## 15-175-00136-0000

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

| Type Test  | t:                                     |   |  |                      |  | (   | See Instruc                             | tions on Rev   | erse Side           | )  |             |  |   |  |
|--|--|---|--|----------------------|--|---|---|--|---------------------|--|-------------|--|---|--|
| Open Flow Deliverabilty  |  |   |  | Test Date            | <b>9</b> :   |   | API No. 15<br>15-175-1 <del>043</del> 0 |  |                     |  |             |  |   |  |
| Company<br>Cabot Oil & Gas Corporation                               |  |   |  |                      |  | Lease<br>Harrell U                          | nit                                     |  | 00,/30              | <b>- 00<b>00</b></b>   | Well Number |  |   |  |
| County Location<br>Seward C-SW-SW                                    |  |   |  | Section<br>5         |  | TWP<br>33S                                  |   |  | W)                  | Acres Attributed 80  |             |  |   |  |
|  |  |   |  | Reservoir<br>Upper M |  |   |   | Gas Gat<br>WNG   | hering Conne        | ection   |             |  |   |  |
| Completion Date 05/16/1966   |  |   |  | Plug Bac<br>5705     | Plug Back Total Depth<br>5705  |   |   | Packer S<br>None   | Set at              |  |             |  |   |  |
| Casing Size Weight 4-1/2' 9.5  |  |   |  | Internal D<br>4.090  | Diameter   |   | Set at <b>5736</b>                      |  | rations<br>5        | то<br>5641   |             |  |   |  |
| Tubing Size Weigh 2-1/2' 4.7   |  |   |  | ht                   |  | Internal D<br>1.995                         | Diameter                                | iameter Set at 5692  |                     | Perforations<br>5653   |             | т <sub>о</sub><br>5655                 |   |  |
| Type Completion (Describe) Single                                    |  |   |  |                      | Type Fluid Production Gas/ Condensate  |   |   | Pump Unit or Traveling Plunger? Yes / No Pumping Unit                |                     |  |             |  |   |  |
| Producing<br>Casing  | Thru                                   | (Anr  | nulus / Tubii                                      | ng)                  |  | % C   | arbon Diox                              | ide  |                     | % Nitrog   | en          | Gas G                                  | ravity - G <sub>g</sub>                                     |  |
| Vertical D<br>5654   | epth(F                                 | <del>1</del> )  | · · · · · · · · · · · · · · · · · · ·              |                      |  |   | Pres                                    | sure Taps  |                     |  |             | (Meter<br>4                            | Run) (Prover) Size  |  |
| Pressure   | Buildu                                 |   | Shut in  |                      |  | 0 at  |   |  |                     |  |             |  | (AM) (PM)   |  |
| Well on L  | ine:                                   | ;   | Started 10   | /06/2                | 2011 20  | 0 at  | 1:30am                                  | (AM) (PM)  | Taken 10            | )/06/201   | 11 20       | at11:30a                               | am (AM) (PM)  |  |
|  |  |   |  | <del></del>          |  |   | OBSERVE                                 | D SURFACE  |                     | r  |             | Duration of Shut-                      | -in Hours   |  |
| Static /<br>Dynamic<br>Property                                      | ynamic Size                            |   | Circle one:  Meter Prover Pressure psig (Pm)       |                      | Pressure Differential in Inches H <sub>2</sub> 0   | Flowing Well He Temperature t t             |   | i Wollhaad Proceura  |                     | Tubing Wellhead Pressure $(P_w)$ or $(P_1)$ or $(P_c)$ psig psia |             | Duration<br>(Hours)                    | Liquid Produced<br>(Barrels)                                |  |
| Shut-In  |  |   |  |                      |  |   |   | 107  |                     | 0  |             |  |   |  |
| Flow   |  |   |  |                      |  |   |   |  |                     |  |             |  |   |  |
|  |  |   |  | · · ·                |  |   | FLOW STE                                | REAM ATTRI   | BUTES               |  |             |  |   |  |
| Plate<br>Coeffiecient<br>(F <sub>b</sub> ) (F <sub>p</sub> )<br>Mofd |  |   | Circle one:<br>Meter or<br>Prover Pressure<br>psia |                      | Press<br>Extension<br>✓ P <sub>m</sub> xh  | Grav<br>Fact                                | tor                                     | Temperature Factor   |                     | viation Metered Flor<br>actor R<br>F <sub>pv</sub> (Mcfd)        |             | GOR<br>(Cubic Fe<br>Barrel)            | Gravity I   |  |
|  |  |   |  | <u> </u>             |  |   |   |  |                     |  |             |  |   |  |
| (P <sub>c</sub> ) <sup>2</sup> =                                     |  | :   | (P) <sup>2</sup>                                   | =                    | :  | (OPEN FLO                                   |   | <b>/ERABILITY)</b><br>% (P <sub>.</sub>                              | CALCUL<br>- 14.4) + |  | :<br>:      | (P <sub>a</sub> )<br>(P <sub>d</sub> ) | 2 <sup>2</sup> = 0.207<br>2 <sup>2</sup> =                  |  |
| $(P_c)^2 - (P_a)^2$<br>or<br>$(P_c)^2 - (P_d)^2$                     |  | (P <sub>e</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> |  | Choos<br>1.<br>2.    | e formula 1 or 2:  P <sub>c</sub> <sup>2</sup> - P <sub>n</sub> <sup>2</sup> P <sub>c</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> d by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | LOG of<br>formula<br>1. or 2.<br>and divide | P.2 - P.2                               | Backpressure Curv<br>Slope = "n"<br>or<br>Assigned<br>Standard Slope |                     | n x LOG  |             | Antilog                                | Open Flow<br>Deliverability<br>Equals R x Antilog<br>(Mcfd) |  |
| Open Flor  |  |   |  |                      | Vofd @ 14  | 65 peia                                     |   | Deliverabil  | ity                 |  |             | Mcfd @ 14.65 ps                        | ia  |  |
| Open Flor  | ······································ |   | د داد د مادر دو ال                                 |                      | Mcfd @ 14.   |   | .totoc 414 '                            | Deliverabil  |                     | n make 45  |             | •                                      |   |  |
|  |  | •   | •  |                      |  | •   |   | this the 16  |                     |  |             | rt and that he ha                      | , 20 <u>12</u>  |  |
|  |  |   |  |                      |  |   |   | _  |                     | 4  | MAN         | etich                                  |   |  |
|  |  |   | Witness  | (if any)             |  |   |   |  |                     |  | For C       | Company                                | RECEIVED  |  |
|  |  |   | For Com  | mission              | 1  |   |   | _  |                     |  | Chec        | ked by                                 | EB 0 1 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 <u>Cabot Oi &amp; Gas Corporation</u> 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 <u>Harrel Unit *1</u> 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: 01/16/2012  |
| Signature:  |
|   |

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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