

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1. Type of Work
 a. Type of Well
 DRILL DEEPEN PLUG BACK
 Oil Well Gas Well Other
 b. Name of Operator
 Union Pacific Resources Company

2. Address of Operator
 P.O. Box 7 Fort Worth, TX 76101-0007 (817)877-6530

3. Location of Well (Report location clearly and in accordance with any State requirements.)
 At surface 1055' FSL and 1395' FEL (SL)
 At proposed prod. zone 1650' FSL and 1870' FEL (BHL)

4. Distance in miles and direction from nearest town or post office*
 N/A

5. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. line, if any)
 1650'

6. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.
 ±1000'

7. Elevations (Show whether DF, RT, GR, etc.)
 6835' GR 6855' KB

6. Lease Designation and Serial No.
 UPRR Land Grant
 7. If Indian, Allottee or Tribe Name
 N/A
 8. Unit Agreement Name
 N/A
 9. Farm or Lease Name
 UPRR
 10. Well No.
 3-10
 11. Field and Pool, or Wildcat
 Pineview
 12. Co. Sec., T., R., S., or Blk. and Survey or Area
 SE/NW Sec. 3-2N-7E
 13. County or Parish
 Summit
 14. State
 Utah

15. No. of acres in lease
 640
 16. No. of acres assigned to this well
 80 laydown N/2

17. Rotary or cable tools
 Rotary

18. Approx. date work will start*
 Upon Approval

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17 1/2"	20"	94#	50'	To Surface
12 1/4"	13 5/8"	54.4#	2000'	1200 sxs 35:63 poz + 250 sxs class G
8 1/2"	9 5/8"	53.5#	6800'	1800 sxs class H sxs
	5 1/2"	20.0#	12,000'	1500 sxs class G sxs

Union Pacific Resources Company proposes to drill, test and attempt a completion in the Nuggett formation. You will find the following information attached for your review and approval:

- 1) Drilling Well Plan
- 2) Proposed Wellbore Diagram
- 3) Location Plat
- 4) Elevation and Location Schematic
- 5) Geological Prognosis (forwarded under separate cover as soon as available)
- 6) BOP Diagram

If additional information is needed, please contact the undersigned at 817/877-6530.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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.

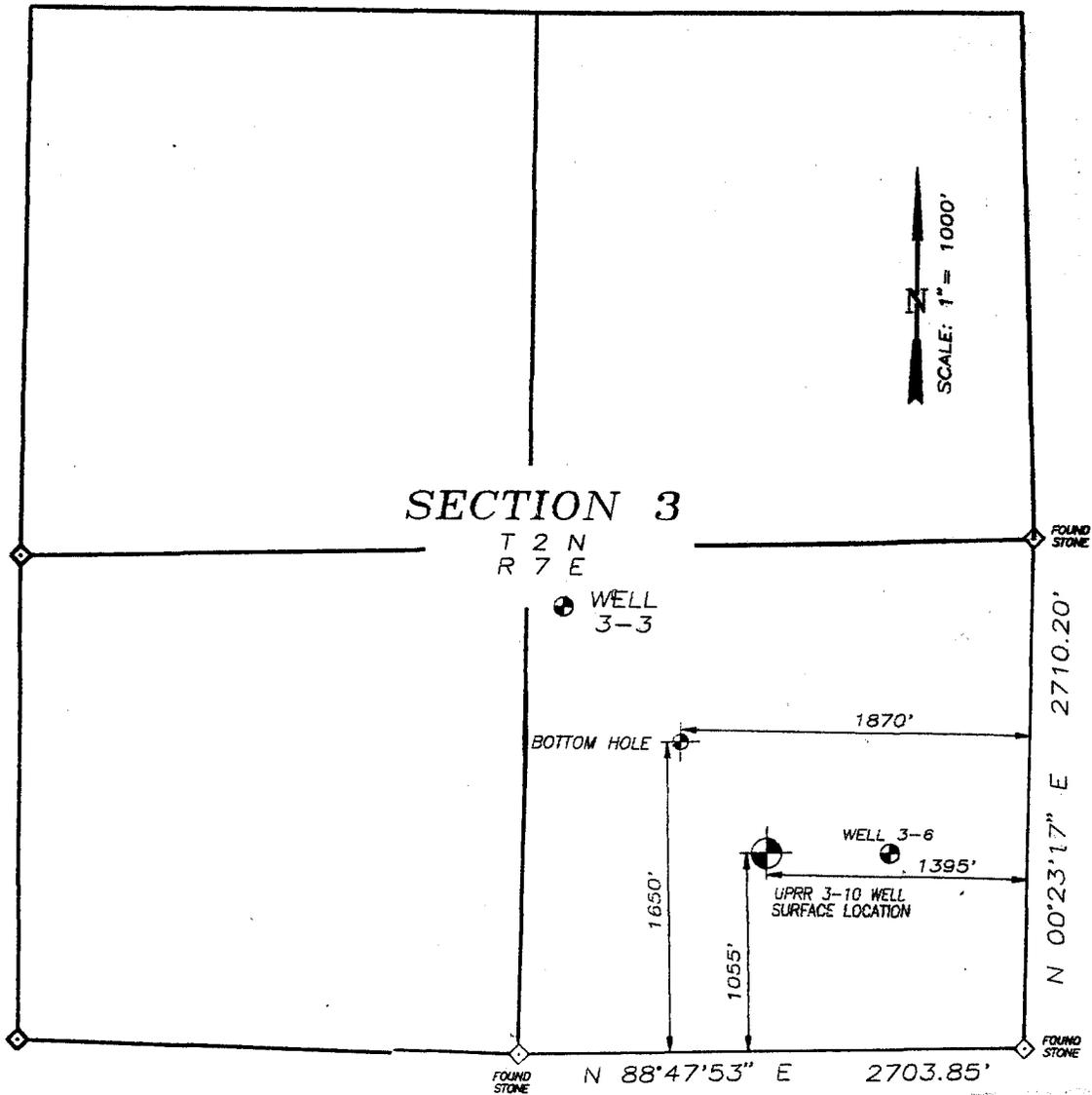
I hereby certify that this report is true and complete to the best of my knowledge.
 Signed: Camie Minzenmayer Title: Regulatory Analyst Date: _____

(This space for Federal or State office use)
 APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
 DATE: 1-3-94
 BY: [Signature]
 Title: _____
 Approved by: _____
 Conditions of approval, if any: _____

WELL SPACING:
 Cause # 100-18.
 9/25/80

DEC 27 1993

DIVISION OF OIL, GAS & MINING



SECTION 3

T 2 N
R 7 E

WELL 3-3

BOTTOM HOLE

WELL 3-6

UPRR 3-10 WELL SURFACE LOCATION

LOCATION MAP



DEC 27 1993

DIVISION OF
OIL, GAS & MINING

SURVEYED UNDER MY SUPERVISION
IN OCTOBER 1993.

John A. Proffit 11/5/93
John A. Proffit

MAP TO ACCOMPANY
APPLICATION FOR PERMIT TO DRILL
U.P.R.R. 3-10 WELL
1055' FSL 1395' FEL
SE 1/4 SECTION 3
T 2 N, R 7 E, SLBM
SUMMIT COUNTY, UTAH

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

REV. 12-9-93 REVISE BOT. HOLE LOC.

REVISED: 11-05-93

DATE: 11-01-93-93 JOB #: 93-64-17
DISK #: 082 FILE: 93-64-17

BOOK #: 798
DRAWN BY: Brent Sanders



**Union Pacific
Resources**

A Subsidiary of Union Pacific Corporation

via Federal Express

December 23, 1993

Utah Department of Natural Resources
Division of Oil, Gas, and Mining
355 N. Temple - 3 Triad Center, Suite 350
Salt Lake City, Utah 84180
Attn: Mr. Frank Matthews

RECEIVED

DEC 27 1993

DIVISION OF
OIL, GAS & MINING

RE: **Permit to Drill**
UPRR 3-10
Section 3-2N-7E
Summit County, Utah

Dear Mr. Matthews,

Enclosed in duplicate is an application for permit to drill the referenced well. Your early approval will be appreciated as we plan to spud in early January and it will take approximately two weeks to build the location.

Merry Christmas and a Happy New Year!!

UNION PACIFIC RESOURCES COMPANY

Cami Minzenmayer
Cami Minzenmayer
Regulatory Analyst

enclosures

:CM

DRILLING WELL PLAN

Well Name: UPRR 3-10
County/State: Summit County, Utah
Proposed Depth: 12000 'MD/ 11400 'TVD
Location:
 Surface: 1055' FSL & 1395' FEL of Section 3-T 2N-R 7E
 Bottomhole: 1650' FSL & 1870' FEL of Section 3-T 2N-R 7E

Elevation: 6,835' Ground Level
 6,855' KB

Productive Formation: Nugget

SUMMARY

The UPRR 3-10 is proposed as a directional well to be drilled the Nugget formation to a depth of 12000 'MD/11400 'TVD. Horizontal displacement is 750'; wellbore direction is N-38.6-W.

PROPOSED DIRECTIONAL PROGRAM

Drill a 17-1/2" surface hole to 2000 '. Run 13-5/8" casing and cement to surface. Drill a 12-1/4" hole to 6800'. The surface and intermediate holes will be drilled with steerable mud motors and MWD surveying tools. The hole will oriented in a N-38.6-W direction and "nudged" to obtain a 750' displacement. Establish BHL with a multishot directional survey. Drill out and TD the well vertically through the Nugget in an 8-1/2" hole. Run and cement 5-1/2" casing at 12000' MD/ 11400' TVD. Directional surveys will be taken every 60' through the directional portion of the hole and at intervals no greater than 450' in the vertical section.

BOP PROGRAM

The Utah Oil, Gas and Mining Division of the Department of Natural Resources will be notified at least 24 hours prior to testing. The BOP's will be tested by an outside testing company and their report will be submitted to the State. Reference BOP Diagram attached.

Casing Program

<u>Size</u>	<u>Depth</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>
20"	0 - 50'	94.0#	J-55	-----
13-5/8"	0 - 2000'	54.4#	J-55	STC
9-5/8"	0 - 6800'	53.5#	L-80	LTC
5-1/2"	0 - 12000'	20.0#	P-110	LTC

Mud Program

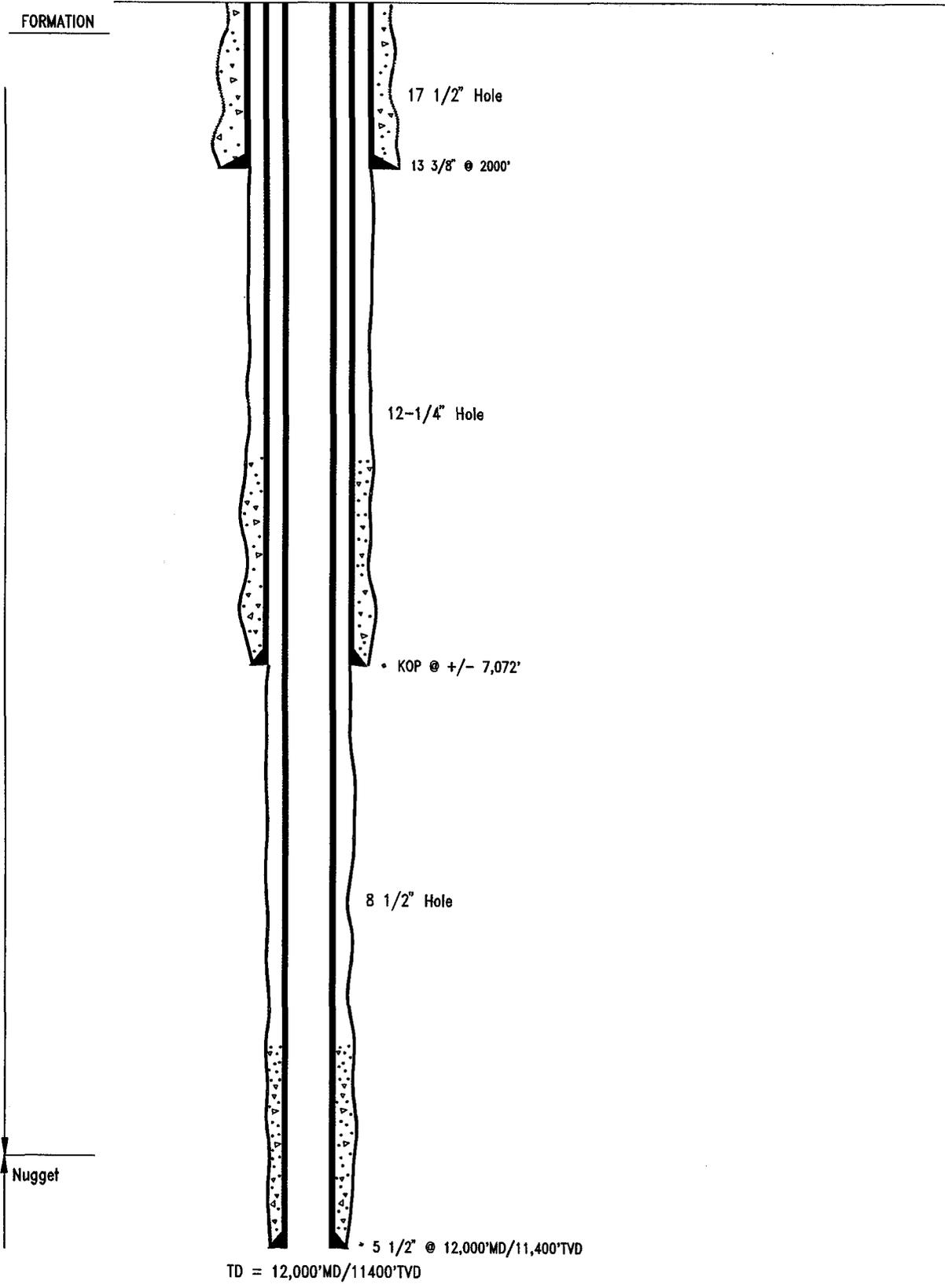
<u>Interval (MD)</u>	<u>Mud Wt (PPG)</u>	<u>Viscosity</u>	<u>Wtr Loss (cc)</u>	<u>Remarks</u>
0' - 2000'	8.3- 8.8	40-45	NC	Fresh water mud
2000' - 6800'	8.5-15.0	35-50	NC	Fresh water mud
6800' - 12000'	9.0-10.0	35-45	NC - 10	Salt saturated water based mud

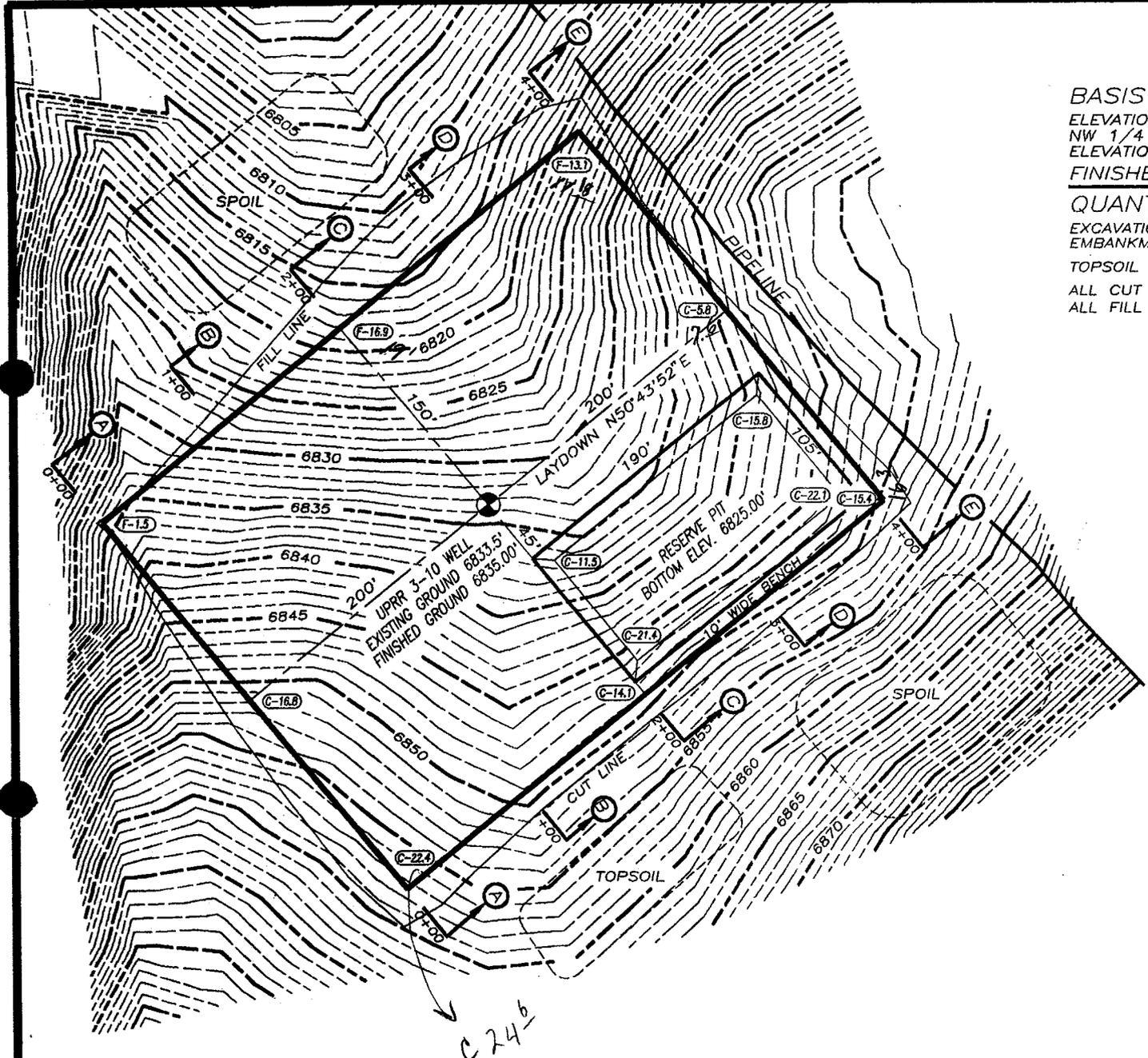
Cement Program

<u>Hole Size</u>	<u>Pipe Depth</u>	<u>Volume</u>	<u>Fill</u>	<u>Remarks</u>
17-1/2"	2000'	2450 cf	2000'	1200sx 35/63 Poz/G @ 12.7 ppg and 250 sx Class G @ 15.8 ppg.
12-1/4"	6800'	1800 cf	4000'	1800 sx Class H @16.2 ppg.
8-1/2"	5000'	1800 cf	5000'	1500 sx Class G + 24% salt @ 16.1 ppg.

- AFE# ?
- SUMMIT CO., UTAH
- NUGGET
- 12,000' MD / 11,400' TVD

- S.L.: 1055' FSL & 1395' FEL SEC. 3 - T2N - R7E
- BHL: 1650' FSL & 1870' FEL SEC. 3 - T2N - R7E
- GROUND LEVEL ELEVATION = 6,835'



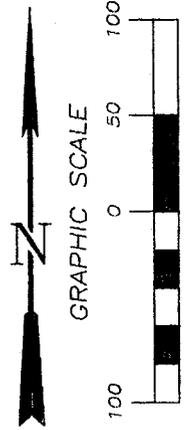


BASIS OF ELEVATION:
 ELEVATIONS BASED ON U.S.G.S. B.M.
 NW 1/4 SECTION 3, T2N, R7E
 ELEVATION 6579.00'
FINISHED PAD ELEVATION TO BE 6835.00'

QUANTITIES
 EXCAVATION INCLUDING PIT = 32,277 C.Y.
 EMBANKMENT = 17,949 C.Y.
 TOPSOIL = 2,726 C.Y.
 ALL CUT SLOPES ARE 1 : 1
 ALL FILL SLOPES ARE 1.5 : 1

DEC 27 1995

DIVISION OF
 OIL, GAS & MINING



C 24^b

**MAP TO ACCOMPANY
 APPLICATION FOR PERMIT TO DRILL
 U.P.R.R. 3-10 WELL
 1055' FSL 1395' FEL
 SE 1/4 SECTION 3
 T 2 N, R 7 E, SLBM
 SUMMIT COUNTY, UTAH**

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

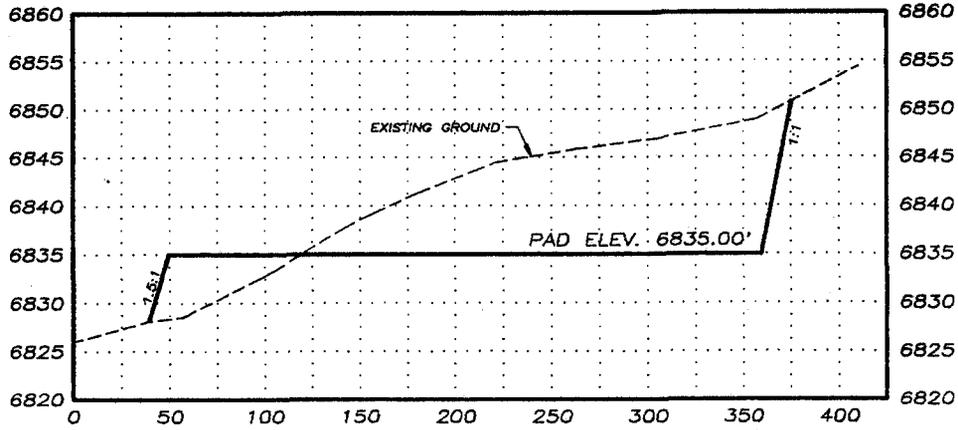
DATE: 11-01-93-93 JOB #: 93-64-17
 DISK #: 082 FILE: 93-04-17

REVISED: 11-08-93

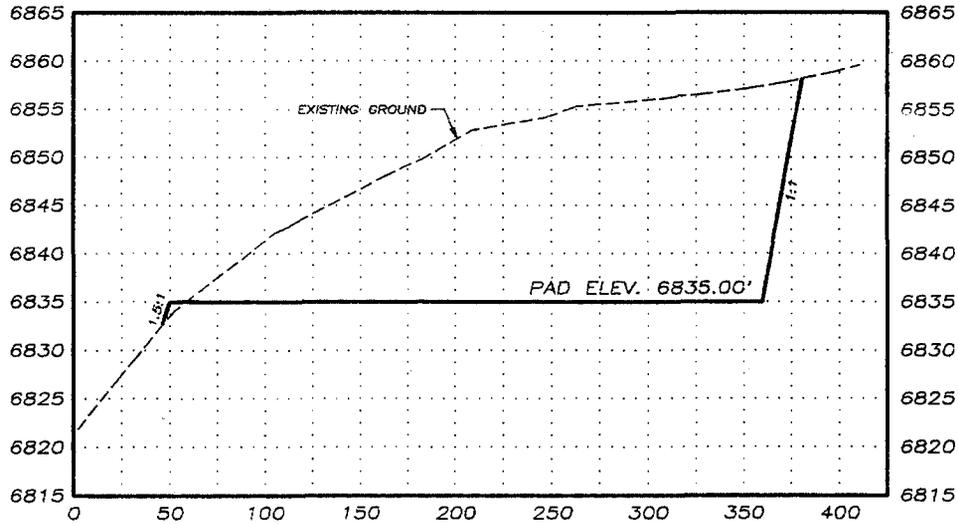
DRAWN BY: Brent Sanders

SHEET 2 OF 5

SECTION B - B



SECTION A - A



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

ALL CUT SLOPES ARE 1 : 1
 ALL FILL SLOPES ARE 1.5 : 1

RECEIVED

DEC 27 1993

DIVISION OF
 OIL, GAS & MINING

MAP TO ACCOMPANY
 APPLICATION FOR PERMIT TO DRILL
 U.P.R.R. 3-10 WELL
 1055' FSL 1395' FEL
 SE 1/4 SECTION 3
 T 2 N, R 7 E, SLBM
 SUMMIT COUNTY, UTAH

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

DATE: 11-01-93-93 JOB #: 93-64-17
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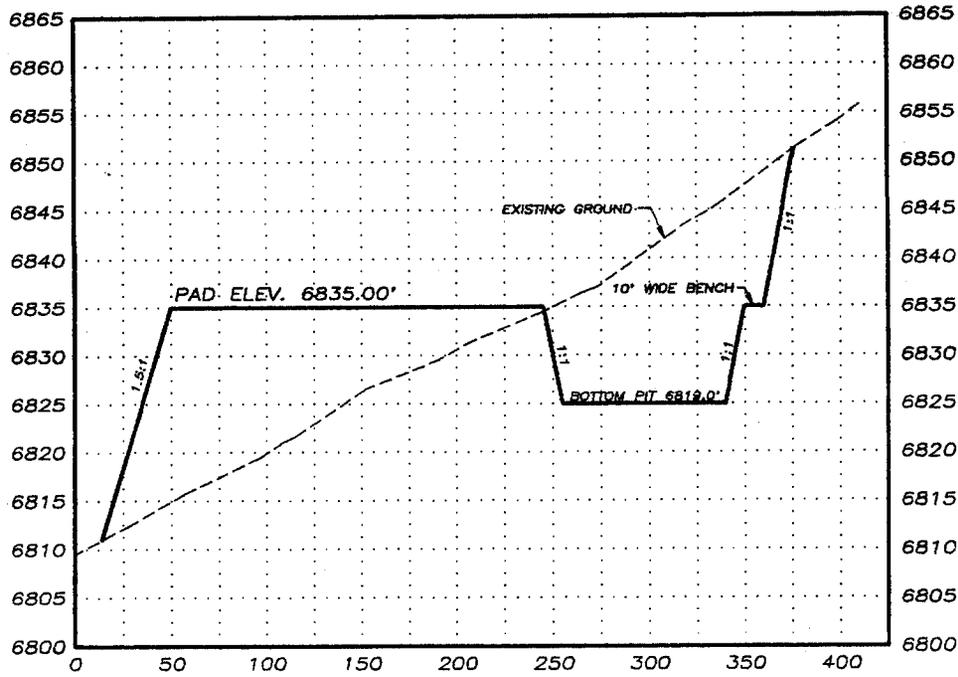
BOOK #: 798

DRAWN BY: Brent Sanders

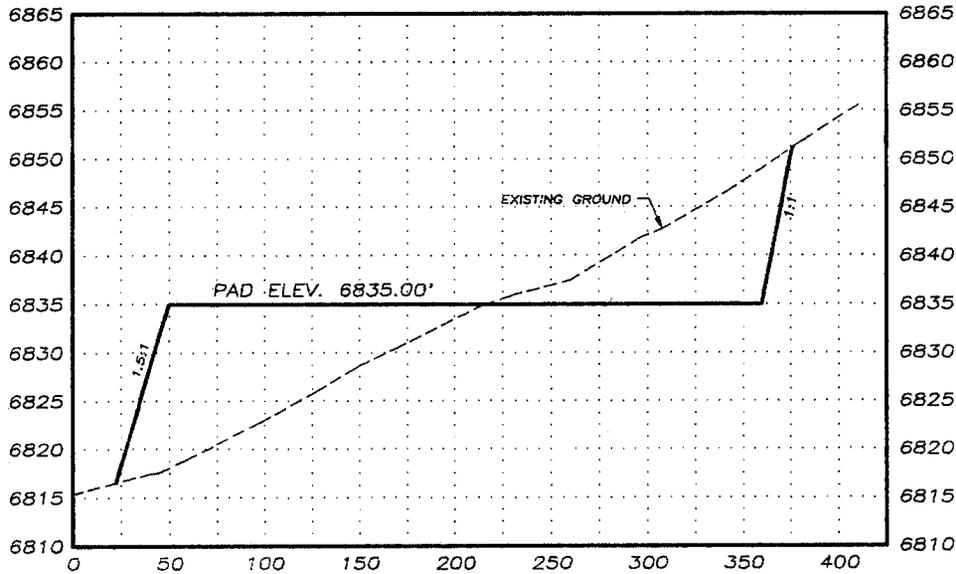
REVISED: 11-08-93

SHEET 3 OF 5

SECTION D - D



SECTION C - C



SCALE:

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

ALL CUT SLOPES ARE 1 : 1
ALL FILL SLOPES ARE 1.5 : 1

DEC 27 1993

DIVISION OF
OIL, GAS & MINING

REVISED: 11-08-93

**MAP TO ACCOMPANY
APPLICATION FOR PERMIT TO DRILL
U.P.R.R. 3-10 WELL
1055' FSL 1395' FEL
SE 1/4 SECTION 3
T 2 N, R 7 E, SLBM
SUMMIT COUNTY, UTAH**

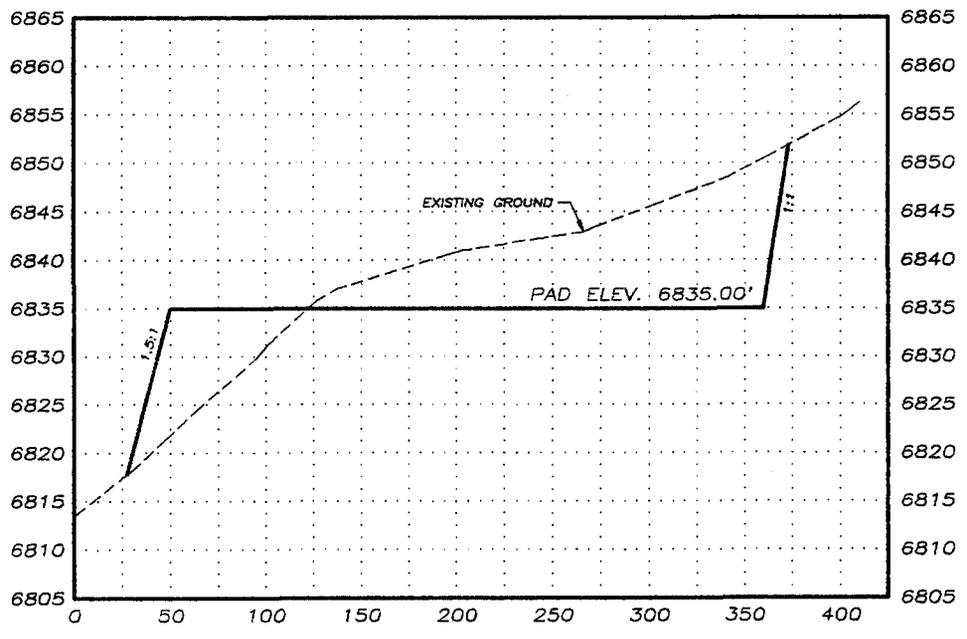
UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 11-01-93-93 JOB #: 93-64-17
DISK #: 092 FILE: 93-64-17
BOOK #: 798

DRAWN BY: Brent Sanders

SHEET 4 OF 5

SECTION E - E



MAP TO ACCOMPANY
APPLICATION FOR PERMIT TO DRILL
U.P.R.R. 3-10 WELL
1055' FSL 1395' FEL
SE 1/4 SECTION 3
T 2 N, R 7 E, SLBM
SUMMIT COUNTY, UTAH

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

DATE: 11-01-93-93 JOB #: 93-64-17
 DISK #: 082 FILE: 93-64-17

BOOK #: 798

DRAWN BY: Brent Sanders

SHEET 5 OF 5

RECEIVED
 DEC 27 1993

DEC 27 1993

DIVISION OF
 OIL, GAS & MINING

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

ALL CUT SLOPES ARE 1 : 1
 ALL FILL SLOPES ARE 1.5 : 1

REVISED: 11-08-93



Union Pacific
Resources

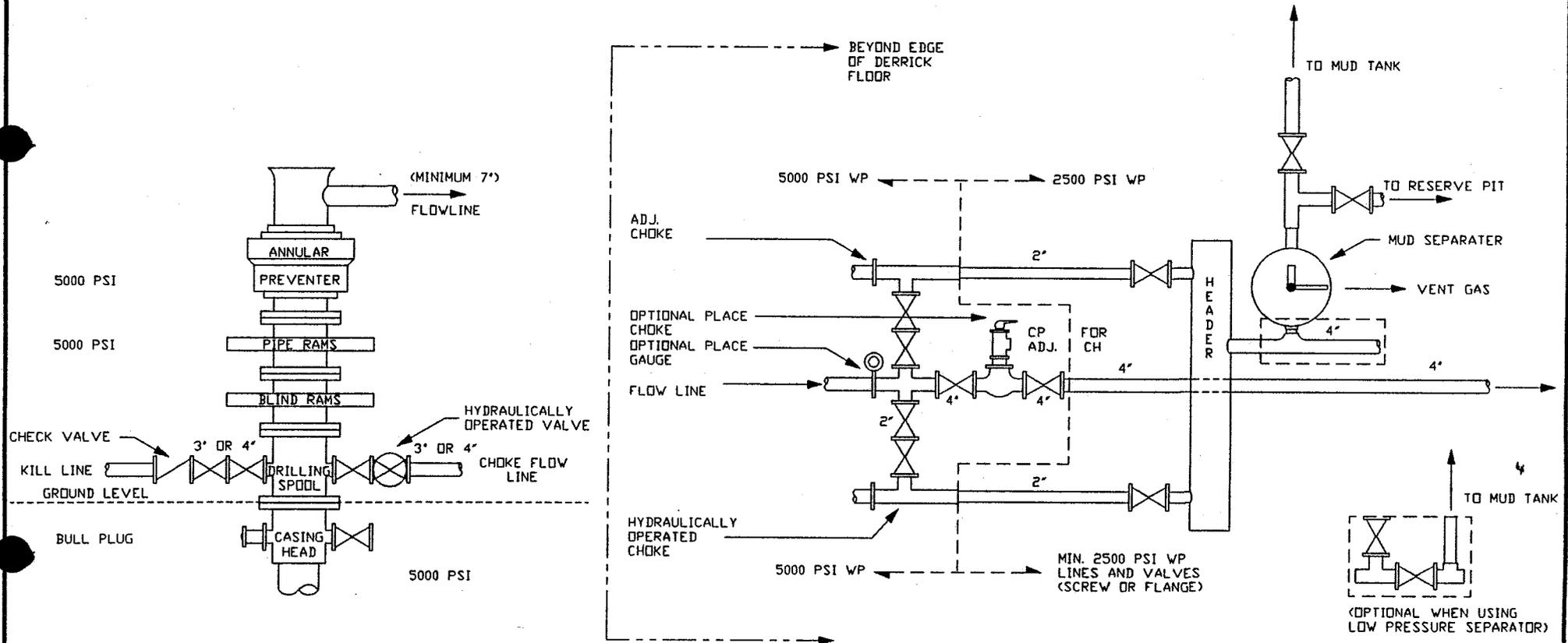
A Subsidiary of Union Pacific Corporation

DRAWING NUMBER 7

5000 # WORKING PRESSURE

DEC 27 1993

DRAWING NO. 5000DN7E
CUL, ONE A MINING



**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 12/27/93

API NO. ASSIGNED: 43-043-30302

WELL NAME: UPRR 3-10
OPERATOR: UNION PACIFIC RESOURCES (N9465)

PROPOSED LOCATION:
SE NW 03 - T02N - R07E
SURFACE: 1055-FSL-1395-FEL
BOTTOM: 1055-FSL-1395-FEL
SUMMIT COUNTY
PINEVIEW FIELD (535)

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering	JM	1/3/94
Geology	PJ	12/30/93
Surface	TH	12/29/93

LEASE TYPE: FEE
LEASE NUMBER:

1/6/94: surface owner agreement rec'd.

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Federal[] State[] Fee[]
(Number 24472221690.000)
- Potash (Y/N)
- Oil shale (Y/N)
- Water permit
(Number BY SUMMARY)
- RDCC Review (Y/N)
(Date: _____)

LOCATION AND SITING:

- R649-2-3. Unit: _____
- R649-3-2. General.
- ~~R649-3-2. Exception.~~
- Drilling Unit. 80 ACRE NUGGET
Board Cause no: 160-6 160-18
Date: 7/28/96 9/25/80

COMMENTS: ~~THIS WELL NEEDS A SPACING EXCEPTION REQUEST AS PART OF THE APD FILING.~~

STIPULATIONS: *1. Compliance with the stipulations of the Drilling Location Assessment dated December 29, 1993. (Copy attached).*
~~2. WATER SOURCE & PERMIT WILL BE ACQUIRED PRIOR TO SPUD. rec'd. 1/6/94.~~

** Cement must be brought above the "stump" formation @ approximately 5700' Top must be confirmed by log.*
** A multi-shot survey will be required @ TD to determine BTH as per R 649-3-11.*

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
DRILLING INSPECTION FORM

COMPANY: UNION PACIFIC COMPANY REP: DON PRESTENKOWSKI
WELL NAME: UPRR 3-10 API NO: 43-043-30302
QTR/QTR: SE/NW SECTION: 3 TWP: 2 N RANGE: 7 E
CONTRACTOR: SST RIG NUMBER: 56
INSPECTOR: HEBERTSON TIME: 1:00 PM DATE: 2/16/94
OPERATIONS: DRILLING AHEAD DEPTH: 6,572
SPUD DATE: DRY: 1/20/94 ROTARY: _____ PROJECTED T.D.: 12,000

=====

WELL SIGN: Y SANITATION: Y BOPE: Y BLOOIE LINE: _____
H2S POTENTIAL: _____ ENVIRONMENTAL: OK FLARE PIT: Y
RESERVE PIT: Y FENCED: N LINED: Y PLASTIC: _____
RUBBER: _____ BENTONITE: _____ OTHER: _____ MUD WEIGHT _____ LBS/GAL
BOPE TEST RECORDED IN THE RIG DAILY TOUR BOOK: Y
BOPE TRAINING RECORDED IN THE RIG DAILY TOUR BOOK: Y

=====

LEGEND: (Y)=YES (U)=UNKNOWN (NA)=NOT APPLICABLE

=====

REMARKS:

9 5/8 CASING IS ON LOCATION AND SHOULD BE SET AT 7,200 FEET.

FIVE DAYS OF DRILLING REMAIN TO REACH CASING DEPTH.



**Union Pacific
Resources**

A Subsidiary of Union Pacific Corporation

via Federal Express

December 27, 1993

Utah Department of Natural Resources
Division of Oil, Gas, and Mining
355 N. Temple - 3 Triad Center, Suite 350
Salt Lake City, Utah 84180
Attn: Mr. Frank Matthews

RECEIVED

DEC 28 1993

DIVISION OF
OIL, GAS & MINING

RE: **Permit to Drill**
UPRR 3-10
Section 3-2N-7E
Summit County, Utah

Dear Mr. Matthews,

Enclosed please find the geological tops for the above-mentioned well. The permit to drill for this well was sent via Federal Express on December 23, and in it Union Pacific Resources made reference to the geological information that was not available at that time. The enclosed tops and their depths should complete our part of the permit.

Your expedience to this permit will be greatly appreciated.

Sincerely,

UNION PACIFIC RESOURCES COMPANY

Cami Minzenmayer
Cami Minzenmayer
Regulatory Analyst

:CM

enclosures

RECEIVED

DEC 28 1993

DIVISION OF
OIL, GAS & MINING

UPRR 3-10
Section 3-2N-7E
Summit County, Utah

FORMATION TOPS

Twin Creek	-	7640'
Watton Canyon	-	8250'
Boundary Ridge	-	8490'
Rich	-	8550'
Gypsum Springs	-	8880'
Nugget	-	8930'



Union Pacific
Resources

A Subsidiary of Union Pacific Corporation

FACSIMILE TRANSMISSION

UNION PACIFIC RESOURCES COMPANY

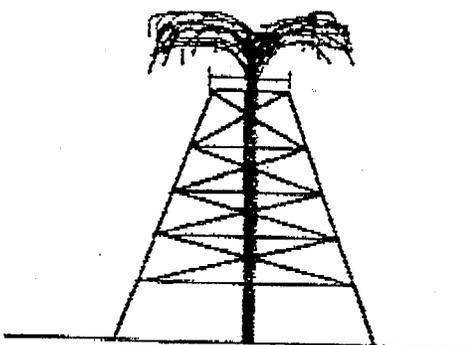
TO: Ron DATE: _____ TIME: _____
FAX NO: _____ LOCATION: _____
FROM: Cam TELEPHONE (817) _____
NUMBER OF PAGES _____ + COVER

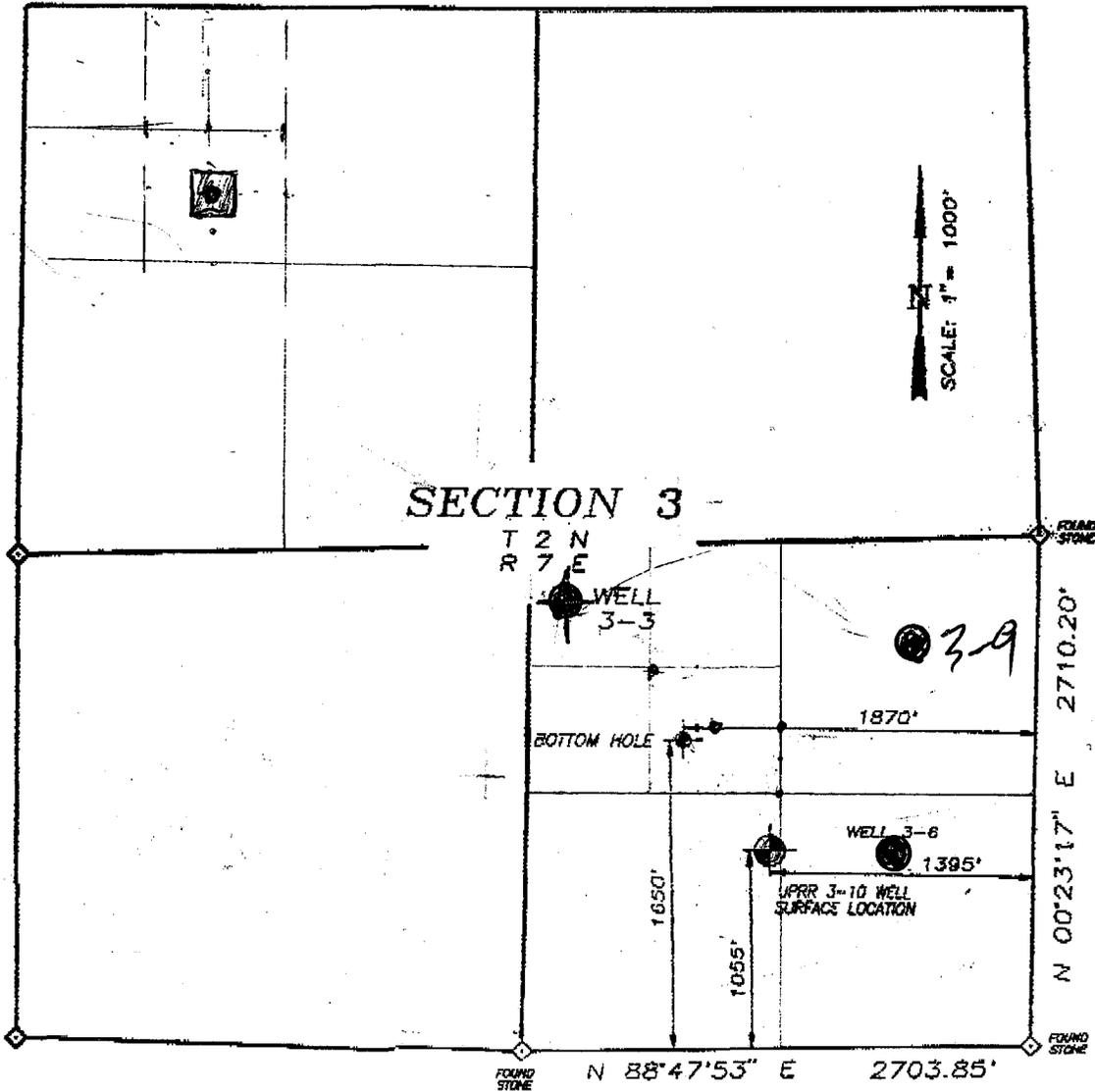
REMARKS: _____

PLEASE NOTE: The information contained in this facsimile is privileged and confidential, and is intended only for the use of the individual named above and others who have been specifically authorized to receive such. If the recipient is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone.

Thank You,
Susan Feist

817/877-7949
FAX 817/877-7942





LOCATION MAP

SURVEYED UNDER MY SUPERVISION
IN OCTOBER 1993.

John A. Proffit 11/5/93
 John A. Proffit
 UTAH SURVEYING BOARD

MAP TO ACCOMPANY
 APPLICATION FOR PERMIT TO DRILL
 U.P.R.R. 3-10 WELL
 1055' FSL 1395' FEL
 SE 1/4 SECTION 3
 T 2 N, R 7 E, SLBM
 SUMMIT COUNTY, UTAH

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

DATE: 11-01-93-95 JOB #: 93-64-17
 DSK #: 089 FILE: 93-64-17

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF)
AMERICAN QUASAR PETROLEUM COMPANY OF)
NEW MEXICO FOR AMENDMENT TO THE SPA-) ORDER
CING ORDER FOR THE NUGGET FORMATION)
AND THE TWIN CREEK FORMATION IN THE) CAUSE NO. 160-18
NUGGET RESERVOIR, PINEVIEW FIELD,)
SUMMIT COUNTY, UTAH)

This cause came to be heard regularly before the Board of Oil, Gas and Mining ("Board"), and was heard, pursuant to due and proper Application and Notice of Hearing, on September 25, 1980 in the Executive Conference Room, Holiday Inn, 1659 West North Temple, Salt Lake City, Utah.

The following members of the Board (constituting a quorum of the Board) were present and in accordance with the law participated in the hearing upon all matters and the decision resulting in this order:

Charles R. Henderson, Chairman

John L. Bell

Edward T. Beck

E. Steele McIntyre

Max A. Farbman

The following members of the Board's staff were also present and participating:

Michael T. Minder, Geological Engineer

Denise A. Dragoo, Special Assistant Attorney General

Appearances of Counsel were made as follows:

Frank Gustin, Salt Lake City, Utah, and

Frank Douglass, Austin, Texas,

Attorneys representing American Quasar Petroleum Company

of New Mexico, Applicant herein;

Joe Henry, Denver, Colorado, and

R. C. McGinnis, Austin, Texas,

Attorneys representing Champlin Petroleum Company, the only

other operator in the subject field and an interested party

herein.

NOW, THEREFORE, the Board having fully considered the testimony of all witnesses, statements of others and all exhibits, statements introduced and received in the course of said hearing, and in all respects being fully advised in the premises, makes and enters the following Findings of Fact and Conclusions of Law and renders its permanent and final Order as follows:

FINDINGS OF FACT

1. American Quasar Petroleum Company (Applicant) owns oil and gas leases and operates wells in both the Twin Creek Formation and the Nugget Formation in the Pineview Field as spaced by the Board's Order of July 28, 1976, in Cause No. 160-6.

2. The July 28, 1976 order does not sufficiently describe the area spaced by said order. The July 28, 1976 order specifically rescinded all preexisting orders relating to drilling and spacing units in the subject lands.

3. The evidence shows that the following description is an accurate and definite description of the area spaced by the July 28, 1976 order entered in Cause No. 160-6:

All of Sections 2,3,4,5,8,9,10 and 11 in Township 2 North, Range 7 East, SLM, Summit County, Utah;

All of Sections 32,33,34 and 35 in Township 3 North, Range 7 East, SLM, Summit County, Utah.

4. There is sufficient evidence to show that surface topography and drilling conditions in the Nugget Reservoir Pineview Field require that operators be given more flexibility in spotting surface locations and drilling bottomhole locations in overthrust geological conditions.

5. In order to provide such flexibility, and in order to afford each owner of an interest in production in the Nugget formation and the Twin Creek formation of the Pineview field an opportunity to protect his correlative rights to produce the share of recoverable hydrocarbons initially in place under his respective tract, the spacing rules, as reflected in the July 26, 1976 order entered in Cause No. 160-6 should be amended to provide as follows:

- (a) Provided, however, the wellbore shall not be perforated or otherwise open to production in a manner that the lowest perforation or producing interval is nearer than 300 feet, measured horizontally, from quarter quarter section line on which the well was drilled and if said perforations are closer than said 300', then said well shall be immediately shut-in until the Board, after notice and hearing, determines whether said well shall be (1) permitted to be produced or (2) straightened, and if permitted to produce, at what rate. However, if the operator drilling said well owns or controls the adjacent or contiguous oil and gas lease(s) and the correlative rights of the royalty owners would not be violated then the well need not be shut-in. Nevertheless, a hearing will be held to determine the status of the well.
- (b) Upon written application to the Board and notice to each offset owner to said drilling unit, an operator may commence the drilling of a well under this order at a surface location of the operator's choice within the quarter quarter section permitted under this order and at a total depth such well shall, at the bottom of the hole, be located within the boundaries of the quarter quarter section, provided, however, that the well be drilled and completed in accordance with the provisions of subparagraph (a) above.

CONCLUSIONS OF LAW

1. The Board has jurisdiction over all matters covered by the Application of American Quasar Petroleum Company for amendment to the spacing order for the Nugget and Twin Creek Formation in the Pineview Field, Summit County, Utah. The Board also has jurisdiction over all matters covered by the Notice of Hearing and over the subject lands and mineral leases covered by the Application, and all parties interested in said subject lands as their respective interests appear. Further, the Board has the authority under applicable law to make and enter the order set forth herein:
2. The Application is in the form as provided by the applicable statutes and the rules and regulations governing proceedings before the Board.
3. Due, proper, and regular notice of the time, place and purpose of the hearing was given to all interested parties in the form and manner and within the time prescribed by the applicable statutes and the rules and regulations of the Board.

That, pursuant to the foregoing Findings of Fact and Conclusions of Law, the Board hereby makes and adopts the following:

CONCLUSIONS

1. IT IS HEREBY ORDERED that the July 26, 1976 order entered in Cause No. 160-6 and any other applicable spacing order is amended to provide the following description of the area covered by said Order:

All of Sections 2,3,4,5,8,9,10 and 11 in Township 2 North, Range 7 East,
SLM, Summit County, Utah;

All of Sections 32,33,34 and 35 in Township 3 North, Range 7 East, SLM,
Summit County, Utah.

2. IT IS FURTHER ORDERED that Ordering Paragraph 2, Page 7 of the July
26, 1976 order entered in Cause No. 160-6 is amended to provide as follows:

- "2. In order to afford each owner of an interest in production from the subject lands an opportunity to protect his respective correlative right to produce the share of recoverable hydrocarbons initially in place under his respective tract, drilling and spacing units should consist of the N/2 and S/2 of each quarter section and the permitted well location for each such drilling and spacing unit shall be located in the center of the NW/4 and the center of the SE/4 of each quarter section with the tolerance of 200 feet in any direction when surface topography makes it necessary.
- (a) Provided, however, the wellbore shall not be perforated or otherwise open to production in a manner that the lowest perforation or producing interval is nearer than 300 feet, measured horizontally, from quarter quarter section line on which the well was drilled and if said perforations are closer than said 300', then said well shall be immediately shut-in until the Board, after notice and hearing, determines whether said well shall be (1) permitted to be produced or (2) straightened, and, if permitted to produce, at what rate. However, if the operator drilling said well owns or controls the adjacent or contiguous oil and gas lease(s) and the correlative rights of the royalty owners would not be violated then the well need not be shut-in. Nevertheless, a hearing will be held to determine the status of the well.
- (b) Upon written application to the Board and notice to each offset owner to said drilling unit, an operator may commence the drilling of said well under this order at a surface location of the operator's choice within the quarter quarter section permitted under this order and at a total depth such well shall, at the bottom of the hole, be located within the boundaries of the quarter quarter section, provided, however, that the well be drilled and completed in accordance with the provisions of subparagraph (a) above.

ENTERED THIS 25th day of September, 1980.

STATE OF UTAH
BOARD OF OIL, GAS AND MINING

Charles R. Henderson, Chairman

John L. Bell

ORDER
CAUSE NO. 160-18
Page Five

Edward T. Beck

E. Steele McIntyre

Max A. Farbman

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

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

RECEIVED
JAN 06 1994

5. Lease Designation and Serial Number:
UPRR Land Grant

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

7. Unit Agreement Name:
N/A

8. Well Name and Number:
UPRR 3-10

9. API Well Number:
N/A

10. Field and Pool, or Wildcat:
Pineview

County: Summit

State: Utah

1. Type of Well: OIL GAS OTHER:

2. Name of Operator:
Union Pacific Resources Company

3. Address and Telephone Number:
P.O. Box 7 MS 3407 Fort Worth, Texas 76101-0007

4. Location of Well
Footages: 1055' FSL & 1395' FEL (SL)
1650' FSL & 1870' FEL (BHL)
OQ, Sec., T., R., M.: SE/NW Sec. 3-2N-7E

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

NOTICE OF INTENT
(Submit in Duplicate)

Abandonment
 Casing Repair
 Change of Plans
 Conversion to Injection
 Fracture Treat
 Multiple Completion
 Other _____

New Construction
 Pull or Alter Casing
 Recompletion
 Shoot or Acidize
 Vent or Flare
 Water Shut-Off

Approximate date work will start _____

SUBSEQUENT REPORT
(Submit Original Form Only)

Abandonment*
 Casing Repair
 Change of Plans
 Conversion to Injection
 Fracture Treat
 Other _____

New Construction
 Pull or Alter Casing
 Shoot or Acidize
 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 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.)

Please be advised that the water source for drilling operations on the above mentioned well is the Chalk Creek located in Sec. 4-2N-7E, Summit County. The water hauler contractor is Dalbo, Inc. P.O. Box 1168 Vernal, Utah 84078 801-789-0743

Also, find attached, the surface owner agreement you requested prior to approval of UPRC's drilling permit.

If further information is needed, please contact the undersigned at (817) 877-6530.

13. Name & Signature: Cami Minzenmayer Title: Regulatory Analyst Date: 1-5-94

(This space for State use only)

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 1-6-94
BY: [Signature]

DRILLING LOCATION ASSESSMENT
State of Utah
Division of Oil, Gas and Mining

OPERATOR: UNION PACIFIC RESOURCES CORP. WELL NAME: UPRR 3-10
SEC: 3 TWP:2N RNG: 7E SURFACE LOC:1055 FSL 1395 FWL QTR/QTR SW SE
BOTTOM HOLE LOCATION: 1650 FSL 1870 FEL SEC: 3 QTR/QTR: NW SE
COUNTY: SUMMIT FIELD: PINEVIEW SURFACE OWNER: FEE
SURFACE AGREEMENT: FEE LAND OWNER
SPACING: 80 ACRES NUGGET
GEOLOGIST: HEBERTSON, JARVIS DATE AND TIME: DEC. 29, 1993 2:30 PM

PARTICIPANTS:

MIKE HEBERTSON, DAN JARVIS, BOBBIE COOPER, LES WILSON

REGIONAL SETTING/TOPOGRAPHY: WASATCH MOUNTAINS NORTHEAST PORTION OF THE STATE OVERTHRUST, HIGH ALPINE SLOPES, STEEP HILLS AND NARROW CANYONS. MOSTLY VEGETATED WITH TREES AND BUSHES.

LAND USE:

CURRENT SURFACE USE: GRAZING FOR DOMESTIC LIVESTOCK, WINTER RANGE FOR DEER AND WILDLIFE.

PROPOSED SURFACE DISTURBANCE: 5 ACRE LOCATION, RESERVE PIT AND ROAD ACCESS 16' WIDE.

AFFECTED FLOODPLAINS AND/OR WETLANDS: THE LOCATION IS IN THE BOTTOM OF A SECONDARY DRAINAGE SYSTEM. DIVERSIONS AROUND THE LOCATION WILL BE REQUIRED. THIS IS A WATER RECHARGE AND RUNOFF AREA DURING HIGH MOISTURE PERIODS FALL AND SPRING SEASONS.

FLORA/FAUNA: SAGEBRUSH, BITTER BRUSH, GRASSES; DEER, ELK, MOOSE, SQUIRRELS LIZARDS, HAWKS, EAGLES, SMALLER BIRDS, COYOTE, BOBCAT, INSECTS.

ENVIRONMENTAL PARAMETERS:

SURFACE GEOLOGY:

SOIL TYPE AND CHARACTERISTICS: CLAY AND SILT, GRAVEL FROM THE ECHO FORMATION.

SURFACE FORMATION & CHARACTERISTICS: ECHO CONGLOMERATE. LARGE ROCKS AND GRAVEL CEMENTED WITH SILT AND MUD STONE. WEATHERS TO SILTY CLAY AND HEAVY GAVELS.

EROSION/SEDIMENTATION/STABILITY: EROSION AND STABILITY COULD BE A PROBLEM DURING RUNOFF AND SPRING THAW, AND SUMMER THUNDER STORMS

PALEONTOLOGICAL POTENTIAL: NONE.

SUBSURFACE GEOLOGY:

OBJECTIVES/DEPTHS: THE OBJECTIVE FORMATION IS THE NUGGET FORMATION AT 12,000 ±. THE HOLE WILL BE DIRECTIONALLY DRILLED ABOUT 700 FEET TRENDING NORTHWEST.

ABNORMAL PRESSURES-HIGH AND LOW: THIS AREA IS UNDER PRESSURED AND THE ZONE MAY SHOW DEPLETION PRESSURES AS A RESULT OF PREVIOUS PRODUCTION. THE STUMP FORMATION MAY BE OVER PRESSURED AS A RESULT OF INJECTION OPERATIONS.

CULTURAL RESOURCES/ARCHAEOLOGY: NONE HAVE BEEN SITED.

CONSTRUCTION MATERIALS: LOCATION WILL BE CONSTRUCTED WITH MATERIALS AT THE SITE USING CUT & FILL AS AVAILABLE, OTHER MATERIAL WILL BE HAULED IN TO GRADE THE ROAD. SPOIL PILES WILL BE PLACED ABOVE AND BELOW THE LOCATION.

SITE RECLAMATION: AS REQUIRED BY THE SURFACE OWNER AGREEMENT.

RESERVE PIT:

CHARACTERISTICS: 190 X 95' CUT IN THE ECHO CONGLOMERATE ON THE SOUTHEAST SIDE OF THE LOCATION. PIT WILL BE PARALLEL TO THE PREVAILING WIND DIRECTION.

LINING: A LINER OF 12 MIL PLASTIC (MINIMUM) WILL BE REQUIRED AND THE PIT WILL BE PADDED OR SMOOTHED SO AS TO PREVENT THE LINER FROM BEING PUNCTURED.

MUD PROGRAM: AS SPECIFIED IN THE APD AND DRILLING PLAN.

DRILLING WATER SUPPLY: NOT STIPULATED.

OTHER OBSERVATIONS :

STIPULATIONS FOR APD APPROVAL:

1. PIT WILL BE PLACED IN CUT MATERIAL ON THE SOUTHEAST SIDE OF THE LOCATION.
2. PIT WILL BE PADDED OR SMOOTHED IN SUCH A WAY THAT A LINER OF 12 MIL PLASTIC WILL NOT PUNCTURE.
3. THE PIT WILL BE INSPECTED BEFORE THE LINER IS PLACED.
4. A BERM AND DITCH WILL BE PLACED ON THE SOUTH EDGE OF THE LOCATION AND WILL BE CONSTRUCTED SO AS TO PREVENT RUNOFF FROM ENTERING THE WELL PAD, AND DIVERT WATER OFF LOCATION TO THE WEST
5. THE BERM AND DITCH WILL BE RIP-RAPPED TO PREVENT ERROSION.

6. A SILT TRAP WILL BE PLACED IN THE BOTTOM OF THE DRAINAGE AT THE NARROWEST POINT SO AS TO PREVENT SILT FROM ENTERING CHALK CREEK.
7. THE ACCESS ROAD WILL BE DITCHED ON THE UPHILL SIDE AND WATER WILL BE DIVERTED TOWARDS THE NATURAL DRAINAGES.
8. A CULVERT WILL BE PLACED AT THE ENTRANCE TO LOCATION AND A DIVERSION DITCH MAINTAINED SO THAT WATER AND RUNOFF WILL RUN FREELY AROUND LOCATION.
9. TOP SOIL AND SPOIL PILES WILL BE BERMED AND DITCHED. FURTHER REVIEW OF THESE AREAS WILL BE CONDUCTED TO ASSURE STABILITY.

ATTACHMENTS

PHOTOGRAPHS WILL BE PLACED OF FILE.

STATE OF UTAH

Operator: UNION PACIFIC RES. CO.	Well Name: UPRR 3-10
Project ID:	Location: SEC 3,T2N, R7E

Design Parameters:

Mud weight (9.63 ppg) : 0.500 psi/ft
 Shut in surface pressure : 6000 psi
 Internal gradient (burst) : 0.000 psi/ft
 Annular gradient (burst) : 0.000 psi/ft
 Tensile load is determined using air weight
 Service rating is "Sweet"

Design Factors:

Collapse : 1.125
 Burst : 1.00
 8 Round : 1.80 (J)
 Buttress : 1.60 (J)
 Other : 1.50 (J)
 Body Yield : 1.50 (B)

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost		
1 12,000	5.500	20.00	P-110	LT&C	12,000	4.653			
	<u>Collapse</u>			<u>Burst</u>		<u>Min Int Yield</u>		<u>Tension</u>	
	Load	Strgth	S.F.	Load	Strgth	S.F.	Load	Strgth	S.F.
	(psi)	(psi)		(psi)	(psi)		(kips)	(kips)	
1	6000	11100	1.850	6000	12640	2.11	240.00	548	2.28 J

Prepared by : F. R. MATTHEWS, Salt Lake City, UT
 Date : 12-30-1993
 Remarks :

Minimum segment length for the 12,000 foot well is 12,000 feet.
 The mud gradient and bottom hole pressures (for burst) are 0.500 psi/ft and 6,000 psi, respectively.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1987 pricing model. (Version 1.06)

DRILLING WELL PLAN

Well Name: UPRR 3-10
County/State: Summit County, Utah
Proposed Depth: 12000 'MD/ 11400 'TVD
Location:
 Surface: 1055' FSL & 1395' FEL of Section 3-T 2N-R 7E
 Bottomhole: 1650' FSL & 1870' FEL of Section 3-T 2N-R 7E

Elevation: 6,835' Ground Level
 6,855' KB

Productive Formation: Nugget

SUMMARY

The UPRR 3-10 is proposed as a directional well to be drilled the Nugget formation to a depth of 12000 'MD/11400 'TVD. Horizontal displacement is 750'; wellbore direction is N-38.6-W.

PROPOSED DIRECTIONAL PROGRAM

Drill a 17-1/2" surface hole to 2000 '. Run 13-5/8" casing and cement to surface. Drill a 12-1/4" hole to 6800'. The surface and intermediate holes will be drilled with steerable mud motors and MWD surveying tools. The hole will oriented in a N-38.6-W direction and "nudged" to obtain a 750' displacement. Establish BHL with a multishot directional survey. Drill out and TD the well vertically through the Nugget in an 8-1/2" hole. Run and cement 5-1/2" casing at 12000' MD/ 11400' TVD. Directional surveys will be taken every 60' through the directional portion of the hole and at intervals no greater than 450' in the vertical section.

BOP PROGRAM

The Utah Oil, Gas and Mining Division of the Department of Natural Resources will be notified at least 24 hours prior to testing. The BOP's will be tested by an outside testing company and their report will be submitted to the State. Reference BOP Diagram attached.

Casing Program

<u>Size</u>	<u>Depth</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>
20"	0 - 50'	94.0#	J-55	-----
13-5/8"	0 - 2000'	54.4#	J-55	STC
9-5/8"	0 - 6800'	53.5#	L-80	LTC
5-1/2"	0 - 12000'	20.0#	P-110	LTC

Mud Program

<u>Interval (MD)</u>	<u>Mud Wt (PPG)</u>	<u>Viscosity</u>	<u>Wtr Loss (cc)</u>	<u>Remarks</u>
0' - 2000'	8.3- 8.8	40-45	NC	Fresh water mud
2000' - 6800'	8.5-15.0	35-50	NC	Fresh water mud
6800' - 12000'	9.0-10.0	35-45	NC - 10	Salt saturated water based mud

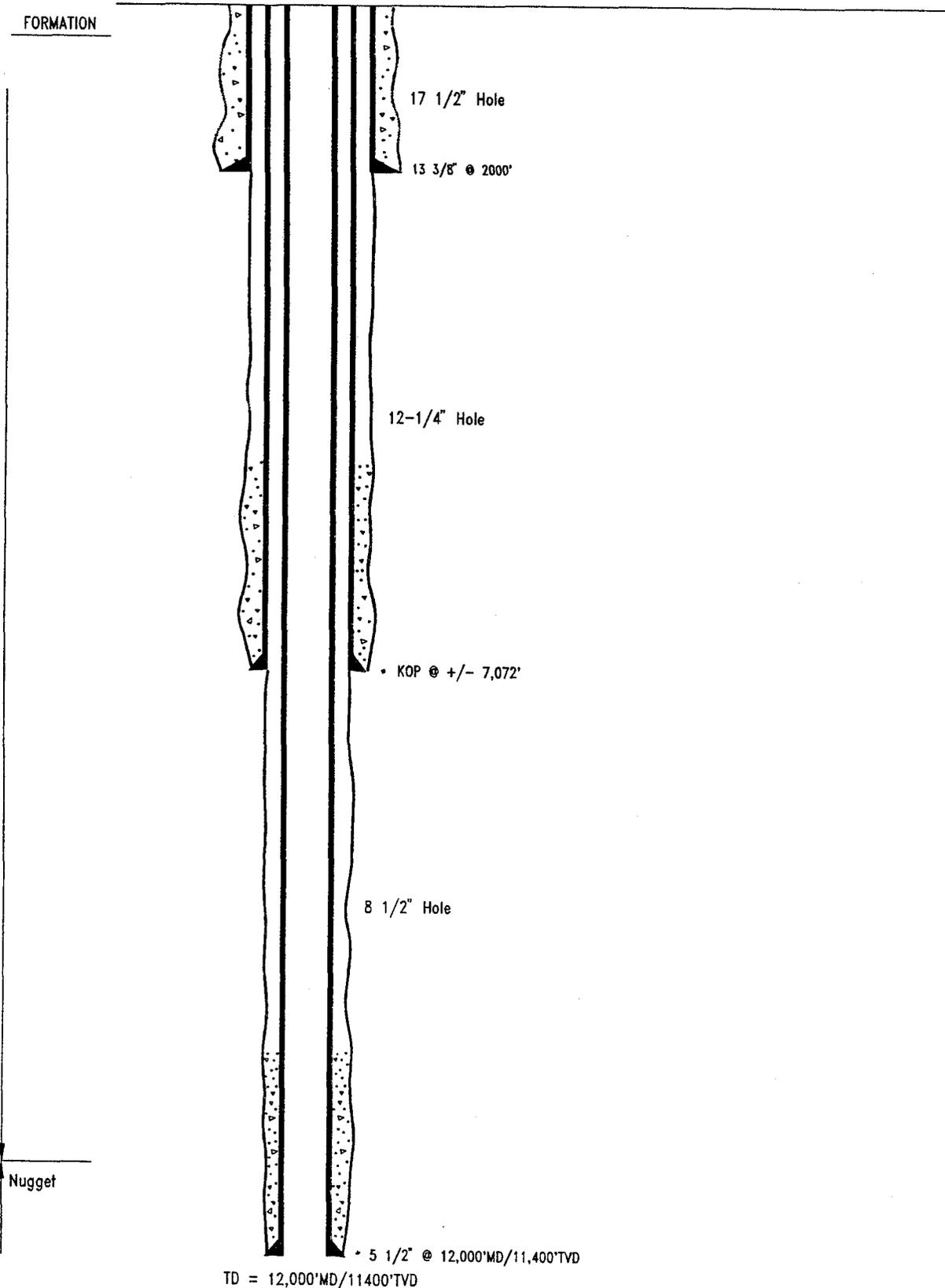
Cement Program

<u>Hole Size</u>	<u>Pipe Depth</u>	<u>Volume</u>	<u>Fill</u>	<u>Remarks</u>
17-1/2"	2000'	2450 cf	2000'	1200sx 35/63 Poz/G @ 12.7 ppg and 250 sx Class G @ 15.8 ppg.
12-1/4"	6800'	1800 cf	4000'	1800 sx Class H @16.2 ppg.
8-1/2"	5000'	1800 cf	5000'	1500 sx Class G + 24% salt @ 16.1 ppg.

- AFE# ?
- SUMMIT CO., UTAH
- NUGGET
- 12,000' MD / 11,400' TVD

- S.L.: 1055' FSL & 1395' FEL SEC. 3 - T2N - R7E
- BHL: 1650' FSL & 1870' FEL SEC. 3 - T2N - R7E
- GROUND LEVEL ELEVATION = 6,835'

FORMATION



TD = 12,000' MD / 11,400' TVD

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

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7. Unit Agreement Name:
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8. Well Name and Number:
UPRR 3-10

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10. Field and Pool, or Wildcat:
Pineview

County: Summit
State: Utah

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2. Name of Operator:
Union Pacific Resources Company

3. Address and Telephone Number:
P.O. Box 7 MS 3407 Fort Worth, Texas 76101-0007

4. Location of Well
Footages: 1055' FSL & 1395' FEL (SL)
1650' FSL & 1870' FEL (BHL)
CO. Sec., T., R., M.: SE/NW Sec. 3-2N-7E

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

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____	<input type="checkbox"/> Abandonment* <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Other _____
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off
Approximate date work will start _____	Date of work completion _____ Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.

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P.O. Box 1168
Vernal, Utah 84078
801-789-0743

Also, find attached, the surface owner agreement you requested prior to approval of UPRC's drilling permit.

If further information is needed, please contact the undersigned at (817) 877-6530.

13. Name & Signature: Cami Minzenmayer Cami Minzenmayer Title: Regulatory Analyst Date: 1-5-94

(This space for State use only)

DUPLICATE ORIGINAL
CHAMPLIN COPY

INDEXED: _____
GRANTOR: 2
GRANTEE: 2
RELEASED: _____
ABSTRACTED: A
STAMPED: _____

SURFACE OWNER'S AGREEMENT

THIS AGREEMENT, made and entered into this 20th
day of January, 1976, by and between

E.A. BINGHAM AND SONS, INC., a Utah Corporation,
with principal place of business at Honeyville, Utah

(hereinafter for convenience called the "Land Owner"), and CHAMPLIN
PETROLEUM COMPANY (hereinafter for convenience called "Champlin");

W I T N E S S E T H:

RECITALS:

Land Owner is the owner of the following described premises
hereinafter referred to as "described premises":

The Southeast Quarter (SE $\frac{1}{4}$) of Section Three (3),
Township Two (2) North, Range Seven (7) East of
S.L.B.&M., Summit County, Utah.

BOOK M77 PAGE 587

Book	130749	M77
Page	3-8-76 4920	587-593
Upland Industries		
By	S. G. S.	Handwritten Signature
Witness		

SUBJECT, however, to exceptions and reservations of minerals and rights of entry and of surface use contained in a certain deed or deeds of conveyance, as follows: Warranty Deed No. 607 dated June 6, 1901, from Union Pacific Railroad Company to Herbert Clark, recorded November 7, 1901, in Book G at Page 446, in the Office of the County Clerk of Summit County, Utah.

Champlin is successor in interest to all the right, title, and interest of Union Pacific Railroad Company in and to the oil, gas, and associated liquid hydrocarbons in said premises for a term or period equal to or exceeding the term of this Surface Owner's Agreement.

Champlin proposes for Champlin or its agents, lessees, licensees, successors, or assigns to prospect upon and explore the described premises for the development and production of oil, gas, and associated liquid hydrocarbon substances either on Champlin's behalf or under or pursuant to an oil and gas lease or license, or under or pursuant to a "unitization agreement," meaning here and wherever that term is used herein any operating agreement, or any other agreement covering the exploration or development for or the production of oil, gas, or associated liquid hydrocarbons, or any pooling, communitization, unit or other agreement whereby the described premises may be included with other lands in proximity thereto as a unit area under a plan of unit or joint exploration, development, and operation.

AGREEMENT:

NOW, THEREFORE, it is agreed as follows:

Section 1. In consideration of the mutual benefits and of the sum of [REDACTED] paid by Champlin to Land Owner, receipt whereof is hereby acknowledged, Land Owner hereby confirms, extends, and grants to Champlin, its agents, lessees, licensees, successors, and assigns, including any operator or unit operator from time to time in charge of operations under a unitization agreement, and their respective successors and assigns, the easements and rights to enter upon the described premises and to drill, construct, maintain and use upon, within, and over said premises all oil wells, gas wells, derricks, machinery, tanks, drips, boilers, engines, pipe, power and telephone lines, roadways, water wells, and, without limitation by reason of the foregoing enumeration, any and all other structures, equipment, fixtures, appurtenances, or

facilities (all the above being included under the term "facilities") necessary or convenient in prospecting and developing for, producing, storing, transporting, and marketing oil, gas, and associated liquid hydrocarbon substances under or produced from any portion of the described premises or under or produced from any portion of the unit area created under a unitization agreement, together with the right to remove said facilities. ~~and the right to such water as may be needed from the surface of the premises, not including water from land owned by the~~

57/2
6
A F B

Section 2. Champlin agrees, so long as it is receiving oil and/or gas production from or oil and/or gas royalties upon production from the described premises or allocated thereto under the provisions of a unitization agreement, to pay or cause to be paid to the Land Owner in cash the value on the premises of two and one-half percent (2 1/2%) of all the oil and gas and associated liquid hydrocarbons hereafter produced, saved, and marketed therefrom or allocated thereto as aforesaid, except oil and gas and associated liquid hydrocarbons used in operations on the premises or used under the unitization agreement, and except that as to casinghead gasoline and other products manufactured from gas there shall be deducted the cost of manufacture; provided, however, that during any time the described premises or any portion thereof are included within the boundaries of a participating, pooled, or communitized area, (to which inclusion Land Owner expressly consents) and there is no provision for the payment of royalties to Champlin but it participates in the production from the pooled, communitized, or unit area as a working interest owner, then the two and one-half percent (2 1/2%) above set forth shall be applied to that percentage of the total production from such area which is allocated to the described premises.

When production of oil from lands under several surface ownerships is commingled in one central tank setting for practical operating reasons, periodic individual well tests may be made to compute the quantities of commingled oil properly allocable to each well, and the two and one-half percent (2 1/2%) payment provided herein shall be payable upon the quantities apportioned to each well as reported to Champlin in full satisfaction of the obligations of Champlin under this Section 2.

Section 3. Should the described premises or any portion thereof at any time be committed to a unitization agreement, the operator or unit operator under such agreement may exercise the rights granted under Section 1 hereof during the period ending with the fifth calendar year following the date of this agreement without compensation to the Land Owner other than payment as above provided, but after said period if such operator shall install or maintain any facilities other than pipe or pole lines upon the described premises during any calendar year, it shall pay Land Owner [REDACTED] per acre for the acreage used during any part of that calendar year, if such use substantially deprives the Land Owner of the use of such acreage. The above amount of [REDACTED] per acre shall be subject to upward revision upon a showing by the Land Owner that the land involved has theretofore earned and is capable of earning a greater sum per acre.

Section 4. Nothing herein contained shall be construed as a covenant to drill by Champlin, its agents, lessees, licensees, successors, or assigns, or by any operator or unit operator, or as a grant to Land Owner of oil or gas rights or rights in other associated liquid hydrocarbons.

Section 5. Champlin, its agents, lessees, licensees, successors, and assigns, including the operator or unit operator under a unitization agreement, shall be required: (a) to pay for all damage to Land Owner's lands, buildings, ^{livestock, grass, & crops,} and growing crops caused by the erection or construction ^{or use} of facilities to be used in connection with oil or gas or associated liquid hydrocarbon operations; (b) to bury all pipe lines below plow depth where such lines cross cultivated land; and (c) to construct gates or at its option install cattle guards where necessary for crossing fenced land in connection with exploration, development, or producing operations and, where an election has been made to construct gates in lieu of cattle guards, to keep such gates in repair and closed. C-13
D

Section 6. Other than the payments to be made as aforesaid, the Land Owner shall not be entitled to any other or additional payments as a result of the conduct of operations upon the described premises.

Section 7. Subject to the provisions of Section 9 hereof, it is agreed that the covenants to pay the sums provided in Sections 2, 3, and 5 hereof shall be covenants running with the surface ownership of the described premises and shall not be held or transferred separately therefrom, and any sums payable under this agreement shall be paid to the person or persons owning the surface of the described premises as of the date the oil or gas

or associated liquid hydrocarbon production is marketed. Champlin shall not, however, become obligated to make such payments to any subsequent purchaser of the described premises and shall continue to make such payments to the Land Owner until the first day of the month following the receipt by Champlin of notice of change of ownership, consisting of the original or certified copies of the instrument or instruments constituting a complete chain of title from the Land Owner to the party claiming such ownership, and then only as to payments thereafter made.

Section 8. The easements, rights, and uses herein shall be binding upon the described premises and each and every part thereof, and the present and future owners thereof, and shall continue for the benefit of the present or future owners of the oil and/or gas and/or associated liquid hydrocarbon rights in the described premises and each and every part thereof and their agents, lessees, licensees, successors, and assigns, including any operator or unit operator, and for the benefit of other lands within any unit area within which the described premises, or any portion thereof may be included, and each and every part thereof.

Section 9. This agreement shall be in full force and effect from and after execution and delivery and shall continue in full force and effect for a period of one (1) year and so long thereafter as the oil and gas rights in the described premises are committed to an oil and gas lease or license or to a unitization agreement, or so long as a well capable of producing oil or gas or associated liquid hydrocarbons is located upon the described premises, or drilling or reworking operations are being conducted thereon, and, upon termination of such lease, license, or unitization agreement, or upon abandonment of such well, or upon cessation of such drilling or reworking operations, whichever last occurs, this agreement shall terminate; provided, however, that such termination shall neither affect nor terminate the rights, expressed or implied, in the deed or deeds referred to in the Recitals hereof.

Section 10. Subject to the provisions of Sections 7 and 9 hereof, this agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors, and assigns.

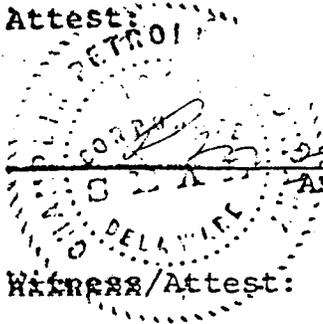
~~Section 11. _____, wife of the above-named Land Owner, does hereby join with her husband in the execution of the foregoing agreement, hereby releasing and waiving all right of homestead and dower in and to the lands above described.~~

6-7-73
217

IN WITNESS WHEREOF, the parties hereto have executed this

agreement as of the day and year first above written.

Attest:



Assistant Secretary

Witness/Attest:

Earl L. Bingham
Secretary

CHAMPLIN PETROLEUM COMPANY

By D. Churchill
Vice President

B. A. BINGHAM AND SONS, INC.
a Utah Corporation - Land Owner

By Robert F. Bingham
Vice President

87-0243764A
Social Security or
Tax Identification Number

Social Security or
Tax Identification Number

Social Security or
Tax Identification Number

Social Security or
Tax Identification Number

XXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXX

CORPORATE ACKNOWLEDGMENT

State of Utah)
County of) ss
)

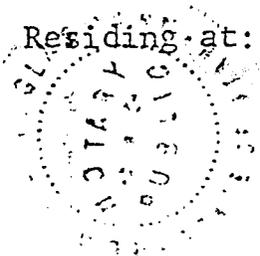
On this 20th day of January, 1976, before me; a Notary Public in and for said County, in the State aforesaid, personally appeared Albert F. Bingham, to me personally known, and to me personally known to be the Vice President of B.A. BINGHAM AND SONS, INC. and to be the same person whose name is subscribed to the foregoing instrument, and who, being by me duly sworn, did say that he is the Vice President of said Company; that ~~the seal affixed to said instrument~~ ~~is the corporate seal of said Corporation~~ and that said instrument was signed ~~and sealed~~ on behalf of said corporation by authority of its Board of Directors; and the said Albert F. Bingham acknowledged said instrument to be his free and voluntary act and deed, and the free and voluntary act and deed of said Corporation, by it voluntarily executed, for the uses specified therein.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year above written.

My commission expires May 7 1978
Blaine H. [Signature]
Notary Public

Residing at: [Signature]

(SEAL)





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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

January 6, 1994

Union Pacific Resources Company
P.O. Box 7
Fort Worth, Texas 76101-0007

Re: UPRR 3-10 Well, 1055' FSL, 1395' FEL, SE NW, Sec. 3, T. 2 N., R. 7 E., Summit County, Utah

Gentlemen:

Pursuant to Utah Code Ann. § 40-6-6, (1953, as amended) and the order issued by the Board of Oil, Gas and Mining in Cause No. 160-18 dated September 25, 1980, approval to drill the referenced well is hereby granted.

In addition, the following specific actions are necessary to fully comply with this approval:

1. Union Pacific Resources Company ("UPRC"), as designated operator, is the bonded principal in reference to this Application for Permit to Drill. Should this designation change or a transfer of ownership occur, liability will remain with UPRC until the division is notified by letter of a new bonded principal.
2. Compliance with the stipulations of the Drilling Location Assessment Report dated December 29, 1993. (Copy attached).
3. A sufficient quantity of cement should be used in order to have cement above the Stump formation at approximately 5700'. The cement top should be confirmed by running a suitable cement log.
4. Submittal of directional drilling data upon completion of drilling operations to properly ascertain the location of the producing formation.
5. Compliance with the requirements of Utah Admin. R. 649-1 et seq., Oil and Gas Conservation General Rules.



Page 2
Union Pacific Resources Company
UPRR 3-10 Well
January 6, 1994

6. Notification within 24 hours after commencing drilling operations.
7. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.
8. Submittal of the Report of Water Encountered During Drilling, Form 7.
9. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or Mike Hebertson, Oil and Gas Field Specialist, (Home) (801)269-9212.
10. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.

This approval shall expire one year after date of issuance unless substantial and continuous operation is underway or a request for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-043-30302.

Sincerely,



R.J. Firth
Associate Director, Oil and Gas

ldc
Enclosures
cc: Summit County Assessor
Bureau of Land Management, Salt Lake District Office
WO11

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: UNION PACIFIC RESOURCES

WELL NAME: UPRR # 3-10

API NO. 43-043-30302

Section 3 Township 2N Range 7E County SUMMIT

Drilling Contractor SST

Rig # 56

SPUDDED: Date 1/20/94

Time 7:30 AM

How ROTARY

Drilling will commence _____

Reported by BOBBIE COOPER

Telephone # 1-640-0726

Date 1/25/94 SIGNED _____ FRM _____

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

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 <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER:	5. Lease Designation and Serial Number: UPRR Land Grant
2. Name of Operator: Union Pacific Resources Company	6. If Indian, Allottee or Tribe Name: N/A
3. Address and Telephone Number: P.O. Box 7 MS 3407 Fort Worth, Texas 76101-0007 817-877-6530	7. Unit Agreement Name: N/A
4. Location of Well Footages: 1055' FSL to 1395' FEL (SL) 1650' FSL to 1870' FEL (BHL) OO, Sec., T., R., M.: SE/NW Sec. 3-2N-7E	8. Well Name and Number: UPRR 3-10
	9. API Well Number: 43-043-30302
	10. Field and Pool, or Wildcat: Pineview
	County: Summit State: Utah

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

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____	<input type="checkbox"/> Abandonment * <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input checked="" type="checkbox"/> Other <u>Spud date & chronological report</u>
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off
Approximate date work will start _____	Date of work completion _____
	Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION 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.)

Please be advised that the above-mentioned well spud on 01-20-94 by SST # 56 rig.
Also, attached is the chronological report for the well from spud to today's date.
If further information is needed, please contact the undersigned

RECEIVED
FEB 01 1994
DIVISION OF
OIL, GAS & MINING

13. Name & Signature: Cami Minzenmayer / Cami Minzenmayer Title: Regulatory Analyst Date: 01-31-94

(This space for State use only)

OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
 AFE No. :16830
 FIELD :LODGEPOLE TWIN CREEK

WELL No. :
 API No. :49-043-30302
 RIG :SST #56

SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
01/20/94	74.00		<p>AFE #16830 IN THE AMOUNT OF \$1,850M TO DRILL, COMPLETE, & EQUIP A 10,400' NUGGET TEST WELL AT 1050' FSL, 1395' FEL, SECTION 3, T2N, R7E, SUMMIT COUNTY, UTAH. 6859' RKB (24' GL KB). API #49-043-30302.</p> <p>08:00 21:00 RIG UP 21:00 03:00 MIX MUD. RIG ON DAYWORK @ 2100 HRS. 1/19/94. 03:00 05:00 PU/LD BHA & TOOLS - GUAGE, STRAP, PU BHA</p> <p>DRLG./24 HRS.:0 HRS./CUM.:0 HRS.\\FUEL/24 HRS.:7787 GALS./CUM.:7787 GALS.\\0 CUM. ROT. HRS. ON BHA SINCE LAST INSPECTION.</p> <p>WEATHER: CLEAR, CALM, 25 DEG. F./LOC. & ACCESS: GOOD</p>
01/21/94	372.0	05:00 07:30	<p>PU/LD BHA & TOOLS - CONT'D PU BHA & HANDLING TOOLS FOR LARGE DCS. TAG CEMENT @ 69'. SPUD WELL @ 0730 HRS. 1/20/94.</p> <p>07:30 08:00 DRILL CEMENT 69-74' 08:00 16:30 DRILL ROTATE 74-211' - 10-25M# WOB/90 RPM/100 SPM ON 1 PUMP UNTIL LARGE DCS ARE BURIED BELOW CONDUCTOR,</p> <p>16:30 16:45 WIRELINE SURVEY @ 167' - 0.5 DEG. 16:45 19:00 TRIP - INSTALL 3-PT. REAMERS @ 74' & 113' ABOVE BIT. 19:00 03:30 DRILL ROTATE 211-337' - RUN 25M# WOB/90 RPM/100 SPM ON 1 PUMP. DRILLING ROUGH WITH REAMERS IN HOLE 211-223', LOST PARTIAL RETURNS 217-220', PUMP LCM PILL, REGAINED FULL RETURNS. LOST TOTAL OF 100 BBLs. BELIEVE HOLE LOADING UP, CAUSING ROUGH DRILLING WITH REAMERS/LOST RETURNS, INCREASE PUMP RATE TO 75 SPM ON BOTH PUMPS, HOLE STARTED TO "SMOOTH OUT".</p> <p>03:30 04:00 WIRELINE SURVEY @ 293' - 0.75 DEG. 04:00 05:00 DRILL ROTATE 337-372' - 25M# WOB/90 RPM/75 SPM ON BOTH PUMPS.</p> <p>DRILLING 100% SAND 74-270', 70% CLAY/30% SAND 270-372'\\WILL INCREASE RPM TO 120/PUMP RATE TO 100 SPM ON BOTH PUMPS/START CUTTING BACK ON VIS ONCE 8" DCS ARE BURIED BELOW CONDUCTOR.</p> <p>INFORMED UTAH DEPT. OF NATURAL RESOURCES (CINDY EMAL) OF WELL SPUD @ 1315 HRS. 1/20/94.</p> <p>DRLG./24 HRS.:18.0 HRS./CUM. 18.0 HRS.\\FUEL/24 HRS.:0 GALS./CUM.:7787 GALS.\\18.5 CUM. ROT. HRS. ON BHA SINCE LAST INSPECTION.</p> <p>WEATHER: CLEAR, CALM, 25 DEG. F./LOC. & ACCESS: GOOD</p>
01/22/94	837.0	05:00 07:00	<p>DRILL ROTATE 372-427' - 25M# WOB/90 RPM/75 SPM ON EACH PUMP. ROP STEADILY IMPROVING, SHAKER SAMPLES SHOWING GRADUALLY MORE CLAY.</p> <p>07:00 07:15 WIRELINE SURVEY @ 383' - 1.25 DEG. 07:15 10:15 DRILL ROTATE 427-513' - 25M# WOB/110 RPM/100 SPM</p>

OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
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WELL No. :
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SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
			ON EACH PUMP. INCREASE RPM & PUMP RATE WITH 8" DCS BURIED BELOW CONDUCTOR. START CUTTING BACK VIS ON MUD. ROP UP TO 35-40 FPH, DRILLING 100% CLAY. FLOWLINE PLUGGED OFF/ DEVELOPED LARGE MUD RING IN TOP OF CONDUCTOR @ 513'.
		10:15 14:15	CLEAN OUT FLOWLINE & CONDUCTOR - UN PLUG FLOWLINE, WORK LARGE MUD RING OUT OF CONDUCTOR, CIRCULATE & THIN BACK HIGH VIS MUD COMING FROM ANNULUS WITH WATER, PUMP/CLEAN OUT CELLAR. NO BIT BALLING/PIPE FREE DOWNHOLE - JUST LARGE CHUNKS OF PURE BENTONITE IN UPPER PORTION OF ANNULUS.
		14:15 15:15	DRILL ROTATE 513-541' - 10-15M# WOB/110 RPM/100 SPM
		15:15 15:45	ON EACH PUMP. LIMIT ROP TO NO MORE THAN 30 FPH UNTIL VIS ON MUD @ FLOWLINE UNDER CONTROL. WIRELINE SURVEY @ 497' - 0.75 DEG.
		15:45 02:45	DRILL ROTATE 541-791' - 25-30M# WOB/110 RPM/100 SPM ON EACH PUMP. SHAKER SAMPLES SHOWING LESS CLAY. RESUME RUNNING FULL DESIRED WOB.
		02:45 03:00	WIRELINE SURVEY @ 747' - 1.0 DEG.
		03:00 05:00	DRILL ROTATE 791-837' - 25-30M# WOB/110 RPM/100 SPM ON EACH PUMP. START DUMPING MUD TANKS/ RUNNING MORE WATER TO CONTROL WEIGHT.
			DRILLING 85-100% CLAY/15-0% SAND\\LIMITING ROP TO 30 FPH/RUNNING WATER & DUMPING POLYMER DOWN DRILLPIPE ON EACH CONNECTION IN BENTONITE SECTIONS.\\NO MUD LOSSES OBSERVED LAST 24 HRS.
			REC'D 53 JTS. 13 3/8", 54.5#, J-55, STC CASING 1/21/93\\DOWELL SCHLUMBERGER SET & LOADED CEMENT BINS ON LOCATION WITH LEAD SLURRY FOR SURFACE CASING JOB.
			DRLG./24 HRS.:18.0 HRS./CUM.:36.0 HRS.\\ FUEL/24 HRS.:0 GALS./CUM.:7787 GALS.\\36.5 CUM. ROT. HRS. ON BHA SINCE LAST INSPECTION
			WEATHER: CLEAR, CALM, 20 DEG. F./LOC. & ACCESS: DRY/GOOD
01/23/94	1207.	05:00 11:00	DRILL ROTATE 837-978' - 25M# WOB/110 RPM
		11:00 11:15	WIRELINE SURVEY @ 934' - 1.25 DEG.
		11:15 16:30	DRILL ROTATE 978-1102' - 25M# WOB/110 RPM - ATTEMPTED TO INCREASE WOB, IMPROVED ROP, BUT HOLE LOADING UP, SUBSEQUENT CONNECTION TIGHT, RESUME RUNNING 25M# WOB. ROP SLOWED TO 10 MPF @ 1100', DECIDE TO TOH TO CHECK BIT.
		16:30 17:00	WIRELINE SURVEY @ 1058' - 0.75 DEG.
		17:00 17:30	CIRCULATE - PRIOR TO TOH
		17:30 21:00	TRIP - FOR BIT #2, NO TIGHT SPOTS ON TOH, 3-PT. REAMERS
			1/8" UNDER GAUGE, BIT #1 3/8" UNDER GAUGE, CHANGE OUT BIT, TIH.
		21:00 22:00	REAM 1041-1102' - REAM 61' OF OUT OF GAUGE HOLE, NO FILL.
		22:00 05:00	DRILL ROTATE 1102-1207' - 10-40M# WOB/70-110 RPM. IRREGULAR DRILLING, ROUGH IN SPOTS

OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
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WELL No. :
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SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
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			<p>DRILLING 85-100% CLAY/15-0% SAND 837-1100' & 60-80% CLAY, 40-20% CONGLOMERATE 1100-1207'\\ NO MUD LOSSES OBSERVED LAST 24 HRS. \\ \\RUNNING WATER & SOLIDS CONTROL EQUIPMENT/ DUMPING TANKS TO HOLD DOWN MUD WEIGHT \\ \\BACTERIA CHECK RUN ON SOURCE WATER FROM CREEK NEGATIVE IN 24 HRS.</p> <p>DRLG./24 HRS.:18.25 HRS./CUM.:54.25 HRS.\\ FUEL/24 HRS.:0 GALS./CUM.:7787 GALS.\\55.75 CUM. ROT. HRS. ON BHA SINCE LAST INSPECTION</p> <p>WEATHER: CLEAR, CALM, 25 DEG. F./LOC. & ACCESS: DRY/GOOD</p>
01/24/94	1418.	05:00 06:30	<p>DRILL ROTATE 1207-1227' - 10-40M# WOB/70-110 RPM. IRREGULAR, ROUGH DRILLING IN SPOTS. WIRELINE SURVEY @ 1183' - 1.25 DEG.</p>
		06:30 07:00	<p>DRILL ROTATE 1227-1337' - 10-40M# WOB/70-110 RPM</p>
		07:00 22:30	<p>HAVING TROUBLE WITH BIT BALLING UP. RUNNING SAPP & NUT PLUG TO KEEP BIT CLEAR. SIGNIFICANT INCREASE IN TORQUE/REDUCTION IN ROP @ 1330', SUSPECT BIT GOING OUT OF GAUGE.</p>
		22:30 23:00	<p>CIRCULATE - PRIOR TO TOH FOR BIT #3</p>
		23:00 01:00	<p>TRIP - TOH FOR BIT, 20-30M# OVERPULL 1337-1240', NO OTHER TIGHT SPOTS, CHANGE OUT BIT, TIH.</p>
		01:00 01:30	<p>REAM 1292-1337' - REAM 45' OUT OF GAUGE HOLE, NO FILL.</p>
		01:30 05:00	<p>DRILL ROTATE 1337-1418' - 35M# WOB/90 RPM</p>
			<p>DRILLING 60-80% CLAY/40-20% CONGLOMERATE\\NO MUD LOSSES LAST 24 HRS.\\BACTERIA CHECK RUN ON MUD FILTRATE 1/23/94 NEGATIVE AFTER 24 HRS.</p> <p>DRLG./24 HRS.:20.5 HRS./CUM.:74.75 HRS.\\FUEL/ 24 HRS.:0 GALS./CUM.:7787 GALS.\\76.75 CUM. ROT. HRS. ON BHA SINCE LAST INSPECTION</p> <p>WEATHER: PARTLY CLOUDY, 0-5 MPH WINDS/W, 35 DEG. F./LOC. & ACCESS: DRY/GOOD</p>
01/25/94	1867.	05:00 06:00	<p>DRILLED 1418-1442</p>
		06:00 06:30	<p>SURVEY @ 1442 1/4 DEG.</p>
		06:30 06:45	<p>DRILLED 1442-1449</p>
		06:45 09:00	<p>RIG REPAIR (BROKE OILER CHAIN IN DRAW WORKS)</p>
		09:00 15:30	<p>DRILLED 1449-1590</p>
		15:30 16:30	<p>RIG REPAIR (CHECK OUT PUMPS F/ PRESSURE LOSS)</p>
		16:30 23:30	<p>DRILLED 1590-1721</p>
		23:30 24:00	<p>SURVEY @ 1691 1 3/4 DEG.</p>

OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
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WELL No. :
 API No. :49-043-30302
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SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
		24:00 05:00	DRILLED 1721-1867 DRILLING SILTSTONE 100%\ \ NO MUD LOSSES LAST 24 HRS, DRLG./24 HRS.:19.75 HRS./CUM.:95.50 HRS.\ \ FUEL/24 HRS.:0 CUM.: 7787\ \ 96.50 CUM. ROT. HRS. ON BHA SINCE LAST INSPECTION. WEATHER:42 DEG.F. OVERCAST CALM LOCATIO9N AND ACESS DRY/GOOD
01/26/94	2034.	05:00 09:30	DRILLED 1867-1970
		09:30 10:00	CIRCULATE FOR TOH
		10:00 14:30	TRIP FOR BIT, CHANGE BIT AND BITSUB, CHECK FLOAT
		14:30 15:00	WASH/REAM OUT OF GUAGE HOLE, 70'
		15:00 20:00	DRILLED 1970-2034, CSG POINT.
		20:00 21:30	CIRCULATE AND CONDITION FOR CSG.
		21:30 02:00	DROP SURVEY, TOH, TRIP CHECK BHA, LD 5" H90 PX 4 1/2 IF B, CRACKED PIN. SURVEY WAS A MIS RUN.
		02:00 05:00	RU WEATHERFORD, PU AND RUN 13 3/8" 54.5# K-55 STC. DRLG./24 HRS.:9.5, CUM:120,\ \ FUEL:0, CUM:7787 106 HRS. SINCE LAST BHA INSPECTION. WEATHER:30 DEG.F. PARTLY CLOUDY CALM, LIGHT SNOW LOCATION AND ACESS DRY/GOOD
01/27/94	2034.	05:00 12:30	PU AND RUN 50 JTS OF 13 3/8" 54.5# K55 STC, 2029.31', LANDED @ 2029, FLOAT COLLAR IS @ 1989.73', RU DS, CIRC W/ RIG PUMP, CHANGE OVER, PUMP 30 BBL OF WATER, 1545 SX OF 35-65 POZ, W/ 6% GEL, 2% S1, 1/4# SX D-29, WT. 12.7, YEILD 1.79, 493 BBL OF SLURRY, TAIL IN WITH 250 SX OF "G", WT 15.8, YEILD 1.16, 51 BBL OF SLURRY, DROP PLUG AND DISPLACE WITH 302 BBL OF FRESH WATER, BUMPED PLUG WITH 1000# @ 11:30 AM, RELEASED, FLOATS HELD OK, CEMENT FELL OUT OF SIGHT RIGHT AWAY, RAN A TAPE IN HOLE 60', NO SIGN OF CEMENT, PU100' OF 1", PUMP 100 SX OF "G", WITH 2% CACL2, NO CEMENT TO SURFACE, PULLED 1", CEMENT @ 46', WIPED OFF CEMENT AND RAN 1" BACK, CEMENT FELL @ 5' MIN, ORDERED MORE CEMENT. CIRCULATED A TOTAL OF 148 BBL OF CEMENT TO PITS ON ORIGINAL JOB, NO LOST RETURNS.
		12:30 22:30	WAIT ON CEMENT, PU 100' OF 1", TAG CEMENT @ 80' MIX AND PUMP 100 SX OF "G", WITH 3% CACL2, CIRC 2 BBL OF CEMENT TO PITS, RD DS, WOC. CEMENT FELL BACK 5' BELOW CELLAR FLOOR.

OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
 AFE No. :16830
 FIELD :LODGEPOLE TWIN CREEK

WELL No. :
 API No. :49-043-30302
 RIG :SST #56

SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
		22:30 04:30	CUT OFF COND., MAKE ROUGH CUT, MAAKE FINAL CUT, PREHEAT AND WELD ON CSG. HEAD, COOL DOWN AND TEST CSG HEAD TO 800# FOR 15 MIN. "OK"
		04:30 05:00	NU BOP CUM.: ROT.HRS.:120,\\FUEL:0 CUM.:7787 BHA INSPECTED ON TRIP OUT OF HOLE. WEATHER: 30 DEG. F. CLOUDY, CALM, 5" OF NEW SNOW LAST 24 HRS, MOST OF IT SINCE MIDNIGHT, STILL SNOWING. LOCATION AND ACESS SNOW COVERED BUT GOOD FOR NOW.
01/28/94	2038.	05:00 13:00	NU BOP
		13:00 18:30	TESTBLIND RAMS,CHOKE MANIFOLD, CHOKE LINE,KILL LINE,CHOKE,UPPER AND LOWER KELLEY VALVES, AND FLOOR VALVES TO 250 LOW, AND 3500 HIGH, TEST ANNULAR TO 250 LOW, AND 1500 HIGH. HAD TO ND ROTATING HEAD TO GET TEST PLUG DOWN, ID 13.25" POURED 7 SACKS OF DRY MIX BETWEEN CONDUCTOR PIPE AND SURFACE CASIG, TO FILL UP.
		18:30 20:00	NU ROTATING HEAD BACK UP.
		20:00 21:00	TIH TAG CEMENT @ 1980'
		21:00 22:45	DRILL 11' OF SOFT CEMENT,FLOAT COLLAR, AND 18' OF SOFT CEMENT
		22:45 23:00	TEST CASING TO 1000# F/ 15 MIN. "OK"
		23:00 23:30	DRILL 18' OF SOFT CEMENT, SHOE, AND 4' OF NEW HOLE.
		23:30 24:00	CIRCULATE BOTTOMS UP PRIOR TO RUNNING GYRO
		24:00 03:30	RU AND RUN SLICK LINE GYRO
		03:30 04:30	TOH
		04:30 05:00	PU NEW 3/4 DEG MOTOR AND MWD ROT. HRS 1/4, CUM: 120.25,\\FUEL:0, CUM:7787 1/4 HR. SINCE LAST BHA INSPECTION. WEATHER: 18 DEG.F. HAZEY, WINDS SOUTH @ 5 MPH LOCATION AND ACESSSNOW PACKED AND ICEY, TR NEW SNOW LAST 24 HRS. CEMENT DIDN'T APEAR TO BE SET UP WELL, DRILLED IT W/ 5-10K @ 30'/HR, O9NLS SLOWED DOWN ON PLUG AND FLOAT EQUIPMENT.
01/29/94	2445.	05:00 05:00	PU BHA, TRIP, RIG REPAIRS,DRILL AND SURVEY PU BHA & TOOLS TIH

OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
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WELL No. :
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SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
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			CLEAN JUNK OUT OF PUMPS DRILL ROTATE DRILL SLIDE 2219-2229 328-330 2219-2229 310-320 2250-2262 300-310 2281-2291 300-310 2343-2358 290-300 2374-2385 290-300 MWD SURVEY ROT. HRS:14.75, CUM:135, FUEL:0, CUM:7787 14.75 HRS SINCE LAST BHA INSPECTION.MOTOR# 963-008 14.75 ROT HRS, TOTAL HRS ON PUMP:16.75 MWD: TOTAL HR.ON PUMP:16.75 TOTAL IN HOLE.20.5 WEATHER:22 DEG. F. CLEAR,CALM, NO SNOW LAST 24 HRS. LOCATION AND ACESS SNOW PACKED AND SLICK 01/30/94 2836. 05:00 05:00 DRILLING 100% SHALE, LIGHT GRAY (STICKEY) DRILL,SURVEY,TRIP,RIG SERVICE,CHANGE BHA DRILL ROTATE SURVEY SERVICE RIG DRILL SLIDE 2468-2488 290-300 2529-2560 290-320 2591-2620 285-300 2622-2643 280-290 2658-2678 270-280 2690-2711 270 2721-2742 280-300 2752-2772 280-300 2782-2797 300-315 TRIP WASH 30' TO BTM. PU/LD BHA & TOOLS LD MUD MOTOR,AND 1 MONEL ROT.HRS.:16, CUM:151\FUEL:0,CUM:7787\30.75 HRS SINCE LAST BHA INSPECTION,\MOTOR #963-004 7.75 DRLG. HRS,9 TOYAL HRS IN HOLE. MWD:36 HRS. ON PUMP, TOTAL HRS IN HOLE:24.5 WEATHER:20 DEG.CLEAR,CALM, 1" NEW SNOW LAST 24 HRS. LOCATION AND ACESS SNOW PACKED AND SLICK. 01/31/94 3517. 05:00 05:00 DRILL,SURVEY,REPAIRS DRILL ROTATE SURVEY
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OPERATION SUMMARY REPORT

WELLNAME :UPRR 3-10
AFE No. :16830
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WELL No. :
API No. :49-043-30302
RIG :SST #56

SUMMARY OF OPERATIONS FROM REPORT No. 1 TO REPORT No. 12

DATE	DEPTH	TIME	WORK DESCRIPTION DIARY
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WORK ON PUMP

DRILL SLIDE
2845-2894 300-320
2908-2929 290-320
3000-3010 300-320
3010-3020 300-320
3032-3052 300
3126-3146 20-40L
3152-3173 30-40L
3314-3339 90L
3469-3474 90L

ROT.HRS.:20.5,CUM:171.5\FUEL:0, CUM:7787.
51.25 HRS, SINCE LAST BHA INSPECTION\MOTOR #
963-004 28.25 DRLG HRS.27 TOTAL HRS ON PUMP
MWD:59.5 HRS ON PUMP, TOTAL HRS IN HOLE:48.5

WEATHER:0 DEG. CLEAR, CALM, NO NEW SNOW LAST
24 HRS.LOCATION AND ACESS SNOW PACKED AND SLICK

DRILLING 100% DARK GRAY SHALE SINCE 23:00 LAST
NIGHT, AVERAGING ABOUT 18-20 FT. HR.



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

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

April 7, 1994

Carolyn Fluman
Union Pacific Resources Co.
P. O. Box 7 MS 2602
Fort Worth, Texas 76101-0007

Re: Request for Completed Entity Action Form - UPRR 3-10
SWSE Sec. 3, T. 2N, R. 7E - Summit County, Utah

Dear Ms. Fluman:

This is written to remind you that all well operators are responsible for sending an Entity Action Form to the Division of Oil, Gas and Mining within five working days of spudding a new well. This office was notified that your company spudded the UPRR 3-10 well, API Number 43-043-30302, on January 20, 1994. At this time, we have not received an Entity Action Form for this well.

Please review the instructions on the back of the enclosed form. Make sure you choose the proper Action Code to show whether the well will be a single well with its own sales facilities (Code A), a well being added to an existing group of wells having the same tank battery and common division of royalty interest (Code B - show existing Entity Number to which well should be added), or a well being drilled in the participating area of a properly designated unit (Code B). Complete the form and return it to us by April 18, 1994.

Your attention to this matter is appreciated. If we can be of assistance to you, please feel free to call Lisha Cordova at the above number.

Sincerely,

Don Staley
Administrative Supervisor

lec
Enclosure
cc: R. J. Firth
File





Union Pacific Resources

A Subsidiary of Union Pacific Corporation

FAX TRANSMISSION

DATE: 4-11

TIME: 2:30

TO: Lisha Cordova

LOCATION: St of Utah

FAX NUMBER: 801-359-3940

FROM: Carolyn Fluman

MAIL STATION: 2602 LOCATION: Fort Worth

PHONE NUMBER: 817-877-6467

Fax Number: 817-877-6230

NUMBER OF PAGES (INCLUDING COVER): 2

COMMENTS: Let me know if the attached
is properly completed.
If so, I will mail original today -
Sorry for the delay -
Thanks
Carolyn

8

3 Truad Center
Suite 350
Salt Lake City, Ut.
84180-1203

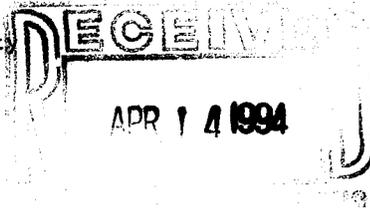
OPERATOR Union Pacific Resources OPERATOR ACCT. NO. N 9465
ADDRESS PO Box 7 MS 2602
Fort Worth TX 76101-0007

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	11626		43-043-30302	UPRR 3-10	SWSE	3	2N	7E	Summit	1/20/94	
WELL 1 COMMENTS: <u>Lodgepole Field</u> Entity added 4-11-94. <u>Jee</u> <u>Iron Creek Formation</u>											
D	10860		4304330290	UPRC #1	SENW	17	2N	7E	Summit	12-7-93 3/22/88	<u>Complete</u> 2-24-94
WELL 2 COMMENTS: <u>Elkhorn Field - Iron Creek - Dry Hole</u> <u>No chg. necessary. Jee</u> <u>recompleted to Nuggett - Water Disposal Well</u>											
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.



Cecily Fluman
Signature
Dr Accountant 4/11/94
Title Date
Phone No. 817 877-6467

RECEIVED

MAY 10 1994
DIVISION OF
OIL GAS & MINING

UNION PACIFIC RESOURCES COMPANY

UPRR #3-10 43-043-30302

1050' FSL & 1395' FEL

SW SE SECTION 3, T2N, R7E

PINEVIEW FIELD

SUMMIT COUNTY, UTAH

Note: *This is a directional hole with the bottom hole location 566' north and 378' west of the surface location in the same quarter section.*

Prepared by:

Wayne Freisatz
c/o Sunburst Consulting
235 Alkali Creek Road
Billings, Montana 59105
(406) 259-4124

Prepared for:

Ross Matthews
c/o Union Pacific Resources
801 Cherry St., MS #3706
Ft. Worth, Texas 76102
(817) 877-6763

Sunburst Consulting
A Geological Service

WELL EVALUATION

GENERAL:

The UPRR #3-10 is a development well at Pineview Field, Summit County, Utah. The well was designed to exploit Jurassic Twin Creek and Nugget reservoirs and more specifically, to test the productive capability of lower zones within the Nugget sandstone reservoir.

Pineview Field was discovered in 1975 at the American Quasar #1 Newton Sheep [Nw Ne Se Section 4, Township 2 North, Range 7 East]. Initial production rate was 540 BOPD [46° API], 270 MCFGPD, 226 BWPD from the Nugget. Some of the lower Nugget perforations were squeezed off later that same year to reduce water production. Subsequent development in Pineview Field included both Nugget and Twin Creek production, with some dual completed wells. The Nugget/Twin Creek reservoirs appear to have a common oil/water contact in the field [near -3415]'. Cumulative production from the 18 well field [with 10 still productive as of this report] has been 28.7 MBO, 34.6 BCFG, and 58.4 MBW [as of 9/93]. Current production for the field's 10 remaining producers [5 Twin Creek and 5 Nugget] is 796 BOPD, 1.306 MMCFGPD, and 12,358 BWPD.

Pineview Field was the first significant hydrocarbon discovery in the Overthrust Belt. The Pineview structure is "an asymmetric thrust anticline in the hanging wall of the Absaroka thrust system" ¹. Jurassic Twin Creek and Nugget reservoir rocks are thrust over younger Cretaceous source rocks. The oil column in the field appears to be over 1000' with the structure nearly filled to its spill point on the 1,280 acre closure.

WELL DESIGN:

The Union Pacific Resources Company UPRR #3-10 was spotted near the apex of the Pineview structure in an attempt to tap into undrained Nugget oil and gas reserves in zones stratigraphically lower than those traditionally perforated. It was felt that, although water cuts may be higher than those observed in the early phases of Pineview's development, additional hydrocarbon reserves could be added to replace the declining production rates from the existing Nugget production in the field.

The UPRR #3-10 was staked 1,050' from the South line, 1,395' from the East line in Section 3, Township 2 North, Range 7 East, Summit County, Utah. The plan was to deviate from the surface location to the north-northwest, reaching a bottom hole location approximately 600' North and 475' West of the surface at total depth. Primary well control was provided by the nearby American Quasar UPRR #3-6 [Se Se, Section 3, T2N, R7E] and the American Quasar UPRR #3-3 [Nw Se, Section 3, T2N, R7E], both currently operated by Union Pacific Resources Company. The UPRR #3-6 has produced 3,166,345 BO, 4.45 BCFG and 11.9 MBW from the Twin Creek and Nugget [through 9/93] and currently produces 195 BOPD, 467,000 CFGPD and 3,927 BWPD. The UPRR #3-3 also has produced from both Twin Creek and Nugget perforations.

OPERATIONS:

Original Wellbore:

Union Pacific Resources Company spudded the UPRR #3-10 on January 19, 1994. A string of 13.375" surface casing was set at 2,029' and cemented. A gyroscopic survey was run to accurately locate the bottom hole position in preparation for directional steering of the wellbore. Geologic supervision began in the lower Kelvin Formation, just above the Stump Formation, with a Sunburst Consulting geologist and a mudlogging trailer. The top of the Preuss Formation was identified and a string of 9.625" intermediate casing was run to 7,135' and cemented. The purpose of the intermediate casing string was to isolate potential water flows resulting from disposal of production water into the Stump Formation in Pineview Field. Drilling proceeded without geologic supervision until 7,850' in the lower Preuss, where Sunburst Consulting resumed operations. Drilling proceeded through the Preuss salt interval [with very little salt encountered] to the Twin Creek Formation.

Circulation was lost to fractures in the lower Watton Canyon member of the Twin Creek. The rate of loss was approximately 140 barrels per hour, but was brought under control with the addition of lost circulation material [mica, nut plug and cedar fiber]. In order to apply sufficient lost circulation material to combat the problem, directional tools & MWD were laid down and drilling proceeded with conventional rotary techniques from 9,059' to 9,148'. Directional drilling resumed at 9,148'. Apparent fractures were encountered in the Rich member of the Twin Creek between 9,155' and 9,168', with an associated gas show. Apparent fractures were also encountered in the uppermost Sliderock member along with further lost circulation and gas shows. The top of the targeted Nugget Formation was penetrated and exhibited good oil and gas shows. Drilling proceeded with lost circulation being treated with fine mica and nut plug LCM. Hole conditions became difficult with significant drag on trips resulting from suspected key-seating in the lower Preuss Formation. The drill string became stuck during a short trip at 9,728' in the Nugget.

The bottom hole assembly was assumed to be differentially stuck in a porous zone in the Nugget. A free-point survey indicated the string to be stuck below 9,332', with the bit at 9,620'. Jarring on the fish & circulating crude oil did not free it. The string was backed off above the stuck portion, leaving a 174.67' fish in the hole [consisting of four 6.5" drill collars, MWD, monel collar, and the mud motor with bit]. Several attempts were made to fish out the stuck BHA with no success. A string of wash pipe was picked up and an attempt was made to wash and ream the wash pipe down to the BHA fish. The wash pipe never reached the BHA fish and eventually became stuck in the hole and separated [leaving 6 joints 8.125" wash pipe in the hole, total length 183.77']. Multiple attempts to recover the wash pipe were not successful.

Sidetrack:

The UPRR #3-10 was plugged back to intermediate casing with cement in preparation for a sidetrack hole. The first cement plug did not appear to harden sufficiently for kicking off a sidetrack hole. A second cement plug was set and sidetracking was attempted. The initial sidetrack attempt broke back into the original hole by 7,403'. A third cement plug was set and the sidetrack attempt was resumed. This sidetrack was successful and drilling resumed toward a slightly revised bottom hole target.

Communication with the original wellbore appeared to have occurred at 7,986' to 7,988' MD [measured depth], with an influx of gas and lost circulation material. The gas signature from this interval was similar to that recorded in the original hole as a result of the crude oil added to the mud in the effort to free the BHA fish. This cross flow incident is probably indicative of a fracture or fault zone. At the time that the cross flow occurred the sidetrack hole was approximately 85' from the original hole.

Drilling in the sidetrack hole proceeded through the Twin Creek Formation. Gas shows in the sidetrack hole were considerably subdued compared to the original hole, probably due to mud invasion and LCM plugging from the original wellbore. Sample quality was significantly better in the sidetrack hole, due to the lack of lost circulation.

The targeted Nugget Formation was reached at 9,428' MD, 9,397' TVD [true vertical depth] in the sidetrack hole. Gas shows were somewhat subdued during the drilling of the previously penetrated portion of the upper Nugget, but sample shows were comparable. Sample shows and gas readings improved when new hole was made below the stratigraphic level of the original hole. Some lost circulation was encountered between 10,060' and 10,100' MD. Gas and sample shows decreased in magnitude and frequency below 10,100' (-3241').

Total depth was reached at 10,450' MD, 10,413' TVD in the lower Nugget Formation on April 19, 1994. The bottom hole location at total depth was projected at 566' North and 378' west of the surface location. Schlumberger ran a Dual Laterolog - Digital Sonic - Gamma Ray - Caliper from 10,445' to intermediate casing [7,135']. The well was cased to total depth for perforation and evaluation in the Nugget Formation.

ZONES OF INTEREST:

Original Wellbore:

The Twin Creek Formation was penetrated at 8,132' MD, 8,101' TVD (-1242') in the original hole. The top of the Twin Creek came in 36' low to the UPRR #3-6 offset, and 201' high to the UPRR #3-3. There were no significant hydrocarbon shows in the Giraffe Creek member.

The Leeds Creek member was encountered at 8,612' MD, 8,580' TVD (-1721'), 181' low to the UPRR #3-6 and 40' high to the UPRR #3-3. There were several small gas increases [+6 to 18 units, 1% methane in air = 100 units], with no associated sample shows, in the Leeds

Creek member beginning at 8,754'MD.

The Watton Canyon member was reached at 8,886'MD, 8,852'TVD (-1993'), 185' low to the UPRR #3-6 and 74' high to the UPRR #3-3. Small gas shows persisted through the Watton Canyon member until mud circulation was lost at 9,020'MD. Partial to total loss of circulation continued from 9,020' to 9,059'MD. *This lost circulation zone in the lower Watton Canyon corresponds with the primary target zone in the horizontal Twin Creek drilling program.* The lost circulation is most likely going into fractures with the possibility of some contributing matrix porosity.

The Rich member of the Twin Creek was topped in the original well at 9,112'MD, 9,077'TVD (-2218'). A small gas increase was noted at the top of the Rich between 9,112' to 9,120'MD. A more significant gas increase, in association with mud motor stall out and bit bounce, occurred at 9,155' to 9,168'MD. The gas show from this apparent fractured interval reached 240 units with a large increase in the heavy gas components [indicating an oily zone].

The Sliderock member of the Twin Creek was topped at 9,317'MD, 9,282'TVD (-2423') in the original hole. This marker was 198' low to the UPRR #3-6 offset and 30' high to the UPRR #3-3. A series of spiky gas shows were observed throughout the drilling of the Sliderock member [155 units @ 9,321'MD, 75 units @ 9,344'MD, and 90 units @ 9,368'MD]. These shows had the high percentages of heavy gas components and sharp profiles of oil filled fractures. Partial loss of drilling mud circulation was noted by the lowermost Sliderock member and into the underlying Gypsum Springs. The shale shaker was bypassed during the drilling of the bulk of the Gypsum Springs in order to hold the lost circulation materials in the mud system. Therefore, there were no gas reading for this interval.

The primary target in the UPRR #3-10, the Jurassic Nugget Formation, was penetrated at 9,456'MD, 9,421'TVD (-2562') in the original hole. This marker was 204' low to the equivalent point in the UPRR #3-6 well, and 75' high to the Nugget in the UPRR #3-3. Background gas readings were elevated in association with the drilling of the Nugget sandstone along with significant increases in the percentages of heavy gas components. A gas peak of 535 units was recorded at the top of the Nugget and 475 units were recorded at 9,482'MD. Typical samples from the upper Nugget are described as follows:

Sandstone: clear, light tan, fine to very fine grained, moderately well sorted to well sorted, sub-rounded, sub-spherical, moderately cemented, siliceous, yellow-gold fluorescence, tan to light brown oil stain, slow to moderate crush cut, fair intergranular porosity.

A period of depressed gas readings followed from 9,510' to 9,568'MD while lost circulation material overwhelmed the gas extractor. In general, the gas readings for the initial penetration of the Nugget ranged between 90 and 300 units, with good heavy gas representation. A peak of 430 units was observed at 9,623'MD and 310 units at 9,644'MD in association with faster drilling zones. The largest gas show in the well was recorded at 9,670' to 9,678'MD, reaching 1,220 units. This zone exhibited relatively fast drilling [1 to 2 minutes per foot] which may partially account for the gas increase. Samples from this zone contained:

Sandstone: tan, fine to nearly medium fine grained, moderately well sorted, moderately cemented, siliceous, sub-rounded, sub-spherical, with a fairly even brown to occasional

black oil stain, fair yellow-gold fluorescence, moderate streaming cut, fair intergranular porosity.

An equivalent zone in the sidetrack wellbore displayed 10 to 25% sonic porosity.

At a measured depth of 9,728' the original hole was lost due to stuck bottom hole assembly and subsequent stuck fishing tools. The original hole reached a bottom hole location approximately 540' north and 420' west of the surface location at a true vertical depth of 9,689'. The well was plugged back to the intermediate casing and a sidetrack hole was drilled.

Sidetrack:

The Twin Creek Formation log top in the sidetrack hole was at 8,176'MD, 8,149'TVD (-1290'), 84' low to the UPRR #3-6 and 153' high to the UPRR #3-3. The Leeds Creek member log top was 8,556'MD, 8,528'TVD (-1669'), 129' low to the UPRR #3-6 and 92' high to the UPRR #3-3. Gas readings were quite subdued compared to the original hole with no significant gas peaks in the Giraffe Creek or Leeds Creek members.

The Watton Canyon log top was at 8,848'MD, 8,819'TVD (-1960'), 152' low to the UPRR #3-6 and 107' high to the UPRR #3-3. There was a small gas increase noted at 8,898'MD in association with a pelletal zone and a 4 unit gas show in the lowermost Watton Canyon oolitic zone [where circulation was lost in the original hole]. These shows were much subtler than the original penetration, probably due to mud and LCM invasion during the drilling of the first hole. However, sample quality was significantly improved over the original hole (ie. the samples were much more representative of the new hole drill rather than contaminated with slough and LCM as in the first hole).

The log top for the Rich member was encountered at 9,063'MD, 9,033'TVD (-2174'), 164' low to the UPRR #3-6 and 108' high to the UPRR #3-3. A gas show of 14 units was recorded near the top of the Rich, with an associated sample show in:

Limestone: medium gray brown, light gray brown, very fine to microcrystalline, fragmental in part, trace granular, moderately hard, dull green fluorescence, slow streaming cut in part, poor to trace intergranular porosity.

Electric logs indicate a relatively clean zone, but with only 4% sonic porosity and 27 ohm-ms of deep resistivity with a small invasion profile. A gas spike of 74 units was registered at 9,090'MD, with good heavy gas components. The sharpness of the peak suggests a fracture. Electric logs indicate a zone of 8% sonic porosity with 50 ohm-ms of resistivity and no invasion profile. Gas background levels were slightly elevated following these gas shows. Another small peak of 27 units occurred at 9,159'MD in the Rich.

The Sliderock member was encountered at log depth 9,282'MD, 9,251'TVD (-2392'), 167' low to the UPRR #3-6 and 61' high to the UPRR #3-3. Gas reading drifted upwards and a propane component was detected by the chromatograph. In general, the gas readings were much lower than those encountered in the original hole (eg. 7 units at the top of the Sliderock as compared to 155 units in the original hole). Small increases of 11 units and 12 units were recorded in the lower Sliderock in association with an oolitic zone (where mud circulation was lost partially in the original hole).

The primary target zone, the Nugget Formation, was topped at log depth 9,428'MD, 9,397'TVD (-2538'), 180' low to the UPRR #3-6 and 99' high to the UPRR #3-3 offset. Gas readings rose to 170 units at the top the Nugget and ranged between 100 units and 200 units from the top of the zone to 9,520'MD. This background level is comparable to the original penetration but lacking in the high gas peaks seen on the original hole. The sample shows were comparable with:

Sandstone: light brown, clear, translucent, fine to medium grained, sub-rounded to sub-angular, moderately well sorted, moderately cemented, siliceous, light blue-green fluorescence, fast to slow streaming cut, spotty to even light brown oil stain, fair to good intergranular porosity.

Gas readings were more subdued between 9,520' and 9,700'MD ranging from 50 to 140 units. This interval corresponds roughly with the lowermost portion of the Nugget penetrated in the original wellbore. The lower gas readings may be attributed to a combination of mud invasion from the original hole and slower average rates of penetration in the sidetrack hole.

The first gas show in the sidetrack hole below the stratigraphic level reached in the original hole was encountered at 9,764' to 9,774'MD, with gas peaks of 375 and 500 units. Samples from this interval were more coarse grained and less cemented than those described above and a fair streaming yellow-white cut, and fair to good intergranular porosity. Electric logs indicate sonic porosity of 14% to 18% for this zone. Resistivity logs show two 5 ohm-m spikes in this interval with a small wash out on the caliper followed by undergauge hole. The caliper anomaly may indicate a permeable zone with wall cake build up. Gas readings were generally elevated from the show at 9,764' to 9,935'MD. Several gas peaks were noted within this interval: 290 units @ 9,804'MD, 540 units @ 9,825'MD, 300 units @ 9,863'MD, and 250 units @ 9,926'MD. The show at 9,825'MD seems to be associated with an interval of up to 18.5% sonic porosity. The gas increase at 9,863'MD is associated with a 8' thick wash out zone on the caliper log. Samples from these show intervals tended to be coarser grained and less cemented with light brown to black oil stain, fair streaming yellow-white cut, fair to good intergranular porosity.

Gas readings were trending lower during the interval 9,935' and 10,040'MD, ranging from 50 to 15 units. The decrease in background gas seems to correspond to the color change in the Nugget sandstone from shades of brown and white to oranges. This interval also corresponds with a general decrease in sonic porosity in the well. Some smaller gas increases were noted between 10,040' and 10,080'MD, with peaks of 54 to 84 units. These zones occur as intervals of slightly increased sonic porosity on electric logs. The lowermost show zone in the well occurred between 10,146' and 10,170'MD, with an increase to 90 units. Sample show from this zone was relatively weak with only a trace of milky wet cut, and poor intergranular visible porosity. Electric logs indicate a zone of 9 to 12% sonic porosity and 17 to 22 ohm-ms of deep resistivity. The balance of the Nugget did not display any significant gas or sample shows. Electric logs showed a trend of decreasing sonic porosity and increasing resistivity. Samples from the lower Nugget contained increasing amounts of anhydrite and argillaceous material with no hydrocarbon shows.

LOG CALCULATIONS

FORMATION /ZONE	DEPTH	SONIC POROSITY	LLd	LLs	Rt (2LLD-LLS)	@Rw =.12 Sw
Leeds Creek	8735'*	13	55	25	85	.29
Leeds Creek	8746'*	14	40	27	53	.34
Leeds Creek	8766'	7.5	150	70	230	.31
Leeds Creek	8843'	3	400	220	580	.47
Watton C.	8898'	3.5	500	340	660	.39
Watton C.	8988'	2	800	270	1330	.48
Rich	9078'	4	27	17	37	1.00
Rich	9094'*	10	45	45	45	.52
Sliderock	9158'	5	190	80	300	.40
Sliderock	9287'	2	320	270	370	.90
Sliderock	9357'	4	120	87	153	.70
Sliderock	9378'*	10	14	12	16	.87
Nugget	9434'	11	27	23	31	.57
Nugget	9456'	12	21	9.5	32.5	.51
Nugget	9468'	16	15	7.5	22.5	.46
Nugget	9491'	17	28	15	44	.31
Nugget	9503'	13	30	14	46	.39
Nugget	9519'	18	29	15	43	.29
Nugget	9531'	12	30	16	44	.44
Nugget	9540'	13	22	13	31	.48
Nugget	9552'	11	21	13	29	.59
Nugget	9568'	11	28	19	37	.52
Nugget	9586'	15	20	13	27	.44
Nugget	9594'	8	32	19	45	.65
Nugget	9606'***	11	16	8	24	.64

FORMATION /ZONE	DEPTH	SONIC POROSITY	LLd	LLs	Rt (2LLD-LLS)	@Rw = .12 Sw
Nugget	9614'***	22	17	8.5	25.5	.31
Nugget	9627'	25	8	4.7	11.3	.41
Nugget	9638'	16	26	15	37	.36
Nugget	9650'	13	22	18	26	.52
Nugget	9670'	15	23	18	28	.44
Nugget	9678'	14	23	17	29	.46
Nugget	9690'	13	20	14	26	.52
Nugget	9708'	15	13	7	19	.53
Nugget	9752'	6	35	24	46	.85
Nugget	9760'	14.5	20	12	28	.45
Nugget	9771'***	18	5	2.7	7.3	.71
Nugget	9804'	11	20	17	23	.66
Nugget	9812'	19	10	6.5	13.5	.50
Nugget	9825'	13.5	15	8.5	21.5	.55
Nugget	9852'***	13.5	13	7.5	18.5	.60
Nugget	9868'	11	15	9.5	20.5	.70
Nugget	9898'	17	10	4.5	15.5	.52
Nugget	9925'	13	16	13	19	.61
Nugget	10040'	10	21	21	21	.76
Nugget	10064'	15	4	2.7	5.3	1.00
Nugget	10074'	14	12	8	16	.62
Nugget	10152'	11	16	14	18	.74
Nugget	10165'	12	17	14	20	.65
Nugget	10273'	11	9	7	11	.95

* = shaly interval with inflated porosity

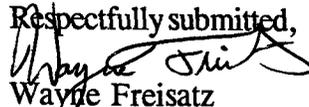
** = caliper anomaly

SUMMARY:

The UPRR #3-10 was drilled near the apex of the Pineview structure to exploit remaining hydrocarbon reserves in the Nugget sandstone below the typically perforated zones in the field. The well was directionally controlled to achieve a bottom hole location to the north-northwest of the surface location. The original hole reach total depth 272' into the Nugget Formation before hole problems and stuck pipe forced the abandonment. The well was plugged back to the intermediate casing for a sidetrack attempt. The sidetrack hole reached total depth at 10,450'MD, 10,413'TVD, 566' North and 378' West of the surface location.

CONCLUSIONS:

- 1) The UPRR #3-10 sidetrack successfully reached penetrated the Nugget sandstone reservoir after the original well bore was abandoned due to mechanical problems.
- 2) Several hydrocarbon shows were encountered in the Twin Creek Formation, specifically in the Leeds Creek, Watton Canyon, Rich and Sliderock members. The gas shows were more pronounced in the original well and attenuated in the sidetrack hole. The decrease is probable due to mud and lost circulation material invasion from the original hole. The sidetrack hole was 87' or less from the original hole during the sidetrack.
- 3) Lost circulation was encountered in the original hole but to a much lesser degree in the sidetrack. Evidence of cross-flow was seen at 7,986'MD in the sidetrack hole.
- 4) Several zones of gas and sample show were identified in the Nugget interval of the sidetrack hole. Good shows in the sidetrack hole below the stratigraphic interval encountered in the original hole include: 9,764' to 9,774', 9,804', 9,825', 9,863', and 9,926' [all measured depth]. Lesser shows were observed at: 10,040' to 10,080' and 10,146' to 10,170' [measured depth].
- 5) Casing was run to total depth for attempted completion in the Nugget Formation below the normally perforated interval in the Pineview Field.

Respectfully submitted,

Wayne Freisatz
Sunburst Consulting

¹ Chidsey, Thomas C., 1993, Jurassic-Triassic Nugget Sandstone in Hjellming, C.A. et. al. editors, Atlas of Major Rocky Mountain Gas Reservoirs, New Mexico Bureau of Mines & Mineral Resources

WELL DATA SUMMARY

OPERATOR: UNION PACIFIC RESOURCES COMPANY

ADDRESS: 801 Cherry Street, MS #3706
Ft. Worth, Texas 76102

WELL NAME: UPRR #3-10

SURFACE LOCATION: 1050' FSL 1395' FEL
SW SE Sec 3, T2N, R7E

BOTTOM HOLE LOCATION: Sidetrack #1: 565.95' north, 378.25' west
of surface location

COUNTY: Summit

STATE: Utah

FIELD: Pineview

BASIN: Overthrust Belt

WELL TYPE: Nugget development

PERMIT #: API# 43-043-30302

BASIS OF PROSPECT: Well control

ELEVATION: **GL:** 6835' **SUB:** 24' **KB:** 6859'

SPUD DATE: 21:00 January 19, 1994

TOTAL DEPTH/DATE: 03:30 April 19, 1994, 10,450' MD, 10,413' TVD

BOTTOM HOLE DATA: Vertical Section: 680.18'
Final Azimuth: 326.24°
Target exposed: 1,022' of Nugget

TOTAL DAYS: 91 **DRILLING HOURS:** 1,234.5 rotating hours

STATUS OF WELL: Cased for Nugget completion

CONTRACTOR: SST Drilling Rig #56

TOOLPUSHER: "Doc" Asay, Russ Burdick, Jim Stark

FIELD SUPERVISORS: Don Presenkowski, Bobby Cooper

MUD ENGINEERS: Leon Berg, Carlos Bassett - Baroid
MUD TYPE: Dispersed solids/saltwater
WELLSITE GEOLOGISTS: Wayne Freisatz, Randy Wallis - Sunburst Consulting
PROSPECT GEOLOGIST: Ross Matthews - UPRC
MUDLOGGERS: Randy Wallis, Erik Neva - Sunburst Consulting
DIRECTIONAL WORK: Sperry Sun Drilling Services
DRILLERS: Bill Blaschke, Bob Balbinot, Craig Davis
MWD COMPANY: Sperry-Sun Drilling Services
ENGINEERS: Dean Genz, Steve Townsend, Mike Brennen, Andrew Hettinger

GEOLOGICAL SAMPLING PROGRAM:

20' caught by the rig crews from 6,140' to 7,050'
20' caught by the mudloggers from 7,850' to 8,050'
10' caught by the mudloggers from 8,050' to 9,728'
2 hour samples caught by rig crews 7,163' to 7,330'
30' caught by the rig crews from 7,330' to 8,100'
10' caught by the mudloggers from 8,100' to 10,450'

HOLE SIZE:
17.5" from surface to 2,034'
12.25" from 2,034' to 7,135'
8.5" from 7,135' to 10,450'

CASING:
13.375" 54.5# K-55 STC set @ 2,029'
9.625" 53.5# N-80 LT&C set @ 7,135'
5.5" 20# P-110 LT&C & 23# P-110/95 set @ 10,450'(TD)

DRILL STEM TESTS: None

CORE PROGRAM: None

ELECTRIC LOGS: Schlumberger ran a Dual Laterolog - Gamma Ray - Caliper - Sonic from 10,445' to 7,135' prior to 5.5" casing.

DISTRIBUTION:

Utah Board of Oil, Gas & Mining
Suite 350, 3 Triad Center
355 West North Temple
Salt Lake City, Utah 84108-1203

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Fort Worth, Texas 76102
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Attn: Ross Matthews

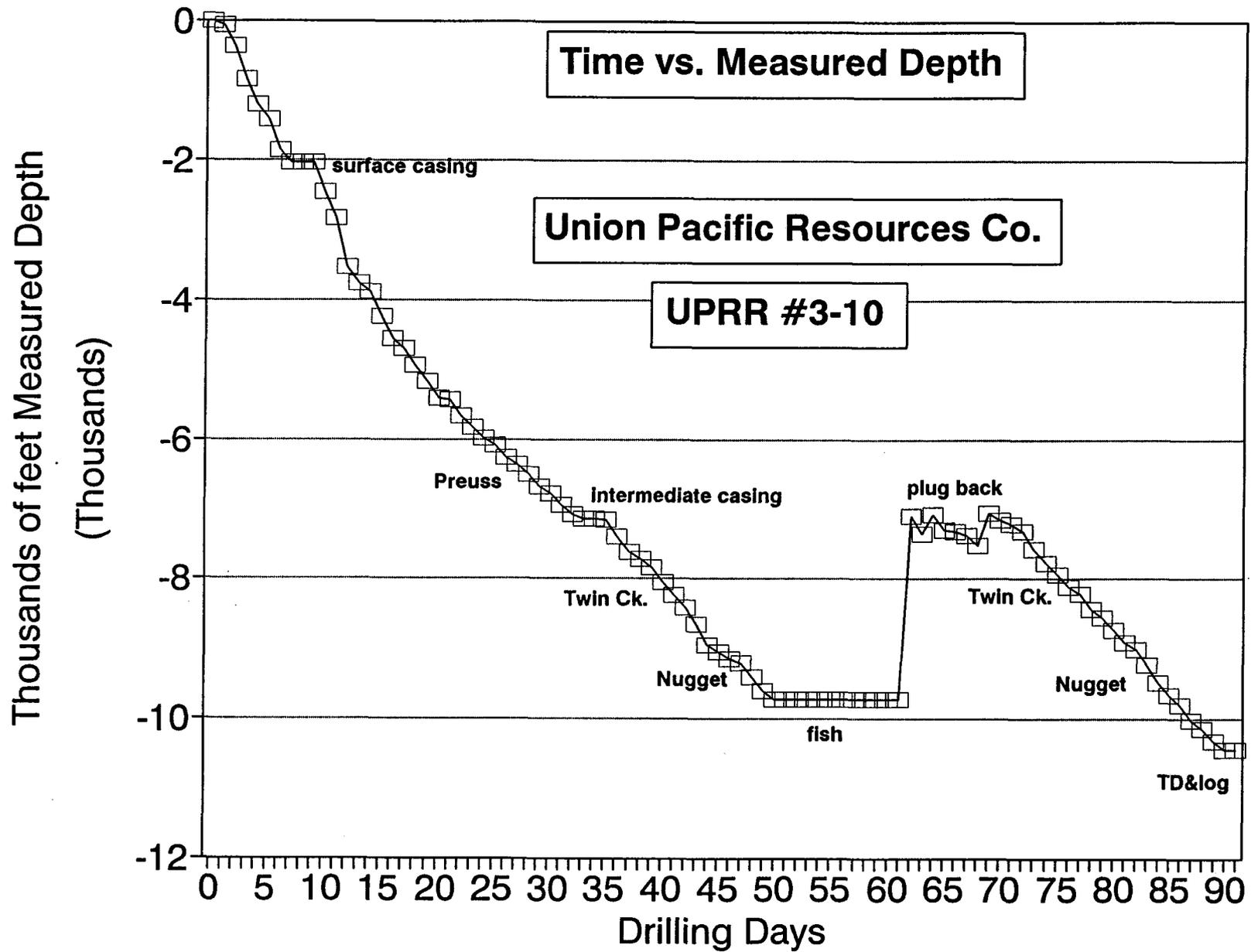
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Attn: Joy Roberts

American Exploration Company
700 Louisiana, Suite 2100
Houston, Texas 77002-2793
Attn: Chuck Chandler

North Central Oil Corporation
6001 Savoy, Suite 600
Houston, Texas 77036
Attn: Mark Tantillo



DAILY DRILLING ACTIVITY

<u>DAY</u>	<u>DATE</u>	<u>DEPTH</u>	<u>PROG</u>	<u>BIT</u>	<u>WOB</u>	<u>RPM</u>	<u>PP</u>	<u>WT</u>	<u>VIS</u>	<u>PV/YP</u>	<u>pH</u>	<u>WL</u>	<u>CL</u>	<u>DRILL HOURS</u>	<u>ACTIVITY</u>	<u>FORMATION</u>
0	1/19	0'	0'	-	---	---	---	---	---	---	---	---	---	---	Spud 21:00	Surface
1	1/20	74'	74'	1	10/25	30/90	200	8.7	67						Drill conductor	
2	1/21	372'	298'	1	10/25	30/90	200	8.8	72	25/23	9.0	10.8	1000	18	Drill	Tertiary
3	1/22	837'	465'	1	10/30	90/110	900	9.2	41	7/11	9.0	12.8	800	18	Drill	Tertiary
4	1/23	1207'	370'	1/2	10/40	70/110	800	9.2	42	14/11	9.0	10.4	800	18.25	Drill, trip	Tertiary
5	1/24	1418'	211'	2/3	10/35	90	1350	9.1	43	17/13	9.0	10.6	800	20.5	Drill, trip	Tertiary
6	1/25	1867'	449'	3	20/50	60/90	1400	9.1	43	15/14	9.0	9.8	900	19.75	Drill	Tertiary
7	1/26	2034'	167'	3/4	20/50	60/90	1450	9.1	40	14/11	9.0	10.0	1000	9.5	Drill, trip out	Tertiary
8	1/27	2034'	0'	-	---	---	---	---	---	---	---	---	---	---	Run sfc csg	
9	1/28	2038'	4'	5	5/15	60	1500	8.9	35	10/12	12.0	14.0	800	0.25	Test BOP, drill cmt	
10	1/29	2445'	407'	6	15/20	40/190	1650	8.7	36	9/12	10.5	12.0	800	14.75	Bit trip, drill	Tertiary
11	1/30	2836'	391'	6/7	20/25	45/175	2100	8.9	38	12/13	9.5	12.2	800	16	Drill, bit trip	Tertiary
12	1/31	3517'	681'	7	20/25	60/190	2200	9.0	36	11/13	9.0	11.0	800	20.5	Drill	Tertiary
13	2/1	3761'	244'	7	20/30	60/190	2200	9.1	36	10/11	9.5	11.4	800	20.5	Drill	Tertiary
14	2/2	3893'	132'	8/9	20/35	50/190	2200	9.2	36	11/10	9.5	11.0	700	11	Drill, bit trip	
15	2/3	4248'	355'	9	20/40	60/190	1800	9.2	38	13/12	9.5	10.8	700	21.5	Drill	
16	2/4	4560'	312'	9	20/40	60/190	1850	9.1	37	11/10	9.0	11.5	600	22.5	Drill	
17	2/5	4689'	129'	9/10	20/40	60/190	1850	8.9	37	12/10	9.0	9.8	500	10.25	Drill, bit trip	
18	2/6	4934'	245'	10	20/40	60/170	1950	8.8	39	14/10	9.5	9.5	500	17.75	Wash & ream, drill	
19	2/7	5180'	246'	10	20/40	60/190	2000	8.8	39	14/10	9.5	9.6	500	23	Drill	
20	2/8	5420'	240'	10	20/40	60/190	2050	9.0	40	15/11	9.5	9.7	400	23.5	Drill	
21	2/9	5433'	13'	10/11	5/40	190	2250	9.0	38	13/9	9.5	10.0	400	1.75	Trip, stuck	
22	2/10	5667'	234'	11	30/40	130/155	2250	9.0	43	15/12	9.5	9.7	500	23.5	Drill	
23	2/11	5837'	170'	11	40/45	130/175	2300	10.0	55	21/14	9.5	9.0	550	21.25	Drill	Kelvin
24	2/12	5995'	158'	11	45	175	2300	11.0	42	17/10	9.5	8.5	500	23.5	Drill	Kelvin
25	2/13	6081'	86'	11/12	10/45	80	2200	11.0	43	17/11	9.0	8.6	500	11.5	Bit trip, drill	Kelvin
26	2/14	6264'	183'	12	45/60	80	2200	11.0	45	20/11	9.0	8.5	600	23.25	Drill	Kelvin
27	2/15	6368'	104'	12	50/60	75/80	2150	11.0	43	20/14	9.0	8.8	600	15.5	Drill, bit trip	Kelvin
28	2/16	6507'	139'	13	50/65	70	2150	11.0	43	21/13	9.0	8.4	600	22.5	Drill	Stump

<u>DAY</u>	<u>DATE</u>	<u>DEPTH</u>	<u>PROG</u>	<u>BIT</u>	<u>WOB</u>	<u>RPM</u>	<u>PP</u>	<u>WT</u>	<u>VIS</u>	<u>PV/YP</u>	<u>pH</u>	<u>WL</u>	<u>CL</u>	<u>HOURS</u>	<u>ACTIVITY</u>	<u>FORMATION</u>
29	2/17	6687'	180'	13	30/60	65	2150	10.8	44	22/14	9.5	8.8	600	22.25	Drill	Stump
30	2/18	6777'	90'	14	40/55	65	2200	10.6	42	18/12	9.5	8.8	600	14.25	Bit trip, drill	Stump, Preuss
31	2/19	6936'	159'	14	55/60	60/65	2150	10.6	45	23/15	9.5	9.2	600	22.75	Drill	Preuss
32	2/20	7080'	144'	14	55/65	60/75	2150	10.6	45	23/16	9.5	8.8	600	22.50	Drill	Preuss
33	2/21	7135'	55'	14	55	75	2150	10.6	48	25/18	9.5	9.4	600	9.25	Run casing	Preuss
34	2/22	7135'	0'	15	-	-	-	9.3	35	5/5	9.0	11.2	600	0.00	Pick up BHA	Preuss
35	2/23	7156'	21'	15/16	30	45/70	1400	9.0	39	10/10	9.5	11.6	800	4.00	Trip in mud motor	Preuss
36	2/24	7396'	240'	16	25/35	45/70	1400	9.0	39	13/9	9.0	10.8	1K	20.50	Drill	Preuss
37	2/25	7616'	220'	16	20/45	70/75	1400	8.9	35	13/6	9.5	9.0	1.3K	20.75	Drill	Preuss
38	2/26	7723'	107'	16/17	25/45	70/218	1600	9.8	40	10/14	9.0	13.5	168K	10.50	Drill,trip,drill	Preuss
39	2/27	7843'	120'	17/18	25/45	70/218	1650	10.0	38	10/10	9.0	11.6	172K	14.25	Drill,trip,drill	Preuss
40	2/28	8052'	209'	18	30/45	90/150	1800	10.2	34	8/8	10.0	9.8	181K	21.5	Drill	Preuss
41	3/01	8240'	188'	18	40/45	90/150	1850	10.1	35	9/7	9.5	10.45	185K	19.25	Drill,short trip	Twin Creek
42	3/02	8408'	168'	18/19	35/45	90/150	1850	10.1	35	9/10	9.5	10.5	176K	12.75	Drill, trip,drill	Twin Creek
43	3/03	8651'	243'	19	35/45	90/150	1850	10.1	35	10/8	9.5	10.6	168K	22.00	Drill	Leeds Creek
44	3/04	8945'	294'	19	35/45	90/150	1850	10.1	36	12/9	9.0	10.2	183K	21.5	Drill	Watton Canyon
45	3/05	9057'	112'	19	35/45	90	800	10.1	37	13/9	9.5	11.2	171K	8.5	Mix LCM, trip	Watton Canyon
46	3/06	9148'	91'	19	35/38	85/100	1300	10.1	37	12/10	9.0	11.0	174K	17.5	Drill,shakeout LCM	Rich member
47	3/07	9217'	69'	20	40	90	1650	10.1	37	12/9	9.0	11.4	172K	7.25	Drill,trip,drill	Rich member
48	3/08	9415'	198'	20	40/45	80/150	1450	9.8	36	11/7	9.0	14.4	151K	20.25	Drill,short trip	Gypsum Springs
49	3/09	9615'	200'	20	35/45	80/150	1400	10.0	35	10/6	9.0	12.5	168K	14.25	Drill, trip	Nugget
50	3/10	9728'	113'	21	20/40	80/150	1600	10.0	35	9/7	9.0	14.0	178K	8.0	Trip, drill	Nugget
51	3/11	9728'	0'	21	-	-	-	10.1	41	11/13	9.5	8.8	181K	0.0	Work stuck pipe	Nugget
52	3/12	9728'	0'	21	-	-	-	10.1	43	11/13	9.5	8.0	182K	0.0	Back off	Nugget
53	3/13	9728'	0'	21	-	-	-	9.7	35	8/6	9.5	10.8	171K	0.0	Trip, fish, trip	Nugget
54	3/14	9728'	0'	22	-	-	-	10.1	44	13/14	9.5	8.6	180K	0.0	Trip, clean out	Nugget
55	3/15	9728'	0'	22	5/10	50/60	850	10.2	48	14/11	9.0	7.6	182K	0.0	Wash & ream, trip	Nugget
56	3/16	9728'	0'	23	1/3	50/80	1000	10.1	48	14/14	9.0	8.4	176K	0.0	Trip, wash over	Nugget
57	3/17	9728'	0'	23	1/3	80	1000	10.1	52	17/13	9.0	6.8	178K	0.0	Wash & ream	Nugget
58	3/18	9728'	0'	23	1/3	80	650	10.1	52	22/12	9.5	7.2	180K	0.0	Work wash pipe,trip	Nugget
59	3/19	9728'	0'	23	-	-	-	10.1	51	24/14	9.5	7.4	181K	0.0	Fish for wash pipe	Nugget
60	3/20	9728'	0'	23	-	-	-	10.1	50	22/12	9.5	7.8	179K	0.0	Fish for wash pipe	Nugget
61	3/21	9728'	0'	23	-	-	-	10.1	46	17/7	9.5	8.0	176K	0.0	Fish, rig up cement	Nugget
62	3/22	7103'	0'	24	5/30	60/75	1050	9.5	37	10/5	10	8.8	106K	0.0	Plug back,drill cmt.	Preuss

<u>DAY</u>	<u>DATE</u>	<u>DEPTH</u>	<u>PROG</u>	<u>BIT</u>	<u>WOB</u>	<u>RPM</u>	<u>PP</u>	<u>WT</u>	<u>VIS</u>	<u>PV/YP</u>	<u>pH</u>	<u>WL</u>	<u>CL</u>	<u>HOURS</u>	<u>ACTIVITY</u>	<u>FORMATION</u>
63	3/23	7365'	0'	24	5/15	60	1050	9.5	42	15/10	11	8.2	100K	0.0	Circ.,drill cement	Preuss
64	3/24	7075'	0'	25	5/10	60	600	9.3	40	11/9	11	8.6	88K	0.0	Cement,drill cement	Preuss
65	3/25	7299'	5'	25/26	1/15	60/87	1300	9.2	44	17/13	10.5	8.4	78K	7.5	Circ,trip,time drill	Preuss
66	3/26	7318'	19'	26	1	87	1300	9.2	46	20/12	10.5	7.8	79K	24.0	Time drill	Preuss
67	3/27	7379'	61'	26	1/30	87	1350	9.1	40	15/8	10.5	8.8	70K	23.25	Time drill, trip	Preuss
68	3/28	7528'	149'	27	5/20	87	1350	9.1	43	14/11	10.0	10.4	68K	3.0	Trip,time drill,trip	Preuss
69	3/29	7060'	0'	28	10/20	60	1300	9.1	38	12/8	10.5	11.0	67K	7.5	Cement,drill cement	Preuss
70	3/30	7172'	112'	28/29	5/15	60/165	1200	9.1	41	13/11	10.5	11.8	68K	11.5	Circ,trip,time drill	Preuss
71	3/31	7213'	41'	29	8/18	165	1350	9.1	41	12/11	10.5	11.6	64K	16.75	Time drill, trip	Preuss
72	4/01	7324'	111'	30	8/25	90	1300	9.1	45	15/14	10.0	11.5	63K	21.5	Trip,drill	Preuss
73	4/02	7576'	252'	30	32/35	60/153	1700	9.0	47	16/14	10.0	11.8	62K	20.5	Drill, survey	Preuss
74	4/03	7770'	194'	30	35/40	60/150	1700	9.1	41	12/10	9.5	11.0	63K	18.25	Drill,short trip	Preuss
75	4/04	7932'	162'	30/31	35/40	60/150	1750	9.5	44	15/14	9.0	10.5	98K	13.75	Drill,trip,drill	Preuss
76	4/05	8112'	180'	31	30/40	55/150	1800	10.2	46	16/12	9.0	10.0	185K	21.75	Drill	Preuss
77	4/06	8223'	111'	31/32	30/40	10/110	1800	10.2	43	14/11	9.0	11.7	181K	11.25	Drill,trip,drill	Twin Creek
78	4/07	8432'	209'	32	40	110	1800	10.1	42	14/10	9.0	10.5	183K	22.25	Drill	Twin Creek
79	4/08	8544'	112'	32/33	40	100	1675	10.1	43	15/10	9.5	10.0	185K	12.5	Drill,trip,drill	Twin Creek
80	4/09	8727'	183'	33	40	100	1800	10.2	44	16/11	9.5	10.0	186K	21.75	Drill	Leeds Creek
81	4/10	8909'	182'	33	30/40	100	1775	10.1	42	14/10	9.5	10.2	184K	21.0	Drill	Watton Canyon
82	4/11	9008'	99'	33/34	20/40	100	1800	10.2	44	16/11	9.5	10.4	183K	12.5	Drill,trip	Watton Canyon
83	4/12	9238'	230'	34	30	20/95	1700	10.1	43	15/10	9.5	10.4	181K	19.25	Trip,drill	Rich
84	4/13	9484'	246'	34	30	20/95	1800	10.1	43	15/10	9.5	10.0	184K	21.75	Drill	Nugget
85	4/14	9668'	184'	34	30/40	20/95	1700	10.2	43	16/10	9.5	10.2	182K	16.25	Drill, trip	Nugget
86	4/15	9797'	129'	35	20/30	20/95	1750	10.2	44	17/11	9.5	9.8	182K	13.0	Trip,drill	Nugget
87	4/16	10025'	228'	35	30/40	20/95	1850	10.3	44	19/12	9.5	10.0	183K	21.5	Drill	Nugget
88	4/17	10143'	118'	35/36	30/40	20/110	1850	10.3	44	20/12	9.5	9.6	184K	10.5	Drill,trip,drill	Nugget
89	4/18	10319'	176'	36	30/38	20/110	1800	10.3	45	22/14	9.5	9.2	185K	22.5	Drill	Nugget
90	4/19	10450'	131'	36	30/38	20/110	1800	10.3+	46	23/13	9.5	8.8	185K	21.5	Drill,circ,short	Nugget
91	4/20	10450'	0'	36	-	-	1800	10.3+	46	24/13	9.5	9.2	184K	0.0	Trip,log,trip	Nugget

DRILLING CHRONOLOGY

Day 0	1/19/94	Spud at 21:00 hours
Day 1	1/20/94	Mix mud, pick up tools
Day 2	1/21/94	Drilling to 298'
Day 3	1/22/94	Drilling to 465'
Day 4	1/23/94	Drill to 1102', bit trip, drill to 1207'
Day 5	1/24/94	Drill to 1337', bit trip, ream 45', drill to 1418'
Day 6	1/25/94	Drill to 1449, rig repair, drill to 1867'
Day 7	1/26/94	Drill to 1970', trip for bit 4, drill to 2034', trip out for surface casing
Day 8	1/27/94	Run casing [50 joints 13.375" 54.5# K55 STC, landed @ 2029', cemented with 1545 sacks 35/65 pozmix w/ 6% gel, 2% S1, 1/4#/sk D-29, wt. 12.7#/gal., yield 1.79, 493 bbls. slurry, tailed with 250 sacks "G" wt. 15.8#, yield 1.16, 51 bbls.; 1" cement to surface]; wait on cement, cut off conductor
Day 9	1/28/94	Nipple-up BOP, drill 29' cement and 4' of formation, test casing, run gyro, trip out
Day 10	1/29/94	Trip in, clean pumps, drill to 2445'
Day 11	1/30/94	Drill 2622, bit trip, wash 30', drill to 2836'
Day 12	1/31/94	Drilling to 3517'
Day 13	2/1/94	Drilling to 3761'
Day 14	2/2/94	Drilling to 3893', trip for bit 9
Day 15	2/3/94	Trip in, drilling to 4248'
Day 16	2/4/94	Drilling to 4560'

Day 17	2/5/94	Drilling to 4689', trip for bit 10, pipe stuck at 2510', jar loose
Day 18	2/6/94	Wash and ream, drilling to 4934'
Day 19	2/7/94	Drilling to 5180'
Day 20	2/8/94	Drilling to 5420'
Day 21	2/9/94	Drill to 5422', trip for bit 11, pipe stuck at 2542', jar loose, back ream 40', wash and ream 90', drilling to 5433'
Day 22	2/10/94	Drilling to 5667'
Day 23	2/11/94	Drill 5711', rig repair, drill to 5837'
Day 24	2/12/94	Drilling to 5995'
Day 25	2/13/94	Trip for bit 12, wash and ream 60', drill to 6081'
Day 26	2/14/94	Drill to 6264'
Day 27	2/15/94	Drilling to 6359', trip for bit 13, wash and ream 40', drill to 6368'
Day 28	2/16/94	Drilling to 6507'
Day 29	2/17/94	Drilling to 6687'
Day 30	2/18/94	Drilling to 6695', bit trip, drill to 6777'
Day 31	2/19/94	Drilling to 6936'
Day 32	2/20/94	Drill, survey, service rig & check BOPs; drill to 7080'
Day 33	2/21/94	Drill, survey, service rig & check BOPs; drill to 7135' for intermediate casing, circulate sweep & pump slug; short trip 10 stands; trip out - SLM no correction; lay down BHA; run casing
Day 34	2/22/94	Finish running casing [ran 165 joints 9.625" 53.5# N-80 LT&C, landed @ 7135'; circulate with rig pump, pump 50 bbls. CW7, 20 bbls. fresh water; cement with 468 bbls. 50/50 pozmix "G" with 2% D-20, 0.1% D800, yield 1.2, wt. 14.5#/gal., displaced with 497 bbls. fresh water; nipple down BOPs; set slips & cut off; nipple up; test BOPs; pick up BHA

Day 35	2/23/94	Pick up 6.5" collars; run temperature survey & found cement top @ 1680'; trip in; circulate out cement; drill cement & float equipment; test casing to 1000# for 15 minutes; drill cement & shoe; drill to 7156'; circulate bottoms up; trip out; pick up mud motor & MWD, test
Day 36	2/24/94	Trip in; wash & ream 60' to bottom; drill; survey; drill to 7396'
Day 37	2/25/94	Drill; survey; drill to 7616'
Day 38	2/26/94	Drill; survey; drill to 7651'; finish adding first load of salt, mix & pump pill; trip out - SLM no correction; change out bit & BHA; trip in; wash & ream 30' to bottom; drill; survey; drill to 7723' having trouble sliding
Day 39	2/27/94	Drill; survey; drill to 7776'; mix & pump pill; trip out, laying down 7 joints "G" pipe, remove stabilizer from mud motor; change out mud motor for slower speed model; trip in; slip & cut drilling line; wash & ream 30' to bottom, no fill; drill; survey; drill to 7843'
Day 40	2/28/94	Drill; survey; drill to 8052'
Day 41	3/01/94	Drill; survey; trip into casing to repair standpipe leak; drill; survey; trip out one stand to check salt; drill; survey; drill to 8240'
Day 42	3/02/94	Drill; survey; trip for bit & mud motor; check MWD & change motor & bit; trip in, fill pipe, check MWD, orient; drill; survey; drill to 8408'
Day 43	3/03/94	Drill; survey; drill to 8651'
Day 44	3/04/94	Drill; survey; drill to 8945'
Day 45	3/05/94	Drill; survey; drill; losing circulation, pump LCM; drill; survey; lost returns @ 9052', pump LCM; short tip into casing to build volume & mix LCM; trip out to lay down directional tools; pick up jars; trip in, break circulation, trip to casing shoe, break circulation; circulate & mix LCM (losing 140 bbls/hr.)
Day 46	3/06/94	Circulate & mix LCM; trip in to 8034', break circulation; trip in to 8562', hanging up, jar back out to 8540'; ream 8532-8592'; trip to bottom; drill to 9126'; short trip 23 stands, tight at stand #7; drill to 9148'; circulate & shake out LCM

Day 47	3/07/94	Circulate & shake out LCM; trip out to pick up directional BHA & new bit, tight in same spot as previous trip; trip in; wash & ream 20 to bottom; drill; survey; drill to 9217'
Day 48	3/08/94	Drill; survey; drill, short trip 16 stands, pipe sticking @ 8484', jars not working, worked loose; trip back to bottom; drill; loosing circulation 9340-44'; survey; drill to 9415'
Day 49	3/09/94	Drill; loosing circulation, work pipe free, mix & pump LCM pill; survey; short trip 18 stands; wash & ream 90' to bottom; drill; survey; drill to 9615'; circulate bottoms up; mix & pump LCM & bar pill; trip out to check bit
Day 50	3/10/94	Finish trip out; change BHA & bit; trip in, hit tight spot @ 8635', worked through, tagged out of gauge hole @ 9500'; wash & ream 9500-9615'; drill; survey; hole becoming tight by 9715'; short trip 21 stands, tight @ 9464' & 8037', jar & work through; trip back in, string taking weight @ 9630', break down stand & pick up kelly to work tight spot; stuck with bit @ 9620'; work stuck pipe, ordered crude oil to circulate for lubrication
Day 51	3/11/94	Work stuck pipe; spot 100 bbls. crude oil 70 bbls. outside pipe, 30 bbls. inside; gained rotation for a period of time before pipe or hole packed off; rig up & run free point survey
Day 52	3/12/94	Free point survey showed 100% free to 9332', obstruction in drill pipe below 9493'; perforated drill collars to gain circulation 9448-9451'; circulated; work stuck pipe; ran free point survey, still free to 9332', jars not actuating; back off string @ 9445'; worked to free backed off portion of string; trip out leaving fish consisting of four 6.5" drill collars, MWD, monel & mud motor with bit [total fish 174.67']
Day 53	3/13/94	Continued trip out with backed off portion of drill string; lay down jars (non-functional); pick up fishing assembly [fishing jars, bumper sub, screw in sub]; trip in fishing tools & collars; slip & cut drilling line; trip in, began rotation @ 9430' in preparation for screwing into fish; screw into fish @ 9445', jar on fish - would not come free; rig up wireline & back off string @ 9445'; trip out fishing tools

- Day 54 3/14/94 Finish trip out with fishing tools, tool joints very tight, having trouble breaking connections, broke tongs; wait on tongs or tong parts; continue trip out; lay down fishing tools, pick up bit to make hole clean out run; trip in, hit tight spot @ 8075', bit appeared plugged, work to unplug bit/string; trip out for plugged bit/string, hole tight 8075-7890'
- Day 55 3/15/94 Finished trip for plugged bit/string; found bottom 2 drill collars packed with LCM; unplug drill collars; trip back in to wash to top of fish; wash & ream 7680-9445'; circulate; short trip 25 stands, tight 8040-7990', trip up into casing; trip back in, tight 9400'; wash & ream 9400-9445'; circulate; trip out, tight 8040-7990'
- Day 56 3/16/94 Trip out; pick up wash pipe assembly; trip in; tight spot tagged @ 7893'; wash & ream 7893-8079'; trip in 7 stands, hit tight spot 8732'; work stuck wash pipe, jar free; wash & ream 8732-9100'
- Day 57 3/17/94 Wash & ream 9100-9122', progress slowing, suspect dull wash over shoe; circulate; trip out to check wash over shoe; wash pipe tight @ 8558', kelly up & work pipe down to free up; trip out, tight again @ 8240' (shoe depth, top drill collars @ 7648, top wash pipe @ 8054'); kelly up & back ream to 8192' (shoe depth)
- Day 58 3/18/94 Back ream & work wash pipe out of hole to 8156' shoe depth, 7564' top drill collars, 7972' top wash pipe, jarred up & string came free; trip out & found wash over pipe separated from top sub; order spear fishing assembly to retrieve wash over pipe [est. top wash pipe @ 7972', left wash over shoe, 6 joints of wash pipe 8.125" in hole, total length fish #2 183.77']; wait on fishing tools; pick up stinger & spear with new bumper sub & jars; trip in
- Day 59 3/19/94 Trip in spear assembly to attempt recover wash pipe; work spear into fish, pick up 2 stands & weight dropped off, work back into fish; trip out slowly to check for recovery, no recovery, marks on fishing tools indicate spear going down along side of fish; trip in spear on bent joint of drill pipe; work spear into fish, work fish down to free, spear came out of fish, worked back in & pull out; trip out to check recovery

- Day 60 3/20/94 Change out fishing tools, grapple missing & left in hole; pick up new grapple & additional 4' of spear extension; trip in, break circulation every 30 stands; fish for wash over pipe, picked up weight then dropped off several times, engaging fish at deeper depth each time, weight fell off each time; trip out to check for recovery; inspect fishing tools & appeared to be releasing grapple or fish split, weld grapple stop in lock position, add 30' of extension to spear; trip in & break circulation every 30 stands; wash down to fish, found obstruction or fish @ 7838', jar loose, trip out a couple of stands to check for drag
- Day 61 3/21/94 Fish for wash over, pull stands to check for weight increase, attempt to pick up fish with weight falling off coming up hole; trip out to check for recovery; lay down fishing tools, grapple in release position with welds broken, light to deep gouging on fishing tools, recovered small piece of lost grapple from previous run; pick up cement retainer, trip in to 6985', set with 30#, test drillpipe & casing to 2000 PSI - OK; circulate above retainer, circulate while waiting on cement, shake out LCM; rig up Halliburton to run cement squeeze & test cementing lines
- Day 62 3/22/94 Rig up Halliburton & test lines; pump 1250 sacks premium AG-250, mixed @ 16.4 PPG, yield 1.06, 236 bbls. of slurry, 0.6% Halad-322, 0.2% HR-7, displaced with 10 bbls. water & 115 bbls. mud, ended displacement with 2200# @ 5 bbls./min., sting out of retainer, pull 10 stands, reverse out with 130 bbls. mud, no sign of water or cement; trip out & lay down cementing tools; service rig; pick up new bit & trip in - SLM; circulate & tag cement @ 6904'; drill cement, tag retainer, drill retainer, drill cement to 7077'; circulate & shake out LCM; drill cement @ 0.5 min./ft.; circulate & wait on cement
- Day 63 3/23/94 Circulate & wait on cement; drill cement 7103-7145'; circulate & wait on cement; drill cement 7145-7170'; circulate & wait on cement; drill cement 7170-7195'; circulate & wait on cement; drill cement 7195-7215' in 4 minutes; drilled cement 7215-7365', break down 2 stands drill pipe; circulate bottoms up; trip out; trip in, pick up 15 joints "G" to replace collars & double; circulate & rig up Dowell
- Day 64 3/24/94 Circulate & rig up Dowell, test cementing lines; mix & pump 230 sacks of "G", with 0.15% D65, 0.15% D800, mixed @ 15.8 PPG, yield 1.16, 47 bbls. slurry, plug in place @ 08:15, displaced with 3 bbls. water & 111 bbls. mud; pulled 10 stands, reversed out 112 bbls., no cement or water observed; trip out; service rig & check BOPs; trip in 40 stands, lay down 15 joints

drill pipe, break circulation, finish trip in, tag cement @ 6826', drill cement 9', would not take over 5,000#; circulate & wait on cement; drill cement 6835-6898' with 10K 60 RPM; circulate & wait on cement; drill cement 6898-6959' 10K 60 RPM; circulate & wait on cement; drill cement 6959-7021' 15K 60 RPM; circulate & wait on cement; drill cement 7021-7075'; circulate & wait on cement

Day 65 3/25/94 Circulate & wait on cement; drill cement 7075-7105'; circulate & wait on cement; drill cement 7105-7215'; circulate bottoms up; trip out - SLM; pick up BHA & tools, orient MWD; trip in SLM [correction depth to 7294']; time drill to sidetrack [2 hrs./ft.]

Day 66 3/26/94 Time drill to sidetrack 7299-7318' [samples increased to 40% formation], increase ROP to 2'/hr.

Day 67 3/27/94 Time drill to sidetrack 7318-7339' @ 2.5 min./inch, 2 min/inch 7339-7341'; service rig; time drill 7341-7372' 2 min./inch; survey; time drill 7372-7379' @ 1 min/inch, penetration rate fell off to zero @ 7379' with 50# differential on mud motor & 30K WOB; trip out to check bit

Day 68 3/28/94 Finish trip out to check bit; service rig & test BOPS; pick up BHA & trip in; slip & cut drilling line 106'; trip in & break circulation; fill pipe & survey; time drill [4-6'/hr.]; survey; broke back into old hole @ 7403'; wash down cement in old hole 7434-7528' - didn't take any weight; circulate bottoms up; trip out; lay down directional tools; service rig & check BOPs; trip in open ended; circulate bottoms up & rig up Dowell to cement; test lines & pump cement plug

Day 69 3/29/94 Pump 20 bbls. fresh water, mix & pump 400 sacks "G" with 1% D-800, 0.15% D-65, mixed @ 16.2 PPG, yield 1.09, 78 bbls. of slurry, displaced with 7 bbls. fresh water & 108 bbls. mud; trip out 10 stands; reversed out with 110 bbls. mud, no cement or water seen; trip out of hole; pick up BHA & trip in - SLM; lay down 54 joints drill pipe & service rig; finish trip in, tag cement @ 6606', 529' above casing shoe; drill cement; circulate & wait on cement; drill cement to 7060'; circulate & wait on cement

Day 70 3/30/94 Circulate & wait on cement; drill cement to 7163'; circulate & lay down 8 stands drill pipe; trip out - SLM; pick up directional BHA; rig repair (replace #2 SCR blower); trip in; fill pipe & wash 20' to bottom; time drill [1-2'/hr.]

Day 71	3/31/94	Time drill 7172-7187' [2.5'/hr.]; survey; time drill 7187-7213' [3'/hr.]; survey; trip out to check bit; change BHA; service rig; trip in
Day 72	4/01/94	Finish trip in; wash & ream 40' to bottom & orient; time drill; survey; drill (orient)
Day 73	4/02/94	Drill (orient); survey; drill (rotate); survey; drill (orient); survey; drill (rotate)
Day 74	4/03/94	Drill (rotate); survey; drill (orient); drill (rotate); survey; trip for pressure loss, short trip & found hole in 24th stand; drill (orient); drill (rotate); survey
Day 75	4/04/94	Drill (orient), lost MWD signal; trip out to check BHA - found bad motor bearings; change BHA; trip in, test motor & MWD; fill pipe & wash 70' to bottom; drill (orient); drill (rotate); survey; drill (orient); survey; drill (rotate)
Day 76	4/05/94	Drill (rotate); survey; drill (orient); survey
Day 77	4/06/94	Drill (orient); circulate bottoms up; trip out to check BHA; repair rig [SCR blower & kelly bushing rollers]; finish trip out; change out BHA; test MWD & motor; change out two drill collars; trip in; wash & ream 8090-8122' - no fill; drill (orient); survey; drill (rotate); survey; drill (orient)
Day 78	4/07/94	Drill (rotate); survey; drill (orient)
Day 79	4/08/94	Drill (orient); survey; pump pressure increase noted, circulate; trip out to check BHA; change BHA; slip & cut 110' drilling line; trip in, test MWD & motor; trip in; wash & ream 30' to bottom - no fill; drill (rotate); survey; drill (orient); drill (rotate)
Day 80	4/09/94	Drill (rotate); survey; drill (orient)
Day 81	4/10/94	Drill (orient); survey; drill (rotate); drill (orient)
Day 82	4/11/94	Drill (orient); survey; drill (rotate); circulate; trip to check BHA (low ROP); caliper & change out 4 drill collars; change BHA; trip in; test MWD & mud motor; trip in
Day 83	4/12/94	Finish trip in; wash 30' to bottom - no fill; drill (orient), drill (rotate); survey; drill (orient)
Day 84	4/13/94	Drill (orient); survey; drill (rotate); drill (orient)

Day 85	4/14/94	Drill (rotate); survey; drill (orient); circulate; pump slug, trip out to check bit; change out BHA
Day 86	4/15/94	Trip in; wash & ream to bottom, out-of-gauge hole reamed hard; drill (rotate); drill (orient); survey; trip for hole in pipe, found hole 27 stands down; trip back in; drill (rotate); drill (orient); survey
Day 87	4/16/94	Drill (rotate); drill (orient); survey; drill (rotate)
Day 88	4/17/94	Drill (rotate); survey; circulate bottoms up; trip to check bit; change BHA; trip in, fill pipe & test MWD; wash & ream 90' to bottom - easy reaming; drill (orient); drill (rotate); survey; drill (orient); drill (rotate)
Day 89	4/18/94	Drill (rotate); survey; drill (orient); drill (rotate); survey; drill (orient); drill (rotate)
Day 90	4/19/94	Drill (rotate); survey; TD; circulate; short trip into casing
Day 91	4/20/94	Finish short trip; circulate; trip out for logs; lay down BHA; rig up Schlumberger to log; log DLL-Sonic-GR-Cal 10445-7135'; trip in; slip & cut drilling line - 100'; trip in - SLM - no correction; wash & ream 120' to bottom - 15' fill; circulate & condition hole for casing; mix & pump lubra-bead pill

BIT RECORD

CONTRACTOR: SST Rig #56

#1 & #2 PUMP, MAKE & MODEL: National 9-P100 9.25" stroke

RIG MAKE & MODEL: National 80UE

SPUD DATE: January 19, 1994

T.D. DATE: April 19, 1994

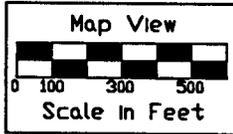
BIT #	SIZE	MAKE/TYPE	JETS	SERIAL #	DEPTH		HOURS	ACCUM.			VERT.		WT.	VIS	WL	DULL COND.		
					OUT	FEET		HOURS	WOB	RPM	DEV.	GPM				T	B	G
1	17.5"	HTC X3A	18 18 18	M64HY	1102'	1028'	47.25	47.25	10/30	90/110	0.75°	650	9.2	41	12.8	4	4	6
2	17.5"	HTC OSC1GJ	18 18 32	805YF	1337'	235'	25	72.25	10/40	70/110	1.0°	711	9.2	42	10.4	4	5	6
3	17.5"	SEC S3S	18 18 18	128919	1970'	633'	28.25	100.5	20/50	60/90	1.25°	650	9.1	40	10.0	4	6	6
4	17.5"	HTC DSJ	18 18 18	EH4922	2034'	64'	5.0	105.5	20/50	60/90	1.0°	650	9.1	40	10.0	3	3	I
5	12.25"	HTC OSC3A	18 18 20	ET4112	2038'	4'	0.25	105.75	5/15	60	1.0°	646	8.9	35	14.0	1	6	I
6	12.25"	REED HP11	20 20 20	H55338	2622'	584'	21.75	127.5	15/20	40/190	4.3°	646	8.9	38	12.0	6	E	3
7	12.25"	REED HP51A	18 18 18	CB4158	3785'	1163'	53	180.5	20/30	60/190	6.5°	646	9.2	36	11.4	4	F	2
8	12.25"	VAREL L126	24 24 24	281398	3893'	108'	9.0	189.5	20/35	50/190	6.9°	646	9.2	36	11.0	7	E	I
9	12.25"	REED HP51A	24 24 24	TC2230	4689'	796'	54.25	243.75	20/40	60/190	6.1°	646	9.0	37	10.0	3	E	2
10	12.25"	REED HP51A	24 24 24	ROO207	5422'	733'	65.25	309.0	20/40	60/190	5.7°	646	9.0	39	9.7	4	F	4
11	12.25"	REED HP51A	28 28 28	BL6112	5995'	573'	74.5	383.5	40	175	5.5°	646	10.0	42	8.6	4	E	2
12	12.25"	VAREL V437	16 16 16	54414	6359'	364'	48.75	432.25	50/60	80	5.8°	485	11.0	43	8.8	8	F	2
13	12.25"	REED HP51H	20 20 20	JE2443	6695'	336'	48.5	480.75	50/60	65	6.1°	536	10.6	42	8.8	3	E	1
14	12.25"	REED HP53A	20 20 20	CB4364	7135'	440'	67.5	548.25	55/65	75	7.5°	548	10.6	48	9.4	4	E	2
15	8.5"	Sec S33S	15 15 15	268491	7156'	21'	4.0	552.25	30	45/70	7.5°	371	9.0	39	11.6	6	E	I
16	8.5"	REED HP53A	20 20 20	TW4315	7651'	495'	45.50	597.75	20/45	70/75	4.2°	371	9.8	40	13.5	4	E	2

BIT #	SIZE	MAKE/TYPER	JETS	SERIAL #	DEPTH		HOURS	ACCUM.			VERT.		WT.	VIS	WL	DULL COND.		
					OUT	FEET		HOURS	WOB	RPM	DEV.	GPM				T	B	G
17	8.5"	REED HP53A	16 16 16	TW4314	7776'	125'	16.0	613.75	25/35	70/218	3.1°	371	10.0	38	11.6	2	E	1
18	8.5"	Sec S86F	18 18 14	5559466	8052'	476'	48.75	662.5	30/45	90/150	2.5°	371	10.1	35	10.5	3	E	I
19	8.5"	STC F3XP	16 16 16	KX6360	9148'	896'	80.25	742.75	35/45	85/100	3.2°	387	10.1	37	11.0	2	E	1
20	8.5"	REED HP53A	18 18 18	BL6265	9615'	467'	49.75	792.5	35/45	60/90	9.4°	371	10.0	35	12.5	8	E	2
21	8.5"	REED HP62A	20 20 20	JC6588	9728'	113'	13.75	806.25	20/40	80/150	10°	388	10.0	35	14.0	left in hole		
22	8.5"	REED Y12J	20 20 20	Y22603	ream	-	6.0	812.25	5/10	50/60	-	355	10.2	48	7.6	5	6	4
23	8.5"	Baker Type J washover shoe			wash	-	12.0	824.25	1/3	50/80	-	323	10.1	48	8.4	left in hole		
24	8.5"	REED HP11	16 16 16	BL6384	7365'	461'	7.0	831.25	5/15	60	7.6°	323	9.5	42	8.2	8	E	I
25	8.5"	STC SDGH	32 32 32	R3220	7293'	389'	4.75	836.0	15	60	7.4°	323	9.2	44	8.4	2	E	I
26	8.5"	Sec S86F	15 15 15	404067	7379'	85'	54.75	890.75	1/30	87	6.8°	339	9.1	40	8.8	2	E	I
27	8.5"	STC F3XP	14 14 14	LC0546	7752'	27'	3.0	893.75	1/20	87	3.1°	329	9.1	43	10.4	1	E	I
28	8.5"	Sec M44NG	13 13 13	622332	7163'	557'	10.5	904.25	5/20	87	7.3°	355	9.1	41	11.8	2	E	I
29	8.5"	Var L216	14 14 14	869292	7213'	50'	24.75	929.0	8/18	165	3.2°	323	9.1	41	11.6	5	E	I
30	8.5"	STC F3XP	14 14 14	LC0546	7770'	557'	60.0	989.0	35/40	60/150	3.3°	355	9.5	44	10.5	4	E	I
31	8.5"	STC F3XP	14 14 14	LC0566	8122'	352'	37.5	1026.5	30/40	10/110	4.1°	374	10.2	43	11.7	4	E	1
32	8.5"	Sec S86FL	16 16 15	562251	8487'	365'	37.5	1064.0	40	10/98	3.8°	374	10.1	43	10.0	2	E	I
33	8.5"	Sec S86FL	16 18 18	562336	9008'	521'	61.75	1125.75	20/40	30/98	5.3°	361	10.1	42	10.2	5	E	I
34	8.5"	RTC HP53A	18 18 18	BL6269	9668'	660'	57.25	1183.0	30/40	20/95	6.4°	339	10.2	43	10.2	8	E	2
35	8.5"	RTC HP62A	18 18 18	JC6587	10037'	369'	36.25	1219.25	30/40	20/95	6.0°	355	10.3	44	10.0	6	E	2
36	8.5"	STC F5XP	18 18 18	KX6745	10450'	413'	52.75	1272.0	30/38	20/110	5.0°	355	10.3	46	8.8	6	E	1

UNION PACIFIC
RESOURCES COMPANY

UPRR
#3-10

Surface Location:
T 2 N., R 7 E.
Sec. 3, SW SE
1055'FSL, 1395'FEL
Summit Co., Utah



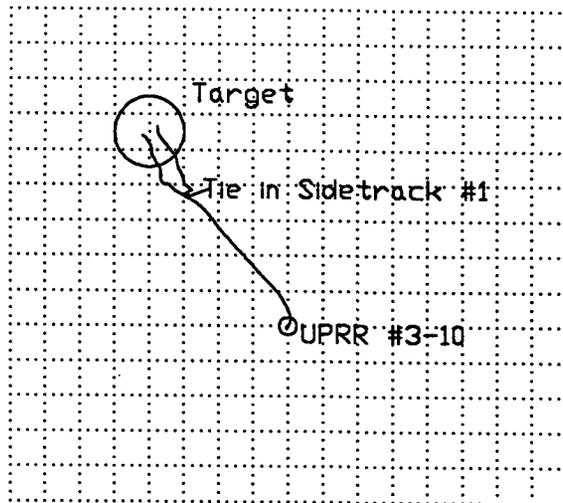
3

4/19/94

Sidetrack #1

Plotted to projection
at TD depth 10,450'
TVD 10,413.02'

Sunburst
Consulting
Wayne Freisatz
Geologist



SPERRY-SUN DRILLING SERVICES
SURVEY DATAUPRR #3-10
3-1019-APR-1994
02:37:21

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.25	176.00	100.00	0.22 S	0.02 E	-0.19	0.25
350.00	0.25	287.00	350.00	0.60 S	0.47 W	-0.21	0.16
450.00	0.41	247.00	450.00	0.68 S	1.01 W	0.04	0.27
550.00	0.41	359.00	550.00	0.46 S	1.34 W	0.42	0.68
650.00	0.33	105.00	649.99	0.18 S	1.07 W	0.49	0.59
750.00	0.41	133.00	749.99	0.50 S	0.53 W	-0.09	0.20
850.00	0.33	155.00	849.99	1.00 S	0.15 W	-0.72	0.16
950.00	0.41	167.00	949.99	1.61 S	0.06 E	-1.33	0.11
1050.00	0.41	187.00	1049.99	2.31 S	0.09 E	-1.93	0.14
1150.00	0.58	255.00	1149.98	2.80 S	0.44 W	-2.01	0.57
1250.00	0.67	297.00	1249.98	2.67 S	1.45 W	-1.30	0.46
1350.00	0.58	235.00	1349.97	2.69 S	2.39 W	-0.77	0.65
1450.00	0.75	239.00	1449.97	3.32 S	3.36 W	-0.71	0.18
1550.00	0.58	279.00	1549.96	3.58 S	4.42 W	-0.29	0.48
1650.00	1.00	174.00	1649.95	4.36 S	4.83 W	-0.69	1.28
1750.00	1.41	159.00	1749.93	6.38 S	4.30 W	-2.63	0.51
1850.00	1.08	133.00	1849.91	8.17 S	3.17 W	-4.75	0.65
1950.00	0.83	238.00	1949.90	9.20 S	3.09 W	-5.62	1.52
2015.00	1.08	245.00	2014.89	9.71 S	4.05 W	-5.47	0.42
2069.00	0.60	40.20	2068.89	9.71 S	4.33 W	-5.31	3.04
2130.00	0.90	52.20	2129.88	9.17 S	3.74 W	-5.21	0.55
2191.00	1.00	43.80	2190.88	8.49 S	3.00 W	-5.11	0.28
2223.00	1.60	33.90	2222.87	7.92 S	2.55 W	-4.90	2.00
2254.00	2.10	32.70	2253.85	7.08 S	2.00 W	-4.55	1.62
2285.00	2.40	36.10	2284.83	6.08 S	1.32 W	-4.14	1.06
2347.00	2.90	26.90	2346.76	3.63 S	0.16 E	-3.03	1.06
2410.00	3.20	23.00	2409.67	0.59 S	1.57 E	-1.40	0.58
2471.00	3.30	21.30	2470.57	2.61 N	2.87 E	0.42	0.23
2533.00	3.50	24.00	2532.46	6.00 N	4.29 E	2.33	0.41
2564.00	3.90	25.70	2563.40	7.82 N	5.13 E	3.30	1.34
2600.00	4.20	24.30	2599.31	10.12 N	6.20 E	4.54	0.88
2632.00	4.40	21.50	2631.22	12.33 N	7.14 E	5.78	0.91
2663.00	4.20	14.10	2662.13	14.54 N	7.85 E	7.14	1.90
2694.00	4.00	5.50	2693.05	16.72 N	8.23 E	8.68	2.08
2724.00	3.90	359.00	2722.98	18.78 N	8.31 E	10.30	1.53
2756.00	3.70	354.10	2754.91	20.89 N	8.19 E	12.08	1.19
2787.00	3.70	350.90	2785.85	22.88 N	7.93 E	13.84	0.67
2818.00	3.60	349.00	2816.78	24.82 N	7.58 E	15.61	0.51
2881.00	4.10	342.80	2879.64	28.91 N	6.54 E	19.54	1.03

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
2942.00	4.60	339.80	2940.47	33.29 N	5.05 E	23.95	0.90
3005.00	5.00	338.10	3003.25	38.21 N	3.15 E	29.05	0.67
3068.00	5.40	336.30	3065.99	43.47 N	0.94 E	34.61	0.69
3130.00	5.90	335.80	3127.68	49.05 N	1.54 W	40.58	0.81
3193.00	6.20	335.60	3190.33	55.10 N	4.28 W	47.08	0.48
3256.00	6.30	333.50	3252.96	61.29 N	7.22 W	53.82	0.40
3349.00	6.80	327.40	3345.35	70.50 N	12.47 W	64.35	0.92
3411.00	6.90	326.10	3406.91	76.68 N	16.52 W	71.73	0.30
3474.00	6.60	325.40	3469.47	82.80 N	20.69 W	79.13	0.49
3567.00	6.60	326.30	3561.86	91.65 N	26.69 W	89.82	0.11
3629.00	6.50	323.30	3623.45	97.43 N	30.76 W	96.88	0.57
3722.00	6.80	315.90	3715.83	105.60 N	37.74 W	107.60	0.98
3816.00	6.90	315.10	3809.16	113.60 N	45.60 W	118.69	0.15
3879.00	6.90	315.40	3871.70	118.97 N	50.93 W	126.17	0.06
3972.00	6.60	315.40	3964.06	126.75 N	58.60 W	136.98	0.32
4065.00	6.00	315.40	4056.49	134.02 N	65.77 W	147.07	0.65
4158.00	6.20	314.50	4148.97	141.00 N	72.76 W	156.83	0.24
4254.00	6.10	315.40	4244.41	148.27 N	80.04 W	166.99	0.14
4347.00	6.00	318.20	4336.90	155.41 N	86.75 W	176.71	0.34
4440.00	6.00	317.90	4429.39	162.64 N	93.25 W	186.38	0.03
4533.00	6.10	319.80	4521.87	170.02 N	99.70 W	196.14	0.24
4626.00	6.10	318.60	4614.34	177.50 N	106.15 W	205.99	0.14
4720.00	6.40	315.20	4707.78	184.96 N	113.15 W	216.14	0.51
4812.00	6.10	315.80	4799.24	192.11 N	120.17 W	226.04	0.33
4906.00	5.90	316.30	4892.72	199.18 N	126.99 W	235.77	0.22
4998.00	5.70	317.20	4984.25	205.95 N	133.36 W	245.00	0.24
5093.00	5.50	316.10	5078.80	212.69 N	139.72 W	254.19	0.24
5187.00	5.40	316.10	5172.37	219.13 N	145.91 W	263.04	0.11
5278.00	5.30	316.10	5262.98	225.24 N	151.80 W	271.44	0.11
5365.00	5.40	318.40	5349.60	231.20 N	157.30 W	279.50	0.27
5459.00	5.40	317.00	5443.18	237.74 N	163.25 W	288.29	0.14
5551.00	5.30	317.90	5534.78	244.06 N	169.06 W	296.81	0.14
5644.00	5.30	317.70	5627.38	250.42 N	174.82 W	305.35	0.02
5738.00	5.10	315.90	5721.00	256.63 N	180.65 W	313.80	0.27
5830.00	5.40	318.00	5812.61	262.78 N	186.40 W	322.16	0.39
5924.00	5.30	321.40	5906.20	269.47 N	192.07 W	330.89	0.35
5957.00	5.30	321.20	5939.06	271.84 N	193.97 W	333.94	0.06
5989.00	5.40	321.90	5970.92	274.18 N	195.83 W	336.92	0.37
6020.00	5.50	321.60	6001.78	276.49 N	197.65 W	339.86	0.34
6051.00	5.50	322.10	6032.64	278.83 N	199.48 W	342.83	0.15

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6080.00	5.60	321.50	6061.50	281.03 N	201.22 W	345.63	0.40
6111.00	5.70	321.60	6092.35	283.42 N	203.12 W	348.68	0.32
6142.00	5.80	322.40	6123.20	285.87 N	205.03 W	351.79	0.41
6173.00	5.80	322.80	6154.04	288.36 N	206.93 W	354.92	0.13
6235.00	5.80	322.70	6215.72	293.35 N	210.72 W	361.18	0.02
6297.00	6.10	321.70	6277.38	298.42 N	214.66 W	367.61	0.51
6328.00	6.30	320.90	6308.20	301.04 N	216.76 W	370.95	0.70
6358.00	6.50	320.00	6338.02	303.62 N	218.89 W	374.29	0.75
6389.00	6.60	320.50	6368.81	306.33 N	221.15 W	377.82	0.37
6419.00	6.70	320.30	6398.61	309.01 N	223.36 W	381.28	0.34
6451.00	6.70	319.40	6430.39	311.86 N	225.77 W	385.01	0.33
6482.00	6.90	319.30	6461.18	314.65 N	228.16 W	388.67	0.65
6511.00	6.90	318.40	6489.97	317.27 N	230.45 W	392.14	0.37
6541.00	6.90	318.20	6519.75	319.96 N	232.85 W	395.72	0.08
6571.00	7.00	317.70	6549.53	322.66 N	235.28 W	399.33	0.39
6603.00	6.90	317.20	6581.29	325.51 N	237.90 W	403.18	0.37
6634.00	6.90	316.60	6612.07	328.23 N	240.45 W	406.88	0.23
6666.00	7.10	316.10	6643.83	331.05 N	243.14 W	410.74	0.65
6696.00	7.10	314.90	6673.60	333.70 N	245.74 W	414.41	0.49
6728.00	7.00	312.60	6705.36	336.41 N	248.57 W	418.27	0.94
6759.00	7.10	311.00	6736.12	338.95 N	251.41 W	421.99	0.71
6790.00	7.10	309.60	6766.89	341.43 N	254.33 W	425.71	0.56
6821.00	7.00	308.90	6797.65	343.83 N	257.28 W	429.39	0.43
6853.00	7.10	307.70	6829.41	346.27 N	260.36 W	433.18	0.56
6884.00	7.10	305.60	6860.17	348.55 N	263.43 W	436.83	0.84
6915.00	7.30	304.00	6890.93	350.77 N	266.62 W	440.50	0.91
6945.00	7.30	302.20	6920.68	352.85 N	269.82 W	444.06	0.76
6976.00	7.20	300.30	6951.44	354.88 N	273.16 W	447.67	0.84
7007.00	7.30	299.90	6982.19	356.84 N	276.55 W	451.25	0.36
7038.00	7.30	298.80	7012.94	358.77 N	279.98 W	454.83	0.45
7069.00	7.30	297.50	7043.69	360.63 N	283.45 W	458.37	0.53
7135.00	7.43	296.56	7109.14	364.48 N	290.99 W	465.92	0.27
7163.00	6.60	295.10	7136.93	365.97 N	294.07 W	468.93	3.04
7192.00	5.10	294.70	7165.78	367.22 N	296.75 W	471.52	5.17
7224.00	3.20	293.60	7197.69	368.17 N	298.86 W	473.53	5.94
7254.00	1.40	320.90	7227.67	368.79 N	299.86 W	474.62	6.86
7285.00	2.50	43.20	7258.66	369.57 N	299.63 W	475.12	8.70
7316.00	3.60	57.00	7289.61	370.60 N	298.35 W	475.20	4.24
7347.00	2.40	59.30	7320.57	371.46 N	296.98 W	475.09	3.89
7378.00	2.10	53.30	7351.54	372.13 N	295.97 W	475.03	1.23

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
7409.00	1.90	48.00	7382.53	372.81 N	295.13 W	475.09	0.88
7440.00	1.70	40.70	7413.51	373.51 N	294.45 W	475.25	0.98
7472.00	1.60	36.20	7445.50	374.23 N	293.87 W	475.50	0.51
7503.00	1.80	47.70	7476.48	374.90 N	293.26 W	475.68	1.27
7534.00	2.00	51.40	7507.47	375.57 N	292.47 W	475.76	0.76
7566.00	2.10	55.70	7539.45	376.25 N	291.55 W	475.77	0.57
7597.00	2.30	56.30	7570.42	376.91 N	290.57 W	475.73	0.65
7628.00	2.50	58.30	7601.40	377.61 N	289.47 W	475.65	0.70
7658.00	3.00	60.50	7631.36	378.34 N	288.23 W	475.51	1.70
7690.00	3.50	59.00	7663.31	379.26 N	286.67 W	475.33	1.58
7720.00	3.70	61.20	7693.25	380.20 N	285.03 W	475.13	0.81
7752.00	3.90	62.50	7725.18	381.20 N	283.16 W	474.84	0.68
7784.00	3.30	61.70	7757.12	382.13 N	281.39 W	474.55	1.88
7815.00	3.10	69.70	7788.07	382.85 N	279.82 W	474.20	1.58
7846.00	2.60	71.70	7819.03	383.36 N	278.36 W	473.76	1.64
7877.00	1.80	43.80	7850.01	383.93 N	277.36 W	473.63	4.24
7909.00	1.30	349.80	7882.00	384.65 N	277.07 W	474.05	4.61
7940.00	1.80	319.70	7912.99	385.37 N	277.45 W	474.85	3.03
7971.00	2.60	304.80	7943.97	386.14 N	278.34 W	476.00	3.15
8002.00	3.20	300.60	7974.92	386.98 N	279.67 W	477.46	2.05
8017.00	3.40	306.00	7989.90	387.46 N	280.39 W	478.27	2.46
8033.00	3.60	310.90	8005.87	388.07 N	281.15 W	479.21	2.25
8048.00	3.70	314.80	8020.84	388.72 N	281.85 W	480.14	1.78
8062.00	4.10	317.00	8034.81	389.40 N	282.51 W	481.09	3.05
8072.00	4.00	316.00	8044.78	389.91 N	283.00 W	481.79	1.22
8093.00	4.30	316.60	8065.73	391.01 N	284.05 W	483.29	1.44
8108.00	4.30	314.80	8080.68	391.82 N	284.83 W	484.41	0.90
8123.00	4.10	314.40	8095.64	392.59 N	285.61 W	485.49	1.35
8138.00	3.90	312.00	8110.61	393.31 N	286.38 W	486.52	1.74
8154.00	3.70	312.30	8126.57	394.02 N	287.16 W	487.56	1.26
8169.00	3.40	308.70	8141.54	394.62 N	287.87 W	488.46	2.49
8186.00	2.80	306.30	8158.52	395.18 N	288.60 W	489.34	3.61
8196.00	2.60	304.80	8168.51	395.45 N	288.98 W	489.79	2.12
8217.00	2.20	298.70	8189.49	395.92 N	289.72 W	490.60	2.26
8233.00	1.90	298.00	8205.48	396.19 N	290.23 W	491.12	1.88
8249.00	1.80	293.70	8221.47	396.42 N	290.69 W	491.57	1.07
8265.00	1.60	291.30	8237.46	396.60 N	291.13 W	491.98	1.33
8280.00	1.70	290.70	8252.46	396.76 N	291.53 W	492.34	0.68
8295.00	1.70	294.10	8267.45	396.92 N	291.94 W	492.72	0.67
8311.00	1.90	294.90	8283.44	397.13 N	292.40 W	493.16	1.26

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
8326.00	2.00	298.10	8298.43	397.36 N	292.86 W	493.61	0.99
8343.00	2.30	298.90	8315.42	397.66 N	293.42 W	494.19	1.77
8359.00	2.50	299.50	8331.41	397.99 N	294.00 W	494.79	1.26
8375.00	2.80	301.00	8347.39	398.37 N	294.64 W	495.47	1.92
8390.00	3.10	303.10	8362.37	398.78 N	295.30 W	496.19	2.13
8405.00	3.20	306.00	8377.35	399.24 N	295.97 W	496.97	1.25
8421.00	3.40	307.50	8393.32	399.80 N	296.71 W	497.85	1.36
8437.00	3.40	314.80	8409.29	400.42 N	297.42 W	498.77	2.70
8452.00	3.40	326.40	8424.27	401.10 N	297.99 W	499.65	4.58
8468.00	3.60	331.10	8440.24	401.94 N	298.49 W	500.63	2.18
8483.00	3.80	340.70	8455.21	402.82 N	298.88 W	501.57	4.33
8498.00	3.90	344.00	8470.17	403.78 N	299.19 W	502.52	1.62
8513.00	3.90	349.60	8485.14	404.77 N	299.42 W	503.46	2.54
8529.00	4.00	351.90	8501.10	405.86 N	299.60 W	504.45	1.17
8544.00	3.90	354.00	8516.07	406.88 N	299.73 W	505.35	1.17
8560.00	3.90	355.10	8532.03	407.97 N	299.83 W	506.29	0.47
8575.00	4.00	354.60	8546.99	408.99 N	299.92 W	507.17	0.71
8591.00	3.80	355.00	8562.95	410.08 N	300.02 W	508.11	1.26
8606.00	3.60	351.30	8577.92	411.04 N	300.13 W	508.95	2.08
8622.00	3.40	350.30	8593.89	412.00 N	300.29 W	509.83	1.31
8637.00	3.40	346.80	8608.87	412.88 N	300.47 W	510.63	1.38
8653.00	3.40	348.50	8624.84	413.80 N	300.67 W	511.50	0.63
8668.00	3.40	348.20	8639.81	414.67 N	300.85 W	512.31	0.12
8684.00	3.40	348.60	8655.79	415.60 N	301.04 W	513.18	0.15
8699.00	3.50	351.00	8670.76	416.49 N	301.20 W	513.99	1.17
8715.00	3.50	350.70	8686.73	417.45 N	301.35 W	514.86	0.11
8730.00	3.60	344.20	8701.70	418.36 N	301.56 W	515.71	2.76
8747.00	3.80	343.80	8718.66	419.41 N	301.86 W	516.74	1.19
8762.00	4.00	341.60	8733.63	420.39 N	302.16 W	517.71	1.66
8778.00	4.10	341.00	8749.59	421.46 N	302.53 W	518.79	0.68
8793.00	4.30	340.30	8764.55	422.49 N	302.89 W	519.84	1.38
8810.00	4.50	339.30	8781.50	423.72 N	303.34 W	521.09	1.26
8825.00	4.70	338.40	8796.45	424.84 N	303.77 W	522.26	1.42
8842.00	4.90	339.40	8813.39	426.17 N	304.29 W	523.63	1.28
8857.00	5.00	337.70	8828.34	427.37 N	304.76 W	524.88	1.18
8872.00	5.10	338.20	8843.28	428.60 N	305.26 W	526.16	0.73
8887.00	5.20	335.40	8858.22	429.83 N	305.79 W	527.48	1.80
8903.00	5.40	334.50	8874.15	431.17 N	306.41 W	528.93	1.35
8918.00	5.40	333.50	8889.08	432.44 N	307.03 W	530.32	0.63
8934.00	5.50	332.10	8905.01	433.79 N	307.73 W	531.82	1.04

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
8949.00	5.30	330.80	8919.94	435.03 N	308.40 W	533.22	1.56
8966.00	5.40	332.40	8936.87	436.43 N	309.15 W	534.79	1.06
8981.00	5.50	330.70	8951.80	437.68 N	309.83 W	536.20	1.27
8996.00	5.90	330.10	8966.73	438.97 N	310.57 W	537.68	2.70
9011.00	5.80	329.10	8981.65	440.29 N	311.34 W	539.20	0.95
9027.00	6.20	329.80	8997.56	441.73 N	312.19 W	540.87	2.54
9042.00	6.10	330.20	9012.47	443.13 N	313.00 W	542.47	0.73
9058.00	6.30	331.70	9028.38	444.64 N	313.83 W	544.18	1.61
9073.00	5.90	332.80	9043.30	446.05 N	314.58 W	545.76	2.78
9088.00	5.60	333.60	9058.22	447.39 N	315.26 W	547.24	2.07
9103.00	5.10	338.50	9073.16	448.66 N	315.83 W	548.61	4.51
9120.00	4.70	344.40	9090.09	450.04 N	316.29 W	549.99	3.78
9135.00	4.30	345.20	9105.05	451.17 N	316.60 W	551.09	2.70
9152.00	4.10	344.50	9122.00	452.37 N	316.92 W	552.26	1.21
9167.00	4.40	343.30	9136.96	453.44 N	317.23 W	553.30	2.09
9183.00	4.60	339.40	9152.91	454.63 N	317.63 W	554.50	2.28
9199.00	5.20	340.00	9168.85	455.91 N	318.11 W	555.81	3.76
9214.00	5.20	343.50	9183.79	457.20 N	318.53 W	557.11	2.11
9229.00	5.10	345.20	9198.73	458.50 N	318.90 W	558.37	1.22
9245.00	5.30	348.80	9214.66	459.91 N	319.22 W	559.70	2.39
9260.00	5.70	350.70	9229.60	461.33 N	319.48 W	561.00	2.93
9276.00	6.00	352.60	9245.51	462.94 N	319.71 W	562.44	2.23
9291.00	6.60	353.30	9260.42	464.57 N	319.91 W	563.88	4.03
9307.00	6.40	353.90	9276.32	466.37 N	320.12 W	565.46	1.32
9322.00	6.70	350.70	9291.22	468.07 N	320.35 W	566.96	3.15
9338.00	6.70	348.80	9307.11	469.91 N	320.68 W	568.64	1.39
9353.00	6.70	346.00	9322.01	471.61 N	321.06 W	570.25	2.18
9369.00	6.70	343.80	9337.90	473.41 N	321.55 W	571.99	1.60
9384.00	6.40	341.40	9352.80	475.05 N	322.06 W	573.61	2.71
9400.00	6.50	339.80	9368.70	476.74 N	322.65 W	575.33	1.29
9415.00	6.50	337.50	9383.60	478.32 N	323.27 W	576.98	1.74
9431.00	6.40	337.20	9399.50	479.98 N	323.97 W	578.73	0.66
9446.00	6.50	333.30	9414.41	481.51 N	324.67 W	580.38	3.00
9462.00	6.50	326.30	9430.31	483.07 N	325.58 W	582.18	4.95
9478.00	6.70	320.50	9446.20	484.55 N	326.68 W	584.01	4.35
9494.00	7.20	319.20	9462.08	486.03 N	327.92 W	585.94	3.28
9509.00	7.50	319.20	9476.96	487.48 N	329.18 W	587.86	2.00
9525.00	7.90	321.00	9492.81	489.12 N	330.55 W	589.99	2.92
9540.00	8.20	322.90	9507.67	490.78 N	331.85 W	592.09	2.67
9556.00	8.10	328.00	9523.50	492.65 N	333.13 W	594.36	4.56

SPERRY-SUN DRILLING SERVICES
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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
9571.00	7.90	325.20	9538.36	494.39 N	334.28 W	596.44	2.92
9588.00	7.60	322.30	9555.20	496.24 N	335.63 W	598.73	2.90
9603.00	7.10	319.80	9570.08	497.73 N	336.84 W	600.65	3.96
9618.00	6.40	321.00	9584.98	499.09 N	337.96 W	602.41	4.76
9631.00	6.10	321.70	9597.90	500.19 N	338.85 W	603.82	2.38
9646.00	5.90	322.20	9612.82	501.43 N	339.81 W	605.39	1.38
9661.00	5.60	318.20	9627.74	502.58 N	340.77 W	606.89	3.34
9678.00	5.50	320.10	9644.66	503.83 N	341.85 W	608.53	1.23
9692.00	5.70	318.50	9658.60	504.86 N	342.74 W	609.89	1.81
9709.00	5.90	321.90	9675.51	506.18 N	343.84 W	611.60	2.34
9725.00	6.00	322.90	9691.42	507.49 N	344.85 W	613.26	0.90
9740.00	6.20	324.20	9706.34	508.78 N	345.80 W	614.85	1.62
9755.00	6.20	323.50	9721.25	510.08 N	346.75 W	616.47	0.50
9771.00	5.90	324.70	9737.16	511.45 N	347.74 W	618.16	2.03
9787.00	5.60	322.70	9753.08	512.74 N	348.69 W	619.76	2.25
9803.00	5.20	317.60	9769.01	513.90 N	349.65 W	621.27	3.90
9818.00	4.90	315.00	9783.95	514.85 N	350.56 W	622.57	2.52
9833.00	4.50	311.00	9798.90	515.69 N	351.46 W	623.78	3.45
9848.00	4.50	311.30	9813.85	516.47 N	352.35 W	624.93	0.16
9865.00	4.20	312.70	9830.80	517.33 N	353.31 W	626.19	1.87
9880.00	4.60	316.10	9845.76	518.14 N	354.13 W	627.32	3.18
9896.00	4.80	314.10	9861.71	519.06 N	355.05 W	628.62	1.62
9911.00	4.60	313.10	9876.66	519.91 N	355.94 W	629.83	1.44
9926.00	5.00	312.00	9891.60	520.76 N	356.87 W	631.06	2.74
9941.00	5.10	312.40	9906.55	521.65 N	357.85 W	632.35	0.71
9956.00	5.60	313.40	9921.48	522.60 N	358.87 W	633.72	3.39
9971.00	6.00	313.60	9936.40	523.64 N	359.97 W	635.21	2.67
9987.00	5.90	314.00	9952.32	524.79 N	361.17 W	636.84	0.68
10002.00	6.20	315.50	9967.23	525.90 N	362.29 W	638.41	2.26
10017.00	6.50	316.90	9982.14	527.10 N	363.44 W	640.05	2.25
10032.00	6.60	319.10	9997.04	528.37 N	364.58 W	641.75	1.80
10048.00	6.40	319.80	10012.94	529.75 N	365.76 W	643.56	1.34
10063.00	6.30	321.90	10027.85	531.03 N	366.81 W	645.21	1.69
10080.00	6.10	323.60	10044.75	532.50 N	367.92 W	647.05	1.60
10095.00	6.00	324.20	10059.67	533.77 N	368.85 W	648.63	0.79
10111.00	5.80	327.10	10075.58	535.13 N	369.78 W	650.27	2.24
10126.00	5.90	329.30	10090.50	536.43 N	370.58 W	651.80	1.64
10140.00	5.80	329.10	10104.43	537.66 N	371.31 W	653.22	0.73
10155.00	5.90	332.40	10119.35	538.99 N	372.06 W	654.74	2.34
10170.00	5.80	333.30	10134.27	540.35 N	372.76 W	656.25	0.90

SPERRY-SUN DRILLING SERVICES
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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
10185.00	5.80	335.60	10149.20	541.72 N	373.41 W	657.74	1.55
10201.00	5.80	335.10	10165.12	543.19 N	374.09 W	659.32	0.32
10216.00	5.70	336.50	10180.04	544.56 N	374.70 W	660.79	1.15
10233.00	5.70	338.90	10196.95	546.12 N	375.34 W	662.43	1.40
10248.00	5.80	341.40	10211.88	547.53 N	375.85 W	663.87	1.80
10265.00	5.80	344.70	10228.79	549.17 N	376.35 W	665.50	1.96
10280.00	5.60	346.30	10243.72	550.62 N	376.73 W	666.88	1.70
10295.00	5.50	348.90	10258.65	552.03 N	377.04 W	668.21	1.80
10310.00	5.40	350.50	10273.58	553.44 N	377.29 W	669.50	1.21
10326.00	5.30	351.20	10289.51	554.91 N	377.53 W	670.83	0.75
10341.00	5.40	352.80	10304.44	556.29 N	377.73 W	672.06	1.20
10357.00	5.30	354.40	10320.38	557.78 N	377.89 W	673.36	1.12
10388.00	5.00	358.30	10351.25	560.55 N	378.07 W	675.71	1.49
10400.00	5.00	358.10	10363.20	561.59 N	378.10 W	676.57	0.15
*10450.00	5.00	358.10	10413.02	565.95 N	378.25 W	680.18	0.00

THE DOGLEG SEVERITY IS IN DEGREES PER 100 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG 323.97°

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS, THE BOTTOM HOLE
DISPLACEMENT IS 680.71 FEET IN THE DIRECTION OF 326.24°
COORDINATE VALUES ARE GIVEN RELATIVE TO THE PLATFORM REFERENCE POINT
VERTICAL SECTION IS GIVEN RELATIVE TO THE WELLHEAD LOCATION

* EXTRAPOLATED TO BIT

SPERRY-SUN DRILLING SERVICES
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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.25	176.00	100.00	0.22 S	0.02 E	-0.18	0.25
350.00	0.25	287.00	350.00	0.60 S	0.47 W	-0.17	0.16
450.00	0.41	247.00	450.00	0.68 S	1.01 W	0.11	0.27
550.00	0.41	359.00	550.00	0.46 S	1.34 W	0.49	0.68
650.00	0.33	105.00	649.99	0.18 S	1.07 W	0.54	0.59
750.00	0.41	133.00	749.99	0.50 S	0.53 W	-0.05	0.20
850.00	0.33	155.00	849.99	1.00 S	0.15 W	-0.69	0.16
950.00	0.41	167.00	949.99	1.61 S	0.06 E	-1.29	0.11
1050.00	0.41	187.00	1049.99	2.31 S	0.09 E	-1.86	0.14
1150.00	0.58	255.00	1149.98	2.80 S	0.44 W	-1.90	0.57
1250.00	0.67	297.00	1249.98	2.67 S	1.45 W	-1.16	0.46
1350.00	0.58	235.00	1349.97	2.69 S	2.39 W	-0.59	0.65
1450.00	0.75	239.00	1449.97	3.32 S	3.36 W	-0.46	0.18
1550.00	0.58	279.00	1549.96	3.58 S	4.42 W	0.00	0.48
1650.00	1.00	174.00	1649.95	4.36 S	4.83 W	-0.35	1.28
1750.00	1.41	159.00	1749.93	6.38 S	4.30 W	-2.25	0.51
1850.00	1.08	133.00	1849.91	8.17 S	3.17 W	-4.36	0.65
1950.00	0.83	238.00	1949.90	9.20 S	3.09 W	-5.20	1.52
2015.00	1.08	245.00	2014.89	9.71 S	4.05 W	-5.00	0.42
2069.00	0.60	40.20	2068.89	9.71 S	4.33 W	-4.82	3.04
2130.00	0.90	52.20	2129.88	9.17 S	3.74 W	-4.77	0.55
2191.00	1.00	43.80	2190.88	8.49 S	3.00 W	-4.71	0.28
2223.00	1.60	33.90	2222.87	7.92 S	2.55 W	-4.55	2.00
2254.00	2.10	32.70	2253.85	7.08 S	2.00 W	-4.24	1.62
2285.00	2.40	36.10	2284.83	6.08 S	1.32 W	-3.90	1.06
2347.00	2.90	26.90	2346.76	3.63 S	0.16 E	-2.92	1.06
2410.00	3.20	23.00	2409.67	0.59 S	1.57 E	-1.45	0.58
2471.00	3.30	21.30	2470.57	2.61 N	2.87 E	0.22	0.23
2533.00	3.50	24.00	2532.46	6.00 N	4.29 E	1.97	0.41
2564.00	3.90	25.70	2563.40	7.82 N	5.13 E	2.85	1.34
2600.00	4.20	24.30	2599.31	10.12 N	6.20 E	3.96	0.88
2632.00	4.40	21.50	2631.22	12.33 N	7.14 E	5.09	0.91
2663.00	4.20	14.10	2662.13	14.54 N	7.85 E	6.36	1.90
2694.00	4.00	5.50	2693.05	16.72 N	8.23 E	7.81	2.08
2724.00	3.90	359.00	2722.98	18.78 N	8.31 E	9.36	1.53
2756.00	3.70	354.10	2754.91	20.89 N	8.19 E	11.09	1.19
2787.00	3.70	350.90	2785.85	22.88 N	7.93 E	12.79	0.67
2818.00	3.60	349.00	2816.78	24.82 N	7.58 E	14.52	0.51
2881.00	4.10	342.80	2879.64	28.91 N	6.54 E	18.35	1.03

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
2942.00	4.60	339.80	2940.47	33.29 N	5.05 E	22.70	0.90
3005.00	5.00	338.10	3003.25	38.21 N	3.15 E	27.71	0.67
3068.00	5.40	336.30	3065.99	43.47 N	0.94 E	33.19	0.69
3130.00	5.90	335.80	3127.68	49.05 N	1.54 W	39.09	0.81
3193.00	6.20	335.60	3190.33	55.10 N	4.28 W	45.51	0.48
3256.00	6.30	333.50	3252.96	61.29 N	7.22 W	52.18	0.40
3349.00	6.80	327.40	3345.35	70.50 N	12.47 W	62.63	0.92
3411.00	6.90	326.10	3406.91	76.68 N	16.52 W	69.99	0.30
3474.00	6.60	325.40	3469.47	82.80 N	20.69 W	77.37	0.49
3567.00	6.60	326.30	3561.86	91.65 N	26.69 W	88.02	0.11
3629.00	6.50	323.30	3623.45	97.43 N	30.76 W	95.07	0.57
3722.00	6.80	315.90	3715.83	105.60 N	37.74 W	105.82	0.98
3816.00	6.90	315.10	3809.16	113.60 N	45.60 W	116.98	0.15
3879.00	6.90	315.40	3871.70	118.97 N	50.93 W	124.51	0.06
3972.00	6.60	315.40	3964.06	126.75 N	58.60 W	135.39	0.32
4065.00	6.00	315.40	4056.49	134.02 N	65.77 W	145.54	0.65
4158.00	6.20	314.50	4148.97	141.00 N	72.76 W	155.37	0.24
4254.00	6.10	315.40	4244.41	148.27 N	80.04 W	165.60	0.14
4347.00	6.00	318.20	4336.90	155.41 N	86.75 W	175.37	0.34
4440.00	6.00	317.90	4429.39	162.64 N	93.25 W	185.08	0.03
4533.00	6.10	319.80	4521.87	170.02 N	99.70 W	194.87	0.24
4626.00	6.10	318.60	4614.34	177.50 N	106.15 W	204.75	0.14
4720.00	6.40	315.20	4707.78	184.96 N	113.15 W	214.95	0.51
4812.00	6.10	315.80	4799.24	192.11 N	120.17 W	224.92	0.33
4906.00	5.90	316.30	4892.72	199.18 N	126.99 W	234.71	0.22
4998.00	5.70	317.20	4984.25	205.95 N	133.36 W	243.98	0.24
5093.00	5.50	316.10	5078.80	212.69 N	139.72 W	253.22	0.24
5187.00	5.40	316.10	5172.37	219.13 N	145.91 W	262.12	0.11
5278.00	5.30	316.10	5262.98	225.24 N	151.80 W	270.57	0.11
5365.00	5.40	318.40	5349.60	231.20 N	157.30 W	278.66	0.27
5459.00	5.40	317.00	5443.18	237.74 N	163.25 W	287.50	0.14
5551.00	5.30	317.90	5534.78	244.06 N	169.06 W	296.06	0.14
5644.00	5.30	317.70	5627.38	250.42 N	174.82 W	304.63	0.02
5738.00	5.10	315.90	5721.00	256.63 N	180.65 W	313.13	0.27
5830.00	5.40	318.00	5812.61	262.78 N	186.40 W	321.53	0.39
5924.00	5.30	321.40	5906.20	269.47 N	192.07 W	330.28	0.35
5957.00	5.30	321.20	5939.06	271.84 N	193.97 W	333.33	0.06
5989.00	5.40	321.90	5970.92	274.18 N	195.83 W	336.32	0.37
6020.00	5.50	321.60	6001.78	276.49 N	197.65 W	339.26	0.34
6051.00	5.50	322.10	6032.64	278.83 N	199.48 W	342.23	0.15

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
6080.00	5.60	321.50	6061.50	281.03 N	201.22 W	345.03	0.40
6111.00	5.70	321.60	6092.35	283.42 N	203.12 W	348.09	0.32
6142.00	5.80	322.40	6123.20	285.87 N	205.03 W	351.19	0.41
6173.00	5.80	322.80	6154.04	288.36 N	206.93 W	354.32	0.13
6235.00	5.80	322.70	6215.72	293.35 N	210.72 W	360.59	0.02
6297.00	6.10	321.70	6277.38	298.42 N	214.66 W	367.01	0.51
6328.00	6.30	320.90	6308.20	301.04 N	216.76 W	370.36	0.70
6358.00	6.50	320.00	6338.02	303.62 N	218.89 W	373.70	0.75
6389.00	6.60	320.50	6368.81	306.33 N	221.15 W	377.24	0.37
6419.00	6.70	320.30	6398.61	309.01 N	223.36 W	380.71	0.34
6451.00	6.70	319.40	6430.39	311.86 N	225.77 W	384.45	0.33
6482.00	6.90	319.30	6461.18	314.65 N	228.16 W	388.11	0.65
6511.00	6.90	318.40	6489.97	317.27 N	230.45 W	391.60	0.37
6541.00	6.90	318.20	6519.75	319.96 N	232.85 W	395.20	0.08
6571.00	7.00	317.70	6549.53	322.66 N	235.28 W	398.82	0.39
6603.00	6.90	317.20	6581.29	325.51 N	237.90 W	402.69	0.37
6634.00	6.90	316.60	6612.07	328.23 N	240.45 W	406.40	0.23
6666.00	7.10	316.10	6643.83	331.05 N	243.14 W	410.29	0.65
6696.00	7.10	314.90	6673.60	333.70 N	245.74 W	413.98	0.49
6728.00	7.00	312.60	6705.36	336.41 N	248.57 W	417.87	0.94
6759.00	7.10	311.00	6736.12	338.95 N	251.41 W	421.63	0.71
6790.00	7.10	309.60	6766.89	341.43 N	254.33 W	425.39	0.56
6821.00	7.00	308.90	6797.65	343.83 N	257.28 W	429.12	0.43
6853.00	7.10	307.70	6829.41	346.27 N	260.36 W	432.95	0.56
6884.00	7.10	305.60	6860.17	348.55 N	263.43 W	436.66	0.84
6915.00	7.30	304.00	6890.93	350.77 N	266.62 W	440.39	0.91
6945.00	7.30	302.20	6920.68	352.85 N	269.82 W	444.02	0.76
6976.00	7.20	300.30	6951.44	354.88 N	273.16 W	447.70	0.84
7007.00	7.30	299.90	6982.19	356.84 N	276.55 W	451.36	0.36
7038.00	7.30	298.80	7012.94	358.77 N	279.98 W	455.02	0.45
7069.00	7.30	297.50	7043.69	360.63 N	283.45 W	458.65	0.53
7168.00	7.50	296.10	7141.86	366.38 N	294.83 W	470.27	0.27
7199.00	7.50	296.60	7172.60	368.17 N	298.46 W	473.95	0.21
7230.00	7.40	298.40	7203.34	370.03 N	302.02 W	477.64	0.82
7262.00	7.60	299.60	7235.06	372.06 N	305.68 W	481.51	0.79
7293.00	7.50	300.10	7265.79	374.08 N	309.21 W	485.31	0.39
7323.00	7.60	298.70	7295.53	376.02 N	312.64 W	488.97	0.70
7353.00	7.60	299.20	7325.27	377.94 N	316.11 W	492.65	0.22
7385.00	7.50	304.70	7356.99	380.16 N	319.68 W	496.62	2.28
7416.00	7.50	309.30	7387.73	382.59 N	322.91 W	500.54	1.94

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MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
7447.00	7.40	312.40	7418.47	385.22 N	325.95 W	504.50	1.34
7479.00	6.90	311.20	7450.22	387.88 N	328.91 W	508.43	1.63
7510.00	6.50	310.00	7481.00	390.23 N	331.66 W	511.99	1.37
7542.00	6.60	310.00	7512.80	392.58 N	334.46 W	515.57	0.31
7571.00	6.50	310.70	7541.61	394.72 N	336.98 W	518.82	0.44
7603.00	6.00	314.20	7573.42	397.07 N	339.55 W	522.26	1.96
7634.27	5.10	315.50	7604.54	399.20 N	341.70 W	525.27	2.91
7665.42	4.20	305.20	7635.59	400.84 N	343.60 W	527.75	3.93
7695.70	3.40	290.90	7665.80	401.80 N	345.34 W	529.59	4.08
7727.24	2.90	267.90	7697.29	402.11 N	347.02 W	530.88	4.27
7758.27	3.10	249.10	7728.28	401.78 N	348.58 W	531.61	3.22
7789.29	3.00	246.90	7759.26	401.16 N	350.11 W	532.09	0.50
7818.46	3.30	265.60	7788.38	400.80 N	351.65 W	532.78	3.65
7850.05	4.40	285.50	7819.90	401.05 N	353.73 W	534.28	5.43
7880.31	5.60	298.30	7850.05	402.06 N	356.15 W	536.59	5.39
7911.79	6.20	302.30	7881.36	403.70 N	358.94 W	539.62	2.31
7942.16	5.90	308.80	7911.56	405.55 N	361.54 W	542.70	2.46
7973.70	5.40	319.50	7942.95	407.70 N	363.77 W	545.76	3.69
8004.17	4.90	333.50	7973.30	409.95 N	365.28 W	548.47	4.42
8034.50	3.90	344.90	8003.54	412.11 N	366.12 W	550.68	4.36
8065.76	3.80	358.80	8034.73	414.17 N	366.42 W	552.47	3.00
8097.03	3.90	5.90	8065.93	416.26 N	366.33 W	554.04	1.56
8127.26	4.20	3.60	8096.09	418.39 N	366.16 W	555.58	1.13
8158.90	4.60	3.90	8127.63	420.81 N	366.00 W	557.36	1.27
8190.05	5.00	5.70	8158.67	423.41 N	365.78 W	559.24	1.37
8221.61	3.70	6.00	8190.14	425.79 N	365.54 W	560.94	4.12
8251.56	2.50	344.40	8220.05	427.38 N	365.61 W	562.22	5.52
8282.76	2.00	324.90	8251.22	428.48 N	366.11 W	563.39	2.91
8312.58	1.60	315.80	8281.03	429.20 N	366.70 W	564.33	1.64
8344.50	1.40	319.80	8312.94	429.82 N	367.26 W	565.16	0.71
8375.62	1.60	343.00	8344.05	430.53 N	367.63 W	565.94	2.04
8406.18	1.80	355.30	8374.59	431.41 N	367.80 W	566.73	1.36
8436.70	2.30	1.80	8405.10	432.50 N	367.82 W	567.59	1.80
8468.28	2.70	4.40	8436.65	433.88 N	367.74 W	568.61	1.32
8499.63	3.10	5.30	8467.95	435.46 N	367.60 W	569.76	1.28
8530.87	4.10	0.10	8499.13	437.42 N	367.52 W	571.23	3.36
8562.70	5.10	353.70	8530.86	439.96 N	367.68 W	573.30	3.53
8593.54	5.90	346.50	8561.56	442.87 N	368.20 W	575.89	3.42
8623.10	6.00	342.10	8590.96	445.81 N	369.03 W	578.70	1.58
8655.10	6.10	336.30	8622.78	448.96 N	370.23 W	581.90	1.93

†

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

UPRC
3-10

11-MAR-1994
17:49:07

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
8686.71	6.10	327.10	8654.21	451.91 N	371.81 W	585.19	3.09
8717.86	6.10	321.20	8685.19	454.59 N	373.75 W	588.49	2.01
8749.29	6.00	320.30	8716.44	457.15 N	375.84 W	591.80	0.44
8779.73	5.80	324.70	8746.72	459.63 N	377.75 W	594.93	1.62
8811.11	5.80	329.10	8777.94	462.29 N	379.48 W	598.08	1.42
8842.54	5.60	334.90	8809.21	465.04 N	380.95 W	601.14	1.94
8873.64	5.60	338.70	8840.17	467.83 N	382.14 W	604.06	1.19
8904.32	5.80	335.20	8870.69	470.63 N	383.34 W	606.99	1.31
8935.15	6.30	325.60	8901.35	473.44 N	384.94 W	610.18	3.65
8966.87	6.80	312.40	8932.87	476.14 N	387.31 W	613.78	4.99
8996.73	6.00	313.30	8962.54	478.40 N	389.76 W	617.07	2.70
9100.00	3.90	7.70	9065.47	485.59 N	393.22 W	624.83	4.74
9122.61	3.90	10.70	9088.03	487.11 N	392.97 W	625.86	0.90
9153.69	3.20	12.00	9119.05	488.99 N	392.59 W	627.09	2.27
9183.91	2.80	7.60	9149.23	490.55 N	392.32 W	628.13	1.53
9215.14	3.30	355.10	9180.42	492.20 N	392.30 W	629.39	2.66
9245.49	3.40	349.50	9210.71	493.96 N	392.53 W	630.91	1.13
9276.56	3.20	4.10	9241.73	495.73 N	392.64 W	632.35	2.77
9308.02	2.60	37.10	9273.15	497.17 N	392.15 W	633.16	5.54
9339.65	2.70	15.50	9304.75	498.47 N	391.52 W	633.77	3.15
9370.75	4.10	349.80	9335.80	500.27 N	391.52 W	635.17	6.55
9401.39	5.30	339.60	9366.33	502.67 N	392.20 W	637.47	4.76
9431.60	6.00	337.30	9396.40	505.43 N	393.30 W	640.31	2.43
9461.55	6.60	334.30	9426.17	508.43 N	394.65 W	643.48	2.28
9492.20	6.80	329.10	9456.61	511.57 N	396.34 W	646.99	2.08
9523.17	8.00	330.50	9487.32	515.02 N	398.35 W	650.94	3.92
9554.73	9.40	331.70	9518.52	519.20 N	400.65 W	655.63	4.47
9585.23	9.30	326.80	9548.61	523.46 N	403.18 W	660.53	2.63
9616.86	9.30	319.80	9579.83	527.55 N	406.23 W	665.63	3.57
9648.51	10.00	313.40	9611.03	531.39 N	409.88 W	670.91	4.04
9678.85	10.40	309.20	9640.89	534.93 N	413.91 W	676.20	2.78
9726.00	9.40	310.00	9687.34	540.10 N	420.16 W	684.15	2.14

THE DOGLEG SEVERITY IS IN DEGREES PER 100 FEET
THE VERTICAL SECTION WAS COMPUTED ALONG 321.00°

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE
DISPLACEMENT IS 684.28 FEET IN THE DIRECTION OF 322.12°
COORDINATE VALUES ARE GIVEN RELATIVE TO THE WELLHEAD
VERTICAL SECTION IS GIVEN RELATIVE TO THE WELLHEAD LOCATION

FORMATION TOPS & STRUCTURAL RELATIONSHIPS

GL: 6835

Sub: 24

KB: 6859

Original Hole

Formation/Zone	TVD Prognosis	Measured Depth Estimate	Electric Log Top	True Vertical Depth	TVD Datum	Thick	Dip to Quasar #3-6	Dip to Quasar #3-3	Top Quasar #3-6	KB 6934 Datum	#3-6 Thick	Top Quasar #3-3	KB 6689 Datum	#3-3 Thick
Preuss	7050	6760		6735	124	1302	12	41	6822	112	1223	6606	83	1426
Preuss salt	8055	8068		8037	-1178	64	-67	165	8045	-1111	95	8032	-1343	100
Twin Creek	8170	8132		8101	-1242	479	-36	201	8140	-1206	334	8132	-1443	318
Leeds Creek		8612		8580	-1721	272	-181	40	8474	-1540	268	8450	-1761	306
Watton Canyon		8886		8852	-1993	196	-185	74	8742	-1808	175	8756	-2067	188
Boundry Ridge	8970	9082		9048	-2189	29	-206	66	8917	-1983	27	8944	-2255	27
Rich		9112		9077	-2218	205	-208	64	8944	-2010	215	8971	-2282	171
Sliderock		9317		9282	-2423	75	-198	30	9159	-2225	81	9142	-2453	118
Gypsum Springs	9340	9392		9357	-2498	64	-192	73	9240	-2306	52	9260	-2571	66
Nugget	9395	9456		9421	-2562		-204	75	9292	-2358	1044	9326	-2637	
Ankareh									10336	-3402				
Total Depth	10500	9728		9689	-2830				10433	-3499		10301	-3612	

Sidetrack #1

Preuss salt	8055	8060	8050	8023	-1164	126	-53	179	8045	-1111	95	8032	-1343	100
Twin Creek	8170	8119	8176	8149	-1290	379	-84	153	8140	-1206	334	8132	-1443	318
Leeds Creek		8570	8556	8528	-1669	291	-129	92	8474	-1540	268	8450	-1761	306
Watton Canyon		8861	8848	8819	-1960	187	-152	107	8742	-1808	175	8756	-2067	188
Boundry Ridge	8970	9036	9035	9006	-2147	27	-164	108	8917	-1983	27	8944	-2255	27
Rich		9064	9063	9033	-2174	218	-164	108	8944	-2010	215	8971	-2282	171
Sliderock		9284	9282	9251	-2392	95	-167	61	9159	-2225	81	9142	-2453	118
Gypsum Springs	9340	9377	9377	9346	-2487	51	-181	84	9240	-2306	52	9260	-2571	66
Nugget	9395	9428	9428	9397	-2538		-180	99	9292	-2358	1044	9326	-2637	
Ankareh									10336	-3402				
Total Depth	10500	10450	10445	10408	-3549				10433	-3499		10301	-3612	

SAMPLE DESCRIPTIONS

Lagged samples were caught by the rig crews, under the supervision of the mudloggers, at 20' intervals from 6,140' to 7,050'. Sunburst Consulting was placed on standby and no samples were caught from the interval 7,050' to 7,850'. Mudlogging was resumed at 7,850'. Mudloggers caught 20' lagged samples from 7,850' to 8,050' and 10' lagged samples from 8,050' to 9,728' [the total depth of the original hole]. Stuck pipe and fishing tools forced abandonment of the original hole, which was cement plugged back to intermediate casing [7,135']. Sidetrack #1 was initiated at 7,163'MD [measured depth]. Unlagged samples were caught every 2 hours by the rig crews, under the supervision of the Sunburst geologist, from 7,163' to 7,330'MD. Rig crews caught lagged 30' samples from 7,330' to 8,100'MD. The mudloggers caught 10' lagged samples from 8,100' to 10,450'MD [total depth Sidetrack #1].

Samples were cleaned and examined under a binocular microscope and tested for hydrocarbon "cut" and fluorescence with an ultra-violet light and 1-1-1 tri-chloro-ethane. Sample quality ranged from fair to poor, with the worst samples coming from the later portions of the original hole following lost circulation in the lower Twin Creek and Nugget Formations. Sample quality improved in Sidetrack #1, with more representative samples of the lower Twin Creek members [probably due to lack of lost circulation].

The sample descriptions below begin above the Stump Formation. Estimated formation/member tops have been inserted for reference, with measured depth [MD]. true vertical depth [TVD] and datum elevations.

- 6140' - 6180' Shale: red brown to brown, moderately soft, clayey, limy, silty (90%)
Siltstone: red brown, moderately friable, sandy, calcareous cement (10%)
- 61800' - 6210' Shale: as above, becoming very silty (60%)
Siltstone: as above (10%)
Sandstone: light brown-light orange, very fine to fine grain, sub-rounded, clay matrix, poor visible porosity, no shows (30%)
- 6210' - 6250' Shale: brick red to brown, moderately soft, blocky, earthy, v silty to sandy, slight to moderately limy (80%)
Siltstone: red brown to orange, moderately friable, clayey, occasionally arenaceous and grading to sandstone (20%)
Sandstone: as above, generally grading with siltstone (Trace)
- 6250' - 6320' Shale: red brown to orange, moderately soft, occasionally firm, blocky, silty to sandy texture, earthy, limy (80%)
Sandstone: light orange, very fine to medium grain, sub-rounded, poorly sorted, clay matrix, silty, generally tight (20%)
Limestone: light gray, hard, micro- to crypto-crystalline, tight, probably stringers (Trace)

6320' - 6360' Shale: red brown, maroon, light gray, moderately soft to firm, occasionally limy, sub-waxy to earthy, sub-platy (100%)
Limestone: off white to light gray, hard, cryptocrystalline (Trace)

6360' - 6380' Shale: red brown, occasionally mottled with gray, moderately soft to firm, occasionally silty (50%)
Sandstone: off white, very fine to fine grained, firm, siliceous to calcareous cement, cherty in part, moderately clean, tight (50%)

6380' - 6420' Shale: red brown to red orange, moderately soft, earthy to sub-waxy, calcareous, sub-platy (90%)
Sandstone: as above (10%)

Est. Top Stump 6,422'MD, 6,402'TVD, +457'

6420' - 6440' Shale: as above (20%)
Sandstone: light orange to light pink, very fine to medium grained, poorly sorted, sub-angular to sub-rounded, moderately friable, slightly calcareous to siliceous cement, slight clay matrix, moderately tight to poor visible porosity, no shows (80%)

6440' - 6470' Shale: red brown to gray brown, moderately soft, earthy, silty, sub-platy (80%)
Sandstone: light orange to off white, predominately very fine grain, well sorted, siliceous, tight (20%)

6470' - 6500' Shale: generally as above (20%)
Sandstone: orange, very fine to medium grain, poorly sorted, moderately firm, sub-angular, clay matrix, siliceous to limy cement, tight, (70%)

6500' - 6540' Sandstone: light orange, very fine to fine grain, sub-angular, medium to poorly sorted, generally siliceous cement, poor visible porosity, trace chert, no shows (70%)
Shale: red brown, very silty to sandy, earthy (30%) calcareous cement (Trace)

6540' - 6570' Sandstone: off white, very fine grained, firm, abundant siliceous cement, medium sorted, tight cherty (90%)
Chert: light green yellow, angular, very hard

6570' - 6600' Sandstone: generally as above (70%)
Chert: as above (30%)

- 6600' - 6620' Shale: red brown, moderately firm, silty to grainy (40%)
Siltstone: orange brown, very sandy, moderately firm, slightly limy, argillaceous matrix (30%)
Sandstone: light orange, trace glauconite, fine grained, sub-rounded to sub-angular, medium sorted, siliceous to limy cement, clay matrix, poor visible porosity, moderately firm (30%)
- 6620' - 6640' Sandstone: light gray, salt and pepper, abundant glauconite, very fine to fine grain, siliceous cement, firm, medium sorted, generally tight, no shows (40%)
Shale: medium green gray, maroon, moderately firm, sub-waxy, splintery to platy, non limy (40%)
Siltstone: off white to light green gray, generally grading to sandstone, very firm, siliceous, tight (20%)
- 6640' - 6660' Siltstone: light gray, translucent, moderately firm to firm, siliceous to slightly calcareous, generally grading to sandstone, (60%)
Sandstone: light gray, very fine grain grading to siltstone, salt and pepper, trace glauconite, slight limy to siliceous cement, moderately firm, tight (40%)
- 6660' - 6680' Shale: light green gray, moderately firm, splintery, sub-waxy, non limy (50%)
Sandstone: as above (20%)
Siltstone: as above (30%)
- 6680' - 6690' Sandstone: off white, fine grained, medium to well sorted, sub-rounded, trace glauconite, slight to moderate calcareous cement, moderately clean, friable, poor to fair visible porosity, no shows (90%)
Shale: as above, green gray (10%)
- 6690' - 6700' Shale: red brown, gray, occasionally gray mottled with red, moderately firm, occasionally limy, becoming blocky and silty (70%)
Sandstone: generally as above, occasional chert fragments and glauconite grains (30%)
- 6700' - 6760' Shale: brown to red brown, moderately firm to firm, sub-platy to blocky, slight to moderately silty, earthy, slightly calcareous (100%)

Est. Top Preuss 6,760'MD, 6,735'TVD, +124'

- 6760' - 6820' Shale: red brown to brown, moderately firm, moderate to very silty, slightly limy (60%)
Siltstone: dark orange to red brown, argillaceous, sandy, moderately firm, limy cement (30%)
Sandstone: orange to red brown, very fine to medium grained, sub-round, poorly sorted, moderately friable, calcareous cement, abundant clay matrix, very poor visible porosity, no shows (10%)
- 6820' - 6860' Shale: brown to red brown, moderately firm, silty, slightly limy, platy, earthy (70%)
Siltstone: light orange brown, moderately firm, limy, sandy (20%)
Sandstone: tan to light orange, very fine to fine grain, medium to poorly sorted, silty and clayey matrix, limy, cement, generally tight (10%)
- 6860' - 6960' Shale: generally as above, occasionally very silty to sandy (80%)
Siltstone: as above, occasionally grading to with shale and sandstone (20%)
Sandstone: as above, generally very shaly to silty (10%)
- 6960' - 7000' Shale: brown to red brown, moderately firm, very silty, limy, sub-platy (60%)
Siltstone: light red brown, moderately firm, shaly, sandy, limy (20%)
Sandstone: light brown to orange, very fine grain, grading to siltstone, argillaceous matrix, limy moderately friable, tight (20%)
- 7000' - 7050' Shale: as above, generally grading to siltstone (40%)
Siltstone: as above, grading from shale, sandy (40%)
Sandstone: as above, generally grading with siltstone (20%)

Sunburst on standby until 200' above salt (7850')

Resume logging at 7,850' in Preuss

- 7850' - 7900' Siltstone: red brown, grading to silty shale, slightly calcareous to calcareous, moderately hard, occasional anhydrite crystals, blocky to sub-platy, occasional very fine sandy in part

Est. Top Preuss Salt (inferred from ROP) 8,068'MD, 8,037'TVD, -1178'

- 7900' - 8100' Siltstone: red brown, as above, increased anhydrite crystals, grading to silty shale
- 8100' - 8130' Siltstone: red brown, as above, with anhydrite crystals

8130' - 8150'

Siltstone: red brown, as above (50%)

Siltstone: light gray, silty to very fine sandy, limy, bentonitic, moderately hard to soft, blocky to sub-platy (50%)_

Est. Top Twin Creek 8,132'MD, 8,101'TVD, -1242'

8150' - 8160'

Siltstone: light gray, limy, bentonitic, moderately hard to soft, sub-platy (80%)

Siltstone: red brown, as above (10%)

Limestone: light gray, very fine crystalline, very argillaceous, silty in part, moderately hard, no fluorescence, no cut, no visible porosity (10%)

8160' - 8190'

Limestone: light gray, occasional medium gray, silty, bentonitic, moderately hard to soft, trace very fine mica, no fluorescence, no cut, no porosity, argillaceous (80%)

Siltstone: red brown, light gray, as above (20%)

8190' - 8200'

Limestone: light to medium gray, very fine crystalline, silty in part, occasional bentonitic, moderately hard to soft, slightly to moderately argillaceous, no fluorescence, no cut, no porosity (90%)

Siltstone: red brown, as above (10%)

8200' - 8230'

Limestone: light to medium gray, very fine crystalline, as above, slightly to moderately argillaceous

8230' - 8250'

Limestone: light gray, occasional medium gray, very fine to microcrystalline, as above, chalky in part

8250' - 8290'

Limestone: light to medium gray, occasional off white, very fine to microcrystalline, as above, with red brown siltstone cavings after trip

8290' - 8300'

Limestone: medium to light gray, brown gray, very fine crystalline, silty, bentonitic in part, soft to moderately hard, occasional fragmental, no fluorescence, no cut, no visible porosity, with siltstone casings after trip as above

8300' - 8320'

Limestone: light to medium gray, very fine crystalline, slightly to moderately argillaceous, chalky in part, occasional anhydritic, no fluorescence, no cut, no porosity, bentonitic in part, occasional silty, with cavings as above

8320' - 8340'

Limestone: light to medium gray, very fine crystalline, slightly to moderately argillaceous, occasional silty, bentonitic in part, no fluorescence, no cut, no visible porosity, chalky in part, with cavings as above

- 8340' - 8360' Limestone: medium to light gray, very fine to microcrystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity
- 8360' - 8380' Limestone: light to medium gray, very fine to microcrystalline, slightly argillaceous, chalky, anhydritic in part, moderately hard to soft, no fluorescence, no cut, no porosity
- 8380' - 8400' Limestone: medium to light gray, very fine to microcrystalline, as above, anhydrite displacive crystals in part
- 8400' - 8430' Limestone: medium to light gray, very fine to occasional microcrystalline, slightly to moderately argillaceous, moderately hard, no fluorescence, no cut, no porosity
- 8430' - 8450' Limestone: medium gray, occasional light gray, very fine to microcrystalline, slightly argillaceous, moderately hard, occasional chalky, no fluorescence, no cut, no porosity
- 8450' - 8480' Limestone: medium gray, very fine to microcrystalline, trace pelletal, moderately hard, slightly argillaceous, no fluorescence, no cut, no porosity
- 8480' - 8500' Limestone: light to medium gray, very fine crystalline, silty, very argillaceous, chalky, bentonitic in part, soft to moderately hard, no fluorescence, no cut, no porosity, trace very fine mica
- 8500' - 8510' Limestone: light to medium gray, as above, moderately hard to soft
- 8510' - 8520' Limestone: light to medium gray, very fine crystalline, pelletal to oolitic in part, moderately hard, trace mineral fluorescence, no cut, no visible porosity, chalky & anhydritic in part
- 8520' - 8540' Limestone: light to medium gray, off white, very fine to fine crystalline, chalky & anhydritic, soft to moderately hard, no fluorescence, no cut, no porosity, bentonitic in part
- 8540' - 8560' Limestone: light to medium gray, off white, as above, increased bentonitic, trace very fine mica
- 8560' - 8590' Limestone: light to medium gray, very fine to microcrystalline, chalky, moderately hard, no fluorescence, no cut, no porosity, slightly argillaceous

8590' - 8600' Limestone: medium to light gray, very fine crystalline, silty & bentonitic in part, trace pelletal/fragmental, trace calcite, no fluorescence, no cut, no visible porosity

8600' - 8610' Limestone: medium to light gray, very fine to microcrystalline, silty & bentonitic in part, trace very fine mica, slightly argillaceous, no fluorescence, no cut, no porosity

Est. Top Leeds Creek member 8,612'MD, 8,580'TVD, -1721'

8610' - 8640' Limestone: light gray, off white, very fine to fine crystalline, silty & bentonitic, chalky & anhydritic in part, soft to moderately hard, no fluorescence, no cut, no porosity

8640' - 8650' Limestone: light gray, as above, silty & bentonitic

8650' - 8660' Limestone: light gray, off white, very light brown, very fine to fine crystalline, silty & bentonitic, slightly argillaceous, chalky & anhydritic in part, soft to moderately hard, no fluorescence, no cut, no porosity

8660' - 8680' Limestone: light to occasional medium gray, as above, increasingly argillaceous

8680' - 8700' Limestone: medium to light gray, very fine to microcrystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity

8700' - 8720' Limestone: medium to light gray, as above, anhydritic in part

8720' - 8750' Limestone: light to medium gray, very fine to microcrystalline, as above, decreasing bentonitic, increasing very fine crystalline

8750' - 8780' Limestone: medium to light gray, light brown, micro- to very fine crystalline, moderately hard, no fluorescence, no cut, no porosity, with siltstone cavings

8780' - 8800' Limestone: medium to light gray, micro- to very fine crystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity

8800' - 8810' Limestone: medium to light gray, as above

8810' - 8830' Limestone: light gray, off white, fine crystalline, silty, bentonitic, chalky & anhydritic in part, soft to moderately hard, mineral fluorescence, no cut, no visible porosity

8830' - 8850' Limestone: light to medium gray, very fine to microcrystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no visible porosity, occasional chalky & anhydritic

8850' - 8880' Limestone: light to medium gray, light brown, very fine to microcrystalline, as above, chalky & anhydritic in part, soft in part

Est. Top Watton Canyon member 8,886'MD, 8,852'TVD, -1993'

8880' - 8900' Limestone: light gray, light gray brown, very fine to microcrystalline, moderately hard, no fluorescence, no cut, no porosity, chalky & anhydritic in part

8900' - 8920' Limestone: light gray brown, light gray, micro- to very fine crystalline, moderately hard, no fluorescence, no cut, no porosity, chalky in part

8920' - 8930' Limestone: light brown, light gray, micro- to very fine crystalline, mottled with anhydrite, moderately hard to soft, mineral fluorescence, no cut, no porosity (90%)
Anhydrite: white, very fine crystalline, calcareous, moderately hard to soft

8930' - 8950' Limestone: medium gray brown, light gray, very fine to microcrystalline, chalky & anhydritic in part, moderately hard, mineral fluorescence, no cut, no porosity, decreasingly anhydritic

8950' - 8960' Limestone: light to medium gray brown, micro- to very fine crystalline, chalky & anhydritic in part, moderately hard, mineral fluorescence, no cut, no porosity

8960' - 8970' Limestone: light to medium gray brown, as above, silty in part

8970' - 9000' Limestone: medium to light gray, medium gray brown, very fine to microcrystalline, chalky & anhydritic in part, moderately hard, no fluorescence, no cut, no porosity

9000' - 9020' Limestone: medium gray brown, micro- to very fine crystalline, chalky in part, moderately hard to soft, no fluorescence, no cut, no porosity

9020' - 9030' Limestone: light gray, fine crystalline, silty, bentonitic in part, moderately hard to soft, no fluorescence, no cut, no visible porosity, chalky & anhydritic in part

9030' - 9040' Limestone: medium to light gray, medium gray brown, very fine to microcrystalline, moderately hard, no fluorescence, no cut, no porosity

9040' - 9050' No sample - shaker bypassed for LCM

Est. Top Boundry Ridge member 9,082'MD, 9,048'TVD, -2189'

9050' - 9100' Limestone: medium to light gray, very fine to microcrystalline, as above, silty in part, poor samples with abundant LCM & cavings

9100' - 9110' Limestone: light to medium gray, light brown, very fine crystalline, silty in part, moderately hard, trace pelletal, no fluorescence, no cut, no visible porosity, chalky & anhydritic in part

Est. Top Rich member 9,112'MD, 9,077'TVD, -2218'

9110' - 9120' Limestone: medium to light brown, light gray, very fine to microcrystalline, chalky & anhydritic in part, trace oolitic to pelletal, trace calcite, trace mineral fluorescence, no cut, no visible porosity

9120' - 9130' Limestone: medium to light gray, light brown, very fine to microcrystalline, as above, increasingly argillaceous

9130' - 9150' Limestone: medium gray, occasional light brown, very fine to microcrystalline, predominately slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity

9150' - 9170' Limestone: medium gray, medium gray brown, very fine to microcrystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity, clear to white vein/fracture fill calcite

9170' - 9180' Limestone: medium gray, very fine to microcrystalline, as above, decreasing calcite, trace very fine pyrite

9180' - 9200' Limestone: medium gray, very fine to microcrystalline, slightly to moderately argillaceous, moderately hard, occasional chalky, no fluorescence, no cut, no porosity

9200' - 9250' Limestone: medium to occasional light gray,, micro- to very fine crystalline, slightly to occasionally moderately argillaceous, moderately hard, no fluorescence, no cut, no porosity, occasional chalky

9250' - 9290' Limestone: medium to occasional light gray, micro- to very fine crystalline, slightly to moderately argillaceous, as above

9290' - 9310' Limestone: medium to light gray, very fine to microcrystalline, slightly argillaceous, moderately hard, chalky & anhydritic in part, no fluorescence, no cut, no porosity

Est. Top Sliderock member 9,317'MD, 9,282'TVD, -2423'

9310' - 9320' Limestone: medium gray, medium gray brown, micro- to very fine crystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity, trace vein calcite

9320' - 9340' Limestone: medium to occasional light gray brown, medium brown, micro- to very fine crystalline, moderately hard, no fluorescence, no cut, no porosity, trace calcite, trace stylolites

9340' - 9360' Limestone: medium gray brown, medium brown, microcrystalline, as above, increased vein calcite

9360' - 9370' Limestone: medium gray brown, medium brown, as above, with abundant LCM, poor sample

9370' - 9380' Limestone: medium gray brown, very fine to microcrystalline, chalky in part, slightly argillaceous, moderately hard, no fluorescence, no cut, no porosity, with abundant LCM

Est. Top Gypsum Springs 9,392'MD, 9,357'TVD, -2498'

9380' - 9400' Limestone: light brown, mottled with anhydrite & calcite, pelletal & oolitic with chalky matrix, moderately hard to soft, trace mineral fluorescence, no cut, trace interparticle porosity, predominately tight

9400' - 9410' Limestone: light brown, very fine crystalline, granular in part, calcite veins, chalky & anhydritic in part, moderately hard to soft, trace mineral fluorescence, no cut, trace interparticle porosity, predominately tight, very poor sample, abundant LCM, shakers bypassed

9410' - 9420' Limestone: light gray brown, light brown, very fine crystalline, slightly argillaceous, as above (50%)
Shale: red brown, silty in part, moderately hard, blocky, slightly calcareous, anhydritic in part (50%)

9420' - 9430' Shale: red brown, occasional silty, moderately hard, blocky, slightly calcareous, anhydritic in part (70%)
Limestone: light gray brown, light brown, as above (30%)

9430' - 9440'

Shale: red brown, as above (70%)

Anhydrite: off white, very fine crystalline, slightly calcareous, moderately hard, with red brown stain in part (20%)

Limestone: light gray brown, light brown, as above (10%)

9440' - 9450'

Shale: red brown, as above (60%) with abundant LCM

Anhydrite: off white, as above (10%)

Limestone: light gray, light pinkish gray, off white, very fine crystalline, slightly argillaceous, moderately hard to soft, chalky & anhydritic in part, no fluorescence, no cut, no porosity

Est. Top Nugget 9,456'MD, 9,421'TVD, -2562'

9450' - 9460'

Limestone: off white, light gray, light pinkish gray, very fine to microcrystalline, as above (50%)

Sandstone: clear, light tan, very fine to fine grained, moderately well sorted, poorly cemented - friable, siliceous cement, sub-rounded, sub-spherical, occasional light brown oil stain, yellow-gold fluorescence, slow streaming cut in part, poor to fair intergranular porosity (30%)

Anhydrite: off white, as above (20%)

9460' - 9480'

Sandstone: clear, light tan, fine to very fine grained, moderately well sorted to well sorted, sub-rounded, sub-spherical, moderately cemented, siliceous cement, yellow-gold fluorescence, tan to light brown oil stain, slow to moderate streaming crush cut, fair intergranular porosity (80%)

Limestone: light gray, off white, light pinkish gray, as above (20%)

9480' - 9500'

Sandstone: light tan, clear, as above, increasing grain size to predominately fine grained

9500' - 9530'

Sandstone: tan, occasional clear, fine to occasional very fine grained, moderately well sorted, moderately cemented, siliceous cement, sub-rounded, sub-spherical, yellow-gold fluorescence, slow to moderate streaming crush cut, light brown oil stain, fair intergranular porosity, occasional dark grains & green mineral cement ?

9530' - 9550'

Poor sample with abundant mica LCM

Sandstone: tan, occasional clear, as above, increased poorly cemented to friable

9550' - 9570'

Sandstone: tan, fine to very fine grained, as above, even light brown oil stain, fair streaming cut, fair intergranular porosity, moderately cemented, siliceous

- 9570' - 9580' Sandstone: tan, as above, decreased porosity to poor to fair intergranular with loss to cementation & grain size
- 9580' - 9600' Sandstone: light tan, tan, as above, decreased porosity & oil staining
- 9600' - 9615' Sandstone: light tan, tan, fine to very fine grained, moderately well sorted, moderately well cemented, siliceous, sub-rounded, sub-spherical, occasional darker grains, medium to light brown oil stain, yellow-gold fluorescence, poor to fair streaming crush cut, fair to poor intergranular porosity
- 9615' - 9630' Cavings after trip
Sandstone: tan, fine grained, moderately well sorted, moderately to well cemented, siliceous, sub-rounded, sub-spherical, light brown oil stain, yellow-gold fluorescence, slow streaming crush cut, fair intergranular porosity
- 9630' - 9640' Sandstone: light tan, tan, as above, poor to fair intergranular porosity
- 9640' - 9650' Sandstone: light tan, as above, increased cementation, decreased porosity
- 9650' - 9660' Sandstone: light tan, off white, fine grained, as above, fair to poor intergranular porosity, slight decrease in cementation
- 9660' - 9670' Sandstone: tan to light tan, fine grained, as above, increased grain size, fair intergranular porosity, brown oil stain, slow to moderate streaming cut
- 9670' - 9690' Sandstone: tan, fine grained, as above, fair intergranular porosity, fairly even brown to occasional black oil staining, moderate streaming cut
- 9690' - 9700' Sandstone: tan to light tan, fine to very fine grained, as above, decreased grain size, decreased stain, slow streaming crush cut
- 9700' - 9728' Sandstone: light tan, tan, fine to very fine grained, as above, decreased stain, poor to occasional fair intergranular porosity

Plug back and begin Sidetrack #1

- 7165' Cement [98%]
Siltstone: light to medium red brown, slightly calcareous, moderately hard, anhydritic in part, blocky, very fine sandy in part

- 7167' Cement [95 %]
Siltstone: light to medium red brown, as above
- 7169' Cement [90%]
Siltstone: light to medium red brown, as above
- 7171' Cement [85 %]
Siltstone: light to medium red brown, as above
- 7175' Cement [85 %]
Siltstone: light to medium red brown, as above, (very fine to fine sandy)
- 7179' Cement [80%]
Siltstone: light to medium red brown, as above, (fine sandy)
- 7182' Cement [75 %]
Siltstone: light to medium red brown, as above, (fine to medium sandy, chalky & anhydritic in part)
- 7186' Cement [60%]
Siltstone: medium to light red brown, fine sandy, moderately hard, slightly to moderately calcareous, blocky, chalky & anhydritic in part
- 7191' Cement [50%]
Siltstone/Sandstone: medium to fine grained, light red brown, poorly cemented, slightly calcareous, multi-colored grains
- 7197' Cement [40%]
Siltstone/Sandstone: light to medium red brown, fine grained, as above
- 7203' Cement [60%]
Siltstone: light to medium red brown, as above
- 7210' Cement [30%]
Siltstone: light to medium red brown, as above, (increased chalky & anhydritic)
- 7213' Cement [20%]
Siltstone/Sandstone: light to medium red brown, fine to medium grained, chalky & anhydritic in part
- 7218' Cement [20%], poor sample after trip
Siltstone/Sandstone: light to medium red brown, as above

7226'	Cement [10%] <u>Siltstone</u> : medium to light red brown, fine sandy, slightly to moderately calcareous, moderately hard, blocky, chalky & anhydritic in part
7234'	Cement [1%] <u>Siltstone/Sandstone</u> : medium to light red brown, fine grained, anhydritic in part, as above
7243'	Cement [1%] <u>Siltstone/Sandstone</u> : medium to light red brown, as above
7243' - 7276'	Cement [trace] <u>Siltstone/Sandstone</u> : medium to light red brown, fine sandy, slightly to moderately calcareous, moderately hard, occasionally chalky & anhydritic, blocky
7276' - 7288'	<u>Siltstone/Sandstone</u> : medium to light red brown, as above
7288' - 7300'	<u>Siltstone</u> : medium red brown, slightly to moderately calcareous, moderately hard to soft, chalky & anhydritic, blocky, trace sandy
7300' - 7322'	<u>Siltstone</u> : medium red brown, as above
7322' - 7330'	<u>Siltstone</u> : medium red brown, slightly to moderately calcareous, moderately hard to soft, chalky & anhydritic, blocky, trace mottled with anhydrite
7330' - 7360'	<u>Siltstone</u> : medium to light red brown, increased anhydritic, as above
7360' - 7390'	<u>Siltstone</u> : medium red brown, as above, decreased anhydritic
7390' - 7420'	<u>Siltstone</u> : medium red brown, calcareous, moderately hard to soft, blocky
7420' - 7450'	<u>Siltstone/Shale</u> : medium red brown, as above
7450' - 7570'	<u>Shale/Siltstone</u> : medium red brown, calcareous, soft to moderately hard, blocky, trace anhydrite crystals
7570' - 7600'	<u>Shale/Siltstone</u> : medium red brown, calcareous, soft to moderately hard, blocky, trace anhydritic
7600' - 7630'	<u>Shale/Siltstone</u> : medium to light red brown, calcareous, soft, blocky, anhydritic in part

- 7630' - 7660' Shale/Siltstone: medium to light red brown, as above, very fine sandy in part, increased anhydritic
- 7660' - 7690' Shale: medium to light red brown, as above [60%]
Sandstone: clear, light red brown, fine grained, moderately to poorly sorted, poorly cemented, calcareous, no fluorescence, no cut, predominately unconsolidated [40%]
- 7690' - 7720' Anhydrite: off white, very fine crystalline - amorphous, slightly calcareous, soft [60%]
Shale: medium to light red brown, as above [20%]
Sandstone: clear, light red brown, as above [20%]
- 7720' - 7750' Sandstone: clear, light red brown, as above, unconsolidated [70%]
Shale: medium to light red brown, as above [20%]
Anhydrite: off white, as above [10%]
- 7750' - 7780' Sandstone: clear, light red brown, fine grained, moderately to poorly sorted, poorly cemented, calcareous [70%]
Anhydrite: off white, light red brown, very fine crystalline to amorphous, calcareous, soft [20%]
Siltstone: red brown, as above [10%]
- 7780' - 7810' Siltstone/Shale: medium to light red brown, very fine sandy in part, calcareous, moderately hard to soft, blocky [60%]
Sandstone: clear, light red brown, as above [20%]
Anhydrite: off white, light red brown, as above [20%]
- 7810' - 7840' Siltstone/Shale: medium red brown, as above, very fine to fine sandy [80%]
Anhydrite: off white, light red brown, as above [20%]
- 7840' - 7900' Siltstone/Shale: medium red brown, as above
- 7900' - 7990' Siltstone/Shale: medium to light red brown, as above, anhydritic in part
- 7990' - 8020' Shale: medium red brown, silty in part, moderately calcareous, moderately hard, blocky

Est. Top Preuss Salt (inferred from ROP) 8,060'MD, 8,033'TVD, -1164'

- 8020' - 8070' Siltstone: medium red brown, grading to silty shale, moderately hard, moderately calcareous, blocky, occasional anhydrite crystals

8070' - 8110'

Siltstone: medium red brown, as above, occasional chalky & anhydritic

Est. Top Twin Creek 8,119'MD, 8,092'TVD, -1233'

8110' - 8120'

Siltstone: medium red brown, grading to silty shale, moderately hard to soft, moderately calcareous, blocky, anhydritic in part [70%]
Siltstone: light gray, soft, bentonitic, calcareous, blocky [30%]
Limestone: light brown, light gray, very fine to microcrystalline, slightly argillaceous, bentonitic in part, moderately hard, no fluorescence, no cut, no visible porosity [trace]

8120' - 8130'

Limestone: light gray, light gray brown, very fine to microcrystalline, moderately hard to soft, slightly to moderately argillaceous, silty, bentonitic in part, no fluorescence, no cut, no visible porosity [20%]
Siltstone: medium red brown & light gray, as above [80%]

8130' - 8140'

Limestone: light to medium gray, occasional gray-cream, very fine to microcrystalline, chalky in part, moderately soft to firm, very silty, mica in part, trace disseminated pyrite, no show

8140' - 8150'

Limestone: light to medium gray, as above, with brown red, grading to siltstone, firm, friable, calcareous, no show

8150' - 8170'

Limestone: light gray, cream, light gray green, microcrystalline to very fine crystalline, predominately firm, very silty, mica, trace chlorite ?

8170' - 8180'

Limestone: light to medium gray, occasional cream, very fine crystalline, granular texture in part, very silty, firm to hard, grading to calcareous shale in part, calcite fracture fill, no show

8180' - 8190'

Limestone: increased light to medium gray, decreased cream, very fine crystalline, decreased silty, slightly to moderately argillaceous, calcite filled fractures

8190' - 8200'

Limestone: light to medium gray, cream, very fine crystalline, moderately firm, silty in part, slightly chalky in part, argillaceous, mica, no show

8200' - 8210'

Limestone: light to medium gray, very fine crystalline, chalky & anhydritic in part, moderately hard to soft, occasional silty, occasional bentonitic, no show

8210' - 8220'

Limestone: light to medium gray, as above, decreased chalky & anhydritic

- 8220' - 8230' Limestone: light to medium gray, as above, very fine to microcrystalline
- 8230' - 8240' Limestone: medium to light gray, very fine to microcrystalline, occasional silty & bentonitic, moderately hard, no fluorescence, no cut, no porosity, trace calcite filled micro-fractures & fracture fill
- 8240' - 8250' Limestone: medium to light gray, as above, chalky & anhydritic in part, decreased microcrystalline
- 8250' - 8260' Limestone: medium to light gray, very fine crystalline, silty in part, moderately hard, occasional chalky & anhydritic, no show, trace fragmental
- 8260' - 8270' Limestone: light to medium gray, very fine crystalline, soft to moderately hard, chalky & anhydritic, no show, silty in part
- 8270' - 8280' Limestone: light to medium gray, very light red brown, very fine crystalline, silty, moderately argillaceous, soft to moderately hard, no show
- 8280' - 8290' Limestone: light to medium gray, occasional very light red brown, very fine crystalline, as above, decreasingly argillaceous, increasingly bentonitic, no show
- 8290' - 8300' Limestone: light to medium gray, as above, increased chalky & anhydritic, silty in part
- 8300' - 8310' Limestone: light to medium gray, very fine to microcrystalline, silty & bentonitic in part, chalky & anhydritic in part, moderately hard to soft, no show
- 8310' - 8320' Limestone: light to medium gray, very fine to microcrystalline, as above, trace green bentonite with mica
- 8320' - 8330' Limestone: medium to light gray, very fine to microcrystalline, as above, decreasing chalky & anhydrite
- 8330' - 8340' Limestone: light to dark gray, occasional cream, micro- to very fine crystalline, predominately firm to hard, silty in part, trace chalky, no show
- 8340' - 8350' Limestone: light to dark gray, as above, increased chalky, very soft to moderately soft, slightly to moderately argillaceous, no show

- 8350' - 8370' Limestone: light to dark gray, cream, microcrystalline, very chalky in part, soft to firm, mica, trace fine disseminated pyrite, no show
- 8370' - 8380' Limestone: light to medium gray, cream, microcrystalline, very fine crystalline, chalky in part, soft to firm, argillaceous in part, with calcareous fracture fill
- 8380' - 8390' Limestone: gray, occasional cream, microcrystalline, decreased chalky, soft to firm, argillaceous in part, trace silty, trace fine disseminated pyrite, no show
- 8390' - 8400' Limestone: light to medium gray, cream, microcrystalline, predominately firm, trace soft, trace chalky, silty in part, with siltstone red brown, cavings ?
- 8400' - 8410' Limestone: light to medium gray, occasional cream, microcrystalline, granular, firm, increased silty, decreasing chalky, no show
- 8410' - 8420' Limestone: light to medium gray, occasional cream, microcrystalline, occasional granular, firm, silty in part, chalky in part, with calcite fracture fill & disseminated pyrite
- 8420' - 8430' Limestone: medium to light gray, microcrystalline, slightly argillaceous, moderately hard, chalky & anhydritic in part, no show, trace clear to white vein/fracture fill calcite
- 8430' - 8460' Limestone: medium gray, microcrystalline, slightly argillaceous, moderately hard, no show, white fracture fill calcite in part
- 8460' - 8470' Limestone: medium to occasional light gray, as above, increased chalky & anhydritic
- 8470' - 8487' Limestone: medium gray, micro- to very fine crystalline, slightly argillaceous, moderately hard, trace fine disseminated pyrite, no show
- 8487' - 8500' Limestone: light to medium gray, trace cream, microcrystalline, granular in part, hard, silty in part, trace chalky, tight, no show
- 8500' - 8510' Limestone: light to medium gray, increased cream, white, microcrystalline, granular in part, ooids in chalky matrix, soft to moderately hard, no show
- 8510' - 8520' Limestone: increased cream, white, light gray, microcrystalline, granular in part, moderately hard to soft, slightly chalky, silty in part, ooids, mica, no show

- 8520' - 8530' Limestone: light to medium gray, cream, white, microcrystalline, granular in part, slightly chalky in part, moderately hard to soft, silty in part, occasional ooids in chalky matrix, no show
- 8530' - 8540' Limestone: light to medium gray, very fine crystalline, slightly argillaceous, mica in part, moderately hard to soft, trace oolitic, no show, trace fine pyrite
- 8540' - 8550' Limestone: light to medium gray, very fine to microcrystalline, oolitic in part, moderately hard, slightly argillaceous, no show, chalky & anhydritic in part
- 8550' - 8560' Limestone: light to medium gray, micro- to very fine crystalline, decreasing oolitic, increasing chalky & anhydritic, moderately hard to soft, no show

Est. Top Leeds Creek member 8,570'MD, 8,542'TVD, -1669'

- 8560' - 8570' Limestone: medium to light gray, microcrystalline, slightly argillaceous, decreased chalky & anhydritic, moderately hard, no show
- 8570' - 8580' Limestone: light to medium gray, very fine to microcrystalline, silty in part, slightly to moderately argillaceous, chalky & anhydritic in part, moderately hard to soft, no show, trace bentonitic with mica
- 8580' - 8590' Limestone: light to medium gray, micro- to very fine crystalline, decreased silty, slightly argillaceous, moderately hard, occasional chalky & anhydritic, no show
- 8590' - 8600' Limestone: light to medium gray, very fine to microcrystalline, as above
- 8600' - 8610' Limestone: medium to light gray, very fine to microcrystalline, slightly argillaceous, chalky & anhydritic in part, silty in part, occasional pelletal, moderately hard, no show
- 8610' - 8620' Limestone: light gray, very fine crystalline, silty in part, chalky, moderately hard, no show, trace mica & bentonitic
- 8620' - 8630' Limestone: light gray, very fine crystalline, very silty to very fine sandy, chalky & anhydritic, moderately hard, no show
- 8630' - 8640' Limestone: cream, light to medium gray, microcrystalline, increased chalky, silty in part, soft to occasional hard, slightly argillaceous, no show

- 8640' - 8650' Limestone: light to dark gray, decreased cream, occasional green, microcrystalline, granular in part, silty in part, slightly chalky in part, no show
- 8650' - 8660' Limestone: light to medium gray, cream, microcrystalline, chalky & silty in part, soft to firm, with trace cement, no show
- 8660' - 8670' Limestone: gray, cream, microcrystalline, very chalky in part, very soft to hard, slightly argillaceous, dense, no show
- 8670' - 8680' Limestone: gray, cream gray, microcrystalline, very chalky & marly in part, very soft to hard, slightly argillaceous, dense, no show
- 8680' - 8690' Limestone: light to dark gray, microcrystalline, chalky & marly in part, very soft to hard, slightly argillaceous, trace calcite fill fractures, no show
- 8690' - 8700' Limestone: light to dark gray, occasional green gray, microcrystalline, granular in part, decreased chalky, silty in part, mica, trace fine disseminated pyrite, no show
- 8700' - 8710' Limestone: light to medium gray, trace cream, microcrystalline, granular in part, very silty, trace sandy, moderately soft to hard, no show
- 8710' - 8720' Limestone: light to medium gray, microcrystalline, increased granular & silty, predominately hard, trace soft, no show
- 8720' - 8730' Limestone: medium to light gray, very fine to microcrystalline, slightly argillaceous, moderately hard, occasional silty, no show
- 8730' - 8740' Limestone: medium to light gray, very fine to microcrystalline, as above, chalky & anhydritic in part, trace white calcite
- 8740' - 8750' Limestone: medium to light gray, as above [80%]
Shale: light red brown, pink, moderately calcareous, silty in part, soft to moderately hard, blocky [20%]
- 8750' - 8760' Limestone: medium to light gray, as above [85%]
Shale: light red brown, cream, as above, anhydritic in part [15%]
- 8760' - 8770' Limestone: medium to light gray, micro- to very fine crystalline, slightly argillaceous, occasional chalky & anhydritic, moderately hard, no show, trace white calcite

- 8770' - 8780' Limestone: medium to occasional light gray, micro- to very fine crystalline, slightly argillaceous, moderately hard, no show, trace white calcite
- 8780' - 8790' Limestone: medium gray, light gray, micro- to very fine crystalline, very chalky & anhydritic in part, moderately hard to soft, no show
- 8790' - 8800' Limestone: light gray, off white, very fine to microcrystalline, very chalky & anhydritic in part, moderately hard to soft, no show, common white vein/fracture fill calcite
- 8800' - 8810' Limestone: cream, white, light to medium gray, very fine crystalline, predominantly granular, very silty & chalky, very soft to trace hard, slightly argillaceous, no show
- 8810' - 8820' Limestone: light to dark gray, cream, very fine to microcrystalline, decreased silty, slightly chalky in part, moderately soft to hard, calcite filled fractures, no show
- 8820' - 8830' Limestone: light to dark gray, predominately microcrystalline, occasional chalky, soft to hard, with calcite filled fractures, anhydritic in part, trace fine disseminated pyrite
- 8830' - 8840' Limestone: light to dark gray, occasional cream, microcrystalline, chalky in part, soft to hard, no show
- 8840' - 8850' Limestone: light to dark gray, occasional cream, microcrystalline, chalky in part, moderately soft to hard, trace calcite filled fractures
Anhydrite: white, amorphous, very soft, gummy
- 8850' - 8860' Limestone: light to medium gray, gray brown, microcrystalline, slightly chalky in part, soft to hard, with calcite filled fractures, no show

Est. Top Watton Canyon 8,861'MD, 8,832'TVD, -1960'

- 8860' - 8880' Limestone: light to medium gray, cream, microcrystalline, chalky in part, soft to hard, dead oil stain, trace pyrite, no cut, no visible porosity
- 8880' - 8890' Limestone: light to medium gray, occasional gray brown, predominately microcrystalline, chalky in part, soft to hard, trace dead oil stain, trace pyrite, tight, no fluorescence or cut

- 8890' - 8900' Limestone: off white, light gray, occasional light gray brown, very fine to microcrystalline, very chalky & anhydritic, fragmental & pelletal in part, occasional calcite, no show
- 8900' - 8910' Limestone: light gray, medium gray, medium gray brown, very fine to microcrystalline, very chalky & anhydritic in part, mottled with anhydrite in part, moderately hard, mineral fluorescence, no cut, no porosity, trace stylolites
Anhydrite: off white, white, light gray, very fine crystalline to amorphous, slightly calcareous, moderately hard to soft
- 8910' - 8920' Limestone: light to occasional medium gray, light to medium gray brown, micro- to very fine crystalline, chalky & anhydritic in part, moderately hard, no show, clear to white vein/fracture fill calcite
- 8920' - 8930' Limestone: light gray, medium to light gray brown, as above, no show
- 8930' - 8940' Limestone: medium gray brown, light gray, micro- to very fine crystalline, chalky & anhydritic in part (light gray), moderately hard to soft, no show
- 8940' - 8950' Limestone: light gray, medium gray brown, very fine to microcrystalline, silty in part, chalky & anhydritic in part, moderately hard to soft, no show
- 8950' - 8960' Limestone: increased light gray, medium gray brown, very fine to microcrystalline, very chalky in part (light gray), soft to moderately hard, no show
- 8960' - 8980' Limestone: light gray, medium gray brown, micro- to very fine crystalline, decreased chalky, trace stylolites, moderately hard, no show
- 8980' - 8990' Limestone: medium gray brown, light gray, micro- to very fine crystalline, chalky in part, moderately hard, stylolitic, no show
- 8990' - 9000' Limestone: light to dark gray, light brown, microcrystalline, granular in part, slightly chalky in part, soft to hard, trace pyrite, no show
- 9000' - 9008' Limestone: light to medium gray, occasional cream, predominately granular, occasional very fine crystalline, predominately soft, trace hard, calcite filled fractures, no show

9008' - 9020'

Limestone: medium to light gray, medium to light gray brown, very fine to microcrystalline, oolitic in part, chalky & anhydritic in part, moderately hard to soft, white calcite fracture fill & ooid matrix, mineral fluorescence, no cut, no visible porosity

9020' - 9030'

Limestone: medium to light gray, dark gray to black, occasional gray brown, very fine crystalline, silty in part, anhydritic in part, moderately hard, argillaceous in part, trace granular, dull green fluorescence in part, trace weak milky cut in part, trace to poor intercrystalline porosity [60%]

Anhydrite: white, off white, cream, very fine crystalline to amorphous, slightly calcareous, stylolitic stain in part [40%]

Est. Top Boundry Ridge 9,036'MD, 9,007'TVD, -2147'

9030' - 9040'

Siltstone: light red brown, slightly calcareous, soft to moderately hard, blocky [90%]

Anhydrite: white, cream, as above [10%]

9040' - 9060'

Siltstone: medium to light red brown, as above

Est. Top Rich member 9,064'MD, 9,034'TVD, -2174'

9060' - 9070'

Anhydrite: off white, light brown, light gray, very fine crystalline to amorphous, slightly calcareous, soft to moderately hard [50%]

Limestone: light gray brown, light gray, very fine crystalline, silty in part, moderately hard, no show, trace bentonitic with mica, chalky & anhydritic [50%]

9070' - 9080'

Limestone: medium gray brown, light gray brown, very fine to microcrystalline, fragmental, trace granular, moderately hard, dull green fluorescence in part, slow streaming cut in part, poor to trace intercrystalline & interparticle porosity

9080' - 9090'

Anhydrite: white, cream, translucent, amorphous, moderately soft to firm

Limestone: light to dark gray, occasional gray brown, microcrystalline, very fine crystalline, slightly granular in part, fair to poor intercrystalline porosity, no visible fluorescence, no cut

9090' - 9100'

Limestone: light to dark gray, occasional gray brown, microcrystalline, oolitic in part, slightly chalky in part, poor intercrystalline porosity, no fluorescence, no cut

- 9100' - 9110' Limestone: light to dark gray, occasional gray brown, trace white, microcrystalline, granular in part, trace chalky, predominately hard, occasionally moderately soft, silty in part, no show
- 9110' - 9120' Limestone: light to dark gray, microcrystalline, slightly granular in part, marly in part, predominately hard, soft, trace silty, no show
- 9120' - 9130' Limestone: light to dark gray, brown, microcrystalline, slightly chalky in part, predominately hard, occasional moderately soft, trace calcite, no show
- 9130' - 9150' Limestone: light to dark gray, dark gray brown, predominately microcrystalline, slightly marly in part, predominately hard, occasional soft, trace fine disseminated pyrite, no show, trace calcite filled fractures
- 9150' - 9160' Limestone: light to medium gray, occasional gray brown, microcrystalline, slightly chalky & marly in part, predominately hard, occasional moderately soft, trace calcite filled fractures & trace dogtooth calcite, no visible porosity, no fluorescence, no cut
- 9160' - 9170' Limestone: light to dark gray, dark gray brown, microcrystalline, chalky & marly in part, soft to hard, no visible porosity, trace fine disseminated pyrite, no show
- 9170' - 9180' Limestone: light to dark gray, dark gray brown, as above, with calcite filled fractures & possible dead oil stain
- 9180' - 9190' Limestone: light to dark gray, occasional dark gray brown, microcrystalline, marly in part, moderately soft to hard, slightly argillaceous, dense, no show
- 9190' - 9200' Limestone: medium to dark gray brown, predominately microcrystalline, marly in part, trace fragmental, moderately soft to hard, slightly argillaceous, with increased calcite, no show
- 9200' - 9210' Limestone: medium to dark gray brown, micro- to very fine crystalline, slightly chalky in part, predominately hard, occasional moderately soft, slightly to moderately argillaceous, calcite & carbonaceous material, possible dead oil stain, no visible porosity, no show
- 9210' - 9220' Limestone: medium to dark gray brown, trace light gray, microcrystalline, trace marly, predominately hard, trace soft, slightly to moderately argillaceous, no visible porosity, no show

9220' - 9250' Limestone: medium to dark gray, trace light gray, micro- to very fine crystalline, moderately hard, slightly to moderately argillaceous, no show

9250' - 9260' Limestone: medium to dark gray, as above, with white vein/fracture fill calcite

9260' - 9280' Limestone: medium to dark gray, occasional light gray, very fine to microcrystalline, slightly to moderately argillaceous, moderately hard, no show, trace white calcite

Est. Top Sliderock member 9,284'MD, 9,253'TVD, -2392'

9280' - 9290' Limestone: medium brown, light gray brown, micro- to very fine crystalline, chalky in part, moderately hard, fracture fill calcite, no show

9290' - 9300' Limestone: medium brown, light gray, as above, white fracture fill calcite

9300' - 9310' Limestone: medium brown, light gray, micro- to very fine crystalline, occasional chalky, moderately hard, white fracture fill calcite, no show

9310' - 9320' Limestone: medium brown, medium gray brown, light gray, as above, no show

9320' - 9340' Limestone: medium brown, occasional light gray, microcrystalline, occasional chalky (light gray), moderately hard, white calcite fracture fill, no show

9340' - 9350' Limestone: medium gray brown, light gray, micro- to very fine crystalline, occasional chalky & anhydritic, white fracture fill calcite, no show

9350' - 9360' Limestone: light to medium brown, cream, ooids in chalky limestone matrix, trace microcrystalline to very fine crystalline, poor interparticle porosity, no fluorescence, no cut

9360' - 9370' Limestone: light to medium brown, occasional cream, gray brown, chalky, occasional very fine crystalline, decreased oolitic, slightly argillaceous in part, poor intercrystalline porosity, no show

Est. Top Gypsum Springs 9,377'MD, 9,346'TVD, -2487'

- 9370' - 9380' Limestone: white, light to medium gray, granular to very fine crystalline, chalky & anhydritic in part, slightly argillaceous in part, poor intercrystalline porosity, no show
Siltstone: red brown, moderately soft to firm, slightly calcareous
- 9380' - 9390' Siltstone: red brown, moderately soft to moderately hard, shaly in part, slightly calcareous
Anhydrite: clear, translucent, amorphous, firm to hard [trace]
- 9390' - 9400' Siltstone: red brown, sub-platy, moderately hard, occasional soft, shaly in part, slightly calcareous
Anhydrite: white, clear, translucent, amorphous, very soft to hard, pasty in part
Sandstone: light gray, clear, fine grained; sub-rounded to rounded, moderately well sorted, hard, non-calcareous, tight [trace]
- 9400' - 9410' Anhydrite: white, translucent, amorphous, trace very fine crystalline, occasional pasty, very soft to moderately soft, slightly limy in part
Siltstone: red brown, light orange, sandy in part, anhydritic in part
- 9410' - 9420' Anhydrite: white, as above
Siltstone: red brown, orange brown, light orange, sub-blocky, shaly in part, slightly to moderately calcareous

Est. Top Nugget 9,428'MD, 9,397'TVD, -2538'

- 9420' - 9430' Siltstone: red brown, orange brown, light orange, as above
Sandstone: light brown, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, siliceous cement, firm to hard, light blue green fluorescence, fast yellow-green streaming cut, fair to good intergranular porosity [1%]
- 9430' - 9440' Sandstone: light brown, light pink, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, siliceous cement, hard, light brown oil stain, light blue-green fluorescence, fair to good intergranular porosity, fair yellow-green streaming cut
- 9440' - 9450' Sandstone: light brown, light orange, clear, translucent, predominately fine grained, sub-rounded to sub-angular, moderately well sorted, siliceous cement, slightly friable to hard, light brown oil stain, light blue-green fluorescence, fair intergranular porosity, fair yellow-white streaming cut

- 9450' - 9470' Sandstone: light brown, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately sorted, siliceous cement, occasional friable, predominately hard, spotty light brown oil stain, blue-green fluorescence, fair intergranular porosity, fair yellow-white streaming cut
- 9470' - 9480' Sandstone: light to occasional medium brown, clear, as above, increased spotty brown oil stain
- 9480' - 9500' Sandstone: light to occasional medium brown, clear, as above, slight increase grain size
- 9500' - 9510' Sandstone: light to occasional medium brown, fine to occasional medium grained, moderately sorted, moderately cemented, siliceous, sub-rounded to sub-angular, spotty brown oil stain, slow streaming cut in part, poor to fair intergranular porosity
- 9510' - 9520' Sandstone: light brown, off white, fine grained, as above, decreased oil stain & cut
- 9520' - 9530' Sandstone: light brown, occasional off white, as above, weak streaming to milky cut
- 9530' - 9540' Sandstone: light to occasional medium brown, occasional off white, fine to occasional medium grain, as above, poor intergranular porosity
- 9540' - 9550' Sandstone: light brown, off white, fine to occasional medium grained, as above, trace friable
- 9550' - 9560' Sandstone: light brown, clear, fine to occasional medium grained, as above, weak milky cut, poor intergranular porosity
- 9560' - 9570' Sandstone: light to occasional medium brown, clear, as above, slight increased brown oil stain & slow streaming cut
- 9570' - 9580' Sandstone: light brown, clear, fine to occasional medium grained, moderately well sorted, moderately cemented, siliceous, sub-rounded to sub-angular, scattered light brown oil stain, slow steaming cut in part, poor to occasional fair intergranular porosity
- 9580' - 9590' Sandstone: light to occasional medium brown, as above, slight increase brown oil stain & slow streaming cut
- 9590' - 9600' Sandstone: light brown, clear, as above, decreased stain & cut

- 9600' - 9620' Sandstone: light brown, translucent, clear, white, predominately medium to fine grained, trace medium to coarse grained, sub-angular to sub-rounded, moderately sorted, trace poorly sorted, siliceous cement, slightly friable to hard, light brown to black oil stain, fair intergranular porosity, light green-blue fluorescence, fair yellow-white streaming cut
- 9620' - 9630' Sandstone: light brown, translucent, clear, medium to fine grained, sub-rounded to sub-angular, predominately moderately well sorted, trace poorly sorted, siliceous cement, predominately hard, trace friable, light brown oil stain, fair to trace good intergranular porosity, light blue-green fluorescence, fair yellow-white streaming cut
- 9630' - 9640' Sandstone: light brown, translucent, clear, as above, with trace medium to coarse grained, trace poorly sorted
- 9640' - 9650' Sandstone: light brown, cream, translucent, trace gray-brown, medium to fine grained, occasionally moderately coarse grained, moderately sorted, siliceous, hard to friable, light brown to occasional black oil stain, fair intergranular porosity, light blue-green fluorescence, fair yellow-white streaming cut
- 9650' - 9660' Sandstone: light brown, cream, translucent, as above, with increased black oil stain on moderately coarse grained, fair to good yellow-blue streaming cut
- 9660' - 9668' Sandstone: light brown, cream, translucent, clear, medium to fine grained, increased coarse grained, moderate to increased poorly sorted, siliceous cement, hard to friable, light brown to black oil stain, fair to good intergranular porosity, light blue-green fluorescence, fair yellow-white streaming cut
- 9668' - 9680' Sandstone: light brown, off white, clear, fine to medium grained, occasional lower coarse grained, moderately sorted, moderately cemented, siliceous, light brown to black oil stain, fair streaming cut in part, fair intergranular porosity, yellow-white fluorescence
- 9680' - 9690' Sandstone: light brown, upper fine to lower medium grained, moderately sorted, moderately cemented, siliceous, light brown oil stain, slow streaming cut in part, fair to poor intergranular porosity, yellow-white fluorescence
- 9690' - 9700' Sandstone: light brown, off white, occasional medium brown, upper fine to lower medium grained, moderately sorted, moderately cemented, siliceous, light brown to black oil stain, slow streaming cut in part, yellow-white fluorescence, fair to poor intergranular porosity

- 9700' - 9710' Sandstone: light brown, clear, cream, predominately medium to occasional fine grained, sub-rounded to sub-angular, moderately to poorly sorted, siliceous, light brown to black oil stain, fair intergranular porosity, light blue fluorescence, yellow-white streaming cut in part
- 9710' - 9720' Sandstone: light brown, clear, cream, as above, with banded black stain
- 9720' - 9730' Sandstone: light brown, clear, cream, medium to fine grained, sub-rounded to sub-angular, predominately moderately well sorted, siliceous, light brown to occasional black oil stain, fair intergranular porosity, light blue fluorescence, fair yellow-white streaming cut
- 9730' - 9740' Sandstone: light brown, clear, translucent, cream, medium to fine grained, sub-rounded to sub-angular, predominately well sorted, trace moderately poorly sorted, siliceous cement, light brown oil stain with trace black oil stain, fair intergranular porosity, light blue fluorescence, fair yellow-white streaming cut
- 9740' - 9750' Sandstone: light brown, clear, translucent, cream, as above, with cavings from short trip
- 9750' - 9760' Sandstone: light brown, light orange, clear, medium to fine grained, sub-rounded to sub-angular, predominately moderately well sorted, siliceous cement, light brown to black oil stain, fair intergranular porosity, light blue fluorescence, fair yellow-white streaming cut
- 9760' - 9770' Sandstone: light brown, light orange, clear, medium to fine grained, occasional lower coarse grained, occasional unconsolidated, angular to sub-rounded, moderately to poorly sorted, light brown oil stain in part, fair to good intergranular porosity, bright green-blue fluorescence, fair yellow-white streaming cut
- 9770' - 9780' Sandstone: light brown, light orange, white, clear, medium to fine grained, occasional lower coarse grained, unconsolidated in part, sub-angular to sub-rounded, predominately moderately well sorted, light brown oil stain on medium to fine grained, black oil stain on coarse grained, fair to good intergranular porosity, bright yellow fluorescence, good yellow-white streaming cut
- 9780' - 9790' Sandstone: light brown, light orange, white, clear, as above, with increased unconsolidated grains

- 9790' - 9800' Sandstone: light brown, clear, lower medium to upper fine grained, occasional lower coarse grained, moderately to poorly cemented, unconsolidated in part, sub-angular to sub-rounded, moderately well sorted, light brown oil stain in part, fair intergranular porosity, fair to good streaming yellow-white cut, occasional black oil stain
- 9800' - 9820' Sandstone: light brown, off white, clear, medium to fine grained, moderately well sorted, moderately to poorly cemented, light brown oil stain in part with occasional black oil stain, fair intergranular porosity, yellow-green fluorescence, fair slow streaming cut in part
- 9820' - 9830' Sandstone: light brown, off white, clear, as above, occasional lower coarse grained, unconsolidated, increased black oil stain
- 9830' - 9850' Sandstone: light brown, off white, medium grained, occasional lower coarse grained, moderately well sorted, moderately to poorly cemented, siliceous, light brown to occasional black oil stain, fair to good intergranular porosity, yellow-green fluorescence, slow to moderate streaming yellow-white cut
- 9850' - 9860' Sandstone: off white, light brown, clear, medium to occasional lower coarse grained, moderately well sorted, poor to moderately cemented, siliceous, light brown to black oil stain, fair to good intergranular porosity, fair streaming yellow-white cut
- 9860' - 9870' Sandstone: light brown, clear, off white, medium to occasional lower coarse grained, moderately well sorted, poorly cemented to unconsolidated, light brown to black oil stain, fair to occasional good intergranular porosity, fair streaming yellow-white cut
- 9870' - 9880' Sandstone: light brown, clear, off white, medium to fine grained, moderately well sorted, poor to moderately cemented, siliceous, brown to black oil stain, fair intergranular porosity, fair slow streaming yellow-white cut
- 9880' - 9890' Sandstone: light brown, clear, off white, as above, occasional lower coarse grained
- 9890' - 9900' Sandstone: off white, light brown, medium to fine grained, moderately well sorted, moderately to poorly cemented, siliceous, anhydritic ?; poor intergranular porosity, light brown oil stain in part, slow streaming cut in part

- 9900' - 9910' Sandstone: light brown, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately sorted, occasional unconsolidated grains, very friable to very hard, light brown & black oil stain, light blue fluorescence, fair yellow-white streaming cut
- 9910' - 9920' Sandstone: orange, clear, light brown, white, medium to fine grained, sub-rounded to sub-angular, moderately to trace poorly sorted, occasional unconsolidated coarse grains, very hard to friable, light brown & black oil stain in part, fair to good intergranular porosity in part, silty in part, no show in orange sandstone, anhydritic in part
- 9920' - 9940' Sandstone: light brown, white, cream, translucent, medium to fine grained, sub-rounded to sub-angular, abundant unconsolidated grains, moderately well to trace poorly sorted, very friable to hard, light brown & black oil stain, light blue fluorescence, fair to good yellow-white streaming cut, fair to good intergranular porosity, anhydritic in part
- 9940' - 9950' Sandstone: light brown, cream, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately sorted, with unconsolidated grains, hard to very friable, light brown to black oil stain, fair to occasional good intergranular porosity, light blue fluorescence, slow yellow-white streaming cut
- 9950' - 9960' Sandstone: light brown, cream, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, occasional unconsolidated, very friable to hard, light brown & black oil stain, siliceous cement, fair intergranular porosity, light blue fluorescence, slow yellow-white streaming cut
- 9960' - 9970' Sandstone: light brown, cream, clear, translucent, as above, with abundant unconsolidated grains
- 9970' - 9980' Sandstone: light orange, white, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, with unconsolidated grains, predominately friable, siliceous cement, decreasing black oil stain with trace light brown oil stain, fair intergranular porosity, very light blue fluorescence, trace weak milky cut, no show in orange sandstone, anhydritic in part
- 9980' - 9990' Sandstone: light brown, clear, translucent, decreasing light orange, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, with medium to coarse unconsolidated grains, friable, siliceous cement, scattered black to brown oil stain, light blue-green fluorescence, fair intergranular porosity, fair yellow-white streaming cut, anhydritic in part

- 9990' - 10000' Sandstone: light brown, clear, translucent, decreasing light orange, as above, fair streaming cut, anhydritic in part
- 10000' - 10010' Sandstone: light brown, light orange, clear, translucent, medium to fine grained, sub-rounded to sub-angular, with abundant loose grains, moderately sorted, very friable, with black oil stain, scattered very light blue fluorescence, slow milk cut, anhydritic in part
- 10010' - 10020' Sandstone: light brown, clear, medium to fine grained, as above, light brown to black oil stain, fair to poor intergranular porosity, slow milky yellow-white cut in part
- 10020' - 10030' Sandstone: light orange, light brown, clear, medium to fine grained, moderately to poorly sorted, moderately cemented to friable, sub-rounded to sub-angular, light brown oil stain in part, yellow-green fluorescence in part, slow streaming to milky cut in part, fair to poor intergranular porosity, anhydritic in part
- 10030' - 10037' Sandstone: light to medium orange, clear, light brown, medium to fine grained, moderately poorly sorted, moderately to poorly cemented, siliceous, sub-rounded to sub-angular, trace light brown oil stain, trace yellow-green fluorescence, milky cut in part, poor intergranular porosity, unconsolidated in part (clear), anhydritic in part
- 10037' - 10050' Sandstone: light brown, clear, translucent, medium to fine grained, occasionally lower coarse grained, moderately to poorly sorted, sub-angular to sub-rounded, abundant loose grains, hard to friable, black oil stain, light blue fluorescence, fair intergranular porosity, fair yellow-white streaming cut, poor sample quality after trip
- 10050' - 10060' Sandstone: light brown, clear, translucent, medium grained, sub-rounded to sub-angular, moderately sorted, very friable to hard, with light brown & black oil stain, fair intergranular porosity, light blue fluorescence, yellow-white streaming cut
Anhydrite: white, cream, amorphous, pasty, very soft, slightly calcareous
- 10060' - 10070' Sandstone: light brown, clear, translucent, occasional light orange, as above, with abundant LCM
- 10070' - 10080' Sandstone: light brown, white, translucent, clear, medium to fine grained, sub-rounded to sub-angular, predominately moderately well sorted, trace poorly sorted, friable to hard, light brown to black oil stain, fair to poor intergranular porosity, light green-blue fluorescence, fair yellow-white streaming cut

10080' - 10090'

Sandstone: light brown, white, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, very friable to trace hard, light brown & black oil stain, fair to poor intergranular porosity, light green blue fluorescence, fair yellow-white streaming cut

10090' - 10100'

Sandstone: light orange red, medium to fine grained, sub-rounded to sub-angular, moderately to well sorted, very friable, siliceous, no visible oil stain, no fluorescence, no cut

Anhydrite: white, cream, amorphous, very chalky, pasty, very soft, slightly calcareous

10100' - 10110'

Sandstone: light brown, light orange red, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, friable to hard, siliceous, scattered light brown & black oil stain, no stain on light orange red, fair intergranular porosity, scattered light blue fluorescence, fair yellow-white streaming cut in part

Anhydrite: white, cream, amorphous, chalky, slightly sandy, very soft

10110' - 10120'

Sandstone: light orange red, occasional clear & translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, friable to very hard, trace light brown & black oil stain, no stain on orange red, poor intergranular porosity, rare yellow fluorescence, slow yellow-white cut from light brown to clear pieces

10120' - 10130'

Sandstone: light orange red, medium to fine grained, sub-angular to sub-rounded, moderately sorted, friable to hard, siliceous, silty in part, poor intergranular porosity, no visible stain, no fluorescence, no cut, anhydritic in part

10130' - 10140'

Sandstone: light to medium red orange, medium to fine grained, as above

10140' - 10150'

Sandstone: light to occasional medium red orange, light brown, medium to fine grained, sub-rounded to sub-angular, moderately sorted, moderately to poorly cemented, siliceous, poor intergranular porosity, occasional blue-white fluorescence, trace milky cut, anhydritic in part

10150' - 10160;'

Sandstone: light brown, off white, medium to fine grained, sub-angular to sub-rounded, moderately sorted, moderately cemented, siliceous, light brown oil stain in part, blue-white fluorescence, weak streaming cut in part, poor to occasional fair intergranular porosity

Anhydrite: off white, white, amorphous, sandy in part, soft to gummy, slightly calcareous

- 10160' - 10170' Anhydrite: off white, white, as above, slightly sandy in part
Sandstone: light brown, off white, as above
- 10170' - 10180' Sandstone: off white, light brown, light orange, medium to fine grained, sub-angular to sub-rounded, moderately well sorted, moderately cemented, siliceous, trace light brown oil stain, poor intergranular porosity, anhydritic in part, weak blue-white fluorescence in part, occasional weak streaming to milky cut
Anhydrite: off white, white, as above
- 10180' - 10190' Sandstone: light to medium red orange, off white, occasional light brown, medium to fine grained, sub-rounded to sub-angular, moderately sorted, moderately cemented, siliceous, anhydritic in part, poor to trace intergranular porosity, no stain, no cut, occasional unconsolidated lower coarse grained & clear
- 10190' - 10200' Sandstone: light to medium red orange, off white, as above, no show, increased anhydritic
- 10200' - 10210' Sandstone: light to occasional medium red orange, off white, medium to fine grained, silty in part, sub-rounded to sub-angular, moderately to poorly sorted, moderately cemented, siliceous, poor to trace intergranular porosity, no stain or cut, anhydritic in part
- 10210' - 10220' Sandstone: light orange red, medium to fine grained, sub-rounded to sub-angular, silty in part, anhydritic in part, moderately well sorted, friable to occasional hard, poor intergranular porosity, no fluorescence or cut
- 10220' - 10230' Sandstone: light orange red, translucent, medium to fine grained, sub-rounded to sub-angular, silty in part, anhydritic in part, moderately to well sorted, very friable, trace hard, poor intergranular porosity, no show
- 10230' - 10240' Sandstone: light orange red, cream-orange, medium to fine grained, sub-rounded to sub-angular, silty in part, anhydritic in part, moderately well sorted, very friable, poor intergranular porosity, no fluorescence or cut
Anhydrite: white, cream, amorphous, chalky, pasty, very soft
- 10240' - 10250' Sandstone: light orange, white, translucent, medium to fine grained, sub-rounded to sub-angular, silty & anhydritic, moderately sorted, very friable, with abundant loose grains, poor intergranular visible porosity, no show
Anhydrite: white, cream, amorphous, chalky, pasty, very soft, sandy in part

- 10250' - 10260' Sandstone: light orange, white, translucent, as above, very anhydritic
Anhydrite: white, cream, as above
- 10260' - 10270' Sandstone: light orange, pink, medium to fine grained, sub-rounded to sub-angular, very anhydritic & silty in part, moderately well sorted, with loose grains, poor intergranular porosity, no show
Anhydrite: white, light orange pink, amorphous, chalky, pasty, very soft
- 10270' - 10280' Sandstone: light orange, white, cream, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, very anhydritic, silty in part, very friable, with unconsolidated grains, poor intergranular porosity, no fluorescence, very weak milky cut
Anhydrite: white, cream, amorphous, chalky, pasty, sandy, very soft
- 10280' - 10290' Sandstone: clear, translucent, white, orange, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, very anhydritic, very friable, silty in part, poor intergranular porosity, no fluorescence, very weak milky cut
Anhydrite: white, light orange, amorphous, very soft, sandy in part
- 10290' - 10300' Sandstone: clear, orange, white, translucent, as above, very anhydritic
Anhydrite: white, light orange, as above
- 10300' - 10310' Sandstone: light orange, clear, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, very anhydritic, very friable, poor intergranular porosity, no fluorescence or cut
Anhydrite: white, light orange, pink, amorphous, chalky, pasty, very soft, sandy in part
- 10310' - 10320' Sandstone: light orange, clear, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, poorly cemented, friable in part, anhydritic, no show
Anhydrite: off white, light orange, slightly calcareous, soft to gummy, sandy in part
- 10320' - 10330' Sandstone: light to medium orange, medium to fine grained, as above, silty in part
Anhydrite: light orange, off white, amorphous, slightly calcareous, soft to gummy, occasional sandy

- 10330' - 10340' Sandstone: light to occasional medium orange, off white, clear, medium to fine grained, sub-angular to sub-rounded, moderately well sorted, moderately cemented, siliceous, no stain, fluorescence or cut, poor to trace intergranular porosity
Anhydrite: light orange, off white, as above
- 10340' - 10370' Anhydrite: light orange, off white, amorphous, slightly calcareous, soft to gummy, sandy in part
Sandstone: light to occasional medium orange, off white, clear, medium to fine grained, sub angular to sub-rounded, moderately well sorted, moderately cemented, siliceous, no stain, fluorescence or cut, poor intergranular porosity
- 10370' - 10390' Anhydrite: light orange, off white, as above
Sandstone: light to occasional medium orange, occasional off white, clear, as above, no show
- 10390' - 10400' Anhydrite: light orange, pink, cream, amorphous, chalky, pasty, sandy, very soft
Sandstone: orange, red orange, trace translucent, medium to fine grained, sub-angular to sub-rounded, moderately well sorted, very friable, poor intergranular porosity, no show
- 10400' - 10410' Anhydrite: light orange, cream, amorphous, pasty, silty, sandy in part, very soft
Sandstone: light orange, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, silty & anhydritic in part, very friable, poor intergranular porosity, no show
- 10410' - 10420' Anhydrite: white, light orange, amorphous, pasty, silty, sandy in part
Sandstone: light orange, as above
Siltstone: red, orange, red brown, sub-blocky, very soft, anhydritic, non-calcareous
- 10420' - 10430' Sandstone: light orange, cream, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, silty in part, anhydritic in part, friable to hard, poor intergranular porosity, no show
Siltstone: orange, red orange, sub-blocky, sandy in part, non-calcareous
Anhydrite: white, light orange, sandy in part, very soft, pasty
- 10430' - 10440' Siltstone: orange, red orange, sub-blocky, sandy in part, shaly in part, very soft, slightly calcareous
Sandstone: light orange, translucent, medium to fine grained, sub-rounded to sub-angular, moderately well sorted, very silty, no show

10440' - 10450'

Sandstone: maroon, clear, translucent, light orange, very fine to medium grained, occasional loose coarse grains, sub-rounded to sub-angular, silty in part, hard, very poor intergranular porosity, no show
Siltstone: orange, red orange, sub-blocky, shaly in part, sandy in part, very soft, slightly calcareous

Total Depth 10,450'MD, 10,413'TVD, -3554'

LOGGING REPORT

Logging Company: Schlumberger Engineer: Jeff Gebhart Date: 4/19/94

Witnessed by: Bobby Cooper, Wayne Freisatz

Driller's TD Depth: 10,450' Logger's TD Depth: 10,445'

Driller's Casing Depth: 7,135' Logger's Casing Depth: 7,135'

Elevation: GL: 6835' Sub: 24' KB: 6859'

Mud Conditions: Wt: 10.3 Vis: 46 WL: 8.8 CL: 185K
BHT: 177°F Rmf: .056 @ 78°F Rmf @ BHT: .026

Hole Conditions: Good

Logging Time: First Tool in Hole: 15:30 4/19/94
Last Tool Out: 18:30 4/19/94

Electric Logging Program: 1.) Dual Laterolog - Long Spaced Sonic - Gamma Ray - Caliper from 10,430' to 7,135' (int.casing).

Software Presentation: none

Log Tops: Preuss Salt 8050'MD, 8023'TVD; Twin Creek 8176'MD, 8149'TVD; Leeds Creek 8556'MD, 8528'TVD; Watton Canyon 8848'MD, 8819'TVD; Boundry Ridge 9035'MD, 9006'TVD; Rich 9063'MD, 9033'TVD; Sliderock 9282'MD, 9251'TVD; Gypsum Springs 9377'MD, 9346'TVD; Nugget 9428'MD, 9397'TVD; Total depth 10445'MD, 10408'TVD

Note: Digital Long Spaced Sonic employed to reduce cycle skipping (noise). Sandstone assumed matrix [DTM = 51.3] used from 7,135' to 8,100' and 9,375' to 10,430', Twin Creek logged on assumed limestone matrix [DTM = 47].

LOG CALCULATIONS

FORMATION /ZONE	DEPTH	SONIC POROSITY	LLd	LLs	Rt (2LLD-LLS)	@Rw = .12 Sw
Leeds Creek	8735'*	13	55	25	85	.29
Leeds Creek	8746'*	14	40	27	53	.34
Leeds Creek	8766'	7.5	150	70	230	.31
Leeds Creek	8843'	3	400	220	580	.47
Watton C.	8898'	3.5	500	340	660	.39
Watton C.	8988'	2	800	270	1330	.48
Rich	9078'	4	27	17	37	1.00
Rich	9094'*	10	45	45	45	.52
Sliderock	9158'	5	190	80	300	.40
Sliderock	9287'	2	320	270	370	.90
Sliderock	9357'	4	120	87	153	.70
Sliderock	9378'*	10	14	12	16	.87
Nugget	9434'	11	27	23	31	.57
Nugget	9456'	12	21	9.5	32.5	.51
Nugget	9468'	16	15	7.5	22.5	.46
Nugget	9491'	17	28	15	44	.31
Nugget	9503'	13	30	14	46	.39
Nugget	9519'	18	29	15	43	.29
Nugget	9531'	12	30	16	44	.44
Nugget	9540'	13	22	13	31	.48
Nugget	9552'	11	21	13	29	.59
Nugget	9568'	11	28	19	37	.52
Nugget	9586'	15	20	13	27	.44
Nugget	9594'	8	32	19	45	.65
Nugget	9606'***	11	16	8	24	.64

FORMATION /ZONE	DEPTH	SONIC POROSITY	LLd	LLs	Rt (2LLD-LLS)	@Rw = .12 Sw
Nugget	9614'***	22	17	8.5	25.5	.31
Nugget	9627'	25	8	4.7	11.3	.41
Nugget	9638'	16	26	15	37	.36
Nugget	9650'	13	22	18	26	.52
Nugget	9670'	15	23	18	28	.44
Nugget	9678'	14	23	17	29	.46
Nugget	9690'	13	20	14	26	.52
Nugget	9708'	15	13	7	19	.53
Nugget	9752'	6	35	24	46	.85
Nugget	9760'	14.5	20	12	28	.45
Nugget	9771'***	18	5	2.7	7.3	.71
Nugget	9804'	11	20	17	23	.66
Nugget	9812'	19	10	6.5	13.5	.50
Nugget	9825'	13.5	15	8.5	21.5	.55
Nugget	9852'***	13.5	13	7.5	18.5	.60
Nugget	9868'	11	15	9.5	20.5	.70
Nugget	9898'	17	10	4.5	15.5	.52
Nugget	9925'	13	16	13	19	.61
Nugget	10040'	10	21	21	21	.76
Nugget	10064'	15	4	2.7	5.3	1.00
Nugget	10074'	14	12	8	16	.62
Nugget	10152'	11	16	14	18	.74
Nugget	10165'	12	17	14	20	.65
Nugget	10273'	11	9	7	11	.95

* = shaly interval with inflated porosity

** = caliper anomaly



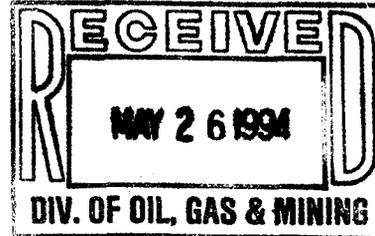
**Union Pacific
Resources**

A Subsidiary of Union Pacific Corporation

43-043-30302

May 25, 1994

Utah Department of Natural Resources
Division of Oil, Gas, and Mining
355 N. Temple - 3 Triad Center - Suite 350
Salt Lake City, Utah 84180



ATTN: Mr. Fred Matthews

RE: **Sundry Notice
Well UPRR 3-10
Summit County, Utah**

Dear Mr. Matthews:

Enclosed please find a Sundry Notice dated May 25, 1994, pertaining to activities at the referenced well.

Please contact me at (817) 877-7952 if you have any questions or need additional information.

Yours truly,

UNION PACIFIC RESOURCES COMPANY

W. F. Brazelton

WFB/bb

Enc. (1)

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.

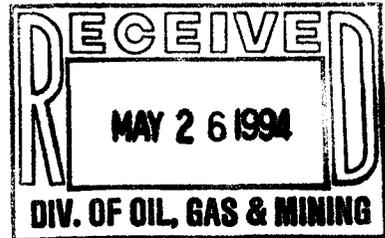
1. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER:		5. Lease Designation and Serial Number: UPRR Land Grant
2. Name of Operator: Union Pacific Resources Company		6. If Indian, Aluttee or Tribe Name: NA
3. Address and Telephone Number: PO Box 7 MS 3006 Fort Worth, TX 76101-0007 817-877-7952		7. Unit Agreement Name: NA
4. Location of Well Footages: 1055' FSL, 1395' FEL OO, Sec., T., R., M.: SE4/NW4 Sec 3-T2N-R7E		8. Well Name and Number: UPRR 3-10
		9. API Well Number: 43-043-30302
		10. Field and Pool, or Wildcat:
		County: Summit State: Utah

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

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____ Approximate date work will start _____	<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input checked="" type="checkbox"/> Other <u>Notice per your request to Pat Stephens</u> Date of work completion _____ Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off

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.)

Set CIBP at 10,102.5-10,104' in 5 1/2" 23# P-110 casing, 1sx cement (approx. 8') on top of plug.



13. Name & Signature: W.F. Brazelton W.F. Brazelton Title: Sr. Regulatory Analyst Date: 05-25-94

(This space for State use only)

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

A. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

B. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESV. Other _____

2. NAME OF OPERATOR: **UNION PACIFIC RESOURCES COMPANY**

3. ADDRESS OF OPERATOR: **P.O. BOX 7 - MS 3006, FORT WORTH, TEXAS 76101-0007**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):
At surface 1055' FSL, 1395' FEL, Sec. 3, T. 2N., R. 7E.

At top prod. interval reported below 1535' FEL, 1720' FWL, Sec. 3, T. 2N., R. 7E.

At total depth 1621' FSL, 1773' FEL, Sec. 3, T. 2N., R. 7E.

5. LEASE DESIGNATION AND SERIAL NO.

UPRR Land Grant

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

UPRR

9. WELL NO.

3-10

10. FIELD AND POOL OR WILDCAT

Pineview

11. SEC. T., R., N., OR BLOCK AND SUBSET OR AREA

SW4/SE4, Sec. 3, T. 2N., R. 7E., SLBM

14. API NO. 43-043-30302 DATE ISSUED 01-06-94 12. COUNTY Summit 13. STATE Utah

15. DATE SPUNDED 1-19-94 16. DATE T.D. REACHED 4-19-94 17. DATE COMPL. (Ready to prod.) 8-01-94 18. ELEVATIONS (DF, RB, RT, GR, ETC.) 6859' FL. 19. ELEV. CASINGHEAD 6883'

20. TOTAL DEPTH, MD & TVD 10,450'/10,413' 21. PLUG BACK T.D., MD & TVD 6985' MD/6994 TVD 22. IF MULTIPLE COMPL. HOW MANY N/A 23. INTERVALS DRILLED BY ROTARY TOOLS X CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) Nugget Formation 9428 MD/9397 TVD 25. WAS DIRECTIONAL SURVEY MADE Yes

26. TYPE ELECTRIC AND OTHER LOGS RDN DLL-LSS-GR 27. WAS WELL CORED YES NO DRILL STEM TEST YES NO

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	2029'	17-1/2"	2766 cf 35/65 POZ + 290cf "G"	N/A
9-5/8"	53.5	7135'	12-1/4"	562 cf 50/50 POZ "G"	N/A
5-1/2"	20.0/23.0	10450'	8-1/2"	549 cf "G" + 1074 cf "G"	N/A

LINER RECORD				TUBING RECORD			
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A					2-7/8"	7013'	N/A

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
9430-36, 9443-48, 9452-72, 9488-92 9502-05, 9510-13, 9518-24, 9528-32 9538-42; 0.38" dia. hole, 4SPF	N/A		

33. PRODUCTION DATE FIRST PRODUCTION 8-01-94 PRODUCTION METHOD Pumping, 2" 25-200 RWBC WELL STATUS Producing or Shut-in Producing

DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-03-94	24	64/64	→	36	47	472	1.3:1
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
65	0	→	36	47	472	45.5	

35. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Sold TEST WITNESSED BY Paul Smith

LIST OF ATTACHMENTS N/A

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records
SIGNED W.F. Brazelton TITLE Sr. Regulatory Analyst DATE 10/03/94

INSTRUCTIONS

This form should be completed in compliance 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.

ITEMS 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), bottom(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).

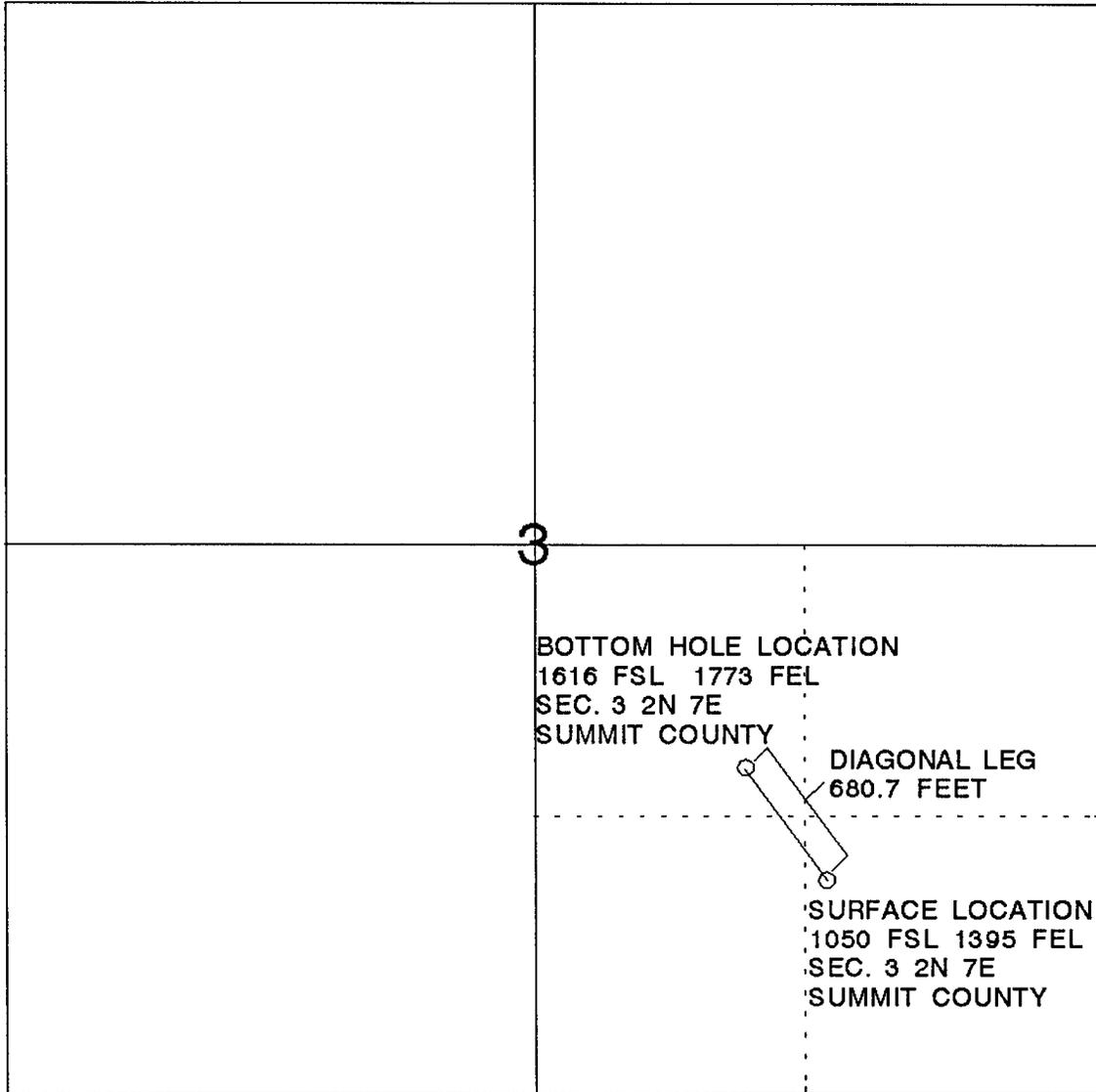
37. SUMMARY OF POROUS ZONES:

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.

38. GEOLOGIC MARKERS

Formation	Top	Bottom	Description, contents, etc.	Name	Meas. Depth	
					Irve	Veri. Depth
				Watton Canyon	8848'	8819'
				Boundary Ridge	9035'	9006'
				Rich	9063'	9033'
				Nugget	9428'	9397'

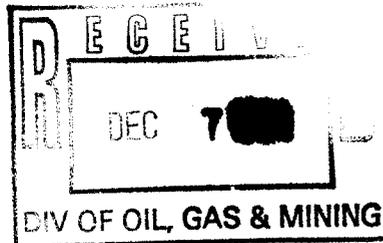
UPRR 3-1043-043-30302
BOTTOM HOLE LOCATION
DIAGRAM 1"=768'





November 30, 1994

Division of Oil, Gas and Mining
Department of Natural Resources
3 Triad Center - Suite 350
355 West Temple
Salt Lake City, Utah 84180-1203



ATTN: Ms. Vickey Carney

RE: **Electric Log Submission**
UPRR 3-10
Section 3, T. 2 N., R. 7E., SLBM
Summit County, Utah

Dear Ms. Carney:

Enclosed please find the following electric logs from the aboved referenced well:

- ✓ 1. Long Spaced Sonic (LSS) 7,135' - 10430'
- ✓ 2. Acoustic Cement Bond-Gamma Ray Log 5,400' - 10,351'
- ✓ 3. Dual Laterolog 7,135' - 10,430'

If additional information is required, please contact me at (817) 877-7952, FAX (817) 877-7942.

Yours truly,

UNION PACIFIC RESOURCES COMPANY

A handwritten signature in cursive script, appearing to read "W. F. Brazelton".

W. F. Brazelton
Senior Regulatory Analyst

enc: (3)

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

RON REAMES
UNION PACIFIC RESOURCES CO
PO BOX 7
FORT WORTH TX 76101-0007

UTAH ACCOUNT NUMBER: N9465

REPORT PERIOD (MONTH/YEAR): 12 / 98

AMENDED REPORT (Highlight Changes)

Well Name	Pi Number	Entity	Location	Producing Zone	Well Status	Days Oper	Production Volumes			
							OIL(BBL)	GAS(MCF)	WATER(BBL)	
PINEVIEW 4-3	4304330077	02210	02N 07E 4	TWNCR			free (POW)			
PINEVIEW 4-4S	4304330083	02215	02N 07E 4	FRTR			free (SOW)			
BLONQUIST 26-3	4304330235	02595	02N 06E 26	TWNCR			free (SOW)			
NEWTON SHEEP 1	4304330284	10768	02N 07E 18	TWNCR			free (SOW)			
UPRR 1H 19-2X (RIG SKID)	4304330300	11592	02N 07E 19	TWNCR			free (SOW)			
JUDD 34-1H	4304330301	11607	02N 06E 34	TWNCR			free (POW)			
IR 3-10	4304330302	11626	02N 07E 3	NGSD			free (POW)			
UPRR 17-2H	4304330304	11647	02N 07E 17	TWNCR			free (POW)			
UPRR 35-2H (MULTI-LEG)	4304330305	11659	02N 06E 35	TWNCR			free (POW)			
NEWTON SHEEP 20-1H (MULTI-LEG)	4304330310	11696	02N 07E 20	TWNCR			free (SOW)			
JUDD 4-1H	4304330311	11750	01N 06E 4	WTCYN			free (POW)			
NEWTON SHEEP 24-1H	4304330308	11755	02N 06E 24	WTCYN			free (SOW)	GA# UTU 74867		
BLONQUIST 26-1H	4304330314	11950	02N 06E 26	WTCYN			free (SOW)			
TOTALS										

REMARKS:

I hereby certify that this report is true and complete to the best of my knowledge.

Date: _____

Name and Signature: _____

Telephone Number: _____

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

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

5. Lease Designation and Serial No.	Fee
6. If Indian, Allottee or Tribe Name	NA
7. Unit Agreement Name	NA
8. Well Name and Number	UPRR #3-10
9. API Well Number	43-043-30302
10. Field and Pool, or Wildcat	Pineview

1. Type of Well: OIL (X) GAS (X) OTHER: () INJ. ()

2. Name of Operator
Union Pacific Resources Company

3. Address and Telephone Number
P. O. Box 7 MS 29-3006-01 Fort Worth, Texas 76101-0007
Telephone (817) 321-6739

4. Location of Well

Footages	1055' FSL, 1395' FEL	County	Summit
QQ, Sec., T., R., M.	(SWSE) Sec. 3, T2N-R7E	State	Utah

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

NOTICE OF INTENT
(Submit in Duplicate)

<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shutoff
<input checked="" type="checkbox"/> Other: Change of Operator	

Approximate date work will start: Upon Approval

SUBSEQUENT REPORT
(Submit Original Form Only)

<input type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shuc-Off Shutoff
<input type="checkbox"/> Other _____	

Date of work completion _____

Report results of Multiple Completions and Reclamations to different reservoirs on WELL COMPLETION OR RECOMPLETION 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).

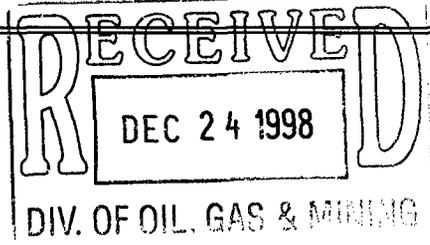
Union Pacific Resources Company has sold the captioned well to Citation Oil & Gas Corp. P. O. Box 690688, Houston, Texas 77269-0688 and requests that Citation be named Operator of Record effective January 1, 1999. Please release this well from coverage under Union Pacific Resources Company's Utah Statewide Bond #2447222.

On behalf of Union Pacific Resources Company I hereby certify that the foregoing is true and correct:
Dorothy Moravek *D Moravek* Title: Regulatory Analyst Date 12-18-98

By execution of this document, Citation Oil & Gas Corp. requests the State of Utah to approve it as Operator of Record for the above captioned well. Citation accepts responsibility for this well under it's Utah Statewide Bond #587800.

13. On behalf of Citation Oil & Gas Corp. I hereby certify that the foregoing is true and correct:
Robert T. Kennedy *Robert T. Kennedy* Title: Vice President-Land Date: 12-22-98

(This space for State use only)





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)

January 27, 1999

Union Pacific Resources Company
Attn: Dorothy Moravek
P.O. Box 7 MS 29-3006-01
Fort Worth, Texas 76101-0007

Re: Notification of Sale or Transfer of Fee Lease Interest

The Division has received notification of a change of operator from Union Pacific Resources Co. to Citation Oil & Gas Corporation for the following well(s) which are located on a fee lease:

<u>Well Name</u>	<u>Sec.-T.-R.</u>	<u>API Number</u>
Bingham 1-43-3	03-02N-07E	43-043-30029
Judd 34-3	34-02N-06E	43-043-30098
Judd 34-1	34-02N-06E	43-043-30061
UPRR 3-1	03-02N-07E	43-043-30012
UPRR 3-2	03-02N-07E	43-043-30015
UPRR 3-6	03-02N-07E	43-043-30036
UPRR 3-9	03-02N-07E	43-043-30151
Bingham 2-1	02-02N-07E	43-043-30026
Bingham 2-1A	02-02N-07E	43-043-30125
Bingham 2-2	02-02N-07E	43-043-30028
Bingham 2-3	02-02N-07E	43-043-30033
Bingham 2-4	02-02N-07E	43-043-30038
Bingham 10-1	10-02N-07E	43-043-30025
Pineview 4-3	04-02N-07E	43-043-30077
Pineview 4-4S	04-02N-07E	43-043-30083
Blonquist 26-3	26-02N-06E	43-043-30235
Newton Sheep 1	18-02N-07E	43-043-30284
UPRR 1H 19-2X	19-02N-07E	43-043-30300
Judd 34-1H	34-02N-06E	43-043-30301
UPRR 3-10	03-02N-07E	43-043-30302
UPRR 17-2H	17-02N-07E	43-043-30304

Page 2
Dorothy Moravek
Notification of Sale
January 27, 1999

<u>Well Name</u>	<u>Sec.-T.-R.</u>	<u>API Number</u>
UPRR 35-2H	35-02N-06E	43-043-30305
Newton Sheep 20-1H	20-02N-07E	43-043-30310
Judd 4-1H	04-01N-06E	43-043-30311
Blonquist 26-1H	26-02N-06E	43-043-30314
Bingham 2-6H	02-02N-07E	43-043-30317
UPR 3-11H	03-02N-07E	43-043-30318
Blonquist 26-4	26-02N-06E	43-043-30268
UPRC 33-1	33-02N-06E	43-043-30233
Clark 4-1	04-02N-07E	43-043-30071
UPRC 1	17-02N-07E	43-043-30290
B.A. Bingham & Sons 1	02-02N-07E	43-043-30295

Utah Administrative Rule R649-2-10 states; the owner of a lease shall provide notification to any person with an interest in such lease, when all or part of that interest in the lease is sold or transferred.

This letter is written to advise Union Pacific Resources Co. of its responsibility to notify all individuals with an interest in this lease (royalty interest and working interest) of the change of operator. Please provide written documentation of this notification to:

Utah Royalty Owners Association
Box 1292
Roosevelt, Utah 84066

Page 3
Dorothy Moravek
Notification of Sale
January 27, 1999

Your assistance in this matter is appreciated.

Sincerely,

Kristen D. Risbeck

Kristen D. Risbeck

cc: Citation Oil & Gas Corporation
Utah Royalty Owners Association, Kent Stringham
John R. Baza, Associate Director
Operator File(s)

OPERATOR CHANGE WORKSHEET

1-KDR ✓	6-KAS ✓
2-CLH ✓	7-SJ
3-JRB ✓	8-FILE
4-CDWL ✓	
5-KDR ✓	

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold) Designation of Agent
 Designation of Operator Operator Name Change Only

The operator of the well(s) listed below has changed, effective: 1-1-99

TO: (new operator) (address) <u>CITATION OIL & GAS CORP</u> <u>P.O. BOX 690688</u> <u>HOUSTON, TX 77269-0688</u> <u>RUTH ANN ALFORD</u> Phone: <u>(281) 469-9664</u> Account no. <u>N0265</u>	FROM: (old operator) (address) <u>UNION PACIFIC RESOURCES CO</u> <u>P.O. BOX 7 MS 29-3006-01</u> <u>FORT WORTH, TX 76101-0007</u> <u>DOROTHY MORAVEK</u> Phone: <u>(817) 321-6739</u> Account no. <u>N9465</u>
--	---

WELL(S) attach additional page if needed:

Name: <u>*SEE ATTACHED*</u>	API: <u>43-043-30303</u>	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____

OPERATOR CHANGE DOCUMENTATION

- KDR 1. (r649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator (attach to this form). *(Rec'd 12.24.98)*
- KDR 2. (r649-8-10) Sundry or other legal documentation has been received from the **NEW** operator (Attach to this form). *(Rec'd 12.24.98)*
- N/A 3. The **Department of Commerce** has been contacted if the new operator above is not currently operating any wells in Utah. Is the company **registered with the state?** (yes/no) _____ If yes, show company file number: _____
- N/A 4. **FOR INDIAN AND FEDERAL WELLS ONLY.** The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of **Federal** and **Indian** well operator changes should ordinarily take place prior to the division's approval, and before the completion of **steps 5 through 9** below.
- KDR 5. Changes have been entered in the **Oil and Gas Information System (3270)** for each well listed above. *(3.11.99)*
- KDR 6. **Cardex** file has been updated for each well listed above.
- N/A 7. Well **file labels** have been updated for each well listed above. *(*new filing system)*
- KDR 8. Changes have been included on the monthly "Operator, Address, and Account Changes" **memo** for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. *(3.11.99)*
- KDR 9. A folder has been set up for the **Operator Change file**, and a copy of this page has been placed there for **reference during routing and processing of the original documents.**

ENTITY REVIEW

- WDR 1. (r649-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) NO If entity assignments were changed, attach copies of Form 6, Entity Action Form.
- WDR 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been notified through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

- WDR 1. (r649-3-1) The NEW operator of any fee lease well listed above has furnished a proper bond.
(Rec'd 2.11.99 Bond # RSB-670565)
- WDR 2. A copy of this form has been placed in the new and former operator's bond files.
- WDR 3. The FORMER operator has requested a release of liability from their bond (yes/no) Yes, as of today's date 3.10.99. If yes, division response was made to this request by letter dated 3.10.99.

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

- N/A 1. Copies of documents have been sent on _____ to _____ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.
- WDR 2. (r649-2-10) The former operator of any fee lease wells listed above has been contacted and informed by letter dated 1.27.99 19 __, of their responsibility to notify all interest owners of this change.

FILMING

- VS 1. All attachments to this form have been microfilmed. Today's date: 5.12.99.

FILING

- 1. Copies of all attachments to this form have been filed in each well file.
- 2. The original of this form, and the original attachments are now being filed in the Operator Change file.

COMMENTS



March 29, 1999

Kristen Risbeck
State of Utah
P O Box 145801
Salt Lake City, Utah 84114-5801

Re: Transfer of Authority to Inject

Dear Ms. Risbeck:

Enclosed please find an original and one copy of the form 5 to transfer the following wells into Citation Oil & Gas Corp.'s name.

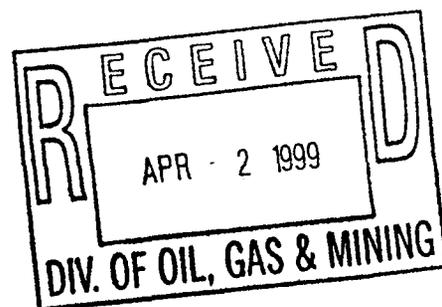
UPRC 33-1 SWD	43-043-30233
Blonquist 26-4 SWD	43-043-30268
Clark 4-1 SWD	43-043-30071
Exxon UPRC #1 SWD	43-043-30290
B. A. Bingham & Sons Inc. #1	43-043-30295

If you have any questions regarding this form, please contact the undersigned at 281-469-9664.
Thank you.

Sincerely,

Sharon Ward
Regulatory Administrator

Cc: Dorothy Moravek
UPRC



STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:

UPRR Land Grant

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. Type of Well:

OIL GAS OTHER:

8. Well Name and Number:

UPRR #3-10

2. Name of Operator

Citation Oil & Gas Corp.

9. API Well Number:

43-043-30302

3. Address and Telephone Number:

P O Box 690688, Houston, Texas 77269 (281) 517-7800

10. Field and Pool, or Wildcat:

Pineview

4. Location of Well

Footages: **1055 FSL & 1395 FEL**

County: **Summit**

QQ, Sec., T., R., M.: **SW SE SEC. 3-2N-7E**

State: **Utah**

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

NOTICE OF INTENT

(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Stimulate/Polymer Treat
Other _____

Approximate date work will start **2001**

SUBSEQUENT REPORT

(Submit Original Form Only)

- Abandonment*
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other _____
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- 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 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.)

Citation plans to stimulate and polymer treat the UPRR 3-10 well with the attached procedure.

RECEIVED

NOV 09 2001

DIVISION OF
OIL, GAS AND MINING

13.

Name & Signature:

Sharon Ward

Sharon Ward

Title:

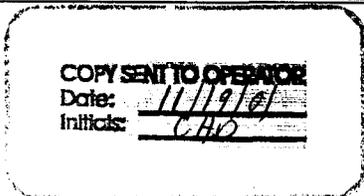
Regulatory Administrator

Date:

11/6/01

(This space for State use only)

(12192)



(See Instructions on Reverse Side)

**APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING**

DATE: **11/19/01**
BY: *Dale Duff*

Date: 8-21-01

Citation Oil & Gas Corporation Pineview Field, UPRR #3-10

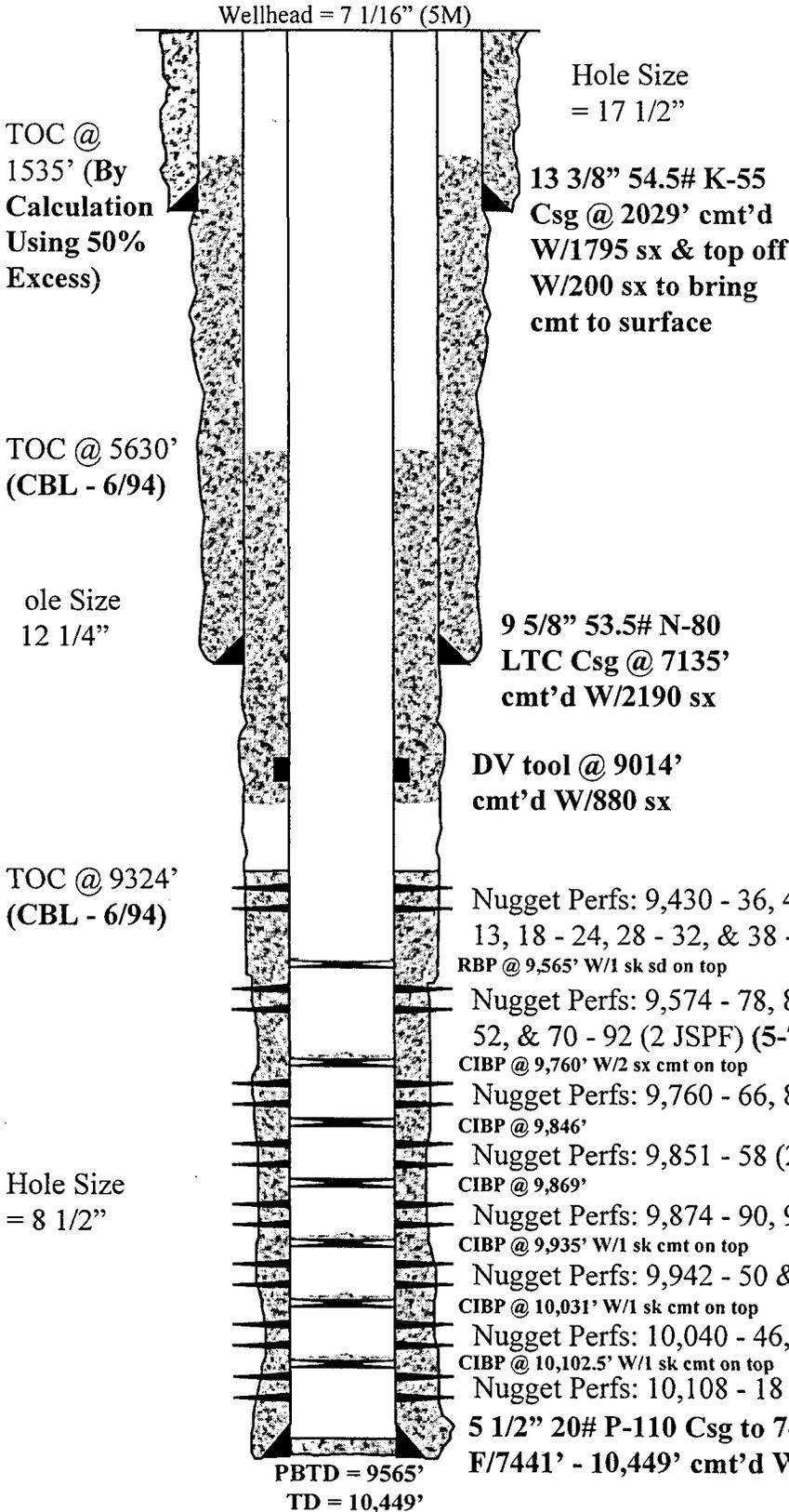
Ground Elevation = 6859'
RKB = 6883'
KB = 24'

Wellbore Diagram

Present Status

Surface Location

1055' FSL & 1395' FEL,
SE NW, Sec. 3, T-2-N,
R-7-E, Summit County, UT



TUBING DETAIL			
Qty	Description	Length	Depth
—	KB (used)	0	0.00
124	2 7/8" 6.5# L-80 8rd EUE	3,970.00	3,970.00
1	2 7/8" X 5 1/2" TAC	2.08	3,972.08
1	4' pup jt	4.00	3,976.08
1	2 3/4" tbg pump	27.10	4,003.18
Records are not the same.			

ROD & PUMP DETAIL			
Qty	Description	Length	Depth
68	1" guided rods	1700	1,700.00
92	7/8" guided rods	2,300.00	4,000.00
1	on/off tool		
Records are incomplete.			

CITATION OIL & GAS CORPORATION
PINEVIEW FIELD, POLYMER TREATMENT
PROCEDURE

DATE: 08-22-01

WELL NO. UPRR #3-10

1. Set 2(cleaned) – 500 BBL frac tanks & 1 swab tank on location. Fill frac tanks with produced wtr from inj station & add 10 gals of K-31W bacteriacide from Champion Chemical to each tank.
***NOTE* Every 100 BBLs of produced wtr brought to the frac tanks needs to contain 2 gals of Champion's K-31W bacteriacide. Haul an additional +/-5500 of 2 7/8" L-80 tbg from stock to location for workover.**
2. MIRU rig. ND wellhead. NU BOP. POOH W/rods, 124 jts 2 7/8" tbg, & tbg pump. PU additional tbg & Hydrotest tbg in hole to 6500 psi while RIH W/4 1/2" bit & scraper to top of sd @ +/- 9560'. If needed, CO well to @ 9545' (just below bottom perf). POOH W/tbg & tools.
3. RIH W/SN & PKR & set PKR +/- 9375'. Test backside to 500 psi.
4. RU acid company. Test lines to 3000 psi. Acidize Nugget perms at maximum rate, not exceeding 1500 psi surface pressure, W/2000 gals 7.5% HCl acid plus additives in 4 stages using 400# rock salt (1200# total) in gelled brine water to divert between stages as follows:

300 gals acid-400# rock salt-700 gals acid-400# rock salt-700 gals acid-400# rock salt-300 gals acid

Follow end of acid job W/56 BBLs of lease water flush from transport (no K-31W chemical needed for flush wtr). Swab back load until neutral in pH (7) & clean enough to produce.
5. NU injection "T". RU wireline & 5000 psi lubricator on top of injection "T". RIH, dn tbg, through the PKR, to +/-9400' W/bottom hole pressure(BHP) recorder. ***NOTE* Continue to monitor BHP throughout job until a positive surface injection pressure is achieved. At this point, shut dn polymer injection, POOH W/BHP recorder, & RD & release wireline. Go back to scheduled polymer injection.**
6. RU TIORCO (as per reservoir engineering's recommendation). Test lines to 3000 psi. Pump 100 BBLs of non-chemically treated wtr into formation to establish injectivity rate & pressure. **Do not exceed 1500 psi inj pressure while pumping main job.** Pump Nugget polymer treatment consisting of WATER-CUT 204 polymer crosslinked with WATER-CUT 684 crosslinker at a rate of 1080 BBLs/D at 3000 – 8000 ppm polymer concentration until a total of 6000 BBLs of polymer has been pumped into formation. Pumping schedule is as follows:

Stage #1: 600 BBLs @ 3,000 ppm gel concentration @ 1080 BPD rate

Stage #2: 4200 BBLs @ 4,500 ppm gel concentration @ 1080 BPD rate

Stage #3: 900 BBLS @ 6,000 ppm gel concentration @ 1080 BPD rate

Stage #4: 300 BBLS @ 8,000 ppm gel concentration @ 1080 BPD

Stage #5: 125 BBLS wtr overflush @ 1080 BPD rate

- 7. RD polymer company. Shut-in well. RDMO. Leave well shut-in for 5 days minimum.*
- 8. MIRU rig. Swab back fluid until fluid is not contaminated with polymer gel. Determine swab rate and report results to the Gillette Office for artificial lift sizing analysis. Treat all polymer contaminated produced fluids in the swab tank prior to moving them to the production battery (CLOROX bleach will break polymer – 20 gals/100BBLS of fluid & let sit over night).*
- 9. Unseat PKR. POOH W/tbg & PKR. Run in hole W/recommended lift equip. RDMO. Put well in test.*

**Carol Daniels - UPRR #3-10 (API #43-043-30302); Pineview Field;
Summit County, Utah**

From: "Debra Harris" <DHarris@cogc.com>
To: <caroldaniels@utah.gov>
Date: 11/11/2002 1:29 PM
Subject: UPRR #3-10 (API #43-043-30302); Pineview Field; Summit
County, Utah

Carol,

Sharon Ward asked me to contact you concerning the status of the Notice of Intent to stimulate and polymer treat the subject well which was approved by your office on November 19, 2001.

This work has not been started as of today's date – November 11, 2002. I will file a Subsequent Report once the work has been done. If you have any other questions, please contact me at (281) 517-7194.

Thank you,

Debra Harris
Citation Oil & Gas Corp.
Production/Regulatory Coordinator

MONTHLY SUMMARY REPORT OF GAS PROCESSING PLANT OPERATIONS - FORM 13-A

FACILITY PINEVIEW GAS PLANT
 OPERATOR CITATION OIL AND GAS CORP.
 ADDRESS 14077 CUTTEN ROAD
HOUSTON, TX 77069-2212

OPERATIONS MONTH/YR Mar-13

CORRECTED REPORT []

GAS ACQUISITIONS		MCF
1. GAS INTO GATHERING SYSTEM		25816
2. DISPOSITIONS OF UNPROCESSED WET GAS FROM GATHERING SYSTEM (explain)		
3. PLANT INTAKE FROM GATHERING SYSTEM (Plant meters)		25816
4. (LOSS) OR GAIN (line 3 - line 1 = line 2)		
5. GAS FROM OTHER PROCESSING PLANTS (Plant names:		
6. GAS FROM MAIN TRANSMISSION LINE (Pipeline company:		
7. GAS WITHDRAWN FROM STORAGE		
TOTAL ACQUISITIONS (add lines 3, 5, 6, and 7)		25816

GAS DISPOSITIONS			MCF
1. PLANT FUEL	3,302	7. CYCLED	
2. VENTED/FLARED	0	8. UNDERGROUND STORAGE	
3. EXTRACTION LOSS (SHRINKAGE)	7,234	9. OTHER PROCESSING PLANTS	
4. FIELD FUEL & USE	383	10. TRANSMISSION LINE	14,832
5. LIFT GAS		11. METER DIFFERENTIAL - LOSS/(GAIN)	65
6. REPRESSURING/PRESSURE MAINTENANCE		12. OTHER DISPOSITIONS (explain)	
TOTAL DISPOSITIONS (add lines 1 through 12)			25,816

PLANT PRODUCTION, RECEIPTS, DELIVERIES, AND STOCK IN GALLONS					
PRODUCT	OPENING STOCK	RECEIPTS	PRODUCTION	DELIVERIES	CLOSING STOCK
ETHANE					
PROPANE					
ISO-BUTANE					
BUTANE					
NGL MIX	63,300		140,676	152,076	51,900
GASOLINE					
CONDENSATE					
KEROSENE					
OTHER:					
TOTAL	63,300		140,676	152,076	51,900

BTU OF GAS SOLD 1.2207

PRODUCTION OF SULFUR FROM PROCESSING NATURAL GAS: _____ LONG TONS

COMMENTS:
 No propane sales this month; propane stock sold off 1/99.
 Plant now selling only NGL Mix.

I HEREBY CERTIFY THAT THIS REPORT IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.


 SIGNATURE Diane Cerny
 Production Analyst I
 TITLE _____ DATE 4/23/2013

Phone No. (281) 891-1562

APR 29 2013

MONTHLY REPORT OF GAS PROCESSING PLANT PRODUCT ALLOCATIONS - FORM 13-B

FACILITY OPERATOR ADDRESS PINEVIEW GAS PLANT
 CITATION OIL AND GAS CORP.
 14077 CUTTEN ROAD
 HOUSTON, TX 77070-5623

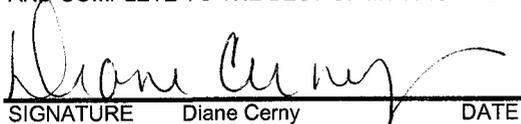
PAGE 1 OF 1 OPERATIONS MONTH/YR Mar-13

CORRECTED REPORT ()

WELL OPERATOR	WELL NAME	API NUMBER	METERED WELL VOLUME (MCF)	RESIDUE GAS RETURNED TO FIELD (MCF)	ALLOCATIONS:	
					RESIDUE GAS SOLD (MCF)	NGLS (GALLONS)
CITATION OIL AND GAS CORP.	BINGHAM 2-1	43-043-30026	3,813	56	2,210	20,486
CITATION OIL AND GAS CORP.	BINGHAM 2-1A	43-043-30125	2,753	41	1,641	15,827
CITATION OIL AND GAS CORP.	BINGHAM 2-6H	43-043-30317	347	5	209	1,444
CITATION OIL AND GAS CORP.	BINGHAM 10-1	43-043-30025	0	0	0	0
CITATION OIL AND GAS CORP.	BINGHAM 1-42-3	43-043-30029	2,705	40	1,578	15,366
CITATION OIL AND GAS CORP.	UPRR 3-2	43-043-30015	1,319	20	730	9,082
CITATION OIL AND GAS CORP.	UPRR 3-6 TWCNG	43-043-30036	8,140	121	4,652	50,903
CITATION OIL AND GAS CORP.	UPRR 3-9	43-043-30151	3,698	55	2,070	22,146
CITATION OIL AND GAS CORP.	UPRR 3-10	43-043-30302	3,041	45	1,742	16,822
CITATION OIL AND GAS CORP.	JUDD 34-1H	43-043-30301	0	0	0	0
TOTALS (TOTAL ONLY IF THIS IS LAST PAGE OF REPORT)			25,816	383	14,832	152,076

COMMENTS:

I HEREBY CERTIFY THAT THIS REPORT IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.


 SIGNATURE Diane Cerny DATE 23-Apr-13
 TITLE Production Analyst I
 PHONE NO. - 281-891-1562

APR 29 2013

Revision

MONTHLY REPORT OF GAS PROCESSING PLANT PRODUCT ALLOCATIONS - FORM 13-B

FACILITY OPERATOR ADDRESS
 PINEVIEW GAS PLANT
 CITATION OIL AND GAS CORP.
 14077 CUTTEN ROAD
 HOUSTON, TX 77070-5623

PAGE 1 OF 1
 OPERATIONS MONTH/YR
 Mar-13

CORRECTED REPORT ()

WELL OPERATOR	WELL NAME	API NUMBER	METERED WELL VOLUME (MCF)	RESIDUE GAS RETURNED TO FIELD (MCF)	ALLOCATIONS:	
					RESIDUE GAS SOLD (MCF)	NGLS (GALLONS)
CITATION OIL AND GAS CORP.	BINGHAM 2-1	43-043-30026	3,815	56	2,213	20,498
CITATION OIL AND GAS CORP.	BINGHAM 2-1A	43-043-30125	2,753	41	1,641	15,827
CITATION OIL AND GAS CORP.	BINGHAM 2-6H	43-043-30317	347	5	209	1,444
CITATION OIL AND GAS CORP.	BINGHAM 10-1	43-043-30025	0	0	0	0
CITATION OIL AND GAS CORP.	BINGHAM 1-42-3	43-043-30029	2,706	40	1,578	15,372
CITATION OIL AND GAS CORP.	UPRR 3-2	43-043-30015	1,317	20	729	9,069
CITATION OIL AND GAS CORP.	UPRR 3-6 TWCNG	43-043-30036	8,137	121	4,650	50,886
CITATION OIL AND GAS CORP.	UPRR 3-9	43-043-30151	3,699	55	2,070	22,153
CITATION OIL AND GAS CORP.	UPRR 3-10	43-043-30302	3,042	45	1,742	16,827
CITATION OIL AND GAS CORP.	JUDD 34-1H	43-043-30301	0	0	0	0
TOTALS (TOTAL ONLY IF THIS IS LAST PAGE OF REPORT)			25,816	383	14,832	152,076

COMMENTS:

I HEREBY CERTIFY THAT THIS REPORT IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Diane Cerny
 SIGNATURE Diane Cerny DATE
 TITLE Production Analyst I 09-May-13
 PHONE NO. - 281-891-1562

RECEIVED

MAY 28 2013

DIV. OF OIL, GAS & MINING

Revision

MONTHLY REPORT OF GAS PROCESSING PLANT PRODUCT ALLOCATIONS - FORM 13-B

FACILITY OPERATOR ADDRESS PINEVIEW GAS PLANT CITATION OIL AND GAS CORP. 14077 CUTTEN ROAD HOUSTON, TX 77070-5623

PAGE 1 OF 1 OPERATIONS MONTH/YR Mar-13

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COMMENTS:

I HEREBY CERTIFY THAT THIS REPORT IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

Diane Cerny
SIGNATURE Diane Cerny DATE 09-May-13
TITLE Production Analyst I
PHONE NO. - 281-891-1562

RECEIVED
MAY 22 2013
DIV. OF OIL, GAS & MINING

MONTHLY SUMMARY REPORT OF GAS PROCESSING PLANT OPERATIONS - FORM 13-A

FACILITY PINEVIEW GAS PLANT
 OPERATOR CITATION OIL AND GAS CORP.
 ADDRESS 14077 CUTTEN ROAD
HOUSTON, TX 77069-2212

OPERATIONS MONTH/YR Mar-13

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4. (LOSS) OR GAIN (line 3 - line 1 = line 2)		
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PROPANE					
ISO-BUTANE					
BUTANE					
NGL MIX	63,300		140,676	152,076	51,900
GASOLINE					
CONDENSATE					
KEROSENE					
OTHER:					
TOTAL	63,300		140,676	152,076	51,900

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 TITLE
 DATE 4/23/2013

Phone No. (281) 891-1562

APR 29 2013

MONTHLY REPORT OF GAS PROCESSING PLANT PRODUCT ALLOCATIONS - FORM 13-B

FACILITY OPERATOR ADDRESS PINEVIEW GAS PLANT
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WELL OPERATOR	WELL NAME	API NUMBER	METERED WELL VOLUME (MCF)	RESIDUE GAS RETURNED TO FIELD (MCF)	ALLOCATIONS:	
					RESIDUE GAS SOLD (MCF)	NGLS (GALLONS)
CITATION OIL AND GAS CORP.	BINGHAM 2-1	43-043-30026	3,813	56	2,210	20,486
CITATION OIL AND GAS CORP.	BINGHAM 2-1A	43-043-30125	2,753	41	1,641	15,827
CITATION OIL AND GAS CORP.	BINGHAM 2-6H	43-043-30317	347	5	209	1,444
CITATION OIL AND GAS CORP.	BINGHAM 10-1	43-043-30025	0	0	0	0
CITATION OIL AND GAS CORP.	BINGHAM 1-42-3	43-043-30029	2,705	40	1,578	15,366
CITATION OIL AND GAS CORP.	UPRR 3-2	43-043-30015	1,319	20	730	9,082
CITATION OIL AND GAS CORP.	UPRR 3-6 TWCNG	43-043-30036	8,140	121	4,652	50,903
CITATION OIL AND GAS CORP.	UPRR 3-9	43-043-30151	3,698	55	2,070	22,146
CITATION OIL AND GAS CORP.	UPRR 3-10	43-043-30302	3,041	45	1,742	16,822
CITATION OIL AND GAS CORP.	JUDD 34-1H	43-043-30301	0	0	0	0
TOTALS (TOTAL ONLY IF THIS IS LAST PAGE OF REPORT)			25,816	383	14,832	152,076

COMMENTS:

I HEREBY CERTIFY THAT THIS REPORT IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.


 SIGNATURE Diane Cerny DATE 23-Apr-13
 TITLE Production Analyst I
 PHONE NO. - 281-891-1562

APR 29 2013

Revision

MONTHLY REPORT OF GAS PROCESSING PLANT PRODUCT ALLOCATIONS - FORM 13-B

FACILITY OPERATOR ADDRESS
 PINEVIEW GAS PLANT
 CITATION OIL AND GAS CORP.
 14077 CUTTEN ROAD
 HOUSTON, TX 77070-5623

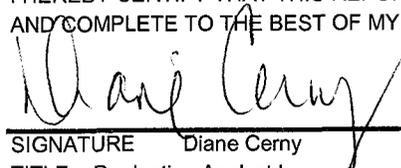
PAGE 1 OF 1
 OPERATIONS MONTH/YR
 Mar-13

CORRECTED REPORT ()

WELL OPERATOR	WELL NAME	API NUMBER	METERED WELL VOLUME (MCF)	RESIDUE GAS RETURNED TO FIELD (MCF)	ALLOCATIONS:	
					RESIDUE GAS SOLD (MCF)	NGLS (GALLONS)
CITATION OIL AND GAS CORP.	BINGHAM 2-1	43-043-30026	3,815	56	2,213	20,498
CITATION OIL AND GAS CORP.	BINGHAM 2-1A	43-043-30125	2,753	41	1,641	15,827
CITATION OIL AND GAS CORP.	BINGHAM 2-6H	43-043-30317	347	5	209	1,444
CITATION OIL AND GAS CORP.	BINGHAM 10-1	43-043-30025	0	0	0	0
CITATION OIL AND GAS CORP.	BINGHAM 1-42-3	43-043-30029	2,706	40	1,578	15,372
CITATION OIL AND GAS CORP.	UPRR 3-2	43-043-30015	1,317	20	729	9,069
CITATION OIL AND GAS CORP.	UPRR 3-6 TWCNG	43-043-30036	8,137	121	4,650	50,886
CITATION OIL AND GAS CORP.	UPRR 3-9	43-043-30151	3,699	55	2,070	22,153
CITATION OIL AND GAS CORP.	UPRR 3-10	43-043-30302	3,042	45	1,742	16,827
CITATION OIL AND GAS CORP.	JUDD 34-1H	43-043-30301	0	0	0	0
TOTALS (TOTAL ONLY IF THIS IS LAST PAGE OF REPORT)			25,816	383	14,832	152,076

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 TITLE Production Analyst I 09-May-13
 PHONE NO. - 281-891-1562

RECEIVED

MAY 28 2013

DIV. OF OIL, GAS & MINING

Revision

MONTHLY REPORT OF GAS PROCESSING PLANT PRODUCT ALLOCATIONS - FORM 13-B

FACILITY OPERATOR ADDRESS PINEVIEW GAS PLANT CITATION OIL AND GAS CORP. 14077 CUTTEN ROAD HOUSTON, TX 77070-5623

PAGE 1 OF 1 OPERATIONS MONTH/YR Mar-13

CORRECTED REPORT ()

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Diane Cerny
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