

# DUVERNAY GEOCHEMICAL STUDY 3 - Valleyview



## DATA AVAILABLE - DEC 10

CBM Solutions and Trican Well Service Ltd. are pleased to announce the availability of our Duvernay geochemical study 3 (Valleyview).

### General:

Continuing north from the successful Fox Creek Duvernay Study 1 (released in summer 2010) and the Rimbey Duvernay Study 2 (released November 2010); **Valleyview Duvernay Study 3** helps the client explore the northern extent of the Duvernay Study 1 area. Excellent results from the richly organic Duvernay Shales and intervening carbonates are available with this study. Detailed mapping of the kerogen maturity can be obtained from this data set.

Over 70 wells have been analyzed using cuttings to provide a geochemical data set to the explorer of the Valleyview area with the upcoming December 15 landsale. In addition, 1 core has also been sampled to show the downcore variation within the Duvernay Formation. The focus of the study is the light hydrocarbon potential of the Duvernay shales. A minimum of one sample per well location has been tested. All data included is **NEW** and has been recently generated by CBM Solutions. Samples have been hand-picked by CBM Solutions geologists from archived cuttings.

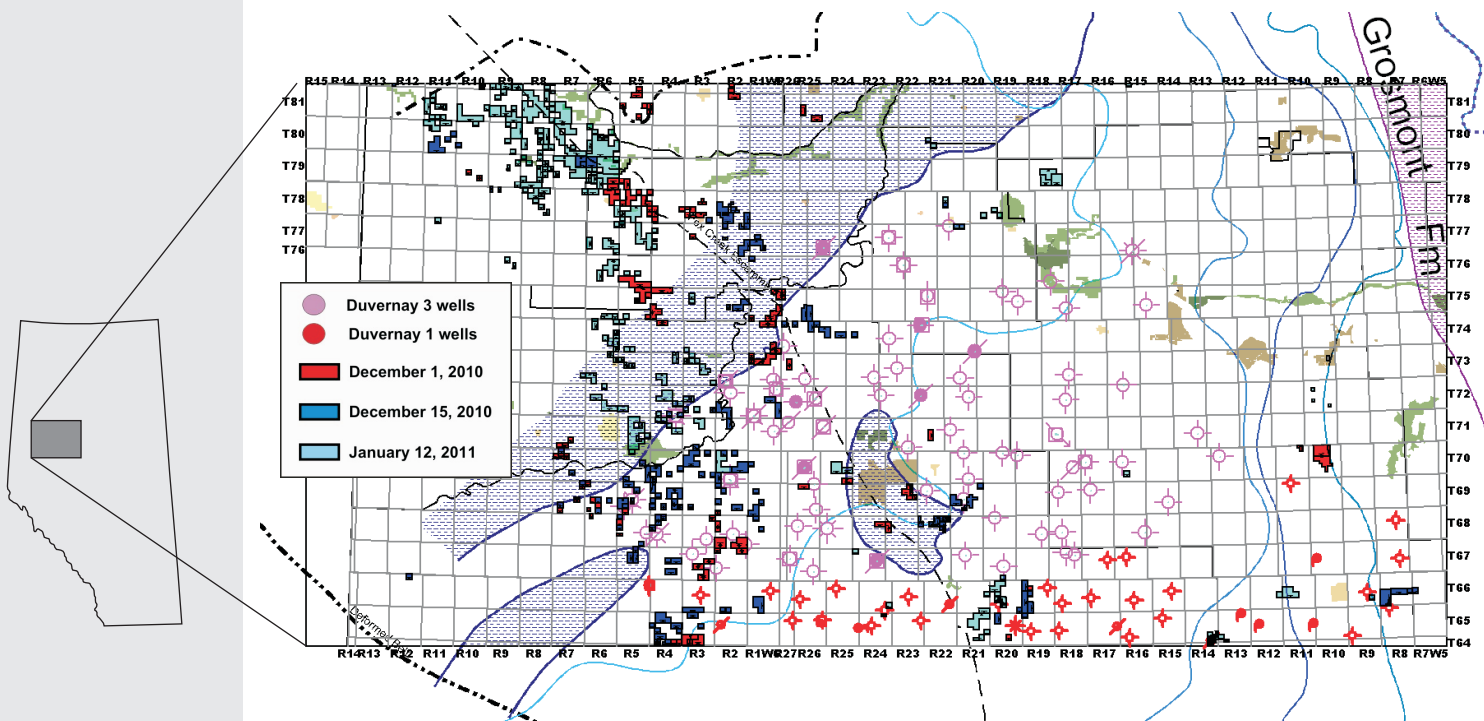
### Terms:

Subscriptions available NOW with release of first data starting Friday, December 10, 2010 (at least one SRA/RockEval analysis and one interpreted XRD trace). One update will follow the initial data release. **Price is \$20,000 + GST.** Data will be delivered when the contract is signed.

### Conditions:

A confidentiality agreement will be required to restrict transfer of data to outside parties. Data remains the property of Trican Well Services Ltd.

### Contact:



### Deliverables:

**The combined analyses represent a value of over \$150,000**

***SRA analyses: why? Where is the Duvernay relative to NGL's and the oil window? Do these shales have the potential capability to produce and store light hydrocarbons or dry gas? Which lands have the greatest potential based on the geochemistry? Where is the total organic carbon distributed? In what amount?***

SRA analyses provides:

Tmax (thermal maturity) - indicates the level of maturity with respect to the oil window

TOC (Total Organic Carbon) - weight percent of organic carbon

Kerogen Type - crossplots of hydrogen and oxygen indices indicate the presence of Type I, II or III kerogen

***XRD Analyses: Why? What is the mineralogy of the Duvernay? How are the carbonates and quartz distributed? What is the relationship between the TOC and the mineralogy? Does this provide a high-grading of the landsale blocks?***

XRD analysis and calculated quantitative Rietveld data:

Bulk Mineralogy - indicates the total mineral assemblage

Quantitative Mineralogy - reitveld analysis is used to determine relative weight percent of each mineral

Mineral Trends - indicates relationships between various minerals and the relationships between organic carbon and various minerals

***Sorption capacity & TOGIP modeling: Why? What are the hydrocarbon resources per section? What variables are important?***

Ten unpublished Bustin et. al. adsorption isotherms from the Duvernay have been integrated into this study to determine gas capacities.

72 runs modeling total free and sorbed gas variables using CBM Solutions proprietary analytical software are included to evaluate the light hydrocarbon potential. Variables included are ranges in porosity, reservoir temperature & pressure, gas compositions, and sorption capacity.

### ***Final Data***

Final data reporting includes Excel tables of all data and an interpreted report displaying trends in maturity, organic content, mineralogy and TOGIP (total original gas in place).

### ***Delivery Schedule***

***December 10 - minimum of 1 SRA and 1 XRD per location sampled, TOGIP modelling, analysed well list***

***December 13 - update of additional SRA and XRD analyses final report with interpretations and includes Excel tables and charts.***