

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

1500' FNL, 960' FWL, Sec. E14, T-28-N, R-5-W, NMPM

5. Lease Number
SF - 079250

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name
San Juan 28-5 Unit

8. Well Name & Number
San Juan 28-5 Unit #91E

9. API Well No.
30-039-23846

10. Field and Pool
Blanco MV/Basin DK

11. County and State
Rio Arriba 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 recompleate the subject well in the Mesaverde formation according to the attached procedure and wellbore diagram. The well will then be down-hole commingled. A down-hole commingle order will be applied for.

RECEIVED
APR 22 1998
OIL CON. DIV.
DIST. 8

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

Signed *[Signature]* Title Regulatory Administrator Date 4/15/98
VKH

(This space for Federal or State Office use)

APPROVED BY */s/ Duane W. Spencer* Title _____ Date APR 20 1998

CONDITION OF APPROVAL, if any:

NMDCO

BURLINGTON RESOURCES

(E)

San Juan 28-5 Unit #91M

**1500' FNL, 960' FWL
Unit E, Section 14, T28N, R05W
Rio Arriba County, New
LAT: 36° 39.85' LONG: 107° 20.02'**

Project Objective:

Well is currently non-productive. Suspected fluid loading from lower Dakota perforations. Set BP over lower Dakota perms and flow test upper Dakota. Set plug over Dakota and recompleate in the Mesaverde. Mesaverde will be completed with a two stage slick-water. After the Mesaverde is cleaned up tubing will be landed in the Dakota and both zone commingled.

Equipment and Material Requirements:

Deliver the following equipment to location:

1. 8500' of 2-3/8" 4.7# J-55 tubing
2. Sixteen (16) - 400 bbls frac tanks to be spotted and filled w/ 2% KCL
3. 4-1/2" wellhead isolation tool (2 jts of 2-7/8 6.5# J-55 tubing and 4-1/2" packer)
4. 3-7/8" bit/mill
5. Six 3-1/8" drill collars

Below are materials required for fracture stimulations:

	<u>Mesaverde</u>	
1. Fluid Type	Slickwater	
2. Stages	Two	
3. Acid Volume	60	bbls
4. Sand Type	Arizona	
5. Sand Size	20/40	
6. Sand Volume	200,000	#s

Fill frac tanks w/ 3# biocide/tank & 2% KCL water. Put one load of fresh water in each tank before adding 20% concentrated KCL water. Set Location proppant container and fill with sand. Contact Production Engineering and discuss stimulation water source and quality. Run fluid tests on water. Filter water based on Stimulation company solids water analysis.

Procedure:

1. Hold safety meeting. MIRU completion rig. Place fire and safety equipment in strategic locations. Comply with all MOI, BLM, and NMOCD rules and regulations. Record tubing, casing, pressures. RU flowlines. Blowdown tbg and csg. **Perform 1 hr Pitot test. if well will flow once blown down.** Will use as baseline.
2. Kill well w 2% KCL down tubing, if necessary. ND wellhead. Replace any failed valves or seals on wellhead. NU BOP's w/ 1-1/2" pipe rams and stripping head.

3. TOOH with 8318' of 1-1/2", 2.9#, 10rnd tubing. Rabbit and strap tubing. Inspect and replace any bad joints.
4. MIRU wireline unit. Under a lubricator, RIH with 4-1/2", 11.6# gauge ring to PBTD of 8340'. POOH. PU 4-1/2" CIBP. Under a lubricator, RIH and set 4-1/2" CIBP at 8286'. POOH. ND wireline unit.
5. XO to 2-3/8" pipe rams and slips. TIH with 4-1/2" packer on 2-3/8" tubing. TIH and Set packer at 8274'. Load tubing and pressure test CIBP to 2000 psi with rig pump. Release packer. TOOH.
6. TIH open ended with 2-3/8" tubing to 8260' (btm DK perf at 8258'). Attempt to flow test upper Dakota. If zone will not unload attempt to swab. Contact engineering with flow test results. Based upon flow test, may consider separator test for commingle allocation. (Step 23) TOOH.
7. NU wireline unit. PU 4-1/2" CIBP and RIH. Under a lubricator, wireline set CIBP at 6520'. POOH. ND wireline. Load hole with 2% KCL. Pressure test casing and CIBP to 1000 psi for 15 min.
8. NU wireline. RIH with CBL/GR log. Under 1000 psi, log from CIBP at 6520' to 200' above TOC. Cement bond required from 6500' to 5600'. POOH. RD wireline.
9. XO to 2-7/8" pipe rams and slips. PU 4-1/2" packer on 2 jts of 2-7/8" tubing. TIH and set packer @ 60'. RU stimulation company. Pressure test casing to 3000 psi for 15 min. Record results. Unseat packer and TOOH.

Point Lookout and Lower Menefee Fracture Stimulation (1st Stage):

10. NU wireline company. Under a lubricator, RIH with 3-1/8" HSC casing gun. Select fire perforate Point Lookout and Menefee with 1 SPF, 0.32" diameter, (Owen, 302) charges at the following depths:
Note: Perforate Lower Point Lookout w/ 2 spf at 120°

Following Lower Point Lookout perforations at 2 spf:

6318, 6349, 6377, 6400, 6416

Following Massive Point Lookout and Lower Menefee at 1 spf:

6102, 6107, 6121, 6131, 6136, 6148, 6156, 6165, 6175, 6194,
6201, 6215, 6218, 6222, 6227, 6241, 6264, 6275, 6295, 6304

(30 total holes, 314' of gross interval)

POOH and ND wireline. Inspect casing gun to ensure all perforations fired.

11. PU 4-1/2" packer on 2 jts of 2-7/8" tubing. TIH and set packer @ 60'. NU stimulation company. Pressure test surface lines to 4000 psi. Prepare to breakdown perforations. Pump into perforations to establish injection rate at maximum pressure of 3000 psi. Record breakdown pressure and rate and ISIP. **Note: Calculate the number of perforations open at beginning of the job. If 90% (or more) of the holes calculate to be open, pump acid but do not drop balls. Be prepared to continue right into frac job.** If less than 90% of holes are open proceed to next step. If an injection rate of > 5 BPM can be established, prepare to balloff. If an injection rate cannot be established, TIH with 2-3/8 tubing and spot 5 bbls 15% HCL across perforations. TOOH.

12. Begin balloff. Pump 25 bbls of 15% HCL (Add 2/1000 gallons corrosion inhibitor and 1/1000 gallons surfactant to acid.) and flush with 2% KCL at maximum rate pressure will allow. Drop a total of 60, 7/8" 1.3 SG RCN ball sealers spaced evenly throughout job. Maximum pressure at balloff is 3000 psi. ND stimulation company. Unseat packer and TOOH.
13. NU wireline company. Under lubricator, RIH with 4-1/2" junk basket to recover ball sealers. Run basket by perforations several times to ensure maximum ball recovery. POOH and ND wireline company. Record number of hits and balls recovered.
14. PU 4-1/2" packer and reset @ 60'. NU stimulation company. Hold safety meeting. Pressure test surface lines to 4000 psi. Maximum surface treating pressure during frac is 3000 psi. Fracture stimulate Point Lookout / Lower Menefee interval per attached schedule at 50 BPM, with 100,000 #'s of 20/40 Arizona sand. Quick flush at 2 ppg with 2% KCL. Flush with 92 bbls of 2% KCL to 100' of top perforation. Cut pump rate throughout flush as pressure will allow. Shutdown and record ISIP, 5, 10, and 15 min shut-in pressures. ND stimulation company. Unseat packer and TOOH.
15. NU wireline company. Under and lubricator RIH with 4-1/2" CIBP and set @ 6044'. POOH. ND wireline company. PU 4-1/2" packer on 2 jts of 2-7/8" tubing and set @ 60'. RU stimulation company. Pressure test CIBP to 3000 psi for 15 min. Unseat packer and TOOH.

Upper Menefee and Cliff House perforating and fracture stimulation (2nd Stage):

16. NU wireline company. Under a full lubricator, RIH with 3-1/8" HSC casing gun. Select fire perforate the Menefee and Cliff House with 1 SPF, 0.32" diameter, (Owen, 302) charges at the following depths:

5651,	5685,	5724,	5736,	5757,	5767,	5772,	5777,	5784,	5789,
5795,	5799,	5814,	5849,	5852,	5920,	5978,	5981,	5998,	6001,
6005,	6016,	6018,	6020						

(24 total holes, 369' of gross interval)

POOH and ND wireline. Inspect casing gun to ensure all perforations fired.

17. PU 4-1/2" packer on 2 jts of 2-7/8" tubing. TIH and set packer @ 60'. NU stimulation company. Pressure test surface lines to 4000 psi. Prepare to breakdown perforations. Pump into perforations to establish injection rate at maximum pressure of 3000 psi. Record breakdown pressure and rate and ISIP. **Note: Calculate the number of perforations open at beginning of the job. If 90% (or more) of the holes calculate to be open, pump acid but do not drop balls. Be prepared to continue right into frac job.** If less than 90% of holes are open proceed to next step. If an injection rate of > 5 BPM can be established, prepare to balloff. If an injection rate cannot be established, TIH with 2-3/8 tubing and spot 5 bbls 15% HCL across perforation. TOOH.
18. Begin balloff. Pump 25 bbls of 15% HCL (Add 2/1000 gallons corros on inhibitor and 1/1000 gallons surfactant to acid.) and flush with 2% KCL at maximum rate pressure will allow. Drop a total of 48, 7/8" 1.3 SG RCN ball sealers spaced evenly throughout job. Maximum pressure at balloff is 3000 psi. ND stimulation company. Unseat packer and TOOH.
19. NU wireline company. Under lubricator, RIH with 4-1/2" junk basket to recover ball sealers. Run basket by perforations several times to ensure maximum ball recovery. POOH and ND wireline company. Record number of hits and balls recovered.
20. PU 4-1/2" packer and reset @ 60'. NU stimulation company. Hold safety meeting. Pressure test surface lines to 4000 psi. Maximum surface treating pressure during frac is 3000 psi. Fracture stimulate Cliff House / Upper Menefee interval per attached schedule at 50 BPM, with 100,000 #'s of

20/40 Arizona sand. Quick flush at 2 ppg with 2% KCL. Flush with 84 bbls of 2% KCL to 200' of top perforation. Cut pump rate throughout flush as pressure will allow. Shutdown and record ISIP, 5, 10, and 15 min shut-in pressures. RD stimulation company. Unseat packer and TOOH. XO to 2-3/8" pipe rams and slips.

21. PU 3-7/8" bit and six drill collars on 2-3/8" tubing. Clean out to CIBP set and 6044'. Obtain pitot gauge. Drill out CIBP at 6044'. Use foam/mist rate of 10 to 12 BPH. Clean out to CIBP set at 6520'. Clean up to less than 5 BPH water and trace of sand. Obtain stabilized pitot gauges at 15, 30, 45, and 60 min for the Mesaverde interval. Record on WIMS report
22. Based upon Dakota testing in step 6, a decision will be made to test Mesaverde through separator prior to drilling CIBP set at 6520' or to **temporarily abandon the Dakota**. Contact engineering to confirm decision prior to proceeding. If decision is to temporarily abandon the Dakota, go to step 26 and land tubing in Mesaverde. PUH. Clean out until less than 5 BPH. Space out such that the bottom of the tubing is within +/- 20' of bottom perforation at 6416'.
23. RU test unit and pit. Flow test MV up tubing with 200 psi backpressure on unit. Run a minimum 3 hour test and record results on WIMS report.
24. Check for fill on CIBP at 6520'. TIH. Drill out CIBP at 6520'. Use foam/mist rate of 10 to 12 BPH.
25. Clean out to CIBP at 8286'. **Do not drill out CIBP**. Clean up to less than 5 BPH and trace of sand. Obtain stabilized pitot gauges at 15, 30, 45, and 60 min for the commingled zones. TOOH laying down 2-3/8" tubing, drill collars, and bit.
26. XO to 1-1/2" pipe rams. PU 1-1/2" tubing. TIH with one joint of 1-1/2", 2.9# J-55 tubing with expendable check, a seat-nipple, and the remaining 1-1/2" tubing. Land tubing at +/- 8318. Broach tubing while running in hole to seat-nipple with sandline. POOH
27. ND BOP's. NU Tree and manifold assembly. Pump off expendable check. Make swab run to kick well off if needed. Obtain stabilized pitot gauges at 15, 30, 45, and 60 min for the entire well. Record on WIMS report. SI well. RD and MOL.

Compiled By:

S. C. Woolverton 1/27/99
S. C. Woolverton
Production Engineer

Approval:

S. C. Woolverton 1/27/99
Regional Engineer

P. J. B. 1/27/99
Drilling Superintendent

VENDORS:

VENDORS:

CASED HOLE:

STIMULATION:

FRAC VALVE:

SERVICE COMPANY

TBA

TBA

District Tools

PHONE NUMBER

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San Juan 28-5 Unit #91M

Basin Dakota

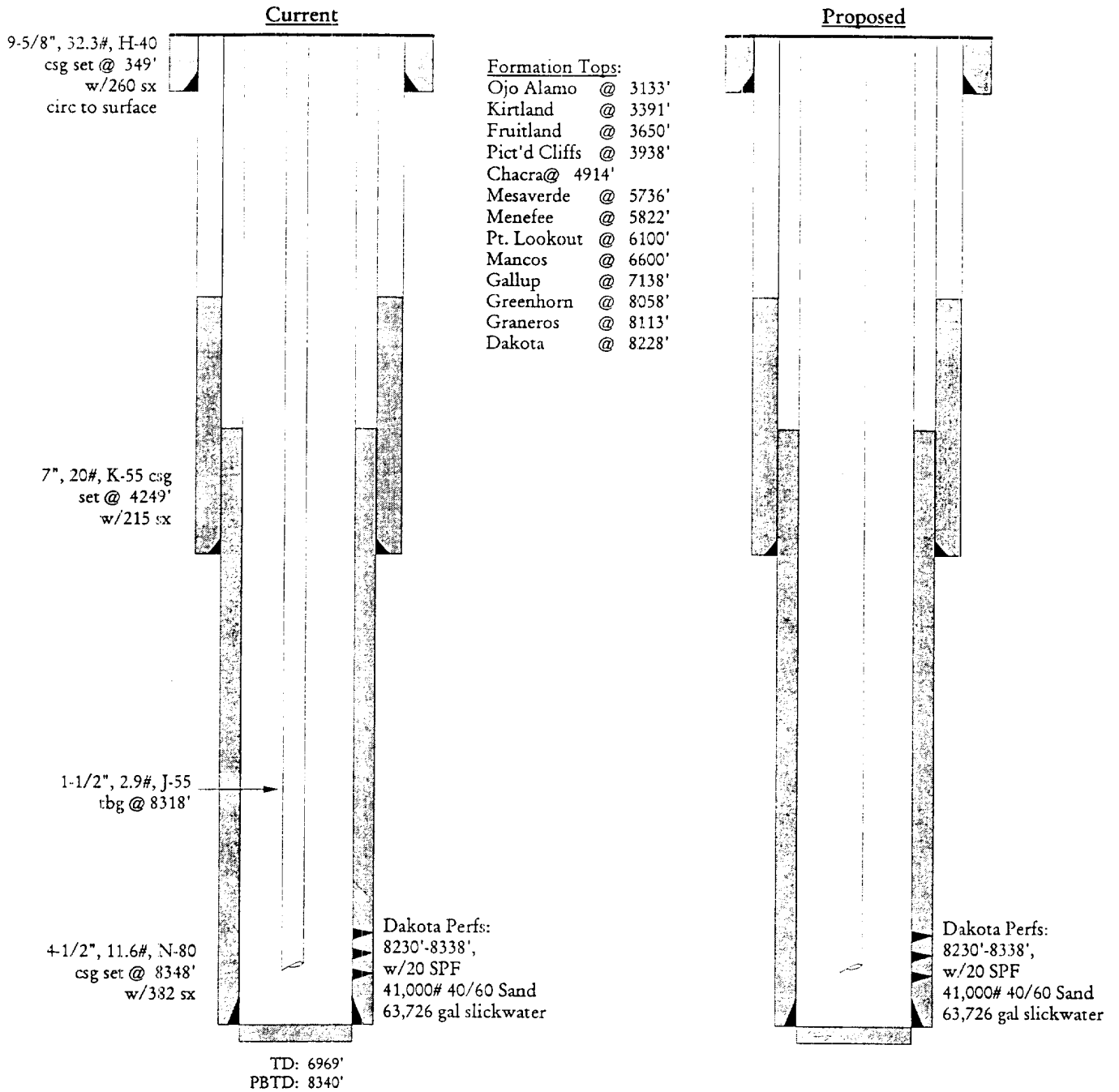
Unit E, Section 14, T28N, R5W

Rio Arriba County, NM

Elevation: 6969' GL

LAT: 36° 39.85' / LONG: 107° 20.02'

date spud: 09-30-85



PERTINENT DATA SHEET
SAN JUAN 28-5 UNIT #91M

<u>Location:</u>	1500' FNL, 960' FWL Unit E, Section 14, T28N, R5W Rio Arriba County, NM	<u>DP#:</u>	54334A (DK) 36249A (MV)	<u>LAT:</u>	36° 39.85'
<u>Field:</u>	Basin Dakota	<u>Elevation:</u>	6969' GL	<u>Operator:</u>	BR
<u>TD:</u>	8348'	<u>Spud Date:</u>	09-30-85	<u>GWl:</u>	69.61%
<u>PBTD:</u>	8340'	<u>Completion Date:</u>	10-25-85	<u>NRI:</u>	58.9%

Casing Record:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight & Grade</u>	<u>Depth Set</u>	<u>SxS Cmt</u>	<u>Cement Top</u>
12-1/4"	9-5/8"	32.3#, H-40	349'	260 (307 ft3)	surface
8-3/4"	7"	20#, K-55	4249'	215 (340 ft3)	
6-1/4"	4-1/2"	11.6#, N-80	8348'	382 (730 ft3)	
		Float Collar @ 8341'			

Tubing Record:

<u>Tubing Size</u>	<u>Weight & Grade</u>	<u>Depth Set</u>	<u>BHA</u>
1-1/2"	2.9#, J-55	8318'	

Formation Tops:

Ojo Alamo:	3133'	Chacra:	4914'	Mancos:	6600'
Kirtland:	3391'	Mesaverde:	5736'	Gallup:	7138'
Fruitland:	3650'	Menefee:	5822'	Greenhorn:	8058'
Pictured Cliffs:	3938'	Pt. Lookout:	6100'	Graneros:	8113'
				Dakota:	8228'

Logging Record:

Comp. Density, Comp. NL, Temp Survey, Differential Temp, Ind. Elec Log, Correlation GR-L

Stimulation:

Perf'd Dakota @ 8230', 8233', 8236', 8248', 8250', 8252', 8254', 8256', 8258', 8298', 8300', 8302', 8304', 8306', 8328', 8330', 8334', 8336', 8338', w/20 SPZ. Frac'd w/41,000# 40/60 sand, 63,726 gal slickwater

Workover History:

08/96: TIH, tag fill @ 8315'. TOOH w/250 jts 1-1/2" tbg. TIH w/4-1/2" csg scraper to 8130'. TIH w/4-1/2" RBP & pkr. Set RBP @ 8315'. Load csg w/45 bbl Kcl, PT csg to 1000 psi. OK. Release RBP. TIH, acidize DK perms w/2% Kcl. Spot 2000 gal 7-1/2" Hcl. Flushed w/40 bbl Kcl. TIH w/250 jts 1-1/2", 2.9#, J-55 tbg, landed @ 8318'. PT tbg to 3500 psi. Released rig.

Production History:

Latest Deliverability	0 MCFD, 0 BOPD
Initial Deliverability	1,445 MCFD (AOF), SITP = 1320, SICP = 1850
Cums:	406 MMCF, 746 BO

Transporter:

Oil/Condensate:	Giant	Gas:	El Paso
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