UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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1. Type of Well		6.	If Indian, A	11. or	
GAS		同国即	Tribe Name		
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		7 7	Unit Agreeme	nt Nam	
2. Name of Operator	[[]] MAY 28	1999	San Juan 28-	4 Unit	
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RESOURCES OIL & GAS COMPANY	NOD 1110	9 0 0	Well Name &	Number	
3. Address & Phone No. of Operator		ම	San Juan 28-		
PO Box 4289, Farmington, NM 87499 (505) 32			API Well No.		
To box 4203, ratifizing con, in 0,133 (505, 52	Vector Control	٠,	30-039-07388		
4. Location of Well, Footage, Sec., T, R, M		10.	Field and Po		
1540'FNL 1180'FEL, Sec.19, T-28-N, R-4-W, NM	PM .		Blanco Mesav	Blanco Mesaverde	
		11.	County and S	tate	
\mathbb{S}			Rio Arriba (o, NM	
12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF		, OTHER	DATA		
	e of Action				
X Notice of Intent Abandonmen					
Recompleti					
Subsequent Report Plugging B.			racturing		
Casing Rep.		Shut of			
Final Abandonment Altering C. X Other -	asing Conve	rsion to	injection		
v other -					
13. Describe Proposed or Completed Operations		4.1			
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(2)

San Juan 28-4 Unit #28

Cliffhouse/Menefee Pay Add Procedure UnitH, Section 19, T28N, R4W

Lat: 36° - 38.9694'/ Long: 107° - 17.17986'

The well is currently completed in the Point Lookout. It is intended to add the Cliffhouse and Menefee to the existing Mesaverde producer. The pay add will be sand fracture stimulated in a single stage using a total of 117,000 gals slickwater and 100,000 lbs 20/40 sand.

- Inspect location and test rig anchors. Comply with all NMOCD, BLM, Forestry & BR rules 1. and regulations. Dig flowback pit or set flowback tank. Haul to location 3 its 2-7/8" N-80 tubing, 2-7/8" X 3-1/2" N-80 crossover, 6400', 3-1/2" frac string and 9, 400 bbl frac tanks
- MIRU, Fill 400 bbl tanks. Fill w/ 3# biocide/tank & 2% KCL water. Put one load of fresh 2. water in each tank before adding 20% concentrated KCL water. Run fluid tests on water. Filter water based upon stimulation company solids water analysis. Record and report SI pressures on tubing, casing and bradenhead. Lay blowdown line. 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. Redress production wellhead as needed.
- TOOH with 2-3/8" Mesaverde production string set at ± 6573'. Visually inspect tubing, 3. note and report any scale in/on tubing. Replace bad joints as needed. LD perf joint and bull plug.
- PU and RIH with a 4-3/4" bit and 5-1/2" (15.5 lb/ft) casing scraper on the 2-3/8" tubing. 4. Clean out to PBTD (~6608') with air. TOOH.
- RIH with 5-1/2" CIBP, packer on 2-3/8" tubing. Set CIBP at 6370'. Release from CIBP. 5. Load hole with 260 bbls 2% KCL water. Set packer just above CIBP. Pressure test CIBP to 3600 psi. Bleed off pressure. Pressure test annulus to 500 psi. Bleed off pressure. Release packer and PUH to 6300'. Spot 8 bbls 15% HCL across Cliffhouse/Menefee perforations (6043-6296'). TOOH.

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

2 gal	HAI-81M	Corrosion inhibitor
5 gal	FE-1A	Iron Control
5 gal	FE-2A	Iron Control
1 gal	SSO-21	Surfactant
1 gal	ClaSta XP	Clay control

- Run GR-CBL-CCL from PBTD to 4300'. Evaluate CBL. Top of good cement must be 6. above 5900' to continue with procedure. Tie into liner top at 4333' for correlation.
- RU wireline. Perforate Cliffhouse and Menefee as follows using select fire HSC guns 7. loaded with Owens HSC-3125 302T 10 gram charges (Av. perf diameter - 0.29", Av. pen. -16.64" in concrete).

6043', 6044', 6046', 6055', 6083', 6084', 6085', 6089', 6090', 6105', 6161', 6163', 6174', 6176', 6178', 6183', 6199', 6254', 6256', 6258', 6260', 6267', 6268', 6276'. 6280', 6281', 6282', 6284', 6286', 6288', 6292', 6294', 6296' (33 holes total)

RDMO wireline company.

- 8. TIH with 5-1/2" packer, 3 jts 2-7/8" N-80 tubing, 2-7/8" X 3-1/2" N-80 crossover, and remaining 3-1/2" frac string. Set packer at 5850'.
- 9. RU stimulation company. Hold tailgate safety meeting. Pressure test surface lines to 6500 psi. Breakdown Cliffhouse and Menefee perforations with 25 bbls 15% HCL. Drop 66 RCN 7/8" 1.3 specific gravity perf balls evenly spaced throughout job. Attempt to balloff to 3600 psi. Use same additives as in Step #5. ND stimulation company. Bleed off pressure and release packer. Lower packer to 6300' to knock off perf balls. Reset packer at 5950'.
- NU stimulation company. Maximum surface treating pressure is 5500 psi. Apply 500 psi to annulus. Monitor annulus pressure during the job. Fracture stimulate the Cliffhouse and Menefee with 100,000 lbs 20/40 Arizona sand in 2,738 bbls slickwater at 50 BPM. Tag sand with 3 radioactive isotopes. Average surface treating pressure will be 4161 psi. If injection pressures allow, adjust sand schedule to increase 2.0 ppg stage. Estimated tubing and perforation friction will be 4056 psi. Treat per the following schedule:

Stage	Water (gals)	Sand Volume (lbs)
Pad	15,000	
0.5 ppg	30,000	15,000
1.0 ppg	45,000	45,000
1.5 ppg	20,000	30,000
2.0 ppg	5,000	10,000
Flush	2,153	
Totals	117,153	100,000

Slow rate during flush. If well is on vacuum near end of frac job, cut flush as necessary to avoid overflushing. RDMO stimulation company.

- 11. Open well through choke manifold and monitor flow. Flow at 20 BPH or less, if sand is observed. When pressures allow, release packer and TOOH. LD 3-1/2" frac string, 3-1/2" X 2-7/8" crossover, 2-7/8" N-80 tubing, and 5-1/2" packer.
- 12. RIH with 4-3/4" bit on 2-3/8" tubing and clean out to CIBP at 6370'. Alternate between natural flow and blow stages for cleanup. Monitor gas and water returns when applicable. Obtain a representative Cliffhouse/Menefee pitot gauge. Drill up CIBP at 6370'. Use a 10-12 BPH mist rate while drilling CIBP. Continue to CO to PBTD. Alternate between natural flow and blow periods at PBTD. When water rates are less than 2 BPH, obtain a Cliffhouse/Menefee/Point Lookout pitot gauge. TOOH.
- 13. RU wireline company. Run Perforation Efficiency log across Mesaverde interval (6043-6536'). RD wireline company.
- 14. TIH with an expendable check, one joint 2-3/8" tubing, standard SN and remaining 2-3/8" tubing string. Broach tubing while running in hole. CO with air/mist to PBTD again, if necessary. Obtain final Cliffhouse/Menefee/Point Lookout pitot gauge. Land tubing at 6536'. ND BOP. NU WH. Pump off expendable check. RDMO. Contact Production Operations for well tie-in.

San Juan 28-4 Unit #26 1998 Discretionary Cliffhouse/Menefee Pay Add

15. RU Pro-Technics. Run After-Frac log across Cliffhouse/Menefee (6043-6296'). RD Pro-Technics.

Recommended:

roduction Engineer

Approved:

Drilling Superintendent

Approved:

Feam Leader

Jennifer Dobson

599-4026 (work)

564-3244 (home)

324-2461 (pager)

San Juan 28-4 Unit #28

Unit H, Section 19, T28N, R4W Rio Arriba County, NM

Lat: 36° - 38.9694'/Long: 107° - 17.17986'

Current Schematic

Proposed Schematic

