

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

Type Test:

(See Instructions on Reverse Side)

- Open Flow
- Deliverability

Test Date:  
10/15 to 10/16/13

API No. 15  
119-20,789-0000

|  |                    |                             |                 |  |                                      |
|--|--------------------|-----------------------------|-----------------|--|--------------------------------------|
| Company<br>Rains & Williamson Oil Co, Inc    |                    |                             | Lease<br>Ediger |  | Well Number<br>1                     |
| County<br>Meade                              | Location<br>SWSWSW | Section<br>12               | TWP<br>33S      | RNG (E/W)<br>27W                               | Acres Attributed                     |
| Field<br>McKinney                            |                    | Reservoir<br>Chester        |                 | Gas Gathering Connection<br>DCP                |                                      |
| Completion Date<br>5/3/89                    |                    | Plug Back Total Depth       |                 | Packer Set at<br>none                          |                                      |
| Casing Size<br>5.5                           | Weight             | Internal Diameter           | Set at<br>5781  | Perforations<br>5716                           | To<br>5732                           |
| Tubing Size<br>2.375                         | Weight             | Internal Diameter           | Set at<br>5740  | Perforations                                   | To                                   |
| Type Completion (Describe)<br>single         |                    | Type Fluid Production<br>SW |                 | Pump Unit or Traveling Plunger? Yes / No<br>no |                                      |
| Producing Thru (Annulus / Tubing)<br>annulus |                    | % Carbon Dioxide<br>.621    |                 | % Nitrogen<br>1.265                            | Gas Gravity - G <sub>g</sub><br>.656 |
| Vertical Depth(H)                            |                    | Pressure Taps<br>flange     |                 |  | (Meter Run) (Prover) Size<br>2"      |
| Pressure Buildup: Shut in                    |                    | 10/12                       | 20 13           | at 10:30 am                                    | (AM) (PM) Taken 10/15                |
| Well on Line: Started                        |                    | 10/15                       | 20 13           | at 10:30 am                                    | (AM) (PM) Taken 10/16                |

### OBSERVED SURFACE DATA

Duration of Shut-in 72 Hours

| Static / Dynamic Property | Orifice Size (inches) | Circle one:<br>Meter<br>Prover Pressure<br>psig (Pm) | Pressure Differential in Inches H <sub>2</sub> O | Flowing Temperature t | Well Head Temperature t | Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> ) |       | Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> ) |      | Duration (Hours) | Liquid Produced (Barrels) |
|---------------------------|-----------------------|--|--|-----------------------|-------------------------|--|-------|--|------|------------------|---------------------------|
|                           |                       |  |  |                       |                         | psig   | psia  | psig   | psia |                  |                           |
| Shut-In                   |                       |  |  |                       |                         | 106.2  | 120.6 |  |      | 72               |                           |
| Flow                      | .250                  | 40   | 10   | 46                    |                         | 79.0   | 93.4  |  |      | 24               |                           |

### FLOW STREAM ATTRIBUTES

| Plate Coefficient (F <sub>b</sub> ) (F <sub>p</sub> ) Mcfd | Circle one:<br>Meter or Prover Pressure psia | Press Extension $\sqrt{P_m \times h}$ | Gravity Factor F <sub>g</sub> | Flowing Temperature Factor F <sub>tt</sub> | Deviation Factor F <sub>pv</sub> | Metered Flow R (Mcfd) | GOR (Cubic Feet/ Barrel) | Flowing Fluid Gravity G <sub>m</sub> |
|--|--|---------------------------------------|-------------------------------|--|----------------------------------|-----------------------|--------------------------|--------------------------------------|
| .3067  | 54.4   | 23.32                                 | 1.235                         | 1.014                                      | -----                            | 9                     |                          | .656                                 |

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 14.544 ; (P<sub>w</sub>)<sup>2</sup> = 8.723 ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>a</sub>)<sup>2</sup> = 0.207 ; (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

| (P <sub>c</sub> ) <sup>2</sup> - (P <sub>a</sub> ) <sup>2</sup><br>or<br>(P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup> | (P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> | Choose formula 1 or 2:<br>1. P <sub>c</sub> <sup>2</sup> - P <sub>a</sub> <sup>2</sup><br>2. P <sub>c</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup><br>divided by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | LOG of formula 1. or 2. and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$ | Backpressure Curve Slope = "n"<br>Assigned Standard Slope | n x LOG | Antilog | Open Flow Deliverability Equals R x Antilog (Mcfd) |
|--|---|---|--|---|---------|---------|--|
| 14.337   | 5.821   | 2.463   | .3915  | .850  | .3328   | 2.15    | 19   |
|  |   |   |  | Assigned  |         |         |  |

Open Flow **19**

Mcfd @ 14.65 psia

Deliverability

Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct. Executed this the 6th day of November, 20 13.

Witness (if any)

*[Signature]*  
COW, INC.

For Company

**KCC WICHITA**

**NOV 12 2013**

**RECEIVED**