



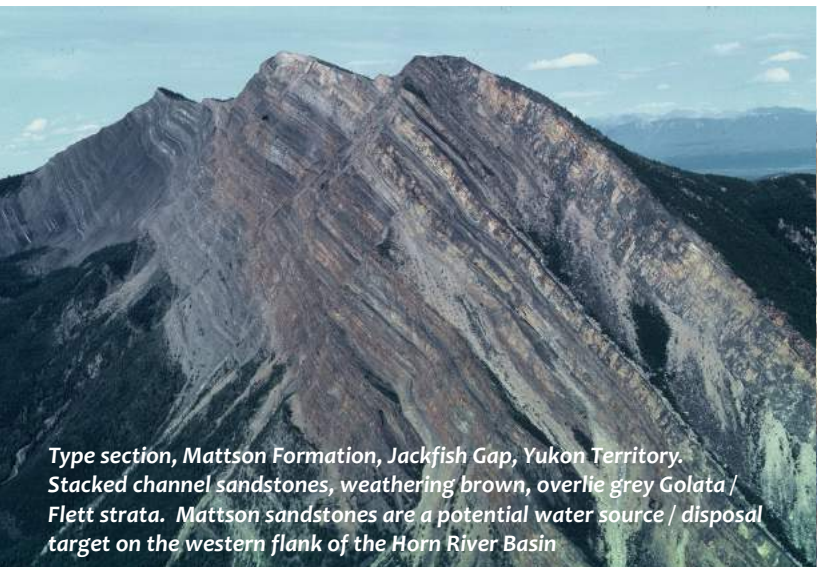
PROJECT HIGHLIGHTS

In 2008, Geoscience BC secured \$5 million in funding from the BC Ministry of Energy, Mines and Petroleum Resources, dedicated to geoscience studies supporting timely and efficient appraisal and development of the enormous shale gas resource of the Horn River Basin. In consultation with the Horn River Basin Producers Group (HRBPG), Geoscience BC determined a key geoscience challenge in identifying aquifers capable of producing high volumes of water to support completions (fracing) operations, and also capable of accepting disposal of large volumes of spent frac fluids. The Horn River Basin Aquifer Characterization Project, a cooperative effort between Geoscience BC and the HRBPG, was conceived as a result, and Petrel Robertson Consulting Ltd. (PRCL) was appointed project manager.



In a series of meetings commencing November 2008, three primary project objectives were defined:

- ◆ Synthesize available geological information to produce a stratigraphic framework for hydrogeological / aquifer analysis
- ◆ Facilitate collection of aquifer and fluid data from new Producer Group wells, particularly those being drilled for water supply and disposal
- ◆ Undertake a systematic hydrogeological investigation of potential aquifers in the Horn River Basin in order to quantify and map reservoir capacity and productivity / injectivity potential



Type section, Mattson Formation, Jackfish Gap, Yukon Territory. Stacked channel sandstones, weathering brown, overlie grey siltstone / shale strata. Mattson sandstones are a potential water source / disposal target on the western flank of the Horn River Basin



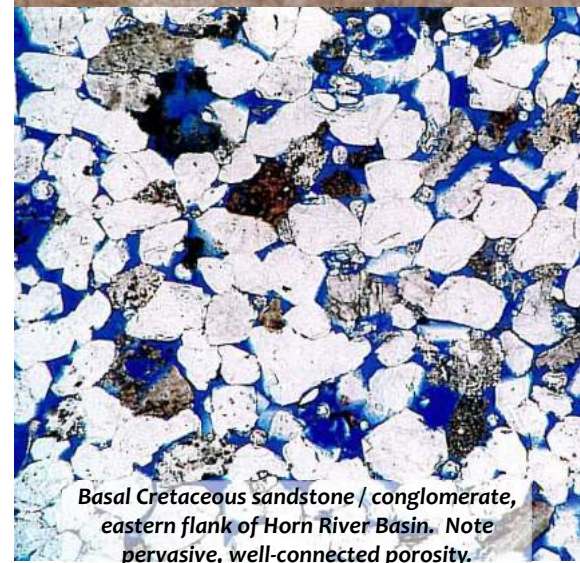
Horn River Basin
Photo courtesy of EnCana



Significant progress has been made on all three objectives:

- ◆ PRCL has compiled geological data and has created a stratigraphic framework using a detailed grid of regional cross-sections. Well-by-well correlations in support of mapping are currently underway. Proposals to characterize reservoir quality in key wells across the basin have been solicited from petrographic specialists, and are currently under review.
- ◆ Producer plans for extended aquifer testing have been reviewed, and a provisional template for funding advanced testing has been created. Geoscience BC funding will substantially augment quantitative aquifer data, and will make all new well test data immediately available to the Aquifer Characterization Project. Most testing programs are expected to be completed by mid-2009.
- ◆ Proposals to characterize hydrogeology of aquifers in the Horn River Basin have been solicited from industry experts, and are currently under review. Focus will be on subsurface saline aquifers, as Producers wish to avoid using surface water, or shallow aquifers that may potentially be linked to the surface. The hydrogeological study will be undertaken in cooperation with PRCL's work in order to create an integrated hydrostratigraphic framework, and high-quality, systematic mapping of aquifer potential.

Results from the Aquifer Characterization Project should be available in Fall 2009, to support HRBPG planning activities for the 2009 / 2010 winter drilling season.



**For more information on this project, please contact
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Geoscience BC is an industry-led, industry-focused not-for-profit society. Its mandate includes the collection, interpretation and marketing of geoscience data and expertise to promote investment in resource exploration and development in British Columbia.

Geoscience BC is funded through grants from the Provincial Government and works in partnership with industry, academia, government, First Nations and communities to attract mineral and oil & gas investment to BC.