

Somme Creek Pingos

LOCATION:

62.430965°N

138.343373°W

DETAILS:

Two pingos within the Somme Creek drainage basin are typical of those found in v-shaped low order streams of the Dawson Range and Klondike Plateau. Both pingos are found in a slope toe position near the confluence of two low order streams. Lipovsky and Bond (2013) indicate that both pingos were visited in the field and map the pingos as developing within deposits derived from colluvial aprons and fans consisting of silty diamicton with considerably less extensive patches of fluvial plains of sandy silt. Both pingos support conifer and deciduous tree growth in areas of otherwise poor drainage. The northernmost pingo (10PL061; Fig. 1) is 40 m in diameter and 5 m high. At the top of the pingo, interbedded silt and coarse sand with weathered basalt clasts were exposed in a soil pit, and the frost table was encountered at 110 cm in late July. The southernmost pingo is adjacent to the fluvial plain of the creek. However, tests pits reveal a significant proportion of coarse rubble (10PL066; Fig. 2). This southernmost pingo is 10 m tall and displays a collapsed form. A channel indicates that a lake formed and drained out to the southeast.



Figure 1. Side view of the Somme Creek pingo (10PL066). Note the person circled for scale. The pingo measures 5 m high and 40 m in diameter.



Figure 2. A 75 cm deep pit dug near the top of the pingo (10PL066) reveals approximately 20 cm of organic materials overlying 18 cm of silty diamicton and 40 cm of sandy pebble cobble gravel.

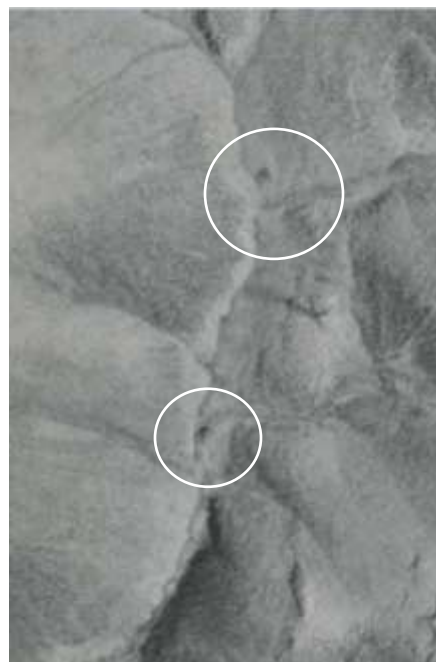


Figure 3. Aerial photograph of two open system pingos in Somme Creek drainage basin. The northernmost (top) pingo is uncollapsed whereas the southernmost (bottom) pingo is collapsed and has an arcuate lake on its northern edge. Note that the southernmost pingo is at the toe of an alluvial fan. The A27517-37,38 (1989, 50k)

REFERENCES AND FURTHER READING

Bond, J.D. and Lipovsky, P.S., 2011. Surficial geology, soils and permafrost of the northern Dawson Range. In: Yukon Exploration and Geology 2010, K.E. MacFarlane, L.H. Weston and C. Relf (eds.), Yukon Geological Survey, p. 19-32.

Lipovsky, P.S. and Bond, J.D., 2013. Surficial Geology of Apex Mountain. Government of Yukon, Open File 2013-12, scale 1:50,000.