

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

- |                                                                                                                 |                                                 |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p>1. Type of Well<br/>GAS</p>                                                                                  | <p>5. Lease Number<br/>SF-078129</p>            |
| <p>2. Name of Operator<br/><b>BURLINGTON<br/>RESOURCES</b> OIL &amp; GAS COMPANY</p>                            | <p>6. If Indian, All. or<br/>Tribe Name</p>     |
| <p>3. Address &amp; Phone No. of Operator<br/>PO Box 4289, Farmington, NM 87499 (505) 326-9700</p>              | <p>7. Unit Agreement Name</p>                   |
| <p>4. Location of Well, Footage, Sec., T, R, M<br/>898' FNL, 990' FEL, Sec. 47, T-30-N, R-9-W, NMPM<br/>187</p> | <p>8. Well Name &amp; Number<br/>Pierce #3</p>  |
|                                                                                                                 | <p>9. API Well No.<br/>30-045-09746</p>         |
|                                                                                                                 | <p>10. Field and Pool<br/>Blanco Mesaverde</p>  |
|                                                                                                                 | <p>11. County and State<br/>San Juan Co, NM</p> |

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

- | Type of Submission                                   | Type of Action                                                                            |
|------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Abandonment <input type="checkbox"/> Change of Plans             |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Recompletion <input type="checkbox"/> New Construction           |
| <input type="checkbox"/> Final Abandonment           | <input type="checkbox"/> Plugging Back <input type="checkbox"/> Non-Routine Fracturing    |
|                                                      | <input type="checkbox"/> Casing Repair <input type="checkbox"/> Water Shut off            |
|                                                      | <input type="checkbox"/> Altering Casing <input type="checkbox"/> Conversion to Injection |
|                                                      | <input checked="" type="checkbox"/> Other - Pay add                                       |

13. Describe Proposed or Completed Operations

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

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

Signed *Donna Shadniece* (SCOpps) Title Regulatory Administrator Date 1/16/98

(This space for Federal or State Office use)

APPROVED BY */s/ Duane W. Spencer* Title \_\_\_\_\_ Date JAN 27 1998

CONDITION OF APPROVAL, if any:

**Pierce #3**  
**Mesa Verde Payadd Procedure**  
**A 17 30N 09W**  
**San Juan County, NM**  
**Latitude: 36 Deg., 49.84 Min**  
**Longitude: 107 Deg., 48.94 Min.**

**Summary:**

The subject well is a 1998 Mesa Verde payadd in 5-1/2" casing. This well was originally drilled in 1955 and was completed in the Point Lookout and Cliffhouse interval. The Point Lookout and Cliffhouse interval was perforated w/ 4 SPF and stimulated w/ approximately 100,000 lbs. total sand and 100,000 gal. total slickwater and placed on production. The subject well will capture the bypassed Menefee pay and will be perforated and fracture stimulated in one (1) stage with 81,558 gal of 20# crossed-linked gel and 145,000# 20/40 mesh sand. The well will then be cleaned-up, tubing landed in the Mesa Verde and placed on production.

- Comply to all NMOCD, BLM and BR regulations. Conduct daily safety meetings for all personnel on location. Notify BR regulatory (Peggy Bradfield 326-9727) and the appropriate Regulatory Agency prior to pumping any cement job and after CBL is run. 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.
1. MOL, hold safety meeting and RU completion rig. Insure all safety equipment is strategically located and functioning properly. NU relief lines to blow pit. Set seven (7) 400 BBL frac tanks and fill w/ 2% KCL. Blow well down and kill well with 2% KCL water as necessary. ND wellhead and NU 7-1/16" 3M BOP, stripping head and blooie line. Test BOP.
  2. TOOH w/ approximately 173 jts. 2-3/8" Mesa Verde tubing set at +/- 5435' and stand back. Inspect tubing and replace bad tubing as necessary.\*\*  
  
**\*\*NOTE:** If existing tbg. is scaled-up, contact production engineer and a scale analysis will be run. This will determine if we will pump acid down the 2-3/8" 4.7# J-55 workstring and acid wash perforations across the Point Lookout and Cliffhouse interval.
  3. RU wireline. RIH w/ 4-1/2" gauge ring and check wellbore for obstructions to PBTD @ 5470'. POOH.\*\*  
  
**\*\*NOTE:** If obstructions are encountered, PU 4-3/4" bit and 5-1/2" 15.5# csg. scraper on 2-3/8" 4.7# J-55 workstring and CO to PBTD @ 5470'. TOOH
  4. RIH and wireline set CIBP @ 5300'. Load hole w/ 2% KCL (126 bbls) Run GR\CCL\CNL from 5290' to 4900'.\*\* Send logs to office immediately to evaluate logs to determine correlation of old logs. Pressure test RBP to 3000 psi. RD wireline company.  
  
\*\* Correlate GR logs to old log suite.
  5. RU wireline company to perforate with 3-1/8" HSC gun w/ 10.5 gram charges. 13" penetration and 0.27 perf diameter. Perforate top down the following Menefee interval w/ total of 22 holes at the following depths:\*\* 4942', 4953', 4966', 4983', 4989', 4998', 5012', 5064', 5070', 5107', 5148', 5154', 5200', 5228', 5234', 5240', 5246', 5256', 5262', 5268', 5274'.
- \*\* Correlate GR logs to old log suite. Perforations may change after new logs are run.

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6. TIH w/ 5-1/2" fullbore pkr. and approx. 158 jts. 2-7/8" 6.4# N-80 **BUTTRESS** frac string and set @ 4910'. RU stimulation company. Pressure test CIBP to 3800 psi. Pressure test surface lines to 7000 psi. Breakdown perforations @ 4 BPM w/ 1500 gal. 15% HCL acid.\*\* Drop forty four (44) 7/8" 1.1 SG RCN balls @ 4 balls/bbl. Displace acid w/ 2% KCL water to bottom perforation. Balloff to maximum pressure of 3800 psi. Record breakdown pressure. ball action and ISIP. RD stimulation company.

\*\* All acid to contain the following additives/1000 gal.:

2 gal.	CI-22	corrosion inhibitor
5 gal	Ferrotrol-300L	iron control
1 gal	Flo-back 20	surfactant
0.5 gal	Clay Master-5C	clay control

7. Release pkr. and TIH knocking balls off perforations. Reset pkr. @ 4910'.
8. RU stimulation company to frac down frac valve and 2-7/8" 6.4# N-80 **BUTTRESS** frac string. Hold pre-job safety meeting. Pressure test surface lines to 7500 psi prior to stimulation. Maximum allowable surface treating pressure is 6500 psi.
9. Fracture stimulate w/ 2% KCL base frac fluid 20# crossed-linked gel in 1.0 to 4.0 ppg stages @ 25 BPM constant downhole rate with 81,558 gal. of 20# crossed-linked gel and 145,000# 20/40 mesh sand. When sand concentration begins to drop, call flush. Flush to top perf @ 4942'\*\*. Treat Menefee interval per the following schedule:

<u>Stage</u>	<u>Water Vol. (gal)</u>	<u>Sand Vol. (lbs.)</u>	<u>Type</u>
Pad	20,000	0	20/40 Az
1 ppg	15,000	15,000	20/40 Az
2 ppg	15,000	30,000	20/40 Az
3 ppg	20,000	60,000	20/40 Az
4 ppg	10,000	40,000	20/40 Az
Flush	1,558	0	
<b>Totals</b>	<b>81,558</b>	<b>145,000</b>	

Treat frac fluid with the following additives per 1000 gallons:

* 0.15#/M M-275	(Biocide)
* 4.5 gal/M J-877	(Slurry Gel Concentrate)
* 6 gal/M Activator	(Buffer & Crosslinker)
* 1 gal/M F-75	(Surfactant)
* 0.25-1.0 #/M J-218	(Breaker)
* 0.4 mCi Sb-124	(Zero wash radioactive sand mixed on fly, 2-3 ppg sand stage)
* 0.3 mCi Sc-46	(Zero wash radioactive sand mixed on fly, 4 ppg sand stage)
* 0.3 mCi Ir-192	(Zero wash radioactive sand mixed on fly, 5 ppg sand stage)

\*\* After 75% of flush volume has been pumped (1168 gal.), cut rate to 10 BPM. If well goes on a vacuum, shut down. Otherwise, flush to top perf @ 4942'.

10. Shut in frac valve and record ISIP, 5, 10 and 15 shut-in pressure. RD stimulation company.

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11. Flowback well @ 20 bbl/hr until returns diminish. Take pitot gauges when possible. When well is sufficiently clean (less than 1 BWPH), gauge the Menefee interval for one (1) hour.
12. After well cleans up and pressures allow, release pkr. and TOOH standing back 2-7/8" 6.4# N-80 **BUTTRESS** frac string.
13. TIH w/ 4-3/4" bit on 2-3/8" 4.7# J-55 workstring and mill-up CIBP @ 5300' with air/mist. CO to PBTD @ 5470'.\*\*  
  
**\*\*NOTE:** If tbg. was scaled-up, as indicated in step #2 of procedure, acid wash the existing Cliffhouse and Point Lookout perforations w/ treatment specified by service company.
14. TIH with one joint of 2-3/8", 4.7#, J-55 tubing w/ expendable check. gas lift mandrel, seating nipple, then the remaining 2-3/8" production tubing. Land tubing @ 5435'.
15. ND BOP's. NU single tubing hanger wellhead. Pump off expendable check. Obtain final pitot up tubing. If well will not flow on it's own, make swab run to seating nipple. If swab run is not necessary, run a broach on slickline to ensure that the tubing is clear. Set bumper spring in seating nipple and drop plunger. RD and MOL. Place well on gas lift/plunger lift combination type production.

Approve:  12/10/97  
Team Leader

Approve:  12/10/97  
Drilling Superintendent

Recommend:  12/10/97  
Production Engineer

VENDORS:

Wireline:	Schlumberger	325-5006
Stimulation:	Dowell/Schlumberger	325-5096
Packer:	Arrow Completion Systems	326-5141
Bridge Plug:	Arrow Completion Systems	326-5141
Gas lift/Plunger lift:	PCS	326-4239

Steve Campbell	Home 325-8218	Office 326-9546	Pager 564-1902
Bob Goodwin	Home 599-0992	Office 326-9713	Pager 564-7096
Jennifer Dobson	Home 564-3244	Office 326-9708	Pager 324-2461
Mike Pippin	Home 327-4573	Office 326-9848	Pager 324-2559

**Pierce #3**  
**Pertinent Data Sheet**

**Location:** 989' FNL, 990' FEL, Unit A, Section 17, T30N, R09W, San Juan County, New Mexico

**Latitude:** 36° - 49.84'      **Longitude:** 107° - 48.94'

**Field:** Blanco Mesa Verde      **Elevation:** 5364' GL  
6374' KB      **TD:** 5490'  
**PBTD:** 5470'

**Spud Date:** 10/15/55      **Completed:** 11/5/55      **DP No:** 58903  
**Lease:** NMSF-078129  
**GWI:** 75.00%  
**NRI:** 58.125%  
**Prop#:** 0023096

**Initial Potential:** 6622 MCF/D

**Casing/Liner Record:**

<b><u>Hole Size</u></b>	<b><u>Casing Size</u></b>	<b><u>Weight &amp; Grade</u></b>	<b><u>Depth Set</u></b>	<b><u>Cement</u></b>	<b><u>Top/Cement</u></b>
13-3/4"	9-5/8"	25.4# Spiral Weld	177'	150 sx	Circ. Cmt.
8-3/4"	7"	20# J-55	3145'	250 sx	1500' (TS)
6-1/4"	5-1/2"	15.5# J-55	5490'	240 sx	3025' (TS)

**Tubing Record:**

<b><u>Tubing Size</u></b>	<b><u>Weight &amp; Grade</u></b>	<b><u>Depth Set</u></b>	<b><u>Number of jts.</u></b>
2-3/8"	4.7#	5435'	173

<b><u>Formation Tops:</u></b>	<b><u>Estimated</u></b>	<b><u>Huerfanito Bentonite</u></b>	<b><u>3765'</u></b>
Ojo Alamo	1795'	Menefee	4900'
Fruitland	2733'	Point Lookout	5290'
Pictured Cliffs	3085'		
Cliffhouse	4708'		

**Logging Record:** ES, GRL, Temp., Ind., ML

**Stimulation:** 11/3/55 - Perfs in Cliffhouse - 4706'-4716', 4720'-4740', 4820'-4834', 4838'-4854', 4876'-4886', 4890'-4904', w/ 4 SPF. Frac w/ 45,800 gal. water and 48,500 lbs. 20/40 sand. Perfs in Point Lookout - 5310'-5330', 5406'-5430', 5437'-5440', 5449'-5455', 5459'-5462', w/ 4 SPF; Frac w/ 51,500 gal. water and 50,000 lbs. 20/40 sand.

**Workover History:** None

**Pipeline:** EPNG

# Pierce #3

Unit A, Section 17, T30N, R09W  
San Juan County, NM

Current Schematic

Proposed Schematic

