

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
BLM

Sundry Notices and Reports on Wells

97 OCT 31 PM 4:29

1. Type of Well
GAS

5. Lease Number

070 FARMINGTON, NM 3688

6. If Indian, All. or
Tribe Name

2. Name of Operator

**BURLINGTON
RESOURCES**

OIL & GAS COMPANY

7. Unit Agreement Name

3. Address & Phone No. of Operator

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

8. Well Name & Number
Atlantic #5

9. API Well No.

30-045-10601

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

990' FNL, 990' FEL, Sec. 22, T-31-N, R-10-W, NMPM

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

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 existing Mesaverde formation will be plugged and abandoned.

RECEIVED
NOV - 6 1997

OIL CON. DIV.
DIST. 3

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

Signed [Signature] (SCOpps) Title Regulatory Administrator Date 10/31/97

(This space for Federal or State Office use)

APPROVED BY _____ Title _____ Date NOV 04 1997

CONDITION OF APPROVAL, if any:

**Atlantic #5
Lewis Shale Recompletion Procedure
A 22 31N 10W
San Juan County, NM
Latitude: 36 Deg., 53.29 Min
Longitude: 107 Deg., 51.83 Min.**

Summary:

The subject well is a 1998 Lewis Shale recompletion in 7" casing. This well was originally drilled in 1953 and was completed in the Mesa Verde formation as an open hole completion. The open hole section will be cemented and recompleted in the Lewis Shale interval. The subject well has depleted the Mesa Verde formation and is currently producing less than 15 MCF/D. This well is a 1998 priority project to test the Lewis interval and has the potential of multiple offsets throughout the basin. The Lewis Shale formation will be stimulated in two (2) stages with the first stage, or lower Lewis Shale interval, will be fracture stimulated with 53,499 gal of 60Q N₂ foamed 25# linear guar gel and 215,500# 20/40 mesh sand. The second stage interval, or upper Lewis Shale interval, will be fracture stimulated with 53,469 gal. of 60Q N₂ foamed 25# linear guar gel and 208,000# 20/40 mesh sand. The well will then be cleaned-up and placed on production.

- Comply to all NMOCD, BLM and BR regulations. Conduct daily safety meetings for all personnel on location. Notify BR regulatory (Peggy Bradfield 326-9727) and the appropriate Regulatory Agency prior to pumping any cement job. If an unplanned cement job is required, approval is required before the job can be pumped. If verbal approval is obtained, document the approval in Dims. Allow adequate notice prior to the pump time for the Agency to witness the cementing operation.
 - Inspect location and wellhead and install rig anchors prior to rig move.
 - Construct blow pit.
1. MOL, hold safety meeting and RU completion rig. Insure all safety equipment is strategically located and functioning properly. NU relief lines to blow pit. Set three (3) 400 BBL frac tanks and fill w/ 2% KCL. Blow well down and kill well with 2% KCL water as necessary. ND wellhead and NU 7-1/16" 3M BOP, stripping head and blooie line. Test BOP.
 2. TOOH w/ 2-3/8" Mesa Verde tbg. set @ 5401' and lay down.**

****During 1991 workover, tbg. was parted @ 1674'. New tbg. was re-run to 1595'. There is no record of tbg. below 1595' being retrieved. Fish remaining tbg. to open hole interval @ 4725'**
 3. PU 7" guage ring on 2-3/8" 4.7# J-55 workstring and check wellbore for obstructions to bottom of open hole section @ 4725'.
 4. RIH w/ 7" CIBP on 2-3/8" 4.7# J-55 workstring and set @ 4700'. Dump 50' of cement on CIBP. WOC
 5. Roll hole clean w/ 2% KCL water. TOOH w/ 2-3/8" 4.7# J-55 workstring. Pressure test cement and CIBP to 3000 psi.
 6. RU wireline and run CBL/CCL/GR and dual spaced neutron log from new PBTD @ 4650' to 1500'.** Send logs to office immediately and perforations and setting depths will be supplied for the upper and lower Lewis Shale interval only. A squeeze procedure will be provided if TOC does not cover the Fruitland and Ojo Alamo interval (refer to step #26). RD wireline company.

** Correlate log depths to GR-Electric log.

LOWER LEWIS

7. TIH w/2-3/8" 4.7# J-55 workstring to +/- 4350' and spot 250 gal 15% HCL acid across the lower Lewis interval (approx. +/- 4350' - +/-4150').** TOOH.

**Atlantic #5
Lewis Shale Recompletion Procedure
A 22 31N 10W
San Juan County, NM
Latitude: 36 Deg., 53.29 Min
Longitude: 107 Deg., 51.83 Min.**

** All acid to contain the following additives/1000 gal.:

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

8. Perforate approximately 20 holes in the lower Lewis interval (+/- 4350' - +/- 4150') top down, using 3-1/8" HSC select fire guns with 17 gram charges and 0.27" diameter holes. (Perforations will be provided after reviewing logs). RD wireline company.
9. TIH w/ 7" fullbore pkr. and approx. 132 jts. 3-1/2" 9.3# N-80 frac string and set @ 4100'. RU stimulation company. Pressure test surface lines to 6000 psi. Breakdown perforations @ 4 BPM w/ 500 gal. 15% HCL acid.** Drop forty (40) 7/8" 1.1 SG RCN balls @ 4 balls/bbl. Displace acid w/ 2% KCL water to bottom perforation. Balloff to maximum pressure of 4000 psi. Record breakdown pressure, ball action and ISIP. RD stimulation company.

** All acid to contain the following additives/1000 gal.:

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

10. Release pkr. and TIH knocking balls off perforations. Reset pkr. @ 4100'.
11. RU stimulation company to frac down frac valve and 3-1/2" 9.3# N-80 frac string. Hold pre-job safety meeting. Pressure test surface lines to 6000 psi prior to stimulation. Maximum allowable surface treating pressure is 5000 psi.
12. Fracture stimulate in 2.0 to 6.0 ppg stages @ 40 BPM constant downhole rate with 53,499 gal. of 60Q N₂ foamed 25# linear guar gel and 215,500# 20/40 mesh sand. **Maintain a bottom hole frac gradient of 0.65 psi/ft throughout job.** When sand is in hopper and the concentration begins to drop, call flush. **Flush to top perforation with +/-11.5 fluid bbls and 2940 scf N₂.** Monitor bottomhole treating pressure, surface treating pressure, downhole rate, foam quality and sand concentration with computer van. Treat per the following schedule:

<u>Stage</u>	<u>Foam Volume (gal)</u>	<u>Clean Gel Volume (gal)</u>	<u>SandVolume (lbs)</u>	<u>Type</u>
Pad	5,000	2,000	0	20/40 Az
2ppg	4,000	1,600	8,000	20/40 Az
3 ppg	5,000	2,000	15,000	20/40 Az
4 ppg	10,000	4,000	40,000	20/40 Az
5 ppg	12,500	5,000	62,500	20/40 Az
6 ppg	15,000	6,000	90,000	20/40 Az
Flush	1,999	800	0	
Totals	53,499	21,400	215,500	

Treat frac fluid with the following additives per 1000 gallons:

- * 25# GW-27 (Gelling agent pre-mixed if full tank)
- * 1.0 gal Inflow-150 (Non-ionic surfactant pre-mixed in full tank)
- * 1.0 # GWB-10 (Enzyme breaker mixed on fly)
- * 1.0# GWB-5 (Oxidizer breaker mixed on fly)

Atlantic #5
Lewis Shale Recompletion Procedure
A 22 31N 10W
San Juan County, NM
Latitude: 36 Deg., 53.29 Min
Longitude: 107 Deg., 51.83 Min.

- | | |
|--------------------|--|
| * 5.0 gal FAW-1 | (Foamer mixed on fly) |
| * 0.38# X-CIDE-207 | (Bactericide pre-mixed in full tank) |
| * 0.3 mCi Sb-124 | (Zero wash radioactive sand mixed on fly, 3-4 ppg stage) |
| * 0.3 mCi Sc-46 | (Zero wash radioactive sand mixed on fly, 4-5 ppg stage) |
| * 0.4 mCi Ir-192 | (Zero wash radioactive sand mixed on fly, 5-6 ppg stage) |

13. Shut well in after frac and record ISIP, 5, 10 and 15 shut-in pressure. RD stimulation company. Install flowback line above frac valve. Wait for 30 minutes to 1 hour before commencing flowback. Open well to pit in accordance to flowback schedule listed in the table below. If choke plugs off, shut well in and remove obstruction from choke and return to flowback schedule. **Do not replace with next larger choke size until schedule dictates.** Continue cleaning well up until fluid returns are negligible. **Take pitot gauges when possible.**

8/64 choke from	shut-in psi to 300 psi
10/64 choke from	300 psi to 150 psi
12/64 choke from	150 psi till well dies

NOTE: If well begins making sand during flowback, drop to next smaller choke size. If well is producing only N₂ during flowback, consult with Production Engineer about flowback schedule.

14. After well cleans up and pressures allow, release pkr. and TOOH standing back 3-1/2" 9.3# N-80 frac string.
15. RIH and wireline set a 7" RBP @ +/- 4110'. Dump 10' of sand on top of RBP w/ dump bailer.

UPPER LEWIS

16. TIH w/ 2-3/8" 4.7# J-55 workstring to +/- 4090' and spot 250 gal 15% HCL acid across the middle Lewis interval (approx. +/- 4100' - +/- 3840').** TOOH.

** All acid to contain the following additives/1000 gal.:

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

17. Perforate approximately 20 holes in the upper Lewis interval (+/- 4100' - +/- 3840') top down, using 3-1/8" HSC select fire guns with 17 gram charges and 0.27" diameter holes. (Perforations will be provided after reviewing logs).** RD wireline company.
18. TIH w/ 7" fullbore pkr. and approx. 122 jts. 3-1/2" 9.3# N-80 frac string and set @ +/- 3800'. RU stimulation company. Pressure test surface lines to 6000 psi. Breakdown perforations @ 4 BPM w/ 500 gal. 15% HCL acid.** Drop forty (40) 7/8" 1.1 SG RCN balls @ 4 balls/bbl. Displace acid w/ 2% KCL water to bottom perforation. Balloff to maximum pressure of 4000 psi. Record breakdown pressure, ball action and ISIP. RD stimulation company.

** All acid to contain the following additives/1000 gal.:

2 gal.	CI-22	corrosion inhibitor
5 gal	Ferrotrol-300L	iron control

**Atlantic #5
Lewis Shale Recompletion Procedure
A 22 31N 10W
San Juan County, NM
Latitude: 36 Deg., 53.29 Min
Longitude: 107 Deg., 51.83 Min.**

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

Release pkr. and TIH knocking balls off perforations. Reset pkr. @ +/- 3800'.

19. RU stimulation company to frac down frac valve and 3-1/2" 9.3# N-80 frac string. Hold pre-job safety meeting. Pressure test surface lines to 6000 psi prior to stimulation. Maximum allowable surface treating pressure is 5000 psi.
20. Fracture stimulate in 2.0 to 6.0 ppg stages @ 40 BPM constant downhole rate with 53,469 gal. of 60Q N₂ foamed 25# linear guar gel and 208,000# 20/40 mesh sand. **Maintain a bottom hole frac gradient of 0.65 psi/ft throughout job.** When sand is in hopper and the concentration begins to drop, call flush. **Flush to top perforation with +/-11.5 fluid bbls and 2900 scf N₂.** Monitor bottomhole treating pressure, surface treating pressure, downhole rate, foam quality and sand concentration with computer van. Treat per the following schedule:

Stage	Foam Volume (gal)	Clean Gel Volume (gal)	Sand Volume (lbs)	Type
Pad	5,000	2,000	0	20/40 Az
2ppg	4,000	1,600	8,000	20/40 Az
3 ppg	7,500	3,000	22,500	20/40 Az
4 ppg	10,000	4,000	40,000	20/40 Az
5 ppg	12,500	5,000	62,500	20/40 Az
6 ppg	12,500	5,000	75,000	20/40 Az
Flush	1,969	788	0	
Totals	53,469	21,388	208,000	

Treat frac fluid with the following additives per 1000 gallons:

* 25# GW-27	(Gelling agent pre-mixed if full tank)
* 1.0 gal Inflow-150	(Non-ionic surfactant pre-mixed in full tank)
* 1.0 # GWB-10	(Enzyme breaker mixed on fly)
* 1.0# GWB-5	(Oxidizer breaker mixed on fly)
* 5.0 gal FAW-1	(Foamer mixed on fly)
* 0.38# X-CIDE-207	(Bactericide pre-mixed in full tank)
* 0.3 mCi Sb-124	(Zero wash radioactive sand mixed on fly, 3-4 ppg stage)
* 0.3 mCi Sc-46	(Zero wash radioactive sand mixed on fly, 4-5 ppg stage)
* 0.4 mCi Ir-192	(Zero wash radioactive sand mixed on fly, 5-6 ppg stage)

21. Shut well in after frac and record ISIP, 5, 10 and 15 shut-in pressure. RD stimulation company. Install flowback line above frac valve. Wait for 30 minutes to 1 hour before commencing flowback. Open well to pit in accordance to flowback schedule listed in the table below. If choke plugs off, shut well in and remove obstruction from choke and return to flowback schedule. **Do not replace with next larger choke size until schedule dictates.** Continue cleaning well up until fluid returns are negligible. **Take pitot gauges when possible.**

8/64 choke from	shut-in psi to 300 psi
10/64 choke from	300 psi to 150 psi
12/64 choke from	150 psi till well dies

NOTE: If well begins making sand during flowback, drop to next smaller choke size. If well is producing only N₂ during flowback, consult with Production Engineer about flowback schedule.

**Atlantic #5
Lewis Shale Recompletion Procedure
A 22 31N 10W
San Juan County, NM
Latitude: 36 Deg., 53.29 Min
Longitude: 107 Deg., 51.83 Min.**

22. After well cleans up and pressures allow, release pkr. and TOOH standing back 3-1/2" 9.3# N-80 frac string.
23. TIH w/ RBP retrieving head on 2-3/8" 4.7# J-55 workstring and CO with air/mist to RBP set @ +/- 4110'. Obtain accurate pitot gauge for the upper Lewis Shale interval. When well is sufficiently clean, retrieve RBP set @ +/- 4110'. TOOH
24. TIH w/3-7/8" bit on 2-3/8" 4.7# J-55 workstring and CO to PBTD @ 4650'. TOOH and stand back workstring.
25. RU wireline company. Run After Frac GR from +/- 4650' to top of tracer activity. RD wireline.
26. Perform squeeze procedure as needed to ensure TOC covers Fruitland and Ojo Alamo interval.
27. TIH with one joint of 2-3/8", 4.7#, J-55 tubing w/ expendable check, a seating nipple, then the remaining 2-3/8" production tubing. Land tubing @ 4200'.
28. ND BOP's, NU single tubing hanger wellhead. Pump off expendable check. Obtain final pitot up tubing. If well will not flow on it's own, make swab run to seating nipple. If swab run is not necessary, run a broach on slickline to ensure that the tubing is clear. RD and MOL. Return well to production.

Approve: _____
Team Leader

Approve: _____
Drilling Superintendent

Recommend: _____
Production Engineer

VENDORS:

Wireline:	Schlumberger	325-5006
Stimulation:	Dowell/Schlumberger	325-5096
Tracer Survey:	Protechnics	326-7133
Packer:	Baker Oil Tools	325-0216
Bridge Plug:	Baker Oil Tools	325-0216

Steve Campbell	Home 325-8218	Office 326-9546	Pager 564-1902
Bob Goodwin	Home 599-0992	Office 326-9713	Pager 564-7096
Jennifer Dobson	Home 564-3244	Office 326-9708	Pager 324-2461
Mike Pippin	Home 327-4573	Office 326-9848	Pager 324-2559

Atlantic #5
Pertinent Data Sheet

Location: 990' FNL & 990' FEL, Unit A, Section 22, T31N, R10W, San Juan County, New Mexico

Latitude: 36°-53.29' **Longitude:** 107°-51.83'

Field: Blanco Mesa Verde **Elevation:** 6299' GL
6309' KB **TD:** 5475' OH
PBTD: 4725'

Spud Date: 5/27/53 **Compl Date:** 6/24/53 **DP #:** 48682A
Lease: FP-NM -013688
GWI: 100.00%
NRI: 85.50%
Prop#: 012601700

Initial Potential: Initial Potential = 7408 MCF/D, SICP = 1086 psi

Casing Record:

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Cement (Top)</u>
13-1/4"	9-5/8"	25.4# Armco	173'	129 sx.	Circ Cmt
8-3/4"	7"	23# Spang	4725'	300 sx.	3005' (TS)
6-1/4"	OH		4725'- 5475'		

Tubing Record:

<u>Tbg. Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>	<u># Joints</u>
2-3/8"	4.7#	5401'	175

Formation Tops:

Ojo Alamo:	1825'
Kirtland Shale:	1935'
Fruitland:	2665'
Pictured Cliffs:	3066'
Lewis Shale:	3115'

Logging Record: ES, GR, TS

Stimulation: SNG w/ 1700 qts. from 4775' - 5475'

Workover History: 9/23/91 - repair of tbg. leak. Tbg. was parted @ 1674'. Tbg. was re-run to 1595'.
Well file does not reveal if remaining tbg. was fished from well.

Pipeline: EPNG

Atlantic #5

Unit A, Section 22, T31N, R10W
San Juan County, NM

Current Schematic

Proposed Schematic

