

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
15-067-21798-00-00

Company MERIT ENERGY COMPANY, LLC		Lease SMITH ATU		Well Number V-5	
County GRANT	Location SW SW NW NW	Section 25	TWP 27S	RNG (E/W) 36W	Acres Attributed
Field HUGPAN		Reservoir CHASE & COUNCIL GROVE		Gas Gathering Connection ONEOK	
Completion Date 10-7-14		Plug Back Total Depth 3190		Packer Set at NONE	
Casing Size 5.5	Weight 17.0	Internal Diameter 4.892	Set at 3254	Perforations 2614	To 2970
Tubing Size	Weight	Internal Diameter	Set at	Perforations	To

KEC WICHITA
DEC 08 2014
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Type Completion (Describe) COMINGLED GAS		Type Fluid Production WATER		Pump Unit or Travelling Plunger? Yes / No YES-PUMP	
Producing Thru (Annulus / Tubing) ANNULUS		% Carbon Dioxide 0.046		% Nitrogen 16.663	
Vertical Depth(H) 2792		Pressure Taps FLANGE		(Meter Run) (Prover) Size 2.067"	
Pressure Buildup:	Shut in 11-10-14	20 at 1015	(AM) (PM) Taken 11-13-14	20 at 1015	(AM) (PM)
Well on Line:	Started 11-13-14	20 at 1015	(AM) (PM) Taken 11-14-14	20 at 1015	(AM) (PM)

OBSERVED SURFACE DATA

Duration of Shut-In 72.0 Hours

Static / Dynamic Property	Orifice Size (inches)	Casing or Meter or Prover Pressure psig (Pm)	Pressure Differential in Inches H ₂ O	Flowing Temperature l	Well Head Temperature l	Casing Wellhead Pressure (P _w) or (P _i) or (P _e)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _e)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						46.8	61.2			72.0	
Flow	.875	40.0	1.7	33	75	40.2	54.6			24.0	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _v) (F _p) Mcfd	Casing or Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _t	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _s
3.8241	54.40	9.62	1.1995	1.0270	1.0049	45.5	NONE	0.695

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_e)² = 3.7 : (P_w)² = 3.0 : P_e = 89.2 % (P_e - 14.4) + 14.4 = 61.2 : (P_w)² = 0.207 (P_e)² =

(P _e) ² - (P _w) ² or (P _e) ² - (P _q) ²	(P _e) ² - (P _w) ²	Choose formula 1 or 2: 1. P _e ² - P _a ² 2. P _e ² - P _d ² divided by: P _e ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_e^2 - P_w^2}{P_e^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
3.54	0.76	4.631	0.6656	0.850	0.5658	3.6796	167.52

Open Flow 168 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 KEC Wichita
Witness (if any)

Precision Wireline Testing
For Company
Marked Powell
Checked by

For Commission

Merit Energy Co - Janna Burton