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London, Ontario  
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3352-NOREX 17 (NOREX Plans)

16 April 2017

Distribution List

FINAL PLAN – NOREX 17

As you are aware, members of 31 Canadian Brigade Group based in London ON recently completed NOREX 17 (Northern Exercise 2017), a demanding field training exercise conducted in Nunavut during March 2017. While the major training location was the Canadian Armed Forces Arctic Training Centre in Resolute, as well as Eleanor Lake on Cornwallis Island, a group of approximately 30 soldiers were also airlifted to Eureka to conduct training from 21-24 March.

Enclosed is the Final Plan concerning NOREX 17. It is intended to formally close out the various permits issued by Nunavut authorities prior to the commencement of this military training activity.

On behalf of 31 Canadian Brigade Group and 4<sup>th</sup> Canadian Division, I would like to express my thanks for the assistance and guidance provided by all permit issuing organisations. Although an involved process, the various reviews ensured that NOREX was conducted in a sustainable manner with limited and transient impact to the sensitive northern environment. I look forward to the conduct of further training activities in Nunavut over the coming years.

Sincerely,



C.W. Poole  
Colonel  
Commander

Enclosure: Final Plan for NOREX 17

Distribution List  
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G&SF Barrie//CO/Ops O/ARCG Plans O

# **FINAL PLAN**

**For**

**NOREX 17**  
**(Northern Exercise 2017)**

**Cornwallis Island and Eureka, Nunavut**

**6-30 March 2017**

NPC File: 148361

NIRB File: 16DN061

NWB File: 8WLC-NES1718

QIA Certificate of Exemption: Q17X002

Nunavut Archaeologist Permit: 2017-01A

## **Background:**

The Canadian Army maintains a variety of forces on standby for deployment within Canada. These forces are designed to support Other Government Departments (OGD) in a response to a domestic emergency situation. Included within the Divisions of the Canadian Army are four Arctic Response Company Groups (ARCG) which are composed primarily of part-time soldiers trained in the specific skills necessary to enable deployment to the high Arctic.

NOREX 17 was conducted in March 2017 and involved the deployment of the ARCG from 4th Canadian Division. Training was staged from the Canadian Armed Forces Arctic Training Centre (CAFATC) located in Resolute Bay, NU. The initial Advance Party arrived on 6 March and immediately began preparing the equipment necessary to support the exercise. All participants had arrived by 18 March and began training the following day at Crystal City. This was followed on 21 March with the overland movement of 95 members of the ARCG, along with 25 Canadian Rangers from various northern communities, via Ski-Doo to the vicinity of Eleanor Lake at the north east portion of Cornwallis Island where a temporary tented camp was established. While it had been intended to use the lake as an austere airstrip for the landing of Twin Otter and DC 3 aircraft, surface conditions did not allow use by DC 3 thus an alternate austere airstrip was established on sea ice immediately east of Eleanor Lake. On 22 March 30 soldiers were moved by air to Eureka where another temporary camp was established. These personnel were moved back to Eleanor Lake on 24 March with close out of the Eleanor Lake site beginning the following day. All camps were abandoned by 26 March with the final overland movement of personnel from Eleanor Lake to Resolute. Earlier plans to include a camp at Gascoyne Inlet and potentially Polaris were not completed due to weather. The final training activity consisted of the conduct of a rifle and shotgun range immediately east of Resolute by approximately 40 personnel. Redeployment to southern Canada was accomplished between 27-30 March 2017.

## **Timeline:**

6 March – arrival of 17 CAF member advance party at CAFATC

13 March – arrival of additional 11 advance party personnel at CAFATC

18 March – arrival of 97 CAF members from the south and 25 Rangers from communities across then north

19 March – start of training at Crystal City

21 March – overland movement to and establishment of tented camp at Eleanor Lake

22 March – deployment of 28 CAF members and 2 Rangers to Eureka. Tented camp established.

24 March – closure of Eureka camp. Personnel return to Eleanor Lake.

25 March – reduction of Eleanor Lake camp to 80 total. Move of 40 personnel overland to Resolute.

26 March – conduct of austere range (rifle and shotgun) 2kms east of Resolute. Closure of Eleanor Lake camp. All remaining personnel move overland to Resolute.

27 March – all training personnel depart. Rear Party of 18 members conducting close out at Resolute.

30 March – final departure of all remaining personnel.

### **Environmental Overview:**

Area of Operation. The initial NOREX proposal identified four operational areas (Op Boxes) for potential use during the course of the exercise. Weather and time constraints did not allow the use of all planned areas. The status of each is therefore as follows:

Eleanor Lake – used as intended. Further details provided below;

Polaris – not used;

Gascoyne Inlet – not used; and

Eureka – used, however movement confined to within 5kms of the airfield. Further details provided below.

Archeology. A visit to the Franklin Expedition sites on Beechey Island was intended for personnel training at Gascoyne Inlet. As the deployment to Gascoyne Inlet did not occur, neither did the Beechey Island visit. No other archeological sites or specimens were visited or observed.

Interaction with Wildlife. There was no interaction by military personnel with wildlife. Sightings of wildlife did occur, however at no time was the proximity of animals to training sites within the limits established to require suspension of training activities. The following summary is provided:

Musk Ox – sighted from the air numerous times on Cornwallis Island. Concentrations of individuals ranged from 6-18 in number. All sightings occurred approximately 15kms south of Eleanor Lake.

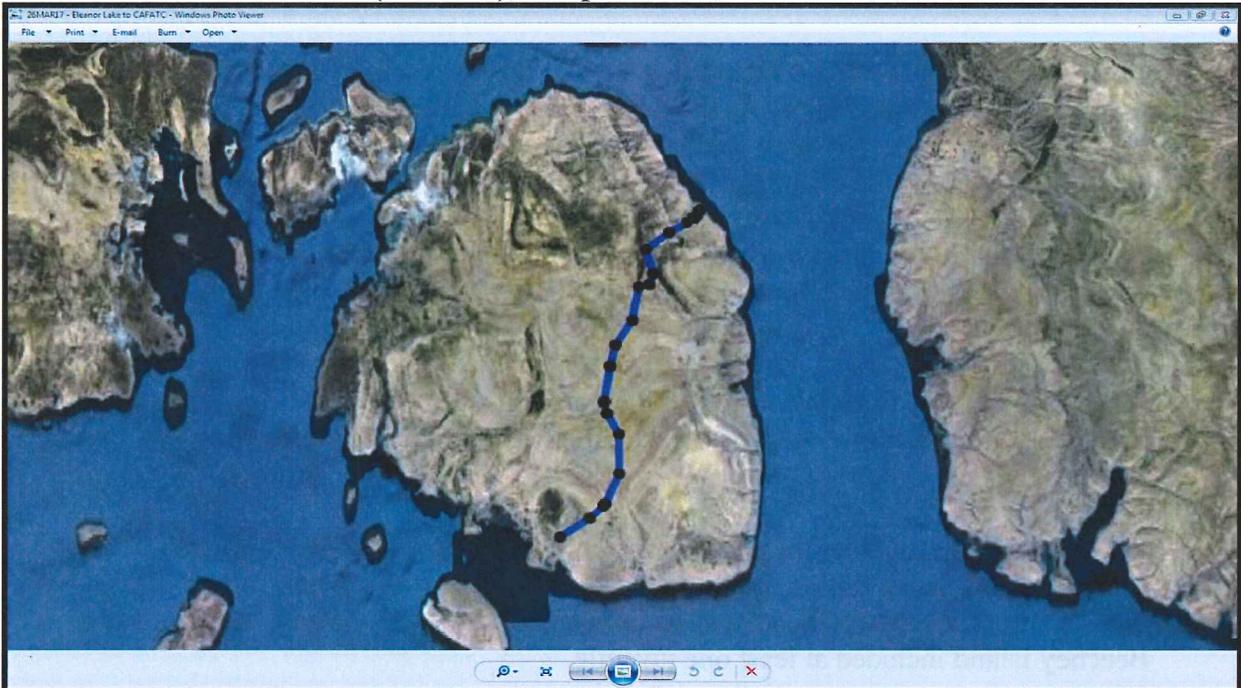
Polar Bear – sighted from the air on sea ice immediately east of Beechey Island. Also observed from the air on sea ice along the shore of Cornwallis Island, approximately 3kms south of Eleanor Lake as well as on the west side of the island. Sightings near Beechey Island included at least one juvenile.

Movement Overview. Significant overland movements were captured by satellite tracking device and are depicted below in order of occurrence.

**Crystal City to Eleanor Lake, 120 personnel, 21 March 2017**



**Eleanor Lake to CAFATC (Resolute), 120 personnel, 25-26 March 2017**

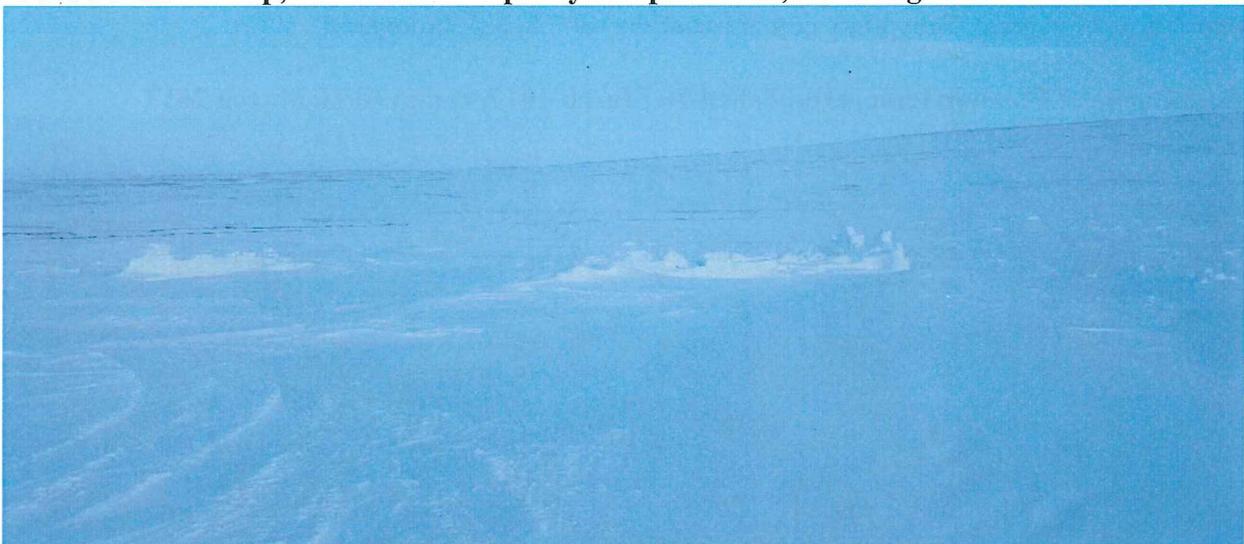


Camps. As indicated in the Timeline, the major camp was established as planned at Eleanor Lake. Planning included the option to establish this camp at either the West or East end of the lake. Ultimately the Officer Commanding the ARCG selected the East option locating the camp at 75.390874, -93.883231. This camp consisted of only temporary structures (tents) which were provided with additional shelter through the construction of snow walls. This camp was completely dismantled at the conclusion of training as indicated in the following photos:

**Eleanor Lake Camp, maximum occupancy 120 personnel, 21-26 March 2017**



**Eleanor Lake Camp, maximum occupancy 120 personnel, following abandonment**



A smaller camp was also briefly established and occupied at Eureka from 22-24 March 2017. This camp was located at 79.992248, -85.788753 and also consisted of temporary tented shelters for 30 persons. No photos are available for this camp.

Vehicles. Overland movement to Eleanor Lake was accomplished primarily via LOSV (ski-doo) of which approximately 80 were employed. Also employed were two tracked BV-206, one of which was employed as a Command Post and the other as a Casualty Evacuation platform. Unfortunately when the date for the overland movement south arrived, neither of these vehicles was in running condition. Both have been stripped of non-permanent equipment/supplies and are currently parked, well off the lake ice, at the Eleanor Lake camp location (75.390874, -93.883231). Canadian Armed Forces Arctic Training Centre staff will either send mechanics to repair these vehicles in situ, or will develop a recovery mechanism which will see them shipped south to Resolute. The timeframe for these vehicles to be recovered is unknown at this time.

**BV-206 Located at Eleanor Lake, pending repair or recovery**



Fuel Caching. One fuel cache was established at Eleanor Lake. As required, this cache was located at a distance greater than 31 metres from any body of water and was co-located with the ARCG camp (75.390874, -93.883231). The cache consisted of ten drums of gasoline as well as two drums of naphtha. Secondary containment was employed throughout.

**Fuel Cache at Eleanor Lake, established 16 March 2017, removed 26 March 2017**

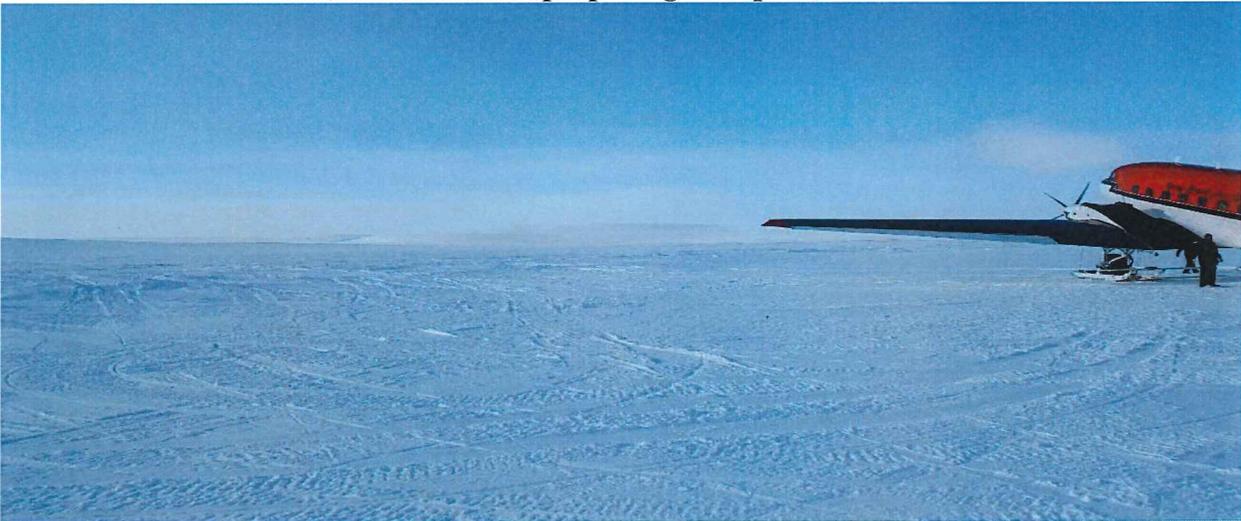


Austere Airfield Operation. On 16 March 2017, Twin Otter were landed on the east end of Eleanor Lake. These aircraft delivered the fuel cache and surveyed the lake for potential DC 3 operations later in the exercise. Unfortunately the surface was such that this larger aircraft was unable to operate from Eleanor Lake. Instead, an alternate site on sea ice was selected immediately east of Eleanor Lake. This austere airfield was oriented from NW to SE along the shoreline with the centre of the runway at 75.401153, -93.804567. It was marked with plastic garbage bags filled with snow. The photos below illustrate the final DC 3 flight to this location.

**Final DC 3 flight to Austere Sea Ice Airstrip, Loading Cached Equipment, 26 March 2017**



**Airfield Cleaned/Closed and final DC 3 preparing to depart, 26 March 2017**



Water Use. As required by the NWB (Nunavut Water Board), details of water used and waste deposited are depicted in the chart below.

NOREX 17									
WATER CONSUMPTION / WASTE WATER DEPOSIT SUMMARY									
	Crystal City (74.755002, -94.973796)			Eleanor Lake (75.390874, -93.883231)			Eureka (79.992248, -85.788753)		
	Number of Personnel	Water Use in Cubic Metres*	Waste Deposit in Cubic Metres**	Number of Personnel	Water Use in Cubic Metres*	Waste Deposit in Cubic Metres**	Number of Personnel	Water Use in Cubic Metres*	Waste Deposit in Cubic Metres**
Date									
19-Mar-17	120	.48	.2						
20-Mar-17	120	.48	.2						
21-Mar-17				120	.48	.2			
22-Mar-17				90	.36	.15	30	.12	.04
23-Mar-17				90	.36	.15	30	.12	.04
24-Mar-17				90	.36	.15	30	.12	.04
25-Mar-17				120	.48	.2			
26-Mar-17				80	.32	.1			
	* All water used was obtained from the Hamlet of Resolute. This water was delivered by truck to CAFATC and frozen into 7 litre ice blocks for transportation and use on the land.								
	** Waste consisted of grey water from cooking and ablutions. Contaminants consisted of either minor food particles or diluted soap products.								

**Contact:**

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