	-524.75	1.12
15161	39.8	347.5	14438.29	-6845	2186.79	-528.93	1.33
15192	39.6	347.4	14462.14	-6869	2206.12	-533.23	0.68
15222	39.0	347.6	14485.36	-6892	2224.67	-537.34	2.04
15253	38.4	347.1	14509.55	-6917	2243.58	-541.59	2.18
15289	38.2	346.6	14537.80	-6945	2265.31	-546.66	1.02
15320	37.6	346.1	14562.26	-6969	2283.81	-551.15	2.17
15352	37.2	345.7	14587.69	-6995	2302.66	-555.89	1.46
15383	36.9	345.5	14612.43	-7019	2320.75	-560.53	1.04

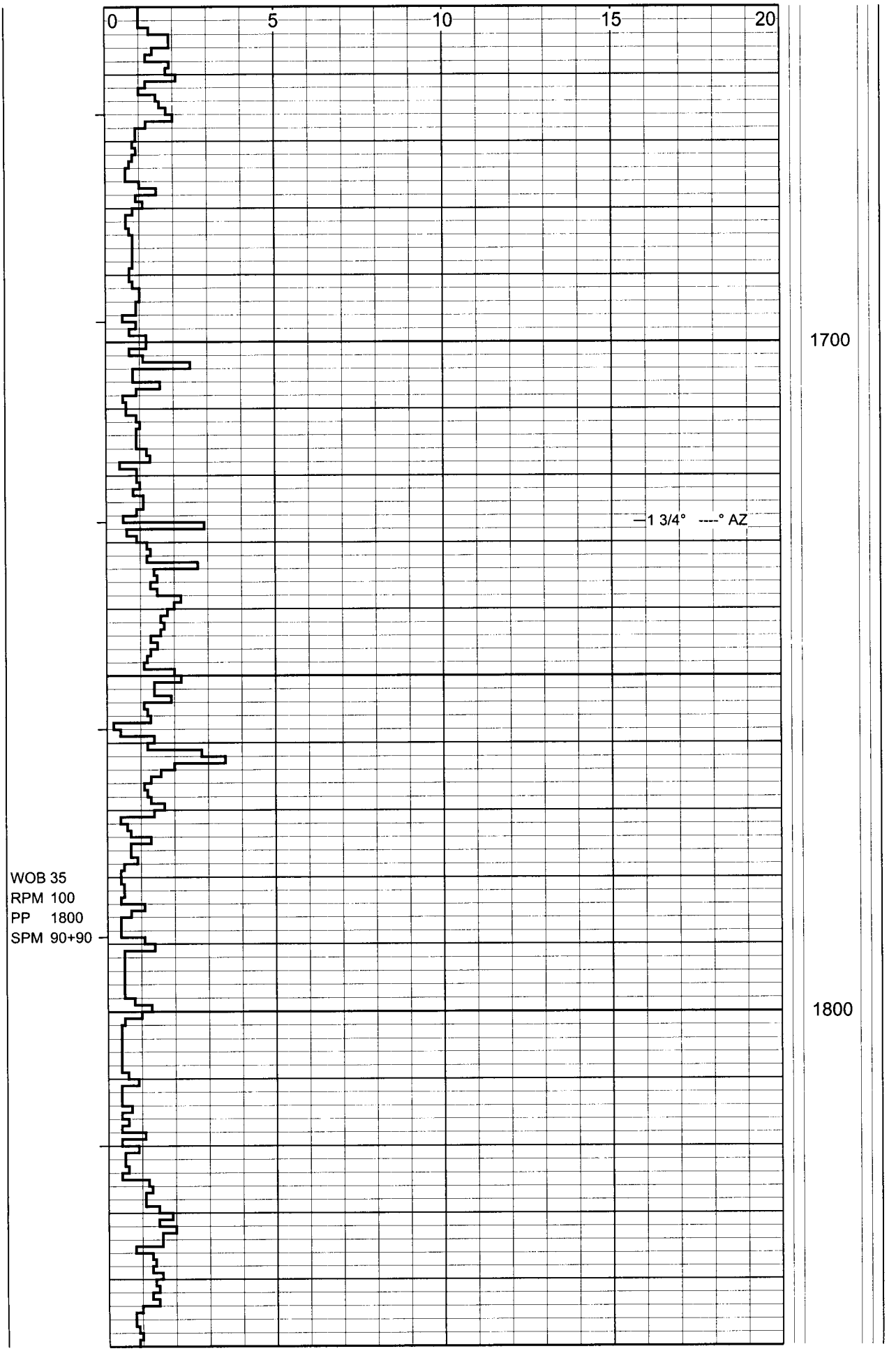
WELL SURVEY

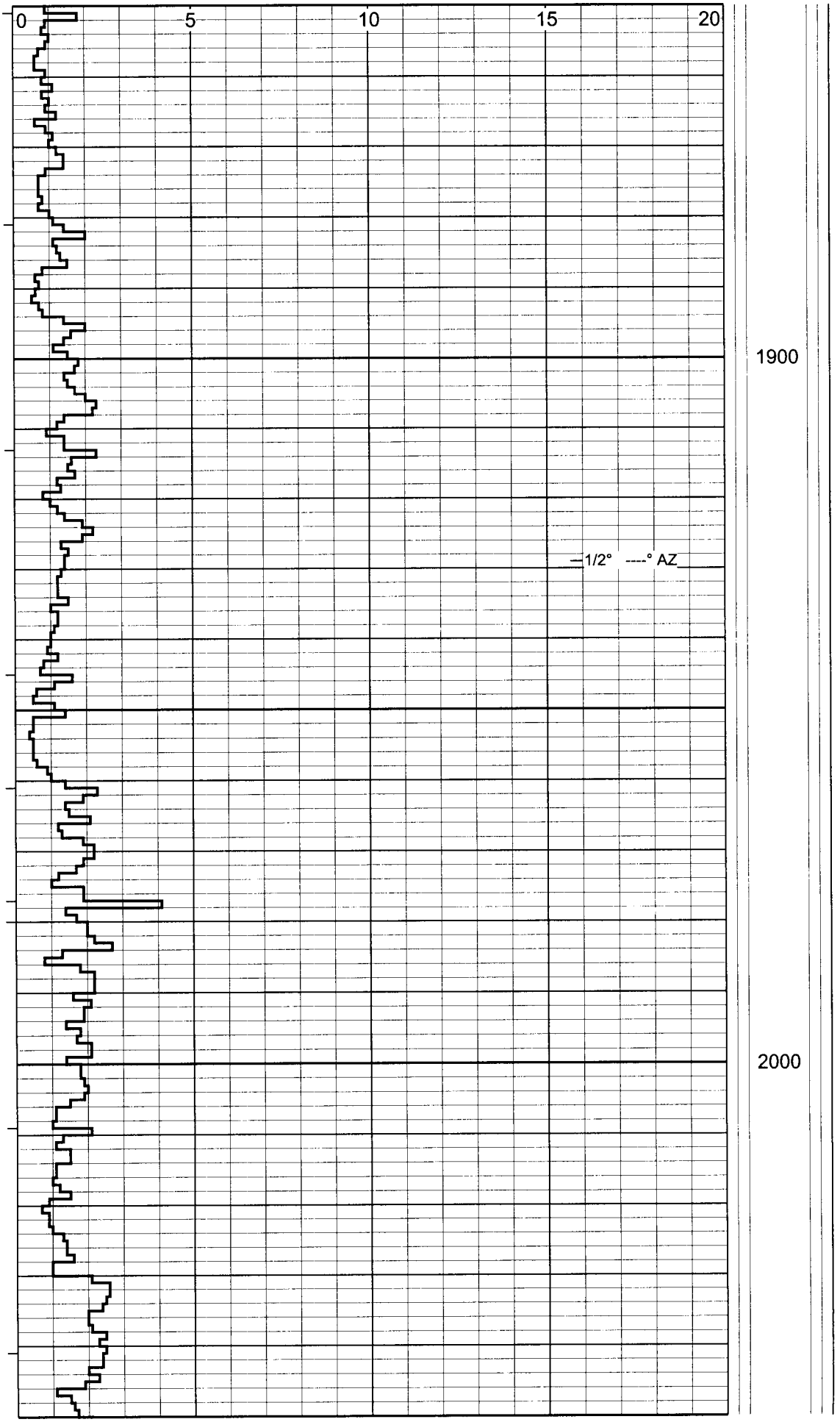
MD ft	INC deg	AZ deg	TVD ft	DATUM ft	N+/S- ft	E+/W- ft	DLS deg/100ft
15414	36.6	345.4	14637.27	-7044	2338.71	-565.19	0.99
15446	36.3	344.8	14663.01	-7070	2357.08	-570.08	1.46
15477	36.0	344.4	14688.04	-7095	2374.71	-574.94	1.23
15509	35.4	345.1	14714.02	-7121	2392.73	-579.85	2.27
15540	35.1	344.5	14739.34	-7146	2409.99	-584.54	1.48
15575	35.4	342.8	14767.92	-7175	2429.37	-590.23	2.93
15607	36.1	342.2	14793.89	-7201	2447.20	-595.85	2.45
15638	35.7	341.5	14819.00	-7226	2464.48	-601.51	1.85
15668	35.4	341.5	14843.41	-7250	2481.02	-607.05	1.00
15700	35.4	341.5	14869.50	-7276	2498.60	-612.93	0.00
15732	34.8	340.5	14895.68	-7303	2515.99	-618.92	2.60
15763	35.9	340.2	14920.96	-7328	2532.88	-624.95	3.59
15794	37.2	339.6	14945.86	-7353	2550.22	-631.30	4.35
15826	37.0	338.8	14971.39	-7378	2568.26	-638.15	1.63
15857	35.9	338.3	14996.32	-7403	2585.41	-644.88	3.68
			CURVED PROJECTION TO TD				
15900	34.8	338.0	15031.39	-7438	2608.50	-654.14	2.59

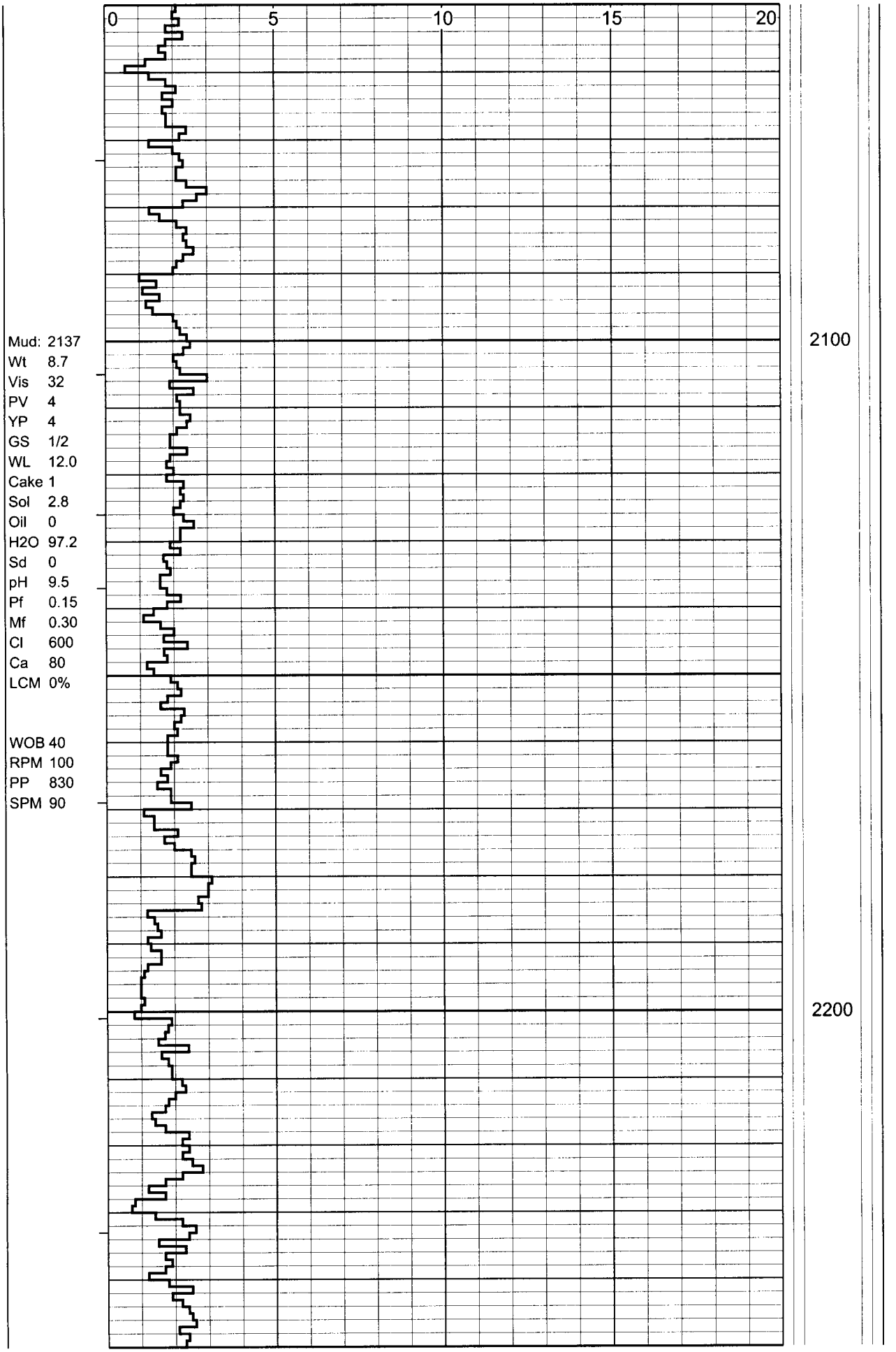
DRILLING CURVE

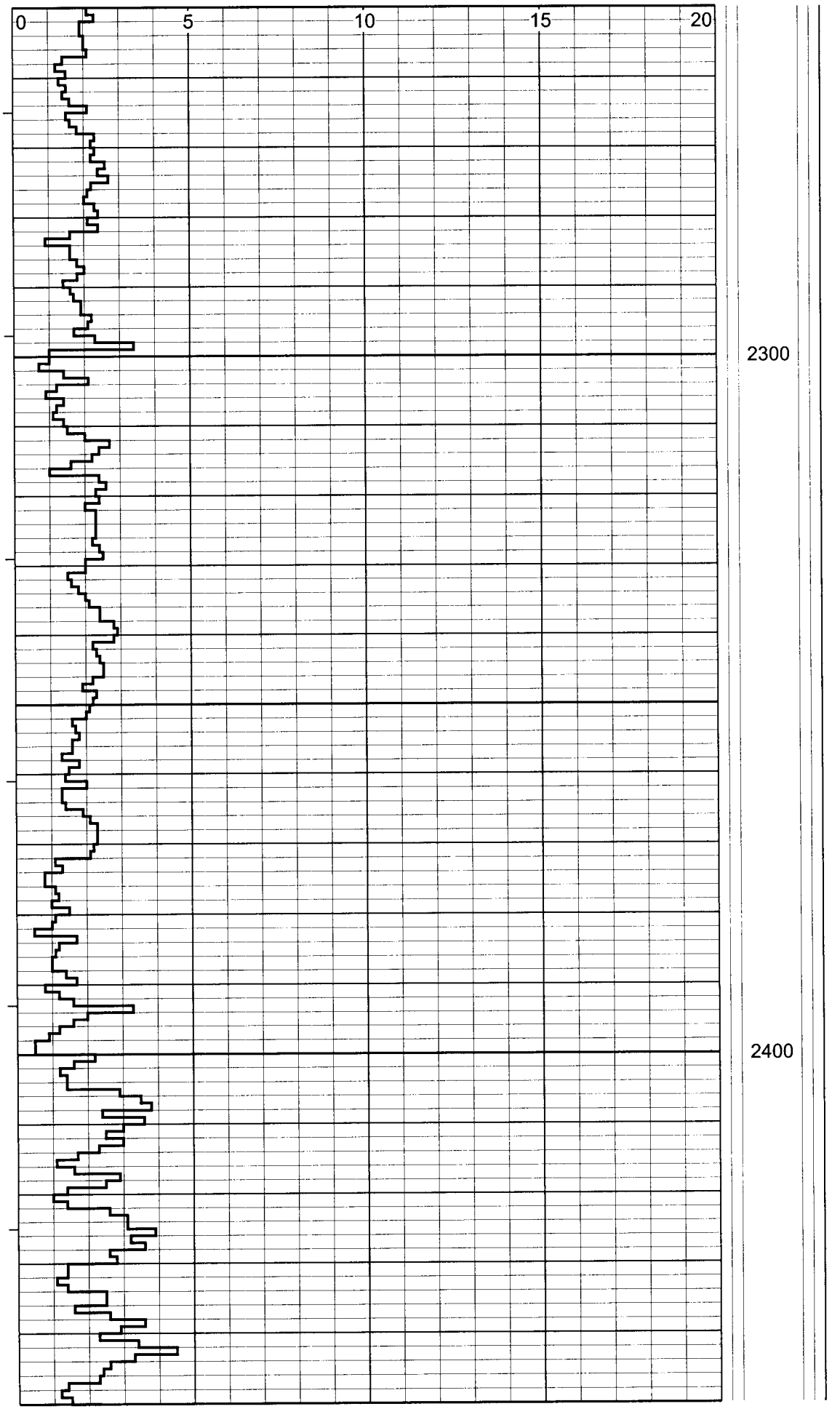


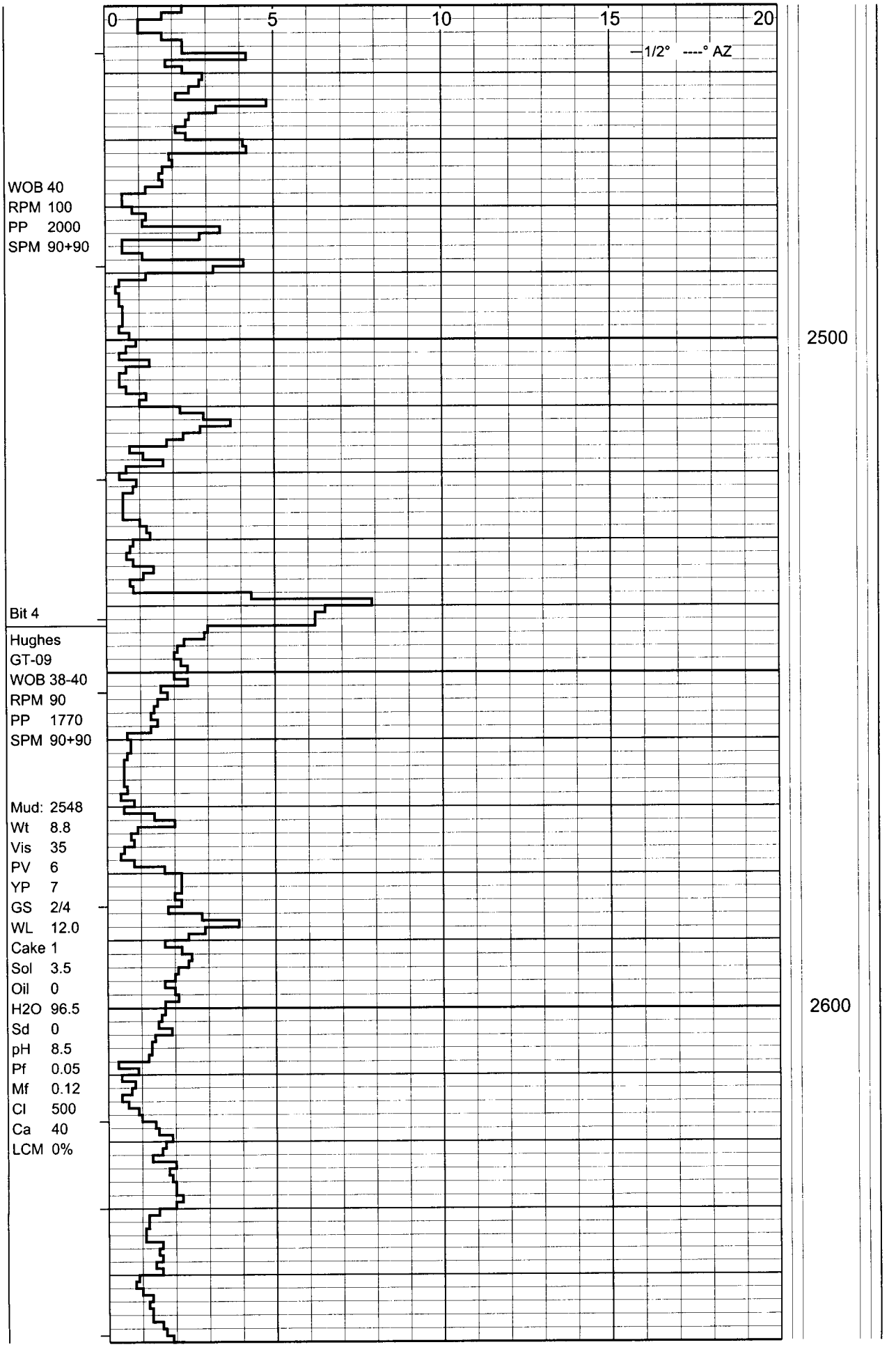

0
5
10
15
20
13 3/8" SURFACE CASING SET AT 1500'
DRILL 12 1/4" HOLE. CLOSED MUD SYSTEM TO TD.
Bit 3
Reed
HP13
WOB 35
RPM 100
PP 2000
SPM 95+95
1500
1600

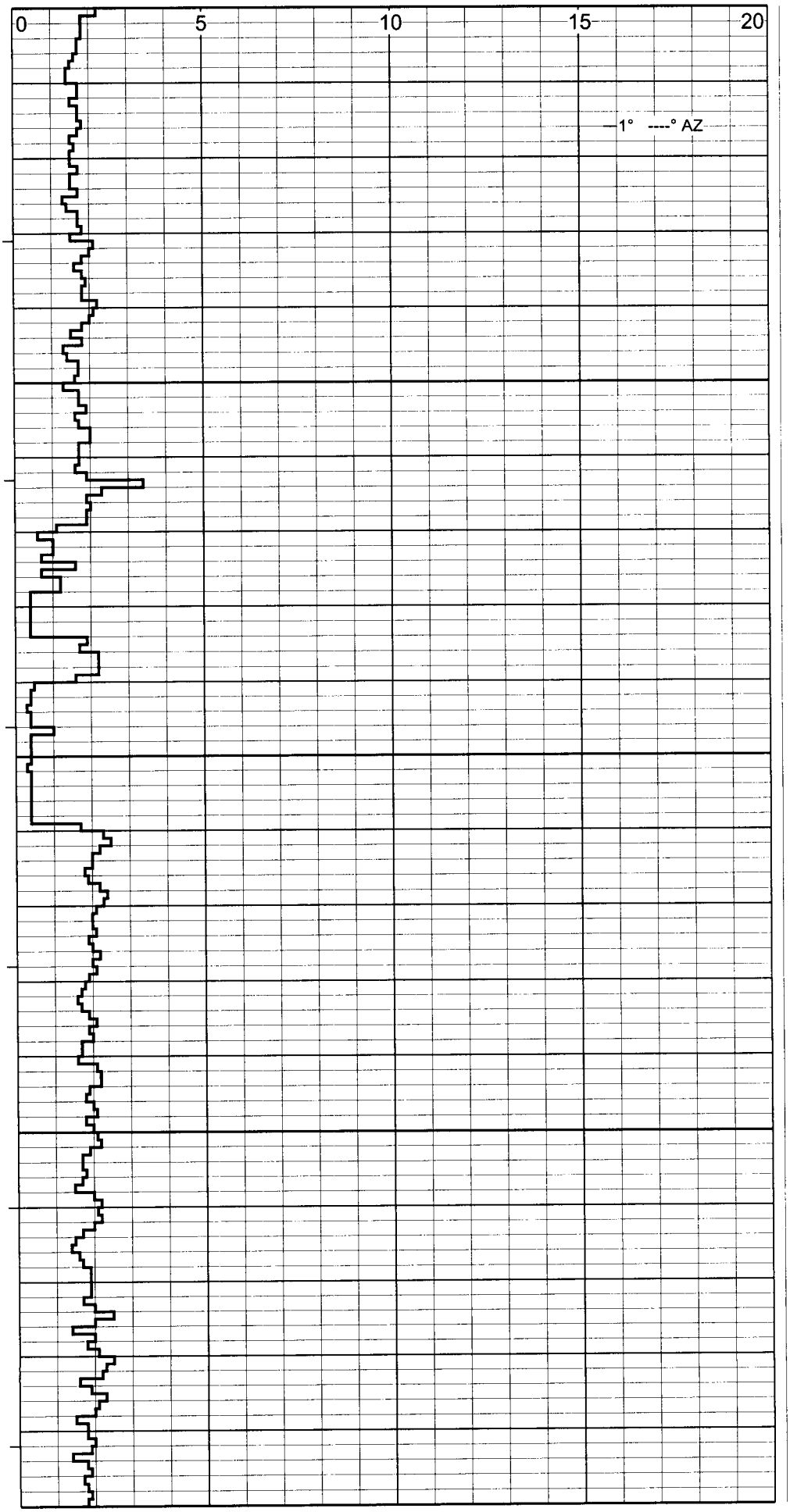

0
5
10
15
20
1700
1800
—1 3/4° ----° AZ
WOB 35
RPM 100
PP 1800
SPM 90+90

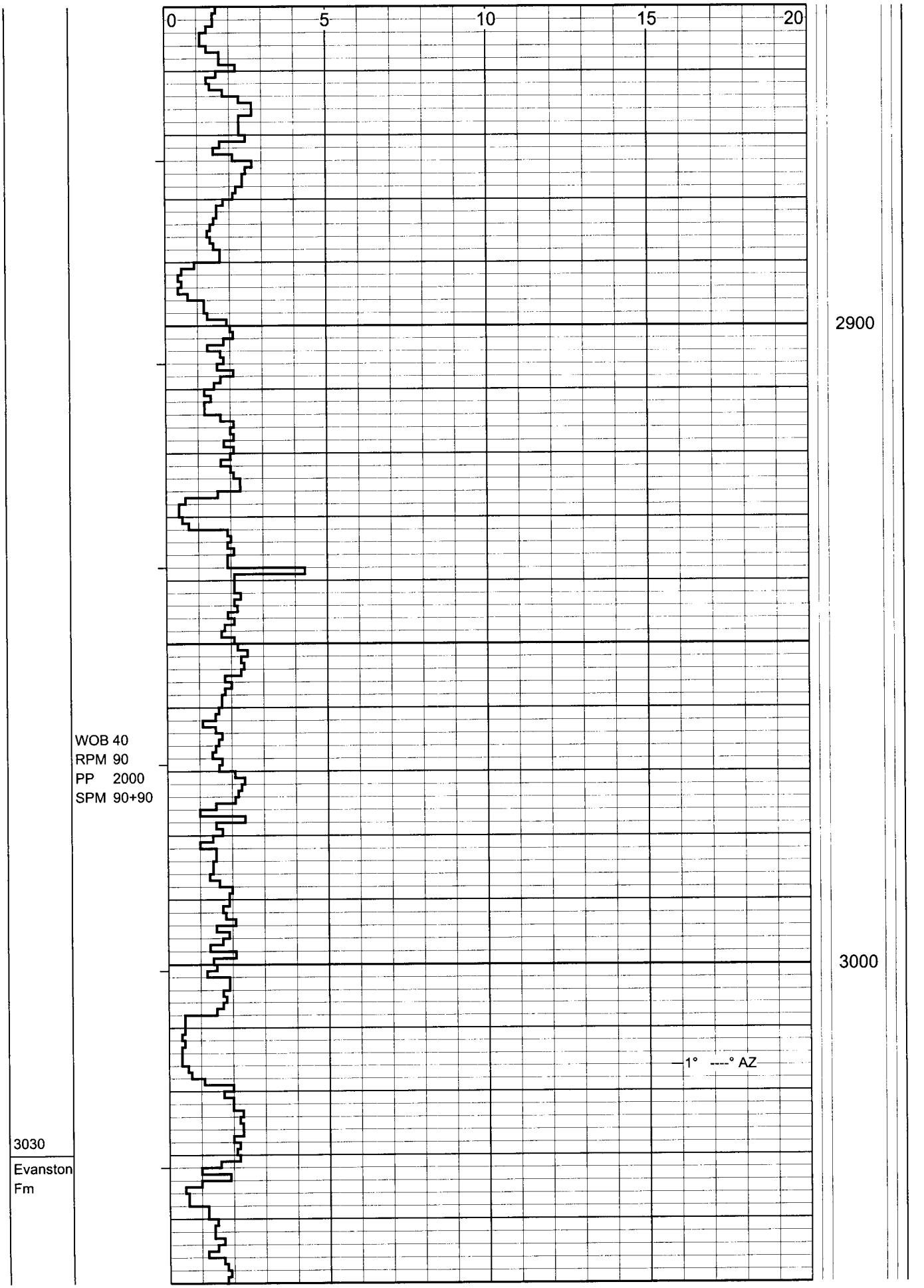

0
5
10
15
20
1900
1/2°
° AZ
2000

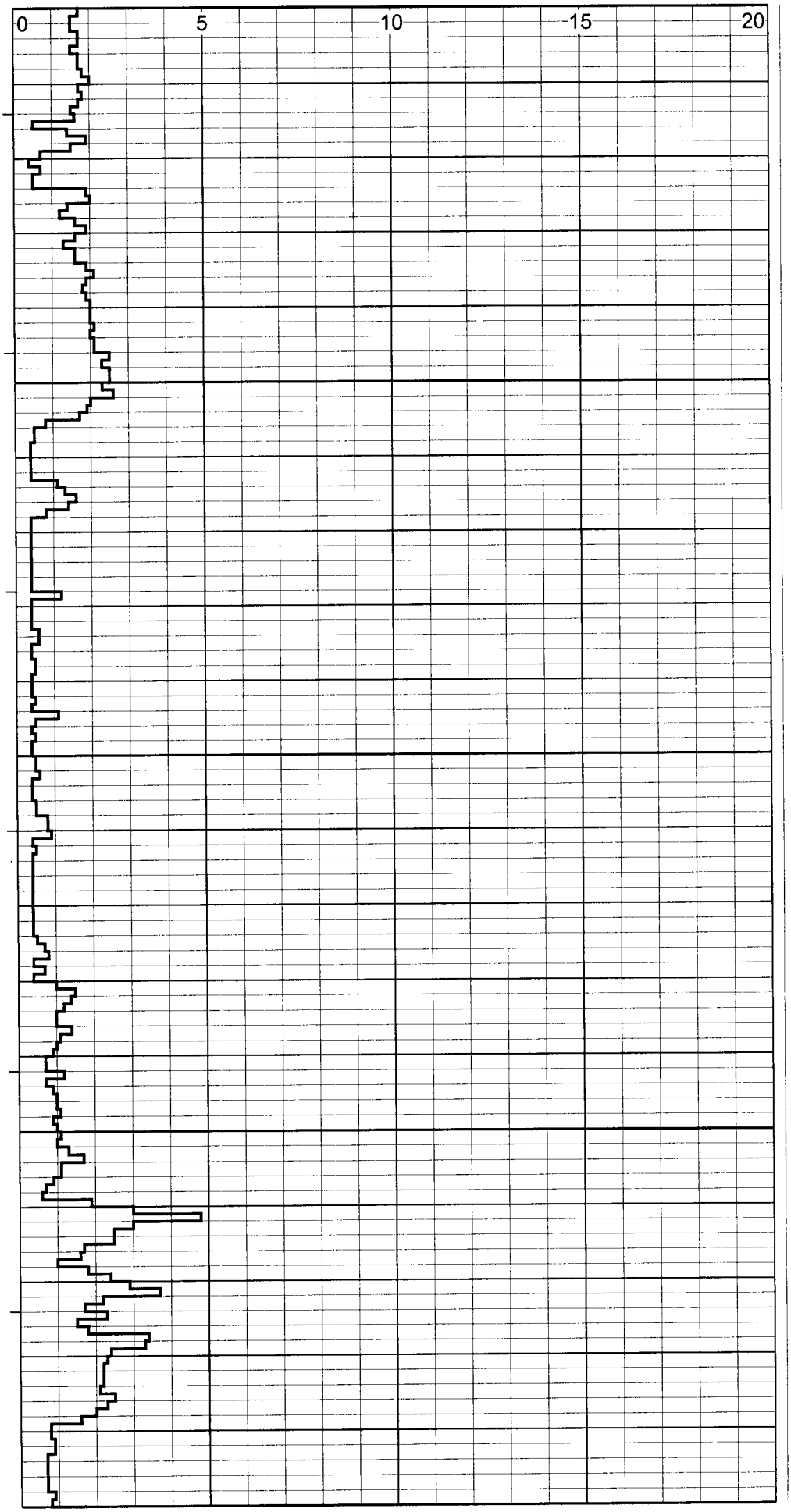

0
5
10
15
20
Mud: 2137
Wt 8.7
Vis 32
PV 4
YP 4
GS 1/2
WL 12.0
Cake 1
Sol 2.8
Oil 0
H2O 97.2
Sd 0
pH 9.5
Pf 0.15
Mf 0.30
Cl 600
Ca 80
LCM 0%
WOB 40
RPM 100
PP 830
SPM 90
2100
2200

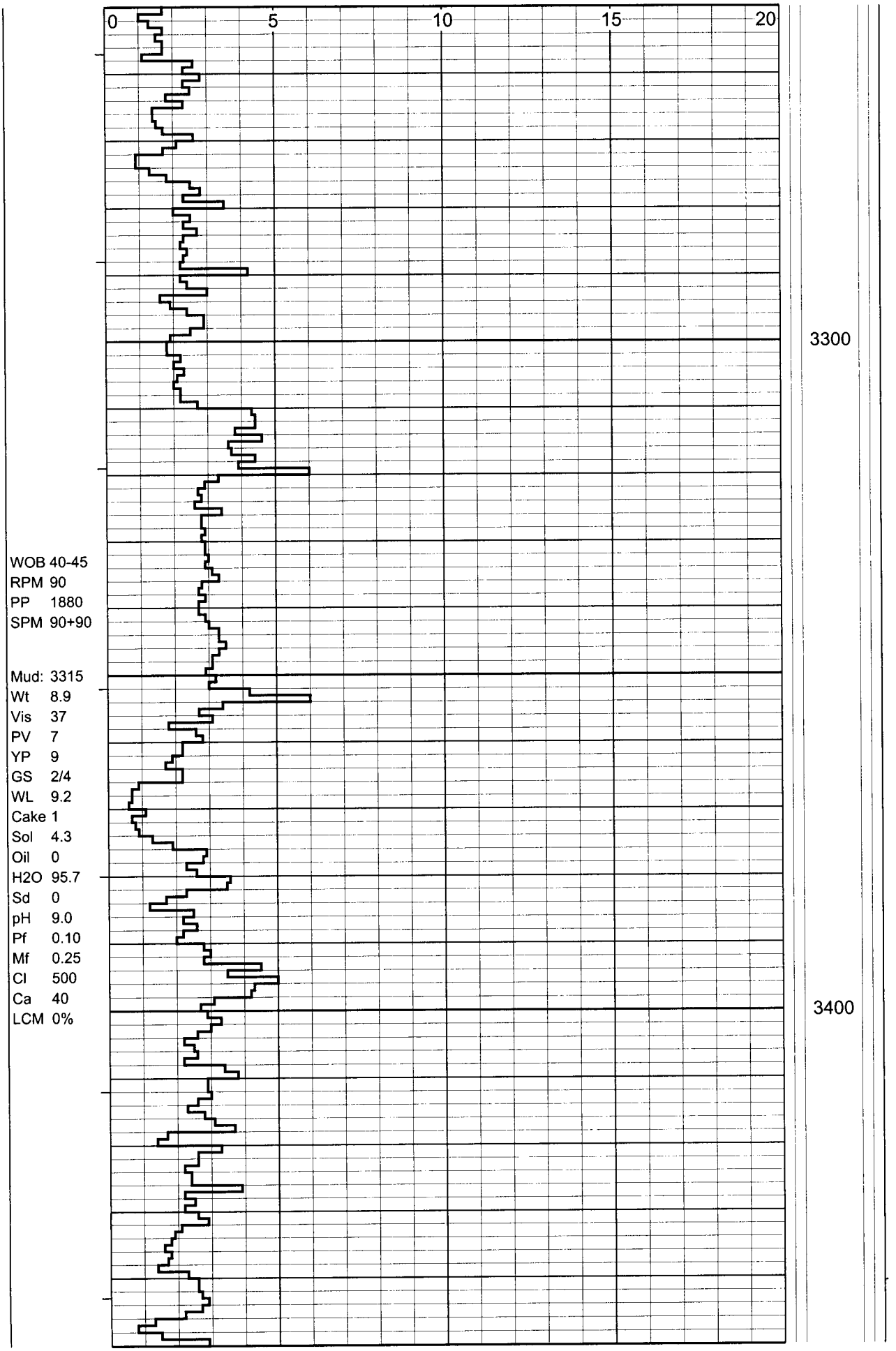

0
5
10
15
20
2300
2400


0
5
10
15
20
—1/2° ----° AZ
WOB 40
RPM 100
PP 2000
SPM 90+90
2500
Bit 4
Hughes
GT-09
WOB 38-40
RPM 90
PP 1770
SPM 90+90
Mud: 2548
Wt 8.8
Vis 35
PV 6
YP 7
GS 2/4
WL 12.0
Cake 1
Sol 3.5
Oil 0
H2O 96.5
Sd 0
pH 8.5
Pf 0.05
Mf 0.12
Cl 500
Ca 40
LCM 0%
2600


0
5
10
15
20
1° ----° AZ
2700
2800

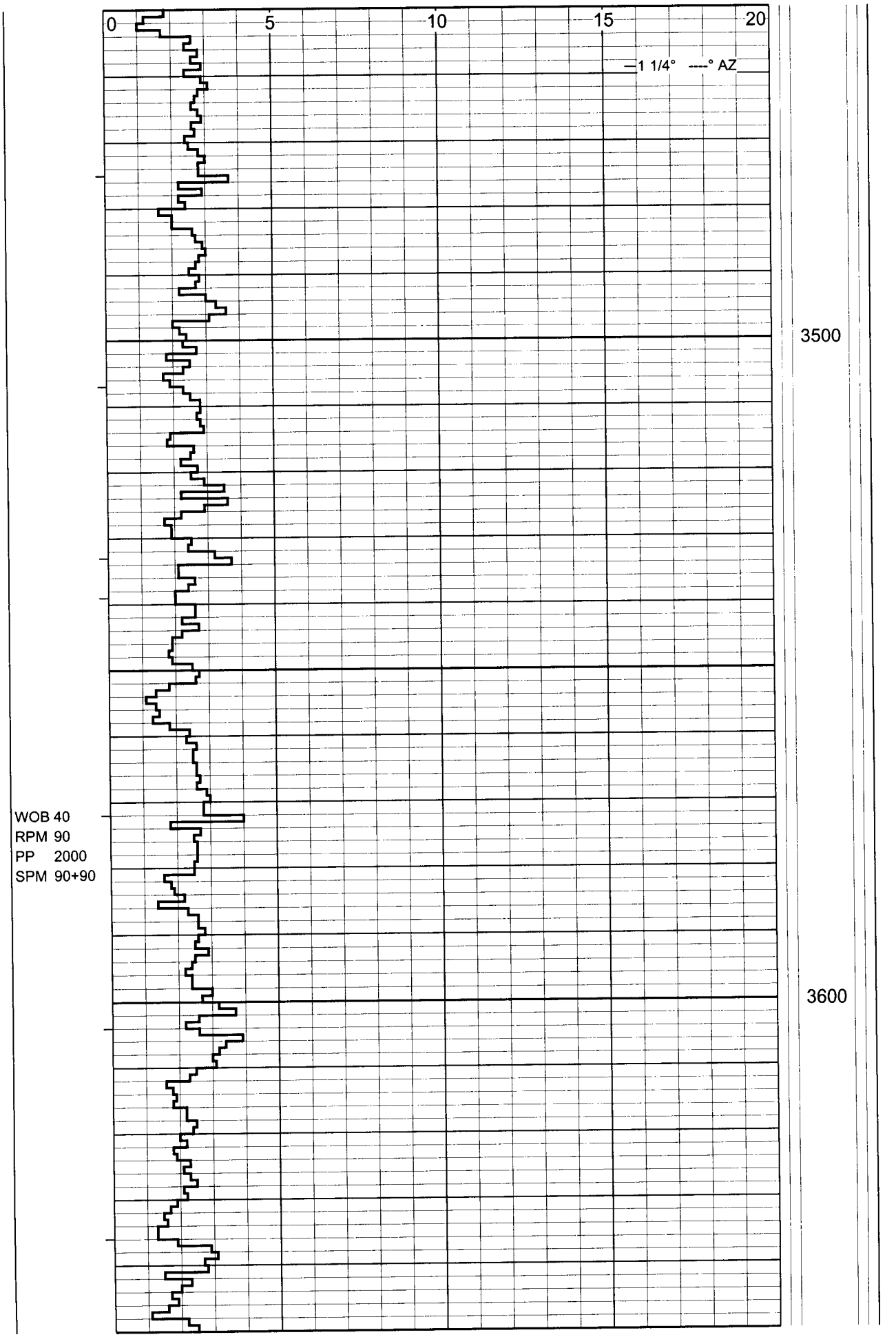

0
5
10
15
20
2900
3000
WOB 40
RPM 90
PP 2000
SPM 90+90
—1° ----° AZ
3030
Evanston
Fm

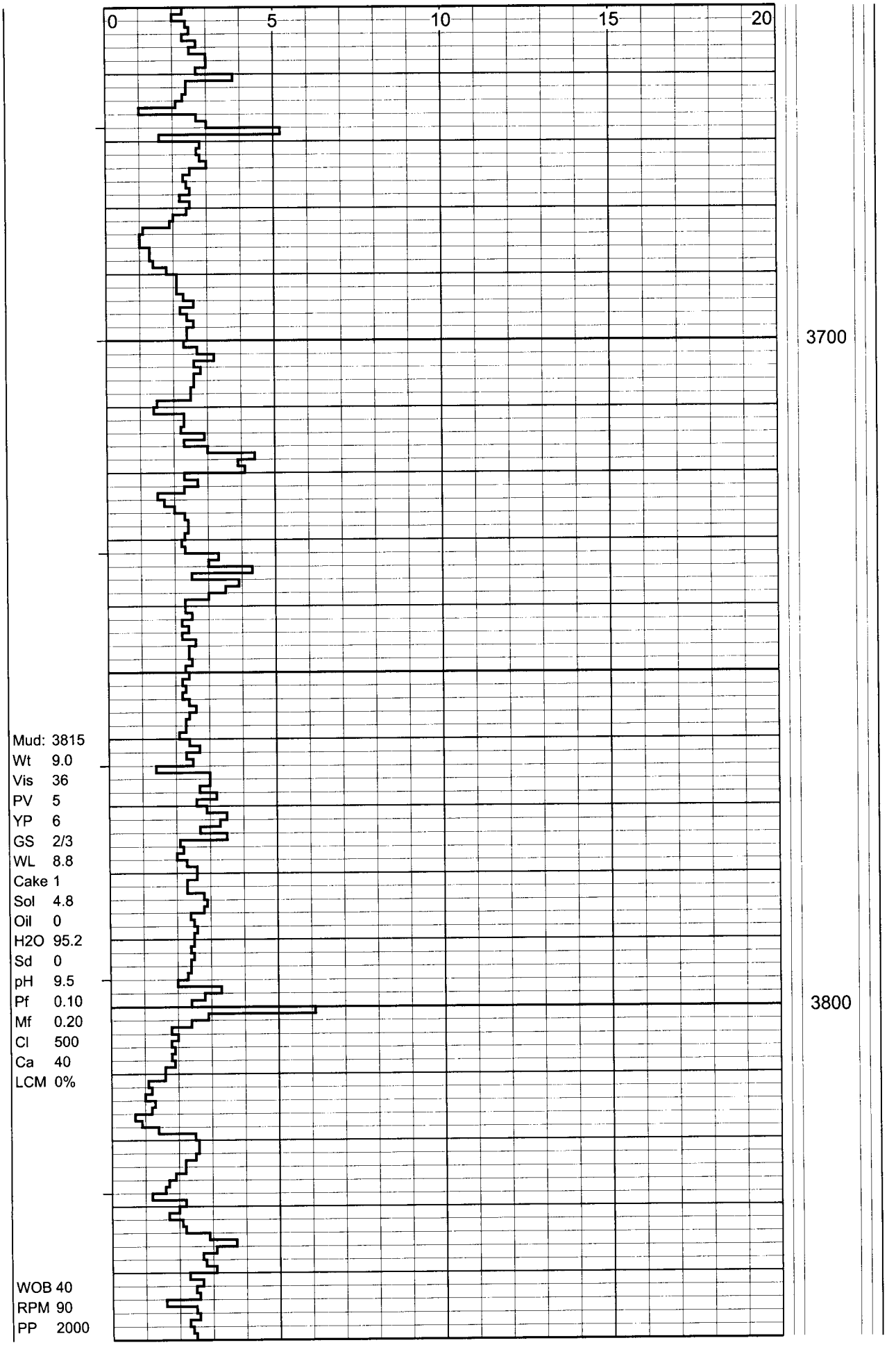

0
5
10
15
20
3100
3200

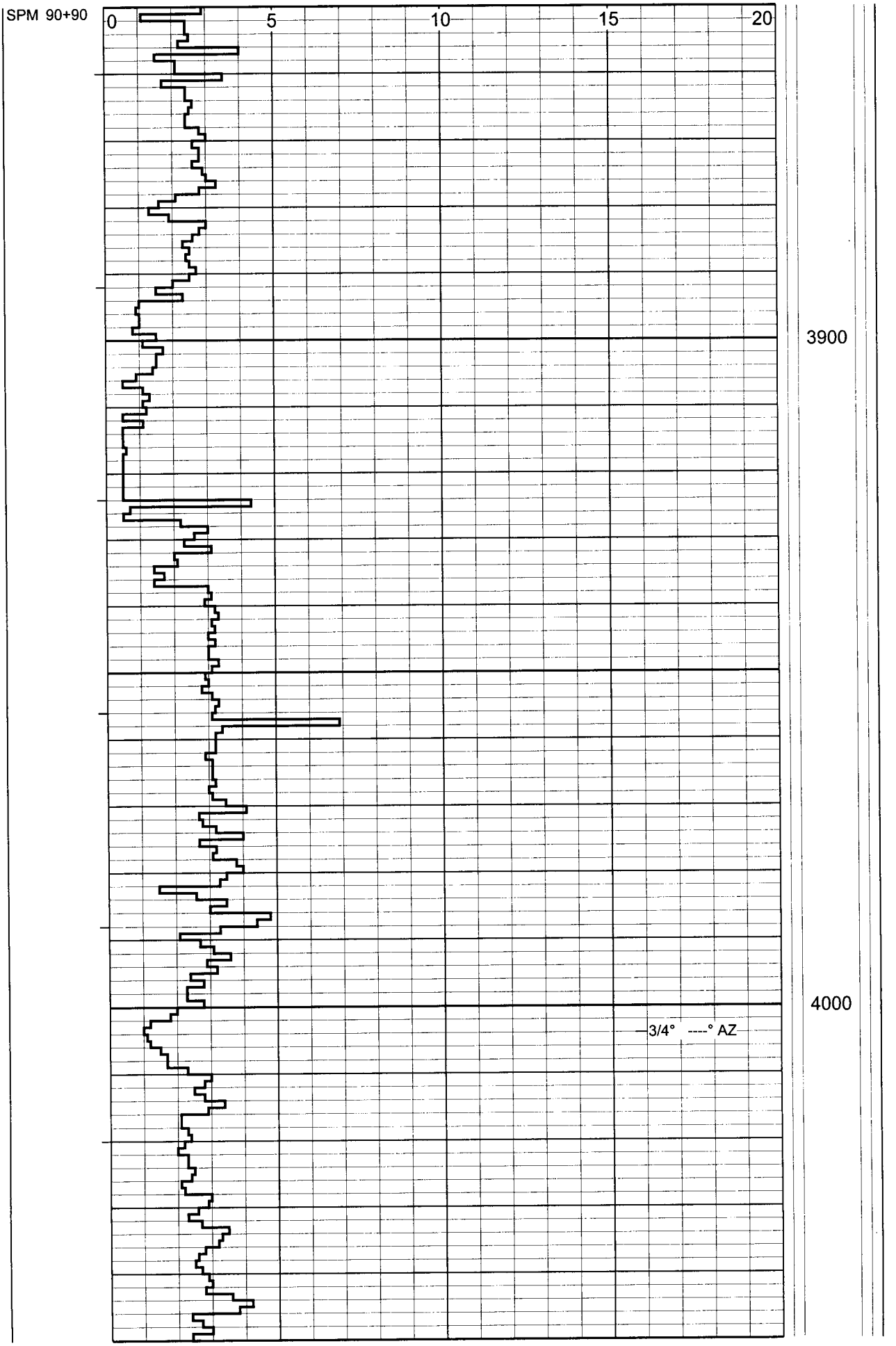


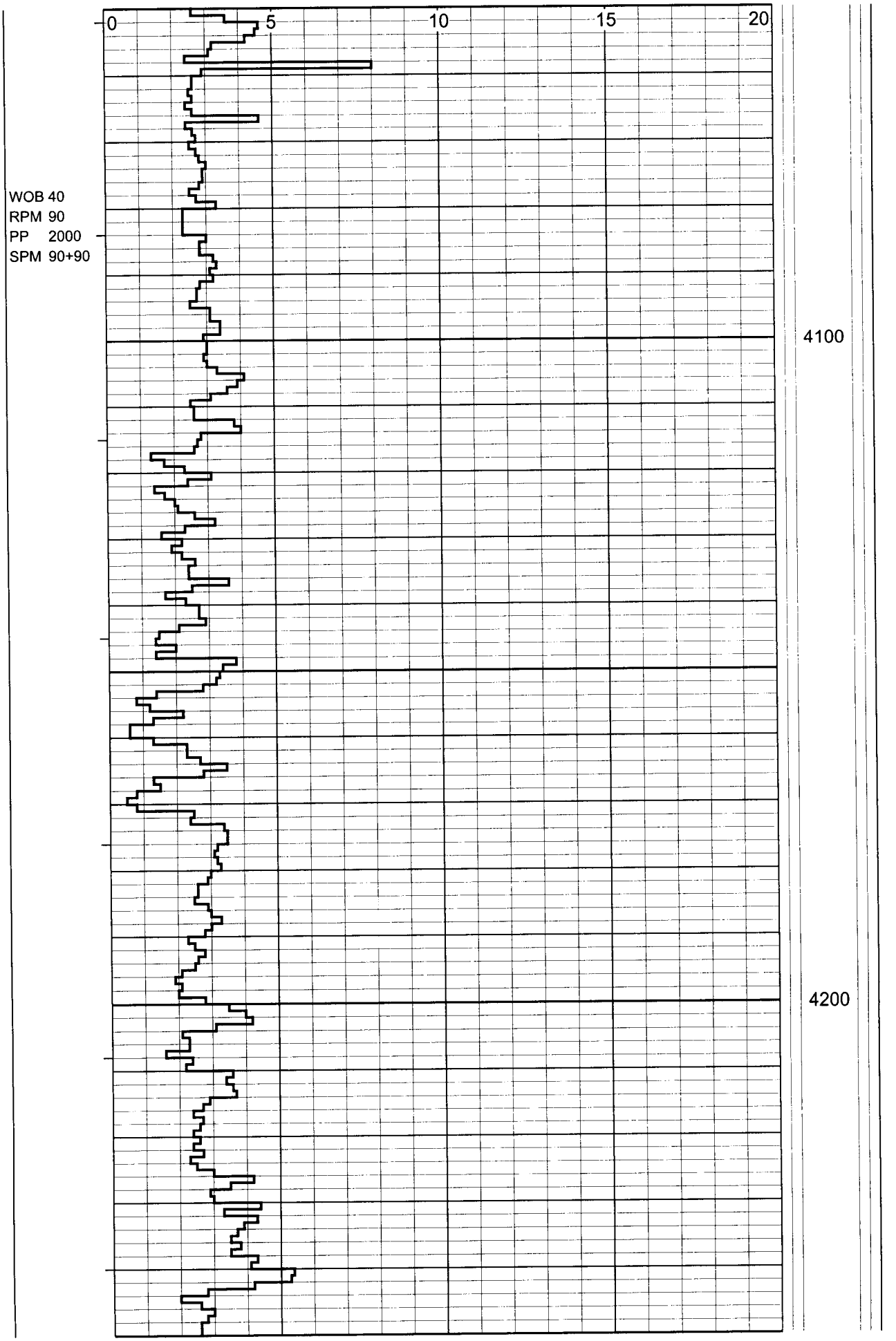
WOB 40-45
RPM 90
PP 1880
SPM 90+90

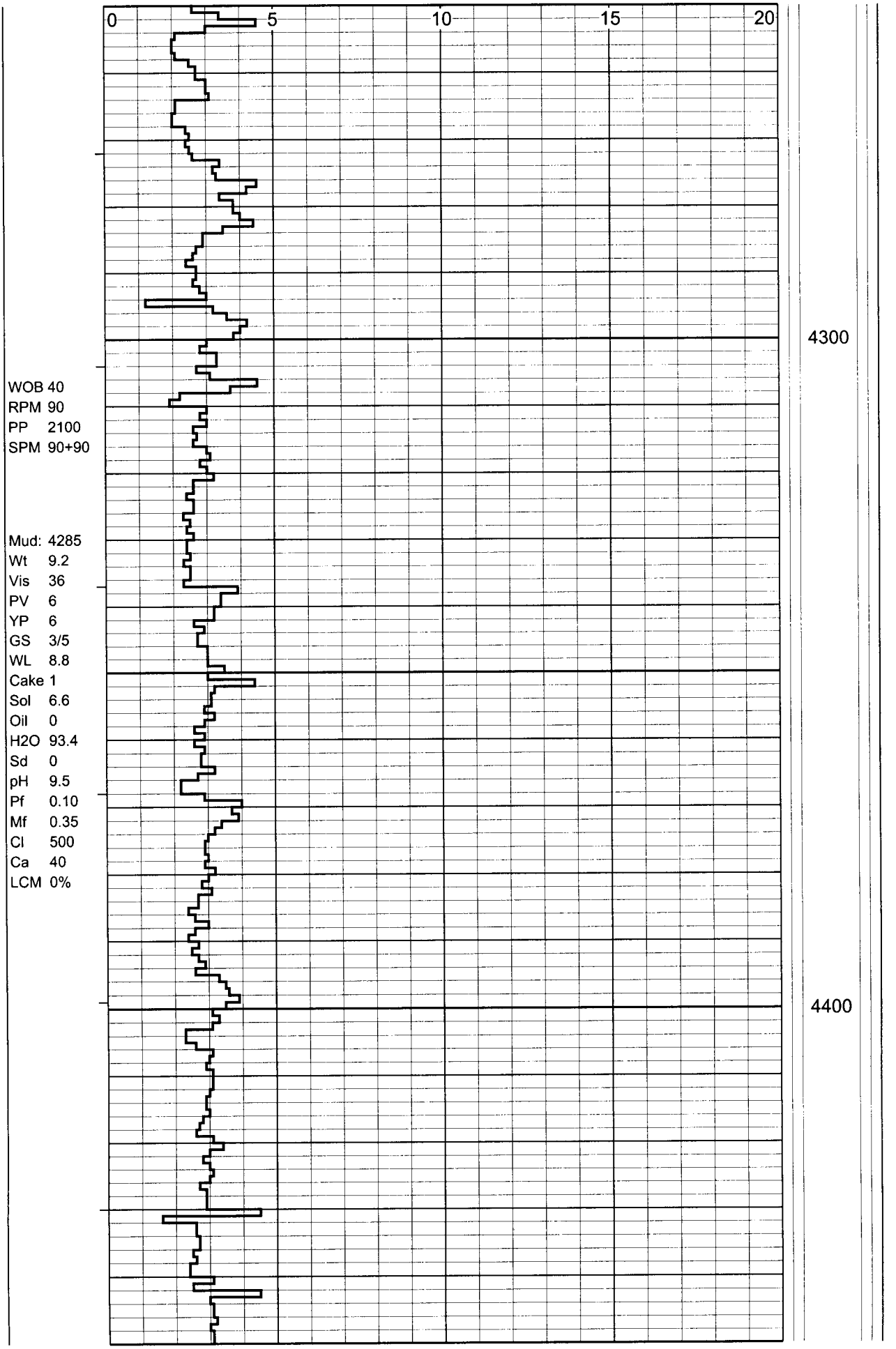
Mud: 3315
Wt 8.9
Vis 37
PV 7
YP 9
GS 2/4
WL 9.2
Cake 1
Sol 4.3
Oil 0
H2O 95.7
Sd 0
pH 9.0
Pf 0.10
Mf 0.25
Cl 500
Ca 40
LCM 0%

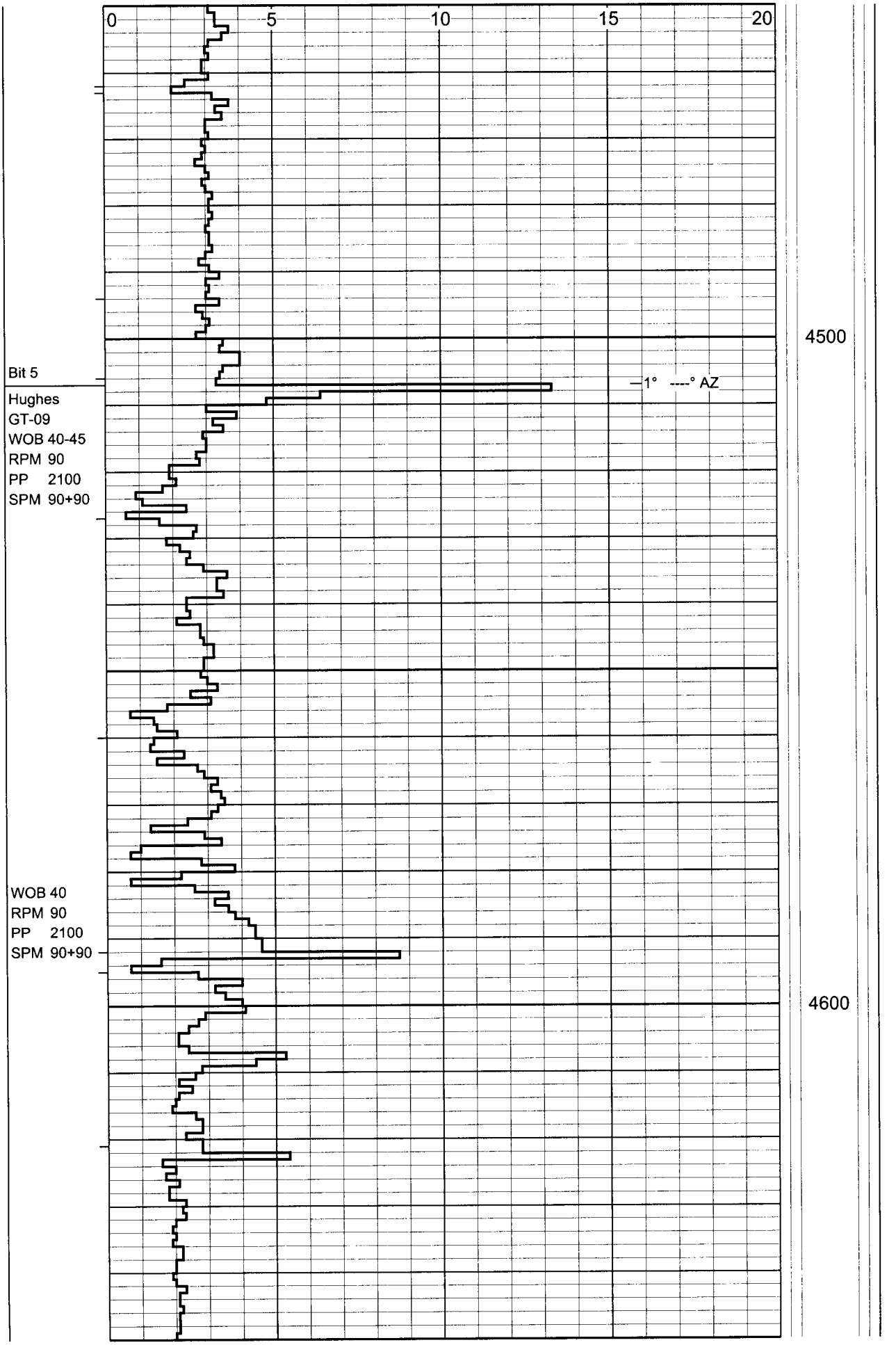

0
5
10
15
20
1 1/4° ----° AZ
3500
3600
WOB 40
RPM 90
PP 2000
SPM 90+90

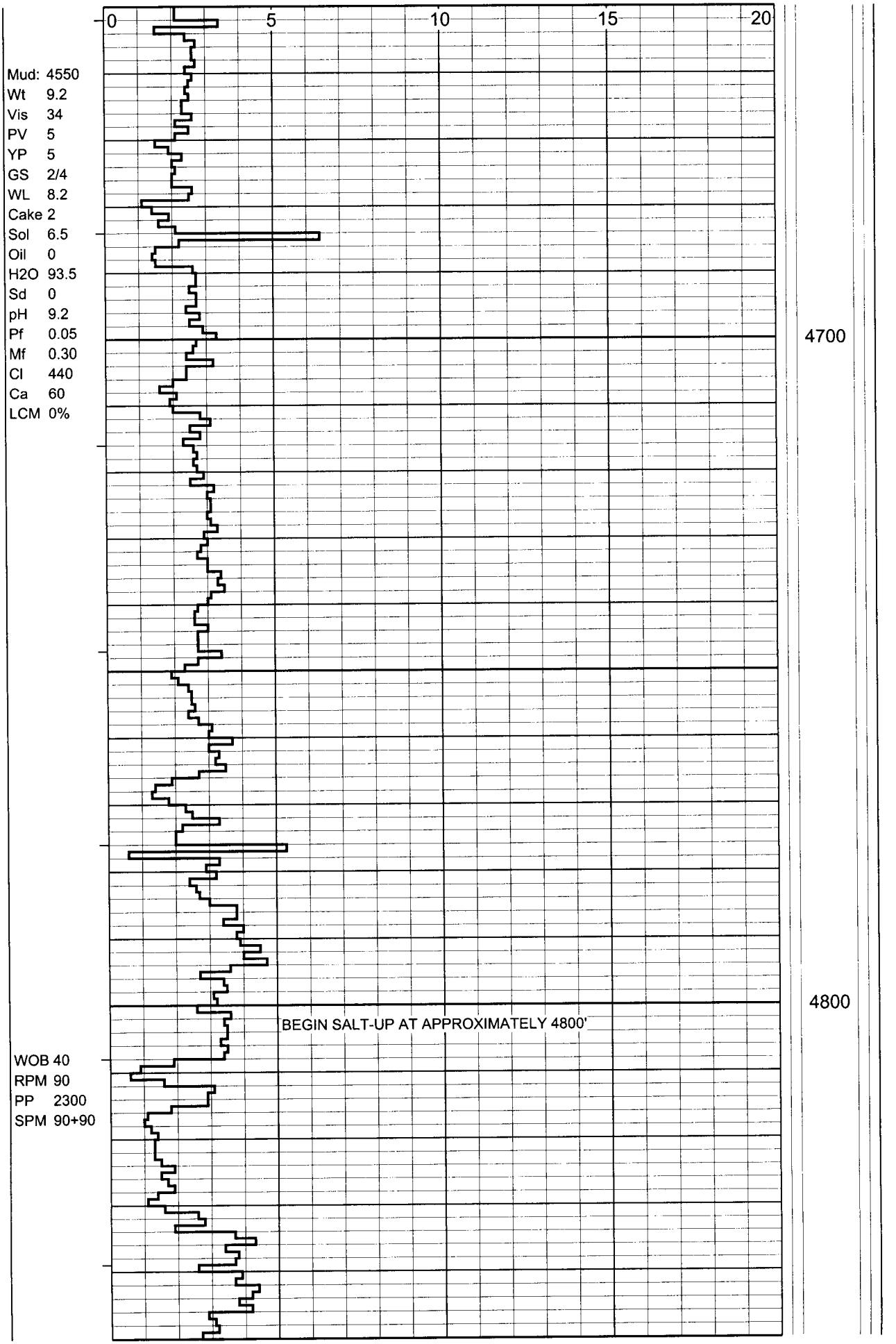

0
5
10
15
20
3700
3800
Mud: 3815
Wt 9.0
Vis 36
PV 5
YP 6
GS 2/3
WL 8.8
Cake 1
Sol 4.8
Oil 0
H2O 95.2
Sd 0
pH 9.5
Pf 0.10
Mf 0.20
Cl 500
Ca 40
LCM 0%
WOB 40
RPM 90
PP 2000

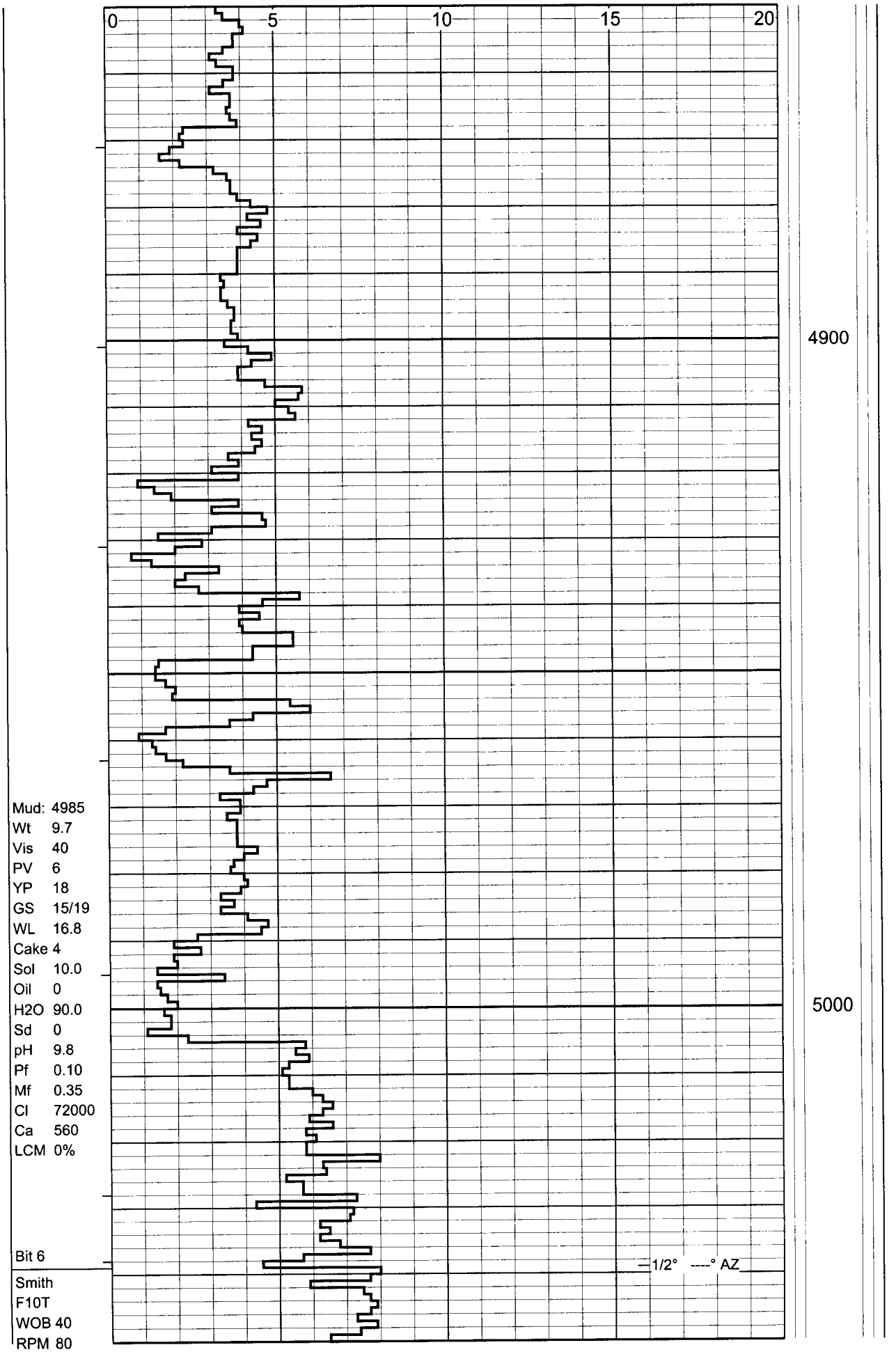

SPM 90+90
0
5
10
15
20
3900
4000
3/4° ----° AZ

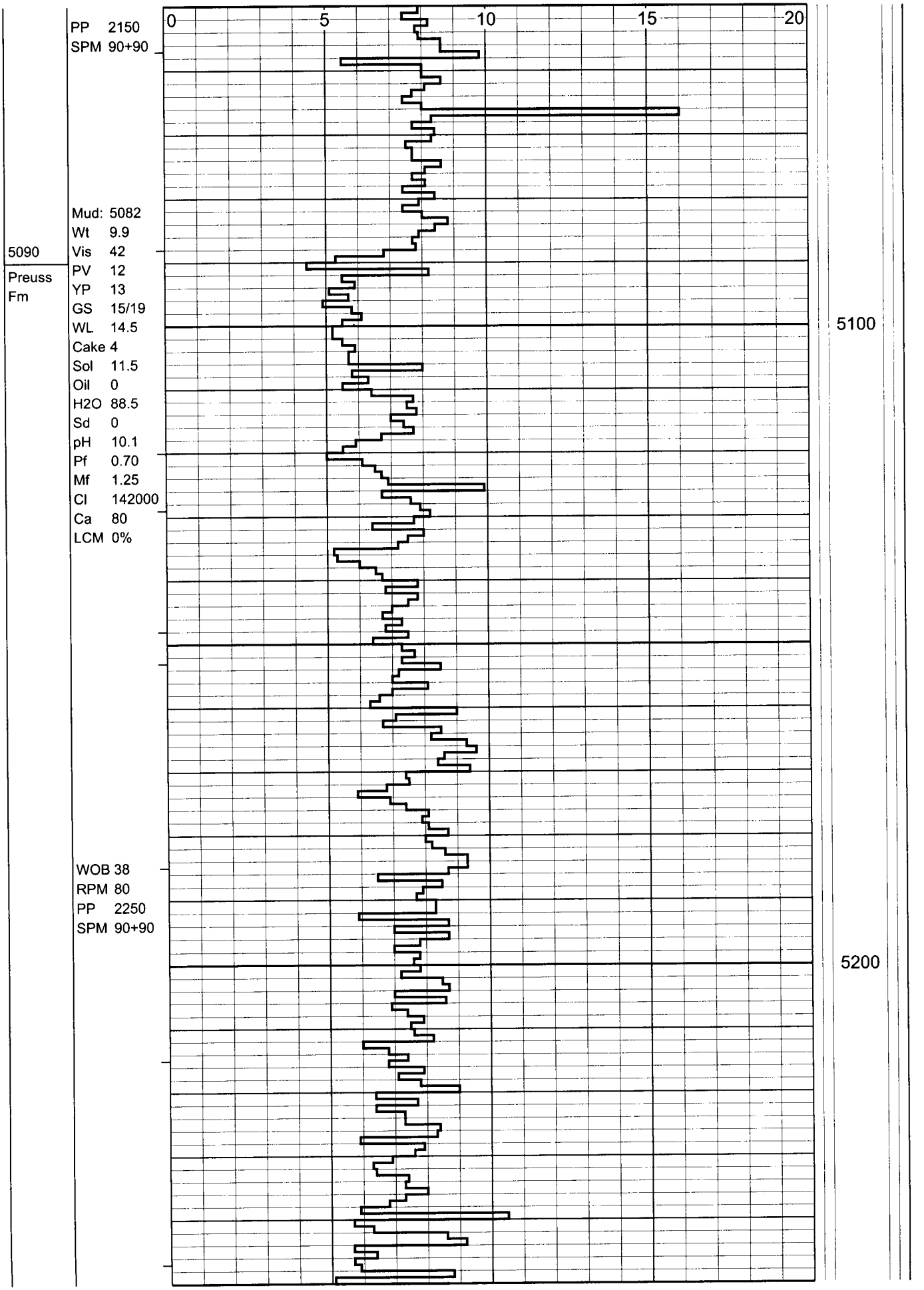

0
5
10
15
20
WOB 40
RPM 90
PP 2000
SPM 90+90
4100
4200

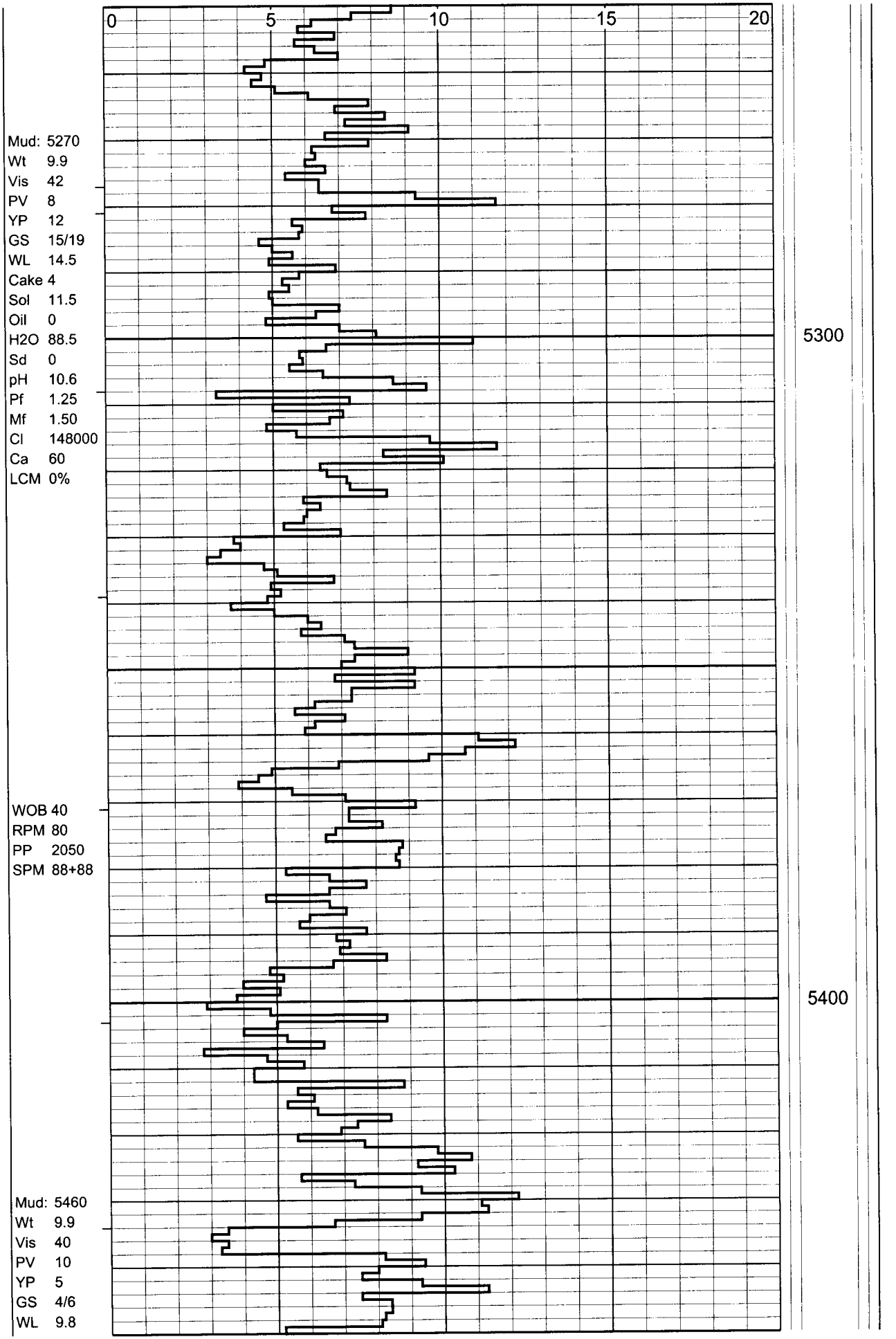

0
5
10
15
20
4300
4400
WOB 40
RPM 90
PP 2100
SPM 90+90
Mud: 4285
Wt 9.2
Vis 36
PV 6
YP 6
GS 3/5
WL 8.8
Cake 1
Sol 6.6
Oil 0
H2O 93.4
Sd 0
pH 9.5
Pf 0.10
Mf 0.35
Cl 500
Ca 40
LCM 0%

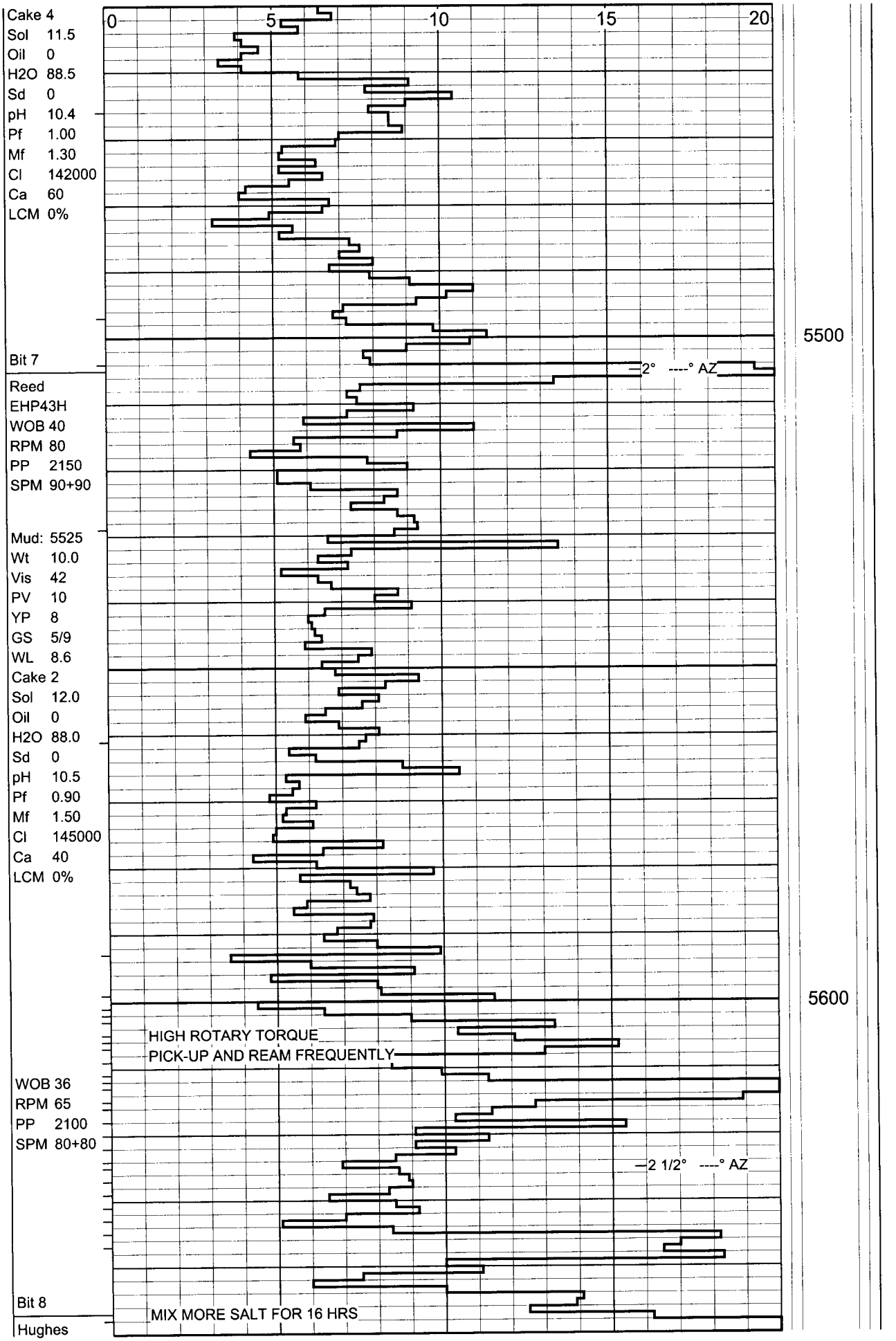

0
5
10
15
20
4500
Bit 5
Hughes
GT-09
WOB 40-45
RPM 90
PP 2100
SPM 90+90
—1° ----° AZ
WOB 40
RPM 90
PP 2100
SPM 90+90
4600

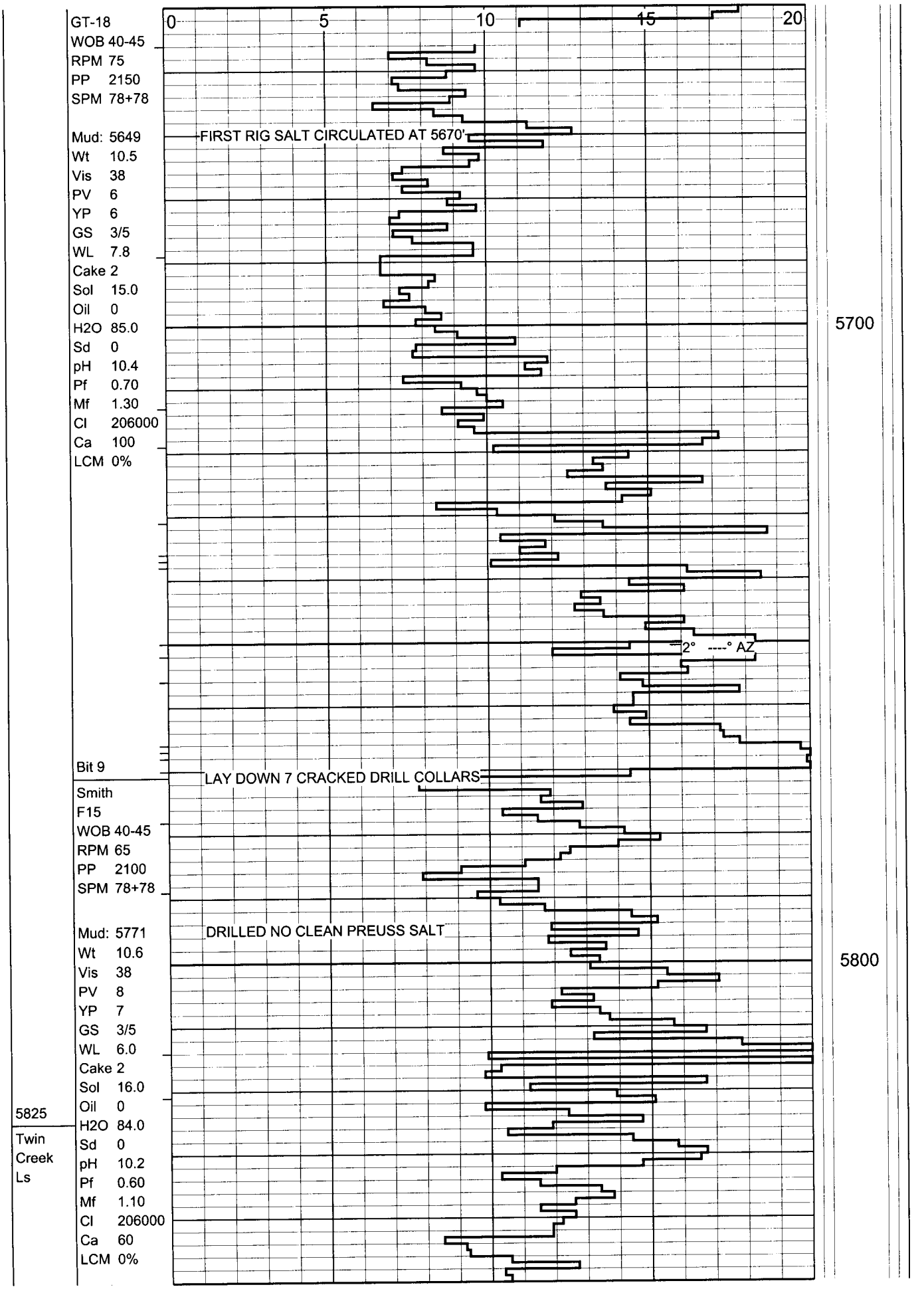

0
5
10
15
20
Mud: 4550
Wt 9.2
Vis 34
PV 5
YP 5
GS 2/4
WL 8.2
Cake 2
Sol 6.5
Oil 0
H2O 93.5
Sd 0
pH 9.2
Pf 0.05
Mf 0.30
Cl 440
Ca 60
LCM 0%
4700
4800
BEGIN SALT-UP AT APPROXIMATELY 4800'
WOB 40
RPM 90
PP 2300
SPM 90+90

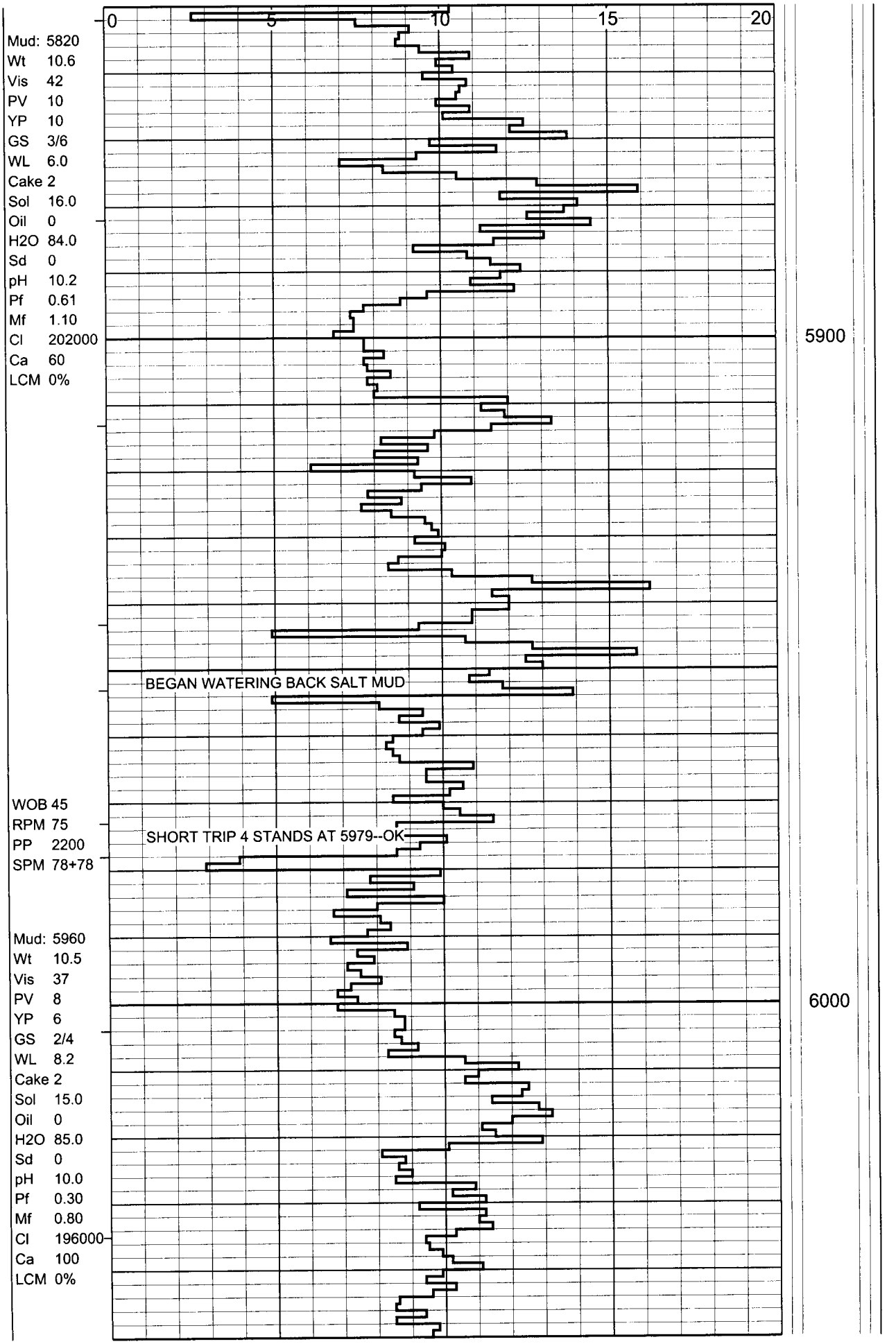

0
5
10
15
20
4900
5000
Mud: 4985
Wt 9.7
Vis 40
PV 6
YP 18
GS 15/19
WL 16.8
Cake 4
Sol 10.0
Oil 0
H2O 90.0
Sd 0
pH 9.8
Pf 0.10
Mf 0.35
Cl 72000
Ca 560
LCM 0%
Bit 6
Smith
F10T
WOB 40
RPM 80
1/2° ----° AZ

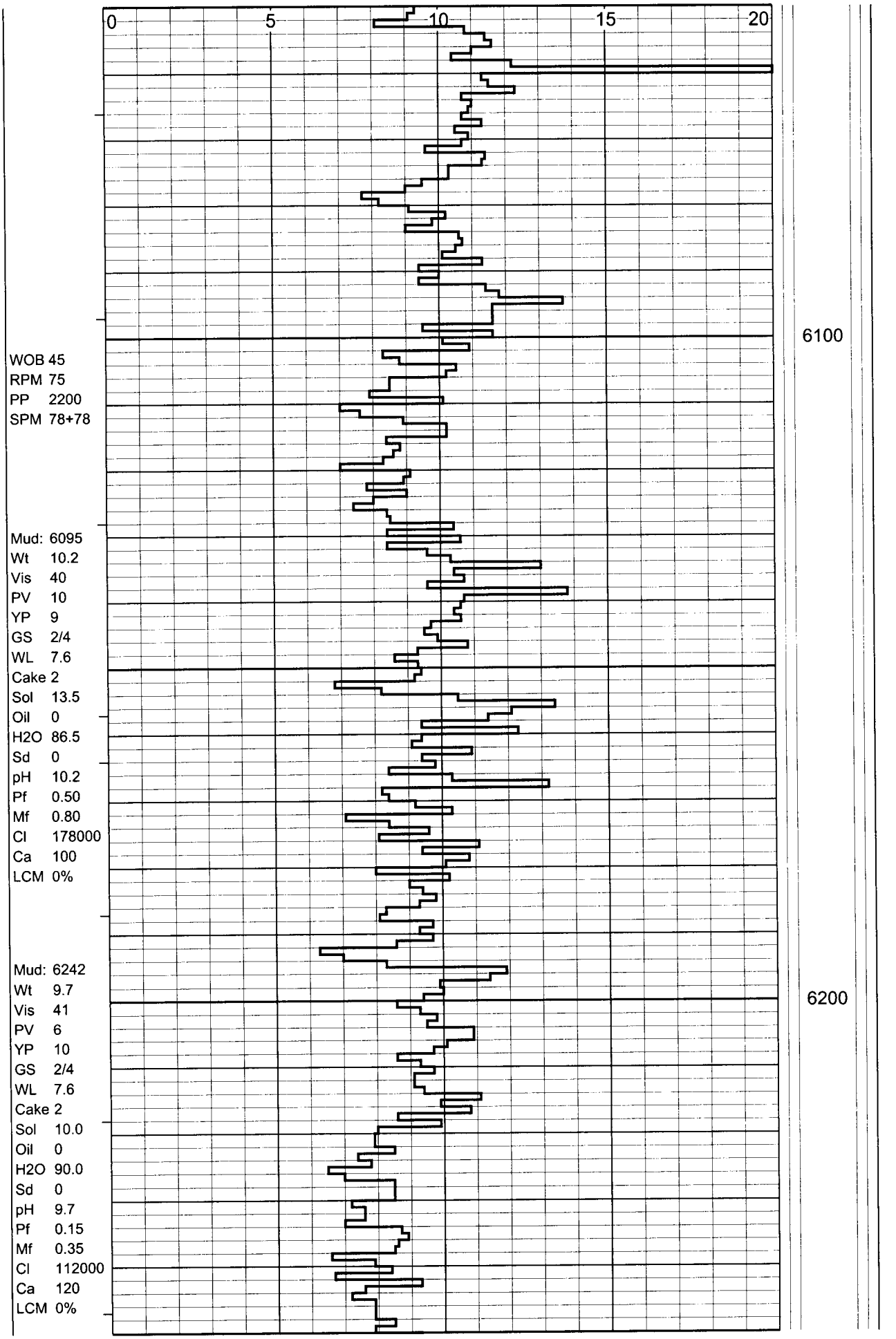

PP 2150
SPM 90+90
0
5
10
15
20
Mud: 5082
Wt 9.9
Vis 42
PV 12
YP 13
GS 15/19
WL 14.5
Cake 4
Sol 11.5
Oil 0
H2O 88.5
Sd 0
pH 10.1
Pf 0.70
Mf 1.25
Cl 142000
Ca 80
LCM 0%
5090
Preuss
Fm
WOB 38
RPM 80
PP 2250
SPM 90+90
5100
5200

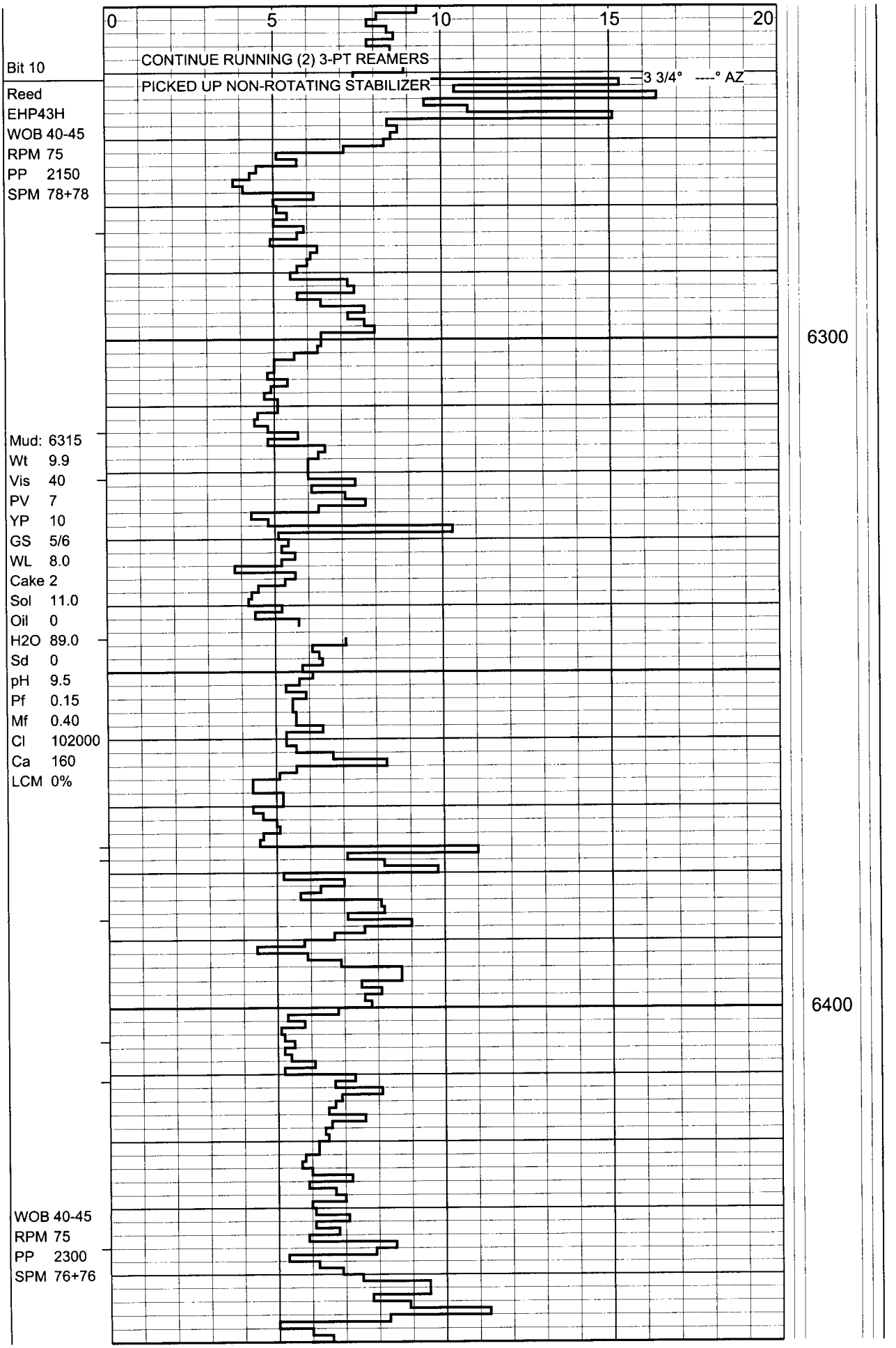

0
5
10
15
20
Mud: 5270
Wt 9.9
Vis 42
PV 8
YP 12
GS 15/19
WL 14.5
Cake 4
Sol 11.5
Oil 0
H2O 88.5
Sd 0
pH 10.6
Pf 1.25
Mf 1.50
Cl 148000
Ca 60
LCM 0%
5300
WOB 40
RPM 80
PP 2050
SPM 88+88
5400
Mud: 5460
Wt 9.9
Vis 40
PV 10
YP 5
GS 4/6
WL 9.8

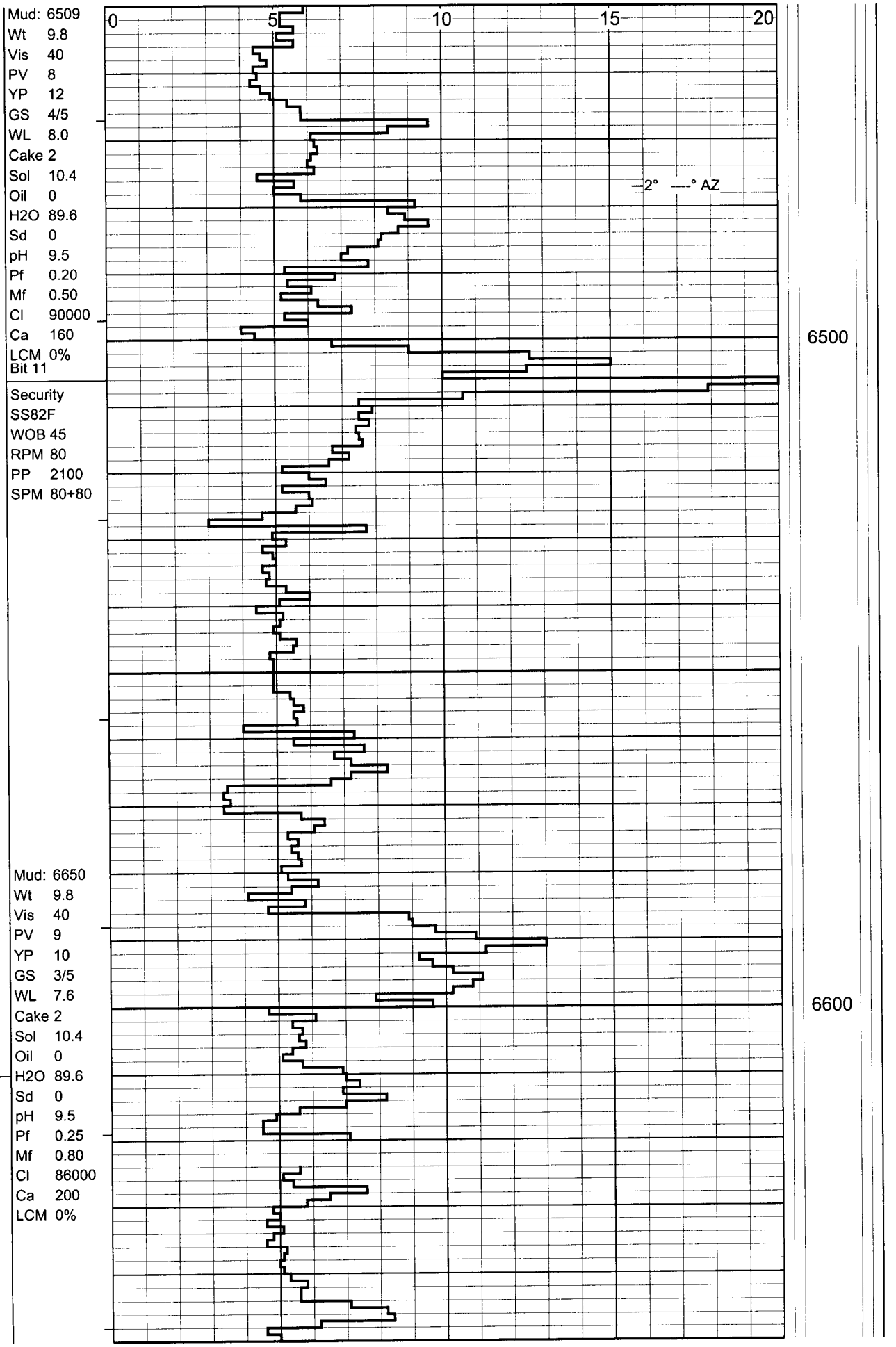

Cake 4
Sol 11.5
Oil 0
H2O 88.5
Sd 0
pH 10.4
Pf 1.00
Mf 1.30
Cl 142000
Ca 60
LCM 0%
0
5
10
15
20
5500
Bit 7
2° ----° AZ
Reed
EHP43H
WOB 40
RPM 80
PP 2150
SPM 90+90
Mud: 5525
Wt 10.0
Vis 42
PV 10
YP 8
GS 5/9
WL 8.6
Cake 2
Sol 12.0
Oil 0
H2O 88.0
Sd 0
pH 10.5
Pf 0.90
Mf 1.50
Cl 145000
Ca 40
LCM 0%
5600
HIGH ROTARY TORQUE
PICK-UP AND REAM FREQUENTLY
WOB 36
RPM 65
PP 2100
SPM 80+80
2 1/2° ----° AZ
Bit 8
Hughes
MIX MORE SALT FOR 16 HRS

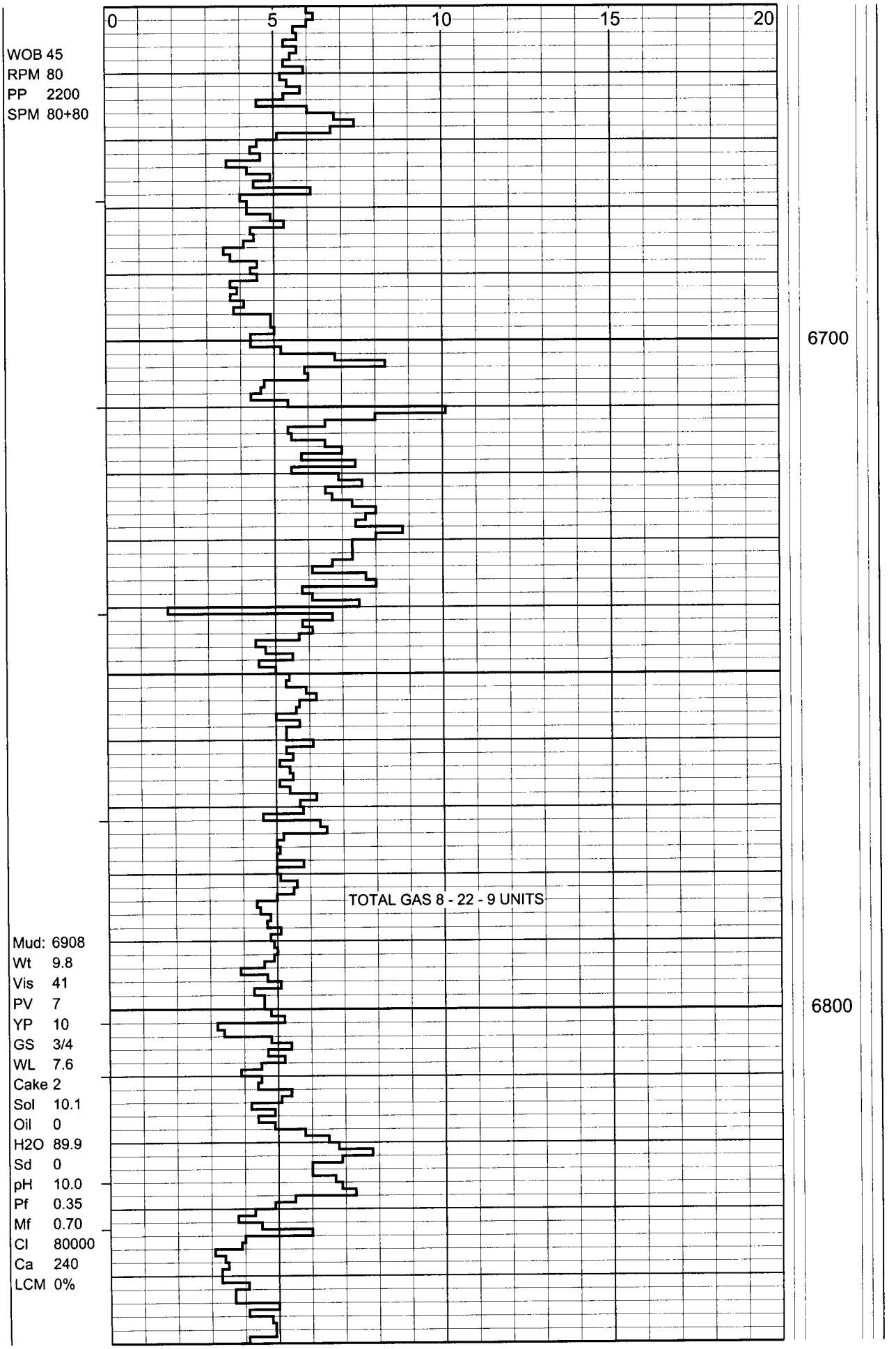

GT-18
WOB 40-45
RPM 75
PP 2150
SPM 78+78
Mud: 5649
Wt 10.5
Vis 38
PV 6
YP 6
GS 3/5
WL 7.8
Cake 2
Sol 15.0
Oil 0
H2O 85.0
Sd 0
pH 10.4
Pf 0.70
Mf 1.30
Cl 206000
Ca 100
LCM 0%
0
5
10
15
20
FIRST RIG SALT CIRCULATED AT 5670'
5700
2° ----° AZ
Bit 9
LAY DOWN 7 CRACKED DRILL COLLARS
Smith
F15
WOB 40-45
RPM 65
PP 2100
SPM 78+78
Mud: 5771
Wt 10.6
Vis 38
PV 8
YP 7
GS 3/5
WL 6.0
Cake 2
Sol 16.0
Oil 0
H2O 84.0
Sd 0
pH 10.2
Pf 0.60
Mf 1.10
Cl 206000
Ca 60
LCM 0%
DRILLED NO CLEAN PREUSS SALT
5800
5825
Twin
Creek
Ls

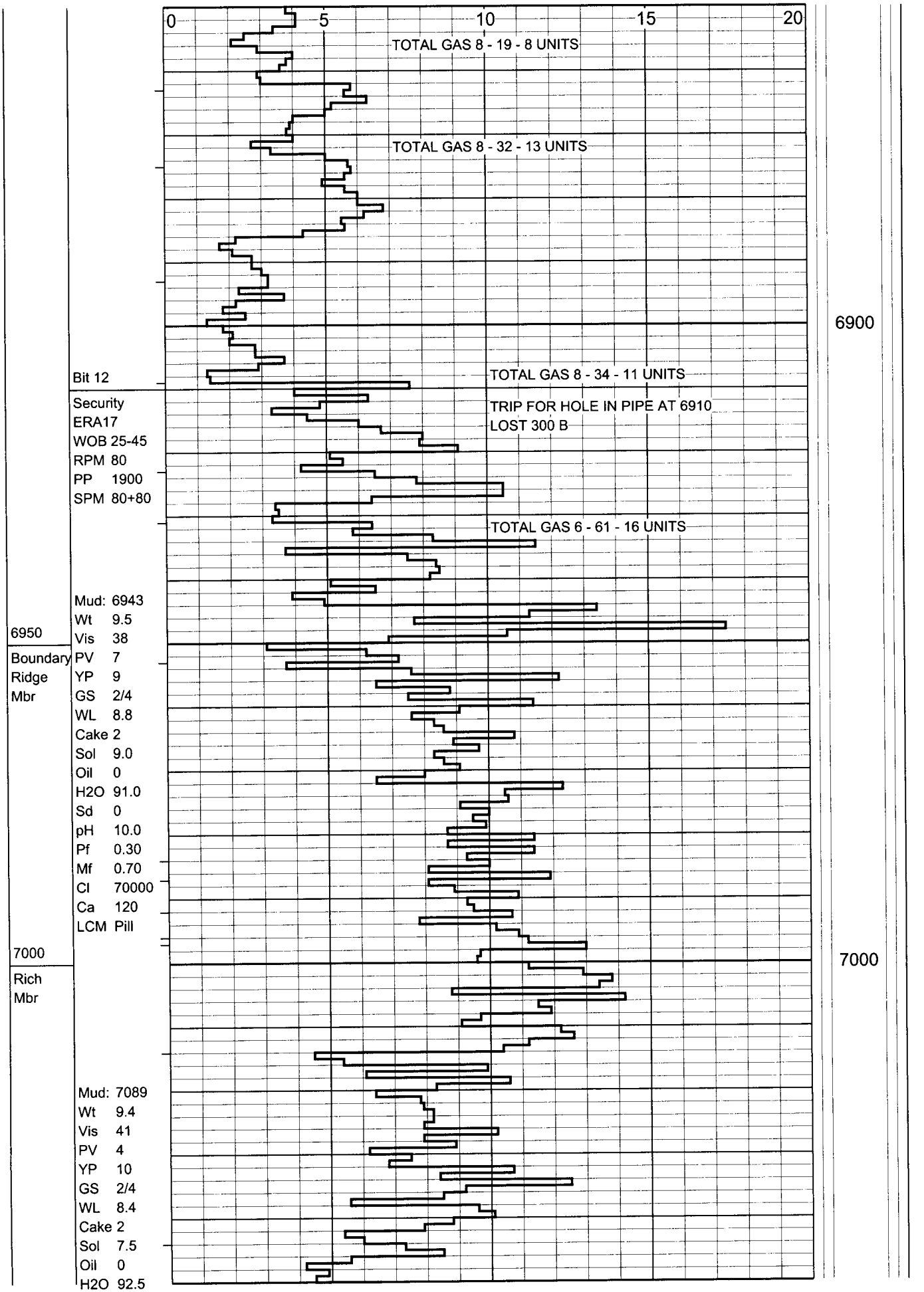

0
5
10
15
20
Mud: 5820
Wt 10.6
Vis 42
PV 10
YP 10
GS 3/6
WL 6.0
Cake 2
Sol 16.0
Oil 0
H2O 84.0
Sd 0
pH 10.2
Pf 0.61
Mf 1.10
Cl 202000
Ca 60
LCM 0%
5900
BEGAN WATERING BACK SALT MUD
WOB 45
RPM 75
PP 2200
SPM 78+78
SHORT TRIP 4 STANDS AT 5979--OK
Mud: 5960
Wt 10.5
Vis 37
PV 8
YP 6
GS 2/4
WL 8.2
Cake 2
Sol 15.0
Oil 0
H2O 85.0
Sd 0
pH 10.0
Pf 0.30
Mf 0.80
Cl 196000
Ca 100
LCM 0%
6000

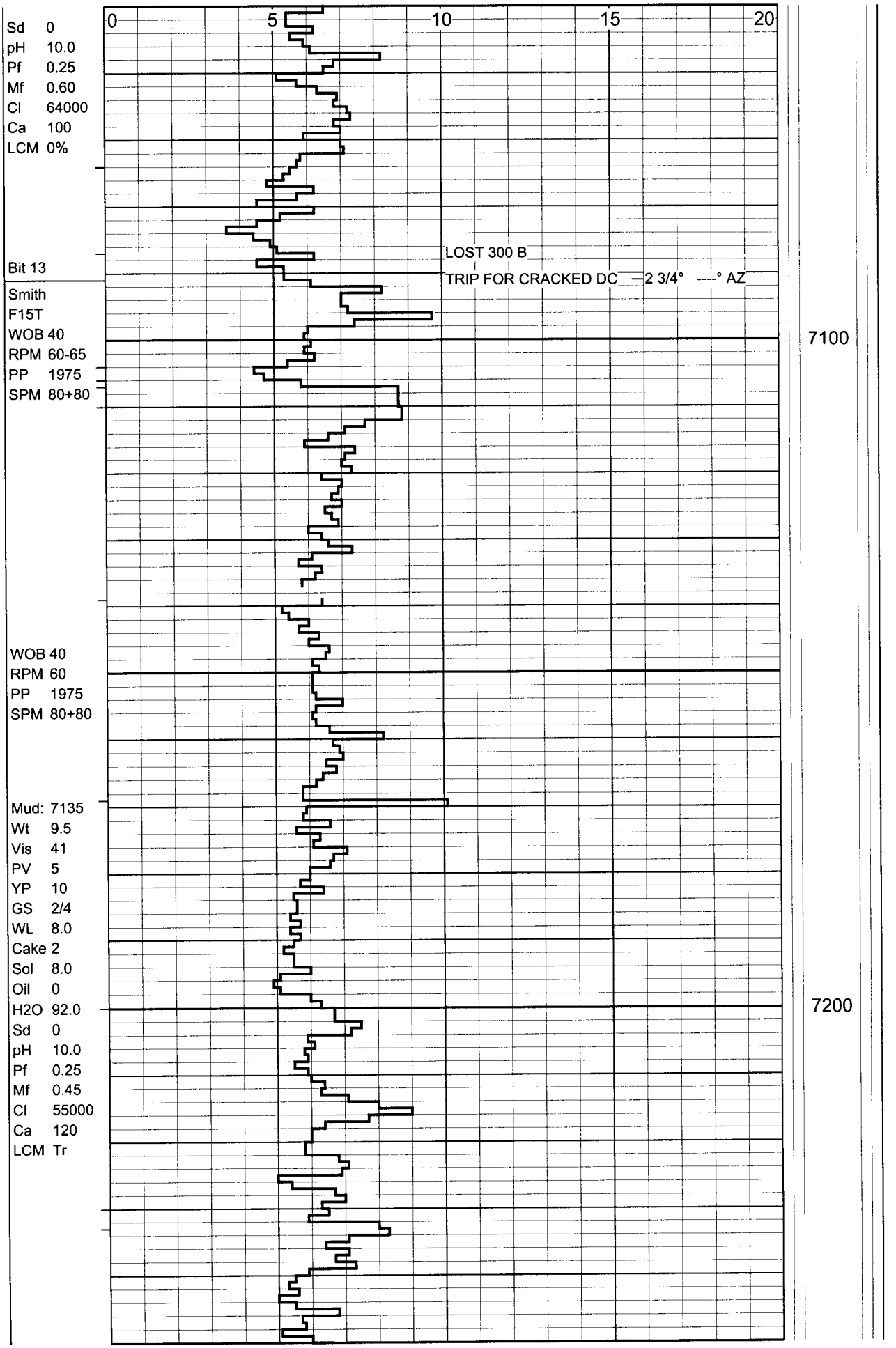

0
5
10
15
20
6100
6200
WOB 45
RPM 75
PP 2200
SPM 78+78
Mud: 6095
Wt 10.2
Vis 40
PV 10
YP 9
GS 2/4
WL 7.6
Cake 2
Sol 13.5
Oil 0
H2O 86.5
Sd 0
pH 10.2
Pf 0.50
Mf 0.80
Cl 178000
Ca 100
LCM 0%
Mud: 6242
Wt 9.7
Vis 41
PV 6
YP 10
GS 2/4
WL 7.6
Cake 2
Sol 10.0
Oil 0
H2O 90.0
Sd 0
pH 9.7
Pf 0.15
Mf 0.35
Cl 112000
Ca 120
LCM 0%

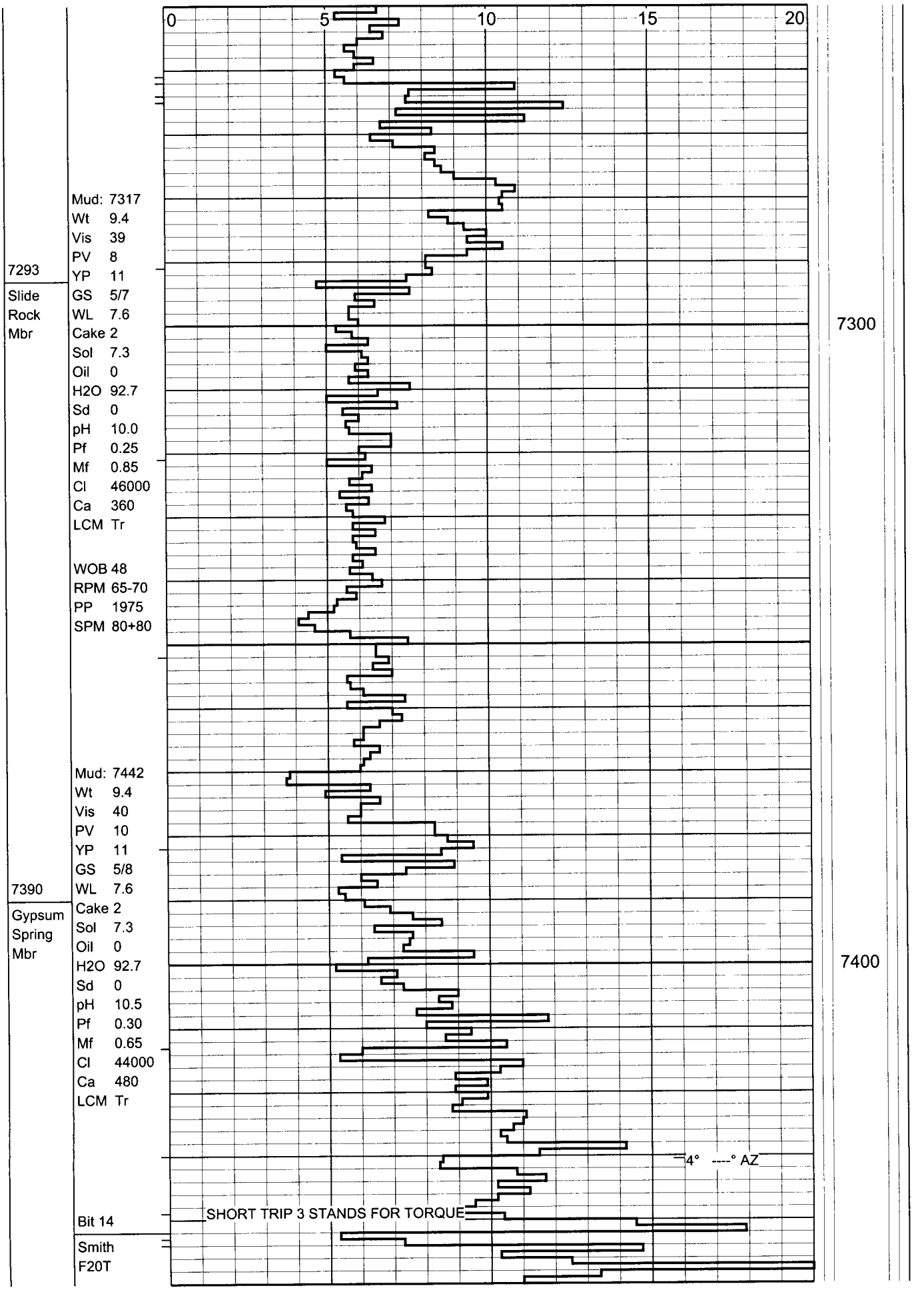

0
5
10
15
20
CONTINUE RUNNING (2) 3-PT REAMERS
PICKED UP NON-ROTATING STABILIZER
3 3/4°
---° AZ
Bit 10
Reed
EHP43H
WOB 40-45
RPM 75
PP 2150
SPM 78+78
Mud: 6315
Wt 9.9
Vis 40
PV 7
YP 10
GS 5/6
WL 8.0
Cake 2
Sol 11.0
Oil 0
H2O 89.0
Sd 0
pH 9.5
Pf 0.15
Mf 0.40
Cl 102000
Ca 160
LCM 0%
WOB 40-45
RPM 75
PP 2300
SPM 76+76
6300
6400

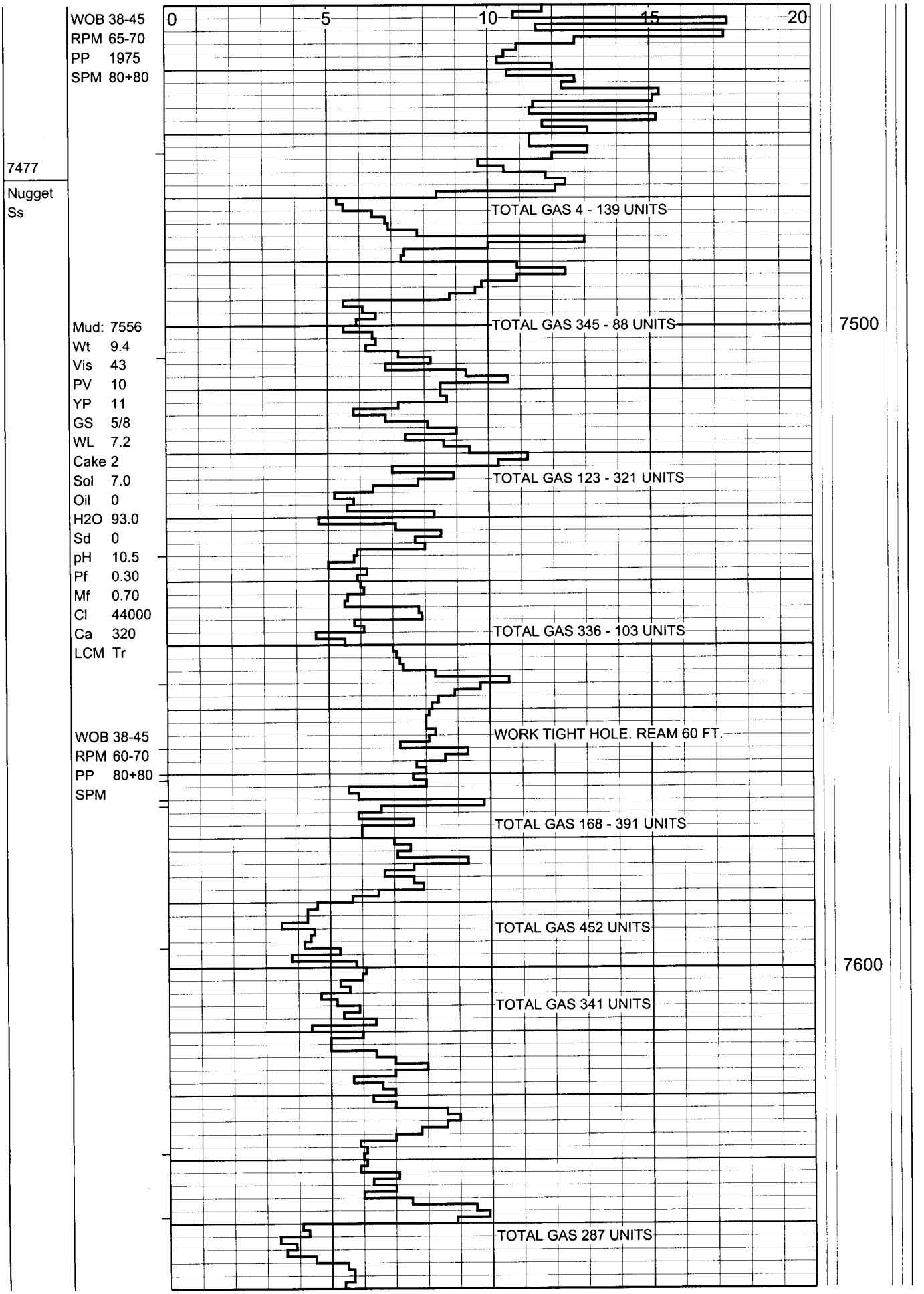

Mud: 6509
Wt 9.8
Vis 40
PV 8
YP 12
GS 4/5
WL 8.0
Cake 2
Sol 10.4
Oil 0
H2O 89.6
Sd 0
pH 9.5
Pf 0.20
Mf 0.50
Cl 90000
Ca 160
LCM 0%
Bit 11
Security
SS82F
WOB 45
RPM 80
PP 2100
SPM 80+80
Mud: 6650
Wt 9.8
Vis 40
PV 9
YP 10
GS 3/5
WL 7.6
Cake 2
Sol 10.4
Oil 0
H2O 89.6
Sd 0
pH 9.5
Pf 0.25
Mf 0.80
Cl 86000
Ca 200
LCM 0%
6610
Watton Canyon Mbr
0
5
10
15
20
—2° ---° AZ
6500
6600

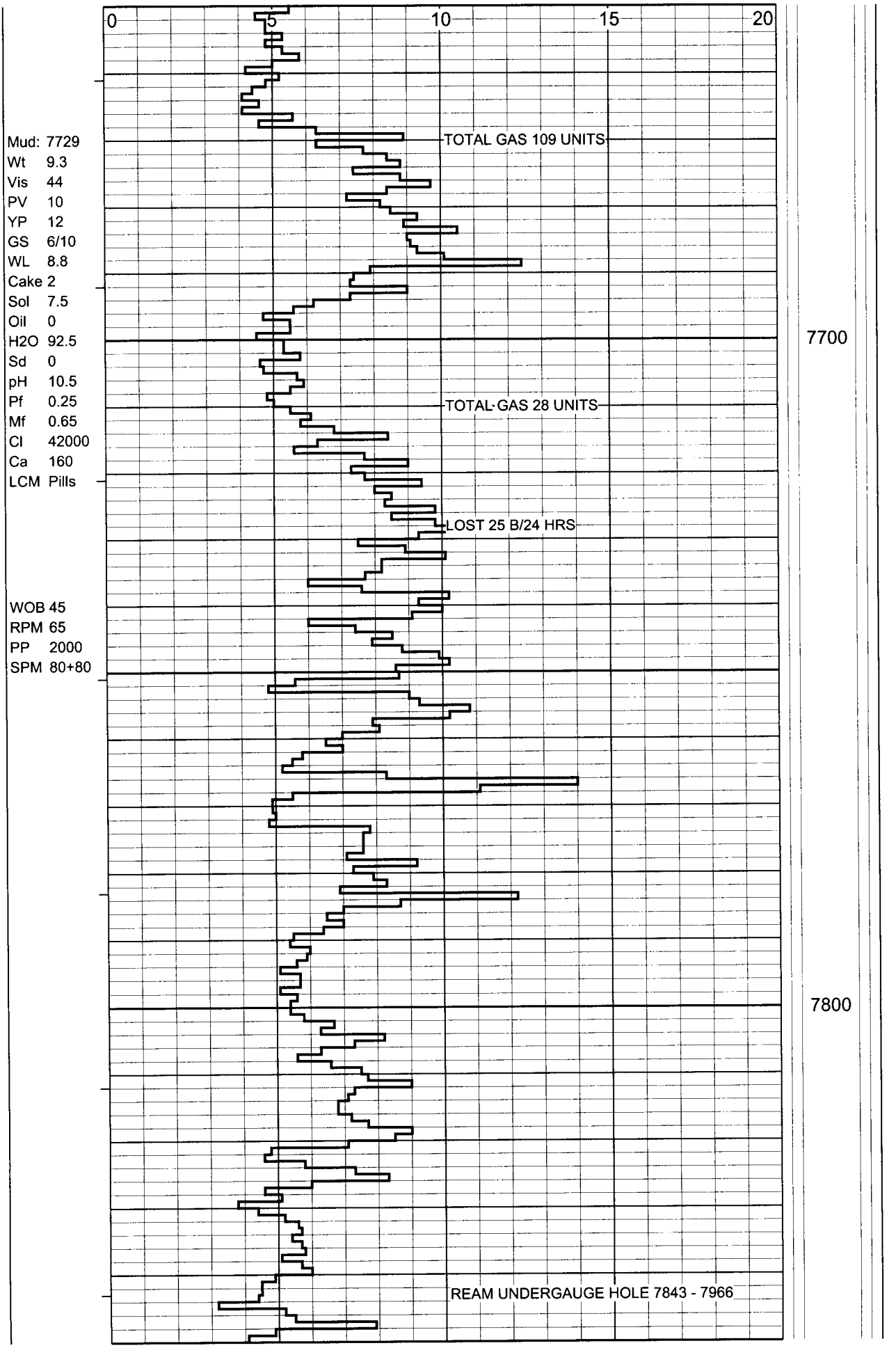

0
5
10
15
20
WOB 45
RPM 80
PP 2200
SPM 80+80
6700
TOTAL GAS 8 - 22 - 9 UNITS
Mud: 6908
Wt 9.8
Vis 41
PV 7
YP 10
GS 3/4
WL 7.6
Cake 2
Sol 10.1
Oil 0
H2O 89.9
Sd 0
pH 10.0
Pf 0.35
Mf 0.70
Cl 80000
Ca 240
LCM 0%
6800

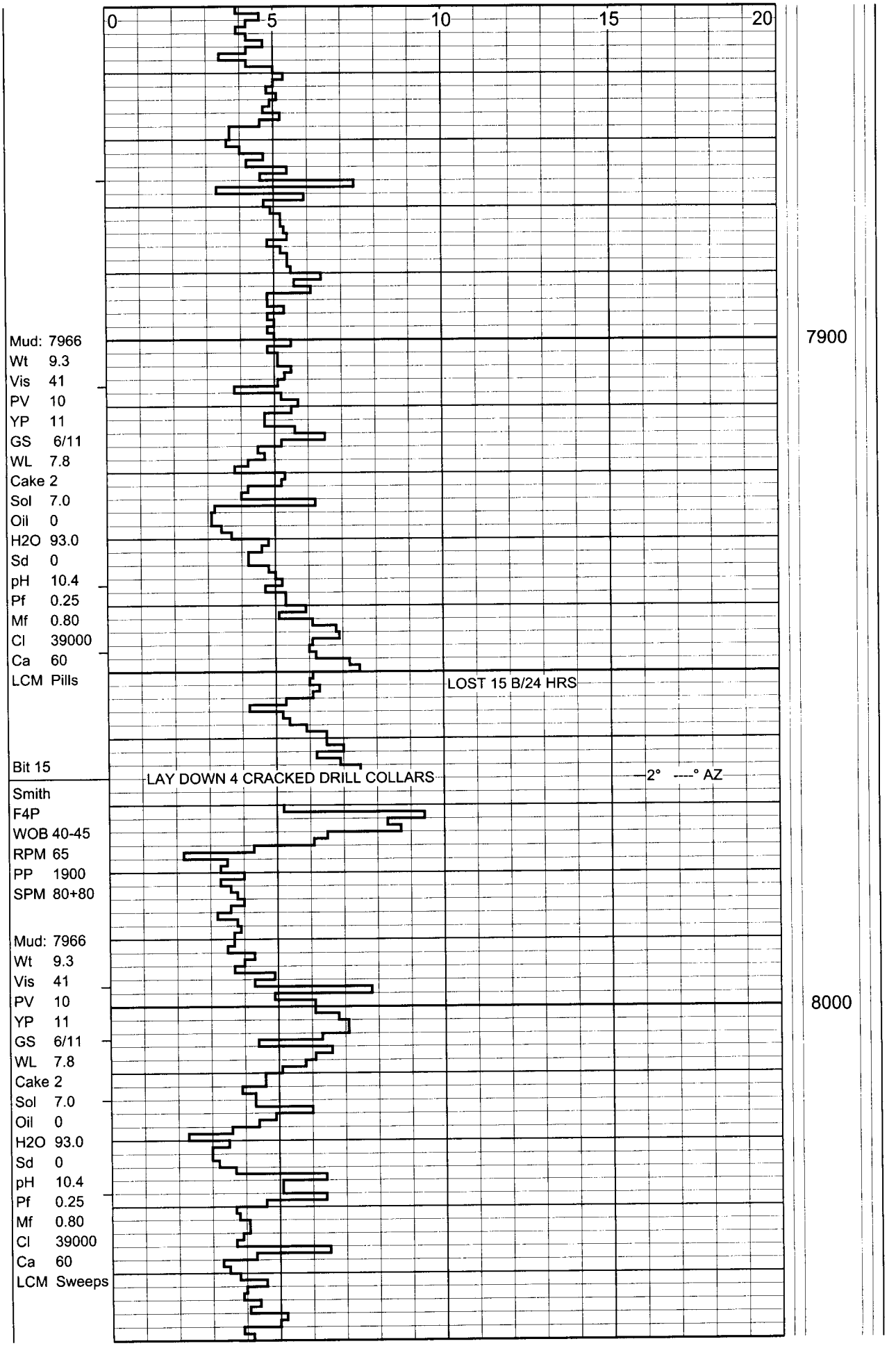

0
5
10
15
20
TOTAL GAS 8 - 19 - 8 UNITS
TOTAL GAS 8 - 32 - 13 UNITS
TOTAL GAS 8 - 34 - 11 UNITS
TRIP FOR HOLE IN PIPE AT 6910
LOST 300 B
TOTAL GAS 6 - 61 - 16 UNITS
6900
7000
Bit 12
Security
ERA17
WOB 25-45
RPM 80
PP 1900
SPM 80+80
Mud: 6943
Wt 9.5
Vis 38
6950
Boundary
Ridge
Mbr
PV 7
YP 9
GS 2/4
WL 8.8
Cake 2
Sol 9.0
Oil 0
H2O 91.0
Sd 0
pH 10.0
Pf 0.30
Mf 0.70
Cl 70000
Ca 120
LCM Pill
7000
Rich
Mbr
Mud: 7089
Wt 9.4
Vis 41
PV 4
YP 10
GS 2/4
WL 8.4
Cake 2
Sol 7.5
Oil 0
H2O 92.5

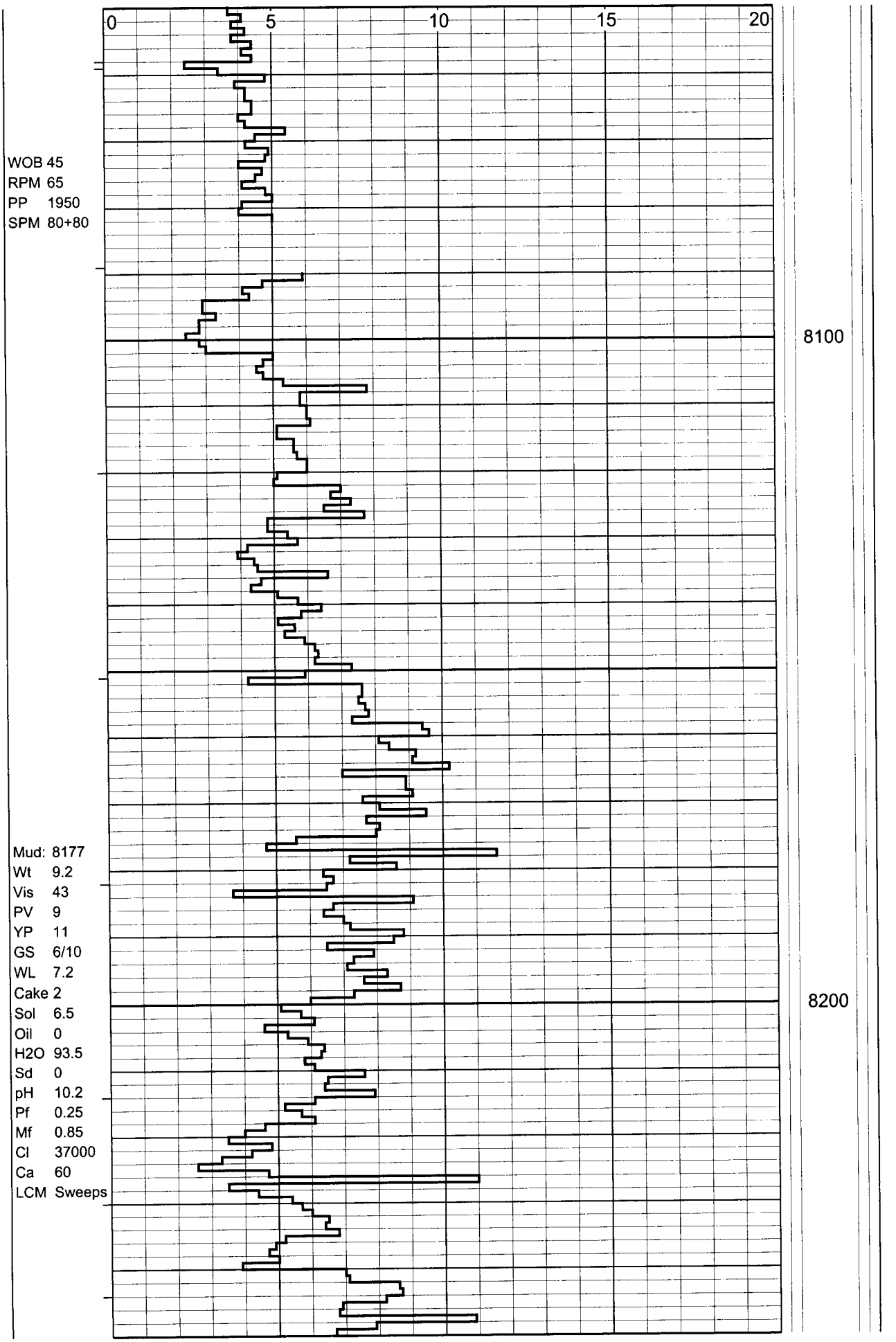

Sd 0
pH 10.0
Pf 0.25
Mf 0.60
Cl 64000
Ca 100
LCM 0%
Bit 13
Smith
F15T
WOB 40
RPM 60-65
PP 1975
SPM 80+80
WOB 40
RPM 60
PP 1975
SPM 80+80
Mud: 7135
Wt 9.5
Vis 41
PV 5
YP 10
GS 2/4
WL 8.0
Cake 2
Sol 8.0
Oil 0
H2O 92.0
Sd 0
pH 10.0
Pf 0.25
Mf 0.45
Cl 55000
Ca 120
LCM Tr
0
5
10
15
20
LOST 300 B
TRIP FOR CRACKED DC
2 3/4°
----° AZ
7100
7200

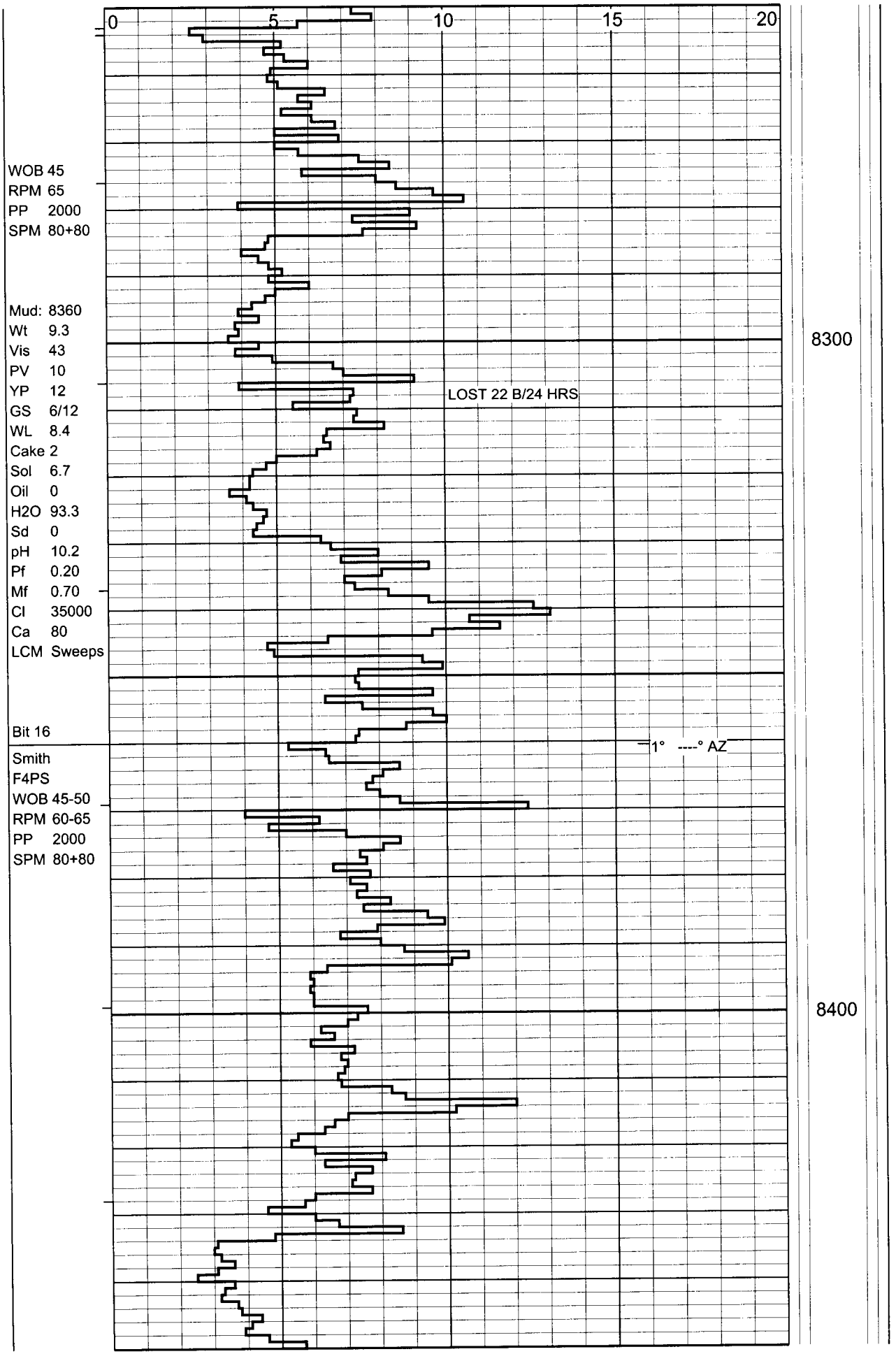

0
5
10
15
20
Mud: 7317
Wt 9.4
Vis 39
PV 8
YP 11
GS 5/7
WL 7.6
Cake 2
Sol 7.3
Oil 0
H2O 92.7
Sd 0
pH 10.0
Pf 0.25
Mf 0.85
Cl 46000
Ca 360
LCM Tr
WOB 48
RPM 65-70
PP 1975
SPM 80+80
7293
Slide
Rock
Mbr
7300
Mud: 7442
Wt 9.4
Vis 40
PV 10
YP 11
GS 5/8
WL 7.6
Cake 2
Sol 7.3
Oil 0
H2O 92.7
Sd 0
pH 10.5
Pf 0.30
Mf 0.65
Cl 44000
Ca 480
LCM Tr
7390
Gypsum
Spring
Mbr
7400
4° ----° AZ
SHORT TRIP 3 STANDS FOR TORQUE
Bit 14
Smith
F20T

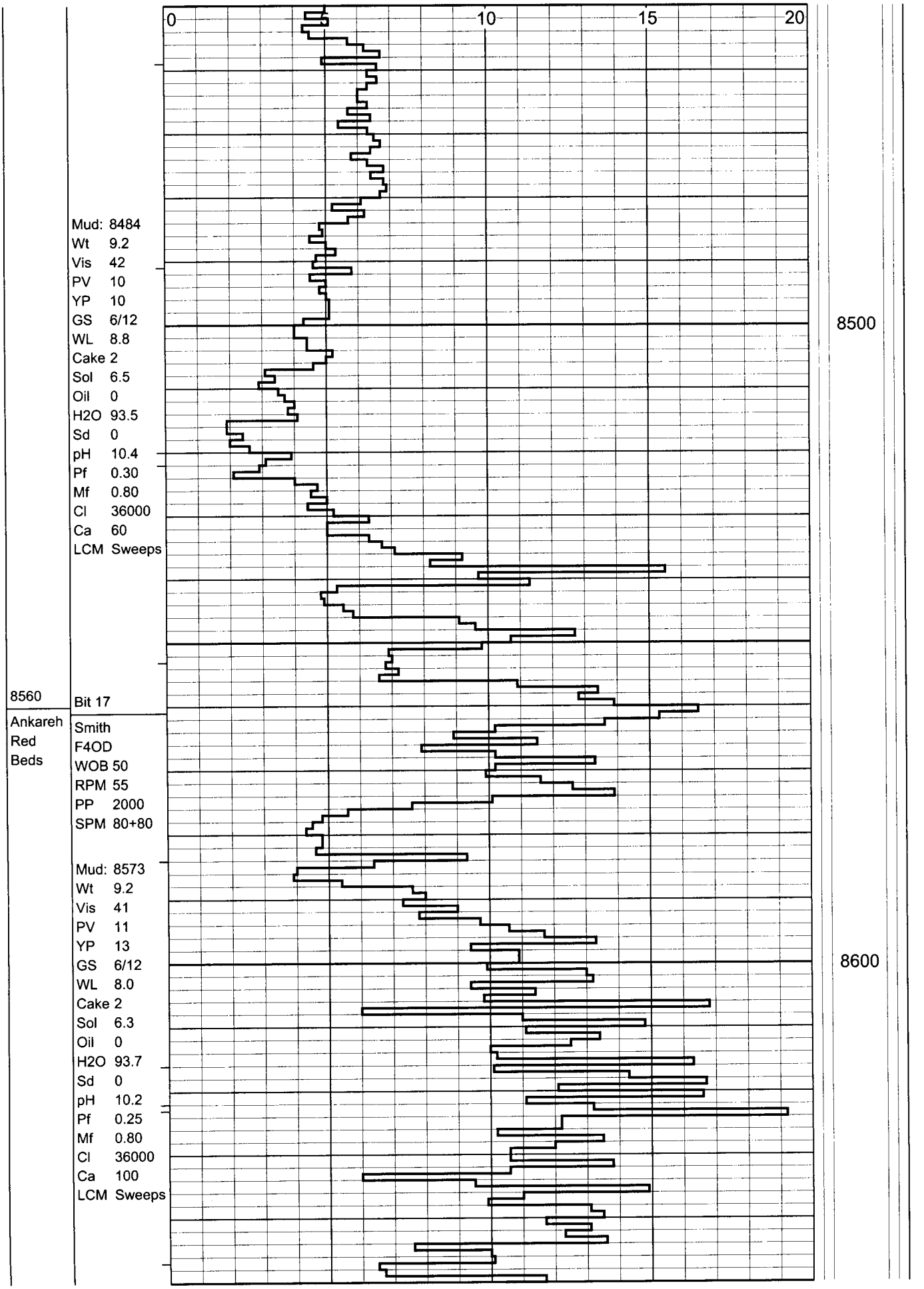

WOB 38-45
RPM 65-70
PP 1975
SPM 80+80
0
5
10
15
20
7477
Nugget
Ss
TOTAL GAS 4 - 139 UNITS
TOTAL GAS 345 - 88 UNITS
7500
Mud: 7556
Wt 9.4
Vis 43
PV 10
YP 11
GS 5/8
WL 7.2
Cake 2
Sol 7.0
Oil 0
H2O 93.0
Sd 0
pH 10.5
Pf 0.30
Mf 0.70
Cl 44000
Ca 320
LCM Tr
TOTAL GAS 123 - 321 UNITS
TOTAL GAS 336 - 103 UNITS
WOB 38-45
RPM 60-70
PP 80+80
SPM
WORK TIGHT HOLE. REAM 60 FT.
TOTAL GAS 168 - 391 UNITS
TOTAL GAS 452 UNITS
7600
TOTAL GAS 341 UNITS
TOTAL GAS 287 UNITS

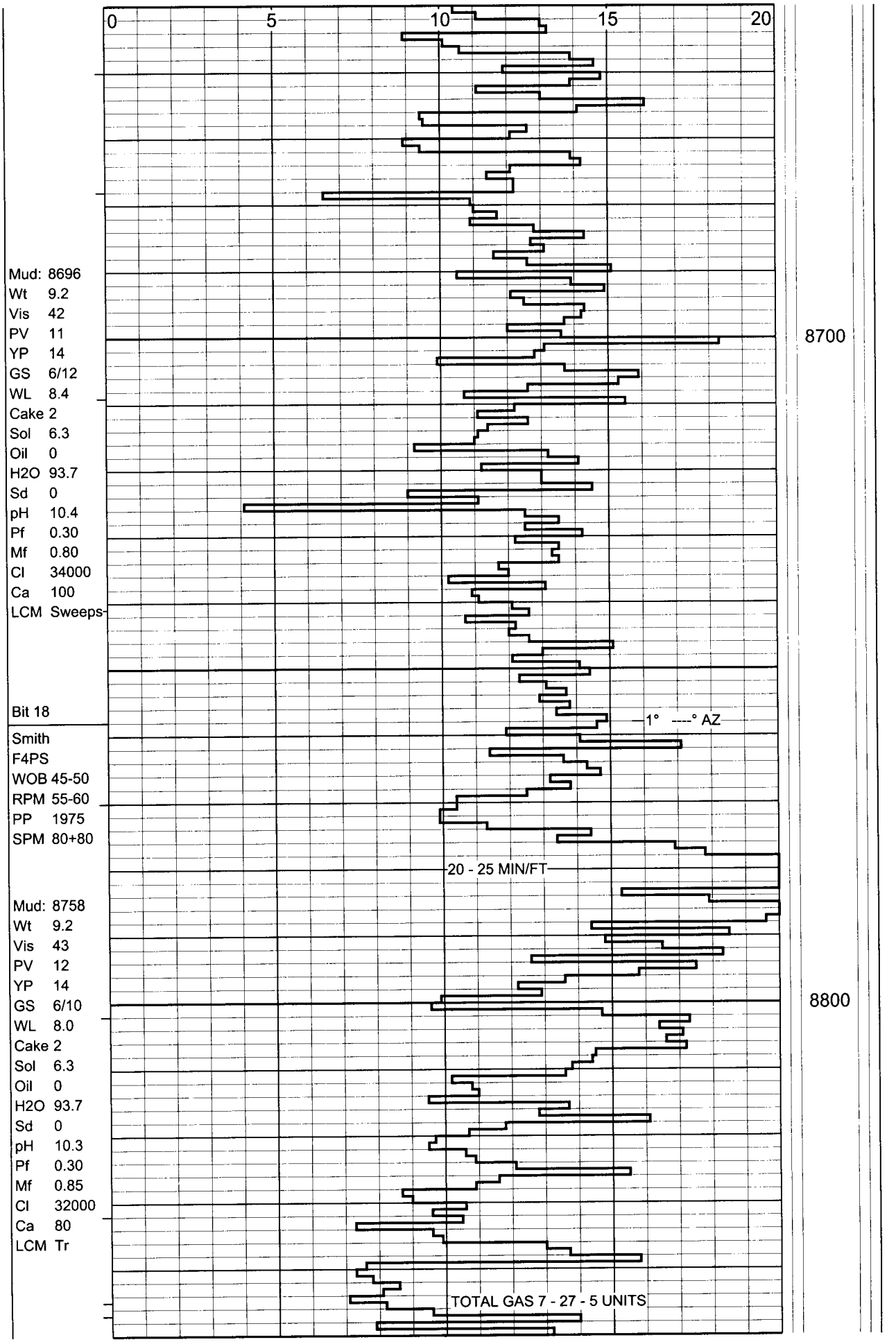

0
5
10
15
20
Mud: 7729
Wt 9.3
Vis 44
PV 10
YP 12
GS 6/10
WL 8.8
Cake 2
Sol 7.5
Oil 0
H2O 92.5
Sd 0
pH 10.5
Pf 0.25
Mf 0.65
Cl 42000
Ca 160
LCM Pills
WOB 45
RPM 65
PP 2000
SPM 80+80
TOTAL GAS 109 UNITS
TOTAL GAS 28 UNITS
LOST 25 B/24 HRS
REAM UNDERGAUGE HOLE 7843 - 7966
7700
7800

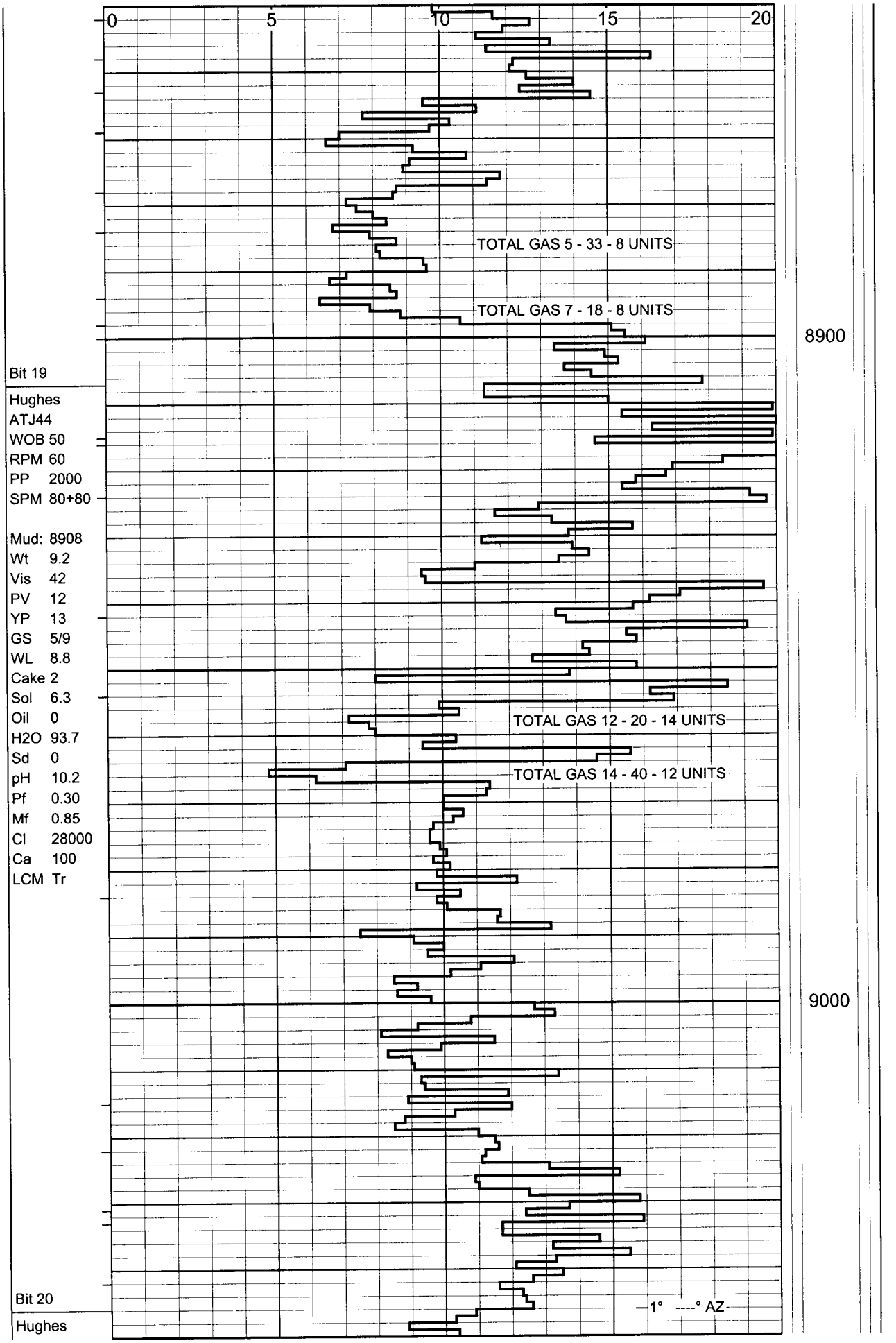

0
5
10
15
20
7900
8000
Mud: 7966
Wt 9.3
Vis 41
PV 10
YP 11
GS 6/11
WL 7.8
Cake 2
Sol 7.0
Oil 0
H2O 93.0
Sd 0
pH 10.4
Pf 0.25
Mf 0.80
Cl 39000
Ca 60
LCM Pills
LOST 15 B/24 HRS
Bit 15
LAY DOWN 4 CRACKED DRILL COLLARS
—2° ----° AZ
Smith
F4P
WOB 40-45
RPM 65
PP 1900
SPM 80+80
Mud: 7966
Wt 9.3
Vis 41
PV 10
YP 11
GS 6/11
WL 7.8
Cake 2
Sol 7.0
Oil 0
H2O 93.0
Sd 0
pH 10.4
Pf 0.25
Mf 0.80
Cl 39000
Ca 60
LCM Sweeps

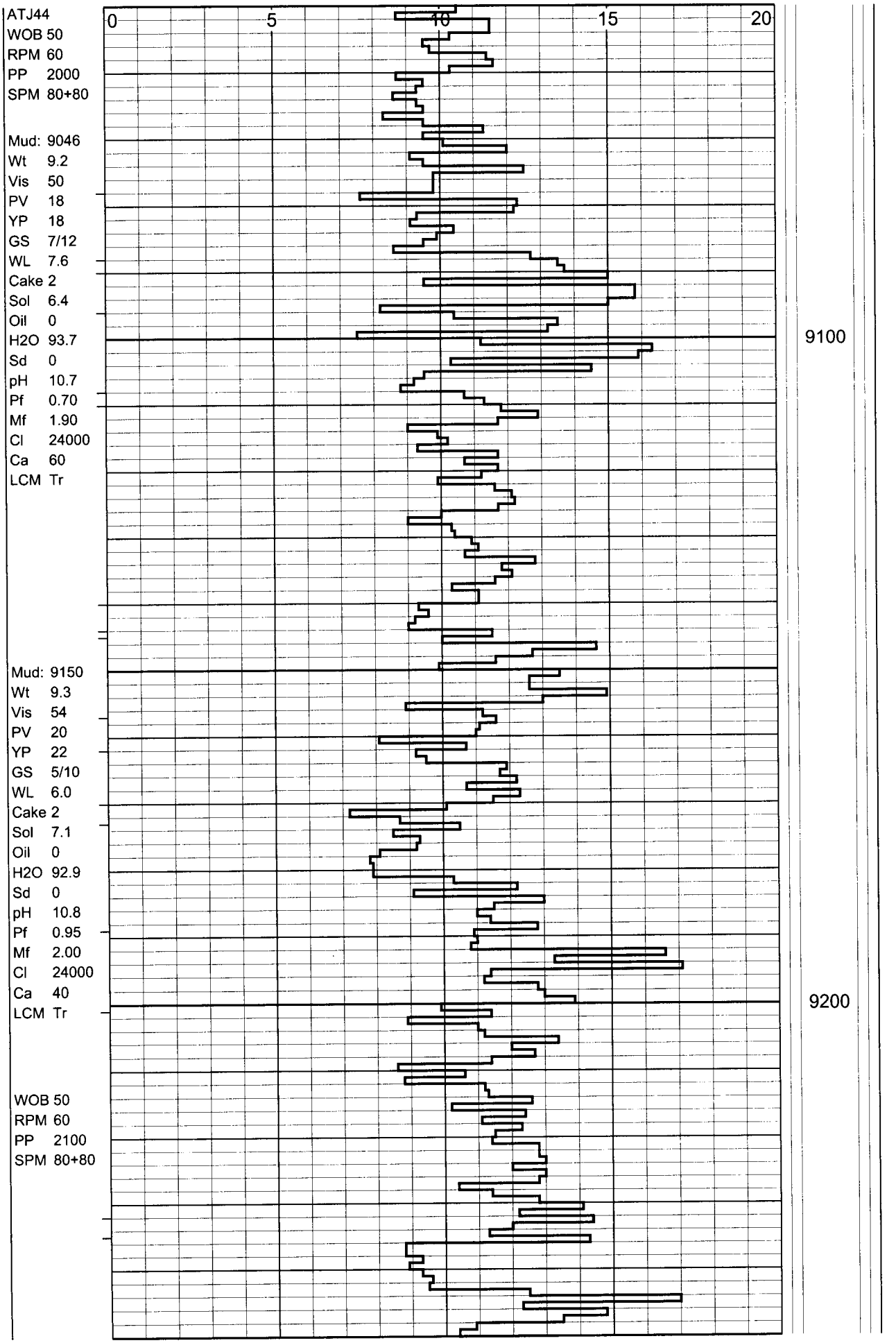

0
5
10
15
20
WOB 45
RPM 65
PP 1950
SPM 80+80
8100
Mud: 8177
Wt 9.2
Vis 43
PV 9
YP 11
GS 6/10
WL 7.2
Cake 2
Sol 6.5
Oil 0
H2O 93.5
Sd 0
pH 10.2
Pf 0.25
Mf 0.85
Cl 37000
Ca 60
LCM Sweeps
8200

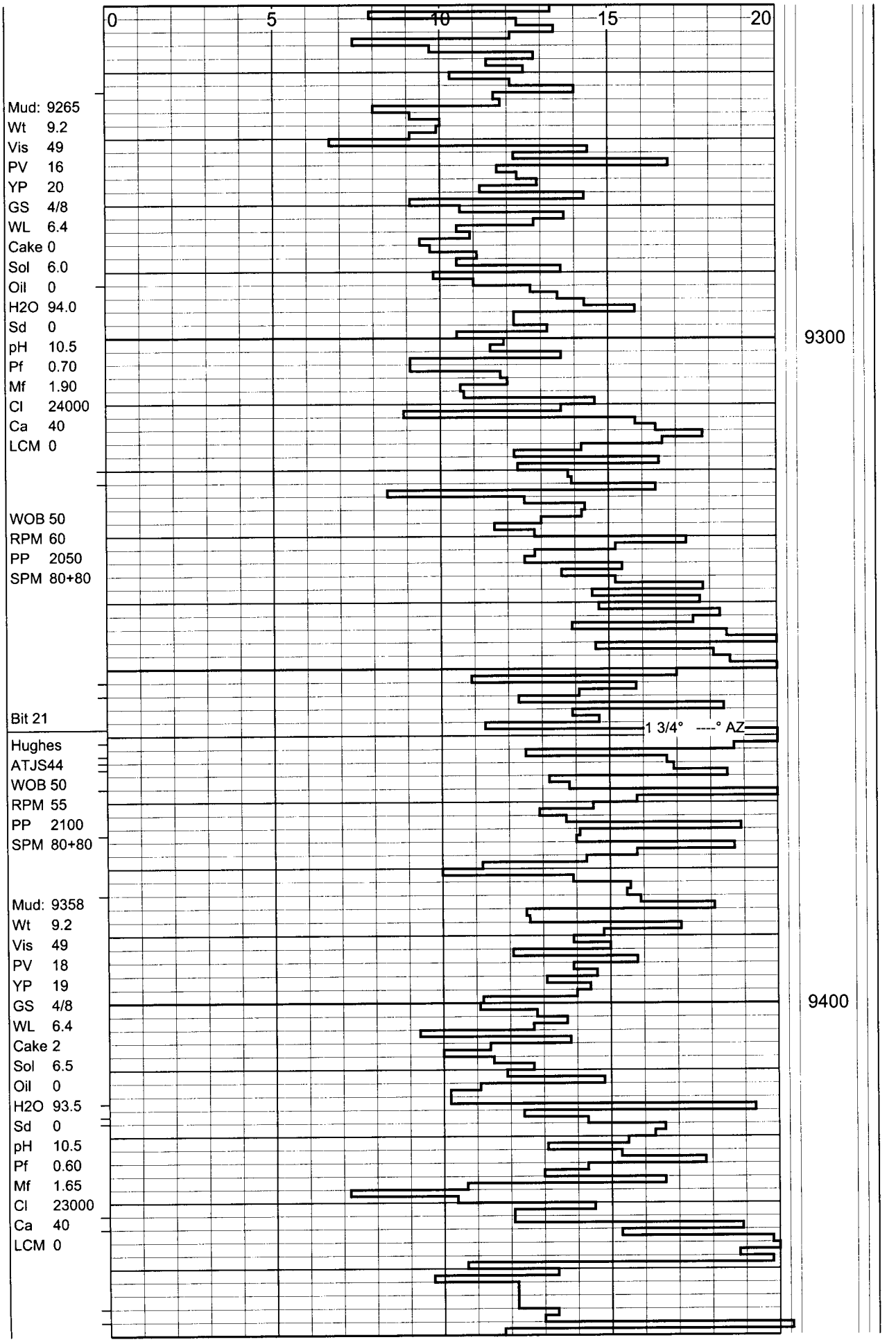

0
5
10
15
20
WOB 45
RPM 65
PP 2000
SPM 80+80
Mud: 8360
Wt 9.3
Vis 43
PV 10
YP 12
GS 6/12
WL 8.4
Cake 2
Sol 6.7
Oil 0
H2O 93.3
Sd 0
pH 10.2
Pf 0.20
Mf 0.70
Cl 35000
Ca 80
LCM Sweeps
Bit 16
Smith
F4PS
WOB 45-50
RPM 60-65
PP 2000
SPM 80+80
LOST 22 B/24 HRS
1° ----° AZ
8300
8400

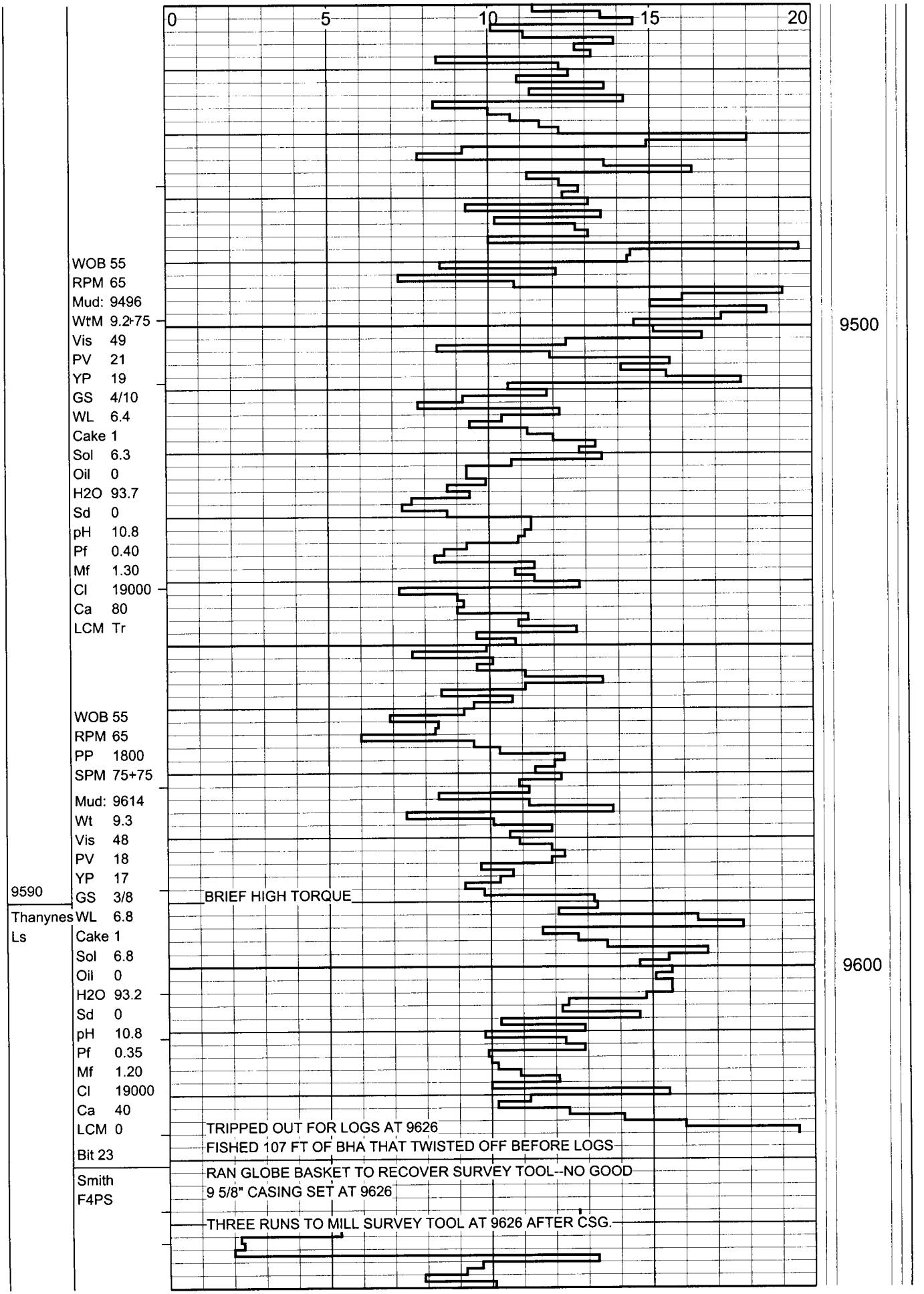

0
5
10
15
20
Mud: 8484
Wt 9.2
Vis 42
PV 10
YP 10
GS 6/12
WL 8.8
Cake 2
Sol 6.5
Oil 0
H2O 93.5
Sd 0
pH 10.4
Pf 0.30
Mf 0.80
Cl 36000
Ca 60
LCM Sweeps
8500
8560
Bit 17
Ankareh
Red
Beds
Smith
F4OD
WOB 50
RPM 55
PP 2000
SPM 80+80
Mud: 8573
Wt 9.2
Vis 41
PV 11
YP 13
GS 6/12
WL 8.0
Cake 2
Sol 6.3
Oil 0
H2O 93.7
Sd 0
pH 10.2
Pf 0.25
Mf 0.80
Cl 36000
Ca 100
LCM Sweeps
8600

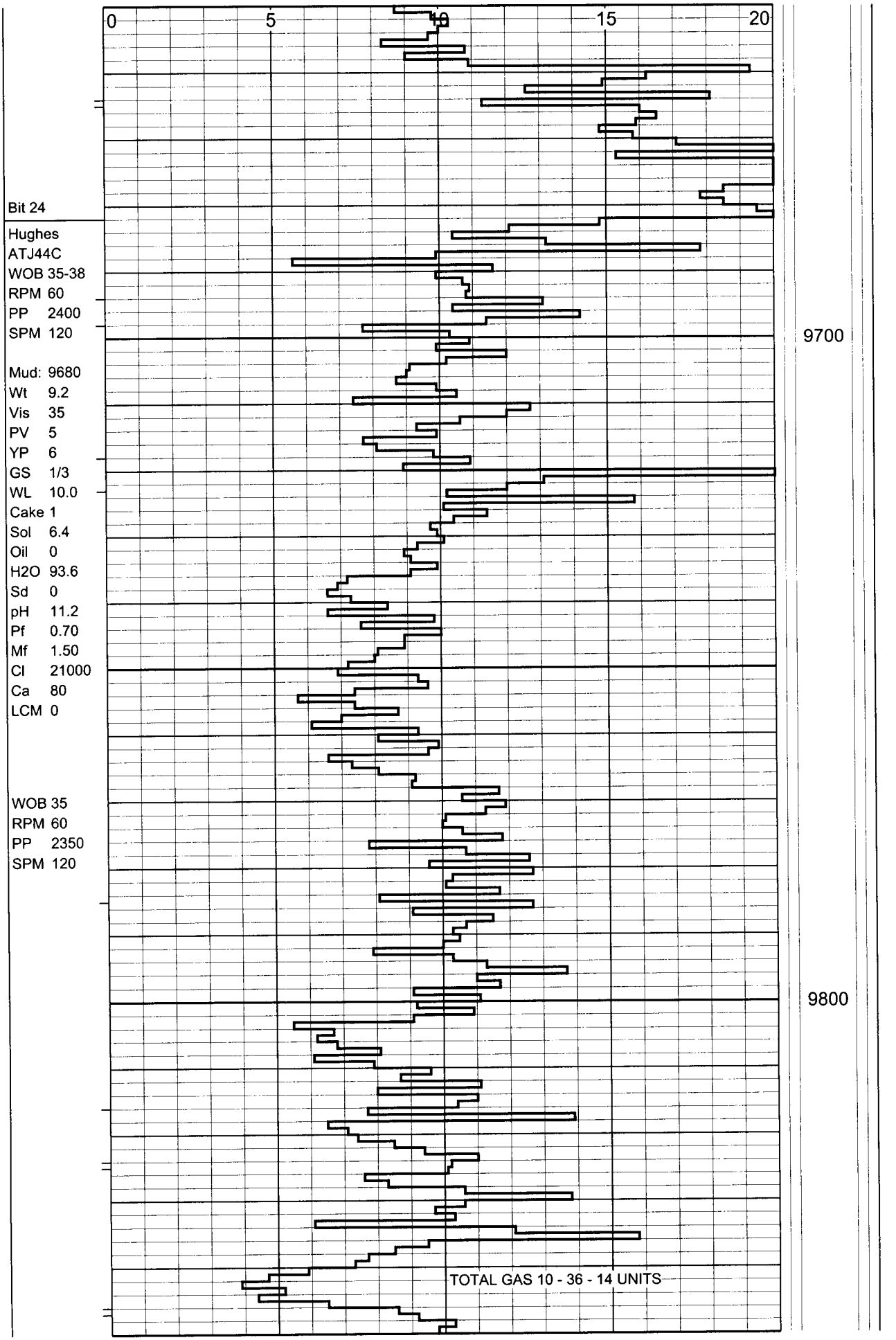

0
5
10
15
20
Mud: 8696
Wt 9.2
Vis 42
PV 11
YP 14
GS 6/12
WL 8.4
Cake 2
Sol 6.3
Oil 0
H2O 93.7
Sd 0
pH 10.4
Pf 0.30
Mf 0.80
Cl 34000
Ca 100
LCM Sweeps
8700
Bit 18
Smith
F4PS
WOB 45-50
RPM 55-60
PP 1975
SPM 80+80
1° ---° AZ
20 - 25 MIN/FT
Mud: 8758
Wt 9.2
Vis 43
PV 12
YP 14
GS 6/10
WL 8.0
Cake 2
Sol 6.3
Oil 0
H2O 93.7
Sd 0
pH 10.3
Pf 0.30
Mf 0.85
Cl 32000
Ca 80
LCM Tr
8800
TOTAL GAS 7 - 27 - 5 UNITS

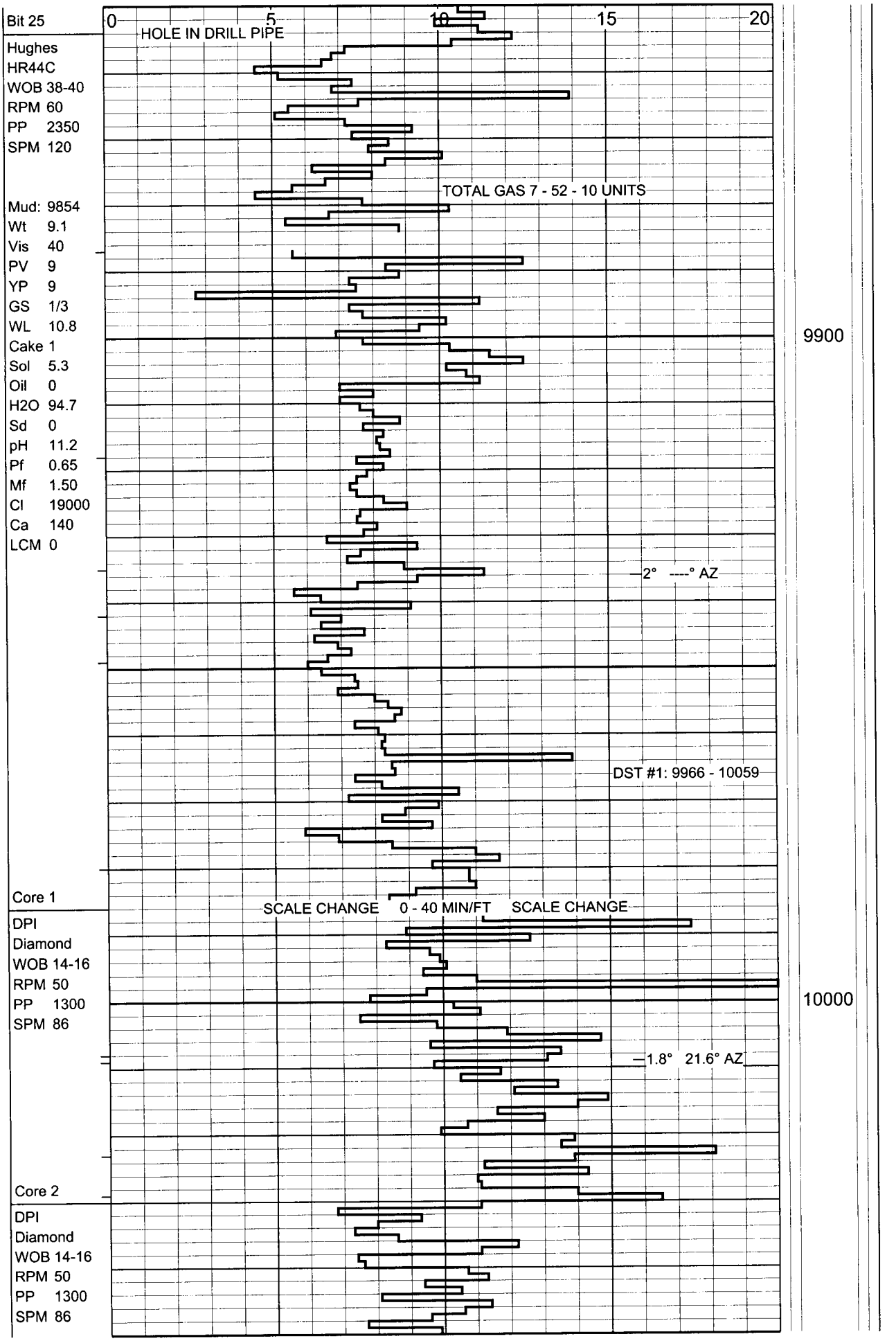

0
5
10
15
20
TOTAL GAS 5 - 33 - 8 UNITS
TOTAL GAS 7 - 18 - 8 UNITS
8900
Bit 19
Hughes
ATJ44
WOB 50
RPM 60
PP 2000
SPM 80+80
Mud: 8908
Wt 9.2
Vis 42
PV 12
YP 13
GS 5/9
WL 8.8
Cake 2
Sol 6.3
Oil 0
H2O 93.7
Sd 0
pH 10.2
Pf 0.30
Mf 0.85
Cl 28000
Ca 100
LCM Tr
TOTAL GAS 12 - 20 - 14 UNITS
TOTAL GAS 14 - 40 - 12 UNITS
9000
Bit 20
Hughes
—1° ----° AZ

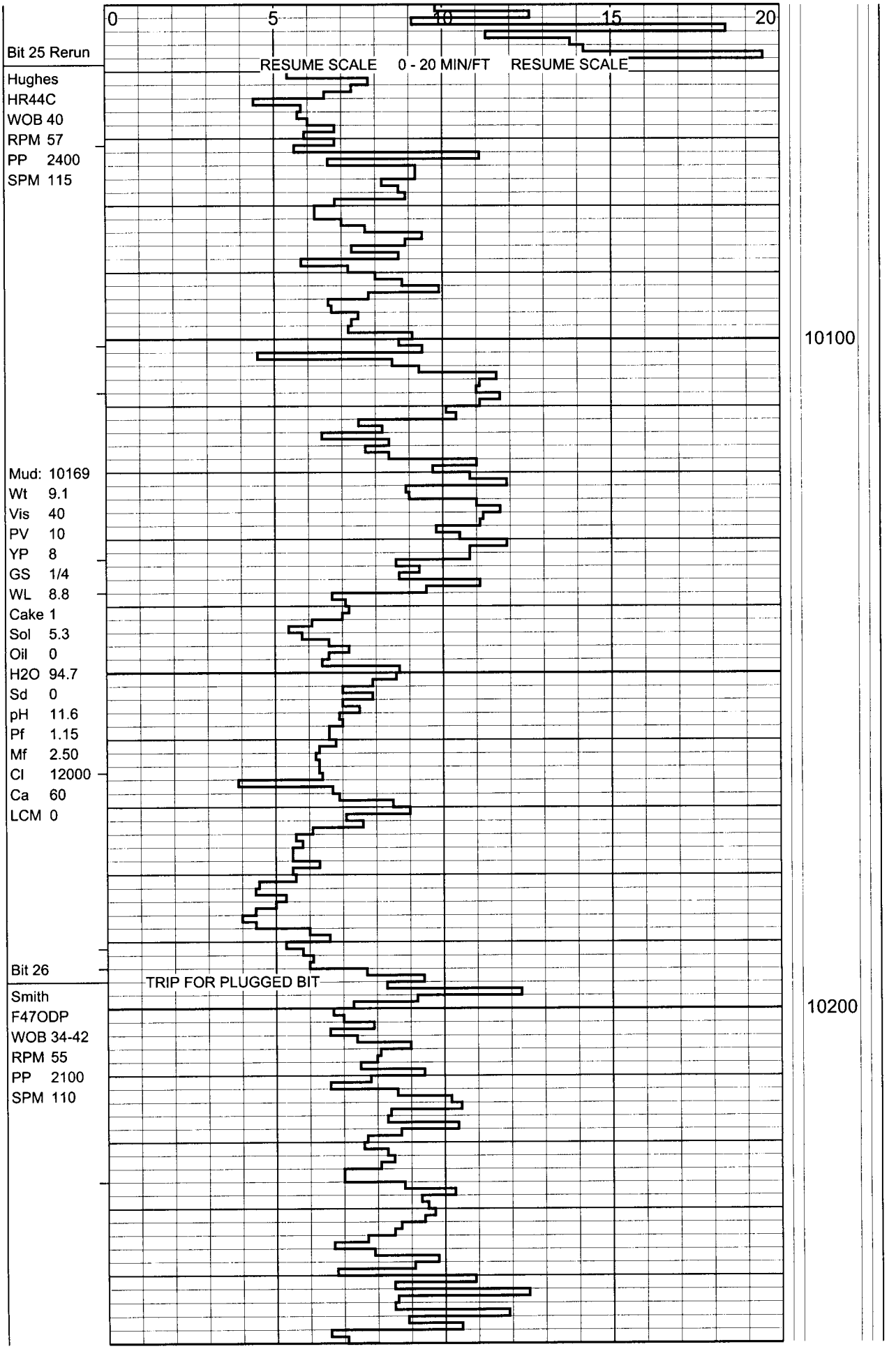

ATJ44
WOB 50
RPM 60
PP 2000
SPM 80+80
Mud: 9046
Wt 9.2
Vis 50
PV 18
YP 18
GS 7/12
WL 7.6
Cake 2
Sol 6.4
Oil 0
H2O 93.7
Sd 0
pH 10.7
Pf 0.70
Mf 1.90
Cl 24000
Ca 60
LCM Tr
Mud: 9150
Wt 9.3
Vis 54
PV 20
YP 22
GS 5/10
WL 6.0
Cake 2
Sol 7.1
Oil 0
H2O 92.9
Sd 0
pH 10.8
Pf 0.95
Mf 2.00
Cl 24000
Ca 40
LCM Tr
WOB 50
RPM 60
PP 2100
SPM 80+80
0
5
10
15
20
9100
9200

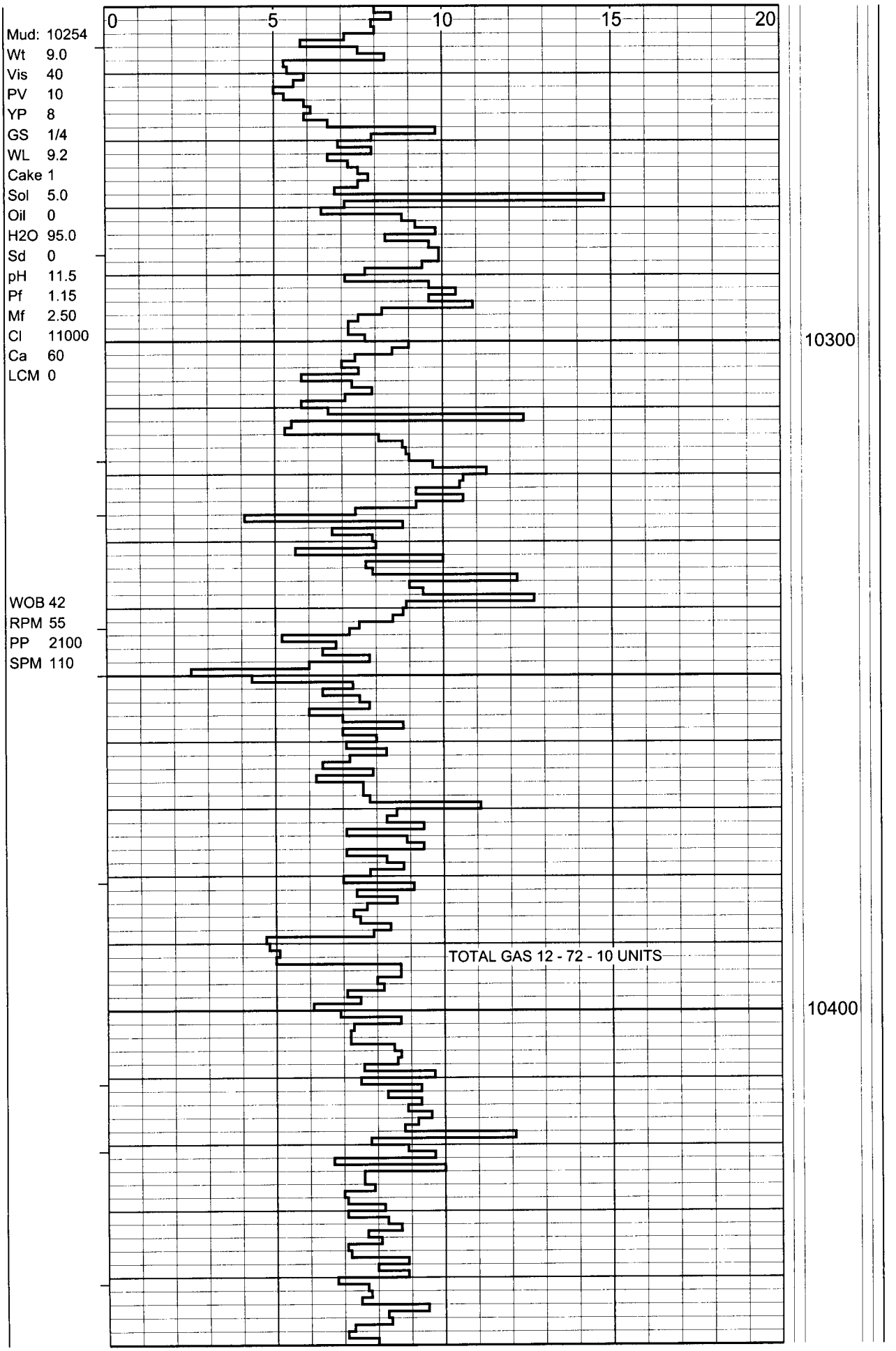

0
5
10
15
20
Mud: 9265
Wt 9.2
Vis 49
PV 16
YP 20
GS 4/8
WL 6.4
Cake 0
Sol 6.0
Oil 0
H2O 94.0
Sd 0
pH 10.5
Pf 0.70
Mf 1.90
Cl 24000
Ca 40
LCM 0
WOB 50
RPM 60
PP 2050
SPM 80+80
Bit 21
Hughes
ATJS44
WOB 50
RPM 55
PP 2100
SPM 80+80
Mud: 9358
Wt 9.2
Vis 49
PV 18
YP 19
GS 4/8
WL 6.4
Cake 2
Sol 6.5
Oil 0
H2O 93.5
Sd 0
pH 10.5
Pf 0.60
Mf 1.65
Cl 23000
Ca 40
LCM 0
1 3/4° ----° AZ
9300
9400

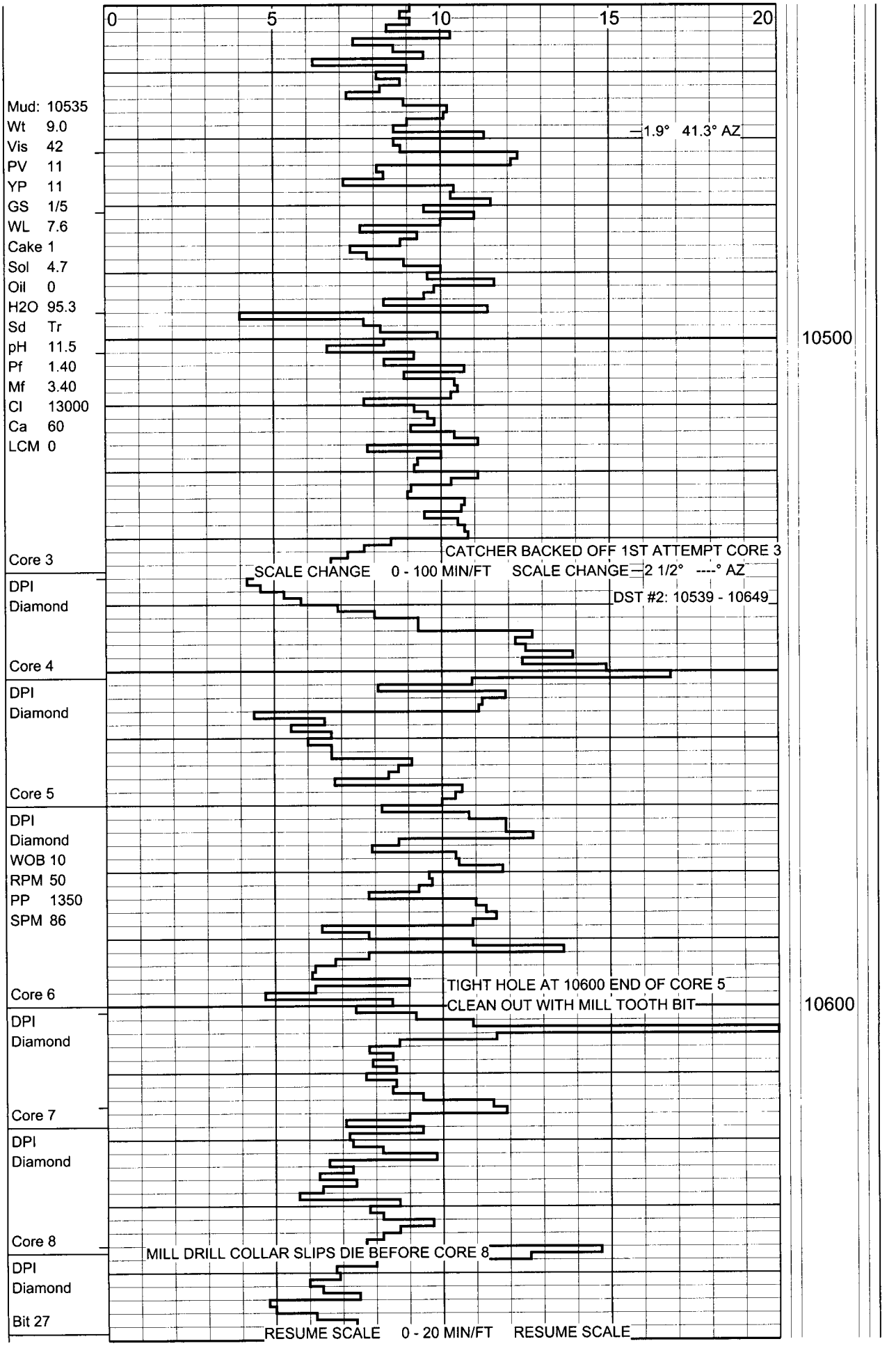

0
5
10
15
20
WOB 55
RPM 65
Mud: 9496
WtM 9.2+75
Vis 49
PV 21
YP 19
GS 4/10
WL 6.4
Cake 1
Sol 6.3
Oil 0
H2O 93.7
Sd 0
pH 10.8
Pf 0.40
Mf 1.30
Cl 19000
Ca 80
LCM Tr
9500
WOB 55
RPM 65
PP 1800
SPM 75+75
Mud: 9614
Wt 9.3
Vis 48
PV 18
YP 17
GS 3/8
WL 6.8
Cake 1
Sol 6.8
Oil 0
H2O 93.2
Sd 0
pH 10.8
Pf 0.35
Mf 1.20
Cl 19000
Ca 40
LCM 0
Bit 23
Smith
F4PS
9590
Thanynes
Ls
BRIEF HIGH TORQUE
9600
TRIPPED OUT FOR LOGS AT 9626
FISHED 107 FT OF BHA THAT TWISTED OFF BEFORE LOGS
RAN GLOBE BASKET TO RECOVER SURVEY TOOL--NO GOOD
9 5/8" CASING SET AT 9626
THREE RUNS TO MILL SURVEY TOOL AT 9626 AFTER CSG.

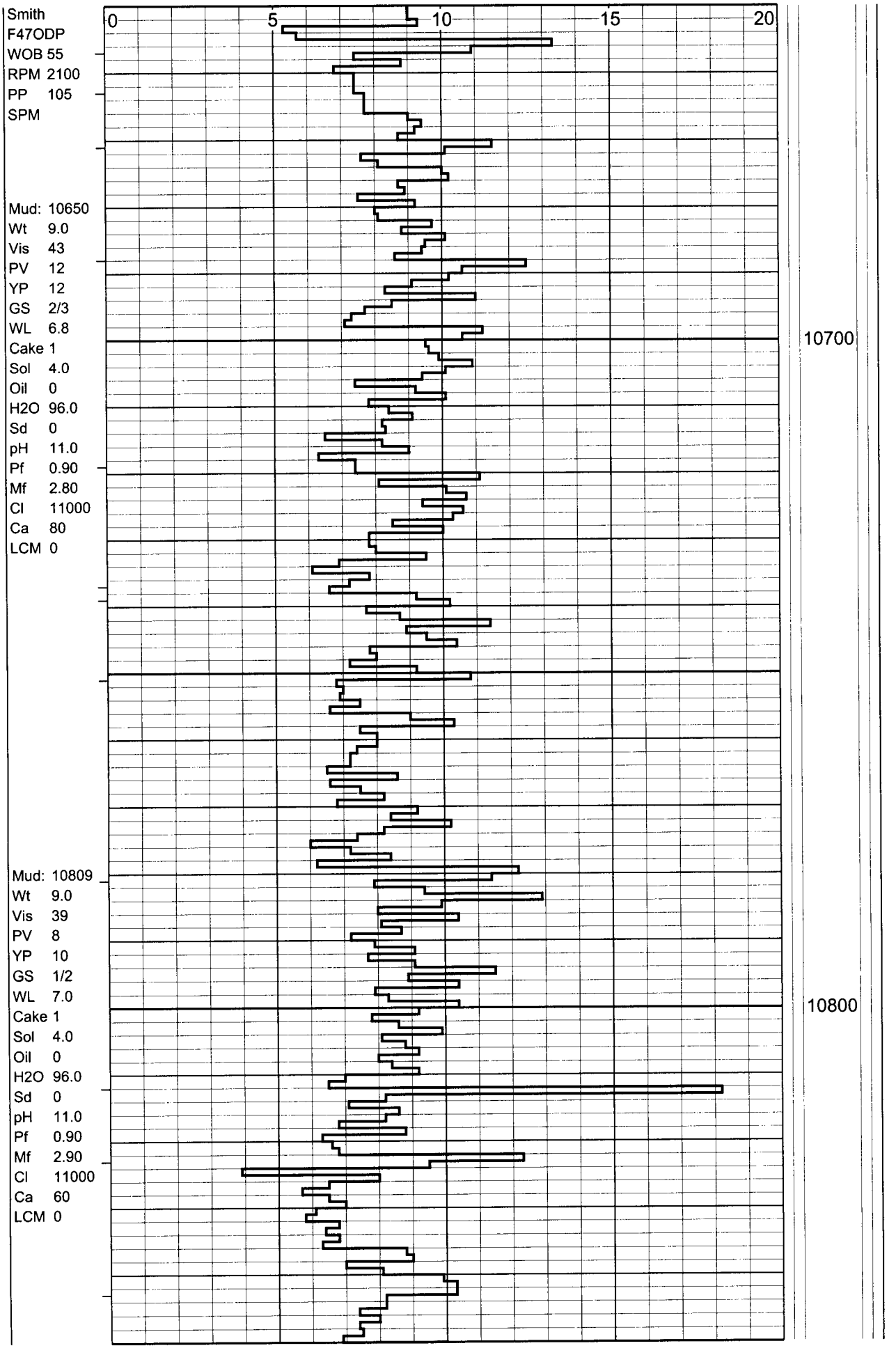

0
5
10
15
20
Bit 24
Hughes
ATJ44C
WOB 35-38
RPM 60
PP 2400
SPM 120
Mud: 9680
Wt 9.2
Vis 35
PV 5
YP 6
GS 1/3
WL 10.0
Cake 1
Sol 6.4
Oil 0
H2O 93.6
Sd 0
pH 11.2
Pf 0.70
Mf 1.50
Cl 21000
Ca 80
LCM 0
WOB 35
RPM 60
PP 2350
SPM 120
9700
9800
TOTAL GAS 10 - 36 - 14 UNITS

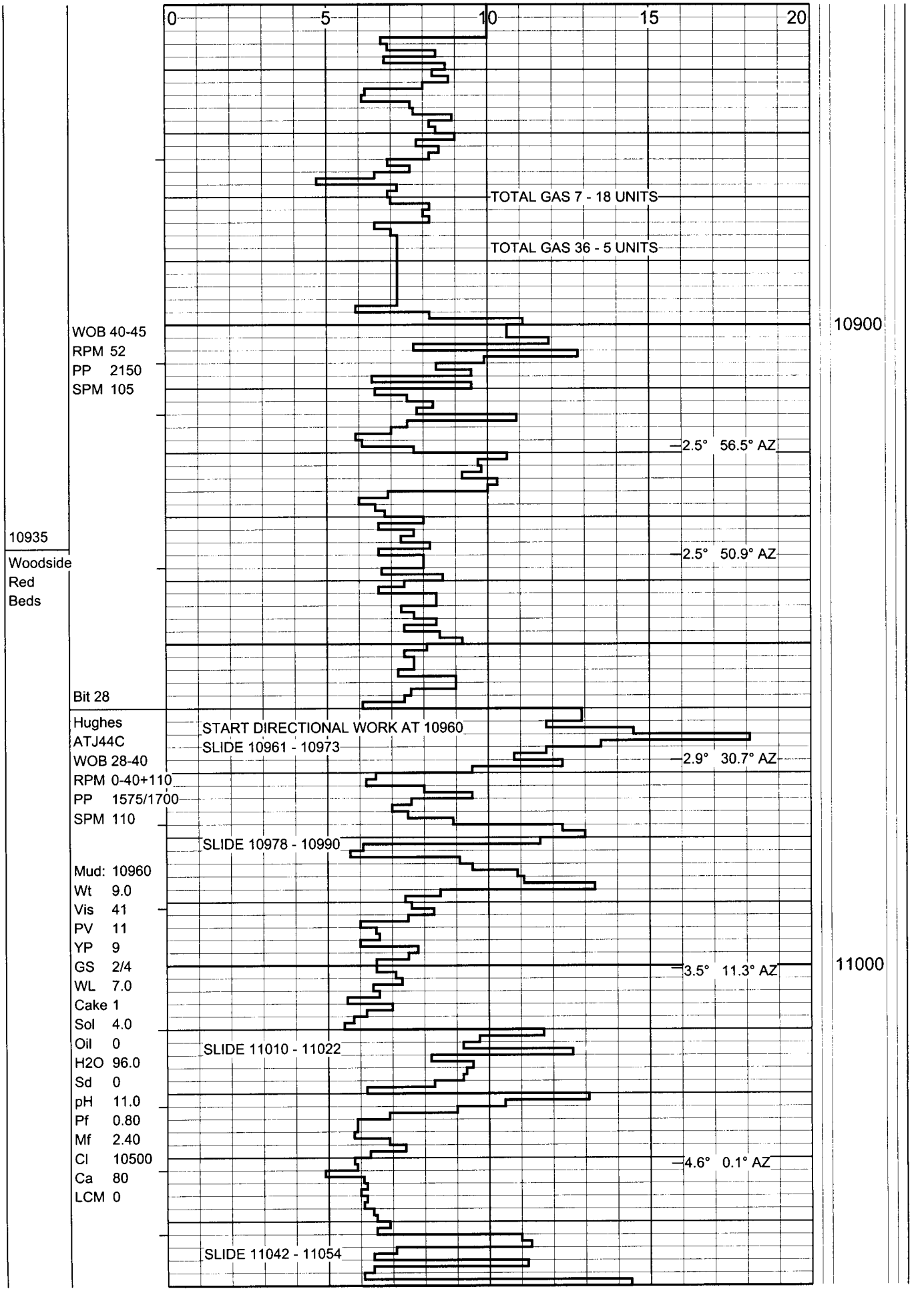

Bit 25
Hughes
HR44C
WOB 38-40
RPM 60
PP 2350
SPM 120
Mud: 9854
Wt 9.1
Vis 40
PV 9
YP 9
GS 1/3
WL 10.8
Cake 1
Sol 5.3
Oil 0
H2O 94.7
Sd 0
pH 11.2
Pf 0.65
Mf 1.50
Cl 19000
Ca 140
LCM 0
Core 1
DPI
Diamond
WOB 14-16
RPM 50
PP 1300
SPM 86
Core 2
DPI
Diamond
WOB 14-16
RPM 50
PP 1300
SPM 86
0
5
10
15
20
HOLE IN DRILL PIPE
TOTAL GAS 7 - 52 - 10 UNITS
2° ----° AZ
DST #1: 9966 - 10059
SCALE CHANGE 0 - 40 MIN/FT SCALE CHANGE
1.8° 21.6° AZ
9900
10000

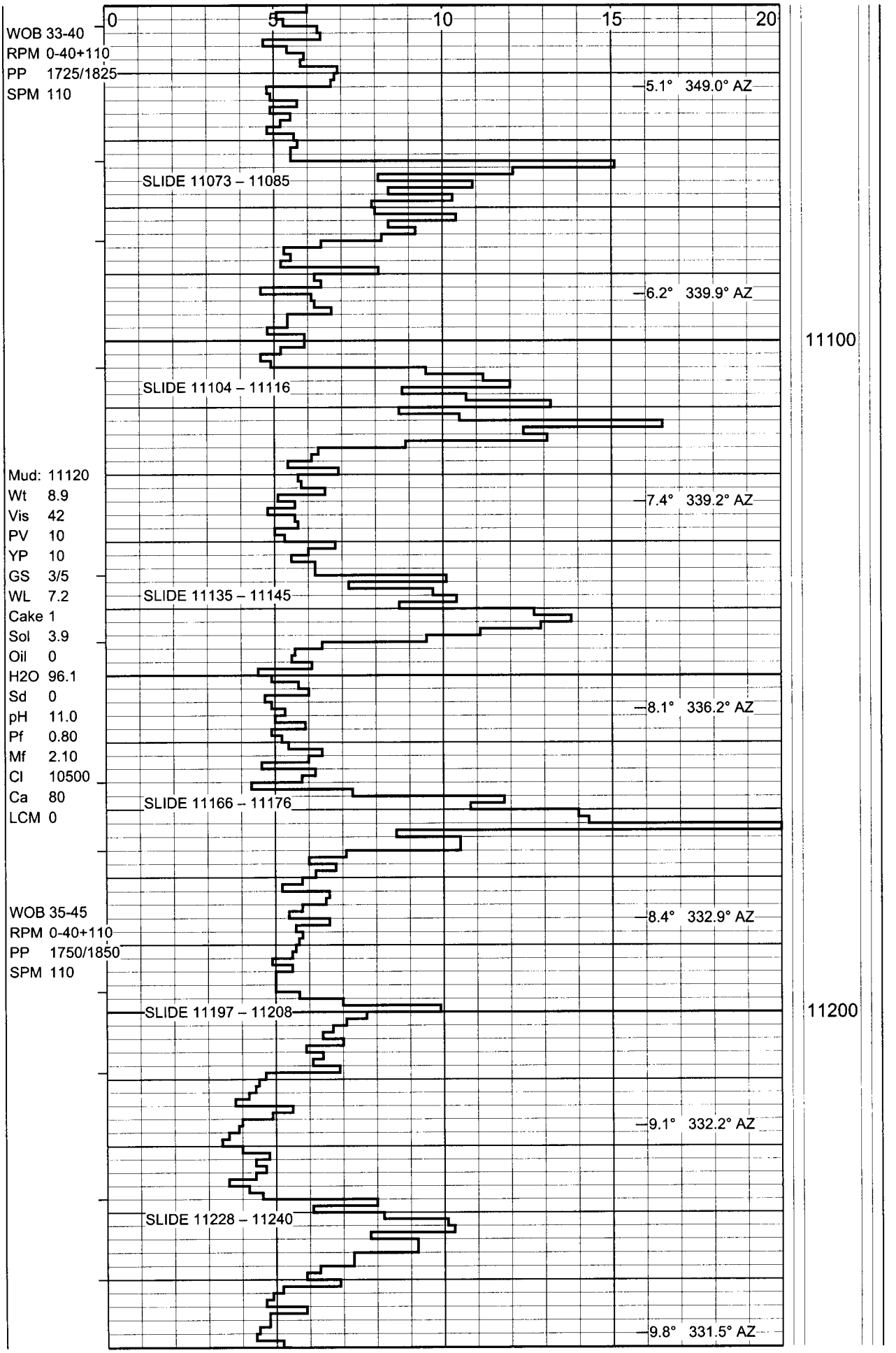

0
5
10
15
20
RESUME SCALE 0 - 20 MIN/FT RESUME SCALE
Bit 25 Rerun
Hughes
HR44C
WOB 40
RPM 57
PP 2400
SPM 115
Mud: 10169
Wt 9.1
Vis 40
PV 10
YP 8
GS 1/4
WL 8.8
Cake 1
Sol 5.3
Oil 0
H2O 94.7
Sd 0
pH 11.6
Pf 1.15
Mf 2.50
Cl 12000
Ca 60
LCM 0
Bit 26
TRIP FOR PLUGGED BIT
Smith
F47ODP
WOB 34-42
RPM 55
PP 2100
SPM 110
10100
10200

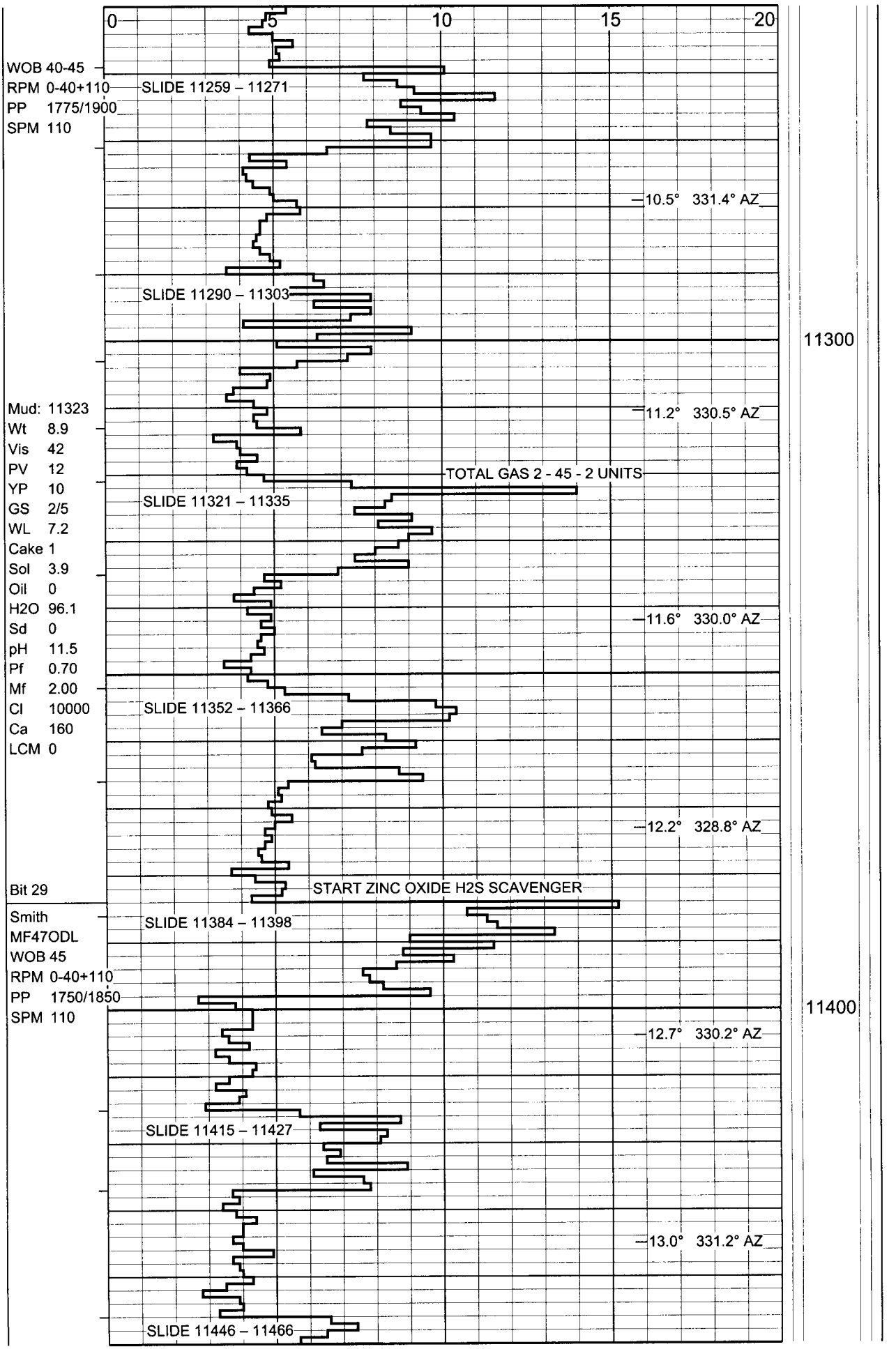

Mud: 10254
Wt 9.0
Vis 40
PV 10
YP 8
GS 1/4
WL 9.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 11.5
Pf 1.15
Mf 2.50
Cl 11000
Ca 60
LCM 0
WOB 42
RPM 55
PP 2100
SPM 110
0
5
10
15
20
10300
10400
TOTAL GAS 12 - 72 - 10 UNITS

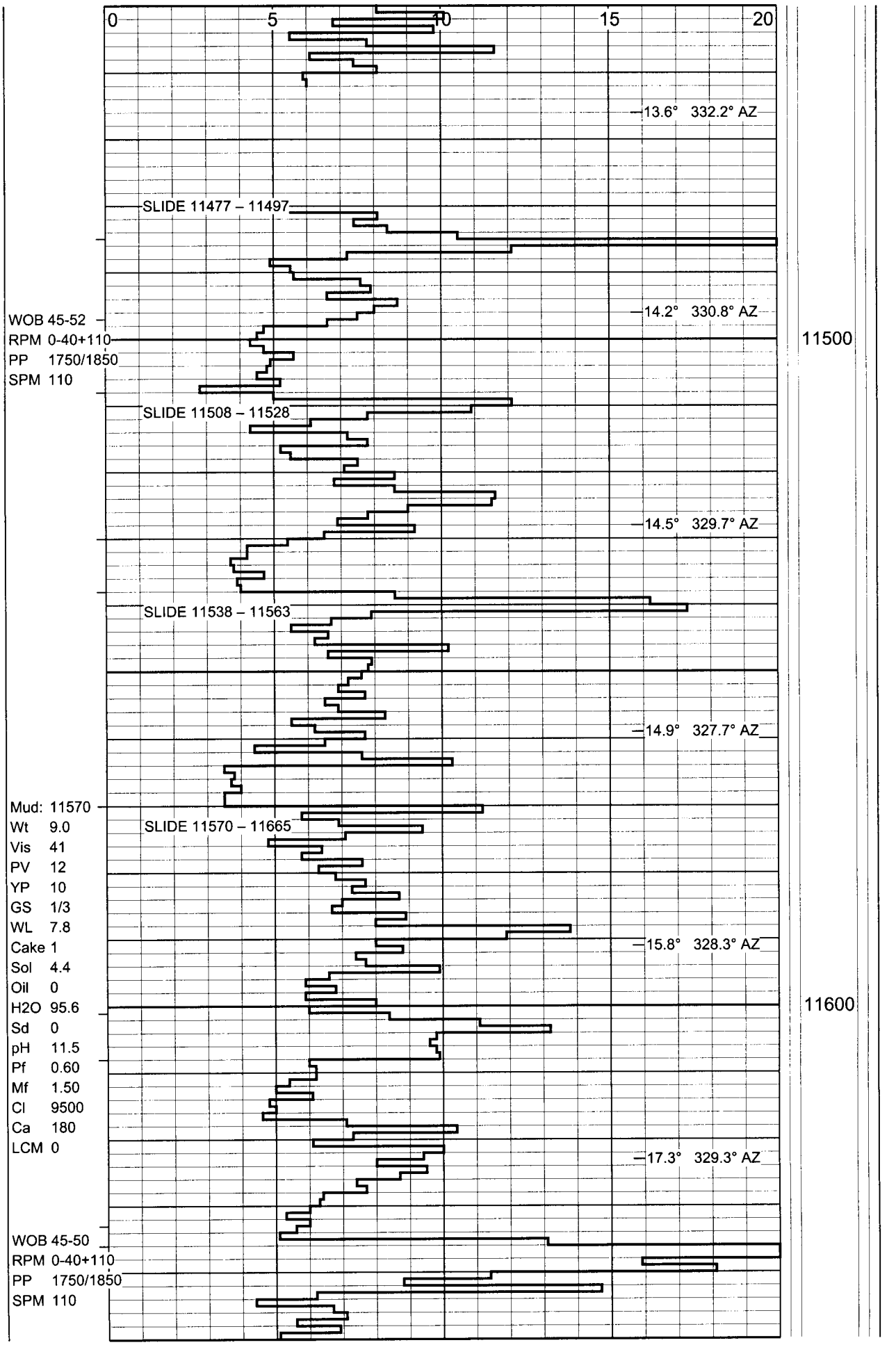

0
5
10
15
20
Mud: 10535
Wt 9.0
Vis 42
PV 11
YP 11
GS 1/5
WL 7.6
Cake 1
Sol 4.7
Oil 0
H2O 95.3
Sd Tr
pH 11.5
Pf 1.40
Mf 3.40
Cl 13000
Ca 60
LCM 0
1.9° 41.3° AZ
10500
Core 3
CATCHER BACKED OFF 1ST ATTEMPT CORE 3
SCALE CHANGE 0 - 100 MIN/FT SCALE CHANGE 2 1/2° ----° AZ
DPI
Diamond
DST #2: 10539 - 10649
Core 4
DPI
Diamond
Core 5
DPI
Diamond
WOB 10
RPM 50
PP 1350
SPM 86
Core 6
TIGHT HOLE AT 10600 END OF CORE 5
CLEAN OUT WITH MILL TOOTH BIT
10600
DPI
Diamond
Core 7
DPI
Diamond
Core 8
MILL DRILL COLLAR SLIPS DIE BEFORE CORE 8
DPI
Diamond
Bit 27
RESUME SCALE 0 - 20 MIN/FT RESUME SCALE

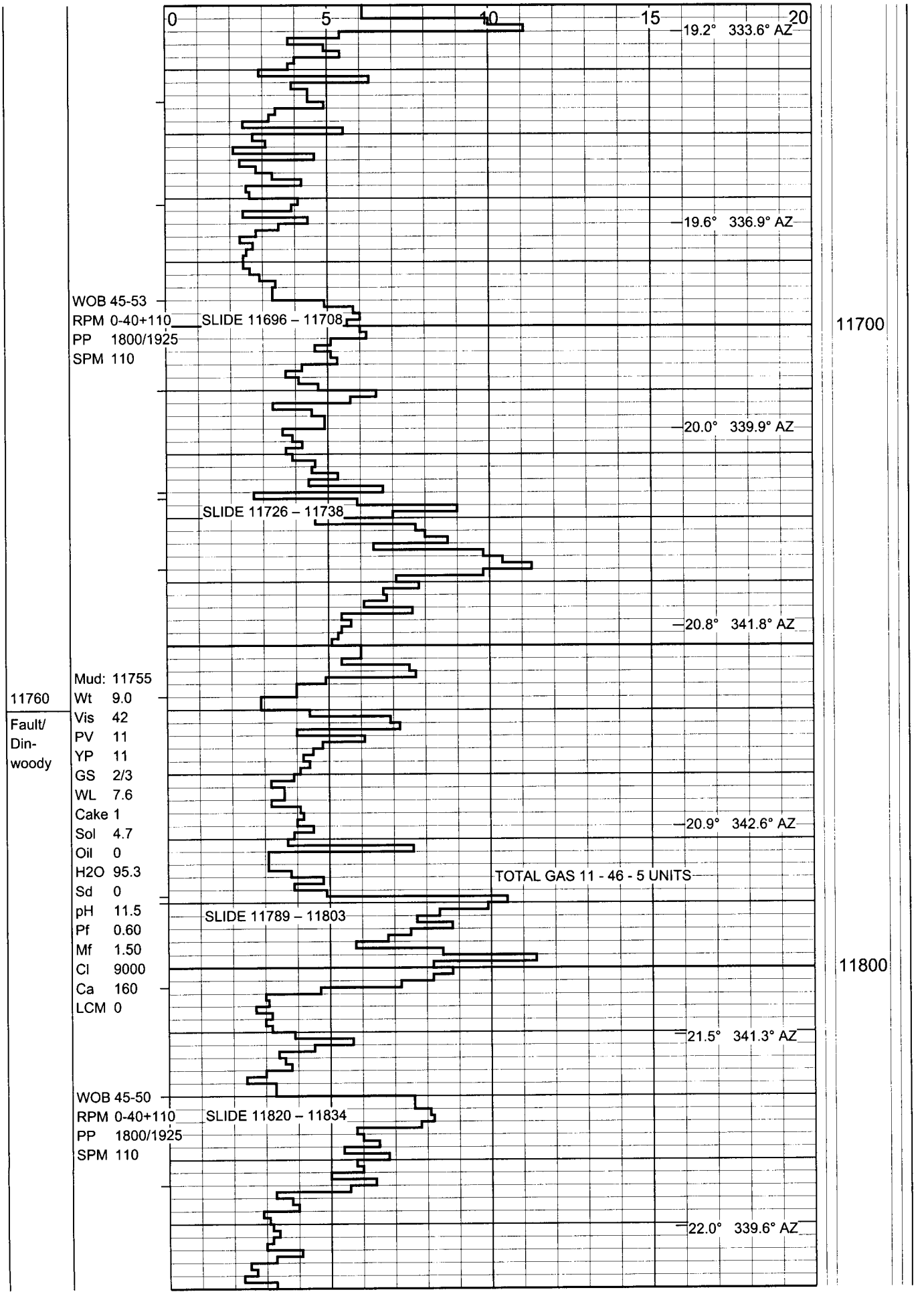

Smith
F47ODP
WOB 55
RPM 2100
PP 105
SPM
Mud: 10650
Wt 9.0
Vis 43
PV 12
YP 12
GS 2/3
WL 6.8
Cake 1
Sol 4.0
Oil 0
H2O 96.0
Sd 0
pH 11.0
Pf 0.90
Mf 2.80
Cl 11000
Ca 80
LCM 0
Mud: 10809
Wt 9.0
Vis 39
PV 8
YP 10
GS 1/2
WL 7.0
Cake 1
Sol 4.0
Oil 0
H2O 96.0
Sd 0
pH 11.0
Pf 0.90
Mf 2.90
Cl 11000
Ca 60
LCM 0
0
5
10
15
20
10700
10800

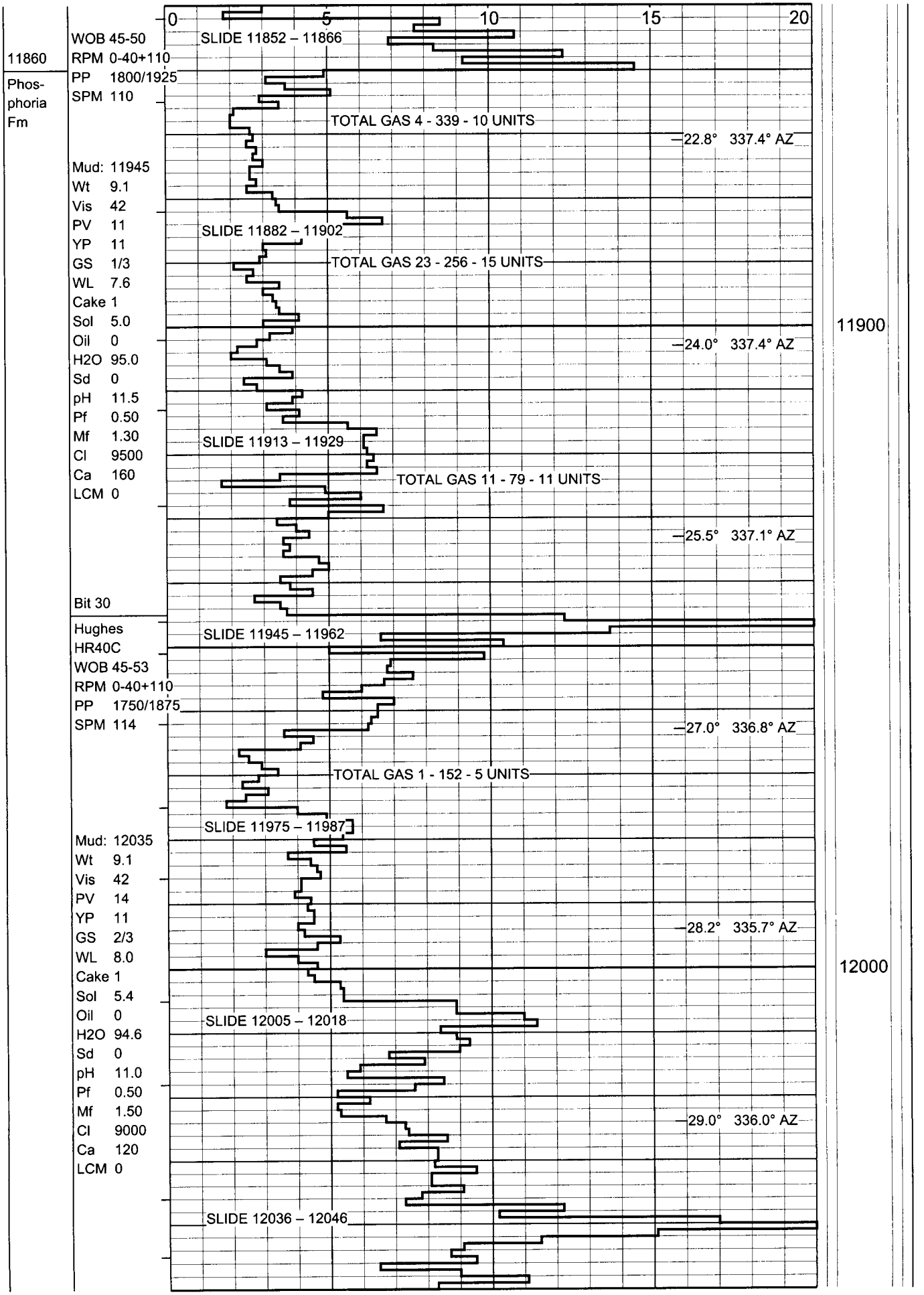

0
5
10
15
20
TOTAL GAS 7 - 18 UNITS
TOTAL GAS 36 - 5 UNITS
10900
WOB 40-45
RPM 52
PP 2150
SPM 105
2.5° 56.5° AZ
10935
2.5° 50.9° AZ
Woodside
Red
Beds
Bit 28
Hughes
ATJ44C
WOB 28-40
RPM 0-40+110
PP 1575/1700
SPM 110
START DIRECTIONAL WORK AT 10960
SLIDE 10961 - 10973
2.9° 30.7° AZ
SLIDE 10978 - 10990
Mud: 10960
Wt 9.0
Vis 41
PV 11
YP 9
GS 2/4
WL 7.0
Cake 1
Sol 4.0
Oil 0
H2O 96.0
Sd 0
pH 11.0
Pf 0.80
Mf 2.40
Cl 10500
Ca 80
LCM 0
3.5° 11.3° AZ
11000
SLIDE 11010 - 11022
4.6° 0.1° AZ
SLIDE 11042 - 11054

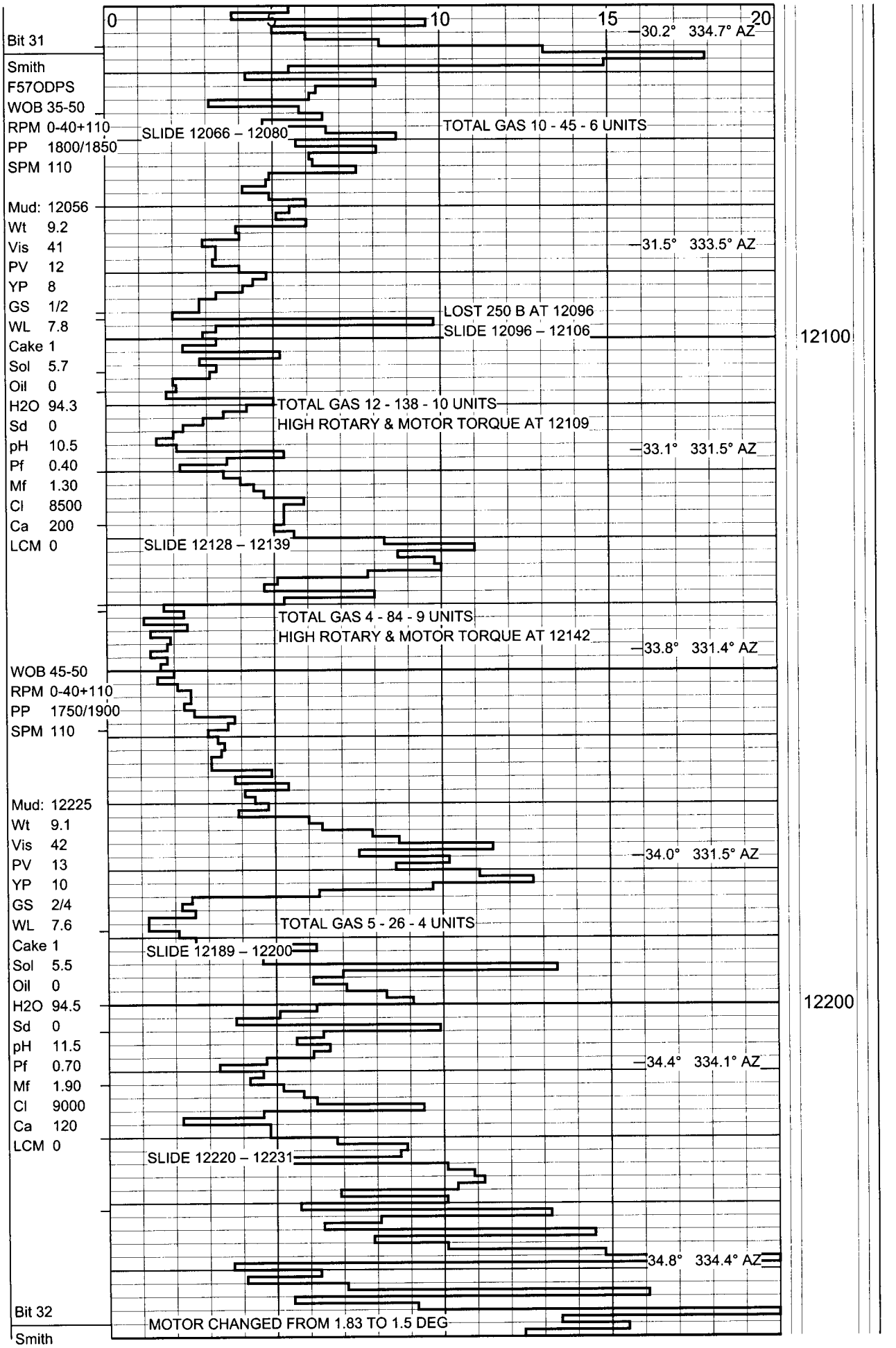

0
5
10
15
20
WOB 33-40
RPM 0-40+110
PP 1725/1825
SPM 110
5.1° 349.0° AZ
SLIDE 11073 – 11085
6.2° 339.9° AZ
11100
SLIDE 11104 – 11116
Mud: 11120
Wt 8.9
Vis 42
PV 10
YP 10
GS 3/5
WL 7.2
Cake 1
Sol 3.9
Oil 0
H2O 96.1
Sd 0
pH 11.0
Pf 0.80
Mf 2.10
Cl 10500
Ca 80
LCM 0
7.4° 339.2° AZ
SLIDE 11135 – 11145
8.1° 336.2° AZ
SLIDE 11166 – 11176
WOB 35-45
RPM 0-40+110
PP 1750/1850
SPM 110
8.4° 332.9° AZ
SLIDE 11197 – 11208
11200
9.1° 332.2° AZ
SLIDE 11228 – 11240
9.8° 331.5° AZ

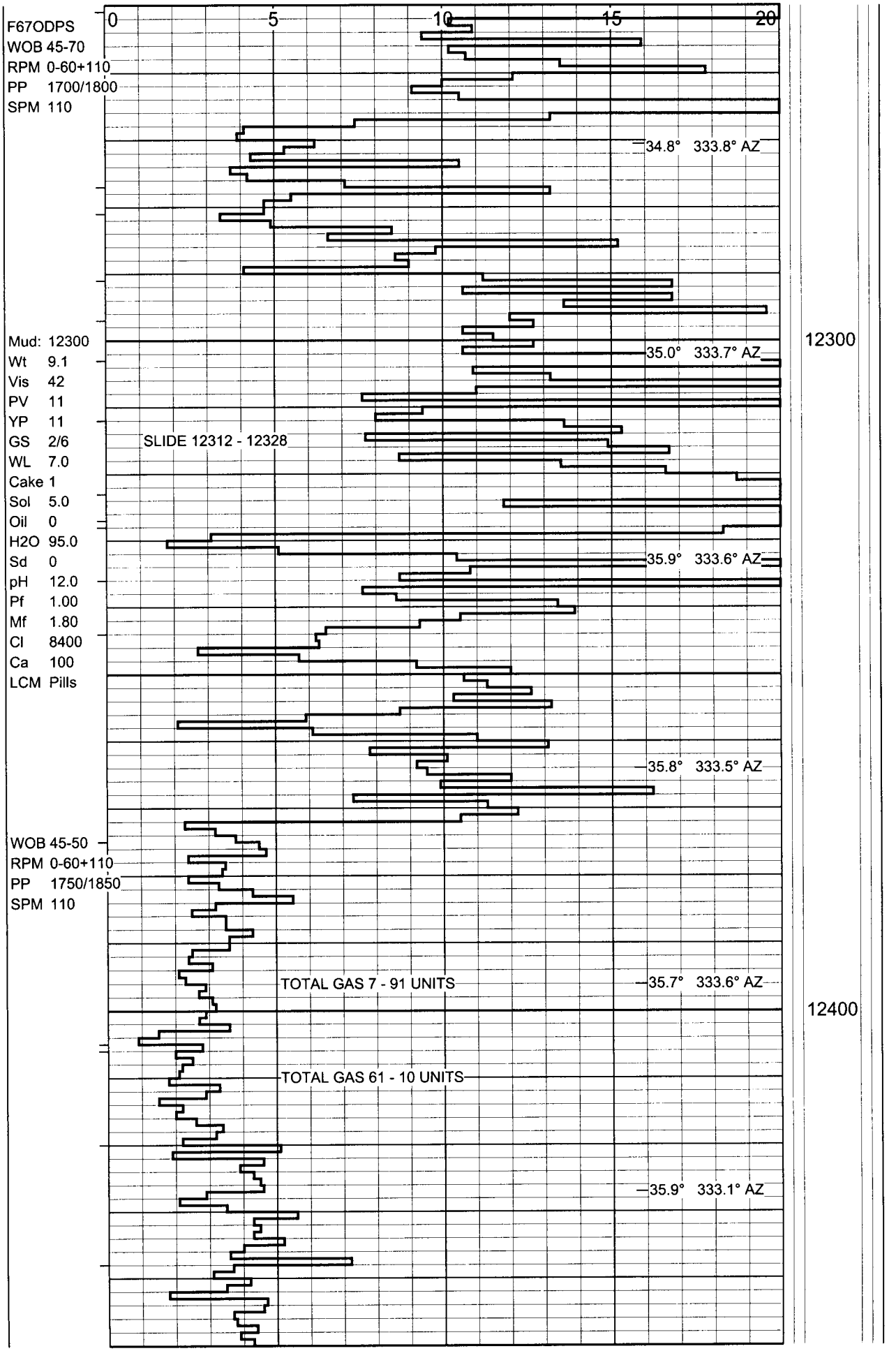

0
5
10
15
20
WOB 40-45
RPM 0-40+110
PP 1775/1900
SPM 110
SLIDE 11259 – 11271
10.5° 331.4° AZ
SLIDE 11290 – 11303
11300
Mud: 11323
Wt 8.9
Vis 42
PV 12
YP 10
GS 2/5
WL 7.2
Cake 1
Sol 3.9
Oil 0
H2O 96.1
Sd 0
pH 11.5
Pf 0.70
Mf 2.00
Cl 10000
Ca 160
LCM 0
11.2° 330.5° AZ
TOTAL GAS 2 - 45 - 2 UNITS
SLIDE 11321 – 11335
11.6° 330.0° AZ
SLIDE 11352 – 11366
12.2° 328.8° AZ
Bit 29
START ZINC OXIDE H2S SCAVENGER
Smith
MF47ODL
WOB 45
RPM 0-40+110
PP 1750/1850
SPM 110
SLIDE 11384 – 11398
11400
12.7° 330.2° AZ
SLIDE 11415 – 11427
13.0° 331.2° AZ
SLIDE 11446 – 11466

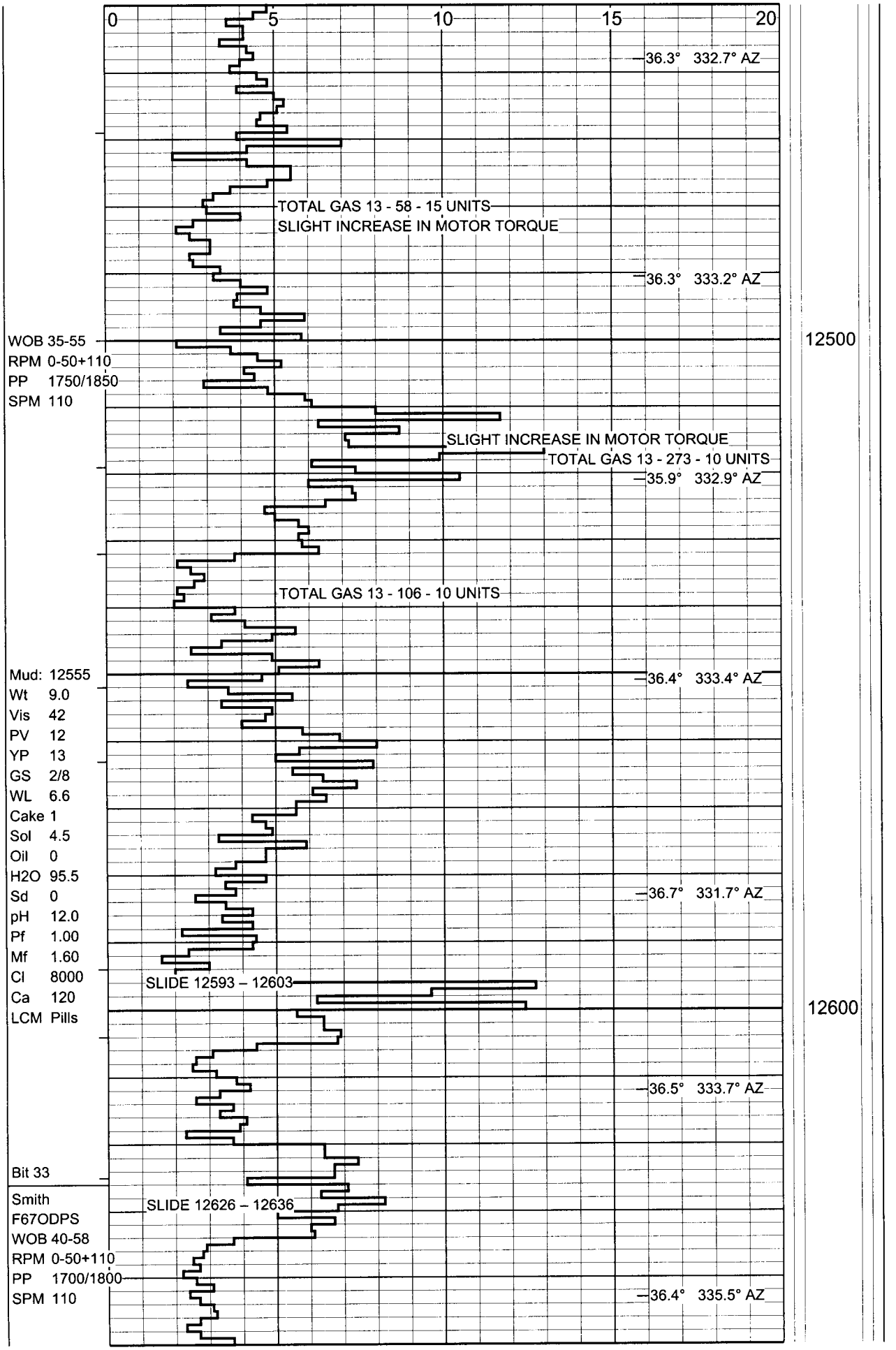

0
5
10
15
20
13.6° 332.2° AZ
SLIDE 11477 – 11497
14.2° 330.8° AZ
WOB 45-52
RPM 0-40+110
PP 1750/1850
SPM 110
11500
SLIDE 11508 – 11528
14.5° 329.7° AZ
SLIDE 11538 – 11563
14.9° 327.7° AZ
Mud: 11570
Wt 9.0
Vis 41
PV 12
YP 10
GS 1/3
WL 7.8
Cake 1
Sol 4.4
Oil 0
H2O 95.6
Sd 0
pH 11.5
Pf 0.60
Mf 1.50
Cl 9500
Ca 180
LCM 0
SLIDE 11570 – 11665
15.8° 328.3° AZ
11600
17.3° 329.3° AZ
WOB 45-50
RPM 0-40+110
PP 1750/1850
SPM 110

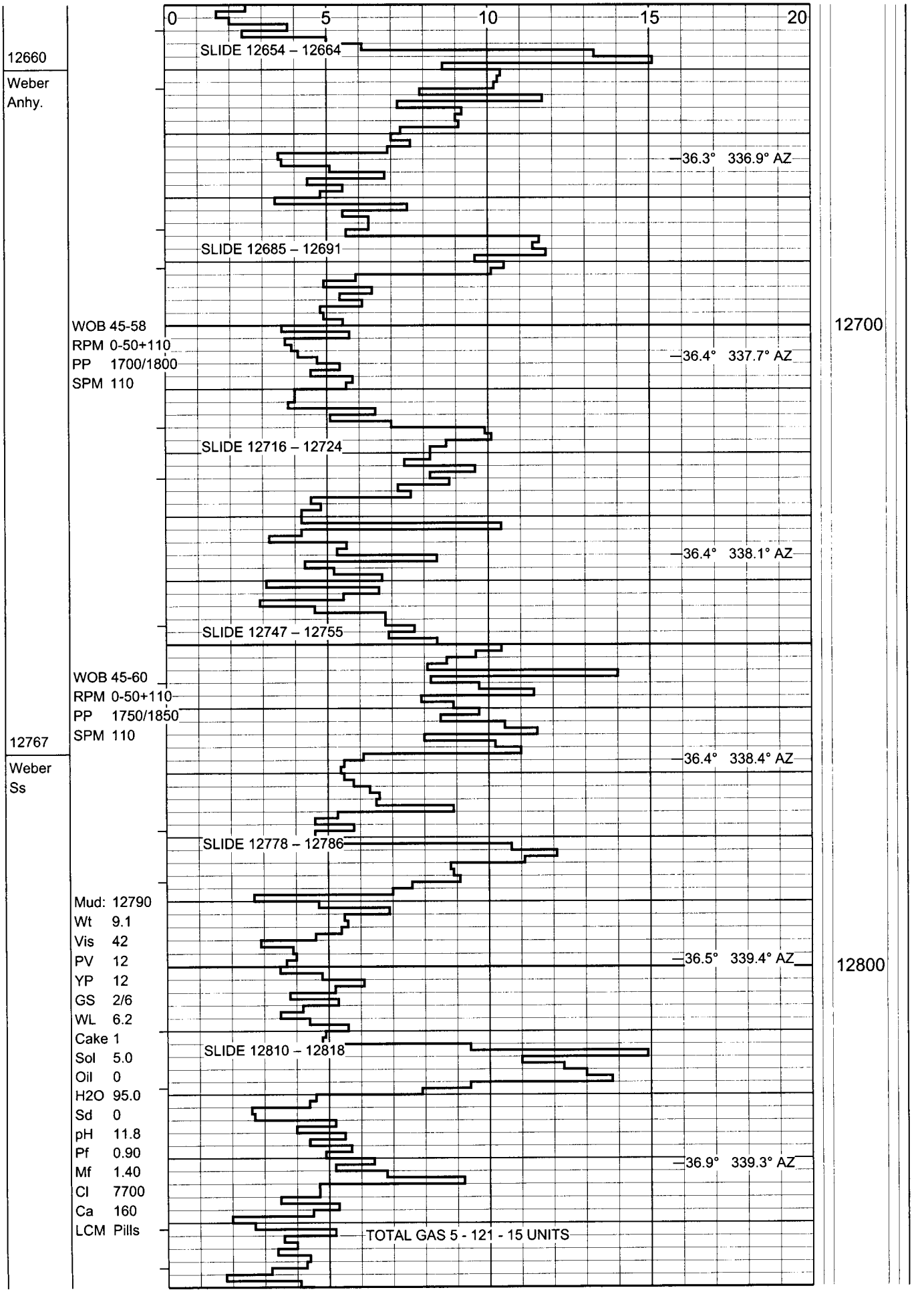

0
5
10
15
20
19.2° 333.6° AZ
19.6° 336.9° AZ
WOB 45-53
RPM 0-40+110
PP 1800/1925
SPM 110
SLIDE 11696 – 11708
11700
20.0° 339.9° AZ
SLIDE 11726 – 11738
20.8° 341.8° AZ
Mud: 11755
11760
Wt 9.0
Vis 42
PV 11
YP 11
GS 2/3
WL 7.6
Cake 1
Sol 4.7
Oil 0
H2O 95.3
Sd 0
pH 11.5
Pf 0.60
Mf 1.50
Cl 9000
Ca 160
LCM 0
Fault/
Din-
woody
20.9° 342.6° AZ
TOTAL GAS 11 - 46 - 5 UNITS
SLIDE 11789 – 11803
11800
21.5° 341.3° AZ
WOB 45-50
RPM 0-40+110
PP 1800/1925
SPM 110
SLIDE 11820 – 11834
22.0° 339.6° AZ

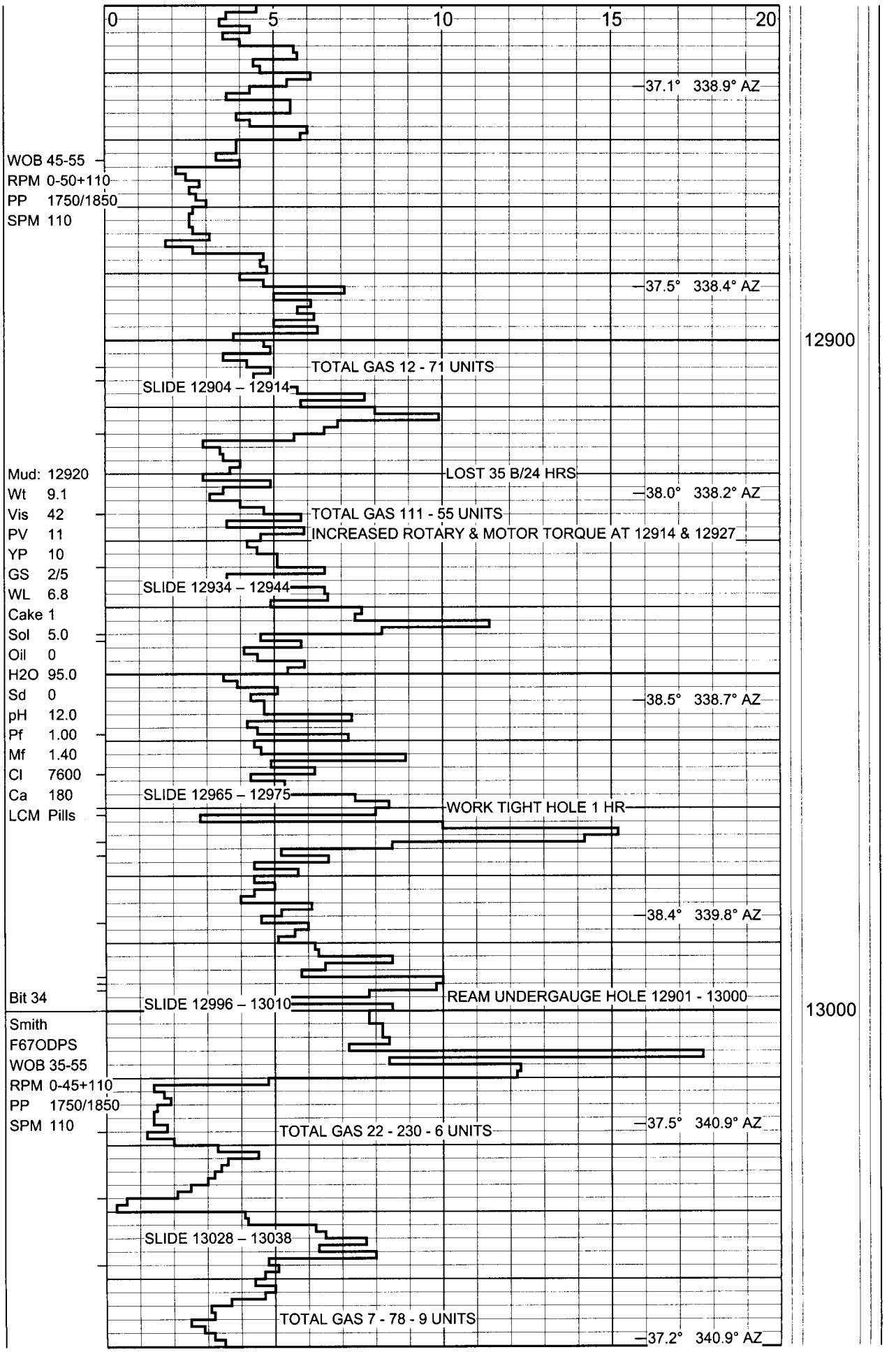

0
5
10
15
20
11860
Phos-
phoria
Fm
WOB 45-50
RPM 0-40+110
PP 1800/1925
SPM 110
SLIDE 11852 – 11866
TOTAL GAS 4 - 339 - 10 UNITS
22.8° 337.4° AZ
Mud: 11945
Wt 9.1
Vis 42
PV 11
YP 11
GS 1/3
WL 7.6
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 11.5
Pf 0.50
Mf 1.30
Cl 9500
Ca 160
LCM 0
SLIDE 11882 – 11902
TOTAL GAS 23 - 256 - 15 UNITS
24.0° 337.4° AZ
11900
SLIDE 11913 – 11929
TOTAL GAS 11 - 79 - 11 UNITS
25.5° 337.1° AZ
Bit 30
Hughes
HR40C
WOB 45-53
RPM 0-40+110
PP 1750/1875
SPM 114
SLIDE 11945 – 11962
27.0° 336.8° AZ
TOTAL GAS 1 - 152 - 5 UNITS
SLIDE 11975 – 11987
Mud: 12035
Wt 9.1
Vis 42
PV 14
YP 11
GS 2/3
WL 8.0
Cake 1
Sol 5.4
Oil 0
H2O 94.6
Sd 0
pH 11.0
Pf 0.50
Mf 1.50
Cl 9000
Ca 120
LCM 0
28.2° 335.7° AZ
12000
SLIDE 12005 – 12018
29.0° 336.0° AZ
SLIDE 12036 – 12046

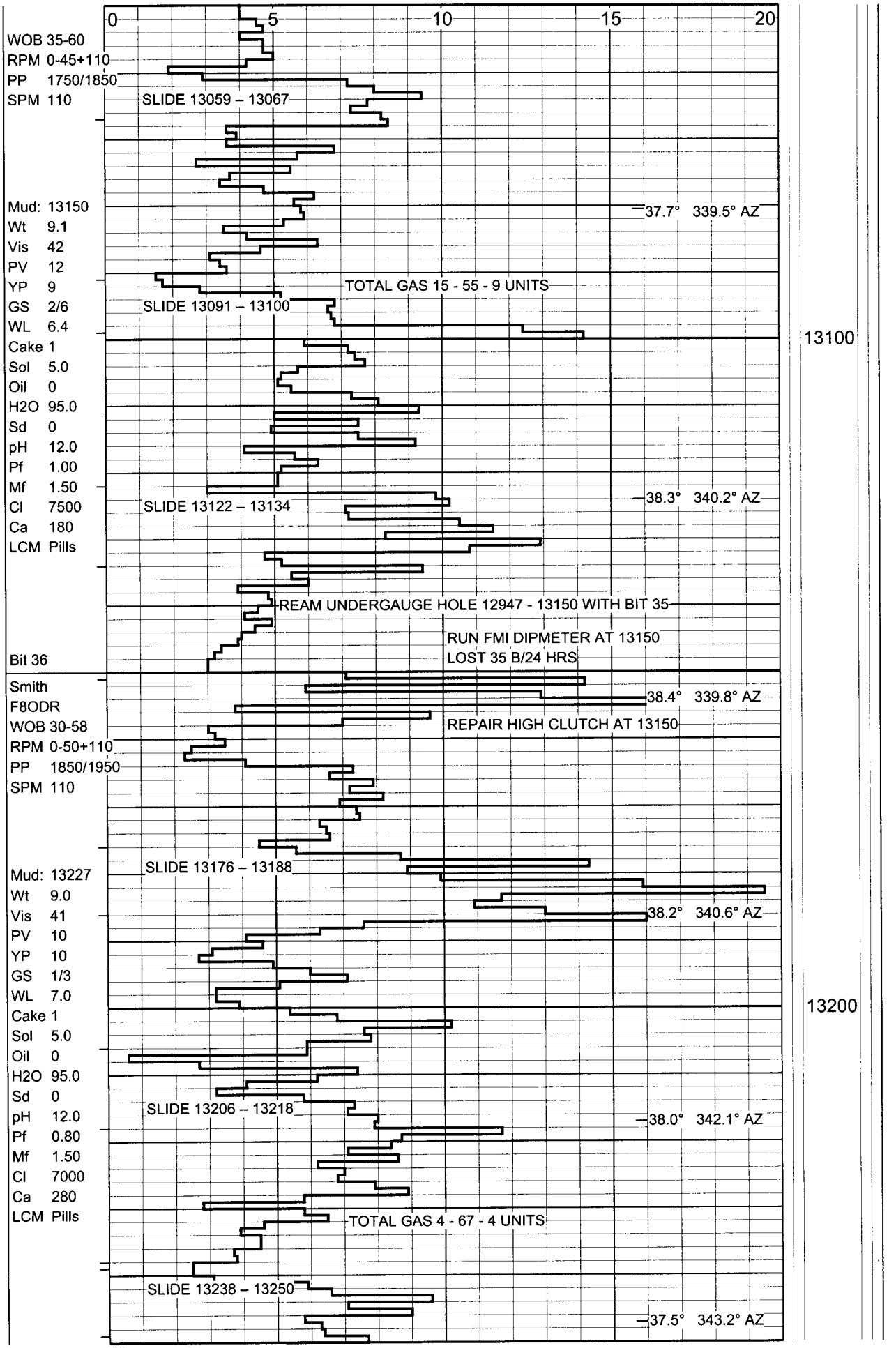

0
10
15
20
Bit 31
Smith
F57ODPS
WOB 35-50
RPM 0-40+110
PP 1800/1850
SPM 110
Mud: 12056
Wt 9.2
Vis 41
PV 12
YP 8
GS 1/2
WL 7.8
Cake 1
Sol 5.7
Oil 0
H2O 94.3
Sd 0
pH 10.5
Pf 0.40
Mf 1.30
Cl 8500
Ca 200
LCM 0
WOB 45-50
RPM 0-40+110
PP 1750/1900
SPM 110
Mud: 12225
Wt 9.1
Vis 42
PV 13
YP 10
GS 2/4
WL 7.6
Cake 1
Sol 5.5
Oil 0
H2O 94.5
Sd 0
pH 11.5
Pf 0.70
Mf 1.90
Cl 9000
Ca 120
LCM 0
Bit 32
Smith
30.2° 334.7° AZ
SLIDE 12066 – 12080
TOTAL GAS 10 - 45 - 6 UNITS
31.5° 333.5° AZ
LOST 250 B AT 12096
SLIDE 12096 – 12106
12100
TOTAL GAS 12 - 138 - 10 UNITS
HIGH ROTARY & MOTOR TORQUE AT 12109
33.1° 331.5° AZ
SLIDE 12128 – 12139
TOTAL GAS 4 - 84 - 9 UNITS
HIGH ROTARY & MOTOR TORQUE AT 12142
33.8° 331.4° AZ
34.0° 331.5° AZ
TOTAL GAS 5 - 26 - 4 UNITS
SLIDE 12189 – 12200
12200
34.4° 334.1° AZ
SLIDE 12220 – 12231
34.8° 334.4° AZ
MOTOR CHANGED FROM 1.83 TO 1.5 DEG

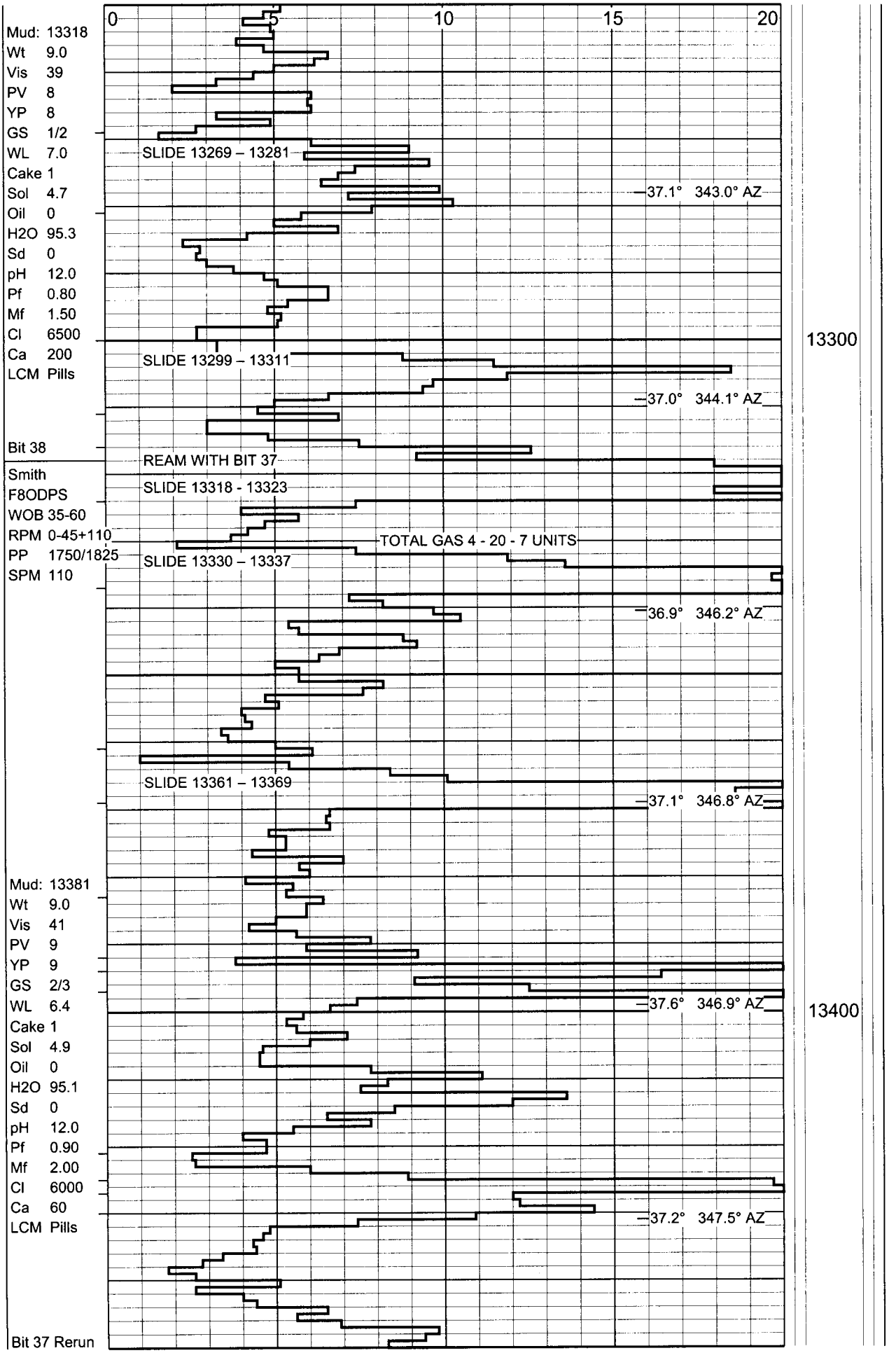

F67ODPS
WOB 45-70
RPM 0-60+110
PP 1700/1800
SPM 110
0
5
10
15
20
34.8° 333.8° AZ
Mud: 12300
Wt 9.1
Vis 42
PV 11
YP 11
GS 2/6
WL 7.0
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 12.0
Pf 1.00
Mf 1.80
Cl 8400
Ca 100
LCM Pills
12300
35.0° 333.7° AZ
SLIDE 12312 - 12328
35.9° 333.6° AZ
35.8° 333.5° AZ
WOB 45-50
RPM 0-60+110
PP 1750/1850
SPM 110
TOTAL GAS 7 - 91 UNITS
35.7° 333.6° AZ
12400
TOTAL GAS 61 - 10 UNITS
35.9° 333.1° AZ

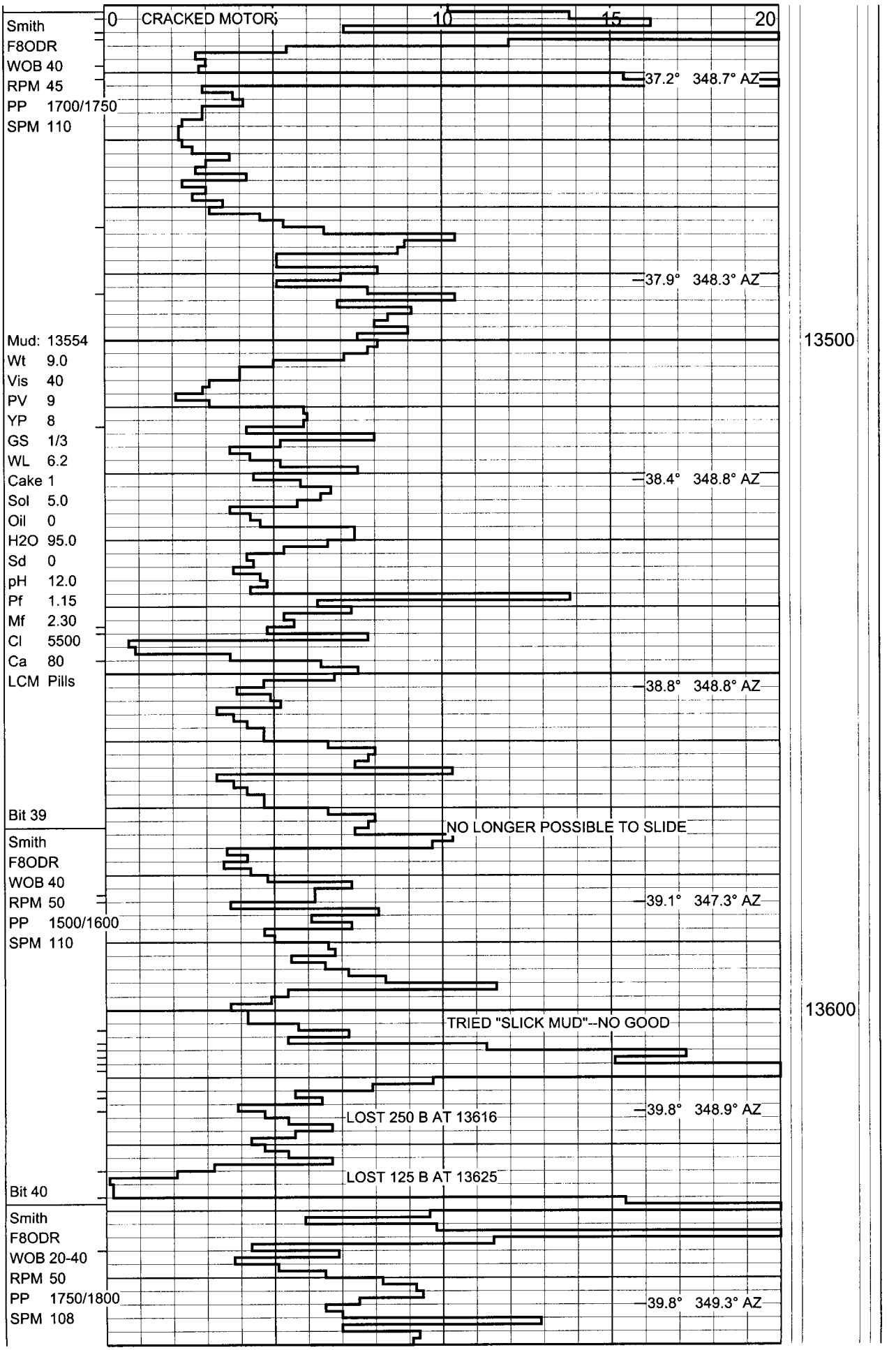

0
5
10
15
20
36.3° 332.7° AZ
TOTAL GAS 13 - 58 - 15 UNITS
SLIGHT INCREASE IN MOTOR TORQUE
36.3° 333.2° AZ
WOB 35-55
RPM 0-50+110
PP 1750/1850
SPM 110
12500
SLIGHT INCREASE IN MOTOR TORQUE
TOTAL GAS 13 - 273 - 10 UNITS
35.9° 332.9° AZ
TOTAL GAS 13 - 106 - 10 UNITS
Mud: 12555
Wt 9.0
Vis 42
PV 12
YP 13
GS 2/8
WL 6.6
Cake 1
Sol 4.5
Oil 0
H2O 95.5
Sd 0
pH 12.0
Pf 1.00
Mf 1.60
Cl 8000
Ca 120
LCM Pills
36.4° 333.4° AZ
36.7° 331.7° AZ
SLIDE 12593 – 12603
12600
36.5° 333.7° AZ
Bit 33
Smith
F67ODPS
WOB 40-58
RPM 0-50+110
PP 1700/1800
SPM 110
SLIDE 12626 – 12636
36.4° 335.5° AZ

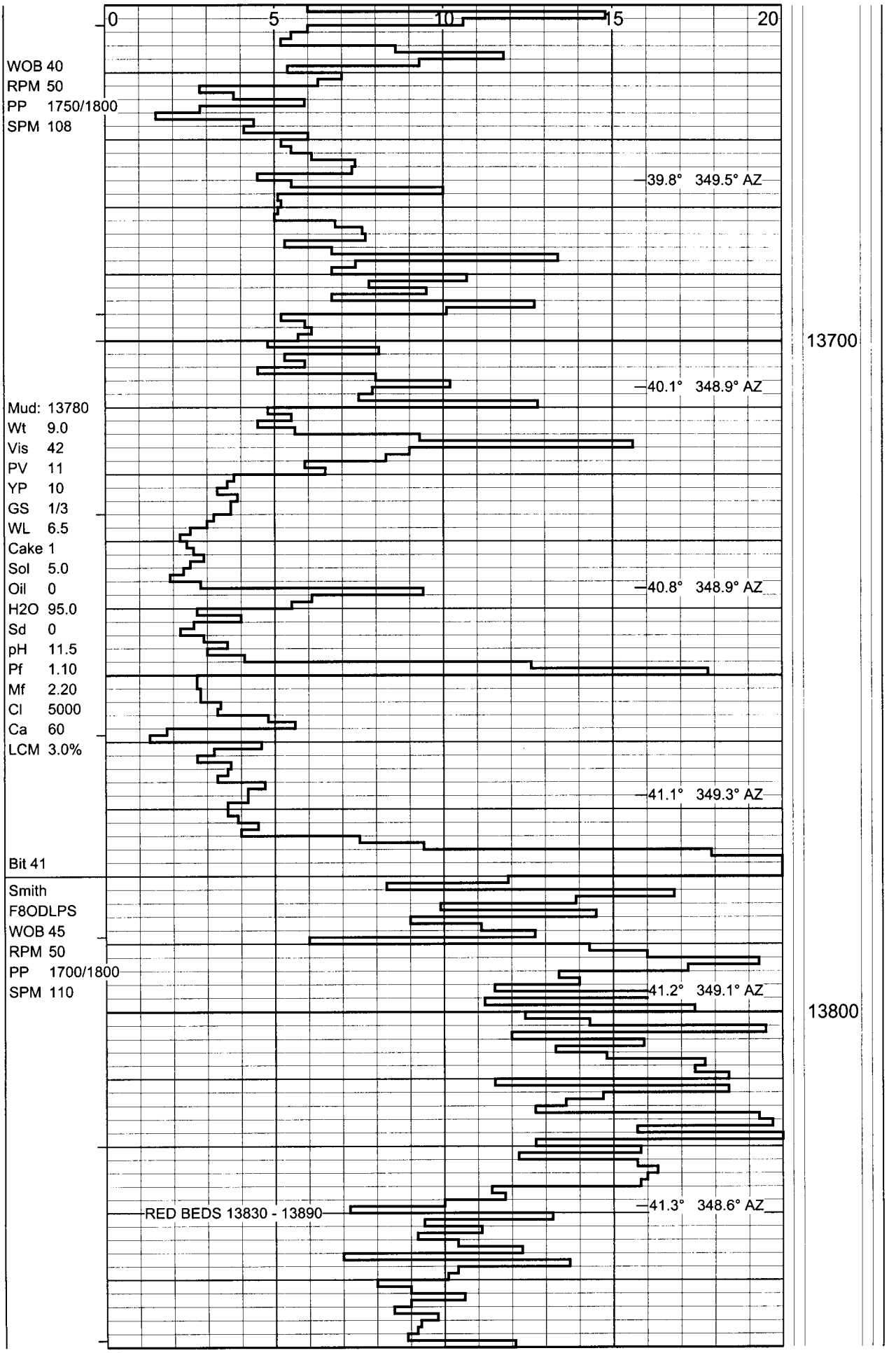

0
5
10
15
20
12660
Weber
Anhy.
SLIDE 12654 – 12664
36.3° 336.9° AZ
SLIDE 12685 – 12691
WOB 45-58
RPM 0-50+110
PP 1700/1800
SPM 110
12700
36.4° 337.7° AZ
SLIDE 12716 – 12724
36.4° 338.1° AZ
SLIDE 12747 – 12755
WOB 45-60
RPM 0-50+110
PP 1750/1850
SPM 110
12767
Weber
Ss
36.4° 338.4° AZ
SLIDE 12778 – 12786
Mud: 12790
Wt 9.1
Vis 42
PV 12
YP 12
GS 2/6
WL 6.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 11.8
Pf 0.90
Mf 1.40
Cl 7700
Ca 160
LCM Pills
36.5° 339.4° AZ
12800
SLIDE 12810 – 12818
36.9° 339.3° AZ
TOTAL GAS 5 - 121 - 15 UNITS


0
5
10
15
20
37.1° 338.9° AZ
WOB 45-55
RPM 0-50+110
PP 1750/1850
SPM 110
37.5° 338.4° AZ
12900
TOTAL GAS 12 - 71 UNITS
SLIDE 12904 – 12914
Mud: 12920
Wt 9.1
Vis 42
PV 11
YP 10
GS 2/5
WL 6.8
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 12.0
Pf 1.00
Mf 1.40
Cl 7600
Ca 180
LCM Pills
LOST 35 B/24 HRS
38.0° 338.2° AZ
TOTAL GAS 111 - 55 UNITS
INCREASED ROTARY & MOTOR TORQUE AT 12914 & 12927
SLIDE 12934 – 12944
38.5° 338.7° AZ
SLIDE 12965 – 12975
WORK TIGHT HOLE 1 HR
38.4° 339.8° AZ
Bit 34
SLIDE 12996 – 13010
REAM UNDERGAUGE HOLE 12901 - 13000
13000
Smith
F67ODPS
WOB 35-55
RPM 0-45+110
PP 1750/1850
SPM 110
TOTAL GAS 22 - 230 - 6 UNITS
37.5° 340.9° AZ
SLIDE 13028 – 13038
TOTAL GAS 7 - 78 - 9 UNITS
37.2° 340.9° AZ


0
5
10
15
20
WOB 35-60
RPM 0-45+110
PP 1750/1850
SPM 110
SLIDE 13059 – 13067
Mud: 13150
Wt 9.1
Vis 42
PV 12
YP 9
GS 2/6
WL 6.4
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 12.0
Pf 1.00
Mf 1.50
Cl 7500
Ca 180
LCM Pills
37.7° 339.5° AZ
TOTAL GAS 15 - 55 - 9 UNITS
SLIDE 13091 – 13100
13100
38.3° 340.2° AZ
SLIDE 13122 – 13134
REAM UNDERGAUGE HOLE 12947 - 13150 WITH BIT 35
RUN FMI DIPMETER AT 13150
LOST 35 B/24 HRS
Bit 36
Smith
F8ODR
WOB 30-58
RPM 0-50+110
PP 1850/1950
SPM 110
38.4° 339.8° AZ
REPAIR HIGH CLUTCH AT 13150
SLIDE 13176 – 13188
Mud: 13227
Wt 9.0
Vis 41
PV 10
YP 10
GS 1/3
WL 7.0
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 12.0
Pf 0.80
Mf 1.50
Cl 7000
Ca 280
LCM Pills
38.2° 340.6° AZ
13200
SLIDE 13206 – 13218
38.0° 342.1° AZ
TOTAL GAS 4 - 67 - 4 UNITS
SLIDE 13238 – 13250
37.5° 343.2° AZ


0
5
10
15
20
Mud: 13318
Wt 9.0
Vis 39
PV 8
YP 8
GS 1/2
WL 7.0
Cake 1
Sol 4.7
Oil 0
H2O 95.3
Sd 0
pH 12.0
Pf 0.80
Mf 1.50
Cl 6500
Ca 200
LCM Pills
Bit 38
Smith
F8ODPS
WOB 35-60
RPM 0-45+110
PP 1750/1825
SPM 110
SLIDE 13269 – 13281
37.1° 343.0° AZ
13300
SLIDE 13299 – 13311
37.0° 344.1° AZ
REAM WITH BIT 37
SLIDE 13318 - 13323
TOTAL GAS 4 - 20 - 7 UNITS
SLIDE 13330 – 13337
36.9° 346.2° AZ
SLIDE 13361 – 13369
37.1° 346.8° AZ
Mud: 13381
Wt 9.0
Vis 41
PV 9
YP 9
GS 2/3
WL 6.4
Cake 1
Sol 4.9
Oil 0
H2O 95.1
Sd 0
pH 12.0
Pf 0.90
Mf 2.00
Cl 6000
Ca 60
LCM Pills
Bit 37 Rerun
37.6° 346.9° AZ
13400
37.2° 347.5° AZ


0
CRACKED MOTOR
10
15
20
Smith
F8ODR
WOB 40
RPM 45
PP 1700/1750
SPM 110
37.2° 348.7° AZ
37.9° 348.3° AZ
13500
Mud: 13554
Wt 9.0
Vis 40
PV 9
YP 8
GS 1/3
WL 6.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 12.0
Pf 1.15
Mf 2.30
Cl 5500
Ca 80
LCM Pills
38.4° 348.8° AZ
38.8° 348.8° AZ
Bit 39
NO LONGER POSSIBLE TO SLIDE
Smith
F8ODR
WOB 40
RPM 50
PP 1500/1600
SPM 110
39.1° 347.3° AZ
13600
TRIED "SLICK MUD"--NO GOOD
LOST 250 B AT 13616
39.8° 348.9° AZ
LOST 125 B AT 13625
Bit 40
Smith
F8ODR
WOB 20-40
RPM 50
PP 1750/1800
SPM 108
39.8° 349.3° AZ


0
5
10
15
20
WOB 40
RPM 50
PP 1750/1800
SPM 108
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13700
40.1° 348.9° AZ
Mud: 13780
Wt 9.0
Vis 42
PV 11
YP 10
GS 1/3
WL 6.5
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 11.5
Pf 1.10
Mf 2.20
Cl 5000
Ca 60
LCM 3.0%
40.8° 348.9° AZ
41.1° 349.3° AZ
Bit 41
Smith
F8ODLPS
WOB 45
RPM 50
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SPM 110
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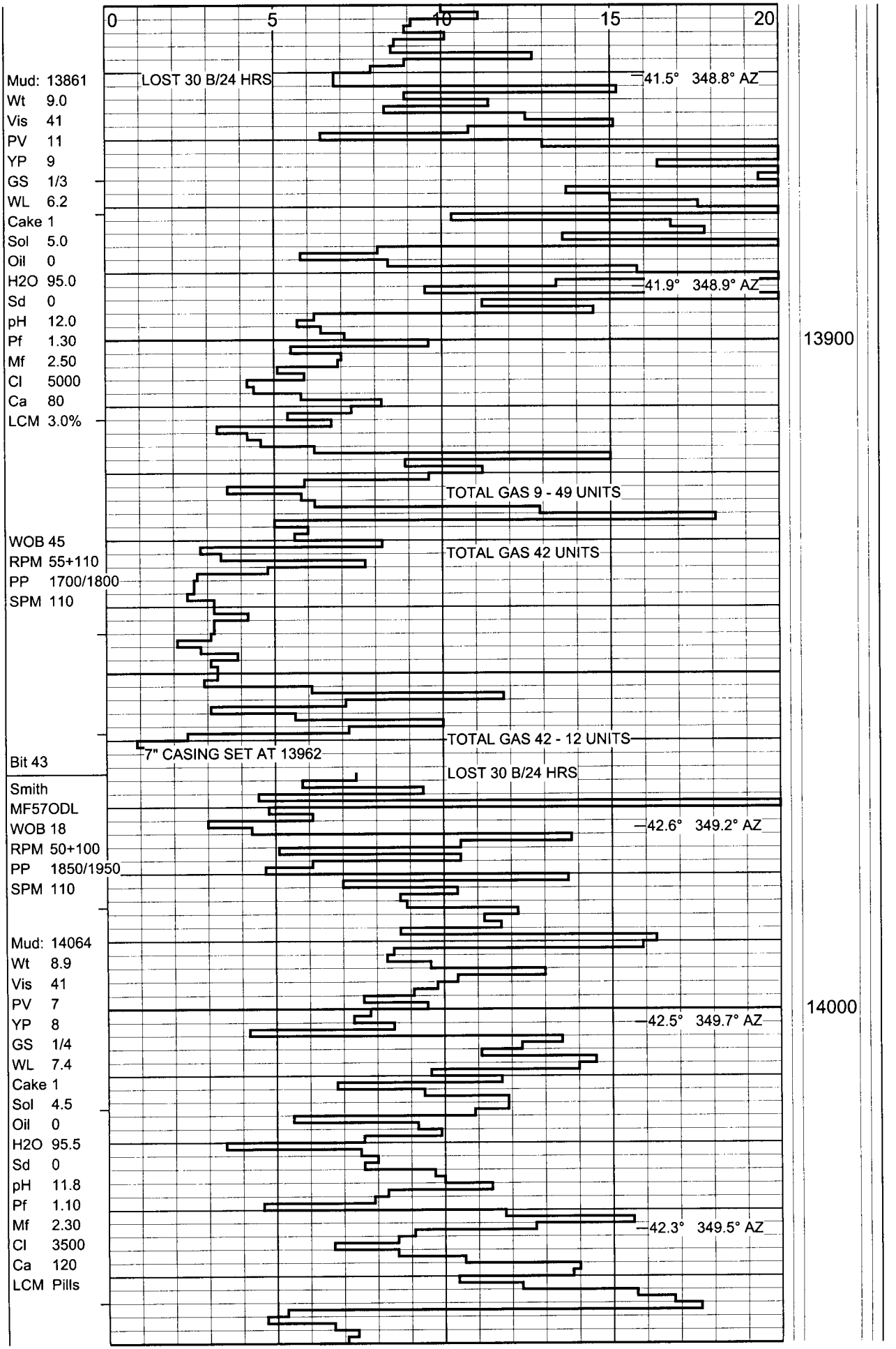
13800
RED BEDS 13830 - 13890
41.3° 348.6° AZ


0
5
10
15
20
Mud: 13861
Wt 9.0
Vis 41
PV 11
YP 9
GS 1/3
WL 6.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0
pH 12.0
Pf 1.30
Mf 2.50
Cl 5000
Ca 80
LCM 3.0%
LOST 30 B/24 HRS
41.5° 348.8° AZ
41.9° 348.9° AZ
13900
TOTAL GAS 9 - 49 UNITS
WOB 45
RPM 55+110
PP 1700/1800
SPM 110
TOTAL GAS 42 UNITS
TOTAL GAS 42 - 12 UNITS
7" CASING SET AT 13962
Bit 43
Smith
MF57ODL
WOB 18
RPM 50+100
PP 1850/1950
SPM 110
LOST 30 B/24 HRS
42.6° 349.2° AZ
Mud: 14064
Wt 8.9
Vis 41
PV 7
YP 8
GS 1/4
WL 7.4
Cake 1
Sol 4.5
Oil 0
H2O 95.5
Sd 0
pH 11.8
Pf 1.10
Mf 2.30
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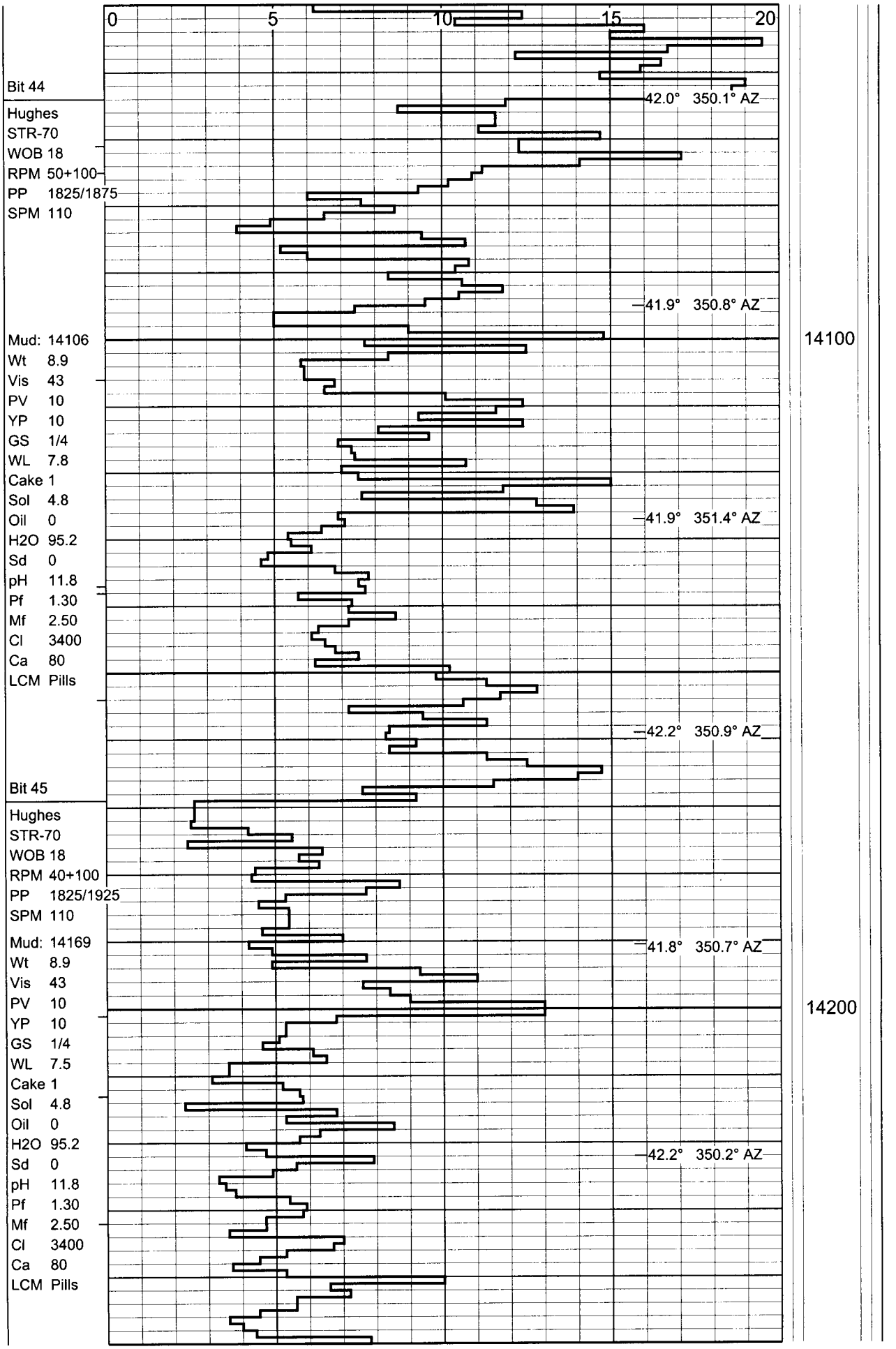
Ca 120
LCM Pills
42.5° 349.7° AZ
14000
42.3° 349.5° AZ


0
5
10
15
20
Bit 44
Hughes
STR-70
WOB 18
RPM 50+100
PP 1825/1875
SPM 110
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41.9° 350.8° AZ
Mud: 14106
Wt 8.9
Vis 43
PV 10
YP 10
GS 1/4
WL 7.8
Cake 1
Sol 4.8
Oil 0
H2O 95.2
Sd 0
pH 11.8
Pf 1.30
Mf 2.50
Cl 3400
Ca 80
LCM Pills
14100
41.9° 351.4° AZ
42.2° 350.9° AZ
Bit 45
Hughes
STR-70
WOB 18
RPM 40+100
PP 1825/1925
SPM 110
Mud: 14169
Wt 8.9
Vis 43
PV 10
YP 10
GS 1/4
WL 7.5
Cake 1
Sol 4.8
Oil 0
H2O 95.2
Sd 0
pH 11.8
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Mf 2.50
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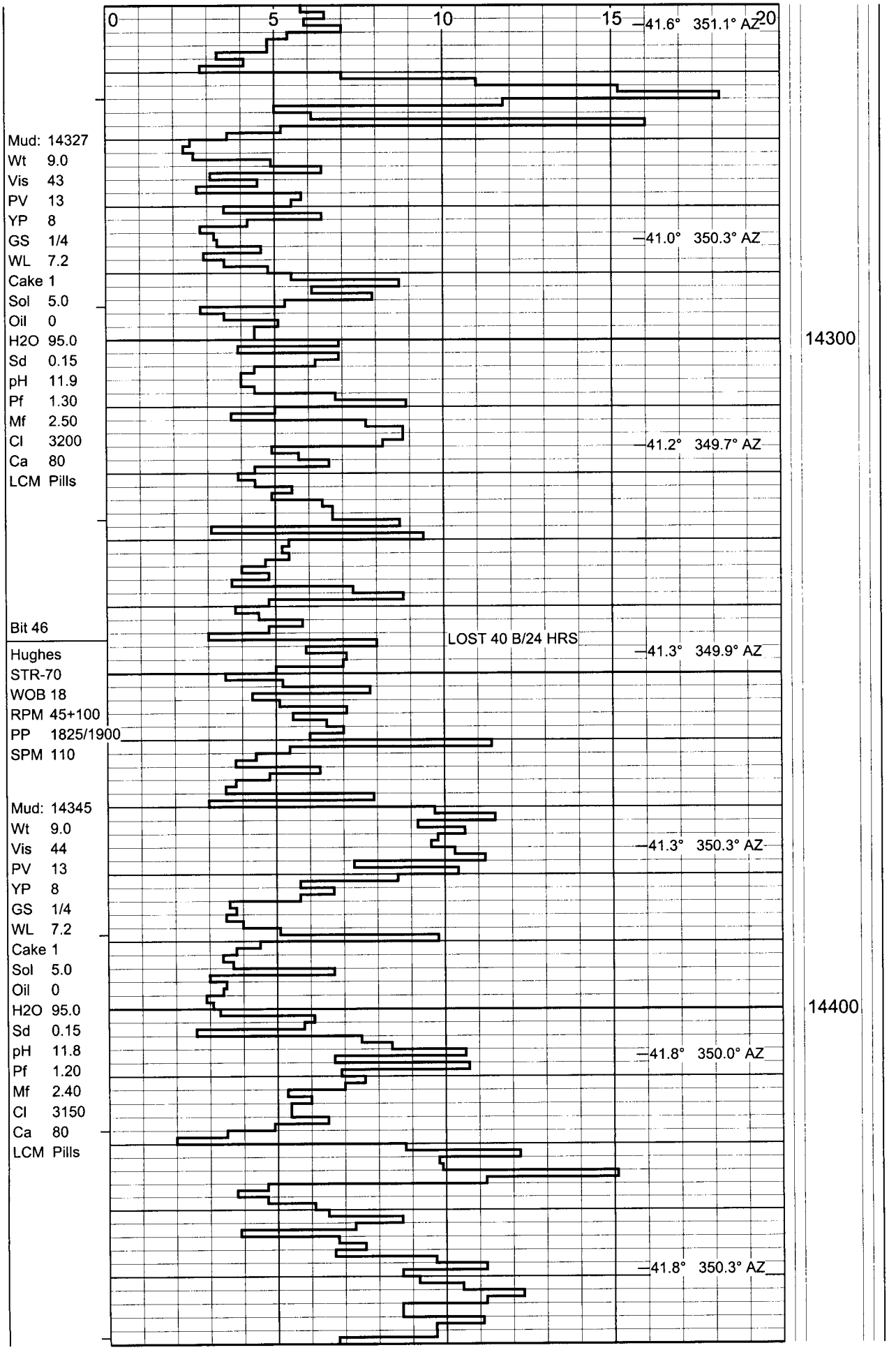
Ca 80
LCM Pills
41.8° 350.7° AZ
14200
42.2° 350.2° AZ


0
5
10
15
20
41.6° 351.1° AZ
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41.2° 349.7° AZ
41.3° 349.9° AZ
41.3° 350.3° AZ
41.8° 350.0° AZ
41.8° 350.3° AZ
14300
14400
Mud: 14327
Wt 9.0
Vis 43
PV 13
YP 8
GS 1/4
WL 7.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0.15
pH 11.9
Pf 1.30
Mf 2.50
Cl 3200
Ca 80
LCM Pills
Bit 46
Hughes
STR-70
WOB 18
RPM 45+100
PP 1825/1900
SPM 110
LOST 40 B/24 HRS
Mud: 14345
Wt 9.0
Vis 44
PV 13
YP 8
GS 1/4
WL 7.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0.15
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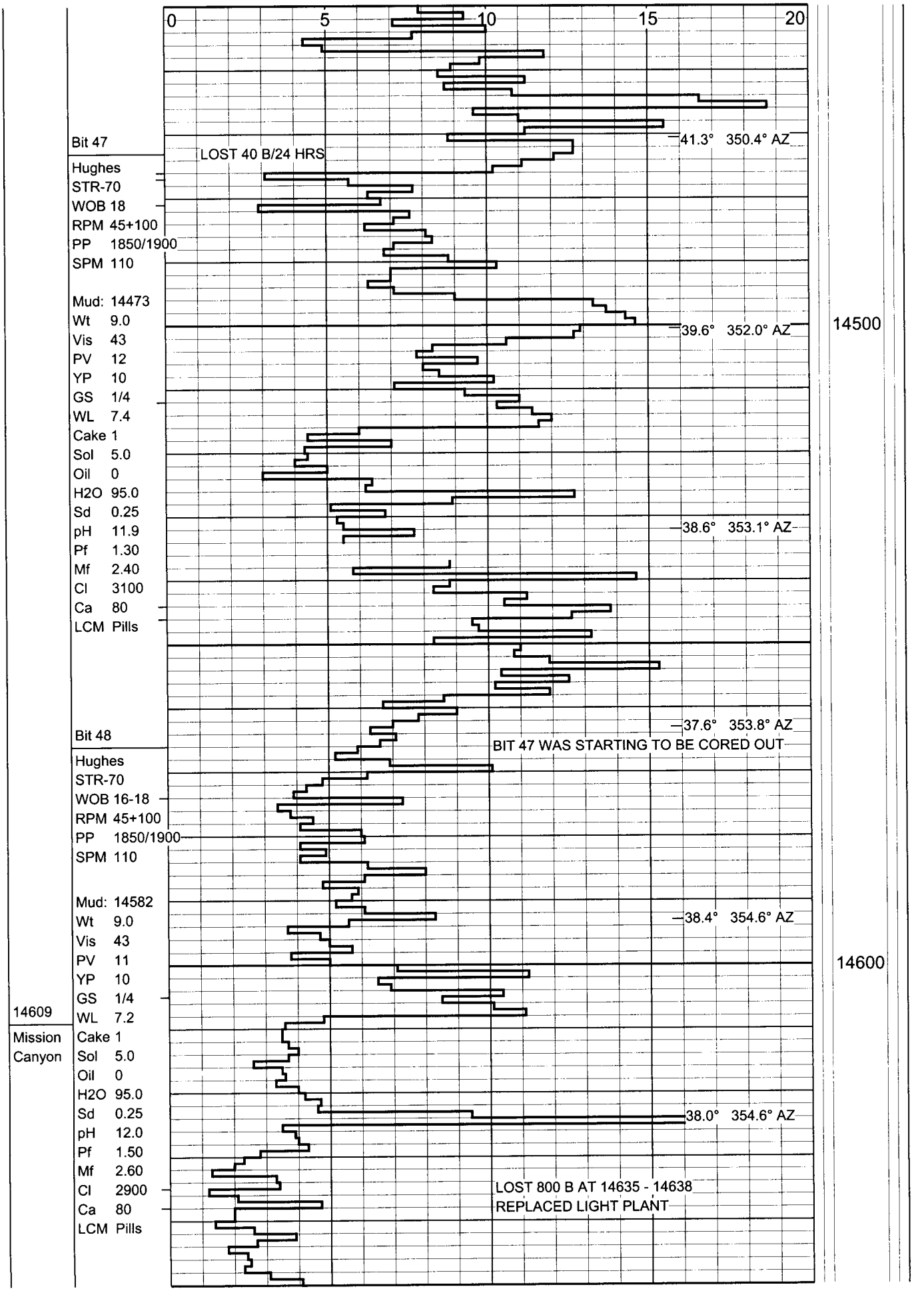
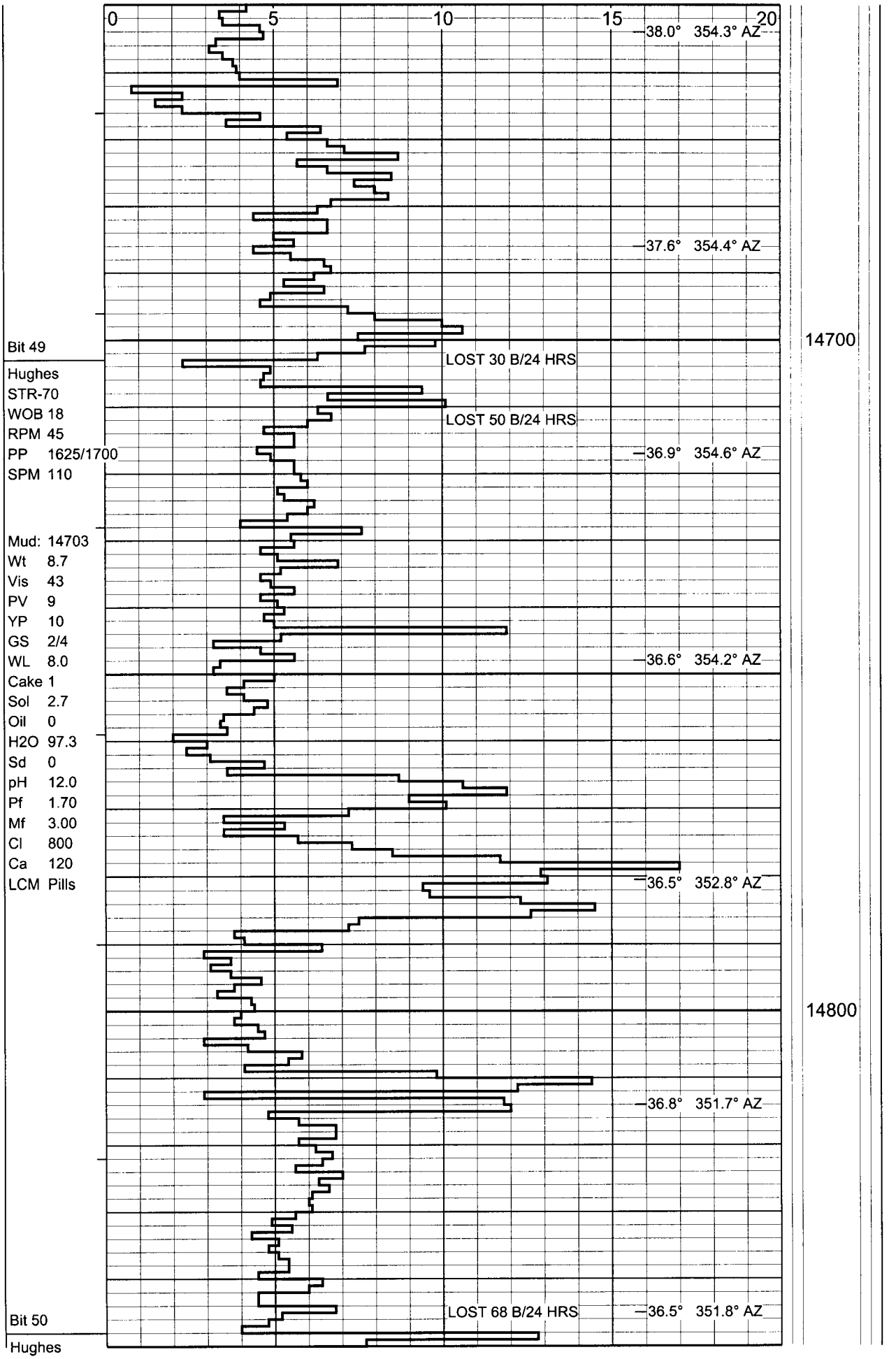
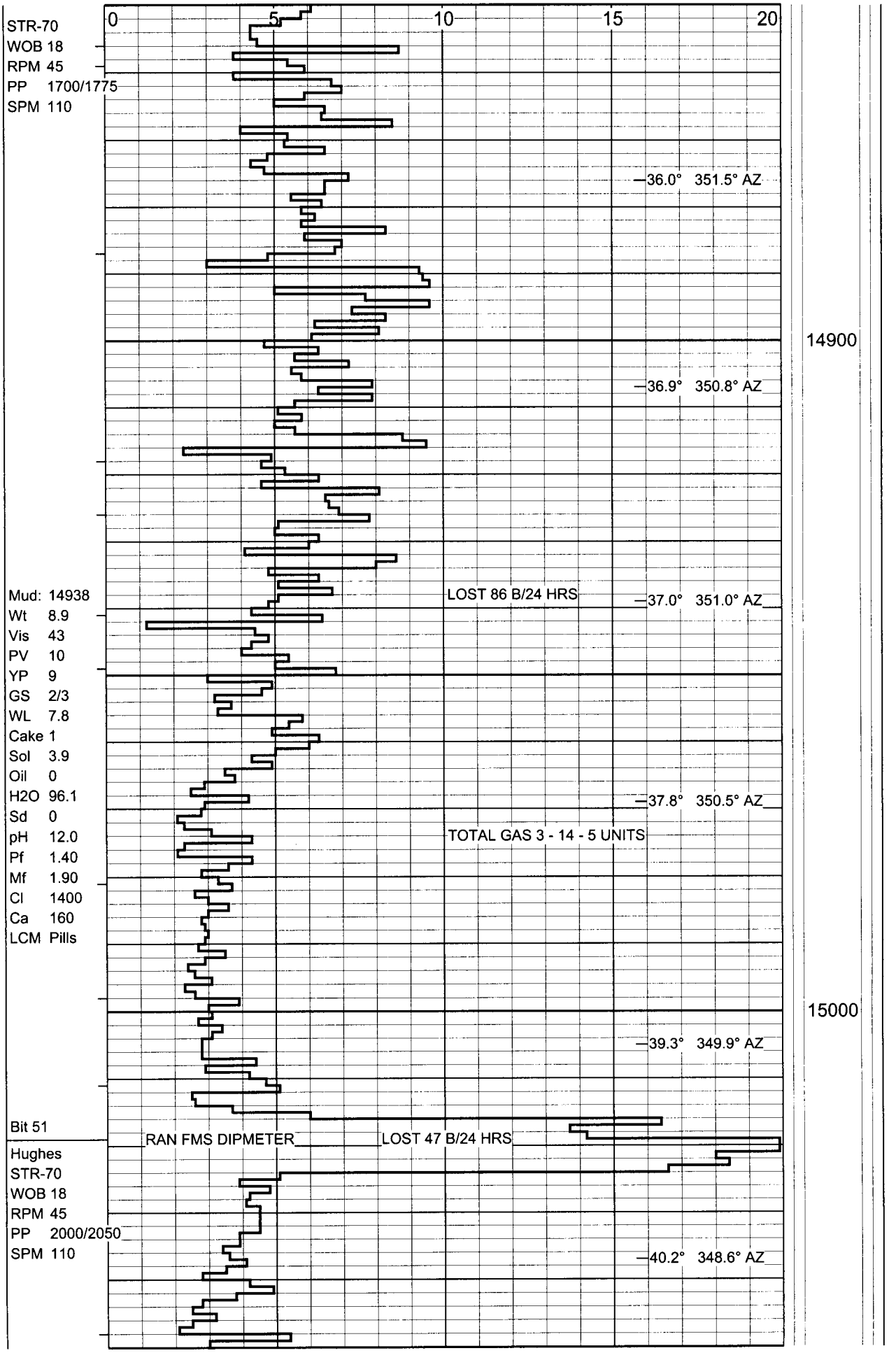
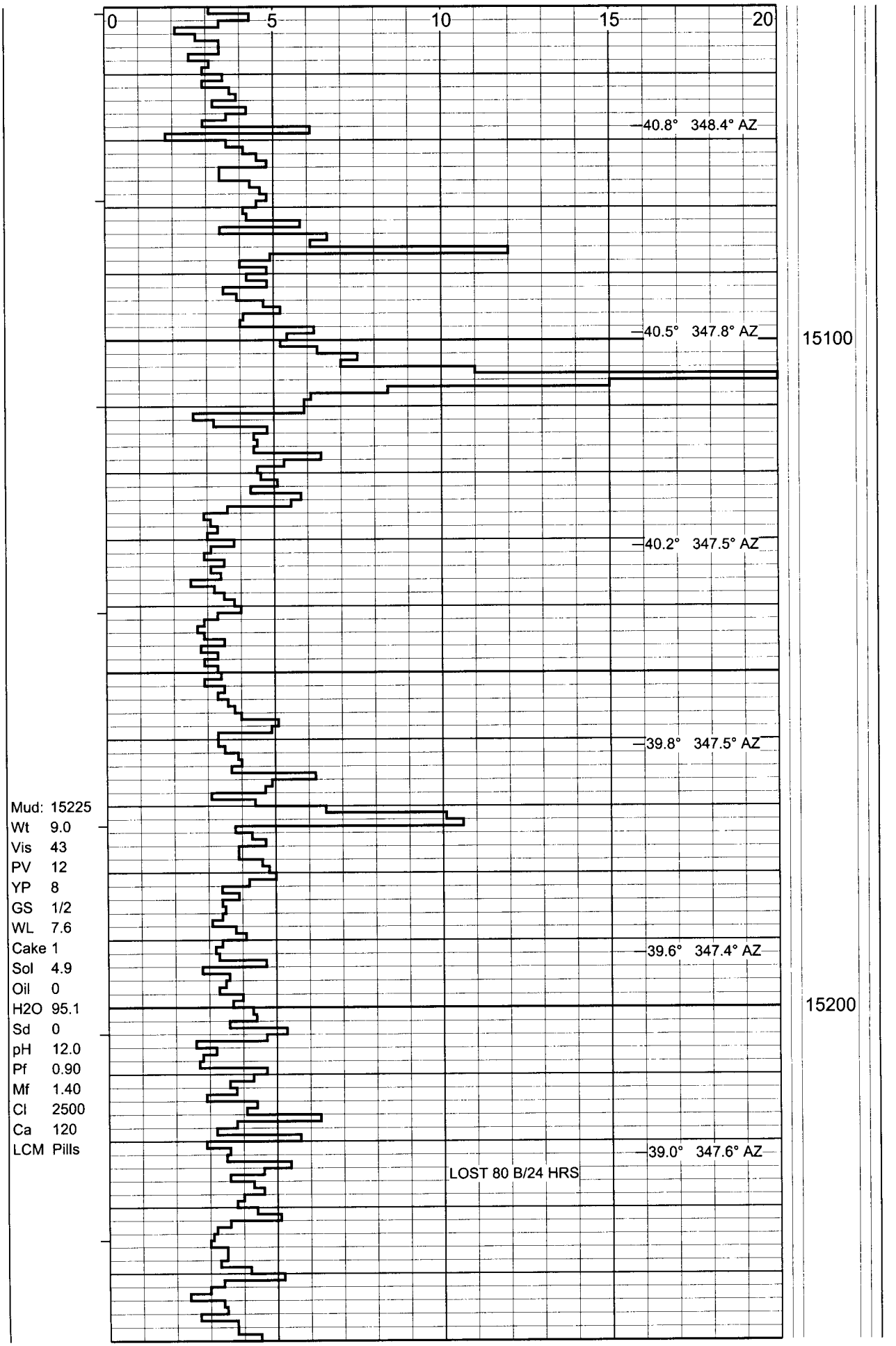
Mf 2.40
Cl 3150
Ca 80
LCM Pills


0
5
10
15
20
Bit 47
Hughes
STR-70
WOB 18
RPM 45+100
PP 1850/1900
SPM 110
Mud: 14473
Wt 9.0
Vis 43
PV 12
YP 10
GS 1/4
WL 7.4
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0.25
pH 11.9
Pf 1.30
Mf 2.40
Cl 3100
Ca 80
LCM Pills
LOST 40 B/24 HRS
41.3° 350.4° AZ
39.6° 352.0° AZ
38.6° 353.1° AZ
14500
Bit 48
Hughes
STR-70
WOB 16-18
RPM 45+100
PP 1850/1900
SPM 110
Mud: 14582
Wt 9.0
Vis 43
PV 11
YP 10
GS 1/4
WL 7.2
Cake 1
Sol 5.0
Oil 0
H2O 95.0
Sd 0.25
pH 12.0
Pf 1.50
Mf 2.60
Cl 2900
Ca 80
LCM Pills
37.6° 353.8° AZ
BIT 47 WAS STARTING TO BE CORED OUT
38.4° 354.6° AZ
14600
14609
Mission
Canyon
38.0° 354.6° AZ
LOST 800 B AT 14635 - 14638
REPLACED LIGHT PLANT


0
5
10
15
20
38.0° 354.3° AZ
37.6° 354.4° AZ
Bit 49
LOST 30 B/24 HRS
14700
Hughes
STR-70
WOB 18
RPM 45
PP 1625/1700
SPM 110
LOST 50 B/24 HRS
36.9° 354.6° AZ
Mud: 14703
Wt 8.7
Vis 43
PV 9
YP 10
GS 2/4
WL 8.0
Cake 1
Sol 2.7
Oil 0
H2O 97.3
Sd 0
pH 12.0
Pf 1.70
Mf 3.00
Cl 800
Ca 120
LCM Pills
36.6° 354.2° AZ
36.5° 352.8° AZ
14800
36.8° 351.7° AZ
Bit 50
LOST 68 B/24 HRS
36.5° 351.8° AZ
Hughes


STR-70
WOB 18
RPM 45
PP 1700/1775
SPM 110
0
5
10
15
20
36.0° 351.5° AZ
14900
36.9° 350.8° AZ
Mud: 14938
Wt 8.9
Vis 43
PV 10
YP 9
GS 2/3
WL 7.8
Cake 1
Sol 3.9
Oil 0
H2O 96.1
Sd 0
pH 12.0
Pf 1.40
Mf 1.90
Cl 1400
Ca 160
LCM Pills
LOST 86 B/24 HRS
37.0° 351.0° AZ
37.8° 350.5° AZ
TOTAL GAS 3 - 14 - 5 UNITS
15000
39.3° 349.9° AZ
Bit 51
RAN FMS DIPMETER
LOST 47 B/24 HRS
Hughes
STR-70
WOB 18
RPM 45
PP 2000/2050
SPM 110
40.2° 348.6° AZ


0
5
10
15
20
40.8° 348.4° AZ
40.5° 347.8° AZ
15100
40.2° 347.5° AZ
39.8° 347.5° AZ
Mud: 15225
Wt 9.0
Vis 43
PV 12
YP 8
GS 1/2
WL 7.6
Cake 1
Sol 4.9
Oil 0
H2O 95.1
Sd 0
pH 12.0
Pf 0.90
Mf 1.40
Cl 2500
Ca 120
LCM Pills
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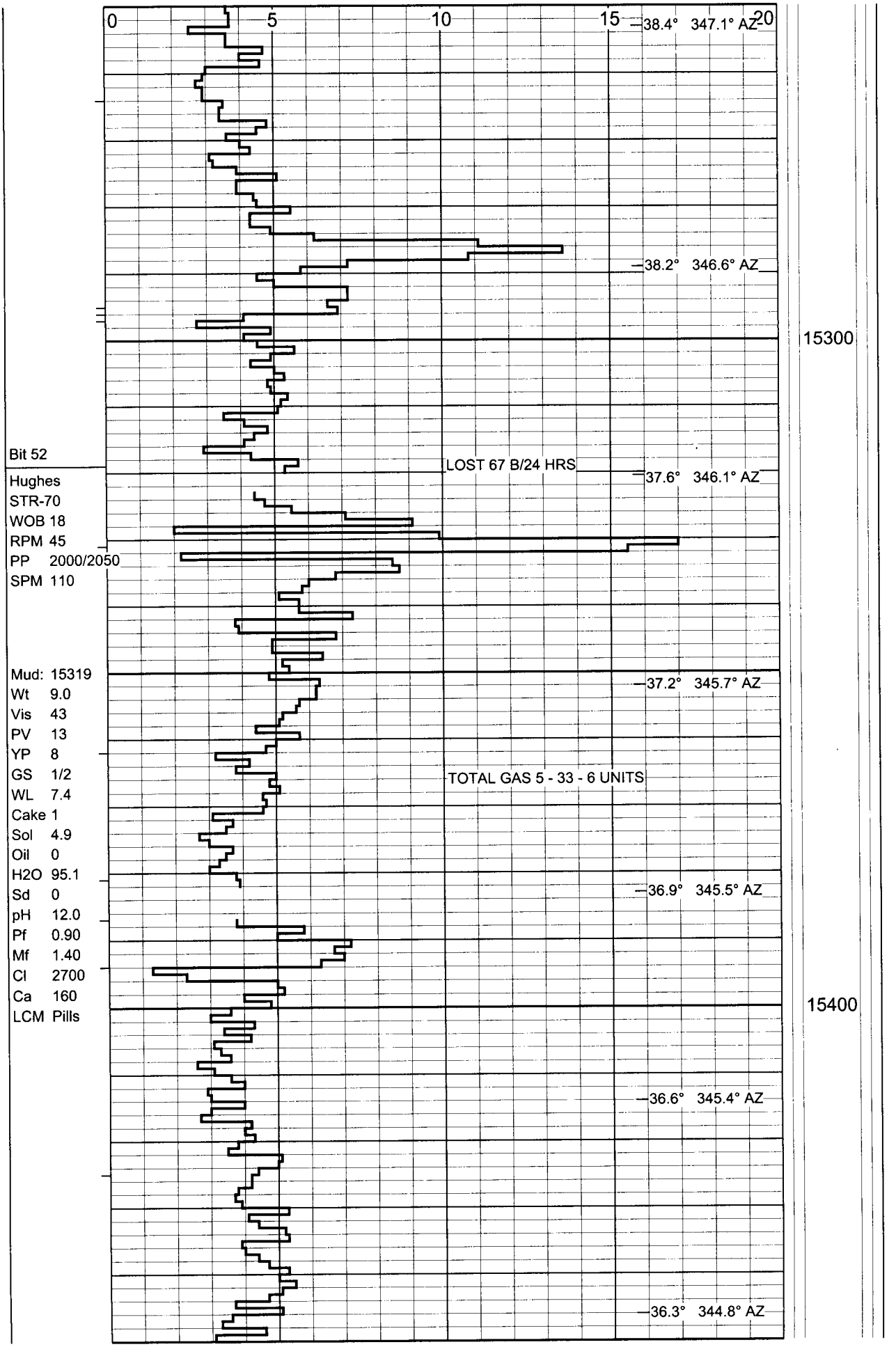
15200
39.0° 347.6° AZ
LOST 80 B/24 HRS


0
5
10
15
20
38.4° 347.1° AZ
38.2° 346.6° AZ
15300
Bit 52
Hughes
STR-70
WOB 18
RPM 45
PP 2000/2050
SPM 110
LOST 67 B/24 HRS
37.6° 346.1° AZ
Mud: 15319
Wt 9.0
Vis 43
PV 13
YP 8
GS 1/2
WL 7.4
Cake 1
Sol 4.9
Oil 0
H2O 95.1
Sd 0
pH 12.0
Pf 0.90
Mf 1.40
Cl 2700
Ca 160
LCM Pills
37.2° 345.7° AZ
TOTAL GAS 5 - 33 - 6 UNITS
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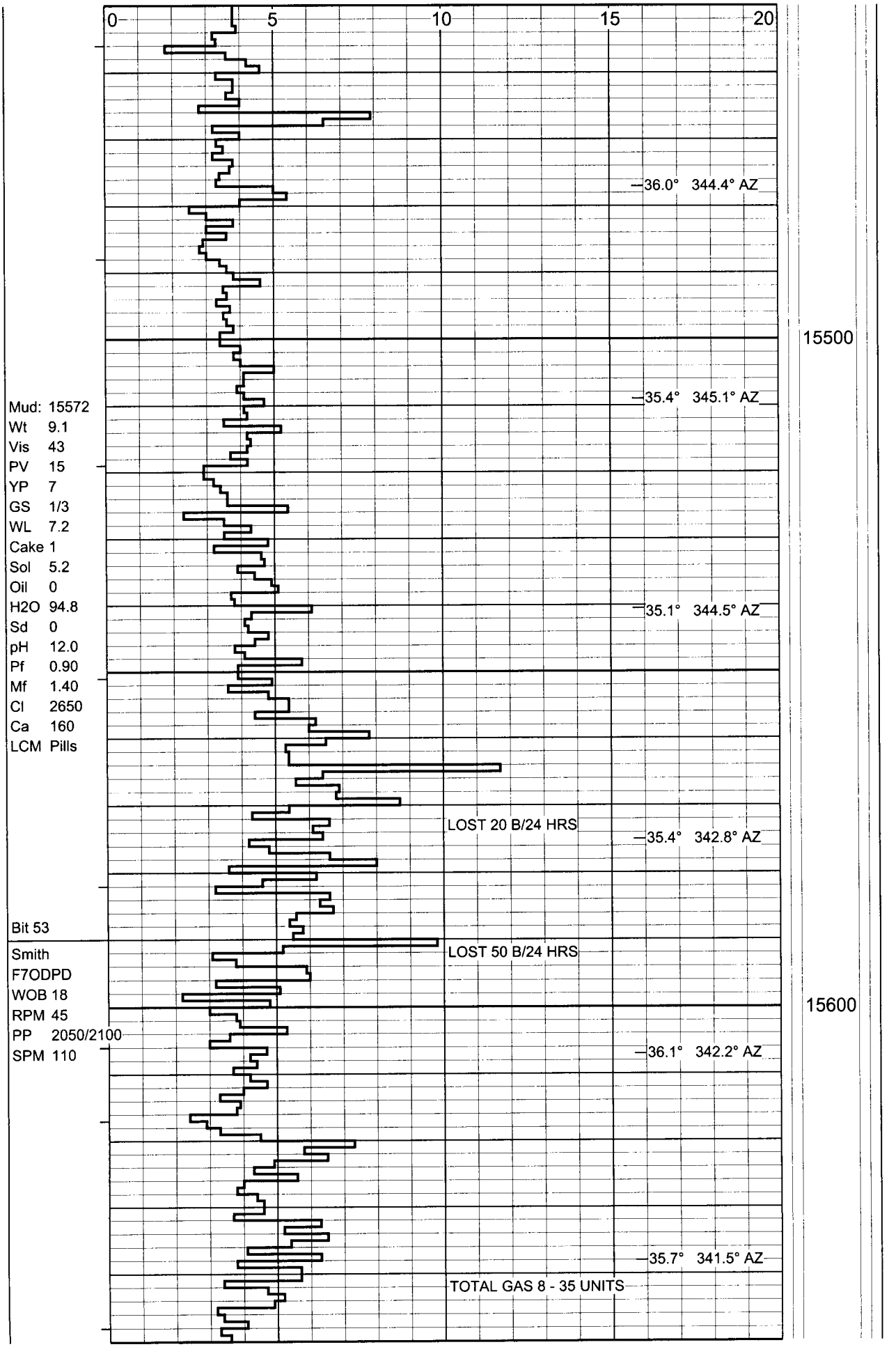
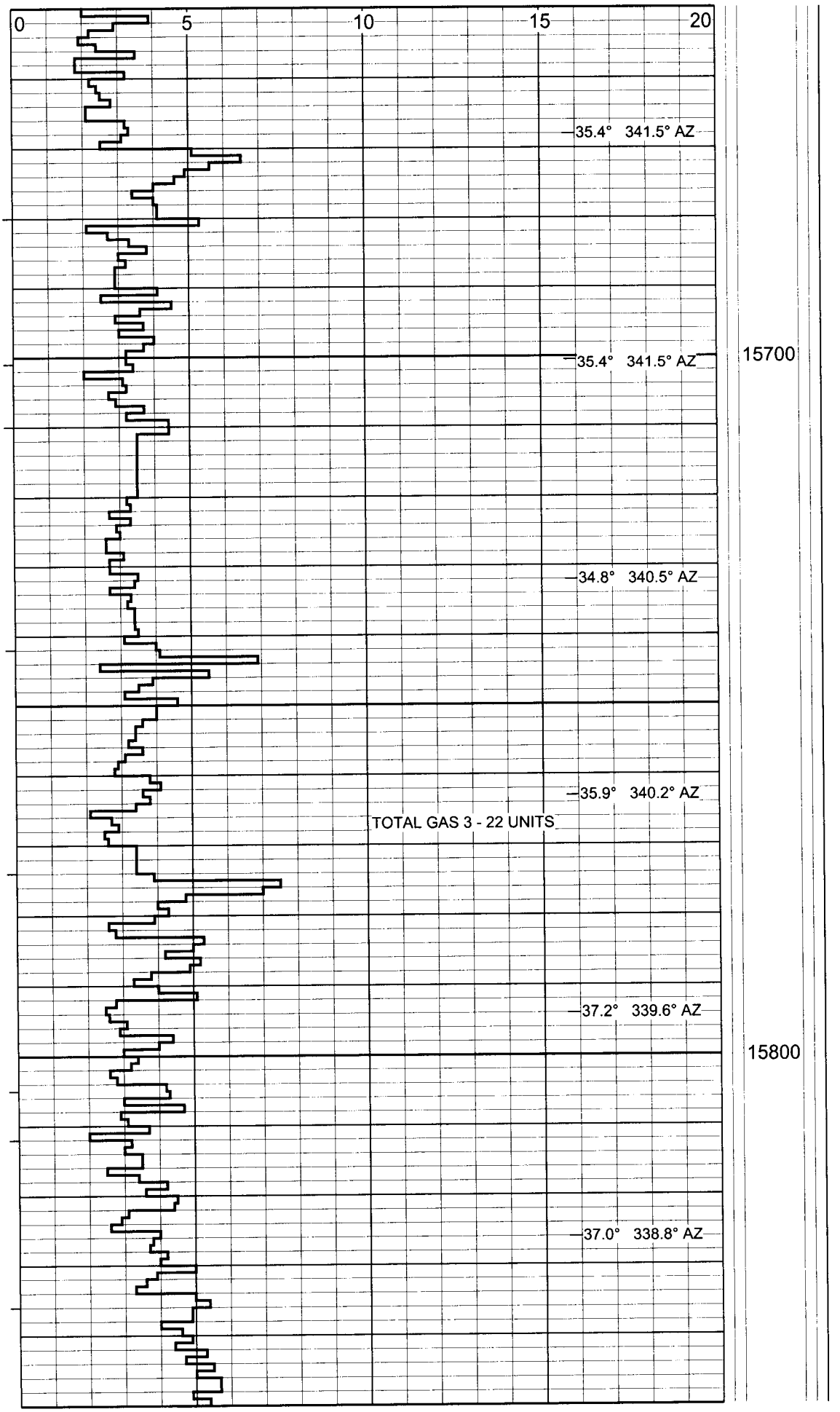
15400
36.6° 345.4° AZ
36.3° 344.8° AZ


0
5
10
15
20
36.0° 344.4° AZ
15500
35.4° 345.1° AZ
Mud: 15572
Wt 9.1
Vis 43
PV 15
YP 7
GS 1/3
WL 7.2
Cake 1
Sol 5.2
Oil 0
H2O 94.8
Sd 0
pH 12.0
Pf 0.90
Mf 1.40
Cl 2650
Ca 160
LCM Pills
35.1° 344.5° AZ
LOST 20 B/24 HRS
35.4° 342.8° AZ
Bit 53
Smith
F7ODPD
WOB 18
RPM 45
PP 2050/2100
SPM 110
LOST 50 B/24 HRS
15600
36.1° 342.2° AZ
35.7° 341.5° AZ
TOTAL GAS 8 - 35 UNITS


0
5
10
15
20
35.4° 341.5° AZ
35.4° 341.5° AZ
15700
34.8° 340.5° AZ
35.9° 340.2° AZ
TOTAL GAS 3 - 22 UNITS
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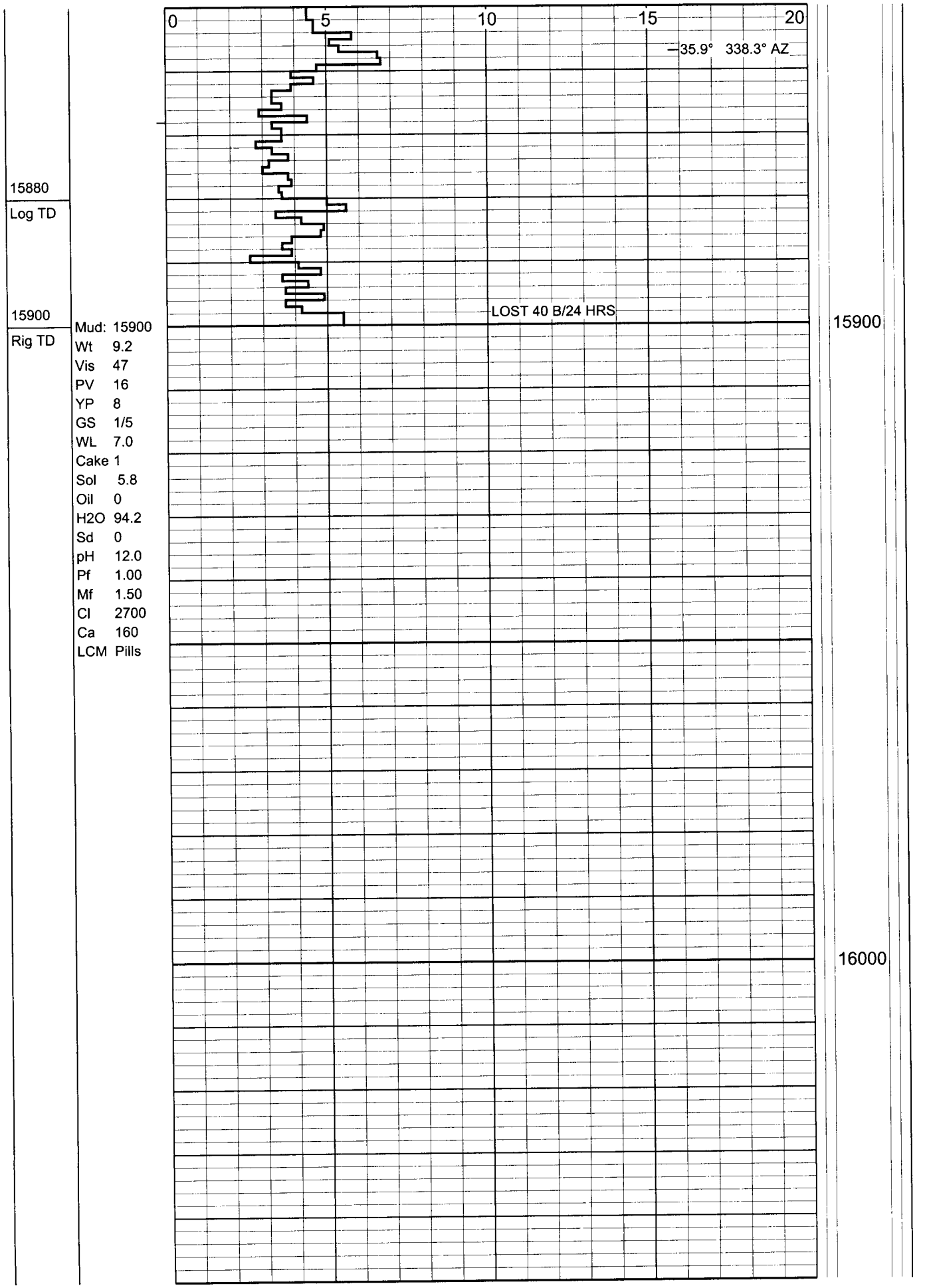
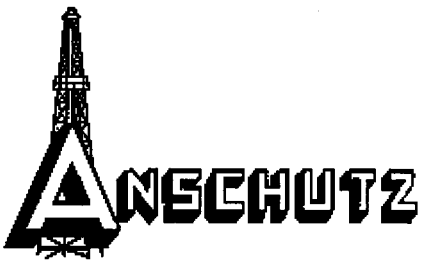
15800
37.0° 338.8° AZ


0
5
10
15
20
35.9° 338.3° AZ
15880
Log TD
15900
Rig TD
LOST 40 B/24 HRS
15900
16000
Mud: 15900
Wt 9.2
Vis 47
PV 16
YP 8
GS 1/5
WL 7.0
Cake 1
Sol 5.8
Oil 0
H2O 94.2
Sd 0
pH 12.0
Pf 1.00
Mf 1.50
Cl 2700
Ca 160
LCM Pills



H_2S Contingency Plan

for

ANSCHUTZ RANCH DEEP #10-27

Section 27, T4N, R7E

Summit County, Utah

Anschutz Exploration Corporation
555 17th Street, Suite 2400
Denver, Colorado 80202

MICROFICHE

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Introduction

It is the policy of Anschutz Exploration Corporation to provide a safe and healthful work environment for all of its employees as well as contractors that may work on Anschutz leases. Anschutz Exploration Corporation makes a continued effort to comply with laws and regulations relative to worker safety and health, and to manage all operations in a manner to reduce risk.

The following is a H_2S Contingency Plan for the Anschutz Ranch Deep #10-27 well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling and/or completion operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the well site in the event of a sudden release of hydrogen sulfide H_2S. All personnel working on the well site as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the drilling operation is necessary for this plan to be effective.

This plan shall incorporate the existing Emergency Response Plan of the Union Pacific Resources Wahsatch Gathering System as it pertains to the public safety in the event of any atmospheric release of H_2S. It is imperative that the WGS Control Room be contacted as soon as possible in the event of any release so this plan can be implemented.

Directions to location:

PLEASE SEE ATTACHED MAPS (2)

I. Duties & Responsibilities

In order to assure proper execution of the contingency plan, it is essential that one person be responsible and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. Anschutz Exploration Corporation drilling representative on location. If unable to perform his/her duties,

2. alternate Anschutz representative. If unable to perform his/her duties,

3. rig Toolpusher/Supervisor. If unable to perform his/her duties,

4. safety consultant representative, if available.

A. All Personnel

1. Always be alert for possible H_2S alarms - both audible and visual.

2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.

3. Develop a "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas, should there be no wind.

4. Familiarize yourself with nearest escape routes for safe evacuation.

5. Should H_2S alarm sound, DON'T PANIC. Remain calm and follow instructions of person in charge.

6. If the H_2S alarms sound:

   a. Essential personnel shall don the appropriate respiratory protective equipment and follow company procedures. Essential personnel will continue to wear respiratory protective equipment until the area is deemed safe (H_2S concentration less than 10 ppm).

   b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape breathing systems. Wait there for further instructions from Anschutz drilling representative.

   c. Initiate rescue protocol if necessary, following training procedures.

B. Drilling Foreman

1. The Anschutz drilling foreman will confirm that all personnel on location are trained in H_2S safety and aware of the above list of duties when the H_2S plan becomes effective at 300 feet above the Dinwoody Formation.

2. The Anschutz foreman will ensure that all personnel observe all safety and emergency procedures.

3. The Anschutz foreman will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.

4. Should any extreme danger condition exist, the Anschutz foreman will:

   a. Assess the situation and advise all personnel by appropriate means of communication.
   b. Be responsible for determining that the extreme danger condition is warranted and the red flag shall be posted at location entrance.
   c. Go to safe briefing area and give clear instructions relative to hazard on location, and actions for personnel to follow.
   d. Notify company and regulatory groups of current situation as outlined in company protocol. Notify WGS Control room to activate WGS Emergency Response Plan.
   e. Proceed to rig floor and supervise operations with rig supervisor. Take action to control and reduce the H_2S hazard.
   f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
   g. Be responsible for authorizing evacuation of persons/residents in area surrounding the drilling location.
   h. Commence any ignition procedures if ignition criteria are met.

C. Rig Supervisor - Toolpusher

1. If the Anschutz drilling foreman is unable to perform his/her duties, and the alternate drilling foreman is also unable or unavailable to perform his duties, the drilling rig Toolpusher will assume command of well site operations and all responsibilities listed above for the drilling foreman.

2. Ensure that all rig personnel are properly trained to work in H_2S environment and fully understand purpose of H_2S alarms and actions to take when alarms activate. Ensure that all crew personnel understand the buddy system, safe briefing areas (SBA), and individual duties as well as emergency evacuation procedures.

3. Should an extreme danger operational condition arise, the rig Toolpusher shall assist the Anschutz foreman by:

   a. Proceeding to the rig floor and assist in supervising rig operations.
   b. Ensure that only essential working personnel remain in hazardous areas.
   c. Ensure that all crew members that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
   d. Assign rig crew member or other service representative to block entrance to location. No unauthorized personnel will be allowed entry to location.
   e. Help to determine hazardous "danger zones" on location using portable detection equipment and position electric fans to move gas in any high concentration areas.

D. Safety Consultant

1. During normal operations (no H_2S present), the safety consultant will be responsible for the following:

   a. Ensure that all well site safety equipment is in place and operational.
   b. Ensure that all well site personnel are familiar with location safety layout and operation of all safety equipment.
   c. Assist the Anschutz foreman in performing weekly H_2S drills for location personnel.

2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:

   a. Account for all well site personnel.
   b. Assess any injuries and direct first aid measure.
   c. Ensure that all safety and monitoring equipment is functioning properly and available.
   d. Monitor the safety of well site personnel.
   e. Maintain a close communication with Anschutz foreman.
   f. Be prepared to assist Anschutz foreman with support for rig crew or other personnel using breathing equipment.
   g. Be prepared to assist Anschutz foreman with emergency procedures including possible well ignition.
   h. Be prepared to assist with evacuation of any area residents or other personnel working in the immediate area.

E. Union Pacific Resources Company - Wahsatch Gathering System Office

1. The Union Pacific Resources Company - Wahsatch Gathering System operations control room will be notified of any release of H_2S by the Anschutz Operations Superintendent as well as other Anschutz Exploration Corporation supervisory personnel. The Union Pacific Resources Company - Wahsatch Gathering System Operations Control room will be responsible for notifying and maintaining contact with the Uinta County Fire Protection Agency in the event of a H_2S release. A Memorandum of Understanding between Summit County, Utah and Uinta County, Wyoming, states that the primary responder to any event pertaining to the Wahsatch Gathering System (WGS) will be the Uinta County Fire Protection Agency.

2. The Anschutz drilling foreman will maintain communications with the UPRC - WGS control room to coordinate with any other assistance that might be required.

3. Travel to well site if appropriate.

II. Drilling Rig Layout

A. Location

1. All respiratory protective equipment and H_2S detection equipment will be rigged up 3 days or 500 feet prior to entering the first zone suspected to contain hydrogen sulfide. The rig crews and other service personnel will be trained at this time.

2. The drilling rig will be situated on location to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the BOP's to the circulation tanks.

3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.

4. A minimum of 2 safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These will be located at least 150 ft. or as practical, from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated safe briefing area (SBA) for instructions.

5. Smoking areas will be established and "No Smoking" signs will be posted around the location.

6. Reliable 24 hour radio and telephone communications will be available at the drilling foremen's office.

7. A mud-gas separator will be rigged up and manifolded to the choke system.

8. All equipment that might come in to contact with hydrogen sulfide - drill pipe, drill stem test tools, blowout preventers, casing, choke system will meet Anschutz' metallurgy requirements for H_2S service.

9. The drilling rig will have a continuous electronic H_2S detection system that automatically with activate visible and audible alarms if hydrogen sulfide is detected. The visible light W11 activate if 10 ppm H_2S is present. The audible siren will activate if 15 ppm or higher concentration is present. There will be at least 4 H_2S sensors in place on the drilling rig. They will be located to detect the presence of hydrogen sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, and 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time.

10. The H_2S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.

11. A least 4 windsocks will be placed around the drill site to ensure that everyone on the drilling location can readily determine wind direction. One windsock will be mounted on or near the rig floor to be readily visible to rig crews when tripping pipe.

12. All respiratory protective equipment will be NIOSH/ MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air. Battery powered voice mikes will be available for communication when wearing masks.

13. Both 30 minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have 1 piece of equipment available to them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32°F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.

14. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.

15. H_2S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the driller's log.

III. Safety Procedures

A. Training

All personnel who come onto the drilling location must be properly trained in hydrogen sulfide (H_2S), nitrogen, and oxygen deficient atmosphere safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide (H_2S), nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.

2. Proper use, care and limitations of respiratory protective equipment with hands on practice.

3. Use of both fixed and portable detection toxic gas equipment.

4. Work practices to reduce opportunities for toxic gas exposure as well as confined space procedures.

5. First aid for toxic gas exposure and resuscitation equipment.

6. The buddy system.

7. Emergency evacuation procedures.

8. A review of the contingency plan for the well.

B. Operating Conditions

A three color flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the well site. This system is in compliance with BLM 0.0. # 6 and follows industry standards.

Green Flag Potential Danger

Yellow Flag Moderate Danger

Red Flag Extreme Danger - Do not approach if red flag is flying.

C. Evacuation Plan

There are no permanent residents within a 1-mile radius of the drill site. Anschutz Exploration Corporation and Union Pacific Resources Company have operations within this area and travel the roads in the immediate area.

According to the Union Pacific Resources Company – Wahsatch Gathering System Emergency Response Plan, any evacuation will be conducted under the direction of Jon Lunsford, Chief, Uinta County Fire Protection Agency.

All regulatory agencies will be notified as soon as possible.

D. Emergency Rescue Procedures

Well site personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide should **not attempt to rescue without donning the proper breathing equipment.** When making an emergency rescue always use the following procedures:

1. Don rescue breathing equipment before attempting to rescue someone.

2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.

3. If the victim is not breathing, initiate mouth-to mouth resuscitation immediately. Follow CPR guidelines and replace mouth to mouth with a bag mask resuscitator if available.

4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.

5. Any personnel who experience hydrogen sulfide (H_2S) exposure must be taken to a hospital for examination and their supervisor notified of the incident.

IV. H_2S Safety Equipment on Drilling Location

Item	Amount	Description
1.	One (1)	Safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high pressure regulators.
2.	At least 1000 ft.	Low pressure airline equipped with Hansen locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	Scott 30 minute self-contained breathing apparatuses (SCBA).
4.	Twelve (12)	Scott airline units with emergency escape cylinders.
5.	One (1)	4 channel continuous electronic H_2S monitor with audible and visual alarms. The set points for these alarms are 10 PPM for the low alarm and 15 PPM for the high alarm.
6.	Two (2)	Sensidyne portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)	Oxygen resuscitator with spare oxygen cylinder.
8.	One (1)	Trauma first aid kit.
9.	One (1)	Stokes stretcher and one (1) KED.
10.	Four (4)	Wind socks.
11.	At least one (1)	Well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs.
13.	One (1)	Fire blanket.
14.	One (1)	Set air splints.
15.	Two (2)	Electric explosion proof fans.
16.	One (1)	Bullhorn and chalk board.
17.	Three (3)	300 cu. ft. air bottles for the safe briefing area.
18.	Two (2)	30# fire extinguishers.
19.	Six (6)	Battery powered voice mikes for communication when wearing air masks.
20.	One (1)	Battery powered combustible gas meter.

A drawing of the drilling location will be inserted in this page showing the actual placement of all safety equipment relative to the other equipment on the drill site. This drawing will be completed within 2 weeks of the drilling rig being in place and the location fully constructed to assure that all equipment, pits and roads are accurately located on the map.

V. Well Ignition Procedures

If it should become apparent that a uncontrolled release of hydrogen sulfide to the atmosphere may endanger the health and safety of the public or well site personnel, the Anschutz drilling foreman will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition Equipment

The following equipment will be available on-site for use by the ignition team.

1. Two (2) 12 gauge flare guns with flare shells.
2. Two (2) 500 ft. fire resistant retrieval ropes.
3. One (1) portable combustible gas meter.
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. One (1) backup vehicle with communication equipment.

B. Ignition Procedures

1. The Anschutz drilling foreman will ensure that well site personnel are evacuated to a safe area upwind of the wellbore prior to any ignition action.

2. The Anschutz foreman and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.

3. The backup crew will be positioned near a radio equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.

4. The partner of the ignition team will carry a combustible gas/hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.

5. The Anschutz foreman will carry the flare gun and shells.

6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with the flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 degree angles to the gas source, but DO NOT approach closer to the leak.

7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.

8. Notify the Union Pacific Resources Company, Wahsatch Gathering System Control Room of any flaring of H_2S gas on location.

VI. Residents – Public in Roe

There is one residence approximately one and one half miles from the well. Mr. Miles Williams, Executive Vice President of The Anschutz Corporation, owns the residence. There are no other residences within a one-mile radius of this well. Amoco Production Co. and Anschutz operate wells within a 1-mile radius. Both of these companies could have personnel working in the area at any time of the day. Castle Rock L & L may have ranching personnel in the area at any time of the day. The Fawcett family operates a ranch 1-1/2 miles to the North of the wellsite and may have personnel in the area at any time of day.

Amoco Production Co.
Evanston, WY .....(307) 785-2100
Tom Zimmer – Head Foreman .....(Home) (307) 789-2101

Union Pacific Resources CO .....(307) 789-1573
UPRC Emergency Phone to WGS Control Room .....(307) 789-9735

Fawcett Ranch .....(801) 773-2365

Castle Rock Land & Livestock
Jeff Young – Ranch Manager.....(Home) (801) 289-8414
.....(Mobil) (801) 541-0279

Castle Rock Land & Livestock Corporate Office..... .....(801) 328-1600
David Allen

Mr. Miles Williams..... .....(801) 277-0906

VII. Emergency Phone Directory

Union Pacific Resources Co. - Wahsatch Gathering System (UPRC-WGS) is a partner in this well and will be the lead contact in providing emergency response services. The first emergency response call should be to the UPRC-WGS control room in Evanston, Wyoming.

Union Pacific Resources Co. - Wahsatch Gathering System Pete Straub - Superintendent	(307) 789-1573
WGS Emergency Phone to Control Room	(307) 789-9735

Anschutz Exploration Corporation 555 17 Th. St. Suite 2400 Denver, CO. 80202	(303) 298-1000

Anschutz Exploration Corporation Contacts:

Title	Name	Phone
General Manager	Hal Koerner	Wk: (303) 299-1269 Home: (303) 841-8151 Pager: (800) 759-8888 PIN No. 195-8787
Drilling Superintendent	Haw Gallagher	Wk: (303) 299-1532 Home: (303) 873-0396 Pager (800) 492-0694 Mobil: (303) 915-8183
Geology	Dave Dlouhy	Wk: (303) 299-1228 Home: (303) 797-0115
Engineering	Jim Oursland	Wk: (713) 750-0210 Home: (281) 355-5654
Anschutz Ranch East Pipeline Foreman	Stan Dolinar	Wk: (307) 783-2905 Home: (307) 789-9048
Field Supervision	Bob Griffin Ken Clare Bobby Cooper	Home: (801) 789-1564 Mobile: (888) 846-1155 Home: (801) 789-8838 Mobile: (307) 360-7402 Home: (435) 789-9455 Mobile: (307) 679-2312
Public Relations	Bill Miller	Wk: (303) 299-1330 Home: (303) 797-8071 Mobile: (303) 489-4851

B. Emergency Services Phone List

Uinta County, Wyoming has a 911 system. Should the well site have direct access to Wyoming telephone system, 911 would contact all emergency services.

1. IHC Memorial Hospital - Evanston, WY.	(307) 789-3636
2. Ambulance Services - Uinta County, WY.	(307) 783-1000
3 Sheriff Department - Uinta County, WY.	(307) 783-1000
4. Highway Patrol – WY.	(800) 442-9090
5. Summit County Sheriffs Office (dispatch), UT.	(801) 336-4461
6. Fire Department - Uinta County, WY.	(307) 783-1000
7. Utah Division Oil & Gas - Salt Lake City, UT.	(801) 538-5340
8. Medical Helicopter - Air Med - Salt Lake City, UT.	(800) 453-0120

PROPERTIES OF GAS

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide (H_2S), and Methane.

TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity of Air = 1	1 Threshold Limit	2 Hazardous Limit	3 Lethal Concern
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr.	300 ppm
Hydrogen Sulfide	H_2S	1.18	10 ppm	250 ppm/hr.	600 ppm
Sulfur Dioxide	SO_2	2.21	5 ppm	--	1000 ppm
Chlorine	CL_2	2.45	1 ppm	4 ppm/hr.	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO_2	1.52	5000 ppm	5%	10%
Methane	CH_4	0.55	90000 ppm	Combustible Above 5% in Air	--

[1]Threshold — Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

[2]Hazardous — Concentration that may cause death.

[3]Lethal — Concentration that will cause death with short-term exposure.

HYDROGEN SULFIDE

GENERAL PROPERTIES

Hydrogen Sulfide (H_2S) is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide (H_2S), which is more toxic than Carbon Monoxide. Common names: sour gas, acid gas, rotten egg gas, sulfur gas, sulfurated gas, sweet gas. H_2S is a sweet tasting gas, but often the word "tasting" is left out.

PHYSICAL - CHEMICAL PROPERTIES

1. Specific Gravity (Air = 1.000)	1.193 (@77° F)
2. Color	None
3. Odor	Compare to rotten eggs.
4. Odor Threshold	0.13 part of I ppm.
5. Corrosivity	Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water	4.0 to I in H_20 @ 32°F 2.6 to I in H_20 @ 68°F
7. Effects on Humans	Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure	19.6 atmospheres at 25°C.
9. Explosive Limits	4.3% to 46% by volume in air.
10. Ignition Temperature	18°F (burns with pale flame).
11. Molecular Weight	34.08
12. Conversion Factors	I mg/1 of air = 717 ppm (at 25°C and 760 mm HG). I ppm = 0.00139 mg/1 of air.
13. pH	3 in water.
14. Conversion Factors	I mg/1 of air = 717 ppm (at 25°C and 760 mm HG). I ppm = 0.00139 mg/1 of air.

INDUSTRIAL OCCURRENCES

Hydrogen Sulfide (H_2S) exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, canneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in swampy or filled ground. It is produced when sulfur-containing organic material decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manholes, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

TOXIC PROPERTIES

Hydrogen Sulfide (H_2S) is an extremely toxic and irritating gas. Free Hydrogen Sulfide (H_2S) in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations cause blocking of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide (H_2S) is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about three days, have occurred after acute exposures to Hydrogen Sulfide (H_2S).

At low concentrations the predominant effect of Hydrogen Sulfide (H_2S) is on the eyes and respiratory tract. Eye irritation, conjunctivitis pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide (H_2S) result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposures to Hydrogen Sulfide (H_2S) do not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide (H_2S) on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor (H_2S), some victims of sudden acute overexposure have reported a brief, sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide (H_2S) have been summarized as follows:

0.02 ppm:	No odor.
0.13 ppm:	Minimal perceptible odor.
0.77 ppm:	Faint, but readily perceptible odor.
4.60 ppm:	Easily detectable, moderate odor.
27.0 ppm:	Strong, unpleasant odor, but not intolerable.

Physiological responses to various concentrations of Hydrogen Sulfide (H_2S) have been reported as follows:

10 ppm:	Beginning eye irritation.
50 - 100 ppm:	Slight conjunctivitis, respiratory tract irritation after I hour exposure.
100 ppm:	Coughing, eye irritation, loss of sense of smell after 2 to 15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15 to 30 minutes, followed by throat irritation after I hour. Several hours of exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours.
200 - 300 ppm:	Marked conjunctivitis and respiratory tract irritation after I hour of exposure.
500 - 700 ppm:	Loss of consciousness and possibly death in 30 minutes to I hour.
700 - 1000 ppm:	Rapid unconsciousness, cessation of respiration, and death.
1000 - 2000 ppm:	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

ACCEPTABLE CONCENTRATIONS

Acceptable Eight Hour Time-Weighted Average

To avoid discomfort, the time-weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

Acceptable Ceiling Concentrations

The acceptable concentration for protection of health for an eight-hour, five-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

Acceptable Maximum for Peaks Above Acceptable Base Line For Continuous Exposure

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

H_2S EQUIVALENTS

Parts Per Million	Percents %	Grains per 100 cu. Ft.
1	.0001	0.055
10	.0010	0.550
18	.0018	1.000
100	.0100	5.500
1000	.1000	55.500
10000	1.0000	555.500

Grains per 100 cu. ft. = % by volume Mole 636.4
1% by volume = 10.000 ppm

SULFUR DIOXIDE

Sulfur Dioxide (SO_2) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide (SO_2) is produced during the burning of H_2S. Although SO_2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide (SO_2) is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

CONCENTRATIONS		EFFECTS
% SO_2	**ppm**	
.0005	5	Pungent odor. Normally a person can detect SO_2 in this range.
.001	10	Safe for (8) eight hour exposure.
.0012	12	Throat irritation, coughing, and constriction of the chest, tearing and smarting of the eyes.
.015	150	So irritating that it can be endured for only a few minutes.
.05	500	Causes sense of suffocation, even with the first breath.

PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula	SO_2
1. Specific Gravity	2.212
2. Color	None
3. Flammable	No
4. Odor	Pungent odor gives ample warning of its presence.
5. Corrosivity	Dry, not corrosive to ordinary metals. Wet-corrosive to most common metals.
6. Allowable Concentrations	5 ppm (ACGIH) 5 ppm (OSHA)
7. Effects on Humans	Eyes, throat and upper respiratory irritation.

TOXIC PROPERTIES

Sulfur Dioxide (SO_2) is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide (SO_2) contaminated atmosphere unless he were unconscious or trapped.

Sulfur Dioxide gas (SO_2) is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is extremely irritating, and can be endured for only a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide (SO_2), there are few references that would indicate pneumonia as an after effect.

RECEIVED
NOV 12 1998
DIV. OF OIL, GAS & MINING

H_2S Contingency Plan

for

ANSCHUTZ RANCH DEEP #10-27

Section 27, T4N, R7E

Summit County, Utah

Anschutz Exploration Corporation
555 17th Street, Suite 2400
Denver, Colorado 80202

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Introduction

It is the policy of Anschutz Exploration Corporation to provide a safe and healthful work environment for all of its employees as well as contractors that may work on Anschutz leases. Anschutz Exploration Corporation makes a continued effort to comply with laws and regulations relative to worker safety and health, and to manage all operations in a manner to reduce risk.

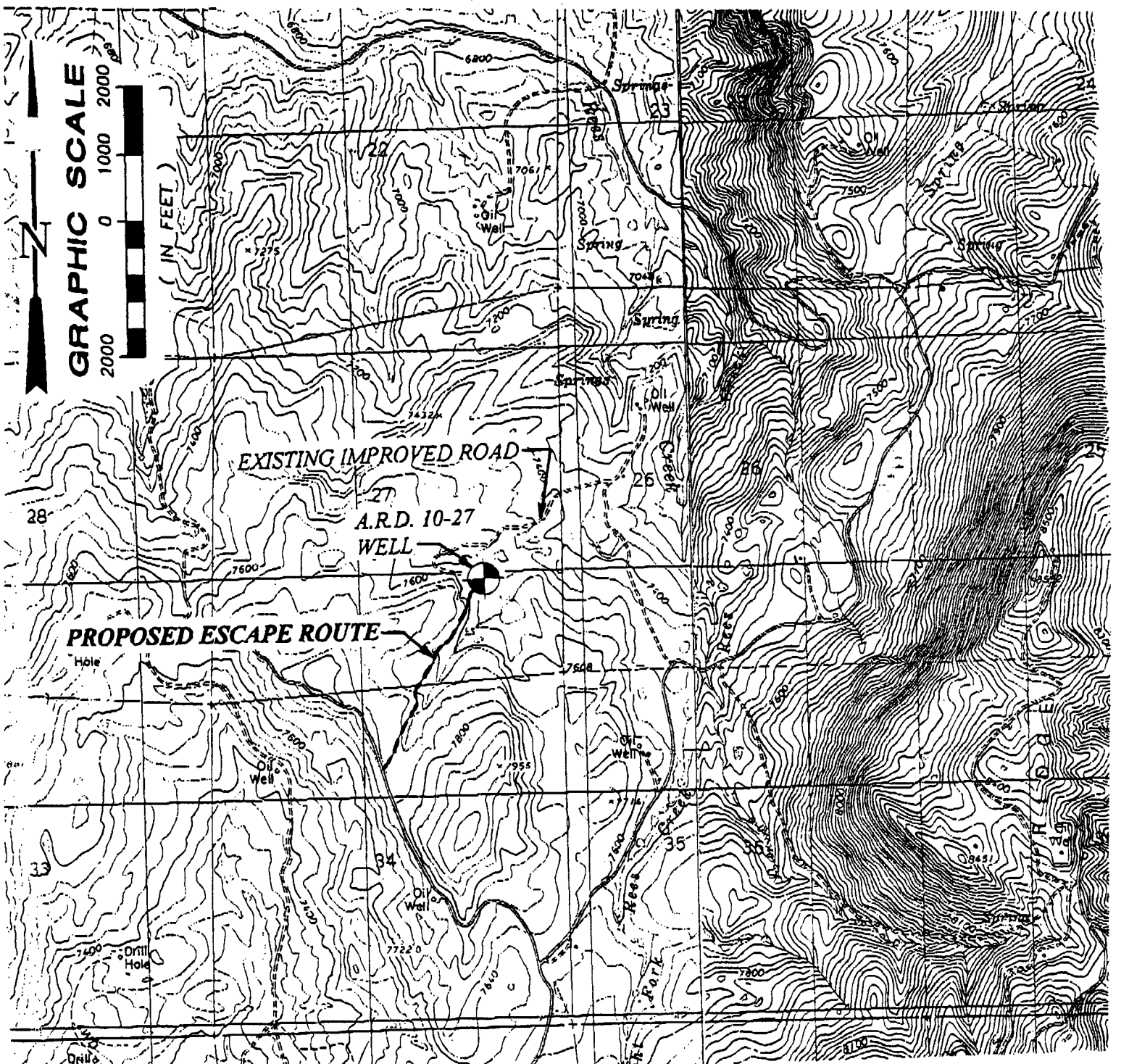
The following is a H_2S Contingency Plan for the Anschutz Ranch Deep #10-27 well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling and/or completion operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the well site in the event of a sudden release of hydrogen sulfide H_2S. All personnel working on the well site as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the drilling operation is necessary for this plan to be effective.

This plan shall incorporate the existing Emergency Response Plan of the Union Pacific Resources Wahsatch Gathering System as it pertains to the public safety in the event of any atmospheric release of H_2S. It is imperative that the WGS Control Room be contacted as soon as possible in the event of any release so this plan can be implemented.

Directions to location:

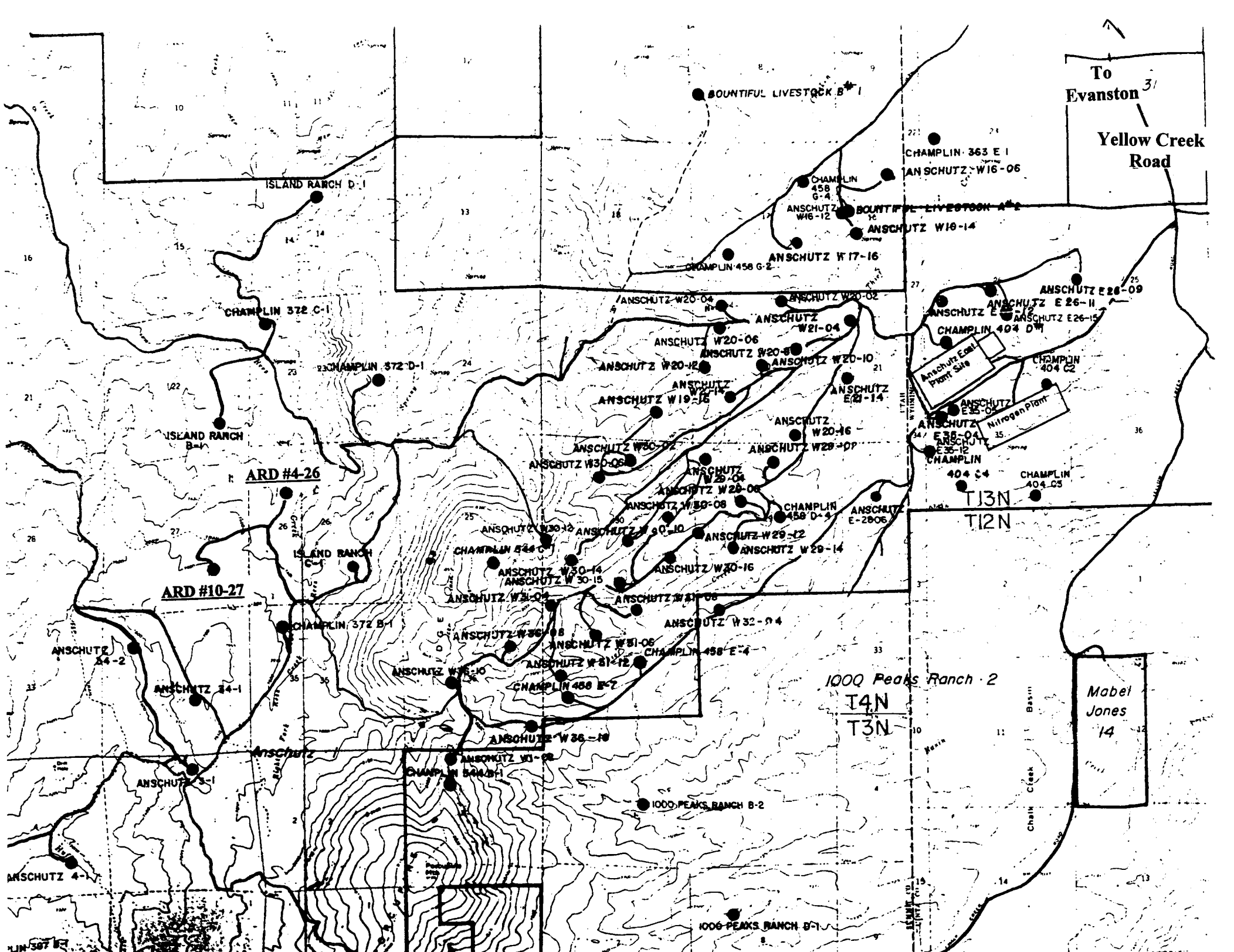
PLEASE SEE ATTACHED MAPS (2)



VICINITY MAP
SHOWING PROPOSED
ESCAPE ROUTE
ANSCHUTZ EXPLORATION
ANSCHUTZ RANCH DEEP 10-27 WEL
SECTION 27, T4N, R7E, S.L.B.M.
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 10/27/98 PROJECT: 98-19-03


To Evanston
Yellow Creek Road
BOUNTIFUL LIVESTOCK B-1
CHAMPLIN 363 E 1
ANSCHUTZ W16-06
CHAMPLIN 458 G-4
ANSCHUTZ W16-12
BOUNTIFUL LIVESTOCK A-2
ANSCHUTZ W18-14
ANSCHUTZ W17-16
CHAMPLIN 458 G-2
ISLAND RANCH D-1
CHAMPLIN 372 C-1
CHAMPLIN 372 D-1
ANSCHUTZ W20-04
ANSCHUTZ W20-02
ANSCHUTZ W21-04
ANSCHUTZ W20-06
ANSCHUTZ W20-08
ANSCHUTZ W20-10
ANSCHUTZ W20-12
ANSCHUTZ W21-14
ANSCHUTZ W19-15
ANSCHUTZ E21-14
ANSCHUTZ W20-16
ANSCHUTZ W29-09
ANSCHUTZ W30-02
ANSCHUTZ W30-06
ANSCHUTZ W29-04
ANSCHUTZ W29-06
ANSCHUTZ W30-08
CHAMPLIN 458 D-4
ANSCHUTZ E-28-06
ANSCHUTZ W30-12
ANSCHUTZ W30-10
ANSCHUTZ W29-12
ANSCHUTZ W29-14
CHAMPLIN 544 C-1
ANSCHUTZ W30-14
ANSCHUTZ W30-15
ANSCHUTZ W30-16
ANSCHUTZ W31-04
ANSCHUTZ W31-06
ANSCHUTZ W32-04
ANSCHUTZ W36-08
ANSCHUTZ W31-08
CHAMPLIN 458 E-4
ANSCHUTZ W31-12
ANSCHUTZ W36-10
CHAMPLIN 458 E-2
ANSCHUTZ W36-16
ANSCHUTZ W1-02
CHAMPLIN 544 D-1
1000 PEAKS RANCH B-2
1000 PEAKS RANCH B-1
ANSCHUTZ E26-09
ANSCHUTZ E26-11
ANSCHUTZ E26-12
ANSCHUTZ E26-15
CHAMPLIN 404 D-1
Anschutz East Plant Site
CHAMPLIN 404 C-2
ANSCHUTZ E35-02
Nitrogen Plant
ANSCHUTZ E36-04
ANSCHUTZ E35-12
CHAMPLIN 404 C-4
CHAMPLIN 404 C-3
T13N
T12N
ISLAND RANCH B-1
ISLAND RANCH C-1
ARD #4-26
ARD #10-27
CHAMPLIN 372 B-1
ANSCHUTZ 34-2
ANSCHUTZ 34-1
ANSCHUTZ 3-1
ANSCHUTZ 4-1
1000 Peaks Ranch-2
T4N
T3N
Mabel Jones 14
Anschutz
Chalk Creek Basin

I. Duties & Responsibilities

In order to assure proper execution of the contingency plan, it is essential that one person be responsible and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. Anschutz Exploration Corporation drilling representative on location. If unable to perform his/her duties,

2. alternate Anschutz representative. If unable to perform his/her duties,

3. rig Toolpusher/Supervisor. If unable to perform his/her duties,

4. safety consultant representative, if available.

A. All Personnel

1. Always be alert for possible H_2S alarms - both audible and visual.

2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.

3. Develop a "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas, should there be no wind.

4. Familiarize yourself with nearest escape routes for safe evacuation.

5. Should H_2S alarm sound, DON'T PANIC. Remain calm and follow instructions of person in charge.

6. If the H_2S alarms sound:

   a. Essential personnel shall don the appropriate respiratory protective equipment and follow company procedures. Essential personnel will continue to wear respiratory protective equipment until the area is deemed safe (H_2S concentration less than 10 ppm).

   b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape breathing systems. Wait there for further instructions from Anschutz drilling representative.

   c. Initiate rescue protocol if necessary, following training procedures.

B. Drilling Foreman

1. The Anschutz drilling foreman will confirm that all personnel on location are trained in H_2S safety and aware of the above list of duties when the H_2S plan becomes effective at 300 feet above the Dinwoody Formation.

2. The Anschutz foreman will ensure that all personnel observe all safety and emergency procedures.

3. The Anschutz foreman will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.

4. Should any extreme danger condition exist, the Anschutz foreman will:

   a. Assess the situation and advise all personnel by appropriate means of communication.
   b. Be responsible for determining that the extreme danger condition is warranted and the red flag shall be posted at location entrance.
   c. Go to safe briefing area and give clear instructions relative to hazard on location, and actions for personnel to follow.
   d. Notify company and regulatory groups of current situation as outlined in company protocol. Notify WGS Control room to activate WGS Emergency Response Plan.
   e. Proceed to rig floor and supervise operations with rig supervisor. Take action to control and reduce the H_2S hazard.
   f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
   g. Be responsible for authorizing evacuation of persons/residents in area surrounding the drilling location.
   h. Commence any ignition procedures if ignition criteria are met.

C. Rig Supervisor - Toolpusher

1. If the Anschutz drilling foreman is unable to perform his/her duties, and the alternate drilling foreman is also unable or unavailable to perform his duties, the drilling rig Toolpusher will assume command of well site operations and all responsibilities listed above for the drilling foreman.

2. Ensure that all rig personnel are properly trained to work in H_2S environment and fully understand purpose of H_2S alarms and actions to take when alarms activate. Ensure that all crew personnel understand the buddy system, safe briefing areas (SBA), and individual duties as well as emergency evacuation procedures.

3. Should an extreme danger operational condition arise, the rig Toolpusher shall assist the Anschutz foreman by:

   a. Proceeding to the rig floor and assist in supervising rig operations.
   b. Ensure that only essential working personnel remain in hazardous areas.
   c. Ensure that all crew members that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
   d. Assign rig crew member or other service representative to block entrance to location. No unauthorized personnel will be allowed entry to location.
   e. Help to determine hazardous "danger zones" on location using portable detection equipment and position electric fans to move gas in any high concentration areas.

D. Safety Consultant

1. During normal operations (no H_2S present), the safety consultant will be responsible for the following:

   a. Ensure that all well site safety equipment is in place and operational.
   b. Ensure that all well site personnel are familiar with location safety layout and operation of all safety equipment.
   c. Assist the Anschutz foreman in performing weekly H_2S drills for location personnel.

2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:

   a. Account for all well site personnel.
   b. Assess any injuries and direct first aid measure.
   c. Ensure that all safety and monitoring equipment is functioning properly and available.
   d. Monitor the safety of well site personnel.
   e. Maintain a close communication with Anschutz foreman.
   f. Be prepared to assist Anschutz foreman with support for rig crew or other personnel using breathing equipment.
   g. Be prepared to assist Anschutz foreman with emergency procedures including possible well ignition.
   h. Be prepared to assist with evacuation of any area residents or other personnel working in the immediate area.

E. Union Pacific Resources Company - Wahsatch Gathering System Office

1. The Union Pacific Resources Company - Wahsatch Gathering System operations control room will be notified of any release of H_2S by the Anschutz Operations Superintendent as well as other Anschutz Exploration Corporation supervisory personnel. The Union Pacific Resources Company - Wahsatch Gathering System Operations Control room will be responsible for notifying and maintaining contact with the Uinta County Fire Protection Agency in the event of a H_2S release. A Memorandum of Understanding between Summit County, Utah and Uinta County, Wyoming, states that the primary responder to any event pertaining to the Wahsatch Gathering System (WGS) will be the Uinta County Fire Protection Agency.

2. The Anschutz drilling foreman will maintain communications with the UPRC - WGS control room to coordinate with any other assistance that might be required.

3. Travel to well site if appropriate.

II. Drilling Rig Layout

A. Location

1. All respiratory protective equipment and H_2S detection equipment will be rigged up 3 days or 500 feet prior to entering the first zone suspected to contain hydrogen sulfide. The rig crews and other service personnel will be trained at this time.

2. The drilling rig will be situated on location to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the BOP's to the circulation tanks.

3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.

4. A minimum of 2 safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These will be located at least 150 ft. or as practical, from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated safe briefing area (SBA) for instructions.

5. Smoking areas will be established and "No Smoking" signs will be posted around the location.

6. Reliable 24 hour radio and telephone communications will be available at the drilling foremen's office.

7. A mud-gas separator will be rigged up and manifolded to the choke system.

8. All equipment that might come in to contact with hydrogen sulfide - drill pipe, drill stem test tools, blowout preventers, casing, choke system will meet Anschutz' metallurgy requirements for H_2S service.

9. The drilling rig will have a continuous electronic H_2S detection system that automatically with activate visible and audible alarms if hydrogen sulfide is detected. The visible light W11 activate if 10 ppm H_2S is present. The audible siren will activate if 15 ppm or higher concentration is present. There will be at least 4 H_2S sensors in place on the drilling rig. They will be located to detect the presence of hydrogen sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, and 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time.

10. The H_2S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.

11. A least 4 windsocks will be placed around the drill site to ensure that everyone on the drilling location can readily determine wind direction. One windsock will be mounted on or near the rig floor to be readily visible to rig crews when tripping pipe.

12. All respiratory protective equipment will be NIOSH/ MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air. Battery powered voice mikes will be available for communication when wearing masks.

13. Both 30 minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have 1 piece of equipment available to them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32°F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.

14. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.

15. H_2S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the driller's log.

III. Safety Procedures

A. Training

All personnel who come onto the drilling location must be properly trained in hydrogen sulfide (H_2S), nitrogen, and oxygen deficient atmosphere safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide (H_2S), nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.

2. Proper use, care and limitations of respiratory protective equipment with hands on practice.

3. Use of both fixed and portable detection toxic gas equipment.

4. Work practices to reduce opportunities for toxic gas exposure as well as confined space procedures.

5. First aid for toxic gas exposure and resuscitation equipment.

6. The buddy system.

7. Emergency evacuation procedures.

8. A review of the contingency plan for the well.

B. Operating Conditions

A three color flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the well site. This system is in compliance with BLM 0.0. # 6 and follows industry standards.

Green Flag Potential Danger

Yellow Flag Moderate Danger

Red Flag Extreme Danger - Do not approach if red flag is flying.

C. Evacuation Plan

There are no permanent residents within a 1-mile radius of the drill site. Anschutz Exploration Corporation and Union Pacific Resources Company have operations within this area and travel the roads in the immediate area.

According to the Union Pacific Resources Company – Wahsatch Gathering System Emergency Response Plan, any evacuation will be conducted under the direction of Jon Lunsford, Chief, Uinta County Fire Protection Agency.

All regulatory agencies will be notified as soon as possible.

D. Emergency Rescue Procedures

Well site personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide should **not attempt to rescue without donning the proper breathing equipment.** When making an emergency rescue always use the following procedures:

1. Don rescue breathing equipment before attempting to rescue someone.

2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.

3. If the victim is not breathing, initiate mouth-to mouth resuscitation immediately. Follow CPR guidelines and replace mouth to mouth with a bag mask resuscitator if available.

4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.

5. Any personnel who experience hydrogen sulfide (H_2S) exposure must be taken to a hospital for examination and their supervisor notified of the incident.

IV. H_2S Safety Equipment on Drilling Location

Item	Amount	Description
1.	One (1)	Safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high pressure regulators.
2.	At least 1000 ft.	Low pressure airline equipped with Hansen locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	Scott 30 minute self-contained breathing apparatuses (SCBA).
4.	Twelve (12)	Scott airline units with emergency escape cylinders.
5.	One (1)	4 channel continuous electronic H_2S monitor with audible and visual alarms. The set points for these alarms are 10 PPM for the low alarm and 15 PPM for the high alarm.
6.	Two (2)	Sensidyne portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)	Oxygen resuscitator with spare oxygen cylinder.
8.	One (1)	Trauma first aid kit.
9.	One (1)	Stokes stretcher and one (1) KED.
10.	Four (4)	Wind socks.
11.	At least one (1)	Well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs.
13.	One (1)	Fire blanket.
14.	One (1)	Set air splints.
15.	Two (2)	Electric explosion proof fans.
16.	One (1)	Bullhorn and chalk board.
17.	Three (3)	300 cu. ft. air bottles for the safe briefing area.
18.	Two (2)	30# fire extinguishers.
19.	Six (6)	Battery powered voice mikes for communication when wearing air masks.
20.	One (1)	Battery powered combustible gas meter.

A drawing of the drilling location will be inserted in this page showing the actual placement of all safety equipment relative to the other equipment on the drill site. This drawing will be completed within 2 weeks of the drilling rig being in place and the location fully constructed to assure that all equipment, pits and roads are accurately located on the map.

V. Well Ignition Procedures

If it should become apparent that a uncontrolled release of hydrogen sulfide to the atmosphere may endanger the health and safety of the public or well site personnel, the Anschutz drilling foreman will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition Equipment

The following equipment will be available on-site for use by the ignition team.

1. Two (2) 12 gauge flare guns with flare shells.
2. Two (2) 500 ft. fire resistant retrieval ropes.
3. One (1) portable combustible gas meter.
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. One (1) backup vehicle with communication equipment.

B. Ignition Procedures

1. The Anschutz drilling foreman will ensure that well site personnel are evacuated to a safe area upwind of the wellbore prior to any ignition action.

2. The Anschutz foreman and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.

3. The backup crew will be positioned near a radio equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.

4. The partner of the ignition team will carry a combustible gas/hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.

5. The Anschutz foreman will carry the flare gun and shells.

6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with the flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 degree angles to the gas source, but DO NOT approach closer to the leak.

7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.

8. Notify the Union Pacific Resources Company, Wahsatch Gathering System Control Room of any flaring of H_2S gas on location.

VI. Residents – Public in Roe

There is one residence approximately one and one half miles from the well. Mr. Miles Williams, Executive Vice President of The Anschutz Corporation, owns the residence. There are no other residences within a one-mile radius of this well. Amoco Production Co. and Anschutz operate wells within a 1-mile radius. Both of these companies could have personnel working in the area at any time of the day. Castle Rock L & L may have ranching personnel in the area at any time of the day. The Fawcett family operates a ranch 1-1/2 miles to the North of the wellsite and may have personnel in the area at any time of day.

Amoco Production Co.
Evanston, WY .....(307) 785-2100
Tom Zimmer – Head Foreman .....(Home) (307) 789-2101

Union Pacific Resources CO .....(307) 789-1573
UPRC Emergency Phone to WGS Control Room .....(307) 789-9735

Fawcett Ranch .....(801) 773-2365

Castle Rock Land & Livestock
Jeff Young – Ranch Manager.....(Home) (801) 289-8414
.....(Mobil) (801) 541-0279

Castle Rock Land & Livestock Corporate Office..... .....(801) 328-1600
David Allen

Mr. Miles Williams..... .....(801) 277-0906

VII. Emergency Phone Directory

Union Pacific Resources Co. - Wahsatch Gathering System (UPRC-WGS) is a partner in this well and will be the lead contact in providing emergency response services. The first emergency response call should be to the UPRC-WGS control room in Evanston, Wyoming.

Union Pacific Resources Co. - Wahsatch Gathering System Pete Straub - Superintendent	(307) 789-1573
WGS Emergency Phone to Control Room	(307) 789-9735

Anschutz Exploration Corporation 555 17 Th. St. Suite 2400 Denver, CO. 80202	(303) 298-1000

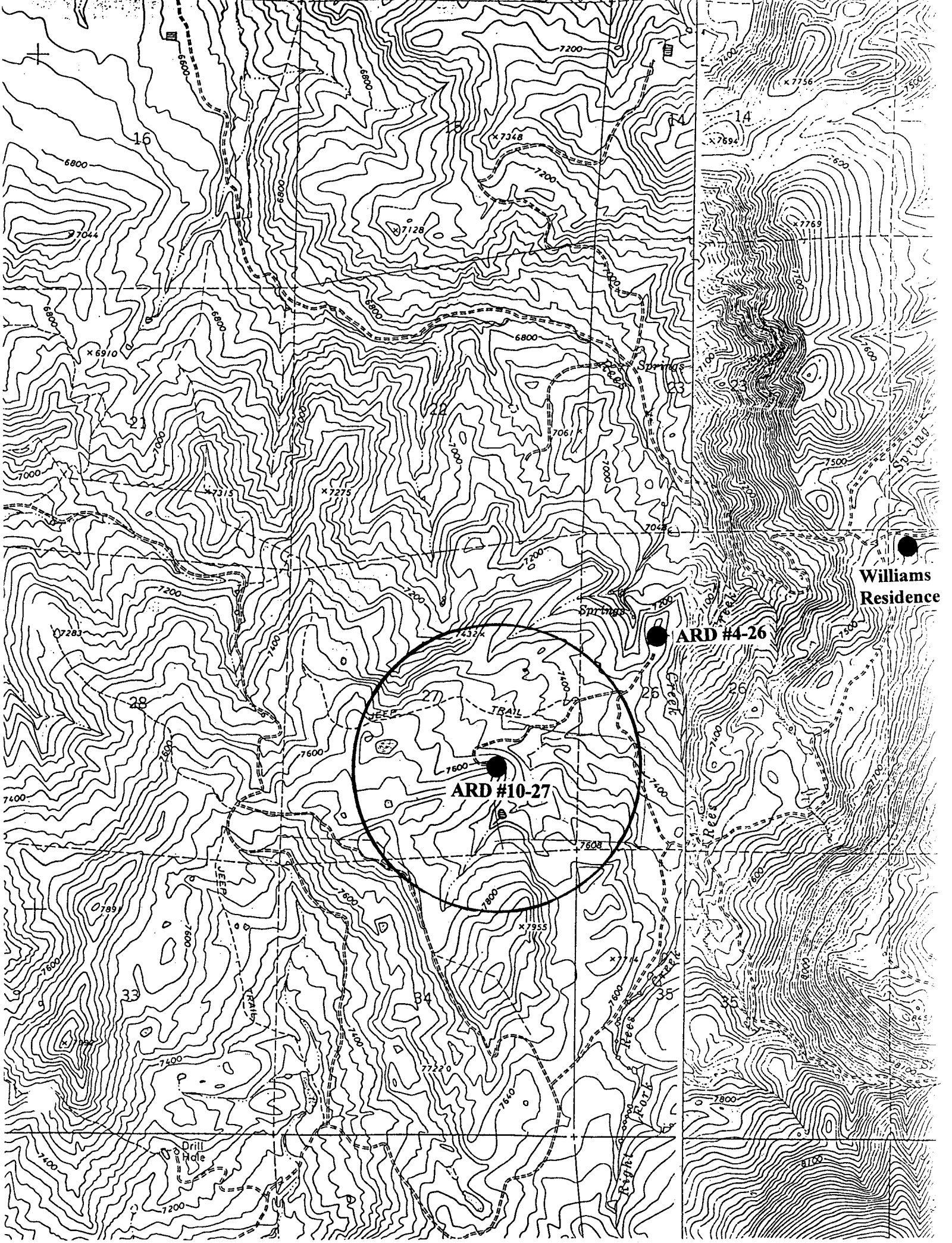
Anschutz Exploration Corporation Contacts:

Title	Name	Phone
General Manager	Hal Koerner	Wk: (303) 299-1269 Home: (303) 841-8151 Pager: (800) 759-8888 PIN No. 195-8787
Drilling Superintendent	Haw Gallagher	Wk: (303) 299-1532 Home: (303) 873-0396 Pager (800) 492-0694 Mobil: (303) 915-8183
Geology	Dave Dlouhy	Wk: (303) 299-1228 Home: (303) 797-0115
Engineering	Jim Oursland	Wk: (713) 750-0210 Home: (281) 355-5654
Anschutz Ranch East Pipeline Foreman	Stan Dolinar	Wk: (307) 783-2905 Home: (307) 789-9048
Field Supervision	Bob Griffin Ken Clare Bobby Cooper	Home: (801) 789-1564 Mobile: (888) 846-1155 Home: (801) 789-8838 Mobile: (307) 360-7402 Home: (435) 789-9455 Mobile: (307) 679-2312
Public Relations	Bill Miller	Wk: (303) 299-1330 Home: (303) 797-8071 Mobile: (303) 489-4851

B. Emergency Services Phone List

Uinta County, Wyoming has a 911 system. Should the well site have direct access to Wyoming telephone system, 911 would contact all emergency services.

1. IHC Memorial Hospital - Evanston, WY.	(307) 789-3636
2. Ambulance Services - Uinta County, WY.	(307) 783-1000
3 Sheriff Department - Uinta County, WY.	(307) 783-1000
4. Highway Patrol – WY.	(800) 442-9090
5. Summit County Sheriffs Office (dispatch), UT.	(801) 336-4461
6. Fire Department - Uinta County, WY.	(307) 783-1000
7. Utah Division Oil & Gas - Salt Lake City, UT.	(801) 538-5340
8. Medical Helicopter - Air Med - Salt Lake City, UT.	(800) 453-0120



Williams Residence
ARD #4-26
ARD #10-27
JEEP TRAIL
Springs
Rees Creek
Right Fork
Drill Hole

PROPERTIES OF GAS

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide (H_2S), and Methane.

TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity of Air = 1	1 Threshold Limit	2 Hazardous Limit	3 Lethal Concern
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr.	300 ppm
Hydrogen Sulfide	H_2S	1.18	10 ppm	250 ppm/hr.	600 ppm
Sulfur Dioxide	SO_2	2.21	5 ppm	--	1000 ppm
Chlorine	CL_2	2.45	1 ppm	4 ppm/hr.	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO_2	1.52	5000 ppm	5%	10%
Methane	CH_4	0.55	90000 ppm	Combustible Above 5% in Air	--

[1]Threshold — Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

[2]Hazardous — Concentration that may cause death.

[3]Lethal — Concentration that will cause death with short-term exposure.

HYDROGEN SULFIDE

GENERAL PROPERTIES

Hydrogen Sulfide (H_2S) is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide (H_2S), which is more toxic than Carbon Monoxide. Common names: sour gas, acid gas, rotten egg gas, sulfur gas, sulfurated gas, sweet gas. H_2S is a sweet tasting gas, but often the word "tasting" is left out.

PHYSICAL - CHEMICAL PROPERTIES

1. Specific Gravity (Air = 1.000)	1.193 (@77° F)
2. Color	None
3. Odor	Compare to rotten eggs.
4. Odor Threshold	0.13 part of I ppm.
5. Corrosivity	Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water	4.0 to I in H_20 @ 32°F 2.6 to I in H_20 @ 68°F
7. Effects on Humans	Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure	19.6 atmospheres at 25°C.
9. Explosive Limits	4.3% to 46% by volume in air.
10. Ignition Temperature	18°F (burns with pale flame).
11. Molecular Weight	34.08
12. Conversion Factors	I mg/1 of air = 717 ppm (at 25°C and 760 mm HG). I ppm = 0.00139 mg/1 of air.
13. pH	3 in water.
14. Conversion Factors	I mg/1 of air = 717 ppm (at 25°C and 760 mm HG). I ppm = 0.00139 mg/1 of air.

INDUSTRIAL OCCURRENCES

Hydrogen Sulfide (H_2S) exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, canneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in swampy or filled ground. It is produced when sulfur-containing organic material decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manholes, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

TOXIC PROPERTIES

Hydrogen Sulfide (H_2S) is an extremely toxic and irritating gas. Free Hydrogen Sulfide (H_2S) in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations cause blocking of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide (H_2S) is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about three days, have occurred after acute exposures to Hydrogen Sulfide (H_2S).

At low concentrations the predominant effect of Hydrogen Sulfide (H_2S) is on the eyes and respiratory tract. Eye irritation, conjunctivitis pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide (H_2S) result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposures to Hydrogen Sulfide (H_2S) do not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide (H_2S) on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor (H_2S), some victims of sudden acute overexposure have reported a brief, sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide (H_2S) have been summarized as follows:

0.02 ppm:	No odor.
0.13 ppm:	Minimal perceptible odor.
0.77 ppm:	Faint, but readily perceptible odor.
4.60 ppm:	Easily detectable, moderate odor.
27.0 ppm:	Strong, unpleasant odor, but not intolerable.

Physiological responses to various concentrations of Hydrogen Sulfide (H_2S) have been reported as follows:

10 ppm:	Beginning eye irritation.
50 - 100 ppm:	Slight conjunctivitis, respiratory tract irritation after I hour exposure.
100 ppm:	Coughing, eye irritation, loss of sense of smell after 2 to 15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15 to 30 minutes, followed by throat irritation after I hour. Several hours of exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours.
200 - 300 ppm:	Marked conjunctivitis and respiratory tract irritation after I hour of exposure.
500 - 700 ppm:	Loss of consciousness and possibly death in 30 minutes to I hour.
700 - 1000 ppm:	Rapid unconsciousness, cessation of respiration, and death.
1000 - 2000 ppm:	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

ACCEPTABLE CONCENTRATIONS

Acceptable Eight Hour Time-Weighted Average

To avoid discomfort, the time-weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

Acceptable Ceiling Concentrations

The acceptable concentration for protection of health for an eight-hour, five-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

Acceptable Maximum for Peaks Above Acceptable Base Line For Continuous Exposure

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

H_2S EQUIVALENTS

Parts Per Million	Percents %	Grains per 100 cu. Ft.
1	.0001	0.055
10	.0010	0.550
18	.0018	1.000
100	.0100	5.500
1000	.1000	55.500
10000	1.0000	555.500

Grains per 100 cu. ft. = % by volume Mole 636.4
1% by volume = 10.000 ppm

SULFUR DIOXIDE

Sulfur Dioxide (SO_2) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide (SO_2) is produced during the burning of H_2S. Although SO_2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide (SO_2) is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

CONCENTRATIONS		EFFECTS
% SO_2	**ppm**	
.0005	5	Pungent odor. Normally a person can detect SO_2 in this range.
.001	10	Safe for (8) eight hour exposure.
.0012	12	Throat irritation, coughing, and constriction of the chest, tearing and smarting of the eyes.
.015	150	So irritating that it can be endured for only a few minutes.
.05	500	Causes sense of suffocation, even with the first breath.

PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula	SO_2
1. Specific Gravity	2.212
2. Color	None
3. Flammable	No
4. Odor	Pungent odor gives ample warning of its presence.
5. Corrosivity	Dry, not corrosive to ordinary metals. Wet-corrosive to most common metals.
6. Allowable Concentrations	5 ppm (ACGIH) 5 ppm (OSHA)
7. Effects on Humans	Eyes, throat and upper respiratory irritation.

TOXIC PROPERTIES

Sulfur Dioxide (SO_2) is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide (SO_2) contaminated atmosphere unless he were unconscious or trapped.

Sulfur Dioxide gas (SO_2) is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is extremely irritating, and can be endured for only a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide (SO_2), there are few references that would indicate pneumonia as an after effect.

CONFIDENTIAL

photography
by

Triple O Slabbing

PRECISION CORE

CONFIDENTIAL

Core Analysis Report

For

Anschutz Exploration Corp.

Anschutz Ranch Deep #10-27

Sec. 27 T4N R7W

Summit County, Utah

MICROFICHE

Precision Core Analysis, Inc. | 1105 W. Custer Place | Denver, CO 80223 | VOICE 303.778.6060 | TOLL FREE 888.261.1755

FAX 303.778.6090 | E-MAIL info@precisioncore.com | WEB SITE www.precisioncore.com

PRECISION CORE

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Laboratory Procedures – Anschutz Ranch Deep #10-27 Well

I. **Surface Core Gamma** - Upon arrival in the laboratory the core was removed from the aluminum sleeve and arranged on a core layout table. The core was marked with orientation lines and corresponding depths. The core was sequentially placed upon a conveyor belt assembly and passed over a gamma radiation detector. The values were collected every 6 inches over the entire length of the full diameter core and recorded. The resulting measurements were processed by calculating a one-foot running average and again recorded. These calculations are presented function of core depth and displayed.

II. **Sample Preparation** - One-inch diameter cylindrical core plugs were drilled with a diamond-tipped core bit using tap water as the bit coolant and lubricant. The samples were labeled with reference numbers corresponding to core depth and placed into a core cleaner. The samples were sealed in a large capacity stainless steel container, which was pressurized with carbon dioxide gas up to 100 psig. The sample container was then flooded with toluene, a hydrocarbon solvent, and pressurized up to approximately 800 psig. The temperature within the container was raised to and maintained at 180° F. After one hour the container was allowed to drain and the cycle repeated until the samples were determined to be sufficiently cleaned of extraneous fluids. Total cleaning times vary according to rock type, oil gravity and chemistry, as well as the specific coring objectives. The samples were removed from the core cleaner and placed into a sample oven for a minimum of four hours at 220° F.

III. **Basic Rock Property Determinations** - The cleaned and dried core samples were removed from the oven and allowed to cool in a sealed glass vessel. Specific physical properties (length, diameter, weight and bulk volume) of each plug sample were measured and recorded. The samples were then individually placed into a Coberly-Stevens Boyle's Law porosimeter and injected with helium at approximately 100 psig. Corresponding pressures and volumes were measured and utilized in the Boyle's Law equation to calculate sample grain volume. Pore volume was determined by subtracting the calculated grain volume from the measured bulk volume (determined by Archimedes Principal using mercury immersion). Grain density was calculated by dividing the calculated grain volume into the measured sample weight. The sample was next placed into a Hassler-Sleeve core holder. The annulus of the core holder was pressurized to a pre-determined value (400 psig minimum) to seal the sample. Nitrogen gas was forced through the sample at a given pressure under steady-state conditions, flow rate was measured and permeability to air calculated. Utilizing the parameters thus measured, a Klinkenberg-corrected permeability value was calculated and reported.

CONFIDENTIAL

PRECISION CORE

Anschutz Exploration Corp. **Job:** **99058**
Anschutz Ranch Deep #10-27 **Date:** **23-Dec-99**
Sec. 27 T4N R7E
Summit County, Utah

Reference Number	Depth (ft)	Permeabiltiy Air (md)	Permeabiltiy Klink (md)	Helium Porosity (%)	Grain Density (g/cc)	Sample Description
	Core No. 1 Thaynes Fm. 9986.0'-10303.0' Rec. 44.0'/44.0'					
1	9986.8	0.020	0.008	0.7	2.75	Calc Sltst tr pyr m-frac
2	9988.1	0.001	<0.001	0.5	2.72	Calc Sltst tr pyr m-frac
3	9990.1	0.001	<0.001	1.0	2.72	Ls Pkst-Grst slty
4	9992.1	0.001	<0.001	0.7	2.71	Ls Pkst-Grst slty calc cmt m-frac
5	9994.6	0.002	<0.001	0.8	2.70	Ls Pkst-Grst slty calc cmt m-frac
6	9996.9	0.002	<0.001	0.9	2.71	Ls Pkst-Grst slty lam
7	9998.1	0.002	<0.001	0.8	2.69	Ls Pkst-Grst slty calc cmt m-frac
8	10000.5	0.002	<0.001	1.0	2.71	Ls Pkst-Grst slty calc cmt m-frac
9	10002.2	0.002	<0.001	0.5	2.70	Ls Pkst-Grst slty tr pyr
10	10004.4	0.002	<0.001	0.8	2.70	Ls Pkst-Grst slty calc cmt m-frac
11	10006.7	0.002	<0.001	0.7	2.72	Ls Pkst-Grst slty lam poi calc cmt
12	10008.4	0.002	<0.001	0.4	2.71	Ls Pkst-Grst slty tr sh poi calc cmt
13	10010.3	0.001	<0.001	0.2	2.73	Ls Pkst-Grst slty tr pyr poi calc cmt
14	10026.8	0.002	<0.001	0.6	2.70	Ls slty sh lam poi calc cmt
15	10028.7	0.002	<0.001	0.6	2.71	Ls slty sh gr poi calc cmt tr pyr
16	10030.2	0.002	<0.001	0.2	2.70	Ls slty lam poi calc cmt
	Core No. 2 Thaynes Fm. 10303.0'-10059.0' Rec. 29.0'/29.0'					
17	10032.4	0.002	<0.001	0.3	2.71	Ls slty lam poi calc cmt
18	10034.6	0.002	<0.001	0.6	2.70	Ls slty dk ls clas calc cmt m-frac
19	10036.7	0.002	<0.001	0.4	2.70	Ls slty abd poi calc cmt
20	10039.0	0.002	<0.001	0.4	2.71	Ls slty poi calc cmt clac cmt m-frac
21	10040.2	0.002	<0.001	0.2	2.71	Ls slty poi calc cmt
22	10042.4	0.002	<0.001	0.5	2.70	Ls slty poi calc cmt abd pyr
23	10044.4	0.002	<0.001	0.7	2.72	Ls slty poi calc cmt tr pyr
24	10046.5	0.002	<0.001	0.5	2.70	Ls slty calc cmt m-frac
25	10048.5	0.006	0.002	0.9	2.68	Ls slty abd calc cmt m-frac
26	10050.2	0.002	<0.001	0.6	2.69	Ls slty dk ls clas calc cmt m-fracs
27	10052.7	0.002	<0.001	0.5	2.71	Ls slty poi calc cmt calc cmt m-fracs

CONFIDENTIAL

PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: 99058
Date: 23-Dec-99

Reference Number	Depth (ft)	Permeability Air (md)	Permeability Klink (md)	Helium Porosity (%)	Grain Density (g/cc)	Sample Description
28	10054.6	0.002	<0.001	0.7	2.71	Ls slty poi calc cmt calc cmt m-fracs
29	10056.7	0.002	<0.001	0.6	2.72	Ls slty poi calc cmt calc cmt m-fracs
30	10058.8	0.004	0.001	1.1	2.72	Ls abd calc com sh gr styl
			Core No. 3 Thaynes Fm. 10536.0'-10551.0' Rec. 13.8'/15.0'			
31	10542.8	0.001	<0.001	0.7	2.76	Dol Sltst lam abd rd cl
32	10548.5	0.001	<0.001	0.9	2.77	Dol Sltst lam abd rd cl anhy cmt m-frac
			Core No. 4 Thaynes Fm. 10551.0'-10570.0' Rec. 17.8'/19.0'			
33	10556.4	<0.001	<0.001	1.4	2.80	Ls sdy poi calc cmt
34	10561.2	<0.001	<0.001	0.3	2.77	Ls sdy sh
35	10568.7	<0.001	<0.001	0.8	2.74	Dol sdy poi calc cmt lam
			Core No. 5 Thaynes Fm. 10570.0'-10600.0' Rec. 13.0'/30.0'			
			No Analyses Requsted			
			Core No. 6 Thaynes Fm. 10600.0'-10618.0' Rec. 7.0'/18.0'			
			No Analyses Requsted			
			Core No. 7 Thaynes Fm. 10618.0'-10637.0' Rec. 14.0'/19.0'			
			No Analyses Requsted			
			Core No. 8 Thaynes Fm. 10637.0'-10649.0' Rec. 9.0'/12.0'			
			No Analyses Requsted			

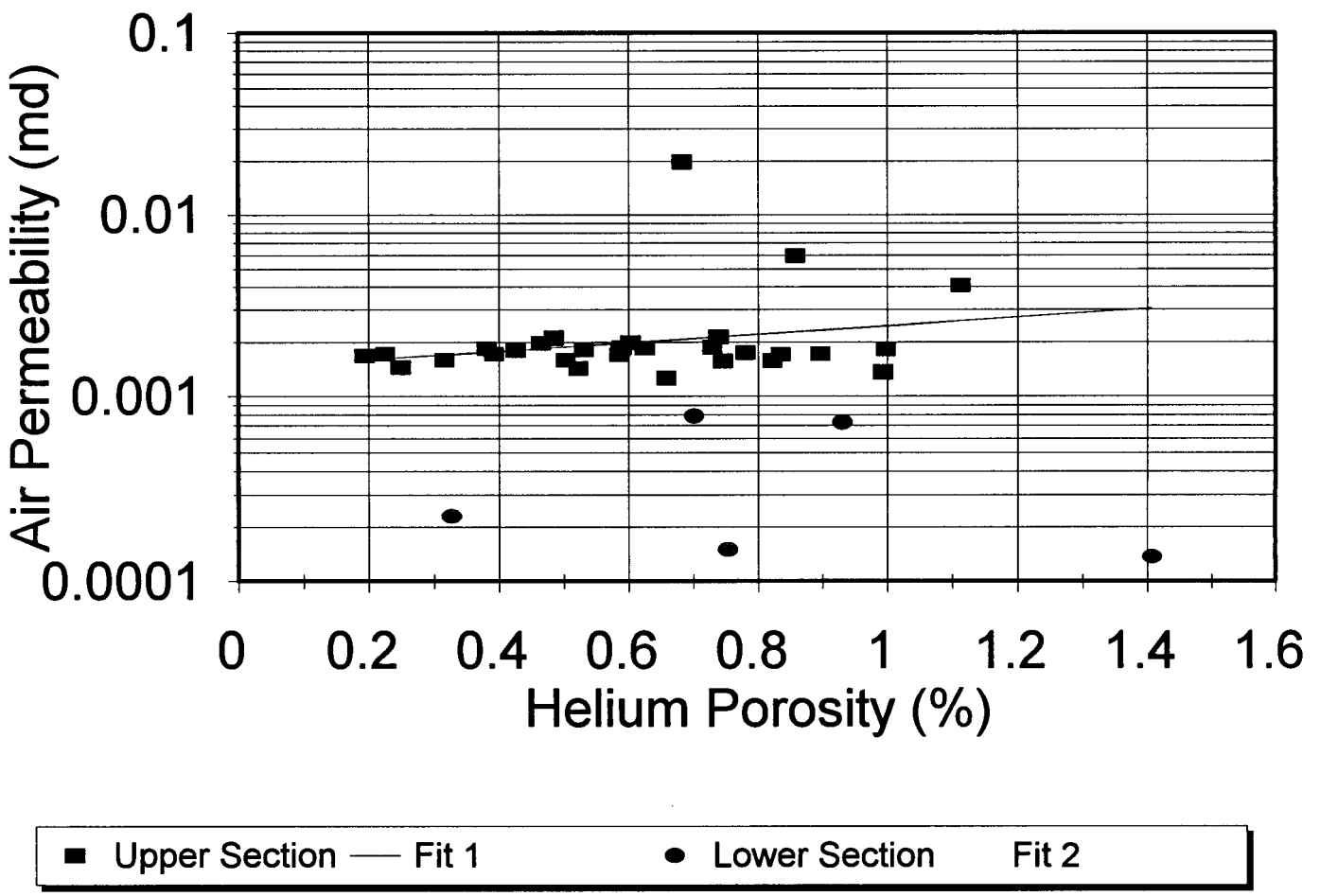
CONFIDENTIAL

PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**

Air Permeability vs Helium Porosity



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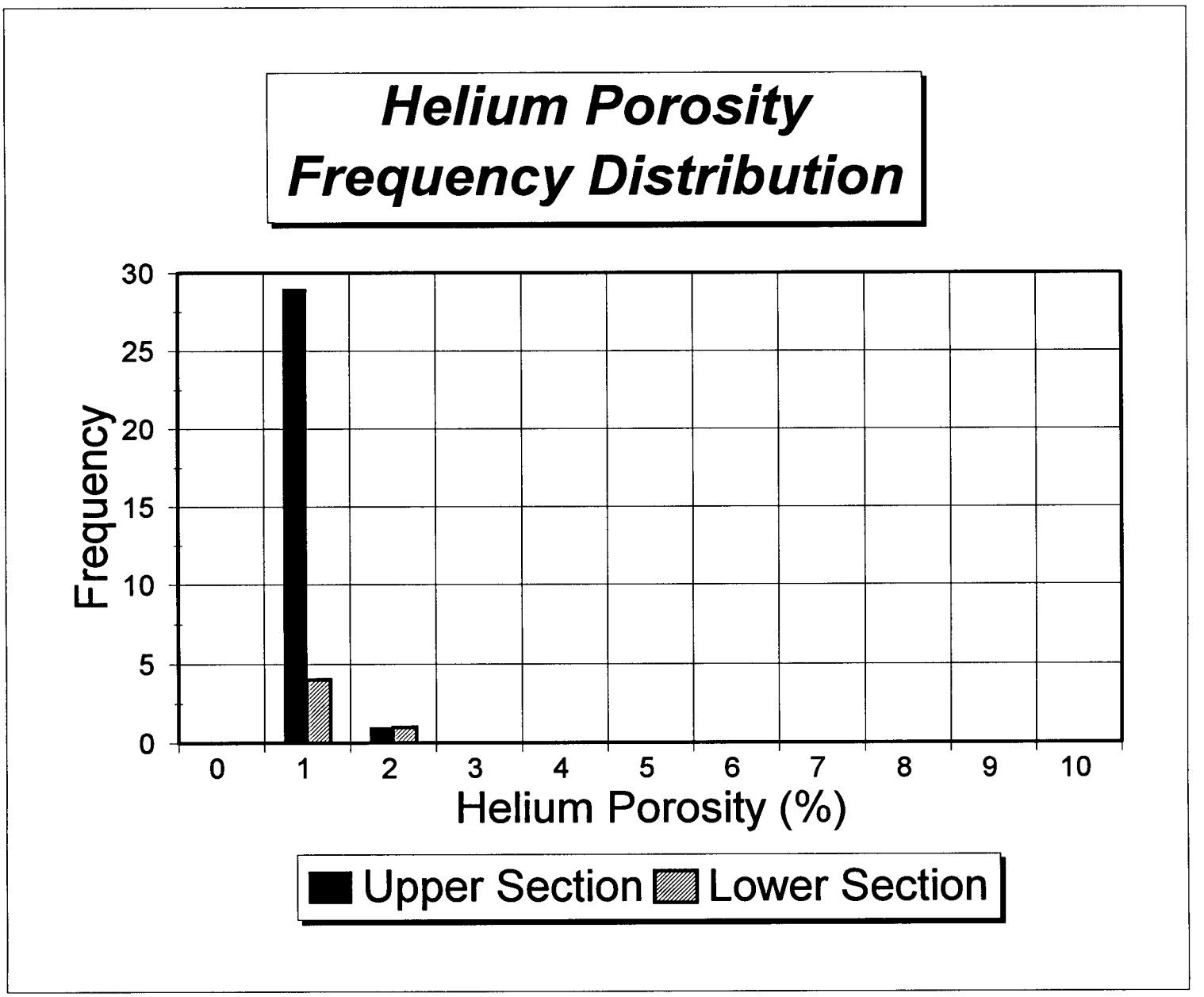
PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**



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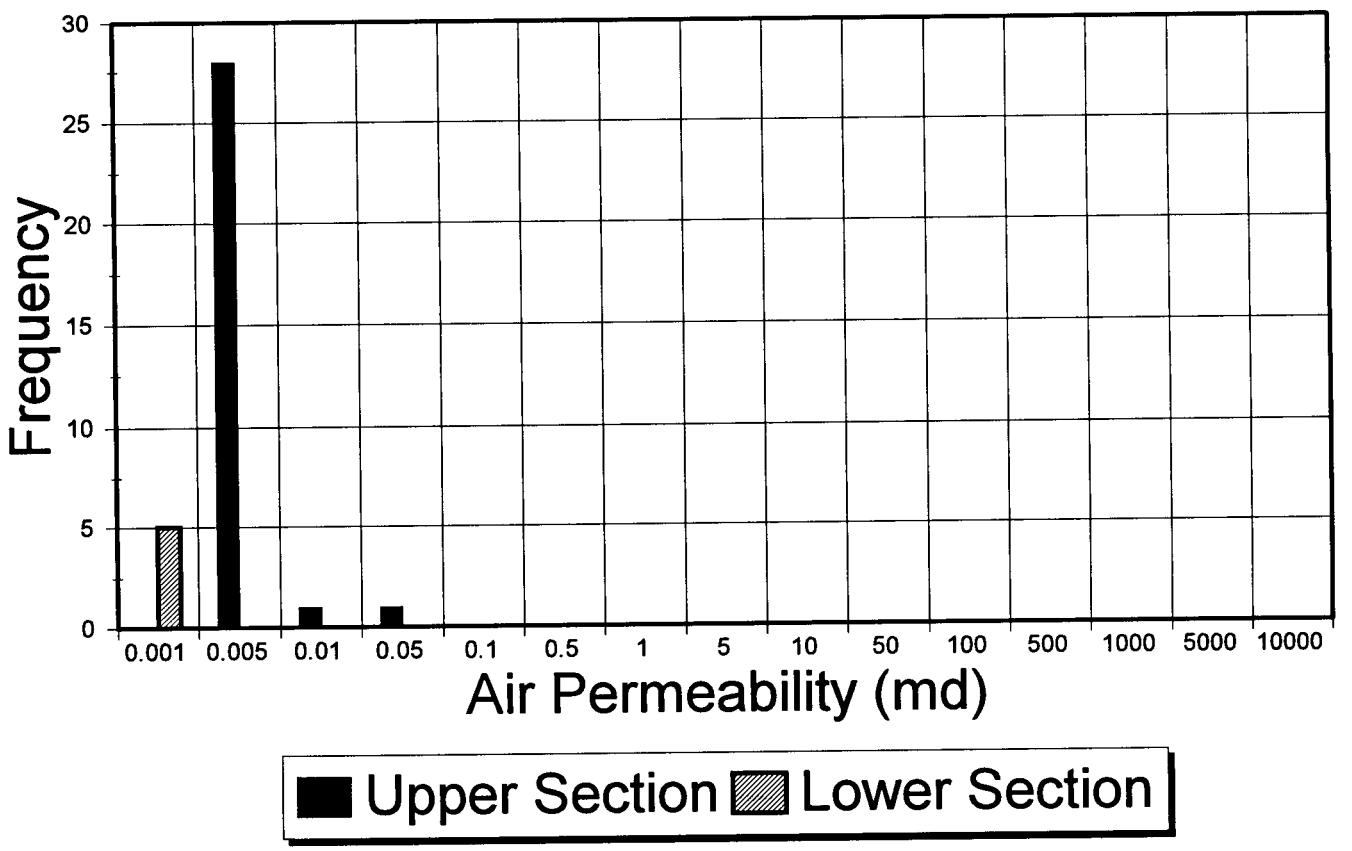
PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**

Air Permeability Frequency Distribution



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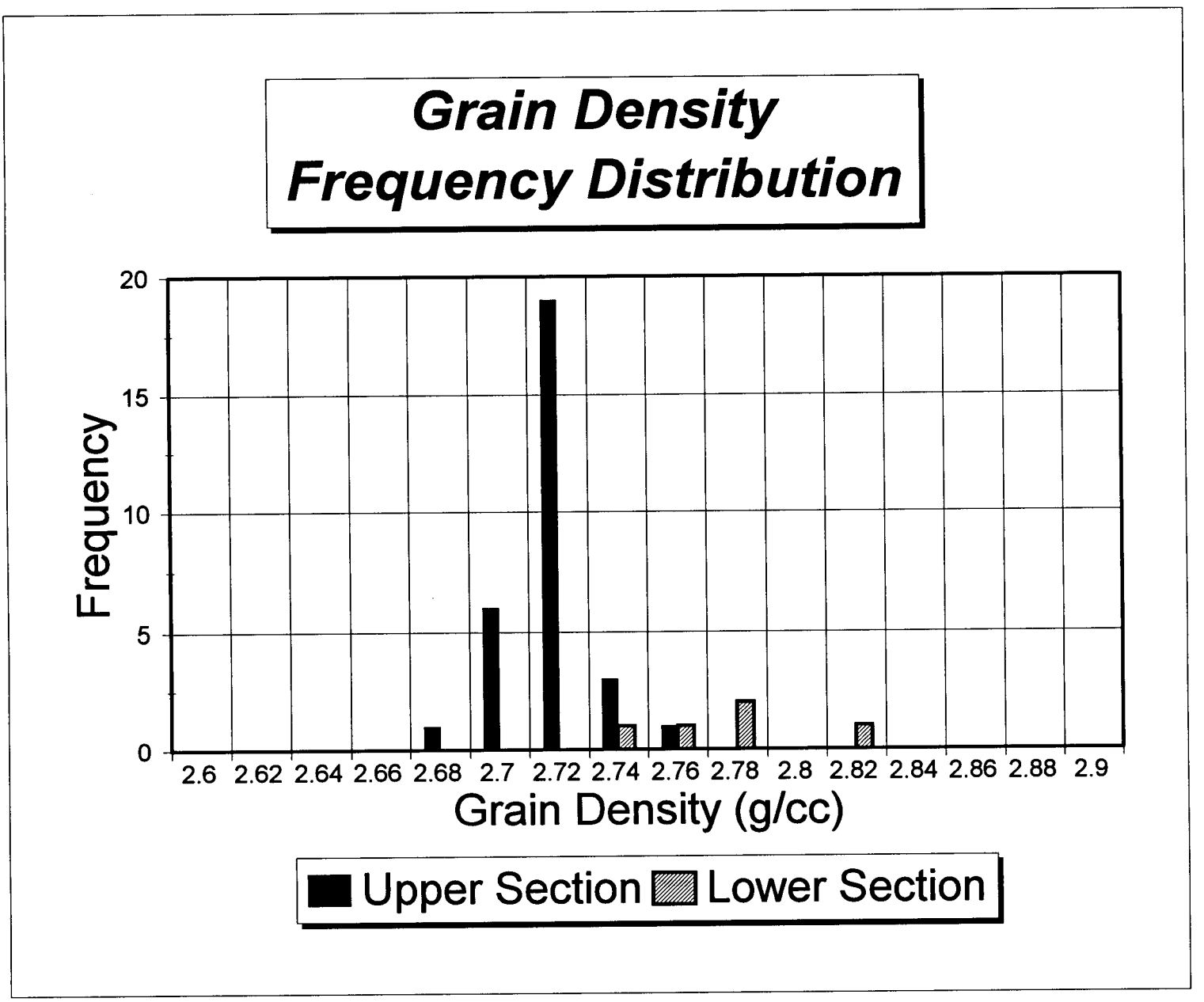
PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**



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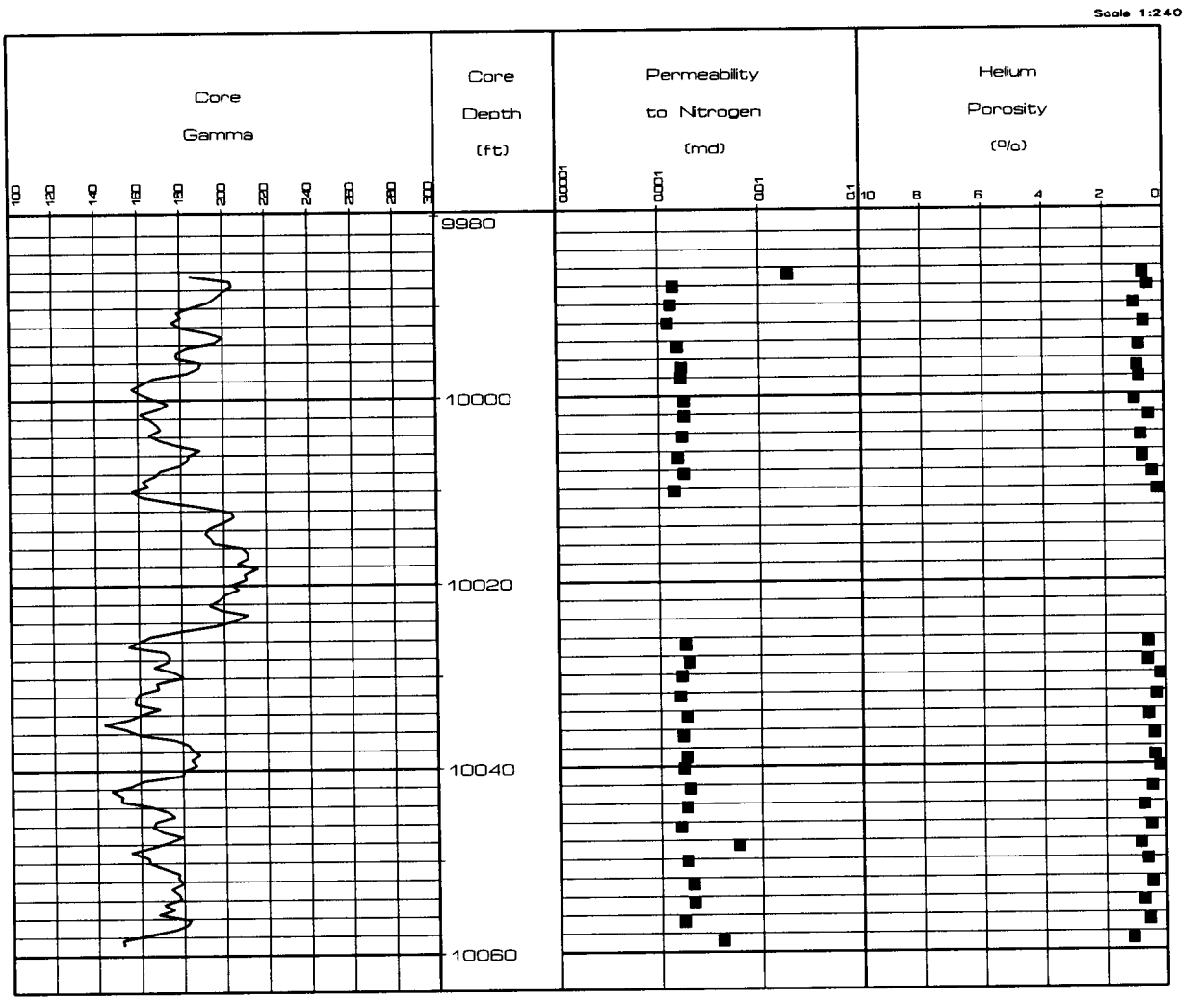
PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**

PETRO-LOG



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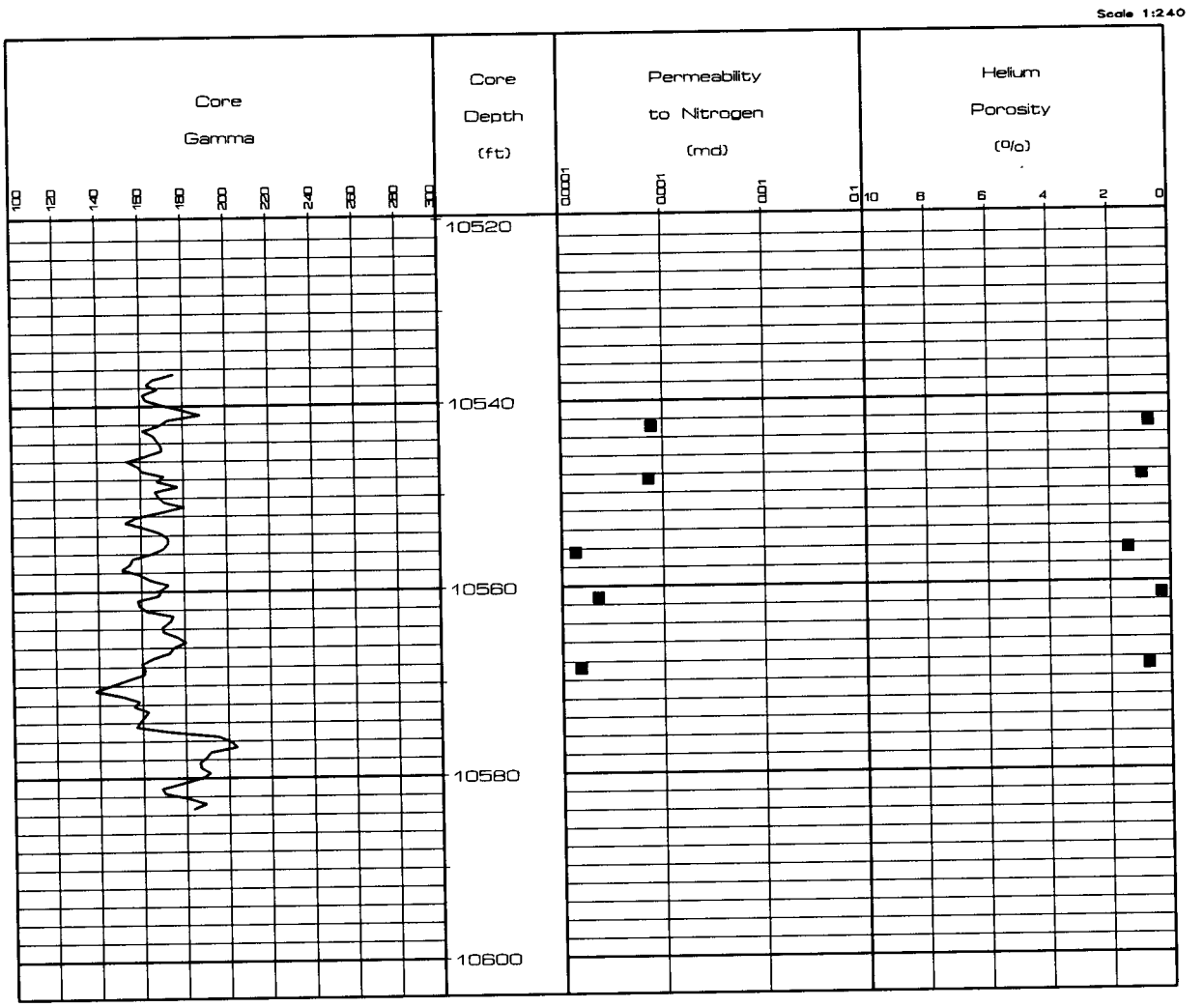
PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**

PETRO-LOG



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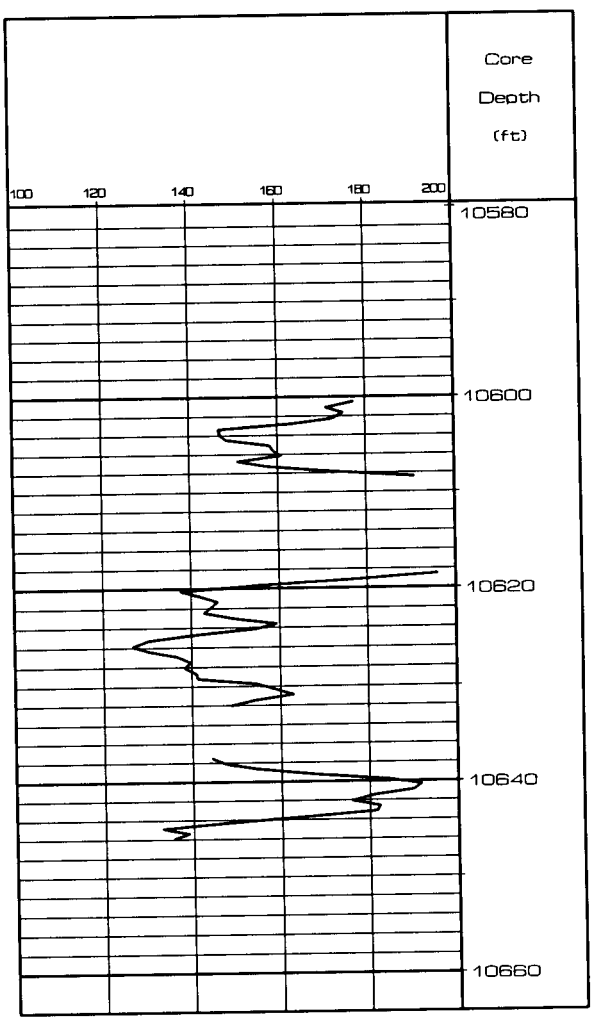
PRECISION CORE

Anschutz Exploration Corp.
Anschutz Ranch Deep #10-27
Sec. 27 T4N R7E
Summit County, Utah

Job: **99058**
Date: **23-Dec-99**

PETRO-LOG

Scale 1:240



CONFIDENTIAL

ANSCHUTZ
EXPLORATION CORPORATION
555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

TRANSMITTAL

DATE: January 10, 2000

TO: Jim Thompson
State of Utah
Division of Oil, Gas & Mining
1594 West North Temple
Suite. 1210
Salt Lake City, UT 84114-5801

FROM: Lorraine Druyff
Anschutz Exploration Corporation
555 17th Street
Suite 2400
Denver, Colorado 80202

Mr. Thompson:

Enclosed is the copy of the Core Analysis Report for the Anschutz Exploration Corporation's Anschutz Ranch Deep #10-27 well, Sec. 27 T4N R7W Summit County, Utah. Please acknowledge the receipt of this report by signing the bottom of this letter and returning it to the address at the top of this letter. ✓ Ack. returned 1/12/2000

Thank you,

Carol Montgomery

Carol Montgomery

Received John R. Baza Date: 1/12/2000

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10000 TO 10008
Box 3 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

9993 TO 10,000
Box 2 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

9986 TO 9993
Box 1 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E.
SUMMIT CO., UTAH

10640 TO 10646
Box 21 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10628 TO 10639
Box 20 of 21

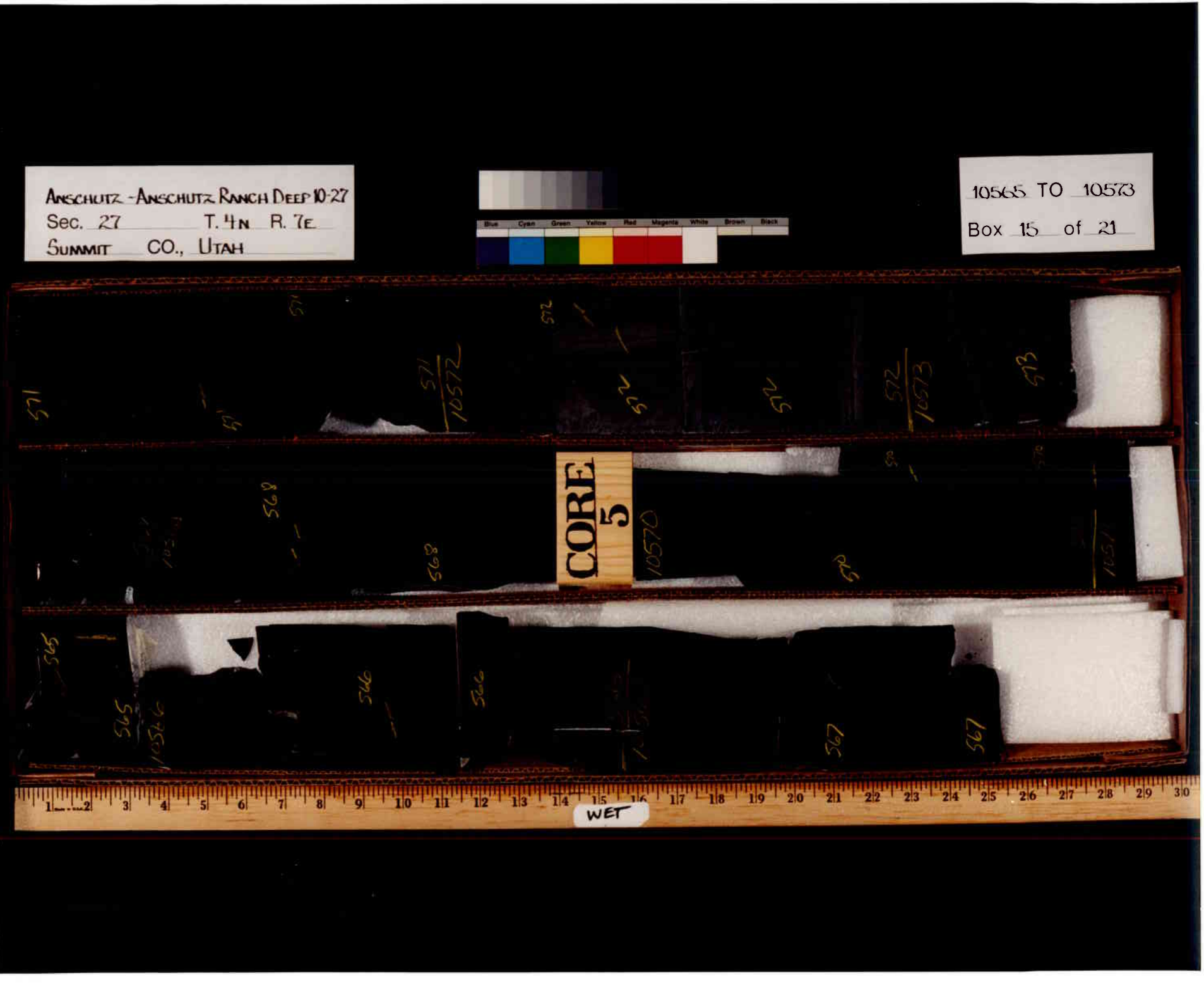
ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10620 TO 10628
Box 19 of 21
WET

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10603-607 TO 10618-620
Box 18 of 21
CORE 7
WET

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10573 TO 10580
Box 16 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10580-582 TO 10600-603
Box 17 of 21
CORE 6
10600
WET


ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10565 TO 10573
Box 15 of 21
CORE 5
WET

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10558 TO 10565
Box 14 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10551 TO 10558
Box 13 of 21
CORE 4
WET

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10543 TO 10549
Box 12 of 21
WET

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH
10536 TO 10543
Box 11 of 21
CORE 3
WET

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10051 TO 10059
Box 10 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10043 TO 10051
Box 9 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10036 TO 10043
Box 8 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10008 TO 10015
Box 4 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10015 TO 10022
Box 5 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10022 TO 10029
Box 6 of 21

ANSCHUTZ - ANSCHUTZ RANCH DEEP 10-27
Sec. 27 T. 4N R. 7E
SUMMIT CO., UTAH

10030 TO 10036
Box 7 of 21

ANSCHUTZ
EXPLORATION CORPORATION
555 SEVENTEENTH STREET • SUITE 2400 • DENVER, COLORADO 80202 • 303-298-1000 • FAX 303-298-8881

September 24, 2004

VIA FEDERAL EXPRESS

Utah Division of Oil, Gas and Mining
1592 West North Temple, Suite 210
Box 145801
Salt Lake City, UT 84114-5801

RE: Sundry Notice
Island Ranching D-1 (API 4304330161);
Anschutz Ranch Deep 10-27 (API 4304330321);
A. L. & L. # 14-33 ST (API 043-30315)

Plug and Abandon

Gentlemen:

Attached please find the original Sundry Notices for Plugging and Abandoning the above mentioned wells in Summit County.

Thank you for your cooperation in the handling of this matter.

Sincerely,

DeVon M. Pester
Operations Technician

/dp
Enclosure

RECEIVED
SEP 27 2004
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
9. API NUMBER: 4304330321
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER
2. NAME OF OPERATOR: Anschutz Exploration Corporation
3. ADDRESS OF OPERATOR: 555 17th St., Ste. 2400 CITY Denver STATE Co ZIP 80202 PHONE NUMBER: (303) 298-1000
4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1433' FSL AND 1228' FEL COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation has plugged back the above well. The daily report and well sketch are attached.

RECEIVED
SEP 27 2004
DIV. OF OIL, GAS & MINING

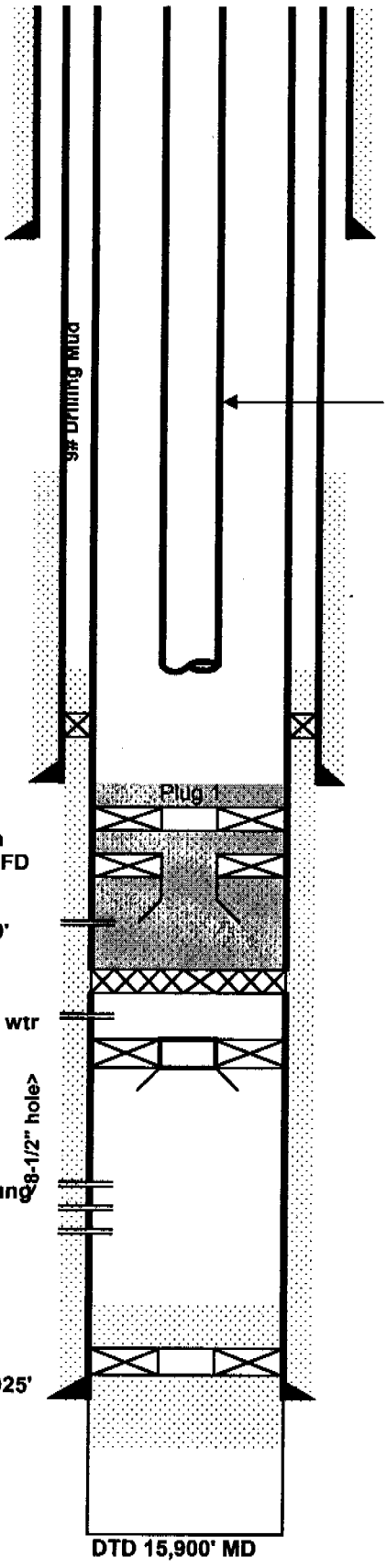
NAME (PLEASE PRINT) Mohamed Elhage TITLE Petroleum Engineer
SIGNATURE [signature] DATE 9/24/2004

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

ANSCHUTZ EXPLORATION CORPORATION
P&A WELLBORE SCHEMATIC

SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27 COUNTY, STATE: Summit, Utah
TD: 13,925'	GROUND ELEVATION: 7,566' KB ELEVATION: 7,593'



9-5/8" CIBP @ 200'

13-3/8" @ 1500'

Calc TOC 4,500'

DV Tool @ 6,100'

TOL 9,135'

9-5/8" @ 9,626'

9/12/02 Perforated Upper Phosphoria 12,067-092', acidized, tested 16 MMCFD

9/9/02 Set Schlumber TTCR @ 12,330' dump bailed 10'+ of cement on plug

7/15/02 perf'd Lower Phophoria 12,642-662', acidized, tested gas and wtr

3/10-11/2000 Perforations
12,842' - 866', 12,910' - 940' and 13,050 - 13,080', 1 spf, 0 degree phasing 2-1/8" PEJ, 14.3g charges

Production Liner
7", 32#, L80 Hydril SLX
(Cmt'd to TOL, returns circulated off of TOL.)

13,925'

DTD 15,900' MD

Cement Calculations:
9-5/8" 43.5# L80 BTC 0.41806 ft^3 capacity
7" 32# L80 0.20255 ft^3 capacity

(20 sks)(1.18 ft^3/sk) / 0.2026 ft^3/ft = 116.5 ft
(100sks)(1.18ft^3/sk)/0.41806 ft^3/ft = 282.3 ft

63 joints of 2-7/8" tubing.

Plug 1 - 80 sks "G" cmt below CR
20 sks "G" cmt on CR

Baker ZXP Liner Top Pkr w/7.5 x 12'
Tie-back ext., CMC liner hanger

CR @ 11,650'

Baker Model "D" Packer @ 11,700'
WLREG @ 11,758'

Tubing String
2-7/8", L80, 7.7#, Vam Ace
(See tbg. detail for specifics)

Baker Model "D" Isolation Pkr @ 12,700'
WLREG @ 12,729.5
7/15/02 Set tubing CIBP in tailpipe assembly capped w/ 10' cmt

Baker Cement Retainer
Set @ 13,920', pumped 100 sks
Class G below retainer, left +/- 1 Bbl
on top of retainer

Anschutz Ranch Deep 10-27
Operator: AEC
1433' FSL and 1228' FEL
NESE Section 27, T4N, R7E
Summit County, Utah
Anschutz Ranch Deep
13,050-13,080'; 12,910-12,940';
12,842-12,866' Weber
12,405-490, 12,520-574', 12,642-12,662' Phosphoria
12,067-12,092' Second Phosphoria
TAC WI: 68.88%
TIGHT HOLE

06/01/04 P&A Day 1. Set BPV, set & test anchors, RD rig & support equipment on Island Ranch D-1ST, ready to move in a.m.

06/02/04 P&A Day 2. Move from Island Ranch D-1ST to location, raise derrick, MI 3-500 bbl tanks, haul 400 bbls water, spot support equipment.

06/03/04 P&A Day 3. RU sub, pump 75 bbls down tbg, pull BPV, ND tree, NU BOP equipment & test, haul in and unload work string, RU LD machine, secure well, SDFN.

06/04/04 P&A Day 4. PO: Set cement retainer. Pump 75 bbls water down tbg, sting out, POOH, LD 2.875" 7.7# L-80 VAM Ace prod tbg & spooling SS control lines, RU hotoiler to pump 300 bbls/hr to keep well dead overnight.

06/05/04 P&A Day 5. PO: PU work string. RU OWP wireline, run 5.718" gauge ring to 11,700', POOH, RIH w/ 7", 32# CR, set at 11,650', POOH, RD & release OWP, fill hole & test CR to 1000#, TIH with stinger & tbg, secure well, SD until 6/7/04.

06/06/04 SD until 6/7/04.

06/07/04 P&A Day 6. PO: LD work string. PU 2.875" work string, tag up, sting in, WO BJ 3 hours, pump 100 sx Class "G" 15.8#/gal, displace w/ 63 bbls water, sting out, leave 20 sx on top of CR, pull 6 jts tbg, reverse out 1 bbl gray colored wtr, no cement in returns, POOH, stand back 10 stds, secure well, RD BJ, SDFN.

06/08/04 P&A Day 7. PO: ND BOP, NU tree, rigging down. POOH, stand 21 stds, LD 300 jts 2.875" tbg, LD stinger, RIH w/ 63 jts 2.875" 6.5# N-80 tbg, X-OVER, 2.875" 8rd PIN x 2.875" VAM Ace PIN, VAM Ace coupling, 2'x 2.875" 7.7# VAM Ace pup, sour service extended neck hanger, land tbg, secure well, SDFN.

06/09/04 P&A Day 8. PO: Rigging down. Check well, RD sub, ND BOPs, NU 2-9/16" sour tree, unstring blocks, rigging down.

06/10/04 P&A Day 9. PO: Rigging down. Too muddy to move. Put protectors on VAM tbg. SD.

06/11/04 PO: Rigging down.

06/14/04 PO: Rigged down. Rig moved over to AL&L 14-33ST. **FINAL REPORT.**

DOUBLE JACK TESTING & SERVICES/IPS
Phone (307) 789-9213

B.O.P TEST REPORT

T04N R07E S-27
43-043-30321

B.O.P. TEST PERFORMED ON (DATE) 5-7-06

OIL COMPANY Anschutz

WELL NAME & NUMBER A.R.D 10-27

SECTION 27

TOWNSHIP 4N

RANGE 7E

COUNTY & STATE Summit Utah

DRILLING CONTRACTOR DHS rig # 1

OIL COMPANY SITE REPRESENTATIVE Jim Hill

RIG TOOL PUSHER Bobby Linder

TESTED OUT OF Evanston, Wyoming

NOTIFIED PRIOR TO TEST

COPIES OF THIS TEST REPORT SENT TO: Wyoming Oil & Gas Commission

BLM- Utah Resource Area

ORIGINAL CHART & TEST REPORT ON FILE AT:

DOUBLE JACK TESTING & SERVICES/IPS
PO BOX 2097
EVANSTON, WY 82930

TESTED BY: Joe Bruce

JUN 07 2006

IPS / db Double Jack Testing

FIELD TICKET 24721

Accounting Office: PO Drawer 2080 • Riverton, WY 82501 • (307) 857-0076

Field Operations:
Riverton, WY (307) 857-0077
Evanston, WY (307) 789-9213
Rock Springs, WY (307) 382-4020
Big Piney, WY (307) 276-5265
Vernal, UT (435) 781-0448

DATE 5-7-06

☒ OPERATOR Anschutz

☐ CONTRACTOR DHS rig #1

WELL NAME A.R.D. 10-27

COUNTY	STATE	SECTION	TOWNSHIP	RANGE
Summit	Utah	27	4N	7E

Items Tested:

	LOW TEST PSI	TIME HELD MINUTES	HIGHTEST PSI	TIME HELD MINUTES
Top Pipe Rams	250	5	10,000	10
Bottom Pipe Rams	250	5	10,000	10
Blind Rams	250	5	10,000	10
Annular B.O.P.	250	5	3,000	10
Choke Manifold	250	5	10,000	10
Choke Line	250	5	10,000	10
Kill Line Valves	250	5	10,000	10
Super Choke	N/A		10,000	2
Upper Kelly	250	5	10,000	10
Lower Kelly	250	5	10,000	10
Floor Valve	250	5	10,000	10
Dart Valve	250	5	10,000	10
Casing	N/A			

Closing Unit PSI 1600

Closing Time of Rams 8 secs.

Closing Time of Annular 20 secs

Closed Casing Head Valve yes

Set Wear Sleeve yes

COMMENTS

CoMan Jim Hill

Tool Pusher Bobby Linder

Driller

ADDITIONAL TESTS & COMMENTS DRILLING ☒ COMPLETION ☐

		CHARGES
TEST PLUG	11" C-22 4½ IF	$165.00
TOP SUB.	3½ IF	65.00
KELLY SUB.	4" FH	65.00
X-OVER SUB.	4½ IF x 4" FH Box N/C	
OTHER		

QUANTITY	RATES		CHARGES
1 unit	UNIT RATES	to test BOPs + Valves	$1,700.00
4 Hrs.	ADDITIONAL	time over set up charge @ $95.00 Hr.	380.00
60 miles	MILEAGE	to + from location @ $2.50 per M/C	150.00
80 gals.	ANTIFREEZE	Antifreeze Fluid 50/50 Mix @ $3.00 gal.	240.00
	OTHER	Fuel Surcharge .05%	$138.25

PURCHASE ORDER # Jim Hill
COMPANY REPRESENTATIVE

Joe Bruce
TESTED BY

NO ACCIDENTS 196
DOUBLE JACK TESTING UNIT NUMBER

SUBTOTAL $2,903.25

TAX

TOTAL

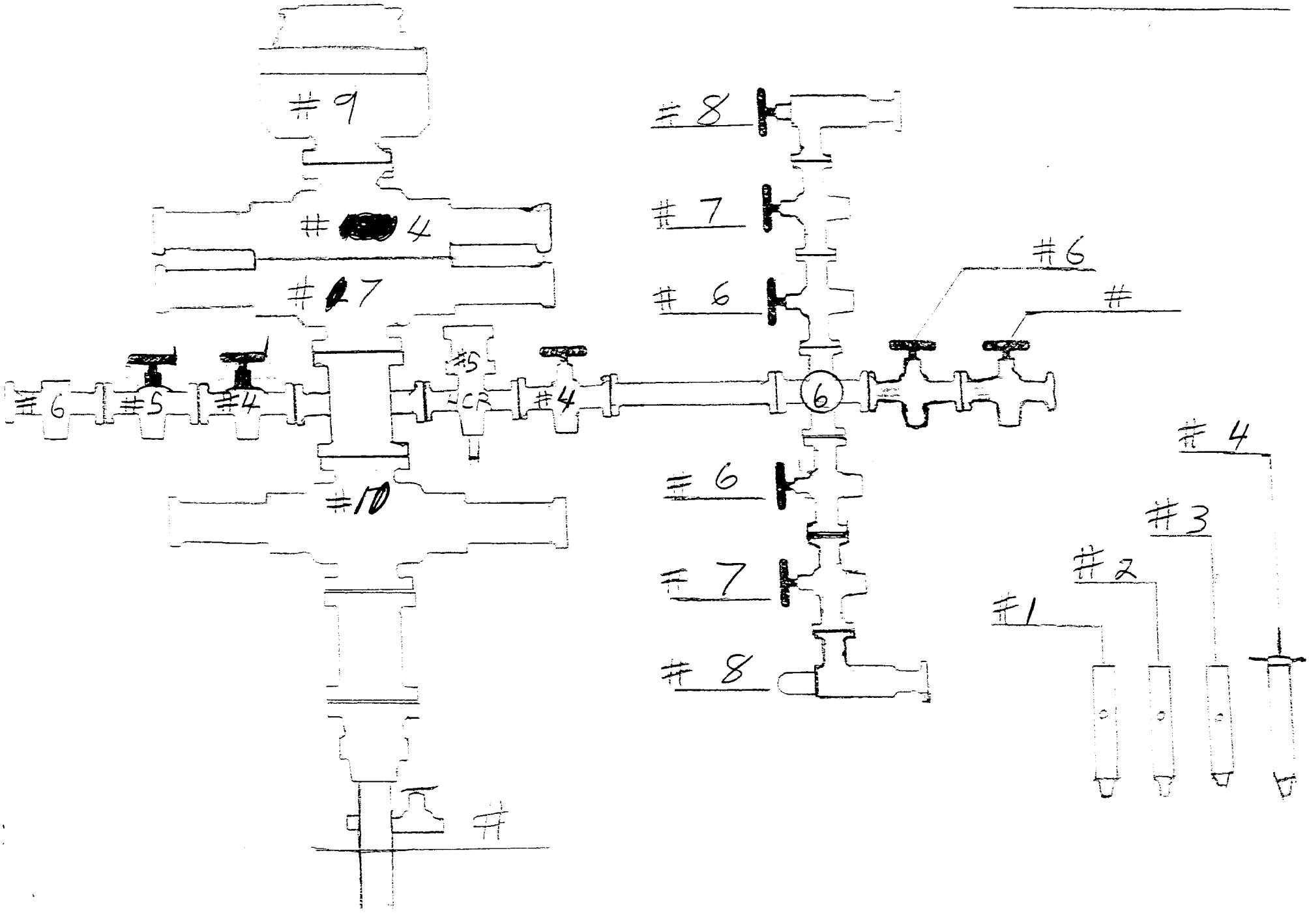
NOTICE TO ALL CUSTOMERS

If this account shall not be paid when due and it is placed with an attorney for collection, or if suit be instituted for collection, the undersigned agree(s) to pay in either case, reasonable expense of collection including attorney's fees and court cost in compliance with TRUTH IN LENDING AND THE UNIFORM CONSUMER CREDIT CODE, the following information disclosure, under the terms of our regular accounts, all amounts for service due and payable within THIRTY (30) DAYS from the receipt of an invoice for such services. A LATE CHARGE will be assessed when accounts are not paid when due. THE LATE CHARGE is computed by a "periodic rate" 1-3/4% PER MONTH which is an ANNUAL PERCENTAGE RATE OF 21% to the previous balance in the account on the billing date. No further credit can be extended on unpaid delinquent accounts until the delinquent account is paid in full. The contractor will not be held liable for damages caused by acts of God, or unforeseen circumstances that could not be reasonably anticipated in performing the work done as set forth above.

IPS/DOUBLE JACK TESTING & SERVICES

COMPANY		LEASE & WELL NAME	TEST DATE	RIG NAME & #
Anschutz		ARD-10-27	5-7-06	DHS Rig # 1
TEST	TIME	ITEMS TESTED		
		96 minute rotation		
1	5:00 pm	T.I.W. Valve 4" FH		
2	5:25 pm	Lower Kelly Valve		
3	6:00 pm	Upper Kelly Valve		
4	7:00	Dart valve, upper pipe rams, Inside kill valve, Inside manual		
5	7:30	Floor valve XT39, outside kill valve, H.C.R. valve		
6	8:00	Check valve riser, inside choke manifold valves		
7	8:30	Lower pipe rams, outside choke manifold valves		
8	9:00	Choke and super choke		
9	9:10	Annular		
10	10:00	Blind rams		

Anschutz
ARD 10-27
DHS #1



Anschutz

IPS / Double Jack Testing

Accumulator Function Tests

DHS #1

1 RECORD INITIAL ACCUMULATOR PRESSURE 2500

2 WITH DRILL PIPE & TEST PLUG INSTALLED IN WELL HEAD.

3 PLACE ALL FUNCTIONING ACCUMULATOR VALVES IN OPEN POSITION
ALLOW ACCUMULATOR TO PRESSURE UP BEFORE SHUTTING OFF ALL PUMPS

4 CLOSE ANNULAR / RECORD TIME & PRESSURE.
ANNULAR INTIAL PSI 2450 FINAL PSI 2150 TIME 20 secs

#5 CLOSE PIPE RAMS / RECORD TIME & PRESSURE.
PIPE RAMS INTIAL PSI 2150 FINAL PSI 2000 TIME 6secs

#6 OPEN PIPE RAMS TO SIMULATE BLIND RAMS / RECORD TIME & PRESSURE.
INTIAL PSI 2000 FINAL PSI 1925 TIME 55 secs

#7 CLOSE HCR (if applicable) / RECORD TIME & PRESSURE.
HCR INTIAL PSI 1925 FINAL PSI 1900 TIME 3 secs

#8 ON THREE RAM STACK CLOSE BOTTOM PIPE RAM / RECORD TIME & PRESSURE.
PIPE RAMS INTIAL PSI 1900 FINAL PSI 1825 TIME 5secs

#9 IF YOU HAVE A 3 RAM STACK OPEN THE ANNULAR TO ACHIEVE THE 50+% SAFETY FACTOR FOR 5M AND GREATER SYSTEMS. 1600

#10 WHEN DONE WITH RECORDED TIMES & PRESSURES THERE SHOULD BE
AT LEAST 200 PSI OVER PRECHARGE IN THE ACCUMLATOR (1200 PSI)

#11 OPEN ANNULAR

NITROGEN BOTTLES / BLEED OFF TEST

#1 FINISH BLEEDING OFF BOTTLES INTO ACCUMLATOR TANK/RESERVOIR.
#2 WATCH & RECORD WHERE PRESSURE DROPS (accumulator psi)

PRESSURE DROP 1025 PSI

#3 ACCUMULATOR PSI SHOULD DROP AT 1100 PSI TO 950 PSI

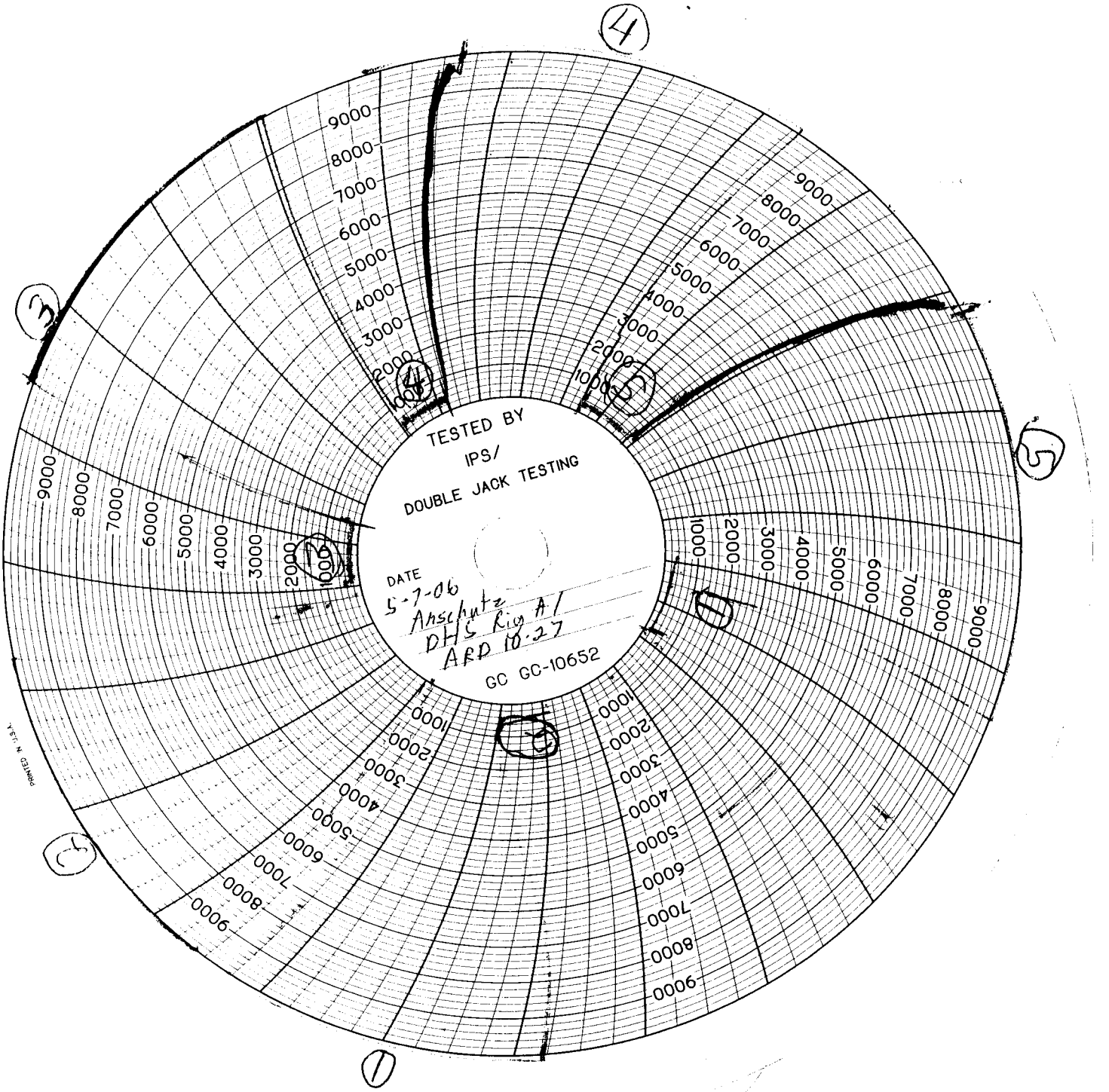
---

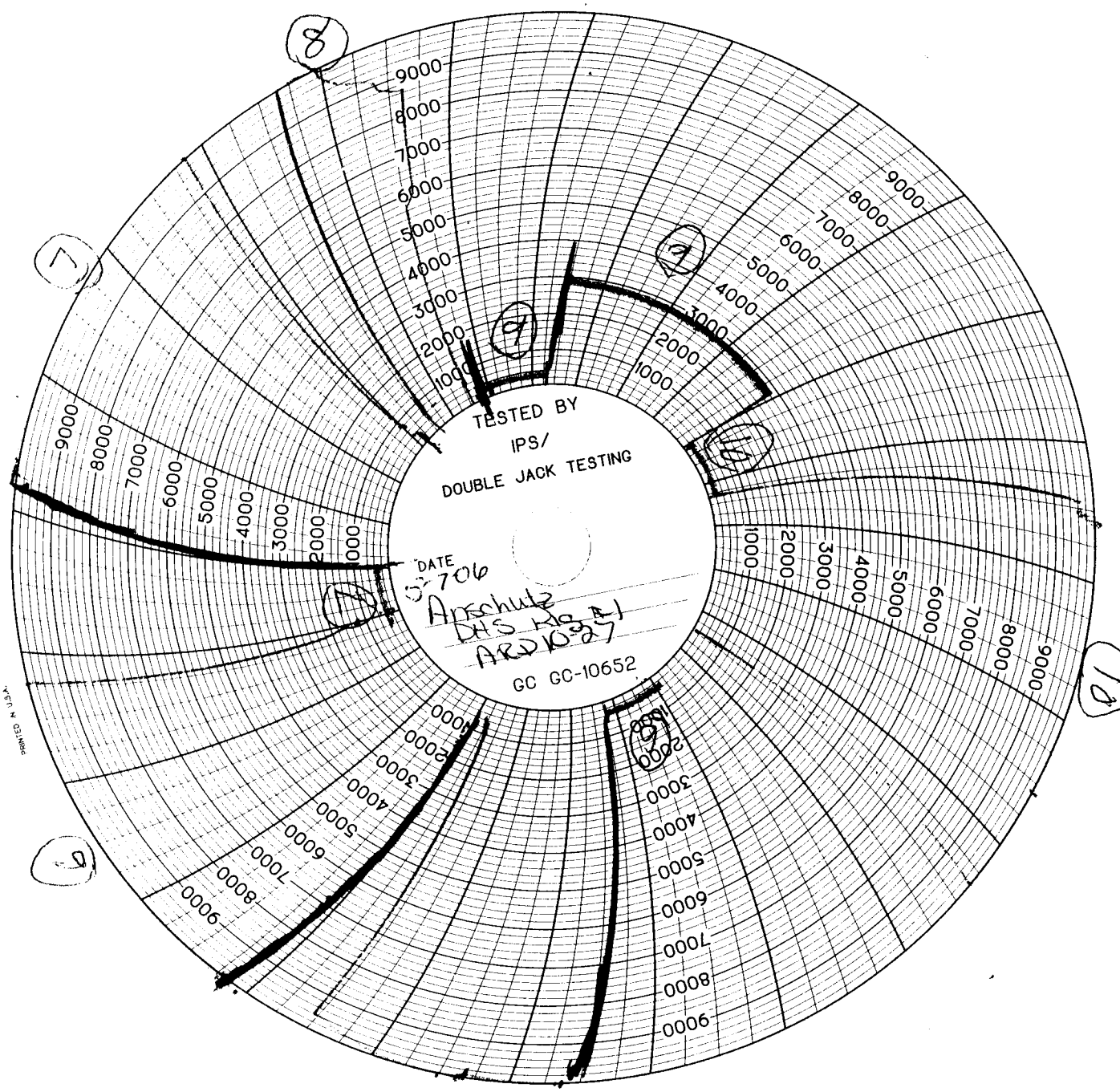
2 MINUTE TIME TEST / ACCUMULATOR PUMPS

#1 SHUT VALVES TO NITROGEN BOTTLES.
#2 PLACE HCR IN THE OPEN POSITION. (if applicable)
#3 PLACE ANNULAR IN THE CLOSE POSITION.
#4 TURN ON PUMPS & RECORD TIME TO PRESSURE UP MANIFOLD ON
ACCUMULATOR TO ATLEAST 200PSI OVER PRECHARGE. WITHIN 2 MIN. OR LESS.

RECORDED TIME 1 MINUTE 35 SEC.

#5 OPEN VALVES TO NITROGEN BOTTLES & PRESSURE THE ACCUMULATOR BACK TO SHUT OFF POINT. THEN OPEN ALL PIPE RAMS & ANNULAR BEFORE PULLING PLUG AND DRILL PIPE OUT OF BOP.


TESTED BY
IPS/
DOUBLE JACK TESTING
DATE
5-7-06
Anschutz
DHS Rig #1
ARD 10.27
GC GC-10652
1000
2000
3000
4000
5000
6000
7000
8000
9000


TESTED BY
IPS/
DOUBLE JACK TESTING
DATE
5-7-06
Anschutz
DHS Rig #1
ARD 10-27
GC GC-10652
PRINTED IN U.S.A.

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
9. API NUMBER: 4304330321
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER _____

2. NAME OF OPERATOR: Anschutz Exploration Corporation

3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 299-1246

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 5/30/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☑ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

After deepening the ARD 10-27 to a depth of 19,500' MD (no shows were encountered), an FMI logging tool was stuck in the hole during a logging run. Subsequent fishing operations have been unsuccessful. Anschutz Exploration Corporation proposes to sidetrack the well. It is proposed that a cement kickoff plug be spotted from 15,463' MD to 16,260' MD for the purposes of drilling an open hole 6" sidetrack. Expected TD of the sidetrack is 21,000'.

Enclosed is a wellbore diagram depicting the proposed operations and the directional plan for the sidetrack.

BHL 488318 X
4544834 Y
41,056[illegible]
-111.13[illegible]015

Approved by the Utah Division of Oil, Gas and Mining
Date: 06-29-06
By: [signature]

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer
SIGNATURE Jason T. Stewart DATE 5/30/2006

(This space for State use only)

[illegible] OPERATOR
2-10-06
CHD

RECEIVED
MAY 31 2006
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

INSTRUCTIONS

This form shall be submitted by the operator to show the intention and/or completion of the following:

- miscellaneous work projects and actions for which other specific report forms do not exist;
- all other work and events as identified in section 11, Type of Action, or as required by the Utah Oil and Gas Conservation General Rules, including:
  - minor deepening of an existing well bore,
  - plugging back a well,
  - recompleting to a different producing formation within an existing well bore (intent only),
  - reperforating the current producing formation,
  - drilling a sidetrack to repair a well,
  - reporting monthly the status of each drilling well.

This form is not to be used for <u>proposals</u> to

- drill new wells,
- reenter previously plugged and abandoned wells,
- significantly deepen existing wells below their current bottom-hole depth,
- drill horizontal laterals from an existing well bore,
- drill hydrocarbon exploratory holes such as core samples and stratigraphic tests.

Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the <u>results</u> of the following operations:

- completing or plugging a new well,
- reentering a previously plugged and abandoned well,
- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

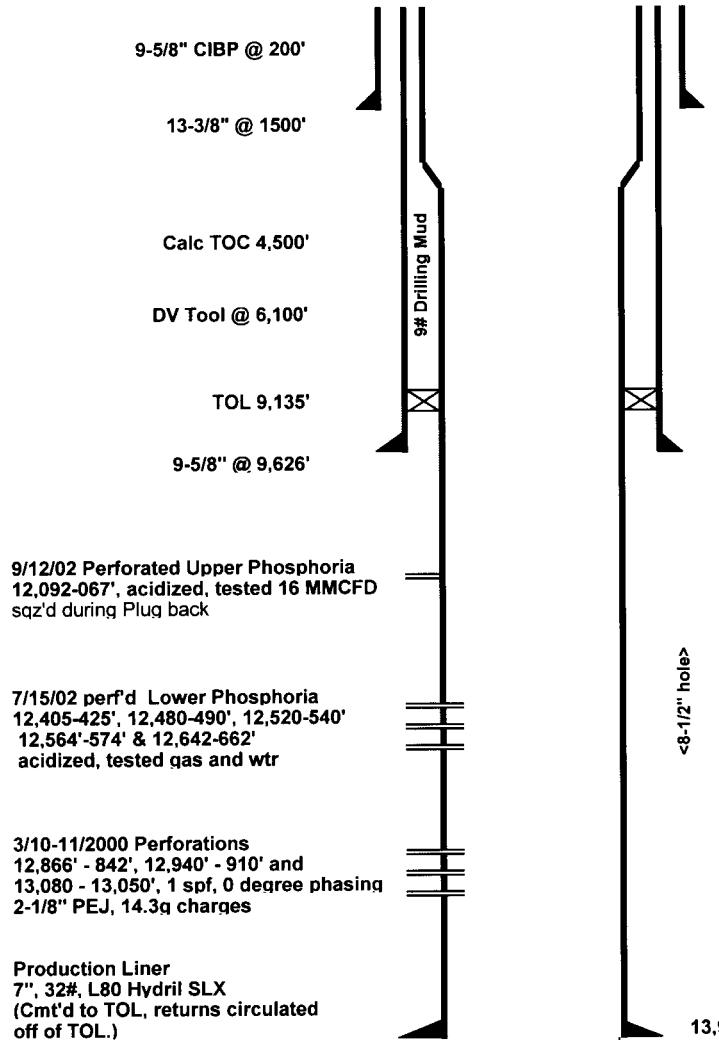
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

ANSCHUTZ EXPLORATION CORPORATION
FISHING WELLBORE SCHEMATIC

SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27	COUNTY, STATE: Summit, Utah
TD: 19,500'	GROUND ELEVATION: 7,566'	KB ELEVATION: 7,593'



Cement Calculations:
9-5/8" 43.5# L80 BTC
7" 32# L80

Production Tie-back
7 5/8" 39#, L80 SLX (ID 6.625") to 3,533'
7 " 32#, L80 SLX & STL (ID 6.094") to 9,134'

Baker ZXP Liner Top Pkr w/7.5 x 12'
Tie-back ext., CMC liner hanger
TOL 9135'

Wellbore Surveys

Depth	Inclination	Depth	Inclination
10,009'	1.80°	14,780'	36.50°
10,919'	2.50°	15,005'	39.30°
11,031'	4.60°	15,253'	38.40°
11,186'	8.40°	15,540'	35.20°
11,528'	14.50°	15,857'	35.90°
11,654'	19.20°	16,003'	39.22°
12,086'	31.60°	16,098'	41.15°
12,117'	33.10°	16,192'	42.82°
12,302'	35.00°	16,287'	44.50°
12,333'	35.90°	16,318'	44.67°
12,531'	36.40°	16,348'	44.76°
12,736'	36.40°	16,378'	45.20°
12,954'	38.50°	16,410'	45.81°
13,369'	37.10°	16,442'	46.43°
13,676'	39.80°	16,473'	47.75°
13,973'	42.60°	16,504'	48.28°
14,500'	39.60°	16,536'	48.36°

ANSCHUTZ EXPLORATION CORPORATION

Location: UTAH
Field: SUMMIT COUNTY
Facility: SEC.27-T4N-R7E

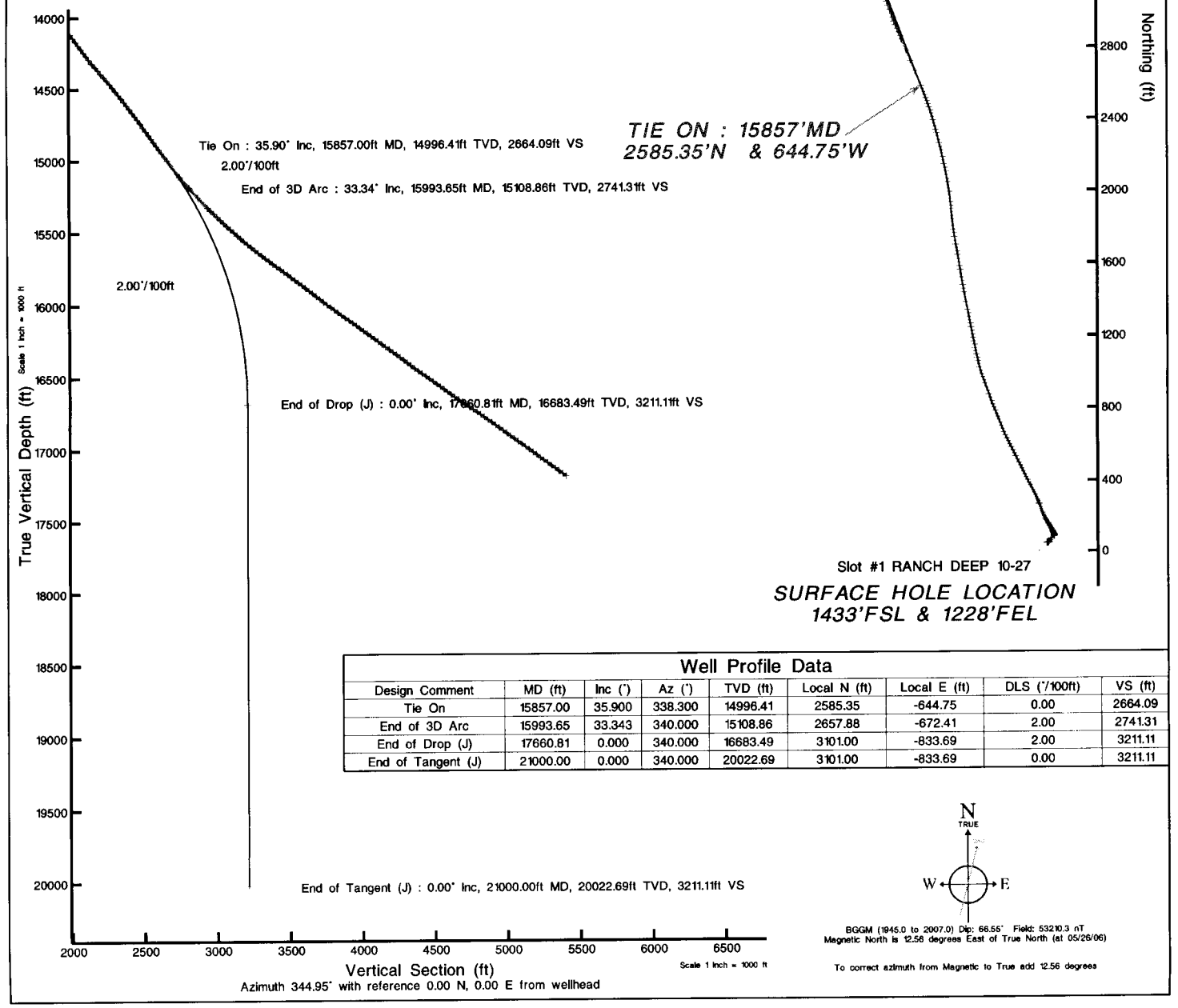
Slot: Slot #1 RANCH DEEP 10-27
Well: RANCH DEEP 10-27
Wellbore: ARD 10-27 ST

Plot reference wellpath is ARD 10-27 ST PWP	
True vertical depths are referenced to Datum #2 (RKB)	Grid System: NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet
Measured depths are referenced to Datum #2 (RKB)	North Reference: True north
Datum #2 (RKB) to Mean Sea Level: 7593 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - SEC.27-T4N-R7E): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: L. Doubek on 5/26/2006

Tie-On Position

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
15857.00	35.900	338.300	14996.41	2585.35	-644.75	2099567.75	263390.61	41° 03' 20.575"N	111° 08' 20.336"W

BAKER HUGHES
INTEQ



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	15857.00	35.900	338.300	14996.41	2585.35	-644.75	0.00	2664.09
End of 3D Arc	15993.65	33.343	340.000	15108.86	2657.88	-672.41	2.00	2741.31
End of Drop (J)	17660.81	0.000	340.000	16683.49	3101.00	-833.69	2.00	3211.11
End of Tangent (J)	21000.00	0.000	340.000	20022.69	3101.00	-833.69	0.00	3211.11

BGGM (1945.0 to 2007.0) Dip: 66.55° Field: 53210.3 nT
Magnetic North is 12.56 degrees East of True North (at 05/26/06)

To correct azimuth from Magnetic to True add 12.56 degrees

ANSCHUTZ EXPLORATION CORPORATION

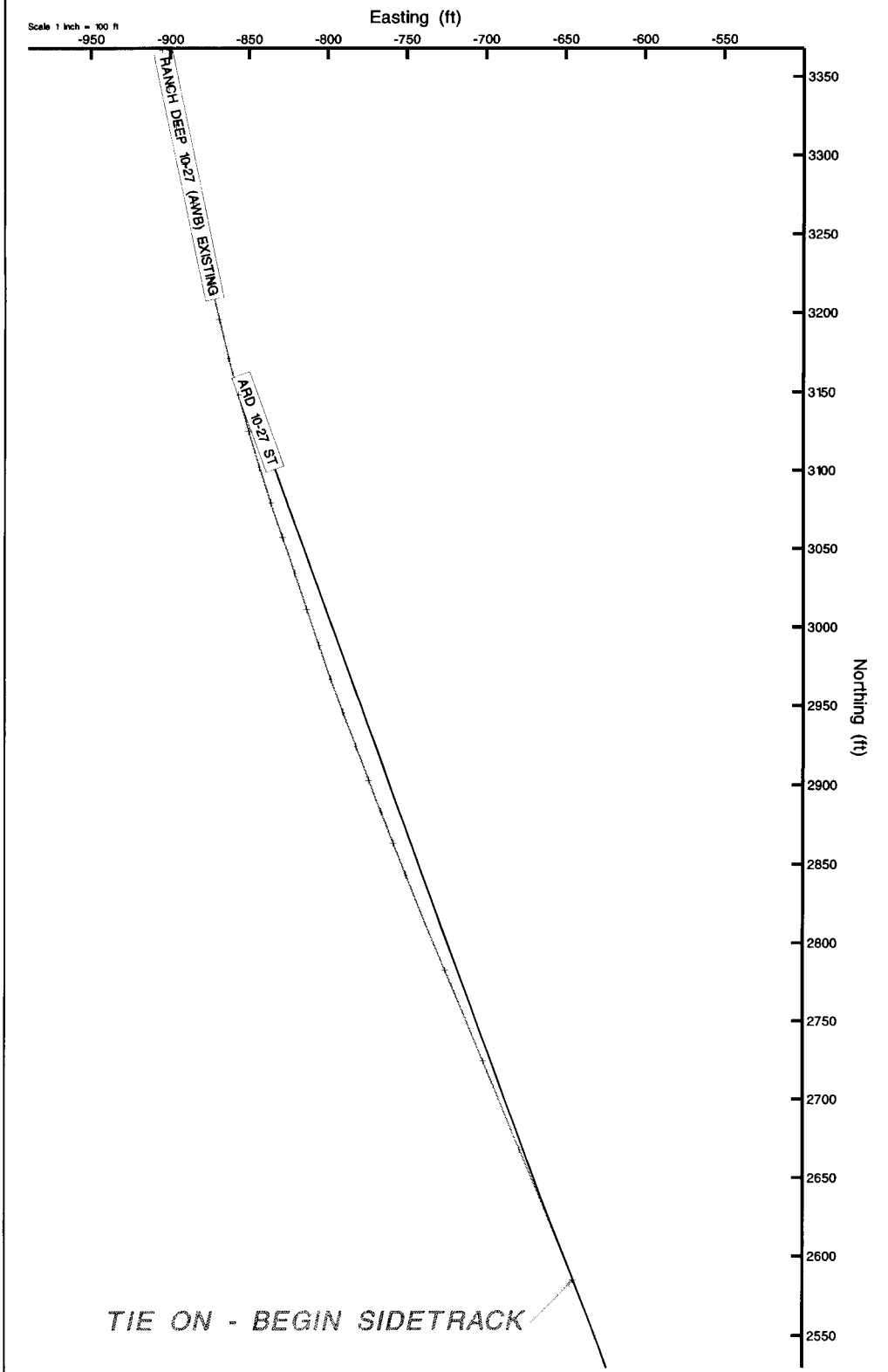
Location: UTAH
Field: SUMMIT COUNTY
Facility: SEC.27-T4N-R7E

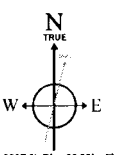
Slot: Slot #1 RANCH DEEP 10-27
Well: RANCH DEEP 10-27
Wellbore: ARD 10-27 ST

BAKER HUGHES
INTEQ

Tie-On Position

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
15857.00	35.900	338.300	14996.41	2585.35	-644.75	2099567.75	263390.61	41° 03' 20.575"N	111° 08' 20.336"W





BGGM (1945.0 to 2007.0) Dip: 66.55° Field: 53210.3 nT
Magnetic North is 12.56 degrees East of True North (at 05/26/06)

To correct azimuth from Magnetic to True add 12.56 degrees

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**ANSCHUTZ EXPLORATION CORPORATION**	Slot	**Slot #1 RANCH DEEP 10-27**
Area	**UTAH**	Well	**RANCH DEEP 10-27**
Field	**SUMMIT COUNTY**	Wellbore	**ARD 10-27 ST**
Facility	**SEC.27-T4N-R7E**	Sidetrack from	**RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M**

REPORT SETUP INFORMATION			
Projection System	**NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet**	Software System	**WellArchitect™ 1.1**
North Reference	**True**	User	**L. Doubek**
Scale	**0.999963**	Report Generated	**05/26/06 at 12:06:53**
Wellbore last revised	**05/26/06**	Database/Source file	**WA_Denver/ARD_1**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			**2100223.28**	**260808.08**	41 02 55.030N	111 08 11.920W
Field Reference Pt			**2000000.00**	**3467958.49**	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Datum #2 (RKB) to Installation Vertical Datum	**7593.00 feet**
Horizontal Reference Pt	**Slot**	Datum #2 (RKB) to Mean Sea Level	**7593.00 feet**
Vertical Reference Pt	**Datum #2 (RKB)**	Installation Vertical Datum to Mud Line	**0.00 feet**
MD Reference Pt	**Datum #2 (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**344.95°**

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	33.79	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	33.69	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	33.56	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	33.41	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	33.28	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	33.17	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	33.07	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	32.98	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	32.88	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	32.82	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	32.79	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	32.74	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	32.69	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	32.66	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	32.63	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	32.59	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	32.55	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	32.49	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	32.40	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	32.30	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	32.21	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	32.10	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	32.01	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	31.97	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	31.96	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	31.99	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	32.04	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	32.08	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	32.09	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	32.12	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	32.25	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	32.43	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	32.63	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	32.88	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	33.16	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	33.44	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	33.73	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	34.03	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	34.27	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	34.48	50.34	54.46	1.17

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	34.65	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	34.78	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	34.87	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	40.88	58.70	60.90	0.29
10469.00	1.900	41.300	10465.08	50.90	71.15	68.59	0.14
10919.00	2.500	56.500	10914.75	58.14	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	58.41	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	59.26	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	60.70	85.40	83.85	3.84
11031.00	4.600	0.100	11026.58	62.75	87.57	84.04	4.35
11062.00	5.100	349.000	11057.47	65.32	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	68.37	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	72.02	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	76.17	100.40	80.07	2.61
11186.00	8.400	332.900	11180.49	80.54	104.41	78.15	1.81
11217.00	9.100	332.200	11211.13	85.14	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	90.10	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	95.41	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	101.07	122.98	68.13	2.32
11342.00	11.600	330.000	11334.04	107.19	128.47	64.99	1.29
11373.00	12.200	328.800	11364.37	113.35	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	119.79	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	126.47	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	133.41	152.02	51.59	2.07
11496.00	14.200	330.800	11484.16	140.42	158.35	48.15	2.29
11528.00	14.500	329.700	11515.16	148.09	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	155.64	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	163.75	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	172.50	186.94	30.92	4.77
11654.00	19.200	333.600	11636.12	181.94	195.47	26.30	7.51
11684.00	19.600	336.900	11664.41	191.76	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	202.53	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	213.30	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	224.32	235.31	11.23	0.87
11810.00	21.500	341.300	11782.38	235.88	246.30	7.63	2.31
11840.00	22.000	339.600	11810.25	246.96	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	254.49	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	258.69	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	271.29	279.50	-5.30	3.75
11933.00	25.500	337.100	11895.52	283.74	291.08	-10.16	5.02

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	296.88	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	311.07	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	325.25	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	339.86	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	356.00	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	372.20	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	388.29	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	405.10	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	422.14	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	438.87	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	456.25	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	474.21	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	491.84	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	509.64	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	527.96	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.73	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.59	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	582.12	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	599.99	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	617.32	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.93	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.82	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	670.94	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	689.10	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	707.31	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	725.56	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	744.42	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	762.74	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	781.77	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	800.33	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	818.40	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	837.25	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	856.32	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	876.12	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	895.12	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	914.48	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	933.27	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	960.25	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	978.79	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	998.56	952.43	-303.47	1.67

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1017.65	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1036.00	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1054.77	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1073.45	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1092.08	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1109.52	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1127.71	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1147.13	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1165.24	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1183.49	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1201.99	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1221.28	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1241.37	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1261.04	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1279.55	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1299.97	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1319.82	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1339.24	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1359.50	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1378.54	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1399.59	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1420.04	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1441.28	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1495.60	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1515.15	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1535.99	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1556.72	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1577.34	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1598.59	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1619.90	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1640.53	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1661.85	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1682.45	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1703.46	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1723.76	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1744.13	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1763.19	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1783.67	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1804.91	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1825.38	1764.73	-466.68	1.63

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1844.72	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.73	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.65	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.85	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.73	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1938.95	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1958.30	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1976.80	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1995.10	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2013.94	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2034.07	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2052.45	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2070.65	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2088.96	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2108.10	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2126.22	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2148.56	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2168.97	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2189.06	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2209.23	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2229.92	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2249.19	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2268.97	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2287.95	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2307.32	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2329.62	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2348.65	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2368.09	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2386.76	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2405.31	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2424.32	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2442.61	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2461.28	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2479.19	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2499.41	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2518.09	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2536.24	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2553.65	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2572.16	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2590.51	2516.11	-618.90	2.60

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2608.39	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2626.78	2550.33	-631.28	4.35
15857.00	35.900	338.300	14996.41	2664.09	2585.35	-644.75	0.00
15957.00†	34.027	339.522	15078.36	2721.07	2638.81	-665.38	2.00
15993.65	33.343	340.000	15108.86	2741.31	2657.88	-672.41	2.00
16057.00†	32.076	340.000	15162.16	2775.42	2690.04	-684.12	2.00
16157.00†	30.076	340.000	15247.80	2826.84	2738.55	-701.77	2.00
16257.00†	28.076	340.000	15335.20	2875.25	2784.21	-718.39	2.00
16357.00†	26.076	340.000	15424.23	2920.60	2826.98	-733.96	2.00
16457.00†	24.076	340.000	15514.80	2962.82	2866.81	-748.45	2.00
16557.00†	22.076	340.000	15606.80	3001.87	2903.64	-761.86	2.00
16657.00†	20.076	340.000	15700.10	3037.69	2937.43	-774.16	2.00
16757.00†	18.076	340.000	15794.60	3070.25	2968.14	-785.34	2.00
16857.00†	16.076	340.000	15890.19	3099.50	2995.73	-795.38	2.00
16957.00†	14.076	340.000	15986.74	3125.42	3020.17	-804.27	2.00
17057.00†	12.076	340.000	16084.15	3147.95	3041.43	-812.01	2.00
17157.00†	10.076	340.000	16182.28	3167.09	3059.48	-818.58	2.00
17257.00†	8.076	340.000	16281.02	3182.81	3074.30	-823.98	2.00
17357.00†	6.076	340.000	16380.25	3195.08	3085.88	-828.19	2.00
17457.00†	4.076	340.000	16479.86	3203.90	3094.19	-831.22	2.00
17557.00†	2.076	340.000	16579.71	3209.24	3099.23	-833.05	2.00
17657.00†	0.076	340.000	16679.69	3211.11	3101.00	-833.69	2.00
17660.81	0.000	340.000	16683.49	3211.11	3101.00	-833.69	2.00
17757.00†	0.000	0.000	16779.69	3211.11	3101.00	-833.69	0.00
17857.00†	0.000	0.000	16879.69	3211.11	3101.00	-833.69	0.00
17957.00†	0.000	0.000	16979.69	3211.11	3101.00	-833.69	0.00
18057.00†	0.000	0.000	17079.69	3211.11	3101.00	-833.69	0.00
18157.00†	0.000	0.000	17179.69	3211.11	3101.00	-833.69	0.00
18257.00†	0.000	0.000	17279.69	3211.11	3101.00	-833.69	0.00
18357.00†	0.000	0.000	17379.69	3211.11	3101.00	-833.69	0.00
18457.00†	0.000	0.000	17479.69	3211.11	3101.00	-833.69	0.00
18557.00†	0.000	0.000	17579.69	3211.11	3101.00	-833.69	0.00
18657.00†	0.000	0.000	17679.69	3211.11	3101.00	-833.69	0.00
18757.00†	0.000	0.000	17779.69	3211.11	3101.00	-833.69	0.00
18857.00†	0.000	0.000	17879.69	3211.11	3101.00	-833.69	0.00
18957.00†	0.000	0.000	17979.69	3211.11	3101.00	-833.69	0.00
19057.00†	0.000	0.000	18079.69	3211.11	3101.00	-833.69	0.00
19157.00†	0.000	0.000	18179.69	3211.11	3101.00	-833.69	0.00
19257.00†	0.000	0.000	18279.69	3211.11	3101.00	-833.69	0.00
19357.00†	0.000	0.000	18379.69	3211.11	3101.00	-833.69	0.00

Planned Wellpath Report

Wellpath: **ARD 10-27 ST PWP**

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15857.00 M

WELLPATH DATA (257 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
19457.00†	0.000	0.000	18479.69	3211.11	3101.00	-833.69	0.00
19557.00†	0.000	0.000	18579.69	3211.11	3101.00	-833.69	0.00
19657.00†	0.000	0.000	18679.69	3211.11	3101.00	-833.69	0.00
19757.00†	0.000	0.000	18779.69	3211.11	3101.00	-833.69	0.00
19857.00†	0.000	0.000	18879.69	3211.11	3101.00	-833.69	0.00
19957.00†	0.000	0.000	18979.69	3211.11	3101.00	-833.69	0.00
20057.00†	0.000	0.000	19079.69	3211.11	3101.00	-833.69	0.00
20157.00†	0.000	0.000	19179.69	3211.11	3101.00	-833.69	0.00
20257.00†	0.000	0.000	19279.69	3211.11	3101.00	-833.69	0.00
20357.00†	0.000	0.000	19379.69	3211.11	3101.00	-833.69	0.00
20457.00†	0.000	0.000	19479.69	3211.11	3101.00	-833.69	0.00
20557.00†	0.000	0.000	19579.69	3211.11	3101.00	-833.69	0.00
20657.00†	0.000	0.000	19679.69	3211.11	3101.00	-833.69	0.00
20757.00†	0.000	0.000	19779.69	3211.11	3101.00	-833.69	0.00
20857.00†	0.000	0.000	19879.69	3211.11	3101.00	-833.69	0.00
20957.00†	0.000	0.000	19979.69	3211.11	3101.00	-833.69	0.00
21000.00	0.000	340.000	20022.69	3211.11	3101.00	-833.69	0.00

SURVEY PROGRAM Ref Wellbore: ARD 10-27 ST Ref Wellpath: ARD 10-27 ST PWP

Start MD [feet]	End MD [feet]	Tool Type	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15857.00	Unknown Tool	Unknown Tool (Standard)		RANCH DEEP 10-27 (AWB) EXISTING

DOUBLE JACK TESTING & SERVICES/IPS
Phone (307) 789-9213

B.O.P TEST REPORT

B.O.P. TEST PERFORMED ON (DATE) 6/8/06

OIL COMPANY Anschutz

WELL NAME & NUMBER ARD 10-27 43-043-30321

SECTION 27

TOWNSHIP 4N

RANGE 7E

COUNTY & STATE Summit County, Ut

DRILLING CONTRACTOR DHS 1

OIL COMPANY SITE REPRESENTATIVE Jim Hill

RIG TOOL PUSHER Bobby Linder

TESTED OUT OF Evanston, Wyoming

NOTIFIED PRIOR TO TEST

COPIES OF THIS TEST REPORT SENT TO: Utah Oil & Gas Commission

BLM- Utah Resource Area

ORIGINAL CHART & TEST REPORT ON FILE AT:

DOUBLE JACK TESTING & SERVICES/IPS
PO BOX 2097
EVANSTON, WY 82930

TESTED BY: John McWhorter

RECEIVED
JUN 27 2006
DIV. OF OIL, GAS & MINING

IPS / dba Double Jack Testing

Accounting Office: PO Drawer 2080 • Riverton, WY 82501 • (307) 857-0076

Field Operations:
Riverton, WY (307) 857-0077
Evanston, WY (307) 789-9213
Rock Springs, WY (307) 382-4020
Big Piney, WY (307) 276-5265
Vernal, UT (435) 781-0448

FIELD TICKET 24734

DATE June 8, 2006

☒ OPERATOR Anschutz

☐ CONTRACTOR DHS 12

WELL NAME ARD 10-27

COUNTY	STATE	SECTION	TOWNSHIP	RANGE
Summit	Utah	27	4N	7E

Items Tested:	LOW TEST PSI	TIME HELD MINUTES	HIGHTEST PSI	TIME HELD MINUTES
Top Pipe Rams	250	5	10,000	10
Bottom Pipe Rams	250	5	10,000	10
Blind Rams	250	5	10,000	10
Annular B.O.P.	250	5	3000	10
Choke Manifold	250	5	10,000	10
Choke Line	250	5	10,000	10
Kill Line	250	5	10,000	10
Super Choke	—	—	10,000	2
Upper Kelly	250	5	10,000	10
Lower Kelly	250	5	10,000	10
Floor Valve 4" FH	250	5	10,000	10
Dart Valve 4" FH	250	5	10,000	10
Casing	—	—	—	—

Closing Unit PSI ____

Closing Time of Rams ____

Closing Time of Annular ____

Closed Casing Head Valve ✓

Set Wear Sleeve ____

COMMENTS

ADDITIONAL TESTS & COMMENTS DRILLING ☑ COMPLETION ☐

XT 39 Inside BOP
XT 39 Floor Valve

Jim Hill Co. Man.
Bobby Linder Tool Pusher

		CHARGES
TEST PLUG	11" C22 4½ IF	165.00
TOP SUB.		
KELLY SUB.	4" FH	65.00
X-OVER SUB.	4" FH Box x 4½ IF Pin	65.00
OTHER	3½ IF Kelly Sub	65.00
1 UNIT RATES	1 hour minimum 11:00pm - 6:00am	1700.00
3 ADDITIONAL	hours @ 95.00	285.00
60 MILEAGE	Round trip @ 2.50	150.00
ANTIFREEZE		
5% OTHER	Fuel Surcharge	124.75
	SUBTOTAL	2619.75
	TAX	
	TOTAL	

S.O. 5760
PURCHASE ORDER #

Jim Hill
COMPANY REPRESENTATIVE

NO ACCIDENTS

Bob McWhorter
TESTED BY

182
DOUBLE JACK TESTING UNIT NUMBER

NOTICE TO ALL CUSTOMERS

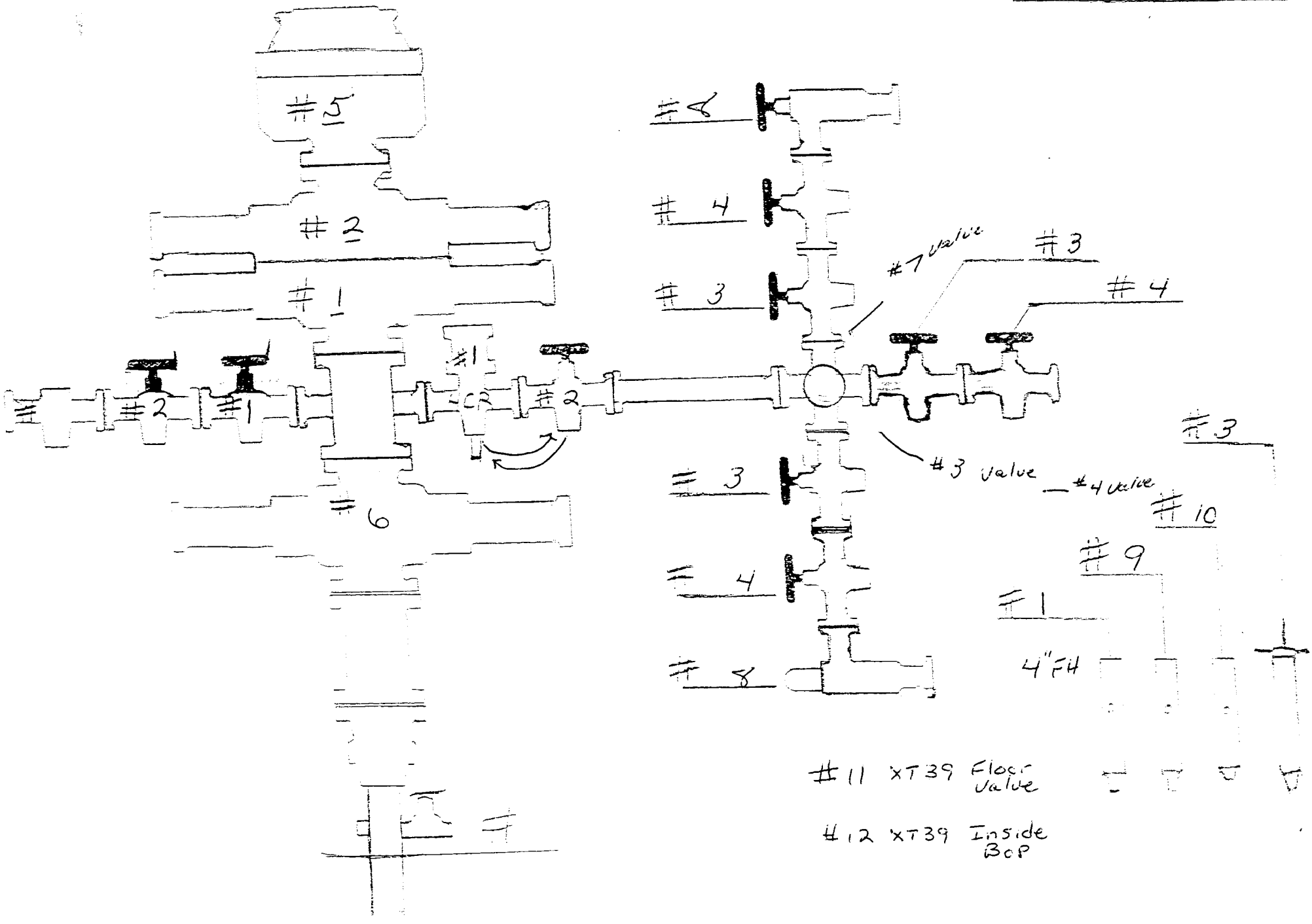
If this account shall not be paid when due and it is placed with an attorney for collection, or if suit be instituted for collection, the undersigned agree(s) to pay in either case, reasonable expense of collection including attorney's fees and court cost in compliance with TRUTH IN LENDING AND THE UNIFORM CONSUMER CREDIT CODE, the following information disclosure, under the terms of our regular accounts, all amounts for service due and payable within THIRTY (30) DAYS from the receipt of an invoice for such services. A LATE CHARGE will be assessed when accounts are not paid when due. THE LATE CHARGE is computed by a "periodic rate" 1-3/4% PER MONTH which is an ANNUAL PERCENTAGE RATE OF 21% to the previous balance in the account on the billing date. No further credit can be extended on unpaid delinquent accounts until the delinquent account is paid in full. The contractor will not be held liable for damages caused by acts

.495

IPS/DOUBLE JACK TESTING & SERVICES

COMPANY		LEASE & WELL NAME	TEST DATE	RIG NAME & #
Anschutz		ARD 10-27	6/8/06	DHS 1
TEST	TIME	ITEMS TESTED		
		96 minute rotation		
	11:00pm	Arrive on location- wait on rig to pull wear bushing and rig up test equipment		
1	1:00am	Lower pipe rams - Inside kill line valve - choke line HCR valve - floor valve 4" FH		
2	1:25	Upper pipe rams - outside kill line valve - Inside choke line valve		
3	1:45	Inside manifold valves- lower riser valve - Kill line check valve - Inside BOP 4" FH		
4	2:05	Outside manifold valves - Upper Riser valve and 2nd lower riser valve		
5	2:25	Annular		
		Swap over to blind rams		
6	3:35	Blind rams		
7	4:00	2nd Upper riser valve - manifold		
8	4:20	Super chokes		
9	5:00	Lower Kelly valve		
10	5:20	Upper Kelly valve		
		Swap over to XT39 Floor valve		
11	6:15	XT39 Floor valve		
12	7:05	XT39 Inside BOP		

Anschutz - AMD 10-27
DHS #1
June 8, 2006
Tester J. McWhorter



Arbuckle ARD 10-27
DHS #1
June 8, 2006

IPS / Double Jack Testing

Accumulator Function Tests

1 RECORD INITIAL ACCUMULATOR PRESSURE 2750

2 WITH DRILL PIPE & TEST PLUG INSTALLED IN WELL HEAD.

3 PLACE ALL FUNCTIONING ACCUMULATOR VALVES IN OPEN POSITION
ALLOW ACCUMULATOR TO PRESSURE UP BEFORE SHUTTING OFF ALL PUMPS

4 CLOSE ANNULAR / RECORD TIME & PRESSURE.
ANNULAR: INTIAL PSI 2750 FINAL PSI 2000 TIME 32

#5 CLOSE PIPE RAMS / RECORD TIME & PRESSURE.
PIPE RAMS: INTIAL PSI 2000 FINAL PSI 1950 TIME 4

#6 OPEN PIPE RAMS TO SIMULATE BLIND RAMS / RECORD TIME & PRESSURE.
INTIAL PSI 1950 FINAL PSI 1800 TIME 4

#7 CLOSE HCR (if applicable) / RECORD TIME & PRESSURE.
HCR: INTIAL PSI 1800 FINAL PSI 1800 TIME 1

#8 ON THREE RAM STACK CLOSE BOTTOM PIPE RAM / RECORD TIME & PRESSURE.
PIPE RAMS: INTIAL PSI 1800 FINAL PSI 1750 TIME 4

#9 IF YOU HAVE A 3 RAM STACK OPEN THE ANNULAR TO ACHIEVE THE 50+% SAFETY FACTOR FOR 5M AND GREATER SYSTEMS. 1300

#10 WHEN DONE WITH RECORDED TIMES & PRESSURES THERE SHOULD BE AT LEAST 200 PSI OVER PRECHARGE IN THE ACCUMLATOR (1200 PSI)

#11 OPEN ANNULAR

NITROGEN BOTTLES / BLEED OFF TEST

#1 FINISH BLEEDING OFF BOTTLES INTO ACCUMLATOR TANK/RESERVOIR.
#2 WATCH & RECORD WHERE PRESSURE DROPS (accumulator psi)

PRESSURE DROP 1050 PSI

#3 ACCUMULATOR PSI SHOULD DROP AT 1100 PSI TO 900 PSI

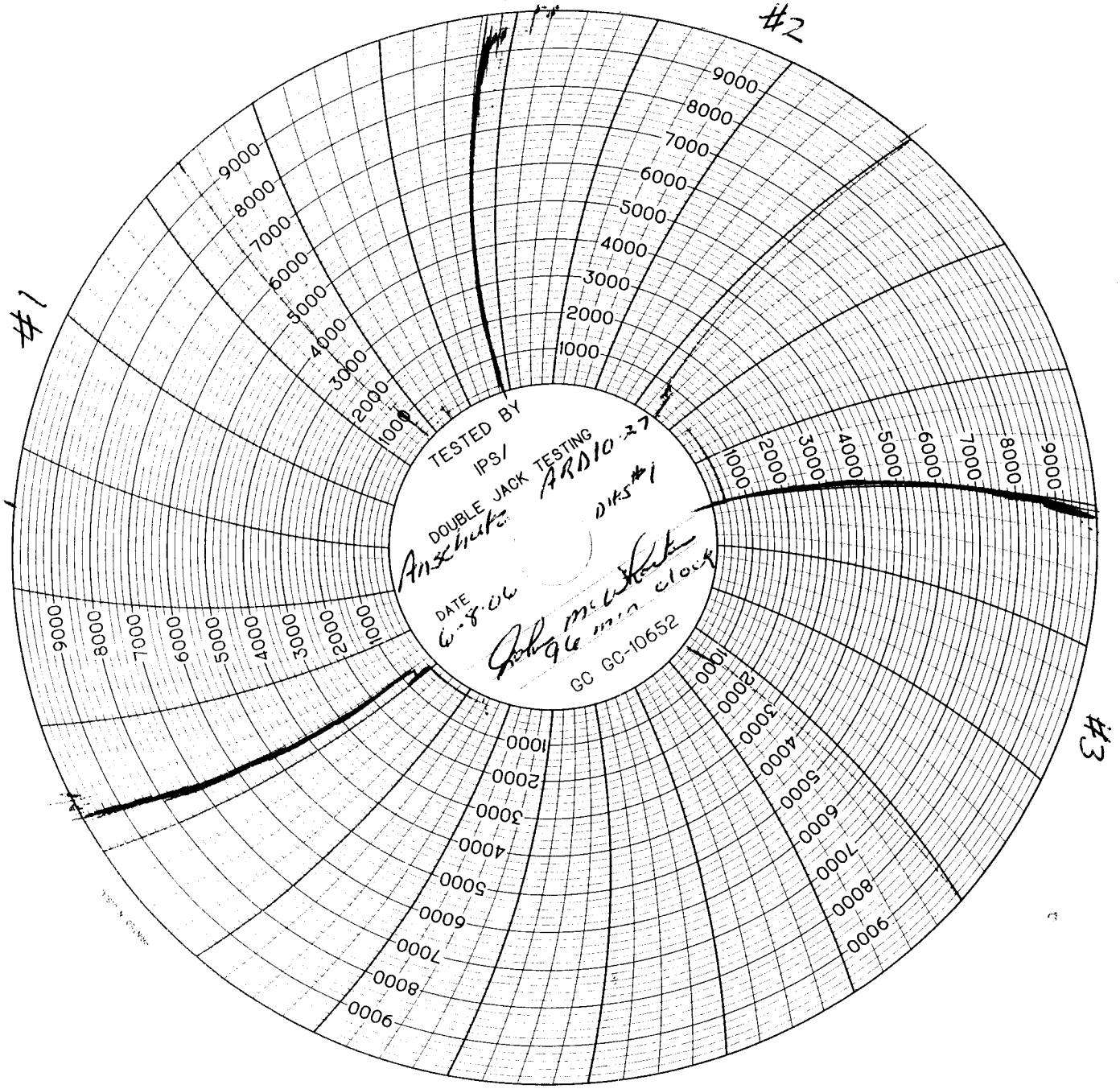
---

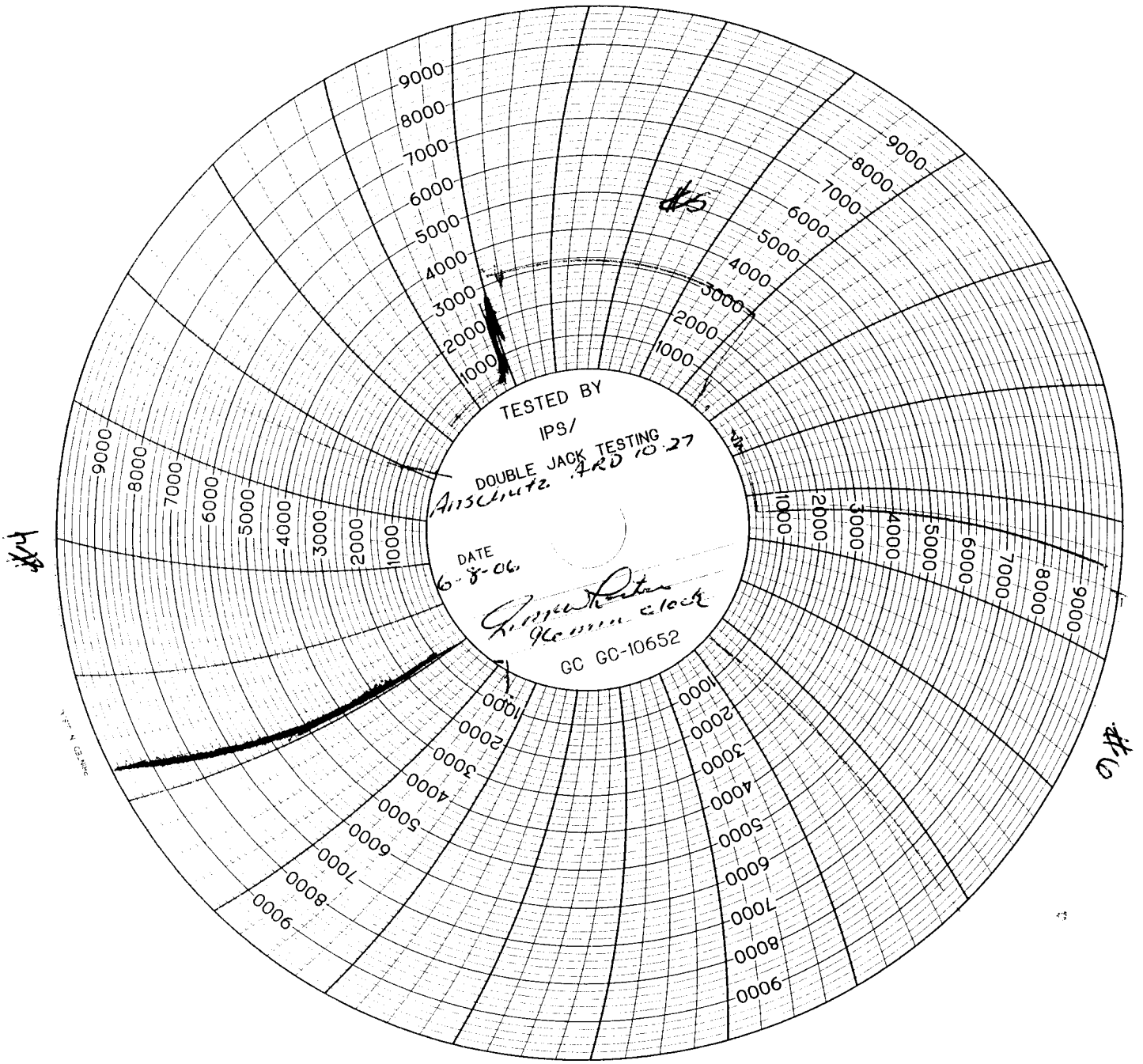
2 MINUTE TIME TEST / ACCUMULATOR PUMPS

#1 SHUT VALVES TO NITROGEN BOTTLES.
#2 PLACE HCR IN THE OPEN POSITION. (if applicable)
#3 PLACE ANNULAR IN THE CLOSE POSITION.
#4 TURN ON PUMPS & RECORD TIME TO PRESSURE UP MANIFOLD ON ACCUMULATOR TO AT LEAST 200 PSI OVER PRECHARGE. WITHIN 2 MIN. OR LESS.

RECORDED TIME: 1 MINUTE 29 SECOND

#5 OPEN VALVES TO NITROGEN BOTTLES & PRESSURE THE ACCUMULATOR BACK TO SHUT OFF POINT. THEN OPEN ALL PIPE RAMS & ANNULAR BEFORE PULLING PLUG AND DRILL PIPE OUT OF BOP.


#1
#2
#3
TESTED BY
IPS/
DOUBLE JACK TESTING
Anschutz ARD10-27
DIKS #1
DATE
6-8-06
96 min clock
GC GC-10652
1000
2000
3000
4000
5000
6000
7000
8000
9000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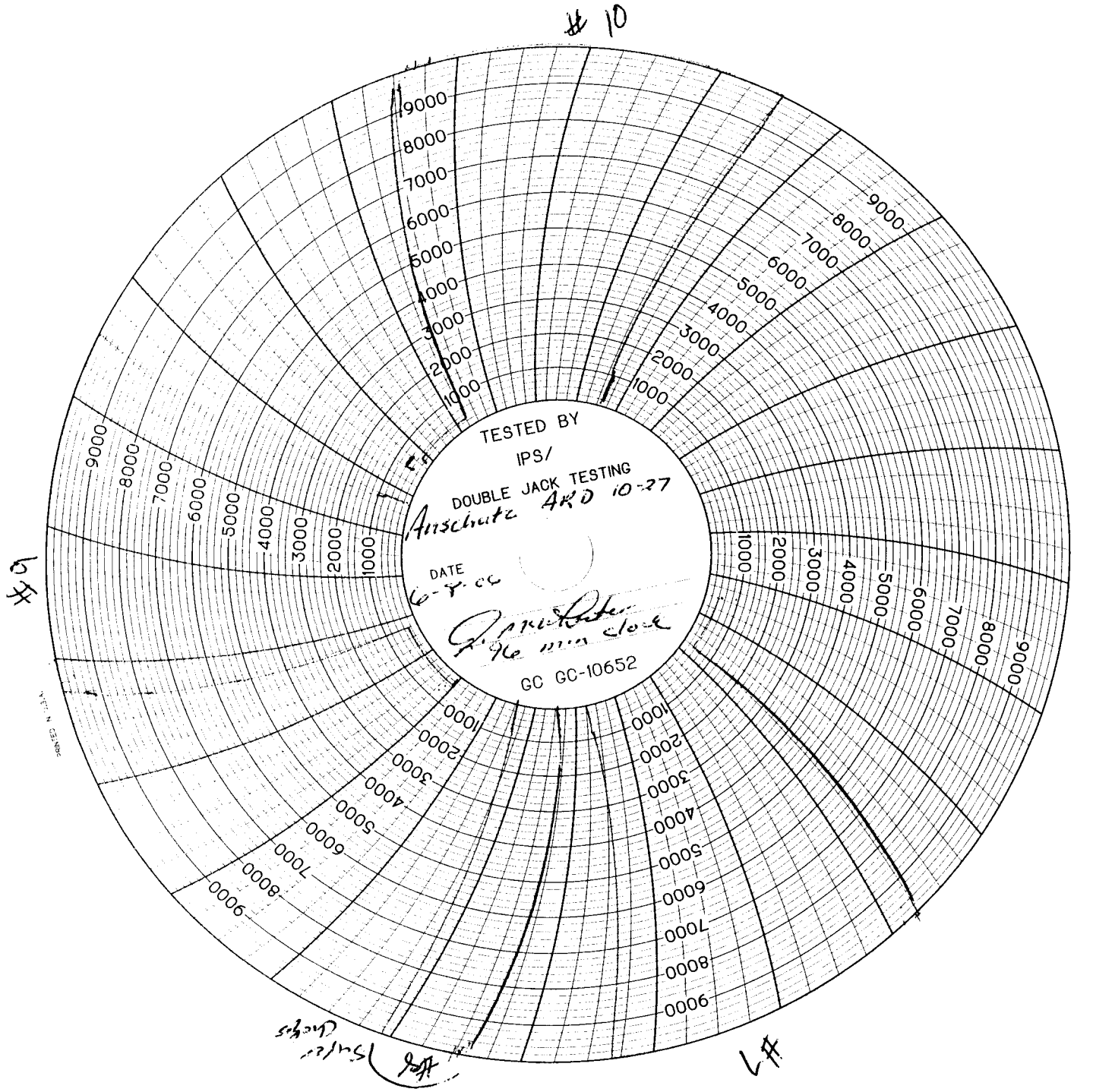
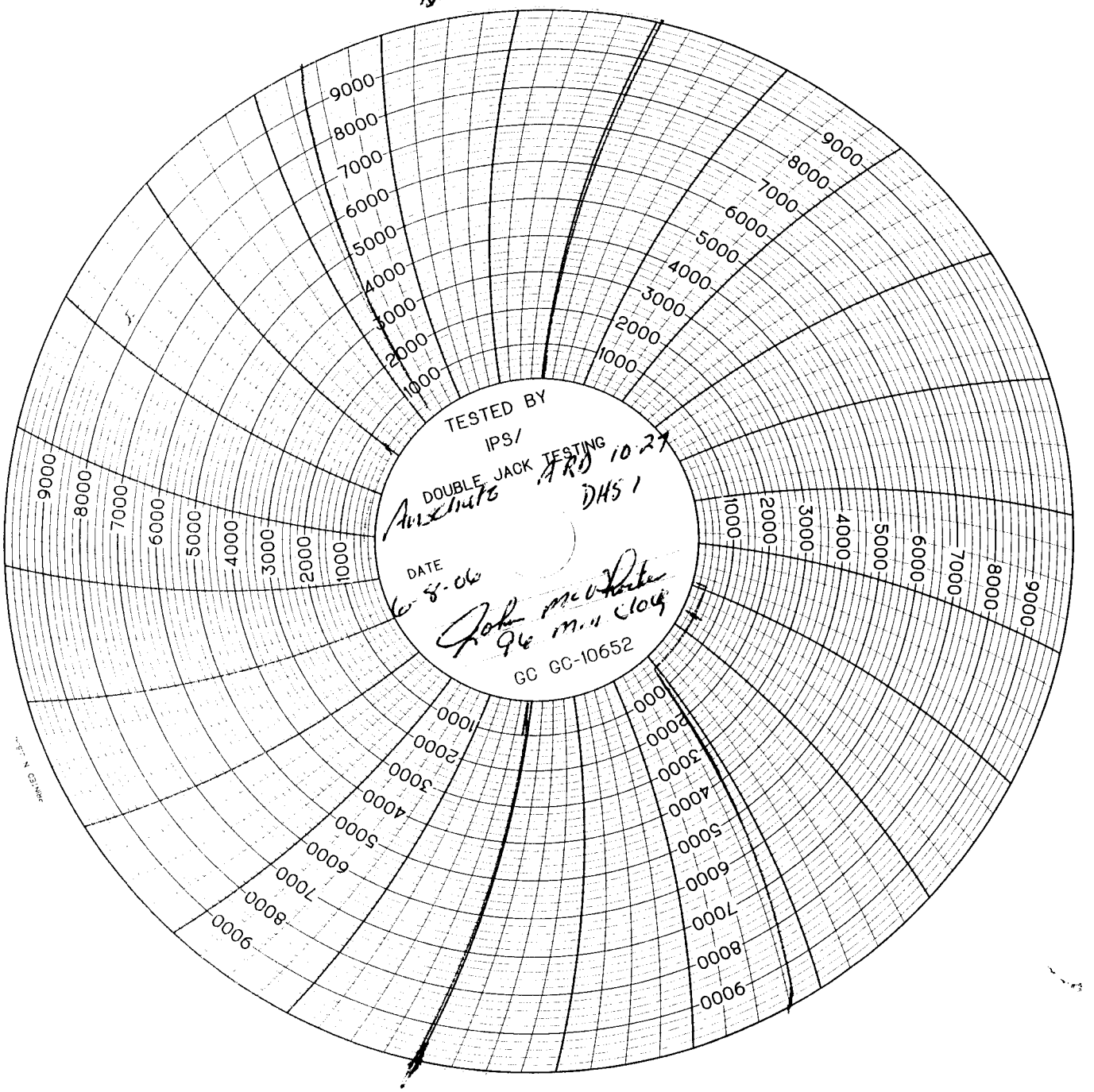
IPS/
DOUBLE JACK TESTING
Anschutz ARD 10.27
DATE
6-8-06
GC GC-10652
#4
#5
#6



#10
#9
#7
TESTED BY
IPS/
DOUBLE JACK TESTING
Anschutz ARD 10-27
DATE
6-8-06
96 min clock
GC GC-10652

#11


9000
8000
7000
6000
5000
4000
3000
2000
1000
TESTED BY
IPS/
DOUBLE JACK TESTING
DATE
6-8-06
GC GC-10652

#12

From: "Jason Stewart" <Jason.Stewart@Aec-denver.com>
To: <caroldaniels@utah.gov>
Date: 7/10/2006 1:19:05 PM
Subject: ARD 10-27 Deepening Confidential Status

Carol, TOWN ROYE S-27
43-043-30321

Thank you for your phone call regarding the confidentiality of the ARD 10-27 Deepening records. Anschutz Exploration would like to maintain confidential status on these records. If you require any further information, please feel free to contact me.

Thank you again,

Jason T. Stewart

Petroleum Engineer

Anschutz Exploration Corporation

Ansbro Petroleum Company

555 Seventeenth Street, Suite 2400

Denver, Colorado 80202

Direct: (303) 299-1246

Main: (303) 298-1000

Fax: (303) 299-1518

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JUL 10 2006
DIV. OF OIL, GAS & MINING

Anschutz Ranch Deep 10-27 (Deepening)
Operator: AEC
1433' FSL and 1228' FEL
NESE Section 27, T4N, R7E
Summit County, Utah
Anschutz Ranch Deep
20,880' Bighorn Dolomite
18,014' TVD
TAC WI: 100.00%
TIGHT HOLE

API # 43-043-30321

10/28/05	PO: Rebuild location. Cut trees off hillside and haul off.
10/29/05	PO: Rebuild location. Haul off trees.
10/30/05	Operations shut down.
10/31/05	PO: Rebuild location. Move in dirt equipment.
11/01/05	PO: Rebuild location. Enlarging location, 5%.
11/02/05	PO: Rebuild location. Enlarging location, 10%.
11/03/05	PO: Rebuild location. Enlarging location, 20%, finished moving dirt that trackhoe could move, WO cat & scraper, should have cat by 11//05/05.
11/04/05	PO: Rebuild location. WO cat and scraper.
11/05/05	PO: Rebuild location. WO cat and scraper.
11/06/05	PO: Rebuild location. WO cat and scraper.
11/07/05	PO: Rebuild location. Move in dirt equipment.
11/08/05	PO: Rebuild location. Enlarging location, making cut on NW corner of location, very steep, encountered rock shelf near top of cut.
11/09/05	PO: Rebuild location. Enlarging location, 25%.
11/10/05	PO: Rebuild location. Start moving dirt to south end of location, enlarging location, 35%.
11/11/05	PO: Rebuild location. Enlarging location, 45%.
11/12-13	Shut down for weekend.
11/14/05	PO: Rebuild location. Finish cut on hillside.
11/15/05	PO: Rebuild location. Moving dirt to south side of location.
11/16/05	PO: Rebuild location. Moving dirt to south side of location.
11/17/05	PO: Rebuild location. Moving dirt to south side of location.

RECEIVED
JUL 10 2006
DIV. OF OIL, GAS & MINING

11/18/05 PO: Rebuild location. Moving dirt to south side of location. 75%.

11/19/05 PO: Rebuild location. Moving dirt to south side of location, 95%, SD until 11/21/05, will bring in laser equipment on 11/21/05 to level location.

11/20/05 Shut down until 11/21/05.

11/21/05 PO: Rebuild location. Laser level location, 95%.

11/22/05 PO: Rebuild location. Laser level location, 100%, ready for gravel.

11/23/05 PO: Rebuild location. Ready for gravel 11/28/05.

11/24/05 PO: Rebuild location. Ready for gravel.

11/25/05 PO: Rebuild location. Ready for gravel.

11/26/05 PO: Rebuild location. Ready for gravel.

11/27/05 PO: Rebuild location. Ready for gravel.

11/28/05 PO: Rebuild location. Move in loader & trucks, haul 16 loads pit run gravel.

11/29/05 PO: Rebuild location. Gravel location, haul 12 loads pit run gravel, location ready for rig.

01/20/06 PO: Rigging up. MI rig & support equipment.

01/21/06 PO: Rigging up. MI rig & support equipment, set sup, spot rig & support equipment, set anchors, haul water, SD until 01/23/06.

01/22/06 PO: Rigging up. Heat water, rig crew off today.

01/23/06 PO: NU BOP equipment. Rigging up rig, substructure and support equipment.

01/24/06 PO: POOH. ND tree, BU BOP equipment & test, unload 480 jts 7.9# L80 PH-6 hydril tbg & handling tools, RU tbg equipment on floor, finish windwalls, RU laydown machine, ready to lay down 2-7/8" tbg in a.m., secure well, SDFN.

01/25/06 PO: POOH, LD 63 jts 2-7/8" tbg, ready to PU fishing tools and work string, box ends of work string damaged, WO Knight 7 hrs to determine usability of pipe.

01/26/06 PO: PU 2-/78" tbg. PU 5.875" mill, jars, 6 4.75" DCs, 244 jts 2-7/8" tbg, secure well, SDFN.

01/27/06 Day 8. PO: Drill cement & CICR. PU 121 jts 2-7/8" tbg, tag cement at 11,575', RU power swivel, test csg to 1000# / 30 mins, SDFN.

01/28/06 Day 9. PO: Drill up CICR & drill cement. Drill cement from 11,575' to 11,646', mill on CICR 11,646' to 11,647', circ btms up, change stripper rubber, SDFN.

01/29/06 Day 10. PO: Drill up CICR & drill cement. Mill on CICR to 11,660', repair pump, circulate hole clean, SD operations, WO new pump.

01/30/06 Day 11. PO: Drill cement to packer, POOH. WO on new pump, rigged up ready to pump at 14:30, drill from 11,660' to 11,688', circulate btms up, drain up, secure well, SDFN.

01/31/06 Day 12. PO: TIH. Drill from 11,688' to 11,700', POOH, LD mill, PU 5.75" shoe, TIH w/ 2 jts 2-7/8" tbg, secure well, SDFN.

02/01/06 Day 13. PO: Wash over Model 'D' pkr. TIH w/ 366 jts 2-7/8" tbg, PU power swivel, NU 'JU' stripper head, ready to wash over Model 'D' in A.M., secure well, SDFN.

02/02/06 Day 14. PO: Trip for overshot. Wash over Baker Model 'D' pkr, circulate hole clean, set back swivel & ND stripper head, POOH w/ 120 stds tbg, secure well, SDFN.

02/03/06 Day 15. PO: POOH w/fish. Safety meeting. Check well. POOH w / shoe. LD shoe & 5' extension. PU 5.75" overshot, dressed w / 4.125" grapple, accelerator TIH - tag fish @ 11694'. Break circulation to check pump pressure. Engage fish. Work pipe. Kick pump in. Have 500# pump pressure increase. Pull 2 stds. Pulled 30000# over. Came free. Secure well. Drain up. SD until 2-7-06.

02/07/06 Day 16. PO: POOH w/fish. TIH w / 5-7/8" bit. Safety meeting. Check well. POOH. Pulling tight on each csg collar. Work free - coming good after 30 stds. POOH to DC. LD accelerator, jars & bumper sub. LD fish (Model 'D' pkr, seal bore extension, 4 flow couplings, 3 pup jts, 2 nipples & wireline re-entry guide). Pkr assembly full of cement. MU 5-7/8" mill tooth bit, bit sub. TIH w / 6 4.75" DC & 64 stds 2-7/8" tbg. Secure well. SDFN.

02/08/06 Day 17. PO: Drill cement. TIH w/ bit, PU power swivel, install rubber in rotating head, tag cement at 11,755', test csg to 1000#, drill cement from 11,755' to 11,846', circulate btms up, secure well, SDFN.

02/09/06 Day 18. PO: Drill cement. Drill from 11,846' to 12,087', clear of cement, circulate hole clean, test csg to 500#, PU singles, ream in hole, tag at 12,295', drill cement to 12,315', circulate hole clean, secure well, drain up, SDFN.

02/10/06 Day 19. PO: Trip for shoe. Check well, standpipe froze up, on rig repair, drill cement from 12,315' to 12,323', circulate hole clean, set back swivel, drain up, pull rotating head rubber, POOH w/ 120 stds, SDFN.

02/11/06 Day 20. PO: Wash over PosiSet plug. Check well, POOH w/ 75 stds & BHA, LD bit, PU 5.969" shoe, bumper sub & jars, TIH w/ 195 stds 2-7/8" tbg, PU swivel, install rotating head rubber, ready to wash over in a.m., secure well, SDFN.

02/12/06 Day 21. PO: TIH w/ overshot. Wash over PosiSet thru tubing bridge plug, lose circulation, pump 40 bbls, get 50% returns, circulate hole clean, work fish, fish appears to be moving up & down hole w/ shoe, set back swivel, POOH, no recovery, pumping 15 BPH water, LD shoe, MU 4-11/16" overshot with 2.125" grapple, TIH with jar, bumper sub & 6 4-3/4" DC & 30 stds 2-7/8" tubing, secure well, drain up, SDFN.

02/13/06 Day 22. PO: POOH w/ overshot. TIH with overshot, engage fish, work fish, SD 20K, pull 120K, work free, POOH w/ 130 stds, pump 15 bbls/hr., keep well dead, drain up, secure well, SDFN.

02/14/06 Day 23. PO: TIH with shoe. POOH w/ 66 stds tbg, recover 13" of PosiSet plug, test BOP, TIH w/ shoe. SDFN.

02/15/06 Day 24. PO: Clean out to top of fish. TIH w/ shoe, tag at 12,467', PU swivel & install rotating rubber, pump 200 bbls to break circulation, wash & ream from 12,467' to 12,596', getting 50% returns, circulate hole clean, secure well, drain up, SDFN.

02/16/06 Day 25. POOH w/ fish. Pump 140 bbls to break circulation, wash from 12,596' to 12,668', lost circulation, set back swivel, POOH wet, fluid in tubing is coming sour, shut well in, open well, POOH 6 stds under air, clear of sour, POOH wet, pull total of 130 stds, drain up, secure well, SDFN.

02/17/06 Day 26. PO: WOO. POOH wet w/ 70 stds & BHA, btm 2 DCs plugged, unplug CDs & BHA, secure well, SD until 2/21/06.

02/21/06 Day 27. PO: TIH. RU OWP, set CICR @ 12,340', TIH w/ 160 stds tbg, secure well, SDFN.

02/22/06 Day 28. PO: Safety meeting. TIH w / stinger & 37 stds. tbg. Test retainer. RU 'BJ'. Squeeze 12405' to 12662' w / 160 sx cement. POOH w / 90stds. Secure well. SDFN.

02/23/06 Day 29. PO: Drill out squeeze. POOH w/ 108 stds & stinger, MU 5-7/8" bit, boot basket & 6 4-3/4" DC, TIH w/ 195 stds 2-7/8" tbg, tag cement at 12,288', PU swivel & install rotating head rubber, secure well. SDFN.

02/24/06 Day 30. PO: Drill out squeeze. Drill cement from 12,288' to 12,340', drill retainer, drill cement from 12,342' to 12,442', circulate hole clean, test perfs 12,405'/12,425' 1000#, drain up, secure well, SDFN.

02/25/06 Day 31. PO: POOH. Drill cement from 12,442' to 12,663', circulate hole clean, drill from 12,473' to 12,536' with firm cement, 12,536' to 12,663' cement fairly soft, ½ min/ft., circulate hole clean, set back swivel, POOH w/ 90 stds 2-7/8" tubing, secure well, SDFN.

02/26/06 Day 32. PO: TIH. POOH w/ bit & 100 stds tbg, change out BHA, TIH with 195 stds, SD at 12,362' to keep shoe & wash pipe above perfs overnight, secure well, SDFN.

02/27/06 Day 33. PO: Washover TTBP. Start in hole, tag at 12,428', LD 9 jts, PU swivel, wash & ream from 12,428' to 12,663', washover TTBPs 12,663' to 12,675', circulate hole clean, drain up, secure well, SDFN.

02/28/06 Day 34. PO: TIH. Washover 12,675' to 12,676', set back swivel, POOH, shoe worn completely out, drain up, secure well, SDFN.

03/01/06 Day 35. PO: POOH. Change out BHA, PU 4-11/16" overshot w/ 2.125" grapple, bumper sub & jars, TIH w/ 200 stds 2-7/8" tubing, establish pump rate/pressure at 3 BPM at 1200#, tag fish at 12,675', attempt to engage fish, work tbg & rotate, no change, POOH, drain up, secure well, SDFN.

03/02/06 Day 36. PO: Washover TTCR. POOH, no fish in grapple, LD overshot, TIH w/ 5.969" shoe, 4.5" ID, 22' extension, boot basket, bumper sub, jar 6 DC & 200 stds 2-7/8" tbg, drain up, secure well, SDFN.

03/03/06 Day 37. PO: Shut down. PU swivel, tag fish at 12,676', washover to 12,677', pull above perfs, drain up, secure well, SD until 3/6/06.

03/06/06 Shut down.

03/07/06 PO: TIH with impression block. POOH with shoe, LD BHA, PU impression block, boot basket, TIH with impression block, secure well, SDFN.

03/08/06 PO: POOH LD tbg. TIH, circulate down on fish, set 10000# on impression block, POOH, LD 145 jts 2-7/8" tbg, secure well, drain up, SDFN.

03/09/06 PO: Rigging down. POOH, LD 255 jts 2-7/8" tbg & BHA, install hanger w/ BPV in wellhead, run in lockdown pins, close blind rams & lock, load out fishing tools, rigging down, secure well, SDFN.

03/10/06 PO: Rigging down. Rigging down, clean pits, RD sub, load out 477 jts 2-7/8" work string, RD air heater, RD pump lines, secure well, SDFN.

03/11/06 PO: WO drilling rig. RD & move to ARD 4-26, well secure, SD waiting on drilling rig.

03/13/06 PO: WO drilling rig.

03/14/06 PO: WO drilling rig. RU OWP, RIH w/ Baker Wireline, set retrievable BP, set at 10,007', RDMO, well secure, SD, WO drilling rig.

03/15/06 PO: WORT.

03/16/06 PO: WORT.

03/17/06 PO: WORT.

03/18/06 PO: WORT. ND 11" 5K x 7-1/16" 5K wellhead, NU 11" 5K x 11" 10K wellhead & test to 5000#, well secure, SD, waiting on drilling rig.

03/19/06 PO: WORT.

03/20/06 PO: WORT.

03/21/06 PO: WORT.

03/22/06 PO: WORT.

03/23/06 PO: WORT.

03/24/06 PO: MIRT. Moving in DHS rig #1, pumping water off location, hauling rock in a.m. to fill in soft spots.

03/25/06 PO: MIRT. Moving in DHS rig #1, pumping water off location, hauling rock to fill in soft spots, pump 600 bbls water off location, set rig mats, mats settling, haul more rock in a.m.

03/26/06 PO: RURT. Re-set rig mats, stack BOP equipment, set ½ substructure, 5% rigged up.

03/27/06 PO: RURT. Too windy for crane until 10:00, work on derrick finish stacking sub, set spreader beams, set rotary table, 20% rigged up.

03/28/06 PO: RURT. Finish derrick set draw works, motors, & floor plates, set pits & pumps, 40% rigged up.

03/29/06 PO: RURT. Very muddy, could not set derrick up on sub, set light plant, lower dog house & fuel tank, re-level one pit, string electrical cords, set catch tank & centrifuge. 50% rigged up.

03/30/06 PO: RURT. Set derrick on substructure, snowed all day, very muddy, 60% rigged up.

03/31/06 PO: RURT. Set derrick on stand, pin board, very muddy, 65% rigged up.

041/01/06 PO: RURT. Stringing blocks, set in camps, rigging up water & sewer, very muddy, had to pull trucks to location.

04/02/06 PO: RURT. Start draw works motors, finish string blocks, raise derrick, very muddy, snowed in afternoon, break towers, continue rigging up.

04/03/06 PO: Rigging up. Continue rigging up, 80% rigged up.

04/04/06 PO: Rigging up. Continue rigging up.

04/05/06 PO: RURT. Haul 260 jts 4" FH DP, 165 jts 4" XT-39, patch suction tank & re-fill, leaking, continue rigging up, 90% rigged up.

04/06/06 PO: RURT. 90% rigged up. Test BOP. Suction tank still leaking. Fabricate choke line. On rig repair.

04/07/06 Day 0. 15,540' MD (0'). PO: RU-LD machine. Test BOP, 250# low – 10,000# high. Install wear bearing. Fabricate spool & NU rotating head.

04/08/06 Day 0. 15,540' MD (0'). PO: TOOH. PU Baker retrieving head, PU-DP, tag BP @ 10010'

04/09/06 Day 0. 15,540' MD (0'). PO: TIH. Tag BR @ 10010'. Release Baker RBP. TOOH, LD RBP, MU overshot – TIH.

04/10/06 Day 0. 15,540' MD (0'). PO: TOOH. TIH w/41stds, engage fish. TOOH – recover TTCR. MU new overshot, TIH. Work fish – TOOH.

04/11/06 15,540' (0'). PO: Rig repair. POOH w/ overshot, recover 8" Baker TTCR, dress overshot, start in hole, cathead slipping, run total 68 stds, on rig repair.

04/12/06 15,540' (0'). PO: TIH w/ overshot. On rig repair, finish TIH, engage & work fish, rig repair, POOH, recover 7.45' TTCR, LD fish, dress overshot w/ 2.125" grapple, 9.35' TTCR left to recover, TIH w/ overshot.

04/13/06 15,540' (0'). PO: POOH. Finish TIH, on rig repair, kelly up, tag fish at 12,668', work down over fish to 12,678', pump pressure increased 50#, POOH w/ overshot, recover 6" TTCR, MU 5.875" overshot w/ 2.125" grapple, TIH with overshot, kelly up, tag fish at 12,678', work fish 25# PP pressure, POOH w/ overshot.

04/14/06 15,540' (0'). PO: Wash over TTCR. POOH, LD overshot, MU shoe, TIH, slip & cut drill line, TIH, wash over from 12,678' to 12,682'.

04/15/06 15,540' (0'). PO: Wash over TTCR. Wash over from 12,682' to 12,685', not making any hole, POOH w/ shoe, LD shoe & boot basket, MU 5.875" overshot with 2.125" grapple, TIH w/ overshot, engage fish, pump pressure increased to 1340#, POOH w/ overshot.

04/16/06 15,540' (0'). PO: POOH. POOH w/ overshot, recover 9.35' TTCR, LD overshot, PU 5.969" shoe w/ 4.25" ID, 5' extension, boot basket, TIH w/ shoe, tag at 12,683', wash over junk to 12,686', not making any hole, no cuttings, POOH w/ shoe.

04/17/06 15,540' (0'). PO: POOH. POOH, change out shoe, TIH, mill on packer at 12,683', packer free, circulate gas bubble, RIH picking up singles to 12,892', pushing packer to bottom, tag at 12,893', work tight hole, circulate clean.

04/18/06 15,540' (0'). PO: POOH. POOH w/ shoe, TIH w/ overshot, tag fish at 12,838', pull 30K over, fish came free, POOH w/ overshot & fish.

04/19/06 15,540' (0'). PO: Wash & ream. POOH, recover Baker model 'D' packer & tail pipe, TIH w/ 5.969" mill, boot basket, TIH w/ mill to HWDP, slip & cut drill line, TIH w/ mill, circulate btms up, tag at 12,822', wash to 13,089'.

04/20/06 15,540' (0'). PO: POOH. Wash and ream from 13,089' to 13,853', tag CR, drill cement retainer, drill cement from 13,894' to 14,001', POOH for bit.

04/21/06 14,487' (0'). PO: Clean out old open hole. POOH for bit, LD mill, PU 6" PDC, TIH, drill cement from 14,001' to 14,375', break out of cement at 14,375', W&R from 14,375' to 14,487', lost 42 bbls mud in last hour, start mudding up at 14,001'.

04/22/06 15,889' (1402'). PO: POOH. Clean out old open hole 14,487' to 15,889', circ btms up, pump 100 bbl LCM pill, slug pipe, POOH for directional tools.

04/23/06 15,933' (44'). PO: Drilling. POOH, PU directional tools, TIH, drill from 15,889' to 15,933'.

04/24/06 16,304' (371'). PO: Drill from 15,933' to 16,304'.

Surveys:

Depth	Angle	Direction
16,003'	39.22°	337.4
16,098'	41.15°	337.8
16,192'	42.82°	337.4

04/25/06 16,336' (32'). PO: TIH. Drill from 16,304' to 16,336', trip for bit, change out MM.

Surveys:

Depth	Angle	Direction
16,287'	44.50°	338.2

04/26/06 Day 3. 16,440' (104'). PO: Drilling. Scribe motor, TIH w/ bit #3, drill from 16,336' to 16,440'.

Surveys:

Depth	Angle	Direction	TVD
16,287'	44.50°	338.19	15323.30
16,318'	44.67°	338.48	15345.38
16,348'	44.76°	338.83	15366.70

04/27/06 Day 4. 16,640' (200'). PO: Drilling. Drill from 16,440' to 16,640'.

Surveys:

Depth	Angle	Direction	TVD
16,378'	45.20°	338.83	15387.92
16,410'	45.81°	338.83	15410.34
16,442'	46.43°	339.53	15432.53
16,473'	47.75°	340.24	15453.63
16,504'	48.28°	341.29	15474.37
16,536'	48.36°	341.64	15495.65

04/28/06 Day 5. 16,900' (260'). PO: Drilling. Drill from 16,640' to 16,900'.

Surveys:

Depth	Angle	Direction	TVD
16,568'	48.89°	340.94	15516.80
16,600'	49.15°	341.29	15537.78
16,631'	50.30°	341.64	15557.82
16,662'	50.65°	342.70	15577.55
16,693'	51.00°	343.75	15597.14
16,724'	50.47°	344.81	15616.76
16,755'	51.00°	345.86	15636.38

04/29/06 Day 6. 17,055' (155'). PO: POOH. Drill from 16,900' 17,055', circ btms up, mix & pump pill, POOH for bit.

Surveys:

Depth	Angle	Direction	TVD
16818	52.67	346.92	15675.37
16850	53.2	347.62	15694.66
16882	53.38	347.62	15713.79
16913	53.55	347.62	15732.24
16945	53.38	348.32	15751.29
16976	53.29	349.38	15769.80
17006	53.02	350.7	15787.79

04/30/06 Day 7. 17,167 (112). PO: Drilling. POOH, TIH w/ bit #4, fill pipe every 3000', install rotating head rubber, drill from 17,055' to 17,167'.

Surveys:

Depth	Angle	Direction	TVD
17038	53.20	351.49	15807.00
17069	53.73	351.13	15825.46
17101	53.73	350.78	15844.39

05/01/06 Day 8. 17,546' (379'). PO: Drilling. Drill from 17,167' to 17,546'.

Surveys:

Depth	Angle	Direction	TVD
17132	53.2	351.49	15862.84
17163	52.67	352.54	15881.53
17194	52.76	351.84	15900.31
17225	52.85	351.84	15919.05
17256	52.58	352.19	15937.82
17288	52.58	352.19	15957.27
17320	52.67	352.54	15976.69
17351	53.82	352.19	15995.24
17382	54.61	352.89	16013.37
17413	54.87	353.95	16031.27
17444	54.78	353.24	16049.13
17475	54.87	353.95	16066.99

05/02/06 Day 9. 17,846' (300'). PO: Drilling. Drill from 17,546' to 17,846'.

Surveys:

Depth	Angle	Direction	TVD
17,507'	54.78°	353.95	16085.42
17,538'	55.22°	353.60	16103.20
17,570'	54.78°	352.89	16121.55
17,601'	54.34°	351.84	16139.53
17,632'	54.08°	350.08	16157.66
17,663'	54.26°	349.38	16175.81
17,695'	54.08°	349.38	16194.54
17,727'	54.08°	349.03	16213.31
17,758'	54.08°	349.03	16231.50

05/03/06 Day 10. 18,030' (184'). PO: POOH. Drill from 17,846' to 18,030', circ btms up, pump LCM pill & slug, POOH for bit.

Surveys:

Depth	Angle	Direction	TVD
17,789'	54.08°	350.08	16249.69
17,821'	53.82°	351.13	16268.52
17,852'	53.64°	350.78	16286.86
17,883'	53.73°	351.13	16305.22
17,915'	53.90°	350.78	16324.11
17,946'	53.99°	350.43	16342.35
17,978'	53.99°	351.49	16361.17

05/04/06 Day 11. 18,110' (80'). PO: Drilling. POOH w/ bit #4, C/O MWD & motor, TIH w/ bit #5, fill DP every 3000', kelly up, fill pipe, wash 30' to btm, drill from 18,030' to 18,110'.

Surveys:

Depth	Angle	Direction	TVD
18,009'	53.55°	351.49	16379.49
18,039'	53.64°	350.43	16397.30

05/05/06 Day 12. 18,378' (268'). PO: Drilling. Drill from 18,110' to 18,378'.

Surveys:

Depth	Angle	Direction	TVD
18,070'	54.34°	350.08	16415.52
18,102'	54.52°	350.08	16434.14
18,134'	54.52°	349.73	16452.71
18,165'	54.08°	349.73	16470.80
18,197'	53.55°	351.13	16489.69
18,227'	53.38°	352.19	16507.55
18,259'	53.55°	351.84	16526.60
18,291'	53.64°	351.13	16545.59

05/06/06 Day 13. 18,659' (281'). PO: Drilling. Drill from 18,378' to 18,659'.

Surveys:

Depth	Angle	Direction	TVD
18322	53.55	351.13	16563.99
18353	53.9	350.8	16582.33
18384	54.2	350.4	16600.53
18416	54.9	350.1	16619.09
18447	55.13	349.73	16636.87
18478	55.13	349.73	16654.59
18509	55.4	349.03	16672.25
18539	55.57	348.67	16689.25
18570	55.66	348.67	16706.76
18600	55.75	348.67	16723.66
18632	55.4	348.32	16741.75

05/07/06Day 14. 18,959' (300'). PO: POOH. Drill from 18,659' to 18,959', circ btms up, spot LCM pill, mix & pump, POOH for bit #6.

Surveys:

Depth	Angle	Direction	TVD
18663	54.2	348.77	16759.62
18694	54	348.33	16777.8
18726	54	348.32	16796.61
18758	54.17	347.97	16815.38
18789	54.52	347.27	16833.45
18821	53.46	347.27	16852.26
18853	53.46	347.62	16871.32
18884	53.64	347.62	16889.73

05/08/06 Day 15. 18,959' (0'). PO: TIH. POOH for bit #6, test BOP equipment, slip & cut drill line, TIH w/ bit #6.

05/09/06 Day 16. 19,174' (215'). PO: Drilling TIH w/ bit #6, fill pipe every 3000', kelly up, wash down 60', drill from 18,959' to 19,174'.

Surveys:

Depth	Angle	Direction	TVD
18,916'	54.78°	348.67	16908.45
18,948'	55.49°	348.67	16926.74
18,979'	55.66°	348.67	16944.26
19,011'	54.69°	349.38	16962.54
19,043'	54.34°	350.78	16981.12
19,073'	54.52°	351.13	16998.57

05/10/06 Day 17. 19,373' (199'). PO: Drilling. Drill from 19,174' to 19,373', definite formation change at 19,230'.

Surveys:

Depth	Angle	Direction	TVD
19,105'	54.61°	350.78	17017.12
19,137'	54.34°	351.13	17035.72
19,168'	54.52°	351.49	17053.75
19,199'	54.61°	351.49	17071.72
19,230'	54.87°	351.84	17089.62
19,261'	54.08°	351.49	17107.63
19,293'	53.99°	351.49	17126.43

05/11/06 Day 18. 19,405' (32'). PO: TIH w/ bit #7. Drill from 19,373' to 19,405', MM torqued up, POOH, PU new MM & bit #7, TIH filling pipe every 3000'.

Surveys:

Depth	Angle	Direction	TVD
19,323'	54.26°	351.49	17144.01

05/12/06 Day 19. 19,464' (59'). PO: POOH for logs. TIH, drill from 19,405' to 19,464', spot 4#/bbl glass beads, mix & pump slug, POOH for logs.

Surveys:

Depth	Angle	Direction	TVD
19,355'	54.61°	351.13	17162.62
19,386'	54.08°	350.43	17180.69

05/13/06 Day 20. 19,464' (0'). PO: TIH w/ fishing tools. POOH for logs, RU Schlumberger, RIH w/ FMI tool, logging up, tool stuck at 19,313', call for fishing tools, RU fishing tools, start in hole.

05/14/06 Day 21. 19,464' (0'). PO: Circ btms up. Cut & thread to 14,274', work tight hole to 14,370', no progress down, pull 350K to get free, kelly up, break circulation at 14,334'.

05/15/06 Day 22. 19,464' (0'). PO: POOH. Break circulation at 14,334', circulate & work tight hole, no progress going down, tight coming up, POOH for smaller O.D. fishing tools.

05/16/06 Day 23. 19,464' (0'). PO: Wait on tools. POOH for smaller O.D. fishing tools, waiting on tools.

05/17/06 Day 24. 19,464' (0'). PO: TIH. Wait on tools, MU 4-11/16" overshot, cut & thread in hole at 13,250'.

05/18/06 Day 25. 19,464' (0'). PO: POOH slowly. Cut & thread in hole 15,895', install Schlumberger side entry sub, TIH to 17,519', started pulling tension on line, working pipe down hole from 17,519' to 17, 595', wireline parted @ rotary table, pull 180' DP, pulled tight, circulate hole.

05/19/06 Day 26. 19,464' (0'). PO: POOH. POOH working tight hole, pull to side entry sub, recover 1900' wire line, POOH to 13,800', circulate while repairing draw works, POOH to 3800'.

05/20/06 Day 27. 19,464' (0'). PO: TIH. POOH, LD overshot, fish wireline, recovered 1120'.

05/21/06 Day 28. 19,464' (0'). PO: POOH w/ wireline. Fish wireline, WO Schlumberger truck, RU Schlumberger, POOH w/ wireline, drum full, send truck to Evanston to spool off line, RU truck, start spooling line.

05/22/06 Day 29. 19,464' (0'). PO: TIH w/ inside spear. POOH spooling up 6600' wireline, estimated total wireline recovered 17,000', TIH w/ inside spear, work fish top at 13,657', POOH, no recovery, TIH w/ inside spear.

05/23/06 Day 30. 19,464' (0'). PO: TIH w/ inside spear. TIH to 13,657', work tight hole, TIH to 17,050', work fish top, POOH slowly, recover 20-30' wireline, TIH w/ inside spear.

05/24/06 Day 31. 19,464' (0'). PO: TIH w/ inside spear. TIH to heavy wt., slip & cut drill line, TIH to 17,118', work fish, POOH, recover 300' wireline, TIH w/ inside spear.

05/25/06 Day 32. 19,464' (0'). PO: TIH w/ inside spear. Work fish at 17,261', POOH, no recovery, TIH w/ inside spear.

05/26/06 Day 33. 19,464' (0'). PO: RU backoff truck. TIH w/ inside spear to 17,253', work pipe at 17,253', work down hole to 17,647', work fish, pulling over coming up, pull up to 17,569', kelly up, circulate & condition hole, set kelly back, POOH to 17,395', pulled tight, work tight hole at 17,395', no movement up or down.

05/27/06 Day 34. PO: Jarring on fish. Jar on fish, no movement, RU wireline & free point DP, not getting any torque to fish, circulate & jar.

05/28/06 Day 35. 19,464' (0'). PO: Slip & cut drill line. Circulate & jar, run severing tool, sever DP at 17,336', work pipe, pull free, POOH, LD 3300' 4" FH DP, strapping back in open ended, slip & cut drill line.

05/29/06 Day 36. 19,464' (0'). PO: POOH. Strap in hole to 16,264', circulate & cond hole, waiting on BJ to pump kickoff plug, RU BJ, pump 114 sx Class G cement, displace with 163.5 bbls 8.6# mud, pump balance plug at 16,264', POOH, DP wet 2 stds, pulling dry, pull 25 stds, pull rotating head, estimated cement top at 15,757'.

05/30/06 Day 37. 19,464' (0'). PO: WOC. POOH, MU bit, TIH to shoe, WAOC, TIH to 15,463', drill to 15,516', cement very soft, circulate, and WOC.

05/31/06 Day 38. 19,464' (0'). PO: TIH open ended. Circulate, WOC, drill to 16,286', no firm cement, circulate bottoms up, pump pill, pull rotating head, POOH.

06/01/06 Day 39. 19,464' (0'). PO: TIH w/ bit. TIH to spot kick off plug, circulate hole, RU BJ, pump 83 sx Class G, 4 bbls mud clean spacer, displace with 155 bbls mud, POOH.

06/02/06 Day 40. 19,464' (0'). PO: WOC. TIH to shoe, circulate, WOC, TIH, tag at 15,704', drill to 15,877', no firm cement, circulate, wait on cement.

06/03/06 Day 41. 19,464' (0'). PO: Slip & cut drill line. Circulate, WO cement, drill from 15,877' to 16,068', cement firming up, circ btms up, mix & pump pill, POOH for directional tools, TIH, slip & cut drill line.

06/04/06 Day 42. 16,121' (0'). PO: Time drill on kick off plug. TIH with directional tools, tag up at 16,104', orient tools, time drill from 16,104' to 16,121'.

06/05/06 Day 43. 16,142' (21'). PO: Tim drill. Time drill from 16,121' to 16,142', cement samples 50% soft, 50% firm.

06/06/06 Day 44. 16,178' (36'). PO: POOH. Time drill from 16,142' to 16,147', rotate 16,147' to 16,178', no firm cement, circulate hole, POOH to run whipstock.

06/07/06 Day 45. 16,178' (0'). PO: TIH w/ whipstock. POOH to run whipstock, GyroData sent wrong UBHO sub, wait on x-overs, PU 3 jts anchor pipe, whipstock, setting tool, UBHO sub, TIH 3 mins/std.

06/08/06 Day 46. 16,178' (0'). PO: TIH w/whipstock, 3 mins per std. Set down @ 14530'. Work pipe. Circ hole. No movement. POOH. Whipstock sheared off. Test BOP equipment.

06/09/06 Day 47. 16,178' (0'). PO: Slip & Cut Drlg line. Test Bop & equipment. TIH w/box die to screw over whipstock. Tag @ 14176'. Work tight hole. No progress. POOH. LD fishing tools. MU bit & reamers.

06/10/06 Day 48. 16,178' (0'). PO: Circulating. TIH, RU circulating hose & break circulation.

06/11/06 Day 49. 16,178' (0'). PO: Reaming. Circulate, TIH, W&R from 13,925' to 14,389'.

06/12/06 Day 50. 16,178' (0'). PO: POOH. W&R 14,389' to 16,077', pushed whipstock to btm, POOH.

06/13/06 Day 51. 16,178' (0'). PO: RU BJ to cement. POOH, LD BHA, PU 16 jts 2-7/8" tbg, TIH to set kick off plug, circulate, waiting on BJ.

06/14/06 Day 52. 16,178' (0'). PO: WOC. RU BJ, pump 92 sx class G cement plug, POOH, TIH w/ bit #10, circulate, waiting on cement.

06/15/06 Day 53. 15,858' (0'). PO: PU directional tools. WOC, TIH from shoe, tag kickoff plug at 15,712', dress off kickoff plug 15,712' to 15,858', POOH for directional tools.

06/16/06 Day 54. 15,868' (0'). PO: Time drill. PU directional tools, slip & cut drill line, TIH, fill hole every 3000', kelly up, orient directional tools, time drill from 15,862' to 15,868'.

06/17/06 Day 55. 15,903' (41'). PO: Drill by weight. Time drill from 15,868' to 15,899', 97% formation, drill by weight from 15, 899' to 15,903', 98% formation, estimated kickoff point 15,875'.

Surveys:

Depth	Angle	Direction	TVD
15,794'	37.20°	339.60	14945.80
15,843'	36.32°	339.16	14985.06

06/18/06 Day 56. 16,159' (256'). PO: Drilling. Drill from 15,903' to 16,159'.

Surveys:

Depth	Angle	Direction	TVD
15,874'	34.73°	339.51	15010.28
15,904'	31.74°	340.22	15035.38
15,936'	29.90°	340.57	15062.85
15,967'	29.72°	339.51	15089.75
15,998'	29.46°	338.81	15116.71
16,029'	29.37°	338.46	15143.71
16,061'	28.75°	339.16	15171.69

06/19/06 Day 57. 16,319' (160'). PO: POOH. Drill from 16,159' to 16,319', trip for bit.

Surveys:

Depth	Angle	Direction	TVD
16,092'	27.96°	340.22	15198.97
16,124'	27.44°	341.62	15227.30
16,155'	26.56°	340.57	15254.92
16,186'	26.68°	340.22	15282.75
16,218'	24.27°	340.22	15311.76
16,250'	22.16°	341.62	15341.17

06/20/06 Day 58. 16,416' (97'). PO: Drilling. Trip for bit & BHA, MU bit #12 & new BHA, TIH, drill from 16,319' to 16,416', Lodgepole top at 16,335'.

Surveys:

Depth	Angle	Direction	TVD
16,282'	20.93°	341.21	15370.93
16,314'	20.31°	341.62	15400.88
16,345'	19.79°	341.97	15430.00

06/21/06 Day 59. 16,692' (276'). PO: Drilling. Drill from 16,416' to 16,692'.

Surveys:

Depth	Angle	Direction	TVD
16,375'	19.08°	343.03	15458.29
16,406'	19.43°	345.15	15487.56
16,437'	19.08°	344.79	15516.83
16,469'	19.08°	345.84	15547.07
16,500'	18.64°	345.49	15579.40
16,531'	17.94°	346.19	15605.84
16,563'	17.15°	345.49	15636.35
16,595'	16.88°	345.14	15666.95

06/22/06 Day 60. 16,799' (107'). PO: Change BHA. Drill from 16,692' to 16,799', bit torquing up, circulate bottoms up, mix & pump pill, POOH for bit.

Surveys:

Depth	Angle	Direction	TVD
16,626'	16.88°	344.79	15696.61
16,657'	16.53°	345.14	15726.30
16,689'	15.83°	343.73	15757.04
16,719'	15.65°	344.08	15785.91
16,750'	15.21°	343.73	15815.79

06/23/06 Day 61. 16,844' (45'). PO: Drilling. MU new BHA. TIH filling pipe every 3000'. Slip & cut drill line. TIH. Drill from 16799' to 16844'. 45' in 7 hrs. 6.4'/hr.

Surveys:

Depth	Angle	Direction
16,750'	15.21°	343.73
16,780'	14.68°	344.10

06/24/06 Day 62. 17,044' (200'). PO: Drilling. Drill f/16844' to 17044'. 200' in 24 hrs. 8.3'/hr.

Surveys:

Depth	Angle	Direction
16,843'	12.49°	343.70
16,967'	11.17°	351.80

06/25/06 Day 63. 17,303' (259'). PO: Drilling. Drill f/17044' to 17303'. 259' in 24 hrs. 10.8'/hr.

Surveys:

Depth	Angle	Direction
17,031'	9.58°	348.70
17,222'	6.51°	334.90

06/26/06 Day 64. 17,421' (118'). PO: TOOH. Drill f/17303' to 17421'. Motor starting to torque up. Circ btms up-Mix & pump pill - TOOH. Pulled tight, work free – TOOH.

06/27/06 Day 65. 17,421' (0'). PO: Wash & ream. POOH for bit, change out BHA, TIH, fill pipe every 3000', repair drum & replace torque indicator wheel, TIH, wash & ream from 17,270' to 17,330'.

Surveys:

Depth	Angle	Direction	TVD
17,347'	8.18°	329.3	16403.48

06/28/06

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **11/1/2005**

FROM: (Old Operator):	**TO:** (New Operator):
N7940-Anschutz Exploration Corporation	N0060-Anschutz Corporation
555 17th St, Suite 2400	555 17th St, Suite 2400
Denver, CO 80202	Denver, CO 80202
Phone: 1 (303) 298-1000	Phone: 1 (303) 298-1000

CA No. **Unit:** **ANSCHUTZ RANCH PAOZ**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS	
ANSCHUTZ RANCH DEEP 10-27	27	040N	070E	4304330321	12576	Fee	GW	DRL	C

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 8/11/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/11/2006

3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 8/14/2006
4. Is the new operator registered in the State of Utah: YES Business Number:
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE
6b. Inspections of LA PA state/fee well sites complete on: n/a
6c. Reports current for Production/Disposition & Sundries on:

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA n/a

8. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 8/14/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 8/14/2006
3. Bond information entered in RBDMS on: 8/14/2006
4. Fee/State wells attached to bond in RBDMS on: 8/14/2006
5. Injection Projects to new operator in RBDMS on: n/a
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: n/a
2. Indian well(s) covered by Bond Number: n/a
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 965001810

a. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on:

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME:
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
9. API NUMBER: 4304330321
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER
2. NAME OF OPERATOR: Anschutz Exploration Corporation N0960
3. ADDRESS OF OPERATOR: 555 17th St., Suite 2400 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 298-1000
4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
Date of work completion:	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Change Co. Name
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

N7940

A Sundry Notice was submitted November 1, 2005, requesting Name of Operator change to Anschutz Exploration Corporation. The sundry was submitted in error as this well is part of a unit and the Operator needs to remain The Anschutz Corporation. The APD should have been submitted with The Anschutz Corporation as Operator.

NAME (PLEASE PRINT) DeVon M. Pester TITLE Operations Technician
SIGNATURE DeVon M. Pester DATE 8/11/2006

(This space for State use only)

(5/2000) APPROVED 8/14/06 (See Instructions on Reverse Side)
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
AUG 11 2006
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
9. API NUMBER: 4304330321
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER
2. NAME OF OPERATOR: Anschutz Exploration Corporation
3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202
PHONE NUMBER: (303) 298-1000
4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL
COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 7/15/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☑ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation proposes to sidetrack the Anschutz Ranch Deep 10-27 in order to reach a more favorable geologic position. The 6" diameter open hole sidetrack will kickoff at 16,750' MD (15,816' TVD) from a 500' cement plug set from 16,500' MD to 17,000' MD. Target depth is 19,083' MD (18,000' TVD) at 3,551' north and 980' west of the wellhead. The directional plan for this sidetrack is attached. Sidetrack #1 reached a TD of 18745' MD, 17,788 TVD

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer
SIGNATURE Jason T. Stewart DATE 7/13/2006

(This space for State use only)

RECEIVED
JUL 14 2006
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

ANSCHUTZ EXPLORATION CORPORATION

Location: UTAH
Field: SUMMIT COUNTY
Facility: SEC.27-T4N-R7E

Slot: Slot #1 RANCH DEEP 10-27
Well: RANCH DEEP 10-27
Wellbore: ARD 10-27 ST #2

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	16750.00	15.210	343.730	15815.79	2912.08	-751.75	1.45	3007.13
End of 3D Arc	16950.00	15.078	326.451	16008.95	2958.97	-773.49	2.25	3058.12
End of 3D Arc (J)	17168.59	17.627	341.477	16218.78	3014.08	-799.73	2.25	3118.22
End of Tangent (J)	18449.98	17.627	341.477	17440.00	3382.00	-923.00	0.00	3505.68
End of Tangent	19037.57	17.627	341.477	18000.00	3550.71	-979.53	0.00	3683.34

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
ST #2 ARD 10-27 BIG HORN	18449.98	17440.00	3382.00	-923.00	2099286.18	264186.06	41° 03' 28.446"N	111° 08' 23.968"W

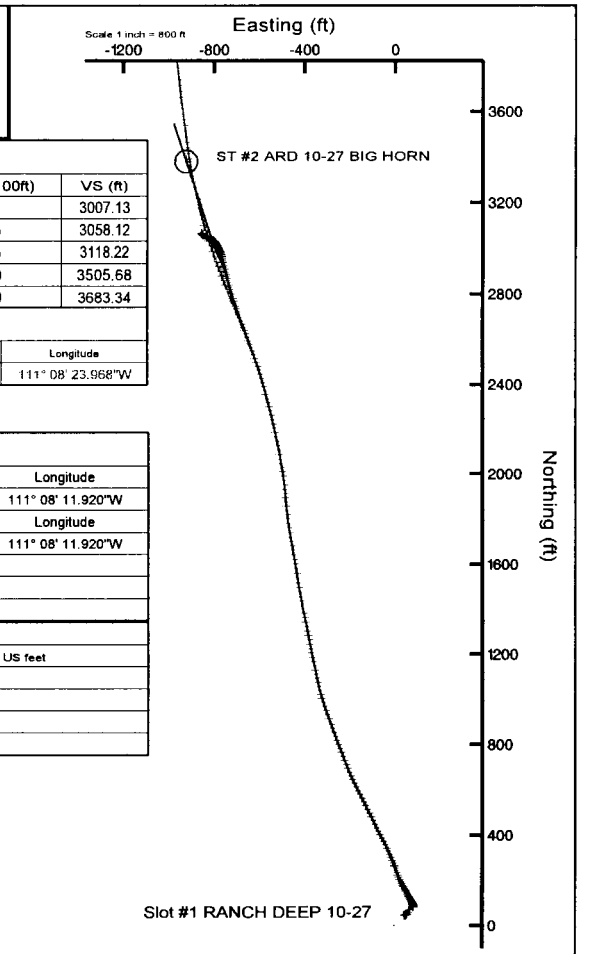
PRELMINARY PLAN - ST #2

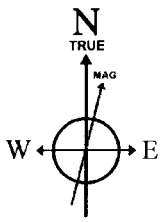
Location Information

Facility Name			Grid East (USft)	Grid North (USft)	Latitude	Longitude
SEC.27-T4N-R7E			2100223.280	260808.080	41° 02' 55.030"N	111° 08' 11.920"W
Slot	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Slot #1 RANCH DEEP 10-27	0.00	0.00	2100223.280	260808.080	41° 02' 55.030"N	111° 08' 11.920"W

Datum #2 (RKB) to Mud line (Facility - SEC.27-T4N-R7E)	7593ft
Mean Sea Level to Mud line (Facility - SEC.27-T4N-R7E)	0ft
Datum #2 (RKB) to Mean Sea Level	7593ft

Plot reference wellpath is ARD ST #2 PWP	
True vertical depths are referenced to Datum #2 (RKB)	Grid System: NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet
Measured depths are referenced to Datum #2 (RKB)	North Reference: True north
Datum #2 (RKB) to Mean Sea Level: 7593 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - SEC.27-T4N-R7E): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: L. Doubek on 7/9/2006

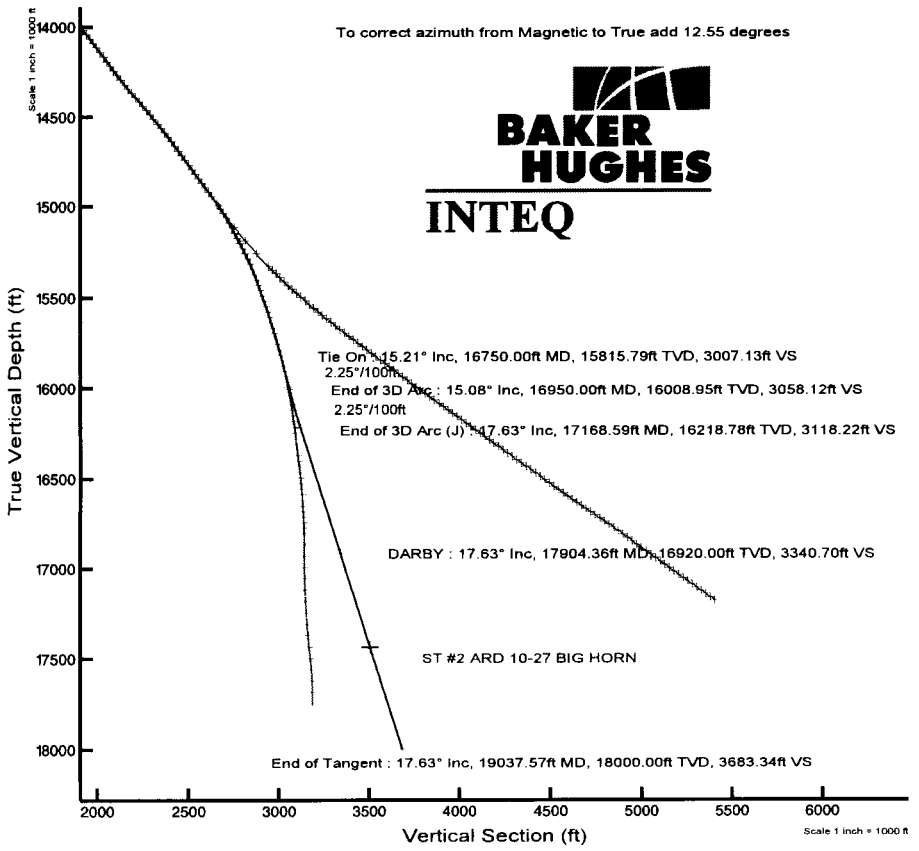




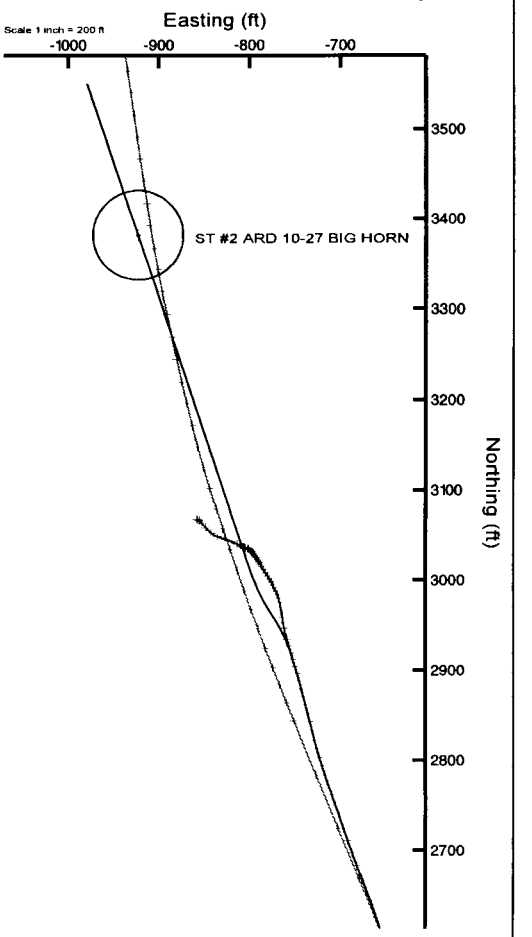
BGGM (1945.0 to 2008.0) Dip: 66.55° Field: 53192.8 nT
Magnetic North is 12.55 degrees East of True North (at 07/09/06)

To correct azimuth from Magnetic to True add 12.55 degrees

BAKER HUGHES INTEQ



Azimuth 344.58° with reference 0.00 N, 0.00 E from wellhead



Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet	Software System	WellArchitect™ 1.2
North Reference	True	User	L. Doubek
Scale	0.999963	Report Generated	07/09/06 at 12:42:24
Wellbore last revised	07/09/06	Database/Source file	WA_Denver/ARD_1

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	0.00	0.00	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Field Reference Pt			2000000.00	3467958.49	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	Minimum curvature	Datum #2 (RKB) to Installation Vertical Datum	7593.00 feet
Horizontal Reference Pt	Slot	Datum #2 (RKB) to Mean Sea Level	7593.00 feet
Vertical Reference Pt	Datum #2 (RKB)	Installation Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Datum #2 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	344.58°

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	33.45	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	33.35	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	33.22	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	33.07	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	32.93	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	32.82	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	32.72	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	32.62	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	32.53	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	32.46	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	32.43	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	32.38	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	32.33	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	32.29	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	32.26	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	32.22	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	32.18	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	32.11	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	32.02	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	31.92	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	31.83	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	31.72	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	31.63	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	31.58	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	31.57	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	31.60	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	31.64	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	31.68	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	31.69	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	31.71	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	31.84	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	32.01	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	32.22	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	32.46	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	32.74	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	33.02	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	33.31	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	33.60	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	33.84	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	34.05	50.34	54.46	1.17

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	34.22	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	34.35	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	34.44	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	40.40	58.70	60.90	0.29
10469.00	1.900	41.300	10465.08	50.35	71.15	68.59	0.14
10919.00	2.500	56.500	10914.75	57.49	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	57.75	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	58.59	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	60.03	85.40	83.85	3.84
11031.00	4.600	0.100	11026.58	62.07	87.57	84.04	4.35
11062.00	5.100	349.000	11057.47	64.64	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	67.68	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	71.34	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	75.49	100.40	80.07	2.61
11186.00	8.400	332.900	11180.49	79.87	104.41	78.15	1.81
11217.00	9.100	332.200	11211.13	84.48	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	89.44	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	94.76	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	100.43	122.98	68.13	2.32
11342.00	11.600	330.000	11334.04	106.56	128.47	64.99	1.29
11373.00	12.200	328.800	11364.37	112.73	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	119.18	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	125.88	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	132.83	152.02	51.59	2.07
11496.00	14.200	330.800	11484.16	139.85	158.35	48.15	2.29
11528.00	14.500	329.700	11515.16	147.53	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	155.10	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	163.21	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	171.99	186.94	30.92	4.77
11654.00	19.200	333.600	11636.12	181.44	195.47	26.30	7.51
11684.00	19.600	336.900	11664.41	191.27	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	202.04	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	212.82	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	223.85	235.31	11.23	0.87
11810.00	21.500	341.300	11782.38	235.41	246.30	7.63	2.31
11840.00	22.000	339.600	11810.25	246.49	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	254.03	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	258.24	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	270.85	279.50	-5.30	3.75
11933.00	25.500	337.100	11895.52	283.30	291.08	-10.16	5.02

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	296.45	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	310.66	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	324.86	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	339.48	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	355.64	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	371.87	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	387.98	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	404.82	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	421.87	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	438.63	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	456.03	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	474.01	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	491.66	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	509.49	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	527.84	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.62	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.51	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	582.06	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	599.96	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	617.31	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.94	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.86	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	671.00	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	689.18	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	707.40	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	725.67	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	744.55	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	762.87	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	781.92	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	800.49	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	818.57	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	837.44	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	856.52	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	876.33	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	895.34	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	914.72	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	933.51	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	960.51	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	979.06	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	998.84	952.43	-303.47	1.67

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1017.93	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1036.29	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1055.07	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1073.74	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1092.37	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1109.82	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1128.00	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1147.42	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1165.52	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1183.76	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1202.25	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1221.53	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1241.61	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1261.27	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1279.78	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1300.19	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1320.03	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1339.44	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1359.69	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1378.71	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1399.75	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1420.20	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1441.43	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1495.72	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1515.26	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1536.09	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1556.80	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1577.42	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1598.65	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1619.94	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1640.56	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1661.86	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1682.45	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1703.45	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1723.73	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1744.09	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1763.14	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1783.60	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1804.83	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1825.29	1764.73	-466.68	1.63

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1844.62	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.61	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.51	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.70	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.55	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1938.75	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1958.08	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1976.56	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1994.84	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2013.66	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2033.77	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2052.13	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2070.33	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2088.62	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2107.74	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2125.86	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2148.18	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2168.58	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2188.66	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2208.82	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2229.51	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2248.76	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2268.54	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2287.52	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2306.88	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2329.17	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2348.21	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2367.64	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2386.31	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2404.86	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2423.87	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2442.15	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2460.83	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2478.74	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2498.96	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2517.64	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2535.80	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2553.22	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2571.73	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2590.09	2516.11	-618.90	2.60

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2607.98	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2626.38	2550.33	-631.28	4.35
15843.00	36.320	339.160	14985.06	2655.58	2577.78	-641.61	1.87
15874.00	34.730	339.510	15010.29	2673.52	2594.63	-647.96	5.17
15904.00	31.740	340.220	15035.38	2689.90	2610.07	-653.63	10.05
15936.00	29.900	340.570	15062.86	2706.25	2625.51	-659.13	5.78
15967.00	29.720	339.510	15089.75	2721.62	2640.00	-664.39	1.80
15998.00	29.460	338.810	15116.71	2736.85	2654.30	-669.83	1.40
16029.00	29.370	338.460	15143.71	2752.00	2668.48	-675.38	0.63
16061.00	28.750	339.160	15171.69	2767.46	2682.97	-681.00	2.21
16092.00	27.960	340.220	15198.97	2782.13	2696.78	-686.11	3.02
16124.00	27.440	341.620	15227.30	2796.97	2710.83	-690.97	2.60
16155.00	26.560	340.570	15254.92	2811.02	2724.15	-695.53	3.23
16186.00	25.680	340.220	15282.75	2824.63	2737.01	-700.11	2.88
16218.00	24.270	340.220	15311.76	2838.10	2749.72	-704.68	4.41
16250.00	22.160	341.620	15341.17	2850.69	2761.64	-708.81	6.82
16282.00	20.930	341.210	15370.93	2862.42	2772.77	-712.56	3.87
16314.00	20.310	341.620	15400.88	2873.68	2783.46	-716.15	1.99
16345.00	19.790	341.970	15430.00	2884.29	2793.55	-719.47	1.72
16375.00	19.080	343.030	15458.29	2894.27	2803.07	-722.47	2.64
16406.00	19.430	345.140	15487.56	2904.49	2812.90	-725.27	2.51
16437.00	19.080	344.790	15516.83	2914.71	2822.77	-727.93	1.19
16469.00	19.080	345.840	15547.07	2925.17	2832.89	-730.58	1.07
16500.00	18.640	345.490	15576.40	2935.19	2842.60	-733.06	1.47
16531.00	17.940	346.190	15605.84	2944.91	2852.03	-735.44	2.37
16563.00	17.150	345.490	15636.35	2954.56	2861.39	-737.80	2.56
16595.00	16.880	345.140	15666.95	2963.92	2870.45	-740.17	0.90
16626.00	16.880	344.790	15696.61	2972.92	2879.14	-742.51	0.33
16657.00	16.530	345.140	15726.30	2981.83	2887.74	-744.82	1.17
16689.00	15.830	343.730	15757.04	2990.75	2896.33	-747.21	2.51
16719.00	15.650	344.080	15785.91	2998.89	2904.15	-749.46	0.68
16750.00	15.210	343.730	15815.79	3007.13	2912.08	-751.75	1.45
16850.00†	14.980	335.128	15912.36	3033.00	2936.40	-760.86	2.25
16950.00	15.078	326.451	16008.95	3058.12	2958.97	-773.49	2.25
17050.00†	16.112	333.894	16105.27	3084.12	2982.27	-786.78	2.25
17150.00†	17.371	340.375	16201.04	3112.64	3008.80	-797.91	2.25
17168.59	17.627	341.477	16218.78	3118.22	3014.08	-799.73	2.25
17250.00†	17.627	341.477	16296.36	3142.84	3037.45	-807.56	0.00
17350.00†	17.627	341.477	16391.66	3173.07	3066.17	-817.18	0.00
17450.00†	17.627	341.477	16486.97	3203.31	3094.88	-826.80	0.00

Planned Wellpath Report

ARD ST #2 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16750.00 MD

WELLPATH DATA (257 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
17550.00†	17.627	341.477	16582.27	3233.55	3123.59	-836.42	0.00
17650.00†	17.627	341.477	16677.58	3263.79	3152.30	-846.04	0.00
17750.00†	17.627	341.477	16772.88	3294.02	3181.02	-855.66	0.00
17850.00†	17.627	341.477	16868.19	3324.26	3209.73	-865.28	0.00
17950.00†	17.627	341.477	16963.49	3354.50	3238.44	-874.90	0.00
18050.00†	17.627	341.477	17058.80	3384.73	3267.16	-884.52	0.00
18150.00†	17.627	341.477	17154.10	3414.97	3295.87	-894.14	0.00
18250.00†	17.627	341.477	17249.41	3445.21	3324.58	-903.76	0.00
18350.00†	17.627	341.477	17344.71	3475.44	3353.29	-913.38	0.00
18449.98	17.627	341.477	17440.00[1]	3505.68	3382.00	-923.00	0.00
18450.00†	17.627	341.477	17440.02	3505.68	3382.01	-923.00	0.00
18550.00†	17.627	341.477	17535.32	3535.92	3410.72	-932.62	0.00
18650.00†	17.627	341.477	17630.63	3566.16	3439.43	-942.24	0.00
18750.00†	17.627	341.477	17725.93	3596.39	3468.14	-951.86	0.00
18850.00†	17.627	341.477	17821.24	3626.63	3496.86	-961.48	0.00
18950.00†	17.627	341.477	17916.54	3656.87	3525.57	-971.10	0.00
19037.57	17.627	341.477	18000.00	3683.34	3550.71	-979.53	0.00

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) ST #2 ARD 10-27 BIG HORN	18449.98	17440.00	3382.00	-923.00	2099286.18	264186.06	41 03 28.446N	111 08 23.968W	circle

SURVEY PROGRAM Ref Wellbore: ARD 10-27 ST #2 Ref Wellpath: ARD ST #2 PWP

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15794.00	Unknown Tool (Standard)		RANCH DEEP 10-27 (AWB) EXISTING
15794.00	16750.00	MTC (Collar, pre-2000) (Standard)		RANCH DEEP 10-27 ST #1

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	n/a
7. UNIT or CA AGREEMENT NAME:	n/a
1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER	8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
2. NAME OF OPERATOR: Anschutz Exploration Corporation	9. API NUMBER: 4304330321
3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202 / PHONE NUMBER: (303) 298-1000	10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch
4. LOCATION OF WELL — FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL	COUNTY: Summit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 7/15/2006	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: directional drilling letter
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation began a sidetrack in the Anschutz Ranch Deep 10-27 in order to reach a more favorable geologic position. The new target is 19,083' MD (18,000' TVD) at 3,551' north and 980' west of the wellhead. The well design (cementing and casing program) has not changed as a result of this sidetrack.

By this sundry notice, Anschutz Exploration Corporation affirms that it controls all mineral rights within 460' of the wellbore.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 7/21/2006

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: n/a

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 7/27/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☑ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation proposes to sidetrack the Anschutz Ranch Deep 10-27 in order to reach a more favorable geologic position. The 6" diameter open hole sidetrack will kickoff at 16,250' MD (15,341' TVD) from a 500' cement plug set from 16,000' MD to 16,500' MD. Target depth is 19,124' MD (18,000' TVD) at 3,739' north and 983' west of the wellhead. The directional plan for this sidetrack is attached.

By this sundry notice, Anschutz Exploration Corporation also affirms that it controls all mineral rights within 460' of the wellbore.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 7/26/2006

(This space for State use only)

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(5/2000) (See Instructions on Reverse Side)

ANSCHUTZ EXPLORATION CORPORATION

Location: UTAH
Field: SUMMIT COUNTY
Facility: SEC.27-T4N-R7E

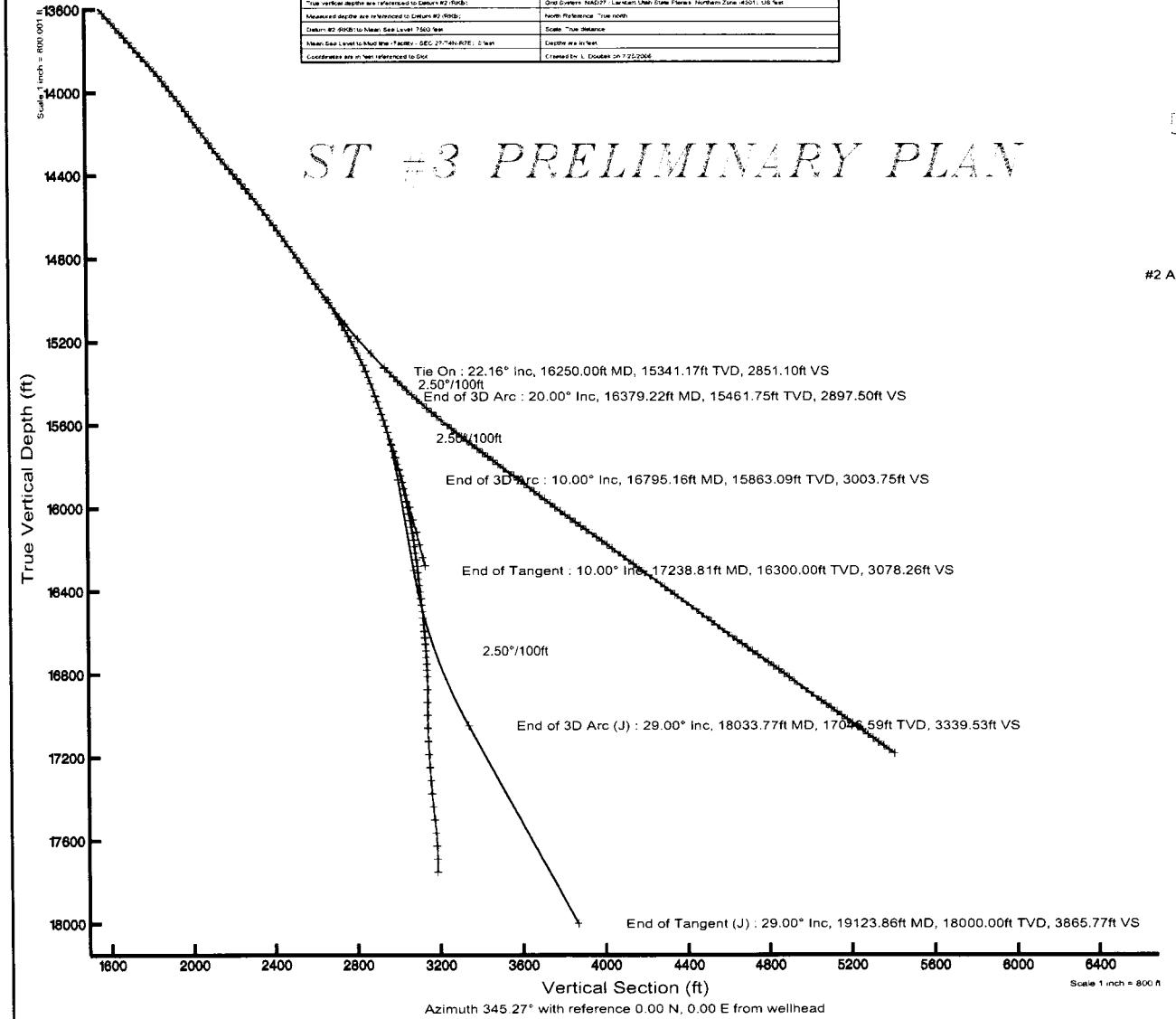
Slot: Slot #1 RANCH DEEP 10-27
Well: RANCH DEEP 10-27
Wellbore: ARD 10-27 ST #3

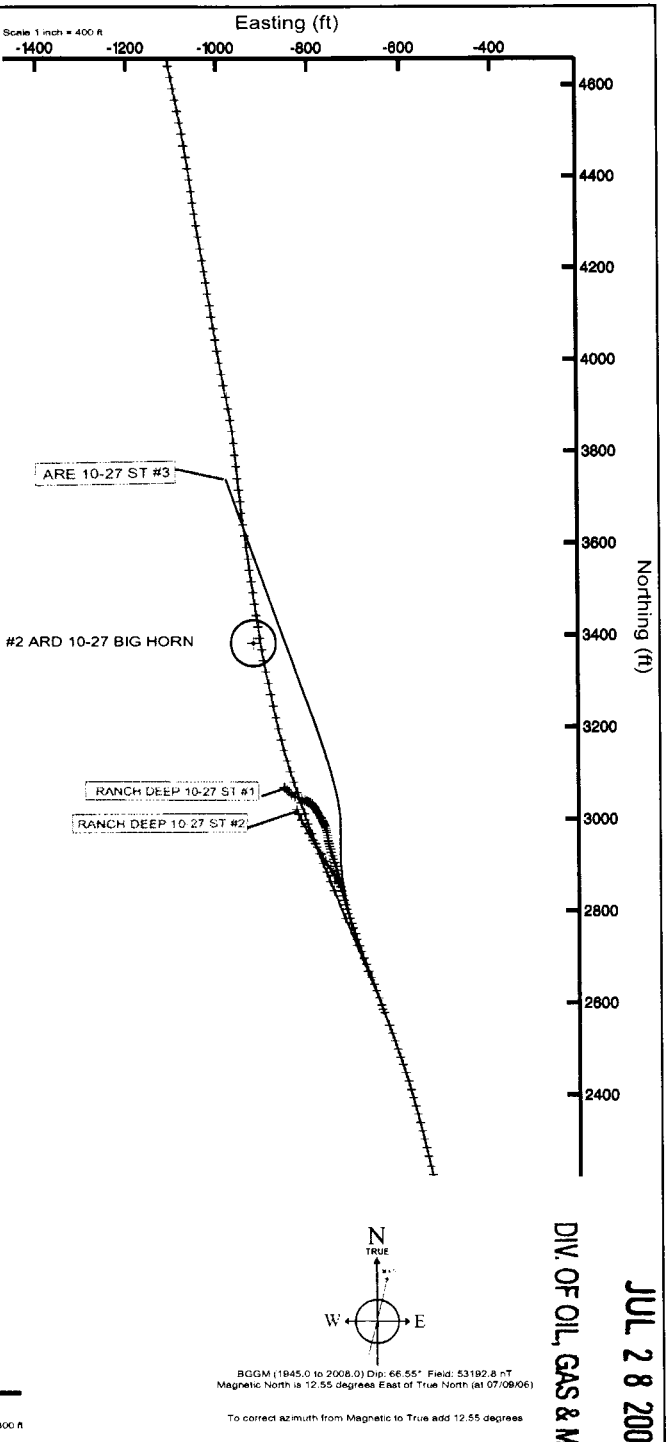
BAKER HUGHES
INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	16250.00	22.160	341.620	15341.17	2761.64	-708.81	0.00	2851.10
End of 3D Arc	16379.22	20.000	348.310	15461.75	2806.41	-720.98	2.50	2897.50
End of 3D Arc	16795.16	10.000	0.000	15863.09	2912.47	-735.43	2.50	3003.75
End of Tangent	17238.81	10.000	0.000	16300.00	2989.51	-735.43	0.00	3078.26
End of 3D Arc (J)	18033.77	29.000	340.000	17046.59	3242.16	-802.01	2.50	3339.53
End of Tangent (J)	19123.86	29.000	340.000	18000.00	3738.77	-982.76	0.00	3865.77

Plot reference wellpath is ARD 10-27 ST #3	
True vertical depths are referenced to Datum #2 (RKB)	Grid System: NAD27 (Lambert,Utah State Plane, Northern Zone,4301, US feet
Measured depths are referenced to Datum #2 (RKB)	North Reference: True north
Datum #2 (RKB) to Mean Sea Level: 7560 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - SEC.27-T4N-R7E): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created By: L. Doucet on: 7/25/2006





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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet	Software System	WellArchitect™ 1.2
North Reference	True	User	L. Doubek
Scale	0.999963	Report Generated	07/25/06 at 17:18:33
Wellbore last revised	07/25/06	Database/Source file	WA_Denver/ARD_10-27_ST

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	0.00	0.00	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Field Reference Pt			2000000.00	3467958.49	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	Minimum curvature	Datum #2 (RKB) to Installation Vertical Datum	7593.00 feet
Horizontal Reference Pt	Slot	Datum #2 (RKB) to Mean Sea Level	7593.00 feet
Vertical Reference Pt	Datum #2 (RKB)	Installation Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Datum #2 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	345.27°

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

WELLPATH DATA (249 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	34.08	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	33.97	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	33.85	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	33.70	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	33.57	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	33.47	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	33.37	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	33.28	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	33.18	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	33.13	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	33.10	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	33.05	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	33.00	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	32.97	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	32.95	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	32.91	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	32.87	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	32.81	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	32.72	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	32.62	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	32.53	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	32.43	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	32.34	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	32.30	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	32.29	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	32.33	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	32.38	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	32.42	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	32.43	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	32.46	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	32.59	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	32.78	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	32.99	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	33.24	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	33.52	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	33.80	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	34.10	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	34.39	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	34.63	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	34.84	50.34	54.46	1.17

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

WELLPATH DATA (249 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	35.02	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	35.15	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	35.25	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	41.30	58.70	60.90	0.29
10469.00	**1.900**	**41.300**	**10465.08**	**51.38**	**71.15**	**68.59**	**0.14**
10919.00	2.500	56.500	10914.75	58.70	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	58.98	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	59.83	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	61.28	85.40	83.85	3.84
11031.00	**4.600**	**0.100**	**11026.58**	**63.33**	**87.57**	**84.04**	**4.35**
11062.00	5.100	349.000	11057.47	65.91	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	68.95	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	72.60	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	76.74	100.40	80.07	2.61
11186.00	**8.400**	**332.900**	**11180.49**	**81.11**	**104.41**	**78.15**	**1.81**
11217.00	9.100	332.200	11211.13	85.71	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	90.66	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	95.97	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	101.62	122.98	68.13	2.32
11342.00	**11.600**	**330.000**	**11334.04**	**107.73**	**128.47**	**64.99**	**1.29**
11373.00	12.200	328.800	11364.37	113.88	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	120.31	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	126.98	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	133.91	152.02	51.59	2.07
11496.00	**14.200**	**330.800**	**11484.16**	**140.91**	**158.35**	**48.15**	**2.29**
11528.00	14.500	329.700	11515.16	148.57	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	156.11	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	164.20	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	172.94	186.94	30.92	4.77
11654.00	**19.200**	**333.600**	**11636.12**	**182.36**	**195.47**	**26.30**	**7.51**
11684.00	19.600	336.900	11664.41	192.17	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	202.93	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	213.70	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	224.72	235.31	11.23	0.87
11810.00	**21.500**	**341.300**	**11782.38**	**236.27**	**246.30**	**7.63**	**2.31**
11840.00	22.000	339.600	11810.25	247.35	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	254.88	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	259.08	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	271.67	279.50	-5.30	3.75
11933.00	**25.500**	**337.100**	**11895.52**	**284.10**	**291.08**	**-10.16**	**5.02**

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

WELLPATH DATA (249 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	297.23	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	311.41	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	325.58	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	340.17	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	356.30	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	372.48	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	388.55	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	405.34	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	422.35	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	439.07	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	456.42	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	474.36	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	491.97	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	509.75	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	528.06	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.80	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.64	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	582.15	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	600.00	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	617.30	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.89	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.76	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	670.86	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	689.00	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	707.20	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	725.44	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	744.29	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	762.59	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	781.62	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	800.16	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	818.22	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	837.06	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	856.12	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	875.90	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	894.90	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	914.25	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	933.03	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	960.00	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	978.53	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	998.29	952.43	-303.47	1.67

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

WELLPATH DATA (249 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1017.37	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1035.71	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1054.49	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1073.16	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1091.79	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1109.24	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1127.43	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1146.85	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1164.97	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1183.22	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1201.73	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1221.03	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1241.12	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1260.79	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1279.31	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1299.74	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1319.60	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1339.03	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1359.30	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1378.34	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1399.40	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1419.86	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1441.11	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1495.45	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1515.01	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1535.85	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1556.59	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1577.23	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1598.49	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1619.81	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1640.45	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1661.78	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1682.39	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1703.41	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1723.72	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1744.10	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1763.17	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1783.66	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1804.91	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1825.39	1764.73	-466.68	1.63

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

WELLPATH DATA (249 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1844.75	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.77	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.70	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.93	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.82	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1939.05	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1958.42	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1976.94	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1995.26	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2014.12	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2034.26	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2052.65	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2070.86	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2089.18	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2108.33	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2126.47	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2148.82	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2169.23	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2189.33	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2209.50	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2230.20	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2249.47	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2269.26	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2288.24	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2307.61	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2329.92	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2348.96	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2368.39	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2387.07	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2405.62	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2424.63	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2442.91	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2461.59	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2479.50	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2499.71	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2518.39	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2536.53	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2553.94	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2572.43	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2590.78	2516.11	-618.90	2.60

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

WELLPATH DATA (249 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2608.65	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2627.03	2550.33	-631.28	4.35
15843.00	36.320	339.160	14985.06	2656.20	2577.78	-641.61	1.87
15874.00	34.730	339.510	15010.29	2674.12	2594.63	-647.96	5.17
15904.00	31.740	340.220	15035.38	2690.48	2610.07	-653.63	10.05
15936.00	29.900	340.570	15062.86	2706.82	2625.51	-659.13	5.78
15967.00	29.720	339.510	15089.75	2722.16	2640.00	-664.39	1.80
15998.00	29.460	338.810	15116.71	2737.38	2654.30	-669.83	1.40
16029.00	29.370	338.460	15143.71	2752.51	2668.48	-675.38	0.63
16061.00	28.750	339.160	15171.69	2767.95	2682.97	-681.00	2.21
16092.00	27.960	340.220	15198.97	2782.60	2696.78	-686.11	3.02
16124.00	27.440	341.620	15227.30	2797.43	2710.83	-690.97	2.60
16155.00	26.560	340.570	15254.92	2811.47	2724.15	-695.53	3.23
16186.00	25.680	340.220	15282.75	2825.07	2737.01	-700.11	2.88
16218.00	24.270	340.220	15311.76	2838.53	2749.72	-704.68	4.41
16250.00	22.160	341.620	15341.17	2851.10	2761.64	-708.81	0.00
16350.00†	20.465	346.681	15434.33	2887.40	2796.55	-718.79	2.50
16379.22	20.000	348.310	15461.75	2897.50	2806.41	-720.98	2.50
16450.00†	18.268	349.411	15528.62	2920.65	2829.17	-725.47	2.50
16550.00†	15.833	351.359	15624.22	2949.86	2858.07	-730.40	2.50
16650.00†	13.423	353.991	15720.97	2974.90	2883.11	-733.66	2.50
16750.00†	11.051	357.738	15818.69	2995.73	2904.23	-735.26	2.50
16795.16	10.000	0.000	15863.09	3003.75	2912.47	-735.43	2.50
16850.00†	10.000	0.000	15917.10	3012.96	2922.00	-735.43	0.00
16950.00†	10.000	0.000	16015.58	3029.75	2939.36	-735.43	0.00
17050.00†	10.000	0.000	16114.06	3046.55	2956.73	-735.43	0.00
17150.00†	10.000	0.000	16212.54	3063.34	2974.09	-735.43	0.00
17238.81	10.000	0.000	16300.00	3078.26	2989.51	-735.43	0.00
17250.00†	10.245	359.233	16311.02	3080.16	2991.48	-735.44	2.50
17350.00†	12.500	353.725	16409.05	3099.50	3011.13	-736.74	2.50
17450.00†	14.832	349.902	16506.22	3122.97	3034.49	-740.17	2.50
17550.00†	17.211	347.106	16602.33	3150.52	3061.52	-745.72	2.50
17650.00†	19.619	344.975	16697.20	3182.09	3092.16	-753.37	2.50
17750.00†	22.047	343.295	16790.66	3217.65	3126.36	-763.12	2.50
17850.00†	24.488	341.935	16882.52	3257.10	3164.04	-774.94	2.50
17950.00†	26.940	340.807	16972.61	3300.38	3205.15	-788.82	2.50
18033.77	29.000	340.000	17046.59	3339.53	3242.16	-802.01	2.50
18050.00†	29.000	340.000	17060.78	3347.36	3249.55	-804.70	0.00
18150.00†	29.000	340.000	17148.25	3395.63	3295.11	-821.28	0.00
18250.00†	29.000	340.000	17235.71	3443.91	3340.66	-837.86	0.00

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Planned Wellpath Report

ARD 10-27 ST #3

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
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Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	ARD 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 16250.00 MD

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MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
18350.00†	29.000	340.000	17323.17	3492.19	3386.22	-854.44	0.00
18450.00†	29.000	340.000	17410.63	3540.46	3431.78	-871.02	0.00
18550.00†	29.000	340.000	17498.09	3588.74	3477.33	-887.60	0.00
18650.00†	29.000	340.000	17585.56	3637.01	3522.89	-904.18	0.00
18750.00†	29.000	340.000	17673.02	3685.29	3568.45	-920.77	0.00
18850.00†	29.000	340.000	17760.48	3733.57	3614.01	-937.35	0.00
18950.00†	29.000	340.000	17847.94	3781.84	3659.56	-953.93	0.00
19050.00†	29.000	340.000	17935.40	3830.12	3705.12	-970.51	0.00
19123.86	29.000	340.000	18000.00	3865.77	3738.77	-982.76	0.00

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
ST #2 ARD 10-27 BIG HORN		17440.00	3382.00	-923.00	2099286.18	264186.06	41 03 28.446N	111 08 23.968W	circle

SURVEY PROGRAM Ref Wellbore: ARD 10-27 ST #3 Ref Wellpath: ARD 10-27 ST #3

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15794.00	Unknown Tool (Standard)		RANCH DEEP 10-27 (AWB) EXISTING
15794.00	16250.00	MTC (Collar, pre-2000) (Standard)		RANCH DEEP 10-27 ST #1

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	n/a
7. UNIT or CA AGREEMENT NAME:	n/a
8. WELL NAME and NUMBER:	Anschutz Ranch Deep 10-27
9. API NUMBER:	4304330321
10. FIELD AND POOL, OR WILDCAT:	Anschutz Ranch

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

2. NAME OF OPERATOR: Anschutz Exploration Corporation

3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 298-1000

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 8/6/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☑ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation proposes to temporarily abandoned the Anschutz Ranch Deep 10-27 using the following procedure:

A cement retainer will be set at 13,863'. 100 sacks Class G cement will be spotted below the retainer and 20 sacks Class G cement will be spotted above the retainer. A cast iron bridge plug will be set at 12,775', and 20 sacks of Class G cement will be spotted above it. A second cast iron bridge plug will be set at 11,650' with 20 sacks Class G cement spotted above it.

Verbal approval for the temporary abandonment of this well was given by Dustin Doucet on 8/6/06.

Directional plans for all sidetracks in the well and a wellbore diagram will be submitted with the subsequent report.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/7/2006

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS AND MINING
DATE: 8/25/06
BY: Dustin Doucet
(See Instructions on Reverse Side)

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(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: The Anschutz Corporation
Address: 555 - 17th Street, Suite 2400
city Denver
state CO zip 80202

Operator Account Number: N 0060

Phone Number: (303) 298-1000

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
049-30321	Anschutz Ranch Deep 10-27 Deepening		SWSE	28	11S	4E	Utah
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	12576	12576	3/24/06			8/17/06	

Comments: We are deepening the original wellbore to a different formation. CONFIDENTIAL
CMBRN from Webr

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	

Comments:

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	

Comments:

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

DeVon M. Pester
Name (Please Print)

Signature

Operations Technician
Title

8/11/2006
Date

(5/2000)

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DIV. OF OIL, GAS & MINING

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

7. UNIT or CA AGREEMENT NAME: n/a

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1433' FSL and 1228' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☑ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 8/8/2006	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation has temporarily abandoned the Anschutz Ranch Deep 10-27 using the following procedure:

A cement retainer was set at 13,863'. 100 sacks Class G cement were spotted below the retainer and 20 sacks Class G cement were spotted above the retainer. A cast iron bridge plug was set at 12,775', and 20 sacks of Class G cement were spotted above it. A second cast iron bridge plug was set at 11,650' with 20 sacks Class G cement spotted above it.

Verbal approval for the temporary abandonment of this well was given by Dustin Doucet on 8/6/06.

Directional plans for all sidetracks in the well and a wellbore diagram are attached. As requested by Dustin Doucet, APD cover letters and completion reports for all bore holes are also included.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

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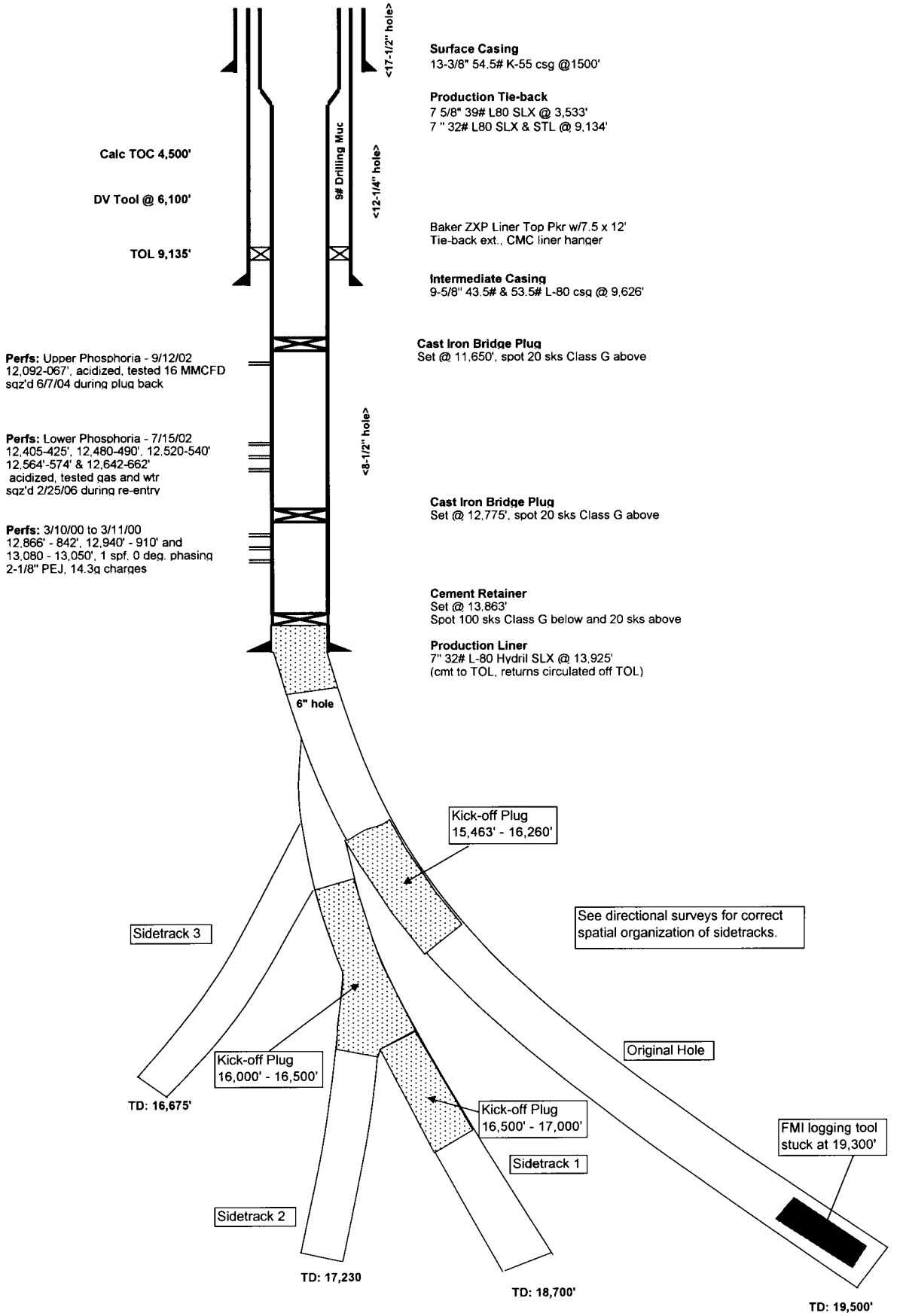
(5/2000) (See Instructions on Reverse Side)

ANSCHUTZ EXPLORATION CORPORATION TEMPORARILY ABANDONED WELLBORE SCHEMATIC		
SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27	COUNTY, STATE: Summit, Utah
TD: 19,500'	GROUND ELEVATION: 7,566'	KB ELEVATION: 7,593'



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: n/a	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL ☐ REENTER ☐ DEEPEN ☑	7. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
B. TYPE OF WELL: OIL ☐ GAS ☑ OTHER _____ SINGLE ZONE ☐ MULTIPLE ZONE ☐	8. UNIT or CA AGREEMENT NAME: n/a
2. NAME OF OPERATOR: The Anschutz Corporation	9. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
3. ADDRESS OF OPERATOR: 555 17th St., Ste 2400 CITY Denver STATE CO ZIP 80202 / PHONE NUMBER: (303) 298-1000	10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E AT PROPOSED PRODUCING ZONE: 1423' FSL, 2449' FEL Sec 22 T4N R7E	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 3 miles northeast of Coalville, Utah	12. COUNTY: Summit / 13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): unitized	16. NUMBER OF ACRES IN LEASE: unitized / 17. NUMBER OF ACRES ASSIGNED TO THIS WELL: unitized
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): unitized	19. PROPOSED DEPTH: 19,386 / 20. BOND DESCRIPTION:
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 7593' KB	22. APPROXIMATE DATE WORK WILL START: 4/23/2006 / 23. ESTIMATED DURATION: 45 days

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
17-1/2"	13-3/8"	54.5	K-55	1,500	Previously Set			
12-1/4"	9-5/8"	43.5, 53.5	L-80	9,626	Previously Set			
8-1/2"	7, 7-5/8"	32, 39	L-80	13,925	Previously Set			
6"	4-1/2"	13.5	L-80	15,800	Class G	240 sacks	1.58 cu. ft/sk	15.8 ppg
6"	4-1/2"	13.5	HCL-80	19,386	Class G	458 sacks	1.58 cu. ft/sk	15.8 ppg

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☐ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ COMPLETE DRILLING PLAN
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

(This space for State use only)

API NUMBER ASSIGNED: _____ APPROVAL:

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(11/2001) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER
b. TYPE OF WORK: NEW WELL ☐ HORIZ. LATS. ☐ DEEP-EN ☑ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR: The Anschutz Corporation
9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St. Ste 2400 CITY Denver STATE CO ZIP 80202
PHONE NUMBER: (303) 298-1000
10 FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E
AT TOP PRODUCING INTERVAL REPORTED BELOW: n/a
AT TOTAL DEPTH: 1423' FSL, 2449' FEL Sec 22 T4N R7E
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
12. COUNTY: Summit
13. STATE: UTAH

14. DATE SPUDDED: 4/23/2006
15. DATE T.D. REACHED: 5/30/2006
16. DATE COMPLETED: 5/30/2006 ABANDONED ☑ READY TO PRODUCE ☐
17. ELEVATIONS (DF, RKB, RT, GL): 7593' KB

18. TOTAL DEPTH: MD 19,386 TVD 17,181
19. PLUG BACK T.D.: MD 15,463 TVD 14,677
20. IF MULTIPLE COMPLETIONS, HOW MANY? * n/a
21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
Resistivity, Neutron Density, BHC, FMI, GR

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
17 1/2	13.3[illegible] K-55	54.5	0	1,500					
12 1/4	9.625 L-80	53.5	0	9,626					
8 1/2	7.625 L-80	39	0	3,533					
8 1/2	7 L-80	32	3,533	13,925					
6	n/a n/a	n/a	13,925	19,386					

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A)				
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: Drilling

(5/2000)

(CONTINUED ON BACK)

AUG 16 2006

31. INITIAL PRODUCTION — **INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Mission Canyon Lodgepole	14,614 16,335

35. ADDITIONAL REMARKS (Include plugging procedure)

Kickoff plug spotted from 15,463' MD to 16,260' MD for drilling of sidetrack #1

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO:	6. SURFACE:
n/a	Fee

1A. TYPE OF WORK: DRILL ☐ REENTER ☐ DEEPEN ☑

B. TYPE OF WELL: OIL ☐ GAS ☑ OTHER _____ SINGLE ZONE ☐ MULTIPLE ZONE ☐

7. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

8. UNIT or CA AGREEMENT NAME: n/a

2. NAME OF OPERATOR: The Anschutz Corporation

9. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

3. ADDRESS OF OPERATOR: 555 17th St., Ste 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL (FOOTAGES)

AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E

AT PROPOSED PRODUCING ZONE: 779' FSL, 2086' FEL Sec 22 T4N R7E

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 3 miles northeast of Coalville, Utah

12. COUNTY: Summit

13. STATE: UTAH

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET)	16. NUMBER OF ACRES IN LEASE:	17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
unitized	unitized	unitized
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET)	**19. PROPOSED DEPTH:**	**20. BOND DESCRIPTION:**
unitized	18,700	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.):	**22. APPROXIMATE DATE WORK WILL START:**	**23. ESTIMATED DURATION:**
7593' KB	5/30/2006	45 days

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
17-1/2"	13-3/8"	54.5	K-55	1,500	Previously Set			
12-1/4"	9-5/8"	43.5, 53.5	L-80	9,626	Previously Set			
8-1/2"	7, 7-5/8"	32, 39	L-80	13,925	Previously Set			
6"	4-1/2"	13.5	L-80	15,800	Class G	240 sacks	1.58 cu. ft/sk	15.8 ppg
6"	4-1/2"	13.5	HCL-80	18,700	Class G	262 sacks	1.58 cu. ft/sk	15.8 ppg

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☐ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER

☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER

☐ COMPLETE DRILLING PLAN

☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

(This space for State use only)

API NUMBER ASSIGNED: _____

APPROVAL:

(11/2001) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

7. UNIT or CA AGREEMENT NAME: n/a

b. TYPE OF WORK: NEW WELL ☐ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER Sidetrack 1

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: The Anschutz Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St. Ste 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10 FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E
AT TOP PRODUCING INTERVAL REPORTED BELOW: n/a
AT TOTAL DEPTH: 779' FSL, 2086' FEL Sec 22 T4N R7E

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

12. COUNTY: Summit

13. STATE: UTAH

14. DATE SPUDDED: 5/30/2006

15. DATE T.D. REACHED: 7/13/2006

16. DATE COMPLETED: 7/13/2006 ABANDONED ☑ READY TO PRODUCE ☐

17. ELEVATIONS (DF, RKB, RT, GL): 7593' KB

18. TOTAL DEPTH: MD 18,700 TVD 17,752

19. PLUG BACK T.D.: MD 16,750 TVD 15,816

20. IF MULTIPLE COMPLETIONS, HOW MANY? * 2

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
n/a

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
17 1/2	13.375 K-55	54.5	0	1,500					
12 1/4	9.625 L-80	53.5	0	9,626					
8 1/2	7.625 L-80	39	0	3,533					
8 1/2	7 L-80	32	3,533	13,925					
6	n/a n/a	n/a	13,925	18,700					

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A)				
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: Drilling

(5/2000)

(CONTINUED ON BACK)

31. INITIAL PRODUCTION — **INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Mission Canyon Lodgepole Darby	14,614 16,335 17,945

35. ADDITIONAL REMARKS (Include plugging procedure)

Kickoff plug spotted from 16,500' MD to 17,000' MD for drilling of sidetrack #2

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: n/a	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL ☐ REENTER ☐ DEEPEN ☑	7. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
B. TYPE OF WELL: OIL ☐ GAS ☑ OTHER _____ SINGLE ZONE ☐ MULTIPLE ZONE ☐	8. UNIT or CA AGREEMENT NAME: n/a
2. NAME OF OPERATOR: The Anschutz Corporation	9. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27
3. ADDRESS OF OPERATOR: 555 17th St., Ste 2400 CITY Denver STATE CO ZIP 80202 — PHONE NUMBER: (303) 298-1000	10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E AT PROPOSED PRODUCING ZONE: 4453' FSL, 2058' FEL Sec 22 T4N R7E	11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 3 miles northeast of Coalville, Utah	12. COUNTY: Summit — 13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): n/a, unitized	16. NUMBER OF ACRES IN LEASE: n/a unitized — 17. NUMBER OF ACRES ASSIGNED TO THIS WELL: n/a unitized
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): n/a, unitized	19. PROPOSED DEPTH: 17,230 — 20. BOND DESCRIPTION:
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 7593' KB	22. APPROXIMATE DATE WORK WILL START: 7/13/2006 — 23. ESTIMATED DURATION: 45 days

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
17-1/2"	13-3/8"	54.5	K-55	1,500	Previously Set			
12-1/4"	9-5/8"	43.5, 53.5	L-80	9,626	Previously Set			
8-1/2"	7, 7-5/8"	32, 39	L-80	13,925	Previously Set			
6"	4-1/2"	13.5	L-80	15,800	Class G	240 sacks	1.58 cu. ft/sk	15.8 ppg
6"	4-1/2"	13.5	HCL-80	17,230	Class G	130 sacks	1.58 cu. ft/sk	15.8 ppg

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☐ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☐ COMPLETE DRILLING PLAN
☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Jason T. Stewart — TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart — DATE 8/11/2006

(This space for State use only)

API NUMBER ASSIGNED: _____ APPROVAL:

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AUG 16 2006
DIV OF OIL, GAS & MINING

(11/2001) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER
b. TYPE OF WORK: NEW WELL ☐ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER Sidetrack 2

2. NAME OF OPERATOR: The Anschutz Corporation
9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St. Ste 2400 CITY Denver STATE CO ZIP 80202
PHONE NUMBER: (303) 298-1000
10 FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E
AT TOP PRODUCING INTERVAL REPORTED BELOW: n/a
AT TOTAL DEPTH: 4453' FSL, 2058' FEL Sec 22 T4N R7E
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
12. COUNTY: Summit
13. STATE: UTAH

14. DATE SPUDDED: 7/13/2006
15. DATE T.D. REACHED: 7/27/2006
16. DATE COMPLETED: 7/27/2006 ABANDONED ☑ READY TO PRODUCE ☐
17. ELEVATIONS (DF, RKB, RT, GL): 7593' KB

18. TOTAL DEPTH: MD 17,230 TVD 16,278
19. PLUG BACK T.D.: MD 16,250 TVD 15,341
20. IF MULTIPLE COMPLETIONS, HOW MANY? * 3
21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
n/a

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
17 1/2	13.3[illegible] K-55	54.5	0	1,500					
12 1/4	9.625 L-80	53.5	0	9,626					
8 1/2	7.625 L-80	39	0	3,533					
8 1/2	7 L-80	32	3,533	13,925					
6	n/a n/a	n/a	13,925	17,230					

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A)				
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: Drilling

(5/2000)

(CONTINUED ON BACK)

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AUG 16 2006

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Mission Canyon Lodgepole Darby	14,614 16,335 17,130

35. ADDITIONAL REMARKS (Include plugging procedure)

Kickoff plug spotted from 16,000' MD to 16,500' MD for drilling of sidetrack #3

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
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Salt Lake City, Utah 84114-5801

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Fax: 801-359-3940

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: n/a	6. SURFACE: Fee
7. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a	
8. UNIT or CA AGREEMENT NAME: n/a	
9. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27	
10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch	
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E	
12. COUNTY: Summit	13. STATE: UTAH

1A. TYPE OF WORK: DRILL ☐ REENTER ☐ DEEPEN ☑

B. TYPE OF WELL: OIL ☐ GAS ☑ OTHER _____ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR: The Anschutz Corporation

3. ADDRESS OF OPERATOR: 555 17th St., Ste 2400 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 298-1000

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E
AT PROPOSED PRODUCING ZONE: 971' FNL, 1935' FEL Sec 27 T4N R7E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 3 miles northeast of Coalville, Utah

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): unitized	16. NUMBER OF ACRES IN LEASE: unitized	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: unitized
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): unitized	19. PROPOSED DEPTH: 16,675	20. BOND DESCRIPTION:
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 7593' KB	22. APPROXIMATE DATE WORK WILL START: 7/27/2006	23. ESTIMATED DURATION: 45 days

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
17-1/2"	13-3/8" 54.5 K-55	1,500	Previously Set
12-1/4"	9-5/8" 43.5, 53.5 L-80	9,626	Previously Set
8-1/2"	7, 7-5/8" 32, 39 L-80	13,925	Previously Set
6"	4-1/2" 13.5 L-80	15,800	Class G 240 sacks 1.58 cu. ft/sk 15.8 ppg
6"	4-1/2" 13.5 HCL-80	16,675	Class G 80 sacks 1.58 cu. ft/sk 15.8 ppg

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☐ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☐ COMPLETE DRILLING PLAN
☐ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T Stewart DATE 8/11/2006

(This space for State use only)

API NUMBER ASSIGNED: _____ APPROVAL:

RECEIVED
AUG 16 2006
DIV. OF OIL, GAS & MINING

(11/2001) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a
7. UNIT or CA AGREEMENT NAME: n/a
8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☐ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER Sidetrack 3

2. NAME OF OPERATOR: The Anschutz Corporation
9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St. Ste 2400 CITY Denver STATE CO ZIP 80202
PHONE NUMBER: (303) 298-1000
10 FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1433' FSL, 1228' FEL Sec 27 T4N R7E
AT TOP PRODUCING INTERVAL REPORTED BELOW: n/a
AT TOTAL DEPTH: 971' FNL, 1935' FEL Sec 27 T4N R7E
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E
12. COUNTY: Summit
13. STATE: UTAH

14. DATE SPUDDED: 7/27/2006
15. DATE T.D. REACHED: 8/8/2006
16. DATE COMPLETED: 8/8/2006 ABANDONED ☑ READY TO PRODUCE ☐
17. ELEVATIONS (DF, RKB, RT, GL): 7593' KB

18. TOTAL DEPTH: MD 16,675 TVD 15,751
19. PLUG BACK T.D.: MD 11,536 TVD 11,523
20. IF MULTIPLE COMPLETIONS, HOW MANY? * 4
21. DEPTH BRIDGE PLUG SET: MD 11,650 TVD 11,632

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
n/a

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
17 1/2	13.3[illegible] K-55	54.5	0	1,500					
12 1/4	9.625 L-80	53.5	0	9,626					
8 1/2	7.625 L-80	39	0	3,533					
8 1/2	7 L-80	32	3,533	13,925					
6	n/a n/a	n/a	13,925	16,675					

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A)				
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: TA

(5/2000) **(CONTINUED ON BACK)** AUG 16 2006

31. INITIAL PRODUCTION — **INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Mission Canyon Lodgepole	14,614 16,309

35. ADDITIONAL REMARKS (Include plugging procedure)

Cast iron bridge plug set at 11,650' MD with 20 sacks Class G cement spotted above

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Jason T. Stewart TITLE Petroleum Engineer

SIGNATURE Jason T. Stewart DATE 8/11/2006

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

ANSCHUTZ EXPLORATION CORPORATION

Location: UTAH
Field: SUMMIT COUNTY
Facility: SEC.27-T4N-R7E

Slot: Slot #1 RANCH DEEP 10-27
Well: RANCH DEEP 10-27
Wellbore: Ranch Deep 10-27 PWB

Plot reference wellpath is Ranch Deep 10-27 PWP	
True vertical depths are referenced to Datum #2 (RKB)	Grid System: NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet
Measured depths are referenced to Datum #2 (RKB)	North Reference: True north
Datum #2 (RKB) to Mean Sea Level: 7593 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - SEC.27-T4N-R7E): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: L. Doubek on 8/10/2006

N TRUE
MAG
W E

BGGM (1945.0 to 2008.0) Dip: 66.55° Field: 53192.8 nT
Magnetic North is 12.55 degrees East of True North (at 07/09/06)

To correct azimuth from Magnetic to True add 12.55 degrees

BAKER HUGHES
INTEQ

Scale 1 inch = 1200 ft

Easting (ft)
-1800 -1200 -600 0

7200 6600 6000 5400 4800 4200 3600 3000 2400 1800 1200 600 0

Northing (ft)

ORIGINAL WELLBORE

Slot #1 RANCH DEEP 10-27

Scale 1 inch = 1200 ft

True Vertical Depth (ft)
8400 9000 9600 10200 10800 11400 12000 12600 13200 13800 14400 15000 15600 16200 16800 17400 18000

0 600 1200 1800 2400 3000 3600 4200 4800 5400 6000 6600 7200

Vertical Section (ft)

Azimuth 347.55° with reference 0.00 N, 0.00 E from wellhead

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**ANSCHUTZ EXPLORATION CORPORATION**	Slot	**Slot #1 RANCH DEEP 10-27**
Area	**UTAH**	Well	**RANCH DEEP 10-27**
Field	**SUMMIT COUNTY**	Wellbore	**RANCH DEEP 10-27 (AWB) ORIGINAL WELLBORE**
Facility	**SEC.27-T4N-R7E**		

REPORT SETUP INFORMATION			
Projection System	**NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**True**	User	**L. Doubek**
Scale	**0.999963**	Report Generated	**08/10/06** at **13:46:29**
Wellbore last revised	**02/27/06**	Database/Source file	**WA_Denver/RANCH_DEE**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			**2100223.28**	**260808.08**	41 02 55.030N	111 08 11.920W
Field Reference Pt			**2000000.00**	**3467958.49**	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Datum #2 (RKB) to Installation Vertical Datum	**7593.00 feet**
Horizontal Reference Pt	**Slot**	Datum #2 (RKB) to Mean Sea Level	**7593.00 feet**
Vertical Reference Pt	**Datum #2 (RKB)**	Installation Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Datum #2 (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**346.96°**

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	35.57	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	35.48	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	35.37	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	35.23	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	35.11	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	35.01	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	34.93	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	34.84	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	34.76	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	34.71	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	34.69	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	34.66	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	34.62	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	34.60	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	34.58	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	34.56	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	34.53	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	34.47	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	34.39	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	34.31	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	34.23	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	34.14	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	34.06	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	34.04	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	34.04	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	34.09	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	34.15	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	34.20	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	34.22	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	34.27	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	34.41	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	34.61	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	34.83	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	35.09	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	35.39	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	35.68	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	35.99	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	36.29	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	36.54	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	36.76	50.34	54.46	1.17

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	36.94	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	37.08	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	37.19	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	43.45	58.70	60.90	0.29
10469.00	1.900	41.300	10465.08	53.84	71.15	68.59	0.14
10919.00	2.500	56.500	10914.75	61.62	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	61.91	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	62.81	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	64.28	85.40	83.85	3.84
11031.00	4.600	0.100	11026.58	66.35	87.57	84.04	4.35
11062.00	5.100	349.000	11057.47	68.94	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	71.98	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	75.62	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	79.74	100.40	80.07	2.61
11186.00	8.400	332.900	11180.49	84.08	104.41	78.15	1.81
11217.00	9.100	332.200	11211.13	88.65	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	93.57	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	98.83	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	104.44	122.98	68.13	2.32
11342.00	11.600	330.000	11334.04	110.50	128.47	64.99	1.29
11373.00	12.200	328.800	11364.37	116.59	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	122.96	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	129.58	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	136.46	152.02	51.59	2.07
11496.00	14.200	330.800	11484.16	143.41	158.35	48.15	2.29
11528.00	14.500	329.700	11515.16	151.00	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	158.47	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	166.48	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	175.15	186.94	30.92	4.77
11654.00	19.200	333.600	11636.12	184.50	195.47	26.30	7.51
11684.00	19.600	336.900	11664.41	194.25	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	204.97	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	215.71	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	226.71	235.31	11.23	0.87
11810.00	21.500	341.300	11782.38	238.23	246.30	7.63	2.31
11840.00	22.000	339.600	11810.25	249.28	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	256.77	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	260.96	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	273.49	279.50	-5.30	3.75
11933.00	25.500	337.100	11895.52	285.87	291.08	-10.16	5.02

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	298.93	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	313.05	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	327.14	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	341.65	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	357.67	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	373.74	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	389.68	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	406.34	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	423.24	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	439.85	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	457.10	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	474.93	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	492.42	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	510.08	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	528.27	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.89	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.61	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	581.99	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	599.72	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	616.91	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.36	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.12	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	670.11	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	688.16	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	706.27	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	724.44	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	743.21	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	761.44	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	780.40	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	798.88	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	816.87	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	835.63	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	854.61	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	874.33	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	893.26	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	912.57	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	931.29	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	958.17	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	976.64	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	996.34	952.43	-303.47	1.67

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1015.37	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1033.69	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1052.43	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1071.08	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1089.70	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1107.15	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1125.35	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1144.79	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1162.92	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1181.20	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1199.72	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1219.05	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1239.16	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1258.85	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1277.41	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1297.87	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1317.76	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1337.21	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1357.52	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1376.58	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1397.67	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1418.16	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1439.44	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1493.86	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1513.46	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1534.34	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1555.11	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1575.80	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1597.11	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1618.49	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1639.19	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1660.56	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1681.22	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1702.29	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1722.64	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1743.06	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1762.17	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1782.70	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1803.99	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1824.52	1764.73	-466.68	1.63

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1843.93	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.01	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.02	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.32	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.30	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1938.61	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1958.06	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1976.66	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1995.05	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2013.99	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2034.19	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2052.63	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2070.90	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2089.27	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2108.46	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2126.64	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2149.04	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2169.49	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2189.61	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2209.80	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2230.52	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2249.80	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2269.60	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2288.60	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2307.98	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2330.30	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2349.34	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2368.77	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2387.44	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2405.98	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2424.99	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2443.26	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2461.92	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2479.82	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2500.01	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2518.65	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2536.75	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2554.11	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2572.57	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2590.87	2516.11	-618.90	2.60

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2608.68	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2627.00	2550.33	-631.28	4.35
15857.00	35.900	338.300	14996.41	2664.15	2585.35	-644.75	2.40
16003.00	39.220	337.420	15112.13	2752.02	2667.76	-678.31	2.30
16098.00	41.150	337.780	15184.70	2812.50	2724.44	-701.66	2.05
16192.00	42.820	337.420	15254.57	2874.54	2782.57	-725.63	1.79
16287.00	44.500	338.190	15323.30	2939.28	2843.29	-750.39	1.85
16318.00	44.670	338.480	15345.38	2960.80	2863.52	-758.43	0.86
16348.00	44.760	338.830	15366.70	2981.68	2883.18	-766.11	0.87
16378.00	45.200	338.830	15387.92	3002.68	2902.95	-773.77	1.47
16410.00	45.810	338.830	15410.34	3025.27	2924.24	-782.01	1.91
16442.00	46.430	339.530	15432.53	3048.13	2945.80	-790.21	2.50
16473.00	47.750	340.240	15453.63	3070.66	2967.12	-798.02	4.58
16504.00	48.280	341.290	15474.37	3093.57	2988.87	-805.61	3.04
16536.00	48.360	341.640	15495.65	3117.36	3011.53	-813.20	0.85
16568.00	48.890	340.940	15516.80	3141.25	3034.28	-820.91	2.33
16600.00	49.150	341.290	15537.79	3165.28	3057.13	-828.73	1.16
16631.00	50.300	341.640	15557.82	3188.83	3079.56	-836.24	3.81
16662.00	50.650	342.700	15577.55	3212.65	3102.32	-843.56	2.87
16693.00	51.000	343.750	15597.14	3236.63	3125.33	-850.50	2.86
16724.00	50.470	344.810	15616.76	3260.61	3148.43	-857.00	3.15
16755.00	51.000	345.860	15636.38	3284.60	3171.65	-863.08	3.13
16787.00	51.700	346.920	15656.36	3309.59	3195.94	-868.96	3.39
16818.00	52.670	346.920	15675.37	3334.08	3219.79	-874.50	3.13
16850.00	53.200	347.620	15694.66	3359.61	3244.70	-880.13	2.41
16882.00	53.380	347.620	15713.79	3385.26	3269.76	-885.63	0.56
16913.00	53.550	347.620	15732.24	3410.17	3294.09	-890.97	0.55
16945.00	53.380	348.320	15751.29	3435.88	3319.23	-896.33	1.84
16976.00	53.290	349.380	15769.80	3460.73	3343.63	-901.13	2.76
17006.00	53.020	350.700	15787.79	3484.70	3367.27	-905.29	3.63
17038.00	53.200	351.490	15807.00	3510.23	3392.56	-909.25	2.05
17069.00	53.730	351.130	15825.46	3535.06	3417.18	-913.01	1.95
17101.00	53.730	350.780	15844.39	3560.80	3442.66	-917.07	0.88
17132.00	53.200	351.490	15862.84	3585.64	3467.27	-920.91	2.51
17163.00	52.670	352.540	15881.53	3610.28	3491.77	-924.34	3.20
17194.00	52.760	351.840	15900.31	3634.84	3516.20	-927.70	1.82
17225.00	52.850	351.840	15919.05	3659.45	3540.65	-931.20	0.29
17256.00	52.580	352.190	15937.83	3684.02	3565.07	-934.63	1.25
17288.00	52.580	352.190	15957.27	3709.33	3590.25	-938.08	0.00
17320.00	52.670	352.540	15976.70	3734.64	3615.45	-941.46	0.91

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
17351.00	53.820	352.190	15995.25	3759.37	3640.07	-944.76	3.82
17382.00	54.610	352.890	16013.37	3784.40	3665.00	-948.02	3.14
17413.00	54.870	353.950	16031.27	3809.55	3690.15	-950.92	2.92
17444.00	54.780	353.240	16049.13	3834.72	3715.33	-953.75	1.89
17475.00	54.870	353.950	16066.99	3859.89	3740.51	-956.58	1.89
17507.00	54.780	353.950	16085.42	3885.85	3766.52	-959.33	0.28
17538.00	55.220	353.600	16103.20	3911.06	3791.77	-962.09	1.69
17570.00	54.780	352.890	16121.56	3937.12	3817.80	-965.17	2.28
17601.00	54.340	351.840	16139.53	3962.26	3842.83	-968.53	3.10
17632.00	54.080	350.080	16157.66	3987.34	3867.66	-972.48	4.68
17663.00	54.260	349.380	16175.81	4012.45	3892.39	-976.96	1.92
17695.00	54.080	349.380	16194.54	4038.37	3917.89	-981.74	0.56
17727.00	54.080	349.030	16213.31	4064.26	3943.35	-986.59	0.89
17758.00	54.080	349.030	16231.50	4089.35	3967.99	-991.37	0.00
17789.00	54.080	350.080	16249.69	4114.43	3992.68	-995.92	2.74
17821.00	53.820	351.130	16268.52	4140.25	4018.21	-1000.14	2.77
17852.00	53.640	350.780	16286.86	4165.18	4042.89	-1004.07	1.08
17883.00	53.730	351.130	16305.22	4190.10	4067.56	-1008.00	0.95
17915.00	53.900	350.780	16324.11	4215.87	4093.06	-1012.06	1.03
17946.00	53.990	350.430	16342.35	4240.88	4117.79	-1016.15	0.96
17978.00	53.990	351.490	16361.17	4266.70	4143.35	-1020.22	2.68
18009.00	53.550	351.490	16379.49	4291.63	4168.08	-1023.92	1.42
18039.00	53.640	350.430	16397.30	4315.71	4191.93	-1027.71	2.86
18070.00	54.340	350.080	16415.52	4340.75	4216.64	-1031.96	2.44
18102.00	54.520	350.080	16434.14	4366.74	4242.28	-1036.44	0.56
18134.00	54.520	349.730	16452.71	4392.76	4267.94	-1041.01	0.89
18165.00	54.080	349.730	16470.80	4417.91	4292.71	-1045.50	1.42
18197.00	53.550	351.130	16489.69	4443.69	4318.18	-1049.79	3.90
18227.00	53.380	352.190	16507.55	4467.71	4342.02	-1053.29	2.89
18259.00	53.550	351.840	16526.60	4493.32	4367.49	-1056.86	1.03
18291.00	53.640	351.130	16545.59	4519.00	4392.96	-1060.67	1.81
18322.00	53.550	351.130	16563.99	4543.88	4417.61	-1064.52	0.29
18353.00	53.900	350.800	16582.33	4568.81	4442.29	-1068.45	1.42
18384.00	54.200	350.400	16600.53	4593.86	4467.05	-1072.55	1.42
18416.00	54.900	350.100	16619.09	4619.88	4492.74	-1076.96	2.32
18447.00	55.130	349.730	16636.87	4645.24	4517.75	-1081.41	1.23
18478.00	55.130	349.730	16654.59	4670.65	4542.77	-1085.94	0.00
18509.00	55.400	349.030	16672.25	4696.10	4567.81	-1090.64	2.05
18539.00	55.570	348.670	16689.25	4720.81	4592.06	-1095.42	1.14
18570.00	55.660	348.670	16706.76	4746.38	4617.15	-1100.44	0.29

Actual Wellpath Report

RANCH DEEP 10-27 (AWP#1)

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 (AWB) EXISTING
Facility	SEC.27-T4N-R7E		

WELLPATH DATA (306 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
18600.00	55.750	348.670	16723.66	4771.15	4641.45	-1105.31	0.30
18632.00	55.400	348.320	16741.75	4797.54	4667.32	-1110.58	1.42
18663.00	54.200	348.770	16759.62	4822.86	4692.14	-1115.61	4.05
18694.00	54.000	348.330	16777.80	4847.96	4716.75	-1120.59	1.32
18726.00	54.000	348.320	16796.61	4873.84	4742.11	-1125.83	0.03
18758.00	54.170	347.970	16815.38	4899.75	4767.47	-1131.16	1.03
18789.00	54.520	347.270	16833.45	4924.94	4792.07	-1136.56	2.15
18821.00	53.460	347.270	16852.26	4950.83	4817.32	-1142.26	3.31
18853.00	53.460	347.620	16871.32	4976.53	4842.42	-1147.85	0.88
18884.00	53.640	347.620	16889.73	5001.47	4866.77	-1153.20	0.58
18916.00	54.780	348.670	16908.45	5027.42	4892.18	-1158.53	4.45
18948.00	55.490	348.670	16926.74	5053.66	4917.92	-1163.68	2.22
18979.00	55.660	348.670	16944.27	5079.22	4942.99	-1168.71	0.55
19011.00	54.690	349.380	16962.54	5105.47	4968.78	-1173.71	3.54
19043.00	54.340	350.780	16981.12	5131.49	4994.45	-1178.20	3.73
19073.00	54.520	351.130	16998.57	5155.83	5018.54	-1182.04	1.12
19105.00	54.610	350.780	17017.12	5181.84	5044.29	-1186.13	0.93
19137.00	54.340	351.130	17035.71	5207.82	5070.01	-1190.23	1.23
19168.00	54.520	351.490	17053.75	5232.97	5094.94	-1194.04	1.11
19199.00	54.610	351.490	17071.72	5258.15	5119.92	-1197.78	0.29
19230.00	54.870	351.840	17089.62	5283.37	5144.96	-1201.45	1.25
19261.00	54.080	351.490	17107.63	5308.52	5169.93	-1205.10	2.71
19293.00	53.990	351.490	17126.42	5334.34	5195.54	-1208.94	0.28
19323.00	54.260	351.490	17144.00	5358.57	5219.58	-1212.53	0.90
19355.00	54.610	351.130	17162.61	5384.52	5245.31	-1216.47	1.43
19386.00	54.080	350.430	17180.68	5409.66	5270.18	-1220.50	2.51

WELLPATH COMPOSITION

Ref Wellbore: RANCH DEEP 10-27 (AWB) EXISTING Ref Wellpath: RANCH DEEP 10-27 (AWP#1)

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
8760.00	15857.00	Unknown Tool (Standard)	Log #1	RANCH DEEP 10-27 (AWB) EXISTING
15857.00	19386.00	MTC (Collar, pre-2000) (Standard)	BHI MWD	RANCH DEEP 10-27 (AWB) EXISTING

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**ANSCHUTZ EXPLORATION CORPORATION**	Slot	**Slot #1 RANCH DEEP 10-27**
Area	**UTAH**	Well	**RANCH DEEP 10-27**
Field	**SUMMIT COUNTY**	Wellbore	**RANCH DEEP 10-27 ST #1**
Facility	**SEC.27-T4N-R7E**	Sidetrack from	**RANCH DEEP 10-27 (AWB) EXISTING** at **15794.00 MD**

REPORT SETUP INFORMATION			
Projection System	**NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**True**	User	**L. Doubek**
Scale	**0.999963**	Report Generated	**08/10/06** at **13:51:44**
Wellbore last revised	**07/09/06**	Database/Source file	**WA_Denver/RANCH_DEE**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			**2100223.28**	**260808.08**	41 02 55.030N	111 08 11.920W
Field Reference Pt			**2000000.00**	**3467958.49**	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Datum #2 (RKB) to Installation Vertical Datum	**7593.00 feet**
Horizontal Reference Pt	**Slot**	Datum #2 (RKB) to Mean Sea Level	**7593.00 feet**
Vertical Reference Pt	**Datum #2 (RKB)**	Installation Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Datum #2 (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**344.38°**

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	33.27	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	33.17	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	33.04	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	32.89	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	32.75	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	32.64	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	32.54	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	32.44	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	32.34	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	32.28	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	32.24	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	32.19	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	32.14	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	32.10	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	32.07	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	32.03	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	31.99	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	31.91	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	31.82	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	31.72	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	31.62	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	31.52	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	31.42	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	31.38	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	31.36	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	31.39	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	31.43	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	31.47	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	31.48	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	31.50	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	31.62	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	31.80	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	32.00	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	32.24	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	32.52	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	32.79	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	33.09	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	33.37	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	33.61	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	33.82	50.34	54.46	1.17

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	33.99	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	34.12	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	34.21	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	40.14	58.70	60.90	0.29
10469.00	1.900	41.300	10465.08	50.06	71.15	68.59	0.14
10919.00	2.500	56.500	10914.75	57.14	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	57.40	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	58.24	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	59.67	85.40	83.85	3.84
11031.00	4.600	0.100	11026.58	61.71	87.57	84.04	4.35
11062.00	5.100	349.000	11057.47	64.28	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	67.32	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	70.98	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	75.13	100.40	80.07	2.61
11186.00	8.400	332.900	11180.49	79.51	104.41	78.15	1.81
11217.00	9.100	332.200	11211.13	84.13	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	89.09	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	94.42	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	100.09	122.98	68.13	2.32
11342.00	11.600	330.000	11334.04	106.23	128.47	64.99	1.29
11373.00	12.200	328.800	11364.37	112.40	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	118.86	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	125.56	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	132.52	152.02	51.59	2.07
11496.00	14.200	330.800	11484.16	139.54	158.35	48.15	2.29
11528.00	14.500	329.700	11515.16	147.23	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	154.80	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	162.93	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	171.71	186.94	30.92	4.77
11654.00	19.200	333.600	11636.12	181.17	195.47	26.30	7.51
11684.00	19.600	336.900	11664.41	191.01	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	201.78	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	212.57	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	223.59	235.31	11.23	0.87
11810.00	21.500	341.300	11782.38	235.15	246.30	7.63	2.31
11840.00	22.000	339.600	11810.25	246.24	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	253.78	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	257.99	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	270.61	279.50	-5.30	3.75
11933.00	25.500	337.100	11895.52	283.07	291.08	-10.16	5.02

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	296.22	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	310.44	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	324.64	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	339.28	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	355.44	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	371.68	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	387.81	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	404.66	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	421.73	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	438.50	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	455.90	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	473.90	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	491.56	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	509.40	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	527.76	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.56	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.46	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	582.03	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	599.93	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	617.29	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.94	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.87	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	671.02	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	689.21	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	707.44	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	725.72	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	744.60	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	762.93	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	781.98	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	800.56	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	818.65	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	837.52	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	856.61	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	876.43	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	895.45	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	914.82	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	933.62	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	960.63	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	979.19	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	998.97	952.43	-303.47	1.67

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1018.07	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1036.42	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1055.20	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1073.88	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1092.51	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1109.95	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1128.13	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1147.55	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1165.64	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1183.88	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1202.36	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1221.65	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1241.72	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1261.37	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1279.87	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1300.28	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1320.11	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1339.52	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1359.77	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1378.78	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1399.82	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1420.26	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1441.48	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1495.76	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1515.30	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1536.11	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1556.82	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1577.43	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1598.65	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1619.94	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1640.55	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1661.84	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1682.42	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1703.41	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1723.69	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1744.04	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1763.08	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1783.54	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1804.76	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1825.21	1764.73	-466.68	1.63

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1844.54	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.51	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.40	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.58	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.42	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1938.61	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1957.93	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1976.40	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1994.66	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2013.48	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2033.58	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2051.93	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2070.12	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2088.41	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2107.52	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2125.63	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2147.94	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2168.33	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2188.41	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2208.56	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2229.25	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2248.50	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2268.28	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2287.25	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2306.61	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2328.90	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2347.93	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2367.36	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2386.03	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2404.58	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2423.59	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2441.87	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2460.55	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2478.46	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2498.68	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2517.37	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2535.53	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2552.95	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2571.46	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2589.83	2516.11	-618.90	2.60

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2607.72	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2626.12	2550.33	-631.28	4.35
15843.00	36.320	339.160	14985.06	2655.34	2577.78	-641.61	1.87
15874.00	34.730	339.510	15010.29	2673.28	2594.63	-647.96	5.17
15904.00	31.740	340.220	15035.38	2689.67	2610.07	-653.63	10.05
15936.00	29.900	340.570	15062.86	2706.02	2625.51	-659.13	5.78
15967.00	29.720	339.510	15089.75	2721.39	2640.00	-664.39	1.80
15998.00	29.460	338.810	15116.71	2736.63	2654.30	-669.83	1.40
16029.00	29.370	338.460	15143.71	2751.78	2668.48	-675.38	0.63
16061.00	28.750	339.160	15171.69	2767.25	2682.97	-681.00	2.21
16092.00	27.960	340.220	15198.97	2781.92	2696.78	-686.11	3.02
16124.00	27.440	341.620	15227.30	2796.77	2710.83	-690.97	2.60
16155.00	26.560	340.570	15254.92	2810.82	2724.15	-695.53	3.23
16186.00	25.680	340.220	15282.75	2824.43	2737.01	-700.11	2.88
16218.00	24.270	340.220	15311.76	2837.91	2749.72	-704.68	4.41
16250.00	22.160	341.620	15341.17	2850.50	2761.64	-708.81	6.82
16282.00	20.930	341.210	15370.93	2862.23	2772.77	-712.56	3.87
16314.00	20.310	341.620	15400.88	2873.49	2783.46	-716.15	1.99
16345.00	19.790	341.970	15430.00	2884.10	2793.55	-719.47	1.72
16375.00	19.080	343.030	15458.29	2894.08	2803.07	-722.47	2.64
16406.00	19.430	345.140	15487.56	2904.30	2812.90	-725.27	2.51
16437.00	19.080	344.790	15516.83	2914.52	2822.77	-727.93	1.19
16469.00	19.080	345.840	15547.07	2924.98	2832.89	-730.58	1.07
16500.00	18.640	345.490	15576.40	2935.00	2842.60	-733.06	1.47
16531.00	17.940	346.190	15605.84	2944.73	2852.03	-735.44	2.37
16563.00	17.150	345.490	15636.35	2954.37	2861.39	-737.80	2.56
16595.00	16.880	345.140	15666.95	2963.73	2870.45	-740.17	0.90
16626.00	16.880	344.790	15696.61	2972.73	2879.14	-742.51	0.33
16657.00	16.530	345.140	15726.30	2981.64	2887.74	-744.82	1.17
16689.00	15.830	343.730	15757.04	2990.56	2896.33	-747.21	2.51
16719.00	15.650	344.080	15785.91	2998.70	2904.15	-749.46	0.68
16750.00	15.210	343.730	15815.79	3006.94	2912.08	-751.75	1.45
16780.00	14.680	344.080	15844.78	3014.68	2919.51	-753.90	1.79
16812.00	13.630	343.030	15875.81	3022.51	2927.02	-756.11	3.38
16843.00	12.490	343.730	15906.00	3029.51	2933.73	-758.11	3.71
16873.00	11.960	346.540	15935.32	3035.86	2939.87	-759.75	2.66
16905.00	11.430	349.010	15966.66	3042.33	2946.20	-761.12	2.28
16936.00	11.520	349.360	15997.04	3048.48	2952.26	-762.28	0.37
16967.00	11.170	351.820	16027.44	3054.54	2958.28	-763.28	1.93
16999.00	10.730	351.110	16058.85	3060.57	2964.29	-764.18	1.44

Actual Wellpath Report

RANCH DEEP ST #1 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #1
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 (AWB) EXISTING at 15794.00 MD

WELLPATH DATA (279 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
17031.00	9.580	348.650	16090.35	3066.19	2969.84	-765.16	3.84
17062.00	9.230	347.600	16120.93	3071.24	2974.80	-766.21	1.26
17094.00	8.620	343.380	16152.55	3076.20	2979.60	-767.44	2.80
17126.00	7.650	338.810	16184.22	3080.72	2983.89	-768.90	3.64
17158.00	7.030	331.430	16215.96	3084.75	2987.59	-770.60	3.52
17190.00	6.950	335.290	16247.73	3088.57	2991.07	-772.35	1.49
17222.00	6.510	334.940	16279.50	3092.27	2994.47	-773.93	1.38
17253.00	7.030	332.130	16310.29	3095.86	2997.74	-775.56	1.99
17285.00	7.210	328.610	16342.04	3099.70	3001.19	-777.52	1.47
17316.00	7.740	328.970	16372.78	3103.59	3004.64	-779.61	1.72
17347.00	8.180	329.320	16403.48	3107.73	3008.32	-781.81	1.43
17380.00	6.860	328.610	16436.20	3111.89	3012.02	-784.04	4.01
17411.00	5.890	330.370	16467.00	3115.22	3014.99	-785.79	3.19
17442.00	5.720	332.480	16497.84	3118.27	3017.74	-787.29	0.88
17473.00	5.450	327.910	16528.70	3121.20	3020.36	-788.78	1.68
17505.00	5.360	326.510	16560.55	3124.08	3022.89	-790.41	0.50
17536.00	4.920	323.340	16591.43	3126.69	3025.16	-792.01	1.69
17568.00	4.660	326.150	16623.32	3129.21	3027.35	-793.55	1.09
17600.00	4.220	324.400	16655.22	3131.55	3029.38	-794.96	1.44
17631.00	3.780	325.100	16686.15	3133.59	3031.15	-796.21	1.43
17662.00	3.610	317.360	16717.08	3135.42	3032.70	-797.45	1.70
17694.00	3.170	306.820	16749.03	3137.02	3033.97	-798.85	2.38
17724.00	3.080	302.600	16778.98	3138.28	3034.91	-800.19	0.82
17754.00	3.170	290.290	16808.94	3139.37	3035.63	-801.65	2.25
17818.00	1.250	277.290	16872.89	3140.68	3036.33	-804.00	3.08
17880.00	0.270	248.110	16934.88	3140.92	3036.36	-804.80	1.65
17942.00	0.890	263.220	16996.88	3140.98	3036.25	-805.42	1.02
18003.00	1.520	299.440	17057.87	3141.63	3036.59	-806.59	1.57
18067.00	3.780	301.190	17121.79	3143.77	3038.10	-809.14	3.53
18130.00	5.010	299.440	17184.61	3147.23	3040.53	-813.31	1.96
18194.00	6.330	290.290	17248.29	3151.27	3043.13	-819.05	2.49
18258.00	7.650	288.190	17311.82	3155.71	3045.68	-826.41	2.10
18321.00	8.090	289.590	17374.22	3160.60	3048.48	-834.57	0.76
18384.00	7.210	310.330	17436.67	3166.44	3052.52	-841.76	4.57
18447.00	7.390	318.420	17499.16	3173.36	3058.11	-847.46	1.66
18510.00	5.360	321.580	17561.77	3179.71	3063.45	-851.98	3.27
18573.00	2.680	308.580	17624.61	3183.62	3066.67	-854.96	4.47
18637.00	0.980	301.900	17688.58	3185.24	3067.89	-856.60	2.67
18700.00	1.430	231.940	17751.57	3185.33	3067.69	-857.67	2.27

WELLPATH COMPOSITION Ref Wellbore: RANCH DEEP 10-27 ST #1 Ref Wellpath: RANCH DEEP ST #1 AWP

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
8760.00	15794.00	Unknown Tool (Standard)	Log #1	RANCH DEEP 10-27 (AWB) EXISTING

15794.00	18700.00	MTC (Collar, pre-2000) (Standard)	ST #1 MWD	RANCH DEEP 10-27 ST #1

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**ANSCHUTZ EXPLORATION CORPORATION**	Slot	**Slot #1 RANCH DEEP 10-27**
Area	**UTAH**	Well	**RANCH DEEP 10-27**
Field	**SUMMIT COUNTY**	Wellbore	RANCH DEEP 10-27 ST #2
Facility	**SEC.27-T4N-R7E**	Sidetrack from	**RANCH DEEP 10-27 ST #1 at 15794.00 MD**

REPORT SETUP INFORMATION			
Projection System	**NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**True**	User	**L. Doubek**
Scale	**0.999963**	Report Generated	**08/10/06 at 13:54:30**
Wellbore last revised	**07/25/06**	Database/Source file	**WA_Denver/RANCH_DEE**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			**2100223.28**	**260808.08**	41 02 55.030N	111 08 11.920W
Field Reference Pt			**2000000.00**	**3467958.49**	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Datum #2 (RKB) to Installation Vertical Datum	**7593.00 feet**
Horizontal Reference Pt	**Slot**	Datum #2 (RKB) to Mean Sea Level	**7593.00 feet**
Vertical Reference Pt	**Datum #2 (RKB)**	Installation Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Datum #2 (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**344.63°**

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (237 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	33.50	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	33.39	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	33.27	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	33.12	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	32.98	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	32.87	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	32.77	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	32.67	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	32.57	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	32.51	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	32.48	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	32.43	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	32.38	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	32.34	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	32.31	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	32.27	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	32.23	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	32.16	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	32.07	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	31.97	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	31.88	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	31.77	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	31.68	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	31.63	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	31.62	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	31.65	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	31.70	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	31.73	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	31.74	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	31.77	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	31.89	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	32.07	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	32.27	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	32.52	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	32.80	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	33.07	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	33.37	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	33.66	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	33.90	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	34.11	50.34	54.46	1.17

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (237 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	34.28	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	34.41	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	34.50	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	40.46	58.70	60.90	0.29
10469.00	1.900	41.300	10465.08	50.42	71.15	68.59	0.14
10919.00	2.500	56.500	10914.75	57.58	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	57.84	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	58.68	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	60.12	85.40	83.85	3.84
11031.00	4.600	0.100	11026.58	62.16	87.57	84.04	4.35
11062.00	5.100	349.000	11057.47	64.73	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	67.78	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	71.43	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	75.58	100.40	80.07	2.61
11186.00	8.400	332.900	11180.49	79.96	104.41	78.15	1.81
11217.00	9.100	332.200	11211.13	84.57	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	89.53	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	94.85	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	100.52	122.98	68.13	2.32
11342.00	11.600	330.000	11334.04	106.65	128.47	64.99	1.29
11373.00	12.200	328.800	11364.37	112.81	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	119.27	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	125.96	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	132.91	152.02	51.59	2.07
11496.00	14.200	330.800	11484.16	139.93	158.35	48.15	2.29
11528.00	14.500	329.700	11515.16	147.61	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	155.17	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	163.29	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	172.06	186.94	30.92	4.77
11654.00	19.200	333.600	11636.12	181.51	195.47	26.30	7.51
11684.00	19.600	336.900	11664.41	191.34	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	202.11	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	212.89	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	223.91	235.31	11.23	0.87
11810.00	21.500	341.300	11782.38	235.47	246.30	7.63	2.31
11840.00	22.000	339.600	11810.25	246.56	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	254.09	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	258.30	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	270.91	279.50	-5.30	3.75
11933.00	25.500	337.100	11895.52	283.36	291.08	-10.16	5.02

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (237 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	296.51	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	310.72	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	324.91	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	339.53	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	355.69	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	371.91	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	388.02	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	404.86	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	421.91	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	438.67	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	456.06	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	474.04	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	491.69	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	509.51	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	527.85	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.64	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.52	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	582.07	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	599.97	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	617.31	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.94	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.86	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	670.99	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	689.17	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	707.39	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	725.66	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	744.53	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	762.86	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	781.90	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	800.47	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	818.55	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	837.41	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	856.49	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	876.30	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	895.31	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	914.69	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	933.48	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	960.47	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	979.03	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	998.80	952.43	-303.47	1.67

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (237 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1017.90	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1036.25	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1055.03	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1073.70	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1092.34	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1109.78	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1127.96	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1147.38	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1165.49	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1183.73	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1202.21	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1221.50	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1241.58	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1261.24	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1279.75	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1300.16	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1320.00	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1339.41	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1359.67	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1378.69	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1399.73	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1420.18	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1441.41	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1495.71	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1515.25	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1536.08	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1556.79	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1577.41	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1598.65	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1619.94	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1640.56	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1661.86	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1682.45	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1703.45	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1723.74	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1744.10	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1763.15	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1783.62	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1804.85	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1825.31	1764.73	-466.68	1.63

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (237 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1844.64	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.63	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.53	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.72	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.58	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1938.78	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1958.11	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1976.60	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1994.88	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2013.71	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2033.82	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2052.18	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2070.38	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2088.67	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2107.79	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2125.91	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2148.24	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2168.63	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2188.72	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2208.88	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2229.57	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2248.83	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2268.61	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2287.58	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2306.94	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2329.24	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2348.27	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2367.70	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2386.38	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2404.92	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2423.94	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2442.22	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2460.90	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2478.81	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2499.03	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2517.71	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2535.87	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2553.28	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2571.79	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2590.16	2516.11	-618.90	2.60

Actual Wellpath Report

RANCH DEEP 10-27 ST #2

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #2
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (237 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2608.04	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2626.44	2550.33	-631.28	4.35
15843.00	36.320	339.160	14985.06	2655.64	2577.78	-641.61	1.87
15874.00	34.730	339.510	15010.29	2673.58	2594.63	-647.96	5.17
15904.00	31.740	340.220	15035.38	2689.96	2610.07	-653.63	10.05
15936.00	29.900	340.570	15062.86	2706.31	2625.51	-659.13	5.78
15967.00	29.720	339.510	15089.75	2721.67	2640.00	-664.39	1.80
15998.00	29.460	338.810	15116.71	2736.91	2654.30	-669.83	1.40
16029.00	29.370	338.460	15143.71	2752.05	2668.48	-675.38	0.63
16061.00	28.750	339.160	15171.69	2767.51	2682.97	-681.00	2.21
16092.00	27.960	340.220	15198.97	2782.18	2696.78	-686.11	3.02
16124.00	27.440	341.620	15227.30	2797.02	2710.83	-690.97	2.60
16155.00	26.560	340.570	15254.92	2811.07	2724.15	-695.53	3.23
16186.00	25.680	340.220	15282.75	2824.68	2737.01	-700.11	2.88
16218.00	24.270	340.220	15311.76	2838.15	2749.72	-704.68	4.41
16250.00	22.160	341.620	15341.17	2850.73	2761.64	-708.81	6.82
16282.00	20.930	341.210	15370.93	2862.47	2772.77	-712.56	3.87
16314.00	20.310	341.620	15400.88	2873.72	2783.46	-716.15	1.99
16345.00	19.790	341.970	15430.00	2884.33	2793.55	-719.47	1.72
16375.00	19.080	343.030	15458.29	2894.31	2803.07	-722.47	2.64
16406.00	19.430	345.140	15487.56	2904.53	2812.90	-725.27	2.51
16437.00	19.080	344.790	15516.83	2914.75	2822.77	-727.93	1.19
16469.00	19.080	345.840	15547.07	2925.21	2832.89	-730.58	1.07
16498.00	18.470	343.370	15574.53	2934.54	2841.89	-733.05	3.45
16529.00	18.290	336.340	15603.95	2944.27	2851.05	-736.41	7.17
16560.00	17.850	329.310	15633.42	2953.66	2859.59	-740.79	7.17
16622.00	17.500	329.660	15692.50	2971.83	2875.81	-750.35	0.59
16685.00	16.800	330.010	15752.69	2989.80	2891.87	-759.68	1.12
16749.00	16.710	331.770	15813.98	3007.72	2907.99	-768.66	0.81
16812.00	15.920	328.960	15874.44	3024.87	2923.37	-777.40	1.77
16875.00	16.180	327.900	15934.98	3041.59	2938.21	-786.52	0.62
16937.00	16.270	330.010	15994.52	3058.27	2953.05	-795.45	0.96
17000.00	16.090	330.360	16055.02	3075.27	2968.28	-804.18	0.32
17063.00	15.210	328.600	16115.68	3091.67	2982.92	-812.80	1.59
17125.00	14.330	332.470	16175.64	3106.99	2996.67	-820.58	2.13
17188.00	13.280	339.150	16236.82	3121.82	3010.35	-826.76	3.03
17230.00	14.950	341.260	16277.55	3132.03	3019.99	-830.22	4.16

WELLPATH COMPOSITION Ref Wellbore: RANCH DEEP 10-27 ST #2 Ref Wellpath: RANCH DEEP 10-27 ST #2

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
8760.00	15794.00	Unknown Tool (Standard)	Log #1	RANCH DEEP 10-27 (AWB) EXISTING
15794.00	17230.00	MTC (Collar, pre-2000) (Standard)	ST #2 MWD	RANCH DEEP 10-27 ST #2

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**ANSCHUTZ EXPLORATION CORPORATION**	Slot	**Slot #1 RANCH DEEP 10-27**
Area	**UTAH**	Well	**RANCH DEEP 10-27**
Field	**SUMMIT COUNTY**	Wellbore	**RANCH DEEP 10-27 ST #3**
Facility	**SEC.27-T4N-R7E**	Sidetrack from	**RANCH DEEP 10-27 ST #1 at 15794.00 MD**

REPORT SETUP INFORMATION			
Projection System	**NAD27 / Lambert Utah State Planes, Northern Zone (4301), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**True**	User	**L. Doubek**
Scale	**0.999963**	Report Generated	**08/10/06 at 13:56:21**
Wellbore last revised	**08/10/06**	Database/Source file	**WA_Denver/RANCH_DEE**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	2100223.28	260808.08	41 02 55.030N	111 08 11.920W
Facility Reference Pt			**2100223.28**	**260808.08**	41 02 55.030N	111 08 11.920W
Field Reference Pt			**2000000.00**	**3467958.49**	49 48 43.615N	111 30 00.000W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Datum #2 (RKB) to Installation Vertical Datum	**7593.00 feet**
Horizontal Reference Pt	**Slot**	Datum #2 (RKB) to Mean Sea Level	**7593.00 feet**
Vertical Reference Pt	**Datum #2 (RKB)**	Installation Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Datum #2 (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**346.18°**

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (229 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
8760.00	0.880	96.500	8756.60	34.89	45.98	40.88	0.00
8780.00	1.090	89.500	8776.60	34.79	45.96	41.22	1.21
8800.00	1.080	99.200	8796.59	34.67	45.94	41.60	0.92
8820.00	1.200	94.800	8816.59	34.53	45.89	41.99	0.74
8840.00	1.020	95.300	8836.59	34.41	45.85	42.38	0.90
8860.00	0.880	92.300	8856.58	34.30	45.83	42.71	0.74
8880.00	0.950	93.000	8876.58	34.21	45.82	43.03	0.35
8900.00	1.040	89.700	8896.58	34.12	45.81	43.38	0.53
8920.00	1.100	90.000	8916.57	34.04	45.81	43.75	0.30
8940.00	1.080	77.700	8936.57	33.98	45.85	44.13	1.17
8960.00	1.050	82.400	8956.57	33.96	45.91	44.49	0.46
8980.00	1.000	82.700	8976.56	33.92	45.96	44.85	0.25
9000.00	0.890	84.300	8996.56	33.88	46.00	45.17	0.57
9020.00	1.010	78.000	9016.56	33.85	46.05	45.50	0.79
9040.00	0.930	80.600	9036.56	33.83	46.11	45.83	0.46
9060.00	0.850	83.600	9056.55	33.80	46.16	46.14	0.46
9080.00	0.870	81.500	9076.55	33.77	46.20	46.44	0.19
9100.00	0.880	94.300	9096.55	33.71	46.21	46.74	0.98
9120.00	1.030	87.600	9116.55	33.62	46.20	47.08	0.93
9140.00	1.250	89.900	9136.54	33.54	46.21	47.47	1.12
9160.00	1.070	86.400	9156.54	33.45	46.22	47.88	0.97
9180.00	1.200	93.200	9176.53	33.36	46.22	48.27	0.93
9200.00	1.290	81.500	9196.53	33.27	46.24	48.70	1.35
9220.00	1.130	79.800	9216.52	33.24	46.31	49.12	0.82
9240.00	1.150	74.000	9236.52	33.24	46.40	49.51	0.59
9260.00	1.120	65.200	9256.52	33.28	46.54	49.88	0.88
9280.00	1.090	70.600	9276.51	33.34	46.69	50.24	0.54
9300.00	1.030	67.900	9296.51	33.38	46.82	50.58	0.39
9320.00	1.170	77.600	9316.51	33.40	46.93	50.95	1.16
9340.00	1.350	66.100	9336.50	33.44	47.07	51.36	1.55
9360.00	1.520	54.800	9356.49	33.58	47.32	51.79	1.65
9380.00	1.640	56.800	9376.49	33.77	47.62	52.25	0.66
9400.00	1.510	48.400	9396.48	33.99	47.96	52.69	1.32
9420.00	1.370	42.400	9416.47	34.24	48.31	53.05	1.03
9440.00	1.390	36.000	9436.47	34.53	48.68	53.35	0.78
9460.00	1.310	41.900	9456.46	34.82	49.05	53.64	0.80
9480.00	1.350	27.900	9476.46	35.12	49.43	53.91	1.63
9500.00	0.990	31.100	9496.45	35.42	49.78	54.11	1.83
9520.00	0.930	27.700	9516.45	35.66	50.07	54.27	0.41
9540.00	0.970	41.700	9536.45	35.88	50.34	54.46	1.17

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (229 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9560.00	0.780	38.400	9556.44	36.06	50.58	54.66	0.98
9580.00	1.080	59.500	9576.44	36.20	50.78	54.90	2.25
9600.00	1.050	61.800	9596.44	36.30	50.96	55.23	0.26
10009.00	1.800	21.600	10005.32	42.46	58.70	60.90	0.29
10469.00	1.900	41.300	10465.08	52.71	71.15	68.59	0.14
10919.00	2.500	56.500	10914.75	60.28	82.17	81.70	0.18
10936.00	2.500	50.900	10931.74	60.57	82.61	82.29	1.44
10968.00	2.900	30.700	10963.70	61.44	83.75	83.25	3.20
11000.00	3.500	11.300	10995.65	62.90	85.40	83.85	3.84
11031.00	4.600	0.100	11026.58	64.97	87.57	84.04	4.35
11062.00	5.100	349.000	11057.47	67.55	90.17	83.78	3.42
11093.00	6.200	339.900	11088.31	70.59	93.09	82.94	4.57
11124.00	7.400	339.200	11119.10	74.24	96.53	81.66	3.88
11155.00	8.100	336.200	11149.81	78.37	100.40	80.07	2.61
11186.00	8.400	332.900	11180.49	82.72	104.41	78.15	1.81
11217.00	9.100	332.200	11211.13	87.31	108.59	75.98	2.28
11248.00	9.800	331.500	11241.71	92.24	113.08	73.58	2.29
11279.00	10.500	331.400	11272.23	97.52	117.88	70.97	2.26
11310.00	11.200	330.500	11302.67	103.15	122.98	68.13	2.32
11342.00	11.600	330.000	11334.04	109.23	128.47	64.99	1.29
11373.00	12.200	328.800	11364.37	115.35	133.97	61.74	2.09
11404.00	12.700	330.200	11394.64	121.75	139.73	58.35	1.88
11435.00	13.000	331.200	11424.87	128.40	145.74	54.97	1.20
11466.00	13.600	332.200	11455.04	135.30	152.02	51.59	2.07
11496.00	14.200	330.800	11484.16	142.27	158.35	48.15	2.29
11528.00	14.500	329.700	11515.16	149.90	165.24	44.22	1.27
11559.00	14.900	327.700	11545.14	157.40	171.96	40.13	2.08
11591.00	15.800	328.300	11576.00	165.45	179.14	35.64	2.86
11623.00	17.300	329.300	11606.68	174.15	186.94	30.92	4.77
11654.00	19.200	333.600	11636.12	183.53	195.47	26.30	7.51
11684.00	19.600	336.900	11664.41	193.31	204.52	22.14	3.89
11716.00	20.000	339.900	11694.52	204.05	214.60	18.15	3.41
11747.00	20.800	341.800	11723.58	214.81	224.80	14.61	3.35
11778.00	20.900	342.500	11752.55	225.82	235.31	11.23	0.87
11810.00	21.500	341.300	11782.38	237.35	246.30	7.63	2.31
11840.00	22.000	339.600	11810.25	248.41	256.78	3.91	2.68
11860.00	22.510	338.200	11828.76	255.93	263.84	1.18	3.68
11871.00	22.800	337.400	11838.91	260.12	267.77	-0.42	3.85
11903.00	24.000	337.400	11868.28	272.68	279.50	-5.30	3.75
11933.00	25.500	337.100	11895.52	285.08	291.08	-10.16	5.02

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (229 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11963.00	27.000	336.800	11922.43	298.18	303.29	-15.36	5.02
11994.00	28.200	335.700	11949.90	312.33	316.43	-21.14	4.21
12024.00	29.000	336.000	11976.24	326.45	329.54	-27.02	2.71
12054.00	30.200	334.700	12002.32	341.01	343.00	-33.20	4.54
12086.00	31.600	333.500	12029.78	357.07	357.78	-40.38	4.78
12117.00	33.100	331.800	12055.97	373.20	372.51	-48.01	5.66
12147.00	33.800	331.400	12081.00	389.20	387.06	-55.87	2.45
12178.00	34.000	331.500	12106.73	405.92	402.25	-64.14	0.67
12209.00	34.400	334.100	12132.37	422.87	417.74	-72.10	4.89
12239.00	34.800	334.400	12157.06	439.54	433.09	-79.50	1.45
12270.00	34.800	333.800	12182.52	456.84	449.00	-87.23	1.10
12302.00	35.000	333.700	12208.76	474.72	465.42	-95.32	0.65
12333.00	35.900	333.600	12234.02	492.27	481.53	-103.30	2.91
12364.00	35.800	333.500	12259.15	509.99	497.79	-111.39	0.37
12396.00	35.700	333.600	12285.12	528.23	514.53	-119.72	0.36
12427.00	35.900	333.100	12310.26	545.91	530.73	-127.85	1.14
12458.00	36.300	332.700	12335.31	563.69	546.99	-136.17	1.50
12490.00	36.300	333.200	12361.10	582.13	563.86	-144.79	0.93
12521.00	35.900	332.900	12386.14	599.91	580.15	-153.07	1.41
12551.00	36.400	333.400	12410.37	617.16	595.94	-161.06	1.94
12583.00	36.700	331.700	12436.08	635.67	612.84	-169.84	3.30
12612.00	36.500	333.700	12459.36	652.49	628.21	-177.77	4.17
12643.00	36.400	335.500	12484.29	670.53	644.84	-185.67	3.46
12674.00	36.300	336.900	12509.26	688.62	661.65	-193.09	2.70
12705.00	36.400	337.700	12534.23	706.77	678.60	-200.18	1.56
12736.00	36.400	338.100	12559.18	724.98	695.65	-207.10	0.77
12768.00	36.400	338.400	12584.94	743.79	713.29	-214.14	0.56
12799.00	36.500	339.400	12609.87	762.06	730.47	-220.77	1.94
12831.00	36.900	339.300	12635.53	781.04	748.36	-227.51	1.26
12862.00	37.100	338.900	12660.29	799.56	765.79	-234.17	1.01
12892.00	37.500	338.400	12684.15	817.58	782.72	-240.78	1.67
12923.00	38.000	338.200	12708.66	836.38	800.36	-247.80	1.66
12954.00	38.500	338.700	12733.01	855.40	818.21	-254.85	1.90
12986.00	38.400	339.800	12758.07	875.15	836.82	-261.90	2.16
13017.00	37.500	340.900	12782.52	894.11	854.77	-268.31	3.63
13049.00	37.200	340.900	12807.95	913.44	873.11	-274.67	0.94
13080.00	37.700	339.500	12832.56	932.19	890.85	-281.05	3.18
13124.00	38.300	340.200	12867.24	959.11	916.28	-290.38	1.68
13154.00	38.400	339.800	12890.76	977.62	933.77	-296.75	0.89
13186.00	38.200	340.600	12915.88	997.34	952.43	-303.47	1.67

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (229 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
13217.00	38.000	342.100	12940.27	1016.40	970.55	-309.58	3.05
13247.00	37.500	343.200	12963.99	1034.73	988.08	-315.06	2.80
13278.00	37.100	343.000	12988.65	1053.49	1006.06	-320.52	1.35
13309.00	37.000	344.100	13013.39	1072.15	1023.97	-325.81	2.16
13340.00	36.900	346.200	13038.17	1090.78	1041.98	-330.59	4.08
13369.00	37.100	346.800	13061.33	1108.23	1058.95	-334.66	1.42
13399.00	37.600	346.900	13085.18	1126.43	1076.67	-338.80	1.68
13431.00	37.200	347.500	13110.60	1145.86	1095.62	-343.11	1.69
13461.00	37.200	348.700	13134.50	1163.99	1113.37	-346.85	2.42
13491.00	37.900	348.300	13158.28	1182.26	1131.29	-350.49	2.47
13521.00	38.400	348.800	13181.87	1200.77	1149.45	-354.17	1.96
13552.00	38.800	348.800	13206.10	1220.09	1168.42	-357.93	1.29
13584.00	39.100	347.300	13230.99	1240.20	1188.10	-362.09	3.09
13615.00	39.800	348.900	13254.92	1259.88	1207.38	-366.15	3.98
13644.00	39.800	349.300	13277.20	1278.42	1225.60	-369.66	0.88
13676.00	39.800	349.500	13301.79	1298.87	1245.74	-373.43	0.40
13707.00	40.100	348.900	13325.55	1318.75	1265.29	-377.16	1.58
13737.00	40.800	348.900	13348.38	1338.19	1284.39	-380.91	2.33
13768.00	41.100	349.300	13371.80	1358.48	1304.34	-384.75	1.29
13797.00	41.200	349.100	13393.63	1377.54	1323.09	-388.33	0.57
13829.00	41.300	348.600	13417.69	1398.62	1343.79	-392.41	1.08
13860.00	41.500	348.800	13440.95	1419.10	1363.89	-396.42	0.77
13892.00	41.900	348.900	13464.84	1440.36	1384.77	-400.54	1.27
13973.00	42.600	349.200	13524.80	1494.76	1438.24	-410.88	0.90
14002.00	42.500	349.700	13546.16	1514.33	1457.52	-414.48	1.22
14033.00	42.300	349.500	13569.05	1535.20	1478.08	-418.25	0.78
14064.00	42.000	350.100	13592.04	1555.96	1498.56	-421.93	1.62
14095.00	41.900	350.800	13615.09	1576.63	1518.99	-425.37	1.54
14127.00	41.900	351.400	13638.91	1597.92	1540.11	-428.68	1.25
14159.00	42.200	350.900	13662.67	1619.27	1561.28	-431.97	1.41
14190.00	41.800	350.700	13685.71	1639.95	1581.76	-435.29	1.36
14222.00	42.200	350.200	13709.49	1661.30	1602.88	-438.84	1.63
14253.00	41.600	351.100	13732.56	1681.94	1623.30	-442.21	2.74
14285.00	41.000	350.300	13756.60	1702.99	1644.14	-445.62	2.50
14316.00	41.200	349.700	13779.96	1723.33	1664.21	-449.16	1.43
14347.00	41.300	349.900	13803.27	1743.72	1684.33	-452.78	0.53
14376.00	41.300	350.300	13825.06	1762.82	1703.18	-456.07	0.91
14407.00	41.800	350.000	13848.26	1783.33	1723.44	-459.59	1.74
14439.00	41.800	350.300	13872.11	1804.61	1744.46	-463.24	0.62
14470.00	41.300	350.400	13895.31	1825.12	1764.73	-466.68	1.63

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (229 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
14500.00	39.600	352.000	13918.14	1844.50	1783.96	-469.66	6.64
14532.00	38.600	353.100	13942.97	1864.56	1803.97	-472.28	3.80
14563.00	37.600	353.800	13967.37	1883.53	1822.97	-474.47	3.51
14593.00	38.300	354.600	13991.03	1901.80	1841.33	-476.33	2.85
14624.00	38.000	354.600	14015.40	1920.75	1860.39	-478.13	0.97
14654.00	38.000	354.300	14039.04	1939.02	1878.77	-479.92	0.62
14686.00	37.600	354.400	14064.33	1958.44	1898.29	-481.85	1.26
14717.00	36.900	354.600	14089.01	1977.00	1916.97	-483.65	2.29
14748.00	36.600	354.200	14113.84	1995.36	1935.43	-485.46	1.24
14780.00	36.500	352.800	14139.55	2014.26	1954.36	-487.61	2.62
14814.00	36.800	351.700	14166.83	2034.44	1974.47	-490.35	2.12
14845.00	36.500	351.800	14191.70	2052.86	1992.78	-493.01	0.99
14876.00	36.000	351.500	14216.70	2071.11	2010.92	-495.67	1.71
14907.00	36.900	350.800	14241.64	2089.46	2029.12	-498.50	3.20
14939.00	37.000	351.000	14267.21	2108.63	2048.11	-501.55	0.49
14969.00	37.800	350.500	14291.04	2126.79	2066.10	-504.48	2.85
15005.00	39.300	349.900	14319.20	2149.17	2088.20	-508.30	4.29
15037.00	40.200	348.600	14343.80	2169.60	2108.30	-512.11	3.83
15068.00	40.800	348.400	14367.37	2189.72	2128.03	-516.13	1.98
15099.00	40.500	347.800	14390.89	2209.90	2147.79	-520.29	1.59
15131.00	40.200	347.500	14415.28	2230.61	2168.03	-524.72	1.12
15161.00	39.800	347.500	14438.26	2249.89	2186.86	-528.90	1.33
15192.00	39.600	347.400	14462.11	2269.69	2206.19	-533.20	0.68
15222.00	39.000	347.600	14485.33	2288.68	2224.74	-537.31	2.04
15253.00	38.400	347.100	14509.52	2308.06	2243.65	-541.56	2.18
15289.00	38.200	346.600	14537.77	2330.37	2265.38	-546.63	1.02
15320.00	37.600	346.100	14562.23	2349.42	2283.88	-551.13	2.17
15352.00	37.200	345.700	14587.65	2368.85	2302.73	-555.86	1.46
15383.00	36.900	345.500	14612.40	2387.53	2320.82	-560.51	1.04
15414.00	36.600	345.400	14637.23	2406.07	2338.78	-565.17	0.99
15446.00	36.300	344.800	14662.97	2425.08	2357.15	-570.05	1.46
15477.00	36.000	344.400	14688.01	2443.36	2374.78	-574.91	1.23
15509.00	35.400	345.100	14713.99	2462.03	2392.79	-579.82	2.27
15540.00	35.200	344.500	14739.29	2479.94	2410.08	-584.52	1.29
15575.00	35.400	342.800	14767.86	2500.14	2429.49	-590.21	2.86
15607.00	36.100	342.200	14793.83	2518.80	2447.32	-595.83	2.45
15638.00	35.700	341.500	14818.94	2536.92	2464.59	-601.50	1.85
15668.00	35.400	341.500	14843.35	2554.31	2481.13	-607.03	1.00
15700.00	35.400	341.500	14869.43	2572.78	2498.71	-612.91	0.00
15732.00	34.800	340.500	14895.61	2591.11	2516.11	-618.90	2.60

Actual Wellpath Report

RANCH DEEP 10-27 ST #3 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ANSCHUTZ EXPLORATION CORPORATION	Slot	Slot #1 RANCH DEEP 10-27
Area	UTAH	Well	RANCH DEEP 10-27
Field	SUMMIT COUNTY	Wellbore	RANCH DEEP 10-27 ST #3
Facility	SEC.27-T4N-R7E	Sidetrack from	RANCH DEEP 10-27 ST #1 at 15794.00 MD

WELLPATH DATA (229 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
15763.00	35.900	340.200	14920.90	2608.95	2533.00	-624.93	3.59
15794.00	37.200	339.600	14945.80	2627.30	2550.33	-631.28	4.35
15843.00	36.320	339.160	14985.06	2656.42	2577.78	-641.61	1.87
15874.00	34.730	339.510	15010.29	2674.30	2594.63	-647.96	5.17
15904.00	31.740	340.220	15035.38	2690.64	2610.07	-653.63	10.05
15936.00	29.900	340.570	15062.86	2706.95	2625.51	-659.13	5.78
15967.00	29.720	339.510	15089.75	2722.27	2640.00	-664.39	1.80
15998.00	29.460	338.810	15116.71	2737.47	2654.30	-669.83	1.40
16029.00	29.370	338.460	15143.71	2752.56	2668.48	-675.38	0.63
16061.00	28.750	339.160	15171.69	2767.97	2682.97	-681.00	2.21
16092.00	27.960	340.220	15198.97	2782.60	2696.78	-686.11	3.02
16121.00	26.820	342.670	15224.72	2795.89	2709.42	-690.36	5.53
16152.00	24.970	347.240	15252.60	2809.42	2722.48	-693.89	8.77
16184.00	23.740	352.160	15281.76	2822.58	2735.45	-696.26	7.41
16215.00	21.190	355.680	15310.41	2834.31	2747.22	-697.53	9.30
16247.00	19.610	356.730	15340.40	2845.30	2758.35	-698.28	5.07
16278.00	18.910	356.730	15369.66	2855.35	2768.56	-698.86	2.26
16310.00	18.030	356.380	15400.01	2865.32	2778.68	-699.47	2.77
16341.00	17.850	357.430	15429.51	2874.70	2788.21	-699.98	1.19
16372.00	17.940	358.140	15459.01	2884.03	2797.73	-700.35	0.76
16404.00	17.670	358.140	15489.47	2893.61	2807.51	-700.67	0.84
16435.00	17.230	358.140	15519.05	2902.70	2816.80	-700.97	1.42
16467.00	16.620	357.430	15549.66	2911.83	2826.11	-701.33	2.01
16499.00	15.650	357.080	15580.40	2920.55	2834.99	-701.75	3.05
16530.00	14.950	354.970	15610.30	2928.61	2843.15	-702.32	2.88
16562.00	13.720	351.810	15641.31	2936.47	2851.02	-703.22	4.55
16594.00	13.280	351.100	15672.42	2943.91	2858.41	-704.33	1.47
16625.00	13.100	351.810	15702.60	2950.95	2865.40	-705.38	0.78
16675.00	12.500	347.000	15751.36	2962.00	2876.29	-707.41	2.44

WELLPATH COMPOSITION

Ref Wellbore: RANCH DEEP 10-27 ST #3 Ref Wellpath: RANCH DEEP 10-27 ST #3 PWP

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
8760.00	15794.00	Unknown Tool (Standard)	Log #1	RANCH DEEP 10-27 (AWB) EXISTING
15794.00	16675.00	MTC (Collar, pre-2000) (Standard)	BHI MWD	RANCH DEEP 10-27 ST #3

From: Don Staley
To: Carol Daniels; Diana Whitney
Date: 10/2/2006 3:37:34 PM
Subject: Anschutz Ranch Deep 10-27 (4304330321)

CONFIDENTIAL

Diana and Carol, 4N 7E 27

The Anschutz Ranch Deep 10-27 well (4304330321) has been causing some eReport production report problems for several months. When I started looking at it this morning, I realized that the database is incomplete. The scanned well file is 647 pages long, so it is a bit of a mess to follow. I spoke with Dustin and he explained the situation. There was a deepening of the original well, and then 3 sidetrack laterals drilled, and then the laterals were plugged — all in a very short period of time. It really isn't too complex, it just happened in a short time period and we received all of the paperwork after the work was done, rather than before. Since the rig was on the hole, the APDs to drill the 3 laterals were approved verbally by Dustin over the phone before the paperwork ever came in. I'll try to explain what needs to be done. It will require that 3 APDs be input by Diana and 4 WCRs then be input by Carol. Please coordinate this with each other, and please get all reports entered no later than Friday of this week.

Currently, in the database, we have an APD and WCR for the original drilling in 1999-2000. No change needed here.

We also have an APD to DEEPEN (approved 11/30/2005) showing a status of 'DRL'. **Carol** — The WCR for that APD is on pages 604 and 605 of the scanned image. It should be input and the status should be shown as PA since it was plugged back to the lateral kickoff point (similar to the Wolverine well - 4304130037). The APD shown on page 603 was prepared and turned in at the same time as the completion report and should be ignored.

Next — **Diana** — please input the 3 APDs (for sidetrack laterals 1, 2 and 3) shown on pages 606, 609, and 612 of the scanned well file image. They are all for DEEPENINGs. You may need to ask Dustin what approval dates he wants to use.

Next — **Carol** — please input the 3 WCRs on pages 607, 610, and 613 of the scanned well file. Laterals 1 and 2 (pp. 607 and 610) should be shown as PA. Lateral 3 (p. 613) should be shown as TA (as should the Well Data and Well Activity screens) and be back in the WEBER I believe. Spud dates and plug data are on the WCR forms.

Carolyn — I will try to fix the production TAD data for July, August and September so she can file her report. Please call her tomorrow and let her know what's going on. The October TAD should run OK once everything is input. I think.

Kathy — please print out this email message, scan it, and attach it to the scanned file for this well.

Thanks!!!

Don

CC: Brad Hill; Carolyn Williams; Dustin Doucet; Kathy Smith

CONFIDENTIAL

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

7. UNIT or CA AGREEMENT NAME: n/a

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1433' FSL and 1228' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 12/1/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☑ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation requests permission to plug and abandon the Anschutz Ranch Deep 10-27 according to the attached procedure and wellbore diagrams. The first diagram shows the wellbore in its current configuration. The second diagram shows the proposed P&A configuration for the well.

Cement plugs will be spotted from 9150' to 9050' and from 5750' to 5650'. Cement plugs with cement retainers will be spotted from 3250' to 3150' and from 1450' to 1150'. A final plug will be spotted from 100' to surface

COPY SENT TO OPERATOR
Date: 12-5-06
Initials: CHD

NAME (PLEASE PRINT) James P. Oursland TITLE Operations Manager

SIGNATURE James Oursland DATE 11/10/2006

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 11/22/06
BY: [illegible]
(See Instructions on Reverse Side)
* See Conditions of Approval (Attached)

RECEIVED
NOV 13 2006
DIV. OF OIL, GAS & MINING

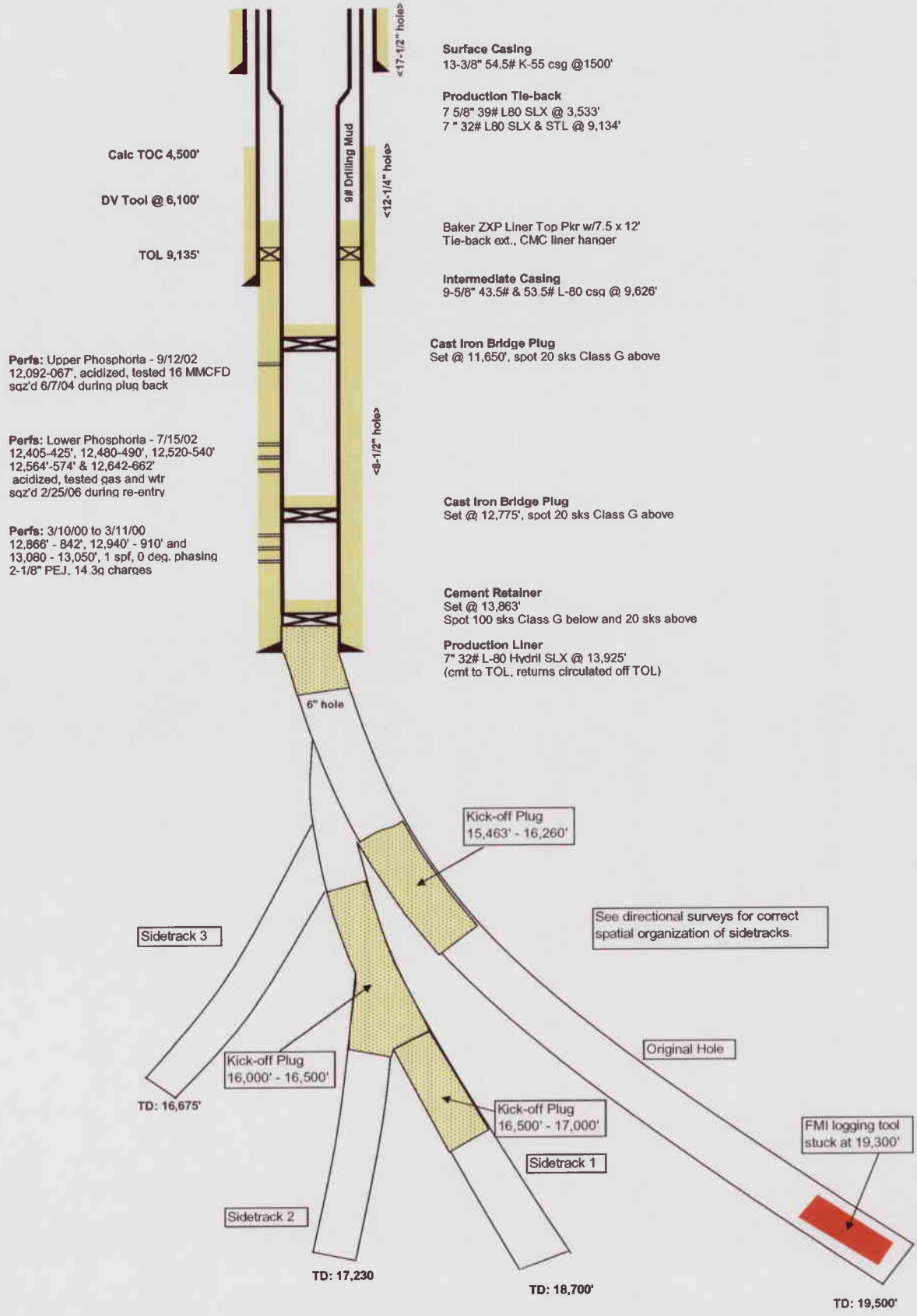
(5/2000)

Anschutz Ranch Deep 10-27 P&A Procedure

1. Confirm P&A sundry notice has been approved. Notify state 24 hrs prior to commencing operations.
2. MI rig, pump, and tank.
3. ND capping assembly, NU BOPE, and test.
4. RU PU/LD machine. PU 2-7/8" work string. RIH to 9100'. Spot 20 sks Class "G" balanced cement plug (9150' – 9050'). PU and reverse out.
5. POOH to 5700' laying down tbg. Spot 20 sks Class "G" balanced cement plug (5750' – 5650'). PU and reverse out. POOH.
6. RU wireline. PU 3-3/8" casing guns. RIH and shoot squeeze perfs from 3250'- 52', 4 SPF, 90° phasing. POOH.
7. PU cement retainer, RIH with wireline, and set at +/- 3200'. POOH.
8. PU 2-7/8" tbg, RIH and sting into cement retainer.
9. Open 9-5/8" casing valve and attempt to gain circulation up 7-5/8" x 9-5/8". Close casing valve. Open 13-3/8" casing valve and attempt to gain circulation up 9-5/8" x 13-3/8" annuli. Close casing valve. If circulation cannot be established, determine injection pressure. Report results to Denver engineering.
10. If circulation was established, spot 76 sks Class "G" cement below retainer (if no injection was possible, contact Utah Department of Oil and gas for instructions). Sting out and spot 10 sks Class "G" above retainer. POOH.
11. PU 3-3/8" casing guns with wireline. RIH and shoot squeeze perfs from 1450' – 52', 4 SPF, 90° phasing. POOH.
12. PU cement retainer, RIH with wireline, and set at +/- 1400'. POOH.
13. PU 2-7/8" tbg, RIH and sting into cement retainer
14. Open 9-5/8" casing valve and attempt to gain circulation up 7-5/8" x 9-5/8". Close casing valve. Open 13-3/8" casing valve and attempt to gain circulation up 9-5/8" x 13-3/8" annuli. Close casing valve. If circulation cannot be established, determine injection pressure. Report results to Denver engineering.
15. If circulation was established, spot 135 sks Class "G" cement below retainer (if no injection was possible, contact Utah Department of Oil and gas for instructions). Sting out and spot 55 sks Class "G" above retainer. POOH.
16. PU 3-3/8" casing guns with wireline. RIH and shoot squeeze perfs from 100' – 102', 4 SPF, 90° phasing. POOH and RD wireline.
17. RIH with 2-7/8" tbg to 100'. Spot 65 sks Class "G" cement plug (100' – surface), using 1" string to top out where possible.
18. Cut casing strings off 5' below ground level and weld dry hole marker per state specifications.

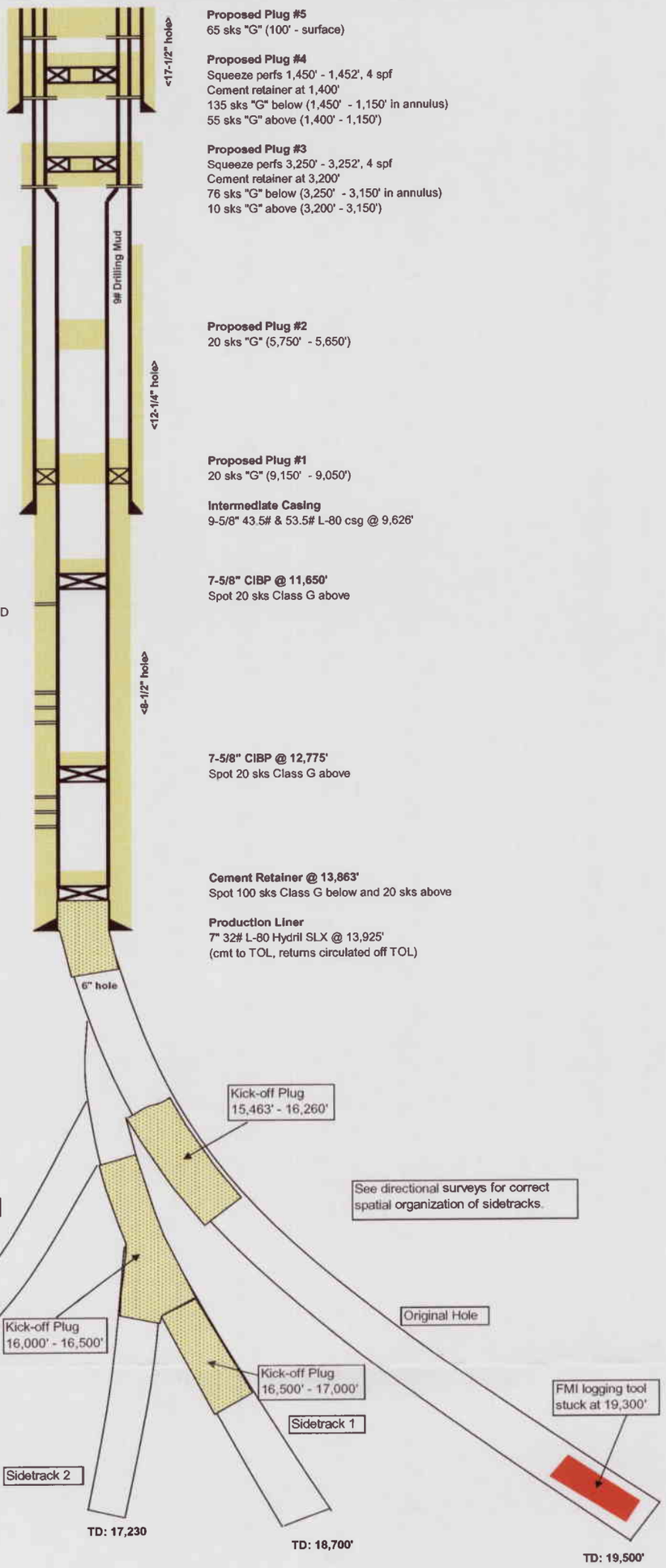
ANSCHUTZ EXPLORATION CORPORATION
TEMPORARILY ABANDONED WELLBORE SCHEMATIC

SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27	COUNTY, STATE: Summit, Utah
TD: 19,500'	GROUND ELEVATION: 7,566'	KB ELEVATION: 7,593'



ANSCHUTZ EXPLORATION CORPORATION
PROPOSED PLUGGED AND ABANDONED WELLBORE SCHEMATIC

SEC: 27-T4N-R7E	WELL NAME: Anschutz Ranch Deep 10-27	COUNTY, STATE: Summit, Utah
TD: 19,500'	GROUND ELEVATION: 7,566'	KB ELEVATION: 7,593'



State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

CONDITIONS OF APPROVAL TO PLUG AND ABANDON WELL

Well Name and Number:	Anschutz Ranch Deep 10-27
API Number:	43-043-30321
Operator:	The Anschutz Corporation
Reference Document:	Original Sundry Notice dated November 10, 2006, received by DOGM on November 13, 2006

Approval Conditions:

1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338.
2. All balanced plugs shall be tagged to ensure the plugs are at the depths specified.
3. All intervals between plugs shall be filled with noncorrosive fluid.
4. Surface reclamation shall be done in accordance with R649-3-34 – Well Site Restoration. Evidence of compliance with this rule should be supplied to the Division upon completion of reclamation.
5. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.
6. If there are any changes to the plugging procedure or wellbore configuration, notify Dustin Doucet at 801-538-5281 (ofc) or 801-733-0983 (home) prior to continuing with the procedure.
7. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.

Dustin K. Doucet
Petroleum Engineer

November 22, 2006
Date

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

Wellbore Diagram

API Well No: 43-043-30321-00-00 **Permit No:** **Well Name/No:** ANSCHUTZ RANCH DEEP 10-27

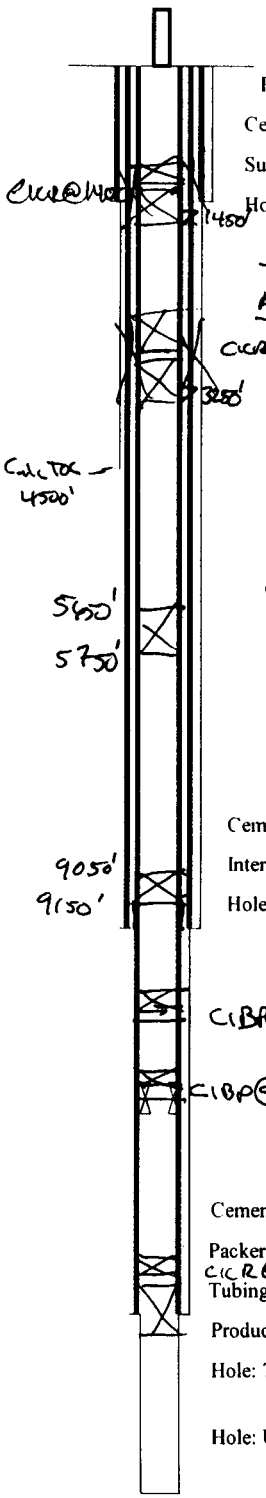
Company Name: ANSCHUTZ CORPORATION, THE

Location: Sec: 27 T: 4N R: 7E Spot: NESE

Coordinates: X: 488541 Y: 4543926

Field Name: ANSCHUTZ RANCH

County Name: SUMMIT



Production: 7.625 in. @ 0 ft.

Cement from 1502 ft. to surface

Surface: 13.375 in. @ 1502 ft.

Hole: 17.5 in. @ 1502 ft.

Plug 5
outside 100' = 49sx
inside 100' = 20sx
69sx
Propose 65sx ✓ OK

Plug #4 (Step #11-15) surf shoe
Below 50' inside = 10sx
& outside 49sx/100' → 135sx = 275
Above (55sx)(1.15)(4.177) = 264' ✓ O.K.

CICR@200'

Plug #3 (Step #6-10) Lower Cretaceous
Below 100'/(1.15)(1.485) = 58sx
100'/(1.15)(9.906) = 9sx
50'/(1.15)(4.177) = 10sx
77sx
Above 50' = 10sx

Plug #2 (Step #5)
20sx = 113' ✓ O.K.
87sx total
Propose 86

Cement from 9626 ft. to 4500 ft.

Intermediate: 9.625 in. @ 9626 ft.

Hole: 12.25 in. @ 9626 ft.

Plug #1 (Step #4)
(20sx)(1.15)(4.937) = 113' ✓ O.K.

CIBP@11650' Existing w/20sx

CIBP@12775 Existing w/20sx

Cement from 13924 ft. to 9626 ft.

Packer: @ 11700 ft.

CICR@13863 Existing

Tubing: 2.875 in. @ 0 ft.

Production: 7 in. @ 13924 ft.

Hole: 7.625 in. @ 13924 ft.

Hole: Unknown

TD: 15900 **TVD:** 15040 **PBTD:** 13920

String Information

String	Bottom (ft sub)	Diameter (inches)	Weight (lb/ft)	Length (ft)	
HOL1	1502	17.5			
SURF	1502	13.375	54.5	1502	
HOL2	9626	12.25			
I1	9626	9.625	44	9626	
PROD	0 3533	7.625	39		4.177
HOL3	13924	~~7.625~~ 8½"			
PROD	13924	7	32		4.937
T1	0	2.875			
PKR	11700				

~~TOC~~ 12¼" x 9⅝" (20%) → 1.485
9⅝" x 7⅝" → 9.906
13⅜" x 9⅝" → 2.1592

Cement Information

String	BOC (ft sub)	TOC (ft sub)	Class	Sacks
I1	9626	4500	G	1186
PROD	13924	~~9626~~ 9134	G	787
SURF	1502	0	HC	646
SURF	1502	0	G	632

Perforation Information

Formation Information

Formation	Depth
NGSD	7474
ANKH	8560
THYNS	9595
WODS	10935
DNWD	11760
PSPR	11860
WEBR	12660
WEBR	12730

INSPECTION FORM 7

STATE OF UTAH
DIVISION OF OIL GAS AND MINING
PLUGGING OPERATIONS

Well Name: Anschutz Ranch Deep 10-27 API Number: 43-043-30321

Qtr/Qtr: NESE Section: 27 Township: 4N Range: 7E County: Summit

Company Name: The Anschutz Corporation / Jim Hill, Consultant (307) 679-6902

Lease: State_____ Fee X Federal_____ Indian_____

Inspector: Lisha Cordova, Petroleum Specialist Date: 2/28-3/4/07

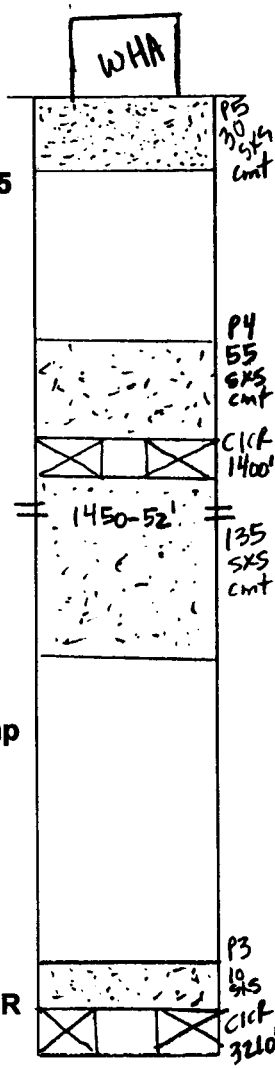
Surface Owner: Castle Rock Land & Livestock/Jeff Young, Ranch Manager (435) 289-8414

Casing Tested: YES X NO_____ Results: OK

Cementing Company: Halliburton

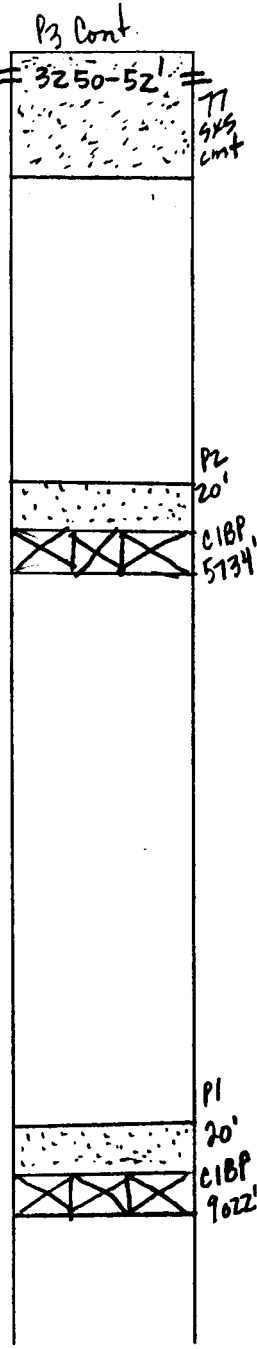
Other Contractors: Basic Energy Services/Rig #1519, Oil Well Perforators, Weatherford, Mountain States Water

Draw a wellbore diagram as plugged:



COMMENTS: (2/28/07) Plug 1; Halliburton HU cementer, tested lines to 3000 psi, est inj rate (2 bpm), pumped 10 bbl water spacer, mixed 20 sxs (4.1 bbls) Mountain G cmt (1.15 yld, 15.8#) w/additives (.1% CFR-3) & pumped balanced plug @9150-9050', disp w/2.1 bbls water, disp w/47 bbls WBM, pulled 47 bbls to 8150'. (3/1/07) Plug 1 continued; attempted to tag cmt @9050' (no tag), ran tbg to 9150' (no tag), unable to est circ. TOOH w/all tbg (9150'), last 3 jts full of cmt. HU wireline & guage ring; weather turned bad so shut down for day. (3/2/07) Plug 1 completed; HU wireline & guage ring, RIH to 9044', ROOH, disconnect guage ring & HU CIBP (Baker, 7", 32#), RIH & set @9022', ROOH & HU dump bailer (3-1/2", 40' long), mix Class G cmt, load dump bailer, RIH (2 runs) & dump cmt @9012' & @9002' (20' cmt on top of CIBP), ROOH & disconnect dump bailer. Plug 2; HU CIBP (Baker, 7", 32#), RIH & set @5734', ROOH & HU dump bailer, mix Class G cmt, load dump bailer, RIH (2 runs) & dump cmt @5724' & @5714 (20' cmt on top of CIBP), ROOH & disconnect dump bailer. Plug 3; HU perf gun (8 shot), RIH & shot off @3250-3252', ROOH & disconnect perf gun. (3/3/07) Plug 3 continued; HU CICR

(Weatherford, 7-5/8"), RIH & set @3210', ROOH, HU stinger, TIH w/tbg & stung into CICR. Halliburton HU cementer, tested lines to 4600 psi, loaded annulus' (7-5/8" & 9-5/8"), est inj rate (3.5 bpm), mixed 86 sxs (17.6 bbls) Mountain G cmt (1.15 yld, 15#) w/additives (.2% Halad 322), pumped 77 sxs cmt below CICR & 10 sxs on top, disp 2 bbls water & WBM, TOOH w/tbg. Plug 4; HU perf gun (8 shot), RIH & shot off @1450-1452', ROOH, disconnect perf gun & HU CICR (Weatherford, 7-5/8"), RIH & set @1400', ROOH & HU stinger, TIH w/tbg & stung into CICR. Halliburton HU cementer, est inj rate (3 bpm), mixed 190 sxs Mountain G cmt (38.9 bbls) w/additives (.2% Halad 322), pumped 135 sxs cmt below CICR & 55 sxs on top, disp 6.5 bbls WBM, TOOH w/tbg. (3/4/07) Plug 5/surface plug; TIH 3 jts (90') tbg. Halliburton HU cementer, tested lines, est inj rate (2 bpm), mixed 30 sxs (6.1 bbls) Mountain G/Neat cmt (1.15 yld 15.8#) w/no additives, pumped 30 sxs cmt inside 7-5/8" tbg (good cmt returns), disconnect cementer. *Plug 5 completion ops to be performed at a later date; the cellar & wellhead will be removed, csg backsides (7-5/8"-9-5/8" & 9-5/8"-13-3/8") will be filled w/49 sxs cmt to surface, and a metal marker plate w/op & well info will be welded to top of csg & will be buried as per landowner request. Anschutz/Jim Hill Consultant, will notify DOGM when ops commence for witnessing. In addition, well site restoration shall be completed within 1 year of plugging ops (by 3/4/2008) in accordance with R649-3-34.



*Copy of cement ticket attached.

ANSCHUTZ

ANSCHUTZ RANCH DEEP
10-27

API Well No.:
43-043-30321

3-Mar-07
SUMMIT

RECEIVED
MAR _ 4 2007
DIV. OF OIL, GAS & MINING

PTA

Customer Representative:
JIM HILL
Halliburton Operator:
PHILLIP MATTOX
Ticket No.:
4949191

HALLIBURTON

HALLIBURTON JOB SUMMARY

REGION: NORTH AMERICA LAND	NWA / COUNTRY: WESTERN	SAP #/TICKET #: 4949191	TICKET DATE: 03/03/07
MBU ID / EMPL #: 104431	H.E.S. EMPLOYEE NAME: PHILLIP MATTOX	BDA / STATE: UTAH	COUNTY: SUMMIT
LOCATION: 55356 ROCK SPRINGS	COMPANY: ANSCHUTZ	PSL DEPARTMENT: ZONAL ISOLATION	
TICKET AMOUNT:	WELL TYPE: PLUG TO ABANDON	CUSTOMER REP / PHONE: JIM HILL	
WELL LOCATION: WYO LAND	DEPARTMENT: CEMENTING SERVICES 10003	API/UWI #: 43-043-30321	
LEASE NAME: ANSCHUTZ RANCH DEEP	Well No.: 10-27	SAP BOMB NUMBER: 7528	Description: PTA
	SEC / TWP / RNG: S27 T4N R7E		

H.E.S. EMP NAME / EMP # / (EXPOSURE HOURS)	HRS		HRS		HRS		HRS
PHILLIP MATTOX	14.0	PETE GUERRA	30.0	JOE MADSEN	30.0		
BEN ROBERTS	30.0	GLEN BRITTEN	18.0				

H.E.S. UNIT #S / (R / T MILES)	R / T MILES			R / T MILES		R / T MILES			R / T MILES
10638381	250	10406262	10378456	250	10248062	250	10724585	10025032	

Form. Name: _____ Type: GAS
Form. Thickness: _____ From: _____ To: _____
Packer Type: _____ Set At: _____
Bottom Hole Temp.: _____ Pressure: _____
Retainer Depth: _____ Total Depth: NA

	Called Out	On Location	Job Started	Job Completed
Date	2-28-07	2-28-07	2-28-07	3-4-07
Time	0300	0700	1225	0859

Tools and Accessories

Type and Size	Qty	Make
Float Collar		
Float Shoe		
Centralizers		
Bottom Plug		
Top Plug		
PDF Collar		
PDF Shoe		
Packer		
DV Tool		
Guide Shoe		
LIMIT CLAMP		
Weld-a		

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing							
Casing	USED	39.0	7 5/8	J55	0	TD	
Casing							
Liner							
Tubing							
Tubing	USED	6.5	2 7/8		0	9,150	
Drill Pipe							
Drill Pipe							
Open Hole							Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials And Tank Strap

Mud Type: WBM Density: 9.0# Lb/Gal
Disp. Fluid: WBM Density: 9.0# Lb/Gal

Plug #1 Set at _____ to _____ Ft _____ Sks
Plug #2 Set at _____ to _____ Ft _____ Sks
Plug #3 Set at _____ to _____ Ft _____ Sks
Plug #4 Set at _____ to _____ Ft _____ Sks
Plug #5 Set at _____ to _____ Ft _____ Sks
Plug #6 Set at _____ to _____ Ft _____ Sks
Plug #7 Set at _____ to _____ Ft _____ Sks
Plug #8 Set at _____ to _____ Ft _____ Sks

Beging Strap _____ EndStrap _____ Lead Cmt
Beging Strap _____ EndStrap _____ Lead Cmt
Beging Strap _____ EndStrap _____ Lead Cmt
Beging Strap _____ EndStrap _____ Lead Cmt
Beging Strap _____ EndStrap _____ Tail Cmt
Beging Strap _____ EndStrap _____ Tail Cmt

Hours On Location

Date	Hours
2-28-07	8.00
3-1-07	8.00
3/3/2007	10.00
3/4/2007	4.00
Total	30.0

Operating Hours

Date	Hours
2-28-07	2.00
3-1-07	0.00
3/3/2007	2.00
3/4/2007	1.00
Total	5.0

Operating hours(rig up-down,pumping)

Date	Hours:Mins
2-28-07	5
3-1-07	0
3/3/2007	4
3/4/2007	3
Total	12

Hydraulic Horsepower
Ordered _____ Avail. _____ Used _____

Average Rates in BPM
Treating _____ Disp. _____ Overall _____

Cement Left in Pipe
Feet _____ Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Bulk/Sks	Additives	W/Rq.	Yield	Lbs/Gal	BBLs
1	20	MTN G	BULK	.1% CFR-3	4.98	1.15	15.80	4.1
2	86	MTN G	BULK	.2% HALAD 322	4.98	1.15	15.8	17.6
3	190	MTN G	BULK	.2% HALAD 322	4.98	1.15	15.8	38.9
4	30	MTN G	BULK	NEAT	4.98	1.15	15.8	6.1
								0.0
								0.0

Circulating _____ Displacement _____ Preflush: _____ Gal - BBl _____ Type: _____
Breakdown _____ Maximum _____ Circulate Hole _____ Gal - BBl _____ Pad:Bbl -Gal _____
Lost Returns-YES _____ Lost Returns-NO _____ Excess /ReturnGal BBl _____ Calc.Disp Bbl _____
Cmt Rtrn#Bbl _____ Actual TOC _____ Calc. TOC: _____ Actual Disp. SEE LOG
Average _____ Frac. Gradient _____ Treatment: _____ Gal - BBl _____ Disp:Bbl-Gal _____
Shut In: Instant _____ 15 Min. _____ 30 Min. _____ Cement Slurry: _____ Gal - BBl _____
Total Volume _____ Gal - BBl _____

Frac Ring #1 | Frac Ring # 2 | Frac Ring # 3 | Frac Ring # 4

THE INFORMATION STATED HEREIN IS CORRECT
CUSTOMER REPRESENTATIVE JIM HILL SIGNATURE

HALLIBURTON

Job Log

TICKET # 4949191	TICKET DATE 03/03/07		
REGION NORTH AMERICA LAND	NWA / COUNTRY WESTERN	BDA / STATE UTAH	COUNTY SUMMIT
MBU ID / EMPL # 104431	H.E.S EMPLOYEE NAME PHILLIP MATTOX	PSL DEPARTMENT ZONAL ISOLATION	
LOCATION 55356 ROCK SPRINGS	COMPANY ANSCHUTZ	CUSTOMER REP / PHONE JIM HILL	
TICKET AMOUNT	WELL TYPE PLUG TO ABANDON	API/UWI # 43-043-30321	
WELL LOCATION WYO LAND	DEPARTMENT CEMENTING SERVICES 10003	JOB PURPOSE CODE 7528	
LEASE / WELL # ANSCHUTZ RANCH DE / Well No. 10-27	SEC / TWP / RNG S27 T4N R7E		

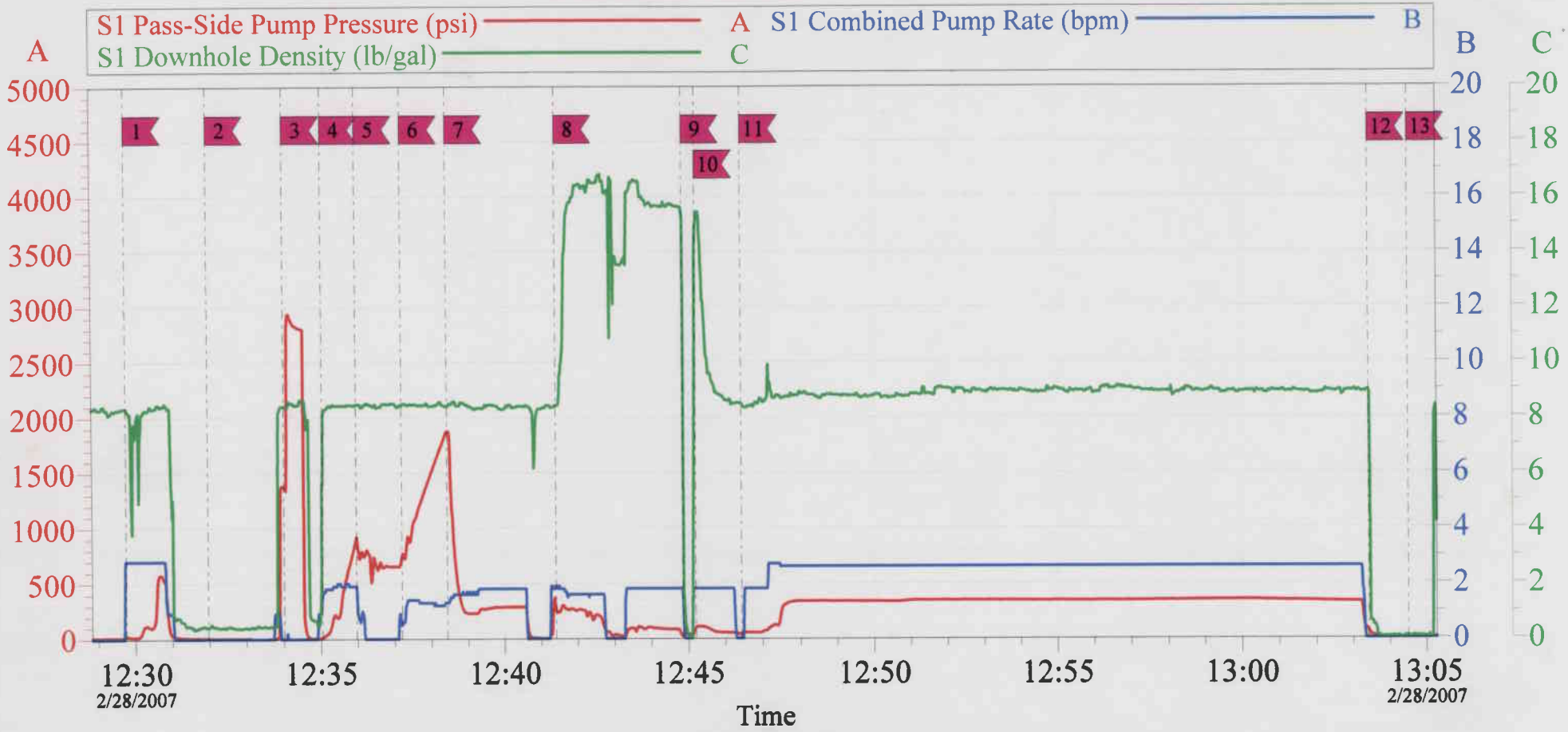
Chart No.	Time	Rate (BPM)	Volume (BBL)(GAL)	Pmps T	Pmps C	Press.(PSI) N_2	Press.(PSI) Fluid	Job Description / Remarks
2-28-07	0300							ARRIVE AT YARD
2-28-07	0700							JOURNEY MANAGEMENT SAFTEY MEETING
								LEAVE YARD
								ARRIVE ON LOCATION, JOBSITE ASSESSMENT
								PRE JOB SAFTEY MEETING
								RIG UP EQUIPMENT
								PRE JOB SAFTEY MEETING,1ST PLUG AT 9150 USING 20 SKS MTN G CEMENT
	1234			X			3000	PSI TEST
	12.29	2.0		X			600	PUMP 10 BLL H2O SPACER
	1241	2.0	4.1	X			600	MIX 20 SKS MOUNTIAN G CEMENT
	1245	2.0	2.1	X			300	DISPLACE WITH 2.1 BLLS H2O
	1246	3.0	47.0	X			400	DISPLACE WITH 47 BLLS MUD
	1303	3.0		X			420	SHUT DOWN,47 BLLS, PULL TO 8150'
	1500							SHUT DOWN FOR DAY
3/1/2007	0745							3-1-07 ON LOCATION, SAFTEY MEETING
								RAN TUBING TUBING TO 9150 TO TAG CEMENT
	0950							COME OUT OF HOLE, DID NOT TAG,WILL SET RETAINERS AND DUMP BAIL
								CEMENT ON TOP OF EACH
	1500							RELEASE HES FOR DAY, WILL CALL BACK FOR HES
	3-3-07							3-3-07 BACK ON LOCATION,SAFTEY MEETING
								2ND PLUG AT 3210' USING 86 SKS
	1205			X			4600	PSI TEST
	1208	3.5		X			100	LOAD 7 5/8 ANNULAS
	1215	3.5	20.0	X			340	7 5/8 ANNULAS FULL,20 BLLS GONE, SHUT DOWN
	1217	3.5		X			100	LOAD 9 5/8 ANNULAS/INJECTION RATE
	1220	3.5	12.0	X			390	SHUT DOWN, HOLE FULL, 12 BLLS GONE
	1226	2.0	18.0	X			190	PUMP 86 SKS MOUNTIAN G CEMENT
	1236	2.0	16.5	X			60	DISPLACE 2 BLLS H2O
	1237	2.0		X			60	SHUT DOWN 2 BLLS GONE, CANNOT GET MUD
	1253	3.0		X			90	FINISH DISPLACEMENT
	1258	3.0		X			450	SHUT DOWN, 16.5 TOTAL BLLS,STING OUT OF TOOL,COOH TO PERFERATE
								THANK YOU FROM HALLIBURTON AND CREW

HALLIBURTON

Ticket Number	Company	Lease Name	Well No.	Date	
4949191	ANSCHUTZ	ANSCHUTZ RANCH DEEP	10-27	03/03/07	2

Chart No.	Time	Rate (BPM)	Volume (BBL)(GAL)	Pmps T	Pmps C	Press.(PSI) N_2	Press.(PSI) Fluid	Job Description / Remarks
								3RD PLUG RETAINER AT 1400, 190 SKS
3/3/2007	1720	3		X			100	STIING OUT OF TOOL, LOAD 7 5/8 ANNULAS
	1728	3	25.0	X			130	ANNULAS FULL, SHUT DOWN.25 BLLS GONE, STING INTO TOOL
	1730	3		X			90	INJECTION RATE UP 9 5/8 ANNULAS
	1732	3	4.0	X			120	ANNULAS FULL, SHUT DOWN.4 BLLS GONE
	1735	3	38.9	X			218	PUMP 190 SKS MTN G CEMENT
	1746	3	35.5	X			-1	SHUT DOWN , STING OUT OF TOOL, 35.5 BLLS GONE
				X				BALANCE REST OF CEMENT ON TOP OF RETAINER
	1748	2		X			20	FINISH PUMPING CEMENT
	1750	2	6.5	X			20	DISPLACE WITH MUD
	1754	2		X			30	SHUT DOWN, 6.5 BLLS GONE, RELEASE PSI
	1755			X			-1	NO PSI, COME OUT OF HOLE TO NEXT PLUG
	1800							SHUT DOWN FOR THE DAY
3/4/2007	0700							ON LOCATION, SAFTEY MEETING
								4TH PLUG 100, USING 30 SKS CEMENT
	0815	2		X			20	BREAK CIRCULATON, H2O
	0817	2	4.0	X			50	CIRCULATING UP ANNULS,4 BLLS GONE, SHUT DOWN
	0819	2	6.1	X			50	PUMP 30 SKS MTN G CEMENT
	0823	2		X			50	CIRCULATING CEMENT UP ANNULAS,6.1 BLLS GONE, SHUT DOWN
	0857	0.3			X		20	PSI UP ON 7 5/8 / 9 5/8 ANNULAS
	0858	0.3	0.5		X		150	SHUT DOWN,.5 BLL GONE
	0859				X		150	HOLDIING PSI, RELEASE PSI, JOB COMPLETE
								POST JOB SAFTEY MEETING
								RIG DOWN EQUIPMENT
								JOURNEY MANAGEMENT SAFTEY MEETING
								LEAVE LOCATION

ANSCHUTX P&A 4949191

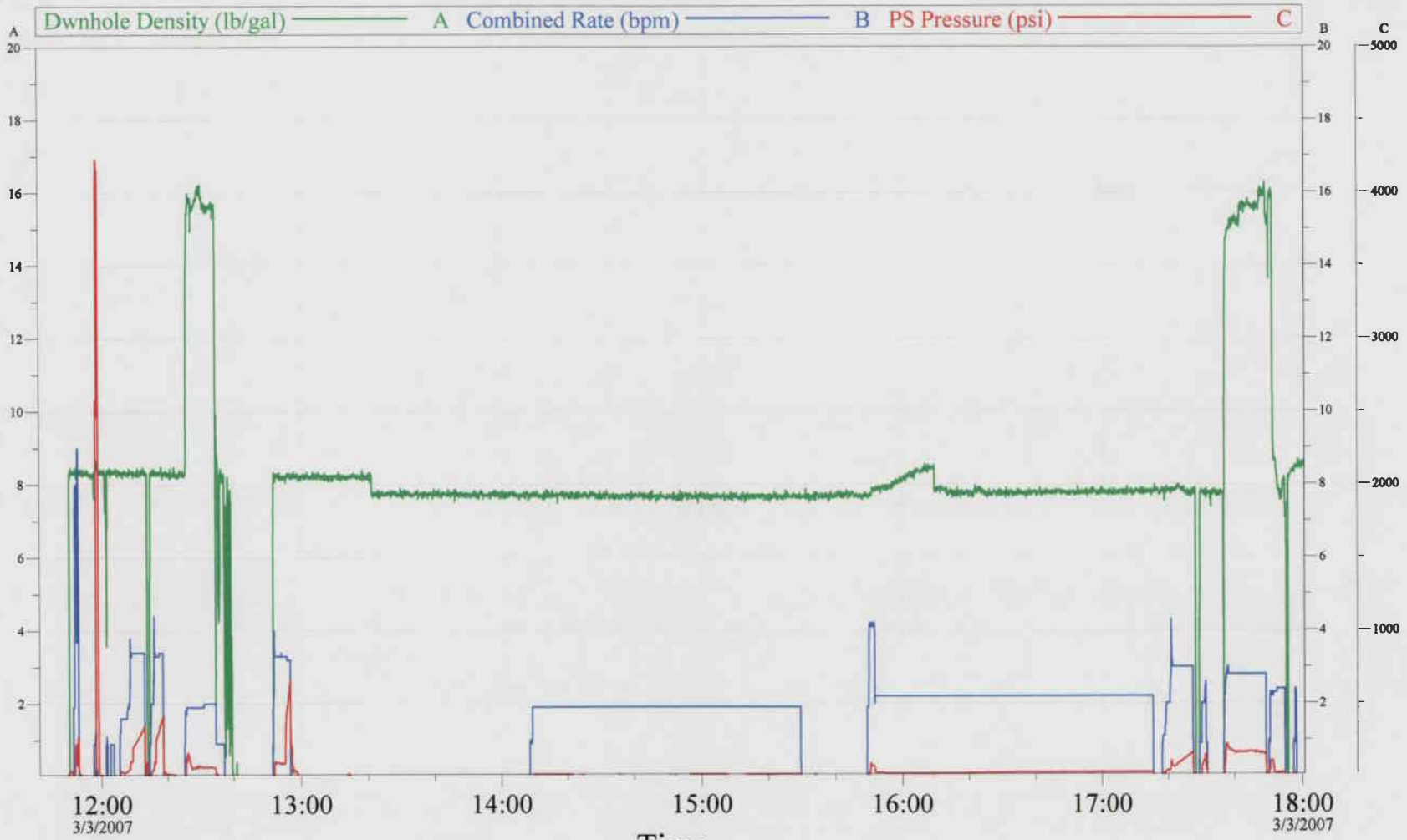


Local Event Log

PUMP 2.5 BBLS WATER	12:29:45	CLOSE VALVE ON FLOOR	12:31:58
TEST LINES	12:34:01	CONTINUE PUMP H20 AHEAD	12:35:02
SHUT DOWN, CHECK BOP	12:35:58	CONTINUE PUMP 10 BBLS AHEAD	12:37:12
FREE BLOCKAGE IN RETURN LINE	12:38:26	PUMP CEMENT@ 16.2 PPG	12:41:24
FINISH CEMENT	12:44:51	PUMP WATER BEHIND	12:45:12
DISPLACE WITH MUD	12:46:26	STOP PUMPING POOH TO 8150FT	13:03:26
WAIT TO TAG	13:04:30		

Customer: ANSCHUTZ	Job Date: 28-Feb-2007	Sales Order #: 4949191
Well Description: P&A	UWI:	

OptiCem v6.1.0
28-Feb-07 13:49

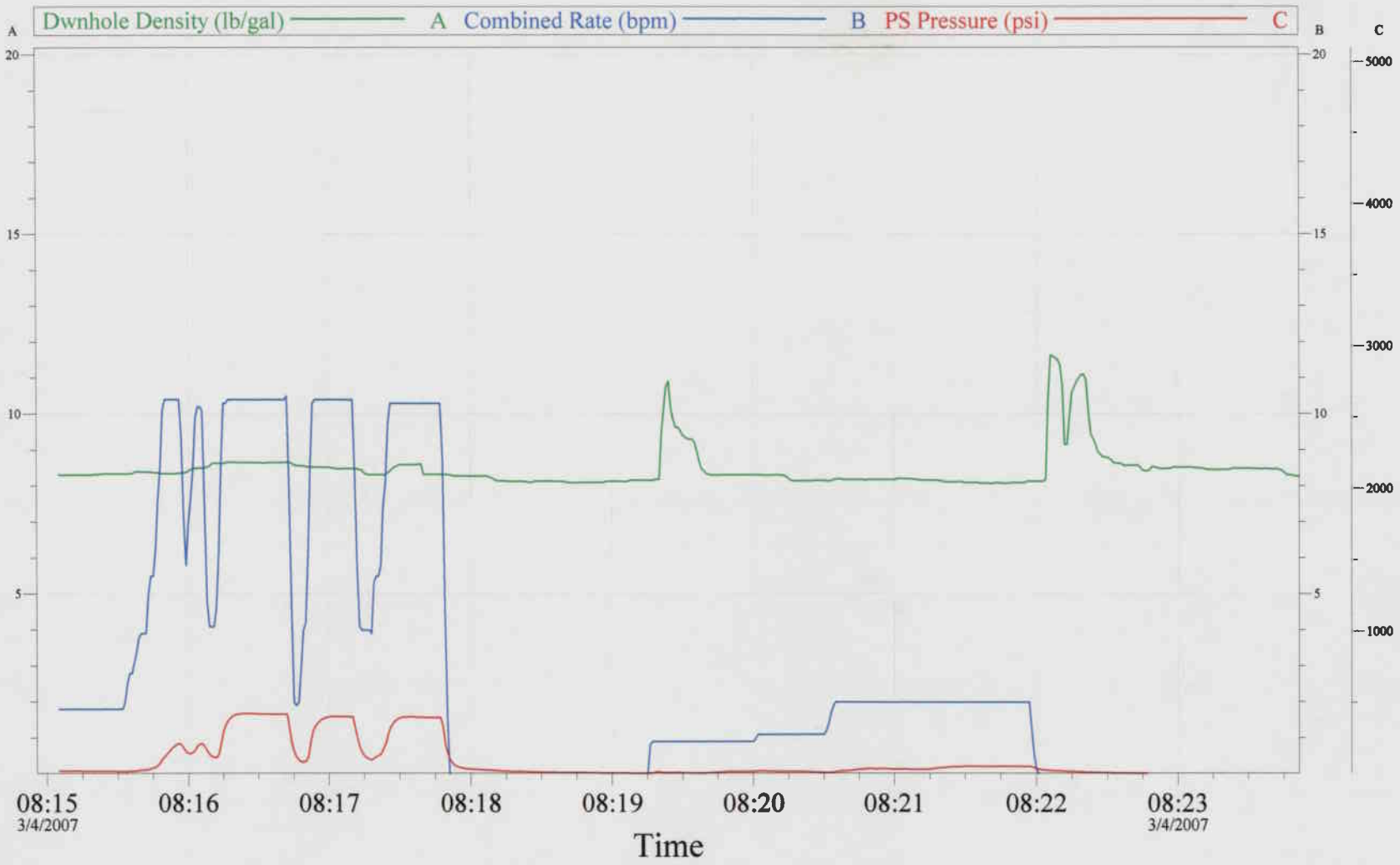


Event Log

Customer: ANSCHUTZ Well Desc: ANSCHUTZ RANCH DEEP	Job Date: 3-2-07 Job Type: PTA	Ticket #: 4949191

CemWin v1.7.1
03-Mar-07 19:03

Plugs 2 and 3



Event Log

Customer: ANSCHUTZ	**Job Date:** 3-4-07	Ticket #: 4949191
Well Desc: ANSCHUTZ RANCH DEEP ##10-27	**Job Type:** PTA , PLUG# 4	

CemWin v1.7.1
04-Mar-07 09:32

CEMENT JOB REPORT

CUSTOMER	DATE	F.R. #	SERV. SUPV.
Anschutz Exploration Corp	11-JUL-06	224950280	JASON M WUOLLE

LEASE & WELL NAME	LOCATION	COUNTY-PARISH-BLOCK
ANSCHUTZ RANCH DE[illegible]27 - API 4304330321(	27-4N-7E	Summit Utah

DISTRICT	DRILLING CONTRACTOR RIG #	TYPE OF JOB
Rock Springs	DHS 1	Plug Back

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
	Float Collar, Pop Valve, 7 - 8rd							
	Guide Shoe, Cement Nose, 7 in							
MATERIALS FURNISHED BY:								
Mud Clean II			8.34				10	
Fresh Water			8.34				5	
Class G+.3%R-3+.5%CD-32		114	17	0.99	3.76	02:44	20.13	10.20
Drilling Mud			8.6				177.02	
						TOTAL	212.15	10.20

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Available Mix Water 400 Bbl. Available Displ. Fluid 400 Bbl.

HOLE SIZE	HOLE % EXCESS	HOLE DEPTH	TBG-CSG-D.P. SIZE	WGT.	TYPE	DEPTH	GRADE	COLLAR DEPTHS SHOE	FLOAT	STAGE
6	15	17000	4	14	DP	9628				
			4	14	DP	5098				
			4	14	DP	1229				
			2.875	6.5	TBG	1013				

LAST CASING SIZE	WGT	TYPE	DEPTH	PKR-CMT RET-BR PL-LINER BRAND & TYPE	DEPTH	PERF. DEPTH TOP	BTM	TOP CONN SIZE	THREAD	WELL FLUID TYPE	WGT.
7	32	CSG	13925					4	FH	WATER BASED MU	8.6

DISPL. VOLUME VOLUME	UOM	DISPL. FLUID TYPE	WGT.	CAL. PSI BUMP PLUG	CAL. MAX PSI TO REV.	OP. MAX SQ. PSI	MAX TBG PSI RATED	Operator	MAX CSG PSI RATED	Operator	MIX WATER
177.0	BBLS	Drilling Mud	8.6	0	0	0	10570	8456	0	0	Rig

Circulation Prior to Job

Circulated Well: Rig [X] BJ [ ] | Circulation Time: 2.75 | Circulation Rate: 5 BPM

Mud Density In: 8.6 LBS/GAL Mud Density Out: 8.6 LBS/GAL | PV & YP Mud In: 23 | PV & YP Mud Out: 23

Gas Present: NO [X] YES [ ] Units: | Solids Present at End of Circulation: NO [X] YES [ ]

Displacement And Mud Removal

Displaced By: Rig [ ] BJ [X] | Amount Bled Back After Job: BBLS

Returns During Job: [ ] NONE [ ] PARTIAL [X] FULL | Method Used to Verify Returns: Visual

Cement Returns at Surface: [ ] YES [X] NO | Were Returns Planned at Surface: [X] NO [ ] YES

Pipe Movement: [ ] ROTATION [ ] RECIPROCATION [ ] NONE [ ] UNABLE DUE TO STUCK PIPE

Centralizers: [X] NO [ ] YES | Quantity: | Type: [ ] BOW [ ] RIGID

Job Pumped Through: [ ] CHOKE MANIFOLD [ ] SQUEEZE MANIFOLD [ ] MANIFOLD [X] NO MANIFOLD

Plugs

Number of Attempts by BJ: 1 Competition: | Wiper Balls Used: [X] NO [ ] YES Quantity:

Plug Catcher Used: [X] NO [ ] YES | Parabow Used: [X] NO [ ] YES

Was There a Bottom: [X] NO [ ] YES | Top of Plug: 16500 FT Bottom of Plug: 17000 FT

Squeezes (Update Original Treatment Report for Primary Job)

BLOCK SQUEEZE [ ] SHOE SQUEEZE [ ] TOP OF LINER SQUEEZE [ ] PLANNED [ ] UNPLANNED [ ]

Liner Packer: [X] NO [ ] YES | Bond Log: [X] NO [ ] YES PSI Applied: Fluid Weight: LBS/GAL

Casing Test (Update Original Treatment Report for Primary Job)

Casing Test Pressure: PSI With LBS/GAL Mud | Time Held: Hours Minutes

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

CEMENT JOB REPORT

Shoe Test (Update Original Treatment Report for Primary Job)

Depth Drilled out of Shoe: FT	Target EMW: LBS/GAL Actual EMW: LBS/GAL
Number of Times Tests Conducted:	Mud Weight When Test was Conducted: LBS/GAL

Problems Before Job (I.E. Running Casing, Circulating Well, ETC)

Problems During Job (I.E. Lost Returns, Equipment Failure, Bulk Delivery, Foaming, ETC)

Problems After Job (I.E. Gas at Surface, Float Equipment Failed, ETC)

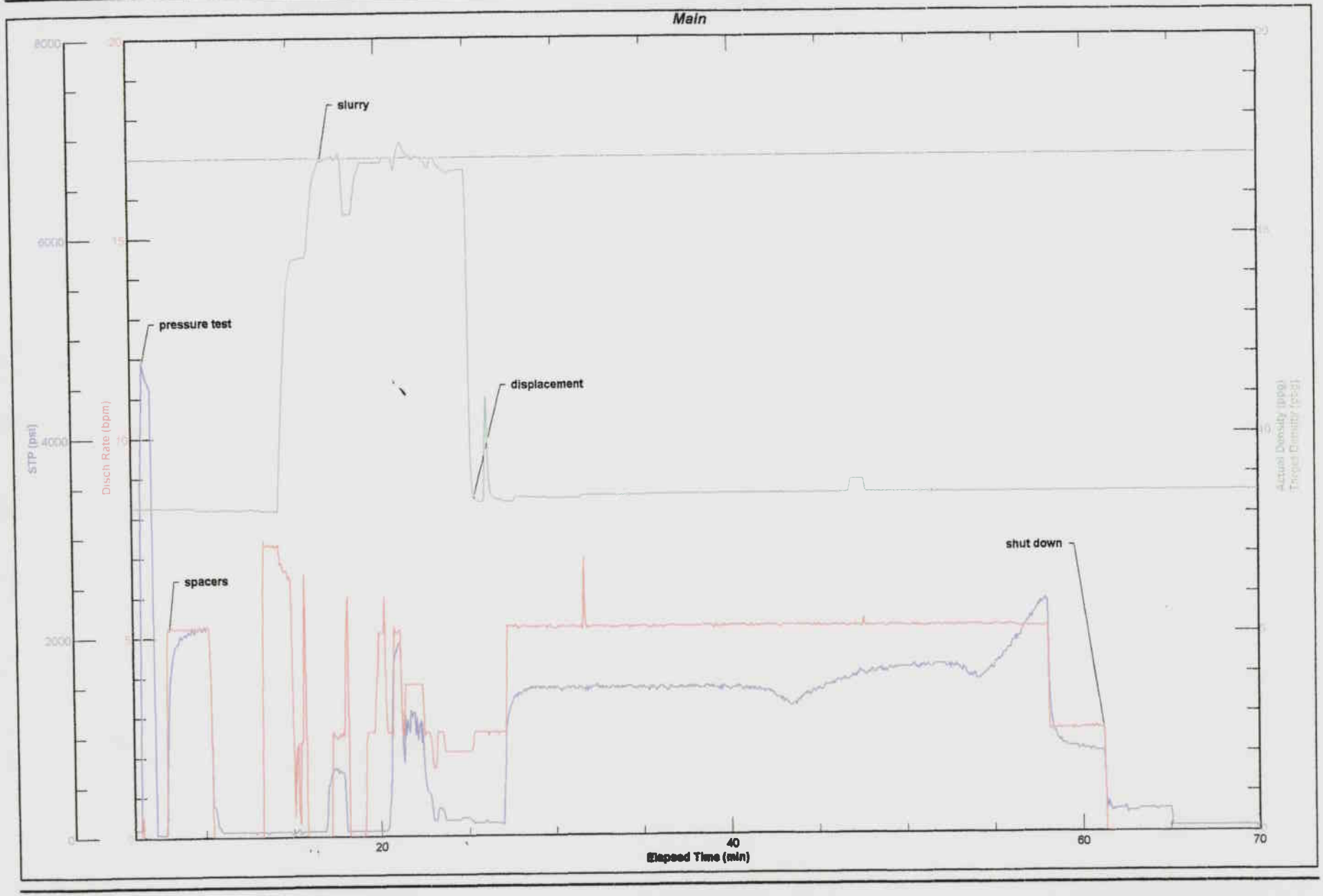
PRESSURE/RATE DETAIL

TIME HR:MIN.	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	EXPLANATION
						SAFETY MEETING: BJ CREW [X] CO. REP. [X]
						TEST LINES 4818 PSI
						CIRCULATING WELL - RIG [X] BJ [ ]
21:50	0	0	0	0	0	ALL TRUCKS ON LOCATION
22:30	0	0	0	0	0	PRE-RIG UP SAFETY MEETING
00:20	0	0	0	0	0	SAFETY MEETING WITH RIG
00:51	4818	0	0	0	H20	PRESSURE TEST LINES
00:52	1539	0	5	10	H20	SPACER MUD CLEAN II
00:54	2069	0	5	5	H20	SPACER FRESH WATER
01:04	1156	0	3.8	20	CMT	MIX SLURRY
01:10	127	0	2.5	8.5	H20	WATER BEHIND
01:12	1438	0	5	10	MUD	DISPLACEMENT WITH 8.5 ppg MUD
01:43	883	0	2.5	160	MUD	SLOW RATE
01:46	203	0	0	168.5	MUD	SHUT DOWN/STILL HAVE PRESSURE ON LINE
01:56	0	0	0	0	MUD	FLOW BACK 3.5 BBLS.
02:00	*0*	*0*	*0*	*0*	*0*	*STOP SERVICE/RIG DOWN MEETING*

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	Service Supervisor Signature:
Y [N]		Y [N]		212	0	Y [N]	

BJ Services JobMaster Program Version 3.10

Job Number: 224950280
Customer: Anschutz Exploration
Well Name: Anschutz Ranch Deep 10-27



BJ Services

Job Start: Tuesday, July 11, 2006

HALLIBURTON

ANSCHUTZ EXPLORATION CORP

43-043-30321
Ranch Deep 10-27 ST
Summit
~~Tooele~~ **County , Utah**

Miscellaneous Pumping Service

17-Aug-2007

Job Site Documents

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HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300491	**Ship To #:** 2593274	**Quote #:**	**Sales Order #:** 5302093
Customer: ANSCHUTZ EXPLORATION CORP		**Customer Rep:** Workover, Anschutz	
Well Name: Ranch Deep	**Well #:** 10-27 ST		**API/UWI #:** 43-043-30321
Field:	**City (SAP):** UNKNOWN	**County/Parish:** Tooele	**State:** Utah
Contractor: Anschutz	**Rig/Platform Name/Num:** Ranch Deep		
Job Purpose: Miscellaneous Pumping Service			
Well Type: Development Well	**Job Type:** Miscellaneous Pumping Service		
Sales Person: VOLNER, THOMAS	**Srvc Supervisor:** JAMES, DONALD	**MBU ID Emp #:** 122510	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
JAMES, DONALD C	0.0	122510	LEBO, GAVIN John	0.0	419314	MCCOY, STEVE Allen	0.0	416547
PAYZANT, GARY Fred	0.0	380528	RUNDHAUG, JEFFERY Dale	0.0	391221			

Equipment

HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*	HES Unit #	*Distance-1 way*
10025023C	120 mile	10378456C	120 mile	10408262C	120 mile	10592954C	120 mile
10829092	120 mile	10925545	120 mile				

Job Hours

Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours	Date	*On Location Hours*	Operating Hours
8-17-07	4	.25						
TOTAL			*Total is the sum of each column separately*					

Job

Formation Name			
Formation Depth (MD)	**Top**		**Bottom**
Form Type		**BHST**	
Job depth MD	100. ft	**Job Depth TVD**	100. ft
Water Depth		**Wk Ht Above Floor**	.5 ft
Perforation Depth (MD)	*From*		**To**

Job Times

	Date	Time	Time Zone
Called Out	17 - Aug - 2007	03:00	MST
On Location	17 - Aug - 2007	08:45	MST
Job Started	17 - Aug - 2007	11:04	MST
Job Completed	17 - Aug - 2007	11:14	MST
Departed Loc	17 - Aug - 2007	12:45	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					**Packer**					**Top Plug**			
Float Shoe					**Bridge Plug**					**Bottom Plug**			
Float Collar					**Retainer**					**SSR plug set**			
Insert Float										**Plug Container**			
Stage Tool										**Centralizers**			

Miscellaneous Materials

Gelling Agt		**Conc**		**Surfactant**		**Conc**		**Acid Type**		**Qty**		*Conc*	**%**
Treatment Fld		**Conc**		*Inhibitor*		**Conc**		**Sand Type**		*Size*		*Qty*	

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk

HALLIBURTON

Cementing Job Summary

Stage/Plug #: 1									
Fluid #	**Stage Type**	**Fluid Name**	**Qty**	**Qty uom**	**Mixing Density lbm/gal**	**Yield ft3/sk**	**Mix Fluid Gal/sk**	**Rate bbl/min**	**Total Mix Fluid Gal/sk**
1	Top Out Cement	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	45.0	sacks	15.8	1.17	5.02		5.02
94 lbm		CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
2 %		CALCIUM CHLORIDE - HI TEST PELLET (100005053)							
5.019 Gal		WATER FURNISHED TO CUSTOMER /1000 GAL (2305)							

Calculated Values		**Pressures**		**Volumes**					
Displacement		**Shut In: Instant**		**Lost Returns**	no	*Cement Slurry*	8	**Pad**	
Top Of Cement	0	**5 Min**		**Cement Returns**	.1	**Actual Displacement**	.5	**Treatment**	
Frac Gradient		**15 Min**		**Spacers**		**Load and Breakdown**		**Total Job**	

Rates

Circulating		*Mixing*		*Displacement*		**Avg. Job**	1

Cement Left In Pipe	**Amount**	***100 ft***	*Reason*	***Top out***

Frac Ring # 1 @		*ID*		*Frac ring # 2 @*		*ID*		*Frac Ring # 3 @*		*ID*		*Frac Ring # 4 @*		*ID*	

The Information Stated Herein Is Correct	***Customer Representative Signature***

HALLIBURTON

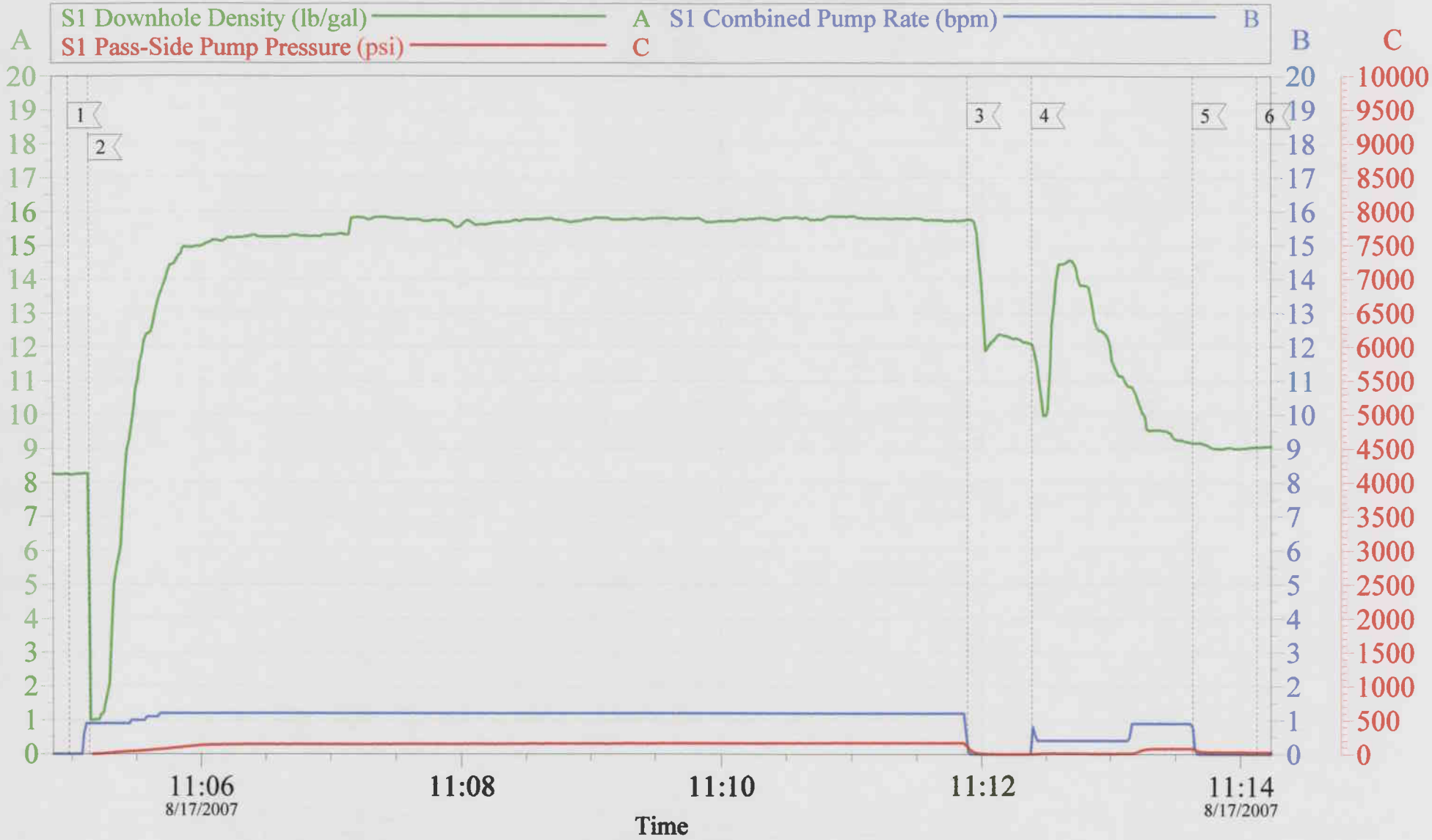
Cementing Job Log

The Road to Excellence Starts with Safety

Sold To #: 300491	**Ship To #:** 2593274	**Quote #:**	**Sales Order #:** 5302093
Customer: ANSCHUTZ EXPLORATION CORP		**Customer Rep:** Workover, Anschutz	
Well Name: Ranch Deep	**Well #:** 10-27 ST		**API/UWI #:** 43-043-30321
Field:	**City (SAP):** UNKNOWN	**County/Parish:** Tooele	**State:** Utah
Legal Description:			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		**Long:** E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Anschutz	**Rig/Platform Name/Num:** Ranch Deep		
Job Purpose: Miscellaneous Pumping Service			**Ticket Amount:**
Well Type: Development Well	**Job Type:** Miscellaneous Pumping Service		
Sales Person: VOLNER, THOMAS	**Srvc Supervisor:** JAMES, DONALD		**MBU ID Emp #:** 122510

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	08/17/2007 03:11							
Crew Leave Yard	08/17/2007 04:59							
Arrive At Loc	08/17/2007 08:45							
Assessment Of Location Safety Meeting	08/17/2007 08:50							
Safety Meeting - Pre Rig-Up	08/17/2007 08:55							
Rig-Up Equipment	08/17/2007 09:00							
Pre-Job Safety Meeting	08/17/2007 11:00							
Start Job	08/17/2007 11:04							
Pump Cement	08/17/2007 11:05							
Shutdown	08/17/2007 11:11							
Pump Water	08/17/2007 11:12							
Shutdown	08/17/2007 11:13							
End Job	08/17/2007 11:14							
Pre-Rig Down Safety Meeting	08/17/2007 11:20							
Rig-Down Equipment	08/17/2007 11:25							
Depart Location Safety Meeting	08/17/2007 12:20							
Depart Location for Service Center or Other Site	08/17/2007 12:30							

Anschutz ARD 10-27 st Top Out



Local Event Log

1	Start Job	11:04:59	2	Pump Cement	11:05:08	3	Shut Down	11:11:53
4	Pump Water	11:12:23	5	Shut Down	11:13:38	6	End Job	11:14:07

Customer: Anschutz	Job Date: 17-Aug-2007	Sales Order #: 5302093

HALLIBURTON
OptiCem v6.1.1
17-Aug-07 11:39

HALLIBURTON

Water Analysis Report

COMPANY:	Anschutz	**Date Recorded**	8/17/2007
SUBMITTED BY:	Don James	**SO#**	5302093
LEASE:	Anschutz Ranch Deep	**Job Type**	Top Out
WELL #:	10-27 ST	**Camp Location**	ROCK SPRINGS, WY.

CEMENT MIX WATER REQUIREMENTS

Item	Recorded Test Value	Max Acceptable Limit	Potential Problems in Exceeding Limit
pH	7	5 to 8.5	Chemicals in water can cause severe retardation
Chlorides[1,2]	0	3000 mg/L	Can accelerate the set time on cement 1% ~ 4800 mg/L
Total Alkalinity	120	1000 mg/L	Cement is greatly retarded to the point where it may not set up at all, decrease strength of cement and possibly thicken cement slurry. (Typically occurs @ pH ≥ 8.3)
Total Hardness	150	400 mg/L	Slightly shortens pump time on cement.
Sulfates	>200	1500 mg/L	Will greatly decrease the strength of cement
Iron	0	300 mg/L	Could cause gelation issues with cement
Water Temp	79	50F to 80F	High temps will accelerate; Low temps may risk freezing in cold weather

NOTES:

1. If the water's pH is greater than or equal to 8, avoid using it since Magnesium may be present (there are no field test strips for Magnesium).

Submitted Respectfully by: _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St., Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 8/29/2007	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☑ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Anschutz Exploration Corporation proposes to reclaim the surface location of the Anschutz Ranch Deep 10-27. The location will be returned to its natural contours and reseeded. The well was plugged in March 2007.

NAME (PLEASE PRINT) James Oursland TITLE Operations Manager

SIGNATURE James Oursland DATE 8/29/2007

(This space for State use only)

RECEIVED
SEP 05 2007
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: n/a

7. UNIT or CA AGREEMENT NAME: n/a

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: The Anschutz Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th Street, Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1433' FSL and 1228' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☑ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 3/4/2007	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The Anschutz Corporation has plugged and abandoned the above well as per the attached daily reports.

NAME (PLEASE PRINT) DeVon M. Pester TITLE Operations Technician

SIGNATURE DeVon M. Pester DATE 1/30/2008

(This space for State use only)

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FEB 04 2008
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

INSTRUCTIONS

This form shall be submitted by the operator to show the intention and/or completion of the following:

- miscellaneous work projects and actions for which other specific report forms do not exist;
- all other work and events as identified in section 11, Type of Action, or as required by the Utah Oil and Gas Conservation General Rules, including:
  - minor deepening of an existing well bore,
  - plugging back a well,
  - recompleting to a different producing formation within an existing well bore (intent only),
  - reperforating the current producing formation,
  - drilling a sidetrack to repair a well,
  - reporting monthly the status of each drilling well.

This form is not to be used for <u>proposals</u> to

- drill new wells,
- reenter previously plugged and abandoned wells,
- significantly deepen existing wells below their current bottom-hole depth,
- drill horizontal laterals from an existing well bore,
- drill hydrocarbon exploratory holes such as core samples and stratigraphic tests.

Use Form 3, Application for Permit to Drill (APD) for such proposals.

NOTICE OF INTENT - A notice of intention to do work on a well or to change plans previously approved shall be submitted in duplicate and must be received and approved by the division before the work is commenced. The operator is responsible for receipt of the notice by the division in ample time for proper consideration and action. In cases of emergency, the operator may obtain verbal approval to commence work. Within five days after receiving verbal approval, the operator shall submit a Sundry Notice describing the work and acknowledging the verbal approval.

SUBSEQUENT REPORT - A subsequent report shall be submitted to the division within 30 days of the completion of the outlined work. Specific details of the work performed should be provided, including dates, well depths, placement of plugs, etc.

WELL ABANDONMENT - Proposals to abandon a well and subsequent reports of abandonment should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, and method of parting of any casing, liner, or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

In addition to any Sundry Notice forms submitted, **Form 8, Well Completion or Recompletion Report and Log** must be submitted to the division to report the <u>results</u> of the following operations:

- completing or plugging a new well,
- reentering a previously plugged and abandoned well,
- significantly deepening an existing well bore below the current bottom-hole depth,
- drilling horizontal laterals from an existing well bore,
- drilling hydrocarbon exploratory holes such as core samples and stratigraphic tests,
- recompleting to a different producing formation.

Send to:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

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08/16/06 PO: Waiting to de-mob rig.

08/17/06 PO: Waiting to de-mob rig.

08/18/06 PO: Set out rig. MI crane & bed trucks, RU crane, ready to set rig out in a.m.

08/19/06 PO: Set out rig. Set out support equipment, set derrick off sub.

08/20/06 PO: Set out rig. Set out remaining sub, BOP equipment & matting boards, haul off Anschutz mats to north yard, will break down derrick in a.m.

08/21/06 PO: Haul off rig. Break down derrick rig ready for trucks, release crane, Black Hills hauling off rig, 10 to 12 loads left to haul off.

08/22/06 PO: Clean location. Black Hills hauling off rig, clean cellar, Stallion water and sewer only thing left.

08/23/06 PO: Clean location. Cleaning location, all DHS #1 equipment off location.

08/24/06 PO: Clean location. Cleaning location, flare blading mud off location, fill rat hole.

08/25/06 PO: Clean location. Dispose miscellaneous junk, flag cuttings pit on ARD 4-26 location, waiting on final tickets.

08/26/06 PO: Waiting on water well to be pulled. Cleaning of location complete.

08/29/06 PO: Waiting on water well to be pulled.

08/30/06 PO: Waiting on water well to be pulled.

08/31/06 PO: Waiting on water well to be pulled. FINAL REPORT UNTIL FURTHER ACTIVITY.

09/07/06 PO: Pull water well. Move in rig, pull rental water well equipment, waiting on final ticket for Knight Oil Tools drill string repairs.

02/14/07 Day 1. PO: Plow snow, set & test anchors. Plow snow, 50% clear.

02/15/07 Day 2. PO: Plow snow, set & test anchors. Plow snow, 100% clear, Basic called, gave rig to someone else.

02/16/07 Day 3. PO: Set & test anchors. Set & test anchors, location ready for rig.

02/22/07 Day 5. PO: NU & test BOPE. Open road and location, MI rig & support equipment, spot rig & raise derrick, spot support equipment.

02/23/07 Day 6. PO: PU work string. RU pump, lay pump & suction lines, set 2- 500 bbl tanks, RU air heater, NU DSA, spool, double gate & accumulator, test to 2000# high, 500# low, RU floor & tbg equipment, RU windwalls, set catwalk & pipe rack, WO work string, secure well, SD until 2/26/07.

02/26/07 Day 7. PO: PU tbg, circulate hole. WO rig operator, tool pusher & trucks hauling work string, unload 384 jts 2-7/8" 6.5# N80 tbg, pull thread protectors & tally pipe, PU 140 jts tbg, secure well, SDFN.

02/27/07 Day 8. PO: Pump cement plugs. PU 148 jts 2-7/8" tbg 9148', circulate 2 hole volumes, 660 bbls, drain up, secure well, SDFN.

02/28/07 Day 9. PO: TIH to tag plug #1. RU cementers, thaw fresh water tank & mud tanks, pressure test lines, pump 10 bbls water, spot 20 sx balance plug @ 9150', pull 15 stds, drain up, secure well, WOC, SDFN.

03/01/07 Day 10. PO: Run gauge ring, set CIBP. TIH w/ 15 stands, RIH to tag cement, did not tag, tbg plugged, POOH standing back 50 stds, LD 184 jts 2-7/8" tbg, pulled wet, last 3 jts plugged w/ cement, secure well, SDFN.

03/02/07 Day 11. PO: Set CR & squeeze. Check well, RU wireline, run gauge ring to 9044', set CIBP at 9022', POOH, PU dump bailer, dump bail 20' cement on top of plug, RIH & set CIBP at 5734', dump bail 20' cement on CIBP, fill hole, break circulation 7-5/8" x 9-5/8" casing, 2 BPM, 100#, no returns on 13-3/8" csg, secure well, SDFN.

03/03/07 Day 12. PO: Set CR & squeeze. Check well, RU wireline, run 7-5/8" CR, set at 3210', TIH w/ stinger, pump 86 sx cement, POOH, perf at 1450', set CR at 1400', TIH, pump 190 sx cement, POOH, LD 44 jts 2-7/8" tbg, drain up, secure well, SDFN.

03/04/07 Day 13. PO: Move to ARD 4-26. Check well, RIH w/ 4 jts tbg, pump 30 sx plug, circulate to surface, LD 4 jts tbg, RD windwalls, air heater, pump & tank, ND BOPE, RD rig, ready to move to ARD 4-26 on 3/7/07. All plugging witnessed by Lisha Cordova with Utah Division Oil, Gas & Mining.

ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated			
Field:	Anschutz Ranch			Formation	Interval		SPF	Status
					From	To		
County:	Summit	State:	Utah					
Operator:	Anschutz							
Contractor:	Basic Energy	Rig No.	1519					
Operation:	Move to ARD 4-26.	PBD:						
Date:	3/4/07 Oper Days 13	CC $	$197,887					

Summary of Day's Work:

Safety meeting. Check well. RIH 4 jts. Pump surface plug. Rigging down. SD until 3-7-07.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30	0.5		Safety meeting. Check well.				
9:00	1.5		RIH w / 4 jts tbg. Pump 30 sx plug. Circulate cement to				
			surface. LD 4 jts tbg.				
15:00	6		RD windwalls, Air heater, pump & tank. ND BOPE. RD rig.				
			Ready to move to ARD 4-26 on 3-7-07.				
	8						
			All plugging was witnessed by Lisha Cordova with Utah				
			Division Oil, Gas & Mining.				

Cost		
Item	Today	CUM
Rig	$7,674	$61,210
Supervision	$1,000	$11,500
Safety		$1,102
Water / Mud		$3,590
Wire Line		$15,783
Cementing	$56,258	$56,258
LD Machine		
BOP Rental	$407	$5,318
Sound & Cellular	$30	$464
Tank Rentals	$100	$1,000
Trucking		$21,258
Work String	$885	$6,125
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.		$3,069
San. & Trash	$50	$400
Weatherford		$5,282
Total Intangable	$66,404	$197,887
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated			
Field:	Anschutz Ranch			Formation	Interval		SPF	Status
					From	To		
County:	Summit	State:	Utah					
Operator:	Anschutz							
Contractor:	Basic Energy	Rig No.	1519					
Operation:	Set CR & Squeeze.	PBD:						
Date:	3/3/07	Oper Days	12	CC $	$131,483			

Summary of Day's Work:

Safety meeting. Check well. RU wireline. Set CR. TIH. Pump 86 sx cement. POOH. Perf @ 1450'. Set CR @ 1400'. TIH. Pump 190 sx cement. POOH. Secure well. SDFN.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30	0.5		Safety meeting. Check well.				
9:30	2		RU wireline. Run 7-5/8" CR. Set @ 3210'.				
11:00	1.5		TIH w / stinger. Tag & space out.				
13:00	2		Fill hole, 20 bbls. Sting in. Fill hole, 12 bbls Establish inj rate.				
			3 BPM 225#. Pump 86 sx class 'G' cement+ .1% CFR-3.				
			76 sx below CR & 10 sx above CR.				
14:30	1.5		POOH. Stand back 22 stds. LD 66 jts 2-7/8" tbg.				
16:30	2		RU wireline. RIH & shoot 8 holes @ 1450'-1452'. POOH.				
			RIH w / 7-5/8" CR. Set @ 1400'.				
17:00	0.5		TIH. Tag up & space out.				
18:00	1		Fill hole, 25 bbls. Sting in. Fill hole, 12 bbls Establish inj rate.				
			Pump 190 sx class 'G' cement+ .2% R-322, 135 sx below				
			CR & 55 sx above CR.				
19:30	1.5		POOH LD 44 jts 2-7/8" tbg. Drain up. Secure well. SDFN.				
	12.5						

Cost		
Item	Today	CUM
Rig	$6,471	$53,536
Supervision	$1,000	$10,500
Safety		$1,102
Water / Mud		$3,590
Wire Line	$15,783	$15,783
Cementing		
LD Machine		
BOP Rental	$407	$4,911
Sound & Cellular	$30	$434
Tank Rentals	$100	$900
Trucking		$21,258
Work String	$885	$5,240
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.		$3,069
San. & Trash	$50	$350
Weatherford	$2,922	$5,282
Total Intangable	$27,648	$131,483
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated		
Field:	Anschutz Ranch			Formation	Interval	SPF	Status
					From To		
County:	Summit	State:	Utah				
Operator:	Anschutz						
Contractor:	Basic Energy	Rig No.	1519				
Operation:	Set CR & Squeeze.	PBD:					
Date:	3/2/07 Oper Days 11	CC $	$103,835				

Summary of Day's Work:

Safety meeting. Check well. RU wireline. Run gage ring to 9044'. Set CIBP @ 9022'. Dump bail 20' cement. Set CIBP @ 5734'. Dump bail 20' cement. Fill hole. Break circulation 7-5/8" X 9-5/8" csg, 2 BPM 100#. No returns on 13-3/8" csg. Secure well. SDFN.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30			Safety meeting. Check well.				
16:30	9		RU wireline. RIH w / 5.750" gage ring to 9044'. POOH. PU				
			CIBP. RIH & set @ 9022'. POOH. PU dump bailer. Dump				
			bail 20' cement on top of plug. RIH & set CIBP @ 5734'. POH				
			Dump bail 20' of cement on CIBP. RIH w / 4" gun, 8 holes,				
			90 deg phasing @ 3250'.				
18:30	2		RU pump. Pump 105 bbls down 7.625" csg to get returns				
			out 9.625" csg 2 BPM 100#. No returns out 13.375" csg.				
			Drain up. Secure well. SDFN.				

Cost Item	Today	CUM
Rig	$6,471	$47,065
Supervision	$1,000	$9,500
Safety		$1,102
Water / Mud		$3,590
Wire Line		
Cementing		
LD Machine		
BOP Rental	$407	$4,504
Sound & Cellular	$30	$404
Tank Rentals	$100	$800
Trucking	$1,155	$21,258
Work String	$885	$4,355
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.		$3,069
San. & Trash	$50	$300
Weatherford	$2,360	$2,360
Total Intangable	$12,458	$103,835
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated		
Field:	Anschutz Ranch			Formation	Interval	SPF	Status
					From To		
County:	Summit	State:	Utah				
Operator:	Anschutz						
Contractor:	Basic Energy	Rig No.	1519				
Operation:	Run gage ring, set CIBP.	PBD:					
Date:	3/1/07	Oper Days	10	CC $	$91,377		

Summary of Day's Work:

Safety meeting. Check well. RIH to tag cement. Did not tag. Tbg plugged. POOH wet. Last 3 jts plugged w / cement. SDFN.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30	0.5		Safety meeting. Check well.				
9:30	2		TIH w / 15 stands. Did not tag cement. PU 4 jts tbg. Did not				
			tag cement. LD 4 jts. Hookup pump. Pump 6 bbls. Presure up				
			to 1500#. Bleed off.				
17:30	8		POOH standing back 50 stds. LD 184 jts 2-7/8" tbg. Pulled				
			wet. Last 3 jts plugged w / cement. Secure well. SDFN.				
	10.5						

Cost		
Item	Today	CUM
Rig	$7,396	$40,594
Supervision	$1,000	$8,500
Safety		$1,102
Water / Mud		$3,590
Wire Line		
Cementing		
LD Machine		
BOP Rental	$407	$4,097
Sound & Cellular	$30	$374
Tank Rentals	$100	$700
Trucking		$20,103
Work String	$885	$3,470
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.	$1,620	$3,069
San. & Trash	$50	$250
Weatherford		
Total Intangable	$11,488	$91,377
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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DIV. OF OIL, GAS & MINING

ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27	Formation	Perforated		
Field:	Anschutz Ranch				Interval		SPF	Status
					From	To		
County:	Summit	State:	Utah					
Operator:	Anschutz							
Contractor:	Basic Energy	Rig No.	1519					
Operation:	TIH to tag plug #1.	PBD:						
Date:	2/28/07	Oper Days	9	CC $	$79,889			

Summary of Day's Work:

Safety meeting. Check well. Thaw out water tanks. RU cementers. Spot 20 sx balance plug @ 9150'. Pull 15 stds. Drain up.Secure well.
WOC. SDFN.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30	0.5		Safety meeting. Check well. Temp 12 below 0.				
12:30	5		MIRU Halliburton. Thaw fresh water tank & mud tank.				
13:30	1		Presurre test lines. Pump 10 bbls water, 4 bbls (20 sx class				
			G' + .1% CFR-3). Displace w / 2 bbls water & 47 bbls mud.				
14:00	0.5		POOH w / 15 stands tbg. Secure well. Drain up. SDFN.				
17:00	3		Heat water.				
	10						

Cost		
Item	Today	CUM
Rig	$7,787	$33,198
Supervision	$1,000	$7,500
Safety	$1,102	$1,102
Water / Mud	$3,590	$3,590
Wire Line		
Cementing		
LD Machine		
BOP Rental	$407	$3,690
Sound & Cellular	$30	$344
Tank Rentals	$100	$600
Trucking		$20,103
Work String	$885	$2,585
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.	$1,840	$1,449
San. & Trash	$50	$200
Weatherford		
Total Intangable	$16,791	$79,889
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated		
Field:	Anschutz Ranch			Formation	Interval	SPF	Status
					From To		
County:	Summit	State:	Utah				
Operator:	Anschutz						
Contractor:	Basic Energy	Rig No.	1519				
Operation:	Pump cement plugs.	PBD:					
Date:	2/27/07	Oper Days	8	CC $	$64,938		

Summary of Day's Work:

Safety meeting. Check well. PU 148 jts tbg. 9148'. Circulate 2 hole volumes. Drain up.Secure well. SDFN.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30	0.5		Safety meeting. Check well.				
13:00	5.5		PU 148 jts 2-7/8" tbg. 9148'.				
18:00	5		RU pump. Circulate 2 hole volumes. 660 bbls.				
18:30	0.5		Drain up. Secure well. SDFN.				

Cost		
Item	Today	CUM
Rig	$6,500	$25,411
Supervision	$1,000	$6,500
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental	$407	$3,283
Sound & Cellular	$30	$314
Tank Rentals	$100	$500
Trucking		$20,103
Work String	$1,700	$1,700
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.		$1,449
San. & Trash	$50	$150
Weatherford		
Total Intangable	$9,787	$64,938
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man: JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated			
Field:	Anschutz Ranch			Formation	Interval		SPF	Status
					From	To		
County:	Summit	State:	Utah					
Operator:	Anschutz							
Contractor:	Basic Energy	Rig No.	1519					
Operation:	PU tbg. Circulate hole.	PBD:						
	Oper							
Date:	2/26/07	Days	7	CC $	$55,151			

Summary of Day's Work:

Highway closed. Wait on work string. Unload 384 jts 2-7/8" tbg. PU 140 jts. Secure well. SDFN.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
9:30	2.5		Interstate 80 closed. Wait on rig operator, tool pusher &				
			trucks hauling work string.				
12:30	4		Unload 384 jts 2-7/8" 6.5# N80 tbg.				
17:30	5		Pull thread protectors & tally pipe. PU 140 jts tbg.				
	10.5		Secure well. SDFN.				

Cost		
Item	Today	CUM
Rig	$6,500	$18,911
Supervision	$1,000	$5,500
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental	$407	$2,876
Sound & Cellular	$30	$284
Tank Rentals	$300	$400
Trucking	$9,766	$20,103
Work String		
Road / Location		$5,528
Roustabouts		
VAM PTS		
Misc.		$1,449
San. & Trash	$50	$100
Weatherford		
Total Intangable	$18,053	$55,151
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man: JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27	Formation	Perforated Interval From	To	SPF	Status
Field:	Anschutz Ranch							
County:	Summit	State:	Utah					
Operator:	Anschutz							
Contractor:	Basic Energy	Rig No.	1519					
Operation:	PU work string.	PBD:						
Date:	2/23/07	Oper Days	6	CC $	$37,100			

Summary of Day's Work:

RU support equipment. NU BOPE & test. RU tbg equip. & windwalls. Secure well. SD until 2-26-07.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
7:30	0.5		Start equipment & safety meeting.				
			RU pump. Lay pump & suction lines. Set 2-500 bbl tanks.				
10:00	2.5		RU air heater.				
14:00	4		NU DSA, spool, double gate 7-1/16" X 5K, 5K Hydril and				
			accumulator. Test to 2000# high, 500# low.				
17:00	3		RU floor &tbg equipment. RU windwalls. Set catwalk & pipe				
			rack. Waiting on work string.				
			Secure well. SD until 2-26-07.				
	10						

Cost Item	Today	CUM
Rig	$8,911	$12,411
Supervision	$1,000	$4,500
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental	$2,471	$2,471
Sound & Cellular	$254	$254
Tank Rentals	$100	$100
Trucking	$2,837	$10,337
Slickline		
Road / Location	$1,000	$5,528
Roustabouts		
VAM PTS		
Misc.	$1,449	$1,449
San. & Trash	$50	$50
Weatherford		
Total Intangable	$18,072	$37,100
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27
Field:	Anschutz Ranch		
County:	Summit	State:	Utah
Operator:	Anschutz		
Contractor:		Rig No.	
Operation:	NU & test BOPE.	PBD:	
Date:	2/22/07	Oper Days	5
		CC $	$19,028

Formation	Perforated Interval From	To	SPF	Status

Summary of Day's Work:

Open road & clean location. MI rig & support equipment. Spot rig & raise derrick. Spot support equipment.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting 7:00 AM	SITP	SICP	FL	HRS SI
11:00	4		Open road & clean location.				
18:00	7		MI rig & support equipment. Spot rig & raise derrick. Spot				
			support equipment. SDFN.				
	11						

Cost Item	Today	CUM
Rig	$3,500	$3,500
Supervision	$1,000	$3,500
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental		
Gate Guard		
Tank Rentals		
Trucking	$7,500	$7,500
Slickline		
Road / Location	$2,000	$4,528
Roustabouts		
VAM PTS		
Misc.		
Other		
Other		
Total Intangable	$14,000	$19,028
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man: JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27
Field:	Anschutz Ranch		
County:	Summit	State:	Utah
Operator:	Anschutz		
Contractor:		Rig No.	
Operation:	Set & test anchors.	PBD:	
Date:	2/16/07	Oper Days	3
		CC $	$4,028

Formation	Perforated Interval From	To	SPF	Status

Summary of Day's Work:

Set & test anchors. Location ready for rig.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting	SITP	SICP	FL	HRS SI

Cost Item	Today	CUM
Rig		
Supervision	$500	$1,500
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental		
Gate Guard		
Tank Rentals		
Trucking		
Slickline		
Road / Location	$1,528	$2,528
Roustabouts		
VAM PTS		
Misc.		
Other		
Other		
Total Intangable	$2,028	$4,028
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man: JIM HILL

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A''SCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27		Perforated			
Field:	Anschutz Ranch			Formation	Interval		SPF	Status
					From	To		
County:	Summit	State:	Utah					
Operator:	Anschutz							
Contractor:		Rig No.						
Operation:	Plow snow, set & test anchors	PBD:						
	Oper							
Date:	2/14/07	Days	1	CC $	$1,000			

Summary of Day's Work:

Plow snow. 50% clear.

Rig Hours: Today ____ Cum. ____

To Time	Hours		Operations Starting	SITP	SICP	FL	HRS SI

Cost		
Item	Today	CUM
Rig		
Supervision	$500	$500
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental		
Gate Guard		
Tank Rentals		
Trucking		
Slickline		
Road / Location	$500	$500
Roustabouts		
VAM PTS		
Misc.		
Other		
Other		
Total Intangable	$1,000	$1,000
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man JIM HILL

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ANSCHUTZ DAILY COMPLETION REPORT

Lease:	Anschutz Ranch Deep ST	Well No.	10-27
Field:	Anschutz Ranch		
County:	Summit	State:	Utah
Operator:	Anschutz		
Contractor:		Rig No.	
Operation:	Plow snow, set & test anchors	PBD:	
Date:	2/15/07	Oper Days	2
		CC $	$2,000

Formation	Perforated Interval From	To	SPF	Status

Summary of Day's Work:

Plow snow. 100% clear.

Basic called. Gave rig to someone else.

Rig Hours: Today _____ Cum. _____

To Time	Hours		Operations Starting	SITP	SICP	FL	HRS SI

Cost Item	Today	CUM
Rig		
Supervision	$500	$1,000
Safety		
Water / Mud		
Wire Line		
Cementing		
LD Machine		
BOP Rental		
Gate Guard		
Tank Rentals		
Trucking		
Slickline		
Road / Location	$500	$1,000
Roustabouts		
VAM PTS		
Misc.		
Other		
Other		
Total Intangable	$1,000	$2,000
Casing		
Tubing		
Well Head		
Heaters		
Other		
Other		
Total Tangiable	$0	$0

Consultant / Company Man: JIM HILL

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER

8. WELL NAME and NUMBER: Anschutz Ranch Deep 10-27

2. NAME OF OPERATOR: Anschutz Exploration Corporation

9. API NUMBER: 4304330321

3. ADDRESS OF OPERATOR: 555 17th St., Suite 2400 CITY Denver STATE CO ZIP 80202

PHONE NUMBER: (303) 298-1000

10. FIELD AND POOL, OR WILDCAT: Anschutz Ranch

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1430' FSL and 1246' FEL

COUNTY: Summit

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESE 27 4N 7E

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: 10/13/2007	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☑ RECLAMATION OF WELL SITE	☑ OTHER: reseeding
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

In September of 2007, Anschutz Exploration Corporation reclaimed the Anschutz Ranch Deep 10-27 well location, re-contouring the pad and spreading topsoil. On October 13, 2007 the disturbed area was re-seeded with the seed mix listed below.

Tall Wheatgrass, VNS	26% (all percentages here are by weight)
Russian Wildrye, Bozoisky	22%
Crested Wheatgrass, Hycrest	42%
Alfalfa, Ladak	2%
Asinfoin, Eski	8%

This mix was selected by the surface owner, Castle Rock. The mixture was planted at 35 pounds to the acre.

NAME (PLEASE PRINT) James Oursland TITLE Operations Manager

SIGNATURE James Oursland DATE 4/23/2008

(This space for State use only)

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(5/2000) (See Instructions on Reverse Side)