

Submit 3 Copies To Appropriate District
Office
District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd , Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Jun 19, 2008

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-35126
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Burlington Resources Oil Gas Company LP		6. State Oil & Gas Lease No. B-10644-84
3. Address of Operator P.O. Box 4289, Farmington, NM 87499-4289		7. Lease Name or Unit Agreement Name Mar Vista SWD
4. Well Location Unit Letter <u>N</u> : <u>290</u> feet from the <u>South</u> line and <u>2490</u> feet from the <u>West</u> line Section <u>2</u> Township <u>29N</u> Range <u>11W</u> NMPM <u>San Juan County</u>		8. Well Number <u>1</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5692' GR		9. OGRID Number 14538
		10. Pool name or Wildcat Mesaverde SWD

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: Step Rate Test ☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Burlington Resources requests permission to perform a step rate test on the subject well per the attached procedure and current wellbore schematic.

* A Braden head test is required before starting the step rate test ROVD MAR 1'12
* There must be three steps below and above break over point. OIL CONS. DIV.
* Step duration and rate increments must not be changed during the test. DIST. 3

Spud Date: 9-29-2010

Rig Released Date: 10-09-2010

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Crystal Tafoya TITLE Staff Regulatory Technician DATE 2/29/2012

Type or print name Crystal Tafoya E-mail address: crystal.tafoya@conocophillips.com PHONE: 505-326-9837

For State Use Only

APPROVED BY: Brod Bull TITLE Deputy Oil & Gas Inspector,
District #3 DATE 3/5/12
Conditions of Approval (if any):
Ar

PC

Mar Vista SWD #1
API 3004535126
Unit N, 290' FSL, 2,490' FWL, Section 2, T29N-R11W
San Juan County, New Mexico

Step Rate Test Procedure

Background: This test is being conducted to collect data for justification to the NMOCD to increase the maximum permitted injection pressure. The current pressure of 1,065 psig was set by NMOCD administrative order IPI-392 on February 15, 2011.

Pre test preparations:

1. Shut down injection operations at least 24 hours prior to commencement of test. Enough shut in time is required to ensure the wellhead pressures are stabilized.
2. Contact Phoenix wireline at least 48 hours prior to the test to make sure the downhole pressure gauges are calibrated.
3. Top off the 2- 500 bbl. storage tanks at the well facility prior to starting the test. Schedule personnel to be available during the test to keep the tanks filled with injection water.
4. Transfer 1,200 barrels of filtered production water from the Vasaly SWD #2 well to the frac tanks.
5. Notify the NMOCD 24 hours prior to beginning the test.

Test Procedure:

1. Conduct pre-job safety meeting. Adhere to and comply with all COP HSE safety policies.
2. MOL with slickline and pumping service equipment.
3. Close master valve and RU a 5,000 psig rated slickline lubricator on the Cameron 4-1/16" 5M tee. RD gate valve, check valve and associated piping and RU pump discharge lines to the flow tee and suction lines to the 500 bbl. on-site storage tanks.
4. RU pressure recorders on the tubing, casing and bradenhead. The pumping service company will provide a continuous plot of injection rate versus pressure to determine the breakover pressure.
5. RIH with tandem pressure recorders to the top perforations at 3,662'. Secure slickline and have personnel standby for the duration of the test.
6. Test all lines and lubricator to 4,000 psig. This will be the maximum allowable pressure.

7. Note the initial shut in pressures on the tubing, casing and bradenhead. Continue to record these pressures at each rate change. The test will be discontinued if the casing pressure rises above 250 psig or if the bradenhead pressure increases any amount above its starting pressure.
8. Commence the step rate test with an initial pump rate of 1/2 bpm with filtered water. Hold this rate and all subsequent rates for a minimum of 15 minutes OR until the rate is stable. The onsite engineer will make this determination. The rates (in bpm) will increase by 1/2 bpm increments until a surface pressure of 4,000 psig is reached, all of the fluid has been pumped or at least 3 data points past the fracture pressure have been recorded.
9. Shut down pumps and record ISIP for 15 minutes.
10. RD pumping service lines and equipment.
11. Pull downhole pressure gauges and RD slickline equipment.
12. Re-establish injection operations.

Contacts

BJ Services:

Michelle Huskey	327-6222 (office)	(505) 330-0010 (cell)
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Phoenix Wireline:

Jeff Williams	325-1125 (office)	793-1101 (cell)
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ConocoPhillips:

Doug Mussett (Engineering)	599-4067 (office)	320-2483 (cell)
Robert Stuard (Operations)	326-9708 (office)	215-4713 (cell)

Mar Vista SWD #1

Treatment History

This SWD well was originally completed on January 6, 2011. The well was fracture treated on November 22, 2010 with 2406 bbls. KCl water and 35,371# of 16/30 mesh sand. Max. treating pressure – 4,346 psig, average treating pressure – 1,684 psig, average treating rate – 41.6 bpm, ISIP – 1,287 psig. A step rate test was conducted on December 29, 2010 as follows:

Rate, bpm	Step Volume, bbls.	Cumulative Volume, bbls.	Pressure, psig
0.5	13.9	13.9	310
1.0	15.3	29.2	422
1.5	21.7	50.9	580
2.0	29.7	80.6	741
2.5	37.9	118.5	926
3.0	39.0	157.5	1,040
3.5	49.4	206.9	1,135
4.0	57.5	264.4	1,284
4.5	66.3	330.7	1,410
5.0	75.0	405.7	1,510
5.5	78.7	484.4	1,657
ISIP			1,200

A second step rate test was conducted on January 6, 2011 as follows:

Rate, bpm	Step Volume, bbls.	Cumulative Volume, bbls.	Pressure, psig
0.7	11.7	11.7	340
1.0	15.4	27.1	462
1.5	24.0	51.1	650
2.0	30.8	81.9	865
2.5	36.5	118.4	986
3.0	42.9	161.3	1,102
3.5	53.7	215.0	1,250
4.0	62.0	277.0	1,370
4.5	71.0	348.0	1,435
5.0	76.0	424.0	1,580
5.5	83.0	507.0	1,650
6.0	90.0	597.0	1,745
ISIP			1,143

The second test above was used to justify the current maximum allowable surface injection pressure of 1,065 psig (NMOCD administrative order IPI-392 issued February 15, 2011).

On December 6, 2011 the well was fracture stimulated with 116,760 gallons 25# X-link gel, 60,060# 20/40 mesh and 308,990# 16/30 mesh sands. Max. treating pressure – 6,450 psig, average treating pressure – 5,890 psig, average treating rate – 45 bpm, ISIP – 4,732 psig.

The well currently injects a daily volume of 1,200-1,300 bpd at an injection pressure of ~985 psig. The injection history is summarized in the following table:

Month	Injected Volume, bbls.	Cumulative Injected, bbls.	Avg. Injection Pressure, psig
Jan. 2011	0	0	0
Feb. 2011	4,115	4,115	760
March 2011	12,755	16,870	1,013
April 2011	7,942	24,812	955
May 2011	4,290	29,102	815
June 2011	13,013	42,115	891
July 2011	12,648	54,763	970
August 2011	18,095	72,858	930
Sept. 2011	19,530	92,388	950
Oct. 2011	17,730	110,118	815
Nov. 2011	15,017	125,135	681
Dec. 2011	15,900	141,035	590
Jan. 2012	45,886	186,921	947

This step rate test is necessary to determine whether a new maximum allowable injection pressure can be justified as a result of the recent fracture treating operation.

API / UWI 3004535126	Surface Legal Location 002-029N-011W-N	Field Name BLANCO MESAVERDE	License No	State/Province NEW MEXICO	Well Configuration Type VERTICAL
Ground Elevation (ft) 5,693.00	Original KB/RT Elevation (ft) 5,708.00	KB-Ground Distance (ft) 15 00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Well Config: VERTICAL - Original Hole; 2/23/2012 12:16:43 PM

