

Submit 1 Copy To Appropriate District
Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103

Revised July 18, 2013

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

WELL API NO. 30-025-39340
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Quail "16" State
8. Well Number 2
9. OGRID Number 151416
10. Pool name or Wildcat SWD; Delaware
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3636' GR

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.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> SWD Well <input type="checkbox"/>	
2. Name of Operator Fasken Oil and Ranch, Ltd.	
3. Address of Operator 6101 Holiday Hill Road, Midland, TX 79707	
4. Well Location Unit Letter <u>N</u> : <u>1230'</u> feet from the <u>South</u> line and <u>1980'</u> feet from the <u>West</u> line Section <u>16</u> Township <u>20S</u> Range <u>34E</u> NMPM County <u>Lea</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3636' GR	

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 ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☒ Perform a Step Rate Test

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
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 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Fasken Oil and Ranch, Ltd. request permission to perform a Step Rate Test on the Quail "16" State No. 2. Fasken is currently approved to dispose at an injection pressure of 1107 psig. Fasken would like to increase the pressure in an effort to dispose more water. Please see attached procedure for the Step Rate Test.

Spud Date:

Rig Release Date:

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

SIGNATURE Kim Tyson TITLE Regulatory Analyst DATE 5-29-2014

Type or print name Kim Tyson E-mail address: kimt@forl.com PHONE: 432-687-1777

For State Use Only

APPROVED BY: Melissa Brown TITLE Dist. Supervisor DATE 6/2/2014
Conditions of Approval (if any):

JUN 03 2014

Determine Frac Pressure via step rate test
Quail State 16 No. 2
1230' FSL & 1980' FWL
Sec 16, T20S R34E
Lea County, New Mexico
AFE 2826

OBJECTIVE:	Perform Step Rate Test
WELL DATA:	
13-3/8" 54.5# K-55:	Set @ 1611'. Cmt w/ 900 sx to surface
9-5/8" 40/36# HCK55/K55:	Set @ 5247'. Cmt w/ 2450sx to surface. DV @ 4009'
5-1/2" 17# HCP-110:	Set @ 13,575'. Cmt w/ 2100 sx "H", TOC 3706' TS, DV @ 8483'
CIBPs:	13,465' w/35'cmt, 12,956' no test, 12,906' w/35' cmt.
PBTD:	12,889'
TD:	13,600'

1. Shut well in 3 days prior to step rate test to allow bottomhole pressure to stabilize. Report tubing pressure on daily drilling report each day prior to the step rate test.
2. RU slickline and lubricator and run BHP bomb to 5230' and record BHP. Once BHP is recorded, bleed down pressure until well equalizes and tubing pressure is 0 psi.
3. RU pump truck with constant flow rate regulator on injection pump and install surface pressure gauge. The constant flow rate regulator will need to be tested prior to the step rate test and documentation of the test will need to be submitted along with the test results (throttling valve will not be a sufficient flow rate regulator). Flow rates must be measured with a turbine flow meter. As with the flow rate regulator, the turbine flow meter must have a documented calibration and test beforehand for submittal.
4. Have transport truck keep the pump truck full with produced water throughout the step rate test so that the pump never stops running.
5. Begin Step Rate Test. Anticipated maximum injection rate = 2 bpm @ 1680 psi. Inject produced water into the formation at each of these rates for exactly thirty minutes each. The estimated friction pressure at each flow rate is shown below:

	<u>Constant Rate</u>	<u>Tubing Friction Pressure</u>
Rate # 1	0.5 bpm	< 10 psi
Rate # 2	1.0 bpm	29 psi
Rate # 3	1.5 bpm	62 psi
Rate # 4	2.0 bpm	105 psi
Rate # 5	2.5 bpm	159 psi
Rate # 6	3.0 bpm	223 psi
Rate # 7	3.5 bpm	297 psi

Record simultaneous bottomhole pressures, rates, and times on a strip chart. Once fracture pressure has definitely been exceeded, as evidenced by a minimum of two injection rate-pressure combinations greater than the breakdown pressure, the injection pump can be stopped. Immediately shut the well in and record ISIP. Each rate-step and corresponding stabilized bottomhole pressure (corrected for tubing friction) will be plotted. The pressure corresponding to the point where the slope flattens will be determined as the fracture pressure and thus the maximum allowable surface injection pressure.

6. RD pump truck and slickline. Report results on daily drilling report.

↳ Report Results
 TO PHILLIP GOETZE
 OCD - SANTA FE
 MAB