Nunavut Research Institute / ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ
Box 1720, Iqaluit, NU X0A 0H0 phone:(867) 979-7279 fax: (867) 979-7109 e-mail: mosha.cote@arcticcollege.ca

SCIENTIFIC RESEARCH LICENSE

LICENSE NUMBER 02 012 22R-M

ISSUED TO: Allison Criscitiello
University of Alberta
1-26 Earth Sciences Building
Edmonton, Alberta
T6G 2E3 Canada

TEAM MEMBERS: S.Killingbeck,J,Killingbeck,C. Dow, 3 TBA

TITLE: Investigating the Devon Ice Cap Subglacial Lakes

OBJECTIVES OF RESEARCH:
A recent study revealed the first evidence for a hypersaline subglacial lake complex beneath Devon Ice Cap, Canadian Arctic using airborne geophysical survey methods. These lakes are salty enough that they can exist at temperatures of -10.50C where freshwater would rapidly freeze. As such, the lakes are globally unique and may represent a microbial habitat, which makes them compelling targets to ask fundamental questions about the existence, evolution and diversity of life in extreme environments on Earth and on other icy planetary bodies in the Solar System. The airborne geophysical data collected to date is highly effective at locating the upper surface of the lakes however, the airborne geophysical signals cannot penetrate through the lake. Therefore, to map the lake thickness, properties and investigate the structure beneath the lake, multiple surface-based geophysical methods must be used.

TERMS & CONDITIONS:
The holder of the licence will be bound by the terms and conditions of the Nunavut Impact Review Board Screening Decision Report and the Department of Culture & Heritage archaeological sites terms and conditions. The license holder will abide by all special public health protection measures imposed by Nunavut's Chief Medical Officer of Health in response to the Covid-19 Pandemic, including restrictions on non-essential travel to Nunavut. These terms and conditions will form part of this licence

DATA COLLECTION IN NU:
DATES: April 1,2022 to July 1,2022
LOCATION: Devon Island, Ellesmere Island, Axel Heiberg Island

Scientific Research License 02 012 22R-M expires on December 31,2022
Issued at Iqaluit, NU on March 8,2022

Jamal Shirley
Science Advisor

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