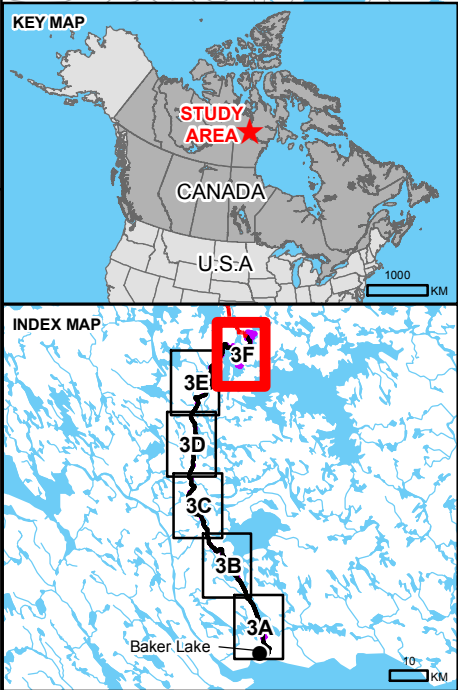
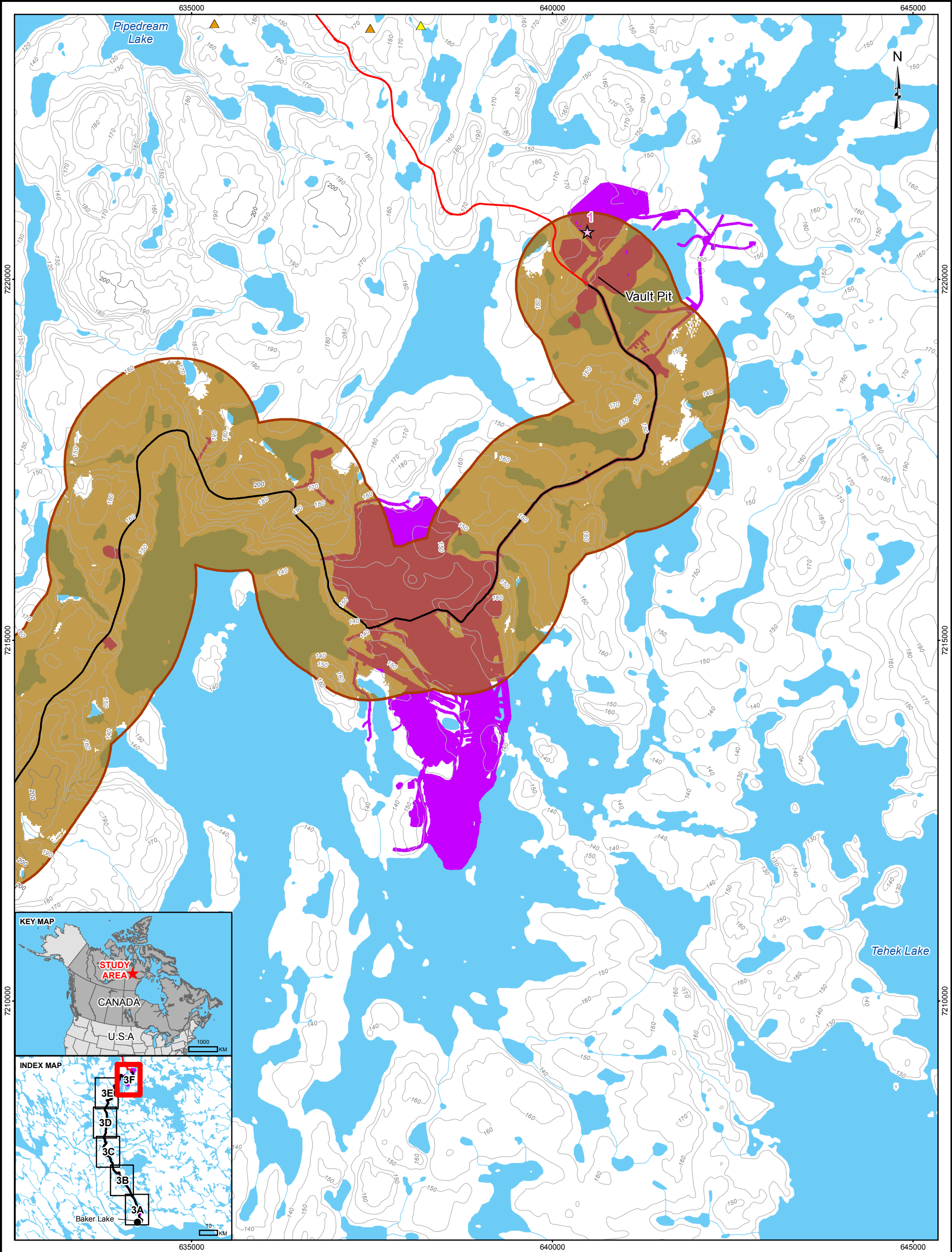




- LEGEND**

  - ☆ 2016 HEIGHT OF LAND SURVEY POINT (D&A, JULY 2016)
  - BARREN-GROUND CARIBOU<sup>2</sup>**
    - ▲ SIGN
    - ▲ CARIBOU TRAIL
- PROJECT DATA AND INFRASTRUCTURE**

  - ALL WEATHER ROAD
  - PROPOSED HAUL ROAD
  - MEADOWBANK OPERATION AND INFRASTRUCTURE
  - VISIBILITY ANALYSIS AREA
  - AREA VISIBLE FROM ALL WEATHER ROAD
- BASE DATA**

  - 10 m CONTOUR
  - 100 m CONTOUR
  - WATERCOURSE
  - WATERBODY



|         |         |                                                                              |              |                  |        |
|---------|---------|------------------------------------------------------------------------------|--------------|------------------|--------|
| PROJECT |         | AGNICO EAGLE MINES LIMITED:<br>MEADOWBANK DIVISION<br>WHALE TAIL PIT PROJECT |              |                  |        |
| TITLE   |         | VIEWSHED FROM ALL WEATHER ROAD                                               |              |                  |        |
|         | PROJECT | 1658927                                                                      |              | FILE No.         |        |
|         | DESIGN  | CDM                                                                          | 3 May 2017   | SCALE AS SHOWN   | REV. 0 |
|         | GIS     | SB                                                                           | 12 May 2017  |                  |        |
|         | CHECK   | JR                                                                           | 14 Jul. 2017 |                  |        |
|         | REVIEW  | CDM                                                                          | 14 Jul. 2017 | <b>FIGURE 3F</b> |        |

**REFERENCE**

1. HAUL ROAD OBTAINED FROM AGNICO EAGLE MINES LIMITED. 2015-10-14 FROM 6103-117-230-200\_R0.dwg

2. 2015/16 BARREN-GROUND CARIBOU OBSERVATIONS FROM THE GROUND RECONNAISSANCE SURVEYS, WATERBIRD NEST SURVEYS, BREEDING BIRD ROAD TRANSECT SURVEYS & HEIGHT-OF-LAND SURVEYS.

3. CONTOUR, WATERCOURSE AND WATERBODY DATA OBTAINED FROM CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.

4. INSET MAP DATA OBTAINED FROM ESRI.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

## APPENDIX H

---

Representative Figure from Baseline Characterization Report

---

Whale Tail Study Area

### Significant Wildlife (D&A; NEC, Franke et al, 2015-2017)

#### Occupied Raptor Nests

- Gyr Falcon Nest
- Rough-legged Hawk Nest
- Peregrine Falcon Nest
- Peregrine Falcon & Rough-legged Hawk Nest
- Gyr Falcon & Rough-legged Hawk Nest

#### High Suitability Waterbird Habitat

- Graminoid or Wet Graminoid Shorelines (Field confirmed 2017)

#### Map Base

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- Significant Wildlife Observations Figure Extent
- Mine Site
- Road
- Whale Tail Study Area
- LSA Boundary
- RSA Boundary

#### Notes:

1. Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
2. Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

### Significant Wildlife (D&A; NEC, Franke et al, 2015-2017)

#### Predatory Mammals

- Arctic Fox Pups
- Arctic Fox Den
- Arctic Fox Sign
- Arctic Fox Observation
- Arctic Wolf Nursery
- Arctic Wolf Den
- Arctic Wolf Sign
- Arctic Wolf Observation
- Wolverine Sign
- Wolverine Observation
- Barren-ground Grizzly Bear Den
- Barren-ground Grizzly Bear Sign
- Barren-ground Grizzly Bear Observation

#### Ungulates

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Sign
- Muskox Observation

#### Raptors

- Bald Eagle Observation
- Gyr Falcon Observation
- Peregrine Falcon Observation
- Rough-legged Hawk Observation
- Short-eared Owl Observation

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

### Significant Wildlife Observations



PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

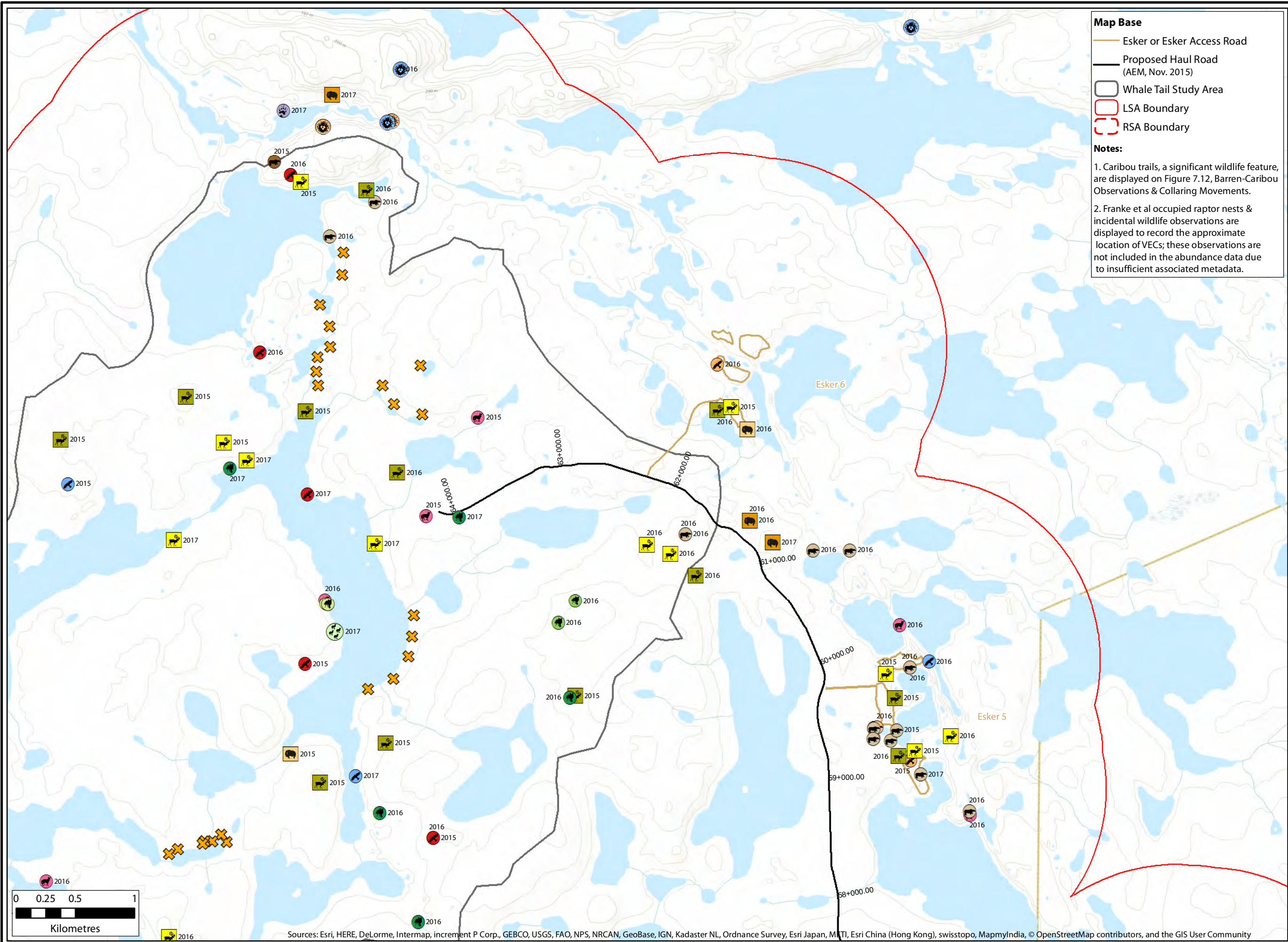
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|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:

## 9 - Key Map

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



**Significant Wildlife (D&A; NEC, Franke et al, 2015-2017)**

**Predatory Mammals**

- Arctic Fox Pups
- Arctic Fox Den
- Arctic Fox Sign
- Arctic Fox Observation
- Arctic Wolf Sign
- Wolverine Sign
- Barren-ground Grizzly Bear Den
- Barren-ground Grizzly Bear Sign
- Barren-ground Grizzly Bear Observation

**Ungulates**

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Sign
- Muskox Observation

**Raptors**

- Bald Eagle Observation
- Peregrine Falcon Observation
- Rough-legged Hawk Observation

**Occupied Raptor Nests**

- Rough-legged Hawk Nest
- Peregrine Falcon Nest

**High Suitability Waterbird Habitat**

- Graminoid or Wet Graminoid Shorelines (Field confirmed 2017)

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

**Significant Wildlife Observations**

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**Nunavut ENVIRONMENTAL CONSULTING LTD**

PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

DATE: NOVEMBER 21, 2017

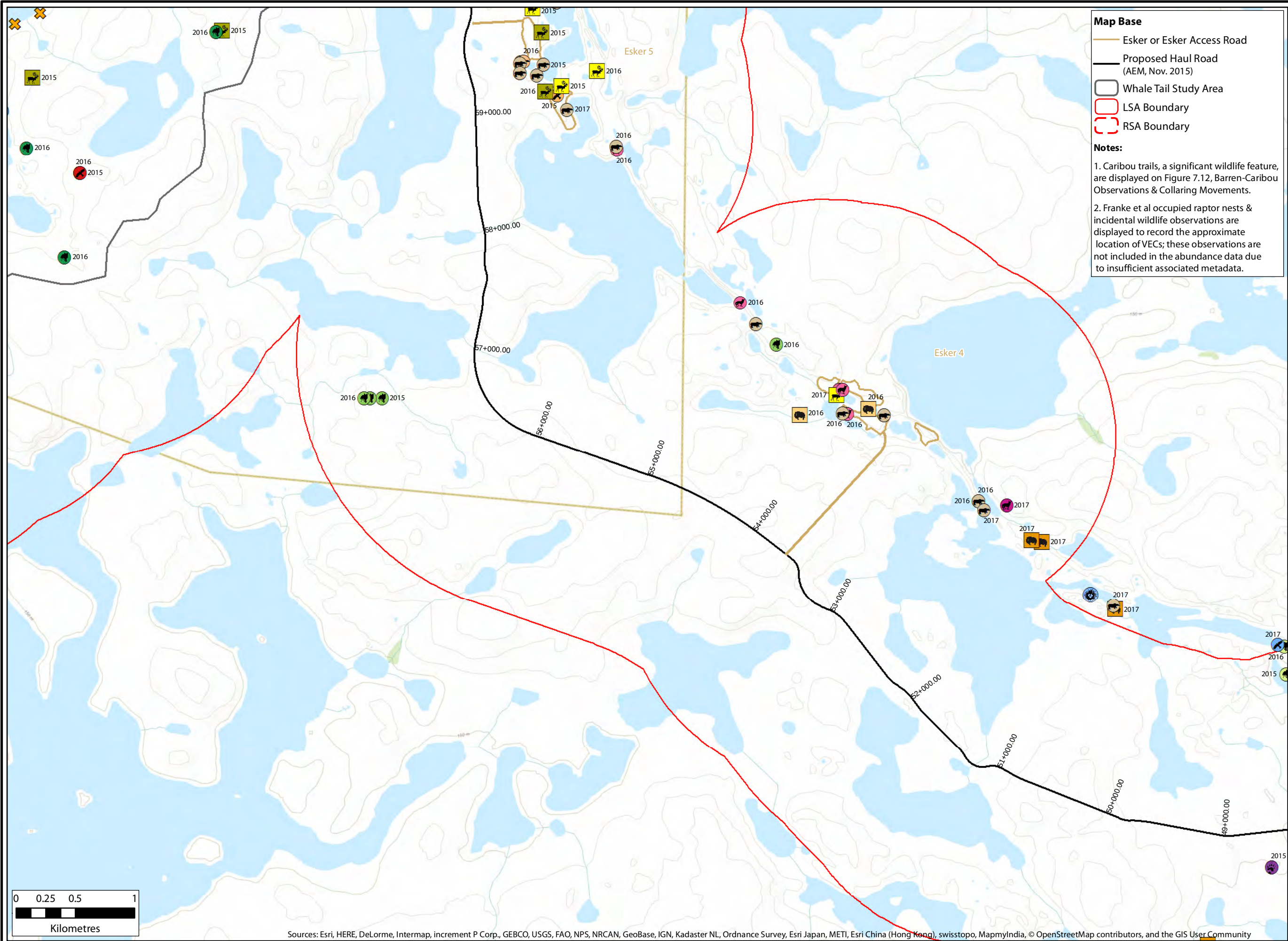
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DRAWN BY: Lindsey Carter

CHECKED BY: Mary Anne Young

Figure: 9 - 1

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

**Predatory Mammals**

- Arctic Fox Den
- Arctic Fox Sign
- Arctic Fox Observation
- Arctic Wolf Sign
- Arctic Wolf Observation
- Wolverine Observation
- Barren-ground Grizzly Bear Den
- Barren-ground Grizzly Bear Sign

**Ungulates**

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Sign
- Muskox Observation

**Raptors**

- Bald Eagle Observation
- Peregrine Falcon Observation
- Rough-legged Hawk Observation

**Occupied Raptor Nests**

- Peregrine Falcon Nest

**High Suitability Waterbird Habitat**

- Graminoid or Wet Graminoid Shorelines (Field confirmed 2017)

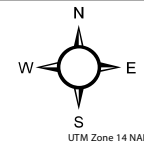
Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

**Significant Wildlife Observations**



PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited



DATE: NOVEMBER 21, 2017

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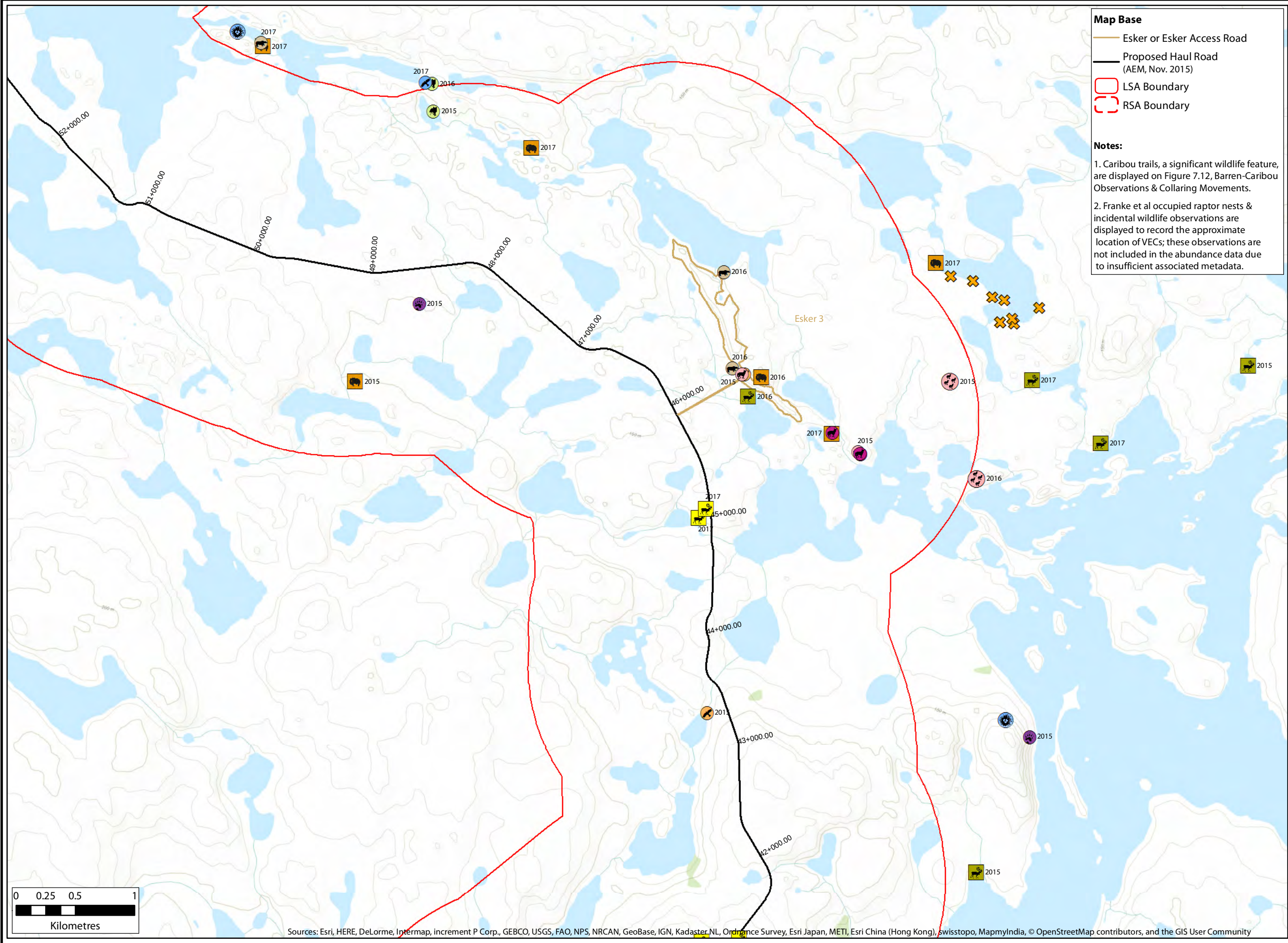
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CHECKED BY: Mary Anne Young

Figure:

9 - 2

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



**Map Base**

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- LSA Boundary
- RSA Boundary

**Notes:**

- Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
- Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

**Significant Wildlife (D&A; NEC, Franke et al, 2015-2017)**

**Predatory Mammals**

- Arctic Fox Den
- Arctic Wolf Nursery
- Arctic Wolf Den
- Arctic Wolf Observation
- Wolverine Observation
- Barren-ground Grizzly Bear Sign

**Ungulates**

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Observation

**Raptors**

- Peregrine Falcon Observation
- Rough-legged Hawk Observation

**Occupied Raptor Nests**

- Peregrine Falcon Nest

**High Suitability Waterbird Habitat**

- Graminoid or Wet Graminoid Shorelines (Field confirmed 2017)

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

**Significant Wildlife Observations**



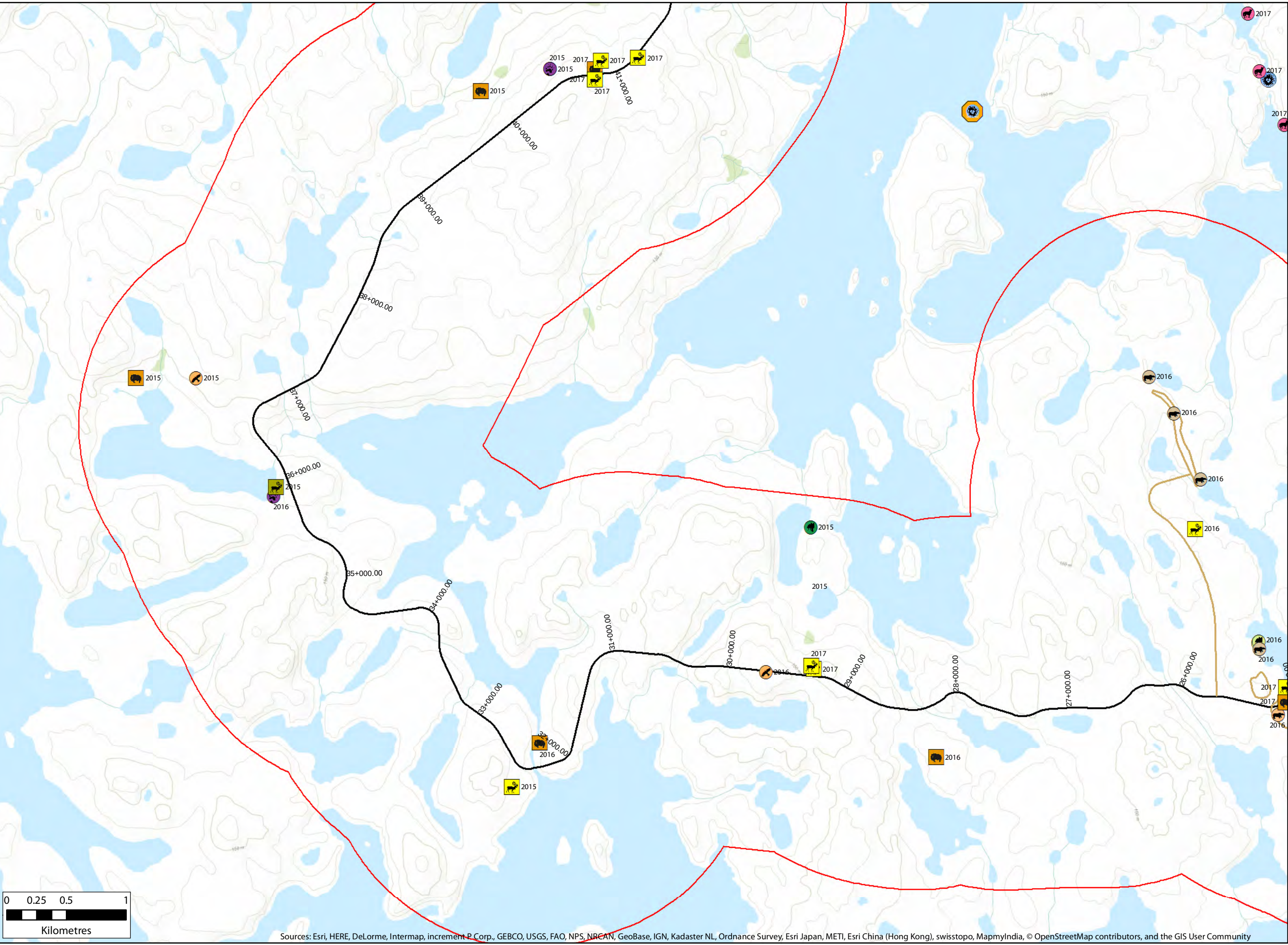
PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

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|  | CHECKED BY: Mary Anne Young |

Figure:  
**9 - 3**

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



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**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

Predatory Mammals

- Arctic Fox Den
- Arctic Fox Observation
- Arctic Wolf Sign
- Wolverine Observation
- Barren-ground Grizzly Bear Den
- Barren-ground Grizzly Bear Sign

Ungulates

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Observation

Raptors

- Rough-legged Hawk Observation

Occupied Raptor Nests

- Peregrine Falcon Nest
- Peregrine Falcon & Rough-legged Hawk Nest

**Map Base**

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- LSA Boundary
- RSA Boundary

**Notes:**

- Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
- Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

**Significant Wildlife Observations**



PROJECT: Whale Tail Pit & Haul Road

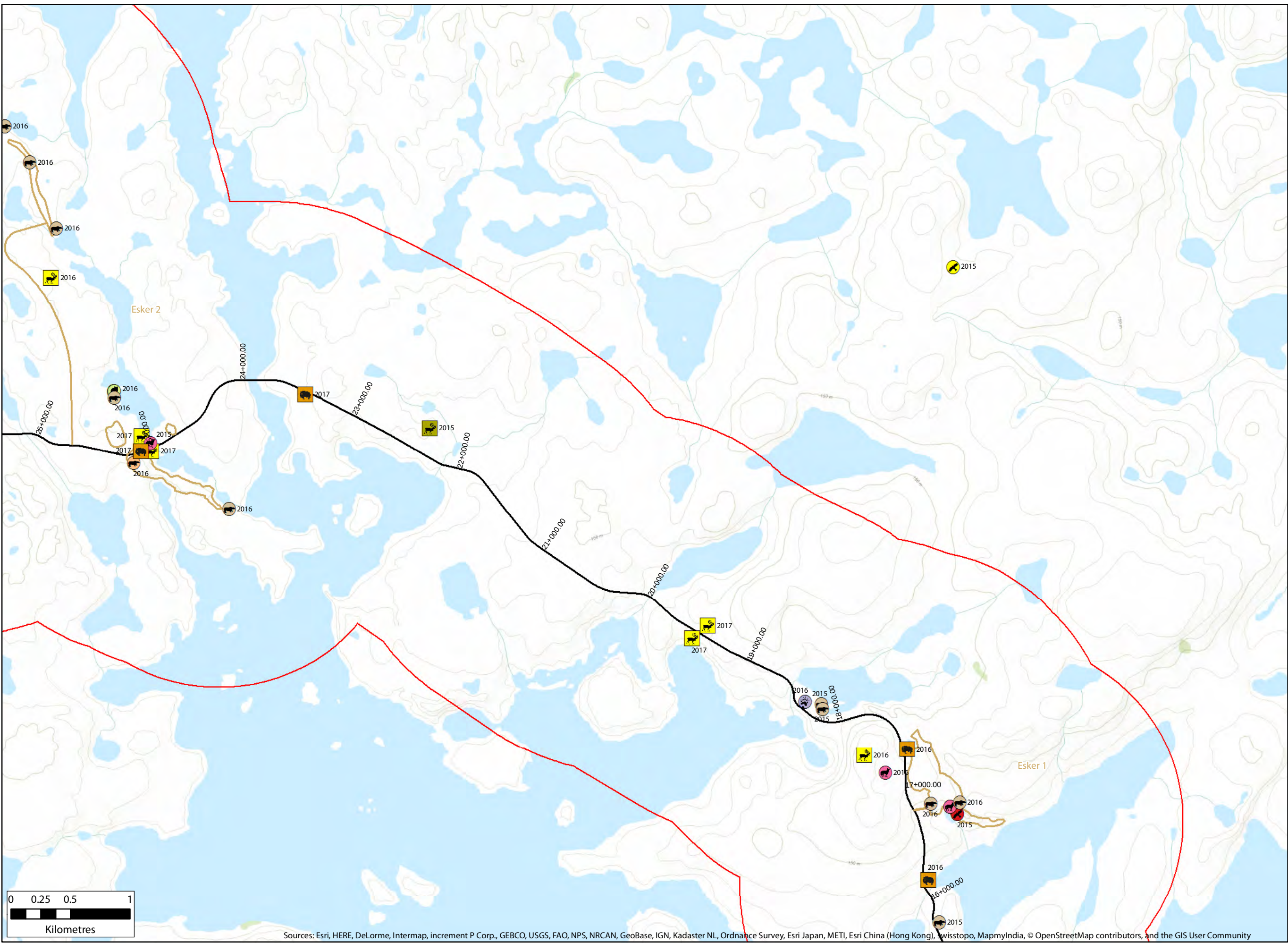
CLIENT: Agnico Eagle Mines Limited

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|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:

9 - 4

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

Predatory Mammals

- Arctic Fox Den
- Arctic Wolf Sign
- Wolverine Sign
- Barren-ground Grizzly Bear Den
- Barren-ground Grizzly Bear Sign

Ungulates

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Observation

Raptors

- Bald Eagle Observation
- Gyr Falcon Observation

**Map Base**

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- LSA Boundary
- RSA Boundary

**Notes:**

- Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
- Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

**Significant Wildlife Observations**



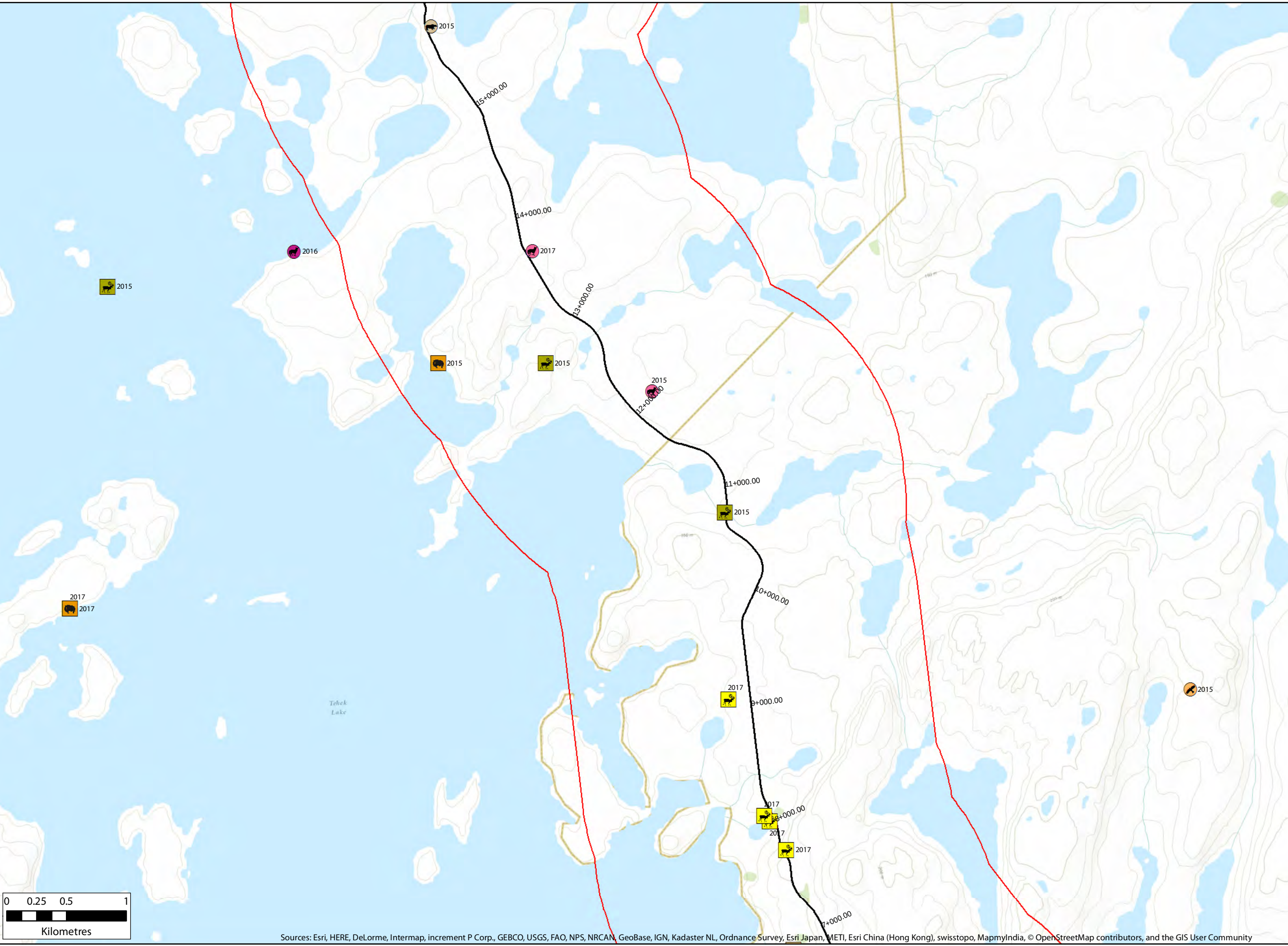
PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

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|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:  
  
**9 - 5**

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



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**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

Predatory Mammals

-  Arctic Wolf Sign
-  Arctic Wolf Observation
-  Barren-ground Grizzly Bear Sign

Ungulates

-  Barren-ground Caribou Sign
-  Barren-ground Caribou Observation
-  Muskox Sign
-  Muskox Observation

Raptors

-  Rough-legged Hawk Observation

**Map Base**

-  Proposed Haul Road (AEM, Nov. 2015)
-  LSA Boundary
-  RSA Boundary

**Notes:**

1. Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
2. Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**Significant Wildlife Observations**



PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

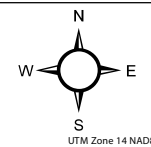
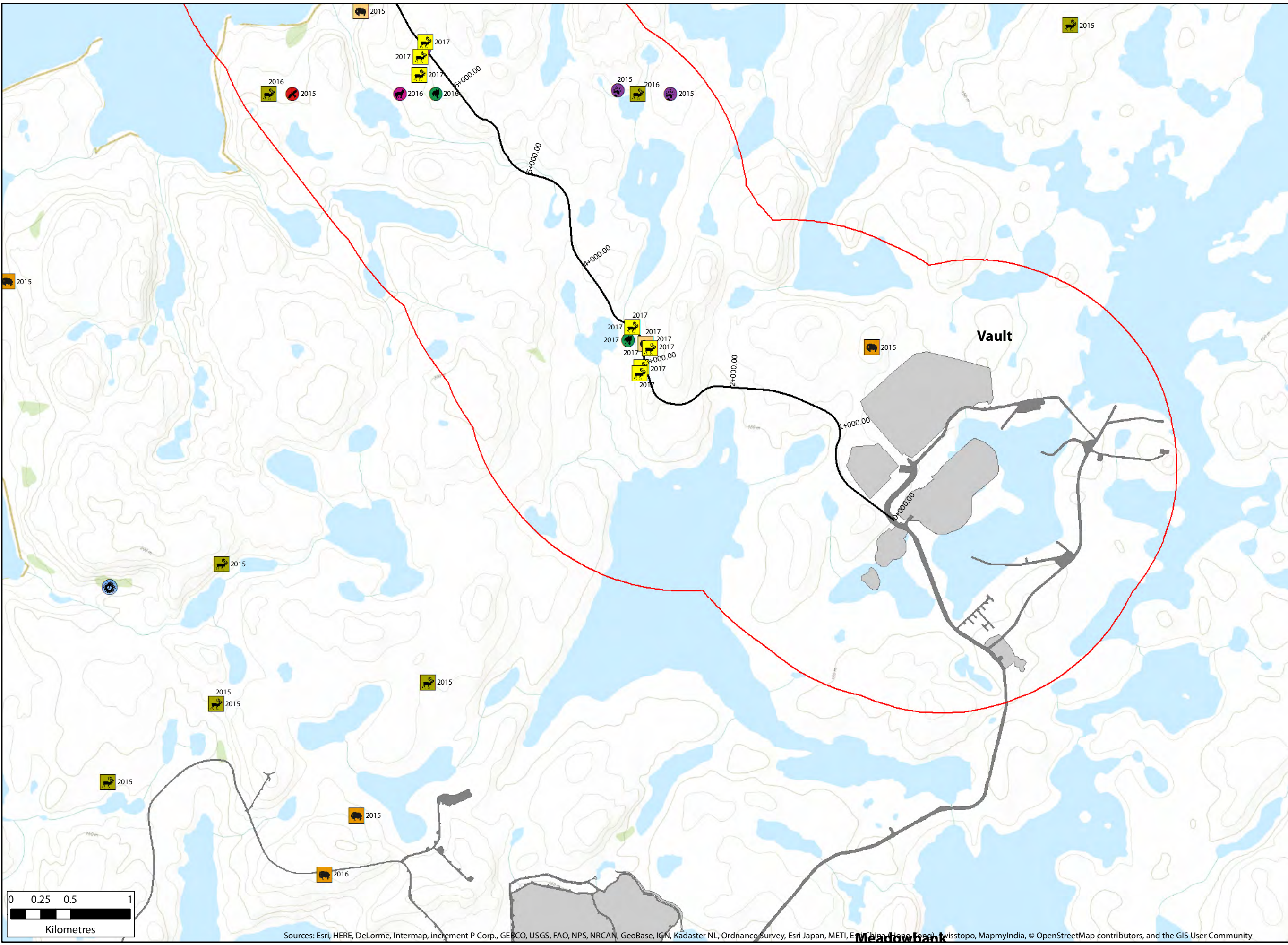
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|                                                                                       | CHECKED BY: Mary Anne Young |

Figure:  
  
9 - 6

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

Predatory Mammals

- Arctic Fox Observation
- Arctic Wolf Observation
- Wolverine Observation

Ungulates

- Barren-ground Caribou Sign
- Barren-ground Caribou Observation
- Muskox Sign
- Muskox Observation

Raptors

- Bald Eagle Observation

Occupied Raptor Nests

- Peregrine Falcon Nest

**Map Base**

- Proposed Haul Road (AEM, Nov. 2015)
- Mine Site
- Road
- LSA Boundary
- RSA Boundary

**Notes:**

- Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
- Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report

**Significant Wildlife Observations**



PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

|  |                             |
|--|-----------------------------|
|  | DATE: NOVEMBER 21, 2017     |
|  | SCALE: 1:30,000             |
|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:

9 - 7

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**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

Predatory Mammals

-  Arctic Wolf Sign
-  Arctic Wolf Observation

Ungulates

-  Muskox Observation

Raptors

-  Gyr Falcon Observation
-  Rough-legged Hawk Observation
-  Short-eared Owl Observation

Occupied Raptor Nests

-  Peregrine Falcon Nest

**Map Base**

-  RSA Boundary

**Notes:**

1. Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
2. Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

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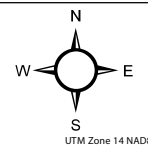
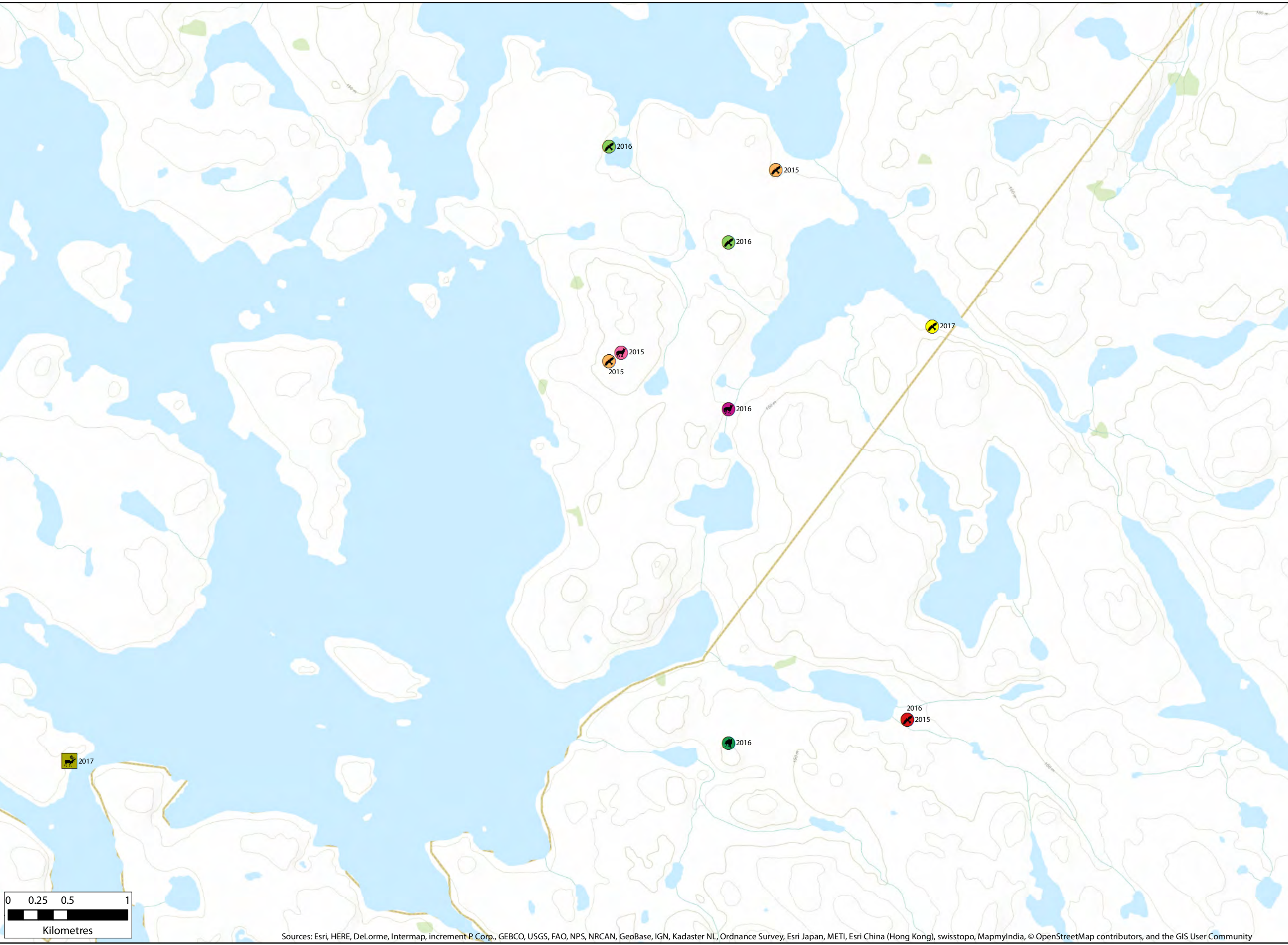
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|                                                                                       | CHECKED BY: Mary Anne Young |

Figure:

9 - 8

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**Significant Wildlife**  
(D&A; NEC, Franke et al, 2015-2017)

Predatory Mammals

-  Arctic Fox Observation
-  Arctic Wolf Sign
-  Arctic Wolf Observation

Ungulates

-  Barren-ground Caribou Observation

Raptors

-  Bald Eagle Observation
-  Gyr Falcon Observation
-  Peregrine Falcon Observation
-  Rough-legged Hawk Observation
-  Short-eared Owl Observation

**Map Base**

-  RSA Boundary

**Notes:**

- Caribou trails, a significant wildlife feature, are displayed on Figure 7.12, Barren-Caribou Observations & Collaring Movements.
- Franke et al occupied raptor nests & incidental wildlife observations are displayed to record the approximate location of VECs; these observations are not included in the abundance data due to insufficient associated metadata.

Whale Tail Pit & Whale Tail Haul Road  
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Characterization Report

**Significant Wildlife Observations**



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PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

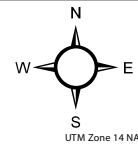
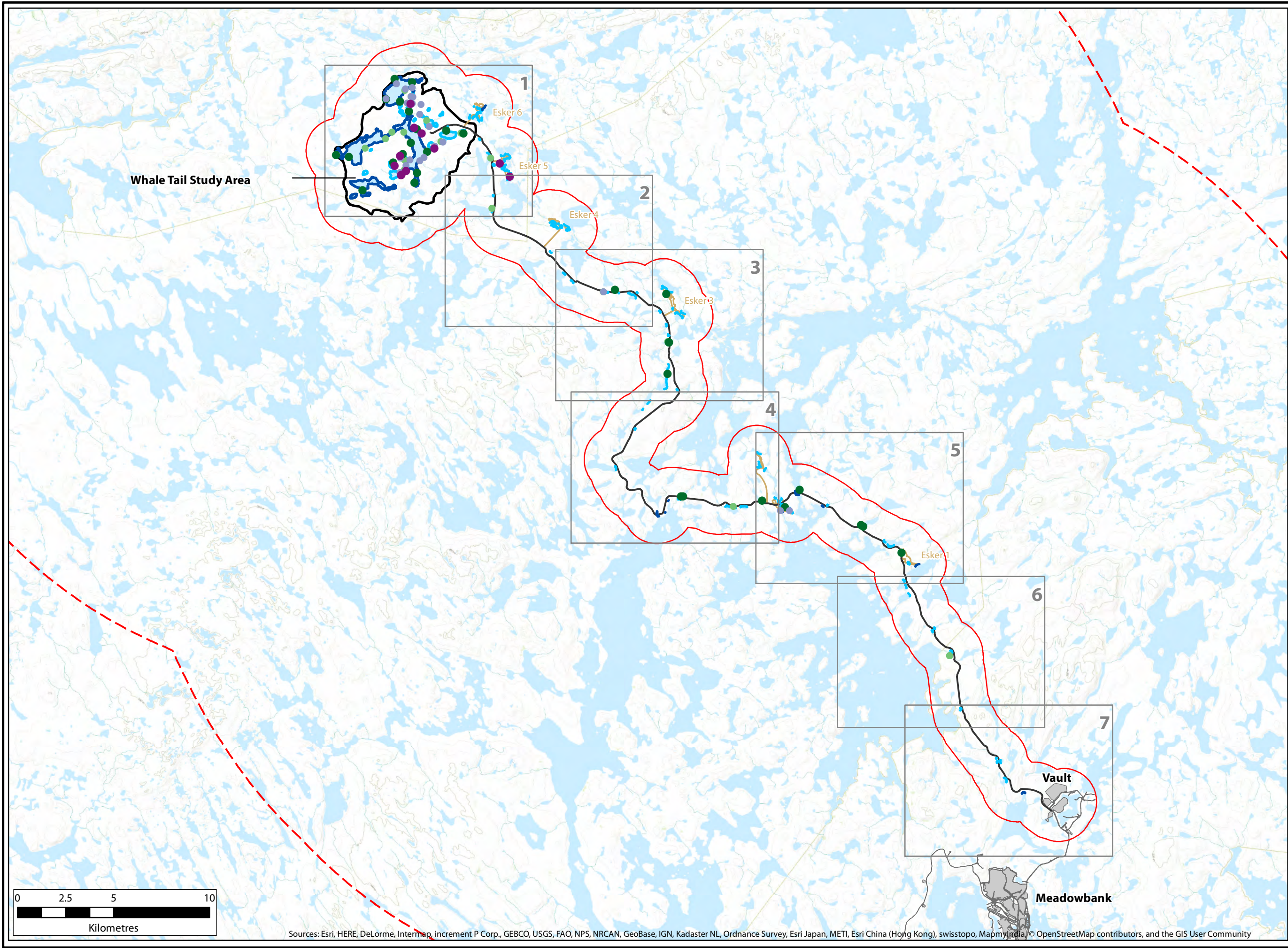
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|                                                                                                            | CHECKED BY: Mary Anne Young |

Figure:  
  
9 - 9

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



**Legend**

**Confirmed Breeding<sup>1</sup> (2015-2017)**

**Waterbirds**

- Confirmed Nest
- Additional Confirmed Breeding

**Upland Birds**

- Confirmed Nest
- Additional Confirmed Breeding

**Waterbird Survey Transect**  
(D&A, 2016)

- Lake
- Pond

**Map Base**

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- 2015 - 2017 Shoreline Surveys Figure Extent
- Mine Site
- Road
- LSA Boundary
- RSA Boundary
- Whale Tail Study Area

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**

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PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

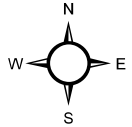
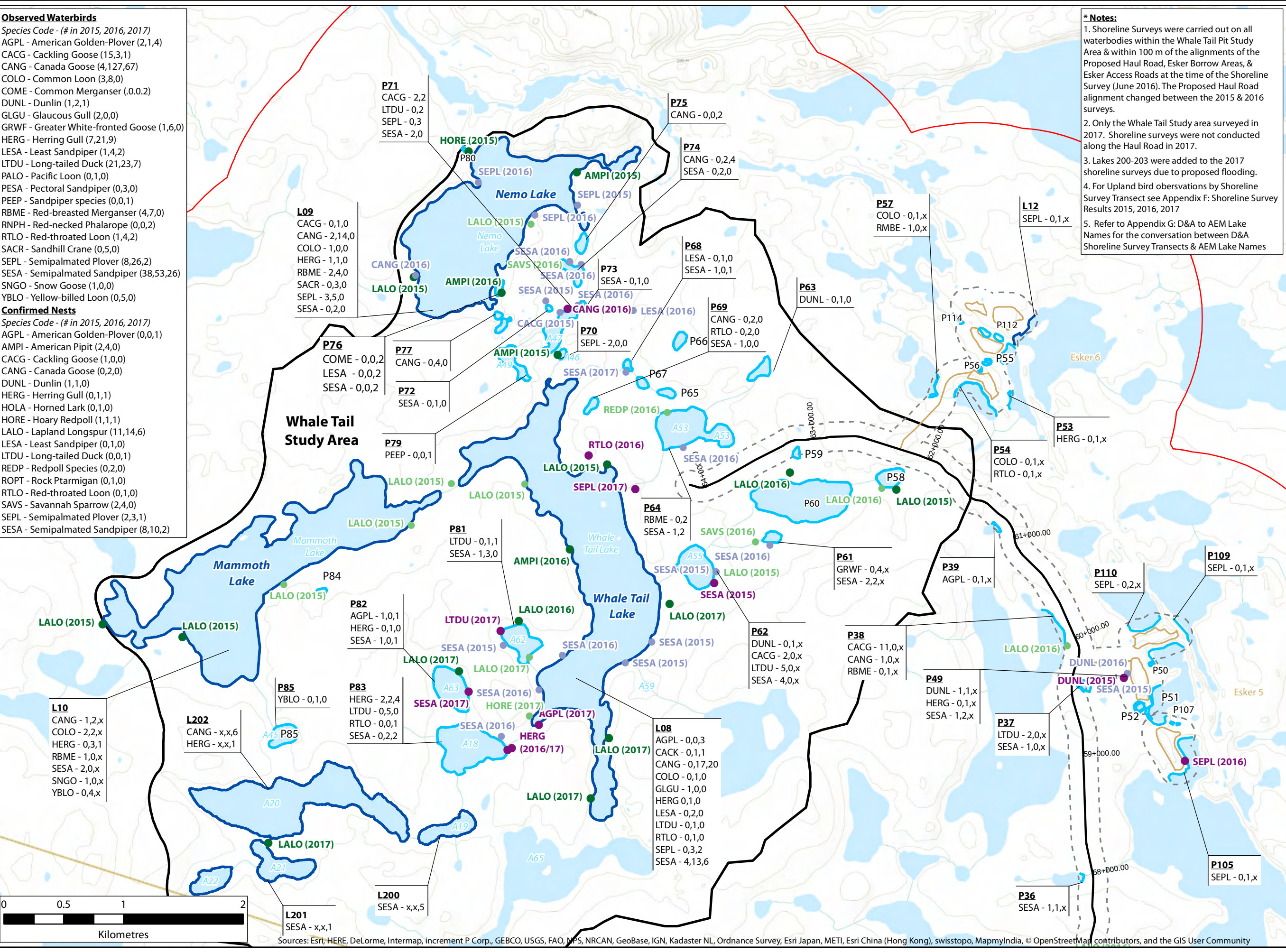
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|                                                                                                            | DRAWN BY: Lindsey Carter    |
|                                                                                                            | CHECKED BY: Mary Anne Young |

Figure:  
**11 - Key Map**

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.

- Observed Waterbirds**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (2,1,4)  
CACG - Cackling Goose (15,3,1)  
CANG - Canada Goose (4,127,67)  
COLO - Common Loon (3,8,0)  
COME - Common Merganser (0,0,2)  
DUNL - Dunlin (1,2,1)  
GLGU - Glaucous Gull (2,0,0)  
GRWF - Greater White-fronted Goose (1,6,0)  
HERG - Herring Gull (7,21,9)  
LESA - Least Sandpiper (1,4,2)  
LTDU - Long-tailed Duck (21,23,7)  
PALO - Pacific Loon (0,1,0)  
PESA - Pectoral Sandpiper (0,3,0)  
PEEP - Sandpiper species (0,0,1)  
RBME - Red-breasted Merganser (4,7,0)  
RNPH - Red-necked Phalarope (0,0,2)  
RTLO - Red-throated Loon (1,4,2)  
SACR - Sandhill Crane (0,5,0)  
SEPL - Semipalmated Plover (8,26,2)  
SESA - Semipalmated Sandpiper (38,53,26)  
SNGO - Snow Goose (1,0,0)  
YBLO - Yellow-billed Loon (0,5,0)
- Confirmed Nests**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (0,0,1)  
AMPI - American Pipit (2,4,0)  
CACG - Cackling Goose (1,0,0)  
CANG - Canada Goose (0,2,0)  
DUNL - Dunlin (1,1,0)  
HERG - Herring Gull (0,1,1)  
HOLA - Horned Lark (0,1,0)  
HORE - Hoary Redpoll (1,1,1)  
LALO - Lapland Longspur (11,14,6)  
LESA - Least Sandpiper (0,1,0)  
LTDU - Long-tailed Duck (0,0,1)  
REDP - Redpoll Species (0,2,0)  
ROPT - Rock Ptarmigan (0,1,0)  
RTLO - Red-throated Loon (0,1,0)  
SAVS - Savannah Sparrow (2,4,0)  
SEPL - Semipalmated Plover (2,3,1)  
SESA - Semipalmated Sandpiper (8,10,2)



- \* Notes:**  
1. Shoreline Surveys were carried out on all waterbodies within the Whale Tail Pit Study Area & within 100 m of the alignments of the Proposed Haul Road, Esker Borrow Areas, & Esker Access Roads at the time of the Shoreline Survey (June 2016). The Proposed Haul Road alignment changed between the 2015 & 2016 surveys.  
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4. For Upland bird observations by Shoreline Survey Transect see Appendix F: Shoreline Survey Results 2015, 2016, 2017  
5. Refer to Appendix G: D&A to AEM Lake Names for the conversation between D&A Shoreline Survey Transects & AEM Lake Names

- Legend**
- Confirmed Breeding <sup>1</sup> (2015-2017) Waterbirds**
- Confirmed Nest
  - Additional Confirmed Breeding
- Upland Birds**
- Confirmed Nest
  - Additional Confirmed Breeding
- Waterbird Survey Transect (D&A, 2015 - 2017)**
- Lake
  - Pond
- Map Base**
- Esker or Esker Access Road
  - Proposed Haul Road (AEM, Nov. 2015)
  - Shoreline Survey Area \*
  - Whale Tail Study Area
  - LSA Boundary
  - RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**



|                                     |                             |
|-------------------------------------|-----------------------------|
| PROJECT: Whale Tail Pit & Haul Road |                             |
| CLIENT: Agnico Eagle Mines Limited  |                             |
|                                     | DATE: NOVEMBER 21, 2017     |
|                                     | SCALE: 1:30,000             |
|                                     | DRAWN BY: Lindsey Carter    |
|                                     | CHECKED BY: Mary Anne Young |

Figure:  
**11 - 1**  
The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.

- Observed Waterbirds**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (2,1,4)  
CACG - Cackling Goose (15,3,1)  
CANG - Canada Goose (4,127,67)  
COLO - Common Loon (3,8,0)  
COME - Common Merganser (0,0,2)  
DUNL - Dunlin (1,2,1)  
GLGU - Glaucous Gull (2,0,0)  
GRWF - Greater White-fronted Goose (1,6,0)  
HERG - Herring Gull (7,21,9)  
LESA - Least Sandpiper (1,4,2)  
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PALO - Pacific Loon (0,1,0)  
PESA - Pectoral Sandpiper (0,3,0)  
PEEP - Sandpiper species (0,0,1)  
RBME - Red-breasted Merganser (4,7,0)  
RNPH - Red-necked Phalarope (0,0,2)  
RTLO - Red-throated Loon (1,4,2)  
SACR - Sandhill Crane (0,5,0)  
SEPL - Semipalmated Plover (8,26,2)  
SESA - Semipalmated Sandpiper (38,53,26)  
SNGO - Snow Goose (1,0,0)  
YBLO - Yellow-billed Loon (0,5,0)
- Confirmed Nests**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (0,0,1)  
AMPI - American Pipit (2,4,0)  
CACG - Cackling Goose (1,0,0)  
CANG - Canada Goose (0,2,0)  
DUNL - Dunlin (1,1,0)  
HERG - Herring Gull (0,1,1)  
HOLA - Horned Lark (0,1,0)  
HORE - Hoary Redpoll (1,1,1)  
LALO - Lapland Longspur (11,14,6)  
LESA - Least Sandpiper (0,1,0)  
LTDU - Long-tailed Duck (0,0,1)  
REDP - Redpoll Species (0,2,0)  
ROPT - Rock Ptarmigan (0,1,0)  
RTLO - Red-throated Loon (0,1,0)  
SAVS - Savannah Sparrow (2,4,0)  
SEPL - Semipalmated Plover (2,3,1)  
SESA - Semipalmated Sandpiper (8,10,2)

- \* Notes:**  
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- Legend**  
**Confirmed Breeding <sup>1</sup> (2015-2017) Waterbirds**  
Confirmed Nest  
Additional Confirmed Breeding
- Upland Birds**  
Confirmed Nest  
Additional Confirmed Breeding
- Waterbird Survey Transect**  
(D&A, 2015 - 2017)  
Pond  
Esker or Esker Access Road  
Proposed Haul Road (AEM, Nov. 2015)  
Shoreline Survey Area \*  
Whale Tail Study Area  
LSA Boundary  
RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**



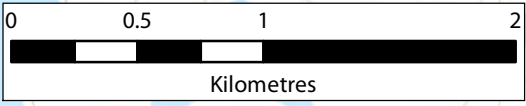
PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

|  |                             |
|--|-----------------------------|
|  | DATE: NOVEMBER 21, 2017     |
|  | SCALE: 1:30,000             |
|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:  
**11 - 2**

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



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COME - Common Merganser (0,0,2)  
DUNL - Dunlin (1,2,1)  
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HERG - Herring Gull (7,21,9)  
LESA - Least Sandpiper (1,4,2)  
LTDU - Long-tailed Duck (21,23,7)  
PALO - Pacific Loon (0,1,0)  
PESA - Pectoral Sandpiper (0,3,0)  
PEEP - Sandpiper species (0,0,1)  
RBME - Red-breasted Merganser (4,7,0)  
RNPH - Red-necked Phalarope (0,0,2)  
RTLO - Red-throated Loon (1,4,2)  
SACR - Sandhill Crane (0,5,0)  
SEPL - Semipalmated Plover (8,26,2)  
SESA - Semipalmated Sandpiper (38,53,26)  
SNGO - Snow Goose (1,0,0)  
YBLO - Yellow-billed Loon (0,5,0)
- Confirmed Nests**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (0,0,1)  
AMPI - American Pipit (2,4,0)  
CACG - Cackling Goose (1,0,0)  
CANG - Canada Goose (0,2,0)  
DUNL - Dunlin (1,1,0)  
HERG - Herring Gull (0,1,1)  
HOLA - Horned Lark (0,1,0)  
HORE - Hoary Redpoll (1,1,1)  
LALO - Lapland Longspur (11,14,6)  
LESA - Least Sandpiper (0,1,0)  
LTDU - Long-tailed Duck (0,0,1)  
REDP - Redpoll Species (0,2,0)  
ROPT - Rock Ptarmigan (0,1,0)  
RTLO - Red-throated Loon (0,1,0)  
SAVS - Savannah Sparrow (2,4,0)  
SEPL - Semipalmated Plover (2,3,1)  
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- Legend**
- Confirmed Breeding <sup>1</sup> (2015-2017) Waterbirds**
- Additional Confirmed Breeding
- Upland Birds**
- Confirmed Nest
  - Additional Confirmed Breeding
- Waterbird Survey Transect (D&A, 2015 - 2017)**
- Pond
- Map Base**
- Esker or Esker Access Road
  - Proposed Haul Road (AEM, Nov. 2015)
  - Shoreline Survey Area \*
  - LSA Boundary
  - RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**



77 Wyndham Street South • Guelph, ON N1E 5R1  
T 519.822.1609 • F 519.822.5389 • www.dougan.ca



PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

|  |                             |
|--|-----------------------------|
|  | DATE: NOVEMBER 21, 2017     |
|  | SCALE: 1:30,000             |
|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:  
  
11 - 3

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.



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- Observed Waterbirds**  
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COME - Common Merganser (0,0,2)  
DUNL - Dunlin (1,2,1)  
GLGU - Glaucous Gull (2,0,0)  
GRWF - Greater White-fronted Goose (1,6,0)  
HERG - Herring Gull (7,21,9)  
LESA - Least Sandpiper (1,4,2)  
LTDU - Long-tailed Duck (21,23,7)  
PALO - Pacific Loon (0,1,0)  
PESA - Pectoral Sandpiper (0,3,0)  
PEEP - Sandpiper species (0,0,1)  
RBME - Red-breasted Merganser (4,7,0)  
RNPH - Red-necked Phalarope (0,0,2)  
RTLO - Red-throated Loon (1,4,2)  
SACR - Sandhill Crane (0,5,0)  
SEPL - Semipalmated Plover (8,26,2)  
SESA - Semipalmated Sandpiper (38,53,26)  
SNGO - Snow Goose (1,0,0)  
YBLO - Yellow-billed Loon (0,5,0)
- Confirmed Nests**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (0,0,1)  
AMPI - American Pipit (2,4,0)  
CACG - Cackling Goose (1,0,0)  
CANG - Canada Goose (0,2,0)  
DUNL - Dunlin (1,1,0)  
HERG - Herring Gull (0,1,1)  
HOLA - Horned Lark (0,1,0)  
HORE - Hoary Redpoll (1,1,1)  
LALO - Lapland Longspur (11,14,6)  
LESA - Least Sandpiper (0,1,0)  
LTDU - Long-tailed Duck (0,0,1)  
REDP - Redpoll Species (0,2,0)  
ROPT - Rock Ptarmigan (0,1,0)  
RTLO - Red-throated Loon (0,1,0)  
SAVS - Savannah Sparrow (2,4,0)  
SEPL - Semipalmated Plover (2,3,1)  
SESA - Semipalmated Sandpiper (8,10,2)

**P22**  
CANG - 0,18,x  
HERG - 0,3,x  
SESA - 0,1,x

**P25**  
LTDU - 2,0,x

**P24**

**P23**

**P94**  
HERG - 0,3,x

**P93**  
LTDU - 0,1,x  
SACR - 0,2,x  
SEPL - 0,1,x

**P92**  
CANG - 0,10,x

**ROPT (2016)**

**LALO (2016)**

**AMPI (2016)**

**REDP (2016)**

**SESA (2015)**

**P17**  
LTDU - 1,0,x

- \* Notes:**  
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**Legend**

**Confirmed Breeding <sup>1</sup> (2015-2017)**

**Upland Birds**

- Confirmed Nest
- Additional Confirmed Breeding

**Waterbird Survey Transect**  
(D&A, 2015 - 2017)

- Lake
- Pond

**Map Base**

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- Shoreline Survey Area \*
- LSA Boundary
- RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**



PROJECT: Whale Tail Pit & Haul Road

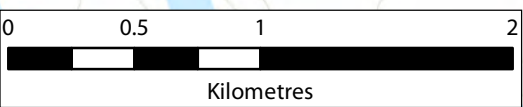
CLIENT: Agnico Eagle Mines Limited

|  |                             |
|--|-----------------------------|
|  | DATE: NOVEMBER 21, 2017     |
|  | SCALE: 1:30,000             |
|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

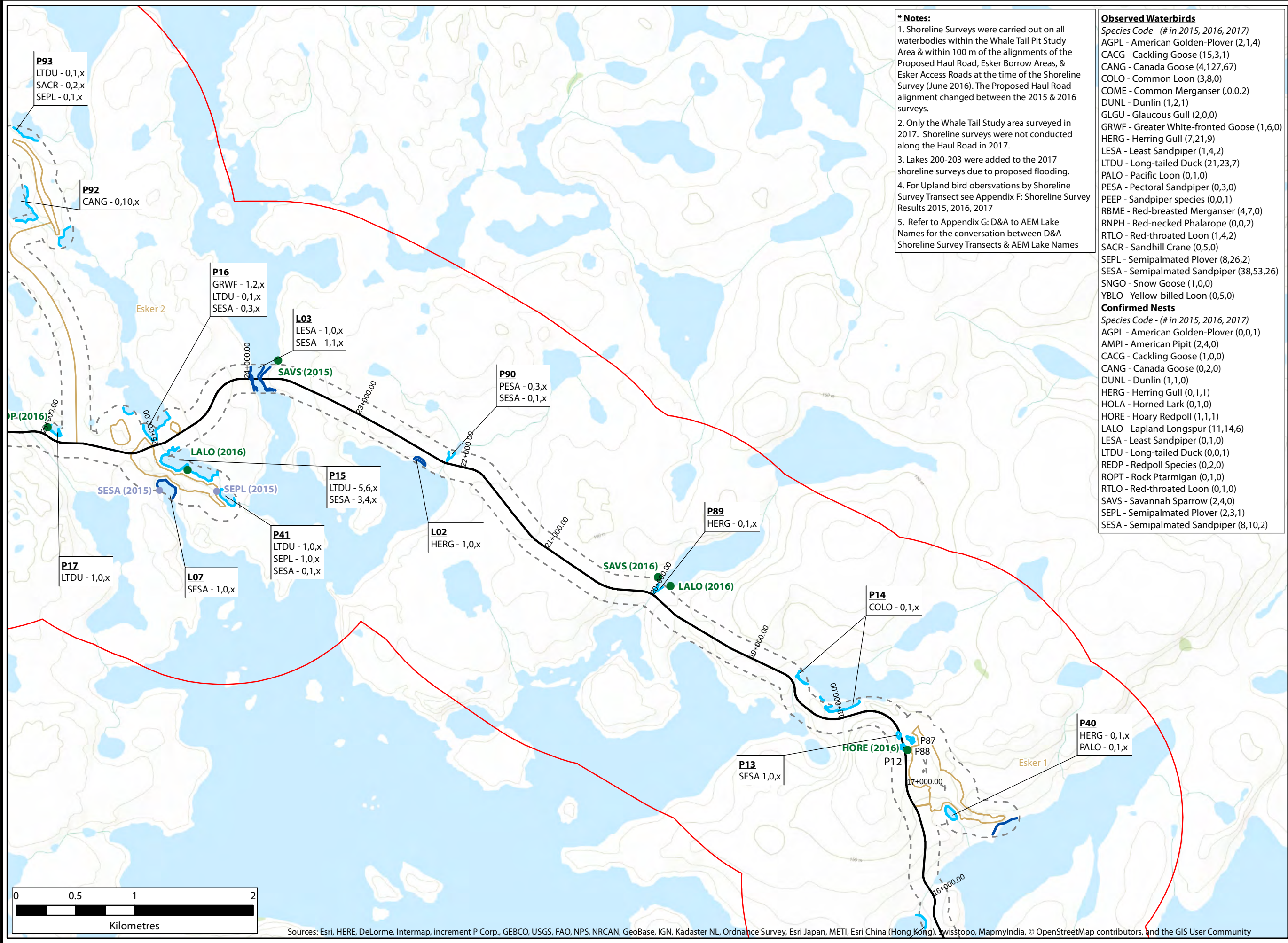
Figure:

11 - 4

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5. Refer to Appendix G: D&A to AEM Lake Names for the conversation between D&A Shoreline Survey Transects & AEM Lake Names

**Observed Waterbirds**

*Species Code - (# in 2015, 2016, 2017)*

AGPL - American Golden-Plover (2,1,4)  
CACG - Cackling Goose (15,3,1)  
CANG - Canada Goose (4,127,67)  
COLO - Common Loon (3,8,0)  
COME - Common Merganser (0,0,2)  
DUNL - Dunlin (1,2,1)  
GLGU - Glaucous Gull (2,0,0)  
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HERG - Herring Gull (7,21,9)  
LESA - Least Sandpiper (1,4,2)  
LTDU - Long-tailed Duck (21,23,7)  
PALO - Pacific Loon (0,1,0)  
PESA - Pectoral Sandpiper (0,3,0)  
PEEP - Sandpiper species (0,0,1)  
RBME - Red-breasted Merganser (4,7,0)  
RNPH - Red-necked Phalarope (0,0,2)  
RTLO - Red-throated Loon (1,4,2)  
SACR - Sandhill Crane (0,5,0)  
SEPL - Semipalmated Plover (8,26,2)  
SESA - Semipalmated Sandpiper (38,53,26)  
SNGO - Snow Goose (1,0,0)  
YBLO - Yellow-billed Loon (0,5,0)

**Confirmed Nests**

*Species Code - (# in 2015, 2016, 2017)*

AGPL - American Golden-Plover (0,0,1)  
AMPI - American Pipit (2,4,0)  
CACG - Cackling Goose (1,0,0)  
CANG - Canada Goose (0,2,0)  
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HERG - Herring Gull (0,1,1)  
HOLA - Horned Lark (0,1,0)  
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LTDU - Long-tailed Duck (0,0,1)  
REDP - Redpoll Species (0,2,0)  
ROPT - Rock Ptarmigan (0,1,0)  
RTLO - Red-throated Loon (0,1,0)  
SAVS - Savannah Sparrow (2,4,0)  
SEPL - Semipalmated Plover (2,3,1)  
SESA - Semipalmated Sandpiper (8,10,2)

**Legend**

**Confirmed Breeding <sup>1</sup> (2015-2017)**

**Waterbirds**

- Additional Confirmed Breeding
- Confirmed Nest

**Upland Birds**

- Confirmed Nest

**Waterbird Survey Transect**  
(D&A, 2015 - 2017)

- Lake
- Pond

**Map Base**

- Esker or Esker Access Road
- Proposed Haul Road (AEM, Nov. 2015)
- Shoreline Survey Area \*
- LSA Boundary
- RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**

**DOUGAN & ASSOCIATES**  
ECOLOGICAL CONSULTING & DESIGN  
77 Wyndham Street South • Guelph, ON N1E 5R1  
T 519.822.1609 • F 519.822.5389 • www.dougan.ca

**Nunavut ENVIRONMENTAL CONSULTING LTD**

PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

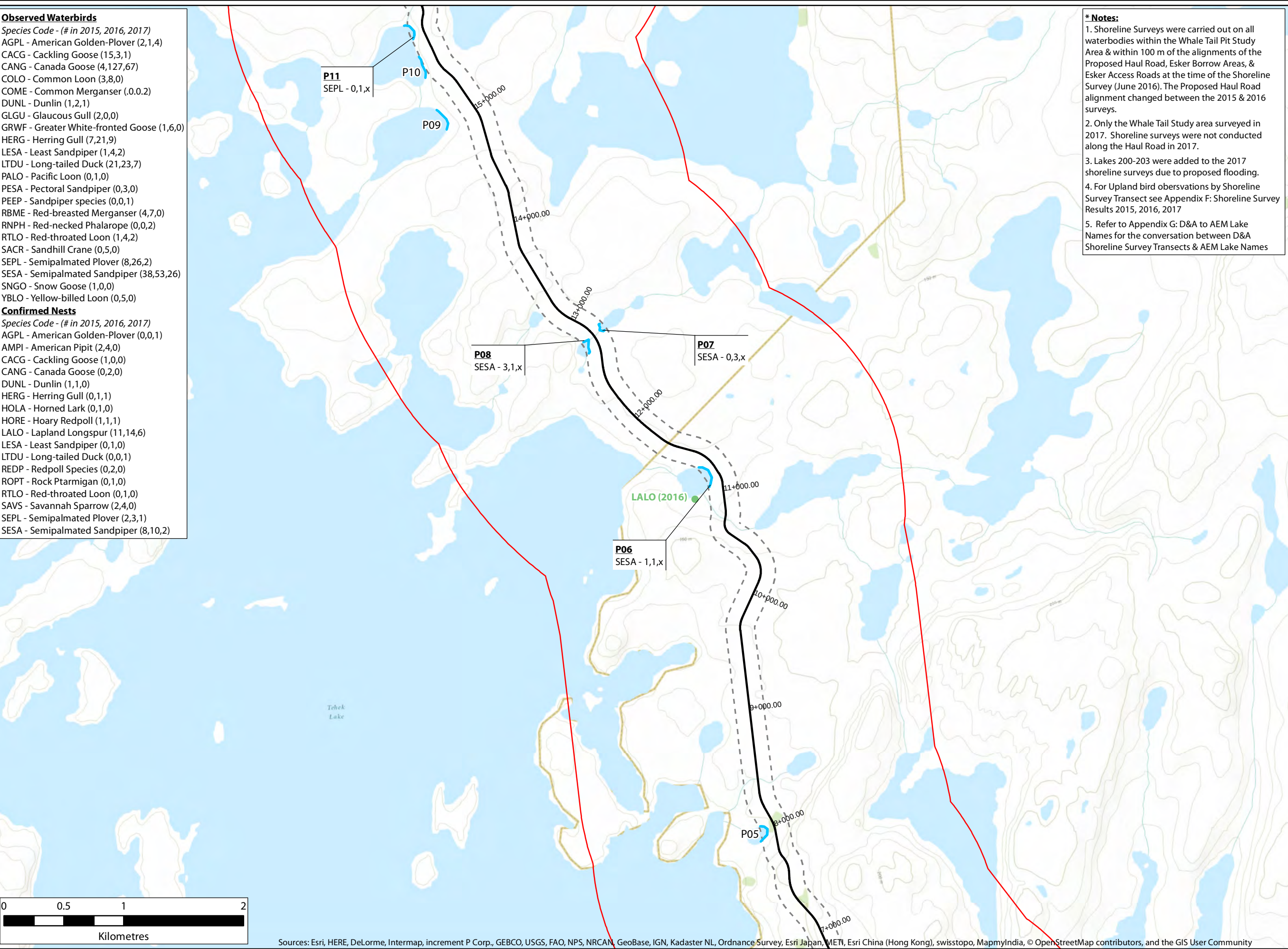
DATE: NOVEMBER 21, 2017  
SCALE: 1:30,000  
DRAWN BY: Lindsey Carter  
CHECKED BY: Mary Anne Young

Figure:

**11 - 5**

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- Confirmed Nests**  
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1. Shoreline Surveys were carried out on all waterbodies within the Whale Tail Pit Study Area & within 100 m of the alignments of the Proposed Haul Road, Esker Borrow Areas, & Esker Access Roads at the time of the Shoreline Survey (June 2016). The Proposed Haul Road alignment changed between the 2015 & 2016 surveys.
  2. Only the Whale Tail Study area surveyed in 2017. Shoreline surveys were not conducted along the Haul Road in 2017.
  3. Lakes 200-203 were added to the 2017 shoreline surveys due to proposed flooding.
  4. For Upland bird observations by Shoreline Survey Transect see Appendix F: Shoreline Survey Results 2015, 2016, 2017
  5. Refer to Appendix G: D&A to AEM Lake Names for the conversation between D&A Shoreline Survey Transects & AEM Lake Names

**Legend**

**Confirmed Breeding <sup>1</sup> (2015-2017)**

**Upland Birds**

- Additional Confirmed Breeding

**Waterbird Survey Transect**  
(D&A, 2015 - 2017)

- Pond

**Map Base**

- Proposed Haul Road (AEM, Nov. 2015)
- Shoreline Survey Area \*
- LSA Boundary
- RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**

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PROJECT: Whale Tail Pit & Haul Road

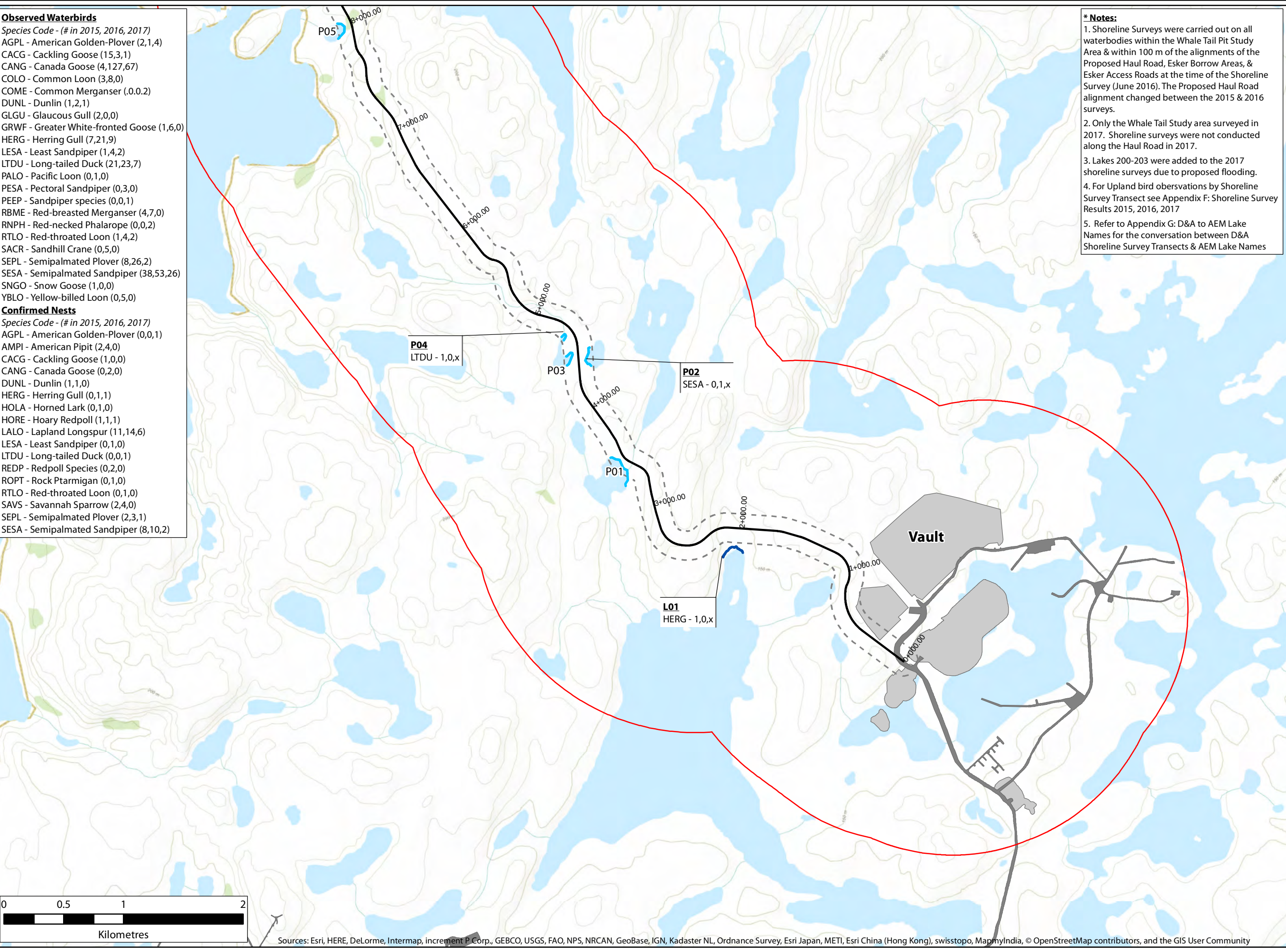
CLIENT: Agnico Eagle Mines Limited

DATE: NOVEMBER 21, 2017  
SCALE: 1:30,000  
DRAWN BY: Lindsey Carter  
CHECKED BY: Mary Anne Young

Figure:  
**11 - 6**

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.

- Observed Waterbirds**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (2,1,4)  
CACG - Cackling Goose (15,3,1)  
CANG - Canada Goose (4,127,67)  
COLO - Common Loon (3,8,0)  
COME - Common Merganser (0,0,2)  
DUNL - Dunlin (1,2,1)  
GLGU - Glaucous Gull (2,0,0)  
GRWF - Greater White-fronted Goose (1,6,0)  
HERG - Herring Gull (7,21,9)  
LESA - Least Sandpiper (1,4,2)  
LTDU - Long-tailed Duck (21,23,7)  
PALO - Pacific Loon (0,1,0)  
PESA - Pectoral Sandpiper (0,3,0)  
PEEP - Sandpiper species (0,0,1)  
RBME - Red-breasted Merganser (4,7,0)  
RNPH - Red-necked Phalarope (0,0,2)  
RTLO - Red-throated Loon (1,4,2)  
SACR - Sandhill Crane (0,5,0)  
SEPL - Semipalmated Plover (8,26,2)  
SESA - Semipalmated Sandpiper (38,53,26)  
SNGO - Snow Goose (1,0,0)  
YBLO - Yellow-billed Loon (0,5,0)
- Confirmed Nests**  
*Species Code - (# in 2015, 2016, 2017)*  
AGPL - American Golden-Plover (0,0,1)  
AMPI - American Pipit (2,4,0)  
CACG - Cackling Goose (1,0,0)  
CANG - Canada Goose (0,2,0)  
DUNL - Dunlin (1,1,0)  
HERG - Herring Gull (0,1,1)  
HOLA - Horned Lark (0,1,0)  
HORE - Hoary Redpoll (1,1,1)  
LALO - Lapland Longspur (11,14,6)  
LESA - Least Sandpiper (0,1,0)  
LTDU - Long-tailed Duck (0,0,1)  
REDP - Redpoll Species (0,2,0)  
ROPT - Rock Ptarmigan (0,1,0)  
RTLO - Red-throated Loon (0,1,0)  
SAVS - Savannah Sparrow (2,4,0)  
SEPL - Semipalmated Plover (2,3,1)  
SESA - Semipalmated Sandpiper (8,10,2)



**\* Notes:**  
1. Shoreline Surveys were carried out on all waterbodies within the Whale Tail Pit Study Area & within 100 m of the alignments of the Proposed Haul Road, Esker Borrow Areas, & Esker Access Roads at the time of the Shoreline Survey (June 2016). The Proposed Haul Road alignment changed between the 2015 & 2016 surveys.  
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4. For Upland bird observations by Shoreline Survey Transect see Appendix F: Shoreline Survey Results 2015, 2016, 2017  
5. Refer to Appendix G: D&A to AEM Lake Names for the conversation between D&A Shoreline Survey Transects & AEM Lake Names

**Legend**

**Waterbird Survey Transect**  
(D&A, 2015 - 2017)

— Pond

**Map Base**

— Proposed Haul Road  
(AEM, Nov. 2015)

■ Mine Site

■ Road

--- Shoreline Survey Area \*

□ LSA Boundary

□ RSA Boundary

Whale Tail Pit & Whale Tail Haul Road  
Comprehensive Terrestrial Baseline  
Characterization Report  
**2015-2017 Shoreline Surveys**



PROJECT: Whale Tail Pit & Haul Road

CLIENT: Agnico Eagle Mines Limited

|  |                             |
|--|-----------------------------|
|  | DATE: NOVEMBER 21, 2017     |
|  | SCALE: 1:30,000             |
|  | DRAWN BY: Lindsey Carter    |
|  | CHECKED BY: Mary Anne Young |

Figure:

11 - 7

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation.

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

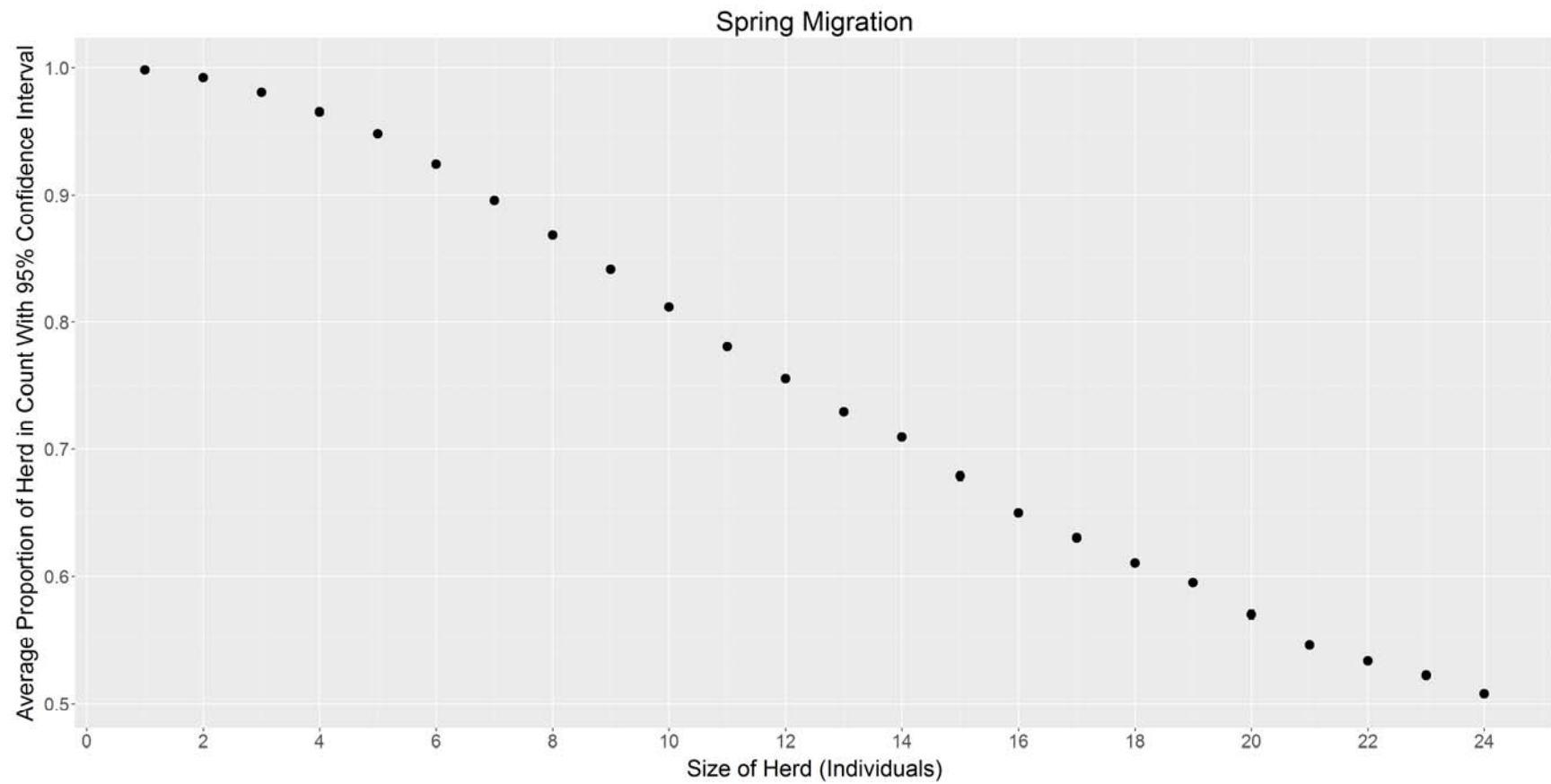
## APPENDIX I

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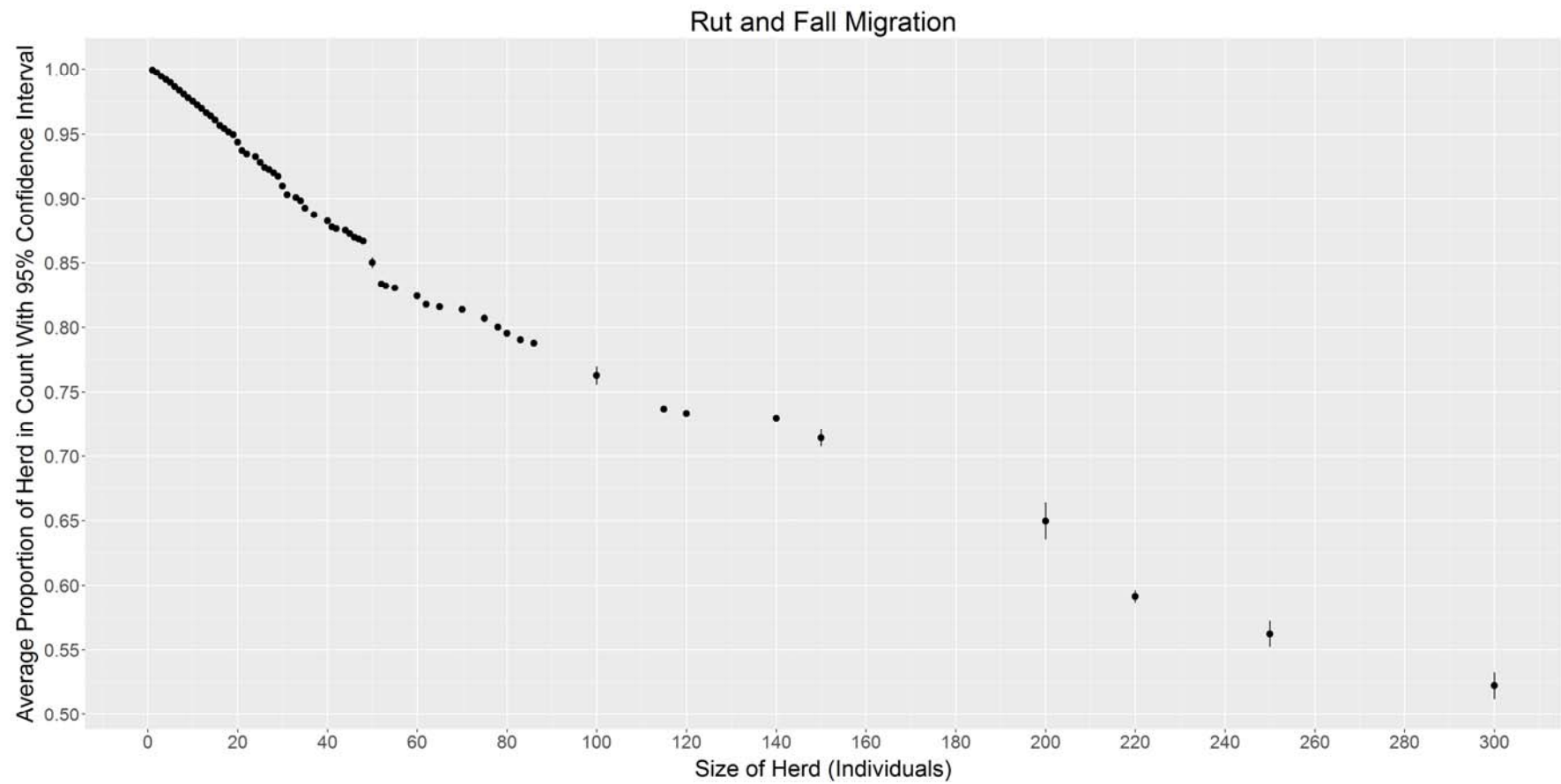
### Seasonal Group Size Thresholds

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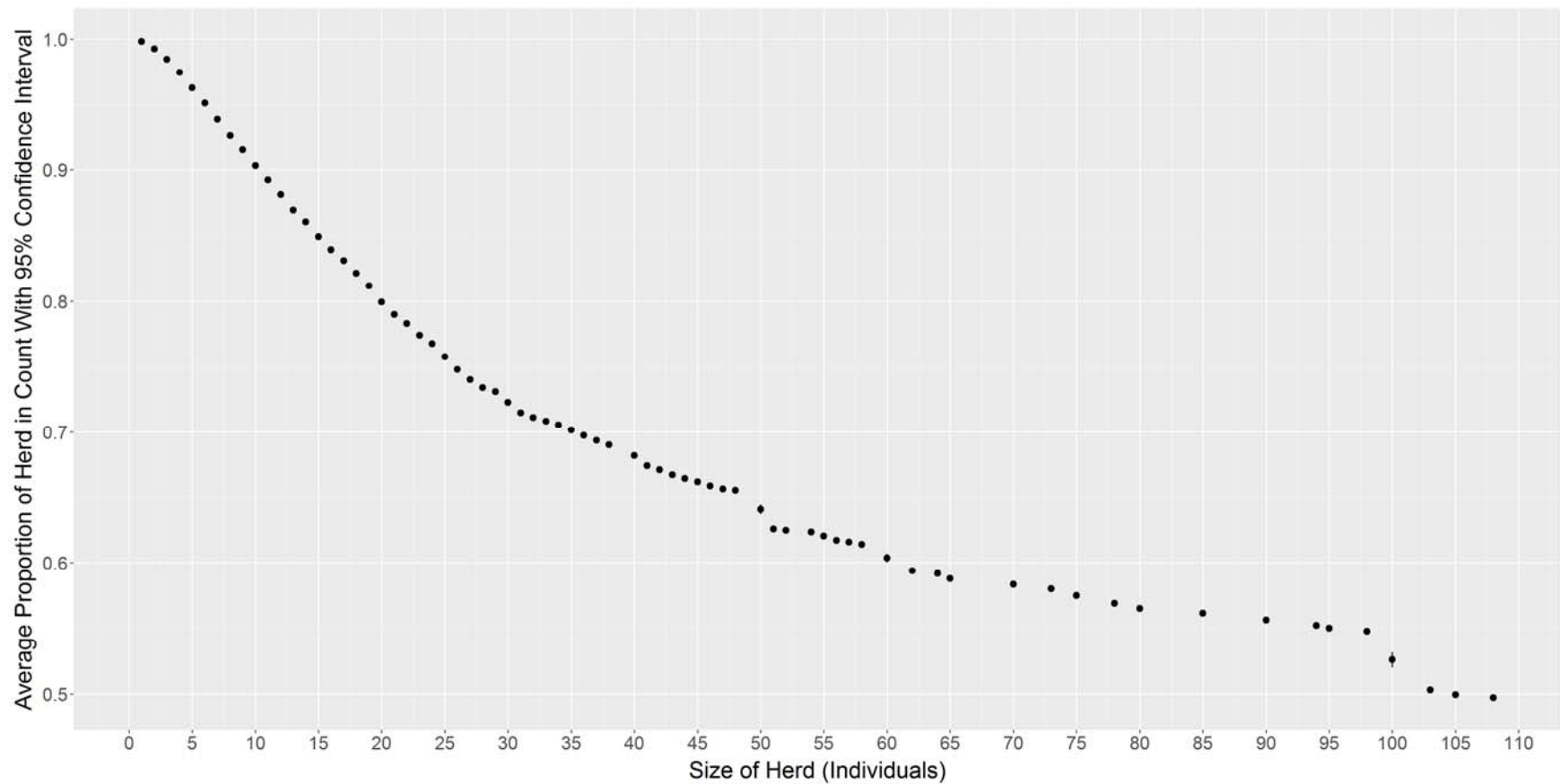
a)



b)



c)



**Figure J-1:** Proportion of Caribou Observations by Season Presented by Group Size with 95% Confidence Intervals as follows: a) Spring Migration; b) Fall Rut/Fall Migration; and c) Early and Late Winter

## **APPENDIX J**

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### **Predatory Mammal Den Management and Protection Plan**

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## BACKGROUND AND PURPOSE

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Predatory mammals represent a valued ecosystem component (VEC), which occur and are known to den in the vicinity of the Meadowbank and Whale Tail Project facilities. Sensory disturbances near to active dens such as blasting, vehicles and, most significantly, ground personnel, may negatively impact denning success by inducing stress responses in the adult mammals, which can result in den abandonment.

This plan is applicable to four species:

- Arctic wolf (*Canis lupus*) natal dens
- Grizzly bear (*Ursus arctos*) natal/overwintering dens
- Arctic fox (*Vulpes lagopus*) natal dens
- Wolverine (*Gulo gulo*) natal dens

The purpose of this plan is to provide a framework for identification, characterization, and monitoring of predatory mammal dens in order to protect any detected dens from disturbance throughout exploration and operation activities in the vicinity of all Meadowbank and Whale Tail Project facilities. The plan will include consultation with the Government of Nunavut (GN) with respect to obligations under the *Wildlife Act*, SNU 2003, c. 26.

## MANAGEMENT AND PROTECTION PLAN PROTOCOL

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### Overview

All observation visits to any active predatory den site must be undertaken with utmost care to avoid disturbing the den. Observations will take place from the greatest possible distance that allows for accurate observation and will employ binoculars and spotting scopes.

### Stage 1 – Detection

Detection of predatory mammal dens will be completed using a combination of targeted surveys prior to new construction and ongoing wildlife monitoring during operation.

| OPTION A – DURING OPERATION                                                                                                                                                                                                                                                                                                                                           | OPTION B – PRIOR TO CONSTRUCTION                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>During project facilities operation;</b><br><br>Predatory mammal observations, including any indication of denning, will be recorded at any point during operation of project facilities. This detection will be supported by ongoing monitoring activities: road surveys and height-of-land surveys in conjunction with incidental observations by AEM personnel. | <b>Prior to construction of any new project facilities;</b><br><br>High-suitability denning habitat (i.e. eskers) within 1 km of the project footprint will be investigated for active predatory mammal dens. |

If active predatory mammal dens are detected during Option A or Option B of Stage 1 (listed above) then proceed to Stage 2 of the protocol. If no active dens are detected then continue with Stage 1: Option A is ongoing and Option B is to be utilized as needed.

## **Stage 2 – Identification and Characterization**

If an active predatory mammal den has been detected, Stage 2 of the protocol will be undertaken. In the table below, a list of the identification questions and examples of characterization answers are provided. This process will involve the completion of the following questions as well as dates, timing, identification information about the observer(s), and any additional comments. A blank version of this table, which can be used as a field data collection sheet, is provided at the end of this Appendix.

|   | <b>Identification Questions to be Answered</b>             | <b>Characterization Answer Examples</b>                                                                                                                                                                                                                                                                                                                                    |
|---|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Unique ID?                                                 | e.g Wolf Den 01                                                                                                                                                                                                                                                                                                                                                            |
| 2 | What predatory mammal species is occupying the active den? | e.g. Arctic wolf; Grizzly bear; Arctic fox; Wolverine                                                                                                                                                                                                                                                                                                                      |
| 3 | Coordinates of the active den?                             | UTM Coordinates of den                                                                                                                                                                                                                                                                                                                                                     |
| 4 | Site description?                                          | e.g. Arctic fox denning under trailer near Whale Tail helipad<br><br>e.g. Arctic wolf den located approximately 800 meters from Whale Tail haul road on the south facing side of an ~8m tall esker.                                                                                                                                                                        |
| 5 | Juveniles Observed?                                        | e.g. Yes; 3 fox pups observed in the entering the den.<br><br>e.g. No; wolf pups have not been observed directly. However, the behaviour of the adult wolves, the repeated observations of wolves at the site, the sandy ridge location of the site and the observations of wolf burrows at the site indicate that an active den with juveniles is highly probable.        |
| 6 | Disturbance and impact considerations?                     | e.g. The wolf den occurs within 800 m of the Whale Tail haul road. As such vehicle noise, including helicopters, is frequently present within 1 km of the den site.                                                                                                                                                                                                        |
| 7 | Adaptive management considerations?                        | e.g. Ground personnel access will be restricted within 1km of the den and, as much as possible, vehicles will not stop on the roadway at km 35. Helicopter routing will be advised and flybys of the esker at this location will be minimized.                                                                                                                             |
| 8 | Recommended monitoring program?                            | e.g. Weekly checks by the den monitoring survey team will be undertaken to monitor the progress of den development (i.e. age of pups), investigate for signs of adult stress responses and inform any additional adaptive management requirements. Checks will be undertaken from a height-of-land at (coordinates), approximately 300 m NW of the suspected den location. |

### **Stage 3 – Monitoring**

Monitoring visits will be undertaken at the frequency, distance and location recommended by the identification and characterization stage (Stage 2). In addition to the information in the table below, dates, timing, identification information about the observer(s), and any additional comments will be recorded. A blank version of this table is provided at the end of this appendix.

|   | <b>Monitoring Questions to be Answered</b>        | <b>Monitoring Characterization Answer Examples</b>                                                                                                                                                                       |
|---|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Unique ID?                                        | Wolf Den 01                                                                                                                                                                                                              |
| 2 | Changes to disturbance and impact considerations? | e.g. frequency of helicopter flybys within 1 km have increased in conjunction with construction activities at the Whale Tail site.                                                                                       |
| 3 | Development stage of den?                         | e.g. Pups are now more active outside of the den.                                                                                                                                                                        |
| 4 | Changes to site location?                         | e.g. Adult wolves still display territorial behaviours, but the specific den has likely been relocated ~200m to the NE.                                                                                                  |
| 5 | Recommended changes to monitoring program?        | e.g. Weekly monitoring is considered sufficient.<br><br>e.g. Recommendation to reduce monitoring to bi-weekly visits: wolf den establishment appears stable, so reduction of personnel presence in the area is advisable |
| 6 | Recommended adaptive management considerations?   | e.g. Continue restricting access to ground personnel within 1 km of the den.<br><br>e.g. Develop new flight path instructions with helicopter teams. Avoid flybys over the den by at least 1 km.                         |

Monitoring (Stage 3) continues at the rate recommended by Stage 2 assessment and all subsequent monitoring visits. Monitoring of an active den will be discontinued once the pups have left the den, the den has been relocated to a distance greater than 1 km from operating facilities, or the potential impacts to the den are considered negligible.

### **ADAPTIVE MANAGEMENT**

Based on findings from Stage 3 monitoring, new adaptive management solutions may be required to prevent negative impacts to the active predatory mammal den. This may include the restriction of movements or activities by certain vehicles or work teams to minimize disturbances. It may also include alterations to monitoring activities to reduce disturbances or increase the amount of information available to inform management decisions. See Chart 3 in 2016 TEMP for adaptive management timing and work flow.

**Data Sheet for Stage 2 – Identification and Characterization****Date:****Observer:**

|   | <b>Identification<br/>Questions to be<br/>Answered</b>                     | <b>Characterization Data</b> |
|---|----------------------------------------------------------------------------|------------------------------|
| 1 | Unique ID?                                                                 |                              |
| 2 | What is the predatory<br>mammal species is<br>occupying the active<br>den? |                              |
| 3 | Coordinates of the<br>active den?                                          |                              |
| 4 | Site description?                                                          |                              |
| 5 | Juveniles Observed?                                                        |                              |
| 6 | Disturbance and impact<br>considerations?                                  |                              |
| 7 | Adaptive management<br>considerations?                                     |                              |
| 8 | Recommended<br>monitoring program?                                         |                              |

**Data Sheet for Stage 3 – Monitoring****Date:****Observer:**

|   | <b>Monitoring Questions<br/>to be Answered</b>          | <b>Monitoring Data</b> |
|---|---------------------------------------------------------|------------------------|
| 1 | Unique ID?                                              |                        |
| 2 | Changes to<br>disturbance and impact<br>considerations? |                        |
| 3 | Development stage of<br>den?                            |                        |
| 4 | Changes to site<br>location?                            |                        |
| 5 | Recommended<br>changes to monitoring<br>program?        |                        |
| 6 | Recommended<br>adaptive management<br>considerations?   |                        |

## **APPENDIX K**

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**Haul Road Design Drawing**

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