

FORM  
17Rev  
6/99State of Colorado  
Oil and Gas Conservation Commission

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DE ET OE ES

Document Number:

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## BRADENHEAD TEST REPORT

Step 1. Record all tubing and casing pressures as found. Step 2. Sample now. If intermediate or surface casing pressure > 25 psi. In sensitive areas, 1 psi.  
Step 3. Conduct Bradenhead test. Step 4. Conduct intermediate casing test. Step 5. Send report to BLM within 3 days and to OGCC within 10 days. Include wellbore diagram if not previously submitted or if wellbore configuration has changed since prior program. Attach gas and liquid analyses if sampled.

1. OGCC Operator Number: 47120 3. BLM Lease No: \_\_\_\_\_  
2. Name of Operator: KERR-MCGEE OIL & GAS ONSHORE LP  
4. API Number: 05-123-14595-00 5. Multiple completion? ☐ Yes ☐ No  
6. Well Name: LUDWIG 2-5 Number: 2  
7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNW,5,3N,65W,6  
8. County WELD 9. Field Name: WATTENBERG  
10. Minerals: ☐ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 02/19/2014

12. Well Status: ☐ Flowing  
☐ Shut In ☐ Gas Lift  
☐ Pumping ☐ Injection  
☐ Clock/Intermitter  
☒ Plunger Lift

13. Number of Casing Strings:  
☐ Two ☐ Three ☐ Liner?

## 14. EXISTING PRESSURES

|                               |                          |                            |                           |                            |                |
|-------------------------------|--------------------------|----------------------------|---------------------------|----------------------------|----------------|
| Record all pressures as found | Tubing: 429<br>Fm: _____ | Tubing: _____<br>Fm: _____ | Prod Csg 433<br>Fm: _____ | Intermediate<br>Csg: _____ | Surf. Csg<br>1 |
|-------------------------------|--------------------------|----------------------------|---------------------------|----------------------------|----------------|

## BRADENHEAD TEST

Buried valve? ☐ Yes ☒ NoConfirmed open? ☒ Yes ☐ No

With gauges monitoring production, intermediate casing and tubing pressures, open surface casing (bradenhead) valve (if no intermediate casing, monitor only the production casing and tubing pressures.) Record pressures at five minute intervals Define characteristics of flow in "Bradenhead Flow" column using letter designations below:

O = No Flow; C = Continuous; D = Down to 0; V = Vapor  
H = Water H2O; M = Mud; W = Whisper; S = Surge; G = Gas

BRADENHEAD SAMPLE TAKEN?

☐ Yes ☒ No ☐ Gas ☐ LiquidCharacter of Bradenhead fluid: ☐ Clear ☐ Fresh☐ Sulfur ☐ Salty ☐ Black

Other:(describe)

Sample cylinder number:

| Elapsed Time (Min:Sec) | Fm: Tubing                   | Fm: Tubing:              | Prod Csg PSIG                | Intermedia Csg PSIG | Bradenhead Flow: |
|------------------------|------------------------------|--------------------------|------------------------------|---------------------|------------------|
| 00:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | G                |
| 05:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | G                |
| 10:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | G                |
| 15:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | G                |
| 20:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | D                |
| 25:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | D                |
| 30:00                  | <input type="checkbox"/> 429 | <input type="checkbox"/> | <input type="checkbox"/> 433 |                     | D                |

Instantaneous Bradenhead PSIG at end of test: &gt; 0

## INTERMEDIATE CASING TEST

Buried valve? ☐ Yes ☐ NoConfirmed open? ☐ Yes ☐ No

With gauges monitoring production, intermediate casing and tubing pressures, open the intermediate casing valve. Record pressures at five minute intervals Characterize flow in "Intermediate Flow" column using letter designations below:

O = No Flow; C = Continuous; D = Down to 0; V = Vapor  
H = Water H2O; M = Mud; W = Whisper; S = Surge; G = Gas

INTERMEDIATE SAMPLE TAKEN?

☐ Yes ☐ No ☐ Gas ☐ LiquidCharacter of Intermediate fluid: ☐ Clear ☐ Fresh☐ Sulfur ☐ Salty ☐ Black

Other:(describe)

Sample cylinder number:

| Elapsed Time (Min:Sec) | Fm: Tubing               | Fm: Tubing:              | Prod Csg PSIG            | Intermedia Csg PSIG | Bradenhead Flow: |
|------------------------|--------------------------|--------------------------|--------------------------|---------------------|------------------|
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |
|                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                     |                  |

Instantaneous Intermediate Casing PSIG at end of test: &gt;

Comments:

SC PRODUCD NO FLUID.

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Test Performed By: TYLER PETERSEN Title: NON EMPLOYEE JOB Phone: (719) 491-3390

Signed: JOLEEN KRAMER Title: ENGINEERING  
SPECIALIST Date: 3/3/2014

Witnessed By: Title: Agency: