

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 1004-0136  
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK   
 b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER   
 SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR: **Saxon Oil Company** (214) 220-3700  
 3. ADDRESS OF OPERATOR: **2626 Cole Ave., Suite 710, Dallas, Tx. 75204**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):  
 At surface: **810' FNL & 1713' FWL NENW**  
 At proposed prod. zone: **Same**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE:  
**20 air miles N of Dugway, Ut.**

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any): **810'**

18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: **1063'**

21. ELEVATIONS (Show whether DF, RT, GR, etc.):  
**4,340' ungraded ground**

5. LEASE DESIGNATION AND SERIAL NO.: **U-63504**  
 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: **N/A**  
 7. UNIT AGREEMENT NAME: **N/A**  
 8. FARM OR LEASE NAME: **Federal 26**  
 9. WELL NO.: **1-2**  
 10. FIELD AND POOL, OR WILDCAT: **Wildcat**  
 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: **26-3s-9w SLBM**  
 12. COUNTY OR PARISH: **Tooele** 13. STATE: **Ut.**

16. NO. OF ACRES IN LEASE: **1280**

17. NO. OF ACRES ASSIGNED TO THIS WELL: **40**

19. PROPOSED DEPTH: **8,000'**

20. ROTARY OR CABLE TOOLS: **Rotary**

22. APPROX. DATE WORK WILL START: **Oct. 15, 1993**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
14"	10-3/4"	40.5# (J-55)	725'	≈635 cu ft and to surface
8-3/4"	5-1/2"	17# (J-55)	8,000'	≈405 cu ft and to ≈5,850'

Request exception to standard statewide spacing because of geology (3D seismic shotpoint 14036 is on pad). Exception is to quarter-quarter line (67' too close), not to another well (closest non-P&A well, a proposed Saxon well, is 1063' away). Orthodox location would move the well away from the shotpoint.

Orthodox well could be drilled at 660 FN & 1980 FW 26-3s-9w, but could be a dry hole since it would be off trend. Request permission to drill at 810' FNL & 1713' FWL 26-3s-9w. Wells (see Page 15) could be drilled to all eight offsetting units, and Saxon has applied to drill wells in four of the offset units (SWSW & SSW Sec. 26 and NWNW & SENEW Sec. 26). No wells are staked in SWSE Sec. 23 or NWNE, SWNE, or SWNW Sec. 26. Saxon is owner of all drilling units and leases (U-60272 & U-63504) within minimum 3,567' radius of proposed exception. This includes all eight directly or diagonally offsetting drilling units. No producing, TA, or TSI wells offset the proposed exception.

cc: BLM, Merschatt, Patterson, Saxon, UDOGM

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.

24. SIGNED: *Brian Wood* TITLE: **Consultant** DATE: **9-29-93**

(This space for Federal or State office use)

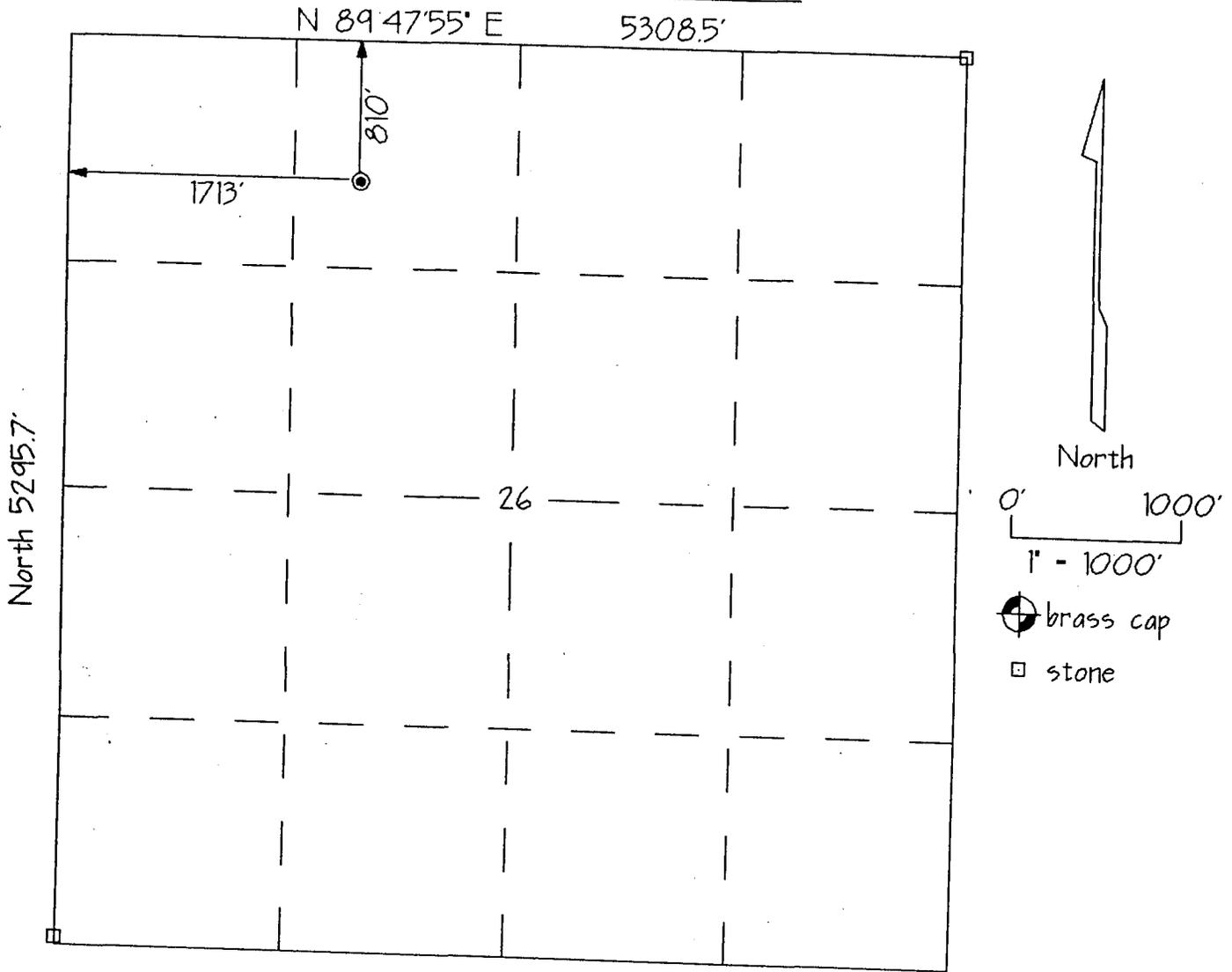
PERMIT NO. **43-045-30024**

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING  
 APPROVAL DATE: **11/26/93** DATE: **OCT 04 1993**  
 BY: *[Signature]*  
 WELL SPACING: **EXCEPTION**

APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_

\*See Instructions On Reverse Side

Well Location Plat



Well Location Description

SAXON OIL COMPANY  
Federal 26 # 1 - 2  
810' FNL & 1713' FWL  
Section 26, T.3 S., R.9 W., SLM  
Tooele County, Utah  
4340' ground elevation

15 September 1993

The above is true and correct to my knowledge and belief.

*Gerald G. Huddleston*  
Gerald G. Huddleston, LS



Huddleston Land Surveying - Drawer KK - Cortez, CO 81321 - (303) 565-3330

Post-It™ brand fax transmittal memo 7671

# [redacted] pages ▶ 3

To Brian Wood	From R. J. Firth
Co. Permits West	Co. DGM
Dept.	Phone # (801)538-5340
Fax # (505)988-9682	Fax #

\*\*\*\*\*

RMATION REPORT \*\*

89682  
L GAS & MINING

\* Date : NOV 20, 93 10:39  
 \* Document : 03 pages  
 \* Time : 01'52"  
 \* Mode : G3 NORMAL  
 \* Result : OK

\*\*\*\*\*

\*\*\*\*\*

\*\* TRANSMIT CONFIRMATION REPORT \*\*

Journal No. : 001  
 Receiver : 15059889682  
 Transmitter : DIV OIL GAS & MINING  
 Date : Nov 26,93 10:39  
 Document : 03 pages  
 Time : 01'52"  
 Mode : G3 NORMAL  
 Result : OK

\*\*\*\*\*

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SINGLE ZONE  MULTIPLE ZONE

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4,340' ungraded ground

5. LEASE DESIGNATION AND SERIAL NO. U-63504  
6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A  
7. UNIT AGREEMENT NAME N/A  
8. FARM OR LEASE NAME Federal 26  
9. WELL NO. 1-2  
10. FIELD AND POOL, OR WILDCAT Wildcat  
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA 26-3s-9w SLBM  
12. COUNTY OR PARISH Tooele 13. STATE Ut.

17. NO. OF ACRES ASSIGNED TO THIS WELL 40

20. ROTARY OR CABLE TOOLS Rotary

22. APPROX. DATE WORK WILL START\* Oct. 15, 1993

PROPOSED CASING AND CEMENTING PROGRAM

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24. SIGNED Brian Wood TITLE Consultant DATE 9-29-93

(This space for Federal or State office use)

PERMIT NO. 43-045-30024

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE: 11/26/93 DATE: OCT 04 1993

BY: [Signature] WELL SPACING: EXCEPTION

\*See Instructions On Reverse Side

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING  
DATE: 11/26/93  
DATE: OCT 04 1993  
WELL SPACING: EXCEPTION  
DIVISION OF OIL, GAS & MINING

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
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SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

5. Lease Designation and Serial No.  
**U-63504**

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

7. If Unit or CA, Agreement Designation  
**N/A**

8. Well Name and No.  
**Federal 26 1-2**

9. API Well No.  
**43-43-045-30029 43-**

10. Field and Pool, or Exploratory Area  
**Wildcat**

11. County or Parish, State  
**Tooele, Ut.**

SUBMIT IN TRIPLICATE

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
**Saxon Oil Company** (214) 220-3700

3. Address and Telephone No.  
**2626 Cole Ave., Suite 710, Dallas, Tx. 75204**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**Surface: NENW 26-3s-9w**

**BHL: Same**

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- Notice of Intent
- Subsequent Report
- Final Abandonment Notice

TYPE OF ACTION

- Abandonment
- Recompletion
- Plugging Back
- Casing Repair
- Altering Casing **APD**
- Other
- Change of Plans
- New Construction
- Non-Routine Fracturing
- Water Shut-Off
- Conversion to Injection
- Dispose Water

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

As requested by BLM in their letter of October 19, following changes are made in APD:

- 1) Chemical toilets will be used for sewage disposal. Boreholes will not be used.
- 2) Surface casing will be tested to at least 1500 psi.
- 3) Annular preventer will be tested to at least 2000 psi.
- 4) A cement bond log (CBL) or cement evaluation (CET) will be run to determine cement top and quality.

RECEIVED

OCT 25 1993

DIVISION OF  
OIL, GAS & MINING

cc: BLM, Patterson, Saxon, UDOGM

14. I hereby certify that the foregoing is true and correct

Signed *Bruce Wood* Title **Consultant**

(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_  
Conditions of approval, if any: \_\_\_\_\_

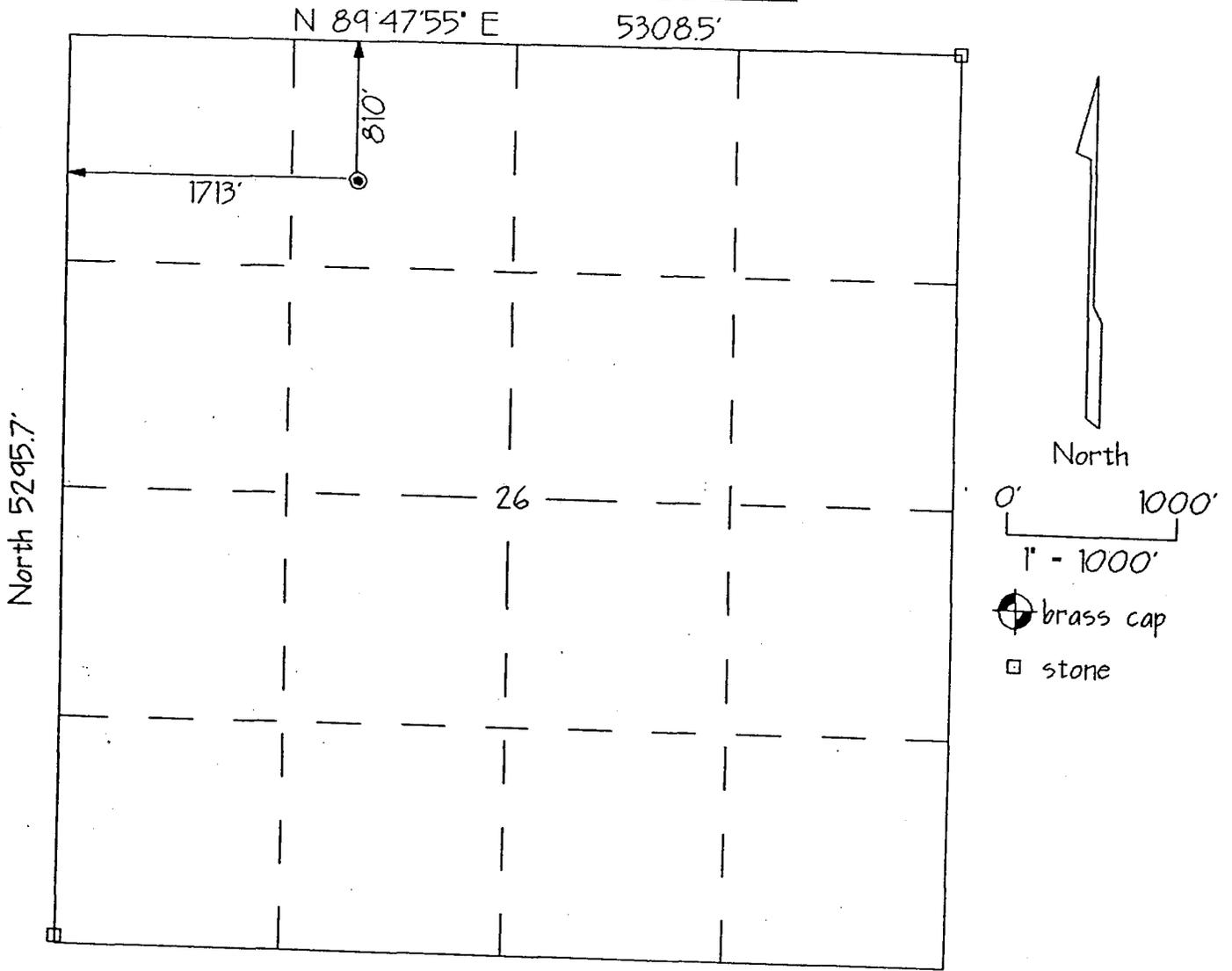
APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: 10-19-93  
BY: *[Signature]* Date

WELL SPACING: Exception

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Well Location Plat



Well Location Description

SAXON OIL COMPANY  
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 810' FNL & 1713' FWL  
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 4340' ground elevation

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*Gerald G. Huddleston*

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Huddleston Land Surveying - Drawer KK - Cortez, CO 81321 - (303) 565-3330

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/04/93

API NO. ASSIGNED: 43-045-30029

WELL NAME: FEDERAL 26 1-2  
OPERATOR: SAXON OIL COMPANY ( ) N 3350

PROPOSED LOCATION:  
NENW 26 - T03S - R09W  
SURFACE: 0810-FNL-1713-FWL  
BOTTOM: 0810-FNL-1713-FWL  
TOOELE COUNTY  
WILDCAT FIELD (001)

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: FED  
LEASE NUMBER: U-63504

RECEIVED AND/OR REVIEWED:

- Plat
- Bond  
(Number FEDERAL )
- Potash (Y/N)
- Oil shale (Y/N)
- Water permit  
(Number \_\_\_\_\_ )
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )

LOCATION AND SITING:

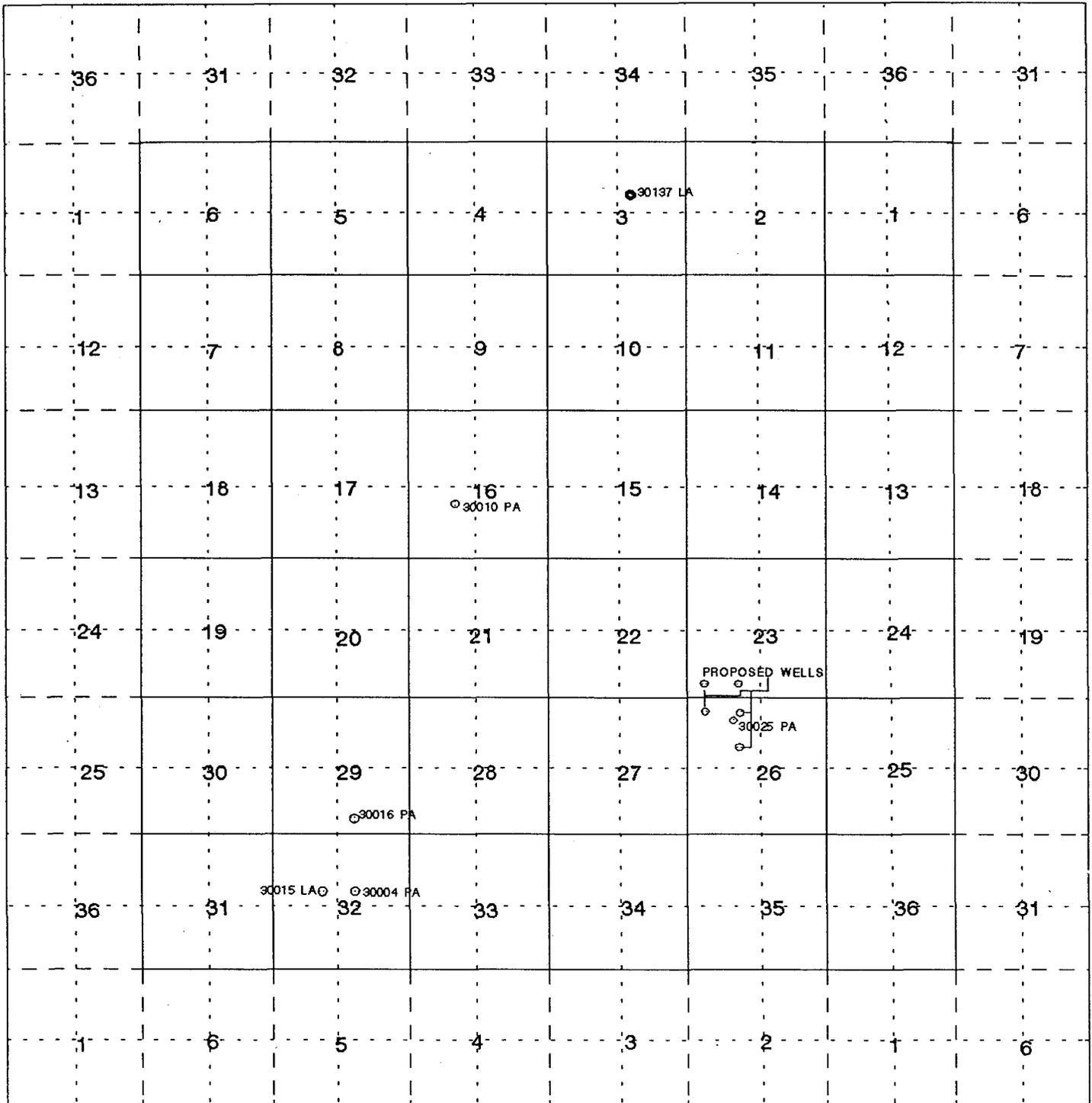
- \_\_\_\_\_ R649-2-3. Unit: \_\_\_\_\_
- ~~\_\_\_\_\_~~ R649-3-2. General.
- R649-3-3. Exception.
- \_\_\_\_\_ Drilling Unit.
- \_\_\_\_\_ Board Cause no: \_\_\_\_\_
- \_\_\_\_\_ Date: \_\_\_\_\_

COMMENTS: NEW OPERATOR

CONFIDENTIAL  
PERIOD  
EXPIRED  
ON 3-2-95

STIPULATIONS:

cc: ① Toole County Assessor  
② Bureau of Land Management  
Salt Lake District Office  
2370 South 2300 West  
Salt Lake City, Ut 84119  
Attention: Christine S. Nagao, Acting Dist. Mgr.



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DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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Budget Bureau No. 1004-0135  
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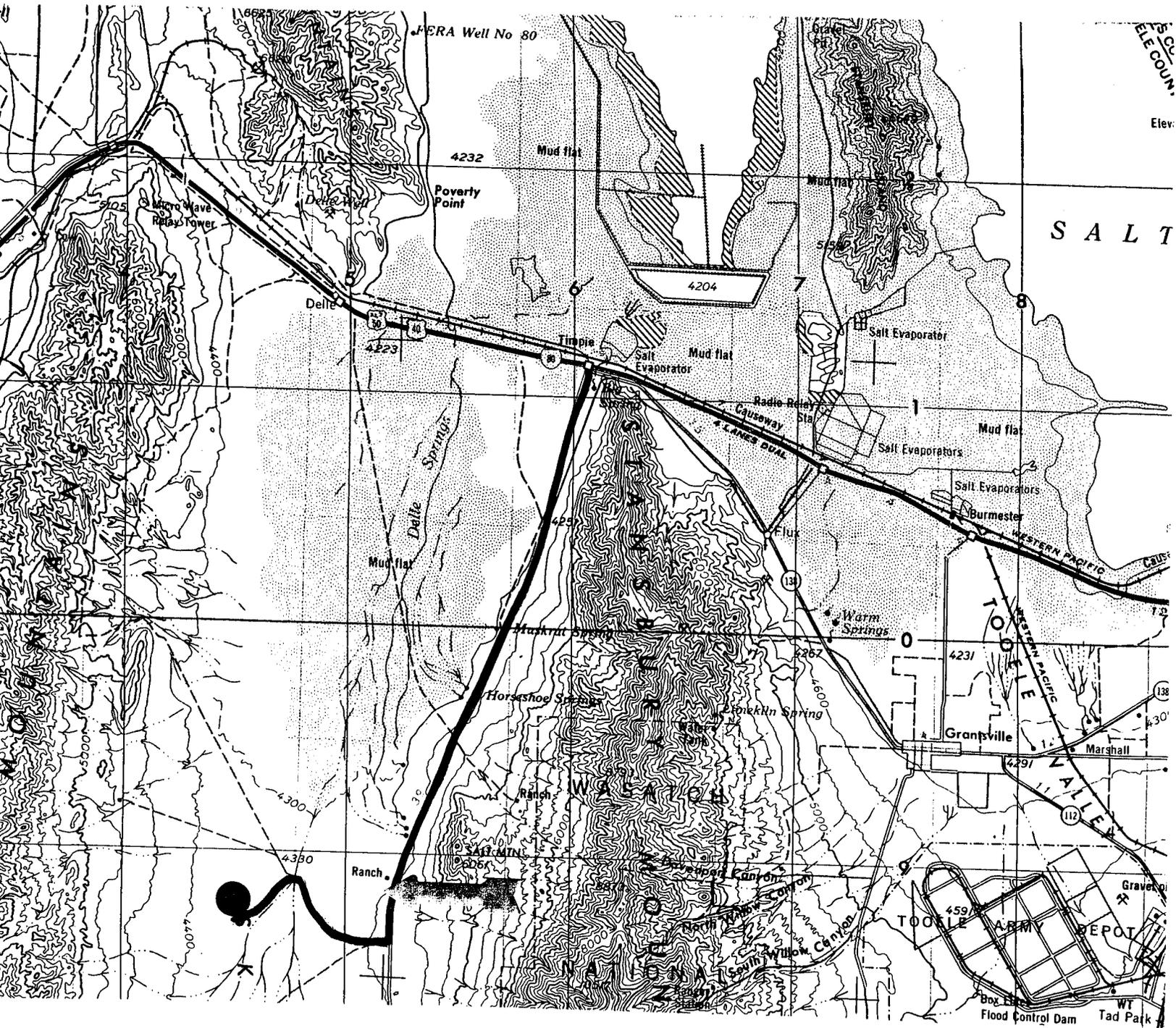
Approved by \_\_\_\_\_ Title \_\_\_\_\_  
Conditions of approval, if any: \_\_\_\_\_

APPROVED BY THE STATE  
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**10-19-93**

DATE: *11-16-93*  
BY: *[Signature]* Title \_\_\_\_\_  
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 Tooele County, Utah

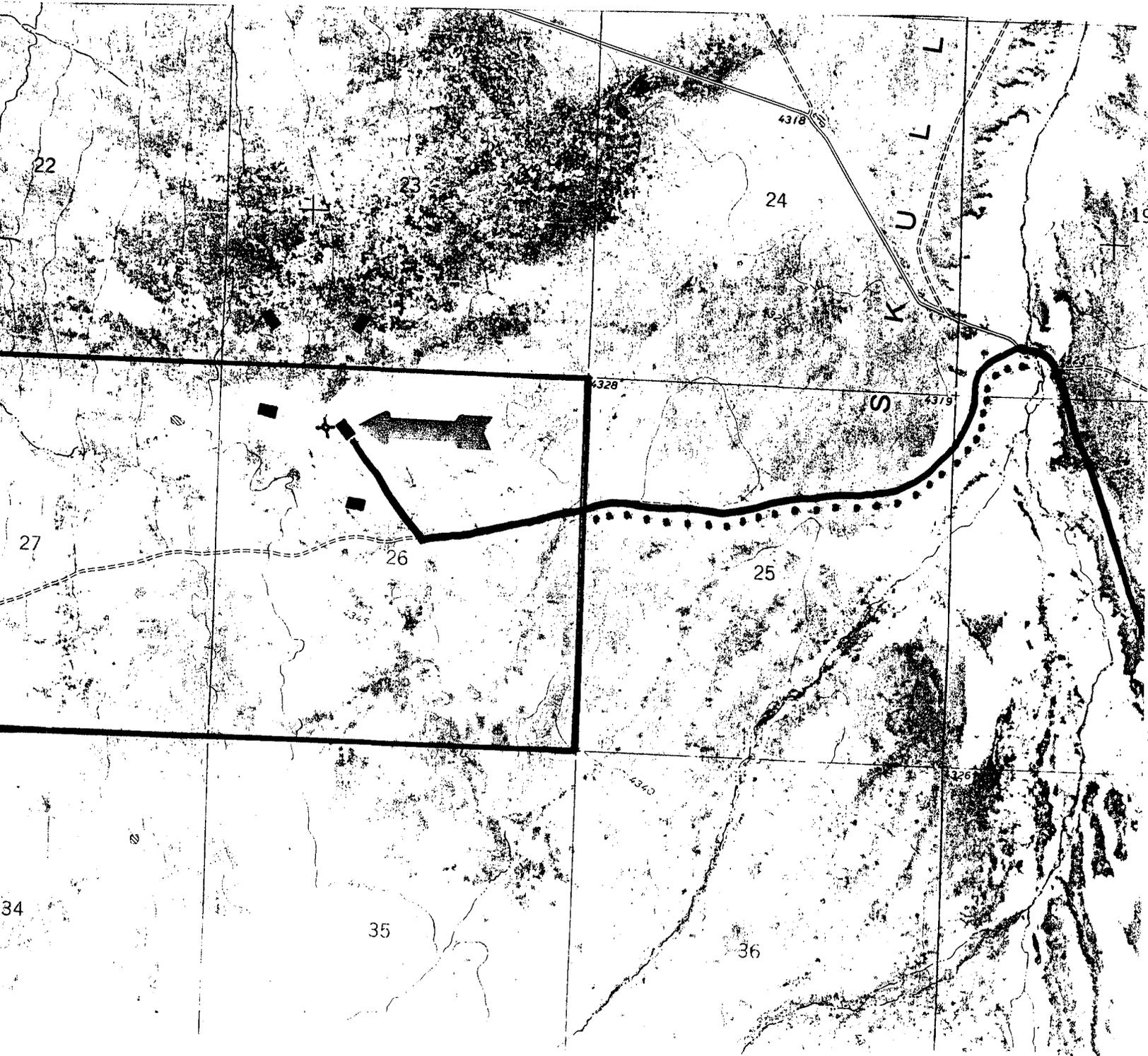


Proposed Well: ●

Water Source: [shaded area]

Access Road: [thick wavy line]

Saxon Oil Company  
Federal 26 1-2  
810' FNL & 1713' FWL  
Sec. 26, T. 3 S., R. 9 W.  
Tooele County, Utah



Right-of-Way: .....  
Existing Road: ~~~~~  
New Road: - - - - -  
Lease: L

Proposed Well: ■  
P & A Well: ⊕

Federal 26 # 1 - 2

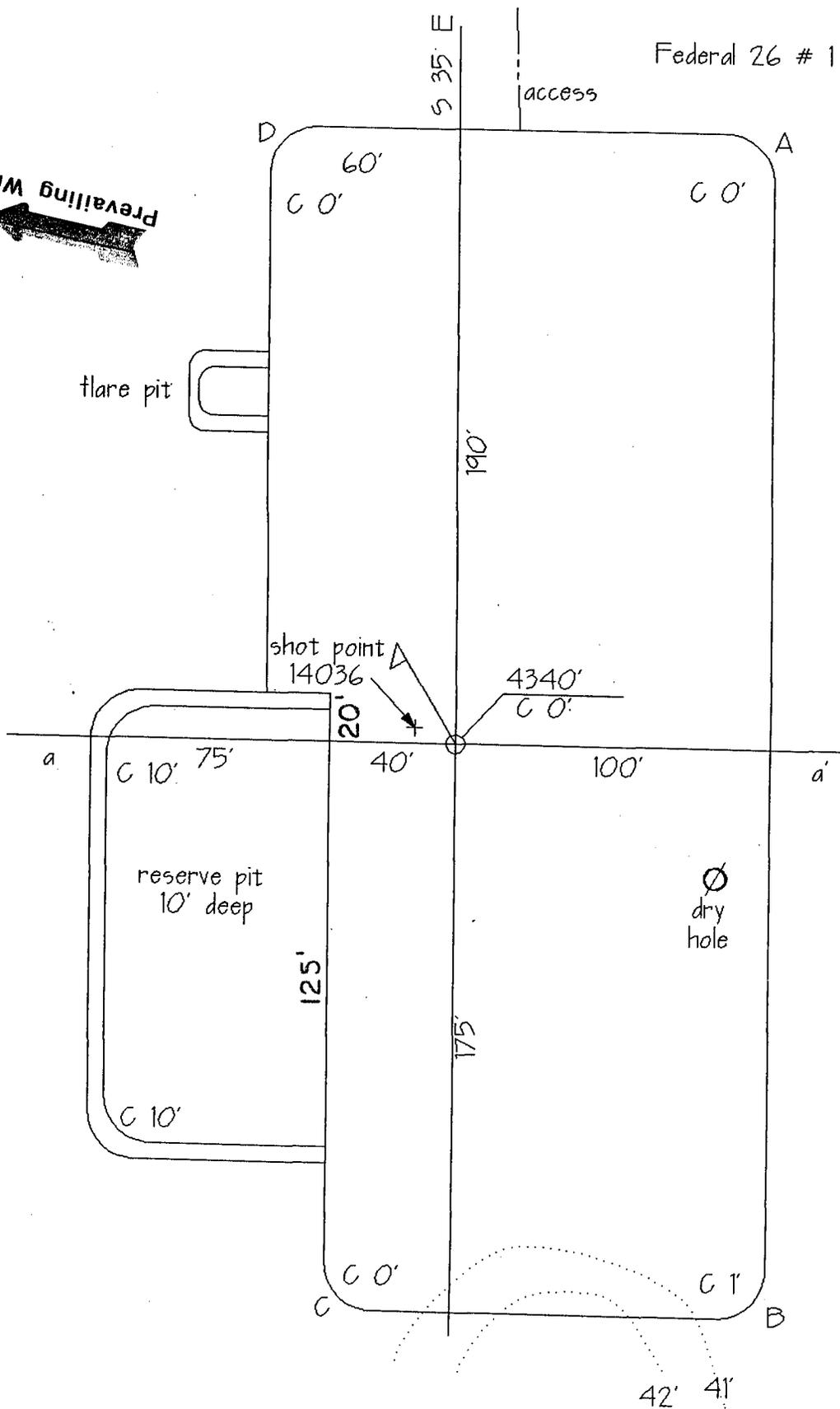
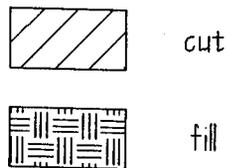
S 35° E

access

Prevailing Wind



0' 50'  
Scale 1" = 50'

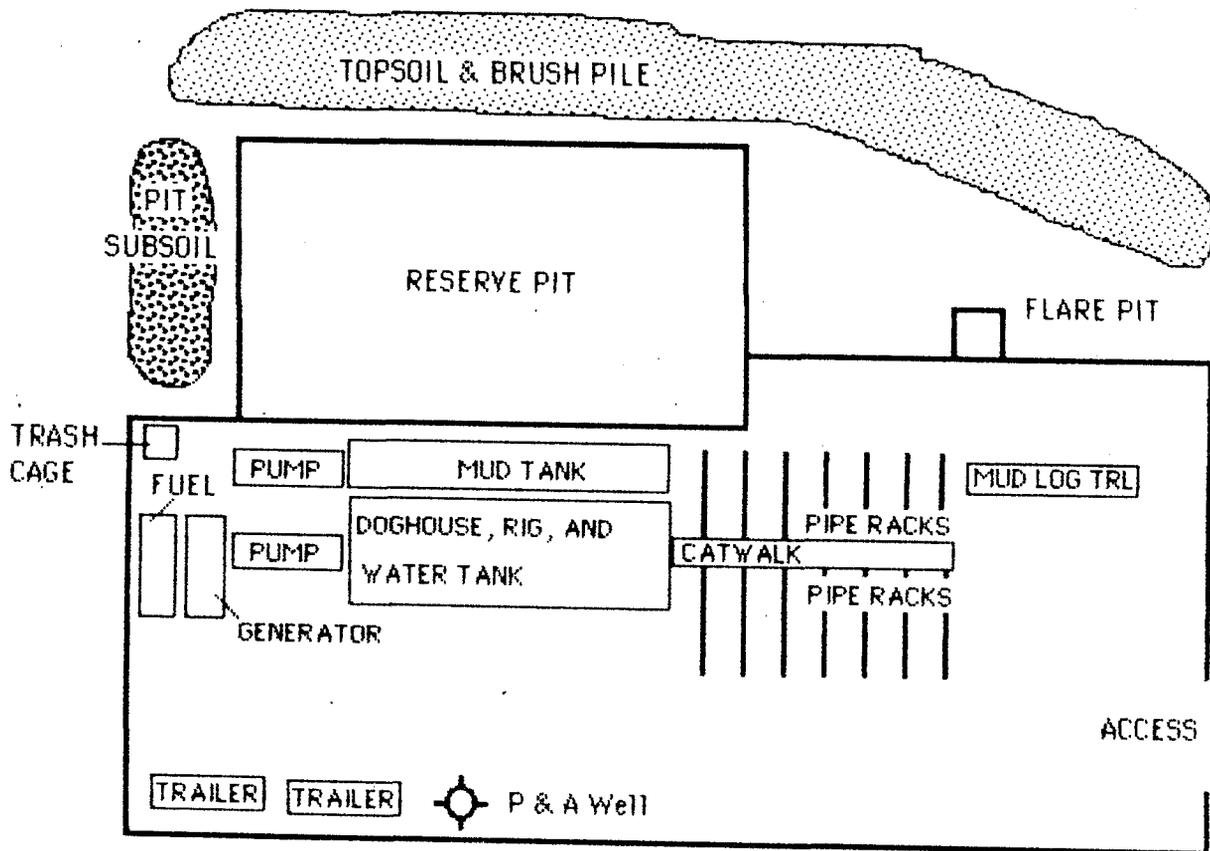


a

x - section

a'

Saxon Oil Company  
Federal 26 1-2  
810' FNL & 1713' FWL  
Sec. 26, T. 3 S., R. 9 W.  
Tooele County, Utah



Saxon Oil Company  
 Federal 26 1-2  
 810' FNL & 1713' FWL  
 Sec. 26, T. 3 S., R. 9 W.  
 Tooele County, Utah

All lease operations will fully comply with applicable laws, regulations (43 CFR 3100), Onshore Oil & Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. Saxon Oil Company will furnish a copy of these conditions to its field representative to assure compliance.

Drilling Program

1. ESTIMATED FORMATION TOPS\*

<u>Formation Name</u>	<u>Depth from GL</u>	<u>Depth from KB</u>	<u>Subsea Depth</u>
Quat. Bonneville	0'	12'	+4,340'
Oquirrh	500'	512'	+3,840'
Lo. Manning Canyon	1,150'	1,162'	+3,190'
Miss. Manning Cany.	1,520'	1,532'	+2,820'
Great Blue	2,750'	2,762'	+1,590'
Humbug	3,890'	3,902'	+ 450'
Pine Canyon Deseret	4,630'	4,642'	- 290'
Gardner	5,430'	5,442'	-1,090'
Devonian	6,380'	6,392'	-2,040'
Silurian	6,800'	6,812'	-2,460'
Total Depth (TD)	8,000'	8,012'	-3,660'

\* All depths are true vertical and are based on a ground level of 4,340'.

2. NOTABLE ZONES

The Devonian and Silurian are the target zones. No other mineral zones are expected to be found. Only likely water zone (Quaternary Bonneville) will be cemented off behind surface casing. Any other water zone which is found will also be protected. Oil and gas shows, as determined by the wellsite geologist, will be tested.

3. PRESSURE CONTROL (Also see "5." on PAGE 4)

An 11" x 3,000 psi double ram BOP with 3,000 psi choke manifold will be used. (A typical 3,000 psi BOP is on Page 3. The actual model will not be known until the bid is let.) Pressure test casing to 1,000 psi and annular preventer to 1,500 psi before drilling out. Test valves, manifold, lines, pipe, and blank to 3,000 psi. Place test plug in bottom of wellhead and retest surface equipment every 30 days.

BOP system will be consistent with API RP53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. BOP controls will be installed before drilling the surface casing plug, and will stay in use until the well is completed or abandoned. BOPs will be inspected and operated at least daily to assure good mechanical working order. All BOP mechanical tests, pressure tests, and inspections will be recorded on the drillers log or daily drilling report. BLM need not be notified before pressure tests.

4. CASING & CEMENTING

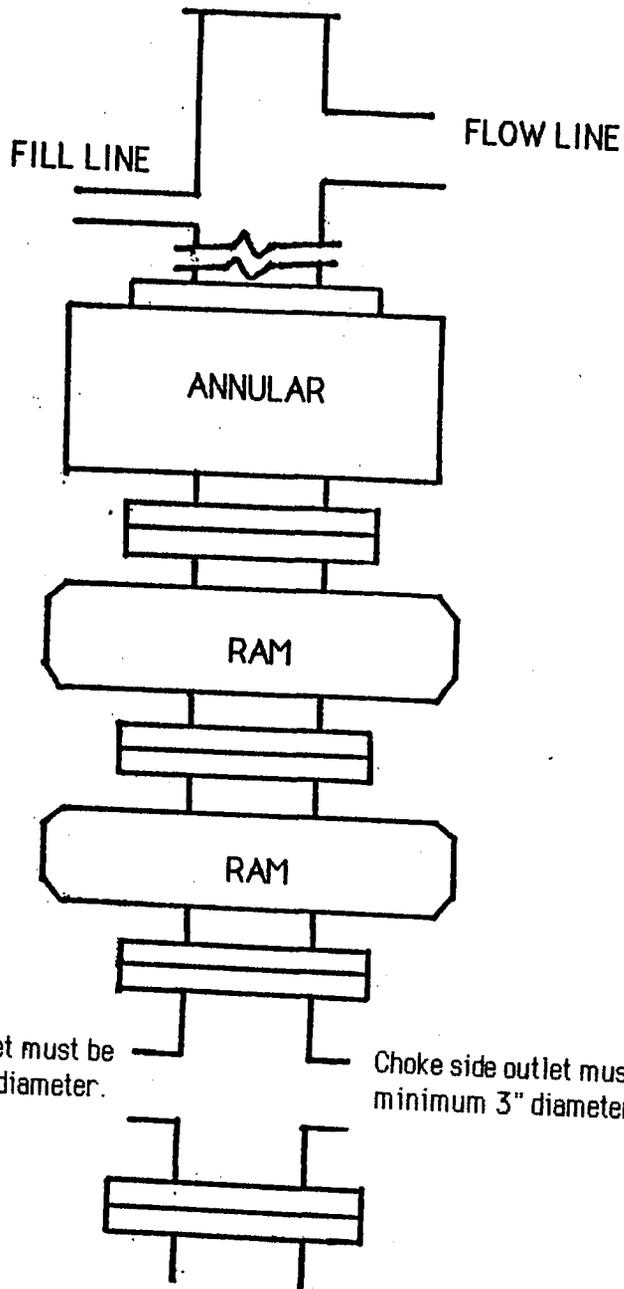
<u>Hole Size</u>	<u>O.D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>Setting Depth</u>
14"	10-3/4"	40.5#	J-55	ST&C	New	0' - 725'
8-3/4"	5-1/2"	17#	J-55	LT&C	New	0' - 8,000'

Saxon will call BLM at (801) 977-4300 before running casing and cementing.

Surface casing (0' to 725') will be cemented to surface with ≈635 cubic feet Class G, based on 100% excess.

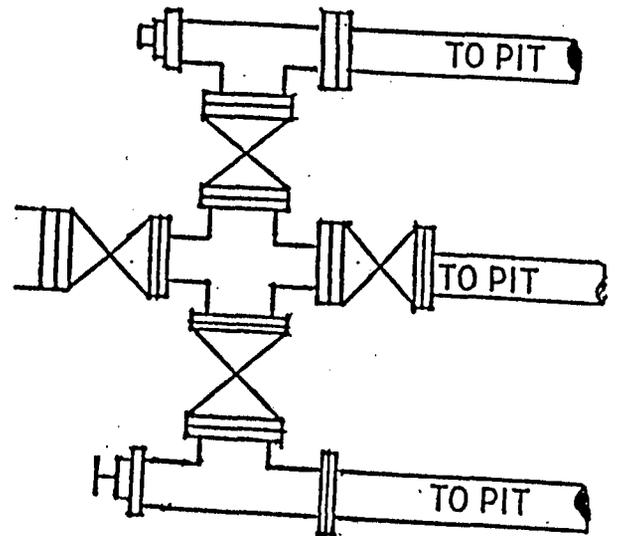
Production casing will be cemented from TD to 500' above the highest pay zone (Devonian top at 6,380') with Class G. This 2120 feet (8,000' - 5,850') of fill up will require 405 cubic feet, based on 35% excess.

Saxon Oil Company  
 Federal 26 1-2  
 810' FNL & 1713' FWL  
 Sec. 26, T. 3 S., R. 9 W.  
 Tooele County, Utah



TYPICAL BOP STACK  
 & CHOKE MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill side outlet must be minimum 2" diameter.

Choke side outlet must be minimum 3" diameter.

Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.

Upper kelly cock will have handle available.  
 Safety valve and subs will fit all drill string connections in use.  
 All BOPE connections subjected to well pressure will be flanged, welded, or clamped.

5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0'-8,000'	Fresh water with Low Solids Non. Disp.	9.0	35-40	N/C	9-9.5

Lost circulation material will be on site. A mud logger will be on location once the well is below the surface casing.

6. CORING, TESTING, & LOGGING

No coring is planned. There may be DSTs run. A caliper, dipmeter, and standard suite of logs may also be run.

Whether the well is completed as a dry hole or producer, "Well Completion or Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations *per* 43 CFR 3162.4-1(b). Two copies of all logs, core descriptions & analyses, test data, geology summaries, sample descriptions, and all other data obtained during drilling, workover, or completion operations, will be filed with Form 3160-4. (If requested, sample cuttings, fluids, and/or gases will be sent to BLM.)

7. DOWNHOLE CONDITIONS

The maximum anticipated bottom hole pressure is  $\approx 3,200$  psi. Mud weight and BOP system will be adequate to handle  $\approx 3,200$  psi. No abnormal pressures, temperatures, or hydrogen sulfide are expected.

8. MISCELLANEOUS

Saxon Oil Company  
Federal 26 1-2  
810' FNL & 1713' FWL  
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The anticipated spud date is October 15, 1993. It is expected it will take  $\approx$ 30 days to drill the well and  $\approx$ 10 days to complete the well.

Saxon will call BLM with the spud date within 48 hours of spudding. A Sundry Notice (Form 3160-5), reporting the spud date and time, will be sent to the District Manager within 24 hours after spudding. If the spud is on a weekend or holiday, the Sundry will be sent on the following regular work day.

Starting with the month in which operations begin, and continuing each month until the well is physically P&Aed, a "Monthly Report of Operations" (Form 3160-6) will be sent to BLM, 2370 South 2300 West, Salt Lake City, Ut. 84119.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual events will be promptly reported to BLM *per* NTL-3A.

If a replacement rig is to be used for completion operations, a Sundry Notice will be filed with BLM for prior approval. All conditions of approval for this APD are applicable to the replacement rig.

If the well is successfully completed for production, then BLM will be notified. Written notification will be sent not later than 5 business days following the date on which the well is placed on production. BLM may schedule a first production conference within 15 days after receipt of the first production notice.

Approval will be obtained to vent/flare gas during the initial well evaluation from BLM. Preliminary approval will not exceed 30 days or 50 MMcf of gas, whichever comes first. Approval to vent/flare beyond this initial limit will require BLM's approval *per* NTL-4A.

The well will not be plugged without BLM's prior approval. A Sundry Notice will be sent to BLM within 30 days following completion of the

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well for abandonment. The Sundry will note where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until reclamation required by the approved APD or abandonment notice has been completed to the satisfaction of BLM.

Once plugged, a 4' high regulation dry hole marker will be installed. The following legend will be beaded on with a welding torch: Saxon Oil Company, Federal 26 1-2, NENW 26-3s-9w, U-63504.

## Surface Use Plan

### 1. EXISTING ROADS & DIRECTIONS (See PAGES 14 & 15)

From Exit 77 on I-80, go south 17 miles on a paved road.  
Then turn right and go NW 3.5 mi. on the 8 Mile Springs County Road.  
Then turn left and go W  $\approx$ 1.8 mi. on a dirt road.  
Then turn right and go NW  $\approx$ 0.4 mi. on a dirt road to the wellsite.

Roads will be maintained to a standard at least equal to their present condition. Water will be used for dust control. No upgrading will be needed, though flat blading will be done to remove ruts. All roads are public, on-lease, or will be covered under a BLM right-of-way.

This APD is serving as a BLM road right-of-way application for this and two other Saxon wells in Section 26. The right-of-way extends from the county road to the lease (U-63504) boundary (see PAGE 15). Length is  $\approx$ 1.3 mi. Width is 30'. The right-of-way crosses:

SW4SW4 Sec. 19, T. 3 S., R. 8 W.  
NW4NW4 Sec. 30, T. 3 S., R. 8 W.  
NE4NE4, S2N2 Sec. 25; T. 3 S., R. 9 W.

### 2. ROAD TO BE BUILT OR UPGRADED (See PAGE 15)

No new road will be built (the proposed wellsite overlaps an existing abandoned wellsite). The existing road will be flat bladed with a 16' wide running surface within a maximum disturbed width of 30'. Maximum cut or fill will be 1'. Maximum grade will be 1%. No gates, cattleguards, turnouts, or culverts are needed.

If production results, then all  $\approx$ 2.2 mi. of road from the county road to

the well will be crowned, ditched, culverts installed, and surfaced with rock.

Surface disturbance and vehicle travel will be limited to the approved location and road. Any additional area needed will require BLM's prior approval.

### 3. EXISTING WELLS

There are no existing oil, gas, water, injection, or disposal wells within a 1 mile radius. There is a plugged and abandoned well in NENW 26-3s-9w and four planned Saxon oil wells (SESW & SWSW Sec. 23 and SENW & NWNW Sec. 26) within a mile. Closest (109' away) of the five surrounding wells is Andy Pierce's P&A well.

### 4. PROPOSED PRODUCTION FACILITIES

The type and layout of the production facilities are not known now. Most likely they will include 20' high 400 bbl tanks for oil and water, heater-treater or separator, and flare pit. A Sundry Notice will be submitted before they are installed.

All permanent (on site for 6 or more months) surface facilities will be painted a flat, neutral tan or juniper green color. Painting will be completed within 6 months of installation. Parts required to comply with OSHA colors will be excluded.

The tank battery will be surrounded by a dike of sufficient capacity to contain 150% of the storage capacity of the battery. All loading lines will be placed inside the dike.

Site security regulations in 43 CFR 3162.7 and Onshore Order #3 will

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be obeyed. Required plan will be submitted to BLM within 30 days of equipment installation. Oil and gas measurement will comply with Onshore Orders #4 (43 CFR 3162.7-2) and #5 (43 CFR 3162.7-3). Any commingling or off lease storage or measurement must have BLM's prior approval.

Gas meter run will be within 500' of the wellhead. The gas flowline will be buried from the wellhead to the meter and downstream for the remainder of the pad. Meters will be housed and/or fenced.

Oil and gas measurement facilities will be installed on the well pad. Meters will be calibrated in place before the first delivery. Meter accuracy tests will be conducted at least quarterly thereafter. BLM will be notified of the initial calibration date and time. Calibration reports will be sent to BLM. All metering will conform with API standards for oil measurement and AGA standards for gas.

5. WATER SUPPLY (See PAGE 14).

Water will be trucked  $\approx$ 7 miles from an irrigation pipeline on Paul Freed's Skull Valley Ranch. Mr. Freed has consented. An Application to Appropriate Water is filed with the State of Utah Div. of Water Rights.

6. CONSTRUCTION MATERIALS & METHODS

What brush and topsoil remains will be stripped and stockpiled east of the pad. The topsoil pile will be posted with a sign indicating it is to be used for reclamation only. Subsoil from the reserve pit will be stockpiled north of the reserve pit. Pad construction materials will be on lease native soil in place on the well pad and road. Rock will be bought from a private pit or from BLM *per* 43 CFR 3610. Rocking is planned only if production results or if mud is severe.

## 7. WASTE DISPOSAL

All of the reserve pit of the capacity will be in cut. The pit will not be lined since there are excellent native clay soils in place. The pit will be fenced 4' high on 3 sides with 4 strands of barbed wire or woven wire topped with barbed wire within 24 hours after it is built. The 4th side will be fenced within 24 hours after drilling stops. The fence will be kept in good repair while the pit dries.

All trash will be placed in a trash cage. When full, it will be hauled to a state approved landfill. There will be no trash burning or disposal of trash in the reserve pit.

Human waste will be disposed of in 10' deep ratholes or chemical toilets. Ratholes will be filled as soon as the trailers are removed.

Water will be produced into the reserve pit for 90 days or less after initial production. During the 90 days, an NTL-2B application will be submitted for BLM's approval of a permanent disposal method and site.

## 8. ANCILLARY FACILITIES

There will be no airstrip or formal camp. Three camper trailers may be on site for the company man, mud logger, and tool pusher.

## 9. WELL SITE LAYOUT

See PAGES 16 & 17 for depictions of the well pad, cross sections, cut and fill diagrams, reserve pit, burn pit, access road onto the pad, parking, living facilities, and rig orientation.

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#### 10. RECLAMATION

Within 24 hours of completing drilling, the wellsite and immediate area will be cleared of all debris, material, and junk not needed for production.

Reclamation will start when the reserve pit is dry. BLM will be called at least 48 hours before starting reclamation work that uses earth moving equipment. All areas not needed for production will be backfilled, recontoured to match natural contours, and reserved topsoil and brush evenly spread. If the well is a producer, then enough topsoil will be kept aside to reclaim the rest of the pad. Disturbed areas will be ripped, harrowed, or scarified before seeding. That pile of topsoil and all reclaimed areas will be broadcast seeded between October or November with the below mixture. Seeded areas will be left rough and lightly harrowed after seeding.

- 2 lb/ac Hycrest wheatgrass
- 2 lb/ac Bozoyski Russian wild rye
- 1 lb/ac yellow sweet clover
- 1 lb/ac fourwing saltbush
- 1 lb/ac shadscale
- 1 lb/ac Hatch winterfat

#### 11. SURFACE OWNER

The owner of the pad and new road is the federal government as administered by BLM.

#### 12. OTHER INFORMATION

The dirt contractor will have an approved copy of the surface use plan. The well will be identified from rig-up on *per* 43 CFR 3162.6.

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If cultural resources are found during construction, all work will stop in that area and BLM notified. Saxon will inform everyone in the area associated with the well that they are subject to prosecution for disturbing historic or archaeology sites or for collecting artifacts.

There will be no change from the proposed drilling and/or workover plan without prior approval from the District Manager. A Sundry Notice will be filed for approval for all changes of plans and other operations per 43 CFR 3162.6.

This permit will be valid for one year from the approval date. After it expires, a new application will be filed for approval of future operations.

BLM's address is 2370 South 2300 West, Salt Lake City, Utah 84119. The phone number is (801) 977-4300. Ask for Cheryl Martinez.

Safe drilling and operating practices will be used. The nearest hospital is a  $\approx$ 90 minute drive to Salt Lake City.

### 13. REPRESENTATION AND CERTIFICATIONS

Anyone having questions concerning the APD should contact:

Brian Wood  
Permits West, Inc.  
37 Verano Loop  
Santa Fe, NM 87505  
(505) 984-8120

FAX: (505) 988-9682

The field representative for Saxon will be:

Vell Mahaffey  
HLP Consultants, Inc.  
P.O. Box 2472

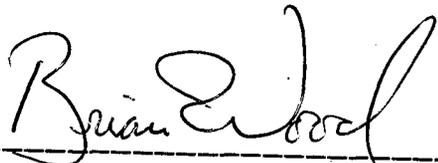
Saxon Oil Company  
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Casper, Wy. 82602  
(307) 266-3388

I hereby certify Saxon Oil Company has the necessary consents from the proper lease and unit interest owners to conduct lease and unit operations in conjunction with this APD. Bond coverage *per* 43 CFR 3104 for lease activities will be provided by Saxon Oil Company.

I hereby certify I have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Saxon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



\_\_\_\_\_  
Brian Wood, Consultant

September 29, 1993  
Date

SAXON OIL COMPANY

November 2, 1993

NOV 05 1993  
DIVISION OF  
OIL, GAS & MINING

Mr. Mike Hebertson  
State of Utah  
Oil and Gas Program  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Re: Confidential Information for Saxon Wells

Dear Mr. Hebertson:

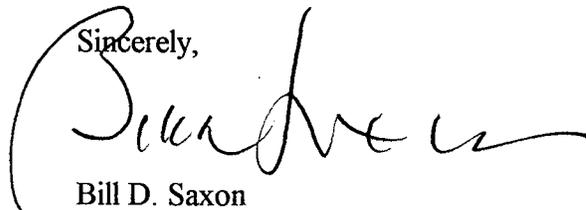
I, Bill D. Saxon, hereby request that all information be held confidential by the State of Utah Oil and Gas Commission regarding the following wells in Tooele County:

- (1) Federal 4-2, Sec. 23, T3S, R9W, Lease No. UTU-60272
- (2) Federal 4-1, Sec. 23, T3S, R9W, Lease No. UTU-60272
- (3) Federal 2-2, Sec. 26, T3S, R9W, Lease No. UTU-63504
- (4) Federal 1-2, Sec. 26, T3S, R9W, Lease No. UTU-51504
- (5) Federal 1-1, Sec. 26, T3S, R9W, Lease No. UTU-51504

**CONFIDENTIAL**

If you have any questions or need additional information, please give me a call.

Sincerely,



Bill D. Saxon

cc: Walt Mersch, Casper

**PERMITS WEST**, INC.

PROVIDING PERMITS for the ENERGY INDUSTRY

17 Verano Loop, Santa Fe, New Mexico 87505

(505) 984-8120

Page 1 of 6  
November 23, 1993

To: Ron Firth

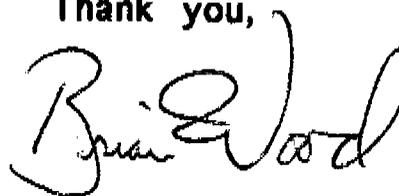
Fr: Brian Wood

Enclosed are copies of the BLM approval and conditions of approval for Saxon Oil Company's Federal 26 1-2 oil well (810' FNL & 1713' FWL 26-3s-9e, Tooele County). Saxon's lease wide bond (UTO962) has also been approved by BLM.

I met with Frank Mathews on November 19 who said you could issue a verbal approval. Saxon would like to start construction this week and spud the week of November 29.

Can you FAX (505-988-9682) me a copy of your approval?

Thank you,



**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

**TYPE OF WORK**  
 DRILL  DEEPEN  PLUG BACK   
**TYPE OF WELL**  
 OIL WELL  GAS WELL  OTHER   
**NAME OF OPERATOR**  
 Saxon Oil Company  
**ADDRESS OF OPERATOR**  
 2626 Cole Ave., Suite 710, Dallas, Tx. 75204  
**LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)**  
 At surface: 810' FNL & 1713' FWL  
 At proposed prod. zone: Same

**D. LEASE DESIGNATION AND SERIAL NO.**  
 U-63504  
**G. IF INDIAN, ALLOTTEE OR TRIBE NAME**  
 N/A  
**F. UNIT AGREEMENT NAME**  
 N/A  
**H. FARM OR LEASE NAME**  
 Federal 26  
**I. WELL NO.**  
 1-2  
**10. FIELD AND POOL, OR WILDCAT**  
 Wildcat  
**11. SEC. 2, R. M., OR BLM AND SURVEY OR ABBA**  
 26-3s-9w SLBM  
**12. COUNTY OR PARISH**  
 Tooele  
**13. STATE**  
 UT.

**DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\***  
 20 air miles N of Dugway, Ut.  
**18. NO. OF ACRES IN LEASE**  
 1280  
**19. PROPOSED DEPTH**  
 8,000'  
**17. NO. OF ACRES ASSIGNED TO THIS WELL**  
 40  
**20. ROTARY OR CABLE TOOL**  
 Rotary

4,340' ungraded ground

**22. APPROX. DATE WORK WILL START\***  
 Oct. 15, 1993

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
4"	10-3/4"	40.5# (J-55)	725'	~635 cu ft and to surface
8-3/4"	5-1/2"	17# (J-55)	8,000'	~405 cu ft and to ~5,850'

Request exception to standard statewide spacing because of geology (3D seismic shotpoint 14036 is on pad). Exception is to quarter-quarter line (67' too close), not to another well (closest non-P&A well, a proposed Saxon well, is 1063' away). Orthodox location would move the well away from the shotpoint. Orthodox well could be drilled at 660 FN & 1980.FW 26-3s-9w, but could be a dry hole since it would be off trend. Request permission to drill at 810' FNL & 1713' FWL 26-3s-9w. Wells (see Page 15) could be drilled in all eight offsetting units, and Saxon has applied to drill wells in four of the offset units (SWSW & SESW Sec. 26 and NWNW & SENW Sec. 26). No wells are staked in SWSE Sec. 23 or NWNE, SWNE, or SWNW Sec. 26. Saxon is owner of all drilling units and leases (U-60272 & U-63504) within minimum 3,567' radius of proposed exception. This includes all eight directly or diagonally offsetting drilling units. No producing, TA, or TSI wells offset the proposed exception.

cc: BLM, Merschat, Patterson, Saxon, UDOGM

**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 program, if any.

*Brian E. Wood*  
 TITLE **Consultant** DATE **9-29-93**  
 SPACE FOR FEDERAL OR STATE OFFICE USE  
 NO. *Christine S. Nagao*  
 APPROVAL DATE  
 BY *Christine S. Nagao* TITLE *Acting DM* DATE *10/24/93*  
 CONDITIONS OF APPROVAL, IF ANY:  
**CONDITIONS OF APPROVAL ATTACHED**

CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Company Saxon Oil Company

Well No. Federal 26 1-2

Location Sec. 26, T. 3 S., R. 9 W.

Lease No. U-63504

I. Notices

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR Parts 3100, 3160, and 3180), lease/agreement terms, Onshore Oil and Gas Orders, Notice to Lessee's and this approved plan of operation. Deviation from the approved plan without prior approval is not allowed.

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease.

This Application For Permit To Drill (APD) is valid for one year from the date of approval, provided lease expiration does not occur. If activities have not commenced by the end of this one year period, the APD will be returned to the operator without prejudice. Should the operator still desire to drill the well, a new APD must be submitted. Upon written request by the operator, a one-time 90 day extension to this time period may be granted by the Authorized Officer (AO) with the concurrence of the appropriate Surface Management Agency (SMA).

Bond coverage for this well is provided by BLM No. UT0962 via surety consent as provided for in 43 CFR 3104.2.

If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction on the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the AO.

II. REQUIRED NOTIFICATIONS

The operator and contractor shall contact the BLM (and other appropriate SMA) office(s) at (801) 977-4300 48 hours prior to commencement of access and site construction or reclamation activities. (Contact Cheryl Martinez or Dan Washington.)

The operator shall contact the Salt Lake District Office at (801) 977-4300 24 hours prior to the following operations:  
- spudding (including dry hole digger or rig hole rigs);

- running and cementing all casing strings;
- pressure testing of BOPE or any casing string.

(Contact Cheryl Martinez or Dan Washington.)

In the case of newly drilled dry holes, and in any emergency situation, after hour authorization may be obtained by contacting the following individuals, in the order listed:

Utah State Office, BLM, Branch of Fluid Minerals (801) 524-3029

Al McKee (801) 572-6911  
Petroleum Engineer

Bob Henricks (801) 484-2294  
Chief, Branch of Fluid Minerals

If unable to reach any of the above individuals, please call the following:

Salt Lake District Office, BLM, (801) 977-4300

Cheryl Martinez (801) 582-6956  
Pony Express Resource Area, Geologist

Mike Ford (801) 485-4784  
Pony Express Resource Area, Geologist

#### A. DRILLING PLAN

Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50MMCF following its completion, whichever comes first, without the prior written approval of the authorized officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

No variances from the minimum standard of Order No. 2 were requested nor granted.

Daily drilling and completion progress reports shall be submitted to the District office on a weekly basis.

Operations authorized by this permit shall not be suspended for more than 30 days without prior approval of the Authorized

Section 109 (b) (3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1 (c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. Section 109(c) (3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(c) and 3163.2 (e) (2).

B. SURFACE USE PLAN OF OPERATIONS

If during operations, any archaeological or historical sites, or any object of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites are to be suspended and the discovery reported promptly to the Surface Management Agency. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. Within 5 working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;

- the mitigation measures the operator will likely have to undertake before the site can be used;

- a time frame for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

No load lines shall extend outside the tank dike.

Produced water may be confined to the unlined reserve pit for a period not to exceed 90 days after initial production. During the 90 day period, an application for approval of a permanent disposal method and location shall be submitted to the Authorized Officer in accordance with Onshore No. 7.

The reserve pit shall be completely dry and all junk and debris removed before initiating any dirt work to restore the location.

The reserve pit and that portion of the location and access road not needed for production or production facilities shall be reclaimed as described in the SUPO or as specified by the AO. All stockpiled topsoil will be used in reclaiming unused areas.

All necessary steps will be taken to prevent any death of a migratory bird in pits or treatment facilities associated with the drilling or production of this well. Prevention methods include, but are not limited to, pit screening or netting and protective cones on vent stacks of dehydrators, separators and heater-treaters. The death of any migratory bird found in such a pit or treating equipment is a violation of the Migratory Bird Treaty Act. Any deaths of migratory birds attributed to pits or equipment associated with drilling or production operations must be reported to this office and the U. S. Fish and Wildlife Service within 24 hours. Voluntary pit screening and netting is encouraged to avoid instances that may result in the death of migratory birds.

Site reclamation shall include recontouring of the location to

approximate natural contours, evenly redistributing stockpiled topsoil over the disturbed contours, scarifying disturbed area, including access roads prior to reseeded, and broadcasting or drilling seeds at a time specified by the BLM. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage during the fall months. If the seeding is unsuccessful, subsequent seedings may be required. Within 3-4 years the disturbed vegetation shall be recovered as nearly as the surrounding vegetation.

On BLM administered lands, use of pesticides and herbicides shall be approved prior to any applications.

All vehicles shall stay within the designated roads and areas.

Water will be used to suppress the fugitive dust.

Any damage to the range fence must be repaired at the conclusion of operations. The wire shall be restretched and spliced where it has been cut or breached.

C. HAZARDOUS MATERIALS

No chemicals from EPA's Consolidated List of Chemicals Subject to Reporting Under Title III of Superfund Amendments and Reauthorization Act (SARA) of 1986.

No extremely hazardous substances as defined in 40 CFR 355 will be used, produced, stored, transported or disposed of in association with the proposed action.



**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)

November 26, 1993

Saxon Oil Company  
2626 Cole Avenue, Suite 710  
Dallas, Texas 75204

Re: Federal 26 1-2 Well, 810' FNL, 1713' FWL, NE NW, Sec. 26, T. 3 S., R. 9 W.,  
Tooele County, Utah

Gentlemen:

Pursuant to Utah Admin. R. 649-3-3, Exception to Location and Siting of Wells and Utah Admin. R. 649-3-4, Permitting of Wells to be Drilled, Deepened or Plugged-Back, approval to drill the referenced well is hereby granted.

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

1. Compliance with the requirements of Utah Admin. R. 649-1 et seq., Oil and Gas Conservation General Rules.
2. Notification within 24 hours after commencing drilling operations.
3. 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.
4. Submittal of the Report of Water Encountered During Drilling, Form 7.
5. 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.
6. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.



Page 2  
Saxon Oil Company  
Federal 26 1-2 Well  
November 26, 1993

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 43-045-30029.

Sincerely,

A handwritten signature in black ink, appearing to read "R.J. Firth". The signature is stylized with a large initial "R" and a long, sweeping underline.

R.J. Firth  
Associate Director, Oil and Gas

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

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: SAXON OIL CO.

WELL NAME: SAXON FEDERAL 26 1-2

API NO. 43-045-30029

Section 26 Township 3S Range 9W County TOOELE

Drilling Contractor CARDINAL

Rig # 43

SPUDDED: Date 11/29/93

Time 3:00 PM

How DRY HOLE

Drilling will commence 12/10/93

Reported by PAT PATTERSON

Telephone # 1-307-266-3388

Date 12/9/93 SIGNED MKH

11/23 C. Martinez  
11/23 M.F.

U-63504  
(U-027)  
3160

Cdm

NOV 29 1993

Gerry Witkosky  
Saxon Oil Company  
2626 Cole Ave., Suite 710  
Dallas, Texas

Dear Mr. Witkosky:

Enclosed are two copies of the approved Application for Permit to Drill (APD) for Federal 26 1-2 (U-63504), NW1/4 of Section 26, T. 3 S., R. 9 W., Tooele County, Utah and two copies of the approved Sundry Notice submitted on October 22, 1993 amending the APD. The attached Conditions of Approval include mitigation measures that were developed in the environmental documentation.

It is our understanding that Vel Mahaffey will be your company's field representative on location during construction and drilling.

If you have any questions concerning this matter, please feel free to contact Cheryl Martinez of my staff at (801) 977-4371.

Sincerely,

Deane H. Zeller  
District Manager

Enclosures (2)  
1-Fed 26 1-2 APD w/ Cond. of Ap.  
2-Sundry Notice

OCT 4 1993

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL  DEEPEN  PLUG BACK

b. TYPE OF WELL  
 OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR  
 Saxon Oil Company (214) 220-3700

3. ADDRESS OF OPERATOR  
 2626 Cole Ave., Suite 710, Dallas, Tx. 75204

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
 At surface: 810' FNL & 1713' FWL  
 At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 20 air miles N of Dugway, Ut. 43-045-30029

10. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit lide, if any)  
 810'

18. NO. OF ACRES IN LEASE  
 1280

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 40

5. LEASE DESIGNATION AND SERIAL NO.  
 U-63504

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

7. UNIT AGREEMENT NAME  
 N/A

8. FARM OR LEASE NAME  
 Federal 26

9. WELL NO.  
 1-2

10. FIELD AND POOL, OR WILDCAT  
 Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
 26-3s-9w SLBM

12. COUNTY OR PARISH  
 Tooele

13. STATE  
 Ut.

8. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.  
 1063'

19. PROPOSED DEPTH

20. ROTARY OR CABLE TOOLS  
 Rotary

1. ELEVATIONS (Show whether DP, RT, GR, etc.)  
 4,340' ungraded ground

22. APPROX. DATE WORK WILL START\*  
 Oct. 15, 1993

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

DEC 14 1993

OFFICE OF  
 OIL & GAS

cc: BLM, Merschat, Patterson, Saxon, UDOGM

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 center program, if any.

SIGNED Brian Wood TITLE Consultant DATE 9-29-93

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY Christine Meyer TITLE Acting DM DATE 10/4/93

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

\*See Instructions On Reverse Side

18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Salt Lake District Office  
2370 South 2300 West  
Salt Lake City, Utah 84119



IN REPLY REFER TO:

3160  
U-63504  
(U-027)

DEC 13 1993

D. Wayne Hedberg  
Utah Dept. of Natural Resources  
Division of Oil, Gas, and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Dear Mr. Hedberg:

Enclosed are copies of the approved APD fact sheets and cover letters for Saxon's Skull Valley Federal 26 1-2, 1-1 and 2-2 wells within the lease U-63504, Section 26, T. 3 S., R. 9 W., Tooele County, Utah.

If you have any questions concerning this matter, please feel free to contact Cheryl Martinez of my staff at (801) 977-4300.

Sincerely,

Cheryl Martinez  
Geologist

Enclosures (5)  
1-APD Fact Sheet of Fed 26 1-2, 1-1, 2-2  
2-Cover Letter

DEC 13 1993

CONFIDENTIAL

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. DEC 13 1993

5. Lease Designation and Serial Number:

U63504

6. If Indian, Allottee or Tribe Name:

-

7. Unit Agreement Name:

-

8. Well Name and Number:

Saxon Fed. 26 1-2

9. API Well Number:

43-045-30029

10. Field and Pool, or Wildcat:

Wildcat

1. Type of Well: OIL  GAS  OTHER:

DIVISION OF

OIL, GAS & MINING

2. Name of Operator:

Saxon Oil Company

3. Address and Telephone Number:

2626 Cole Ave., Ste. 710, Dallas, Tex. 75204

Telephone 214/220-3700

4. Location of Well

Footages:

810 FNL & 1713 FWL

County: Tooele

QQ, Sec., T., R., M.:

NE NW Sec 26 T3S R9W

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
- 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 Spud with Dry Hole Digger  
Setting Conductor Pipe
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion 3 p.m. 11-29-93

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.)

RatHole Managers set 39 feet of 20-inch Conductor Pipe and cemented with 5 yards of Ready Mix Cement

13.

Name & Signature: 

Title: Consultant

Date: 12-9-93

(This space for State use only)

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:  
U63504

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. If Indian, Allottee or Tribe Name:  
--

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.

7. Unit Agreement Name:  
--

1. Type of Well: OIL  GAS  OTHER: \_\_\_\_\_

8. Well Name and Number:  
Saxon Federal 26 1-2

2. Name of Operator:  
Saxon Oil Company

9. API Well Number:  
43-045-30029

3. Address and Telephone Number:  
2626 Cole Ave., Ste. 710, Dallas, Texas 75204  
Telephone 214/220-3700

10. Field and Pool, or Wildcat:  
Wildcat

4. Location of Well 810 FNL and 1713 FWL  
Footages:  
QQ, Sec., T., R., M.: NE NW Sec. 26 T35 R9W

County: Tooele  
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
- 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 Surface Casing
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion 4:00 A.M. 12-20-93

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.)

Ran and cemented 17 Jts. 10-3/4 inch, 40.50 #K-55 ST&C Casing, seat 735 feet, Float Collar 687 feet, with 510 sacks cement. Plug down 2:23 A.M. Circulated cement. Ran 1" and cemented top 100 feet with 150 sacks Class "G" cement. Complete 4:00 A.M. 12-20-93.

13. H. L. Patterson

Name & Signature: *H. L. Patterson*

Title: Consultant

Date: 12/22/93

(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

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 7, 1994

Bill Saxon  
Saxon Oil Company  
2626 Cole Avenue, Suite 710  
Dallas, Texas 75204

Re: Request for Completed Entity Action Form - Federal 26 1-2  
NENW Sec. 26, T. 3S, R. 9W - Tooele County, Utah

Dear Mr. Saxon:

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 Federal 26 1-2 well, API Number 43-045-30029, on November 29, 1993. 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 January 17, 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



OPERATOR SAXON OIL COMPANY  
ADDRESS 2626 COLE AVE., SUITE 710  
DALLAS, TEXAS 75204  
(214) 220-3700

OPERATOR ACCT. NO. N 3350

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	11610	43-045-30029	Saxon Federal 26 1-2	NEW	26	T3S	R9W	TOOELE	12-11-93	
WELL 1 COMMENTS: <i>Entity added 1-24-94. J</i>											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

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

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

*Jerry Withersby*  
Signature  
*Controller*  
Title  
Date 1-13-94  
Phone No. (214) 220-3700

DOUBLE JACK TESTING & SERVICES, INC.

B.O.P. Test Report

JAN 1 1994

B.O.P. Test Performed on (date) 12-21-93  
Oil Company Saxon Oil  
Well Name & Number Fed 26-1-2 43-045-30029

Section 26

Township 35

Range 9W

County Tooele, Utah

Drilling Contractor Cardinal 43

Oil Company Site Representative Vell

Rig Tool Pusher Don

Tested out of Evanston, WY

Notified Prior to Test \_\_\_\_\_

Copies of This Test Report Sent to: Saxon  
Cardinal  
BLM Utah  
State, Utah

Original Chart & Test Report on File at: \_\_\_\_\_  
Evanston

Tested by: Double Jack Testing & Services, Inc.  
108 Parkview Road  
P.O. Box 2097  
Evanston, Wyoming 82930

# Double Jack Testin & Services Inc.

Accounting Office: P.O. Box 516 Shoshoni, WY 82649 • (307) 876-9390  
 Field Operations: Shoshoni, WY (307) 876-2308  
 Hotchk Springs, WY (307) 382-4020  
 Evanston, WY (307) 789-9213  
 Vernal, Ut (801) 781-0448  
 Durango, CO (303) 259-5926

FIELD TICKET  
10435

DATE 12-21-95  
 OPERATOR Saxon o/z  
 RIG NAME & NO. Cardinal 43  
 WELL NAME & NO. Ford 26 1-2

COUNTY	STATE	SECTION	TOWNSHIP	RANGE	
<u>Teton</u>	<u>Utah</u>	<u>21e</u>	<u>35</u>	<u>9W</u>	
ITEMS TESTED	LOW TEST PSI	TIME HELD MINUTES	HIGH TEST PSI	TIME HELD MINUTES	
Top Pipe Rams	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	Closing Unit Psi <u>3000 psi</u>
Bottom Pipe Rams	—	—	—	—	Closing Time of Rams <u>6 sec.</u>
Blind Rams	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	Closing Time of Annular <u>11 sec.</u>
Annular B.O.P.	<u>230 psi</u>	<u>5 min.</u>	<u>1500 psi</u>	<u>10 min.</u>	Closed Casing Head Valve <u>yes</u>
Choke Manifold	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	Set Wear Sleeve <u>yes</u>
Choke Line	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	
Kill Line	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	COMMENTS
Super Choke	—	—	—	—	
Upper Rally	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	
Lower Rally	—	—	—	—	
Fluid Valve	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	
Dart Valve	—	—	—	—	
Casing	—	—	<u>1500 psi</u>	<u>30 min.</u>	

## ADDITIONAL TESTS & COMMENTS

Filled Manifold with Methanol

TEST PLUG 10" C-72  
 RET. TOOL 4 1/2" choke  
 TOP SUB. 4 1/2" choke  
 KELLY SUB. 4 1/2" choke  
 X-OVER SUB.

JAN 4 X 1996

COMPANY

LEASE AND WELL NAME #

DATE OF TEST

RIG # AND NAME

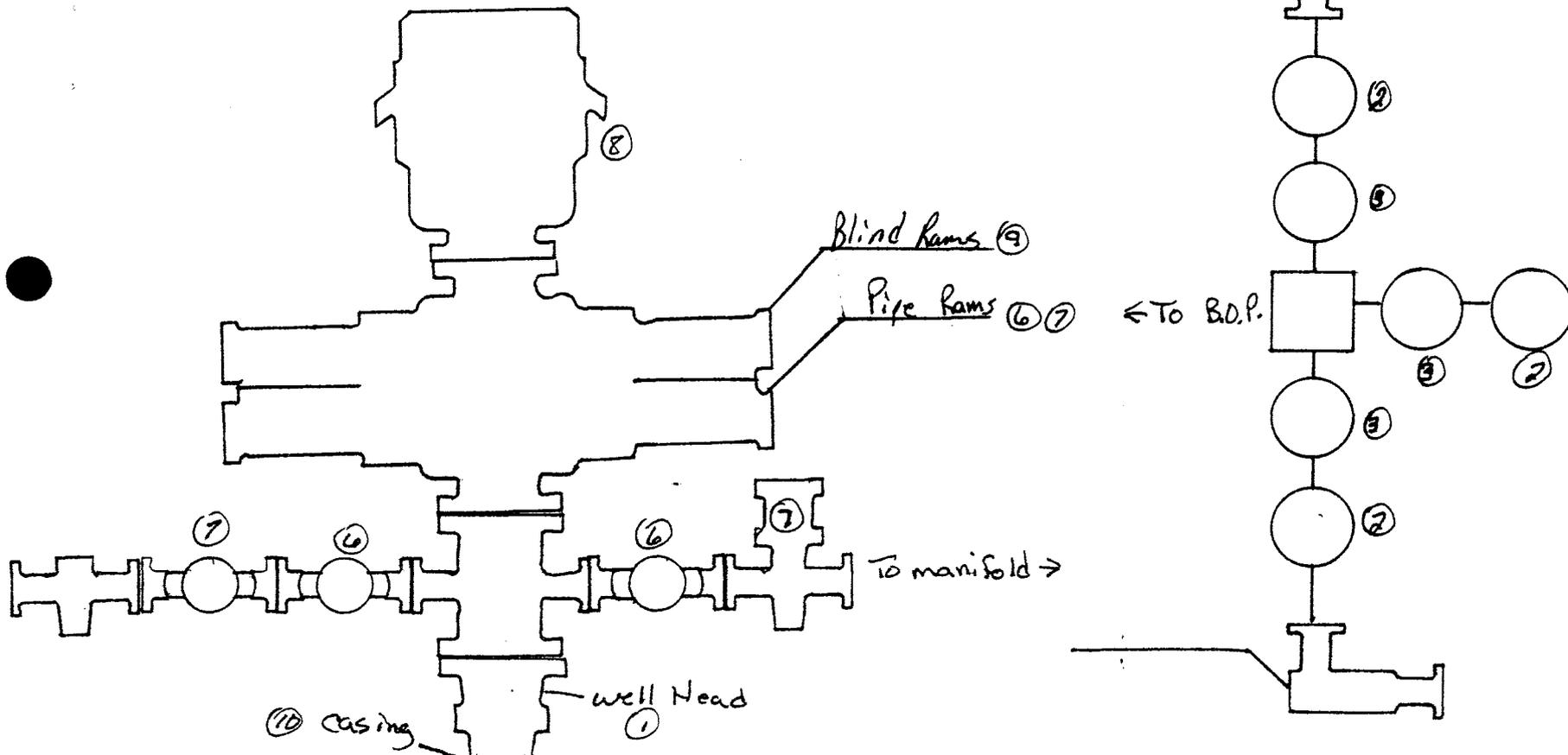
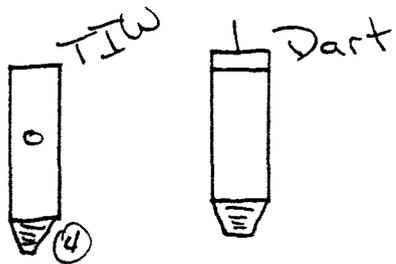
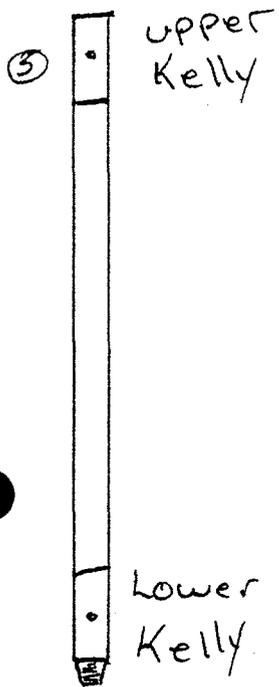
Saxon

Fed 26-1-2

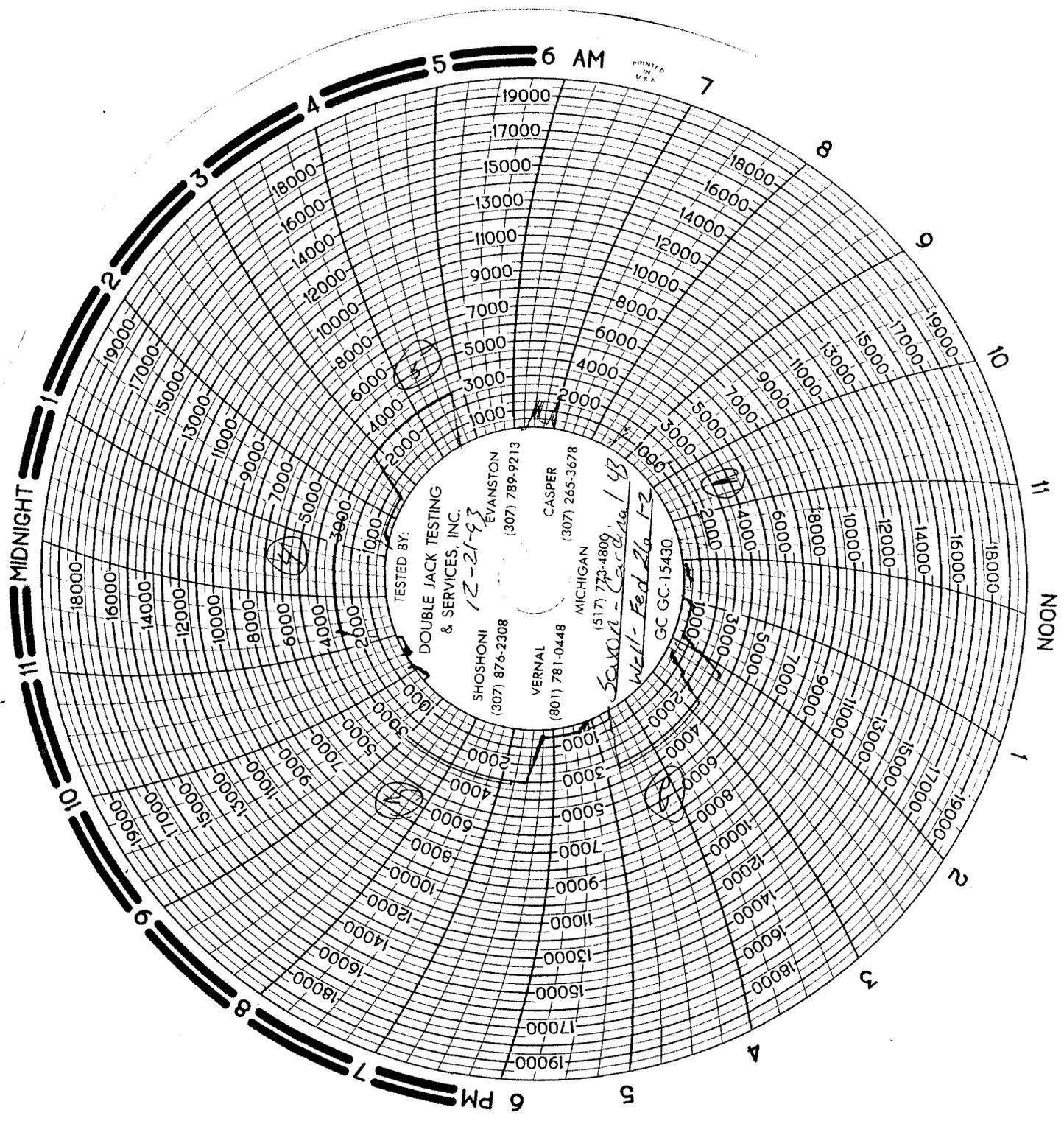
12-21-93

Cardinal 43

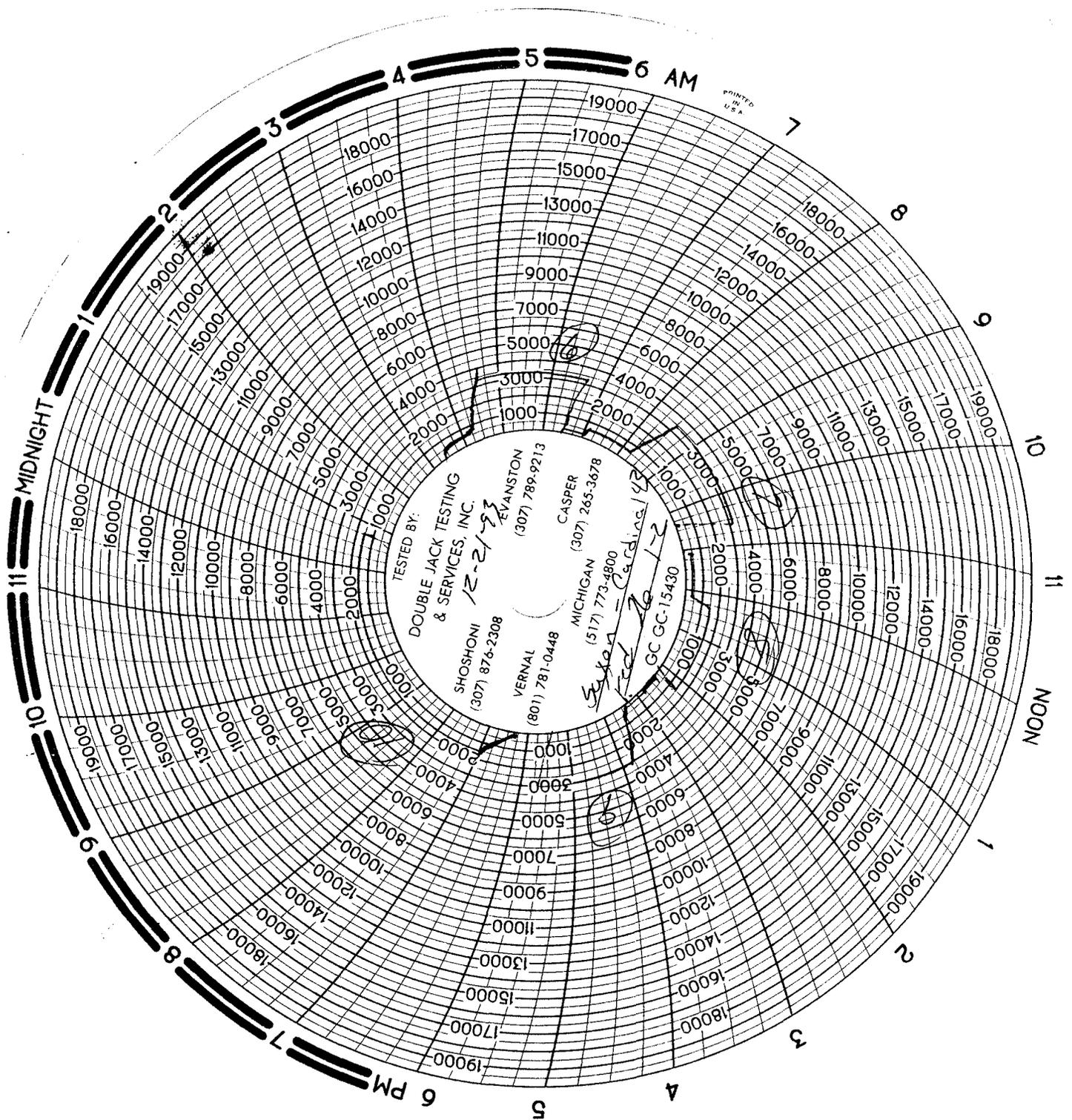
TEST #	TIME	
①	5:45-5:55pm	Well Head 1500 psi 10 min.
②	10:30-10:35 AM	Ripple of B.O.P. 1 <sup>st</sup> set of manifold valves
③	10:35-10:45	250 psi 5 min. 3000 psi 10 min.
③	10:55-11:00	2 <sup>nd</sup> set of manifold valves
④	11:00-11:15	250 psi 5 min. 3000 psi 10 min.
④	11:40-11:45	T.I.W. Float Valve
⑤	11:45-11:55	250 psi 5 min. 3000 psi 10 min.
⑤	12:00-12:05	UPMI Kelly
⑥	12:05-12:15	250 psi 5 min. 3000 psi 10 min.
⑥	12:25-12:30	Pipe Rams, inside Kill, inside Choke
⑦	12:30-12:40	250 psi 5 min. 3000 psi 10 min.
⑦	1:00-1:05	Pipe Rams, outside Kill, outside choke
⑧	1:05-1:15	250 psi 5 min. 3000 psi 10 min.
⑧	1:20-1:25	Hydril
⑨	1:25-1:35	250 psi 5 min. 1500 psi 10 min.
⑨	1:45-1:50	Blind Rams, Check
⑩	1:50-2:00	250 psi 5 min. 3000 psi 10 min.
⑩	2:50-3:00	Casing 1500 psi 30 min.



PRINTED  
IN  
U.S.A.



TESTED BY:  
DOUBLE JACK TESTING  
& SERVICES, INC.  
12-21-93  
SHOSHONI (307) 876-2308  
EVANSTON (307) 789-9213  
VERNAL (801) 781-0448  
CASPER (307) 265-3678  
MICHIGAN  
SANDIA - Casdina 143  
Well-Fed 26 1-2  
GC GC-15430



PRINTED IN USA

DOUBLE JACK TESTING & SERVICES, INC.

B.O.P. Test Report

RECEIVED

JAN 27 1994

DIVISION OF OIL, GAS & MINING

B.O.P. test performed on (date) 1-21-94

oil company Saxon

Well Name & Number Fed 26-12 43-045-30029

section 26

township 35

range 9W

county Toose

billings contractor Cardinal 43

oil company site representative Vell

rig tool pusher Don

tested out of Evanston

Notified pilot to test \_\_\_\_\_

copies of this test report sent to: Saxon

Cardinal

BLM

State

original chart & test report on file at: \_\_\_\_\_

Evanston

tested by: Double Jack testing & services, inc.  
108 Parkview Road  
P.O. Box 2097  
Evanston, Wyoming 82920

# Double Jack Testing & Services Inc.

FIELD TICKET

10482

Accounting Office: P.O. Box 516 Shoshoni, WY 82649 • (307) 876-9390  
 Field Operations: Shoshoni, WY (307) 876-2308  
 Rock Springs, WY (307) 382-4020  
 Evanston, WY (307) 789-9213  
 Vernal, UT (801) 781-0448  
 Durango, CO (303) 259-5926

DATE 1-21-99  
 OPERATOR Saxon  
 RIG NAME & NO. Cardinal 43  
 WELL NAME & NO. Fed 26-12

COUNTY	STATE	SECTION	TOWNSHIP	RANGE	
<u>Tooele</u>	<u>Utah</u>	<u>26</u>	<u>35</u>	<u>9W</u>	
ITEMS TESTED	LOW TEST PSI	TIME HELD MINUTES	HIGH TEST PSI	TIME HELD MINUTES	
Top Pipe Rams	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	Closing Unit Psi <u>3000</u>
Bottom Pipe Rams	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	Closing Time of Rams <u>6 sec</u>
Blind Rams	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	Closing Time of Annular <u>115 sec</u>
Annular B.O.P.	<u>250 psi</u>	<u>5 min.</u>	<u>1500 psi</u>	<u>10 min.</u>	Closed Casing Head Valve <u>yes</u>
Choke Manifold	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	Set Wear Sleeve <u>yes</u>
Choke Line	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	
Kill Line	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	COMMENTS
Super Choke	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Upper Kelly	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	
Lower Kelly	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Floor Valve	<u>250 psi</u>	<u>5 min.</u>	<u>3000 psi</u>	<u>10 min.</u>	
Dart Valve	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Casing	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	

## ADDITIONAL TESTS & COMMENTS

Filled manifold with Methanol  
30 Day Trial Test

TEST PLUG 10" C-22  
 RET. TOOL 4 1/2 choke  
 TOP SUB. 4 1/2 choke  
 KELLY SUB. 4 1/2 choke  
 X-OVER SUB.

DIVISION OF  
 OIL, GAS & MINING

COMPANY

LEASE AND WELL NAME #

DATE OF TEST

RIG # AND NAME

Saxon

Fed 26-12

1-21-94

Cardinal

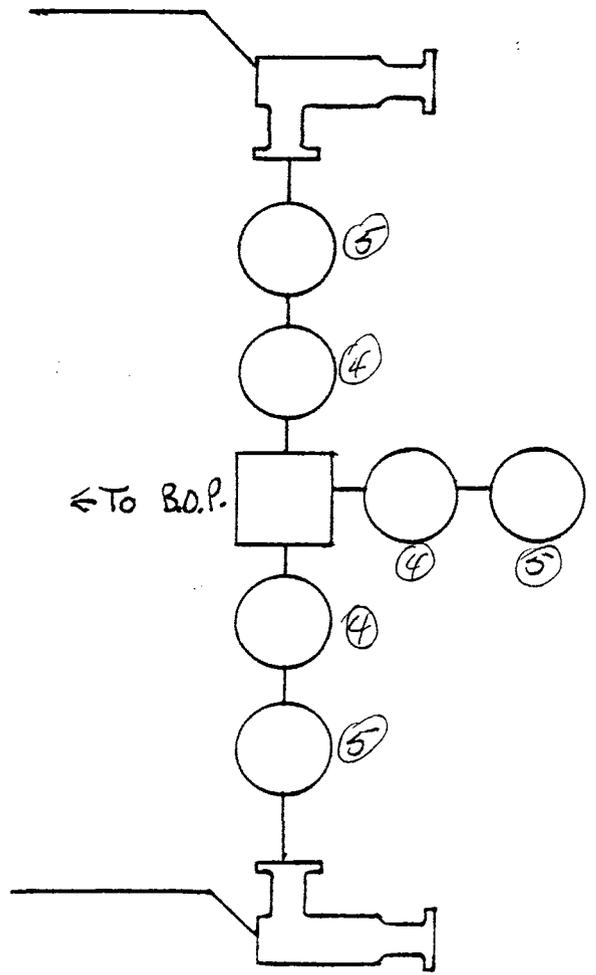
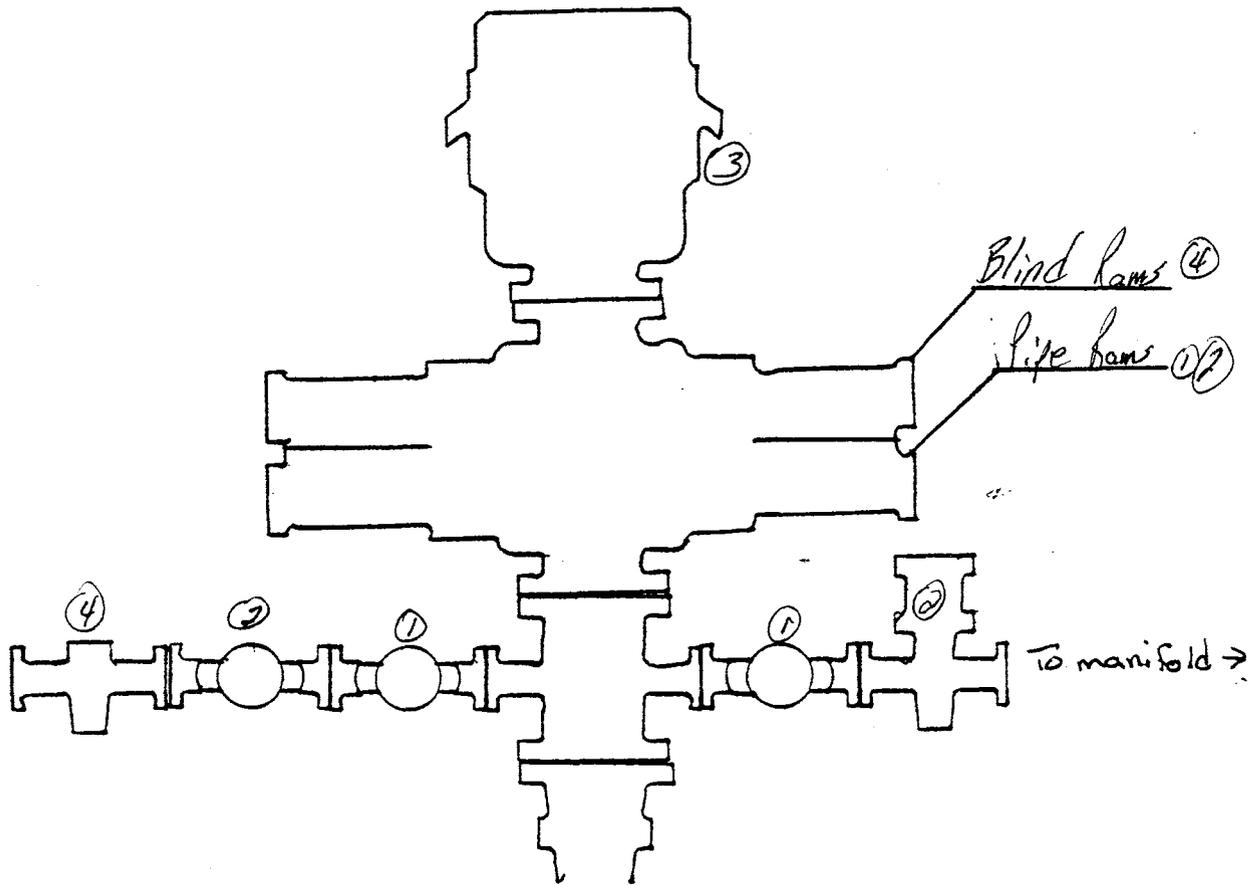
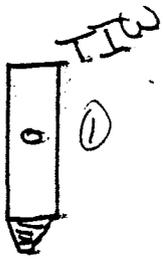
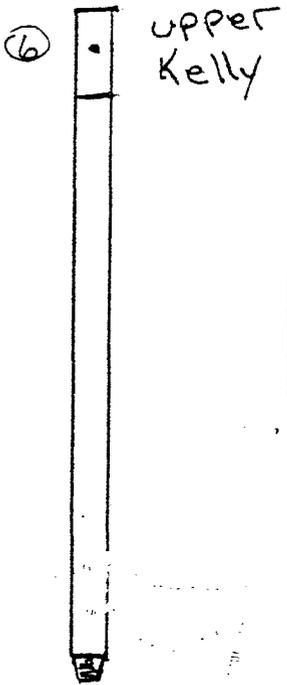
TEST # TIME

- | TEST # | TIME      | DESCRIPTION   | PSI      | MIN.    |
|--------|-----------|---|----------|---------|
| ①      | 2:10-2:15 | Pipe Rams, inside Kill, inside Choke, TFW                 |          |         |
|        | 2:15-2:25 | 250 psi 5 min.  | 3000 psi | 10 min. |
| ②      | 2:30-2:35 | Pipe Rams, outside Kill, outside Choke                    |          |         |
|        | 2:35-2:45 | 250 psi 5 min.  | 3000 psi | 10 min. |
| ③      | 2:50-2:55 | Hy Dil  |          |         |
|        | 2:55-3:05 | 250 psi 5 min.  | 1500 psi | 10 min. |
| ④      | 4:15-4:20 | Blind Rams, Check, 1 <sup>st</sup> set of manifold valves |          |         |
|        | 4:20-4:30 | 250 psi 5 min.  | 3000 psi | 10 min. |
| ⑤      | 4:35-4:40 | 2 <sup>nd</sup> set of manifold valves                    |          |         |
|        | 4:40-4:50 | 250 psi 5 min.  | 3000 psi | 10 min. |
| ⑥      | 6:50-6:55 | Run colars in hole To Get To Kelly                        |          |         |
|        | 6:55-7:05 | Upper Kelly   | 250 psi  | 5 min.  |
|        |           |   | 3000 psi | 10 min. |

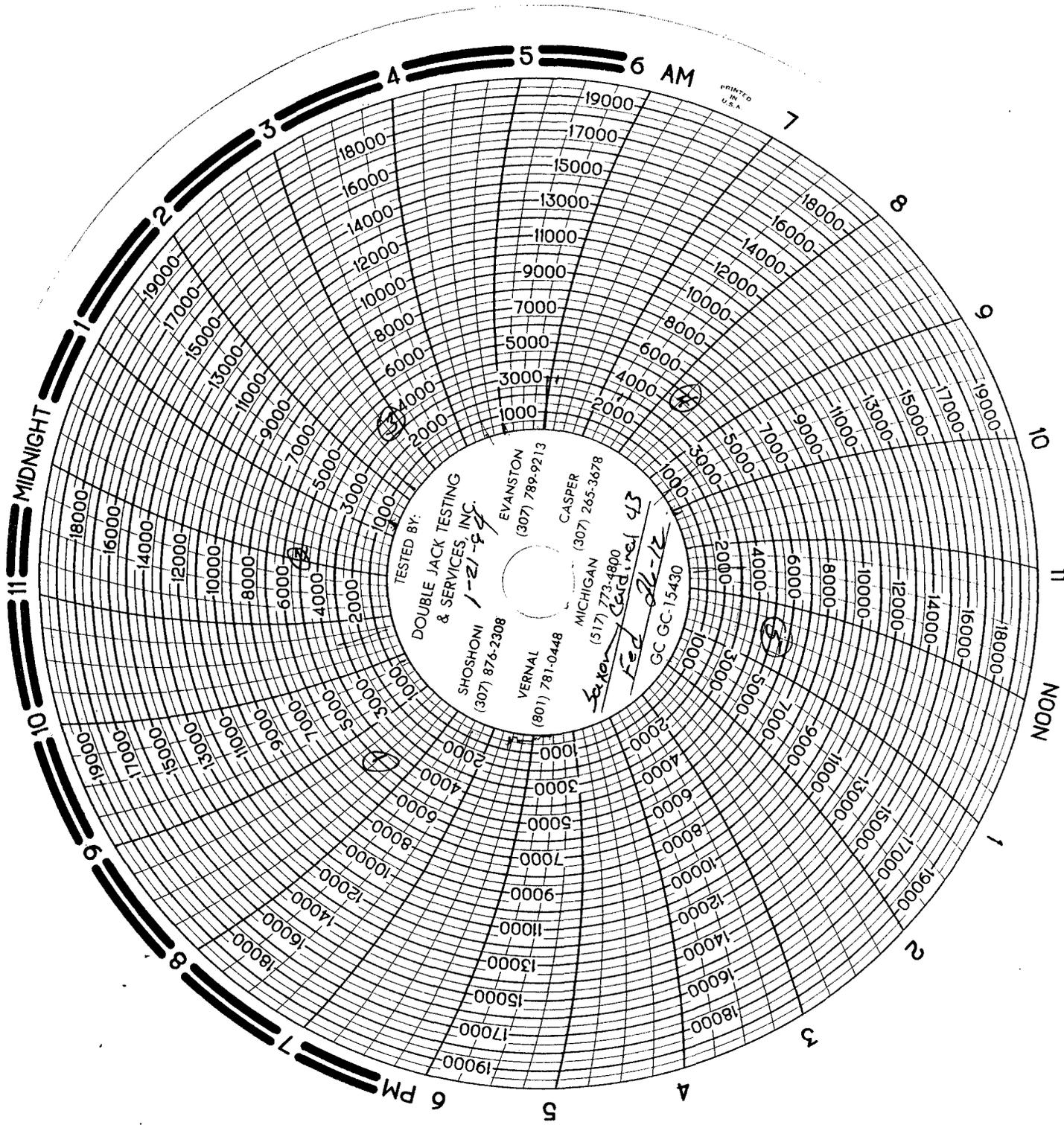
RECEIVED

JAN 27 1994

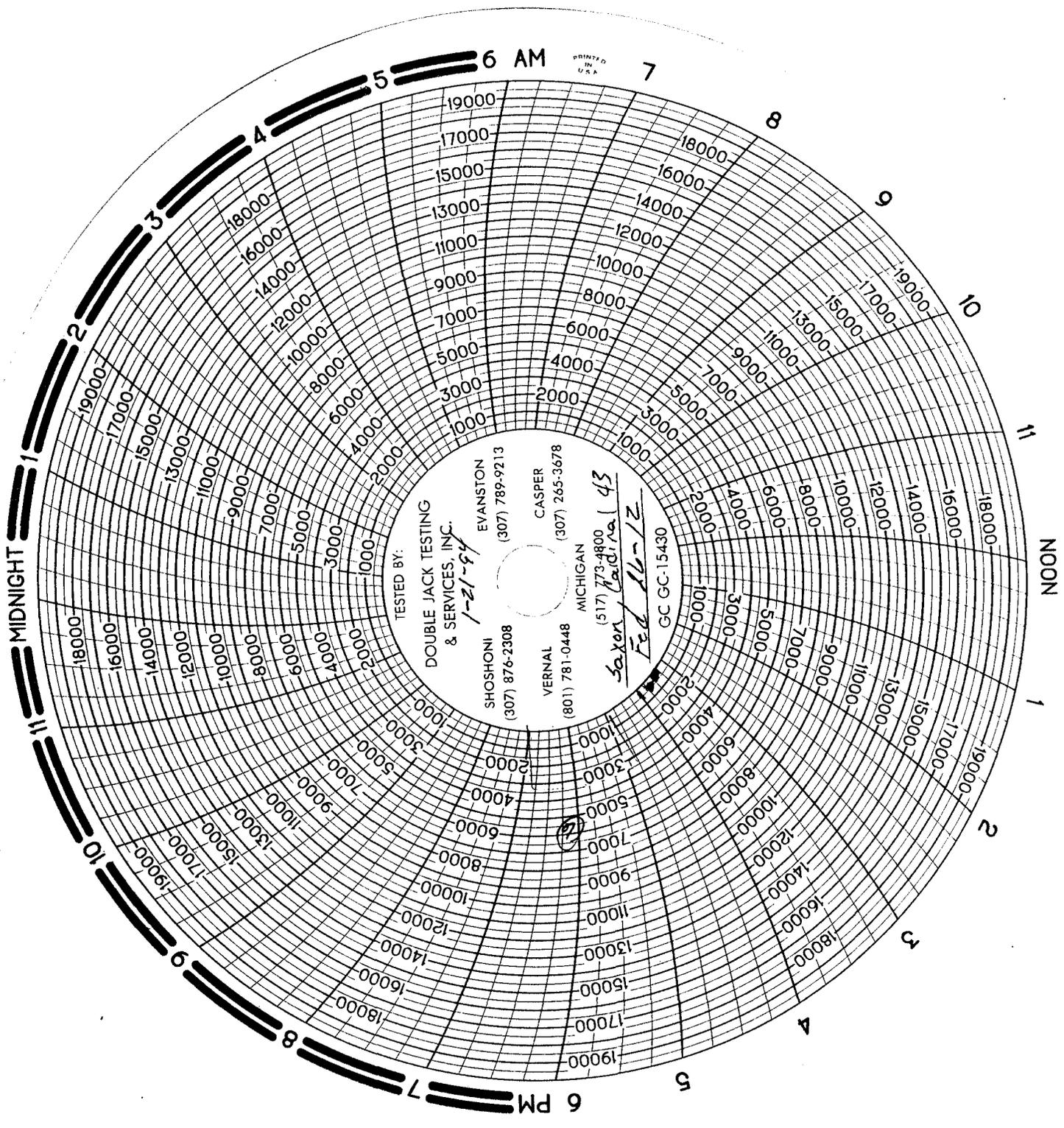
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**CONFIDENTIAL**

**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 Number:

U63504

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

8. Well Name and Number:

Saxon Fed 26 1-2

9. API Well Number:

43-045-30029

10. Field and Pool, or Wildcat:

Wildcat

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator: Saxon Oil Company Telephone #214/220-3700

3. Address and Telephone Number: *STE 710*  
2626 Cole Avenue, Dallas, Texas 75204

4. Location of Well  
Footages: 810 FNL & 1713 FWL  
County: Tooele  
QQ, Sec., T., R., M.: NE NW Sec 26 T3S R9W  
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
- 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 12:15 P. M. 2/1/94

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.)

The following Plugs were run to P & A

Plug	DEPTH	Sks Type "G" Cement
#1	5692-5500	80
#2	3550-3250	220
#3	3344-3044	225 --
#4	2211-2025	105
#5	800- 650	85
#6	60- 0	30

Dry Hole Marker was installed 2/2/94

**RECEIVED**

FEB 10 1994

DIVISION OF  
OIL GAS & MINING

13. Name & Signature: *[Signature]* Title: Consultant Date: 2/7/94

(This space for State use only)

*TD of well 6392' per Vol Mha Fey*

*to Jan 2-1-94*

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT DUPLICATE  
 APR 21 1995  
 DIV OF OIL, GAS & MINING

FORM APPROVED  
OMB NO. 1004-0137  
Expires: February 28, 1995

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG \***

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
**Saxon Oil Company**

3. ADDRESS AND TELEPHONE NO.  
**2626 Cole Ave., Dallas Texas (214)220-3700**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface **810' FNL 1713' FWL Section 26 Township 3 South, Range 9 West**  
At top prod. interval reported below \_\_\_\_\_  
At total depth \_\_\_\_\_

14. PERMIT NO. **43-045-30029** DATE ISSUED **11-26-93**

15. DATE SPUDDED **12-11-93** 16. DATE T.D. REACHED **1-31-94** 17. DATE COMPL. (Ready to prod) **2-1-94 (P&A)** 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* **KB 4355 DF4354 GR 4340** 19. ELEV. CASINGHEAD **N/A**

20. TOTAL DEPTH, MD & TVD **6392** 21. PLUG, BACK T.D., MD & TVD **N/A** 22. IF MULTIPLE COMPL., HOW MANY\* **N/A** 23. INTERVALS DRILLED BY \_\_\_\_\_ ROTARY TOOLS **All** CABLE TOOLS \_\_\_\_\_

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
**NONE**

25. WAS DIRECTIONAL SURVEY MADE  
**NO**

26. TYPE ELECTRIC AND OTHER LOGS RUN  
**Dual Induction SFL, Borehole Comp. Sonic, Dipmeter** **4-21-95 MUD LOG**

27. WAS WELL CORRED  
**NO**

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

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
10 3/4	40.5	735'	14 3/4	Surface w/560 sx.	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
		NONE		

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
	NONE	

31. PERFORATION RECORD (Interval, size and number)  
**NONE**

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	N/A

33. PRODUCTION

DATE FIRST PRODUCTION **None** PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) \_\_\_\_\_ WELL STATUS (Producing or shut-in) \_\_\_\_\_

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF	WATER—BBL.	GAS-OIL RATIO

FLOW, TUBING PRESS.	CASINO PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) \_\_\_\_\_ TEST WITNESSED BY \_\_\_\_\_

35. LIST OF ATTACHMENTS \_\_\_\_\_

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

SIGNED Walter P. Mersch TITLE Geologist DATE 3-30-95

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

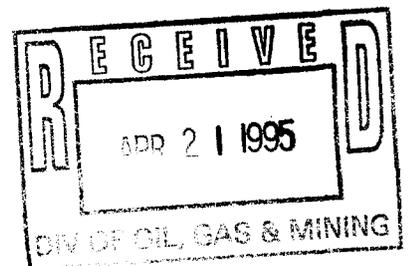
37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Manning Canyon	1300		Shale			
Great Blue	3890		Limestone			
Humberg	4720		Limestone			

WELL REPORT  
SAXON OIL COMPANY  
SAXON FEDERAL #26 1-2  
TOOELE COUNTY, UTAH

H. H. Cate, Jr.  
Cate Logging  
P. O. Box 2041  
Park City, UT 84060



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## WELL SUMMARY

Operator: Saxon Oil Company  
Well: Saxon Federal #26 1-2  
Field/Area: Skull Valley Wildcat  
County: Tooele  
State: Utah  
Location: 810' FNL & 1713' FWL  
Section: 26  
Township: 3 S  
Range: 9 W  
Elevations: KB 4355'  
DF 4354'  
GR 4340'  
Spud Date: December 11, 1993  
Completion Date: February 1, 1994  
Completion: P & A  
Mudlogging and Wellsite  
Supervision: Cate Logging  
Park City, UT 84060  
Mud Loggers: Tony Cate, Clint Davis  
Mud Company: Summit Mud Company  
Mud Engineer: Herman Howard  
Casper, WY  
Mud Type: Gel Water  
Drilling Supervision: Vell Mahaffey  
Casper, WY  
Drilling Contractor: Cardinal Drilling  
Billings, MT

Toolpusher: Don Wagner  
 Cody, WY

Rig: #43

Type: Bethlehem M58A  
 Hookload Capacity 440K

Pumps: DB500 DB375

Casing: Set 10 3/4" at 735'

Hole Size: 14 3/4" to 735'; 9 7/8" to 2711';  
 8 3/4" to TD

Cores: None

Drill Stem Tests: DST #1, Manning Canyon Formation  
 3376-3445', 69'

DST Company: Halliburton Energy Services  
 Casper, WY

DST Operator: Pablo Headworth

Electric Logging: Schlumberger  
 Vernal, UT

Run 1: Engineer: Jeff Gebhart

Dual Induction-SFL  
 739-4348'  
 Borehole Compensated Sonic  
 739-4348'  
 Stratigraphic High Resolution  
 Dipmeter Tool  
 739-4348'

Run 2: Engineer: S. Robinson

Dual Induction-SFL  
 4250-6388'  
 Borehole Compensated Sonic  
 4300-6380'  
 Stratigraphic High Resolution  
 Dipmeter Tool  
 4300-6288'

Total Depth: Driller: 6392'  
 Schlumberger: 6388'

Cement Plugs:

5500-5682'	80 sxs
3250-3550'	220 sxs
3044-3344'	105 sxs
2061-2211'	105 sxs
650-800'	85 sxs
Surface-60'	30 sxs

### CHRONOLOGY

DATE	6 AM DEPTH & ACTIVITY	PROG	ACTIVITY LAST 24 HOURS
12/11/93		50'	Rig up.
12/12/93	281' Drilling	231'	Rig up, Spud 7 AM 12/11/93, Drill, Survey, TOH for BHA, TIH, Drill, Survey, TOH for NB #2, TIH, Drill.
12/13/93	430' Wash & ream to btm	149'	Drill, TOH for NB #3, TIH, Drill, Survey, Drill, Lost 50 bbls mud at 395', Circ & build vol, Short trip to 310', Build vol, Wash & ream to btm.
12/14/93	465' Make up & run 5th string shot	35'	Ream to btm, Rig serv, Drill, Survey, Work stuck pipe, RU Dialog & run freepoint, Make up 4 string shots-unsuccessful, Make up 5th string shot.
12/15/93	536' Ream at 470'	71'	4th string shot did not work-broke at drill pipe, PU kelly, Stab into fish, Attempt back off #6-no go, Ran shot #7--back off at 300', TOH, LD fish tools, Attach gooseneck, LD BHA, TIH, Ream, Drill, Survey, Drill, Plugged bit, TOH, Clean jets, TIH, Ream to btm.
12/16/93	580' Drilling	44'	Drill, Survey, Drill, Losing mud 557-562', TOH for lost circ, Mix & build vol, TIH, Wash & ream 60' to btm-bridge at 557', Drill, Lost mud at 557', Drill.
12/17/93	690' Drilling	110'	Drill, Survey, Drill, Pump repair, Drill, Survey, Drill.
12/18/93	735' Reaming	45'	Drill, Survey, Drill, TOH, Change BHA, PU 14 3/4" bit, TIH, Ream 12 1/4" hole to 14 3/4".

DATE	6 AM DEPTH & ACTIVITY	PROG	ACTIVITY LAST 24 HOURS
12/19/93	735' Replace head & liner	0'	Ream, TOH for NB #5, TIH, Ream, Pump repair.
12/20/93	735' WOC	0'	Ream, TOH for NB #6, TIH, Ream, Short trip, circ & wash 60' to btm, Circ, TOH, RU csg crew, Run 10 3/4" csg-ran 17 jts csg, J 55, 40#, ST&C to 735', Circ with rig pump, Cmt with 275 sxs lead & 235 sxs tail, 1" with 150 sxs class G cmt, 2% CaCL, WOC.
12/21/93	735' Nipple up	0'	WOC, Cut off csg, Weld on head, Nipple up BOPs.
12/22/93	747' Drilling	12'	Finish NU, Press test BOP, Hook up flow line, Set wear bushing, PU stabilizer, TIH, Hook up Kelly hose, Drill float-shoe-cmt, Circ & cond cmt contam in mud, Drill.
12/23/93	876' Drilling	129'	Drill, RS, Drill, Survey, Drill, TOH for BHA-Reamer & NB #8, TIH, Drill, Survey, Drill.
12/24/93	942' TIH	66'	Drill, Survey, Drill, Survey, TOH, for BHA-mud motor, PU mud motor & NB #9, TIH.
12/25/93	1122' Drilling	180'	TIH, Ream 42' to btm, Drill, Survey, Drill.
12/26/93	1370' Survey, Prep to TOH	248'	Drill, Survey, Drill, Rig serv, Drill.
12/27/93	1537' Drilling	167'	TOH, LD mud motor, Check blind rams, PU NB #10, Wash & ream 60' to btm-25' fill, Drill, Survey, Drill.
12/28/93	1863' Survey	326'	Drill, Survey, Rig serv, Drill.
12/29/93	2176' Survey	313'	Drill, Survey, Rig serv, Drill,

DATE	6 AM DEPTH & ACTIVITY	PROG	ACTIVITY LAST 24 HOURS
12/30/93	2383' TOH	207'	Drill, Survey, Drill, TOH.
12/31/93	2458' Wash & ream to btm	75'	TIH with NB #11, Wash & ream 70' to btm-7' fill, Drill, Survey, Drill, Twist off 7th DC, TOH, PU overshot, TIH, Circ & fish, Chain OH with fish, LD fish, PU NB #12-near bit reamer & 2 DCs, Wash & ream to btm.
1/1/94	2562' Drilling	104'	Wash & ream to btm, Drill, Survey, Drill.
1/2/94	2682' Drilling	120	Drill, Rig serv, Survey, Drill.
1/3/94	2722' Drilling	40'	Drill, TOH, Inspect DCs, LD 8" DCs-NRS & NBR, Check BOP, PU NBR-NRS-shock sub, Replace DCs, Trip DCs IH, PU key seat wiper, TIH, Cut drill line, TIH, 8' bridge at 2047', Drill.
1/4/94	2766' Drilling	44'	Drill, Survey, Check BOPs, Drill.
1/5/94	2880' Drilling	114'	Drill, Rig serv, Drill, Survey, Drill.
1/6/94	2987' Drilling	107'	Drill, Rig serv, Survey, Drill, Survey.
1/7/94	3065' Drilling	78'	Drill, Rig serv, Drill, TOH for NB #14, Change BHA, TIH, Drill.
1/8/94	3194' Drilling	129'	Drill, Rig serv, Drill, Survey, Drill.
1/9/94	3329' Drilling	135'	Drill, Survey, Drill, TOH for NB #15, Change BHA, TIH, Wash & ream 60' to btm-no fill, Drill.

DATE	6 AM DEPTH & ACTIVITY	PROG	ACTIVITY LAST 24 HOURS
1/10/94	3445' Circ & cond	116'	Drill, Rig serv, Drill, circ, Lost 250 bbls mud, TOH 5 stnds, Mix LCM, TIH, Drill, Survey, Work tite hole & CO at 3430', Drill to 3445', CO, Short trip, Wash & ream 3370-3445', 8' fill, Circ & cond, Short trip 9 stnds, Wash & ream 30' to btm-no fill, Circ & cond, Short trip 9 stnds, Wash 30' to btm-no fill, Circ & cond.
1/11/94	3445' TOH for DST	0'	Circ & cond, TOH, LD stabs, Cond and build mud vol, TIH, Circ & cond, Short trip 9 stnds, Wash to btm-no fill, Circ & cond, TOH for DST #1 3376-3445', PU test tool, TIH.
1/12/94	3535' Drilling	90'	TIH DST #1, Ran DST, TOH with test tools, Rig serv, TIH RR #15, Break circ at 2495', TIH, Ream 105' to btm, Drill, Ream 3387-3451', Drill 3451-3476', Ream 3451-3476', Drill 3476-3486', Lost 60 bbs mud at 3476', Drill, Lost 60 bbls mud at 3487', Drill.
1/13/94	3718' Drilling	183'	Drill, Survey, Drill, Lost 40 bbls mud at 3586', Drill, Lost 20 bbs mud at 3691', Drill.
1/14/94	3750' Drilling	32'	Drill, Ream, TOH, Magna flux DCs, Check blind rams, TIH, Ream, Drill.
1/15/94	3954' Drilling	204'	Drill, Survey, Ream & work caving hole after survey, Drill.
1/16/94	4148' TOH	194'	Drill, Circ & survey (misrun), Drill, Survey, Drill, Drop survey, TOH.
1/17/94	4290' Drilling	142'	TOH, PU NB #17, TIH, Bridge at 3725', Drill bridges-wash & ream 3725-4148', Drill.

DATE	6 AM DEPTH & ACTIVITY	PROG	ACTIVITY LAST 24 HOURS
1/18/94	4350' Run Dip Meter	60'	Drill, Circ, Short trip 18 stnds, Bridge at 3434', Circ, Short trip 18 stnds-no bridge, Circ, TOH, RU Schl, Log.
1/19/94	4413' Drilling	63'	Finish log, RD loggers, LD shock sub-stabilizers, key seat wiper, TI DCs, Circ, Build vol, TO DCs, PU NB-NRSSs, shock sub, DCs, TIH, Wash & ream 60' to btm-1' fill, Drill.
1/20/94	4613' Drilling	200'	Drill, Rig serv, Drill.
1/21/94	4784' TIH	171'	Drill, Rig serv, Drill, Survey, TOH, Test BOPs, TIH with NB #19.
1/22/94	5015' Drilling	231'	TIH, Wash & ream 180' to btm, Drill, Rig serv, Drill.
1/23/94	5220' Drilling	205'	Drill, Rig serve, Drill.
1/24/94	5375' Drilling	155'	Drill, Rig serv, Drill, Survey, TOH, TIH with NB #20, Ream 100' to btm, Drill.
1/25/94	5595' Drilling	220'	Drill, Rig serv, Drill.
1/26/94	5823' Drilling	228'	Drill, Rig serv, Drill.
1/27/94	6061' TOH	238'	Drill, Rig serv, Drill, Drop survey, TOH.
1/28/94	6158' Drilling	97'	Drill, Pump pill, Drop Survey, TOH, PU NB #21, TIH, LD 6 DCs, Cut drill line, TIH, Wash & ream 1290' to btm, Drill, Survey, Drill.
1/29/94	6254' TIH	96'	Drill, Rig serv, Drill, Pump pill, Drop survey, TOH, TIH with NB #22.
1/30/94	6392' Strap OH	138'	TIH, Ream 90' to btm, Drill, Rig serv, Drill, Circ, Short trip 13 stnds-OK going back to btm, Circ, Drop survey, Strap OH.

DATE	6 AM DEPTH & ACTIVITY	PROG	ACTIVITY LAST 24 HOURS
1/31/94	6392' Set cmt plugs	0'	Finish TOH to log, Ran Schl Dual Induction SFL 4250-6387' & Borehole Comp Sonic 4300-6380', Reran Sonic over same interval with diff tool, LD 15 DCs, TIH open ended, Set 85 sxs 5500- 5692'.
2/1/94	6392' Finish cmt plugs	0'	Finish cmt plugs, Rig released.

### FORMATION TOPS

Sample Tops:

Manning Canyon	1300 (+3055)
Great Blue	3890 ( +465)
Humbug	4720 ( -365)

Other than the Manning Canyon top, which was picked on the first black shale, the other tops really do not have log top equivalents due to the transitional boundaries between formations in this area.

## PALYNOLOGY AND THERMAL MATURITY

SAMPLES	REMARKS
2140-2160'	TAI = 3+ (based on amorphous kerogen). Flood of abraded and weathered amorphous kerogen, common occurrence of plant cuticle, rather common occurrence of woody debris, rather rare occurrence of Tasmanites ( <u>Protoleiosphaeridium</u> spp.), and rare occurrence of acritarchs and spores. Age of the sample is the Lower Pennsylvanian - Namurian B (Morrowan), and restricted to the KV spore zone. The sample is best considered as the middle to upper Manning Canyon Formation. This sample is similar, chronostratigraphically, to sample #2 of Skull Valley Report #112589.
2610-2630'	TAI = 3+ to 4- (based on amorphous kerogen). Flood of secondary pyrite abraded amorphous kerogen, common occurrence of plant cuticle, rather rare occurrence of woody debris, rare occurrence of Tasmanites ( <u>Protoleiosphaeridium</u> spp.), acritarchs and spores, and a very rare occurrence of scolecodont element fragments. Age of the sample is Upper Mississippian - Namurian A (Springerian). The sample is best considered as the middle to lower Manning Canyon Formation.
2700-2720'	TAI = 3+ (based on amorphous kerogen). Abundant occurrence of amorphous kerogen, common occurrence of plant cuticle, rather common occurrence of woody debris, rare occurrence of Tasmanites ( <u>Protoleiosphaeridium</u> spp.), acritarchs and spores, and a very rare occurrence of scolecodont element fragments. Age of the sample is Upper Mississippian - Namurian A, and probably restricted to the latter Chesterian. The sample is best considered as the middle to lower Manning Canyon Formation.
3370-3410'	TAI = 3+ (based on amorphous kerogen). Abundant occurrence of amorphous kerogen, rather common occurrence of plant cuticle and Tasmanites ( <u>Protoleiosphaeridium</u> spp.), rather rare occurrence of woody debris, rare occurrence of spores and scolecodont element fragments, and a very rare occurrence of acritarchs. Age of the sample is Upper Mississippian - top Visean, and probably restricted to the NC spore zone of the Chesterian. The sample is best considered as the lower Manning Canyon Formation.

**SAMPLE            REMARKS**

- 3410-3440' TAI = 3+ (based on amorphous kerogen).  
Abundant occurrence of amorphous kerogen, common occurrence of Tasmanites (Protoleiosphaeridium spp.), rather common occurrence of plant cuticle, rather rare occurrence of woody debris and spores, rare occurrence of scolecodont element fragments, and a very rare occurrence of acritarchs. Age of the sample is Upper Mississippian - late Visean, and restricted to the Chesterian. The sample is best considered as the lower Manning Canyon Formation. However, the significant presence of zonate spores in the sample is somewhat indicative of the transitional facies between the upper Great Blue Formation and the lower Manning Canyon Formation.
- 4310-4330' TAI = 3 (based on amorphous kerogen).  
Abundant occurrence of amorphous kerogen, rather common occurrence of Tasmanites (Protoleiosphaeridium spp.), rather rare occurrence of plant cuticle and woody debris, rare occurrence of acritarchs, and a very rare occurrence of spores and scolecodont element fragments. Age of the sample is Upper Mississippian - early Springer (late Visean). The sample is best considered as the Great Blue Formation.
- 5250-5270 TAI = 3 (based on amorphous kerogen).  
Common occurrence of amorphous kerogen and plant cuticle, rather common occurrence of woody debris and spores, rather rare occurrence of scolecodont element fragments, rare occurrence of Tasmanites (Protoleiosphaeridium spp.), and a very rare occurrence of acritarchs. Age of the sample is Upper Mississippian - Visean, and restricted to the late to middle Meramacian. The sample is best considered as the Humbug Formation.
- 5280-5300' TAI = 3 (based on amorphous kerogen).  
Abundant occurrence of plant cuticle, woody debris and amorphous kerogen, rather common occurrence of spores, rather rare occurrence scolecodont element fragments, and very rare occurrence of Tasmanites (Protoleiosphaeridium spp.) and acritarchs. Age of the sample is Upper Mississippian - Visean, and restricted to the Meramacian. The sample is best considered as the Humbug Formation.

**SAMPLE        REMARKS**

6000-6040' TAI = 3 (based on amorphous kerogen).  
Abundant occurrence of plant cuticle, common occurrence of amorphous kerogen and woody debris, rather rare occurrence of spores and scolecodont element fragments, rare occurrence of Tasmanites (Protoleiosphaeridium spp.), and a very rare occurrence of acritarchs. Age of the sample is Upper Mississippian Visean, and restricted to the late to middle Meramacian. The sample is best considered as the Humbug Formation.

6170-6200' TAI = 3 (based on amorphous kerogen).  
Abundant occurrence of plant cuticle, woody debris and amorphous kerogen, rather common occurrence of spores, rather rare occurrence of scolecodont element fragments, and very rare occurrence of Tasmanites (Protoleiosphaeridium spp.) and acritarchs. Age of the sample is Upper Mississippian - Visean, and restricted to the middle Meramacian. The sample is best considered as the Humbug Formation.

**Comments**

- a) All samples were pH normalized unless otherwise noted.
- b) Sample 4310-4330' represents a significant positive shift in the TAI signature of the well when compared to the five previous up-hole samples.

All information provided by Terry Hutter, TH Geological Services, Inc., Sand Springs, OK.

## COMMENTS

No shows in the samples or on the mud logging equipment were encountered from 735' to total depth.

In the Manning Canyon Formation (Mississippian) excellent drilling breaks of 1 minute/foot or less were encountered from 3370-3445'. These good penetration rates were scattered from 3445-3508'. In the samples throughout this interval, the limestones and dolomites were described as having no visible porosity and no stain, fluorescence, or cut. A 1 unit gas increase was noted through this interval on the gas detection equipment. In spite of these negatives, a drill stem test was considered to be justified by the good rate of penetration, by the fact that 100 barrels of mud were lost while drilling this interval, and by the general history of poor sample and mud logging shows seen in various good producing intervals throughout the Basin and Range Province. The wildcat nature of this well also justified further evaluation of this zone. While only water was recovered from this zone on the drill stem test, the recovery and the formation pressures indicated an excellent potential reservoir if encountered in a better structural position.

The only other drilling break encountered was in the Humbug Formation from 4952-4978'. This strata drilled at 1 to 3 minutes/foot as compared to 6 to 7 minutes/foot before and after the drilling break. The samples throughout this interval consisted of very hard, siliceous, glassy, tight sandstone with no sample shows or gas indications on the gas detection equipment. A drill stem test was considered to be unnecessary.

At 6061', where the hole deviation increased considerably and where the samples became less silty-sandy and much more shaly (predominantly soft and black), the possibility of faulting out of the Humbug back into the Manning Canyon or Great Blue Formations was considered. Palynological dating proved this to be incorrect.

### DRILL STEM TEST

DST #1 3376-3445', 69'  
3/4" bottom hole choke; 3/16" bubble hole surface

Open: 10 min. with immediate strong blow: 4 min. - 5 psi; 10 min. - 20 psi.

Shut-in: 30 min.

Open: 10 min. with immediate strong blow: 1 min. - 2 psi; 5 min. - 8 psi; 7 min. - 7 psi; 10 min. - 0 psi.

Shut-in: 60 min.

No GTS.

Recovered:

44 bbls fluid:

1472' drilling mud

552' mud-cut water

1313' water

Sample Chamber:

2650 cc water at 10 psi; no gas

Make-up water 10+ ohms at 66° F Fresh

Pit mud 8 ohms at 64° F 24 ppm chlorides

Top drill pipe 1.8 ohms at 58° F 2303 ppm chlorides

Middle .14 ohms at 64° F 36,363 ppm chlorides

Bottom 1.2 ohms at 64° F 515 ppm chlorides

Sample chamber .12 ohms at 58° F 39,393 ppm chlorides

Pressures (psi):

	Bottom Chart	Top Chart
IH	1579	1531
IF	1426-1509	1354-1436
ISI	1523	1477
FF	1509-1523	1436-1477
FSI	1523	1477
FH	1565	1518
BHT	84° F	

### DEVIATION SURVEYS

DEPTH (FEET)	ANGLE (DEG)	DEPTH (FEET)	ANGLE (DEG)
105	1/2	1979	4
135	1/2	2041	4 3/4
244	1/2	2230	4 1/4
310	1/2	2295	4 1/4
369	1/4	2388	5 1/2
460	1 1/2	2486	5 1/4
521	1/2	2549	5 3/4
585	3/4	2641	6 1/4
616	3/4	2726	6 1/4
710	1	2821	6 1/2
782	3/4	2987	7 1/2
818	2 3/4	3034	7 3/4
882	2 3/4	3096	7 1/2
922	2 1/2	3158	7 1/2
1069	2	3252	8
1132	2	3374	8 1/2
1250	2 3/4	3503	9
1381	3	3670	8 1/2
1445	3 1/4	3780	9 1/2
1508	2 1/4	4001	9 1/2
1571	2 1/4	5282	9 3/4
1634	1 3/4	6055	17 (with 21° tool tool)
1728	2	6061	15+ (with 14° tool)
1826	3 1/2	6155	17
1916	4 1/2	6212	15

### BIT RECORD

#	SIZE (IN.)	TYPE	DRILLED INT (FT)	FEET	HRS	FT/HR	WOB	RPM	PP	ICS	OCS	B/S	G
1	12	1/4ATJ1S	50-254	204	10.5	19.4	2-6	80	600	4	4	F	I
2	12	1/4J2	254-308	54	15.5	3.5	6	90	600	6	6	E	I
3	12	1/4ATM11C	308-735	427	55.5	7.7	10-14	120	800	4	4	E	I
4	12	1/4SDGH	50-517	467	17	27.4	10-12	120	800	4	4	E	I
5	14	3/4OSC1GJ	517-698	181	14.5	12.4	10-12	120	800	8	2	E	I
6	14	3/4FDT	698-735	37	1.5	24.6	10-12	120	800				
7	14	3/4F2	735-806	71	16	4.4	8-10	120	800	6	4	F	I
8	9	7/8FP53A	806-942	136	27.5	4.9	6	120	1200	2	2	E	I
9	9	7/8FP53A	942-1370	428	43.5	9.8	14-16	180	850	3	3	E	I
10	9	7/8ATM11H	1370-2383	1013	82	12.3	14-20	120	700	4	6	F	1/8
11	9	7/8S84F	2383-2458	75	7.5	10	10-14	120	700	6	6	F	1/8
12	9	7/8FP53J	2458-2711	2535	2.5	4.8	10-16	68	800	3	3	E	I
13	9	7/8ATJ33	2711-3015	3048	3.5	3.6	10	120	1000	3	3	E	I
14	8	3/4S82FJ4	3015-3277	2625	0.5	5.1	14-16	120	1000	4	4	E	1/8
15	8	3/4F3H	3277-3729	4524	0.5	11.1	16-26	120	1100	4	5	E	3/8
16	8	3/4S86H	3729-4148	4194	6	9.1	32-34	68	1300	3	3	E	1/8
17	8	3/4ATJ33	4148-4350	2021	9.5	10.3	34	68	1250	3	3	E	I
18	8	3/4M84F	4350-4784	4344	8	9.04	40	68	1300	8	8	E	1/4
19	8	3/4F4	4784-5318	5345	4.5	9.79	42-45	68	1400	4	6	E	1/8
20	8	3/4F4	5318-6061	7437	5	9.91	45	68	1450	4	4	E	I
21	8	3/4M84F	6061-6254	1933	1.5	6.13	35	68	1300	8	8	E	1/8
22	8	3/4F5	6254-6392	1381	6.5	8.36	35	68	1300	2	2	E	I

## LITHOLOGY

NOTE: All depths are given in feet.

INTERVAL	%	LITH	DESCRIPTION
738-760	100%	SS	lt tan-tan, occ lt yel tan, vf-fg. v lmy, m hd-hd, tt, (spl s v spse); abdt lge crs ang clr qtz frags. Poor spl qty and qlty.
760-770	70%	LS	gr brn, sm wh, micxln, dns, sm suc, abdt iron deposits, v sdy.
	30%	SS	clr-wh orng, vf-fg, ws, fri-prly cons.
770-780	60%	LS	AA sdy alt with-
	40%	SS	AA lmy.
780-790	50%	LS	AA alt with-
	50%	SS	AA.
790-800	70%	LS	AA alt with-
	30%	SS	AA. Poor spl qty.
800-810	50%	LS	brn gr, sm wh, mic-f xln, dns, sm suc, sdy.
	30%	DOL	lt brn-crm, vf-f xln, dns, sil, sdy.
	20%	SS	AA.
810-820	20%	LS	AA.
	60%	DOL	lt brn-crm, qtztc, v hd, sil, glssy, tt.
	20%	SS	AA.
820-840	100%	SS	tan-sm yel tan, vf-fg, sl dolo-sil, v hd, tt, glssy. Spl frags v crs & orng.
840-860	30%	LS	gr, rthy, slty.
	70%	SS	tan, v crs frags, sm fines.
860-880	20%	DOL	brn-gr brn, rthy, slty.
	70%	SS	AA.
	10%	SLTST	dolo.
880-910	80%	SS	lt brn-grn, sm wh, crs ang qtz gns, lmy & dolo ip.
	20%	SLTST	vf-fg, m-w cons, v calc.
910-920	90%	SS	lt-dk brn crs qtz, sm dolo.
	10%	SLTST	dk gr-brn, w cons, calc.
920-930	100%	SS	AA bec orng & wh.

INTERVAL	%	LITH	DESCRIPTION
930-940	60%	SS	pred tan-tan wh, vf-occ fg, v hd, tt, sil-sl dolo, orthoqtzite.
	20%	SLTST	gr, hd, calc-sl dolo.
	20%	SH	blk, blk, rthy, gran-slty, m sft.
940-950	20%	LS	dk gr-gr brn ip, v hd, dns, dolo ip, slty ip, has sulfur odor in acid.
	60%	SS	tan, qtztc AA.
	20%	SH	AA.
950-960	70%	LS	lt gr, mic-crp xln, hd, dns; sm lt gr wh, rthy, sdy ip, dns.
	30%	SS	AA.
960-970	30%	LS	AA.
	70%	SS	AA.
970-980	10%	LS	AA.
	90%	SS	lt-dk gr, brn, orng, ang-blky qtz, v tt, v dolo, sm lmy.
980-1000	80%	SS	AA.
	20%	SLTST	orng, vfg, m-w cons, lmy, sil.
1000-1010	70%	LS	pred dk gr, mic-fg xln ip, hd, dns, gran-sl sdy ip; sm lt gr-gr wh, rthy, chlky, slty-sdy ip.
	30%	SS	AA.
1010-1020	90%	LS	m gr-tan, crp xln, hd, dns, sil, with sm gr wh, chlky. AA.
	10%	SS	
1020-1030	100%	LS	m gr tan & lt gr wh AA.
1030-1040	10%	LS	AA.
	50%	SS	tan-yel tan, vfg, grads to--
	40%	SLTST	v lmy-calc, hd, tt, dirty, with crs calct incl.
1040-1050	40%	LS	m-sm lt gr, mic-crp xln, hd, dns.
	30%	SS	AA.
	30%	SLTST	AA.
1050-1060	10%	LS	AA.
	40%	SS	tan-lt yel tan, vfg, m hd-m sft, v lmy-calc, tt, dirty.
	50%	SLTST	AA.

INTERVAL	%	LITH	DESCRIPTION
1060-1070	100%	LS	blk-dk gr, mic-crp xln, sil ip, hd, dns, with sm frac fill.
1070-1080	70%	LS	AA.
	10%	SS	tan-lt yel tan, vfg, m hd-m sft, v lmy-calc, tt, dirty.
	20%	SLTST	tan-yel tan, sdy.
1080-1090	40%	SS	AA.
	60%	SLTST	AA.
1090-1100	60%	DOL	m-dk gr, mic xln, hd, dns.
	30%	SLTST	tan-yel tan, sdy.
	10%	SH	blk, plty, fm-hd.
1100-1110	20%	DOL	dk gr, mic AA.
	30%	SS	tan-tan orng, vfg, dolo-calc, hd, tt, dirty.
	50%	SLTST	tan-tan orng, sdy, dolo-calc, hd, tt, dirty.
1110-1120	40%	SS	AA.
	60%	SLTST	AA.
1120-1130	90%	LS	gr, crp xln, hd, dns; sm wh chlky, arg, sft (washes out of spls).
	10%	SLTST	AA.
1130-1140	20%	LS	AA.
	20%	SS	tan-tan orng, slty, dolo-calc, hd, tt, dirty.
	60%	SLTST	tan-tan orng, sdy, dolo-calc, hd, tt, dirty.
1140-1160	40%	SS	tan-crm ip-yel, occ wh, sl slty.
	60%	SLTST	tan-crm, m fm-m hd, calc-sl dolo, dirty, tt.
1160-1170	70%	LS	pred gr-gr tan, rthy-mic xln, sdy ip, qtztc, hd, dns; sm m gr, crp xln, dns.
	10%	SS	AA.
	20%	SLTST	AA.
1170-1180	60%	LS	AA with sm gr brn, gran, dolo, hd, dns.
	20%	SS	AA.
	20%	SLTST	AA.
1180-1190	10%	LS	AA.
	90%	SS	tan-tan wh, occ wh, vfg, hd, glssy, v calc-lmy, tt.

INTERVAL	%	LITH	DESCRIPTION
1190-1200	20%	LS	AA occ wh chlky, rthy.
	80%	SS	AA.
1200-1220	100%	SS	tan-tan wh, tan orng, vfg, m hd-hd, v calc-lmy, glssy, silty ip.
1220-1260	60%	LS	lt gr-tan gr, mic-pred rthy, slty, m fm-m sft, dirty.
	20%	SS	tan-tan wh, tan orng, vfg, m hd-hd, v calc-lmy, glssy, slty ip.
	20%	SLTST	tan, sdy, v calc-lmy, tt.
1260-1270	100%	SS	tan-tan orng, vfg, glssy, m hd, tt, v calc-lmy.
1270-1300	100%	LS	brn-tan, mic-pred rthy, slty, arg.
1300-1310	60%	LS	gr tan, rthy, arg-mica ip, m sft, slty ip.
	40%	SH	blk, m sft, rthy, blk-pty, gran (sm washes out).
1310-1330	100%	SH	blk, m sft-sft (washes out of spls), blk-pty ip, rthy, gran, v carb.
1330-1340	30%	LS	lt gr-gr tan, pred rthy-sm mica, arg, sdy ip, dns, dirty.
	70%	SH	AA.
1340-1350	60%	LS	AA.
	20%	SS	lt tan, vf-fg ip, m hd, glssy, v calc-lmy.
	20%	SH	blk AA.
1350-1360	80%	DOL	brn-gr brn, tan, mica, lmy ip, rthy ip, gran, hd, dns, frac fill.
	20%	SH	occ blk AA.
1360-1370	100%	DOL	AA.
1370-1380	40%	DOL	brn-gr brn, tan, mic, lmy ip, rthy ip, gran, hd, dns, frac fill.
	40%	SS	tan yel, vfg, hd, glssy, lmy, tt.
	20%	SLTST	tan yel, sdy, hd, lmy, tt.
1380-1390	60%	LS	pred wh, rthy, v silty ip, vf sdy, sft, occ tr gr, crp xln.
	20%	SS	lt yel tan, wh, vfg, v slty, glssy, hd, lmy.
	20%	SLTST	lt yel tan, wh, sdy, hd, lmy.

INTERVAL	%	LITH	DESCRIPTION
1390-1400	50%	SS	AA.
	50%	SLTST	AA.
1400-1420	70%	LS	wh, rthy, sdy (washes out), sft; sm gr, crp-mic xln, hd, dns.
	10%	SS	yel tan, slty ip, hd, tt, glssy, v lmy.
	20%	SLTST	yel tan, v sdy, hd, tt, v lmy.
1420-1430	30%	LS	AA.
	30%	SS	AA.
	40%	SLTST	AA.
1430-1480	30%	SS	tan-tan yel, lmy, glssy, hd, tt.
	70%	SLTST	tan orng, sdy ip, lmy, hd, tt.
1480-1500	30%	LS	pred dk gr, crp xln, m hd, dns; sm m gr.
	30%	SS	AA.
	40%	SLTST	AA.
1500-1510	20%	LS	m gr, sm lt-dk gr, crp xln, hd, dns; sm wh, sft, chlky (washes out).
	30%	SS	tan, sm lt gr wh, vfg, slty, m sft-m fm, lmy.
	50%	SLTST	tan orng, sdy, m sft-fm, lmy.
1510-1520	40%	LS	AA.
	20%	SS	AA.
	40%	SLST	AA.
1520-1530	10%	LS	AA.
	20%	SS	AA.
	60%	SLTST	AA.
	10%	SH	blk & red, lmy, slty.
1530-1540	10%	LS	AA.
	30%	SS	AA.
	60%	SLTST	AA.
1540-1550	40%	SS	AA incr wh, vfg, v hd, tt, glssy, lmy.
	60%	SLTST	yel tan-tan, lt gr, wh, vfg, sdy, hd, glssy ip, lmy.
1550-1560	30%	SS	AA.
	70%	SLTST	AA.
1560-1580			No spls-lost circ.

INTERVAL	%	LITH	DESCRIPTION
1580-1600	50%	SS	yel tan-tan, vfg, slty, hd, tt, glssy, lmy.
	50%	SLTST	tan, sdy, lmy, hd, tt.
1600-1610	40%	SS	tan, sm lt brn, tan yel, sm wh, vfg, sbglssy ip, m hd-hd, tt, lmy.
	60%	SLTST	tan yel, sdy, lmy, m hd-hd, tt.
1610-1620	30%	SS	AA.
	60%	SLTST	AA.
	10%	SH	blk, blk, slty, gran, carb, m sft.
1620-1630	40%	SS	AA.
	60%	SLTST	AA.
1630-1640	40%	LS	AA.
	50%	SLTST	AA.
	10%	SH	AA.
1640-1650	20%	SS	AA.
	80%	SLTST	AA.
1650-1660	40%	LS	brn-gr brn, tr mic-crp xln, pred slty, arg ip, dirty.
	20%	SLTST	tan-brn, v lmy, shly, sdy ip.
	40%	SH	gr brn-tan, rthy, lmy, slty, m sft-fm. Spls bec more rthy & dkr.
1660-1680	20%	LS	AA.
	30%	SLTST	AA.
	50%	SH	gr, brn, tan, rthy, lmy, slty, m sft-m hd.
1680-1690	40%	LS	AA.
	20%	SS	tan-brn, v lmy, shly, slty, fm-hd.
	20%	SLTST	tan-brn, v lmy, shly-sdy, tt.
	20%	SH	gr, brn, tan, rthy, lmy, slty, m sft-m hd.
1690-1700	20%	LS	AA.
	20%	SS	AA.
	20%	SLTST	AA.
	40%	SH	AA.
1700-1720	70%	LS	dk gr-tan, slty ip, mic xln; sm rthy.
	30%	SLTST	tan, calc, hd.
1720-1730	60%	LS	AA bec m slty.
	40%	SLTST	AA.

INTERVAL	%	LITH	DESCRIPTION
1730-1750	80%	LS	m gr-tan, slty, mic xln, sm rthy, spse wh calct.
	20%	SLTST	tan, v calc.
1750-1760	50%	LS	AA with sm tan-red tan ip, slty.
	50%	SLTST	tan, v calc.
1760-1800	90%	LS	m-dk gr, sm lt gr-tan, v-sl slty, rthy ip, mic xln, sl sdy ip.
	10%	SLTST	tan, v calc, hd.
1800-1820	50%	LS	lt-m gr, sm dk gr, mic xln ip, sm rthy, slty.
	50%	SLTST	tan-red brn, calc.
1820-1840	90%	LS	AA.
	10%	SLTST	AA.
1840-1860	70%	LS	AA.
	30%	SLTST	AA.
1860-1880	80%	LS	AA bec lt gr-m gr, spse dk gr, slty ip, mic xln, sm rthy.
	20%	SLTST	AA.
1880-1900	90%	LS	AA.
	10%	SLTST	AA.
1900-1910	80%	LS	lt tan-lt gr, sm m gr, spse slty & rthy, most mic xln.
	20%	SLTST	tan-red brn, calc.
1910-1980	30%	LS	AA bec m slty & dkr in color.
	70%	SLTST	AA.
1980-2000	30%	LS	m gr, mic xln, rthy ip, slty.
	70%	SLTST	tan-lt gr, calc.
2000-2020	50%	LS	tan-m gr, dk gr ip, slty, mic xln-rthy.
	50%	SLTST	tan-lt gr, calc.
2020-2030	60%	LS	AA.
	40%	SLTST	AA.
2030-2040	100%	LS	AA.

INTERVAL	%	LITH	DESCRIPTION
2040-2050	60%	LS	AA.
	40%	SLTST	AA.
1050-2070	70%	LS	m gr, sm lt gr, mic xln, rthy ip, slty ip.
	30%	SLTST	tan-lt gr, calc.
2070-2090	80%	LS	AA slty ip.
	20%	SLTST	AA.
2090-2100	90%	LS	m gr, dns ip, mic xln, rthy ip.
	10%	SLTST	AA.
2100-2130	80%	LS	lt-m gr, sm dk gr, mic xln, rthy ip, slty, small calct veins & spse xtls.
	20%	SLTST	tan-lt gr, calc.
2130-2150	100%	SH	blk, blk-ply ip, m fm-m sft (washes out), v lmy, lvs abdt dk insol res in acid, vf mica.
2150-2160	40%	LS	m-dk gr, dolo, mic xln, slty.
	20%	SLTST	tan, lmy-dolo.
	40%	SH	AA.
2160-2170	80%	LS	AA m gr.
	20%	SLTST	AA.
2170-2180	60%	LS	AA bec lt-m gr.
	20%	SS	wh-lt tan, calc, hd, vfg.
	20%	SLTST	AA.
2180-2200	20%	LS	AA.
	60%	SS	AA.
	20%	SLTST	AA.
2200-2240	20%	LS	m gr, slty-sdy, hd.
	60%	SS	wh-tan, vfg, calc, hd.
	20%	SLTST	tan, calc.
2240-2250	30%	LS	lt-m gr, slty-sdy.
	50%	SS	milky-tan, vfg, calc.
	20%	SLTST	tan-red brn, calc, sdy.
2250-2260	30%	DOL	m gr, slty, lmy ip.
	30%	SS	wh-tan, vfg, calc, hd.
	40%	SLTST	varicol tan-red brn, lmy-dolo, sdy.

INTERVAL	%	LITH	DESCRIPTION
2260-2270	60%	DOL	m gr, slty, hd.
	40%	SLTST	AA.
2270-2280	70%	DOL	AA dk gr.
	30%	SLTST	tan-varicol ip, dolo.
2280-2290	80%	DOL	AA m-dk gr.
	20%	SLTST	AA.
2290-2300	40%	DOL	m gr, slty, lmy ip.
	60%	SLTST	tan-spse varicol, lmy-dolo.
2300-2310	20%	DOL	m gr, sdy-slty.
	20%	SS	wh-lt gr, dolo-lmy, vfg.
	60%	SLTST	tan-spse varicol, lmy-dolo.
2310-2320	20%	DOL	AA slty.
	80%	SLTST	AA dolo.
2320-2330	50%	DOL	m gr, slty.
	50%	SLTST	tan-varicol ip, dolo.
2330-2340	70%	DOL	AA bec m-dk gr.
	30%	SH	AA.
2340-2360	40%	DOL	m-dk gr, slty.
	60%	SLTST	tan-varicol-red brn, dolo, sdy.
2360-2370	60%	DOL	AA.
	40%	SLTST	AA.
2370-2380	20%	DOL	AA.
	30%	SLTST	AA.
	50%	SH	blk, hd, dolo, slty.
2380-2390	10%	DOL	AA.
	20%	SLTST	AA.
	70%	SH	AA.
2390-2400	10%	DOL	AA.
	10%	SLTST	AA.
	80%	SH	AA.
2400-2450	100%	SH	blk, slty, dolo, vf mic, plty.

INTERVAL	%	LITH	DESCRIPTION
2450-2500	100%	SH	dk gr-blk, sooty-rthy, dolo, slty, spse mic, v hd, spse wh calct fracs; sm m gr; bec v slty & lmy in lwr pt.
2500-2510	30%	SLTST	dk gr, dolo, arg, v hd, NSFOC.
	70%	SH	dk gr-blk, sooty-rthy, dolo, v hd, v slty.
2510-2520	20%	SLTST	AA.
	80%	SH	AA hd, slty ip.
2520-2530	100%	SH	dk gr-blk, plty-blky ip, pred hd, slty ip, vf mic dism, v lmy-calc, sulfur odor in acid, calct frac fill.
2530-2540	60%	LS	lt-m gr, sm dk gr, mica, dns, hd, slty-sdy; sm lt gr wh, rthy, sbchlky, m sft, strong sulfur odor in acid, abdt blk insol res in acid.
	40%	SH	dk gr-blk, plty-blky, m fm-hd, calc-lmy, vf dism mica.
2540-2550	50%	LS	AA.
	50%	SH	AA.
2550-2560	20%	LS	lt-m gr, mic xln, hd, arg, blk insol res in acid.
	80%	SH	dk gr-blk, plty-blky, m fm-hd, calc-lmy, vf dism mica.
2560-2570	10%	LS	AA.
	90%	SH	AA.
2570-2580	50%	LS	m-dk gr, spse lt gr, mic xln, hd, spse wh calct frac fill, arg, slty ip.
	50%	SH	blk, plty-blky, calc, sooty-rthy, hd, mica ip.
2580-2600	20%	LS	dk gr-blk, mic-crp xln, arg, faint sulfur odor in acid, NSFOC.
	80%	SH	sooty blk, lmy, v hd, brit, blk res in acid.
2600-2610	50%	LS	dk gr, mic xln, mic suc, arg-slty, mica, hd, tt, NSFOC, sl sulfur odor in acid, spse calct fracs.
	20%	SLTST	dk gr-dk red gr, calc, arg, mica, hd.
	30%	SH	blk, calc, slty, mica, v hd.

INTERVAL	%	LITH	DESCRIPTION
2610-2620	20%	LS	dk gr, hd, tt, v arg, crp xln.
	80%	SH	AA.
2620-2630	40%	LS	m-dk gr, mic xln, mic suc, arg, hd, tt, wh calc in spse thin frags, NSFOC.
	60%	SH	blk, sooty, lmy, hd, mica ip.
2630-2640	60%	LS	AA.
	40%	SH	AA.
2640-2650	40%	LS	m-dk gr, mic-crp xln, mica ip, arg, hd, tt, blk res in acid.
	60%	SH	blk, sooty, lmy.
2650-2660	50%	LS	dk gr, shly, rthy, dns, m sft-m hd; sm lt gr-gr wh, rthy, sbchlky, arg, sft.
	50%	SH	AA.
2660-2670	60%	LS	AA with sm mot wh, rthy, gr, mic-crp xln.
	20%	SS	wh-v lt gr, pnk, lt orng, vfg, v slty, calc, v hd, tt, sbglyssy.
	10%	SLTST	lt orng-v lt tan, sdy, calc, hd, tt.
	10%	SH	AA.
2670-2680	40%	SS	AA.
	60%	SLTST	AA.
2680-2690	20%	SS	varicol, v hd, lmy.
	60%	SLTST	varicol, v hd, lmy-calc.
	20%	SH	blk, plty-blky, m hd-hd, lmy.
2690-2710	40%	SS	wh-lt gr-lt tan, s&p ip, vfg-slty, calc, v hd, tt.
	60%	SLTST	lt tan, s&p ip, calc, hd, tt.
2710-2720	40%	SS	AA sm red brn-orng brn.
	40%	SLTST	AA.
	20%	SH	blk, sooty, calc, hd, blk insol res in acid.
2720-2730	50%	SS	varicol orng gr-red gr-m gr, vfg, calc, v hd, tt.
	40%	SLTST	varicol, sdy, calc, hd, tt.
	10%	SH	sooty blk, calc, hd, blk res in acid.
2730-2740	20%	LS	m-dk gr ip, mic xln, slty, arg ip, v hd, tt.
	40%	SS	AA.
	40%	SLTST	AA.

INTERVAL	%	LITH	DESCRIPTION
2740-2750	10%	LS	AA.
	10%	SS	AA.
	50%	SLTST	tan-lt gr, calc, hd, tt.
	30%	SH	dk gr-blk, calc, mica, blk, hd.
2750-2760	40%	LS	dk gr, arg, v hd, tt.
	20%	SLTST	AA.
	40%	SH	AA.
2760-2780	20%	LS	AA.
	30%	SLTST	dk gr, calc, v hd, tt.
	50%	SH	dk gr-blk, calc, mica, blk, hd.
2780-2790	70%	SLTST	m gr, calc, hd, tt.
	30%	SH	dk gr-blk, calc, mica, hd.
2790-2800	40%	LS	dk gr, arg, hd.
	20%	SLTST	lt tan-red gr-m gr, calc, hd.
	40%	SH	dk gr, v lmy, hd.
2800-2810	20%	LS	AA.
	20%	SLTST	tan-wh, calc, hd.
	60%	SH	dk gr-blk, sooty-rthy, lmy, hd, plty-blk.
2810-2820	40%	LS	AA clyey.
	20%	SLTST	AA.
	40%	SH	AA lmy, dk gr-blk, hd (washes out).
2820-2830	60%	LS	dk gr, mic xln, hd, tt.
	20%	SLTST	tan-lt gr, calc, hd.
	20%	SH	dk gr-blk, blk, calc, hd.
2830-2840	40%	LS	dk gr, mic xln, arg, hd, tt.
	60%	SLTST	lt tan-m gr, red gr ip, calc, hd.
2840-2850	20%	LS	AA.
	30%	SLTST	AA.
	50%	SH	dk gr, blk-plty, m hd-hd, lmy.
2850-2860	30%	LS	dk gr, pred shly-rthy-mic xln ip, hd.
	40%	SLTST	lt gr-red gr, calc, hd.
	30%	SH	AA.
2860-2870	30%	LS	dk gr, shly-rthy, slty, hd.
	50%	SLTST	AA.
	20%	SH	dk gr-blk, calc, hd.

INTERVAL	%	LITH	DESCRIPTION
2870-2880	40%	LS	AA v shly.
	30%	SLTST	AA most m gr.
	20%	SH	blk, calc, slty, plty, hd.
2880-2890	30%	SLTST	wh-lt gr-red gr, calc, hd.
	70%	SH	AA.
2890-2900	100%	SH	blk, calc, slty, plty, hd.
2900-2920	20%	SLTST	tan, v shly, calc, hd.
	80%	SH	blk, calc-dolo, mica, hd; sm washes out, sft, gummy ip.
2920-2960	100%	SH	blk, calc, mica ip, blk-pty, sooty-rthy, hd; sm v sft, gummy, washes out.
2960-2970	20%	SLTST	lt gr, calc, hd, tt.
	80%	SH	blk, rthy, slty, calc, hd.
2970-2980	60%	LS	m gr, slty-mic xln, hd, tt.
	40%	SLTST	wh-lt gr, s&p ip, calc, hd, tt.
2980-2990	30%	LS	AA.
	50%	SLTST	AA.
	20%	SH	blk, plty, sl calc, mica, hd.
2990-3010	80%	LS	pred m gr, mica, hd, dns, slty-vf sdy ip; sm lt gr wh, rthy-mic xln ip, sl slty, grads to--
	20%	SLTST	orng brn, calc, hd.
3010-3020	40%	LS	dk gr, shly, hd.
	10%	SLTST	orng brn, calc, hd.
	50%	SH	dk gr, calc, hd.
3020-3030	40%	LS	AA bec slty.
	40%	SLTST	lt gr-lt tan, calc, hd.
	20%	SH	AA. (Spl contains mica-LCM).
3030-3040	40%	LS	AA.
	30%	SLTST	lt gr-tan, calc, m hd-hd, v sdy ip.
	30%	SH	dk gr-blk, plty-blky, lmy ip.
3040-3050	50%	LS	m-sm dk gr, mic xln, hd, dns, sdy ip; sm gr wh, mic xln-rthy, chlky, sdy-slty.
	30%	SLTST	AA.
	20%	SH	AA.

INTERVAL	%	LITH	DESCRIPTION
3050-3060	80%	LS	AA.
	20%	SH	dull gr-blk, plty-blky, lmy ip.
3060-3070	60%	LS	AA bec more dk gr & pred mic xln, dns, shly ip.
	20%	SLTST	lt gr-tan, calc, m hd.
	20%	SH	AA.
3070-3080	50%	LS	AA.
	20%	SLTST	AA.
	30%	SH	dk gr, blky-plty, m fm, v sl calc, vf dism mica.
3080-3090	40%	LS	m-dk gr, slty-shly, hd, tt.
	20%	SLTST	tan-lt gr, calc, hd.
	40%	SH	blk, calc, hd.
3090-3100	50%	LS	AA.
	20%	SLTST	AA.
	30%	SH	AA.
3100-3110	60%	LS	m-dk gr, shly, hd, dns, tt.
	10%	SLTST	tan-lt gr, calc, hd.
	30%	SH	blk, calc, hd.
3110-3120	30%	LS	m-dk gr, v slty, hd, tt.
	50%	SLTST	dk gr-blk, m gr ip, dolo, hd, calc frags, shly ip.
	20%	SH	AA.
3120-3130	30%	LS	AA.
	70%	SLTST	AA.
3130-3140	20%	LS	m-dk gr, v slty-shly, hd, tt.
	80%	SLTST	dk gr-blk, sm m gr, dolo, shly, mica ip, blk res in acid.
3140-3150	20%	LS	AA.
	40%	SLTST	AA bec v shly, dolo.
	40%	SH	blk, plty, slty, dolo, hd.
3150-3160	10%	LS	AA.
	20%	SLTST	m gr, v shly, calc, hd.
	70%	SH	AA v slty, dolo-calc.

INTERVAL	%	LITH	DESCRIPTION
3160-3170	10%	LS	lt gr-wh, rthy, m sft, lvs abdt res lse sd gns aft lmy cmt dissolves in acid.
	20%	SS	lt-m gr, vf-occ fg, sbang-sbrd, m hd, brit, tt, v lmy.
	70%	SH	blk, plty, slty, dolo, hd.
3170-3190	20%	LS	AA v sdy.
	80%	SS	AA.
3190-3200	20%	LS	AA.
	40%	SS	lt gr, vfg-slty, hd, tt, lmy-calc.
	20%	SLTST	lt gr, hd, tt, lmy-calc.
	20%	SH	blk, blk, slty, hd, calc.
3200-3210	40%	SS	lt-m gr, vfg-slty, calc, sbrd, m hd, tt, qtz gn res in acid.
	40%	SLTST	m-dk gr, calc-dolo, hd.
	20%	SH	AA.
3210-3220	40%	SS	AA bec dolo.
	20%	SLTST	AA.
	40%	SH	dk gr-blk, dolo, slty, m hd.
3220-3230	20%	SS	AA.
	20%	SLTST	orng tan, calc-dolo, hd.
	60%	SH	dk gr-blk, dolo, slty, hd.
3230-3240	10%	SS	AA.
	30%	SLTST	AA.
	60%	SH	AA.
3240-3250	20%	SLTST	m-dk gr, calc-dolo, v shly, m hd.
	80%	SH	dk gr-blk, dolo, slty, hd.
3250-3260	40%	SLTST	m gr-tan, calc-dolo, shly, m hd.
	60%	SH	AA.
3260-3270	20%	SS	lt gr-tan, vfg, calc, hd, tt.
	30%	SLTST	m-dk gr, v shly, calc, hd.
	50%	SH	dk gr-blk, dolo, v slty, mica, hd.
3270-3280	20%	SLTST	tan-lt tan orng, calc, hd.
	80%	SH	blk, plty-blky ip, fm-m hd, brit, rthy, vf dism mica.
3280-3310	100%	SH	blk, blk, plty, m hd-hd, lmy, vf dism mica, rthy, occ calct frac fill.

INTERVAL	%	LITH	DESCRIPTION
3310-3320	20%	SLTST	occ tan, hd-m hd, lmy.
	80%	SH	AA.
3320-3350	100%	SH	blk, plty-blky, hd-v hd, brit, v lmy-calc, rthy, occ frac fill.
3350-3370	10%	SLTST	tan-lt tan orng.
	90%	SH	AA.
3370-3390	80%	DOL	pred lt-sm m brn, vf xln, looks vf sdy ip, sbrthy, m hd; sm m-dk gr, vf xln, occ crp xln, hd, dns, .NSFOC
	20%	SH	blk, plty-blky, hd-v hd, britt, v lmy-calc, rthy, occ frac fill.
3390-3410	100%	DOL	m-dk gr, lt gr-wh ip, slty ip, rthy ip, spse s&p, NSFOC.
3410-3420	50%	LS	lt-m gr-brn gr ip, slty & rthy ip, mic xln ip, m sft-fm, hd ip, NSFOC.
	30%	DOL	AA.
	20%	SLTST	tan, calc-dolo, rthy.
3420-3430	70%	LS	tan-m gr, vf xln-rthy, slty ip, fm-hd, NSFOC.
	30%	DOL	brn gr, mic xln, sm rthy, hd, NSFOC. (Cavings in spl)
3430-3460	20%	LS	tan-m gr, slty, rthy, fm, NSFOC.
	60%	DOL	brn-dk gr, vf-mic xln, sm rthy, sdy-slty ip, bec hd in lwr pt, NSFOC.
	20%	SLTST	lt gr-tan, calc-dolo.
3460-3470	20%	LS	AA.
	80%	DOL	AA v slty ip.
3470-3480	100%	LS??	lt-m gr, sft, num qtz gns. (Hole probs-poor ret-LCM).
3480-3500	80%	DOL	brn gr-m gr, vf-mic xln, slty ip, fm-hd, NSFOC.
	20%	SLTST	lt gr-tan, calc-dolo.
3500-3510	40%	DOL	tan, vf slty & v lmy ip, hd.
	40%	SLTST	AA lmy, vf sdy ip, hd.
	20%	SH	blk, plty-blky, hd, lmy, slty ip, rthy.

INTERVAL	%	LITH	DESCRIPTION
3510-3520	30%	DOL	AA.
	20%	SLTST	AA.
	50%	SH	AA.
3520-3530	10%	DOL	AA.
	20%	SLTST	lt gr-tan, calc-dolo, hd.
	70%	SH	blk, plty-blky, hd, lmy, slty ip, rthy.
3530-3570	20%	SLTST	occ tan-lt gr tan, vf sdy, v lmy.
	80%	SH	v blk, m fm-m hd, blk-plty; sm m gr, smth, sft, gummy, lmy, rthy, slty, washes out, lvs abdt blk insol res in acid.
3570-3580	40%	SLTST	brn gr-m gr, dolo, rthy, fm.
	60%	SH	dk gr-blk, sooty-rthy, dolo, carb, m sft-fm.
3580-3590	70%	DOL	brn gr-m gr, vf-mic xln, slty ip, fm-hd.
	30%	SLTST	AA.
3590-3600	90%	DOL	AA bec less slty & v hd.
	10%	SLTST	AA.
3600-3620	100%	DOL	m gr, dk gr ip, mic xln-rthy, calc ip, hd, dns; sm m brn gr, sl slty.
3620-3630	40%	DOL	m-dk gr, sm brn gr, mic xln-rthy, shly-slty ip, hd, dns.
	60%	SH	blk, v dolo, slty, mica, hd.
3630-3640	30%	DOL	AA.
	70%	SH	AA.
3640-3650	20%	LS	m gr, rthy, m hd.
	40%	DOL	m-dk gr, rthy, slty, hd, dns.
	40%	SH	dk gr-blk, dolo, hd.
3650-3660	80%	LS	AA.
	20%	SH	AA.
3660-3670	90%	LS	pred mot wh, rthy, chlky & gr, mic xln, dns, m hd, sdy, calct frac fill.
	10%	DOL	lt-m gr, vf-mic xln, sm rthy & calc, hd, dns.
3670-3680	70%	LS	AA.
	30%	DOL	tan, gr, sm gr tan, vf-mic xln, hd, dns, shly ip.

INTERVAL	%	LITH	DESCRIPTION
3680-3700	80%	DOL	AA.
	20%	SH	gr, dolo, hd.
3700-3730	30%	DOL	AA.
	70%	SH	AA. (V pr spls-hole caving).
3730-3740	60%	DOL	m-dk gr, rthy-mic xln, v hd, dns.
	40%	SH	blk, dolo, plty-blky, mica ip, hd. (Pr spls-LCM).
3740-3750	40%	DOL	AA.
	60%	SH	AA.
3750-3790	100%	SH	blk, blky-plty, fm-hd, vf dism mica, calct frac fill, lmy-calc; when washing spl wtr becs v blk & spls bec gummy ip.
3790-3820	20%	LS	lt gr, rthy, sft-mrly, occ tr mic xln, lt gr wh.
	80%	SH	dk gr-blk, blky-plty, hd, lmy-calc, vf dism mica, calct frac fill; sm lt-m gr, v rthy, v lmy.
3820-3830	100%	SH	m-dk gr, sm blk, dolo, sm v slty-rthy, sm calc, hd.
3830-3840	20%	DOL	m gr, shly-slty, hd, dns.
	80%	SH	AA.
3840-3850	40%	DOL	AA.
	60%	SH	m-dk gr, dolo-calc, plty-blky, slty, mica, hd.
3850-3860	20%	LS	lt-m gr, shly, rthy, m hd.
	20%	DOL	m gr, shly-slty, hd, dns.
	60%	SH	AA.
3860-3870	30%	LS	AA.
	10%	DOL	AA.
	60%	SH	m-dk gr, dolo-calc, plty-blky, slty, mica, hd.
3870-3880	30%	LS	m-dk gr, slty, rthy-mic xln, hd; sm wh, chlky, sft.
	70%	SH	AA.

INTERVAL	%	LITH	DESCRIPTION
3880-3890	50%	LS	AA.
	30%	DOL	m-dk gr, slty-shly, sm mica, hd, dns.
	20%	SH	dk gr, dolo, mica, hd.
3890-3900	60%	LS	m-dk gr, slty, rthy-mic xln, hd; sm wh, chlky, sft.
	20%	DOL	AA.
	20%	SH	AA.
3900-3910	80%	LS	lt-m gr, rthy-mic xln, hd, dns; sm wh, chlky, sft.
	20%	DOL	brn gr, v hd, dns.
3910-3920	60%	LS	AA.
	40%	SH	blk, dolo, mica, plty-blky, hd.
3920-3930	50%	LS	AA.
	50%	SH	blk-dk gr, blky-plty, hd, lmy-calc.
3930-3940	30%	LS	pred lt gr-lt gr wh, rthy, m sft, mrly; sm m gr-dk gr, mic xln-rthy, shly, dns.
	70%	SH	AA.
3940-3950	50%	LS	AA calct fracs thruout.
	50%	SH	dk gr-blk, blky-plty, m hd-hd, calc-lmy, rthy.
3950-3960	30%	LS	AA.
	70%	SH	AA.
3960-3970	40%	LS	lt gr & wh, chlky, rthy, arg, mrly; sm gr, mic xln, rthy, dns.
	60%	SH	dk gr-blk, blky-plty, m hd-hd, calc-lmy, rthy.
3970-3990	60%	LS	lt-m gr, rthy-mic xln, sm chlky, most hd, sm sft.
	40%	SH	dk gr-blk, dolo, hd, calct fracs.
3990-4010	80%	LS	m gr, rthy-mic xln, spse fracs with calct xtls, hd; sm chlky, sft.
	20%	SH	AA.
4010-4020	10%	LS	AA.
	20%	DOL	brn-tan, rthy-mic xln, hd, dns.
	70%	SH	dk brn-blk, dolo, mica, hd, calct frac fill.

INTERVAL	%	LITH	DESCRIPTION
4020-4030	30%	DOL	AA sm vf xln.
	70%	SH	AA.
4030-4040	20%	DOL	blk, dolo, mica, hd.
	80%	SH	blk, rthy, sft, disint in wash wtr.
4040-4050	50%	LS	m gr, sm chlky, vf-mic xln, sm rthy, m hd.
	20%	DOL	AA.
	30%	SH	blk, dolo-calc, mica, hd.
4050-4110	100%	LS	wh-lt gr, chlky, sm slty, m hd; sm m gr-tan, mic xln, hd, dns; sm dk gr, rthy, hd, dns.
4110-4120	70%	LS	AA.
	20%	DOL	tan-tr lt tan yel, rthy-mic xln ip, slty ip, with tr good calct xtl growth in fracs.
	10%	SLTST	tan, dolo-lmy, hd.
4120-4130	60%	LS	m gr, rthy-mic xln, m sft-hd; sm wh, chlky-marly, fm.
	20%	DOL	AA.
	20%	SH	dk gr, blk-ply, hd, lmy-calc.
4130-4140	50%	LS	AA.
	10%	DOL	AA.
	10%	SLTST	tan, dolo, hd.
	30%	SH	dk gr-blk, dolo, blk, hd.
4140-4150	70%	LS	mot-m gr, chlky-mic xln, m hd, sm slty.
	10%	DOL	tan, mic xln, hd, dns.
	30%	SH	blk, dolo, blk, hd.
4150-4170	60%	LS	m-dk gr, sm mot wh, mic xln, hd, dns.
	10%	DOL	tan-brn, vf-mic xln, hd.
	30%	SH	dk gr, dolo-calc, hd.
4170-4180	80%	LS	AA.
	20%	SH	AA.
4180-4190	100%	LS	m gr, sm dk gr, sm mot wh, vf-mic xln, sm rthy-chlky, sm v sdy, most hd.
4190-4200	80%	LS	AA m gr.
	20%	SH	dk gr, dolo, hd, rthy.

INTERVAL	%	LITH	DESCRIPTION
4200-4210	60%	LS	mot wh-lt gr, sm slty, chlky, m hd, foss ip.
	10%	DOL	tan, arg, hd.
	30%	SH	dk gr, dolo, sl mica, hd.
4210-4220	70%	LS	AA.
	10%	DOL	AA.
	20%	SH	AA.
4220-4240	70%	LS	pred wh, lt gr wh, chlky; sm m-dk gr, rthy- mic xln, hd, dns, shly ip, mot.
	30%	SH	dk gr-blk, blk-plty, lmy-calc, hd.
4240-4250	60%	LS	lt gr wh-wh, mot ip, rthy, chlky; sm dk gr, mic xln-rthy-shly, hd.
	40%	SH	AA.
4250-4260	80%	LS	AA.
	20%	SH	dk gr, rthy, dolo, slty, hd.
4260-4270	90%	LS	vari wh-dk gr, vf xln-rthy, chlky, sm slty, sft-hd.
	10%	SH	AA.
4270-4280	90%	LS	AA.
	10%	DOL	brn gr, mic xln, hd, dns.
4280-4300	70%	LS	vari wh-dk gr, vf xln-rthy, chlky, sm slty, sft-hd.
	20%	SLTST	lt gr, calc-dolo, hd.
	10%	SH	dk gr, dolo, hd.
4300-4310	60%	LS	wh-m gr, sm mot, sm slty, sm chlky, m-hd.
	20%	DOL	m gr, mic xln, hd, dns.
	20%	SLTST	wh-lt gr, calc, hd, brit.
4310-4320	70%	LS	AA bec most wh, chlky, v slty, sl chty, sil, m-hd.
	30%	DOL	AA.
4320-4340	50%	LS	AA with sm brn, mic xln.
	50%	DOL	m-lt gr, sil, slty, mic xln, hd, dns.
4340-4350	80%	LS	wh-m gr, mot, sm v slty, sil, sm v chlky, hd; sm brn, dolo, hd.
	20%	DOL	AA.

INTERVAL	%	LITH	DESCRIPTION
4350-4390	100%	LS	lt gr wh, has lt blu gr cast in wet unmag spls; pred rthy-mic xln ip, m hd, slty, sil ip; sm lt gry, crp xln, hd, dns, sil. LS has sl effervsns due to poss cly, sil, or dolo cmt. When washing wtr becs milky wh--chlk washes out, NSFOC; occ smky lt gr chty frags.
4390-4410	90%	LS	lt gr wh-wh, rthy, slty, arg-mic xln, sil, hd, dns; sm lt gr, mic-crp xln, sil, v hd, dns. Wash wtr bec v milky wh--washes out, weak efferv in acid due to sil and arg mat.
	10%	SLTST	tan-lt orng tan, rthy, calc, m hd.
4410-4500	100%	LS	lt gr-wh, most rthy, sm mic xln, occ spse sd gns, sil, m-v hd, lvs sil res in acid, milky wash wtr, v uniform, occ spse pyr xtls embdd.
4500-4570	100%	LS	wh-lt gr, sm m gr, rthy-mic xln, sil, spse qtz gns, spse pyr, hd, dns, milky wash wtr; occ smky gr CHT, sm slty-sdy.
4570-4600	80%	LS	pred m-dk gr, mic xln, dns-rthy, m fm, arg; sm mot gr & wh, rthy-mic xln, m sft, grads to--
	20%	SH	dk gr, rthy, lmy.
4600-4620	100%	LS	m-dk gr, mic xln, sm rthy, sil, hd, dns; sm lt gr-wh, rthy, m hd; spse smoky CHT frags.
4620-4690	80%	LS	m-dk gr, rthy-mic xln, sm v slty, sil, hd, dns, spse smky-blk CHT; sm wh-lt gr, rthy, m hd.
	20%	SH	m-dk gr-nr blk, calc-dolo, sil, sm mica, v hd.
4690-4700	60%	LS	m-dk gr, vf-mic xln, hd, dns.
	40%	SH	AA slty.
4700-4720	30%	LS	m gr, vf-mic xln, suc, hd, dns.
	70%	SH	dk gr-blk, slty, sil, dol, hd, blk-ply, mica.
4720-4730	40%	LS	m-dk gr, rthy-mic xln, sm slty-chlky, m hd.
	20%	SLTST	lt gr, calc-dolo, sft-fm.
	40%	SH	AA.

INTERVAL	%	LITH	DESCRIPTION
4730-4740	30%	LS	AA.
	20%	DOL	m gr, vf-mic xln, calc, sil, sm suc, hd, dns.
	20%	SLTST	AA.
	30%	SH	AA.
4740-4750	40%	LS	m gr, rthy-mic xln, dolo, sil, hd; sm lt gr, rthy.
	40%	SLTST	m-lt gr, dolo, sil, v chty, brit.
	20%	SH	dk gr-blk, dolo, sil, v hd.
4750-4760	50%	LS	AA v sil with num smky-blk chty frags.
	30%	SLTST	AA sil.
	20%	SH	AA.
4760-4770	60%	LS	m gr, sm dk gr, sm wh & rthy, vf-mic xln, slty, sil, fm-hd.
	40%	SLTST	lt gr, calc, sm s&p, fm-hd.
4770-4780	80%	LS	AA.
	20%	SLTST	AA.
4780-4790	100%	LS	m-dk gr, rthy-mic xln, v sil, slty, hd, dns; sm lt gr-wh, chlky-marly.
4790-4800	70%	LS	AA.
	30%	SLTST	m-dk gr, dolo, sil.
4800-4810	60%	LS	m-dk gr, rthy-mic xln, v sil, slty, hd, dns, with spse smky-blk chty frags.
	40%	SLTST	m gr, sil, dolo, hd.
4810-4820	40%	LS	AA.
	30%	SLTST	AA.
	30%	SH	dk gr-nr blk, dolo, sil, plty-blky, mica, hd.
4820-4830	70%	LS	AA v slty.
	30%	SH	AA.
4830-4840	50%	LS	AA v sil, hd.
	50%	SH	AA v sil, hd.
4840-4850	40%	LS	m-dk brn gr, rthy-mic xln, sm slty, hd.
	20%	SLTST	lt gr, dolo, fm.
	40%	SH	dk gr-nr blk, dolo, mica, hd.

INTERVAL	%	LITH	DESCRIPTION
4850-4860	60%	LS	AA most dk gr, sil, chty frags; sm wh, chlky, sft.
	40%	SH	AA.
4860-4870	40%	LS	m gr, mic xln, suc, hd.
	20%	SLTST	lt gr, calc, fm.
	40%	SH	nr blk, dolo, mica, hd.
4870-4880	30%	LS	AA.
	40%	SLTST	AA sft-fm.
	30%	SH	AA.
4880-4890	40%	LS	m gr, sm dk gr, slty ip, rthy-mic xln, hd.
	40%	SLTST	lt gr, calc, fm.
	20%	SH	blk, dolo, mica, hd.
4890-4900	50%	LS	AA.
	30%	SLTST	AA.
	20%	SH	AA.
4900-4910	60%	LS	m gr, sm dk gr, rthy-mic xln, sm v slty-shly, chty frags, hd, dns.
	40%	SLTST	lt-m gr, sm s&p, sm rthy, calc, fm.
4910-4930	80%	LS	lt-m gr, most rthy-chlky, sm sdy-slty, chty frags, fm.
	20%	SLTST	AA.
4930-4940	80%	LS	AA v rthy, slty-sdy ip.
	10%	SLTST	lt-m gr, sm rthy, calc, fm.
	10%	SH	nr blk, dolo, vf mica, hd.
4940-4950	40%	LS	lt-m gr-gr wh, pred rthy-chlky, m fm, slty-sdy.
	40%	SLTST	lt gr-gr wh, vf sdy ip, m hd-hd, sbglssy, sl calc-lmy, sil ip.
	20%	SH	AA.
4950-4970	60%	SS	lt gr wh & lt-m gr, vfg, v hd, sil, glssy, sl dolo ip, pr p&p, NSFOC.
	20%	SLTST	AA.
	20%	SH	v blk, rthy, hd, calc-dolo, slty ip.
4970-4980	40%	SS	AA.
	20%	SLTST	AA.
	20%	SH	AA.

INTERVAL	%	LITH	DESCRIPTION
4980-4990	30%	LS	lt gr wh, rthy, slty, m fm; sm mot lt gr wh; sm gr, mic-crp xln, dns; occ smky CHT frags.
	20%	SLTST	lt gr wh, lmy-calc, fm-m hd.
	50%	SH	v blk, rthy, hd, calc-dolo, slty ip.
4990-5000	60%	LS	AA.
	20%	SLTST	AA.
	20%	SH	AA.
5000-5010	20%	LS	lt-m gr, mic-crp xln, dns; sm lt gr wh, rthy, slty, m- fm.
	40%	DOL	gr-dk gr, sm gr tan wh, mic xln, occ tr tan crp xln, all hd, dns; occ tan CHT.
	20%	SLTST	lt gr, calc, fm.
	20%	SH	dk gr-blk, blk-pty, pred hd, slty ip, sl calc.
5010-5020	20%	LS	AA.
	50%	DOL	AA.
	30%	SH	AA.
5020-5030	20%	DOL	m-dk gr, mic xln-rthy, hd, dns.
	20%	SLTST	lt-m gr, sm dk gr, calc-dolo, hd.
	60%	SH	dk gr-blk AA.
5030-5040	30%	DOL	m gr-occ gr brn, mic xln-gran, slty ip, hd, dns.
	20%	SLTST	AA.
	50%	SH	AA.
5040-5050	40%	DOL	AA.
	30%	SLTST	lt-m gr, calc, hd.
	30%	SH	dk gr-sooty blk, dolo, hd.
5050-5060	20%	LS	m gr, slty-mic xln, hd, with chty frags.
	20%	DOL	dk gr, slty-mic xln, v hd.
	40%	SLTST	AA.
	20%	SH	nr blk, dolo, mica, hd.
5060-5070	30%	LS	AA with smoky chty frags.
	50%	SLTST	lt-m gr, calc, hd.
	20%	SH	AA.
5070-5080	20%	DOL	brn gr-dk gr, calc, slty ip, hd.
	60%	SLTST	AA sm sdy, fm.
	20%	SH	nr blk, dolo, mica, hd.

INTERVAL	%	LITH	DESCRIPTION
5080-5090	50%	DOL	AA sil with chty frags.
	30%	SLTST	lt gr, calc-dolo, sm s&p, fm.
	20%	SH	nr blk, dolo, plty, hd.
5090-5100	20%	LS	m gr, dolo, slty, hd.
	40%	DOL	AA.
	20%	SLTST	AA.
	20%	SH	AA.
5100-5110	20%	LS	lt-m gr, sm chlky, slty ip, hd.
	30%	DOL	m-dk gr, rthy-mic xln, slty, hd.
	30%	SLTST	lt gr, calc-dolo, fm.
	20%	SH	dk gr, dolo, hd.
5110-5120	40%	LS	lt-m gr, slty, hd.
	20%	DOL	AA.
	30%	SLTST	AA.
	10%	SH	AA.
5120-5130	10%	LS	AA.
	20%	DOL	dk gr, mic xln, slty, hd, chty frags.
	30%	SLTST	lt gr, calc-dolo, hd.
	40%	SH	nr blk, dolo, fm-hd, darkens wash wtr.
5130-5140	40%	LS	lt gr-nr wh, rthy-chlky, slty-sdy, sm dolo, fm.
	40%	SS	lt gr, vfg-slty, rthy, calc; spse brn orng, vfg, fws, calc.
	20%	SH	AA.
5140-5150	40%	LS	AA.
	50%	SS	AA no brn orng.
	10%	SH	nr blk, dolo, hd.
5150-5160	30%	LS	lt gr-nr wh, rthy-chlky, slty-sdy, fm.
	50%	DOL	m-dk gr, rthy-mic xln, sm glssy, hd, dns.
	20%	SS	lt gr, vfg, calc, chlky.
5160-5170	40%	DOL	AA.
	40%	SS	AA sm dolo, spse fg.
	20%	SH	nr blk, dolo, sooty, hd.
5170-5180	20%	LS	wh, rthy, sbchlky, slty-sdy, m fm.
	40%	DOL	m-dk gr, mic xln-rthy, gran-slty-sdy ip.
	10%	SS	wh, vfg, slty.
	20%	SLTST	lt gr, lmy-calc, m fm-hd.
	10%	SH	AA.

INTERVAL	%	LITH	DESCRIPTION
5180-5190	20% DOL 40% SS 20% SLTST 20% SH	AA. AA. AA. v blk, blk-pty, v lmy-marly, abdt blk insol res in acid, m fm-m sft, washes out, wash wtr v blk.	
5190-5200	10% SS 90% SH	shly, vfg, slty. AA.	
5200-5210	20% DOL 20% SS 10% SLST 50% SH	m-sm dk gr, mic xln, hd, dns, slty-sdy ip. lt gr wh, vfg, slty. lt gr, lmy-calc, tt. blk, blk-pty, marly, fm.	
5210-5220	10% DOL 20% LS 50% SS 20% SH	AA. v lt gr-wh, chlky-rthy, arg, sft. wh-lt gr wh, vfg, slty ip, m fm-hd, v lmy; sm wh, rthy. AA.	
5220-5230	30% LS 60% SS 10% SH	AA. AA. blk, pty, marly, fm.	
5230-5240	30% DOL 50% SS 20% SLTST	m-dk gr, mic xln, hd, dns. wh-lt gr AA bec more slty. lt gr-wh, lmy, hd.	
5240-5250	30% LS 40% DOL 20% SS 10% SH	wh-lt gr wh, rthy, sdy, m fm. AA. lt gr wh, vfg, v lmy, m fm-hd. blk, pty, marly, fm.	
5250-5260	20% DOL 80% SH	m-dk br, mic xln, shly, hd, dns. blk, blk-pty, dolo, fm, sm washes out, wash wtr v dk.	
5260-5270	100% SH	AA with smaller cuttings.	
5270-5280	20% LS 30% SS 50% SH	m-lt gr, rthy, sdy-slty, fm. lt gr, vfg, v lmy, sm glssy, no p&p. AA.	
5280-5290	30% LS 50% SS 20% SH	AA. AA v lmy, sm rthy, sm glssy. blk, blk-pty, dolo, hd.	

INTERVAL	%	LITH	DESCRIPTION
5290-5300	20%	LS	m-lt gr, rthy, sdy-slty, fm, abdt chty frags, smky-nr blk.
	20%	DOL	brn gr, crp xln, v hd.
	60%	SS	lt gr, vfg, v lmy, glssy, hd, tt.
5300-5310	30%	LS	dk gr, sil, sdy-slty, hd, smky CHT frags.
	40%	SS	lt-m gr, vfg-slty, calc, rthy, hd, no p&p.
	30%	SLTST	lt gr, calc, rthy, hd.
5310-5320	30%	DOL	m-dk gr, mic xln, hd, dns, tr good calct xtls on frags.
	50%	SS	wh-lt gr wh, vfg-occ fg, v lmy, rthy, m fm-hd, tt.
	10%	SLTST	AA.
	10%	SH	blk, sil, m hd.
5320-5330	30%	LS	wh-lt gr wh, pred rthy-sbchlky, slty-sdy ip, vf xln.
	20%	DOL	AA mic xln, rthy ip.
	30%	SS	AA.
	20%	SH	blk, blk-plty, calc-dolo, rthy, m hd-occ hd, sil, brit.
5330-5340	10%	LS	AA.
	10%	DOL	AA.
	80%	SH	AA.
5340-5350	20%	LS	wh, rthy, sbchlky, sdy, dolo.
	20%	DOL	m-dk gr, mic xln-rthy, sdy ip, hd, dns.
	60%	SH	blk, blk-plty, calc-dolo, rthy, sm sil.
5350-5360	30%	LS	AA.
	10%	DOL	AA.
	20%	SLTST	lt gr, lmy, rthy, fm.
	40%	SH	AA.
5360-5380	50%	LS	lt gr, sm m gr, chlky-rthy, most slty-sdy, fm.
	30%	SLTST	lt gr, lmy, rthy, fm.
	20%	SH	nr blk, dolo, blk-plty, hd.
5380-5390	30%	LS	vari lt-dk gr, sm chlky & slty, sm crp xln & dns, fm-hd.
	30%	SLTST	lt gr, rthy, lmy, fm.
	40%	SH	sooty blk, calc-dolo, hd.

INTERVAL	%	LITH	DESCRIPTION
5390-5400	20%	LS	AA dk gr inc, v slty.
	20%	SLTST	AA.
	60%	SH	AA bec slty and mica.
5400-5410	50%	LS	m gr, rthy-mic xln, sm slty, hd, dns; sm lt gr, chlky, slty.
	20%	SLTST	lt gr, sm s&p, calc, hd.
	30%	SH	dk gr, calc-dolo, hd.
5410-5420	30%	LS	AA.
	40%	SLTST	AA.
	30%	SH	AA slty, mica, v hd.
5420-5430	30%	LS	m gr, rthy-mic xln, slty, hd.
	20%	DOL	dk gr, mic xln, slty, hd.
	30%	SLTST	lt gr, rthy, sm s&p, calc.
	20%	SH	nr blk, sooty, slty, dolo, hd.
5430-5440	20%	LS	AA sm wh, chlky with lge sdy gns.
	20%	DOL	AA.
	40%	SLTST	AA.
	20%	SH	AA.
5440-5450	30%	LS	m-dk gr, sm wh & chlky, rthy-mic xln, sm slty-sdy, hd.
	30%	SLTST	lt gr, rthy, sm s&p, calc.
	40%	SH	sooty blk, slty, dolo, hd.
5450-5460	30%	LS	AA.
	20%	SLTST	AA.
	50%	SH	AA.
5460-5470	40%	LS	m-dk gr, rthy, slty, arg, hd.
	10%	SLTST	lt gr, rthy, calc.
	50%	SH	sooty blk, slty, calc-dolo, sm mica, hd, dkns wash wtr.
5470-5480	50%	LS	AA.
	20%	SLTST	AA.
	30%	SH	AA.
5480-5490	30%	LS	m-dk gr, slty, rthy, dolo, sil, hd, smky chty frags.
	20%	DOL	brn gr-dk gr, slty, arg, hd.
	20%	SLTST	lt gr, calc-dolo, fm.
	30%	SH	sooty blk, slty, calc-dolo, fm.

INTERVAL	%	LITH	DESCRIPTION
5490-5500	20%	LS	AA.
	20%	DOL	AA.
	20%	SLTST	AA with v spse brn sdy gns.
	40%	SH	AA.
5500-5510	40%	LS	m-dk gr, rthy-mic xln, sm slty, chty, hd, dns; spse wh & chlky.
	20%	SLTST	lt gr, calc, sm s&p, hd.
	40%	SH	blk, blk-plty, slty, dolo, sil, sm washes out--dkns wash wtr.
5510-5520	20%	LS	AA.
	20%	SLTST	AA.
	60%	SH	AA.
5520-5530	40%	LS	m gr, rthy, slty, fm, chty.
	40%	DOL	dk gr, slty-mic xln, calc, hd, chty.
		SH	nr blk, dolo, hd.
5530-5540	20%	LS	AA.
	20%	DOL	AA.
	60%	SH	sooty blk, dolo, hd.
5540-5550	100%	SH	blk, blk-plty, m hd-hd, rthy, v lmy, lvs abdt blk in acid; occ calct frac fill.
5550-5570	20%	LS	lt gr, v rthy, v sft, mrly, grads to--
	80%	SH	AA.
5570-5580	40%	LS	pred lt gr-wh, chlky-rthy, mrly, sft; occ tr wh, mic xln-rthy, m fm.
	60%	SH	blk, blk-plty, calc-dolo, m hd-hd; occ calct frac fill.
5580-5590	30%	LS	AA.
	10%	DOL	m gr, mic xln-rthy, gran, calc, dns.
	60%	SH	AA.
5590-5600	20%	LS	lt gr-wh, chlky-rthy, sft-fm.
	80%	SH	blk, blk-plty, calc-dolo, rthy, m hd.
5600-5640	30%	LS	lt gr wh-wh, rthy-sbchlky, m sft; sm mot lt gr-m-dk gr, mic xln, m hd, dns.
	70%	SH	dk gr-blk, blk-plty, hd, calc-dolo, rthy; sm lt-m gr, rthy, lmy.

INTERVAL	%	LITH	DESCRIPTION
5640-5660	10%	LS	lt-m gr, chlky-rthy, fm, mic xln ip, sil.
	90%	SH	m-dk gr, blk-plty, calc, hd.
5660-5670	40%	LS	lt-m gr, sm chlky, sm mic xln, dolo, fm-hd.
	60%	SH	dk gr-sooty blk, blk-plty, dolo, hd.
5670-5680	60%	LS	AA sm slty-sdy.
	40%	SH	AA.
5680-5690	40%	LS	lt-m gr, sm chlky, sm mic xln, fm.
	60%	SH	sooty blk, dolo, hd.
5690-5710	30%	LS	mot lt-dk gr, sm mic xln, most rthy-chlky, dolo, hd, dns.
	70%	SH	blk, blk-plty, mica ip, calc-dolo, hd.
5710-5720	50%	LS	AA.
	50%	SH	AA.
5720-5730	70%	LS	pred wh-lt gr, rthy-mic xln ip, slty ip, dolo ip, m fm-hd; occ lt-m gr, mica, dolo, hd; occ mot wh-gr, rthy.
	30%	SH	blk, blk-plty, vf dism mica ip, calc-dolo, hd.
5730-5740	90%	LS	AA.
	10%	SH	AA.
5740-5750	40%	LS	wh-lt gr wh, rthy-mic xln, slty, dolo, fm-hd.
	60%	SH	dk gr-blk, blk-plty, calc-dolo, hd.
5750-5780	10%	LS	AA.
	90%	SH	blk-dk gr, blk-plty, splntry ip, rthy, lmy-dolo, m hd-hd.
5780-5790	30%	LS	lt gr wh, rthy, m hd; occ gr wh mott, mic xln-rthy.
	10%	SLTST	lt tan orng, calc, hd.
	60%	SH	AA.
5790-5800	60%	LS	lt gr wh AA, pred rthy, arg.
	20%	DOL	m-dk gr, mic xln, hd, dns.
	20%	SH	dk gr-blk, blk-plty, rthy, calc-dolo, m hd.
5800-5810	60%	LS	lt-m gr, rthy-chlky, shly, hd, dns.
	40%	SH	sooty dk gr, dolo, blk-plty, sm mica, hd.

INTERVAL	%	LITH	DESCRIPTION
5810-5820	50%	LS	AA.
	50%	SH	AA.
5820-5830	40%	LS	lt-m gr, rthy-chlky, shly, hd, dns.
	60%	SH	sooty dk gr, dolo, blkly-plty, sm mica, hd.
5830-5840	30%	LS	lt-m gr, rthy, fm.
	70%	SH	dk gr-nr blk, sooty, rthy, dolo, washes out-dkns wtr.
5840-5860	20%	LS	AA.
	80%	SH	AA.
5860-5880	10%	LS	AA.
	90%	SH	dk gr-nr blk, sooty, rthy, calc-dolo, dkns wtr, fm, most plty, sm blkly.
5880-5890	20%	LS	lt gr, rthy, slty, arg, fm.
	80%	SH	AA sm slty.
5900-5920	70%	LS	lt gr-nr wh, rthy-chlky, sm slty, fm; sm m gr, mic xln, dolo, hd.
	30%	SH	dk gr-nr blk, rthy, calc-dolo, blkly-plty, hd, with v spse sdy gns, orng brn.
5920-5980	80%	LS	lt gr-nr wh, rthy-chlky, fm; sm brn gr-m gr, mic-crp xln, dolo, hd, spse pyr, fm-hd.
	20%	SH	nr blk, sooty, rthy, blkly-plty, calc-dolo, hd.
5980-6000	60%	LS	lt-m gr, sm dk gr, rthy, sm mic xln, sl slty, sm arg, hd, dns.
	40%	SH	dk gr-nr blk, blkly, sm plty, calc, hd.
6000-6020	30%	LS	wh-lt gr wh, pred rthy, sbchlky, arg, m sft.
	70%	SH	blk-dk gr, blkly-plty, occ splnt, rthy, calc-dolo, vf dism mica.
6020-6040	10%	LS	AA.
	90%	SH	AA.
6040-6060	50%	LS	lt-dk gr, rthy-mic xln, sm arg, hd, dns.
	50%	SH	dk gr-blk, sooty-rthy, calc, dolo, blkly-plty, hd.

INTERVAL	%	LITH	DESCRIPTION
6060-6070	30%	LS	lt-dk gr, rthy, spse mic xln, most arg, hd, dns; sm lt gr-wh, sbchlky, sl slty, fm.
	70%	SH	dk gr-blk, sooty-rthy, calc-dolo, blkly-plty, hd.
6070-6100	20%	LS	lt gr, rthy, shly-slty, fm; sm mot lt gr-wh.
	80%	SH	dk gr-sooty blk, rthy, calc, blkly-plty, hd.
6100-6110	60%	LS	pred mot wh-gr brn, rthy-mic xln, dns, hd.
	40%	SH	dk gr-blk, blkly-plty, occ splnt, calc-dolo, hd.
6110-6120	30%	LS	AA.
	70%	SH	AA.
6120-6140	20%	LS	lt gr-wh, mot, rthy-mic xln, hd, dns.
	80%	SH	dk gr-blk, blkly-plty, occ splnt, calc-dolo, hd.
6140-6150	20%	LS	AA.
	30%	DOL	pred dk-sm m gr, mic-vf xln ip, hd, dns.
	20%	SLTST	lt gr-wh, vf sdy ip, lmy-calc, dirty.
	30%	SH	AA.
6150-6160	10%	LS	lt gr-wh, rthy-mic xln, hd, dns.
	30%	DOL	AA dk-m gr, mic xln, dns.
	20%	SS	wh-lt gr, vfg, slty, sbglssy ip, calc-dolo, tt.
	20%	SLTST	AA.
	20%	SH	dk gr, blkly-plty, m hd.
6160-6170	20%	DOL	AA.
	30%	SS	AA.
	30%	SLTST	lt gr, rthy, calc-lmy.
	20%	SH	AA.
6170-6180	20%	DOL	m-dk gr, mic xln, v slty, hd, dns.
	40%	SS	lt gr, sm s&p, vfg, calc-dolo, sm sil-glssy, v hd, no p&p.
	30%	SLTST	AA.
	10%	SH	dk gr, blkly-plty, m hd.
6180-6190	20%	DOL	AA.
	20%	SS	AA.
	40%	SLTST	wh-lt gr, sm rthy, calc-dolo, hd.
	20%	SH	sooty blk, blkly-plty, dolo, hd.

INTERVAL	%	LITH	DESCRIPTION
6190-6200	20%	DOL	m-dk gr, mic xln, v slty, hd, dns.
	10%	SS	AA.
	30%	SLTST	AA.
	40%	SH	AA.
6200-6210	20%	DOL	m-dk gr, slty, hd, dns.
	30%	SS	lt gr-nr wh, vfg, sm s&p, sm sil-glssy, v hd, no p&p.
	20%	SLTST	lt gr, rthy, sil-dolo, hd.
	30%	SH	sooty blk, rthy, dolo, hd.
6210-6220	30%	DOL	AA.
	10%	SS	AA.
	30%	SLTST	AA.
	30%	SH	AA.
6220-6230	10%	DOL	m-dk gr, slty, hd, dns.
	20%	SS	lt gr, vfg, sbrd, sil, glssy, v hd, no p&p.
	20%	SLTST	lt gr, rthy, sil, hd.
	50%	SH	sooty blk, blk-ply, hd.
6230-6240	20%	SS	AA.
	20%	SLTST	AA.
	60%	SH	AA.
6240-6250	20%	SS	lt gr, vfg, sbrd, slty, calc-dolo, hd, no p&p.
	40%	SLTST	lt gr, sm s&p, calc-dolo, hd.
	40%	SH	dull dk gr, rthy, dolo, hd with spse dull gr chty frags.
6250-6260	20%	DOL	m-dk gr, crp xln, v hd, dns.
	10%	SS	AA.
	20%	SLTST	AA.
	50%	SH	AA.
6260-6280	20%	SS	lt gr, sm s&p, vfg, calc-dolo, hd.
	20%	SLTST	lt gr, calc-dolo, rthy, hd.
	60%	SH	dull sooty blk, dolo, vf mica, hd.
6280-6290	30%	SLTST	lt-dk rthy gr, dolo, hd.
	70%	SH	dull sooty blk, dolo, vf mica, blk-ply, hd, dkns wtr.
6290-6320	10%	SLTST	AA.
	90%	SH	dk gr-dull sooty blk, vf mica, dolo, most ply, sm blk, v gummy, dkns wtr.

INTERVAL % LITH DESCRIPTION

6320-6330 100% SH dk gr-dull sooty blk, vf mica ip, spse vf pyr, most plty, bec v gummy, dkns wtr, washes out.

6330-6340 30% SLTST m gr, sil-glssy, hd, sm calc & rthy.  
70% SH AA dk gr-brn gr, dull.

6340-6350 20% SLTST AA.  
80% SH dull rthy blk, sm vf mica, dolo, plty, hd.

6350-6360 40% SLTST m gr, sil, glssy, sm calc, sm s&p, hd.  
60% SH AA.

6360-6370 30% SLTST m gr, calc-sil, sm glssy, sm rthy, sm s&p, hd.  
70% SH dull blk, rthy, slty, sm calc, dolo, v mica, sm vf pyr, hd.

6370-6380 10% LS m gr, mic xln-rthy, shly, hd.  
30% SLTST lt-m gr, calc-dolo, rthy, hd.  
60% SH AA.

6380-6392 100% SH dull blk, rthy, plty, dolo, slty, vf mica, hd.

TD 6392

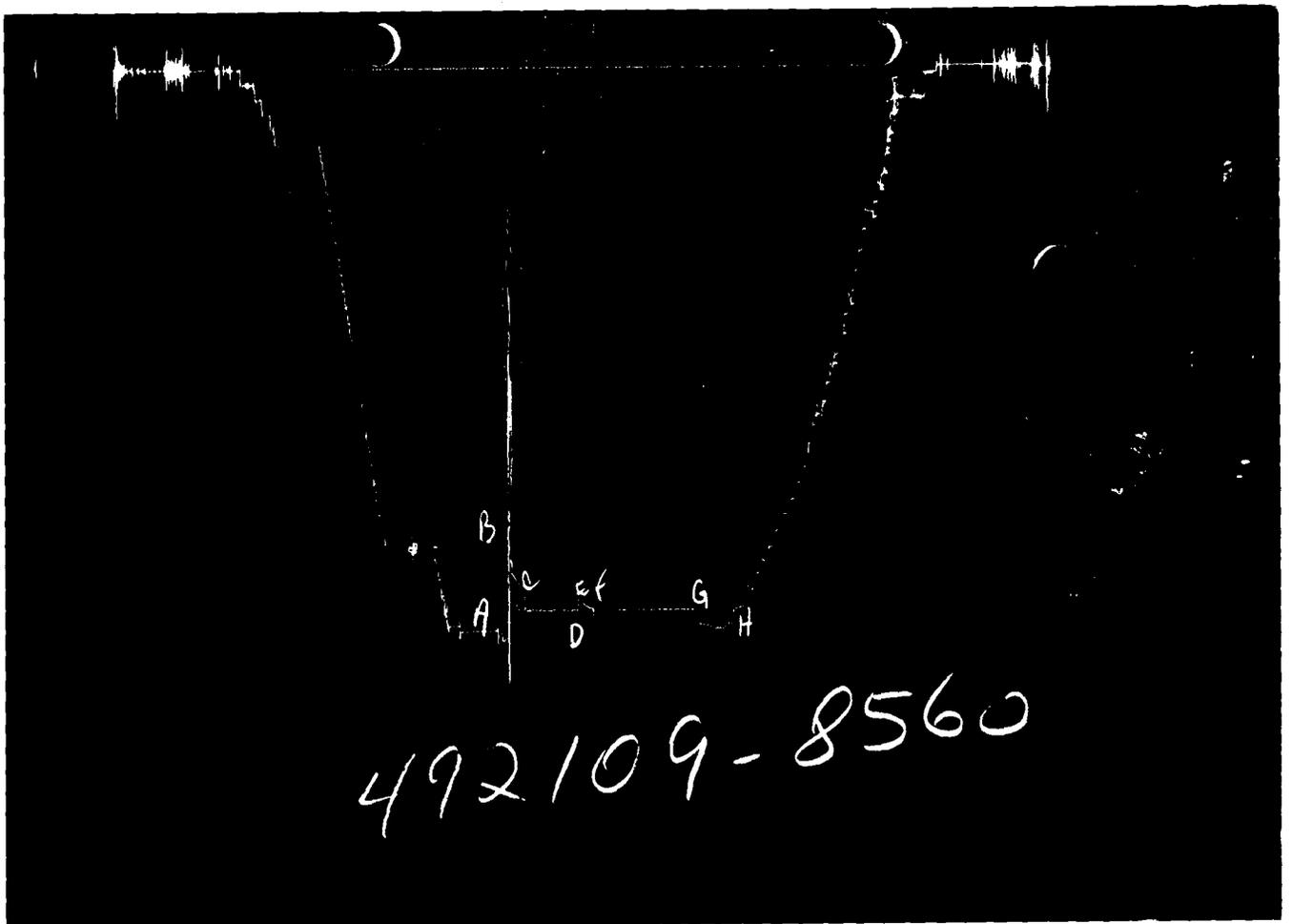
SAXON FEDERAL LEASE NAME  
WELL NO. 26-1-2  
TEST NO. 1  
TESTED INTERVAL 3376.3 - 3445.0  
SAXON OIL COMPANY LEASE OWNER/COMPANY NAME

LEGAL LOCATION SEC - TWP - RANG 26 - 3 S - 9 W  
FIELD AREA WILDCRAT  
COUNTY TOOELE  
STATE UTAH

SAXON OIL COMPANY  
LEASE : SAXON FEDERAL  
WELL NO. : 26-1-2  
TEST NO. : 1

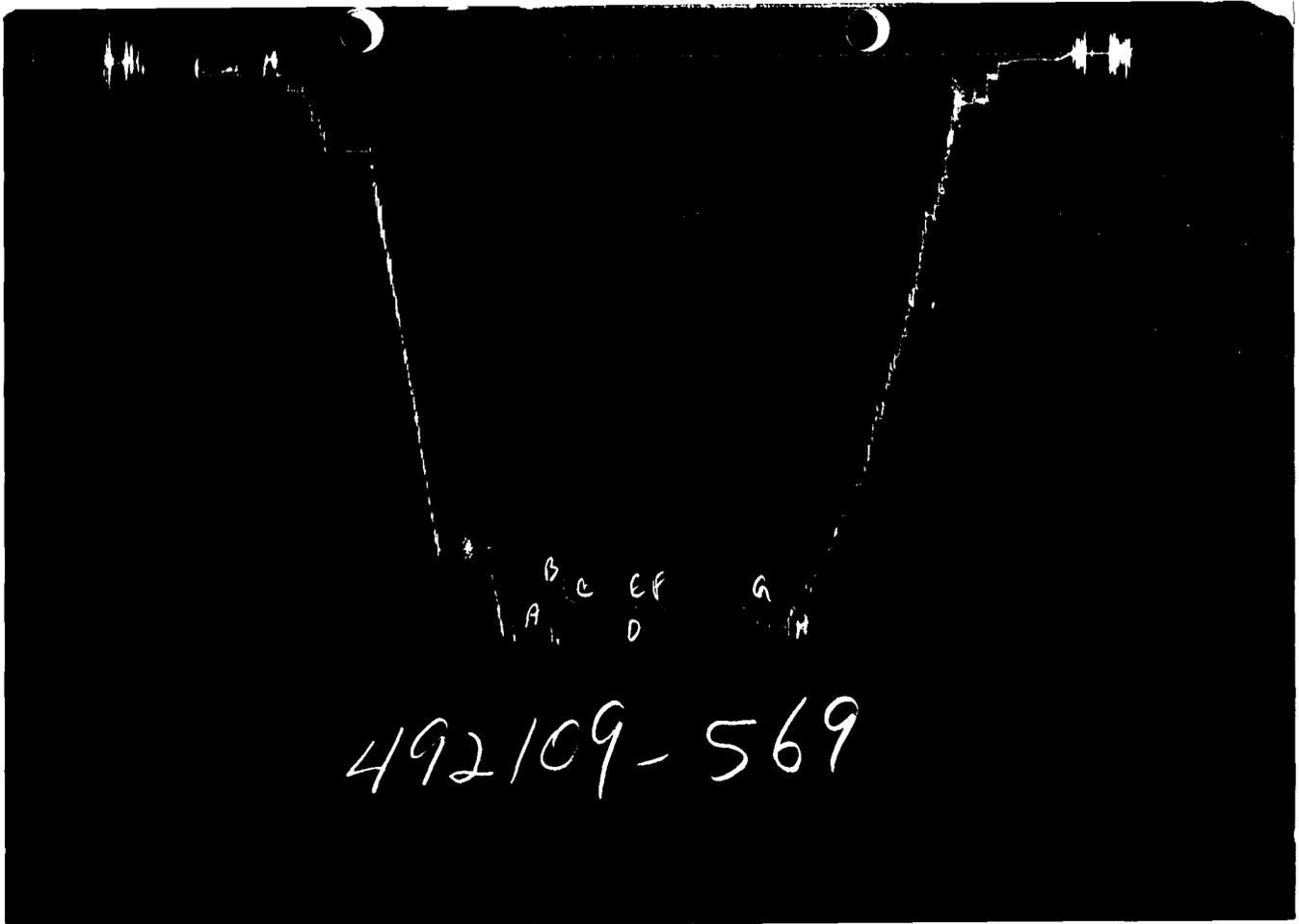
TICKET NO. 49210900  
13-JAN-94  
CASPER

RECEIVED  
APR 21 1995  
DIV OF OIL, GAS & MINING



GAUGE NO: 8560 DEPTH: 3351.6 BLANKED OFF: NO HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1531	1536.5			
B	INITIAL FIRST FLOW	1354	1299.4	10.0	10.0	F
C	FINAL FIRST FLOW	1436	1436.2			
C	INITIAL FIRST CLOSED-IN	1436	1436.2	32.0	32.0	C
D	FINAL FIRST CLOSED-IN	1477	1481.1			
E	INITIAL SECOND FLOW	1436	1452.2	10.0	10.0	F
F	FINAL SECOND FLOW	1477	1477.1			
F	INITIAL SECOND CLOSED-IN	1477	1477.1	60.0	60.0	C
G	FINAL SECOND CLOSED-IN	1477	1481.2			
H	FINAL HYDROSTATIC	1518	1534.0			



492109-569

GAUGE NO: 569 DEPTH: 3442.0 BLANKED OFF: YES HOUR OF CLOCK: 12

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1579	1583.9			
B	INITIAL FIRST FLOW	1426	1439.8			
C	FINAL FIRST FLOW	1509	1511.0	10.0	10.0	F
C	INITIAL FIRST CLOSED-IN	1509	1511.0			
D	FINAL FIRST CLOSED-IN	1523	1522.9	32.0	32.0	C
E	INITIAL SECOND FLOW	1509	1522.2			
F	FINAL SECOND FLOW	1523	1522.9	10.0	10.0	F
F	INITIAL SECOND CLOSED-IN	1523	1522.9			
G	FINAL SECOND CLOSED-IN	1523	1523.3	60.0	60.0	C
H	FINAL HYDROSTATIC	1565	1580.3			

### EQUIPMENT & HOLE DATA

FORMATION TESTED: GREAT BLUE  
 NET PAY (ft): \_\_\_\_\_  
 GROSS TESTED FOOTAGE: 68.7 PACKER TO T.D.  
 ALL DEPTHS MEASURED FROM: KELLY BUSHING  
 CASING PERFS. (ft): \_\_\_\_\_  
 HOLE OR CASING SIZE (in): 8.750  
 ELEVATION (ft): 4340.0 GROUND LEVEL  
 TOTAL DEPTH (ft): 3445.0  
 PACKER DEPTH(S) (ft): 3368, 3376  
 FINAL SURFACE CHOKE (in): \_\_\_\_\_  
 BOTTOM HOLE CHOKE (in): 0.750  
 MUD WEIGHT (lb/gal): 8.00  
 MUD VISCOSITY (sec): 70  
 ESTIMATED HOLE TEMP. (°F): \_\_\_\_\_  
 ACTUAL HOLE TEMP. (°F): 84 @ 3442.0 ft

TICKET NUMBER: 49210900  
 DATE: 01-11-94 TEST NO: 1  
 TYPE DST: OPEN HOLE  
 FIELD CAMP: CASPER  
 TESTER: PABLO J. HEADWORTH  
 WITNESS: R.V. MAHARREY  
 DRILLING CONTRACTOR: CARDINAL #43

### FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>MAKE UP WATER-FRESH</u>	<u>10.000</u> @ <u>66</u> °F	_____ ppm
<u>MUD PIT</u>	<u>8.000</u> @ <u>64</u> °F	<u>424</u> ppm
<u>TOP RECOVERY</u>	<u>1.800</u> @ <u>58</u> °F	<u>2303</u> ppm
<u>MIDDLE</u>	<u>0.140</u> @ <u>64</u> °F	<u>36363</u> ppm
<u>BOTTOM</u>	<u>1.200</u> @ <u>64</u> °F	<u>5151</u> ppm
<u>SAMPLER</u>	<u>0.120</u> @ <u>58</u> °F	<u>39393</u> ppm

### SAMPLER DATA

Psig AT SURFACE: 10.0  
 cu.ft. OF GAS: \_\_\_\_\_  
 cc OF OIL: \_\_\_\_\_  
 cc OF WATER: 2650.0  
 cc OF MUD: \_\_\_\_\_  
 TOTAL LIQUID cc: 2650.0

### HYDROCARBON PROPERTIES

OIL GRAVITY (°API): \_\_\_\_\_ @ \_\_\_\_\_ °F  
 GAS/OIL RATIO (cu.ft. per bbl): \_\_\_\_\_  
 GAS GRAVITY: \_\_\_\_\_

### CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

### RECOVERED :

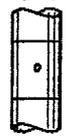
1472 FEET OF DRILLING MUD  
 552 FEET OF MUD CUT WATER  
 1313 FEET OF WATER  
 -  
 3337 FEET (44.3 BBLS.) TOTAL

MEASURED FROM TESTER VALVE

### REMARKS :

\_\_\_\_\_



		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	3006.9	
3		DRILL COLLARS.....	6.500	2.250	241.1	
50		IMPACT REVERSING SUB.....	6.250	2.750	1.1	3248.1
3		DRILL COLLARS.....	6.500	2.250	90.0	
5		CROSSOVER.....	6.000	2.375	0.7	
13		DUAL CIP SAMPLER.....	5.000	0.870	6.8	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	3349.6
80		AP RUNNING CASE.....	5.000	2.250	4.0	3351.6
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.8	
70		OPEN HOLE PACKER.....	7.750	1.530	7.4	3368.2
5		CROSSOVER.....	5.750	2.438	0.7	
70		OPEN HOLE PACKER.....	7.750	1.530	7.4	3376.3
19		ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.0	
5		CROSSOVER.....	6.000	2.375	0.7	
3		DRILL COLLARS.....	6.500	2.250	31.4	
5		CROSSOVER.....	5.750	2.250	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	2.370	26.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.0	3442.0
TOTAL DEPTH					3445.0	

EQUIPMENT DATA