

FORM  
17Rev  
6/99

# State of Colorado Oil and Gas Conservation Commission

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Document Number:

401419319

## BRADENHEAD TEST REPORT

Step 1. Record all tubing and casing pressures as found. Step 2. Sample now. If intermediate or surface casing pressure > 25 psi. In sensitive areas, 1 psi.  
Step 3. Conduct Bradenhead test. Step 4. Conduct intermediate casing test. Step 5. Send report to BLM within 3 days and to OGCC within 10 days. Include wellbore diagram if not previously submitted or if wellbore configuration has changed since prior program. Attach gas and liquid analyses if sampled.

1. OGCC Operator Number: 10625 3. BLM Lease No: \_\_\_\_\_  
2. Name of Operator: HIGHLANDS NATURAL RESOURCES CORPORATION  
4. API Number; 05-005-07267-00 5. Multiple completion? ☐ Yes ☒ No  
6. Well Name: WILDHORSE Number: 5-64 15-16-1BHZ  
7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NESE,15,5S,64W,6  
8. County ARAPAHOE 9. Field Name: WILDCAT  
10. Minerals: ☐ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 10/02/2017

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: _____ Fm: _____	Tubing: _____ Fm: _____	Prod Csg 2960 Fm: _____	Intermediate Csg: _____	Surf. Csg 0
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### BRADENHEAD TEST

Buried valve? ☐ Yes ☒ NoConfirmed open? ☒ Yes ☐ No

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 Define characteristics of flow in "Bradenhead Flow" column using letter designations below:

O = No Flow; C = Continuous; D = Down to 0; V = Vapor  
H = Water H2O; M = Mud; W = Whisper; S = Surge; G = Gas

BRADENHEAD SAMPLE TAKEN?

☐ Yes ☒ No ☐ Gas ☐ LiquidCharacter of Bradenhead fluid: ☐ Clear ☐ Fresh☐ Sulfur ☐ Salty ☐ Black

Other:(describe)

Sample cylinder number:

Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermedia Csg PSIG	Bradenhead Flow:
00:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2960		O
05:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2951		O
10:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2944		O
15:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2935		O
20:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2927		O
25:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2921		O
30:00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2914		O

Instantaneous Bradenhead PSIG at end of test: &gt; 0

### INTERMEDIATE CASING TEST

Buried valve? ☐ Yes ☐ NoConfirmed open? ☐ Yes ☐ No

With gauges monitoring production, intermediate casing and tubing pressures, open the intermediate casing valve. Record pressures at five minute intervals Characterize flow in "Intermediate Flow" column using letter designations below:

O = No Flow; C = Continuous; D = Down to 0; V = Vapor  
H = Water H2O; M = Mud; W = Whisper; S = Surge; G = Gas

INTERMEDIATE SAMPLE TAKEN?

☐ Yes ☐ No ☐ Gas ☐ LiquidCharacter of Intermediate fluid: ☐ Clear ☐ Fresh☐ Sulfur ☐ Salty ☐ Black

Other:(describe)

Sample cylinder number:

Instantaneous Intermediate Casing PSIG at end of test: &gt;

Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermedia Csg PSIG	Bradenhead Flow:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Comments:

Test was performed during a shut-down in fracturing operations, to satisfy the COA for the Form 2. The slight loss in pressure on the production casing can be attributed to formation leak-off. The Bradenhead had no pressure and no flow throughout the test.

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

Test Performed By: Josh Thompson Title: Contractor Phone: ( )

Signed: Stephen Miller Title: VP Operations Date: 10/3/2017

Witnessed By: Marc Fagan Title: Lead Tech Professional Agency: