

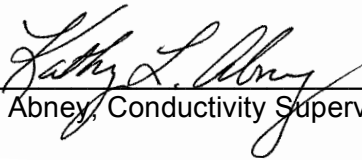
**Conductivity and Permeability Of The  
Submitted 40/70 V7 Stikine Sand  
(Duplicate Testing) at 2 lb/ft<sup>2</sup> and at  
2,000 - 8,000 psi Closure Stresses at 150°F  
For 50 Hours Each On Ohio Sandstone**

**Prepared For:**

Mr. Scott Broughton  
Stikine Gold Corporation  
1122 Mainland St. #490  
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Canada

**Prepared By:**

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Kathy Abney, Conductivity Supervisor

P.O. Number: Verbal per S. Broughton  
to Lisa O'Connell

File Number: SL 8835

June 2010

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Kathy Abney  
Conductivity Supervisor

June 2, 2010

Mr. Scott Broughton  
Stikine Gold Corporation  
1122 Mainland St. #490  
Vancouver, BC V6B 5L1  
Canada

Dear Mr. Broughton;

Stim-Lab, Inc. has completed the duplicate evaluations of the long-term conductivity on the sample submitted by your firm labeled 40/70 V7 Stikine sand. The sample was delivered to Stim-Lab on April 28, 2010. The sample was evaluated in duplicate at 2.0 lb/ft<sup>2</sup> at 150°F and 2000, 4000, 6000 and 8000 psi closure stresses for 50 hours each between Ohio Sandstone. As requested, ISO 13503-2/API RP19C evaluations of the sample were also performed and reported in a separate report.

Figure 1 contains a summary of conductivity and permeability vs. stress. Figures 2 compares the measured conductivity of this sample with predicted values from Predict-K 10.1 using the 40/70 Stikine V7 sand sieve distribution and two types of 40/70 frac sands. The data is presented in Tables 1 and 2. The sieve analysis of the sample is provided in Table 3. The procedures utilized are outlined in the following section of this report.

Thank you for allowing Stim-Lab to perform this test series. If you have any questions regarding the testing or results, please do not hesitate to give me a call.

Sincerely,

Kathy Abney  
Conductivity Supervisor



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## PROCEDURE FOR CONDUCTIVITY AND LIQUID PERMEABILITY MEASUREMENTS

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- 1) The equipment used for the measurement of conductivity and liquid permeability included:
  - (a) 75 ton Dake Press with air oil intensifier. API SS316 flow cells with 10 sq in. flow paths.
  - (b) Rosemont (smart family) 40:1 pressure transducers for measuring pressure drop and rate plumbed with ¼ in. lines and calibrated with the smart system computer and set at the 0-5 inch of water span range.
  - (c) Two gallon nitrogen driven fluid reservoirs filled with 2% KCl and deoxygenated with nitrogen.
  - (d) Internal gauges and calipers for measuring widths.
  - (e) IBM PC to process data and calculate conductivity and permeability.
  - (f) Two - 10 sq in. Ohio Sandstone.
2. An API cell was loaded with proppant sample to be tested. The proppant was leveled with a blade device.
3. The proppant sample was placed between the core slabs and was made a part of a two-cell stack.
4. The cells were stacked to within 0.002 in. from top to bottom and positioned between the platens of the Dake Press. Pressure was increased to 500 psi and the system was evacuated and saturated with water at 70-75 °F.
5. Once saturated, the closure pressure was increased to 1,000 psi, at a rate of 100 psi/min. The proppant was allowed to equilibrate as outlined in the data tables.
6. The flow rate, pressure differential, and average width were measured at each pressure in order to calculate conductivity and permeability. Five measurements were taken and averaged to arrive at each conductivity. Flow rate was measured with a LiquiFlow meter, which was calibrated with a balance to 0.01 ml/min. Darcy's Law was used for the calculations to determine the conductivity and permeability.
7. The test temperature was increased to 150 °F and allowed to equilibrate. The temperature was left at 150 °F for 12 hours prior to increasing the closure.
8. The conductivity and permeability of the proppant were collected at 1,000 psi at both room temperature and 150 °F as stated in the data tables.
9. The pressure was increased at 100 psi per minute at 1,000 psi increments and the above measuring technique repeated.

10. The conductivity and permeability of the proppant were continuously monitored at 2,000 psi and 150 °F for 50 hours.
11. The conductivity and permeability of the proppant were continuously monitored at 4,000 psi and 150 °F for 50 hours.
12. The conductivity and permeability of the proppant were continuously monitored at 6,000 psi and 150 °F for 50 hours.
13. The conductivity and permeability of the proppant were continuously monitored at 8,000 psi and 150 °F for 50 hours.

All ISO13503-2:2006 / API RP-19C evaluations followed the procedures as outlined in this document. These procedures were created from the old API RP 56, 58 and 60 procedures which were rolled into one new procedure which was published in 2006. The specifications were published in 2008 in a separate document.