Drilling with LNG

Prometheus Energy co-develops world's first LNG-fueled electric drilling rig

**PROJECT** - In 2010, Prometheus Energy Group, Inc., Encana Oil and Gas (USA) Inc., and Ensign United States Drilling, Inc. worked together to repower two diesel fueled drilling rigs with natural gas dedicated engines. As part of this innovative team Prometheus Energy designed, built and commissioned LNG mobile storage and vaporization equipment and provided the LNG fuel for the project. This dedicated LNG fuel application was the first of its kind.

**PURPOSE** - Encana's goal was to begin to convert its drilling rig fleet to natural gas. In the absence of field gas, LNG proved to be the most practical solution for Encana's drilling needs offering cost savings, diesel-like mobility and onsite fuel reserve. Prometheus' expertise in the LNG fuel system design, technical implementation and supply logistics enabled Encana's drilling rigs to run entirely on natural gas. After successfully testing the LNG storage and vaporization system the units were readied for operation in the Haynesville Shale Play covering vast amounts of Northern Louisiana. The design of the system was a successful collaboration between Prometheus, Ensign and Encana. The project enabled Encana to realize a significant fuel savings versus a drilling rig burning diesel, while also reducing NOx and PM emissions by as much as 25%.

**CONCLUSION** - Prometheus Energy has pioneered the use of LNG as an attractive alternative. While Encana's drilling rig conversion was a success, it will also raise attention to the many benefits LNG has to offer within the drilling sector. Prometheus Energy is actively replicating this business model with existing and new customers in North America in order to drive down fuel costs and to improve environmental footprints. Prometheus Energy’s mobile LNG solution has now been used for drilling operations in Louisiana, Utah, Texas, Wyoming, Colorado and California. The use of natural gas in these drilling operations replaces approximately 1,500 gallons of diesel per day, per rig or over 500,000 gallons annually per rig. As LNG rigs continue to provide cost savings and reduce the environmental impact, we look forward to implementing this technology in other operating areas.

Mobile Fueling Solutions

Prometheus Energy is one of the largest and fastest growing suppliers of liquefied natural gas (LNG) to the industrial sector in North America. Prometheus provides turnkey fuel solutions to convert industrial users of diesel, propane and other crude-derived fuels to clean, domestic, secure LNG, resulting in reduced fuel cost and environmental footprint.

The company is vertically integrated from LNG production to distribution, to onsite storage and vaporization. A pioneer in the industrial LNG market, Prometheus developed first-of-their-kind conversions of industrial fuel consumers to LNG in numerous sectors.