submitted in lieu of Form 3160-5

#### UNITED STATES

# DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Sundry Noti	ces and Report	s on Wells		
1. Type of Well		· 1/A	5.	Lease Number SF-078438 If Indian, All. or
GAS		The state of the s		Tribe Name
			7.	Unit Agreement Name
2. Name of Operator		DECEN	EN	San Juan 32-9 Unit
BURLINGTON				
RESOURCES OIL	& GAS COMPANY	11 JUL - 6 1	999 🗀	<u>.</u>
			8.	Well Name & Number
3. Address & Phone No. of Operat	cor			San Juan 32-9 U #17A API Well No.
PO Box 4289, Farmington, NM	87499 (505) 3	Dist. 3	<del>-y</del> :	API WEII NO. 30-045-22893
4. Location of Well, Footage, Se	-C. T. R. M		10.	Field and Pool
1500'FNL, 1600'FWL Sec.8, T-1		PM		Blanco Mesaverde
1500 1112, 1000 1112 120011,	· /		11.	County and State
	P			San Juan Co, NM
12. CHECK APPROPRIATE BOX TO IN		pe of Action	r, other	DATA
Type of Submission X Notice of Intent	Abandonme	-	ge of Pla	ans
_X_ Notice of Intent	Recomplet	<del></del>	Construc	
Subsequent Report	Plugging			Fracturing
	Casing Re		r Shut o	ff
Final Abandonment	Altering		ersion t	o Injection
<del></del>	_X_ Other - F	ayadd		
	7 . b . 3 . Ou b d ou	<u> </u>		
13. Describe Proposed or Comp.	leted Operation	ıs		
It is intended to add pay	to the subject	well according	to the	attached procedure
and wellbore diagram.	<b>,</b>	_		
14. I hereby certify that the	foregoing is	rue and correct		
$(\mathcal{L}_{\mathcal{L}})$				
Signed / MAN MARKE	LA Title Requi	Latory Administr	<u>ator</u> Dat	e 6/21/99 <u> </u>
7111-			trc	<del></del>
(This space for Federal or Stat APPROVED BY WAYNE TOWNS	e Office use)	P1 02.	Data	7-1-99
	Title	ICF Ey.	Date _	1-1-11
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 πatter within its jurisdiction.

Lewis Payadd Procedure Unit F. Section 08, T-31N, R-9 W

Lat: 36° 54.9298' Long: 107° 48.3628'

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 ng 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
- 3900' -- 3-1/2" N-80 9.3#

#### PROCEDURE:

- MIRU. Record and report SI pressures on tubing, casing, and brader head. Lay blowdown line 1. 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.
- TOOH w/ 2-3/8" 4.7# J-55 tubing set at 6154' (SN @ 6124'). Visually inspect tubing, note and 2. report any corrosion and/or scale in/on tubing. Replace bad joints as needed.
- RU wireline. Run 4-1/2" gauge ring to 5100'. If ring tags up before 5100', TIH with 3-7/8" Bit, 4-3. 1/2" 10.5# casing scraper on 2-3/8" tubing and CO to 5100'. TOOH. TIH with 4-1/2" CIBP and set CIBP @ ± 5100'. Load hole w/ 2% KCl water. TOOH.
- Run GR-CBL-CCL w/ 1000 psi from 5100' to 3815' (TOL) correlate to old Induction-Gamma Ray 4. Log. Contact Michele Quisel and Drilling to evaluate CBL.
- TIH w/ 4-1/2" packer and 2-3/8" tubing. Set packer @ 3830'. Pressure test CIBP and casing to 5. 3800 psi. Release packer and TOOH.

## 1<sup>st</sup> Stage Lewis:

Perforate Lower Lewis as follows using select fire HSC guns loaded with Owens HSC-3125 302T 6. 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.

> 4958' - 68', 4870' - 80', 4830' - 40',

4750' - 60,

4708' - 18'

For a total of 55 holes. RD wireline.

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Unit F, Section 08, T-31N, R-9 W

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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 ± 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 corros on inhibitor
5% NH₄CL clay control

RBP Setting Depth	Packer Setting Depth	Perforation Intervals
5000	4930	4958-68
4910	4800	4870-80, 4830-40
4790	4670	4750-60, 4708-18

- 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 @ 3830', 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 62,157 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 at 40 BPM. Maximum Surface Treating Pressure is 6000 psi.

	BH Sand Conc.	Stage Sand	BH Rate	BH Foam	Clean Foam Volume	Clean Liquid Volume	Nitrogen Rate	Stage N2
<u>Stage</u>	ppg	<u>lbs</u>	<u>bpm</u>	Qual.	gals	gals	scf/min	<u>mscf</u>
Pad		0	40	80%	17,000	3,400	24,022	243.1
2	1	10,000	40	70%	10,000	2,000	20,102	83.3
3	2	20,000	40	70%	10,000	2,000	19,262	83.2
4	3	40,000	40	70%	13,333	2,667	18,489	110.9
5	4	30,000	40	70%	7,500	1,500	17,776	62.4
Flush		0	40	0%	4,324	4,324	0	0.0
	<u> </u>	Total	Avg.	Avg.	Total	Total	Avg.	Total
		lbs.	Rate	Qual.	gallons	Gallons	N2 Rate	mscf
		100,000	40.0	60%	62,157	15,891	16,609	583

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 correct size flowbean on manifold to pre-determined size listed in table and begin flowing through

Lewis Payadd Procedure Unit F, Section 08, T-31N, R-9 W

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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

16/64" Choke	From Shut-in – Until 2/3 of flush volume has been recovered (Approximately 68 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  $N_2$ ), 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 @ ± 4660'. PUH, set packer @ 3830', 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.

4585' - 90', 4530' - 40', 4497' - 4507', 4465' - 75', 4350' - 60', 4335' - 40'

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 ± 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

5%

MSA II NH<sub>4</sub>CL corrosion inhibitor clay contro

RBP Setting Depth	Packer Setting Depth	Perforation Intervals			
4620	4560	4585-90			
4570	4440	4530-40, 4497-4507, 4465-75			
4390	4300	4350-60, 4335-40			

- 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 @ 3830', 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 60,755 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.

	ВН				Clean	Clean		
	Sand	Stage	вн	вн	Foam	Liquid	Nitrogen	Stage
	Conc.	Sand	Rate	Foam	Volume	Volume	Rate	N2
Stage	ppq	<u>lbs</u>	<u>bpm</u>	Qual.	gals	<u>gals</u>	scf/min	<u>mscf</u>
Pad		0	40	80%	17,000	3,400	22,291	225.6
2	1	10,000	40	70%	10,000	2,000	18,654	77.3
3	2	20,000	40	70%	10,000	2,000	17,875	77.2
4	3	40,000	40	70%	13,333	2,667	17,158	102.9
5	4	30,000	40	70%	7,500	1,500	16,496	57.9
Flush		0	40	0%	2,922	2,922	0	0.0
	<u> </u>	Total	Avg.	Avg.	Total	Total	Avg.	Total
		lbs.	Rate	Qual.	gallons	Gallons	N2 Rate	mscf
]		100,000	40.0	60%	60,755	14,489	15,412	541

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 or adjustable choke.

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Lat: 36° 54.9298' Long: 107° 48.3628'

#### 40+ hour Flowback

16/64" Choke	From Shut-in — Until 2/3 of flush volume has been recovered (Approximately 46 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  $N_2$ ), 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 @ 4660'. 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 @ 4660' with a minimum of 12 BPH mist rate.
- 18. CO to CIBP @ 5100'. 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 @ 5100' 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 <u>+</u> 6154'. 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 (5	100' - 4200'). RD Pro-Technics.
Recom	mended: Production Engineer	Approved: _	Drilling Superintendent
		Approved: _	Team Leader
Contac	xt:		

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

1500' FNL, 1600' FWL Unit F Sec. 08, T-31 R-09W San Juan County, New Mexico

KB 6701

GL 6695

Lat: 36o 54.9298'

Long: 107o 48.3628'

