Checked by

KANSAS CORPORATION COMMISSION ONE POINT STABLIZED OPEN FLOW OR DELIVERABILITY TEST

| TYPE TES | т: pen Fl | O147 | | | | | | | | | | | | | | | |
|--|-------------------|--------------------------------|--|-----------------|--------------------------------------|------------------------|--------|----------|-----------------------|-------------------|--------------|---------------------------------------|-----------|--|------------|------------------------------|----------------|
| | elivera | | v | | TES! | r date: | | 2/9/ | /02 | | 2 | API No. | 15 | -023-2 | 20372 | 2-0000 | |
| Company | | | , | | | | | | Lease | | | | | | | Number | |
| | ty Oil 8 | & Ga | as LLC | | | | | | Kendri | ck | | | | | 2-1 | 9 | |
| County | | | | | Loca | ation | | | Secti | on | TWP F | RNG (E/W) | | | Acre | s Attribut | ed |
| Chey | enne | | | | N | E NE NE | Ē | | 19-4 | s-40 |)w | | | | | | |
| Field | | | | | Rese | ervoir | | | | | G | Gas Gath | ering | Connec | tion | | |
| Dent | Field | | | | Ni | obrara | | | | | ŧ | Kinder- | Mor | gan | | | |
| Completi | on Date | | | | Plug | Back Tot | al Dep | th | | | I | Packer S | et at | | | | |
| 2/3/0 | 1 | | | | | | 132 | 7 | | | | | | | | | |
| Casing S | ize | | Weight | | Inte | ernal Diam | eter | • | Set a | t | E | erforat | ions | To | | | |
| 4.500 |) | | 10.50 | 00 | | 4 | .052 | | 137 | 72 | | 1 | 187 | 12: | 28 | | |
| Tubing S | ize | | Weight | | Inte | ernal Diam | eter | | Set a | t | E | erforat: | ions | To | | | |
| NON | Ε | | | | | | | | RA | | | | | | | | |
| Type Com | pletion | (Desc | cribe) | | Туре | Fluid Pr | oducti | on | | <i>h</i> . | Ē | Pump Uni | t or 1 | raveli | ng Plu | nger? | |
| Frac | | | | | | | | / | FED | 1 Vic | 1 | V 0 | | | | | |
| Producing | - | nnulu | ıs/Tubin | g) | % Ca | arbon Diox | ide | 4 | CWICHIN | 300 | O | Nitroge | en | | Gas | Gravity- G | g |
| casin | | | | | | .425 | | ~1C | e. ** | 9000 - | | 3.474 | | <u></u> | | .586 | |
| Vertical | _ | (H) | | | Pres | ssure Taps | | | " W _C | 17.00 | | | | | Mete | er Run Size | • |
| 1207 | | | | | 10/00/04 | | nge | | <u> </u> | a | | 0.0 | 1000 | | | 2 | ···· |
| Pressure | - | | | | /6/02@1 ⁻ | | | | • | 1 | | | | ฏ12:0 ≋12:2 | | | |
| Well on 1 | Line: | Sta | arted | 2 | /8/02@12 | 2:00 | | | | | TAKEN | 2/8 | 7020 | @12:2 | .5 | | |
| | | | | | | OBS | ERVE | D SUF | RFACE DATA | | | · · · · · · · · · · · · · · · · · · · | | | | | , |
| Static/ Dynamic | Orific Size | ce | Meter Pressur | e | Pressure Diff. | Flowing Temp. | 1 | Head | Casing We | (P _t) | | | - | lHead P P _t)(F _c) | | Duration | 1 |
| Property | in. | | psig | | In. H 20 | t. | t | | psig | | psia | psi | 3 | ps: | ia | (Hours) | Barrels |
| | | | | | | | | | | | · | | | | | | } |
| Shut-in | | | | | | | ļ | | 136 | | 148 | | | | | 72.0 | |
| Flow | .50 | 00 | 98.5 | ; | 19.00 | 27 | | | 119 | | 131 | | | | | 24.0 | ! |
| | | | | | | FL | ow s | ΓREA | M ATTRIBUT | ES | | | | | | • | |
| | | | | | | T | | <u> </u> | | | | T | | | | | |
| COEFFICIENT | | (METER) | | E | XTENSION | GRAVITY | | | WING TEMP | į. | | | | LLOW | | COD C | |
| (F _b) | | PRESS psi | | $\sqrt{}$ | P _m x H _w | FACTOR | | | FACTOR Ft | F | ACTOR Fpv | | R Mcfd | | | GOR | G _m |
| | | | | | | | | <u> </u> | | | | | | | | | |
| 1.21 | 9 | 111. | .o | _ | 45.92 | 1.306 | 3 | 1. | 0333 | • | 1.0099 | | 76 | | | | .586 |
| | | | | | (OPI | EN FLOW)(| DELIV | ERAB | ILITY) CALC | ULAT | IONS | | | | | • | |
| 2 | | | | . 2 | • | • | | | • | | | | | | | $a)^2 = 0.20$ $d)^2 = 9.$ | |
| (Pc) ² = | 22.1 | | (P | w) ² | | | Pd | | 66.3 T | 8 | (Pc - 14 | 1.4) + 14 | 1.4 = | | (P | d) = 9. | 70 |
| (P _C) ² - or (P _C) ² - | (Pa) ² | | | | (P _C) ² - (P | a) ² | | | Backpres | | | | | | | Open 1 Deliver | |
| or | | (P _c) ² | ² - (P _{**}) ² | : [] | (P _c) ² - (P | a) ² LOG | | İ | Curve Slo | | n x LOG | | | | | = R x A | ntilog |
| (P _c) ² - | (Pd) ^c | | " | | _(P _C) ² - (P | <u>v</u> 2] 200 | L | | Assigne Standard S | | n x bos | | A | ntilog | | Mcf | 'd. |
| 21.90 | | 4.76 | | | 4.601 | .ε | .6629 | | .827 | | .548 | 5 3.536 | | | 269 | | |
| 12.35 | | | 76 | \top | 2.595 | | 142 | | .827 | | .342 | | | .201 | | 168 | |
| OPEN FLOW | 7 | | 269 | | М | efd @ 14.6 | 5 psia | ı | | ELIVE | ERABILITY | | 1 | 68 | | Mcfd 0 14 | .65 psia |
| | | d and | | het | | | | | duly authoriz | | | hove *an | | | hae ke | | |
| | | | | | e and correc | | | | 17 | _ day | \ _1 | | Δ | | \ | , 20 O | |
| | | | | | | | | | , _ | · | _ | - | () | 1. | 4 > | | - |
| | Witne | SS (if | anvì | | | | | | | | | | 70 | <u>(m</u> | for F | ompany | |
| | ** 11110 | ~~ (11 | | | | | | | | | | | | | | | |

Witness (if any)

For Commission

| | lare under penelty or perjury under the laws of the state of kansas that I am authorized to request estate to the state of kansas that I am authorized to request estatus under rule K.A.R. 82-3-304 on behalf of the operator |
|----------|---|
| | at the foregoing information and statements contained on this application form are true and correct to |
| the bes | at of my knowledge and belief based upon gas production records and records of equipment installa- |
| tion and | d/or of type completion or upon use of the gas well herein named. |
| l here | eby request a permanent exemption from open flow testing for the Kendrick |
| gas we | ll on the grounds that said well: |
| | 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 vacum at the present time; KCC approval Docket No is incapable of producing at a daily rate in exess of 150 mcf/D |
| Date: _ | 2-19-02 |
| | Signature: Jan Jan Asst. |

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.