

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

Type Test:

- Open Flow  
 Deliverability

SI 24hrs.

(See Instructions on Reverse Side)

Test Date: 9-21-04

API No. 15 - 181-20347-0000

Company <u>Rosewood Resources</u>			Lease <u>Harden</u>			Well Number <u>1-4</u>		
County <u>Sherman</u>	Location <u>SW-NE</u>	Section <u>4</u>	TWP <u>7S</u>	RNG (E/W) <u>39 W</u>	Acres Attributed <u>80</u>			
Field <u>Goodland</u>		Reservoir <u>Niobrara</u>		Gas Gathering Connection <u>B.S.I.</u>				
Completion Date <u>7-22-04</u>		Plug Back Total Depth <u>1198</u>			Packer Set at			
Casing Size <u>4.5</u>	Weight <u>10.5</u>	Internal Diameter <u>4.052</u>	Set at <u>1211</u>	Perforations <u>1024</u>	To <u>1054</u>			
Tubing Size <u>N/A</u>	Weight	Internal Diameter	Set at	Perforations	To			
Type Completion (Describe) <u>SINGLE (vertical)</u>			Type Fluid Production <u>GAS</u>		Pump Unit or Traveling Plunger? Yes / <input checked="" type="checkbox"/> No			
Producing Through (Annulus) <u>Casing</u>		% Carbon Dioxide <u>0</u>		% Nitrogen <u>0</u>		Gas Gravity - G <sub>g</sub> <u>0.64</u>		
Vertical Depth (H) <u>1216</u>		Pressure Taps <u>FLANGE</u>		(Meter Run) (Prover) Size <u>2"</u>				
Pressure Buildup: Shut in <u>7-24</u> 20 <u>04</u> at <u>7</u> (AM) (PM) Taken <u>9-21</u> 20 <u>04</u> at <u>7</u> (AM) (PM)								
Well on Line: Started <u>9-21</u> 20 <u>04</u> at <u>7</u> (AM) (PM) Taken <u>9-23</u> 20 <u>04</u> at <u>7</u> (AM) (PM)								

### OBSERVED SURFACE DATA

Duration of Shut-in 1416 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter Prover Pressure psig (Pm)	Pressure Differential in 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>65</u>	<u>79.4</u>				
Flow						<u>58</u>	<u>72.4</u>			<u>24</u>	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>o</sub> ) (F <sub>p</sub> ) Mcfd	Circle one: Meter or Prover Pressure psig (Pm) psia	Press Extension $\sqrt{P_m \times h}$	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>
						<u>28</u>		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>a</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>a</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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)

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 14 day of January, 20 05.

Devin Gamba  
Witness (if any)

Rosewood Resources  
For Company

I declare under penalty of 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 Rosewood Resources and that the foregoing pressure information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon available production summaries and lease records of equipment installation and/or upon type of completion or upon use being made of the gas well herein named.

I hereby request a one-year exemption from open flow testing for the HARDEN 1-04 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 not capable of producing at a daily rate in excess of 250 mcf/D

I further agree to supply to the best of my ability any and all supporting documents deemed by Commission staff as necessary to corroborate this claim for exemption from testing.

Date: 1/14/05

Signature: *Donald Huns*  
Title: *Reserv Engineer*

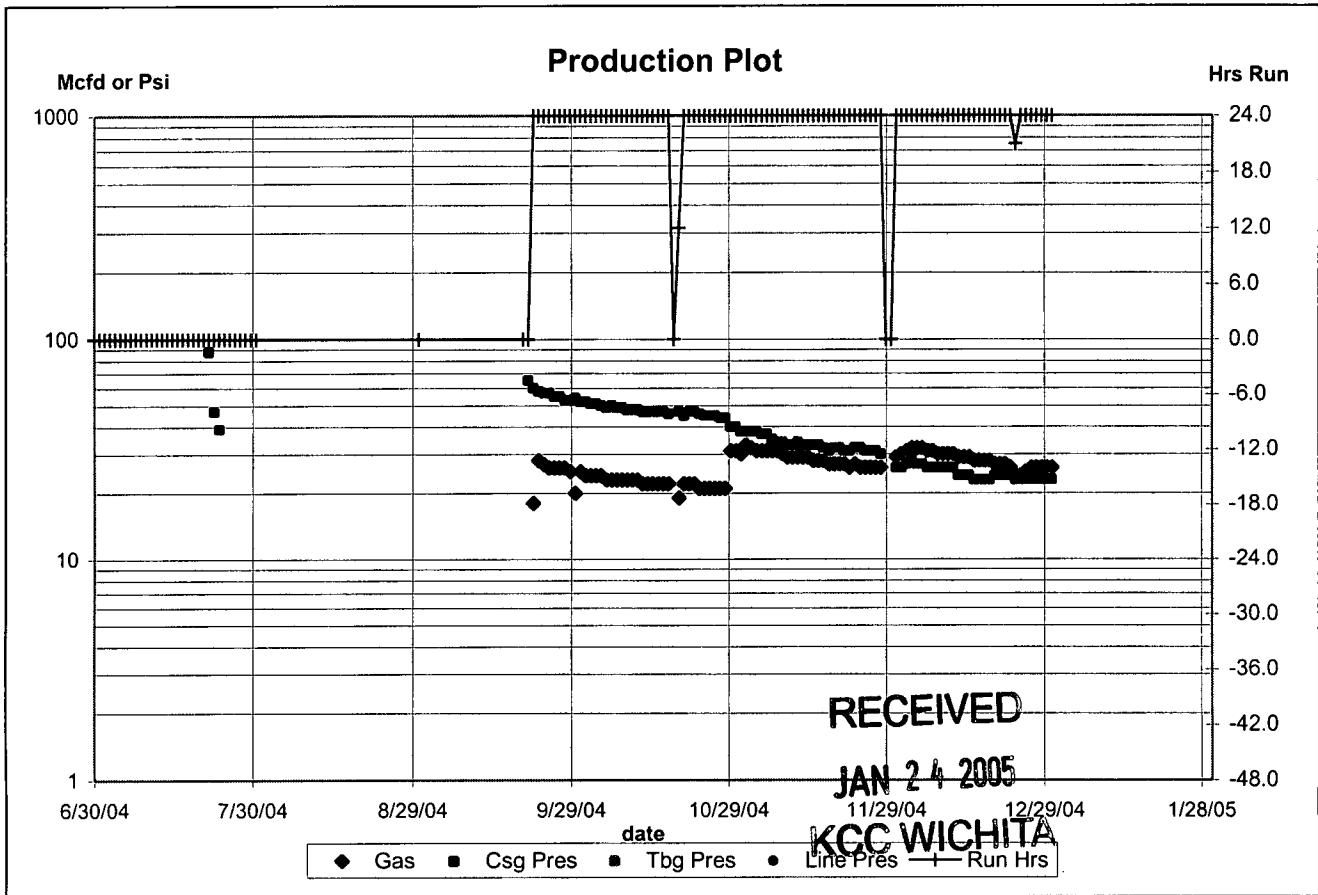
**Instructions:** If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well.

At some point during the current calendar year, wellhead shut-in pressure shall have been 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 for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility for exemption **IS** denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results.

Actual  
HARDEN 01-04

	<u>Gas</u>	<u>Csg Press</u>	<u>Tbg Press</u>	<u>Line Press</u>	<u>Hrs</u>	<u>Remarks</u>
2004/01						
2004/02						
2004/03						
2004/04						
2004/05						
2004/06	null	null	null	null	null	Spud & TD
2004/07	0	null	null	null	0.0	Frac
2004/08	0	null	null	null	0.0	SI & WOPL
2004/09	222	56.7	null	null	24.0	G-2 & 1st Sales
2004/10	687	47.1	null	null	23.6	null
2004/11	800	33.5	null	null	24.0	null
2004/12	877	24.6	null	null	23.9	null
<b>TOTAL</b>	<b>2586</b>	<b>40.5</b>			<b>23.9</b>	



Actual						
HARDEN 01-04						
Gas	Csg Press	Tbg Press	Line Press	Hrs	Remarks	
06/25/2004	null	null	null	null	null	Spud 1:30pm Set Surf Csg 372 & WOC
06/26/2004	null	null	null	null	null	TD 1216 set 4.5" 10.5# Prd Csg @ 1211
06/27/2004	null	null	null	null	null	WOC. RR. RDMO. & WOCU
06/28/2004	null	null	null	null	null	WOCU
06/29/2004	null	null	null	null	null	WOCU
06/30/2004	null	null	null	null	null	WOCU
07/01/2004	0	null	null	null	0.0	WOCU
07/02/2004	0	null	null	null	0.0	WOCU
07/03/2004	0	null	null	null	0.0	WOCU
07/04/2004	0	null	null	null	0.0	WOCU
07/05/2004	0	null	null	null	0.0	WOCU
07/06/2004	0	null	null	null	0.0	WOCU
07/07/2004	0	null	null	null	0.0	WOCU
07/08/2004	0	null	null	null	0.0	WOCU
07/09/2004	0	null	null	null	0.0	WOCU
07/10/2004	0	null	null	null	0.0	WOCU
07/11/2004	0	null	null	null	0.0	WOCU
07/12/2004	0	null	null	null	0.0	WOCU
07/13/2004	0	null	null	null	0.0	WOCU
07/14/2004	0	null	null	null	0.0	WOCU
07/15/2004	0	null	null	null	0.0	WOCU
07/16/2004	0	null	null	null	0.0	TOC 840 PBDT 1198 Perf 1024-1054 spf2
07/17/2004	0	null	null	null	0.0	SI WOFU
07/18/2004	0	null	null	null	0.0	SI WOFU
07/19/2004	0	null	null	null	0.0	SI WOFU
07/20/2004	0	null	null	null	0.0	SI WOFU
07/21/2004	0	null	null	null	0.0	SI WOFU
07/22/2004	0	88	null	null	0.0	N2FRAC 100k# SICP 2 hr & Flo to Pit 18/64"
07/23/2004	0	47	null	null	0.0	FCP on 18/64 Chk. No Fluid
07/24/2004	0	39	null	null	0.0	FCP. Dry Gas & Shut in
07/25/2004	0	null	null	null	0.0	WOPL, SI hrs: 24
07/26/2004	0	null	null	null	0.0	WOPL, SI hrs: 48
07/27/2004	0	null	null	null	0.0	WOPL, SI hrs: 72
07/28/2004	0	null	null	null	0.0	WOPL, SI hrs: 96
07/29/2004	0	null	null	null	0.0	WOPL, SI hrs: 120
07/30/2004	0	null	null	null	0.0	WOPL, SI hrs: 144
07/31/2004	0	null	null	null	0.0	WOPL, SI hrs: 168
08/31/2004	0	null	null	null	0.0	WOPL, SI hrs: 912
09/20/2004	0	null	null	null	0.0	WOPL, SI hrs: 1392
09/21/2004	0	65	null	null	0.0	SI 1416 hrs. G-2 taken. Put on line
09/22/2004	18	60	null	null	24.0	
09/23/2004	28	58	null	null	24.0	
09/24/2004	27	57	null	null	24.0	
09/25/2004	26	57	null	null	24.0	
09/26/2004	26	55	null	null	24.0	
09/27/2004	26	55	null	null	24.0	
09/28/2004	26	53	null	null	24.0	
09/29/2004	25	53	null	null	24.0	
09/30/2004	20	54	null	null	24.0	
10/01/2004	25	52	null	null	24.0	
10/02/2004	24	52	null	null	24.0	
10/03/2004	24	51	null	null	24.0	
10/04/2004	24	51	null	null	24.0	
10/05/2004	24	50	null	null	24.0	
10/06/2004	23	49	null	null	24.0	
10/07/2004	23	50	null	null	24.0	
10/08/2004	23	49	null	null	24.0	
10/09/2004	23	49	null	null	24.0	
10/10/2004	23	48	null	null	24.0	
10/11/2004	23	48	null	null	24.0	
10/12/2004	23	48	null	null	24.0	
10/13/2004	22	47	null	null	24.0	
10/14/2004	22	47	null	null	24.0	
10/15/2004	22	47	null	null	24.0	
10/16/2004	22	47	null	null	24.0	
10/17/2004	22	47	null	null	24.0	
10/18/2004	22	46	null	null	24.0	
10/19/2004	0	null	null	null	0.0	SI
10/20/2004	19	47	null	null	12.0	
10/21/2004	22	45	null	null	24.0	
10/22/2004	22	47	null	null	24.0	
10/23/2004	22	47	null	null	24.0	
10/24/2004	21	46	null	null	24.0	
10/25/2004	21	45	null	null	24.0	
10/26/2004	21	45	null	null	24.0	
10/27/2004	21	45	null	null	24.0	
10/28/2004	21	44	null	null	24.0	
10/29/2004	21	44	null	null	24.0	
10/30/2004	31	40	null	null	24.0	
10/31/2004	31	40	null	null	24.0	
11/01/2004	30	38	null	null	24.0	
11/02/2004	33	38	null	null	24.0	

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**JAN 24 2005**  
**KCC WICHITA**

Actual						
HARDEN 01-04						
Gas	Csg Press	Tbg Press	Line Press	Hrs	Remarks	
11/03/2004	32	38	null	null	24.0	
11/04/2004	31	38	null	null	24.0	
11/05/2004	31	37	null	null	24.0	
11/06/2004	31	37	null	null	24.0	
11/07/2004	31	35	null	null	24.0	
11/08/2004	31	34	null	null	24.0	
11/09/2004	30	34	null	null	24.0	
11/10/2004	29	33	null	null	24.0	
11/11/2004	29	33	null	null	24.0	
11/12/2004	29	34	null	null	24.0	
11/13/2004	29	33	null	null	24.0	
11/14/2004	29	33	null	null	24.0	
11/15/2004	28	33	null	null	24.0	
11/16/2004	28	33	null	null	24.0	
11/17/2004	28	32	null	null	24.0	
11/18/2004	27	31	null	null	24.0	
11/19/2004	27	32	null	null	24.0	
11/20/2004	27	32	null	null	24.0	
11/21/2004	27	31	null	null	24.0	
11/22/2004	26	31	null	null	24.0	
11/23/2004	27	32	null	null	24.0	
11/24/2004	26	32	null	null	24.0	
11/25/2004	26	31	null	null	24.0	
11/26/2004	26	31	null	null	24.0	
11/27/2004	26	31	null	null	24.0	
11/28/2004	26	30	null	null	24.0	
11/29/2004	null	null	null	null	null	SI
11/30/2004	null	null	null	null	null	SI
12/01/2004	29	26	null	null	24.0	
12/02/2004	30	26	null	null	24.0	
12/03/2004	31	27	null	null	24.0	
12/04/2004	32	29	null	null	24.0	
12/05/2004	32	27	null	null	24.0	
12/06/2004	32	27	null	null	24.0	
12/07/2004	31	26	null	null	24.0	
12/08/2004	31	26	null	null	24.0	
12/09/2004	30	26	null	null	24.0	
12/10/2004	30	26	null	null	24.0	
12/11/2004	30	26	null	null	24.0	
12/12/2004	30	26	null	null	24.0	
12/13/2004	29	24	null	null	24.0	
12/14/2004	29	24	null	null	24.0	
12/15/2004	29	24	null	null	24.0	
12/16/2004	28	23	null	null	24.0	
12/17/2004	28	23	null	null	24.0	
12/18/2004	28	23	null	null	24.0	
12/19/2004	28	23	null	null	24.0	
12/20/2004	27	24	null	null	24.0	
12/21/2004	27	24	null	null	24.0	
12/22/2004	27	24	null	null	24.0	
12/23/2004	26	24	null	null	24.0	
12/24/2004	24	23	null	null	21.0	
12/25/2004	24	23	null	null	24.0	
12/26/2004	25	23	null	null	24.0	
12/27/2004	26	23	null	null	24.0	
12/28/2004	26	23	null	null	24.0	
12/29/2004	26	23	null	null	24.0	
12/30/2004	26	23	null	null	24.0	
12/31/2004	26	23	null	null	24.0	
2004	2586	40	null	null	23.9	null

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