

State of Colorado
Oil and Gas Conservation Commission

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Document Number:

403344170

BRADENHEAD TEST REPORT

Step 1. Before opening any valves, record all tubing and casing pressures as found.

Step 2. Collect liquid and gas samples as required; consult Bradenhead Testing and Reporting Instructions and Guidance for field specific Orders at <http://cogcc/reg.html#opguidance>

Step 3. Conduct Bradenhead test.

Step 4. Submit Form 17 within 10 days of test. Attach a wellbore diagram if not previously submitted or if wellbore configuration has changed since last wellbore diagram was submitted.

Step 5. Submit sample analytical results via Form 43.

1. OGCC Operator Number: 69175 3. BLM Lease No: _____

2. Name of Operator: PDC ENERGY INC

4. API Number; 05-123-51262-00 5. Multiple completion? ☐ Yes ☐ No

6. Well Name: Stugart Number: 21NA

7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SENW,20,5N,66W,6

8. County WELD 9. Field Name: WATTENBERG

10. Minerals: ☐ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 03/09/202312. 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: _____ Fm: _____ | Tubing: _____ Fm: _____ | Prod Csg _____ 0 Fm: _____ Csg: _____ | Intermediate _____ Csg: _____ | Surf. Csg _____ 0 |
|-------------------------------|----------------------------|----------------------------|---|----------------------------------|-------------------|

BRADENHEAD TEST

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.

Describe character of flow in "Bradenhead Flow" column: O = No Flow; C = Continuous; D = Down to 0; S = Surge; W = Whisper

Describe fluid type in "Bradenhead Fluid" column: H = Water H₂O; M = Mud; G = Gas; V = Vapor; L = Liquid Hydrocarbon; H & M = Water & Mud; H & G = Water & Gas; H & V = Water & Vapor; M & G = Mud & Gas; M & V = Mud & Vapor; G & V = Gas & Vapor; H & L = Water & Liquid Hydrocarbon; M & L = Mud & Liquid Hydrocarbon; G & L = Gas & Liquid Hydrocarbon; V & L = Vapor & Liquid Hydrocarbon; N = None

| | | | | | | | |
|--|------------------------|------------|-------------|---------------|---------------------|------------------|-------------------|
| Buried valve? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Elapsed Time (Min:Sec) | Fm: Tubing | Fm: Tubing: | Prod Csg PSIG | Intermedia Csg PSIG | Bradenhead Flow: | Bradenhead Fluid: |
| Confirmed open? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 00:00 | | | 0 | | NO FLOW | |
| BRADENHEAD SAMPLE TAKEN? | 05:00 | | | 0 | | NO FLOW | |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid | 10:00 | | | 0 | | NO FLOW | |
| Character of Bradenhead fluid: | 15:00 | | | 0 | | NO FLOW | |
| <input type="checkbox"/> Clear <input type="checkbox"/> Fresh | 20:00 | | | 0 | | NO FLOW | |
| <input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black | 25:00 | | | 0 | | NO FLOW | |
| Other:(describe) | 30:00 | | | 0 | | NO FLOW | |
| REQUIRED - Instantaneous Bradenhead Pressure at End of Test: <u>0</u> PSIG | | | | | | | |

INTERMEDIATE CASING TEST

With gauges monitoring production, intermediate casing and tubing pressures, open the intermediate casing valve. Record pressures at five minute intervals.

Describe character of flow in "Intermediate Flow" column: O = No Flow; C = Continuous; D = Down to 0; S = Surge; W = Whisper

Describe fluid type in "Intermediate Fluid" column: H = Water H₂O; M = Mud; G = Gas; V = Vapor; L = Liquid Hydrocarbon; H & M = Water & Mud; H & G = Water & Gas; H & V = Water & Vapor; M & G = Mud & Gas; M & V = Mud & Vapor; G & V = Gas & Vapor; H & L = Water & Liquid Hydrocarbon; M & L = Mud & Liquid Hydrocarbon; G & L = Gas & Liquid Hydrocarbon; V & L = Vapor & Liquid Hydrocarbon; N = None.

| | | | | | | | |
|---|--|---------------|----------------|------------------|--------------------------|-----------------------|------------------------|
| Buried valve? <input type="checkbox"/> Yes <input type="checkbox"/> No Confirmed open? <input type="checkbox"/> Yes <input type="checkbox"/> No | Elapsed Time (Min:Sec) | Fm: Tubing | Fm: Tubing: | Prod Csg PSIG | Intermediate Csg PSIG | Intermediate Flow: | Intermediate Fluid: |
| | 00:00 | | | | | | |
| INTERMEDIATE SAMPLE TAKEN? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid | 05:00 | | | | | | |
| | 10:00 | | | | | | |
| | 15:00 | | | | | | |
| 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) _____ | 20:00 | | | | | | |
| | 25:00 | | | | | | |
| | 30:00 | | | | | | |
| | REQUIRED - Instantaneous Intermediate Casing Pressure at End of Test: _____ PSIG | | | | | | |

Comments: Initial Test Post Rig Release. 0 PSI. no pressure or flow observed for the entire 30 min test. PDC will monitor pressure and re-test according to bradenhead policy.

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

| | | |
|----------------------------------|----------------------------------|------------------------|
| Test Performed By: _____ | Title: _____ | Phone: () _____ |
| Signed: <u>Jessica Johannsen</u> | Title: <u>Regulatory Analyst</u> | Date: <u>3/13/2023</u> |
| Witnessed By: _____ | Title: _____ | Agency: _____ |