

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

Sundry Notices and Reports on Wells

97 OCT 27 PM 2:41

070 B. L. CO., NM

1. Type of Well
GAS

2. Name of Operator

**BURLINGTON
RESOURCES**

OIL & GAS COMPANY

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M

990' FNL, 990' FWL, Sec. 12, T-31-N, R-12-W, NMPM

5. Lease Number
SF-077648

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name

8. Well Name & Number
Davis #4

9. API Well No.
30-045-10947

10. Field and Pool
Blanco Mesaverde

11. County and State
San Juan Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

Type of Action

☒ Notice of Intent

☐ Abandonment

☐ Change of Plans

☐ Subsequent Report

☐ Recompletion

☐ New Construction

☐ Final Abandonment

☐ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut off

☐ Altering Casing

☐ Conversion to Injection

☒ Other - Pay add - abandon lower Mesaverde

13. Describe Proposed or Completed Operations

It is intended to add the Lewis formation to the subject well according to the attached procedure and wellbore diagram. The lower Mesaverde formation will be abandoned.

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NOV - 3 1997

OIL CON. DIV.
DIST. 3

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

Signed Duane W. Spencer (JLDops) Title Regulatory Administrator Date 10/22/97

(This space for Federal or State Office use)

APPROVED BY AS/ Duane W. Spencer Title _____

Date OCT 30 1997

CONDITION OF APPROVAL, if any:

NMOCG

Davis #4

Lewis Pay Add Procedure

Unit D, Section 12, T31N, R12W

Lat: 36° 55.03782 min./ Long: 108° 3.12192 min.

Abandon the Lower Mesaverde openhole and complete the Lewis. The Lewis will be sand fracture stimulated with two 150,000 lbs 20/40 sand stages using a 60Q 30 lb crosslinked gel for transport. A total of 300,000 lbs of sand will be utilized.

1. Inspect location and test rig anchors, if necessary. Comply with all NMOCD, BLM, Forestry & BR rules and regulations. Dig flowback pit or set flowback tank. Haul to location an inspected 4450', 2-3/8" production string, a 4300', 3-1/2" N-80 frac string and 3, 400 bbl frac tanks.
2. Fill Tank #1 with 400 bbls 2% KCL water. Blow well down and kill with 2% KCL water as necessary. ND WH and NU BOP with flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line.
3. Attempt to TOOH with Mesaverde production string set at \pm 5471. If tubing is stuck, estimate where it is stuck using stretch calculations. Run gauge to 5200'. Wireline jet cut tubing at 5200'. Continue to TOOH and LD. Send string in to be inspected and salvaged, if possible.
4. PU and RIH with a 6-1/4" bit, 7" (23 lb/ft) casing scraper on the inspected 2-3/8" production string. Clean out to 5000' with air. TOOH.
5. RIH with 7" CR on the 2-3/8" production string. Set CR at 5000'. PT tubing to 2000 psi using the CR stinger configuration. RU cementing contractor. Establish an injection rate through the CR. Squeeze the lower Mesaverde openhole with 200 sx class B cement (100% excess). Sting out of CR, spot 2 sx cement on CR and reverse circulate tubing clean. RD cementing contractor.
6. Roll the hole clean with 2% KCL water. TOOH 2-3/8" production string. PT CR and casing to 1000 psi. If casing doesn't hold pressure, isolate hole and contact Jennifer Dobson at ext. 4026 for squeeze procedure.
7. MIRU logging company. Run GR-CBL-CCL from PBTD to 3400' with 1000 psi surface pressure. Run GR-DSNL from PBTD to 3400'. Evaluate CBL and send log copies to production and drilling. Top of good cement must be above 3500' to continue. Contact Jennifer Dobson at ext 4026 for squeeze procedure if needed.

LOWER LEWIS

8. Fill Tank #2 and Tank #3 with 690 bbls 2% KCL water. If necessary, filter all water to 25 microns. These two tanks are for the frac gel fluid. Add water to Tank #1 for the breakdown as necessary.
9. TIH with 2-3/8 production string and spot 580 gals 15% HCL acid across lower Lewis perf interval 4000-4300'. TOH slowly for 7 stands. TOOH. Stand 2-3/8" tubing to side of where 3-1/2" tubing will stand.

All acid on this well to contain the following additives per 1000 gals.

2 gal	CI-22	Corrosion inhibitor
5 gal	Ferrotrol-300L	Iron Control

Davis #4

1998 Priority Lewis Recompletion

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1 gal	Flo-back 20	Surfactant
0.5 gal	Clay Master-5C	Clay control

10. Contact Jennifer Dobson at ext. 4026 for exact Lewis perforations. RU wireline services. RIH with 3-1/8" select fire carrier guns loaded with Owens 3125306P HSC 12 gm charges set at 1 SPF. (Av. perf diameter - 0.30", Av. pen. -17.48" in concrete). Perf the lower Lewis from top down. RD wireline services.
11. PU and RIH with 7" packer, tubing tester and 3-1/2" frac string. Set packer at 3800'. PT frac string to 6000 psi.
12. RU stimulation company. Hold a tailgate safety meeting. Pressure test surface treating lines to 4600 psi. Breakdown lower Lewis with 1000 gals 15% HCL acid. Drop 2, 7/8" 1.3 sp gr RCN perf balls per perforation. Evenly space throughout the job for diversion. Attempt to ball off to 3600 psi. Use same acid additives as in Step 9. RD stimulation company.
13. Release packer and lower to 4300' to knock off perf balls. Pull packer back uphole to 3900' and set.
14. RU stimulation company. Hold tailgate safety meeting. Pressure test surface lines to 7000 psi. Frac lower Lewis down the 3-1/2" N-80 frac string with 66,000 gals of 60 quality foam using 30 lb crosslinked gel as the base fluid and 150,000 lbs 20/40 Arizona sand. Pump at 50 BPM. Monitor surface treating pressures, rate, foam quality and sand concentration with computer van. Sand laden fluid is to be tagged with 3 radioactive tracers. Max pressure is 6000 psi and estimated treating pressure is 5685 psi. Treat per the following schedule:

Stage	Downhole Foam Volume (gals)	Clean Gel Volume (gals)	N2 Volume (MSCF)	Sand Volume (lbs)
Pad	13,500	5,400	136.88	---
1.0 ppg	7,500	3,000	76.05	7,500
2.0 ppg	7,500	3,000	76.05	15,000
3.0 ppg	22,500	9,000	228.17	67,500
4.0 ppg	15,000	6,000	152.11	60,000
Flush	1,425	570	14.45	0
Totals	67,425	26,970	683.72	150,000

Treat frac fluid w/the following additives per 1000 gallons:

* 0.38 lbs XCIDE-207	Bacteriacide to be mixed in tanks.
* 30 lbs GW-27	Guar gelling agent to be mixed in tanks.
* 5.0 gals FAW-1	Foaming agent to be mixed on fly.
* 2.5 gals BF-7L	Buffering agent to be mixed in tanks.
* 1.0 lbs ULTRA PERM CRB	Gel breaker to be mixed on fly.
* 1.0 lbs GBW-5	Gel Breaker to be mixed in last 3,998 gals.
* 1.0 gals FLO-Back 20	Non-ionic Surfactant mix in full tank.
* 1.0 gals XLW-30	Crosslinker to be mixed on fly.
* 1.0 gals ENZYME G	Enzyme breaker to be mixed on fly.

Treat flush fluid with the following additives per 1000 gals:

* 0.38 lbs XCIDE-207	Bacteriacide to be mixed in tanks.
* 30 lbs GW-27	Guar gelling agent to be mixed in tanks.

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- | | |
|------------------------|---|
| * 5.0 gals FAW-1 | Foaming agent to be mixed on fly. |
| * 2.5 gals BF-7L | Buffering agent to be mixed in tanks. |
| * 1.0 gals FLO-Back 20 | Non-ionic Surfactant mix in full tank. |
| * 1.0 lbs GBW-5 | Gel Breaker to be mixed in last 798 gals. |
| * 1.0 gals ENZYME G | Enzyme breaker to be mixed on fly. |

RD stimulation company.

15. Flow well back after 30 minutes to 1 hour through a choke manifold at 20 BPH or less if sand is observed. After the well has cleaned up and pressures allow, release packer and TOOH.
16. PUH and RIH with 7" RBP, packer and 2-3/8" frac string. Set RBP at 3990'. Release packer from RBP and PUH. Set the packer just above RBP and pressure test RBP to 3200 psi (75% of casing yield). Trickle 1 sack of sand and soap down tubing. Allow sand to settle.

UPPER LEWIS

17. Fill Tank #2 and Tank #3 with 689 bbls 2% KCL water. If necessary, filter all water to 25 microns. These two tanks are for the frac gel fluid. Add water to Tank #1 for the breakdown as necessary.
18. Release the packer and spot 550 gals 15% HCL acid across upper Lewis perf interval 3700-3980'. TOH slowly for 7 stands. TOOH. Stand 2-3/8" tubing to side of 3-1/2" tubing.
All acid on this well to contain the following additives per 1000 gals.

2 gal	CI-22	Corrosion inhibitor
5 gal	Ferrotrol-300L	Iron Control
1 gal	Flo-back 20	Surfactant
0.5 gal	Clay Master-5C	Clay control
19. Contact Jennifer Dobson at ext. 4026 for exact Lewis perforations. RU wireline services. RIH with 3-1/8" select fire carrier guns loaded with Owen 3125306P HSC 12 gm charges set at 1 SPF. (Av. perf diameter - 0.30", Av. pen. -17.48" in concrete). Perf the upper Lewis from top down. RD wireline services.
20. TIH with 7" packer and 3-1/2 frac string. Set packer at 3500'.
21. RU stimulation company. Hold a tailgate safety meeting. Pressure test surface treating lines to 4600 psi. Breakdown upper Lewis with 1000 gals 15% HCL acid. Drop 2, 7/8" 1.3 sp gr RCN perf balls per perforation. Space evenly throughout the job for diversion. Attempt to ball off to 3600 psi. Use same acid additives as in Step 18. RD stimulation company.
22. Release packer and lower to 3980' to knock off perf balls. Pull packer uphole to 3600' and set.
23. RU stimulation company. Hold a tailgate safety meeting. Pressure test surface lines to 7000 psi. Frac upper Lewis down the 3-1/2" N-80 frac string with 66,000 gals of 60 quality foam using 30 lb crosslinked gel as the base fluid and 150,000 lbs 20/40 Arizona sand. Pump at 50 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality and sand concentration with computer van. Sand laden fluid is to be tagged with 3

Davis #4

1998 Priority Lewis Recompletion

Lat: 36° 55.03782 min./ Long: 108° 3.12192 min.

radioactive RA tracers. Max pressure is 6000 psi and estimated treating pressure is 5308 psi. Treat per the following schedule:

Stage	Downhole Foam Volume (gals)	Clean Gel Volume (gals)	N2 Volume (MSCF)	Sand Volume (lbs)
Pad	13,500	5,400	128.12	---
1.0 ppg	7,500	3,000	71.18	7,500
2.0 ppg	7,500	3,000	71.18	15,000
3.0 ppg	22,500	9,000	213.56	67,500
4.0 ppg	15,000	6,000	142.38	60,000
Flush	1,315	525	12.48	0
Totals	67,315	26,925	638.91	150,000

Treat frac fluid w/the following additives per 1000 gallons:

* 0.38 lbs XCIDE-207	Bactericide to be mixed in tanks.
* 30 lbs GW-27	Guar gelling agent to be mixed in tanks.
* 5.0 gals FAW-1	Foaming agent to be mixed on fly.
* 2.5 gals BF-7L	Buffering agent to be mixed in tanks.
* 1.0 lbs ULTRA PERM CRB	Gel breaker to be mixed on fly.
* 1.0 lbs GBW-5	Gel Breaker to be mixed in last 3,998 gals.
* 1.0 gals FLO-Back 20	Non-ionic Surfactant mix in full tank.
* 1.0 gals XLW-30	Crosslinker to be mixed on fly.
* 1.0 gals ENZYME G	Enzyme breaker to be mixed on fly.

Treat flush fluid with the following additives per 1000 gals:

* 0.38 lbs XCIDE-207	Bactericide to be mixed in tanks.
* 30 lbs GW-27	Guar gelling agent to be mixed in tanks.
* 5.0 gals FAW-1	Foaming agent to be mixed on fly.
* 2.5 gals BF-7L	Buffering agent to be mixed in tanks.
* 1.0 gals FLO-Back 20	Non-ionic Surfactant mix in full tank.
* 1.0 lbs GBW-5	Gel Breaker to be mixed in last 798 gals.
* 1.0 gals ENZYME G	Enzyme breaker to be mixed on fly.

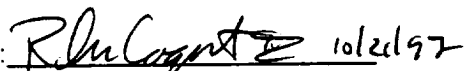
RDMO stimulation company.

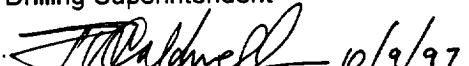
24. Flow well back after 30 minutes to 1 hour through a choke manifold at 20 BPH or less if sand is observed. After the well has cleaned up and pressures allow, release packer and TOOH. LD 3-1/2" frac string and packer.
25. TIH with RBP retrieving head on 2-3/8" tbg and CO with air/mist to RBP at 3990'. **Take pitot gauges when possible.** When well is sufficiently clean, retrieve the RBP at 3990' and TOOH. LD RBP.
26. RIH with notched collar on 2-3/8" tubing and tag PBTD. If sand fill up is present, clean out to PBTD (~4430'). Monitor gas and water returns when applicable.
27. When wellbore is sufficiently clean, TOH and RU Pro-Technics. Run After-Frac log from 4400-3600'. RD Pro-Technics.
28. RU Blue Jet. Run Perforation Efficiency log from 4300-3700'. RD Blue Jet.
29. Squeeze to cover Ojo Alamo as necessary.

Davis #4
1998 Priority Lewis Recompletion

30. Rabbit and TIH with 2-3/8" tubing with a seating nipple one joint off bottom. Tag PBTD for sand fill up. If needed, circulate sand off bottom with air. Land tubing at approximately 3820'. ND BOP. NU WH. Obtain a final water and gas samples and flow rates. Contact Production Operations for well tie-in. RDMO.

Recommended: 
Production Engineer

Approved:  10/21/97
Drilling Superintendent

Approved:  10/9/97
Team Leader

VENDORS:

Wireline:	Blue Jet	325-5584
Fracturing:	BJ Services	327-6222
RA Tag:	Pro-Technics	326-7133
Treesaver:	WSI	327-3402

JLD

Davis #4
Pertinent Data Sheet
Lat: 36° 55.03782 min.
Long: 108° 3.12192 min.

General Well Information:

Location: 990 FNL, 990 FWL, Unit D, Section 12, T31N, R12W, San Juan Co., NM

Federal Lease #: 077648 DP #: 11603
Property #: 0020263 GWI/NRI: 25.00/21.75

Current Field: Blanco Mesaverde
Spud: 7/23/50 Completed: 9/30/50
GL Elevation: 6382' KB Elevation: N/A
TD: 5516' PBTD: 5516'

Casing Record:

Hole Size	Csg Size	Weight	Grade	Depth Set	Cmt Vol	Cmt Top
13-3/4"	10-3/4"	N/A	N/A	171'	50	?
8-3/4"	7"	23 lb/ft	J-55	5180'	125	4900' (TS)

Tubing Record:

Tubing Size	Weight	Grade	Depth Set	Number of Jts
2"	N/A	N/A	5471'	180

Formation Tops:

Ojo Alamo: 1538' Pictured Cliffs: 2941' Menefee: 4770'
Kirtland Shale: 1608' Lewis Shale: Point Lookout: 5200'
Fruitland: 2613' Cliff House: 4539'

Logging Record: None available.

Completion: Drilled as an openhole Mesaverde producer (5180-5516'). Shot the openhole from 5516-5250' with 1020 qts SNG.

Workover History: None performed since original completion.

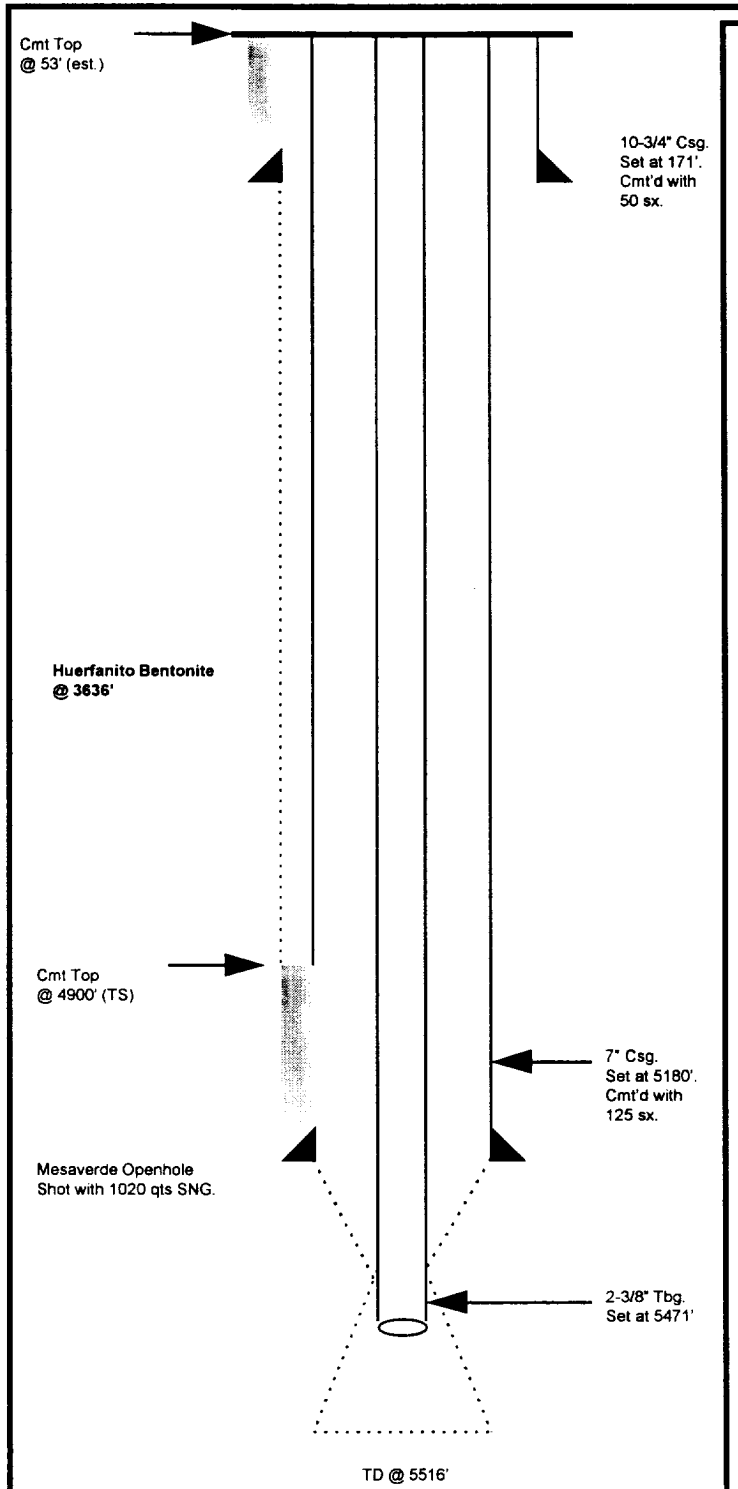
Production History: In April 1953, attempted to pull the tubing with no success. Openhole probably caved in. Will need to run a freepoint survey, shoot off the tubing and abandon the lower Mesaverde. Mesaverde EUR: 4,694 MMCF. Mesaverde Cum: 4,596 MMCF.

Pipeline: Williams Field Service Co. (LP = 275 psi)

Davis #4

Unit D, Section 12, T31N, R12W
San Juan County, NM

Current Schematic



Proposed Schematic

