

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

Open Flow **AST**
 Deliverability

Test Date:
9/21/2011

API No. 15
023-20666-00 - 00

| | | | | | | |
|---|------------------|----------------------------------|------------------------|---|------------------------|--|
| Company Rosewood Resources, Inc. | | | Lease Heim | | Well Number 31-33 | |
| County Cheyenne | Location NWNE | Section 33 | TWP 2S | RNG (E/W) 42W | Acres Attributed 80 | |
| Field Cherry Creek | | Reservoir Niobrara | | Gas Gathering Connection Branch Systems Inc. | | |
| Completion Date 3/29/2006 | | Plug Back Total Depth 1799' | | Packer Set at | | |
| Casing Size 4 1/2" | Weight 10.5# | Internal Diameter 4.052 | Set at 1799.86' | Perforations 1616' | To 1648' | |
| Tubing Size NONE 2 3/8" | Weight | Internal Diameter | Set at 1688" | Perforations | To | |
| Type Completion (Describe) Single (Conventional) | | Type Fluid Production Dry Gas | | Pump Unit or Traveling Plunger? <input checked="" type="radio"/> No Pumping Unit | | |
| Producing Thru (Annulus / Tubing) Annulus | | % Carbon Dioxide | | % Nitrogen | | Gas Gravity - G _g .6 |
| Vertical Depth(H) 1614' | | Pressure Taps Flange | | (Meter Run) (Prover) Size 2" | | |
| Pressure Buildup: | Shut in 9-20 | 20 11 | at 1:55 | (AM) <input checked="" type="radio"/> (PM) | Taken 9-21 | 20 11 |
| | | | | | | at 2:10 (AM) <input checked="" type="radio"/> (PM) |
| Well on Line: | Started 9-21 | 20 11 | at 2:10 | (AM) <input checked="" type="radio"/> (PM) | Taken 9-22 | 20 11 |
| | | | | | | at 2:55 (AM) <input checked="" type="radio"/> (PM) |

OBSERVED SURFACE DATA

Duration of Shut-in **24** 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 _i) or (P _e) | | Tubing Wellhead Pressure (P _w) or (P _i) or (P _e) | | Duration (Hours) | Liquid Produced (Barrels) |
|---------------------------|-----------------------|---|--|-----------------------|-------------------------|--|-------|--|------|------------------|---------------------------|
| | | | | | | psig | psia | psig | psia | | |
| Shut-In | | | | | | 125 | 139.4 | | | | |
| Flow | | | | | | 44 | 58.4 | | | 24 | |

FLOW STREAM ATTRIBUTES

| Plate Coefficient (F _p) (F _o) 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 (Mcfd) | GOR (Cubic Feet/ Barrel) | Flowing Fluid Gravity G _m |
|--|--|--|-------------------------------|---|----------------------------------|-----------------------|--------------------------|--------------------------------------|
| | | | | | | 54 | | |

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ : (P_w)² = _____ : P_d = _____ % (P_c - 14.4) + 14.4 = _____ : (P_a)² = 0.207
(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, and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$ | 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 28 day of December, 20 11.

Witness (if any)

For Commission


For Company

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Checked by _____

APR 24 2012
KCC WICHITA

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, Inc. 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.

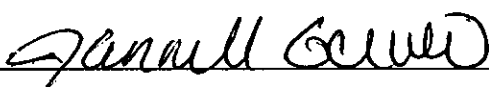
I hereby request a one-year exemption from open flow testing for the Heim 31-33 gas well on the grounds that said well:

(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: 12/28/11

Signature: 
 Title: Production Assistant

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.

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 KCC WICHITA

W436
 Heim 31-33
 West St. Francis
 St. Francis
 None
 September-11

| DATE | Tubi Casing | | | SPM | CYCLE | HRS | Water DOWN BBLs | REMARKS (Maximum length 110 characters) |
|-----------|-------------|-----|------------|-----|-------|-----|-----------------------|---|
| | PSI | PSI | STATIC MCF | | | | | |
| 9/1/2011 | | 43 | 56 | 36 | 6 | 12 | 23 | started PU bob bruphy had to reset box |
| 9/2/2011 | | 44 | 57 | 47 | 6 | 12 | 24 | |
| 9/3/2011 | | 44 | 57 | 49 | 6 | 12 | 23 | |
| 9/4/2011 | | 44 | 57 | 49 | 6 | 12 | 22 | |
| 9/5/2011 | | 44 | 57 | 49 | 6 | 12 | 23 | |
| 9/6/2011 | | 41 | 54 | 49 | 6 | 12 | 24 | |
| 9/7/2011 | | 45 | 58 | 51 | 6 | 12 | 23 | |
| 9/8/2011 | | 45 | 58 | 51 | 6 | 12 | 22 | |
| 9/9/2011 | | 46 | 59 | 51 | 6 | 12 | 29 | bucket test 3 min |
| 9/10/2011 | | 44 | 57 | 48 | 6 | 12 | 28 | |
| 9/11/2011 | | 43 | 56 | 44 | 6 | 6 | 18 | pumping unit off reset and started |
| 9/12/2011 | | 43 | 56 | 42 | 6 | 6 | 19 | belts broke replaced |
| 9/13/2011 | | 43 | 56 | 43 | 6 | 12 | 30 | |
| 9/14/2011 | | 44 | 57 | 49 | 6 | 12 | 29 | |
| 9/15/2011 | | 42 | 55 | 50 | 6 | 12 | 29 | |
| 9/16/2011 | | 43 | 56 | 51 | 6 | 12 | 28 | |
| 9/17/2011 | | 43 | 56 | 52 | 6 | 12 | 27 | |
| 9/18/2011 | | 42 | 55 | 52 | 6 | 12 | 29 | |
| 9/19/2011 | | 42 | 55 | 46 | 6 | 6 | 15 | pumping unit off reset and started |
| 9/20/2011 | | 43 | 51 | 49 | 6 | 6 | 14 | shut well for state test and pumping unit off |
| 9/21/2011 | | 125 | 48 | 0 | 6 | 6 | 24 | 13 open well and start pumping unit |
| 9/22/2011 | | 44 | 57 | 66 | 6 | 12 | 29 | |
| 9/23/2011 | | 44 | 57 | 53 | 6 | 12 | 28 | bucket test 3 min and greased |
| 9/24/2011 | | 43 | 56 | 49 | 6 | 12 | 27 | |
| 9/25/2011 | | 43 | 56 | 49 | 6 | 12 | 28 | |
| 9/26/2011 | | 45 | 58 | 54 | 6 | 12 | 27 | |
| 9/27/2011 | | 45 | 58 | 54 | 6 | 12 | 28 | bucket test 3 min |
| 9/28/2011 | | 45 | 58 | 54 | 6 | 12 | 27 | |
| 9/29/2011 | | 44 | 57 | 57 | 6 | 12 | 26 | |
| 9/30/2011 | | 44 | 57 | 58 | 6 | 12 | 27 | |
| 10/1/2011 | | | | | | | | |

Total

1452

739

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 APR 24 2012
 KCC WICHITA

W436
 Heim 31-33
 West St. Francis
 St. Francis
 None
 October-11

| DATE | Tubing Casing | | STATIC | MCF | SPM | CYCLE DOWN | HRS | Water | REMARKS (Maximum length 110 characters) |
|------------|---------------|-----|--------|-----|-----|------------|-----|-------|--|
| | PSI | PSI | | | | | | BBLs | |
| 10/1/2011 | | 45 | 57 | 59 | 6 | 12 | 0 | 28 | |
| 10/2/2011 | | 45 | 57 | 59 | 6 | 12 | 0 | 27 | |
| 10/3/2011 | | 45 | 57 | 60 | 6 | 12 | 0 | 26 | |
| 10/4/2011 | | 43 | 57 | 60 | 6 | 12 | 0 | 27 | |
| 10/5/2011 | | 46 | 57 | 60 | 6 | 12 | 0 | 29 | bucket test 3 min |
| 10/6/2011 | | 46 | 60 | 61 | 6 | 12 | 0 | 28 | |
| 10/7/2011 | | 49 | 59 | 60 | 6 | 12 | 0 | 27 | |
| 10/8/2011 | | 49 | 58 | 59 | 6 | 12 | 0 | 28 | |
| 10/9/2011 | | 45 | 58 | 58 | 6 | 12 | 0 | 29 | |
| 10/10/2011 | | 46 | 57 | 58 | 6 | 12 | 0 | 28 | replaced battery |
| 10/11/2011 | | 66 | 78 | 57 | 6 | 12 | 0 | 27 | |
| 10/12/2011 | | 44 | 61 | 50 | 6 | 6 | 0 | 14 | not pumping water taged |
| 10/13/2011 | | 43 | 56 | 50 | 6 | 24 | 0 | 30 | bring water left on 24 hrs |
| 10/14/2011 | | 43 | 56 | 49 | 6 | 12 | 0 | 13 | trickle of water, dropped rod 3" m |
| 10/15/2011 | | 44 | 56 | 47 | 6 | 0 | 0 | 0 | |
| 10/16/2011 | | 44 | 57 | 46 | 6 | 0 | 0 | 0 | |
| 10/17/2011 | | 42 | 56 | 45 | 6 | 0 | 0 | 0 | |
| 10/18/2011 | | 44 | 56 | 43 | 6 | 0 | 0 | 0 | |
| 10/19/2011 | | 44 | 56 | 42 | 6 | 0 | 0 | 0 | |
| 10/20/2011 | | 43 | 55 | 42 | 6 | 0 | 0 | 0 | pump problems |
| 10/21/2011 | | 43 | 55 | 41 | 6 | 0 | 0 | 0 | |
| 10/22/2011 | | 43 | 55 | 40 | 6 | 0 | 0 | 0 | |
| 10/23/2011 | | 43 | 55 | 40 | 6 | 0 | 0 | 0 | |
| 10/24/2011 | | 42 | 55 | 39 | 6 | 0 | 0 | 0 | |
| 10/25/2011 | | 42 | 55 | 38 | 6 | 0 | 0 | 0 | |
| 10/26/2011 | | 42 | 55 | 38 | 6 | 0 | 0 | 0 | |
| 10/27/2011 | | 42 | 55 | 37 | 6 | 0 | 0 | 0 | |
| 10/28/2011 | | 42 | 54 | 37 | 6 | 0 | 0 | 0 | |
| 10/29/2011 | | 42 | 54 | 37 | 6 | 0 | 0 | 0 | |
| 10/30/2011 | | 41 | 53 | 36 | 6 | 0 | 0 | 0 | |
| 10/31/2011 | | 46 | 53 | 36 | 6 | 0 | 0 | 0 | workover rig on site |

Total

1484

361

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 APR 24 2012
 KCC WICHITA

W436
 Heim 31-33
 West St. Francis
 St. Francis
 None
 November-11

| DATE | Tubing Casing | | | | HRS CYCLI DOWN | Water BBLs | REMARKS (Maximum length 110 characters) |
|------------|---------------|-----|---------------|-----|----------------------|---------------|--|
| | PSI | PSI | STATIC MCF | SPM | | | |
| 11/1/2011 | | 39 | 70 | 17 | 6 | 0 | 0 work over on site pulling unit |
| 11/2/2011 | | 38 | 52 | 17 | 6 | 0 | 0 |
| 11/3/2011 | | 37 | 51 | 22 | 6 | 24 | 0 57 bucket test 3 min just worked over |
| 11/4/2011 | | 40 | 51 | 28 | 6 | 24 | 0 43 bucket test 4 min |
| 11/5/2011 | | 39 | 52 | 33 | 6 | 24 | 0 43 bucket test 4 min |
| 11/6/2011 | | 40 | 52 | 36 | 6 | 24 | 0 43 |
| 11/7/2011 | | 68 | 53 | 31 | 6 | 12 | 0 22 belt broke replaced |
| 11/8/2011 | | 40 | 59 | 35 | 6 | 24 | 0 43 bucket test 4 min |
| 11/9/2011 | | 40 | 53 | 39 | 6 | 24 | 0 43 bucket test 4 min |
| 11/10/2011 | | 40 | 53 | 43 | 6 | 24 | 0 43 bucket test 4 min |
| 11/11/2011 | | 41 | 52 | 46 | 6 | 24 | 0 43 4 min bt |
| 11/12/2011 | | 41 | 53 | 48 | 6 | 24 | 0 43 4 min bt |
| 11/13/2011 | | 40 | 53 | 50 | 6 | 24 | 0 40 4.25 min bt |
| 11/14/2011 | | 41 | 53 | 52 | 6 | 24 | 0 43 4 min bt |
| 11/15/2011 | | 37 | 58 | 54 | 6 | 24 | 0 43 4 min bt |
| 11/16/2011 | | 42 | 56 | 56 | 6 | 24 | 0 43 |
| 11/17/2011 | | 41 | 54 | 57 | 6 | 24 | 0 43 bucket test 4 min |
| 11/18/2011 | | 40 | 54 | 59 | 6 | 24 | 0 43 |
| 11/19/2011 | | 41 | 55 | 61 | 6 | 24 | 0 44 |
| 11/20/2011 | | 42 | 55 | 61 | 6 | 24 | 0 43 |
| 11/21/2011 | | 43 | 55 | 62 | 6 | 24 | 0 42 |
| 11/22/2011 | | 43 | 56 | 61 | 6 | 24 | 0 43 bucket test 4 min |
| 11/23/2011 | | 42 | 56 | 61 | 6 | 24 | 0 42 |
| 11/24/2011 | | 42 | 57 | 63 | 6 | 24 | 0 41 |
| 11/25/2011 | | 42 | 57 | 64 | 6 | 24 | 0 42 |
| 11/26/2011 | | 43 | 57 | 64 | 6 | 24 | 0 43 |
| 11/27/2011 | | 44 | 57 | 64 | 6 | 24 | 0 42 |
| 11/28/2011 | | 44 | 56 | 64 | 6 | 24 | 0 43 bucket test 4 min |
| 11/29/2011 | | 43 | 56 | 65 | 6 | 24 | 0 43 |
| 11/30/2011 | | 44 | 56 | 65 | 6 | 24 | 0 43 |
| 12/1/2011 | | 0 | 0 | 0 | 0 | 0 | 0 |

Total

1478

1189

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