

**State of Colorado**  
**Energy & Carbon Management Commission**



Document Number:  
403931924

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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://ecmc/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. ECMC Operator Number: 69175      3. BLM Lease No: \_\_\_\_\_  
 2. Name of Operator: PDC ENERGY INC  
 4. API Number; 05-123-51823-00      5. Multiple completion?     Yes     No  
 6. Well Name: Drake      Number: 18N  
 7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SWNW,17,4N,64W,6  
 8. County WELD      9. Field Name: WATTENBERG  
 10. Minerals:     Fee     State     Federal     Indian

11. Date of Test: 09/23/2024  
 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>2076</u> Fm: _____	Tubing: _____ Fm: _____	Prod Csg <u>2852</u> Fm: _____	Intermediate Csg: _____	Surf. Csg <u>100</u>
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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 H<sub>2</sub>O; 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 Confirmed open? <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:
	00:00	2076		2852		CONTINUOUS	GAS
BRADENHEAD SAMPLE TAKEN? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid	05:00	2075		2846		WHISPER	GAS
	10:00	2074		2840		WHISPER	GAS
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) _____	15:00	2073		2839		WHISPER	WATER AND GAS
	20:00	2075		2839		WHISPER	WATER AND GAS
	25:00	2073		2838		WHISPER	WATER AND GAS
	30:00	2075		2836		WHISPER	WATER AND GAS
REQUIRED - Instantaneous Bradenhead Pressure at End of Test: <u>1</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 H<sub>2</sub>O; 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-Production test within 60 days of first sales. 100 PSI continuous gas flow blew down to 1 PSI in thirty minutes. Slight fluid started at 20 minute mark and lasted for remainder of test. PDC will collect a sample and submit results via form 43. 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: Jessica Johannsen Title: Regulatory Analyst Date: 9/24/2024

Witnessed By: \_\_\_\_\_ Title: \_\_\_\_\_ Agency: \_\_\_\_\_