

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:
3-16-16

API No. 15
15-08122105-00-00

Company MERIT ENERGY COMPANY		Lease AI WATKINS		Well Number 20-1	
County HASKELL	Location	Section 20	TWP 30S	RNG (E/W) 32W	Acres Attributed
Field		Reservoir MARMATON/ATOKA	Gas Gathering Connection LINN ENERGY		
Completion Date		Plug Back Total Depth 5507	Packer Set at NONE		
Casing Size 5.5	Weight 17.0	Internal Diameter 4.892	Set at 5548	Perforations 4843-4854	To 5297-5303
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 5488	Perforations	To
Type Completion (Describe) COMINGLED GAS		Type Fluid Production WATER/OIL	Pump Unit or Traveling Plunger? Yes / No YES-PUMP UNIT		
Producing Thru (Annulus / Tubing) ANNULUS		% Carbon Dioxide 0.2070	% Nitrogen 10.8376	Gas Gravity - G _g	
Vertical Depth(H) 5073		Pressure Taps FLANGE		(Meter Run) (Prover) Size 3.068"	
Pressure Buildup:	Shut in 2-29-16	20 at 0945	(AM) (PM)	Taken 3-3-16	20 at 0945 (AM) (PM)
Well on Line:	Started 3-15-16	20 at 1030	(AM) (PM)	Taken 3-16-16	20 at 1030 (AM) (PM)

OBSERVED SURFACE DATA

Duration of Shut-in 72:00 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						467.9	482.3			72.0	
Flow	1.000	37.6	53.4	57	75	50.2	64.6			24.0	166.4

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _v) (F _p) Mcfd	Circle one: 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 _m
4.9116	52.0	52.7	1.1441	1.0029	1.0057	298.6	22288	0.764

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 232.6 ; (P_w)² = 4.3 ; P_d = 13.6 % ; (P_c - 14.4) + 14.4 = 482.3 ; (P_a)² = 0.207 ; (P_d)² =

(P _c) ² - (P _a) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _a ² 2. P _c ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
2332.41	228.31	1.018	0.0077	0.644	0.0050	1.0115	302.08

Open Flow 302 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 16 day of MARCH, 20 16

Witness (If any) _____
For Commission _____
KCG WICHITA Precision Weighing & Testing
For Company _____
Checked by _____
MAR 21 2016

RECEIVED