

APR 15 2002

KANSAS CORPORATION COMMISSION  
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow  
 Deliverability

Test Date:  
April 1, 2002

API No. 15

023-20328-00-00

LEGAL SECTION

Company Valley Operating, Inc.		Lease Barnhart		Well Number 28-9-1	
County Cheyenne	Location NESE	Section 28	TWP 3S	RNG (E/W) 42W	Acres Attributed
Field Wildcat		Reservoir Niobrara		Gas Gathering Connection Bitter Creek	
Completion Date 12-1-93		Plug Back Total Depth 1614'		Packer Set at N/A	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052"	Set at 1646'	Perforations 1418'	To 1442'
Tubing Size N/A	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) Single Gas		Type Fluid Production N/A		Pump Unit or Traveling Plunger? Yes / <input checked="" type="checkbox"/> No	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide .386		% Nitrogen 5.801	
Vertical Depth(H) 1655'		Pressure Taps		Gas Gravity - G <sub>g</sub> (Meter Run) (Prover) Size 2" Meter Run	
Pressure Buildup: Shut in _____ 19 _____ at _____ (AM) (PM) Taken _____ 19 _____ at _____ (AM) (PM)					
Well on Line: Started <u>March 31, 2002</u> at <u>8:00</u> <u>AM</u> (PM) Taken <u>April 1, 2002</u> at <u>8:00</u> <u>AM</u> (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in \_\_\_\_\_ Hours

Static / Dynamic Property	Orifice Size Inches	Circle one: Meter or Prover Pressure psig	Pressure Differential in (h) Inches H <sub>2</sub> O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in											
Flow	open	63	14	56	56	63	76			24	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>s</sub> ) (F <sub>o</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\frac{1}{2} P_m \times H_w$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>t</sub>	Deviation Factor F <sub>dv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>c</sub>
1.57	76					51		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>s</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>g</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>s</sub>)<sup>2</sup> = 0.207  
(P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>s</sub> ) <sup>2</sup> or (P <sub>t</sub> ) <sup>2</sup> - (P <sub>o</sub> ) <sup>2</sup>	(P <sub>w</sub> ) <sup>2</sup> - (P <sub>o</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>c</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> 2. P <sub>t</sub> <sup>2</sup> - P <sub>o</sub> <sup>2</sup> divided by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1, or 2, and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_s^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog Mcfd

Open Flow 51 Mcfd @ 76 psia 13 Deliverability 51 Mcfd @ 76 psia 13

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 1 day of April, 2002

Witness (if any) \_\_\_\_\_  
For Commission

Valley Operating, Inc.  
For Company  
Tom W. Roelfs  
Checked by [Signature]

APR 12 1972

REGISTRATION DIVISION

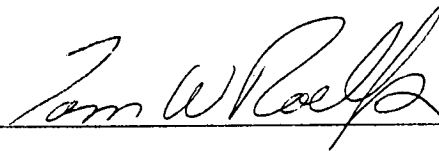
I declare under penalty or perjury under the laws of the state of Kansas that I am authorized to request exempt status under Rule K.A.R. 82-3-304 on behalf of the operator Valley Operating, Inc. and that the foregoing information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon gas production records and records of equipment installation and/or of type completion or upon use of the gas well herein named.

I hereby request a permanent exemption from open flow testing for the Barnhart 28-9-1 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 vacuum at the present time; KCC approval Docket No. \_\_\_\_\_
- is incapable of producing at a daily rate in excess of 150 mcf/D

Date: 4-1-02

Signature:   
Title: Field Foreman

**Instructions:** All active gas wells must have at least an 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 calendar 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 yearly 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.

## KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

Open Flow  
 Deliverability

Test Date:  
**April 1, 2002**

API No. 15  
**023-20328**

Company <b>Valley Operating, Inc.</b>		Lease <b>Barnhart</b>		Well Number <b>28-9-1</b>	
County <b>Cheyenne</b>	Location <b>NESE</b>	Section <b>28</b>	TWP <b>3S</b>	RNG (E/W) <b>42W</b>	Acres Attributed
Field <b>Wildcat</b>		Reservoir <b>Niobrara</b>		Gas Gathering Connection <b>Bitter Creek</b>	
Completion Date <b>12-1-93</b>		Plug Back Total Depth <b>1614'</b>		Packer Set at <b>N/A</b>	
Casing Size <b>4 1/2"</b>	Weight <b>10.5#</b>	Internal Diameter <b>4.052"</b>	Set at <b>1646'</b>	Perforations <b>1418'</b>	To <b>1442'</b>
Tubing Size <b>N/A</b>	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) <b>Single Gas</b>		Type Fluid Production <b>N/A</b>		Pump Unit or Traveling Plunger? Yes / <b>(No)</b>	
Producing Thru (Annulus / Tubing) <b>Annulus</b>		% Carbon Dioxide <b>.386</b>		% Nitrogen <b>5.801</b>	
Vertical Depth(H) <b>1655'</b>		Pressure Taps		(Meter Run) (Prover) Size <b>2" Meter Run</b>	

Pressure Buildup: Shut in \_\_\_\_\_ 19 \_\_\_\_ at \_\_\_\_\_ (AM) (PM) Taken \_\_\_\_\_ 19 \_\_\_\_ at \_\_\_\_\_ (AM) (PM)  
Well on Line: Started **March 31, 2002** at **8:00** **(AM)** (PM) Taken **April 1, 2002** at **8:00** **(AM)** (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in \_\_\_\_\_ Hours

Static / Dynamic Property	Orifice Size Inches	Circle one: Meter or Prover Pressure psig	Pressure Differential in (h) Inches H <sub>2</sub> O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In											
Flow	<b>open</b>	<b>63</b>	<b>14</b>	<b>56</b>	<b>56</b>	<b>63</b>	<b>76</b>			<b>24</b>	<b>0</b>

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>o</sub> ) (F <sub>p</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\frac{1}{2} P_m \times H_w$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
<b>1.57</b>	<b>76</b>					<b>51</b>		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>a</sub>)<sup>2</sup> = 0.207

(P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_

(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>o</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>o</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>c</sub> <sup>2</sup> - P <sub>o</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> divided by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	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" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog Mcfd

Open Flow **51** Mcfd @ ~~4.45~~ **13** psia Deliverability **51** Mcfd @ ~~4.45~~ **13** 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 1 day of April 2002.

\_\_\_\_\_  
Witness (if any)  
\_\_\_\_\_  
For Commission

**Valley Operating, Inc.**  
\_\_\_\_\_  
For Company  
**Tom W. Roelfs**  
\_\_\_\_\_  
Checked by

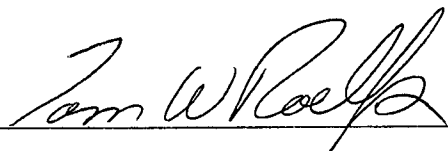
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