

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Form G-2
(Rev. 6/99)

Type Test
 Open Flow
 Deliverability

Test Date: **3/4/15**

API No. **15- 129 20472 - 0000**

Company Anadarko E&P Onshore LLC		Lease INTERSTATE		Well Number 13-21	
County MORTON	Location SE NW SE	Section 21	TWP 34	RNGE (E/W) 43	Acres Attributed 0
Field INTERSTATE		Reservoir REDCAVE	Gas Gathering Connection HUGS W		
Completion Date 11/11/80		Plug Back Total Depth 1265	Packer Set at NA		
Casing Size 4.5	Weight 10.5	Internal Diameter 4.052	Set at 1265	Perforations 1188	To 1203
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 1202	Perforations NA	To NA
Type Completion (Describe) SINGLE GAS		Type Fluid Production NA	Pump Unit or Travelling Plunger? NA		Yes / No
Producing Thru (Annulus / Casing) CASING		% Carbon Dioxide 1.27	% Nitrogen 41.17	Gas Gravity - G _g 0.767	
Vertical Depth (H) 1196		Pressure Taps FLANGE	(Meter Run) X	(PROVER)	Size 3
Pressure Buildup: Well on Line:		Shut in 3/3/15 Started NA	at 11:00 am at	(AM)(PM) (AM)(PM)	Taken 3/4/15 Taken NA
					at 11:00 am at
					(AM)(PM) (AM)(PM)

OBSERVED SURFACE DATA

Duration of Shut-in **24 Hours**

Static / Dynamic Property	Orifice Size inches	Circle One: Meter or Prover Pressure psig	Pressure Differential in (h) 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						41	55.4			24	
Flow	0.500	NA	NA	NA	60	NA	0			NA	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (F _p) Mcfd	Circle One: Meter or Prover Pressure psia	Pressure Extension Sqrt ((P _m)(H _w))	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
1.214	14.4	0	1.142	1.063	1.000	0	0	0.000

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_a)²= 3.069 (P_w)²= 0 P_d= % (P_c-14.4)+14.4= (P_w)²=0.207
(P_c)²= (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. (P _c ² -P _w ²) and divide by:	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG()	Antilog	Open Flow Deliverability Equals R x Antilog Mcfd
2.862	3.069	0.933	-0.03	0.850	-0.026	0.943	0

Open Flow

Deliverability

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 4th day of March 2015

Witness (if any)

Thomas R. Wiggins
For Company

For Commission

Checked by

Received
KANSAS CORPORATION COMMISSION

APR 09 2015

CONSERVATION DIVISION
WICHITA, KS

I declare under penalty or perjury under the laws of the state of Kansas that I am aut
 exempt status under Rule K.A.R. 82-3-304 on behalf of the operator Anadarko E&P Onshore
 and that the foregoing information and statements contained on this application form are true and correct to
 the best of my knowledge and belief based upon gas production records and records of equipment installa-
 tion and/or of type completion or upon use of the gas well herin named.

I hereby request a permanent exemption form open flow testing for the Interstate #13-21
 gas well on the grounds that said well:

(Check One)

- is a coalbed methane producer
- is cycled on plunger lift due to water
- is a source of natural gas for injection into an oil reservoir undergoing ER
- is on vacuume at the present time; KCC approval Docket No. _____
- is incapable of producing at a daily rate in excess of 150 mcf/D

Date: 3/30/2015

Signature: C. Houston

Title: Production Engineer

Instructions All active gas wells must have at least on original G-2 form on file with the conservation division. If a gas well meets the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to obtain a testing exemption.

At some point during the succeeding calender year, wellhead shut-in pressure shall be measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under "observed surface data." Shut-in pressure shall thereafter be reported yearley in the same manner.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than thirty (30) days after the taking of the pressure reading. The form must be signed and dated on the front side as though it was a verified report of test results:

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CONSERVATION DIVISION
 WICHITA, KS