

**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:

403282586

**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: 12/20/2022  
 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: <u>40</u> Fm: <u>SPGN</u>	Tubing: _____ Fm: _____	Prod Csg <u>35</u> Fm: <u>SPGN</u>	Intermediate Csg: _____	Surf. Csg <u>0</u>
-------------------------------	--------------------------------------	----------------------------	---------------------------------------	-------------------------	--------------------

**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

Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermedia Csg PSIG	Bradenhead Flow:	Bradenhead Fluid:
00:00	SPGN 40		35		NO FLOW	NONE
05:00	SPGN 40		35		NO FLOW	NONE
10:00	SPGN 40		35		NO FLOW	NONE
15:00	SPGN 40		35		NO FLOW	NONE
20:00	SPGN 40		35		NO FLOW	NONE
25:00	SPGN 40		35		NO FLOW	NONE
30:00	SPGN 40		35		NO FLOW	NONE
REQUIRED - Instantaneous Bradenhead Pressure at End of Test:						<u>0</u> PSIG

Buried valve?  Yes  No  
 Confirmed open?  Yes  No  
 BRADENHEAD SAMPLE TAKEN?  
 Yes  No  Gas  Liquid  
 Character of Bradenhead fluid:  
 Clear  Fresh  
 Sulfur  Salty  Black  
 Other:(describe) \_\_\_\_\_  
 No fluid observed

### 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: Polaris recently took over as operator for this well and final approval of that transfer has just been made official. December 30, 2022. Our team is actively working to correct all violations and missing submittals and going forward will utilize CDH Consulting to submit in a timely manner the required annual Form 17.

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

Test Performed By: Sam Spear Title: Supervisor Phone: (970) 5541988  
 Signed: Greg Wachel Title: President Date: 1/10/2023  
 Witnessed By: \_\_\_\_\_ Title: \_\_\_\_\_ Agency: \_\_\_\_\_