

POSTER ABSTRACT

Abstract Title: Best Management Practices for Seismic Operations in the Eagle Plains and Kotaneelee Areas

Presenter: Devon Canada

Two separate posters will be presented jointly by Access Consulting Group and Devon Canada. Both will focus on Devon's (Anderson's) 2D seismic operations in Eagle Plains and Kotaneelee in order to show both summer and winter implementation of seismic BMP's.

The posters will also present BMPs from a holistic project approach. BMP's from the standpoint of:

- initial baseline data collection (understand the local environmental sensitivities, use of traditional use studies and traditional knowledge data collection);
- regulatory and community consultation approaches and integration with First Nation needs (early and often community consultation, integration of mitigation to address community issues);
- seismic program implementation and practices (low impact techniques, avoidance cuts, meandering lines, dog legged access, access control, monitors, heli-portable etc); and
- follow-up inspection and reporting.

Pictures and final plans from each program will be presented to outline the above.

POSTER ABSTRACT

Abstract Title: The Influence of Future Climate Change on Periglacial Landslide Activity

First Author: Crystal Huscroft

Second author: Panya Lipovsky

Six case studies of recent landslides in southwestern Yukon Territory help predict the influence of future climate change on periglacial landslide activity in the region. The presence of permafrost and frozen ground has played an important role in each of the case studies. Permafrost degradation and thaw consolidation after recent forest fires has caused debris flows and active layer detachment slides in sub alpine and valley bottom settings. The interface between frozen and unfrozen ground has controlled the depth of movement for active layer detachment slides and debris flows in various hill slope positions. In addition, elevated pore water pressure and poor drainage due to the presence of a frozen substrate has caused debris flows in mid-slope and alpine settings. Lastly, thawing of massive segregated ice bodies has caused large thaw slumps of fine sediment in river terraces. The triggering events in each case study relate to rapid snowmelt, river migration, intense summer rainfall and permafrost degradation caused by forest fires. Climate change scenarios predict an increase in the frequency and magnitude of these incidents in south-western Yukon Territory. Therefore, a similar increase in the frequency and magnitude of periglacial landslides is expected in the region.

POSTER ABSTRACT

Abstract Title: Woodland caribou (*Rangifer tarandus caribou*) response to increased industrial activity at the annual home range level in Northeastern Alberta
Tracz, B.V., Department of Environment and Natural Resources, Sahtu Region

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Woodland caribou (*Rangifer tarandus caribou*) in Alberta have decreasing populations, with the petroleum sector implicated in the decline. Though caribou may avoid industrial features and activities, it is not clear if caribou also display avoidance at the level of their home range. I examined if different levels of industrial activity in the West Athabasca Caribou Range (WSAR) influenced the size and location of woodland caribou home ranges on an annual basis. I used VHF location data provided by the Boreal Caribou Research Program (BCRP) to generate 174 annual home ranges using 100% minimum convex polygon (MCP) estimates for 45 caribou tracked between 1992-2000. Alberta Energy and Utilities board (AEUB) well data (1966-2000) was used to delineate levels of industrial activity based on the presence of “heavy oil” wells. Home range overlap with an area of concentrated heavy oil activity provided “high”, “medium”, or “low” disturbance treatments over time. Multiple linear regression with cluster analysis indicated that caribou in areas of high and low industrial activity did not significantly differ in home range size, or in their proportion of annual home range overlap. Proportion of peatland within a home range emerged as a significant predictor of home range size, indicating that habitat characteristics, not industrial activity, may influence caribou behaviour at the scale of the home range. However, by not abandoning areas of high industrial activity, caribou may still be subject to increased risk of predation, as predators may infiltrate peatland complexes used as refugia by caribou via linear features.

Other: This is a presentation based on part of my M.Sc. thesis work conducted at U of Alberta with Dr. Stan Boutin, and in conjunction with the Boreal Caribou Research Program.

Thesis title: Tracz, B. 2005. Woodland caribou (*Rangifer tarandus caribou*) home range and habitat-use relationships to industrial activity in northeastern Alberta. Master of Science Thesis, Edmonton, Alberta, 99pp.