



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: 10598 3. BLM Lease No: _____
2. Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC
4. API Number; 05-057-06585-00 5. Multiple completion? ☐ Yes ☒ No
6. Well Name: Big Horn Number: 0780 1-17
7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NENW,17,7N,80W,6
8. County JACKSON 9. Field Name: NORTH PARK HORIZONTAL NIOBRARA
10. Minerals: ☐ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 07/16/2018
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>450</u>	Tubing: _____	Prod Csg <u>0</u>	Intermediate	Surf. Csg
	Fm: _____	Fm: _____	Fm: _____	Csg: <u>0</u>	<u>0</u>

BRADENHEAD TEST

Buried valve? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Confirmed open? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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	Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermedia Csg PSIG	Bradenhead Flow:
	00:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D
	05:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D
	10:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D
	15:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D
	20:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D
	25:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D
	30:00	<input type="checkbox"/> 450	<input type="checkbox"/>	<input type="checkbox"/> 0	0	D

BRADENHEAD SAMPLE TAKEN?
☐ Yes ☒ No ☐ Gas ☐ Liquid

Character of Bradenhead fluid: ☐ Clear ☐ Fresh
☐ Sulfur ☐ Salty ☐ Black

Other:(describe) No sample; whisper to 0

Sample cylinder number: _____

Instantaneous Bradenhead PSIG at end of test: > 0

INTERMEDIATE CASING TEST

Buried valve? <input type="checkbox"/> Yes <input type="checkbox"/> No Confirmed open? <input type="checkbox"/> Yes <input type="checkbox"/> 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	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"/>		

INTERMEDIATE SAMPLE TAKEN?
☐ Yes ☐ No ☐ Gas ☐ Liquid

Character of Intermediate fluid: ☐ Clear ☐ Fresh
☐ Sulfur ☐ Salty ☐ Black

Other:(describe) _____

Sample cylinder number: _____

Instantaneous Intermediate Casing PSIG at end of test: > _____

Comments: Field Inspection Document #: 689801377

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

Test Performed By: Shaun Sanders Title: Field Consultant Phone: (405) 4296518

Signed: Spence Laird Title: EHS&R Date: 7/18/2018

Witnessed By: Emily Waldron Title: Field Inspector Agency: COGCC