



## 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: 10531 3. BLM Lease No: \_\_\_\_\_  
2. Name of Operator: VANGUARD OPERATING LLC  
4. API Number; 05-045-07736-00 5. Multiple completion? ☒ Yes ☐ No  
6. Well Name: GIBSON GULCH UNIT Number: 9-30A  
7. Location (QtrQtr, Sec, Twp, Rng, Meridian): NWSW,29,6S,91W,6  
8. County GARFIELD 9. Field Name: MAMM CREEK  
10. Minerals: ☒ Fee ☐ State ☐ Federal ☐ Indian

11. Date of Test: 05/11/2017  
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: <u>87</u> Fm: <u>WMFK</u>	Prod Csg <u>94</u> Fm: <u>WMFK</u>	Intermediate Csg: _____	Surf. Csg <u>228</u>
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### 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 BRADENHEAD SAMPLE TAKEN? <input type="checkbox"/> Yes <input checked="" 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) Sample cylinder number: _____	Elapsed Time (Min:Sec)	Fm: Tubing	Fm: Tubing:	Prod Csg PSIG	Intermedia Csg PSIG	Bradenhead Flow:
	00:00	<input type="checkbox"/>	WMFK 87	<input type="checkbox"/> 94		G
	05:00	<input type="checkbox"/>	WMFK 88	<input type="checkbox"/> 94		O
	10:00	<input type="checkbox"/>	WMFK 88	<input type="checkbox"/> 95		O
	15:00	<input type="checkbox"/>	WMFK 89	<input type="checkbox"/> 95		O
	20:00	<input type="checkbox"/>	WMFK 88	<input type="checkbox"/> 95		O
	25:00	<input type="checkbox"/>	WMFK 90	<input type="checkbox"/> 95		O
	30:00	<input type="checkbox"/>	WMFK 90	<input type="checkbox"/> 95		O
Instantaneous Bradenhead PSIG at end of test: > <u>0</u>						

### 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 INTERMEDIATE SAMPLE TAKEN? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Liquid 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) Sample cylinder number: _____	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"/>		
Instantaneous Intermediate Casing PSIG at end of test: > _____						

Comments:

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

Test Performed By: Dustin Miller Title: Production Foreman Phone: (970) 230-1154

Signed: Scott Ghan Title: Senior EHS Specialist Date: 5/11/2017

Witnessed By: NA Title: NA Agency: NA