

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
BLM

Sundry Notices and Reports on Wells

57 NOV 25 PM 2:22

1. Type of Well  
GAS

5. Lease Number  
SF-077317

6. If Indian, All. or  
Tribe Name

7. Unit Agreement Name

2. Name of Operator

**BURLINGTON  
RESOURCES**

OIL & GAS COMPANY

3. Address & Phone No. of Operator

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

8. Well Name & Number  
Cooper #11

9. API Well No.  
30-045-28567

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

1140' FSL, 1450' FWL, Sec. 6, T-29-N, R-11-W, NMPM

10. Field and Pool  
Otero Chacra **EXT**  
Crouch Mesa MV

11. County and State  
San Juan Co, NM

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

Type of Submission

Type of Action

☒ Notice of Intent

☐ Abandonment

☐ Change of Plans

☐ Subsequent Report

☒ Recompletion

☐ New Construction

☐ Final Abandonment

☒ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut off

☐ Altering Casing

☐ Conversion to Injection

☐ Other -

13. Describe Proposed or Completed Operations

It is intended to plug back the subject well to the Chacra formation according to the attached procedure and wellbore diagram. The Mesaverde formation will be plugged and abandoned.

RECEIVED  
DEC - 8 1997

OIL CON. DIV.  
DIST. 3

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

Signed *Douglas S. Spencer* (PMPOpps) Title Regulatory Administrator Date 11/24/97

(This space for Federal or State Office use)

APPROVED BY *As/ Duane W. Spencer* Title \_\_\_\_\_ Date DEC - 4 1997

CONDITION OF APPROVAL, if any:

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 C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-28567		*Pool Code 82329/75680	*Pool Name Otero Chacra/Crouch Mesa Mesaverde
*Property Code 18498	*Property Name COOPER		*Well Number 11
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		*Elevation 5755'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	6	29N	11W		1140	South	1450	West	SAN JUAN

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	County

12 Dedicated Acres  
Cha-147.12  
MV-147.12

13 Joint or Infill

14 Consolidation Code

15 Order No.

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> <p>1450'</p> <p>1140'</p>
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COOPER #11 LEWIS  
Workover Procedure  
N 6 29 11  
San Juan County, N.M.  
Lat-Long: 36-45.03 - 108-02.13

**PROJECT SUMMARY:** Plugback this 1991 vintage "wet" Mesaverde well to the Lewis Shale and foam frac in three stages.

1. Comply to all NMOCD, BLM, and BROG 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 tbg choke in "F" nipple of 2-3/8" tbg @ 4176'. Pressure test tbg to 5000 psi. TOH w/2-3/8" tbg. TIH w/4-1/2" csg scraper on 2-3/8" tbg to 3550'. TOH. Run 4-1/2" cmt ret on 2-3/8" tbg and set @ 3550'. Sq existing MV perfs w/152 sx cl "B" cmt. (100% excess to cover MV perfs.) Sting out of cmt ret and reverse out cmt from 3540'.
3. Roll hole w/1% KCL water. Spot 150 gal 15% HCL acid across Lower Lewis perf interval 3427'-3228'. TOH. Run 4-1/2" pkr on 2 Jts 2-7/8" N-80 tbg to protect wellhead and pressure test csg to 3800 psi. TOH.  
All acid on this well to contain the following additives per 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
4. 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 first frac is 497 bbls.

**LOWER LEWIS:**

5. Perf lower Lewis (from top down) @ 3228', 39', 52', 64', 77', 85', 96', 3315', 31', 40', 50', 66', 80', 92', 3400', 13', 27' w/1 spf. Perf using 3-1/8" hollow steel carrier guns loaded w/Owen 3125306P HSC 12 gm. charges. Average perf dia. = 0.30". Average penetration is 17.48" in concrete. Total 17 holes.
6. TIH w/4-1/2" pkr on 2-3/8" tbg and set @ 3000'. W/1000 psi on the annulus, breakdown (and attempt to balloff to 4700 psi) lower Lewis perfs w/1000 gal. 15% HCL acid and 42 - 7/8" 1.3 sp gr RCN perf balls. (Use same acid additives as step #3). Max. pressure is 4700 psi. Lower pkr to 3440' to knock off perf balls. TOH.
7. Set Pro-Technics RTD tool @ 3410' on slick line.
8. Install wellhead isolation tool. Frac lower Lewis down csg w/50,000 gals. of 60 quality foam using 30# X-linked gel as the base fluid and 100,000# 20/40 Arizona sand. Pump at 55 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, and sand concentration with computer van. Sand to be tagged w/ Ir-192 RA tracers. Max. pressure is 3800 psi and estimated treating pressure is 2790 psi. Treat per the following schedule:

COOPER #11 LEWIS - PRIORITY RECOMPLETION

<u>Stage</u>	<u>Foam Vol. (Gals.)</u>	<u>Gel Vol. (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	10,000	4,000	—
1.0 ppg	10,000	4,000	10,000
2.0 ppg	10,000	4,000	20,000
3.0 ppg	10,000	4,000	30,000
4.0 ppg	10,000	4,000	40,000
Flush	<u>( 2,162)</u>	<u>(864)</u>	<u>0</u>
Totals	50,000	20,000	100,000#

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

- \* 30# GW-27 (Guar Gel mix in full tank - 16,000 gal)
- \* 1.0 gal. FLO-Back 20 (Non-ionic Surfactant mix in full tank)
- \* 1.0# Enzyme G (Enzyme Breaker mix on fly)
- \* 1.0# GWB-5 (Breaker mix on fly)
- \* 5.0 gal FAW-I (Foamer mix on fly)
- \* 0.38# XCIDE-207 (Bacteriacide mix on full tank)
- \* 2.5 gal BF-7L (Buffering Agent)

9. Rig down tree-saver and rig up wireline lubricator. Try to maintain a closed system (don't let any gas or fluid in or out of the csg).
10. Set 4-1/2" ret BP @ 3210' on wireline and top w/1 sx sand. Run 4-1/2" pkr on 2 jts 2-7/8" tbg to protect wellhead and pressure test csg to 3800 psi. TOH.

**MIDDLE LEWIS:**

11. 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 495 bbls.
12. Run 2-3/8" tbg open ended to 3178' and spot 150 gal 15% HCL acid across middle Lewis perfs 2968'-3178'. Use same additives as in step #3. TOH.
13. Perf middle Lewis (from top down) @ 2968', 75', 90', 3012', 27', 42', 46', 58', 67', 78', 89', 96', 3113', 25', 36', 49', 66', 78' w/1 spf. Perf using 3-1/8" hollow steel carrier guns loaded w/Owen 3125306P HSC 12 gm. charges. Average perf dia. = 0.30". Average penetration is 17.48" in concrete. Total 18 holes.
14. TIH w/4-1/2" pkr on 2-3/8" tbg and set @ 2700'. W/1000 psi on the annulus, breakdown (and attempt to balloff to 4700 psi) lower Lewis perfs w/1000 gal. 15% HCL acid and 45 - 7/8" 1.3 sp gr RCN perf balls. (Use same acid additives as step #3). Max. pressure is 4700 psi. Lower pkr to 3180' to knock off perf balls. TOH.
15. Install wellhead isolation tool. Frac middle Lewis down csg w/50,000 gals. of 60 quality foam using 30# X-linked gel as the base fluid and 100,000# 20/40 Arizona sand. Pump at 55 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, and sand concentration with computer van. Sand to be tagged w/ Sc-46 RA tracers. Max. pressure is 3800 psi and estimated treating pressure is 2558 psi. Treat per the following schedule:

<u>Stage</u>	<u>Foam Vol. (Gals.)</u>	<u>Gel Vol. (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	10,000	4,000	—
1.0 ppg	10,000	4,000	10,000
2.0 ppg	10,000	4,000	20,000

# COOPER #11 LEWIS - PRIORITY RECOMPLETION

3.0 ppg	10,000	4,000	30,000
4.0 ppg	10,000	4,000	40,000
Flush	( 1,970)	(788)	0
Totals	50,000	20,000	100,000#

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

- \* 30# GW-27 (Guar Gel mix in full tank - 16,000 gal)
- \* 1.0 gal. FLO-Back 20 (Non-ionic Surfactant mix in full tank)
- \* 1.0# Enzyme G (Enzyme Breaker mix on fly)
- \* 1.0# GWB-5 (Breaker mix on fly)
- \* 5.0 gal FAW-I (Foamer mix on fly)
- \* 0.38# XCIDE-207 (Bactericide mix on full tank)
- \* 2.5 gal BF-7L (Buffering Agent)

16. Rig down tree-saver and rig up wireline lubricator. Try to maintain a closed system (don't let any gas or fluid in or out of the csg).
17. Set 4-1/2" ret BP @ 2940' on wireline and top w/1 sx sand. Run 4-1/2" pkr on 2 jts 2-3/8" tbg to protect wellhead and pressure test csg to 3800 psi. TOH.

## UPPER LEWIS:

18. 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 492 bbls.
19. Run 2-3/8" tbg open ended to 2894' and spot 200 gal 15% HCL acid across upper Lewis perms 2619'-2894'. Use same additives as in step #3. TOH.
20. Perf upper Lewis (from top down) @ 2619', 29', 48', 65', 82', 92', 2705', 15', 26', 48', 64', 78', 91', 2804', 16', 25', 40', 45', 57', 74', 87', 94' w/1 spf. Perf using 3-1/8" hollow steel carrier guns loaded w/Owen 3125306P HSC 12 gm. charges. Average perf dia. = 0.30". Average penetration is 17.48" in Concrete. Total 21 holes.
21. TIH w/4-1/2" pkr on 2-3/8" tbg and set @ 2400'. W/1000 psi on the annulus, breakdown (and attempt to balloff to 4700 psi) lower Lewis perms w/1000 gal. 15% HCL acid and 52 - 7/8" 1.3 sp gr RCN perf balls. (Use same acid additives as step #3). Max. pressure is 4700 psi. Lower pkr to 2900' to knock off perf balls. TOH.
22. Run 4-1/2" pkr on 2 jts 2-7/8" tbg to protect wellhead. Frac upper Lewis down csg w/50,000 gals. of 60 quality foam using 30# X-linked gel as the base fluid and 100,000# 20/40 Arizona sand. Pump at 55 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, and sand concentration with computer van. Sand to be tagged w/ Sb-124 RA tracer. Max. pressure is 3800 psi and estimated treating pressure is 2696 psi. Treat per the following schedule:

Stage	Foam Vol. (Gals.)	Gel Vol. (Gals.)	Sand Vol. (lbs.)
Pad	10,000	4,000	—
1.0 ppg	10,000	4,000	10,000
2.0 ppg	10,000	4,000	20,000
3.0 ppg	10,000	4,000	30,000
4.0 ppg	10,000	4,000	40,000
Flush	( 1,741)	(697)	0
Totals	50,000	20,000	100,000#

COOPER #11 LEWIS - PRIORITY RECOMPLETION


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

- \* 30# GW-27 (Guar Gel mix in full tank - 16,000 gal)
- \* 1.0 gal. FLO-Back 20 (Non-ionic Surfactant mix in full tank)
- \* 1.0# Enzyme G (Enzyme Breaker mix on fly)
- \* 1.0# GWB-5 (Breaker mix on fly)
- \* 5.0 gal FAW-I (Foamer mix on fly)
- \* 0.38# XCIDE-207 (Bactericide mix on full tank)
- \* 2.5 gal BF-7L (Buffering Agent)

23. Shut-in well for 6 hrs for gel to break. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr. or less, if sand is observed. **Take pitot gauges when possible.**
24. TIH w/BP retrieving head on 2-3/8" tbg and C.O. w/air/mist to ret BP @ 2940'. **Take pitot gauges when possible.** When well is sufficiently clean, retrieve BP @ 2940' and TOH.
25. TIH w/BP retrieving head on 2-3/8" tbg and C.O. w/air/mist to ret BP @ 3210'. **Take pitot gauges when possible.** When well is sufficiently clean, retrieve BP @ 3210' and TOH.
26. TIH w/overshot for Pro-Technics RTD pressure tool on 2-3/8" tbg and C.O. to tool @ 3410' w/air/mist. Fish RTD tool and TOH.
27. TIH w/notched collar on 2-3/8" tbg and C.O. to 3500'. Monitor gas and water returns and **Take pitot gauges when possible.**
28. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log (using Pro-Technics) and perf eff log from 3500'-2400'.
29. TIH w/2-3/8" 4.7# J-55 EUE tbg w/standard seating nipple one joint off bottom and again cleanout to 3500'. When wellbore is sufficiently clean, land tbg @ 3300' KB. **Take final water and gas samples and rates.**
30. ND BOP and NU wellhead and tree. Rig down and release rig.

Recommended:   
Production Engineer

Approved:  10/24/97  
Drilling Superintendent

Approved:  9/21/97  
Team Leader

VENDORS:

Wireline	Blue Jet	325-5584
Fracturing:	BJ	327-6222
RA Tag:	Pro-Technics	326-7133
Treesaver	WSI	327-3402

PMP

**Pertinent Data Sheet - COOPER #11 LEWIS**

N 6 29 11

**Location:** 1140' FSL & 1450' FWL, Unit N, Section 6, T29N, R11W, San Juan County, New Mexico

**Field:** Und. Lewis

**Elevation:** 5751' GL  
KB=12'

**TD:** 4747'  
**PBTD:** 4714'

**Spud Date:** 7/29/91

100% SRC Trust

**Lease#:** Fed. SF-077317

**DP #:** 21212A

**GWl:** 25%

**NRI:** 21.875%

**Prop#:** 0020259

**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"	8-5/8"	24# K-55	223'	160 sx	Circ 7 BBL Cmt
7-7/8"	4-1/2"	10.5# K-55	4747'	1019 sx	Circ 24 BBL Cmt
		Stage Tool @	2150'	914 sx	Circ 31 BBL Cmt

**Tubing Record:**

2-3/8"	4.7# J-55	4207'	135 Jts
	"F" nipple @	4176'	

**Formation Tops:**

Ojo Alamo:	2065'	Huerfanito Bentonite	not present (2605')
Kirtland Shale:	2160	Chacra	4036'
Fruitland:	2920	Mesaverde	4972'
Pictured Cliffs:	3220'	Menefee	5166'
		Point Lookout	5476'

**Logging Record:** Induction Log, Density-Nuetron Log, Microlog, Formation Analysis Log, Circum. Acoustic Scanning Tool

**Stimulation:** Perfed MV (Cliffhouse) w/1 spf @ 3608', 09', 10', 11', 12', 13', 14'. Perfed Menefee w/2 spf @ 3807', 08', 09'. Perfed Point Lookout w/2 spf @ 4227', 28', 29', 30', 31' & 1 spf @ 73', 78', 86', 90', 95', 4304', 10', 4350', 94', 4432', 54', 4549'. Total 35 holes. Fraced w/157,000# sand in slick water.

**Workover History:** None

**Production History:** Well has not produced since 7/96. MV is very wet & we have had many problems keeping a pumping unit running. See attached production curve. Current line pressure is 120 psi.

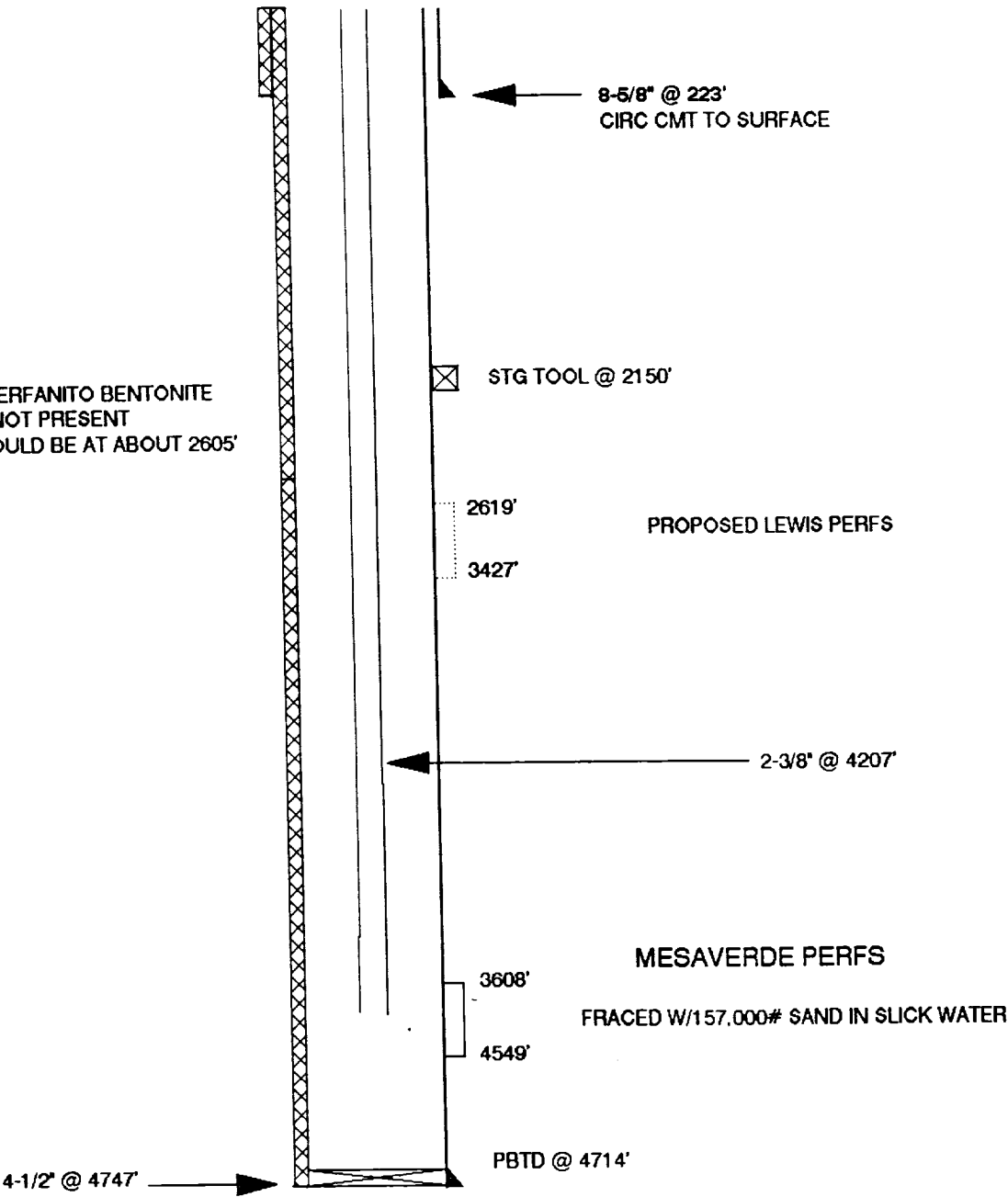
**Pipeline:** EPNG

# COOPER #11 LEWIS

UNIT N SECTION 6 T29N R11W  
SAN JUAN COUNTY, NEW MEXICO

PRESENT

HUERFANITO BENTONITE  
IS NOT PRESENT  
IT SHOULD BE AT ABOUT 2605'







# 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: 11 Cooper**

### CONDITIONS OF APPROVAL

1. Set the 4 1/2" cement retainer at 3515' and squeeze the Mesaverde. (Mesaverde top @ 3515')
2. **Mike Flaniken** with the Farmington District Office is to be notified at least 24 hours before the workover operations commence (505) 599-8907.