

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:
10/16 to 10/17/14

API No. 15
033-21,597-00-00

Company Oil Producers, Inc. of Kansas			Lease Gray		Well Number 1-23
County Comanche	Location NWNWSE	Section 23	TWP 31S	RNG (E/W) 18W	Acres Attributed
Field Wilmore		Reservoir Marmaton	Gas Gathering Connection Oneok		
Completion Date 3/01/12		Plug Back Total Depth CIBP 5050	Packer Set at none		
Casing Size 5.5	Weight	Internal Diameter	Set at 5892	Perforations 4934	To 4941
Tubing Size none	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) single		Type Fluid Production oil/water	Pump Unit or Traveling Plunger? no		Yes / No
Producing Thru (Annulus / Tubing) annulus		% Carbon Dioxide .022	% Nitrogen 3.781		Gas Gravity - G _g .725
Vertical Depth(H)		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in		10/13	20 14	at 10:00 am	(AM) (PM) Taken 10/16
Well on Line: Started		10/16	20 14	at 10:00 am	(AM) (PM) Taken 10/17

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						226.5	240.9			72	
Flow	.750	40.8	4.9	58		183.9	198.3			24	0

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 (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
2.779	55.2	16.45	1.174	1.002	-----	54		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_a)² = 0.207
(P_d)² = _____

(P_c)² = 58.032 ; (P_w)² = 39.322 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____

(P _e) ² - (P _a) ² or (P _e) ² - (P _d) ²	(P _e) ² - (P _w) ²	Choose formula 1 or 2: 1. P _e ² - P _a ² 2. P _e ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)
57.825	18.71	3.090	.4899	.850	.4614	2.89	156
				assigned			

Open Flow 156

Mcf/d @ 14.65 psia


Deliverability

Mcf/d @ 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 18th day of October, 20 14.

Witness (if any)

For Commission


 Received
 KANSAS CORPORATION COMMISSION
 OCT 23 2014
 Checked by _____

CONSERVATION DIVISION
WICHITA, KS

Meter Analysis

October, 2014

ONEOK Partners

KGS DAILY_TF_GLICK	
Meter: 460094	Name: GRAY 1-23

	<u>Mol %</u>	<u>Liquid Content</u>		
Carbon Dioxide	0.022	0.0037	Pressure Base	14.650
Nitrogen	3.781	0.4136	Temperature Base	60.00
Methane	83.092	14.0066		
Ethane	4.139	1.1006		
Propane	3.672	1.0059	Relative Density	0.7248
Iso-Butane	0.595	0.1935	Dry Heating Value	1208.76
N-Butane	1.885	0.5908	As Del Heating Value	
Iso-Pentane	0.583	0.2120	Sat Heating Value	1188.20
N-Pentane	0.721	0.2599		
Hexane	1.375	0.5621		
Heptane			C2+ Liquid Content	3.9249
Octane			C5+ Liquid Content	1.0340
Nonane			C6+ Liquid Content	0.5621
Decane			26# Gasoline	1.6647
Oxygen	0.000	0.0000	H2S ppm	
Hydrogen				
Helium	0.135	0.0000		
Argon				
Water Vapor				
Hydrogen Sulfide				
Total	100.000	18.3488		

Received
KANSAS CORPORATION COMMISSION

OCT 23 2014

CONSERVATION DIVISION
WICHITA, KS