

**BRITISH COLUMBIA
ARCHAEOLOGICAL IMPACT ASSESSMENT
INTERIM REPORT FORM**



1. REPORT TITLE

2020-0176-006, AIA of BCTS Stuart Nechako block AIR16_29.

2. MANAGEMENT SUMMARY

2.1. Protected HCA Sites
N/A
2.2. Brief Overview of Study
British Columbia Timber Sales Stuart Nechako Business Area (BCTS SNBA) requested an archaeological assessment within proposed forestry cut block AIR16_29. Ecofor conducted a detailed pre-field review, followed by an archaeological impact assessment (AIA) survey within the development. The survey focused primarily on areas that were identified during the pre-field review as having high archaeological potential, including the northeast portion of the block in association with numerous wetland and stream complexes, and Lake B. Survey was also conducted by Lake A and Stream A in the southwest portion of the block, which was predicted to have high potential.
2.3. Results
During the field assessment, one location was shovel tested, which was negative for cultural materials. The development has been assessed as having low archaeological potential due to the consistently sloping, poorly drained, hummocky terrain, the negative results of shovel testing, and the absence of terrain features suitable for temporary or permanent settlement.
2.4. Management Recommendations
No further archaeological work is recommended provided block boundaries do not change significantly.

3. ADMINISTRATIVE INFORMATION

3.1. Permit Holder:	Greg Holland	
3.2. Permit Holder Affiliation:	Ecofor Consulting 1315 Noranda Rd E Prince George, BC V2K 5R6	Phone: 250-960-1155 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):	Tristan Pedersen	
3.6. Interim Report Date (dd/mm/yy) & Version:	12/29/20, 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, AIR16_29 (158.6 ha.). The block boundaries were flagged at the time of assessment; therefore, the 250 m buffer zone was not assessed.
4.2. Location:	<p>Airline, Stuart Nechako Natural Resource District</p> <p>A point in the centre of AIR16_29 is located 3.6 km southwest of Glauvers Lake, 5.4 km southeast of Purvis Lake, and 9.2 km northwest of Takatoot Lake (see Figure 1).</p> <p>To access the blocks from the intersection of the Germansen Landing Road and Tachie Road near Fort St. James, turn left (northwest) onto Tachie Road. Continue for 40.5 km, then turn right (north) onto the Leo Creek FSR. Continue for 70.3 km then bear right onto the Driftwood FSR. Continue for 14.8 km then turn left (west) onto the Purvis FSR. Follow the road for 17 km then turn left (southeast) onto an unnamed road. Drive UTV for 700 m then bear left at the fork. In 1.8 km, keep left (east) at the fork. Continue for 2.7 km, at which point the block intersects with the road.</p> <p>UTM coordinates of block centre: NAD 83, Zone 10N, 348990 E, 6112771 N NTS Mapsheet (1:50,000): 93N/03 BCGS Mapsheet (1:20,000): 93N.014</p>

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>
05-07/10/20	Johnny Huynh (N)	Zebedee Kawei	Ashley Fuhr

6. ARCHAEOLOGICAL METHODS & RESULTS

6.1. Pre-field Methodology

☒	<i>Archaeological potential and sites are indicated on Figures 1 and 3</i>
☒	<p><i>An AOA and/or archaeological predictive model exists for the study area</i></p> <p><i>Details:</i> The Fort St. James Forest District Archaeological Predictive Model (Marshall and Bond 2004) indicates high potential in the northeastern half of the block in association with Streams A, G, and F, Lake B, Wetlands B, D, E, and the Wetland A and C complex.</p>
☐	<p><i>Previous field studies influenced this assessment</i></p> <p><i>Details:</i> N/A</p>
☒	<p><i>Review of Provincial Heritage Register (RAAD)</i></p> <p><i>Date Accessed:</i> 02/06/20</p>
☒	<p><i>Review of Vegetation Resources Inventory (VRI) Data</i></p> <p><i>Details:</i> VRI data indicates a mix of pine, hybrid spruce, and sub-alpine fir age class 7-8 (121-150 years) in the northeast portion of the block. A mix of hybrid spruce and sub-alpine fir age class 7 (121-140 years) are indicated in the southwest.</p>
☒	<p><i>Pre-field Potential Assessment</i></p> <p><i>Details:</i> Topographical analysis through Terrain Resources Information Management (TRIM) contour data and satellite imagery indicate that the block is located on continuously sloping terrain. High archaeological potential is predicted in the northeast portion of the block in association with numerous hydrological features. TRIM data indicate that Wetlands C and D, Streams I, J and H, and Lake B are surrounded by elevated terrain where breaks-in-slope may be present. High archaeological potential is</p>

	<p>also predicted in the southwest portion of the block in association with Lake A and Stream C where TRIM data indicate elevated breaks-in-slope overlooking these hydrological features may be present.</p> <p>Potential for pre-1846 culturally modified trees (CMTs) is predicted to be high in a small area in the northeast of the block between Wetlands C and D where VRI data indicate a tree cover which includes age class 8 (141-250 years) pine. Potential for pre-1846 CMTs is predicted to be low throughout the remainder of the block as VRI data indicate a tree cover which either lacks pine or is estimated as age class 7 (121-140 years).</p> <p>Archaeological potential is predicted to be low through the southwest portion as TRIM data indicate continuously sloping terrain and an absence of significant hydrological features. A review of satellite imagery additionally shows that terrain in this area is mountainous and slopes steeply from a topographic high.</p>
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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>
GgSh-7	3.5 km northeast	Precontact, Cache Pit	2007-140	N
GgSh-8	3.8 km northeast	Traditional Use, CMT	2007-140	N
GgSh-9	2.8 km northeast	Precontact, Subsurface Lithics	2007-140	N
GgSi-18	4 km northwest	Precontact, Subsurface Lithics	2017-137	N
GgSi-19	4.4 km northwest	Precontact, Subsurface Lithics	2017-137	N
GhSi-1	3 km north	Traditional Use, CMT	2000-120	N
GhSi-2	2.6 km north	Traditional Use, CMT	2016-124	N

6.2. In-field Methodology

6.2.1. Subsurface Testing

☒	<p>Subsurface test measurements are a minimum of 35 x 35 cm, excavated by shovel, screened through 6 mm mesh, and backfilled. Date Accessed: 07/10/20</p>
☐	Describe if other: N/A

6.2.2. Pedestrian Survey

Number of Crew Members:	The crew consisted of two people.
Crew Spacing and Visibility:	Crew members were spaced 5-20 m apart. Visibility ranged from 5-40 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, arbitrary compass bearings, and flagged block boundaries. Pedestrian transects are shown on Figures 2 and 3.

6.2.3. Site Recording

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

Describe: N/A

6.3. In-field Observations

6.3.1. Hydrology & Associated Landforms

Stream H is an ephemeral drainage with no defined streambed. Terrain in the area is poorly drained and hummocky. Immediately to the west there is a moderate, east facing slope that rises to a hummocky and poorly drained area (Photo 1).

Stream I is undefined in the west and associated terrain is poorly drained and low-lying, with moss covered boulders (Photo 2). In the east, the stream is ~80 cm wide and ~40 cm deep and flows into Lake B. Associated terrain is low-lying and poorly drained.

Stream G is undefined in the north. In the south, the stream is flowing and is 80 cm wide and 20 cm deep. The immediate terrain along the entire stream is low lying, poorly drained, hummocky, gently sloped with an east aspect slope, and contains the occasional standing pool of water.

Wetland A is avoided by flagged block boundaries. The immediate terrain is featureless, low-lying, poorly drained, and hummocky. There is an overall gentle slope with an east-southeast aspect.

Wetland B a grassy area lacking overstory and is poorly drained. The surrounding terrain consists of a moderate to steep slope that is rocky, and moss covered (Photo 3).

Wetland C is a grassy area with standing pools of water and is absent of an overstory.

Wetland E consists of standing pools of water between boulders covered with moss. The area is overgrown with alder. The surrounding terrain is also poorly drained. Stream A avoids the block boundary consistently but audibly runs through Wetland E further to the north.

Lake A is an open body of water. Surrounding terrain is hummocky with standing pools of water. The terrain gently slopes in the north then gradually increases to a moderate slope in the south along the east shore that borders the block boundary (Photo 4).

Lake B is an open body of water (Photo 5). AIR16_29-STL1 is a well drained, rocky knoll located on the west shore of the lake (Photo 6). The terrain on the west side consists of a rocky moderate to steep slope leading to the lakes edge. Terrain on the south and east sides are grassy wetlands.

Streams B, C, D, and E, and Wetland D are all located outside of flagged block boundaries or within wildlife tree patch areas (see Figure 3) and were therefore not assessed.

6.3.2. Topography

The terrain throughout the block is generally sloping, hummocky, and poorly drained. Several moss-covered rocky outcrops are scattered through the block. Apart from STL1, terrain in the block is generally poorly drained with no defined breaks or landforms.

6.3.3. Vegetation

In field observations are consistent with VRI data and indicate an understory of alder, devil's club, huckleberry, clasping twisted stalk, queen's cup, bunchberry, bramble berry, grasses, fireweed, horsetail, black goose berry, moss, reindeer lichen, cranberry, grasses, colt's foot, club moss, soap berry, kinnikinnick, false hellebore, and ostrich ferns.

6.3.4. In-field Assessed Archaeological Potential

The block has been assessed as having low archaeological potential based on the sloping, hummocky, and poorly drained terrain encountered during the assessment. Contrary to the pre-field review potential, the northeastern half of the block was assessed as low due to the poorly drained and sloping nature of the terrain and lack of any distinct topographical features other. STL1 is in an area that was modelled and predicted to have high archaeological potential but tested negative for subsurface lithics. No CMTs were encountered during the assessment. Therefore, the potential for pre-1846 CMTs is assessed to be low.

6.4. Results

6.4.1. Subsurface Testing

The following table describes the results of subsurface testing. See Figure 3 for all subsurface test locations (STLs). See Appendix B for subsurface testing logs and stratigraphy.

Table 3. Subsurface Testing Results

Subsurface Test Area	Description	Dimensions (L x W)	Subsurface Tests		
			Total	Positive	Negative
STL1	Rocky knoll overlooking Lake B (Photo 6).	40 x 6 m	24	0	24

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

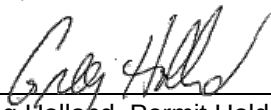
No archaeological sites were identified during the assessment.

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

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Natural Resource Dept.	Tl'azt'en First Nation
Debra Pinkston, Stephanie Rocheleau, Cody Ross, Nathan Prince, Eran Spence, LRO Reception	McLeod Lake Indian Band
Takla Nation Stewardship Portal	Takla Nation
Land Use, Tamara Dokkie	West Moberly First Nation
Chief Waylon John, Rob Diaz	Yekooche First Nation

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. Terrain around Stream H, view south



Photo 2. Stream I, view southwest



Photo 3, Wetland B, view west/southwest



Photo 4, Lake A, view south



Photo 5. Lake B, view north



Photo 6. AIR16_29-STL1, view northwest



Photo 7. AIR16_29-STI1, shovel test #16 stratigraphy

APPENDIX B – SUBSURFACE TEST LOGS

AIR16_29-STL1

Shovel Test #	Positive/Negative	Soil Stratigraphy	Cultural Material	UTM (NAD 83)	Photo #
16	Negative	0-0.05 m LFH; 0.05-0.10 m greyish sandy loam with 30% sub-angular pebble and 10% angular pebble inclusions; 0.10-0.25 m tan coarse sand with 40% sub-angular pebble and 10% sub-angular cobble inclusions; 0.25-0.35+ m greyish-brown silty coarse sand with 50% angular pebble and 10% sub-angular cobble inclusions.	None	10 U 0349926 E 6113448 N Test pits placed at 3 m spacing	9
1-15, 17-24	Negative	Same as #16	None		

APPENDIX C – SITES NOT PROTECTED BY THE HCA

- ☒ No sites were recorded.
- ☐ Post-1846 / traditional use sites were recorded.
- ☐ Modern sites were recorded.
- ☐ Ecological or biological sites were recorded.

APPENDIX D – FIGURES

The following maps are included in Appendix D:

- Figure 1. General Location Map
Figure 2. Midrange Location Map
Figure 3. Detailed Results Map

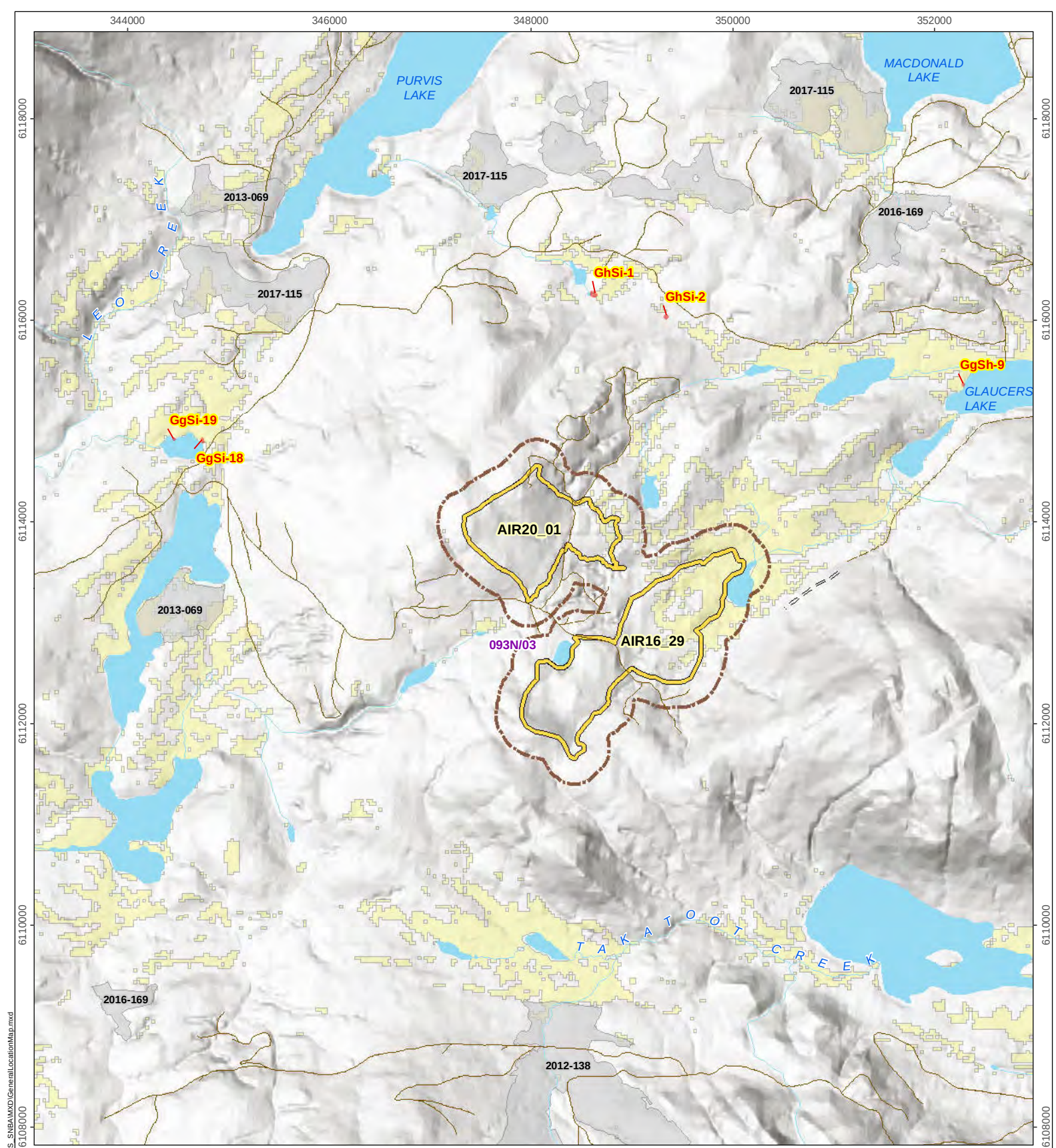
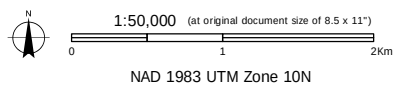


**FIGURE 1
GENERAL LOCATION MAP**



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

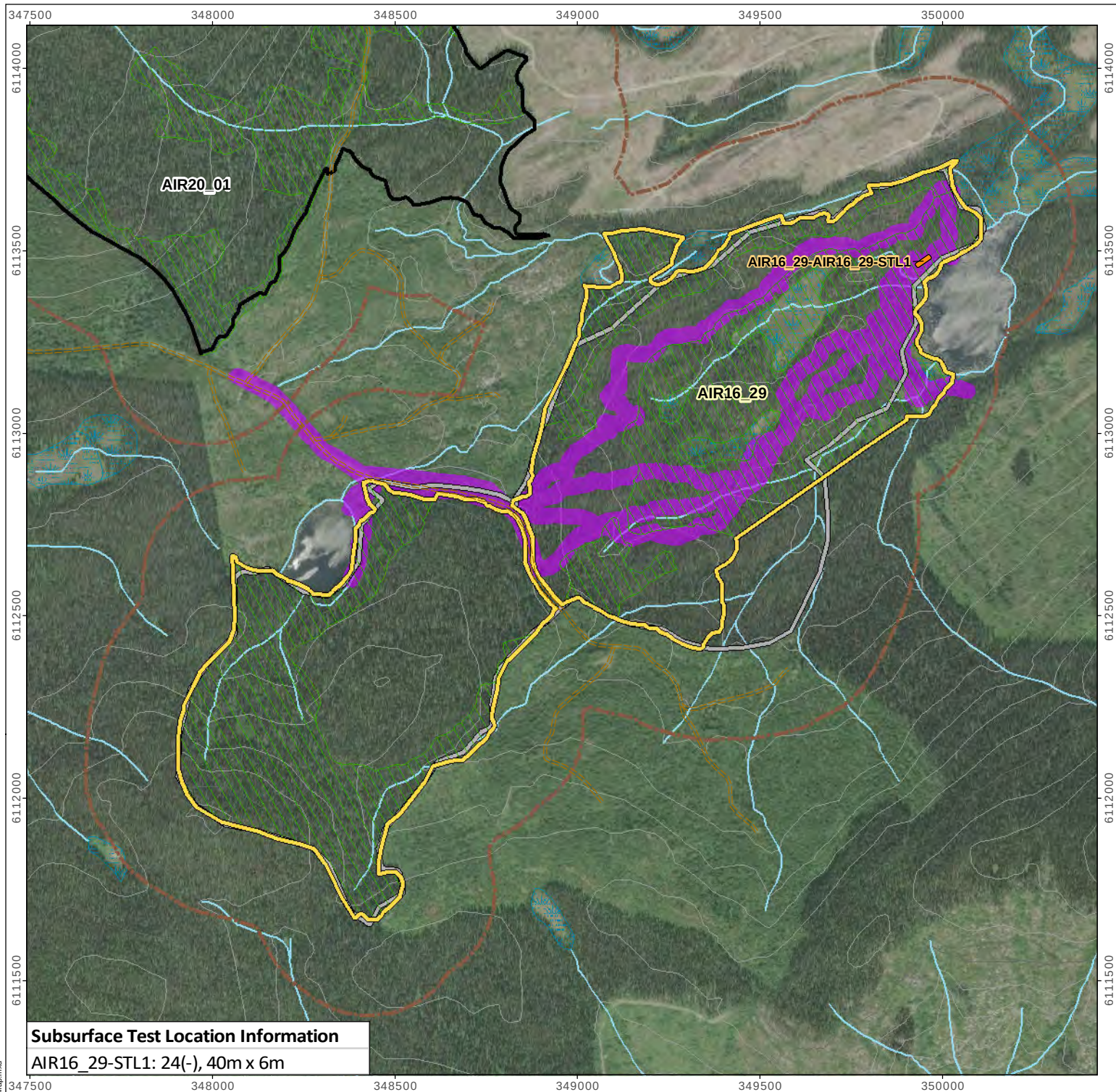


FIGURE 2. MIDRANGE LOCATION MAP
AIR16_29



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

NAD 1983 UTM Zone 10N
BCGS MAPSHEET: 93N.014
NTS MAPSHEET: 93N/03

Permit Number: 2020-0176

EPN: 2020-1203-002

- Contour (100m)
- Contour (20m)
- Stream - Definite
- - - Stream - Indefinite
- Waterbody
- Wetland
- Road - Other
- Adjacent Block
- Proposed Block
- Subsurface Test Location (STL)
- Assessment Buffer (250m)
- Previously Proposed Block
- Wildlife Tree Patch (WTP)
- Survey Transect Area

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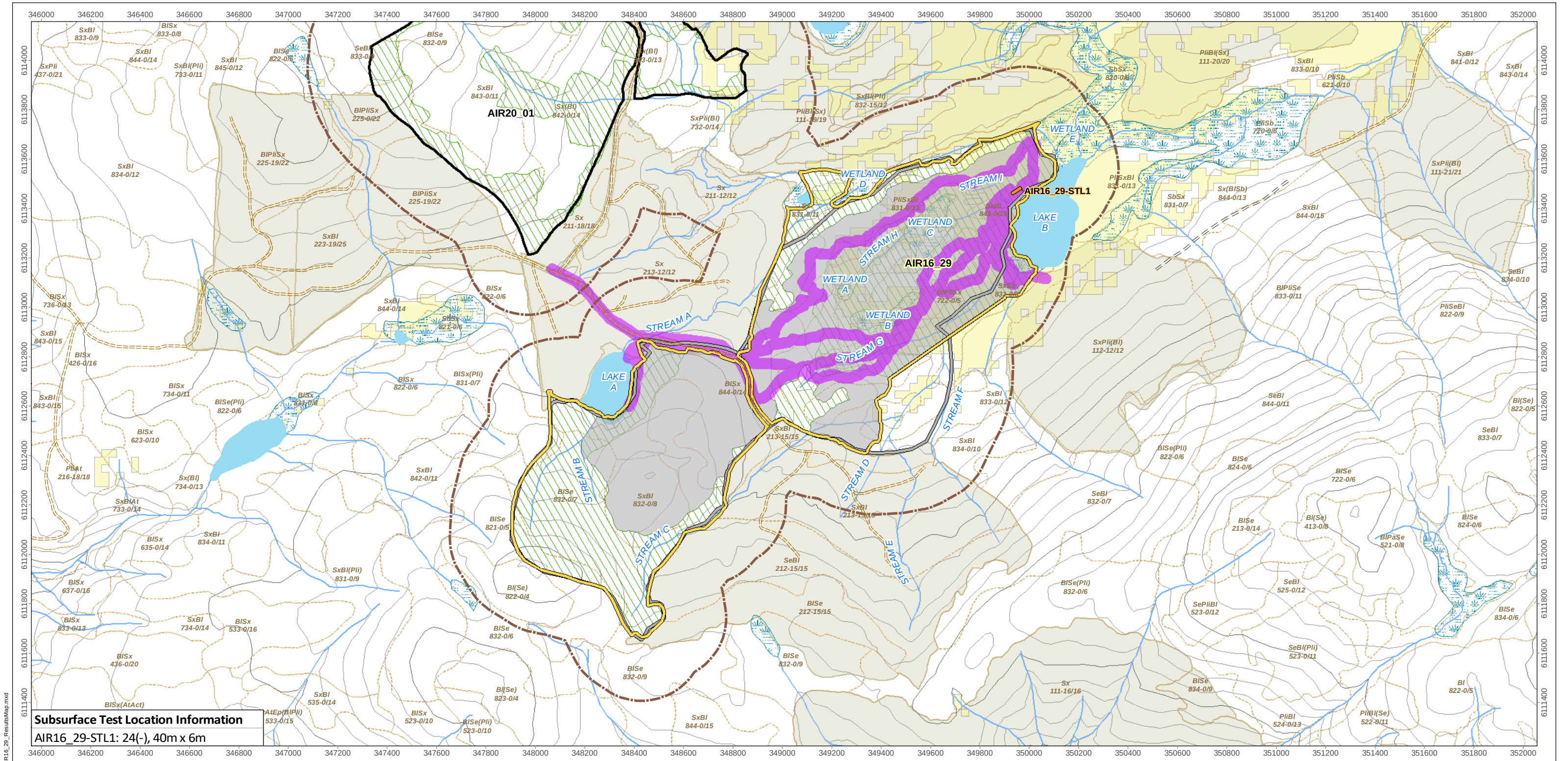
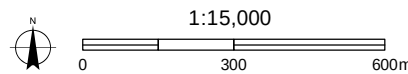


FIGURE 3
ARCHAEOLOGICAL RESULTS MAP
AIR16_29

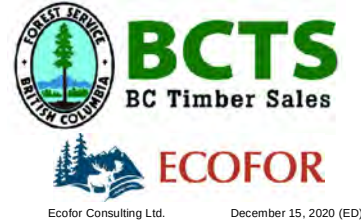


NAD 1983 UTM Zone 10N
BCGS MAPSHEET: 93N.014
NTS MAPSHEET: 93N/03



- | | | | |
|-------------------|---------------|--------------------------------|--------------------------------------|
| Stream - Definite | Resource Road | Assessment Buffer (250m) | Forest Cover (VRI) |
| Contour (100m) | Road - Other | Subsurface Test Location (STL) | High Archaeological Potential (FTSJ) |
| Contour (20m) | | Adjacent Block | Cutblock |
| Wetland | | Proposed Block | |
| Waterbody | | Previously Proposed Block | |
| | | Assessed Area | |
| | | Wildlife Tree Patch (WTP) | |
| | | Survey Transect Area | |

Block ID: AIR16_29
Permit Number: 2020-0176
EPN: 2020-1203-002
Easting: 348990
Northing: 6112771
Area (Ha): 158.6
Culture Area: Sub-Arctic Boreal Forest, Interior Plateau



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