



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: 69175 3. BLM Lease No: _____
2. Name of Operator: PDC ENERGY INC
4. API Number; 05-123-25028-00 5. Multiple completion? ☐ Yes ☐ No
6. Well Name: CARMICHAEL Number: 33-26
7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWSE,26,7N,63W,6
8. County WELD 9. Field Name: WATTENBERG
10. Minerals: ☐ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 07/17/2017
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: <u>0</u> | Tubing: _____ | Prod Csg <u>200</u> | Intermediate | Surf. Csg |
| | Fm: _____ | Fm: _____ | Fm: _____ | Csg: _____ | <u>0</u> |

BRADENHEAD TEST

| | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------|--------------------------|------------------------------|---------------------|------------------|
| Buried valve? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Confirmed open? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 | Elapsed Time (Min:Sec) | Fm: Tubing | Fm: Tubing: | Prod Csg PSIG | Intermedia Csg PSIG | Bradenhead Flow: |
| | 00:00 | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> 200 | | O |
| | 05:00 | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> 200 | | O |
| | 10:00 | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> 200 | | O |
| | 15:00 | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> 200 | | O |
| | 20:00 | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> 200 | | O |
| | 25:00 | <input type="checkbox"/> 0 | <input type="checkbox"/> | <input type="checkbox"/> 200 | | O |
| BRADENHEAD SAMPLE TAKEN? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid Character of Bradenhead fluid: <input type="checkbox"/> Clear <input type="checkbox"/> Fresh <input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black Other:(describe) _____ Sample cylinder number: _____ | | | | | | |
| Instantaneous Bradenhead PSIG at end of test: > <u>0</u> | | | | | | |

INTERMEDIATE CASING TEST

| | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------|--------------------------|--------------------------|---------------------|------------------|
| Buried valve? <input type="checkbox"/> Yes <input type="checkbox"/> No Confirmed open? <input type="checkbox"/> Yes <input type="checkbox"/> 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 | 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"/> | | |
| INTERMEDIATE SAMPLE TAKEN? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid Character of Intermediate fluid: <input type="checkbox"/> Clear <input type="checkbox"/> Fresh <input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black Other:(describe) _____ Sample cylinder number: _____ | | | | | | |
| Instantaneous Intermediate Casing PSIG at end of test: > _____ | | | | | | |

Comments:

pre P&A test, initial pressure 0 psi no pressure for duration of test

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

Test Performed By: Scott A. Hawks Title: Lead Pumper Phone: (970) 3738419

Signed: Jenifer Hakkarinen Title: Reg Tech Date: 7/18/2017

Witnessed By: _____ Title: _____ Agency: _____