

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. Type of Well
GAS

070 FARMINGTON, NM

5. Lease Number
SF-078438

6. If Indian, All. or
Tribe Name

2. Name of Operator

**BURLINGTON
RESOURCES**

OIL & GAS COMPANY

RECEIVED

7. Unit Agreement Name
San Juan 32-9 Unit

3. Address & Phone No. of Operator

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

8. Well Name & Number
San Juan 32-9 U #20A

9. API Well No.
30-045-22898

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

1550' FSL, 1155' FEL Sec. 18, T-31-N, R-9-W, NMPM

OIL CON. DIV.
DIST. 3

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 - Payadd

13. Describe Proposed or Completed Operations

It is intended to add pay to the subject well according to the attached procedure and wellbore diagram.

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

Signed *Debra Shanklin* Title Regulatory Administrator Date 6/21/99
trc

(This space for Federal or State Office use)

APPROVED BY /s/ Duane W. Spencer Title Team Lead, Petroleum Management Date JUN 30 1999
CONDITION OF APPROVAL, if any:

San Juan 32-9 Unit #20A
Lewis Payadd Procedure
Unit I, Section 18, T-31N, R-9 W
Lat: 36° 53.7131' Long: 107° 48.9487'

This well is currently completed in the Cliff House, Menefee, and Point Lookout. It is intended to add the Lewis to the existing Mesaverde production. The Lewis will be sand fracture stimulated in two stages using 100,000 lbs 20/40 sand and 70Q 20 lb linear gel in each stage. Foam is to be used to limit fluid damage to the Lewis and aide in the flowback. The flowback choke schedule is to be used to ensure that proppant remain in the fractures.

- Comply with all BLM, NMOCD, and BR rules and regulations.
- Hold safety meetings.
- Place fire safety equipment in strategic locations.
- Inspect location and test rig anchors.
- Dig flowback pit or set flowback tank.

Equipment Needed:

- (4) Frac Tanks with 2% KCl water
- (2) 4-1/2" CIBP
- (1) 4-1/2" RBP
- (1) 4-1/2" Packer
- 3700' -- 3-1/2" N-80 9.3#

PROCEDURE:

1. MIRU. Record and report SI pressures on tubing, casing, and bradenhead. Lay blowdown line and blow well down. Kill well with 2% KCl water. ND WH, NU BOP. Test and record operation of rams. NU blooie line and 2-7/8" relief line. Redress production wellhead as needed.
2. TOOH w/ 2-3/8" 4.7# J-55 tubing set at 5974' (SN @ 5945'). Visually inspect tubing, note and report any corrosion and/or scale in/on tubing. Replace bad joints as needed.
3. RU wireline. Run 4-1/2" gauge ring to 4850'. If ring tags up before 4850', TIH with 3-7/8" Bit, 4-1/2" 10.5# casing scraper on 2-3/8" tubing and CO to 4850'. TOOH. TIH with 4-1/2" and set CIBP @ \pm 4850'. Load hole w/ 2% KCl water. TOOH.
4. Run GR-CBL-CCL w/ 1000 psi from 4850' to 3576' (TOL) correlate to old Induction-Gamma Ray Log. Contact Michele Quisel and Drilling to evaluate CBL.
5. TIH w/ 4-1/2" packer on 2-3/8" tubing and set packer @ 3600'. Pressure test CIBP and casing to 3800 psi. Release packer and TOOH.

1st Stage Lewis:

6. Perforate Lower Lewis as follows using select fire HSC guns loaded with Owens HSC-3125 302T 10 gram charges set at 1 SPF and 120° phasing (Avg. perf diameter – 0.30", Avg. penetration – 16.64" in concrete). Correlate to new GR-CBL-CCL.

4745' – 55',
4660' – 70',
4620' – 30',
4530' – 40',
4480' – 90'

For a total of 55 holes. RD wireline.

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7. TIH with 4-1/2" RBP, on/off tool and 4-1/2" packer on 2-3/8" tubing.

Set RBP at RBP setting depth. PUH \pm 10 ft and set Packer. RU stimulation company and pressure test RBP and lines to 3800 psi. Release packer, and reset packer at Packer Setting Depth. Breakdown perforations and establish an injection rate between 8 and 10 BPM with 200 gals of Acetic Acid + 5% NH₄Cl **. Breakdown to the **Max pressure of 3800 psi**. Release packer and RBP. Repeat for the remaining intervals.

** All Acid to contain the following additives/ 1000 gal:

1000 gal	10%	Acetic Acid
2 gal	MSA II	corrosion inhibitor
5%	NH ₄ CL	clay control

RBP Setting Depth	Packer Setting Depth	Perforation Intervals
4780	4720	4745-55
4700	4590	4660-70, 4620-30
4570	4450	4530-40, 4480-90

8. TOOH w/ RBP, Packer, and 2-3/8" tubing. PU and TIH w/ 4-1/2" packer, 2 joints 2-3/8" 4.7#, 2-3/8" X 3-1/2" N-80 crossover, and 3-1/2" 9.3# N-80 Frac String. Set Packer @ 3600', or where good cement dictates.
9. Pressure Test surface lines to 7000 psi. Fracture stimulate Lower Lewis with 100,000 lbs 20/40 sand in 62,081 gals 70Q 20 lb linear gel at a **MAXIMUM RATE OF 40 BPM** in 1.0 to 4.0 ppg stages. Apply 500 psi to annulus. Monitor annulus pressure throughout stimulation. **Tag sand with 3 radioactive isotopes**. Estimated friction pressure is 4500 psi @ 40 BPM. **Maximum Surface Treating Pressure is 6000 psi**.

Stage	BH Sand Conc. ppg	Stage Sand lbs	BH Rate bpm	BH Foam Qual.	Clean Foam Volume gals	Clean Liquid Volume gals	Nitrogen Rate scf/min	Stage N2 mscf
Pad		0	40	80%	17,000	3,400	23,005	232.8
2	1	10,000	40	70%	10,000	2,000	19,252	79.8
3	2	20,000	40	70%	10,000	2,000	18,447	79.7
4	3	40,000	40	70%	13,333	2,667	17,707	106.2
5	4	30,000	40	70%	7,500	1,500	17,024	59.7
Flush		0	40	0%	4,247	4,247	0	0.0
		Total lbs.	Avg. Rate	Avg. Qual.	Total gallons	Total Gallons	Avg. N2 Rate	Total mscf
		100,000	40.0	60%	62,081	15,814	15,906	558

Slow rate during flush. Flush to top perf with KCl water. Record ISIP, 5, 10 and 15 minute shut-in pressures. Shut-in frac valve. RD stimulation company. Install flowback line above frac valve. Lay flowback line to dual-flowbean or dual-choke manifold. Begin flowback when stimulation company is rigged down. Open well to pit in accordance to flowback schedule listed in the table below. Do not shut well in during flowback. When schedule dictates a larger choke size, open ball valve upstream of 2nd flowbean or adjustable choke and open adjustable choke or place correct size flowbean on manifold to pre-determined size listed in table and begin flowing through

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adjustable choke or 2nd flowbean. Close ball valve upstream of positive flow bean and change out flow bean to next larger size in table. Open ball valve upstream of positive flow bean and begin flowing. Close ball valve upstream of 2nd flowbean or adjustable choke.

40+ hour Flowback

16/64" Choke	From Shut-in – Until 2/3 of flush volume has been recovered (Approximately 67 BBL).
10/64" Choke	Approximately 3 hrs.
12/64" Choke	Approximately 3 hrs.
14/64" Choke	Approximately 3 hrs.
16/64" Choke	Approximately 4 hrs.
18/64" Choke	Approximately 4 hrs.
20/64" Choke	Approximately 4 hrs.
22/64" Choke	Approximately 4 hrs.
24/64" Choke	Approximately 4 hrs.
32/64" Choke	Approximately 5 hrs.
48/64" Choke	Approximately 5 hrs.

NOTE: Follow this schedule to utilize a 40+ hour flowback. If well begins to slug or make large amounts of sand to surface, drop to next lower choke size. If well begins to taper off in liquid production (mostly N₂), change to next larger choke size before time schedule dictates.

10. Release packer and TOOH. Stand back 3-1/2" frac string, 3-1/2" X 2-3/8" crossover, and 2-3/8" Frac String.
11. TIH w/ 4-1/2" CIBP, on/off tool and 4-1/2" packer on 2-3/8" tbg and set CIBP @ \pm 4450'. PUH, set packer @ 3600', and pressure test CIBP to 3800 psi. Release packer and TOOH.
12. Perforate Upper Lewis as follows using select fire HSC guns loaded with Owens HSC-3125 302T 10 gram charges set at 1 SPF and 120° phasing (Avg. perf diameter – 0.30", Avg. penetration – 16.64" in concrete). Correlate to new GR-CBL-CCL.

4385' – 95',
4335' – 45',
4310' – 20',
4280' – 85',
4170' – 80',
4155' – 60'

For a total of 56 holes. RD wireline.

13. TIH with 4-1/2" RBP, on/off tool and 4-1/2" packer on 2-3/8" tubing.

Set RBP at RBP setting depth. PUH \pm 10 ft and set Packer. RU stimulation company and pressure test RBP and lines to 3800 psi. Release packer, and reset packer at Packer Setting Depth. Breakdown perforations and establish an injection rate between 8 and 10 BPM with 200 gals of Acetic Acid + 5% NH₄Cl **. Breakdown to the **Max pressure of 3800 psi**. Release packer and RBP. Repeat for the remaining intervals.

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** All Acid to contain the following additives/ 1000 gal:

1000 gal	10%	Acetic Acid
2 gal	MSA II	corrosion inhibitor
5%	NH ₄ CL	clay contro

RBP Setting Depth	Packer Setting Depth	Perforation Intervals
4420	4360	4385-95
4370	4250	4335-45, 4310-20, 4280-85
4210	4130	4170-80, 4155-60

14. TOOH w/ RBP, Packer, and 2-3/8" tubing and stand back. TIH w/ 4-1/2" packer, 2 joints 2-3/8" 4.7#, 2-3/8" N-80 Buttress X 3-1/2" N-80 crossover, and 3-1/2" 9.3# N-80 Frac String. Set Packer @ 3600' or where good cement dictates.
15. Pressure Test surface lines to 7000 psi. Fracture stimulate Upper Lewis with 100,000 lbs 20/40 sand in 60,859 gals 70Q 20 lb linear gel at a **MAXIMUM RATE OF 40 BPM** in 1.0 to 4.0 ppg stages. Apply 500 psi to annulus. Monitor annulus pressure throughout stimulation. **Tag sand with 3 radioactive isotopes.** Estimated friction pressure is 4500 psi @ 40 BPM. **Maximum Surface Treating Pressure is 6000 psi.**

Stage	BH Sand Conc. ppg	Stage Sand lbs	BH Rate bpm	BH Foam Qual.	Clean Foam Volume gals	Clean Liquid Volume gals	Nitrogen Rate scf/min	Stage N2 mscf
Pad		0	40	80%	17,000	3,400	21,403	216.6
2	1	10,000	40	70%	10,000	2,000	17,911	74.2
3	2	20,000	40	70%	10,000	2,000	17,162	74.2
4	3	40,000	40	70%	13,333	2,667	16,474	98.8
5	4	30,000	40	70%	7,500	1,500	15,839	55.6
Flush		0	40	0%	3,026	3,026	0	0.0
		Total lbs.	Avg. Rate	Avg. Qual.	Total gallons	Total Gallons	Avg. N2 Rate	Total mscf
		100,000	40.0	60%	60,859	14,592	14,798	519

Slow rate during flush. Flush to top perf. Record ISIP, 5 minute, 10 minute, and 15 minute pressures. Shut-in frac valve. RD stimulation company. Install flowback line above frac valve. Lay flowback line to dual-flowbean or dual-choke manifold. Begin flowback when stimulation company is rigged down. Open well to pit in accordance to flowback schedule listed in the table below. Do not shut well in during flowback. When schedule dictates a larger choke size, open ball valve upstream of 2nd flowbean or adjustable choke and open adjustable choke or place correct size flowbean on manifold to pre-determined size listed in table and begin flowing through adjustable choke or 2nd flowbean. Close ball valve upstream of positive flow bean and change out flow bean to next larger size in table. Open ball valve upstream of positive flow bean and begin flowing. Close ball valve upstream of 2nd flowbean or adjustable choke.

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40+ hour Flowback

16/64" Choke	From Shut-in – Until 2/3 of flush volume has been recovered (Approximately 48 BBL).
10/64" Choke	Approximately 3 hrs.
12/64" Choke	Approximately 3 hrs.
14/64" Choke	Approximately 3 hrs.
16/64" Choke	Approximately 4 hrs.
18/64" Choke	Approximately 4 hrs.
20/64" Choke	Approximately 4 hrs.
22/64" Choke	Approximately 4 hrs.
24/64" Choke	Approximately 4 hrs.
32/64" Choke	Approximately 5 hrs.
48/64" Choke	Approximately 5 hrs.

NOTE: Follow this schedule to utilize a 40+ hour flowback. If well begins to slug or make large amounts of sand to surface, drop to next lower choke size. If well begins to taper off in liquid production (mostly N₂), change to next larger choke size before time schedule dictates.

16. Release packer and TOOH. Laydown 3-1/2" frac string, 3-1/2" X 2-3/8" crossover, and 2-3/8" Frac String.
17. TIH w/ 3-7/8" bit on 2-3/8" tubing and CO to CIBP @ 4450'. Monitor gas and water returns. When sand and water allow (less than 5 BPH and trace sand), take a Upper Lewis pitot gauge. DO CIBP @ 4450' with a minimum of 12 BPH mist rate.
18. CO to CIBP @ 4850'. Monitor gas and water returns. When sand and water allow (less than 5 BPH and trace sand), take a complete Lewis pitot gauge. DO CIBP @ 4850' with a minimum of 12 BPH mist rate.
19. Continue to CO to PBTD with air. Blow well at PBTD to check water rates. If needed continue to blow well for clean up. When water rates are below 5 BPH and there is no sand production, TOOH.
20. TIH with an expendable check, one 2-3/8" joint, seating nipple, and remaining production tubing. Broach tubing while running in hole. CO with air/mist to PBTD again, if necessary. Obtain final Lewis/Cliff House/Menefee/Point Lookout pitot gauge. Land tubing at ± 5974'. ND BOP. NU WH. Pump off expendable check. RDMO. Contact Production Operations for well tie-in.
21. RU Pro-Technics. Run After Frac Log across Lewis (4850' – 4050'). RD Pro-Technics.

Recommended: Michele S. Quisel
 Production Engineer
 6-7-99

Approved: PJB 6/16/99
 Drilling Superintendent

Approved: _____
 Team Leader

Contact:
 Michele Quisel 324-6162 (WORK) 326-8196(PAGER) 564-9097(HOME)

Vendors: Wireline: Black Warrior 326-6669
 RA Tagging: Pro-Technics 326-7133

San Juan 32-9 Unit #20A

1550' FSL, 1155' FEL

Unit I Sec. 18, T-31 R-09W

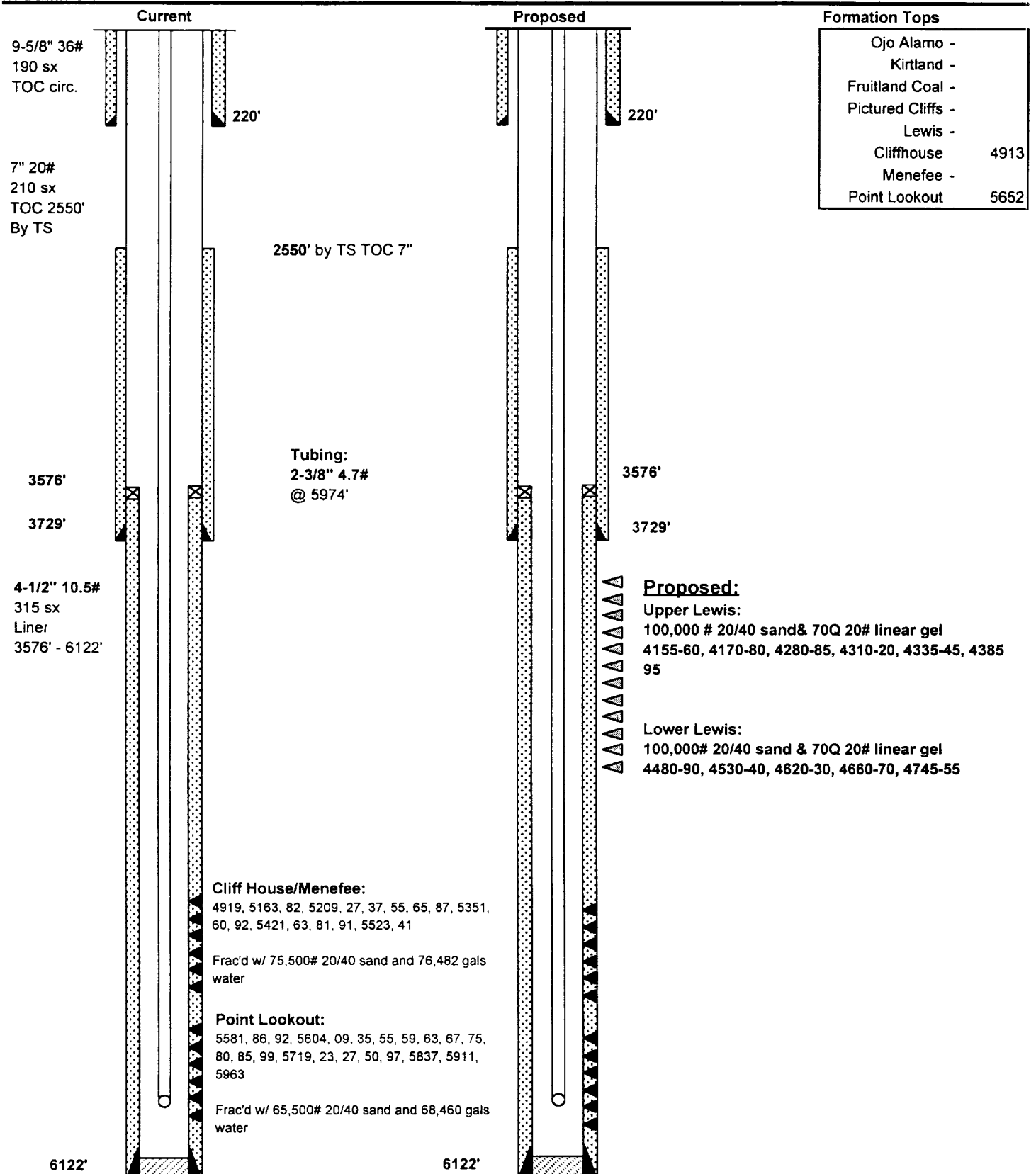
San Juan County, New Mexico

KB 6552

GL 6542

Lat: 36o 53.7131'

Long: 107o 48.9487'



PBTD = 6105'
TD = 6122'