

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

(See Instructions on Reverse Side)

Type Test:

- Open Flow  
 Deliverability

Test Date: 5-23-99 API No. 15

Company <u>Rupe Oil Co, Inc</u>		Lease <u>Sunridge Farms</u>			Well Number <u>1</u>	
County <u>Ellsworth</u>	Location <u>C NE/4</u>	Section <u>17</u>	TWP <u>16S</u>	RNG (E/W) <u>7W</u>	Acres Attributed <u>160</u>	
Field <u>Kanak</u>		Reservoir <u>Tarkio</u>		Gas Gathering Connection <u>Enron</u>		
Completion Date <u>6-27-94</u>		Plug Back Total Depth <u>1835'</u>		Packer Set at <u>none</u>		
Casing Size <u>4 1/2</u>	Weight <u>9.5</u>	Internal Diameter <u>4.090</u>	Set at <u>1876'</u>	Perforations <u>1758'</u>	To <u>- 1774'</u>	
Tubing Size <u>2 3/8" #</u>	Weight <u>4.2 #</u>	Internal Diameter <u>1.995"</u>	Set at <u>1772'</u>	Perforations <u>O.E.</u>	To	
Type Completion (Describe) <u>Single - Gas</u>		Type Fluid Production <u>SW</u>		- Pump Unit or Traveling Plunger? <u>Yes / No</u> <u>no</u>		
Producing Thru (Annulus / Tubing) <u>tb9</u>		% Carbon Dioxide <u>0.036</u>		% Nitrogen <u>38</u>		Gas Gravity - G <sub>g</sub> <u>0.732</u>
Vertical Depth(H) <u>1766'</u>		Pressure Taps <u>Flange</u>			(Meter Run) (Prover) Size <u>2.0"</u>	
Pressure Buildup: Shut in <u>5-3</u> 19 <u>99</u> at <u>10<sup>00</sup></u> (AM) (PM) Taken <u>5-22</u> 19 <u>99</u> at <u>9<sup>00</sup></u> (AM) (PM)						
Well on Line: Started <u>5-22</u> 19 <u>99</u> at <u>9<sup>00</sup></u> (AM) (PM) Taken <u>5-23</u> 19 <u>99</u> at <u>9<sup>00</sup></u> (AM) (PM)						

### OBSERVED SURFACE DATA

Duration of Shut-in > 72 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>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in	—	—	—	—	<u>72</u>	<u>350</u>	<u>364.4</u>	<u>280</u>	<u>294.4</u>	<u>&gt; 72</u>	—
Flow	<u>0.750</u>	<u>90</u>	<u>5</u>	<u>67</u>	<u>77</u>	<u>180</u>	<u>194.4</u>	<u>90</u>	<u>104.4</u>	<u>24</u>	<u>0</u>

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</sub> ) (F <sub>s</sub> ) Mctd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times H_w}$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>t</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mctd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
<u>2.779</u>	<u>104.4</u>	<u>22.84</u>	<u>1.169</u>	<u>0.9933</u>	<u>1.006</u>	<u>74</u>	—	—

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 132.8    (P<sub>w</sub>)<sup>2</sup> = 37.8    P<sub>d</sub> = — %    (P<sub>c</sub> - 14.4) + 14.4 = — :    (P<sub>g</sub>)<sup>2</sup> = 0.207  
(P<sub>g</sub>)<sup>2</sup> = —

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>g</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</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>d</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> - P <sub>d</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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog Mctd
<u>132.6</u>	<u>95.0</u>	<u>1.396</u>	<u>0.1449</u>	<u>0.727</u>	<u>0.1053</u>	<u>1.274</u>	<u>94</u>

Open Flow 94 Mctd @ 14.65 psia      Deliverability Mctd @ 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 10<sup>th</sup> day of June, 19 99.

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

John Cecil, Jr  
For Company  
Checked by \_\_\_\_\_

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 Rupe Oil Co., 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 Sunridge Farms #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: 6-10-99

Signature: John Carl Jr  
Title: Consulting Engineer

**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

(See Instructions on Reverse Side)

Type Test:

- Open Flow  
 Deliverability

Test Date:

11-19-02

API No. 15

Company <u>Rupe Oil Co.</u>		Lease <u>Summit &amp; Tanna</u>			Well Number <u>1</u>
County <u>Cherokee</u>	Location <u>CNE14</u>	Section <u>17</u>	TWP <u>16 S</u>	RNG (E-W) <u>7</u>	Acres Attributed <u>160</u>
Field <u>Donah</u>	Reservoir <u>Forbis</u>		Gas Gathering Connection <u>Rupe Oil Co.</u>		
Completion Date <u>6-27-94</u>	Plug Back Total Depth <u>1835</u>		Packer Set at		
Casing Size <u>4 1/2</u>	Weight <u>9.5</u>	Internal Diameter <u>4.090</u>	Set at <u>1876</u>	Perforations <u>1758</u>	To <u>1774</u>
Tubing Size <u>2 3/8</u>	Weight <u>4.7</u>	Internal Diameter <u>1.995</u>	Set at <u>1772</u>	Perforations	To
Type Completion (Describe) <u>single - gas</u>	Type Fluid Production <u>Saltwater</u>		Pump Unit or Traveling Plunger? <input checked="" type="checkbox"/> Yes / No		
Producing Through (Annulus) Tubing <u>Annulus</u>	% Carbon Dioxide <u>0.036</u>	% Nitrogen <u>38</u>	Gas Gravity - G <sub>s</sub> <u>0.732</u>		
Vertical Depth(H) <u>1766</u>	Pressure Taps <u>Change</u>		(Meter Run) (Prover) Size <u>2</u>		
Pressure Buildup: Shut in <u>11-18</u> at <u>12:15</u> (AM) (PM) Taken <u>11-19</u> at <u>12:15</u> (AM) (PM)					
Well on Line: Started _____ 19 ____ at _____ (AM) (PM) Taken _____ 19 ____ at _____ (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 <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>e</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>e</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						<u>70</u>				<u>24</u>	
Flow											

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>v</sub> ) (F <sub>p</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times H_w}$	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>

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>e</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>e</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>d</sub>)<sup>2</sup> = 0.207  
(P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

$(P_e)^2 - (P_w)^2$ or $(P_e)^2 - (P_d)^2$	$(P_e)^2 - (P_w)^2$	Choose formula 1 or 2: 1. P <sub>e</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> 2. P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> divided by: P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1. or 2. and divide by: $P_e^2 - P_w^2$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog Mcfd

Open Flow 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 19 day of November, 2002

\_\_\_\_\_  
Witness (if any)

\_\_\_\_\_  
For Company

\_\_\_\_\_  
For Commission

\_\_\_\_\_  
Checked by

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 Range Oil Co. 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 Summit Linn 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: 11-19-02

Signature: Mike Ornell

Title: Manager

**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.









3636 S. Peoria Ave., Tulsa, OK 74105-3255

P.O. Box 2481  
Tulsa, OK 74101-2481

TELEPHONE  
(918) 749-7772  
FAX: (918) 747-4863

GAS STATEMENT  
RECEIVED DEC 19 1994

Field:

Operator:

Station: 4

Prod. Period: November 1994 (ID# 759901)

Customer: RUPE OIL COMPANY INC.

Lease: KANOPOLIS FEDERAL #1

Type Meter	Base				FPb Factor	Btu Cond	Ranges			Clock Hours	Fitting Type	Static Source	Press Set	Line Size	Percent		Machine Const.	Date Processed		
	Press	Atmos	Btu	Temp			Static	Diff	Temp						CO2	N2				
ORIFICE	14.650	13.200	0.000	15	1.0055		500	100	0	168	FLANGE	DOWN STREAM	PSIG	2.067	0.000	0.000	7.0000	12-16-94		
CHT Num	Adjustments			Averages			Int Cnt	Specific Gravity	Hours Flow	Orifice Size	Factors					Btu Cu. ft.	Chart Dates	Volume		
	Diff	Press	Hours	Press	Diff	Temp					Orifice	Gravity	Temp	Fr - Fy	Fpv			Misc.	Mcf	Mmbtu
1				96	6.2	60	620	0.7500	167.0	0.500	50.52	1.1547	1.0000	1.0026	1.0119	1.0000		11-01-08	258	
2				96	0.2	60	35	0.7500	53.6	0.500	50.52	1.1547	1.0000	1.0129	1.0118	1.0000		11-08-15	14	
				102	0.6	60	87	0.7500	72.2	0.500	50.52	1.1547	1.0000	1.0070	1.0125	1.0000		11-15-23	36	
				Chart not rec'd for 11/29-12/1 period !																
4				76	0.6	60	65	0.7500	63.2	0.500	50.52	1.1547	1.0000	1.0082	1.0093	1.0000		11-23-29	27	
				Totals ) ) )			95	4.9	60	807										335 ✓

Handwritten initials

ENRON GAS PROCESSING  
 BUSHTON LABORATORY  
 HYDROCARBON ANALYSIS REPORT

Sample Name **SUN RIDGE FARMS**

Sample Info **Laboratory No. 954346**  
 Sample Type SPOT  
 Sample Date 08:00 09/15/95

Acquired on 18 Sep 95 06:48 AM

Data File Name C:\HPCHEM4\DATA\09-15-95\NV-F0114.D

COMPONENT	Mole %	Ideal Btu	Comp Z	S. G.	Gal/Mscf
HELIUM	1.378	0	-0.000234272	-0.001904492	
HYDROGEN	0.000	0	0	0	
OXYGEN	0.000	0	0	0	
NITROGEN	38.382	0	0.00629462	0.371240553	
METHANE	57.103	576.5735934	0.024897107	0.316307462	
C-DIOXIDE	0.036	0	2.28773E-05	0.000543193	
ETHANE	2.112	37.36796901	0.001936285	0.021922035	0.564742168
PROPANE	0.807	20.29794628	0.001118117	0.012283158	0.222292496
ISOBUTANE	0.000	0	0	0	0
N-BUTANE	0.000	0	0	0	0
ISOPENTANE	0.000	0	0	0	0
N-PENTANE	0.000	0	0	0	0
HEXANES+	0.183	9.367934829	0.000876652	0.00587667	0.079680628
TOTAL	100.000	643.607	0.035	0.730	0.867

Molecular Weight 21.145

IDEAL@14.73 PSIA 60 DEG. F

Z= 0.998781  
 REAL BTU 645.9  
 REAL S. G. 0.732367

COMMENTS :