

FORM
17
Rev
11/20

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:
402721125

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; 05-123-49380-00 5. Multiple completion? Yes No
 6. Well Name: Erwin Number: 3N
 7. Location (QtrQtr, Sec, Twp, Rng, Meridian): SWSE,27,5N,64W,6
 8. County WELD 9. Field Name: WATTENBERG
 10. Minerals: Fee State Federal Indian

11. Date of Test: 06/14/2021
 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>0</u> Fm: _____	Tubing: _____ Fm: _____	Prod Csg <u>0</u> Fm: _____	Intermediate Csg: _____	Surf. Csg <u>145</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 checked="" type="checkbox"/> Yes <input 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	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		WHISPER
	05:00	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		DOWN TO 0	NONE
	10:00	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		NO FLOW	NONE
	15:00	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		NO FLOW	NONE
	20:00	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		NO FLOW	NONE
	25:00	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		NO FLOW	NONE
	30:00	<input type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/> 0		NO FLOW	NONE
Instantaneous Bradenhead PSIG at end of test: > <u>0</u>							

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
INTERMEDIATE SAMPLE TAKEN? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid	05:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	10:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	15:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	20:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	30:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	Instantaneous Intermediate Casing PSIG at end of test: > _____						

Comments: Delayed Completions Test. 0 PSI no pressure or flow observed for the entire 30 minute test. This well is currently on abatement system to mitigate bradenhead pressure.

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: Jenifer Hakkarinen Title: Regulatory Supervisor Date: 6/16/2021

Witnessed By: _____ Title: _____ Agency: _____