

FACTORS AFFECTING PIPELINE CROSSING SUCCESS OF CARIBOU

Walter T Smith and Raymond D Cameron
Alaska Department of Fish and Game, Fairbanks, Alaska

Early simulation studies on the Arctic Slope of Alaska showed that caribou would not pass freely beneath elevated pipelines. Our recent observations during summer indicate that crossing success varies with pipeline design, caribou group structure, and a number of environmental stimuli. Absolute barriers to caribou movement exist where surface-to-pipe clearance is inadequate for physical passage, or when drifting snow along road/pipeline complexes reduces the effective clearance. Where pipeline elevation is sufficient, the outcome of an encounter is related to other circumstances. Factors that appear to influence crossing success include group size/composition, topography, insect activity, traffic level and the intensity of local construction, as well as road and/or pipeline configuration. Present studies are aimed at describing local movements and evaluating the effectiveness of special pipeline crossing structures. Maintaining caribou passage through oil fields requires careful planning based on an assessment of both local and regional movements.



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ABSTRACTS