

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

Type Test:

- Open Flow  
 Deliverability

Test Date:  
11/13 to 11/14/14

API No. 15  
057-20,688-00-00

|   |                      |                               |                                       |                                      |                     |
|---|----------------------|-------------------------------|---------------------------------------|--------------------------------------|---------------------|
| Company<br>Vincent Oil Co.                  |                      |                               | Lease<br>Imel                         |                                      | Well Number<br>1-18 |
| County<br>Ford                              | Location<br>NESWSENE | Section<br>18                 | TWP<br>29S                            | RNG (E/W)<br>22W                     | Acres Attributed    |
| Field<br>Wildcat                            |                      | Reservoir<br>Penn             | Gas Gathering Connection<br>DCP       |                                      |                     |
| Completion Date<br>11/18/10                 |                      | Plug Back Total Depth<br>5460 | Packer Set at<br>none                 |                                      |                     |
| Casing Size<br>4.5                          | Weight               | Internal Diameter             | Set at<br>5460                        | Perforations<br>5266                 | To<br>5270          |
| Tubing Size<br>2.375                        | Weight               | Internal Diameter             | Set at<br>5266                        | Perforations                         | To                  |
| Type Completion (Describe)<br>single        |                      | Type Fluid Production<br>none | Pump Unit or Traveling Plunger?<br>no |                                      | Yes / No            |
| Producing Thru (Annulus / Tubing)<br>tubing |                      | % Carbon Dioxide<br>.1336     | % Nitrogen<br>5.9601                  | Gas Gravity - G <sub>g</sub><br>.640 |                     |
| Vertical Depth(H)                           |                      | Pressure Taps<br>flange       |                                       | (Meter Run) (Prover) Size<br>2"      |                     |
| Pressure Buildup: Shut in 11/10             |                      | 20 14 at 9:45 am              | (AM) (PM) Taken 11/13                 | 20 14 at 9:45 am                     | (AM) (PM)           |
| Well on Line: Started 11/13                 |                      | 20 14 at 10:00 am             | (AM) (PM) Taken 11/14                 | 20 14 at 10:00 am                    | (AM) (PM)           |

### OBSERVED SURFACE DATA

Duration of Shut-in 72 Hours

| Static / Dynamic Property | Orifice Size (Inches) | Circle one:<br>Meter or 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                   |                       |  |  |                       |                         | 643  | 657.4 | 641  | 655.4 | 72               |                           |
| Flow                      | 1.500                 | 171  | 82   | 59                    |                         | 603  | 617.4 | 589  | 603.4 | 24               |                           |

### FLOW STREAM ATTRIBUTES

| Plate Coefficient (F <sub>o</sub> ) (F <sub>p</sub> ) Mcfd | Circle one:<br>Meter or Prover Pressure<br>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> |
|--|---|---------------------------------------|-------------------------------|--|----------------------------------|-----------------------|--------------------------|--------------------------------------|
| 13.09  | 185.4   | 123.29                                | 1.250                         | 1.001                                      | 1.016                            | 2051                  |                          |                                      |

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 432.174 ; (P<sub>w</sub>)<sup>2</sup> = 381.182 ; 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> or (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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$ | Backpressure Curve Slope = "n"<br>-----<br>Assigned Standard Slope | n x LOG [ ] | Antilog | Open Flow Deliverability Equals R x Antilog (Mcfd) |
|--|---|---|--|--|-------------|---------|--|
| 431.967  | 50.992  | 8.471   | .9279  | .636   | .5901       | 3.89    | 7978   |

Open Flow **7978** Mcfd @ 14.65 psia X .50 = Deliverability **3989** 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 19th day of November, 20 14.

**KCC WICHITA**

*[Signature]*  
For Company

Witness (if any)

NOV 25 2014

For Commission

Checked by

**RECEIVED**