

FILE NOTATIONS

Entered in NID File
Location Map Pinned
Card Indexed

Checked by Chief
Approval Letter
Disapproval Letter

P.W.B.
7-31-72

COMPLETION DATA:

Date Well Completed *9-6-72*

DW..... WW..... TA.....
GW..... OS..... PA.....

Location Inspected
Bond released
State or Fee Land

LOGS FILED

Driller's Log.....
Electric Logs (No.)
E..... I..... Dual I Lat..... GR-N..... Micro.....
BHC Sonic GR..... Lat..... Mi-L..... Sonic.....
CBLog..... CCLog..... Others.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

5. LEASE DESIGNATION AND SERIAL NO.
U-14970

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Mull Federal

9. WELL NO.
14-4

10. FIELD AND POOL, OR WILDCAT
Bull Canyon

11. SEC., T., R., M. OR BLM-
AND SURVEY OR ABMA
Sec 4-T20S-R21E

12. COUNTY OR PARISH
Grand

13. STATE
Utah

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

20. ROTARY OR CABLE TOOLS
Rotary

22. APPROX. DATE WORK WILL START*
August 10, 1972

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
Petro-Lewis Corporation

3. ADDRESS OF OPERATOR
1600 Broadway, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*
At surface
780' FSL, 2025' FWL Sec 4-T20S-R21E
At proposed prod. zone
Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Same

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

16. NO. OF ACRES IN LEASE
674.70

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

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

19. PROPOSED DEPTH
3600'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
5752' GR

22. APPROX. DATE WORK WILL START*
August 10, 1972

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8	24#	250'	To surface

We propose to drill this well with rotary tools to an approximate depth of 3600' to test the Morrison. If commercial production is encountered a 5-1/2" OD oil string will be set through the producing zone and cemented with sufficient cement to displace 1000'. Estimated formation tops are: Dakota 3090', Morrison 3150', Salt Wash Member 3350'.

12 Point Stipulation submitted 7/26/72
Enclosing - Certified Surveyors Plats
Designation of Operator

Don Vukobratovic

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 Don Vukobratovic TITLE Asst. Manager of Operations DATE July 28, 1972

(This space for Federal or State office use)

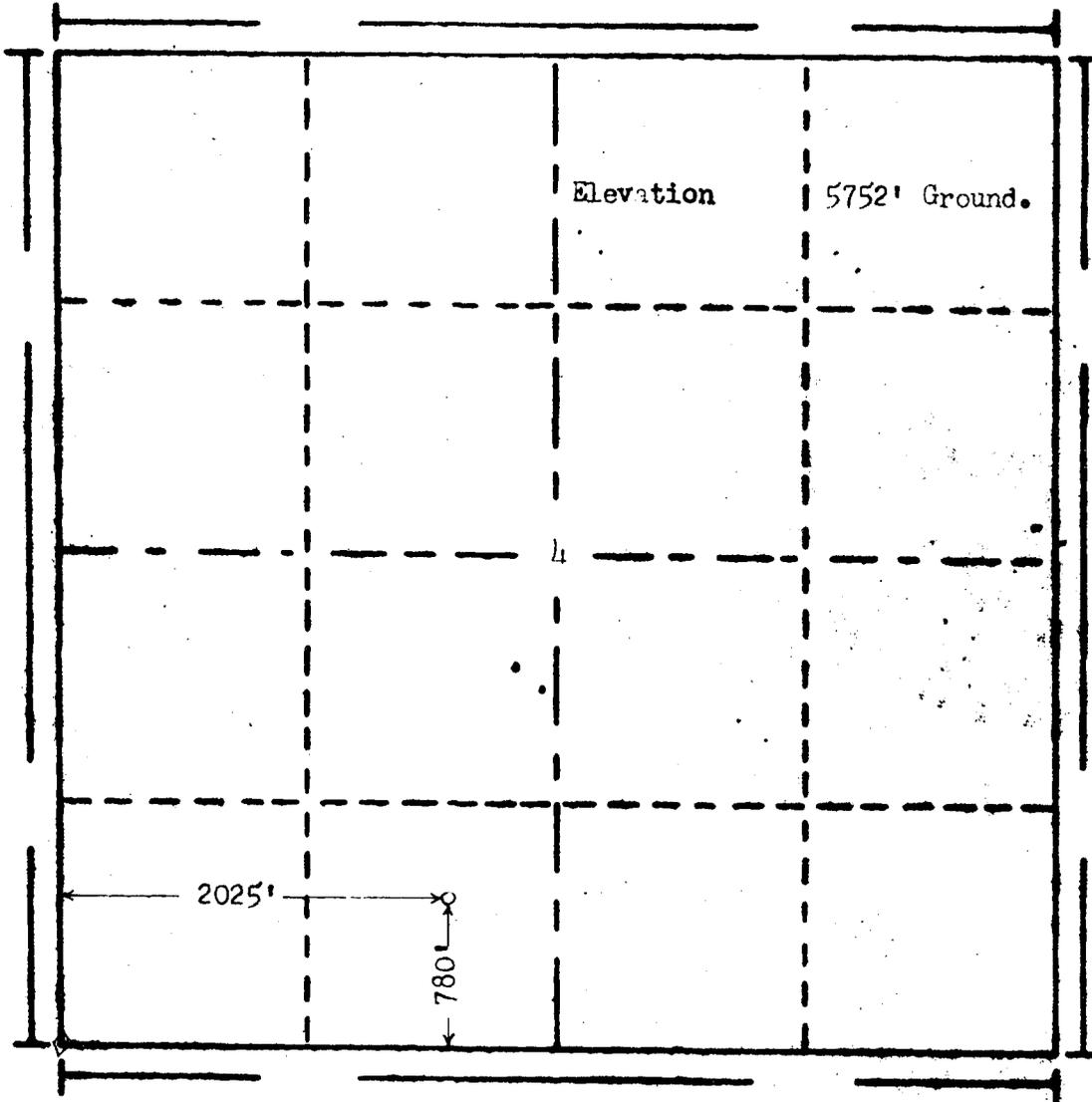
PERMIT NO. 43-019-30112 APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____



R. 21 E.



T. 20 S.

Scale... 1" = 1000'

Powers Elevation Company, Inc. of Denver, Colorado
 has in accordance with a request from Don Vickory
 for Petro-Lewis Corporation
 determined the location of #14-4 Bull Canyon
 to be 780' FS & 2025' FW Section 4 Township 20 S.
 Range 21 E. of the Salt Lake Meridian
 Grand County, Utah

I hereby certify that this plat is an
 accurate representation of a correct
 survey showing the location of

#14-4 Bull Canyon

Date: 7-23-72

Garrett T. White

Licensed Land Surveyor No. 2658 PM
 State of Utah

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: Salt Lake City, Utah
SERIAL NO.: U-14970

and hereby designates

NAME: Petro-Lewis Corporation
ADDRESS: 1400 Colorado State Bank Bldg.
Denver, Colorado

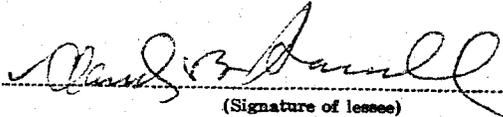
as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 20 South, Range 21 East, S1M
Sec. 3: Lots 1, 2, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$
Sec. 4: SW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$
Sec. 35: NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

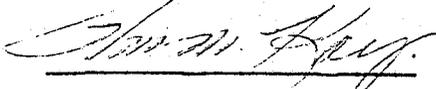
In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.


.....
(Signature of lessee)
CLAUDE B. MANNELL
2306 FIRST CITY NATIONAL BANK BLDG.
HOUSTON, TEXAS 77002
.....
(Address)

July 27, 1972
.....
(Date)

ATTEST


.....
Assistant Sec.

U.S. GOVERNMENT PRINTING OFFICE: 1964-O-726-354

RAINBOW RESOURCES, INC.


.....
By: Charles A. Shear
Vice President

July 31, 1972

Petro-Lewis Corporation
1600 Broadway
Denver, Colorado 80202

Re: Well No. Mull Federal #11-4,
Sec. 4, T. 20 S, R. 21 E,
~~Well No. Mull Federal #14-4,~~
Sec. 4, T. 20 S, R. 21 E,
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted, however, said approval is conditional upon forwarding written notification to this office as to the type of blowout prevention equipment to be installed on said wells.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PAUL W. BURCHELL - Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation with regard to the above will be greatly appreciated.

The API numbers assigned to these wells are as follows:

#11-4 - 43-019-30111
#14-4 - 43-013-30112

Very truly yours,

DIVISION OF OIL & GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

4
3 1/2
90
Petroleum - Geo. Papp.

14-4 - S E SW sec 4 T20S R21E

T.D. - 3600'

7 7/8" hb - 8 5/8" @ 220'

Dakota - 3113

1 & 2 Miss. Rat
Gervais - 3255

DST. #3 - 3474 - 3596 - 105' of Dry. Mud.

35 ft - 3225 - 3125

35 ft - 2000 - 1900

35 ft - 255 - up.

10 ft / surf. / number.

9/6/72

U.S. & S.

SESW
43-019-30112

↳ Via telephone

PMP

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPlicate*
(Other instructions on re-verse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

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

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Dry hole		5. LEASE DESIGNATION AND SERIAL NO. U-14970	
2. NAME OF OPERATOR Petro-Lewis Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
3. ADDRESS OF OPERATOR 1600 Broadway, Denver, Colorado 80202		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 780' FSL, 2025' FWL Sec 4-T20S-R21E		8. FARM OR LEASE NAME Mull-Federal	
14. PERMIT NO.		9. WELL NO. 14-4	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5752' GR		10. FIELD AND POOL, OR WILDCAT Bull Canyon	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 4-T20S-R21E	
		12. COUNTY OR PARISH Grand	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input checked="" type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) <input type="checkbox"/>		(NOTE: Report results of multiple-completion on Well Completion or Recompletion Report and Log form.)	

17. 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.)*

We propose to plug and abandon this well as follows:

- 3225' - 3120' w/35 sx cement
- 2020' - 1915' w/35 sx cement
- 250' - 130' w/35 sx cement
- 10 sx cement at top

Marker will be installed and location restored.

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

SIGNED *Don Vickroy* TITLE Asst. Manager of Operations DATE Sept. 25, 1972

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

67 P 7

ROLLAND L. WONDERLY

plb

POST OFFICE BOX 112
ARVADA, COLORADO 80002

PHONE (303) 424-9146
PHONE (303) 424-8085

GEOLOGICAL REPORT

PETRO-LEWIS CORP.

NO. 14-4 MJLL-FEDERAL
SE SW Section 4-T20S-R21E
Grand County, Utah

WELL DATA

OPERATOR: Petro-Lewis Corp.

WELL & NO.: No. 14-4 Mull-Federal

LOCATION: Se SW Section 4-T20S-R21E
Grand County, Utah

FIELD: Bull Canyon

ELEVATION: 5752 G.L.; 5762 K.B.

SPUD DATE: August 21, 1972

COMPLETION DATE: September 6, 1972

SURFACE CASING: 210' of 8-5/8" @ 221 w/200 sacks

PRODUCTION: None

TOTAL DEPTH: 3600' Driller; 3592' Log

CONTRACTOR: Carmack Drilling Co. (Rig No. 10)
Grand Junction, Colorado

MUD: Chemical Gel IMC Drilling Mud Co.
Vernal, Utah

DRILL STEM TESTS: DST No. 1 3120-3212 (Halliburton)
DST No. 2 3474-3596
DST No. 3 3494-3596

LOGS: Schlumberger-IES - 3593-1600
Density Log- 3590-3050

STATUS: Dry and Abandoned

PLUGGING: 35 sacks 3125-3225
35 sacks 1900-2000
35 sacks 235- base of surface
10 sacks surface

ELECTRIC LOG TOPS

<u>Formation</u>	<u>Depth</u>
Dakota	3113 (+2649)
Morrison	3255 (+2507)
"Bull Canyon Zone"	3447 (+2315)
Total Depth	3596

DISCUSSION

The No. 14-4 Mull-Federal encountered four zones through the Dakota and Morrison Formation which had weak shows. Attempts were made to drill stem test three of these zones and eventually a valid test of the most anomalous zone recovered only mud.

Lost circulation was encountered at 1855' and 2019'. Below these depths it was necessary to drill with an aereated mud system as it was impossible to keep a column of mud in the hole. Electric logs indicate the mud level in the hole to be at 1600'.

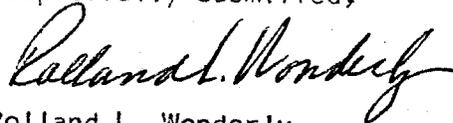
Samples examined below 2600' were considered excellent in quality but questionable as to exact depth within 30 foot limits because of the infrequent "slugging" of air in the mud circulating system.

Shows were noted in samples 3120-3130 and 3150-3180. An attempt to test this zone, 3120-3212, failed because of a plugged test tool. It does seem probable that if this zone had adequate shows with any formation pressure shows would have been noted in the aereated mud system.

Other shows were encountered in samples at 3240-3260 (this show was in a very tight sand), and 3530-3550. The bottom zone, 3526-3540 (Electric log) was drill stem tested, 3474-3596, and yielded only 105' mud with no shows - pressures on this test were extremely low.

The No. 14-4 Mull-Federal was abandoned at 3596' in the Morrison Formation.

Respectfully submitted,



Rolland L. Wonderly

WELL HISTORY

August 18, 1972	Moving in rotary tools.
19,	Moving in rotary tools.
20,	Moving in rotary tools and rigging up.
21,	Rigging up and preparing to spud.
22,	Spud at 2:00 p.m. 8/21/72. Drilling at 120'.
23,	Waiting on cement. Drilled and reamed to 240'. Set 210' of 8-5/8" at 221' w/200 sacks. Plug down at 8:30 a.m.
24,	Shut down - no crews.
25,	Drilling at 544'. Drilled plug at 2:00 p.m.
26,	Drilling at 950'.
27,	Drilling at 1665'.
28,	Mixing mud. Lost circulation at 1853' at 5:00 p.m. Lost approximately 650 barrels.
29,	Lost circulation at 2019'. Lost approximately 1200 barrels.
30,	Regaining circulation at 2654'. Preparing to drill ahead. wt. 8.6 Vis. 33 W.L. 18
September 1, 1972	Preparing to trip at 3077'. Top Dakota 3059 = 3085'. Strap at 3092.41 = 3118.28 = 26' correction.
2,	Conditioning mud at 3212' TD. Top Lakota 3120, Morrison 3172. Preparing to run DST No. 1 3120-3212.
3,	Drilling at 3272'.
4,	Conditioning mud at 3600' TD. Preparing to log.
5,	Going in hole with DST No. 2 3474-3596.
6,	Plugging to abandon. Ran DST No. 3 3474-3596.

SAMPLE DESCRIPTION

2600-2820	Shale, dark gray to gray, soft fissile with occasional trace of gas bubbling from shale and trace of limestone, tan, finely crystalline (Inoceramus)
2820-2920	Shale, as above, becoming harder and more silty, and siltstone, gray and tan, slightly dolomitic, very pyritic, dense, no stain or fluorescence
2920-2950	Sandstone, fine to very fine grain, dirty gray and tan, shale, very well cemented, slightly dolomitic, trace glauconite, very low to no porosity, with trace of bleeding of gas, very poor spotted fluorescence in less than 10% of sample and trace sand- stone, light gray to white, subangular, quartzitic, very dense, glauconitic, no stain or fluorescence
2950-2990	Shale, dark gray and sandstone, very fine grain, gray, fair sorting, very well cemented, no visible porosity, glauconitic, no stain or fluorescence, and siltstone, dark gray, sandy
2990-3060	Shale, dark gray to black, silty in part, increasing in bentonite, light gray and tan at base

SAMPLE DESCRIPTION (CONT.)

- 3060-3070 Sandstone, fine grain, light gray, subrounded, fair sorting, well cemented, no visible porosity, no show, and shale
- 3070-3077 (Circ) Sandstone, fine grain, light gray and white, subangular-subrounded, fair sorting, trace porosity, no stain or fluorescence, and shale
(Drill pipe correction downhole 26' = 3103)
- 3103-3120 Sandstone, gray, fine grain, subrounded, good sorting, clay filled, very low porosity, no stain or fluorescence, and trace sandstone, fine grain, subangular, quartzitic, very dense, no show, and shale, dark gray and gray, silty, with pyrite in lower part
- 3120-3130 Sandstone, as above, becomes very carbonaceous, no porosity, no show, and sandstone, light tan oil stain, fine to medium grain, subrounded, fair sorting, some clay material, low to fair visible porosity, good bright fluorescence, and shale, gray and trace light green
- 3130-3140 Shale, light gray and green, and trace sandstone, as above, with show, and sandstone, fine grain, white, dense, quartzitic, trace carbonaceous material, pyritic, no show
- 3140-3150 Shale and sandstone, as above, no show
- 3150-3180 Sandstone, fine to medium grain, light tan oil stain, subangular - subrounded, poor to fair sorting, low porosity, well cemented, good fluorescence, and sandstone, fine grain, white, quartzitic, dense, no show, and shale, gray and light green - many unconsolidated sand grain
- 3180-3200 Shale, gray and light green, waxey
- 3200-3210 Shale, tan, light green, maroon, and limestone, light brown and tan, finely crystalline, and chert, tan, gray, and light brown
- 3210-3212 (Circ) Sandstone, fine grain, light green and gray, fair sorting, clean, clay filled, low porosity, and shale, as above
- 3212-3220 Shale, gray, light gray, and light green
- 3220-3230 Sandstone, fine to medium grain, white, subrounded, fair to poor sorting, clay filled, very low porosity, no show, and sandstone, fine grain, gray to white, subrounded, fair sorting, trace porosity, clay filled, no show, and chert, gray and milky white, and rose opaque, and shale, dark gray
- 3230-3240 Shale, gray and light green, and trace sandstone, as above, no show
- 3240-3260 Sandstone, light tan, subangular to subrounded, fair sorting, clay filled, very low porosity, fair fluorescence, extremely poor sorting, and sandstone, white, fine grain, good sorting, clay filled, very low porosity, no show, shale, dark gray, and abundant chert
- 3260-3350 Shale, light gray and red and maroon, mottled in part, zone appears to become more shaley near base
- 3350-3390 Shale, as above, and sandstone, light gray, light green, and pink, fine to very fine grain, clay filled in part, very sharp, very low porosity, no stain or fluorescence, and trace chert
- 3390-3410 Sandstone, subrounded, light red, pink, to white, with few dark minerals, very well cemented, with clay material, very low porosity, no show, and vari colored shale, as above
- 3410-3450 Shale, red, brown, and tan, silty in part
- 3450-3470 Shale, as above, and limestone, brown, shaley
- 3470-3480 Shale, as above, and sandstone, light green, fine to medium grain, subrounded grains, poorly sorted, dolomitic, no stain or fluorescence, and sandstone, gray, fine grain, quartzitic, well cemented, calcareous, carbonaceous, no porosity, no show

SAMPLE DESCRIPTION (CONT.)

3480-3530 Trace sandstone, as above, and shale, gray and light green, and maroon, and limestone, light gray and tan, finely crystalline

3530-3550 Sandstone, medium grain, gray, subrounded, fair sorting, well cemented, with trace clay, low porosity, dark asphaltic residue on sample, fluorescence, with very slow poor cut, shale, gray to light green, and trace limestone, tan, finely crystalline

3550-3600 Shale, red, brown, and light green, sandy in part, and mottled in part, with sandstone, fine to very fine grain, gray, clay filled

DRILL STEM TESTS

DST NO. 1 3120-3212 Misrun
Perforations plugged.

DST NO. 2 3474-3596 Misrun
Could not get to bottom.

DST NO. 3 3474-3596
Open 15 minutes; Shut in 75 minutes,
Open 60 minutes; Shut in 75 minutes.
Weak blow.

Recovered: 105' mud with no shows.

Pressures: I.H.P. : 870# F.P. (2) : 56#-56#
F.P. (1) : 37#-56# F.S.I.P. (75) : 187#
I.S.I.P. (15) : 140# F.H.P. : 805#

BIT RECORD

<u>No.</u>	<u>Make</u>	<u>Type</u>	<u>Size</u>	<u>From-To</u>	<u>Feet</u>	<u>Hours</u>
1	Reed	YT3S	12 1/4	0-151	151	17 3/4
2	Reed	YTIAR	7-7/8	-266	115	5
3	Reed	YT3J	7-7/8	-770	474	29
4	Smith	DT	7-7/8	-1586	846	25
5	Smith	DTJ	7-7/8	-1986	400	18
6	Reed	YT3J	7-7/8	-2857	871	31
7	Reed	YTIAR	7-7/8	-3078	221	8
8	Smith	3JS	7-7/8	-3600	522	36

STRAIGHT HOLE SURVEYS

<u>Depth</u>	<u>Deviation</u>
123	3/4
153	1 3/4
180	3/4
207	3/4
236	3/4
337	1 3/4
395	2
514	1 3/4

STRAIGHT HOLE SURVEYS (CONT.)

<u>Depth</u>	<u>Deviation</u>
574	1 1/4
603	1 3/4
623	1 1/2
723	1 3/4
812	1 3/4
902	1 3/4
991	3/4
1080	1
1168	1 3/4
1258	1 1/2
1346	1 3/4
1525	3
1615	1 1/2
1704	1 1/2
2508	2 3/4

WELL HISTORY

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19, Moving in rotary tools.
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21, Rigging up and preparing to spud.
22, Spud at 2:00 p.m. 8/21/72. Drilling at 120'.
23, Waiting on cement. Drilled and reamed to 240'.
Set 210' of 8-5/8" at 221' w/200 sacks. Plug down
at 8:30 a.m.
24, Shut down - no crews.
25, Drilling at 544'. Drilled plug at 2:00 p.m.
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September 1, 1972 Preparing to trip at 3077'. Top Dakota 3059' = 3085'.
Strap at 3092.41 = 3118.28 = 26' correction.
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Morrison 3172. Preparing to run DST No. 1 3120-3212.
3, Drilling at 3272'.
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6, Plugging to abandon. Ran DST No. 3 3474-3596.

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2820-2920 Shale, as above, becoming harder and more silty, and siltstone,
gray and tan, slightly dolomitic, very pyritic, dense, no stain
or fluorescence
2920-2950 Sandstone, fine to very fine grain, dirty gray and tan, shale,
very well cemented, slightly dolomitic, trace glauconite, very
low to no porosity, with trace of bleeding of gas, very poor
spotted fluorescence in less than 10% of sample and trace sand-
stone, light gray to white, subangular, quartzitic, very dense,
glauconitic, no stain or fluorescence
2950-2990 Shale, dark gray and sandstone, very fine grain, gray, fair sorting,
very well cemented, no visible porosity, glauconitic, no stain or
fluorescence, and siltstone, dark gray, sandy
2990-3060 Shale, dark gray to black, silty in part, increasing in bentonite,
light gray and tan at base

SAMPLE DESCRIPTION (CONT.)

- 3060-3070 Sandstone, fine grain, light gray, subrounded, fair sorting, well cemented, no visible porosity, no show, and shale
- 3070-3077 (Circ) Sandstone, fine grain, light gray and white, subangular-subrounded, fair sorting, trace porosity, no stain or fluorescence, and shale
- 3103-3120 (Drill pipe correction downhole 26' = 3103) Sandstone, gray, fine grain, subrounded, good sorting, clay filled, very low porosity, no stain or fluorescence, and trace sandstone, fine grain, subangular, quartzitic, very dense, no show, and shale, dark gray and gray, silty, with pyrite in lower part
- 3120-3130 Sandstone, as above, becomes very carbonaceous, no porosity, no show, and sandstone, light tan oil stain, fine to medium grain, subrounded, fair sorting, some clay material, low to fair visible porosity, good bright fluorescence, and shale, gray and trace light green
- 3130-3140 Shale, light gray and green, and trace sandstone, as above, with show, and sandstone, fine grain, white, dense, quartzitic, trace carbonaceous material, pyritic, no show
- 3140-3150 Shale and sandstone, as above, no show
- 3150-3180 Sandstone, fine to medium grain, light tan oil stain, subangular - subrounded, poor to fair sorting, low porosity, well cemented, good fluorescence; and sandstone, fine grain, white, quartzitic, dense, no show, and shale, gray and light green - many unconsolidated sand grain
- 3180-3200 Shale, gray and light green, waxy
- 3200-3210 Shale, tan, light green, maroon, and limestone, light brown and tan, finely crystalline, and chert, tan, gray, and light brown
- 3210-3212 (Circ) Sandstone, fine grain, light green and gray, fair sorting, clean, clay filled, low porosity, and shale, as above
- 3212-3220 Shale, gray, light gray, and light green
- 3220-3230 Sandstone, fine to medium grain, white, subrounded, fair to poor sorting, clay filled, very low porosity, no show, and sandstone, fine grain, gray to white, subrounded, fair sorting, trace porosity, clay filled, no show, and chert, gray and milky white, and rose opaque, and shale, dark gray
- 3230-3240 Shale, gray and light green, and trace sandstone, as above, no show
- 3240-3260 Sandstone, light tan, subangular to subrounded, fair sorting, clay filled, very low porosity, fair fluorescence, extremely poor sorting, and sandstone, white, fine grain, good sorting, clay filled, very low porosity, no show, shale, dark gray, and abundant chert
- 3260-3350 Shale, light gray and red and maroon, mottled in part, zone appears to become more shaley near base
- 3350-3390 Shale, as above, and sandstone, light gray, light green, and pink, fine to very fine grain, clay filled in part, very sharp, very low porosity, no stain or fluorescence, and trace chert
- 3390-3410 Sandstone, subrounded, light red, pink, to white, with few dark minerals, very well cemented, with clay material, very low porosity, no show, and vari colored shale, as above
- 3410-3450 Shale, red, brown, and tan, silty in part
- 3450-3470 Shale, as above, and limestone, brown, shaley
- 3470-3480 Shale, as above, and sandstone, light green, fine to medium grain, subrounded grains, poorly sorted, dolomitic, no stain or fluorescence, and sandstone, gray, fine grain, quartzitic, well cemented, calcareous, carbonaceous, no porosity, no show

SAMPLE DESCRIPTION (CONT.)

3480-3530 Trace sandstone, as above, and shale, gray and light green, and maroon, and limestone, light gray and tan, finely crystalline
3530-3550 Sandstone, medium grain, gray, subrounded, fair sorting, well cemented, with trace clay, low porosity, dark asphaltic residue on sample, fluorescence, with very slow poor cut, shale, gray to light green, and trace limestone, tan, finely crystalline
3550-3600 Shale, red, brown, and light green, sandy in part, and mottled in part, with sandstone, fine to very fine grain, gray, clay filled

DRILL STEM TESTS

DST NO. 1 3120-3212 Misrun
Perforations plugged.

DST NO. 2 3474-3596 Misrun
Could not get to bottom.

DST NO. 3 3474-3596
Open 15 minutes; Shut in 75 minutes,
Open 60 minutes; Shut in 75 minutes.
Weak blow.

Recovered: 105' mud with no shows.

Pressures: I.H.P. : 870# F.P. (2) : 56#-56#
F.P. (1) : 37#-56# F.S.I.P. (75) : 187#
I.S.I.P. (15) : 140# F.H.P. : 805#

BIT RECORD

<u>No.</u>	<u>Make</u>	<u>Type</u>	<u>Size</u>	<u>From-To</u>	<u>Feet</u>	<u>Hours</u>
1	Reed	YT3S	12 1/4	0-151	151	17 3/4
2	Reed	YTIAR	7-7/8	-266	115	5
3	Reed	YT3J	7-7/8	-770	474	29
4	Smith	DT	7-7/8	-1586	846	25
5	Smith	DTJ	7-7/8	-1986	400	18
6	Reed	YT3J	7-7/8	-2857	871	31
7	Reed	YTIAR	7-7/8	-3078	221	8
8	Smith	3JS	7-7/8	-3600	522	36

STRAIGHT HOLE SURVEYS

<u>Depth</u>	<u>Deviation</u>
123	3/4
153	1 3/4
180	3/4
207	3/4
236	3/4
337	1 3/4
395	2
514	1 3/4

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

14

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

5. LEASE DESIGNATION AND SERIAL NO.

U-14970

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mull Federal

9. WELL NO.

14-4

10. FIELD AND POOL, OR WILDCAT

Bull Canyon

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 4-T20S-R21E

12. COUNTY OR PARISH

Grand

13. STATE

Utah

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 Plug and abandon

2. NAME OF OPERATOR
Petro Lewis Corporation

3. ADDRESS OF OPERATOR
1600 Broadway, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 780' FSL, 2025' FWL Sec. 4-T20S-R21E

At top prod. interval reported below

At total depth Same

14. PERMIT NO. _____ DATE ISSUED 8-8-72

15. DATE SPUDED 8-21-72 16. DATE T.D. REACHED 9-4-72 17. DATE COMPL. (Ready to prod.) Dry hole 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5752' GR 19. ELEV. CASINGHEAD 5762'

20. TOTAL DEPTH, MD & TVD 3600' 21. PLUG, BACK T.D., MD & TVD _____ 22. IF MULTIPLE COMPL., HOW MANY* _____ 23. INTERVALS DRILLED BY _____ ROTARY TOOLS X CABLE TOOLS _____

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* _____ 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN IES - TD to surface casing Combination CNL-FDC-GR minimum run

27. WAS WELL CORED No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24	222'	12-1/4	To surface	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION _____ 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. _____ CASING 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 Donald L. Schain TITLE Asst. Manager of Operations DATE November 8, 1972

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

WELL HISTORY

August 18, 1972 Moving in rotary tools.
19, Moving in rotary tools.
20, Moving in rotary tools and rigging up.
21, Rigging up and preparing to spud.
22, Spud at 2:00 p.m. 8/21/72. Drilling at 120'.
23, Waiting on cement. Drilled and reamed to 240'.
Set 210' of 8-5/8" at 221' w/200 sacks. Plug down
at 8:30 a.m.
24, Shut down - no crews.
25, Drilling at 544'. Drilled plug at 2:00 p.m.
26, Drilling at 950'.
27, Drilling at 1665'.
28, Mixing mud. Lost circulation at 1853' at 5:00 p.m.
Lost approximately 650 barrels.
29, Lost circulation at 2019'. Lost approximately 1200
barrels.
30, Regaining circulation at 2654'. Preparing to drill
ahead. wt. 8.6 Vis. 33 W.L. 18
September 1, 1972 Preparing to trip at 3077'. Top Dakota 3059' = 3085'.
Strap at 3092.41 = 3118.28 = 26' correction.
2, Conditioning mud at 3212' TD. Top Lakota 3120,
Morrison 3172. Preparing to run DST No. 1 3120-3212.
3, Drilling at 3272'.
4, Conditioning mud at 3600' TD. Preparing to log.
5, Going in hole with DST No. 2 3474-3596.
6, Plugging to abandon. Ran DST No. 3 3474-3596.

SAMPLE DESCRIPTION

2600-2820 Shale, dark gray to gray, soft fissile with occasional trace
of gas bubbling from shale and trace of limestone, tan, finely
crystalline (Inoceramus)
2820-2920 Shale, as above, becoming harder and more silty, and siltstone,
gray and tan, slightly dolomitic, very pyritic, dense, no stain
or fluorescence
2920-2950 Sandstone, fine to very fine grain, dirty gray and tan, shale,
very well cemented, slightly dolomitic, trace glauconite, very
low to no porosity, with trace of bleeding of gas, very poor
spotted fluorescence in less than 10% of sample and trace sand-
stone, light gray to white, subangular, quartzitic, very dense,
glauconitic, no stain or fluorescence
2950-2990 Shale, dark gray and sandstone, very fine grain, gray, fair sorting,
very well cemented, no visible porosity, glauconitic, no stain or
fluorescence, and siltstone, dark gray, sandy
2990-3060 Shale, dark gray to black, silty in part, increasing in bentonite,
light gray and tan at base

SAMPLE DESCRIPTION (CONT.)

- 3060-3070 Sandstone, fine grain, light gray, subrounded, fair sorting, well cemented, no visible porosity, no show, and shale
- 3070-3077 (Circ) Sandstone, fine grain, light gray and white, subangular-subrounded, fair sorting, trace porosity, no stain or fluorescence, and shale
- 3103-3120 (Drill pipe correction downhole 26' = 3103) Sandstone, gray, fine grain, subrounded, good sorting, clay filled, very low porosity, no stain or fluorescence, and trace sandstone, fine grain, subangular, quartzitic, very dense, no show, and shale, dark gray and gray, silty, with pyrite in lower part
- 3120-3130 Sandstone, as above, becomes very carbonaceous, no porosity, no show, and sandstone, light tan oil stain, fine to medium grain, subrounded, fair sorting, some clay material, low to fair visible porosity, good bright fluorescence, and shale, gray and trace light green
- 3130-3140 Shale, light gray and green, and trace sandstone, as above, with show, and sandstone, fine grain, white, dense, quartzitic, trace carbonaceous material, pyritic, no show
- 3140-3150 Shale and sandstone, as above, no show
- 3150-3180 Sandstone, fine to medium grain, light tan oil stain, subangular - subrounded, poor to fair sorting, low porosity, well cemented, good fluorescence; and sandstone, fine grain, white, quartzitic, dense, no show, and shale, gray and light green - many unconsolidated sand grain
- 3180-3200 Shale, gray and light green, waxy
- 3200-3210 Shale, tan, light green, maroon, and limestone, light brown and tan, finely crystalline, and chert, tan, gray, and light brown
- 3210-3212 (Circ) Sandstone, fine grain, light green and gray, fair sorting, clean, clay filled, low porosity, and shale, as above
- 3212-3220 Shale, gray, light gray, and light green
- 3220-3230 Sandstone, fine to medium grain, white, subrounded, fair to poor sorting, clay filled, very low porosity, no show, and sandstone, fine grain, gray to white, subrounded, fair sorting, trace porosity, clay filled, no show, and chert, gray and milky white, and rose opaque, and shale, dark gray
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