

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:
11-14-14

API No. 15
15-067-21790-00-00

Company: MERIT ENERGY COMPANY, LLC Lease: HOFFMAN ATU Well Number: M-4

County: GRANT Location: SE SW SW SE Section: 12 TWP: 27S RNG (E/W): 36W Acres Attributed:

Field: HUGPAN Reservoir: CHASE & COUNCIL GROVE Gas Gathering Connection: ONEOK **KCC WICHITA**

Completion Date: 8-25-14 Plug Back Total Depth: 3131 Packer Set at: NONE **DEC 08 2014**

Casing Size: 5.5 Weight: 17.0 Internal Diameter: 4.892 Set at: 3174 Perforations: 2566 To: 2922 **RECEIVED**

Tubing Size: Weight: Internal Diameter: Set at: Perforations: To:

Type Completion (Describe): COMINGLED GAS Type Fluid Production: NONE Pump Unit or Traveling Plunger? Yes / No: NO

Producing Thru (Annulus / Tubing): ANNULUS % Carbon Dioxide: 0.046 % Nitrogen: 14.424 Gas Gravity - G_g: 0.714

Vertical Depth(H): 2744 Pressure Taps: FLANGE (Meter Run) (Prover) Size: 2.067"

Pressure Buildup: Shut in 11-10-14 20 at 0930 (AM) (PM) Taken 11-13-14 20 at 0930 (AM) (PM)

Well on Line: Started 11-13-14 20 at 0930 (AM) (PM) Taken 11-14-14 20 at 0930 (AM) (PM)

OBSERVED SURFACE DATA

Duration of Shut-in 72.0 Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter Prover Pressure psig (P _m)	Pressure Differential in Inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _i) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						16.3	30.7			72.0	
Flow	1.000	12.4	5.4	33	75	12.6	27.0			24.0	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _d) (F _v) Mcfd	Circle one: Meter or Prover Pressure psia	Press. Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _{tt}	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
5.0728	26.80	12.03	1.1835	1.0270	1.0027	74.4	NONE	0.714

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 0.9 : (P_w)² = 0.7 : P_d = 88.0 % (P_c - 14.4) + 14.4 = 30.7 : (P_a)² = 0.207
(P_d)² =

(P _c) ² - (P _a) ² or (P _d) ² - (P _a) ²	(P _d) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _a ² 2. P _d ² - P _a ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: P _c ² - P _w ²	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
0.740	0.21	3.453	0.5383	0.850	0.4575	2.8676	213.27

Open Flow 213

Mcfd @ 14.65 psia

Deliverability

Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct. Executed this the 14 day of NOVEMBER, 20 14.

Copy to KCC Wichita
Witness (if any)

Precision Wichita & Testing
For Company
Mark Buel
Checked by

For Commission

Merit Energy Co. - Janna Burton