



כ ל ד ל ב ל c

$\gamma_b \Delta^c \dot{\bar{N}} \sigma^b \quad \Lambda c_n \nabla^{\gamma_b} \sigma \nabla n \nabla^a L^a \sigma^b$

**ᐅᓂᕈᓗᒃ:** A collaborative project by Fisheries and Oceans Canada, Florida Atlantic University, and Resolute Bay Hunters and Trappers Association is being proposed in Creswell Bay on Somerset Island to research narwhal and beluga whales. The objective of the project is to use drone video and photographs to look at body size of whales, measures ship noise and beluga and narwhal vocalizations, observe beluga and narwhal behaviour in the presence and absence of vessels, assess interactions between narwhal and beluga, and collect biopsy samples to look at hormone levels and genetics in the whales. To undertake the research a temporary camp of six people will be set up. The field crew will be flown in and out of camp on a twin otter on July 26 and August 14, 2022 respectively, by the Polar Continental Shelf Program. No structures or equipment will be left at the camp site. While conducting the research, small zodiac boats with 25hp engines will be used to deploy hydrophones for recording audio, underwater cameras for taking photographs, and to record observations and capture drone photographs and videos of beluga and narwhal. The study is using non-invasive research methods, and we do not expect any long term impacts on the whales or the marine or terrestrial habitat.

▷ΔΛΝΔ◁: Un projet de collaboration entre Pêches et Océans Canada, la Florida Atlantic University et la Resolute Bay Hunters and Trappers Association est proposé dans la baie Creswell, sur l'île Somerset, pour la recherche sur les narvals et les bélugas. L'objectif du projet est d'utiliser des vidéos et des photographies de drones pour examiner la taille corporelle des baleines, mesurer le bruit des navires et les vocalisations des bélugas et des narvals, observer le comportement des bélugas et des narvals en présence et en l'absence de navires, évaluer les interactions entre le narval et le béluga et recueillir des échantillons de biopsie pour examiner les niveaux d'hormones et la génétique chez les baleines. Pour entreprendre les recherches, un camp temporaire de six personnes sera mis en place. L'équipe de terrain entrera et sortira du camp sur une loutre jumelle le 26 juillet et le 14 août 2022, respectivement, dans le cadre du Programme du plateau continental polaire. Aucune structure ou équipement ne sera laissé au camping. Pendant la recherche, de petits bateaux zodiac avec des moteurs de 25 CV seront utilisés pour déployer des hydrophones pour l'enregistrement audio, des caméras sous-marines pour prendre des photos, et pour enregistrer des observations et capturer des photographies de drones et des vidéos de bélugas et de narvals. L'étude utilise des méthodes de recherche non invasives, et nous ne prévoyons aucun impact à long terme sur les baleines ou l'habitat marin ou terrestre.

[illegible]

[illegible]

## Personnel

Personnel on site: 6

Days on site: 20

Total Person days: 120

Operations Phase: from 2022-07-23 to 2022-08-11

Λϵηϰη⋈σϰ<sup>9b</sup>⋈<sup>c</sup>

ᐱ ᑦ	ᖃᓄᐃᑦᑐᒥᑕ ᐱᑕᓚᐳᖃᖅᐳᑦᐳᑦ	ᑭᓂᑯᑕ ᓄᓇᖅᑐᑦᑕᑦ	ᑐᔨᐅᒪᓴᖅᐳᑦ ᓄᓇᐅᑕ ᖃᓄᖃ ᐳᑐᒪᐅᑕᐅᖃ ᑭᒪᓴᓚᐳᖃᓚᑕᑦ	ᐃᑕᔨᖅᑕᖃᖅᐳᑦᐳᑦᐳᑦᐳᑦ ᐃᓄᖃᑕ ᓇᔨᖃᑕᐅᖃᑕᖅᑕᑦᑕᑦᑕᑦ ᑕᐃᑕᑭᒪᓂᑐᖃᐅᑕᖃᑕᖃᑕ	ᖃᓂᑕᓂᖃᑕᑦᐳᖃ ᓄᓇᑕᒻᓴᓴᑦᐳᖃ ᐳᑭᒪᑐ ᔨᑐᑭᑭᑦᐳᑦᐳᑦᐳᑦ ᑭᓇᓄᑕ
Field camp location	Camp	Inuit Owned Surface Lands	This site has been used for scientific research on narwhal and beluga by DFO in the past.	Unknown	The nearest community is Resolute Bay, and Resolute Bay hunts beluga and narwhal from these stocks.

[illegible]

<b>ᓄᑦ ᐱᕈᔭ</b>	<b>ᐃᓂ</b>	<b>ᖅᑐᒻᐳᕋᓪᓰᓯᓴᔭ</b>	<b>ᓆᓇᓗ ᐳᓶᓼᓲᓚᐉᓴᓵᓁᓸ</b>
ᓆᖅᐉᐠᐤᐣᓹᓪᓰ ᐊᓶᓗᓴ	Nancy Amarualik	Resolute Bay HTA	2020-01-13
ᓆᖅᐉᐠᐤᐣᓹᓪᓰ ᐊᓶᓗᓴ	Pllipoosie Iqaluk	Community member	2021-07-08

North Baffin

[illegible]

Transportation Type	Transportation Description	Length of Use
Air	Twin otter to and from camp	
Water	Two zodiacs each with a 25hp engine	

## Temporary Camp

Λ<sup>9</sup>d<sup>c</sup> d<sup>a</sup>b<sup>r</sup>z<sup>s</sup> d<sup>j</sup>s<sup>b</sup>cdσd<sup>h</sup>z<sup>s</sup> Δc<sup>s</sup>b<sup>r</sup>dpn<sup>a</sup>r<sup>c</sup> ΔjCΔ<sup>c</sup>, Γ<sup>c</sup><sub>a</sub>dPñ<sup>c</sup>, s<sup>b</sup>lCj<sup>s</sup>, μερ<sup>p</sup>d<sup>c</sup> d<sup>r</sup>s<sup>r</sup>c<sup>a</sup>

በበፍጥረቱ ምሳሌ ለፍጥነቱ ምሳሌ ለፍጥነቱ ምሳሌ

ΔL<sup>5b</sup> ΔD<sup>5b</sup> CD<sup>5b</sup> ΔL<sup>5b</sup> ΔD<sup>5b</sup>

$\Delta C_{\text{b}} \text{ CIL}_{\text{b}} \Delta C_{\text{b}} \text{ CIL}_{\text{b}} \Delta C_{\text{b}} \text{ CIL}_{\text{b}}$	$\text{C}_{\text{b}} \Delta \Gamma_{\text{b}} \text{C}_{\text{b}} \text{C}_{\text{b}} \text{C}_{\text{b}} \Delta \text{C}_{\text{b}} \text{C}_{\text{b}}$	$\Delta \text{C}_{\text{b}} \Delta \Gamma_{\text{b}} \text{C}_{\text{b}} \text{C}_{\text{b}} \text{C}_{\text{b}} \Delta \text{C}_{\text{b}} \text{C}_{\text{b}}$
0	Buckets/carboys	Creswell River/nearest freshwater runoff

$\triangleleft^b C d^c$ 
$$\Delta^b C d_c n \sigma \Delta^a \sigma^a b$$

ᐱᑕᓕᐳᐱᓂᐅᑦᐱᑦᐱᑦ ᐱᑕᓕᐳᐱᓂᐅᑦᐱᑦᐱᑦ	ᖃᓄᐱᑦᐱᑦ ᐱᑦᐱᑦᐱᑦ	ᖃᓄᐱᑦ ᐱᑦᐱᑦ ᐱᑦᐱᑦᐱᑦᐱᑦᐱᑦᐱᑦ	ᖃᓄᐱᑦ ᐱᑦᐱᑦᐱᑦᐱᑦᐱᑦ	ᐱᑦᐱᑦᐱᑦᐱᑦᐱᑦᐱᑦᐱᑦ
Scientific/International Polar Year Research	ᖃᑦᐱᑦᐱᑦᐱᑦ	0.02 m <sup>3</sup>	Waste will remain on land (urine)/be buried on land (feces).	No treatment will be conducted.

$$A^{\circ} \cap \Gamma \triangleright C \dot{\circ}^C \supset^C \quad A^b \supset^{qb} C \triangleright \Gamma L \downarrow^C$$

This is a small field camp and all garbage/equipment will be brought in and out of the field camp with the crew. The only waste left will be human excrement and it is predicted to have minimal environmental impacts.

# **Additional Information**

**SECTION A1: Project Info**

**SECTION A2: Allweather Road**

**SECTION A3: Winter Road**

**SECTION B1: Project Info**

**SECTION B2: Exploration Activity**

**SECTION B3: Geosciences**

**SECTION B4: Drilling**

**SECTION B5: Stripping**

**SECTION B6: Underground Activity**

**SECTION B7: Waste Rock**

**SECTION B8: Stockpiles**

**SECTION B9: Mine Development**

**SECTION B10: Geology**

**SECTION B11: Mine**

**SECTION B12: Mill**

**SECTION C1: Pits**

**SECTION D1: Facility**

**SECTION D2: Facility Construction**

**SECTION D3: Facility Operation**

**SECTION D4: Vessel Use**

**SECTION E1: Offshore Survey**

**SECTION E2: Nearshore Survey**



### SECTION E3: Vessel Use

## SECTION F1: Site Cleanup

## SECTION G1: Well Authorization

## SECTION G2: Onland Exploration

## SECTION G3: Offshore Exploration

### SECTION G4: Rig

## SECTION H1: Vessel Use

## SECTION H2: Disposal At Sea

## SECTION 11: Municipal Development

[illegible]

**ᐱᓪᑦ ᐃᑦᐅᑦ ᐱᓪᑦᐅᑦ ᐱᓪᑦᐅᑦ:** ᐱᓪᑦᐅᑦ ᐱᓪᑦᐅᑦ

[illegible]

### Miscellaneous Project Information

$\alpha \rightarrow \Delta^{\text{fb}} \text{CD} \sigma^{\text{fb}} \Gamma^{\text{C}} \quad \Delta^{\text{b}} \text{fb} \text{CD} \Gamma^{\text{L}} \Gamma^{\text{C}} \quad \text{fb} \Delta^{\text{C}} \sigma^{\text{fb}} \Gamma^{\text{C}} \quad \langle \text{CD} \Gamma^{\text{L}} \Gamma^{\text{L}} \text{fb} \text{CD} \sigma^{\text{fb}} \Gamma^{\text{C}} \rangle$

## Cumulative Effects

## Impacts

$\mathbf{e} \rightarrow \mathbf{e} \Delta^{\mathfrak{b}} \mathbf{C} \triangleright \sigma^{\mathfrak{a}} \mathbf{r}^{\mathbf{c}} \quad \mathbf{d} \leftarrow \mathbf{d} \Gamma \triangleright \mathbf{C} \dot{\sigma}^{\mathbf{c}} \mathbf{d}^{\mathbf{c}} \quad \mathbf{d}^{\mathbf{b}} \mathbf{d}^{\mathfrak{b}} \mathbf{C} \triangleright \mathbf{r}^{\mathbf{L}} \mathbf{r}^{\mathbf{c}}$

[illegible]
$$(P = \langle b \rangle \Delta_P \cap \langle a \rangle \Delta^C, N = \langle b \rangle \Gamma^b \Delta \langle a \rangle \Delta^C \langle \Delta \Gamma^b \Delta^b \rangle^b \langle \Delta a \rangle^C, M = \langle b \rangle \Gamma^b \Delta \langle a \rangle \Delta^C \langle \Delta \Gamma^b \Delta^b \rangle^b \langle \Delta a \rangle^C, U = \langle b \rangle \Delta \Gamma^a \Delta^b \langle a \rangle \Delta^b)$$

1	point	Field camp location
---	-------	---------------------