KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

| Type Test | i: ien Flov | ~ | | | | | | ruct | ions on Re | verse Sid | | | . 45 | | _ | | | |
|--|----------------|---|----------------------------------|--------------------------------|---|---|----------------------------|-------------------|---|-------------------------------|--|----------------------|------------------------------|----------|--|--------------------------|---|--|
| ✓ Deliverabilty | | | | | Test Date: 02/22/2011 | | | | | API No. 15 023-20736 — OOO | | | | | | | | |
| Company | | eve | lopment (| Corp |) | | | | Lease Hilt | | | | | | 21-15 | Well Nu | mber | |
| County Location Cheyenne SWNENW | | | | Section 15 | | | TWP 2S | RNG (I 42W | E/W |) | | Acres Attributed 160 | | | | | | |
| | | | | | Reservoir Niobrara | | | | Gas Gathering Connection PDC Eureka Gathering | | | | | | | | | |
| | | | | Plug Back Total Depth 1769' | | | | Packer Set at n/a | | | | | | | | | | |
| • | | | | Internal E 4" | Internal Diameter 4" | | | Set at 1792' | | | ions | | то 1679' | | | | | |
| Tubing Size Weight 2.375" 4.75# | | | | | Internal Diameter 2" | | | Set a | Peri | forat | ions | | То | | | | | |
| | | | | | Type Fluid Production Brine Water | | | | Pump Unit or Traveling Plunger? Yes / No Yes, PU | | | | | | | | | |
| Producing Thru (Annulus / Tubing) Annulus | | | | % C | % Carbon Dioxide | | | | % Nitrogen <1% | | | | Gas Gravity - G _g | | | | | |
| Vertical D | |) | | | | -170 | Р | ress | sure Taps | | -170 | | | | (Meter I | Run) (P | rover) Size | |
| Pressure | Buildu | D: | Shut in 02 | /22 | 2 | 0_ <u>11</u> _at_7 | :15am | | (AM) (PM) | Taken 0 | 2/23 | | 20 | 11 at. | 8:22ar | n . | (AM) (PM) | |
| Well on L | • | | Started | | | | | | | | | | | | | | | |
| | | | | - | | · · · | OBSER | RVE | D SURFACI | E DATA | | | | Duration | n of Shut- | in_24 | Hours | |
| Static / Dynamic Property | | rifice Circle one Size Meter Prover Pres psig (Pm | | - 1 | Pressure Differential in | Flowing Well Head Temperature t t | | | (P _w) or (P _t) or (P _c) | | Tubing Wellhead Pressure (P _w) or (P ₁) or (P _c) | | Duration (Hours) | | Liquid Produced (Barrels) | | | |
| Shut-In | | paig | | m) Inches H ₂ 0 | | | | | psig 72 | psia | psig | | psia | | | | | |
| Flow | | | | | | | | | | | | | | | | | | |
| | | | | Т | | | FLOW | STR | EAM ATTR | IBUTES | | | | | | | | |
| Plate Coeffiecient (F _b) (F _p) Mcfd | | Circle one: Meter or Prover Pressure psia | | | Press Extension ✓ P _m x h | Gravity Factor F _g | | Т | Flowing emperature Factor F _{ft} | Fa | Deviation Factor F _{pv} | | Metered Flow R (Mcfd) | | GOR (Cubic Fee Barrel) | | Flowing Fluid Gravity G _m | |
| | | | | | | (ODEN EL | OW) (DE | | ERABILITY |) CALCIII | ATIONS | <u> </u> | | | | | | |
| (P _c) ² = | | _: | (P _w) ² = | | : | P _d = | | | · |) CALCO | | | :: | | | $2^{2} = 0.2$ $2^{2} = $ | 07 | |
| $(P_c)^2 - (P_n)^2$ or $(P_c)^2 - (P_d)^2$ | | (P _c) ² - (P _w) ² | | 1 | pose formula 1 or 2: 1. $P_c^2 - P_a^2$ LOC form 2. $P_c^2 - P_d^2$ 1. or and d ded by: $P_c^2 - P_w^2$ by | | r 2. fivide P 2 - P 2 | | Backpressure Curve Slope = "n" or Assigned Standard Slope | | n x LOG | | g [] | An | Antilog E | | Open Flow Deliverability Equals R x Antilog (Mcfd) | |
| | | | | | | | | | | | | | | | | | | |
| Open Flov | w | | | | Mcfd @ 14. | 65 nsia | ···· | | Deliverab | ility | | | | Mcfd @ | 14.65 ps | ia | | |
| • | | aneo | d authority, o | | | <u> </u> | states that | at h | **** | | to make | the | | | ······································ | ····· | ledge of | |
| | | _ | n, and that s | | | | | | • | | day of _ | | • | | | | 20 2011 | |
| | | | Witness | (if any |) | | | | _ | 9 | | <u>ے</u> | For C | ompany | | | | |
| | | | For Com | missio | n | | | _ | - | | | | Chec | ked by | ······································ | | CEIVED | |
| | | | | | | | | | | | | | | | | Al | IG 0 2 201 | |

KCC WICHITA

| | clare under penalty of perjury under the laws of the state of Kansas that I am authorized to request | | | | | | | |
|-----------------|---|--|--|--|--|--|--|--|
| | status under Rule K.A.R. 82-3-304 on behalf of the operator Petroleum Development Corp | | | | | | | |
| | the foregoing pressure information and statements contained on this application form are true and | | | | | | | |
| | o the best of my knowledge and belief based upon available production summaries and lease records | | | | | | | |
| | ment installation and/or upon type of completion or upon use being made of the gas well herein named. | | | | | | | |
| | eby request a one-year exemption from open flow testing for the Hilt 21-15 | | | | | | | |
| 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 furt | her agree to supply to the best of my ability any and all supporting documents deemed by Commission | | | | | | | |
| staff as r | necessary to corroborate this claim for exemption from testing. | | | | | | | |
| | | | | | | | | |
| Date: <u>07</u> | 7/13/2011 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | Signature: | | | | | | | |
| | | | | | | | | |
| | Title: Sr. Engineering Tech | | | | | | | |

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.

RECEIVED
AUG 0 2 2011