

State of Colorado
Oil and Gas Conservation Commission

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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; 05-123-49994-00 5. Multiple completion? ☐ Yes ☐ No

6. Well Name: Thunder Number: 9N

7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SENW,3,5N,64W,6

8. County WELD 9. Field Name: WATTENBERG

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

11. Date of Test: 08/24/202112. Well Status: ☐ Flowing☒ Shut In ☐ Gas Lift☐ Pumping ☐ Injection☐ Clock/Intermittent☐ 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: _____	Intermediate _____ Csg: _____	Surf. Csg _____ 0
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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 type="checkbox"/> Yes <input checked="" 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			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid	10:00			0			
Character of Bradenhead fluid:	15:00			0			
<input type="checkbox"/> Clear <input type="checkbox"/> Fresh	20:00			0			
<input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black	25:00			0			
Other:(describe)	30:00			0			
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	Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermediate Csg PSIG	Intermediate Flow:	Intermediate Fluid:
Confirmed open? <input type="checkbox"/> Yes <input type="checkbox"/> No	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						
	20:00						
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) _____	25:00						
	30:00						
	REQUIRED - Instantaneous Intermediate Casing Pressure at End of Test: _____ PSIG						

Comments: Post Rig Release test. 0 PSI no pressure or flow for the entire 30 min test.

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>JEnifer Hakkarinen</u>	Title: <u>Reg Tech</u>	Date: <u>8/25/2021</u>
Witnessed By: _____	Title: _____	Agency: _____