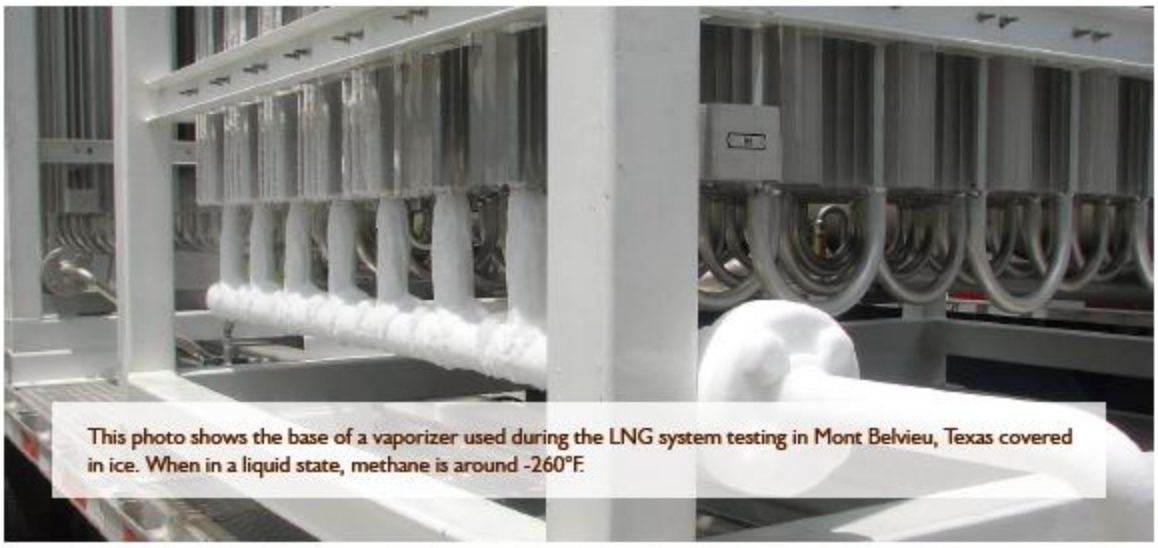
first rigs run on LNG



This photo shows the base of a vaporizer used during the LNG system testing in Mont Belvieu, Texas covered in ice. When in a liquid state, methane is around -260°F.

In just over one year, the idea of running a drilling rig in the Encana Mid-Continent Business Unit (MCBU) on natural gas will have gone from vision to reality. We worked with Ensign US Drilling and Prometheus Energy in Louisiana. Both parties brought a wealth of experience that would prove invaluable to this project, and the logistics of making a rig run on the cleanest burning fossil fuel definitely required team work.

Before the project could truly take off, the team had to overcome a few obstacles and make some big decisions. To begin, the team determined that a portable fuel system would be a good approach, especially given all of the circumstances, like an unstable rig schedule at the time. This would allow the fuel to be trucked to the location just like diesel fuel is.

The exact type of fuel to be used also needed to be determined. Ultimately, project leaders decided to pursue a solution that would allow a drilling rig to be fueled by Liquid Natural Gas (LNG). Nearly 100 percent methane, LNG is the cleanest solution and also allows for the right amount of fuel to be on location with a manageable footprint. The next question centered around which rig(s) would be ideal for the conversion to natural gas. The team settled on two rigs in Louisiana, Ensign 150 and 151. With the fuel selected and the rigs chosen, it was now time to bring the concept to reality.

Over the next couple of months the team worked diligently on the LNG fuel system design and waited anxiously for the testing phase to begin. By early June 2010 the first LNG fuel system was complete and Ensign had their generator skids retrofitted with natural gas engines. Both were ready to put months of engineering to the test.

Much like a blind date, the generator skids and LNG system met for the first time under the blistering July sunshine in Mont Belvieu, Texas for testing. And – like a match made in heaven – the systems were a perfect pair. Testing ended on July 20 and the equipment was readied for its move to the Shreveport, LA area. The design of the system was a successful collaboration between Encana, Ensign and Prometheus which ultimately resulted in a system that all three companies are proud of.