

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) 326-9700

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

1800' FSL, 1695' FWL, Sec. 22, T-30-N, R-10-W, NMPM

K

5. Lease Number

NM-0555078

6. If Indian, All. or

Tribe Name

7. Unit Agreement Name

8. Well Name & Number

Helms Federal #1

9. API Well No.

30-045-09330

10. Field and Pool

Blanco MV/Basin DK

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 - Mesaverde 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.

RECEIVED  
DEC 20 1996

OIL CON. DIV.  
DIST. 3

070 FARMINGTON, NM

96 DEC 17 AM 9:59

RECEIVED  
BLM

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

Signed *Regina Stradwick* (MEL5) Title Regulatory Administrator Date 12/13/96

(This space for Federal or State Office use)

APPROVED BY \_\_\_\_\_ Title \_\_\_\_\_

Date

**APPROVED**

CONDITION OF APPROVAL, if any:

DEC 17 1996

*M. [Signature]*  
DISTRICT MANAGER

NMOCG

## Helms Federal #1

Mesaverde / Dakota  
Unit K Section 22, T30N, R10W  
Lat. 36.795288 Long. -107.874496 by TDG  
Payadd Workover Procedure 10/15/96

1. Hold safety meeting. MIRU. Comply with all MOI, BLM and NMOCD rules and regulations. Install 8 frac tanks and 1x400 bbl rig tank. Fill each frac tank with 3#'s of biocide and Aztec city water with 2% KCl. water.
2. Obtain and record all wellhead pressures. ND WH, NU BOP. TOOH w/ 1-1/4", 2.3# MV tubing set at 5187'. TOOH w/ 1-1/2", 2.75# DK tubing set at 7010' and Baker Model "D" seal assembly and lay down. Send seal assembly to Baker Tools and it will be redressed. Inspect tubing and report any scale build up.
3. PU 3-7/8" bit and 5" (15#) casing scraper and TIH on 2-3/8" workstring. CO to model D packer @ 6990'. TOOH.
4. RIH and wireline set a 5" RBP @  $\pm 5450'$ . Dump  $\pm 10'$  of sand on top of RBP w/ dump bailer. Attempt to load hole with 2% KCL. Run CBL/CCL/GR from 5450' to surface. Send logs to office immediately and squeeze procedure will be provided if necessary.
5. Perforate the following lower Point Lookout interval using 3-1/8" HSC guns with 12 gram charges and 0.29" diameter holes. (19 perfs total)

5279	5341
5281	5343
5289	5353
5296	5361
5300	5380
5314	5396
5317	5408
5320	5416
5323	
5327	
5335	

Inspect guns to ensure all perforations fired. RD wireline.

6. TIH w/ 5" fullbore packer and 2-3/8" work string. Set packer @  $\pm 5430'$  and pressure test CIBP to 4500 psi. Release packer, TOOH to 5250' and reset packer @ 5250'.
7. **Maximum allowable treating pressure is 4500 psi during acid job.** Pump 1500 gallons of 15% HCL acid @  $\pm 8$  Bbls/min dropping 7/8" diameter RCN ball sealers spaced evenly throughout the job (2 balls per perforation hole). Release packer and TIH knocking balls off of perforations. TOOH laying down packer.
8. TIH with two scab liner packers with  $\pm 750'$  of 2-7/8" N-80 frac string between the two packers on 2-3/8" work string. Set scab liner packers to overlap existing Mesaverde perforations @ 4508' to 5238' (730' between top and bottom perf). Set top packer element @  $\pm 4500'$  and bottom element @  $\pm 5250'$ .
9. TIH with packer / RBP combination on 2-3/8" workstring. Set RBP above scab liner at approximately 4480'. TOOH and set packer at  $\pm 60'$ . Pressure test casing to 4500 psi. TIH with workstring and retrieve RBP set at 4480'.
10. **Hold safety meeting. Maximum allowable surface treating pressure is 4500 psi.**

11. Pressure test surface lines to 5500 psi. (1000 psi over maximum treating pressure but less than the working pressure of the lines.) Fracture stimulate the lower Point Lookout interval @  $\pm 40$  BPM using slickwater and 65M lbs. of sand. (See attached stimulation procedure.) Do not over displace during flush. (Stage flush as soon as sand concentration begins to fall.) Shut in well immediately after completion of the stimulation until pressure is zero.
12. Release packer and TOOH laying down 60' of frac string.
13. TIH with Scab Liner retrieving tool and bumper sub on 2-3/8" workstring. Recover Scab Liner set at  $\pm 4500'$  to  $\pm 5250'$  and TOOH.
14. RIH and wireline set a 5" RBP @  $\pm 5100'$ . Dump  $\pm 10'$  of sand on top of RBP with dump bailer.
15. Perforate the following Menefee interval using 3-1/8" HSC guns with 12 gram charges and 0.29" diameter holes. (24 perfs total)

4821	4965
4824	4967
4826	4975
4832	4977
4834	4983
4837	4986
4873	4990
4875	4997
4877	5036
4879	5039
4960	5043
4962	5047

Inspect guns to ensure all perforations fired. RD wireline.

16. TIH w/ 5" fullbore packer and 2-3/8" work string. Set packer @  $\pm 5080'$  and pressure test CIBP to 4500 psi. Release packer, TOOH to 4700' and reset packer @ 4700'.
17. **Maximum allowable treating pressure is 4500 psi during acid job.** Pump 1500 gallons of 15% HCL acid @  $\pm 8$  Bbls/min dropping 7/8" diameter RCN ball sealers spaced evenly throughout the job (2 balls per perforation hole. Release packer and TIH knocking balls off of perforations. TOOH laying down packer.
18. TIH with two scab liner packers with  $\pm 150'$  of 2-7/8" N-80 frac string between the two packers on 2-3/8" work string. Set scab liner packers to overlap existing Cliffhouse perforations @ 4508' to 4636' (128' between top and bottom perf). Set top packer element @  $\pm 4500'$  and bottom element  $\pm @ 4650'$ .
19. TIH with packer / RBP combination on 2-3/8" workstring. Set RBP above scab liner at approximately 4480'. TOOH and set packer at  $\pm 60'$ . Pressure test casing to 4500 psi. TIH with workstring and retrieve RBP set at 4480'.
20. **Hold safety meeting. Maximum allowable surface treating pressure is 4500 psi.**
21. Pressure test surface lines to 5500 psi. (1000 psi over maximum treating pressure but less than the working pressure of the lines.) Fracture stimulate the Menefee interval @  $\pm 40$  BPM using slickwater and 90M lbs. of sand. (See attached stimulation procedure.) Do not over displace during flush. (Stage flush as soon as sand concentration begins to fall.) Shut in well immediately after completion of the stimulation until pressure is zero.
22. Release packer and TOOH laying down 60' of frac string.

23. TIH with Scab Liner retrieving tool and bumper sub on 2-3/8" workstring. Recover Scab Liner set at  $\pm$  4500' to  $\pm$  4650' and TOOH.
24. TIH w/ 2-3/8" tubing with notched collar and CO to RBP @ 5100'. Obtain pitot gauge for Cliffhouse / Menefee interval. Record water and gas rates. TOOH.
25. TIH w/ retrieving head and release 5" RBP @  $\pm$  5100'. TOOH.
26. TIH w/ 2-3/8" tubing with notched collar and CO to RBP @ 5450'. Obtain pitot gauge for Mesaverde interval. Record water and gas rates. TOOH.
27. TIH w/ retrieving head and release 5" RBP @  $\pm$  5450'. TOOH. CO to model D packer @ 6990'. PU above the Mesaverde perforations and flow the well naturally, making short trips for clean up when necessary.
28. When sand has diminished, TOOH. TIH w/  $\pm$  450' of 1-1/4" tubing crossed over w/ 2-3/8" workstring and CO to PBTD of 7425' (i.d. of model D seal bore is 2.25" and o.d. of 1-1/4" is 1.67"). TOOH.
29. TIH with one joint of 1-1/2", 2.75#, IJ tubing w/ expendable check, an S-nipple, then the remaining 2-3/8" production tubing (w/ seal assembly to be @ 6990'). Sting in to Model D packer and land tubing near bottom perforation (7417').
30. TIH with one joint of 1-1/4", 2.3#, IJ tubing w/ expendable check, an S-nipple, then the remaining 1-1/4" production tubing. Land tubing near bottom Mesaverde perforation (5416').
31. ND BOP's, NU WH. Pump off expendable checks. Obtain final pitot up the tubing strings if possible. If well will not flow on it's own, make swab run to SN. If a swab run is not necessary, run a broach on slickline to ensure that the tubing strings are clear. RD and MOL. Return well to production.

Recommend: \_\_\_\_\_

Production Engineer

Approve: \_\_\_\_\_

Northwest Basin Team Leader

Approve: \_\_\_\_\_

Drilling Superintendent

#### Contacts:

Engineers:

Mary Ellen Lutey  
Office - (599-4052)  
Home - (325-9387)  
Pager - (324-2671)

Lori Lantz  
Office - (599-4024)  
Home - (324-0692)

Frac Consultants:

Mark Byars  
Pager - (327-8470)  
Mobile - (320-0349)  
Home - (327-0096)

Mike Martinez  
Pager - (599-7429)  
Mobile - (860-7518)  
Home - (327-6161)

#### Vendors:

Stimulation: Halliburton (325-3575)  
Wireline: Basin (327-5244)  
Tools: Baker (325-0216)

# Helms Federal #1

## Current 08-08-96

BLANCO MESAVERDE/BASIN DAKOTA  
UNIT K, SEC 22, T30N, R10W, SAN JUAN COUNTY, NM

SPUD: 11-04-64  
COMPLETED: 12-08-64

OJO ALAMO @ 1000'  
KIRTLAND @ 1040'

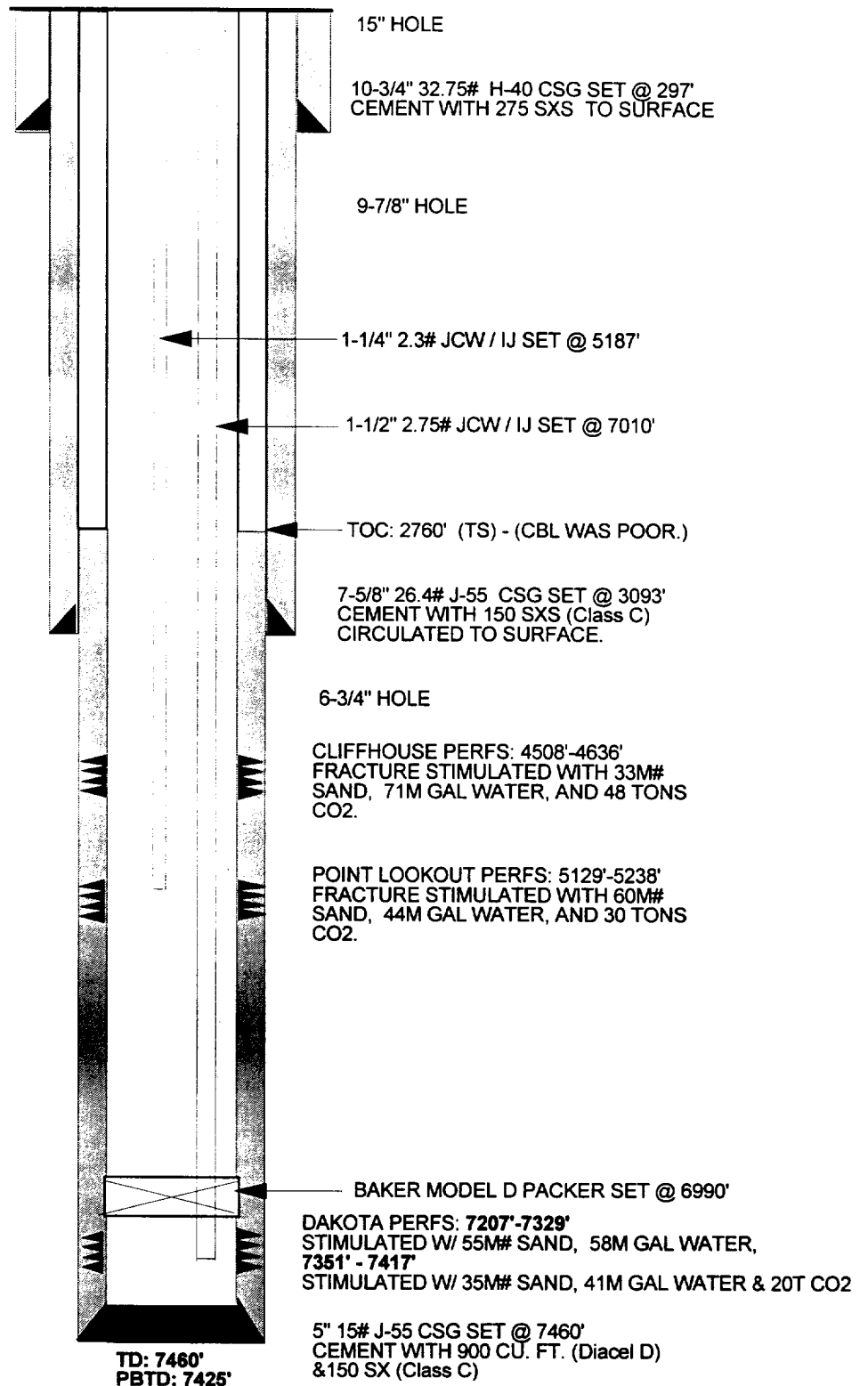
FRUITLAND @ 2640'  
PICTURED CLIFFS @ 2740'

LEWIS @ 3040'

MESAVERDE @ 4507'

MANCOS @ 5350'

DAKOTA @ 7208'



met

Pertinent Data Sheet

# **HELMS FEDERAL #1**

Dual Mesaverde/Dakota Well

**Location:** Unit K SW/4 NE/4, Section 22, T30N, R10W, 1800' FSL, 1695' FWL,  
Lat. 36.795288, Long. -107.874496 by TDG  
San Juan County, NM

**Field:** Blanco Mesaverde  
Basin Dakota

**Elevation:** 6042' DF  
**KB:** N/A

**TD:** 7460'  
**PBTD:** 7425'

**Spud Date:** 11-04-64

**Completed:** 12-08-64

**DP No:** MV:32224B  
DK: 32224A

**Prop. No:** 071278700

**Casing/Liner Record:**

<u>Hole Size</u>	<u>Csg. Size</u>	<u>Wt. &amp; Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Top/Cement</u>
15"	10 3/4"	32.75# H-40	297'	275 sxs	to surface
9 7/8"	7 5/8"	26.4# J-55	3093'	150 sxs	2402' (TS)
6 3/4"	5 "	15# J-55	7460'	1050 cf	2760' (TS)

**Tubing Record:** 1 1/4", 2.3#, JCW @ 5187'  
1 1/2", 2.75#, JCW @ 7010'  
Baker Model D Packer set @ 6990'

**Formation Tops:**

Ojo Alamo:	1000'
Kirtland:	1040'
Fruitland:	2640'
Pictured Cliffs:	2740'
Lewis:	3040'
Mesaverde:	4507'
Mancos:	5350'
Dakota:	7208'

**Logging Record:** Temp. survey, CCL, GRN, CBL (1964 log - bad quality. MV appears to have free pipe on CBL but temp. survey indicated TOC above MV perms.)

**Perf/Stim History:**

**Cliffhouse:**

**Fraced w/ 33M#, 71M gal, 48 T CO2**

4508'-4525' (17 holes @ 1 SPF)  
4531'-4535' (4 holes @ 1 SPF)  
4539'-4546' (7 holes @ 1 SPF)  
4564'-4583' (19 holes @ 1 SPF)  
4601'-4607' (6 holes @ 1 SPF)  
4610'-4614' (4 holes @ 1 SPF)  
4618'-1622' (4 holes @ 1 SPF)  
4628'-4636' (8 holes @ 1 SPF)

**Point Lookout: Fraced w/ 60M#, 44M gal, 30T CO2**

5129'-5135' (6 holes @ 1 SPF)  
5139'-5148' (9 holes @ 1 SPF)  
5153'-5160' (7 holes @ 1 SPF)  
5164'-5182' (18 holes @ 1 SPF)  
5188'-5192' (4 holes @ 1 SPF)  
5195'-5200' (5 holes @ 1 SPF)  
5220'-5224' (4 holes @ 1 SPF)  
5230'-5238' (8 holes @ 1 SPF)

**Dakota:**

**Fraced w/ 55M#, 58M gal**

7207'-7225' (18 holes @ 1 SPF)  
7268'-7272' (4 holes @ 1 SPF)  
7279'-7287' (8 holes @ 1 SPF)  
7299'-7329' (30 holes @ 1 SPF)  
**LDK: Fraced w/ 35M#, 41M gal**  
7351'-7355' (4 holes @ 1 SPF)  
7365'-7370' (5 holes @ 1 SPF)  
7372'-7376' (4 holes @ 1 SPF)  
7391'-7398' (7 holes @ 1 SPF)  
7405'-7417' (12 holes @ 1 SPF)