

FORM
17
Rev
11/20

State of Colorado

Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403550977

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: 10793 3. BLM Lease No: _____
 2. Name of Operator: POLARIS PRODUCTION OPCO LLC
 4. API Number; 05-073-06683-00 5. Multiple completion? Yes No
 6. Well Name: KEYSTONE Number: 3-7
 7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWNE,7,7S,54W,6
 8. County LINCOLN 9. Field Name: BROKEN SPEAR
 10. Minerals: Fee State Federal Indian

11. Date of Test: 08/25/2023
 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: <u>50</u> Fm: _____	Tubing: _____ Fm: _____	Prod Csg <u>40</u> Fm: _____	Intermediate Csg: _____	Surf. Csg <u>0</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 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 Confirmed open? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No BRADENHEAD SAMPLE TAKEN? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid 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) _____	Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermedia Csg PSIG	Bradenhead Flow:	Bradenhead Fluid:	
	00:00	50		40		NO FLOW	NONE	
	05:00	50		40		NO FLOW	NONE	
	10:00	50		40		NO FLOW	NONE	
	15:00	50		40		NO FLOW	NONE	
	20:00	50		40		NO FLOW	NONE	
	25:00	50		40		NO FLOW	NONE	
	30:00	50		40		NO FLOW	NONE	
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:

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

Test Performed By: Brad Smith Title: Foreman Phone: () _____

Signed: Greg Wachel Title: _____ Date: 10/5/2023

Witnessed By: _____ Title: _____ Agency: _____