

State of Colorado

Oil and Gas Conservation Commission

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



Document Number:

402829422

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: 69175 3. BLM Lease No: _____
 2. Name of Operator: PDC ENERGY INC
 4. API Number; 05-123-45754-00 5. Multiple completion? ☐ Yes ☐ No
 6. Well Name: Harold Number: 6Y-214
 7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SESE,6,4N,64W,6
 8. County WELD 9. Field Name: WATTENBERG
 10. Minerals: ☐ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 09/20/202112. 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>1700</u> Fm: _____	Tubing: _____ Fm: _____	Prod Csg <u>1700</u> Fm: _____	Intermediate Csg: _____	Surf. Csg <u>230</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

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	1700		1700		CONTINUOUS	GAS
BRADENHEAD SAMPLE TAKEN?	05:00	1700		1700		DOWN TO 0	GAS
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid	10:00	1700		1700		NO FLOW	
Character of Bradenhead fluid:	15:00	1700		1700		NO FLOW	
<input type="checkbox"/> Clear <input type="checkbox"/> Fresh	20:00	1700		1700		NO FLOW	
<input type="checkbox"/> Sulfur <input type="checkbox"/> Salty <input type="checkbox"/> Black	25:00	1700		1700		NO FLOW	
Other:(describe)	30:00	1700		1700		NO FLOW	
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 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: Post Biosqueeze test, 230 PSI with continous gas flow blew down to 0 PSI after the first 5 min of test. No pressure or flow observed for the remainder of the test. PDC has scheduled a sampling event and will submit results as soon as possible to COGCC via form 43. This well is currently on a blowdown test presented to COGCC engineering to mitigate pressure post biosqueeze.

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

Test Performed By: _____	Title: _____	Phone: () _____
Signed: <u>JEnifer Hakkarinen</u>	Title: <u>Reg TEch</u>	Date: <u>10/2/2021</u>
Witnessed By: _____	Title: _____	Agency: _____