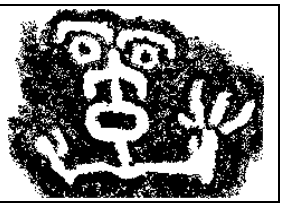
BRITISH COLUMBIA
ARCHAEOLOGICAL IMPACT ASSESSMENT
INTERIM REPORT FORM



1. REPORT TITLE

2020-0176-015, AIA of BCTS BAP20_02

2. MANAGEMENT SUMMARY

2.1. Protected HCA Sites
N/A
2.2. Brief Overview of Study
BC Timber Sales requested an archaeological assessment within proposed forestry cut block BAP20_02. Ecofor conducted a detailed pre-field review, followed by an archaeological impact assessment (AIA) survey within the development. The survey focused primarily on areas identified during the pre-field review as having high potential, including in the northern portion of the block in association with Stream A, the block centre in association with Streams B and F, in the south near Lake A, and a topographical high point in the east.
2.3. Results
During the field assessment, one location was shovel tested and was negative cultural materials. Three post-1846 CMT sites were located. The remainder of the development has been assessed as having low archaeological potential due to the consistently sloping and poorly drained terrain.
2.4. Management Recommendations
The post-1846 sites are not protected by the Heritage Conservation Act. 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:	1315 Noranda E Road, 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):	Cory Vickruck	
3.6. Interim Report Date (dd/mm/yy) & Version:	23/11/20, 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, BAP20_02 (116.3 ha) with a 250 m assessment buffer. The block was flagged at the time of assessment therefore the buffer was not surveyed.
4.2. Location:	Stuart Nechako Natural Resource District

	A point near the centre of BAP20_02 is located 2.3 km southwest of Takla Lake, 9.3 km northeast of Natowite Lake, and 19.5 km northeast of Tochcha Lake (see Figure 1). To access the block from the intersection of Highway 27 and Tachie Road, turn left (northwest) onto Tachie Road. Continue for 40 km then turn right (north) onto Leo Creek FSR. Continue for approximately 68.5 km and continue left (west) on the Leo Creek FSR, travel 25.6 km west then turn right (northwest) onto the Leo Kazchek FSR. Continue for 2.9 km then turn left (southwest) onto the Leo-Sakeniche FSR. Continue for 1.6 km over the Middle River Bridge, then keep to the right at the fork to continue on the Leo-Sakeniche FSR. Follow for 17 km then turn left (west) onto an unnamed road. Continue for 1.9 km then turn right (northwest). In 500 m, keep left at the fork and follow for another 1.2 km, at which point the block will be located 80 m southwest of the block. UTM coordinates of block centre: NAD 83, Zone 10N, 323988 E, 6112807 N NTS Mapsheet (1:50,000): 93N/04 BCGS Mapsheet (1:20,000): 93N.012

5. FIELD CREW

Table 1. Field Crew

Date (dd/mm/yy)	*Field Director (On site? Y/N)*	*Field Supervisor*	*Other Field Personnel*
02/09/20	Kari Carter (N)	Ariel McIntyre	Gwen Topacio, Chantelle Bird (Tl'azt'en First Nation)
03/09/20	Kari Carter (N)	Ariel McIntyre	Gwen Topacio, Chantelle Bird (Tl'azt'en First Nation)
04/09/20	Kari Carter (N)	Ariel McIntyre	Gwen Topacio, Chantelle Bird (Tl'azt'en First Nation)
16/10/20	Johnny Huynh (N)	Cory Vickruck	Tristan Pedersen

6. ARCHAEOLOGICAL METHODS & RESULTS

6.1. Pre-field Methodology

☒	*Archaeological potential and sites are indicated on Figures 1 and 3*
☒	*An AOA and/or archaeological predictive model exists for the study area* *Details:* The Fort St. James Forest District Archaeological Predictive Model (Marshall and Bond 2004) indicates high potential scattered in the north of the block in association with Streams A and B. The model indicates three additional small areas of high potential: one is located along the west boundary and the others are located in the southwest corner of the block.
☐	*Previous field studies influenced this assessment* *Details:* N/A
☒	*Review of Provincial Heritage Register (RAAD)* *Date Accessed:* 02/06/2020
☒	*Other* *Details:* Topographical analysis through Terrain Resources Information Management (TRIM) contour data and satellite imagery suggest the block is located on hilly terrain. High archaeological potential is predicted in the north of the block in association with Stream A as TRIM data indicates the stream is surrounded by elevated terrain exhibiting a well-defined change in slope. Archaeological potential is predicted along the south boundary and through the block centre in association with Streams B and F and Lake A where TRIM data suggest that breaks-in-slope may be present on the slightly elevated terrain overlooking these hydrological features. The east boundary near Stream C is also predicted to have high archaeological potential due to its location on top of a hill in proximity to Takla Lake.

	The southwest arm of the block is predicted to have low archaeological potential as TRIM data indicate a lack of significant hydrological features in the vicinity and continuously sloping terrain. Potential for pre-1846 CMTs is predicted to be low throughout the block as VRI data indicate pine to be absent from the tree cover.

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

Borden No.	*Distance & Direction from Proposed Development*	*Site Type*	*Permit No. of Previous Visits*	*Site in Conflict (Y/N)*
GgSk-1	4.2 km northeast	Precontact, Subsurface Lithics	1996-066	N
GgSk-2	3.8 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-3	3.6 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-4	3.4 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-5	3.5 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-6	3.3 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-7	3.4 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-8	3.4 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-9	3.5 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-10	3.6 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-11	3.7 km southwest	Traditional Use, Culturally Modified Tree	2001-194	N
GgSk-12	4 km south	Precontact, Subsurface Lithics	2011-076	N

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: 16/10/2020
☐	Describe if other: N/A

6.2.2. Pedestrian Survey

Number of Crew Members:	3
Crew Spacing and Visibility:	Crew members were spaced 5-30 m apart. Visibility ranged from 30-25 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

☒	CMTs were flagged and recorded. Describe: CMTs were recorded using Level II standards and flagged with black and white ribbon with 'CMT' text. Dendrochronological samples were obtained using an increment borer and counted to obtain the age of the CMTs (see Section 6.4.3 below).
☐	Trail(s) recorded. Describe: N/A

☐	Other. Describe: N/A

6.3. In-field Observations

6.3.1. Hydrology & Associated Landforms
Wetland A/Lake A: is a small lake surrounded by a wet land with an associated terrain that exhibits a continuous south aspect slope, except at STL1 which is a level terrace (see section 6.4.1 and Photo 1). Stream A: is a generally flat low-lying poorly drained area with pools of standing water (see Photo 2). Stream B: can not be seen from the flagged wildlife tree patch but is a low-lying poorly drained area with a moderate and continuous west aspect slope (see Photo 3). Streams C, D, and G-I: were not seen during the assessment because they are well back from flagged boundaries.
6.3.2. Topography
The southern portion of the block is sloping continuously with a moderate northeast aspect. The northern and western portions of the block are predominantly low-lying and poorly drained with no elevated landforms suitable for human habitation. However, one elevated area was identified and tested with negative results (see 6.4.1)
6.3.3. Vegetation
The overstory vegetation closely matches VRI data and consist of predominantly spruce and balsam with some pine. The understory was predominately devil's club, clubmoss, moss, oakfern, bunchberry, cranberry, huckleberry, false Solomon's seal, alder, willow, thimble berry, and soapberry. The understory consists of devil's club, clubmoss, oak fern, bunchberry, cranberry, huckleberry, false Solomon's seal, alder, willow, thimble berry and soapberry.
6.3.4. In-field Assessed Archaeological Potential
The block has been assessed as having low archaeological potential based on the sloping, undulating, and poorly-drained terrain that was encountered during the assessment. Contrary to the AOA model, potential surrounding Stream A, Stream B and around the Wetland A/Lake A complex was assessed as low due to the poorly-drained nature of the nearby terrain as well as the lack of any distinct topographical features except at STL1 where a level terrace can be found overlooking Lake A (see section 6.4.1) (see Photo 1). Although three post-1846 CMTs were encountered during the assessment, the potential for pre-1846 CMTs is assessed as low as none were identified.

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*
BAP20_02-STL1	Is a level terrace overlooking Lake A/Wetland A. The terrace is moderately drained and well defined with a south aspect slope. (see Photos 3 and 4)	25 x 5 m	20	0	20

6.4.2. Untested Areas of Potential

No untested areas are present within the block.

6.4.3. Sites Not Protected by the HCA

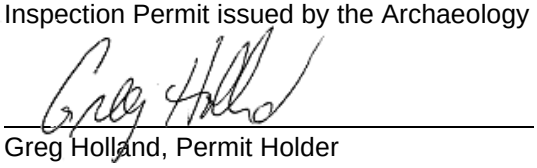
All traditional use, post-1846 and modern sites that are not protected by the Heritage Conservation Act are described in Appendix C.

7. 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

8. 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.

9. REPORT DISTRIBUTION

Contact	Affiliation
Damian Hind	Archaeology Branch
David Zurevinski	BCTS
Kelley Williams	Binche Whut'en
Takla Nation Stewardship Portal	Takla Nation
Natural Resource Dept	Tl'azt'en Nation

10. SHAPEFILES

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

11. 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 A/Lake A , view northwest

Photo 2. Stream B, view east

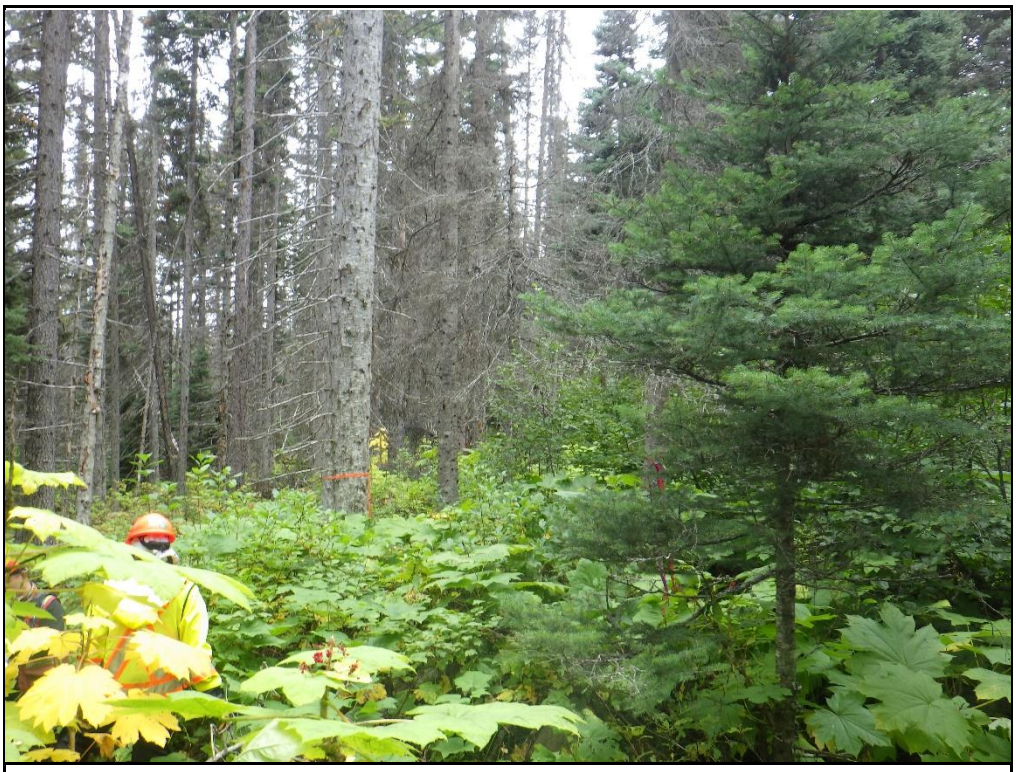


Photo 3. BAP20_02-STL1, view west.

Photo 4. BAP20_02-STL1, test pit #7 stratigraphy, view east wall.

Photo 5. AGM1, CMT1 view west

Photo 6. AGM2, CMT1, view southeast

Photo 7. AGM3, CMT1, view southwest.

APPENDIX B – SUBSURFACE TEST LOGS

STL1

Shovel Test #	Positive/ Negative	Soil Stratigraphy	Cultural Material	UTM (NAD 83)	Photo #
1	Negative	0-0.05 m LFH; 0.05-0.15 m grey sand with no inclusions 0.16-0.30 m dark red brown sand with 20-30% subangular pebble inclusions. (see Photo 4)	None	10 U 324311 E 6112282 N Test pits placed at 3 m spacing	4

APPENDIX C – SITES NOT PROTECTED BY THE HCA

☐ No sites were recorded.

☒ Post-1846 / traditional use sites were recorded.

Assigned Site Number:	AGM1
Site Type:	Post-1846 CMT
UTM (NAD 83):	Zone 10U, 323812 E, 6112215 N
Location Description:	Located in the southwest corner of the block (see Figure 3)
Dimensions:	1 m by 1 m, based on a single recorded CMT
Features:	There was 1 dead cambium stripped lodgepole pine recorded. DBH 35 cm.
Age:	One core was obtained, indicating a scar date of AD1903.
Photos:	5
Interpretation:	The site represents post-1846 use of the area for cambium collection.

Assigned Site Number:	AGM2
Site Type:	Post 1846 CMT
UTM (NAD 83):	Zone 10U, 323522 E, 6112119 N
Location Description:	Located in the southwest corner of the block (see Figure 3)
Dimensions:	1 m by 1 m, based on a single recorded CMT
Features:	There was 1 dead cambium stripped lodgepole pine recorded. DBH 38 cm.
Age:	One core was obtained, indicating a scar date of AD1898.
Photos:	6
Interpretation:	The site represents post-1846 use of the area for cambium collection.

Assigned Site Number:	AGM-3
Site Type:	Post-1846 CMTs
UTM (NAD 83):	Zone 10, 323713 E, 6112376 N
Location Description:	Located in the southwest corner of the block (see Figure 3)
Dimensions:	1 m by 1 m, based on a single recorded CMT
Features:	There was 1 dead cambium stripped lodgepole pine recorded. DBH 32 cm.
Age:	One core was obtained, indicating a scar date of AD1979.
Photos:	7
Interpretation:	The site represents post-1846 use of the area for cambium collection.

☐ Modern sites were recorded.

N/A

☐ Ecological or biological sites were recorded.

N/A

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

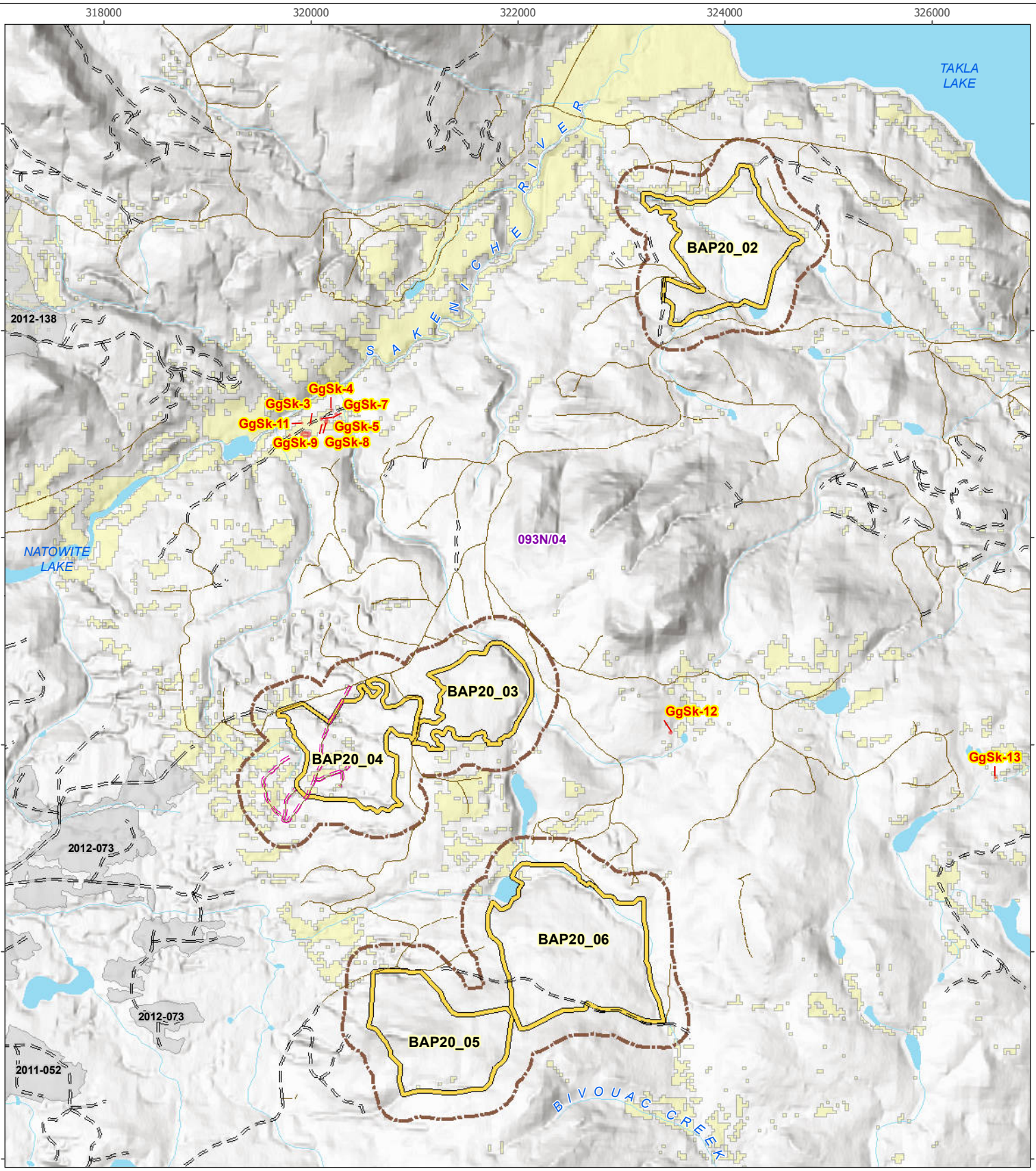


FIGURE 1
GENERAL LOCATION MAP

BCTS
BC Timber Sales

ECOFOR
natural and cultural resource consultants
Ecofor Consulting Ltd.
May 14, 2020 (JM)

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0 1 2Km

NAD 1983 UTM Zone 10N

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,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,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

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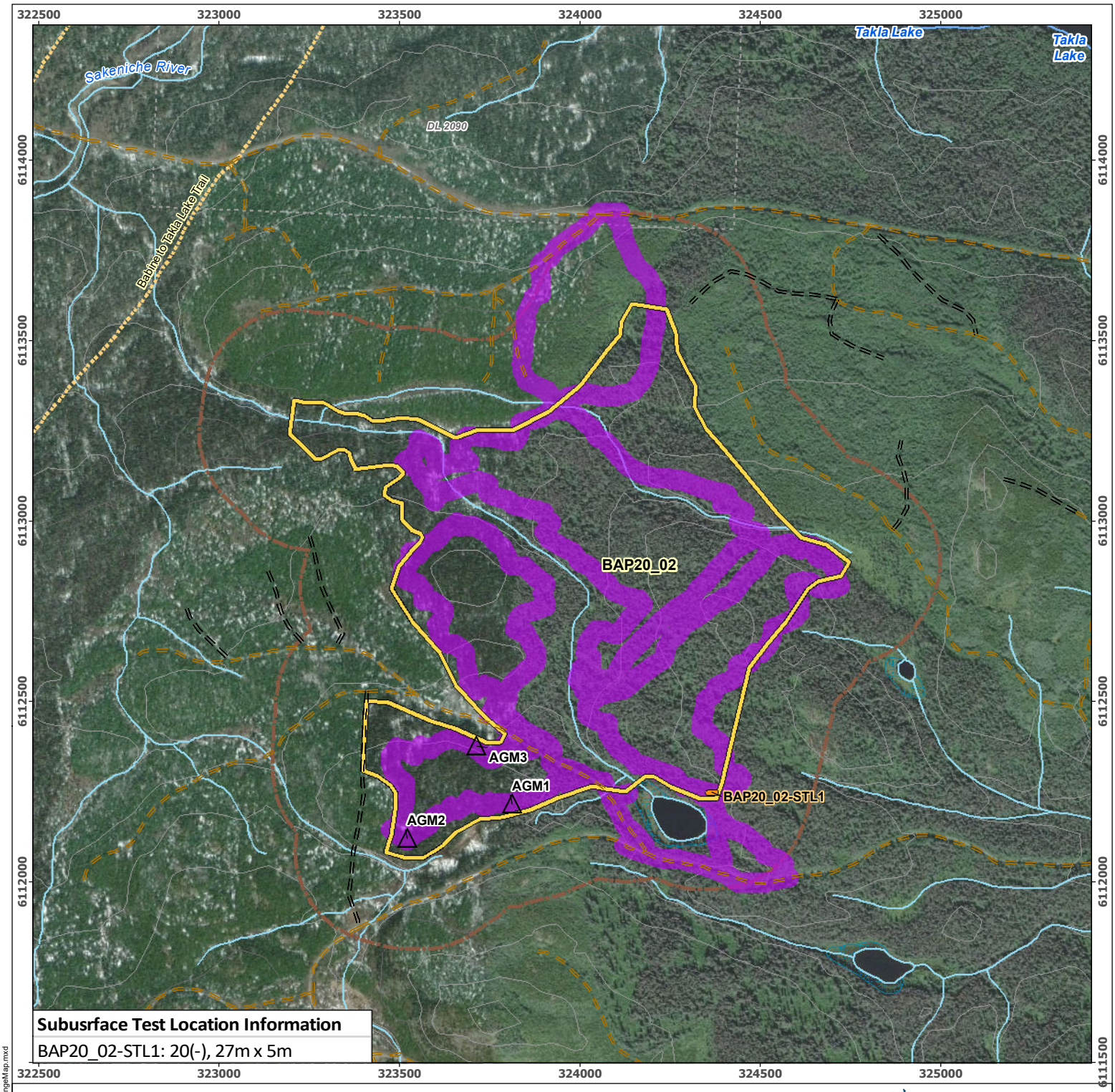

FIGURE 2. MIDRANGE LOCATION MAP

BAP20_02

BCTS BC Timber Sales

ECOFOR Ecofor Consulting Ltd.

November 18, 2020 (ED)

N

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0 300 600 Meters

NAD 1983 UTM Zone 10N
NTS MAPSHEET: 93N/04
BCGS MAPSHEET: 93N.012

Permit Number: 2020-0176

EPN: 2020-1203-006

- Contour (100m)
- Contour (20m)
- Stream - Definite
- Stream - Indefinite
- Waterbody
- Wetland
- Post-1846 CMT
- Proposed Block
- Subsurface Test Location (STL)
- Assessment Buffer (250m)
- Survey Transect Area
- Road - Resource
- Road - Other
- Trails - Estimated
- Surveyed Land Parcel

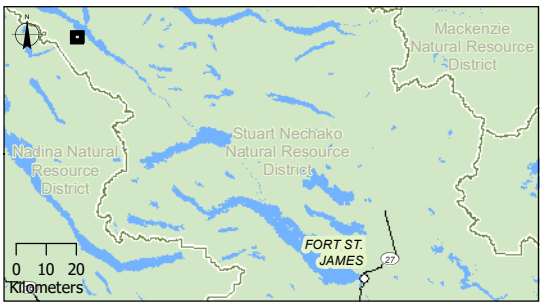

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FIGURE 3
ARCHAEOLOGICAL RESULTS MAP
BAP20_02

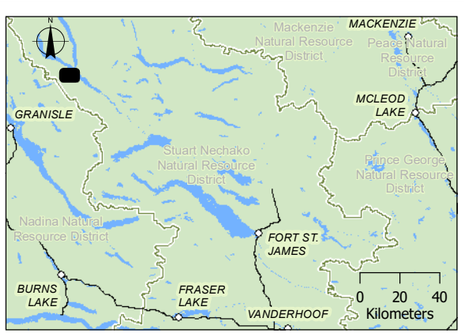
Subsurface Test Location Information

BAP20_02-STL1: 20(-), 27m x 5m

1:15,000

0 300 600m

NAD 1983 UTM Zone 10N
BCGS MAPSHEET: 93N.012
NTS MAPSHEET: 93N/04



- Contour (100m)
- Contour (20m)
- Stream - Definite
- Wetland
- Waterbody
- Post-1846 CMT
- Subsurface Test Location (STL)
- Assessment Buffer (250m)
- Proposed Block
- Survey Transect Area
- Assessed Area
- Road - Resource
- Road - Other
- Trails - Estimated
- Forest Cover (VRI)
- Recreation Site
- Surveyed Land Parcel
- Private Land
- High Archaeological Potential (FTSJ)
- Cutblock

Block ID:	BAP20_02
Permit Number:	2020-0176
EPN:	2020-1203-006
Easting:	323988
Northing:	6112807
Area (Ha):	116.3
Culture Area:	Interior Plateau

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