

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date
9/12 to 9/13/14

API No 15
025-20,475-00-00

Company Benchmark Energy, LLC			Lease Pfeifer		3	Well Number
County Clark	Location CSENE	Section 36	TWP 33S	RNG (E/W) 22W	Acres Attributed	
Field Harper Ranch		Reservoir Miss	Gas Gathering Connection DCP			
Completion Date 9/17/81		Plug Back Total Depth		Packer Set at none		
Casing Size 5.5	Weight	Internal Diameter	Set at 5591	Perforations 5412	To 5478	
Tubing Size 2.375	Weight	Internal Diameter	Set at 5483	Perforations	To	
Type Completion (Describe) single		Type Fluid Production SW		Pump Unit or Traveling Plunger? Yes / No Yes - pump unit		
Producing Thru (Annulus / Tubing) annulus		% Carbon Dioxide .3251		% Nitrogen 1.6409	Gas Gravity - G _g 728	
Vertical Depth(H)		Pressure Taps flange			(Meter Run) (Prover) Size 2"	
Pressure Buildup	Shut in	9/09	20 14	at 11:15am	(AM) (PM)	Taken
Well on Line	Started	9/12	20 14	at 11:15 am	(AM) (PM)	Taken

OBSERVED SURFACE DATA

Duration of Shut-in 72 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						281.4	295.8			72	
Flow	.625	68	11.9	70		4.7	19.1			24	

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (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 _{tt}	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
1.914	82.4	31.31	1.172	.9905	-----	70		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 87.497 (P_w)² = .364 P_d = _____ % (P_c - 14.4) + 14.4 = _____ (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" ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
87.290	87.133	1.002	.0008	.850	.0006	1.00	70
				assigned			

Open Flow 70 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 14th day of September, 2014

Received _____
KANSAS CORPORATION COMMISSION For Company
Audrey M. Wilson
G.M., Inc.
Checked by

OCT 09 2014