

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

800' FNL 1600' FEL, Sec.16, T-28-N, R-8-W, NMMPM

5. Lease Number

SF-078499-A

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name

8. Well Name & Number

Hardie E #1

9. API Well No.

30-045-07496

10. Field and Pool

Blanco Mesaverde

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 -
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut off
☐ Conversion to Injection

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.

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21M
99 MAR -4 PM 2:24
OTO FORMATION, NM

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

Signed [Signature] (RLG) Title Regulatory Administrator Date 3/2/99
TLW

(This space for Federal or State Office use)
APPROVED BY /s/ Duane W. Spencer Title Team Lead, Petroleum Management Date MAR - 8 1999
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

Hardie E #1

Cliffhouse/Menefee Pay Add Procedure

Unit B, Section 16, T28N, R8W

Lat: 36° – 39.98658' Long: 107° – 40.93140'

Hardie E #1 is currently completed in the Lower Menefee and Point Lookout. It is intended to add Cliffhouse and Upper Menefee pay to the existing Mesaverde producer. The pay add will be sand fracture stimulated in a single stage using a total of 60,000 gals 30 lb linear gel and 90,000 lbs 20/40 sand.

1. Inspect location and test rig anchors. Comply with all NMOCD, BLM, Forestry & BR rules and regulations. Dig flowback pit or set flowback tank. Haul to location 3 jts 2-7/8" N-80 tubing, 2-7/8" X 3-1/2" N-80 crossover, 4900', 3-1/2" N-80 frac string and 5, 400 bbl frac tanks.
2. MIRU. Fill 400 bbl tanks with 2% KCL water. Run fluid tests on water. Filter water based upon stimulation company solids water analysis. Record and report SI pressures on tubing, casing and bradenhead. Lay blowdown line. Blow well down and kill with 2% KCL water as necessary. ND WH and NU BOP with flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line. Redress production wellhead as needed.
3. TOOH with 2-3/8" Mesaverde production string set at \pm 5216'. Visually inspect tubing, note and report any scale in/on tubing. Replace bad joints as needed.
4. PU and RIH with a 4-3/4" bit, 5-1/2" (15.5 lb/ft) casing scraper on the 2-3/8" tubing string. Clean out to PBTD (~5245') with air/mist. TOOH.
- 5,6. TIH with 5-1/2" Mechanical set CIBP and Packer combo on 2-3/8" tubing. Set CIBP at 4870'. PU and set packer at 4850'. Pressure test CIBP to 3600 psi. Spot 320 gals 15% HCl. Load hole bottoms up. TOOH. Pressure test casing to 500 psi.

All acid on this well to contain the following additives per 1000 gals.

2 gal	HAI-81M	Corrosion inhibitor
5 gal	FE-1A	Iron Control
5 gal	FE-2A	Iron Control
1 gal	SSO-21	Surfactant
1 gal	ClaSta XP	Clay control

7. Run GR-CBL-CCL from PBTD to 3000'. If bond is questionable, pressure casing to 1000 psi and run the GR-CBL-CCL under pressure. Evaluate CBL. Good cement coverage must exist from PBTD to 4400' to continue with procedure.
8. RU wireline. Perforate Cliffhouse and Menefee as follows using select fire HSC guns loaded with Owens HSC-3125 302T 10 gram charges set at 1 SPF (Av. perf diameter - 0.29", Av. pen. -16.64" in concrete).

**4542', 4547', 4562', 4564', 4566', 4578', 4579', 4587', 4588', 4592', 4594', 4596',
4598', 4610', 4612', 4614', 4619', 4621', 4622', 4761', 4767', 4794', 4796', 4801',
4803' (25 holes total)**

RDMO wireline company.

Hardie E #1
1999 Discretionary Cliffhouse/Menefee Pay Add

9. TIH with 5-1/2" packer, 3 jts 2-7/8" N-80 tubing, 2-7/8" X 3-1/2" N-80 crossover, and remaining 3-1/2" N-80 frac string and set packer at 4350'.
10. RU stimulation company. Hold tailgate safety meeting. Pressure test surface lines to 4600 psi. Hold 500 psi on annulus. Monitor pressure on annulus. Breakdown Cliffhouse and Menefee perforations with 1000 gals 15% HCL. Drop 50 RCN 7/8" 1.3 specific gravity perf balls evenly spaced throughout job. Attempt to balloff to 3600 psi. Use same additives as in Step #9. Bleed off pressure and release packer. Lower packer to PBTD to knock off perf balls. Reset packer at 4450'.
11. **Maximum surface treating pressure is 5500 psi.** Hold 500 psi on annulus, behind packer, and monitor during the job. Fracture stimulate the Cliffhouse and Menefee with 90,000 lbs 20/40 Arizona sand in 57,000 gals 30 lb linear gel at **50 BPM. If surface pressures allow, increase injection rate accordingly.** Average surface treating pressure will be 4260 psi. Estimated tubing and perforation friction will be 4415 psi. Treat per the following schedule:

Stage	Water (gals)	Sand Volume (lbs)
Pad	10,000	
1.0 ppg	10,000	10,000
2.0 ppg	25,000	50,000
3.0 ppg	10,000	30,000
Flush	1,606	
Totals	56,606	90,000

Slow rate during flush. If well is on vacuum near end of frac job, cut flush as necessary to avoid overflushing.

Frac with the following additives per 1000 gals frac fluid. **Gel will be mixed on the fly.**

* 7.5 gal	LGC-8	Gel
* 0.18 lb	BE-6	Biocide
* 0.4 lb	SP	Oxidizing Breaker
* 0.2 lb	GBW-3	Enzyme Breaker


RDMO stimulation company.

12. Open well through a positive choke or choke manifold and monitor flow. Flow at 20 BPH or less, if sand is observed. When pressures allow, release packer and TOOH. LD 3-1/2" frac string, 3-1/2" X 2-7/8" crossover, 3-1/2" N-80 frac string, and 5-1/2" packer.
13. RIH with 4-3/4" bit on 2-3/8" tubing and clean out to CIBP at 4870'. Monitor gas and water returns when applicable. Obtain a representative Cliffhouse/Menefee pitot gauge. Drill up CIBP at 4870'. Continue to CO to PBTD. When water rates are less than 3 BPH, obtain a Cliffhouse/Menefee/Point Lookout pitot gauge. TOOH.
14. TIH with an expendable check, one joint 2-3/8" tubing, standard SN and remaining 2-3/8" tubing string. Broach tubing while running in hole. CO with air/mist to PBTD again, if necessary. Land tubing at 5216'. ND BOP. NU WH. Pump off expendable check. RDMO. Contact Production Operations for well tie-in.

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1999 Discretionary Cliffhouse/Menefee Pay Add

Recommended: 
Production Engineer, 1-28-99

Approved: Bruce W. Boyer FOR PWB 2-17-99
Drilling Superintendent

Approved:  2/1/99
Team Leader

Bobby Goodwin 326-9713 (work) 599-0992 (home) 564-7096 (pager)

Hardie E #1

Unit B, Section 16, T28N, R8W
San Juan County, NM
Lat: 36° - 39.98658'/Long: 107° - 40.93140'

Current Schematic

Proposed Schematic

