

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:
1/29 to 1/30/15

API No. 15
033-21,298-00-00

Company American Warrior, Inc		Lease Murdock		Well Number 3	
County Comanche	Location CNENWSW	Section 03	TWP 35S	RNG (E/W) 16W	Acres Attributed
Field Aetna Gas Area		Reservoir Miss		Gas Gathering Connection Oneok	
Completion Date 2/27/02		Plug Back Total Depth 5466		Packer Set at none	
Casing Size 5.5	Weight	Internal Diameter	Set at 5500	Perforations 5262	To 5318
Tubing Size	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) single		Type Fluid Production Oil/SW		Pump Unit or Traveling Plunger? Yes / No yes - pump unit	
Producing Thru (Annulus / Tubing) annulus		% Carbon Dioxide .1920		% Nitrogen .6111	
Gas Gravity - G _g .659		Vertical Depth(H) Pressure Taps flange		(Meter Run) (Prover) Size 3"	
Pressure Buildup: Shut in 1/26 20 15 at 9:00 am (AM) (PM)		Taken 1/29 20 15 at 9:00 am (AM) (PM)			
Well on Line: Started 1/29 20 15 at 9:00 am (AM) (PM)		Taken 1/30 20 15 at 9:00 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 _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						123.5	137.9			72	
Flow	.750	30	6	36		80.8	95.2			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
2.740	44.4	16.32	1.232	1.024	-----	56		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 19.016 : (P_w)² = 9.063 : P_d = _____ % (P_c - 14.4) + 14.4 = _____ : (P_d)² = 0.207
(P_d)² = _____

(P _c) ² - (P _d) ² or (P _c) ² - (P _w) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _d ² 2. P _c ² - P _w ² divided by: P _c ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
18.809	9.953	1.889	.2762	.850	.2347	1.72	96
				Assigned			

Open Flow **96** Mcfd @ 14.65 psia X .50 = Deliverability **48** 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 2nd day of February, 20 15.

Received
KANSAS CORPORATION COMMISSION

Witness (if any) _____ For Company
_____ For Commission

FEB 05 2015

Checked by _____