

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) 328-8780

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

1840' FNL, 1620' FWL, Sec.14, T-31-N, R-10-W, NMPM

5. Lease Number  
NM-01594

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#86

9. API Well No.  
30-045-21591

10. Field and Pool  
Blanco Pictured Cliffs

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  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other - restimulate  
☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut off  
☐ Conversion to Injection

13. Describe Proposed or Completed Operations

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

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

Signed Tammy Winsell for Title Regulatory Administrator Date 2/16/00  
TLW

(This space for Federal or State Office use)

APPROVED BY /s/ Charlie Beecham Title \_\_\_\_\_ Date FEB 24 2000

CONDITION OF APPROVAL, if any:

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

NMOC

SAN JUAN 32-9 UNIT #86  
Pictured Cliffs Slimhole Restimulation Procedure  
F 14 31N 10W  
San Juan County, N.M.  
Latitude: 36 Deg, 54.03 Min  
Longitude: 107 Deg, 51.28 Min  
API # 300452159100

**Summary:**

The subject well is a 1975 Pictured Cliffs slimhole completion through 2 7/8" casing. The casing did not test during the initial attempt to restimulate. The casing leak will now be isolated & a free point will be run to determine if casing is free below the leak. If so, the casing will be backed off as deep as possible. New casing will be run & tied back in & a bond log will be run. If the BLM requires a squeeze job, the procedure will be written at that time. The new casing will then be pressure tested to 3700 psi & the cased hole interval will be cleaned out to PBTD at 3248' using air-mist and 1-1/4" drillstring. The Pictured Cliffs will be restimulated with 57,133 gal of 70Q N<sub>2</sub> foamed 30# linear guar gel and 175,000# 20/40 mesh sand. The well will then be cleaned-up and returned to production.

- Comply with all NMOCD, BLM, and BR regulations. Conduct daily safety meetings for all personnel on location. Notify BR regulatory (Peggy Cole 326-9727) & 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.
- Contact area foreman 24-hrs. prior to beginning operations.

**CASING REPAIR**

1. MOL, hold safety meeting, & RU completion rig. Insure all safety equipment is strategically located & functioning properly. NU relief lines to blow pit. ND wellhead and NU 7-1/16" #M BOP, stripping head, & blooie line. Test BOP.
2. PU and TIH with a 2-7/8" RBP and 1-1/4" tubing. Set RBP above top perf (3116'). Release from BP. Spot 10' of sand on BP. Close pipe rams. Pressure test casing to 2000 psi for 15 minutes. If casing tests, TOOH & call for pump truck to test to 3700 psi. If casing fails, TOOH & continue with step 3.
3. PU 1 jt 2-7/8" tubing & screw into casing. MIRU wireline specialties. Freepoint 2-7/8" casing.
4. PU 2-7/8" packer. TIH with 2-7/8" packer on 1-1/4" tubing. Set packer above bridge plug & test to 3700 psi. Release packer, TOOH, and set packer at lowest 100% freepoint in casing. Pressure test to 3700 psi below & above packer. If casing leak is below packer, RDMO. If leak is above packer, continue with step 5. Release packer & TOOH.
5. RIH with stringshot. Back of casing at lowest joint 100% free. RDMO wireline specialties.
6. Circulate hole clean. TOOH & lay down old 2-7/8" casing.
7. PU & TIH with new 2-7/8" casing. Screw into existing casing.
8. Pressure test casing to 3700 psi for 15 minutes. (If casing can not be screwed into or pressure tested to 3700 psi on first attempt, contact Drilling Superintendent and Production Engineer to discuss procedure to run a Bowen casing patch.)
9. TIH with 1-1/4" tubing. Clean out to top of RBP. Latch on to 2-7/8" RBP & TOOH. Lay down RBP. TIH. CO to PBTD (3248'). TOOH & lay down 1-1/4" tubing.
10. RDMO.

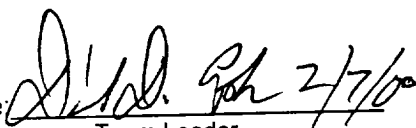
**RIGLESS STIMULATION**

11. Install 2-7/8", 6.5#, N-80 EUE 8rd sub and 5000 psi frac valve. Lay flowback line to pit.

12. Set two (2) 400 bbl frac tanks on location and fill with 640 bbls 2% KCl water. Treat tank with biocide prior to filling. Heat gel tank to 60-70 °F in winter.
13. RU stimulation company to frac down 2 7/8" casing. Hold pre-job safety meeting with all personnel on location. Pressure test surface lines to 4,700 psi for 15 minutes. Breakdown perforations by bullheading 250 gals 60Q foamed 15% inhibited acid ahead of fracture stimulation. Acid will contain the following additives:
- 1 gal/M A261 (corrosion inhibitor)
  - 2 gals/M F-75 (surfactant)
14. Stimulate in 1 to 4 ppg stages at 35 BPM constant downhole rate with 57,133 gal of 70Q N<sub>2</sub> foamed 30# linear guar gel and 175,000# 20/40 mesh Arizona sand. Maintain a bottom hole frac gradient of 0.65 psi/ft throughout job. When sand is in the hopper and the concentration begins to drop, call flush. Maintain previous stage's slurry and N<sub>2</sub> rates. Flush to 100 ft. above top perforation with +/- 299 fluid gals. **Maximum treating pressure is 3,700 psi.** Monitor bottomhole treating pressure, surface treating pressure, downhole rate, foam quality, and sand concentration with computer van. Treat in accordance to the enclosed schedule. Frac fluid will contain the following additives per 1000 gallons:
- 30# J8-77 (Gelling agent pre-mixed in full tank)
  - 1.0# J-134 (Enzyme breaker mixed on fly)
  - 1.0# J-218 (Oxidizer breaker mixed on fly)
  - 5.0# gal F-52.1 (Foamer mixed on fly)
  - 0.3# M-275 (Bactericide pre-mixed in full tank)
15. Shut well in after frac and record ISIP. Record volume & empty remaining fluid in frac tanks to pit and 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 enclosed in procedure**. 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.**
16. ND flowback line, frac valve, and isolation tool. NU production valve with flow tee. NU flowback line.

#### SWAB RIG CLEAN-UP

17. MIRU Silver Star. PU and RIH with 2 1/4" sand bailer. CO to PBTD at 3248'. Monitor gas and water returns. **Take pitot gauges when possible.**
18. Continue cleaning up after frac until sand returns are a trace and fluid recovery is less than 2 BPH. TOOH. **Take final pitot gauge.**
19. RD and release swabbing unit.

Approve:  2/7/00  
Team Leader

Approve:  2/9/2000  
Drilling Superintendent

#### VENDORS:

Stimulation:	Dowell-Schlumberger	325-5096
Swabbing:	Silverstar	327-7259
Frac Valve, & Flowback Line:	Dean Lingo	330-0144
Scott Dobson	Office - 326-9813 Home - 564-3244 Pager - 326-8036	

**Nitrogen Foam Stimulation Procedure  
Burlington Resources**

General Information			Well Configuration			Formation and Stimulation Data		
Well Name:	San Juan 32-9 Unit #86		Csg:	2 7/8" 6.5# J-55		Frac Gradient:	0.65 psi/ft	
Location:	F 14 T31N R10W		Tbg:	Packer @	ft	BH Temp:	100 deg. F	
Formation:	Pictured Cliffs		Capacity:	0.00579 bbl/ft	Csg	Antic. BH Treating Pres:	2,033 psi	
<u>Vendors</u> Stimulation: Dowell Tagging:				bbl/ft	Tbg	Antic. Surf. PSI:	3,000 psi	
			PBTD:	3248 ft	Vol. to: (gals)	Foam Quality:	70%	
			T Perf:	3116 ft	- 100'	Nitrogen GLR:	705 scf/bbl	
			B Perf:	3140 ft	T Perf:	BH Foam Rate:	35 bpm	
Fluid: 70Q N2 Foamed 30# Linear Gel Note: Water is city water @ pH of 7.3 with 2% KCl (supplied by BR)			Midpnt:	3128 ft	B Perf:	764	Percent Pad:	6%
			<u>Perforations</u>			Net Pay:	60 ft	
			6 spz	0.31 " holes		lb prop/net ft pay:	2,917 lb/ft	
			6 holes	18.00 " penetration		Job Duration:	44.5 min	

**Stimulation Schedule  
Mitchell Quality**

Stage	BH Sand Conc. ppg	Sand Mesh	Stage Sand lbs	BH Rate bpm	BH Foam Qual.	Clean Foam Volume gals	Clean Liquid Volume gals	Stage Clean Rate bpm	Blender Sand Conc. ppg	Stage Slurry Volume gals	Slurry Rate bpm	Nitrogen Rate scf/min	Stage N2 mscf	Stage Time min
Acid				12.5	60%	250	100	5.0	0.0	100	5.0	5,285	2.5	0.5
Pad			0	35.0	70%	3,100	930	10.5	0.0	930	10.5	17,263	36.4	2.1
3	1	20/40	2,000	35.0	70%	2,000	600	10.0	3.3	690	11.6	16,510	23.5	1.4
4	2	20/40	6,000	35.0	70%	3,000	900	9.6	6.7	1,171	12.5	15,820	35.2	2.2
5	3	20/40	75,600	35.0	70%	25,200	7,560	9.2	10.0	10,978	13.4	15,186	295.2	19.4
6	4	20/40	91,400	35.0	70%	22,850	6,855	8.9	13.3	10,988	14.3	14,600	267.5	18.3
Flush			0	35.0	59%	733	299	14.3	0.0	299	14.3	14,600	7.3	0.5
			Total lbs.	Avg. Rate	Avg. Qual.	Total gallons	Total Gallons	Avg. Rate	Avg. SC	Total Gallons	Avg. Rate	Avg. N2 Rate	Total mscf	Total Time
			175,000	31.8	67%	57,133	17,244	9.7	8.3	25,157	11.7	14,181	667	44.5

Schedule maintains constant bottom-hole rate.

**Volumes and Additives**

**Equipment**

Volumes and Additives								
Water Volume:	17,144	treat +	8,400	excess	25,544	gals. (BR)	Tanks:	2 x 400 bbl frac tank(s) (supplied by BR)
Water Volume:	408	treat +	200	excess	608	bbls. (BR)	Water:	640 bbls 2% KCl water (supplied by BR)
Fluid Volume:	608 bbls needed for stimulation						Computer Van	
20/40 Arizona Sand:	175,000 lbs						Sand Master	
Nitrogen Volume:	667 mscf (w/o cooldown)						Blender	
Base Fluid:	30# linear guar gel in 2% KCl (BR), pre-mixed in tank						Fluid Pumps as required	
Foamer:	5 gal/M (mix on fly)						Nitrogen Pumps as required	
Breaker:	1#/M enzyme (mix on fly) & 1#/M oxidizer (mix on fly)						Quality Control Equipment	
Bacteriacide:	0.38#/M added to each tank prior to filling with water							
Acid:	100 gal. 15% HCL with additives (see procedure)							
Radioactive Tagging								
None	None		None					

**Comments and Special Instructions**

<b>MAXIMUM ALLOWABLE TREATING PRESSURE IS:</b>	<b>3,700 PSI</b>
Hold safety meeting with everyone on location before pressure testing surface lines.	
Pressure test surface lines to 1000 psi over maximum allowable pressure but less than working pressure.	
Mileage - 45 miles one way	
RTS at 7 am on day #1	
Scott Dobson	2/7/00 <i>AAA</i> <i>Don 2/9/2000</i>

## Pictured Cliffs

### Flow Back Table

<u>Well Head Pressure, psi</u>	<u>Choke Size, x/64 in.</u>
Over 700	8
700	10
450	12
300	14
200	18
100	32

Well should be flowed back according to the above schedule.

Once the lower pressure is obtained, or if the well is blowing dry, the next larger choke size should be used.

Once the well head pressure drops below 100 psi, choke sizes should be gradually increased from 32 to 48.

Maximum choke size to be used during flow back and sand bailer operation is 48/64". No larger choke should be used.

# SAN JUAN 32-9 UNIT # 86

Section 14 F, T-31 -N R-10 -W  
San Juan, New Mexico

## Blanco Pictured Cliffs Field Wellbore Schematic

