

submitted in lieu of Form 3160-5

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

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) 326-8700

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

790' FSL, 1780' FEL Sec. 8, T-31-N, R-9-W, NMPM

5. Lease Number  
SF-078438

6. If Indian, All. or  
Tribe Name

7. Unit Agreement Name  
San Juan 32-9 Unit

8. Well Name & Number  
San Juan 32-9 U #16A

9. API Well No.  
30-045-23314

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

☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment

Type of Action

☐ Abandonment ☐ Change of Plans  
☐ Recompletion ☐ New Construction  
☐ 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 Wayne Townsend Title Regulatory Administrator Date 6/21/99  
trc

(This space for Federal or State Office use)

APPROVED BY WAYNE TOWNSEND Title Pet. Eng. Date 7-1-99

CONDITION OF APPROVAL, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOCD

**San Juan 32-9 Unit #16A**  
Lewis Payadd Procedure  
Unit O, Section 08, T-31N, R-9 W  
Lat: 36° 54.4455' Long: 107° 48.0084'

*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 6097' (SN @ 6064'). 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 5050'. If ring tags up before 5050', TIH with 3-7/8" Bit, 4-1/2" 10.5# casing scraper on 2-3/8" tubing and CO to 5,050'. TOOH. TIH with 4-1/2" CIBP and set CIBP @  $\pm$  5050'. Load hole w/ 2% KCl water. TOOH.
4. Run GR-CBL-CCL w/ 1000 psi from 5050' to 3594' (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 @ 3610'. Pressure Test CIBP and casing to 3800 psi. Release packer and TOOH.

**1<sup>st</sup> 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.

**4930' – 40'**  
**4840' – 50'**  
**4800' – 10'**  
**4720' – 30'**  
**4670' – 80'**

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% NH<sub>4</sub>Cl \*\*. 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 <sub>4</sub> CL	clay contro

RBP Setting Depth	Packer Setting Depth	Perforation Intervals
4970	4900	4930-40
4880	4770	4840-50, 4800-10
4760	4640	4720-30, 4670-80

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 @ 3610' 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 62,761 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**.

	BH Sand Conc.	Stage Sand lbs	BH Rate bpm	BH Foam Qual.	Clean Foam Volume gals	Clean Liquid Volume gals	Nitrogen Rate scf/min	Stage N2 mscf
Stage	ppg	lbs	bpm	Qual.	gals	gals	scf/min	mscf
Pad		0	40	80%	17,000	3,400	23,869	241.5
2	1	10,000	40	70%	10,000	2,000	19,975	82.8
3	2	20,000	40	70%	10,000	2,000	19,140	82.7
4	3	40,000	40	70%	13,333	2,667	18,372	110.2
5	4	30,000	40	70%	7,500	1,500	17,664	62.0
Flush		0	40	0%	4,928	4,928	0	0.0
		Total lbs.	Avg. Rate	Avg. Qual.	Total gallons	Total Gallons	Avg. N2 Rate	Total mscf
		100,000	40.0	60%	62,761	16,494	16,503	579

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 2<sup>nd</sup> flowbean or adjustable choke and open adjustable choke or place

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correct size flowbean on manifold to pre-determined size listed in table and begin flowing through adjustable choke or 2<sup>nd</sup> 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 2<sup>nd</sup> flowbean or adjustable choke.

**40+ hour Flowback**

<b>16/64" Choke</b>	<b>From Shut-in – Until 2/3 of flush volume has been recovered (Approximately 78 BBL).</b>
<b>10/64" Choke</b>	<b>Approximately 3 hrs.</b>
<b>12/64" Choke</b>	<b>Approximately 3 hrs.</b>
<b>14/64" Choke</b>	<b>Approximately 3 hrs.</b>
<b>16/64" Choke</b>	<b>Approximately 4 hrs.</b>
<b>18/64" Choke</b>	<b>Approximately 4 hrs.</b>
<b>20/64" Choke</b>	<b>Approximately 4 hrs.</b>
<b>22/64" Choke</b>	<b>Approximately 4 hrs.</b>
<b>24/64" Choke</b>	<b>Approximately 4 hrs.</b>
<b>32/64" Choke</b>	<b>Approximately 5 hrs.</b>
<b>48/64" Choke</b>	<b>Approximately 5 hrs.</b>

**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 N<sub>2</sub>), 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 @  $\pm$  4630'. PUH, set packer @ 3610', 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.

**4560' – 70',**  
**4515' – 25',**  
**4475' – 85',**  
**4445' – 50',**  
**4335' – 45',**  
**4320' – 25'**

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% NH<sub>4</sub>Cl \*\*. 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 <sub>4</sub> CL	clay contro

RBP Setting Depth	Packer Setting Depth	Perforation Intervals
4600	4500	4560-70, 4515-25
4500	4410	4475-85, 4445-50
4380	4290	4335-45, 4320-25

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" X 3-1/2" N-80 crossover, and 3-1/2" 9.3# N-80 Frac String. Set Packer @ 3610' 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 61,445 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	22,211	224.7
2	1	10,000	40	70%	10,000	2,000	18,587	77.0
3	2	20,000	40	70%	10,000	2,000	17,810	77.0
4	3	40,000	40	70%	13,333	2,667	17,096	102.6
5	4	30,000	40	70%	7,500	1,500	16,436	57.7
Flush		0	40	0%	3,612	3,612	0	0.0
		<b>Total lbs.</b>	<b>Avg. Rate</b>	<b>Avg. Qual.</b>	<b>Total gallons</b>	<b>Total Gallons</b>	<b>Avg. N2 Rate</b>	<b>Total mscf</b>
		100,000	40.0	60%	61,445	15,179	15,357	539

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 2<sup>nd</sup> 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 2<sup>nd</sup> 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 2<sup>nd</sup> flowbean or adjustable choke.

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 Unit O, Section 08, T-31N, R-9 W  
 Lat: 36° 54.4455' Long: 107° 48.0084'

**40+ hour Flowback**

16/64" Choke	From Shut-in – Until 2/3 of flush volume has been recovered (Approximately 57BBL).
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 N<sub>2</sub>), 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 @ 4630'. 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 @ 4630' with a minimum of 12 BPH mist rate.
18. CO to CIBP @ 5050'. 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 @ 5050' 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 ± 6097'. 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 (5050' – 4150'). RD Pro-Technics.

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

Approved: RJS 6/11/99  
 Drilling Superintendent

Approved: \_\_\_\_\_  
 Team Leader

Contact:

Michele Quisel 324-6162 (WORK) 326-8196(PAGER) 564-9097(HOME)  
 Vendors: Wireline: Schlumberger 325-5006  
 RA Tagging: Pro-Technics 326-7133

# San Juan 32-9 Unit #16A

790' FSL, 1780' FEL

Unit O Sec. 08, T-31 R-09W

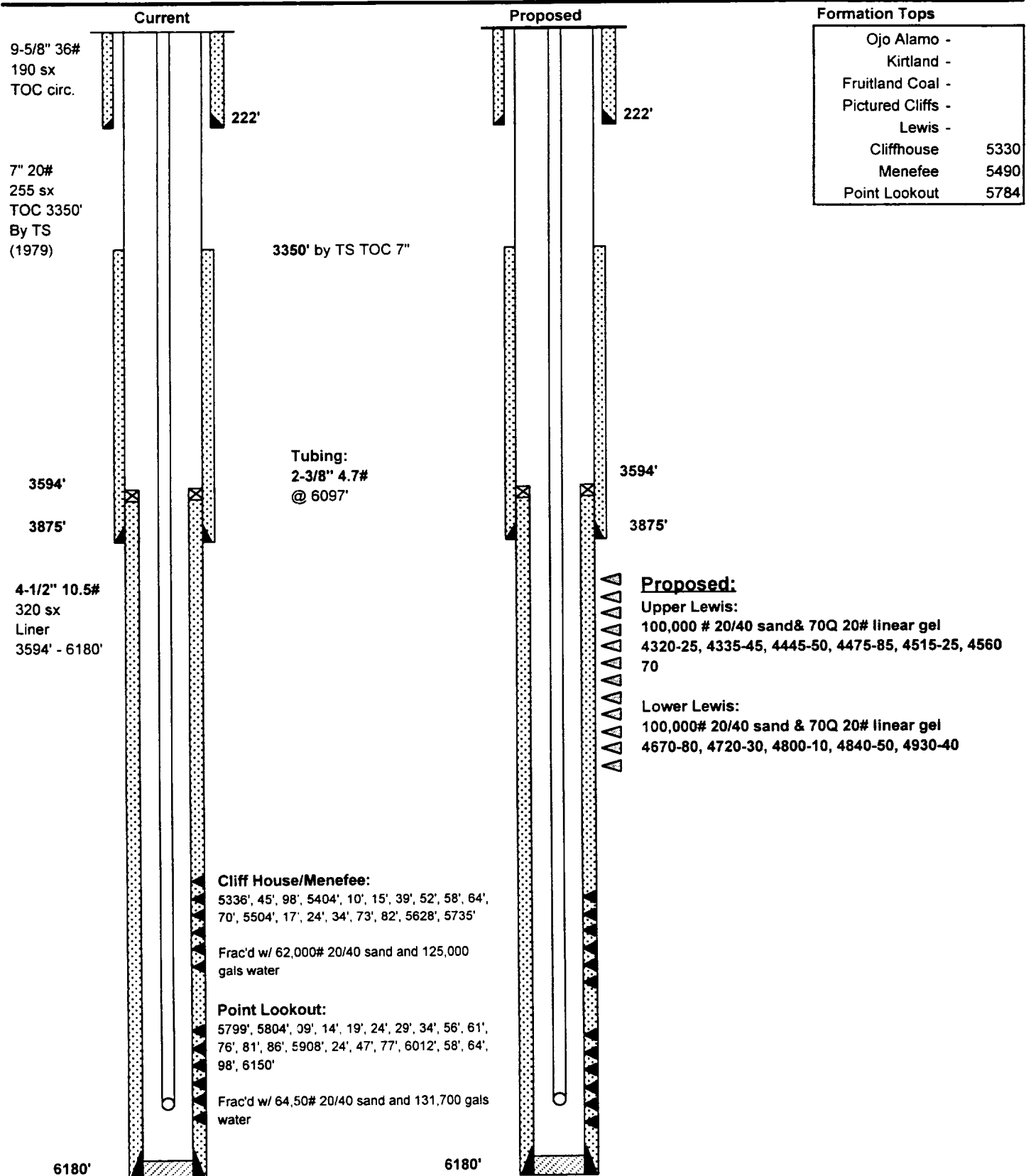
San Juan County, New Mexico

KB 6695

GL 6686

Lat: 36° 54.4455'

Long: 107° 48.0084'



PBTD = 6173'  
TD = 6180'

04/29/1999

MSQ