Doyle Creek Pingo, Dawson Range

Location: 62.64413°N 139.359959°W

DETAILS

Lipovsky and Bond (2012; 10PL032 and 033) map this pingo within organic deposits consisting of fibric peat greater than 1 m thick overlying floodplain and fluvial fan deposits subjected to permafrost processes, including ice wedges and thermokarst. This pingo is found in a slope toe position in a high (third or fourth) order fluvial system. At the top of the pingo, 110 cm of interbedded silt and coarse sand were exposed in a soil pit and the frost table was encountered at 150 cm in mid-July. Near the pingo margin, the frost table was encountered at 60 cm depth. Fluvial deposits in the area generally have a high silty loess component and may contain interbedded peat (Bond & Lipovsky, 2011). Pingos provide improved drainage and support conifer and deciduous tree growth in contrast to surrounding poorly-drained areas. This pingo measures 160 x 121 m in diameter (Gibson, 2010), and is found at an elevation of 350 m.a.s.l., on a gentle 3° south-facing slope. Pingos in this part of the Dawson Range are commonly 10-20 m high (Bond & Lipovsky, 2011).

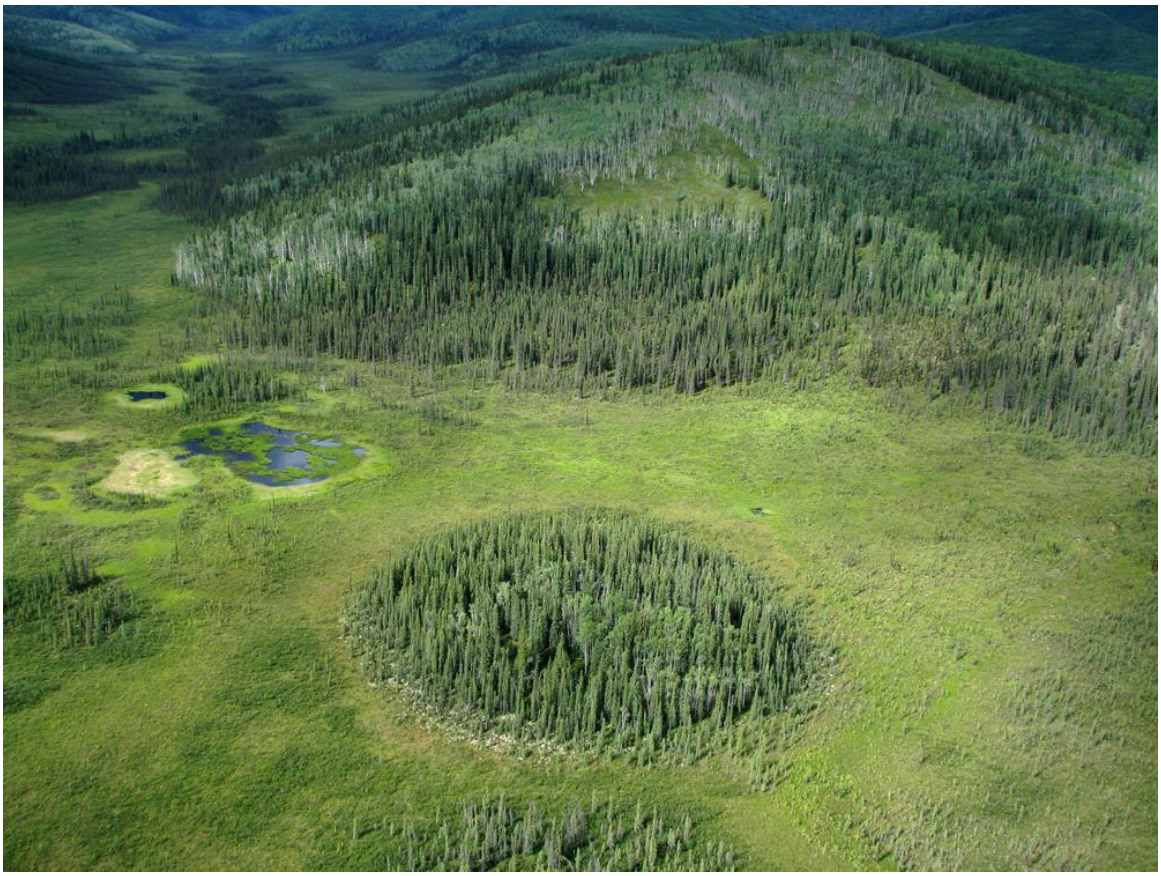

Figure 1. *View to the north of an open-system pingo in Doyle Creek valley bottom, Dawson Range. Note conifer and deciduous tree growth which is supported by improved drainage on the raised pingo in contrast to the surrounding poorly-drained peat plain. Thermokarst ponds are also visible in the background.*

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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.

† Gibson, R., 2010. Pingos of the Dawson Range, locations, morphologies and environmental contexts. Unpublished B.Sc. Paper. University of Lethbridge. 28 p.

Hughes, O.L., 1969. Distribution of open-system pingos in Central Survey, Yukon Territory with respect to glacial limits. Geological Survey of Canada, Paper 69-34: 8 p.

*Lipovsky, P.S. and Bond, J.D., 2012. Surficial Geology of Doyle Creek (115J/11). Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon, Open File 2012-3, scale 1:50,000.