

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow
 Deliverability

Test Date:
4/16 to 4/17/15

API No. 15
077-21,621-00-00

Company Sandridge		Lease Lana		Well Number 1-A	
County Harper	Location C S/2 N/2 NE	Section 01	TWP 34S	RNG (E/W) 05W	Acres Attributed
Field Gerberding		Reservoir Miss	Gas Gathering Connection Atlas Pipeline		
Completion Date 5/05/08 re-completion		Plug Back Total Depth 4674	Packer Set at none		
Casing Size 5.5	Weight	Internal Diameter	Set at 4737	Perforations 4331	To 4604
Tubing Size 2.375	Weight	Internal Diameter	Set at 4284	Perforations	To
Type Completion (Describe) single		Type Fluid Production Oil/SW	Pump Unit or Traveling Plunger? Yes / No No		
Producing Thru (Annulus / Tubing) Tubing		% Carbon Dioxide .311	% Nitrogen 15.958	Gas Gravity - G _g .803	
Vertical Depth(H)		Pressure Taps flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in		4/13	20 15	at 10:30 am	(AM) (PM) Taken 4/16
Well on Line: Started		4/16	20 15	at 10:30 am	(AM) (PM) Taken 4/17

OBSERVED SURFACE DATA

Duration of Shut-in 72 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or Prover Pressure psig (Pm)	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						479	493.4			72	
Flow	1.000	48	28.7	71		448	462.4			24	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _s) (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
5.073	62.4	42.32	1.116	.9896		237		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 243.443 ; (P_w)² = 213.813 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_o)² = 0.207
(P_o)² = _____

(P _c) ² - (P _o) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _o 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: $\frac{P_c^2 - P_o^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- of ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
243.236	29.63	8.209	.9142	.850	.7770	5.98	1417
				assigned			

Open Flow 1417 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 21st day of April, 20 15.

Witness (if any) _____ Received _____ For Company
KANSAS CORPORATION COMMISSION
Colm, INC.

For Commission

Checked by

APR 23 2015

CONSERVATION DIVISION
WICHITA, Ks