

BRITISH COLUMBIA ARCHAEOLOGICAL IMPACT ASSESSMENT INTERIM REPORT FORM



1. REPORT TITLE

2020-0176-009, AIA of BCTS SNBA block RAI20_02

2. MANAGEMENT SUMMARY

2.1. Protected HCA Sites
N/A
2.2. Brief Overview of Study
BCTS SNBA requested an archaeological assessment within proposed forestry cut block RAI 20_02. Ecofor conducted a detailed pre-field review, followed by an archaeological impact assessment (AIA) survey within the development. The survey focused on areas identified during pre-field review as having high archaeological potential, including in the central and southern portions of the block near unnamed watercourses.
2.3. Results
No archaeological sites were identified and no shovel testing was conducted. RAI20_02 was assessed as having low archaeological potential due to the continuously sloping, poorly drained terrain that was encountered during the assessment. The block boundaries were not flagged at the time of the assessment, and the entire block area and surrounding 250 m assessment buffer were assessed as a result.
2.4. Management Recommendations
No further archaeological work is recommended provided the block boundaries do not change to include unassessed areas.

3. ADMINISTRATIVE INFORMATION

3.1. Permit Holder:	Greg Holland	
3.2. Permit Holder Affiliation:	Ecofor Consulting Ltd. 1315 Noranda Rd E Prince George, BC V2K 5R6	Phone: 250-960-1155 ext. 237 Email: greg@ecofor.ca
3.3. Proponent Contact:	David Zurevinski	
3.4. Proponent Affiliation:	BCTS Stuart Nechako Business Area 1560 Highway 16 East Vanderhoof, BC V0J 3A0	Phone: 250-567-6331 Email: david.zurevinski@gov.bc.ca
3.5. Interim Report Author(s):	Emily Stach	
3.6. Interim Report Date (dd/mm/yy) & Version:	27/01/21, V1	
3.7. Notification of Work Date:	15/05/20	
3.8. OGC Ref No.:	N/A	

4. PROPOSED DEVELOPMENT

4.1. Description:	Proposed block for timber harvest, RAI20_02 (427.2 ha) with a 250 m assessment buffer. The block boundaries were not flagged at the time of the assessment; therefore, the entire block and buffer were assessed as part of the AIA.
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4.2. Location:	<p>Rainbow Operating Area, Stuart Nechako Natural Resource District</p> <p>A point near the centre of RAI20_02 is located 14.6 km northwest of Salmon Lake, 9.6 km northeast of Nendatoo Lake, and 17 km southeast of Chichonajilh Lake (see Figure 1).</p> <p>To access the block from the intersection of Tachie Road and Germansen Landing Road near Fort St. James, travel north on Germansen Landing Road for 58.2 km then turn right (northwest) onto the Rainbow FSR. Continue for 7.6 km then turn right (east) onto the Delta FSR. Follow for 1.6 km then turn left (northeast) onto an unnamed road. Continue for 2.4 km then turn right (east). Follow the road for 550 m, at which point the road forks. The block is located 280 m to the east of the fork in the road. Turn left (north) for closer access to the north portion of the block and turn right (south) for closer access to the south portion of the block.</p> <p>UTM coordinates of block centre: NAD 83, Zone 10N, 435146 E, 6090536 N NTS Mapsheet (1:50,000): 93K/16 BCGS Mapsheet (1:20,000): 93K.100</p>
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5. FIELD CREW

Table 1. Field Crew

<i>Date (dd/mm/yy)</i>	<i>Field Director (On site? Y/N)</i>	<i>Field Supervisor</i>	<i>Other Field Personnel</i>
16/08/20	Johnny Huynh (N)	Rob Steeves	Ron Sam (Nak'azdli Whut'en)
18/08/20	Johnny Huynh (N)	Rob Steeves	Micah Tavener John Sam (Nak'azdli Whut'en)
19/08/20	Johnny Huynh (N)	Rob Steeves	Micah Tavener

6. ARCHAEOLOGICAL METHODS & RESULTS

6.1. Pre-field Methodology

☒	<i>Archaeological potential and sites are indicated on Figures 1 and 3.</i>
☒	<i>An AOA and/or archaeological predictive model exists for the study area</i> <i>Details: The Fort St. James Forest District Archaeological Predictive Model (Marshall and Bond 2004) does not indicate any areas of high potential within the block.</i>
☐	<i>Previous field studies influenced this assessment</i> <i>Details: N/A</i>
☒	<i>Review of Provincial Heritage Register (RAAD)</i> <i>Date Accessed: 05/06/20</i>
☒	<i>Review of Vegetation Resources Inventory (VRI) Data</i> <i>Details: VRI indicates a tree cover containing age class 5-8 (81-250 years old) Engelmann spruce and subalpine fir. Hybrid spruce is also indicated in portions of the 250 m assessment buffer.</i>
☒	<i>Pre-field Potential Assessment</i> <i>Details: Topographical analysis through Terrain Resources Information Management (TRIM) contour data and satellite imagery indicate the block is located on sloping and uneven terrain. Archaeological potential is predicted to be high in association with Streams C, E, G, M, and L and Wetland C as TRIM data indicate that elevated breaks-in-slope may be present overlooking these hydrological features.</i>

	Archaeological potential is predicted to be low throughout the remainder of the block as TRIM data indicate continuously sloping terrain and an absence of significant hydrological features.
	Potential for pre-1846 CMTs is considered to be low throughout the block, as VRI data indicates no presence of age class 8 (141-250 years old) or older pine trees.

Table 2. Archaeological Sites in the Vicinity of the Study Area

<i>Borden No.</i>	<i>Distance & Direction from Proposed Development</i>	<i>Site Type</i>	<i>Permit No. of Previous Visits</i>	<i>Site in Conflict (Y/N)</i>
No archaeological sites within a 5 km of the block.				

6.2. In-field Methodology

6.2.1. Subsurface Testing

☐	Subsurface test measurements are a minimum of 35 x 35 cm, excavated by shovel, screened through 6 mm mesh, and backfilled. Date Accessed: N/A
☐	Describe if other: N/A

6.2.2. Pedestrian Survey

Number of Crew Members:	Crews consisted of two members on 16/08/20 and 19/08/20 and three members on 18/08/20.
Crew Spacing and Visibility:	Crew members were spaced 10-15 m apart. Visibility ranged from 20-50 m throughout the block.
Other:	Crew members conducted transects which inspected surfaces for sites and areas of potential. The survey followed predicted archaeological potential (see Section 6.1 above), hydrological features, landforms, mapped block boundaries, and arbitrary compass bearings. Pedestrian transects are shown on Figures 2 and 3.

6.2.3. Site Recording

☐	CMTs were flagged and recorded. Describe: N/A
☐	Trail(s) recorded. Describe: N/A
☐	Other. Describe: N/A

6.3. In-field Observations

6.3.1. Hydrology & Associated Landforms

Stream C is a small draw located at the base of generally undulating terrain. Associated terrain exhibits a continuous gentle to moderate slope with no distinct features. There is no channel evident at the eastern extent of the stream, but is flowing further west where it is ~ 1 m wide and 10 cm deep.

Stream D is indistinguishable from surrounding terrain, which exhibits a continuous, steep west aspect slope (Photo 1).

Stream E is a wet, grassy, open draw with no stream bed (Photo 2). Surrounding terrain exhibits a gentle to steep north-northeast aspect slope.

Stream F is indistinguishable from the surrounding terrain, which exhibits a heavy northwest aspect slope (Photo 3).

Stream G is a 10 cm deep and 50-100 cm stream flowing to the south. Surrounding terrain is saturated and exhibits a continuous, moderate, south aspect slope.

Stream J is a braided stream with more than one channel (Photo 4). Surrounding terrain exhibits a continuous west aspect slope.

Stream L is dry and approximately 40 cm wide, with a continuous, steep, west aspect slope.

Stream M is at the centre of a wide valley flowing fast to the south. It is 60 cm wide and with a 10-20 cm deep rock bottom. The surrounding area has a continuous, moderate slope.

Wetland B is a grassy, low-lying, flat, saturated wetland with standing water. Terrain is generally sloping gently to moderately to the north-northeast (Photo 5).

Wetland C is a grassy, muddy area with standing water. Surrounding terrain exhibits a continuous, moderate northeast aspect slope (Photo 6).

The remainder of the streams associated with the development were not observed during the survey.

6.3.2. Topography

The terrain is generally well drained due to continuously sloping terrain, with the west side being less well drained than the rest of the block. An area of elevated undulating terrain runs roughly north-northeast/south-southwest through the block. There are rolling, forested topographic highs with no defined breaks in slope.

In the eastern half of the block, there is a continuous east aspect slope. The streams on the eastern side have carved much wider, deeper draws than those on the western side of the block. There is a more uneven continuous slope with no defined breaks.

6.3.3. Vegetation

The overstory and understory is largely homogenous throughout the block and consists of mature subalpine fir with some mature spruce.

Blueberry, huckleberry, rhododendron, grasses, sedge, gooseberry, pelt lichen, fireweed, currant, willow, mosses, arnica, five leafed bramble, bunchberry, queen's cup, brambleberry, thimbleberry, lady fern, and clasping twisted stalk were all observed in the understory. Near streams, horsetail, oak fern, devil's club, and false hellebore are also present.

6.3.4. In-field Assessed Archaeological Potential

The block and buffer area have been assessed as having low archaeological potential based on the sloping, undulating, and poorly drained terrain that was encountered during the assessment. The in-field assessment is largely consistent with the pre-field review, which predicted low potential throughout much of the block due to continuously sloping terrain and an absence of significant hydrological features.

High potential was predicted in the areas adjacent to Streams C, E, G, M, and L and Wetland C as TRIM contours suggested the presence of elevated breaks-in-slope overlooking these features; instead, crew members observed sloping, undulating, and featureless terrain throughout the development area.

Areas that were not traversed in-field but assessed as having low potential based on the pre-field review include the eastern and northern most portion of RAI20_02 and most of the assessment buffer. These areas were predicted to have low potential based on TRIM contour and VRI data, which indicates that the areas in question are sloping and have low potential for pre-1846 CMTs. In-field observations of nearby terrain were consistent with the desktop assessment.

No CMTs were encountered and no mature pine trees were observed. Potential for pre-1846 CMTs is considered to be low throughout the development area as a result.

6.4. Results

6.4.1. Subsurface Testing

No subsurface testing was conducted within the block.

6.4.2. Untested Areas of Potential

No untested areas of potential are present within the block.

6.4.3. Sites Not Protected by the HCA

No traditional use, post-1846, or modern sites were identified during the survey.

7. ARCHAEOLOGICAL SITE SUMMARY

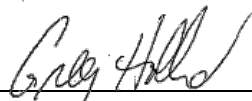
No archaeological sites were identified during the assessment.

8. DISCLOSURE STATEMENT & SIGNATURE

Although every attempt was made to locate and record all archaeological and cultural heritage features within the specified survey area, the possibility exists that materials may have been missed. If any unidentified archaeological or cultural heritage materials are encountered during development activities, work in the vicinity must stop and the Archaeology Branch, relevant First Nations, and/or the Ministry of Forests, Lands and Natural Resource Operations must be informed. These agencies will then provide direction as to an appropriate course of action to take regarding management of the materials.

It was not the intent of this survey to identify, evaluate, or comment on the presence or absence of aboriginal rights in the survey area. Completion of this survey does not "abrogate or derogate from Aboriginal treaty rights" (Heritage Conservation Act Sec. 8). The survey was conducted without prejudice to First Nations' treaty negotiations, Aboriginal rights, or Aboriginal title.

As permit holder, it is my opinion that the field work and reporting were completed in accordance with the Heritage Inspection Permit issued by the Archaeology Branch.



Greg Holland, Permit Holder

9. REFERENCES CITED

Marshall, Amanda and Tara Bond. 2004. *Fort St. James Forest District Archaeological Predictive Model Revision Project: Final Report*. Ecofor Consulting Ltd., Fort St. James, BC.

10. REPORT DISTRIBUTION

Contact	Affiliation
Damian Hind	Archaeology Branch
David Zurevinski	BCTS SNBA
Kelley Williams	Binche Whut'en
Robin Young, Clara Jack	Nak'azdli Whut'en

11. SHAPEFILES

☒ Study area shapefiles have been sent to archsiteform@gov.bc.ca

12. APPENDICES

- ☒ Appendix A – Photos (required)
- ☐ Appendix B – Subsurface Test Log (where applicable)
- ☐ Appendix C – Sites Not Protected by the HCA (where applicable)
- ☒ Appendix D – Figures (per Archaeology Branch Mapping and Spatial File Standards released November 1, 2017)
 - ☒ General Location Map (required)
 - ☒ Midrange Location Map (required)
 - ☒ Detailed Results Map (required)
 - ☐ Detailed Site Map (where applicable)

APPENDIX A – PHOTOS



Photo 1. Stream D, south view.



Photo 2. Stream E, northeast view.



Photo 3. Stream F, east view.



Photo 4. Stream J, east view.



Photo 5. Wetland B, north view.



Photo 6. Wetland C, northeast view.

APPENDIX D – FIGURES

The following maps are included in Appendix D:

Figure 1. General Location Map

Figures 2a/2b. Midrange Location Maps

Figure 3. Detailed Results Map

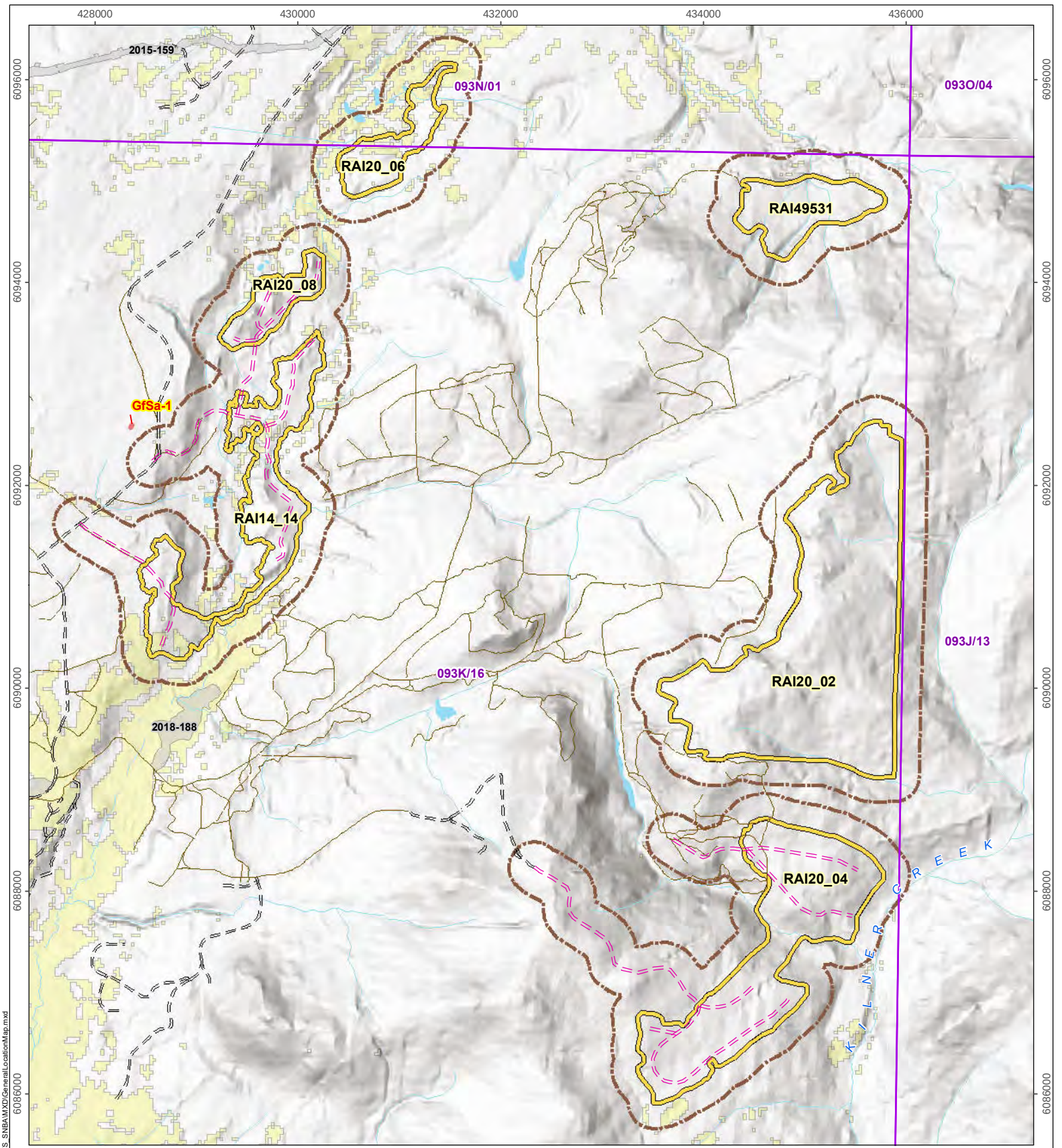
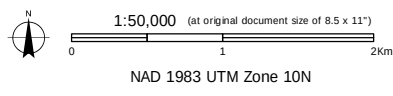


FIGURE 1
GENERAL LOCATION MAP



Disclaimer: This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The base data layers have been obtained from the British Columbia Geographic Warehouse (BCGW). Archaeological Site Boundaries were obtained by the Ministry of Forests, Lands and Natural Resources Operations Archaeology Branch's RAAD Sites. Service Layer Credits: Airbus, USGS, NOAA, NASA, CGIAR, NCEAS, NLS, OS, NMA, Geodatasystem, GSA, GSI and the GIS User Community

- Proposed Road
- Road - Resource
- Road - Other
- Stream
- Waterbody
- Proposed Block
- Assessment Buffer (250m)
- Previously Assessed Block
- High Archaeological Potential (FTSJ)
- Previously Recorded Archaeological Site
- NTS 50K GRID

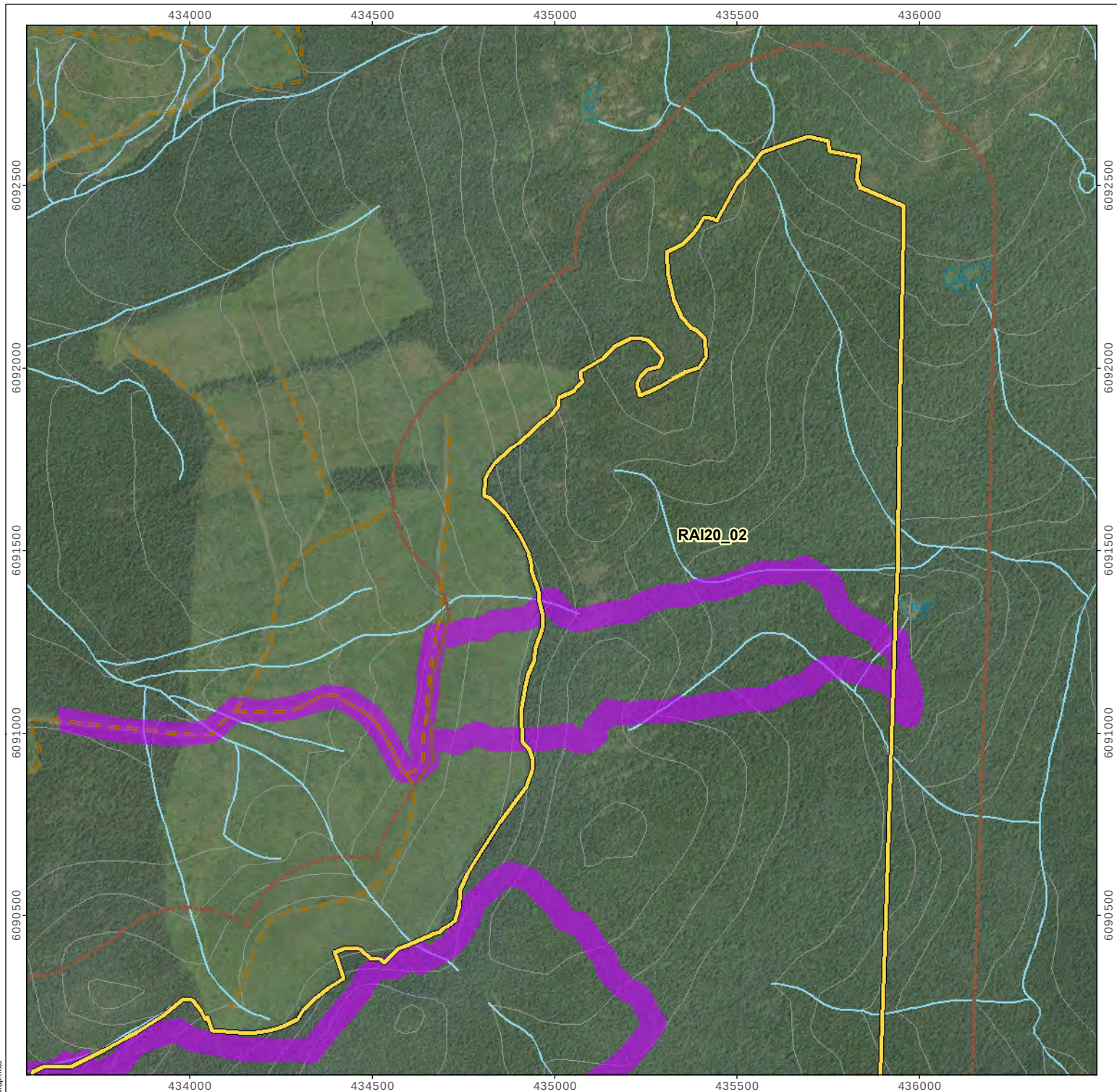


FIGURE 2a. MIDRANGE LOCATION MAP
RAI20_02 Map 1 of 2



August 24, 2020 (ED)



1:15,000 (at original document size of 8.5 x 11")
0 300 600
Meters

NAD 1983 UTM Zone 10N
NTS MAPSHEET: 93K/16, 93J/13
BCGS MAPSHEET: 93K.100, 93J.091

Permit Number: 2020-0176

EPN: 2020-1203-014

- Contour (100m)
- Contour (20m)
- Stream - Definite
- - - Stream - Indefinite
- Waterbody
- ▨ Wetland
- Proposed Block
- ▨ Assessment Buffer (250m)
- ▨ Survey Transect Area
- Proposed Road
- Road - Other



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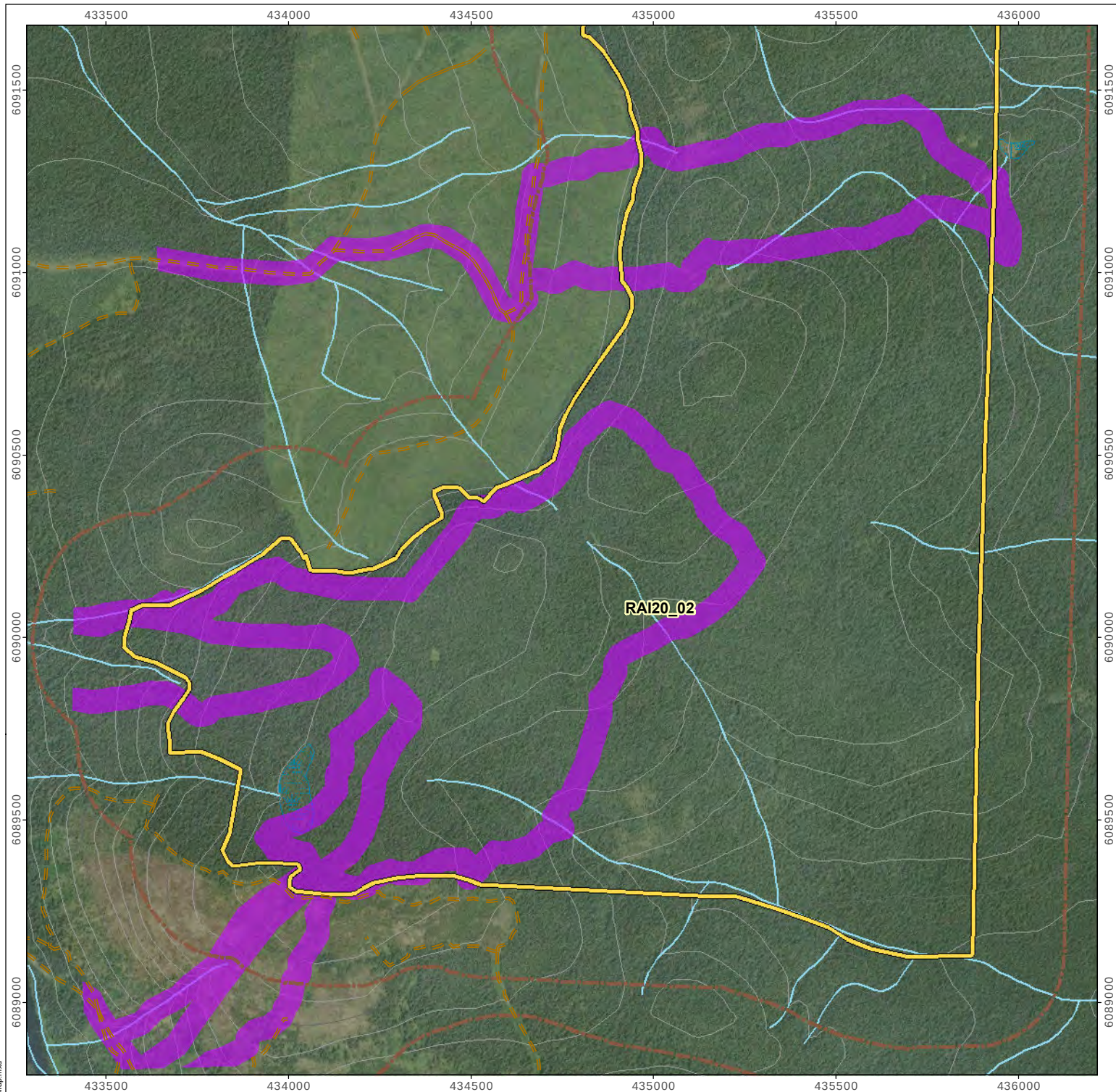


FIGURE 2b. MIDRANGE LOCATION MAP
RAI20_02 Map 2 of 2



1:15,000 (at original document size of 8.5 x 11")
0 300 600
Meters

NAD 1983 UTM Zone 10N
NTS MAPSHEET: 93K/16, 93J/13
BCGS MAPSHEET: 93K.100, 93J.091

Permit Number: 2020-0176

EPN: 2020-1203-014

- Contour (100m)
- Contour (20m)
- Stream - Definite
- - - Stream - Indefinite
- Waterbody
- ▨ Wetland
- Proposed Block
- ▤ Assessment Buffer (250m)
- ▨ Survey Transect Area
- == Proposed Road
- == Road - Other



Disclaimer: This product is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The base data layers have been obtained from the British Columbia Geographic Warehouse (BCGW). Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

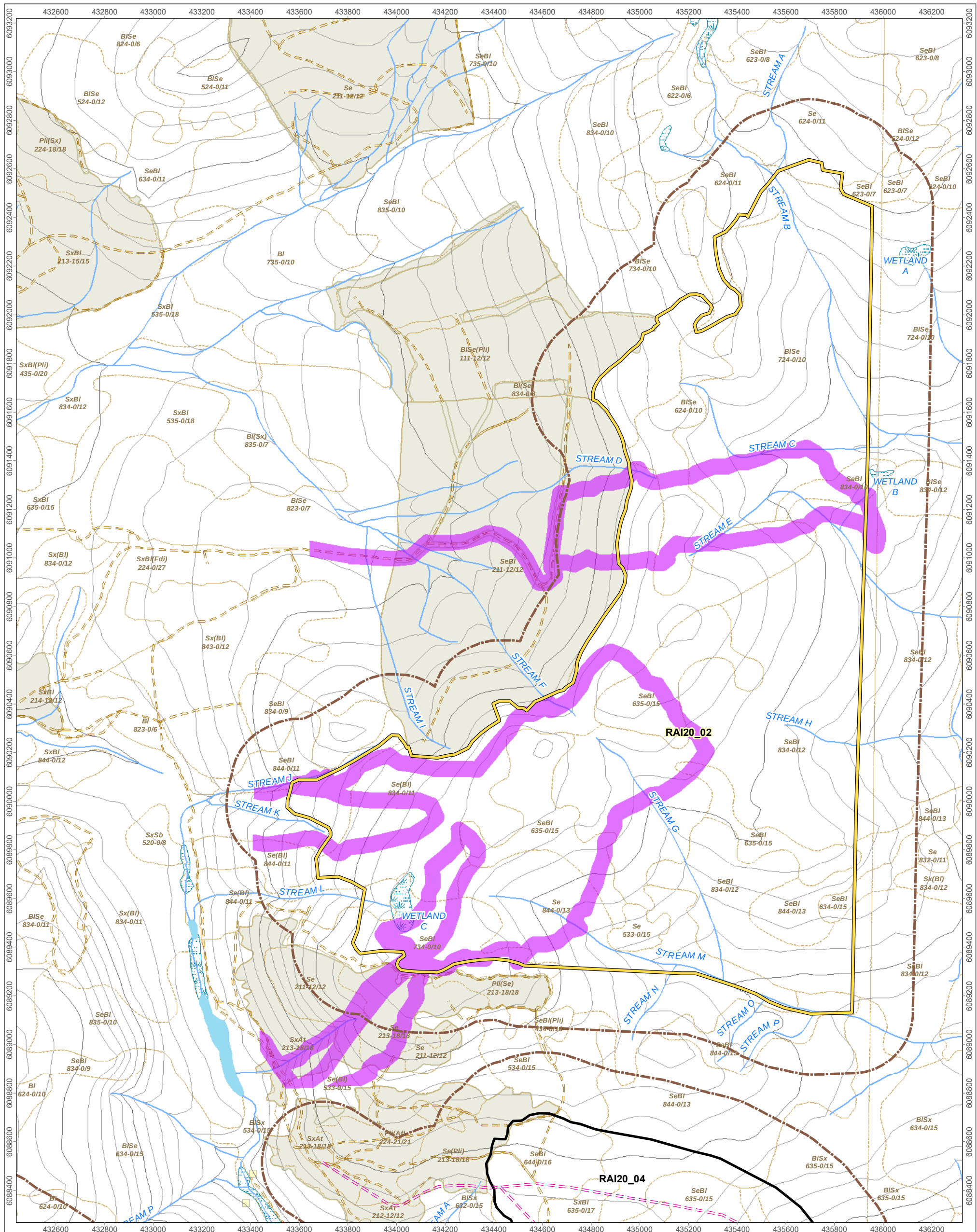
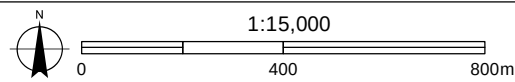


FIGURE 3
ARCHAEOLOGICAL RESULTS MAP
RAI20_02



- | | | | | | |
|--|-------------------|---|--------------------------|---|--------------------------------------|
| | Stream - Definite |  | Adjacent Block | | Road - Other |
|  | Contour (100m) |  | Proposed Block |  | Proposed Road |
|  | Contour (20m) |  | Survey Transect Area |  | Forest Cover (VRI) |
|  | Wetland |  | Assessment Buffer (250m) |  | Cutblock |
|  | Waterbody | | |  | High Archaeological Potential (FTSJ) |



NAD 1983 UTM Zone 10N
BCGS MAPSHEET:93K.100, 93J.091
NTS MAPSHEET: 93K/16, 93J/13

Block ID:	RAI20_02
Permit Number:	2020-0176
EPN:	2020-1203-014
Easting:	435146
Northing:	6090536
Area (Ha):	427.2
Culture Area:	Interior Plateau



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