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

| Type Test  | t:                        |  |   |   | (                              | See Instr                     | ructi                  | ons on Re   | verse Side                            | 9)                    |  |                   |                                      |                                       |   |  |
|--|---------------------------|--|---|---|--------------------------------|-------------------------------|------------------------|---|---------------------------------------|-----------------------|--|-------------------|--------------------------------------|---------------------------------------|---|--|
| ✓ Op   | en Flov                   | 1  |   |   | Test Date:                     |                               |                        |   |                                       | Δ.                    | PI No. 15  |                   |                                      |                                       |   |  |
| ✓ Deliverabilty  |                           |  |   |   | 8/08 to 8/09/13                |                               |                        |   |                                       | 007-23,203-00-00      |  |                   |                                      |                                       |   |  |
| Company<br>Chieftain Oil Co, Inc.                          |                           |  |   |   | Lease<br>Houlton               |                               |                        |   | 1                                     |                       |  |                   |                                      | Well Number<br>C-1                    |   |  |
| County Location Barber SESESW                              |                           |  |   |   |                                |                               |                        | TWP RNG (E/W) 33S 11W   |                                       |                       |  |                   | Acres                                | Attributed                            |   |  |
| Field<br>Traffas   |                           |  |   | Reservoir<br><b>Miss</b>  |                                |                               |                        | Gas Gathering Conn<br>Atlas   |                                       |                       | nectio   | on                |                                      |                                       |   |  |
| Completion Date<br>10/25/07                                |                           |  |   |   | Plug Back<br>5088              | k Total D                     | epth                   | 1   | Packer Set at none                    |                       |  |                   |                                      |                                       |   |  |
| Casing S<br>5.5  | Casing Size Weight<br>5.5 |  |   | nt  | Internal Diameter              |                               |                        | Set at Perforations 5111 4530   |                                       |                       |  | то<br><b>4546</b> |                                      |                                       |   |  |
| Tubing Size Weight 2.875                                   |                           |  |   | nt  | Internal Diameter              |                               |                        |   | Set at Perforations<br>4600           |                       |  |                   | То                                   |                                       |   |  |
| Type Corsingle   | npletion                  | (Des   | cribe)                                    |   | Type Fluid Production Oil/SW   |                               |                        |   |                                       |                       | Unit or Travelir<br>- pump unit  |                   | nger? Yes                            | / No                                  |   |  |
| Producing Thru (Annulus / Tubing) annulus                  |                           |  |   |   | % Carbon Dioxide               |                               |                        |   | % Nitrogen<br>1.653                   |                       |  |                   | Gas Gravity - G <sub>g</sub><br>.674 |                                       |   |  |
| Vertical Depth(H)  |                           |  |   |   | Pressure Taps<br><b>flange</b> |                               |                        |   | <u> </u>                              |                       |  |                   | (Meter Run) (Prover) Size            |                                       |   |  |
|  |                           |  | nut in8/0                                 | 5 -   | 0_13_at_8:                     |                               | <u> </u>               | (AM) (PM)   | 8/                                    | /08                   | <del></del>  | 13                | 8:45 a                               | m                                     |   |  |
| Pressure Buildup: Shut in 5/08  Well on Line: Started 8/08 |                           |  |   | 0 at<br>0 at 8:   |                                |                               | (AM) (PM)<br>(AM) (PM) |   |                                       |                       |  | at8:45 a          |                                      | (AM) (PM)<br>(AM) (PM)                |   |  |
|  |                           |  | <del></del>                               |   |                                |                               |                        |   |                                       |                       |  |                   |                                      | . 72                                  |   |  |
|  |                           |  | Circle one:                               | Pressure  |                                |                               |                        | Casing  |                                       | 1                     | Tubing   |                   | Duration of Shut-                    |                                       | Hours   |  |
| Static /<br>Dynamic  | Dynamic Size              |  | Meter<br>Prover Press                     | Differential  | Flowing<br>Temperature         | Well Head<br>Temperature<br>t |                        | Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> ) |                                       | l l                   | Wellhead Pressure<br>(P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> ) |                   | Duration<br>(Hours)                  |                                       | Liquid Produced (Barrels)                     |  |
| Property   |                           |  | psig (Pm)                                 | Inches H <sub>2</sub> 0   | t                              |                               |                        | psig  | psia                                  | psig                  |  |                   | ,                                    |                                       | -,  |  |
| Shut-In  |                           |  |   |   |                                |                               |                        | 174.5   | 188.9                                 |                       |  | 72                | 2                                    |                                       |   |  |
| Flow   | .750 26                   |  | 26  | 1.5   | 70                             |                               |                        | 154.8   | 169.2                                 |                       |  |                   | 24                                   |                                       |   |  |
|  | <del></del>               |  |   | · · · · · · · · · · · · · · · · · · ·   |                                | FLOW S                        | TRI                    | EAM ATTR  | IBUTES                                | -1                    |  |                   |                                      | · · · · · · · · · · · · · · · · · · · | ····  |  |
| Plate Coefficient (F <sub>b</sub> ) (F <sub>p</sub> ) Mcfd |                           | Circle one:<br>Meter or<br>Prover Pressure<br>psia |   | Press<br>Extension  | Grav<br>Fact<br>F <sub>g</sub> | ctor T                        |                        | Flowing<br>emperature<br>Factor<br>F <sub>11</sub>                            | Fa                                    | viation<br>actor<br>F | Metered Flow<br>R<br>(Mcfd)  |                   | GOR<br>(Cubic Fe<br>Barrel)          |                                       | Flowing<br>Fluid<br>Gravity<br>G <sub>m</sub> |  |
| 2.779  |                           | 40.4   | · · · · · · · · · · · · · · · · · · ·     | 7.78  | 1.218                          | 18 .9                         |                        | 905   |                                       | 26                    |  |                   |                                      |                                       | .674  |  |
| (P <sub>c</sub> ) <sup>2</sup> = 3                         | 5.683                     |  |   | 28.628  | (OPEN FLO                      | OW) (DEI                      |                        | RABILITY  | ") CALCUL<br>P <sub>c</sub> - 14.4) + |                       |  |                   | (P <sub>a</sub> )                    | <sup>2</sup> = 0.2                    | 207   |  |
|  |                           |  |   | Choose formula 1 or 2   | : [                            |                               | 7                      |   | ssure Curve                           |                       | Г 7  | T                 | , d)                                 | 1                                     | pen Flow                                      |  |
| $(P_c)^2 - (P_a)^2$<br>or<br>$(P_c)^2 - (P_d)^2$           |                           | (P <sub>c</sub> )                                  | ²- (P <sub>w</sub> )²                     | 1. P <sub>c</sub> <sup>2</sup> -P <sub>a</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> -P <sub>d</sub> <sup>2</sup> | tormula                        |                               |                        |   | Slope = "n"                           |                       | n x LOG  |                   | Antilog                              |                                       | Deliverability Equals R x Antilog             |  |
| $(P_c)^2 - (P_d)^2$  |                           |  | divided by: P <sub>2</sub> <sup>2</sup> - |   | and divide p2_p2               |                               |                        | Assigned<br>Standard Slope  |                                       |                       |  |                   |                                      |                                       | (Mcfd)  |  |
| 35.476   | 35.476                    |  | 55  | 5.028   | .7014                          |                               |                        | .850  |                                       | .5                    | .5962  |                   | 3.94                                 |                                       | 102   |  |
|  |                           |  |   |   |                                |                               |                        | assign  | ed                                    |                       |  |                   |                                      |                                       |   |  |
| Open Flo   | w 102                     |  |   | Mcfd @ 14.  | 65 psia X .5                   | 60 =                          |                        | Deliverat   | oility 51                             |                       |  | Mcf               | d @ 14.65 psi                        | ia                                    |   |  |
| The  | undersi                   | gned a   | authority, o                              | n behalf of the   | Company, s                     | tates tha                     | t he                   | is duly a   | uthorized t                           | o make                | the above rep  | ort a             | nd that he ha                        | ıs knov                               | ledge of                                      |  |
| he facts s   | tated th                  | erein,   | and that s                                | aid report is true  | and correct                    | t. Execut                     | ted 1                  | this the 1  | 5th                                   | day of _              | August   |                   |                                      |                                       | 20 13 .                                       |  |
|  |                           |  |   |   |                                |                               | _                      | -   |                                       | ly T                  | lle  |                   |                                      | REC<br>ORPOR                          | EIVED<br>ATION COMMIS                         |  |
|  |                           |  | Witness (                                 | if any)   |                                |                               |                        |   | Ce l                                  | M. 1                  | VC. Fo   | r Compa           |                                      | MG 4                                  | 2013  |  |

CONSERVATION DIVISION WICHITA, KS

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