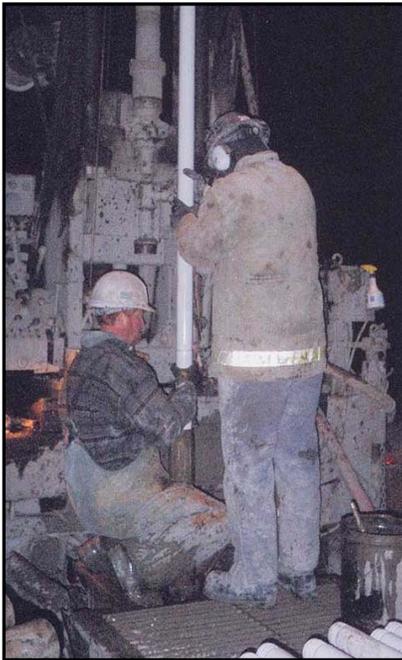
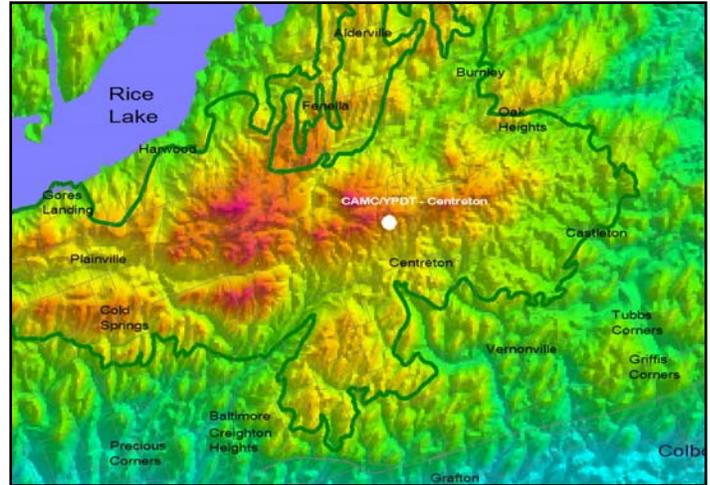


## PROJECT FACT SHEET CAMC/YPDT - CENTRETON

### **ISSUE:**

YPDT-CAMC drilled a high-quality PQ-continuously cored borehole to bedrock on the Oak Ridges Moraine (ORM) east of Rice Lake, near the eastern limit of the moraine. The drill site was selected with help from the Lower Trent Conservation Authority and was situated on municipal land at the crest of the moraine near Centreton. The estimated depth to bedrock in this area was 150 – 200 m but only a few boreholes have been previously drilled to depths below 60 m, so very little information exists on the deep subsurface geology.

Information obtained from this borehole figures significantly into the interpretation of the depositional history and structure of the Oak Ridges Moraine and the underlying sediments in this area. Of particular relevance, the nature of the lower sediment package that has been studied extensively along the Lake Ontario shoreline at the Scarborough Bluffs and other smaller Lake Ontario bluffs, has not been interpreted this far to the east.



### **RESULTS:**

- drilling completed by All Terrain Drilling in December 2003
- PQ mud rotary continuous coring system used
- preliminary interpretations indicate only 15 m of ORM sediments overlying a relatively shallow Newmarket Till (~15 m thick) that, in turn, overlies the Lower Sediment package
- the Lower Sediments include about 30 m of Thorncliffe (or equivalent) sands underlain by a thick sequence of nearly 122 m of glaciolacustrine deposits and diamicts
- the extensive thickness of relatively fine grained sediments indicates a prolonged period of low energy depositional environments
- work needs to be undertaken to correlate depositional environment in this area with that interpreted to the west in the Laurentian Valley system
- a very dense basal till, currently interpreted to be the York Till, was found overlying bedrock
- bedrock was intersected at a depth of ~179 m ( ~122 mASL)
- a monitoring well nest consisting of four screened intervals was completed at the site with three of these screened intervals being incorporated into the Lower Trent Conservation Authority's Provincial Groundwater Monitoring Network
- downhole geophysics of the borehole completed by DGI Geoscience - results currently being interpreted
- detailed sedimentological interpretation also ongoing by Gorrell Resource Investigations, in cooperation with the Geological Survey of Canada



### **FURTHER CONSIDERATIONS:**

This is the first cored borehole that has been drilled in the eastern most lobe of the Oak Ridges Moraine. The borehole is interpreted to intersect the Newmarket Till, indicating that tunnel channel activity has not been active in the immediate vicinity of the borehole. The borehole therefore appears to provide a complete stratigraphic record for this part of the Oak Ridges Moraine. The considerable thickness of low energy deposition beneath the Newmarket Till is somewhat different than what has been observed to the west where coarse Thorncliffe sediments are frequently exploited by high capacity municipal wells. Whether this depositional setting is uniform across the eastern parts of the moraine cannot be determined at this time as few key stratigraphic wells currently exist. Follow up work with the GSC is ongoing.