

Grace Lake thermokarst lake

Location: 61.969867°N, 139.135028°W

DETAILS:

Lipovsky and Bond (2009; 07PL010) describe a thermokarst lake developed within grey clayey and silty glacial lake sediments overlain by veneers of tephra and sandy glaciofluvial sediment. The banks of the lake were up to 4.6 m high and the frost table was observed at a depth of 340 cm during a field visit in late June 2007. Approximately 15% visible ice was observed at the permafrost surface, including stratified veins of ice up to 2mm thick.



Figure 1. Oblique aerial view of a thermokarst pond's collapsing 5 m bank indicating permafrost thaw. Photo taken in 2007 in the broad valley bottom east of Grace Lake, Nisling Range.



Figure 2. Ice-rich glaciolacustrine sediments exposed at the base of the collapsing bank of a thermokarst pond east of Grace Lake (Bond & Lipovsky, 2009; 07PL010).

REFERENCES AND FURTHER READING

- * Lipovsky, P.S. and Bond, J.D., 2009. Surficial Geology of Toshingerman Lake (115G/14). Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, Open File 2009-45, scale 1:50,000.