

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test

(See Instructions on Reverse Side)

- Open Flow
 Deliverability

Test Date
9/12 to 9/13/14

API No. 15
025-20,565-00-00

Company Benchmark Energy, LLC			Lease Pfeifer		Well Number 4
County Clark	Location CSWNE	Section 36	TWP 33S	RNG (E/W) 22W	Acres Attributed
Field Harper Ranch		Reservoir Miss	Gas Gathering Connection DCP		
Completion Date 3/25/82		Plug Back Total Depth		Packer Set at none	
Casing Size 5 5	Weight	Internal Diameter	Set at 5674	Perforations 5393	To 5399
Tubing Size 2.375	Weight	Internal Diameter	Set at 5420	Perforations	To
Type Completion (Describe) single		Type Fluid Production SW	Pump Unit or Traveling Plunger? Yes - pump unit		Yes / No
Producing Thru (Annulus / Tubing) annulus		% Carbon Dioxide .3869	% Nitrogen 2.6443	Gas Gravity - G _g .742	
Vertical Depth(H)		Pressure Taps flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup.	Shut in	20	14	at	11:30 am (AM) (PM)
				Taken	9/12 20 14 at 11:30 am (AM) (PM)
Well on Line	Started	20	14	at	11:30 am (AM) (PM)
				Taken	9/13 20 14 at 11:30 am (AM) (PM)

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 _t) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _t) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						7.0	21.4			72	
Flow	.625	68	9.6	70		3.3	17.7			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 _t	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
1.914	82.4	28.13	1.161	.9905	-----	62		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_a)² = 0 207

(P_d)² = _____

(P_c)² = .457

(P_w)² = .313

P_d = _____ %

(P_c - 14 4) + 14 4 = _____

(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)
.25	.144	1.736	.2395	.850	2035	1.59	98
				assigned			

Open Flow **98**

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, 20 14

Received
KANSAS CORPORATION COMMISSION

Clifford M. Wilson
For Company

Witness (if any)

OCT 09 2014

G.M. Inc.
Checked by

For Commission

CONSERVATION DIVISION
WICHITA, KS