

Breaking Another Record!

May 15, the Albion Expansion 1 Team broke the record previously set in April, for length and diameter of Glass Reinforced Epoxy (GRE) pipe installed into a previously bored horizontal directional drill (HDD). The 36" GRE pipe pull was 733 metres under the Canterra Road and Jackpine Creek!

Eugene Van Trigt, Albion Sands Expansion 1 Area Construction Manager, Pipelines explained, "This is part of the 11 kilometre pipeline system supplying hot water to the new facilities at Jackpine Mine."

The long section of pipe was brought in at a tight angle due to right of way restraints, yet only 40,000 pounds pull force was required to make it to the Jackpine Mine site on the opposite side of Canterra Road. The line of pipe was about 740 metres long and weighed over 200,000 pounds.

This complex pull was done with extreme care. Low pulling force was used to minimise potential damage to the GRE pipe. Coordinating the equipment and the drilling rig to work as one unit was impressive! Upon completion, the end of the pipe was inspected and there was little damage to the spacers on the leading edge of the pulled pipe, indicating that it was a smooth pull.

According to Bill Gowland of Fibreglass Solutions, "The Jackpine Creek HDD insertion, which took about four hours, went off without a hitch. "The leading edge casing spacers were worn on the bottom as expected when they came out the far side, but looked great," he said. "The corrosion-free nature of the Green Thread product [GRE pipe] will serve to provide long-term performance for decades to come."

The Albion Sands Expansion 1 Project Management team said the care, planning, and incorporation of lessons learned from the previous successful pull shows that the participating companies are constantly looking for ways to improve performance. Ledcor Pipelines, The Crossing Company, Fibreglass Solutions, Fiber Glass Systems and AMEC/Colt were able to beat their own record!

By Bonnie McCluskey



36" diameter GRE pipe. The white casing spacers protect and centre the GRE as it is pulled through the 48" diameter casing pipe already inserted into the previously drilled 60" diameter HDD bore



Twenty-five pieces of equipment (19 side booms and 6 excavators) handled the entrance side of the bore while the drill rig pulled from the exit side



In April, the Team set the record with their 640 metre 36" GRE pull under the Muskeg River. A month later, they broke their own record!



Right of Way Stringing
Many aspects of the installation of the fibreglass pipeline are logistically challenging including extreme cold weather, muskeg conditions, and limitations on bending and pulling stress.



Muskeg River Pull April 2008

The design and installation of a 36" GRE pipeline for hot water service is unique to the oilsand industry. Large diameter fibreglass pipelines exist but typically operate at ambient temperatures and utilize laminated joint techniques. This fibreglass pipeline utilized a tapered bell and spigot adhesive joint allowing for better joint integrity, faster bonding, and a joint with much better resistance to tensile loads. These features are important in both operation and in construction.