

submitted in lieu of Form 3160-5

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
BLM

Sundry Notices and Reports on Wells: 53

070 FARMINGTON, NM

1. Type of Well  
GAS

5. Lease Number  
SF-078578A

6. If Indian, All. or  
Tribe Name

RECEIVED  
MAY - 2 1997

2. Name of Operator

**BURLINGTON  
RESOURCES**

OIL & GAS COMPANY

OIL CON. DIV.  
DIST. 3

7. Unit Agreement Name

3. Address & Phone No. of Operator

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

8. Well Name & Number  
Howell K #2R

9. API Well No.  
30-045-20130

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

800' FSL, 800' FWL, Sec. 22, T-30-N, R-8-W, NMPM

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

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 - 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.

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

Signed *Debra Stanfield* (JME6) Title Regulatory Administrator Date 4/23/97

(This space for Federal or State Office use)

APPROVED BY *[Signature]* Title *[Signature]* Date *[Signature]*

CONDITION OF APPROVAL, if any:

APR 30 1997

APR 30 1997

**Howell K #2R**  
**Burlington Resources Oil & Gas**  
Blanco Mesaverde Workover  
UnitM-Sec22-T30N-R08W  
Lat: 36° 47' 32''  
Long: 107° 40' 08''

- 
- Comply with all BLM, NMOCD, & BR rules & regulations.
  - **Always Hold Safety Meetings.** Place fire and safety equipment in strategic locations.
  - 2-7/8" buttress frac string (4500' +/-) required.
  - 2-3/8" frac string (300' +/-) required.
  - Spot and fill 12 frac tanks with 2% KCl water.
  - Use drill gas for all operations.
  - **(3) 4-1/2" packers, (1) 4-1/2" RBP, and (1) 4-1/2" CIBP** required for 4-1/2" 10.5# J55 pipe.
  - Prepare for immediate flowback of Lewis.
- 

*The well is currently completed in the Cliffhouse and the Point Lookout. Cumulative production is 3,861 MMCF from the Mesaverde. Menefee pay will be added and stimulated with a 25# xlink frac. Lewis pay will be added and stimulated with a 25# xlink frac.*

**NOTE: Cliffhouse perfs open 4384' - 4454'**  
**Point Lookout perfs open 4868' - 4892'**

1. MIRU. Record and report SI pressures on tubing, casing, & bradenhead. Blow down casing & tubing. Kill well w/ 2% KCl. ND WH, NU BOP.
2. TOOH with 2-3/8" tubing. Rabbit and strap tubing. Visually inspect tubing, note any scale in tubing. Lay down any bad tubing.
3. PU 3-7/8" bit and 4-1/2", 10.5# casing scraper on 2-3/8" tbg, clean out w/ gas to PBTD @ 5015'. TOOH and LD bit and scraper.
4. RU wireline unit. Set CIBP at 4800' to TA the Point Lookout.
5. PU 4-1/2" packer on 2-3/8' tubing and TIH. Set packer at 4500' and pressure test CIBP to 3800 psi for 10 minutes. If casing fails, isolate hole(s). Engineering will provide squeeze design if required.
6. Release packer, pull up, and set at 4350'. Pressure test backside to 900 psig. Hold for 10 minutes. If casing fails, isolate hole(s). Engineering will provide squeeze design if required.
7. Complete all squeeze cementing operations. WOC recommended time. Drill out cement. Pressure test to 1000 psi.

***Menefee Completion:***

8. If already in hole, spot 250 gallons 15% HCL acid (w/ 2 gal/1000 corrosion inhibitor) across MN @ 4790'. TOOH, standing 2-3/8" back. Change rams to 2-7/8". (If separate trip is required, skip spotting acid.)
9. RU wireline under packoff. Perforate MN (top-down if in acid) @ the following depths with a 3-1/8" HSC gun w/ Owen 302T 10g charges (0.297" hole, 11.43" penetration), 1 SPF @ 120 degree phasing.

Howell K #2R  
Burlington Resources Oil & Gas  
04/22/97

4522'	4524'	4528'	4537'	4546'	4548'
4555'	4570'	4574'	4578'	4615'	4617'
4660'	4673'	4675'	4691'	4722'	4724'
4729'	4731'	4760'	4762'	4771'	4776'
4778'	4789'				

**(26 total holes, 267' gross interval)**

10. PU 4-1/2" fullbore packer, 2 joints 2-3/8" frac string, and 2-7/8" buttress frac string. Set packer at 4500'.

11. RU stimulation company. Pressure test surface lines to 6800 psi. **Max STP = 5800 psi.** Prepare to break down MN w/ 1000 gallons **15% HCL acid** (w/ 2 gal/1000 corrosion inhibitor) and 52 7/8" 1.3 s.g. ball sealers. Release pressure, RD stimulation company. Release packer & TOOH. Run junk basket and recover balls.

12. TIH with frac liner (two 4-1/2" packers and 150' of 2-3/8", 4.7#, J-55 frac string). Set packers at 4350' and 4500'. TOOH. TIH with 4-1/2" packer, 2 joints 2-3/8" frac string, and 2-7/8" buttress frac string. Set packer at 4320'.

13. RU stimulation company. Pressure test surface lines to 6800 psi. **Max surface STP = 5800 psi.** Hold 500 psi on annulus. Fracture stimulate the MN w/110,000# 20/40 Arizona sand in 25# Xlink. See attached frac schedule for details. *(4 frac tanks needed)*

14. Release packer, TOOH. TIH, release frac liner packers, and TOOH.

15. RU wireline under packoff. Make 4-1/2" gauge ring run to 4380'. Set 4-1/2" RBP @ 4350'.

**Lewis Completion:**

16. Perforate Lewis @ the following depths w/ 3-1/8" HSC gun w/ Owen 306 12g charges (0.375" hole, 11" penetration), at 120 degree phasing.

3408-3414' (1 SPF)	3435-3474' (1 SPF)	3649-3693' (1 SPF)
3713-3732' (1 SPF)	4240-4246' (2 SPF)	4280-4284' (2 SPF)
4294-4298' (2 SPF)	4306-4310' (2 SPF)	

**(144 total holes, 902' gross interval)**

17. PU 4-1/2" fullbore packer, 2 joints 2-3/8" frac string, and 2-7/8" buttress frac string. Set packer below Lewis perforations. Test RBP @ 4350' to 3800 psi. Release packer, come up hole and reset packer 150' +/- above top Lewis perf. Hold 500 psi on annulus during frac job.

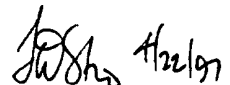
18. RU immediate flowback equipment.

19. RU stimulation company. Pressure test surface lines to 6800 psi. **Maximum STP = 5800 psi.** Pump 1000 gals 15% HCl acid, followed by 2% KCl until formation breaks down. Begin frac job. Fracture stimulate the Lewis w/ 200,000# 20/40 Arizona sand in 25# XLink. See attached frac schedule for details. *(8 frac tanks needed)*

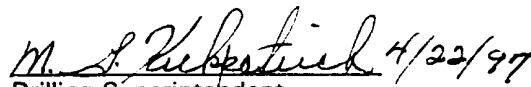
Howell K #2R  
Burlington Resources Oil & Gas  
04/21/97

20. Flow back well immediately after shutdown -- **NOTE: Time from frac shut-down until flow tee is opened for flow back should be around 30 seconds. Time is critical to achieve reverse gravel packing. Begin flowback on 1/4" choke, increase as needed.** Flowback should continue for as long as necessary to release packer.
21. Release packer & TOOH laying down 2-7/8" tubing. Change out rams to 2-3/8".
22. TIH w/retrieving head on 2-3/8" tubing and clean out to RBP @ 4350'. Pull up above Lewis perms, obtain pitot gauge. Latch onto RBP, TOOH, and LD RBP.
23. TIH w/ 3-7/8" bit on 2-3/8" tubing and clean out to CIBP @ 4800'. Pull up above Lewis perms, obtain pitot gauge. Drill up CIBP, clean out to PBTD @ 5015'. Clean up to +/- 5 BPH and trace to no sand. Obtain final pitot gauge. TOOH.
24. Prepare to run production tubing string as follows: expendable check, one joint 2-3/8" tubing, 1.78" seating nipple, and remaining tubing. Land tubing @ 4892' +/-.
25. ND BOP, NU WH. Pump off expendable check and flow well up tubing to ensure check pumped off. RD & release rig to next location.

Concur:

  
Northeast Basin Team Leader

Approved:

  
Drilling Superintendent

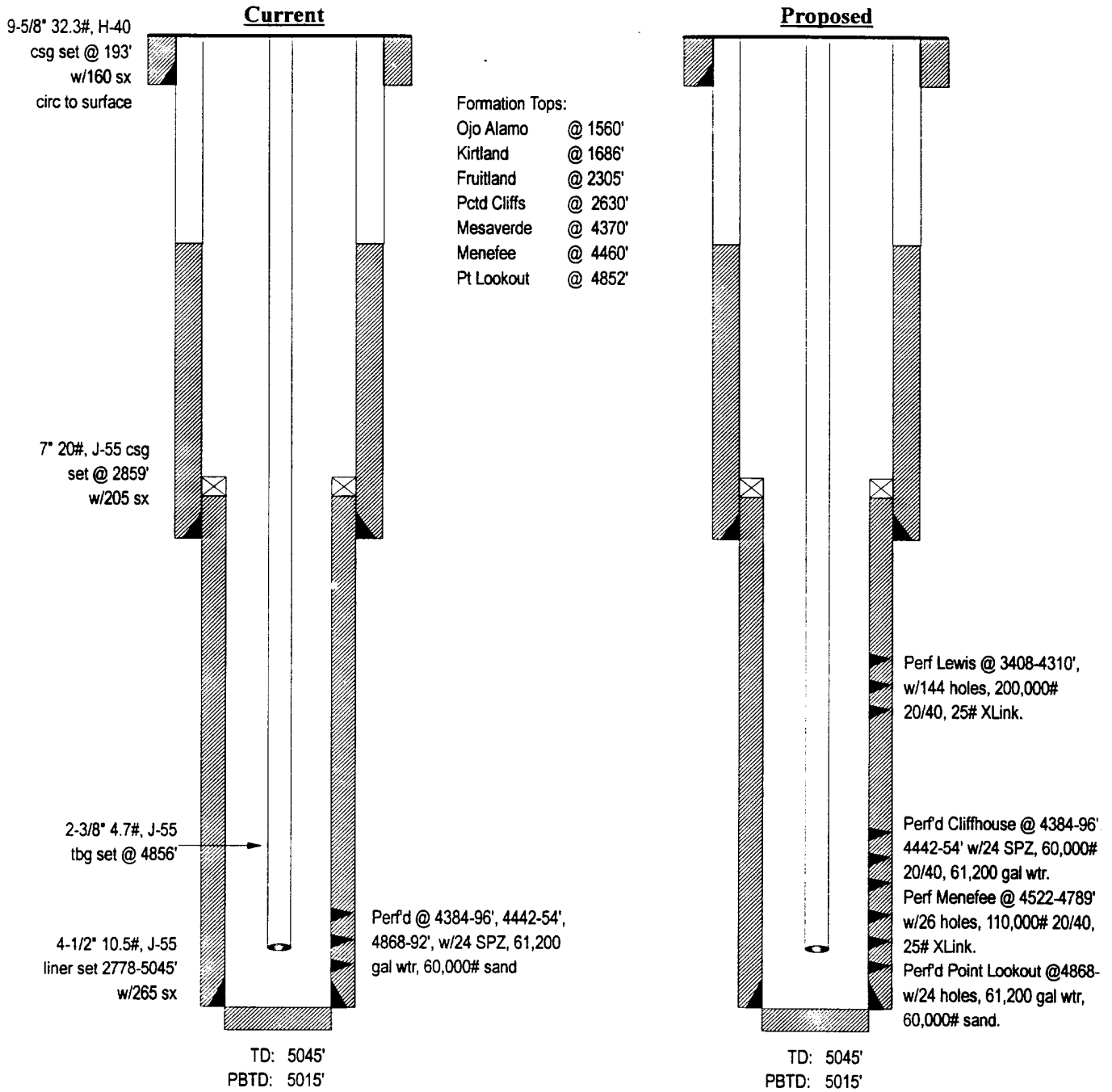
Production Engineers: **Gaye White**  
**326-9875-work**  
**327-8904-pager**  
**326-6534-home**

Joan Easley  
599-4026-work  
324-2717-pager  
327-6843-home

VGW

# Howell K #2R

Blanco Mesaverde  
 Unit M, Section 22, T30N, R8W  
 San Juan County, NM  
 Elevation: 5833 GL  
 LAT: 36° 47' 32" / LONG: 107° 40' 8"  
 date spud: 09-02-67



# PERTINENT DATA SHEET

## HOWELL K #2R

**Location:** 800' FSL, 800' FWL  
Unit M, Section 22, T30N, R8W  
San Juan County, New Mexico

**Elevation:** 5833' GL  
**LAT:** 36° 47' 32"  
**LONG:** 107° 40' 8"

**Field:** Blanco Mesaverde

**DP#:** 47973A

**GW:** 100%

**NRI:** 86.5%

**Spud Date:** 09/02/67

**TD:** 5045'

**Completion Date:** 09/08/67

**PBTD:** 5015'

**Casing Record:**

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight &amp; Grade</u>	<u>Depth Set</u>	<u>Sxs Cmt</u>	<u>Cement Top</u>
13-3/4"	9-5/8"	32.3#, H-40	193'	160 (~189 ft3)	surface
8-3/4"	7"	20#, J-55	2859'	205 (~242 ft3)	960' (TS)
6-1/4"	4-1/2" (liner)	10.5#, J-55	2778-5045'	265 (313 ft3)	2778' (calc. @ 75% eff.)

**Tubing Record:**

<u>Tubing Size</u>	<u>Weight &amp; Grade</u>	<u>Depth Set</u>	<u>BHA</u>
2-3/8"	4.7# J-55	4856'	

**Formation Tops:**

Ojo Alamo	1560'	Mesaverde	4370'
Kirtland	1686'	Menefee	4460'
Fruitland	2305'	Pt. Lookout	4852'
Pictured Cliffs	2630'		

**Logging Record:**

IES / FDC / GR / GG / GR / Temp Survey

**Stimulation:**

4384-96', 4442-54', 4868-92', w/24 SPZ, 61,200 gal water, 60,000# sand

**Workover History:**

09:96: MIRU. Tag fill @ 4905'. TOOH w/154 jts 2-3/8" tbg. TIH w/4-1/2" csg scraper to 4095'. TOOH. TIH w/7" csg scraper to 2784'. TOOH. TIH w/4-1/2" RPB, set @ 4309'. Loaded hole & circ to surface. PT backside to 900 psi/30 min, OK. TOOH w/RBP. TIH w/154 jts 2-3/8", 4.7#, J-55 tbg landed @ 4885'. TIH pump 500 gal 15% acid. Displ. w/19 bbls wtr. TOOH w/tbg. TIH w/153 jts 2-3/8" 4.7#, J-55 tbg landed 4856'. Rig released.

**Production History:**

Initial Deliverability: 8521 AOF ISITP: 900 ISICP: 853  
Latest Deliverability: -0- MCFD, -0- BOPD  
CUMS: 3,661 MMCF, 1,960 BO

**Transporter:**

Oil/Condensate: Gas: El Paso