



## This Month

### Coal Bed Methane GIP from Logs

Using technology to create realistic reserve estimates

### MetroPetro

Can Suncor and PetroCan team up to defeat the bad economy?

### Company News

One of Proven's Professional Engineers takes the spotlight

## Coal Bed Methane GIP from Logs

In Search of Greater Efficiency



**"Log analysis allows for realistic reserve estimates to be developed for CBM fields."**

Norman Mohr

CBM original gas in place estimates can now be estimated from log analysis. Several companies serving western Canada now offer log analysis based on the bulk density curve in coal seams. Recon and Schlumberger both offer CBM gas content analysis from standard log suites that include a bulk density.

These GIP interpretations are based mainly on the response of the bulk density curve in the coal seams. Probable concentrations of the four components of coal (ash, fixed carbon, moisture and volatile matter) are estimated based on the bulk density readings. Several published equations such as the Mullen, Mavor, Kim and Langmuir equations can be used to calculate the gas content based on these concentrations.

As with conventional gas well, CBM wells

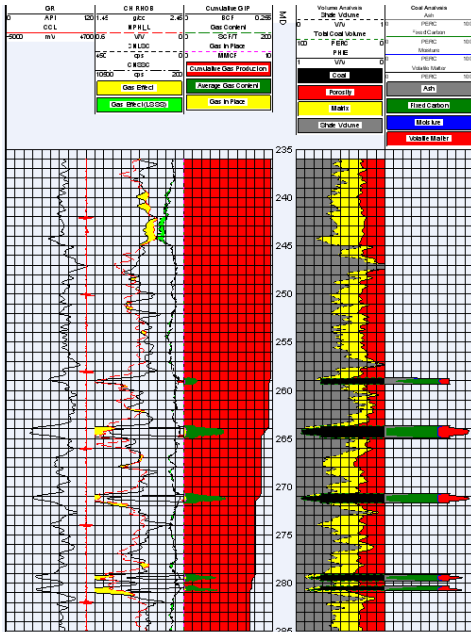
need to be logged and analysed. The unique properties of CBM, however, make this process different. Most natural gas is found adsorbed on the surface of the coal, which is distinct as to how conventional gas is found. As a result, conventional log analysis does not apply.

To ensure accurate interpretation of the data, it is also important that the log based interpretation be correlated to results from core desorption analysis. A reservoir engineer can then best decide how to use/interpret the results from the distinctive equations in order to correctly develop a local model. Log analysis of individual wells is a useful tool as it allows for realistic reserve estimates to be developed for CBM fields.

Typically, a control well is chosen and a desorption test is conducted for all the different

**(continued on page 2)**

## CBM GIP from Logs



Sample log courtesy of  
RECON Petrotechnologies Ltd.

(continued from page 1)

coal seams found. This control well may then be used as an analog for other wells in the area to estimate the gas in place.

As global energy demand grows, it is important to continue the development of unconventional resources. Coal-bed Methane (CBM) is one of these unconventional resources that will play a big part in Alberta's energy future. CBM production in Alberta is expected to increase from 2.9 billion cubic metres in 2005 to 19.6 billion cubic metres in 2015.

## Company News

Remodeled Proven-Reserves.com Now Online

Steve Shon is one of Proven Reserves' Professional Engineers, and an important part of our engineering team.

Steve is originally from Seoul, Korea, though he graduated from the University of Alberta with a B.Sc. in Materials Engineering.

Prior to his work at Proven Reserves, Steve worked for four years in field as an openhole wireline engineer and production optimization engineer. He also participated in an engineering software development which calculates side-loadings on the sucker rods in a deviated well.

During his free time, Steve enjoys spending time in nature, including traveling and hiking. He also likes to



go to the gym.

Steve says that he wants to continue acquiring knowledge and skills in order to provide professional services to his clients, and would like to become a senior engineer.

Thanks, Steve!

MetroPetro



click for larger image

### Upcoming Events

**Technical Luncheon**  
Back to Basics: Microscopic  
Fracture Mapping  
May 5, 2009  
Calgary, Alberta  
[www.petsoc.org](http://www.petsoc.org)

**Technical Luncheon**  
The State of Fluid Saturation  
in Tight-Gas Reservoirs  
May 13, 2009  
Calgary, Alberta  
[www.cwls.org](http://www.cwls.org)

**Technical Luncheon**  
Production Data Analysis  
Using Fuzzy Logic  
May 25, 2009  
Calgary, Alberta  
[www.speca.ca](http://www.speca.ca)