

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 &amp; GAS COMPANY

## 3. Address &amp; Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

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

1762' FSL, 973' FEL, Sec. 11, T-28-N, R-11-W, NMPM

5. Lease Number  
SF-047017A6. If Indian, All. or  
Tribe Name

7. Unit Agreement Name

8. Well Name & Number  
Angel Peak #279. API Well No.  
30-045-2569910. Field and Pool  
Basin Fruitland Coal/  
Armenta Gallup11. 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 -☐ Change of Plans☐ New Construction☐ Non-Routine Fracturing☐ Water Shut off☐ Conversion to Injection

## 13. Describe Proposed or Completed Operations

It is intended to recompleate the subject well in the Fruitland Coal formation according to the attached procedure and wellbore diagram. The Gallup formation will be plugged and abandoned.

**RECEIVED**  
DEC - 8 1997

**OIL CON. DIV.**  
DIST. 8

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

Signed [Signature] (PMPOpps) Title Regulatory Administrator Date 11/20/97

(This space for Federal or State Office use)

APPROVED BY [Signature] Title \_\_\_\_\_ Date DEC - 4 1997

CONDITION OF APPROVAL, if any:

NMOCB

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer 00, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form  
Revised February 2, 1997  
Instructions  
Submit to Appropriate District  
State Lease - 4  
Fee Lease - 3

☐ AMENDED RE

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-25699		Pool Code 71629/2290		Pool Name Basin Fruitland Coal/Armenta Gallun	
Property Code 6787		Property Name ANGEL PEAK			Well Number 27
GRID No. 14538		Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			Elevation 5730'

10 Surface Location

UL or lot no. I	Section 11	Township 28N	Range 11W	Lot Idn	Feet from the 1762	North/South line South	Feet from the 973	East/West line East	Cont SAN
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	Cont
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12 Dedicated Acres Frt-A11-257.48 Gal-24	13 Joint or Infill	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<div>16</div> <div></div>	<div>17 OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained in this plat is true and complete to the best of my knowledge and belief.</div> <div></div> <div>Signature</div> <div>Peggy Bradfield</div> <div>Printed Name</div> <div>Regulatory Administrator</div> <div>Title</div> <div>11-10-97</div> <div>Date</div>
	<div>18 SURVEYOR CERTIFICATION</div> <div>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made or under my supervision and that the same are true and correct to the best of my belief.</div> <div>NOVEMBER 4, 1997</div> <div>Date of Survey</div> <div></div> <div>Signature and Seal of Professional Surveyor</div> <div>NEALE C. EDWARDS</div> <div>NEW MEXICO</div> <div>6857</div> <div>CERTIFICATE NUMBER</div>

ANGEL PEAK #27 FRTC  
Recompletion Procedure  
11 28 11  
San Juan County, N.M.  
Lat-Long: 36.674194 - 107.966934

**PROJECT SUMMARY:** Plugback this 1983 vintage depleted Gallup well to the FRTC and foam frac.

1. Comply to all NMOCD, BLM, and MOI rules and regulations. MOL and RU completion rig. NU 7-1/16" 3000 psi BOP w/flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line.
2. Set blanking plug in S.N. of 2-3/8" tbg @ 5859' and test to 3000 psi. TOH w/2-3/8" tbg. Run 4-1/2" gauge ring on 2-3/8" tbg to 5350'. TOH. Run 4-1/2" cmt ret on 2-3/8" tbg and set @ 5350'. Sq Gallup perms w/120 sx cmt. This will fill inside 4-1/2" csg from bottom perf to cmt retainer w/100% excess cmt. Sting out of ret and spot 5 sx on top cmt ret.
3. PU tbg and spot <sup>20</sup>15 sx cmt 5155'-5055'. This will fill inside csg 50' above and below top 4-1/2" liner w/50% excess cmt.
4. PU tbg and spot <sup>28</sup>20 sx cmt 3460'-3560'. This will fill inside the csg 50' above and below top of Mesaverde w/50% excess. Spot a 15 sx cmt balanced plug w/top @ 1900'. TOH.
5. MI Blue Jet. Run an advanced integrated data processed GSL neutron log 1900'-1300' and correlate to attached open hole log. Hot-shot log to Mike Pippin (326-9848) so perms can be picked. Run 7" pkr on 2 jts 2-7/8" 4.7# N-80 tbg and pressure test to 3500 psi. TIH w/2-3/8" tbg open ended and spot 250 gal 7-1/2% HCL acid 1815'-1400'
6. Using GSL log, Perf about 50' of FRTC w/2 spf from about 1816' to 1400'. Perf using 3-1/8" hollow steel carrier guns loaded w/Owen HSC 13 gm. charges phased at 180 degrees. Average perf dia. = 0.48". Average penetration is 18" in Berea.
7. Fill 3 - 400 bbl. frac tanks with 1% KCL water. If necessary, filter all water to 25 microns. Two tanks are for gel and one tank for breakdown water. Usable gel water required for frac is 448 bbls.
8. TIH w/7" pkr on 2-3/8" tbg and set @ 1300'. W/1000 psi on backside, breakdown FRTC perms w/2000 gal. 15% HCL acid and 150% excess 7/8" 1.3 sp gr RCN perf balls. (1 gal/1000 corrosion inhibitor). Max. pressure is 4150 psi. Lower pkr to 1820' to knock off perf balls. TOH.
9. Run 7" pkr on 2 jts 3-1/2" N-80 tbg w/shaved collars to protect wellhead. Frac FRTC down csg w/62,000 gals. of 70 quality foam using 30# gel as the base fluid and 120,000# 20/40 Arizona sand. Pump at 70 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, and sand concentration with computer van. Sand to be tagged w/ 3 RA isotope tracers. Max. pressure is 3500 psi and estimated treating pressure is 3200 psi. Treat per the following schedule:

# ANGEL PEAK #27 - RECOMPLETE TO FRTC WELL

<u>Stage</u>	<u>Foam Vol. (Gals.)</u>	<u>Gel Vol. (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	12,000	3,600	---
1.0 ppg	10,000	3,000	10,000
2.0 ppg	20,000	6,000	40,000
3.0 ppg	10,000	3,000	30,000
4.0 ppg	10,000	3,000	40,000
Flush	( 849)	(255)	0
Totals	62,000	18,600	120,000#

Treat frac fluid w/the following additives per 1000 gallons:

- \* 30# J-48 (Guar Gel mix in full tank - 16,000 gal)
- \* 1.0 gal. Aqua Flow (Non-ionic Surfactant mix in full tank)
- \* 1.0# GVW-3 (Enzyme Breaker mix on fly)
- \* 1.0# B - 5 (Breaker mix on fly)
- \* 3.0 gal Fracfoam I (Foamer mix on fly)
- \* 0.38# FracCide 20 (Bacteriacide mix on full tank)

10. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr. or less, if sand is observed. Take pitot gauges when possible. TOH w/pkr.
11. TIH w/notched collar on 2-3/8" tbg and C.O. to 1900' w/air/mist. Monitor gas and water returns and Take pitot gauges when possible.
12. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log and perf eff log from 1900'-1300'.
13. TIH w/2-3/8" 4.7# J-55 EUE tbg w/standard seating nipple one joint off bottom and again cleanout to 1900'. When wellbore is sufficiently clean, land tbg @ 1750' KB. Take final water and gas samples and rates.
14. ND BOP and NU wellhead and tree. Rig down and release rig.

Recommended:   
Production Engineer

Approved:  10/28/97  
Drilling Superintendent

Approved:  9/21/97  
Team Leader

## VENDORS:

Wireline:	Blue Jet	325-5584
Fracturing:	BJ	327-6222
RA Tag:	Pro-Technics	326-7133

PMP

**Pertinent Data Sheet - ANGEL PEAK #27 FRTC**

11 28 11

**Location:** 1762' FSL & 973' FEL, Unit I, Section 11, T28N, R11W, San Juan County, New Mexico

**Field:** Basin Fruitland Coal

**Elevation:** 5730' GL  
KB=12'

**TD:** 6075'  
**PBTD:** 6043'

**Spud Date:** 5/26/83

**Lease#:** Fed. SF-047017A  
**DP #:** 32485B  
**GWl:** 100%  
**NRI:** 87.50%  
**Prop#:**

**Casing Record:**

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. &amp; Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Cement (Top)</u>
12-1/4"	9-5/8"	36# K-55	319'	319 cf	Circ Cmt
8-3/4"	7"	23# K-55	5310'	1410 cf	Circ Cmt
		Stage Tool @	1981'	1065 cf	Circ 15 BBL Cmt
6-1/4"	4-1/2"	11.6# K-55	5105'-6075'	186 cf	Circ 75 BBL Cmt

**Tubing Record:**

2-3/8"	4.7# J-55	5922'	187 Jt
	S.N. @	5859'	

**Formation Tops:**

Ojo Alamo:	600'	Chacra	2410'
Kirtland Shale:	830	Mesaverde	3510'
Fruitland:	1350	Point Lookout	4200'
Pictured Cliffs:	1820'	Gallup	5400'

**Logging Record:** Induction Log, Density-Nuetron Log, Temp (Gallup), CBL (4-1/2" csg).

**Stimulation:** Perfed lower Gallup w/1 spf @ 5870', 78', 88', 5900', 10', 20', 30', 40', 50', 63', 74', 84', 94', 6004', 14', 25', 34'. Total 17 holes. Fraced w/80,000# sand in 75Q foam. Perfed upper Gallup w/1 spf @ 5415', 33', 50', 68', 88', 5515', 36', 55', 74', 94', 5615', 36', 48', 58', 66', 80', 92', 5702', 121', 21', 34', 42', 54'. Total 23 holes. Fraced w/180,000# sand in 70Q foam.

**Workover History:** 1/26/94: TOH w/tbg & rods, cleaned tbg, reran tbg, pressure tested - OK, did not rerun rods.

**Production History:** Gallup cum = 8 <sup>EO</sup>MMCF & 246, <sup>MMCF</sup>15 ~~15~~ BO. No Gallup reserves are currently booked. See attached Gallup production curve. This well is on the Rudy-Zachry compression system.

**Pipeline:** BROG

# ANGEL PEAK #27

AS OF 6/6/94

ARMENTA GALLUP

UNIT I, SEC 11, T28N, R11W, SAN JUAN COUNTY, NM

COMPLETED 6/14/83

OJO ALAMO @ 600'  
KIRTLAND @ 830'

FRUITLAND @ 1350'

PICTURED CLIFFS @ 1820'  
LEWIS @ 1890'

CHACRA @ 2410'

CLIFF HOUSE @ 3510'

POINT LOOKOUT @ 4200'  
MANCOS @ 4510'

GALLUP @ 5400'

12-1/4" HOLE

9-5/8" 36# K-55 CSG SET @ 323'  
CMT W/ 319 CT.FT.  
CIRC. CMT TO SURFACE

8-3/4" HOLE

D.V. TOOL @ 1981'

2-3/8" 4.7# K-55 TBG SET @ 5922'

LINER TOP @ 5105'

7" 23# K-55 CSG SET @ 5310'  
CMT W/ 1475 CT.FT. (2 STAGES)  
FLOAT COLLAR @ 5265'  
CIRC 10 BBLS CMT TO SURFACE

6-1/4" HOLE

PERF 5415'-5754' FRAC W/ 180,000# SAND & 70Q  
FOAM

PERF 5870'-6034' FRAC W/ 80,000# SAND & 75Q  
FOAM

4-1/2" 11.6# K-55 LINER SET @ 5105'-6075'  
CMT W/ 186 CU.FT.  
FLOAT COLLAR @ 6043'  
CIRC. CMT TO LINER TOP

TD 6075'  
PBD 6043'



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Farmington District Office  
1235 La Plata Highway  
Farmington, New Mexico 87401

IN REPLY REFER TO:

**Attachment to Notice of  
Intention to Workover**

**Re: Plug Back and Recomplete  
Well: 27 Angel Peak**

### CONDITIONS OF APPROVAL

1. Move the Mesaverde cement plug from 3460'-3560' to 3444'-3344' inside the 7.0" casing. (28 sks. cement -- 100' plus 50 linear feet excess) (Mesaverde top @ 3394')
2. Place a cement plug from 2460' to 2360' inside the 7.0" casing plus 50 linear feet excess cement. (28 sks. cement) (top of Chacra @ 2410')
3. **Mike Flaniken** with the Farmington District Office is to be notified at least 24 hours before the workover operations commence (505) 599-8907.