

State of Colorado  
Oil and Gas Conservation Commission

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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://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: 10433 3. BLM Lease No: \_\_\_\_\_

2. Name of Operator: LARAMIE ENERGY LLC

4. API Number; 05-077-08486-00 5. Multiple completion? ☐ Yes ☐ No

6. Well Name: HORSESHOE CANYON Number: 4-21

7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SWNE,21,9S,97W,6

8. County MESA 9. Field Name: SHIRE GULCH

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

11. Date of Test: 07/18/2023

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: 157 Fm: _____	Tubing: _____ Fm: _____	Prod Csg 157 Fm: _____	Intermediate Csg: _____	Surf. Csg 15
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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	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	157		157		CONTINUOUS	
BRADENHEAD SAMPLE TAKEN?	05:00	159		159		CONTINUOUS	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid	10:00	159		159		CONTINUOUS	
Character of Bradenhead fluid:	15:00	161		161		DOWN TO 0	
<input type="checkbox"/> Clear <input type="checkbox"/> Fresh	20:00	164		164		DOWN TO 0	
<input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black	25:00	165		165		DOWN TO 0	
Other:(describe)	30:00	166		166		DOWN TO 0	
REQUIRED - Instantaneous Bradenhead Pressure at End of Test: 0 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 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:

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

Test Performed By: <u>Casey Sheets</u>	Title: <u>Lease Operator</u>	Phone: <u>(970) 312-6479</u>
Signed: <u>Lori Muhr</u>	Title: <u>Regulatory Specialist</u>	Date: <u>7/24/2023</u>
Witnessed By: _____	Title: _____	Agency: _____