Kansas Corporation Commission One Point Stabilized Open Flow or Deliverability Test

| Type Test | t; | - | ن سا | | | (| (See Instru | ıctic | ons on Re | verse Side | e) | | | | | | | |
|---|-------------------------------|--|--------------------------------|-------------------------|---|--|--|---------------------------------|--|--|-----------------------------|---|---|--------------------------|--------------------|------------------------|------------------|-------|
| Op | en Flov | v 🔀 | Dr. | | | Toot Date | ٥. | | | | | ADLA | lo 15 | | | | | |
| De | liverabi | lty | | | | Test Date 6/28/20 | | | | | | API N 15-02 | 10. 15 23-20586 - | 0000 | • | | | |
| Company | | sour | ces | | | | | | Lease Isernha | igen | | | | | 1-22 | Well N | umber | |
| County Location Cheyenne SWSW | | | | | Section 22 | | TWP RNG (E/W) 3S 41W | | | ') | , | | ٥٥ | Attributed | | | | |
| Field St. Francis | | | | | Reservoir Niobrara | | | | | Gas Gathering Connection Branch Systems Inc. | | | | | | RECE JAN 0 CC WI | IVED | |
| Completion Date 9/10/2004 | | | | | Plug Back Total Depth 1441' | | | | | Packer Set at | | | | | | JAN 0 | 3 2013 | |
| | | | | | Internal Diameter 4.052 | | | Set at Perforations 1490' 1320' | | | tions | | то 1358' | K | CC WI | CHITA | | |
| Tubing Si | ize | | Weig | ght | | Internal I | Diameter | | Set | at | F | Perfora | tions | | То | £ | | 11174 |
| Type Con Single (| | • | , | | | Type Flui Dry Ga | id Producti as | on | | | | | or Traveling g Unit | Plunge | er? Yes | € |) | |
| Producing Annulus | • | (Ann | ulus / Tubi | ng) | | % (| Carbon Dio | xide | е | | % N | litroger | 1 | | Gas Gr .6 | avity - | G, | |
| Vertical D | epth(H) |) | | | | | Pressure Taps Flange | | | | | | | | (Meter I | Run) (F | Prover) Size | |
| Pressure | Buildup | | mut III | 27 | | 0 12 at 1 | | • | | Taken 6- | | | | | 11:20 | (| (AM) (PM) | |
| Well on L | ine: | S | started 6-2 | 28 | 20 | 12 at 1 | 1:20 | - (| ÂM) (РМ) | Taken 6- | -29 | | 20 | 12 a | 1:10 | | (AM) (M) | |
| | | | | | | | OBSERV | ΈD | SURFAC | E DATA | | | | Duratio | on of Shut- | in | Hours | į |
| Static / Dynamic Property | namic Size Meter Differential | | Flowing Temperature t | Temperature Temperature | | Casing Wellhead Pressure (P _w) or (P _t) or (P _c) psig psia | | (F | Tubing Wellhead Pressure (P _w) or (P ₁) or (P _c) psig psia | | Duration (Hours) | | | id Produced (Barrels) | | | | |
| Shut-In | | | | | | | | | 225 | 239.4 | | isiy | psia | | | | | |
| Flow | | | | | | | | | 70 | 84.4 | | | | 24 | | 0 | | |
| <u> </u> | | | | | | 1 | FLOW ST | RE | AM ATTR | IBUTES | | | | | | | | l |
| Plate Coefficient $(F_b)(F_p)$ Mcfd Circle one: Meter or Prover Pressure psia Press Extension $P_m \times h$ | | i Gravito i | | Ter | Flowing mperature Factor F _{t1} | Fa | eviation Metered Floreactor R F _{pv} (Mcfd) | | | | GOR (Cubic Fe Barrel) | et/ | Flowing Fluid Gravity G _m | | | | | |
| | | | | | | | | | | | | 4 | ļ | | | | | |
| | | | | | | (OPEN FL | OW) (DELI | ۷EI | RABILITY |) CALCUL | ATIO | NS | | | (P.) | ² = 0.2 | 207 | |
| (P _c) ² = | | <u>.</u> : | (P _w) ² | = | : | P _d = | | _% | (F | c - 14.4) + | 14.4 | = | <u> </u> | | (P _d); | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | LOG of formula 1. or 2. and divide by: | | | Backpressure Curve Slope = "n" or Assigned Standard Slope | | n x LOG | | Antilog | | Del Equals | Open Flow Deliverability Equals R x Antilog (Mctd) | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Open Flov | <u> </u> | . | | | Mcfd @ 14.6 | 35 neia | | | Deliverab | sility | | | | Motel @ | 14 65 pci | | | 1 |
| | | | | | | | | | ' | ···· | | | | | 14.65 psi | | | |
| | | | | | ehalf of the report is true | | | | | 9 | day o | f Dec | ember | t and | that he ha | | ledge of 20 12 . | |
| | | | Witness | (if any | r) | | | | - | 5 | 70 | M | THE FORCE | | W | | | |
| | | | For Com | missio | n | | | | - | | | | Chec | ked by | | | | |

KCC WICHITA

| | er penalty of perjury under the laws of the state of Kansa er Rule K.A.R. 82-3-304 on behalf of the operator Rosewo | |
|---------------------|--|------------------------------------|
| | oing pressure information and statements contained on t | |
| correct to the best | of my knowledge and belief based upon available product | tion summaries and lease records |
| of equipment insta | lation and/or upon type of completion or upon use being m | nade of the gas well herein named. |
| I hereby reque | st a one-year exemption from open flow testing for the <u>Iso</u> | ernhagen 1-22 |
| | ounds that said well: | |
| (Chook | | |
| (Check | 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 | r undergoing ER |
| | is on vacuum at the present time; KCC approval Docket N | |
| 7 | is not capable of producing at a daily rate in excess of 25 | |
| | | |
| 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: 12/19/12 | | |
| | | |
| | | |
| | | |
| | _ | 11 (21511) |
| | Signature: | U Cour |
| | Title: Production Assistant | |
| | * 197 7 1 ********************************* | |
| | | • |
| | | |

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.

W349

Isernhagen 01-22

St. Francis

St. Francis

None

June-12

RECEIVED

JAN 0 3 2013

KCC WICHITA

| | Tubing | Casing | | | | HRS | Water | REMARKS |
|-----------|--------|--------|-------------|-----|-----|------------|-------|--------------------------------|
| DATE | PSI | PSI | STATIC | MCF | SPM | CYCLE DOWN | BBLS | (Maximum length 110 characters |
| 6/1/2012 | | 52 | 65 | 4 | | | | |
| 6/2/2012 | | 52 | 65 | 4 | | | | |
| 6/3/2012 | | 54 | 68 | 4 | | | | |
| 6/4/2012 | | 58 | 71 | 4 | | | | |
| 6/5/2012 | | 54 | 67 | 4 | | | | |
| 6/6/2012 | | 54 | 67 | 4 | | | | |
| 6/7/2012 | | 54 | 67 | 4 | | | | |
| 6/8/2012 | | 55 | 68 | 4 | | | | |
| 6/9/2012 | | 57 | 70 | 4 | | | | |
| 6/10/2012 | | 56 | 69 | . 4 | | | | |
| 6/11/2012 | | 55 | 68 | 4 | | | | |
| 6/12/2012 | | 56 | 69 | 4 | | | | |
| 6/13/2012 | | 56 | 69 | 4 | | | | |
| 6/14/2012 | | 56 | 69 | 4 | | | | |
| 6/15/2012 | | 59 | 72 | 4 | | | | |
| 6/16/2012 | | 56 | 69 | 4 | | | | |
| 6/17/2012 | | 57 | 70 | 4 | | | | |
| 6/18/2012 | | 61 | 74 | 4 | | | | |
| 6/19/2012 | | 61 | 74 | 4 | | | | |
| 6/20/2012 | | 65 | 78 | 4 | | | | |
| 6/21/2012 | | 68 | 81 | 4 | | | | |
| 6/22/2012 | | 73 | 86 | 4 | | | | |
| 6/23/2012 | | 71 | 84 | 4 | | | | |
| 6/24/2012 | | 65 | 78 | 4 | | | | |
| 6/25/2012 | | 71 | 84 | 4 | | | | |
| 6/26/2012 | | 70 | 83 | 4 | | | | |
| 6/27/2012 | | 68 | 81 | 4 | | | | cp 74 si for state test |
| 6/28/2012 | | 221 | 5 85 | 0 | | 24 | | cp 225 opened |
| 6/29/2012 | | 70 | 83 | 6 | | | | - • |
| 6/30/2012 | | 62 | . 75 | 4 | | | | |
| 7/1/2012 | • | | | | | | | |

W349 Isernhagen 01-22

St. Francis

St. Francis

None

July-12

RECEIVED JAN 03 2013 KCC WICHITA

| | Tubing | Casing | | | HRS | Water | REMARKS |
|-----------|--------|--------|----------|---------|--------------|-------|--------------------------------|
| DATE | PSI | PSI | STATIC N | MCF SPM | 1 CYCLE DOWN | BBLS | (Maximum length 110 characters |
| 7/1/2012 | | 63 | 76 | 4 | | | |
| 7/2/2012 | | 56 | 70 | 4 | 3 | | |
| 7/3/2012 | • | 74 | 87 | 4 | | | |
| 7/4/2012 | | 53 | 66 | 4 | | | |
| 7/5/2012 | | . 52 | 65 | 4 | | | |
| 7/6/2012 | | 51 | 64 | 4 | 1 | | |
| 7/7/2012 | | 55 | 68 | . 4 | | | |
| 7/8/2012 | | 60 | 73 | 4 | | | |
| 7/9/2012 | | 58 | 71 | 4 | | | |
| 7/10/2012 | | 58 | 71 | 4 | | | |
| 7/11/2012 | | 55 | 68 | 4 | | | |
| 7/12/2012 | | 55 | 68 | 4 | | | |
| 7/13/2012 | | 54 | 67 | 4 | | | |
| 7/14/2012 | | 54 | 67 | 4 | | | |
| 7/15/2012 | | 55 | 68 | 4 | | | |
| 7/16/2012 | | 67 | 80 | 3 | 1.5 | | |
| 7/17/2012 | | 54 | 67 | 4 | | | |
| 7/18/2012 | | 51 | 64 | 4 | | | |
| 7/19/2012 | | 59 | 72 | 4 | . 0.5 | | |
| 7/20/2012 | | 60 | 73 | 4 | | | |
| 7/21/2012 | | 62 | 75 | 4 | | | |
| 7/22/2012 | | 56 | 69 | 4 | | | |
| 7/23/2012 | | 54 | 67 | 4 | 0.5 | | |
| 7/24/2012 | | 60 | 73 | 3 | | | |
| 7/25/2012 | | 68 | 81 | 3 | | | |
| 7/26/2012 | | 54 | 67 | 4 | | | |
| 7/27/2012 | | 82 | 95 | 3 . | 5 | | |
| 7/28/2012 | | 67 | 80 | 4 | | | |
| 7/29/2012 | | 54 | 67 | 4 | | | |
| 7/30/2012 | | 52 | 65 | 4 | | | |
| 7/31/2012 | | 52 | 65 | 4 | | | |

W349

Isernhagen 01-22

St. Francis

St. Francis

None

August-12

RECEIVED

JAN 0 3 2013

KCC WICHITA

| | Tubin | g Casing | | | | HRS | Water | REMARKS |
|-----------|-------|----------|--------|-----|-----|-----------|--------|--------------------------------|
| DATE | PSI | PSI | STATIC | MCF | SPM | CYCLE DOW | N BBLS | (Maximum length 110 characters |
| 8/1/2012 | | 53 | 66 | 4 | | | | |
| 8/2/2012 | | 56 | 69 | 4 | | | | |
| 8/3/2012 | | 55 | 68 | 4 | | | | |
| 8/4/2012 | | 55 | 68 | 4 | | | | |
| 8/5/2012 | | 56 | 69 | 4 | | | | |
| 8/6/2012 | | 54 | 67 | 4 | | | | |
| 8/7/2012 | | 58 | 71 | 4 | | | | |
| 8/8/2012 | | 58 | 71 | 4 | | | | |
| 8/9/2012 | | 56 | 69 | 4 | | | | |
| 8/10/2012 | | 66 | 79 | 4 | | | | |
| 8/11/2012 | | 55 | 68 | 3 | | 1 | .5 | |
| 8/12/2012 | | 53 | 66 | 4 | | | | |
| 8/13/2012 | | 53 | 66 | 4 | | | | |
| 8/14/2012 | | 52 | 65 | 4 | | | | |
| 8/15/2012 | | 66 | 79 | 4 | | | | |
| 8/16/2012 | | 53 | 66 | 4 | | | | |
| 8/17/2012 | | 50 | 63 | 4 | | | | |
| 8/18/2012 | | 51 | 64 | 4 | | | | |
| 8/19/2012 | | 52 | 65 | 4 | | | | |
| 8/20/2012 | | 52 | 65 | 4 | | | | |
| 8/21/2012 | | 52 | 65 | 4 | | | | |
| 8/22/2012 | | 51 | 64 | 4 | | | | |
| 8/23/2012 | | 53 | 66 | 4 | | | | |
| 8/24/2012 | | 57 | 70 | 3 | | | | |
| 8/25/2012 | | 57 | 70 | 3 | | | | |
| 8/26/2012 | | 56 | 69 | 3 | | | | |
| 8/27/2012 | | 53 | 66 | 3 | | | | |
| 8/28/2012 | | 53 | 66 | 4 | | | | |
| 8/29/2012 | | 55 | 68 | 3 | | | | |
| 8/30/2012 | | 55 | 68 | 4 | | | | |
| 8/31/2012 | | 55 | 68 | 3 | | | | |