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EnCana's Hidden Hills East Road – Landslide Analysis, Slope Stabilization & Road Re-Alignment, Dawson Creek, BC

GES Geotech Inc. has provided site reconnaissance, geotechnical analysis, and engineering recommendations for stabilizing the 2008 Hidden Hills landslide area, together with specifications for stabilization works, which were implemented initially in the summer of 2008 and will be finalized in 2011.

The east Hidden Hills road area, located 45 km southwest of Dawson Creek, had been experiencing a series of landslides prior to the construction of an access road for a new lease site. The recent landslide, which had occurred as a result of the original road excavation, brought GES with our worldwide experience and highly knowledgeable geotechnical engineers to investigate the landslide area in February 2008. GES detected the previous landslides (as well as the likelihood of future probable slope instability) and recommended road re-alignment to stabilize the landslide area. A 4 m high rock beam was thus constructed.



The landslide assessment program involved:

- Drilling boreholes and installing inclinometers and piezometers to identify potentially high risk slide zones along the road re-alignment area.
- Completing slope stability back-analysis for evaluating the prevailing shear strength parameters and to calculate slope stability factors of safety.
- Modelling different remedial slope scenarios to assess stability conditions and to better re-align the road for achieving long-term stability.

Based on the results of instrumentation monitoring, the location, depth and rate of movement of slip surfaces were confirmed. This enabled proceeding to complete detailed design of slope remedial systems, which consisted of installing 40-50m long horizontal drains for controlling groundwater.

