

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



Document Number:  
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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: 96730      3. BLM Lease No: \_\_\_\_\_  
 2. Name of Operator: WILLIFORD ENERGY COMPANY  
 4. API Number; 05-017-06636-00      5. Multiple completion?     Yes     No  
 6. Well Name: RHOADES UNIT      Number: 4-5  
 7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SESE,31,13S,48W,6  
 8. County CHEYENNE      9. Field Name: RHOADES  
 10. Minerals:     Fee     State     Federal     Indian

11. Date of Test: 08/15/2024  
 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>0</u> Fm: _____	Tubing: _____ Fm: _____	Prod Csg <u>0</u> Fm: _____	Intermediate Csg: _____	Surf. Csg <u>1</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 type="checkbox"/> Yes <input checked="" 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:
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) _____	00:00	50		0		NO FLOW	NONE
	05:00	50		0		NO FLOW	NONE
	10:00	50		0		NO FLOW	NONE
	15:00	50		0		NO FLOW	NONE
	20:00	50		0		NO FLOW	NONE
	25:00	50		0		NO FLOW	NONE
	30:00						
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: Open to atmosphere - Puff & Dead. Test for 2023 time period.

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

Test Performed By: Don Thatcher Title: Pumper Phone: (719) 688-2565  
 Signed: P. Douglas Storts Title: SR VP/COO Date: 8/19/2024  
 Witnessed By: \_\_\_\_\_ Title: \_\_\_\_\_ Agency: \_\_\_\_\_