

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: 10706 3. BLM Lease No: _____
 2. Name of Operator: D90 ENERGY LLC
 4. API Number; 05-057-06472-00 5. Multiple completion? ☐ Yes ☒ No
 6. Well Name: MUTUAL Number: 7-17H
 7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNW,17,7N,80W,6
 8. County JACKSON 9. Field Name: NORTH PARK
 HORIZONTAL
 NIOBRARA
 10. Minerals: ☒ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 02/08/2022

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: 70 Fm: _____	Tubing: _____ Fm: _____	Prod Csg 72 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	70		72		DOWN TO 0	NONE
BRADENHEAD SAMPLE TAKEN?	05:00	69		72		NO FLOW	NONE
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid	10:00	73		72		NO FLOW	NONE
Character of Bradenhead fluid:	15:00	76		72		NO FLOW	NONE
<input type="checkbox"/> Clear <input type="checkbox"/> Fresh	20:00	69		72		NO FLOW	NONE
<input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black	25:00	72		72		NO FLOW	NONE
Other:(describe)	30:00	71		72		NO FLOW	NONE
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 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: Flameless heater placed on bradenhead valve for ~10 minutes prior to test. Bradenhead had negative pressure prior to test (-4 PSI). The bradenhead equalized shortly after beginning the Form 17 test.

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

Test Performed By: <u>Jordan Flemming</u>	Title: <u>Env. Technician</u>	Phone: <u>(720) 244-8469</u>
Signed: <u>Max Moran</u>	Title: <u>Project Manager</u>	Date: <u>2/11/2022</u>
Witnessed By: _____	Title: _____	Agency: _____