

OIL AND GAS CONSERVATION COMMISSION
DEPARTMENT OF NATURAL RESOURCES

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THE STATE OF COLORADO
triplicate for Patented and Federal lands.
quadruplicate for State lands.

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 DRY HOLE

2. NAME OF OPERATOR
Cardinal Petroleum Company

3. ADDRESS OF OPERATOR
Box 1077, Billings, Montana

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
At surface 2040¹ FEL & 600¹ FNL Sec. 2-2N-57W
At top prod. interval reported below
At total depth same API 05 087 7231

5. LEASE DESIGNATION AND SERIAL NO.
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Huey Lee Lusby
9. WELL NO.
1
10. FIELD AND POOL, OR WILDCAT
Lee Field
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
NW NE
Sec. 2-2N-57W
12. COUNTY
Morgan
13. STATE
Colorado

14. PERMIT NO. 72 430 DATE ISSUED 6-13-72

15. DATE SPUNDED 7-18-72 16. DATE T.D. REACHED 7-27-72 17. DATE COMPL. (Ready to prod.) 7-27-72 P&A(Plug & Abd.) 18. ELEVATIONS (DF, RKB, RT, GR, ETC.) 4500¹ Gr., 4503¹ KB 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 5625¹ Drlr, 5620 Log 21. PLUG, BACK T.D., MD & TVD - 22. IF MULTIPLE COMPL., HOW MANY - 23. INTERVALS DRILLED BY 0-5625 ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)
P&A July 27, 1972 25. WAS DIRECTIONAL SURVEY MADE
no

26. TYPE ELECTRIC AND OTHER LOGS RUN
Schlumberger IES and Fm. Density 27. WAS WELL CORED YES NO (Submit analysis) No cores
DRILL STEM TEST YES NO (See reverse side) Yes. (3) see attached

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#	130 ¹	12-1/4	120 sx reg	

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)
P&A July 27, 1972

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	<u>DR</u>
	<u>FIP</u>
	<u>HUM</u>
	<u>JAM</u>

33. PRODUCTION

DATE FIRST PRODUCTION P&A 7-27-72 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
Geological report by Larry E. O'Brian

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

SIGNED R. D. Orr TITLE Prod. Supt. DATE Nov. 3, 1972

37. SUMMARY OF POROUS ZONES:
 SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES.

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			SEE ATTACHED GEOLOGICAL REPORT

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH

BEST IMAGE
AVAILABLE

Well File



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COLA. OIL & GAS COMM.

WELL REPORT

CARDINAL PETROLEUM COMPANY - HUEY

#1 LEE-LUSBY

2040' FFL & 600' FNL Section 2
Township 2 North, Range 57 West
Morgan County, Colorado

Larry E. O'Brien
919 Highland Savings Building
Denver, Colorado 80202
303-892-7661

BEST IMAGE
AVAILABLE



WELL DATA

OPERATOR: Cardinal Petroleum Company
P.O. Box 1077
Billings, Montana 59103

WELL NAME: #1 Lee-Lusby

LOCATION: 2040' FEL & 600' FNL Section 2
Township 2 North, Range 57 West
Morgan County, Colorado

ELEVATION: 4500' Ground; 4503' Kelly Bushing
(4' Cuton location plus 7' substructure)

CONTRACTOR: Jim Snyder Drilling Co.
Denver, Colorado
Rig #3
Tool Pusher: Dave Rankin
Drillers:
Morning - A. C. Hamby
Daylight - Robert E. Rankin
Evening - Gary Good

SPUD DATE: July 18, 1972

COMPLETION DATE: July 27, 1972

SURFACE CASING: Set 3 joints (120'), 8-5/8" surface casing at 130'
with 120 sacks regular and recemented with 158
sacks regular cement.

DRILL-STEM TEST: Virg's 5468 to 5498 Failed to reach bottom
Virg's 5472 to 5493 Packers failed
Virg's 5474 to 5485 "D" Sand

CORES: None

LOGS: Schlumberger, Induction-Electric 132' - 5620'
Schlumberger, Formation Density Log 4700' - 5620'

STATUS: Plugged and abandoned



SCHLUMBERGER TOPS

<u>FORMATION</u>	<u>TOP</u>	<u>DATUM</u>
Niobrara	4716	- 213
Ft. Hays	5017	- 514
Greenhorn	5276	- 773
Bentonite	5370	- 877
"D" Sand	5462	- 959
"J" Sand	5535	-1032
Total Depth Driller	5619	-1116
Total Depth Schlumberger	5620	-1117

SAMPLE DESCRIPTION

All descriptions lagged and corrected to Induction-Electric log depths.

- 5400 - 5462 Shale, medium grey, silty in part.
- 5462 - 5468 Sandstone, white, fine-grained, clay infilled, firm, subrounded to subangular. No shows.
- 5468 - 5474 Shale, medium grey, soft to fissile in part, some stringers sandstone as above interbedded.
- 5474 - 5478 Sandstone, white, well sorted, fine grained, some clay infilling, subrounded to subangular. Most sample no show; however, 6 to 8 pieces had slight staining, fair fluorescence and good cut on fresh breaks.
- 5478 - 5482 Shale, medium to light grey, soft.
- 5482 - 5486 Sandstone, white, fine grained, poor sorting, clay infilled, subrounded to subangular. No shows.
- 5486 - 5514 Shale, medium to light grey, soft.
- 5514 - 5535 Shale, medium to light grey, with interbedded siltstones, grey, hard.
- 5535 - 5556 Sandstone, white, fine grained, dirty, poor sorting, subrounded to subangular. No shows.
- 5556 - 5560 Shale, medium grey, silty in part.
- 5560 - 5567 Sandstone, white, fine to medium grained, good sorting, clean, subrounded to subangular, friable. No shows.
- 5567 - 5570 Shale, medium grey, some interbedded siltstone.
- 5570 - 5575 Sandstone, white, fine grained, partially clay infilled, firm, subangular to subrounded. No shows.
- 5575 - 5578 Shale, medium grey, some interbedded silt.
- 5578 - 5619 Sandstone, white, fine grained, some clay infilling, subangular to subrounded, firm. Some sandstone, white, fine-medium grained, friable, clean, subangular. No shows anywhere in entire interval.



DRILL-STEM TESTS

- DST #1 5468 to 5498 "D" Sand
Misrun.
Tool stopped 180' of bottom
- DST #2 5472 to 5493 "D" Sand Straddle Packers
Misrun.
Upper Packers failed immediately.
- DST #3 5574 to 5485 "D" Sand Straddle Packers
First Flow Period - 30 minutes, First Shut-In Period - 30 minutes
Second Flow Period - 60 minutes, Second Shut-In Period - 60 minutes

Blow: 1st Open Flow - Very weak blow, dead in 10 minutes
2nd Open Flow - Dead throughout

Recovery: 65' mud cut water

Sample Chamber: 1450 cc water

IHP 2466 psi, IFP₁ 47 psi, ISIP 1342 psi, IFP₂ 59 psi
FHP 2955 psi, FFP₁ 47 psi, FSIP 1330 psi, FFP₂ 59 psi
BHT - 152°; Mud weight - 10; Viscosity - 90

Tool was not plugged. Bottom packer did hold.

BEST IMAGE
AVAILABLE



DEVIATION RECORD

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
131	1/4°	2877	1/2°
616	1/4°	3558	1/2°
1127	1/4°	4058	3/4°
1612	1/2°	4410	1/2°
2120	1/4°	5163	1°
2634	1/2°	5625	1°

MUD RECORD

<u>Date</u>	<u>Time</u>	<u>Weight</u> (lbs. per gal.)	<u>Viscosity</u> (1500/qt.)	<u>pH</u>	<u>Water Loss</u> (ml/30 min)	<u>Depth</u>
7/20/72		Water				
7/23/72	8:30 a.m.	9.6	38	8.5	5.8	5031
7/24/72	10:30 a.m.	9.8	48	9.0	5.2	5491
7/25/72	10:00 a.m.	9.8	48	8.5	5.0	5584



CHRONOLOGICAL HISTORY

1972

- July 17 Moved in and rigged up rig.
- July 18 Rigged up rig and spudded 5:00 p.m. Drilled 135', 12-1/4" surface hole. Set 3 joints (120') - 8-5/8" at 130' with 120 sacks regular cement, 3% calcium chloride. Plugged down 10:45 p.m. Midnight waiting on cement.
- July 19 Recemented surface casing with 158 sacks regular cement, 3% calcium chloride. Plug down at 7:00 a.m. Drilled out plug at 4:00 p.m. Drilled ahead to 12:00 midnight, depth 796'.
- July 20 Drilled ahead. Down 1 hour waiting on pump. Depth at 12:00 midnight 2782'.
- July 21 Drilled ahead 12:00 midnight to 2:10 a.m. Depth 2874'. Round trip for Bit #2, 2:10 a.m. to 5:55 a.m. Drilled ahead 5:55 a.m. to 12:00 midnight, depth 4027'.
- July 22 Drilled ahead 12:00 midnight to 7:10 a.m., depth 4404'. Waited on pump 7:10 a.m. to 9:08 a.m. Drilled ahead 9:08 a.m. to 9:12 a.m., depth 4009'. Jetted pits 9:12 a.m. to 10:07 a.m. Round trip for Bit #3, 10:07 a.m. to 4:15 a.m. Drilled ahead 4:15 p.m. to 4:45 p.m., depth 4434'. Changed water pump and pump motor 4:45 p.m. to 6:25 p.m. Drilled ahead 6:25 p.m. to 12:00 midnight, depth 4736'.
- July 23 Drilled ahead 12:00 midnight to 2:00 p.m., depth 5162'. Round trip for Bit #4, 2:00 p.m. to 9:10 p.m. Drilled ahead 9:10 p.m. to 12:00 midnight, depth 5245'.
- July 24 Drilled ahead 12:00 midnight to 11:45 a.m., depth 5498'. Trip out for Bit #5, 11:45 a.m. to 1:50 p.m. Started (Bit just below rotary table) in hole, orders changed. Waited on Virg's testers, 2:00 p.m. to 3:00 p.m. Picked up test tool 3:00 p.m. to 4:45 p.m. Started in hole 4:45 p.m., got to within 180' of total depth and could go no further. Started out of hole 6:55 p.m. Orders changed to drill to total depth, log and drill stem test from logs. Round trip for Bit #5 under way at 12:00 midnight.



- July 25 Finish trip for Bit #5 at 12:55 p.m. Drilled ahead 12:55 p.m. to 11:00 a.m., depth 5588'. Trip for Bit #6, 11:00 a.m. to 6:00 p.m., spent 2 hours reaming. Drilled ahead 6:00 p.m. to 10:45 p.m. Total depth this well 5620'. Conditioned hole 10:45 to 11:50 p.m. Tripping at 12:00 midnight.
- July 26 Trip out for logs, rearrange pipe in derrick and rig up loggers 12:00 midnight to 4:00 a.m. Ran Schlumberger logs 4:00 a.m. to 8:15 a.m. Waiting on orders 8:15 a.m. to 9:30 a.m. Time 9:30 a.m. to 11:00 a.m. unaccounted for. Picked up Virg's testers tool 11:00 a.m. to 11:30 a.m. Started in hole for DST #2 at 11:30 a.m. Packers failed 1:25 a.m., no test, pulled out of hole to rerig test, on surface at 4:00 p.m. Repaired test tool and waited on orders 4:00 p.m. to 7:00 p.m. Started in hole with DST #3 at 7:00 p.m. Commence testing at 8:45 p.m., finished test and started out of hole at 11:45 p.m. Tripping at 12:00 midnight.
- July 27 Tripped out with DST #3 12:00 midnight to 3:30 a.m. Broke down test tool and retrieved recorders 3:30 a.m. to 4:00 a.m. Waited on orders 4:00 a.m. to 4:45 a.m. Orders to plug and abandoned received at 4:45 a.m.