

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division

Sundry Notices and Reports on Wells

1. Type of Well GAS	API # (assigned by CCD) 30-045-27161
	5. Lease Number
2. Name of Operator BURLINGTON RESOURCES OIL & GAS COMPANY	6. State Oil&Gas Lease # B-9320-3
	7. Lease Name/Unit Name Huerfanito Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Well No. #167
	9. Pool Name or Wildcat Basin Fruitland Coal
4. Location of Well, Footage, Sec., T, R, M 1190'FNL, 790'FEL, Sec.2, T-26-N, R-9-W, NMPM, San Juan County, NM	10. Elevation:

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 -

13. Describe Proposed or Completed Operations

It is intended to pull the preperfed liner, run and cement a 4 1/2" liner, and perf. and frac this FRTC well according to the attached procedure and wellbore diagram.

RECEIVED
DEC 22 1999
OIL CON. DIV.
DIST. 3

SIGNATURE *Regan Cole* Regulatory Administrator December 20, 1999

trc

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Approved by ORIGINAL SIGNED BY CHARLIE T. PERDUE Title DEPUTY OIL & GAS INSPECTOR, DIST. 3 Date DEC 22 1999

HUERFANITO UNIT #167 FRTC
Workover Procedure
A 2 26 9
San Juan County, N.M.
Lat-Long: 36 – 31.26 & 107 – 45.11

PROJECT SUMMARY: Pull the 5-1/2" preperfed liner, run open hole logs, run and cmt a ⁴ 6-1/2" liner, and perf and foam frac this 1988 vintage FRTC well. A cavitation completion was originally attempted on this well.

1. Comply to all NMOCD, BLM, and BROG rules and regulations. MOL and RU completion rig. NU BOP w/flow tee and stripping head. NU blooie line and 2-7/8" relief line.
2. TOH w/64 jts 2-3/8" tbg. TIH w/6-1/4" rotary shoe and 4-3/4" drill collars on 2-7/8" work string. Cut slips on liner hanger(see attached liner hanger sketch). TOH. TIH w/spear, bumper jars on 2-7/8" work string and jar liner until free. TOH w/5-1/2" liner.
3. TIH w/6-1/4" bit on 2-7/8" workstring and drill and CO w/fluid to new TD @ 2170'. TOH.
4. Run open hole Induction and Density-Neutron logs from TD2170' to 7" csg shoe @ 1883'.
5. Run 4-1/2" 10.5# K-55 (class "B") csg from surface to TD 2170' w/10' shoe jt & notched collar on bottom. Land csg in tbg head & install KTH attachment spool.
6. Cmt w/123 sx 65-35 CI "G" POZ (226.cf) w/6% gel, 2% CaCl₂, ¼ pps cellophane, and 5#/sx Gilsonite. Tail w/51 sx CI "B" (60.2 cf) w/2% CaCl₂ w/5 pps Gilsonite. This is 100% excess for the open hole and 0% excess between the csgs. WOC overnight.
7. Spot and fill 3-400 bbl. frac tanks w/1% KCL water. If necessary, filter all water to 25 microns. Two tanks are for gel and one tank for breakdown water. Usable water required for frac is 723 bbls.
8. TIH w/2-3/8" tbg to PBTD'. Roll hole w/1% KCL water & pressure test csg to 3800 psi. Spot 200 gal 15% HCL acid across perfs ~2020' to ~1900'. 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
9. Using open hole logs, perf about 50' of FRTC w/2 spf from about 2020" to 1900'. Perf using 3-1/8" hollow steel carrier guns loaded w/Owen HSC 13 gm. charges phased at 90 degrees. Average perf dia. = 0.48". Average penetration is 18" in Berea.
10. TIH w/4-1/2" pkr on 2-3/8" and set about 1800'. W/ 1000 psi on annulus, breakdown and attempt to balloff FRTC perfs w/1500 gal 15% HCL acid and 150% excess RCN 7/8" 1.3 sp gr perf balls. Use same acid additives as in step #8. Max. pressure is 4550 psi. Lower pkr to 2030' to knock off perf balls. TOH.
11. Install MB wellhead isolation tool. Fracture treat FRTC down csg w/100,000 gals. of 70 quality foam using 20# gel as the base fluid and 200,000# 20/40 Arizona sand. Pump at 50 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, and sand

HUERFANITO UNIT #167 FRTC – RUN & CMT 4-1/2" CSG THEN PERF & FRAC FRTC

concentration with computer van. Sand to be tagged w/ 3 RA tracers. Max. pressure is 3800 psi and estimated treating pressure is 3100 psi. Treat per the following schedule:

<u>Stage</u>	<u>Foam Vol.</u> <u>(Gals.)</u>	<u>Gel Vol.</u> <u>(Gals.)</u>	<u>Sand Vol.</u> <u>(lbs.)</u>
Pad	20,000	6,000	---
1.0 ppg	20,000	6,000	20,000
2.0 ppg	20,000	6,000	40,000
3.0 ppg	20,000	6,000	60,000
4.0 ppg	20,000	6,000	80,000
Flush	<u>(1,272)</u>	<u>(381)</u>	<u>0</u>
Totals	100,000	30,000	200,000#

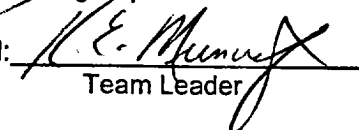
Shut well in after frac for 4 hours to allow the gel to break. Treat frac fluid w/the following additives per 1000 gallons:

- * 20# 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)
- * 5.0 gal Fracfoam I (Foamer mix on fly)
- * 0.38# FracCide 20 (Bactericide mix on full tank)

12. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr, or less if sand is observed. Take pitot gauges when possible.
13. TIH w/notched collar on 2-3/8" tbg and clean out to PBTD w/air/mist.
14. Monitor gas and water returns and take pitot gauges when possible.
15. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log and perf eff. log from PBTD-1800'.
16. TIH w/2-3/8" tbg w/standard seating nipple one joint off bottom and again cleanout to PBTD. When wellbore is sufficiently clean, land tbg @ 1950' KB. Take final water and gas rates.
17. ND BOP and NU wellhead and tree. Rig down and release rig.

Recommended: 
Production Engineer

Approved:  12-14-99
Drilling Superintendent

Approved: 
Team Leader

VENDORS:

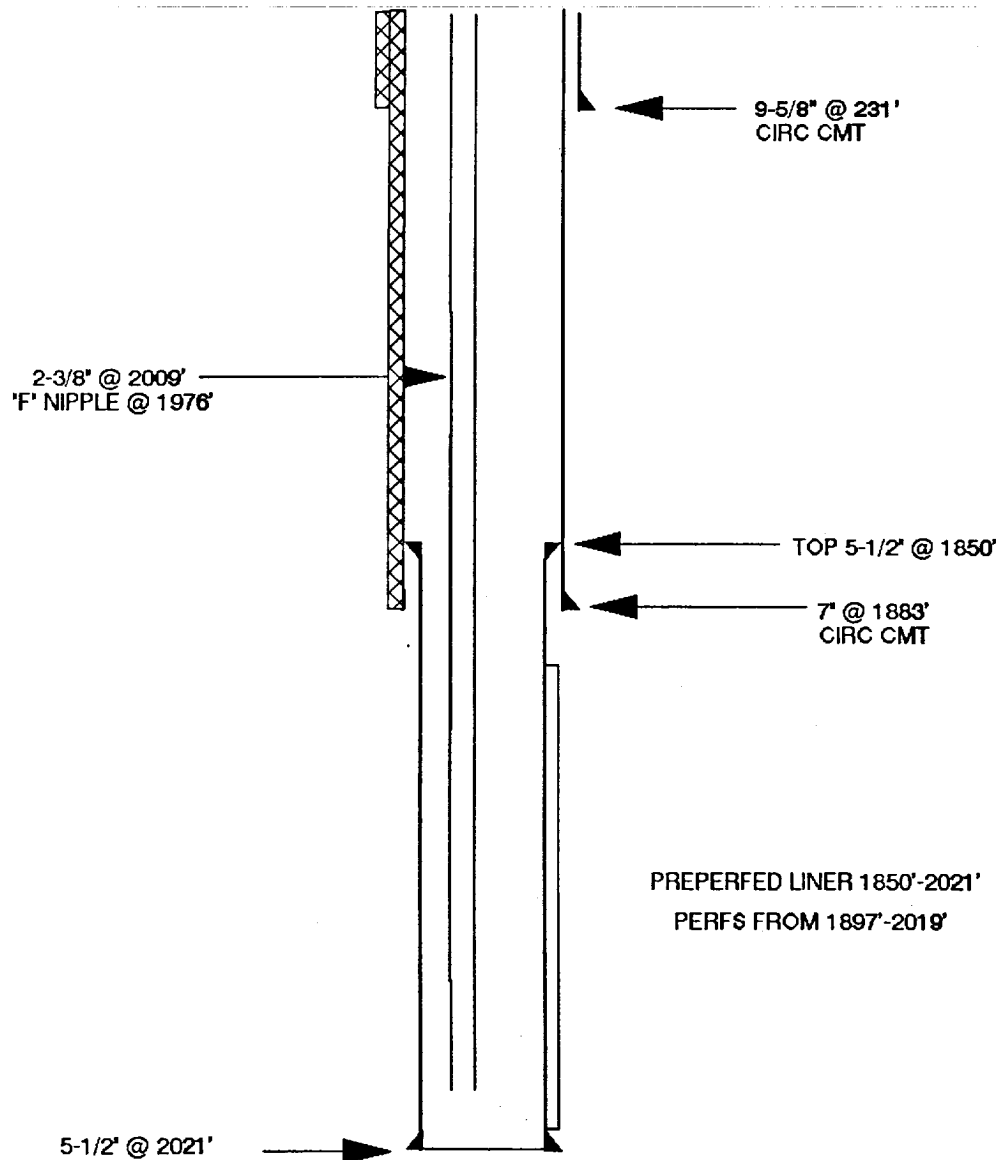
Wireline:	Basin	327-5244
Fracturing:	Howco	325-3575
RA Tagging:	Pro-Technics	326-7133
Packers:	Schlum.	325-5006

PMP

12/09/19992

HUERFANITO UNIT #167 FRTC

UNIT A SECTION 2 T27N R9W
SAN JUAN COUNTY, NEW MEXICO



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1-14-00 MIRU. SDON.

1-15-00 ND WH. NU BOP. TOO H w/2 3/8" tbg. TIH w/mill, tag lnr top @ 1845'.
Mill over lnr. SD for weekend.

1-17-00 Circ hole clean. TOO H w/mill. TIH, engage lnr & pull free. SDON.

1-18-00 TOO H w/4 jts 5 1/2" lnr. TIH w/bit. Circ & CO to TD @ 2021'. Drill new
hole @ 2021-2132'. Circ hole clean. SDON.

1-19-00 Drill new hole @ 2132-2195'. Circ hole clean. TOO H w/bit. Ran logs. SDCN.

1-20-00 TIH w/48 jts 4 1/2" 10.5# J-55 ST&C csg, set @ 2142'. Cmt d w/123 sx Class
"G" 65/35 poz w/6% gel, 5 pps gilsonite, 0.25 pps flocele, 2% calcium
chloride (171 cu ft). Tail w/51 sx Class "B" neat cmt w/2% calcium
chloride, 5 pps gilsonite (61 cu ft). SDON.

1-21-00 RU W/L. Ran CBL/GR/CCL @ 1983-1000'. TOC @ 1070'. RD W/L. TIH w/bit.
Drill cmt @ 2005-PBTD @ 2132'. Circ hole clean. SD for weekend.

1-24-00 PT csg to 3800 psi, OK. Spot acid. TOO H w/bit. Perf Fruitland @ 1901, 1902,
1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914,
1915, 1916, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963,
1964, 1965, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003,
2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014 w/92
0.48" diameter holes. Brk dwn perfs w/1500 gal 15% HCL. Frac Fruitland
w/803 bbl 25# lnr gel, 193,000# 20/40 AZ snd, 955,100 SCF N2. Flow back
well.

1-25/28-00 Flow back well. CO to PBTD @ 2132'.

1-29-00 Flow back well. TIH w/62 jts 2 3/8" 4.7# J-55 tbg, set @ 1945'. ND BOP.
NU WH. RD. Rig released.

SIGNATURE Peggy Case Regulatory Administrator January 31, 2000

TLW

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Approved by 358 Title SUPERVISOR DISTRICT # 3 Date FEB 1 2000