BRITISH COLUMBIA ARCHAEOLOGICAL IMPACT ASSESSMENT INTERIM REPORT FORM

1. REPORT TITLE

2019-0140-13158	*Archaeological Impact Assessment of Proposed British Columbia Timber Sales Cutblock SAL082.*

2. MANAGEMENT SUMMARY

2.1	*Protected HCA Sites:*	GfRw-9 (GfRw-13158-t1, lithics)
2.2	*Brief Overview of Study:*	
	ARCHER CRM Partnership (ARCHER) conducted an archaeological impact assessment (AIA) on the subject project at the request of David Zurevinski of British Columbia Timber Sales Stuart Nechako (BCTS Stuart Nechako). An in-office review of the project prior to field assessment identified areas of archaeological potential within the study area. Portions of Block SAL082 have undergone a previous AIA with negative results (ARCHER CRM Partnership 2012).	
2.3	*Results:*	
	A total of 119 shovel tests were completed at five test locations in the southwest portion of Block SAL082. Three shovel tests from one of the assessed locations (TL8) proved positive for archaeological material resulting in the identification of previously unrecorded site GfRw-9 (Figure 1). The site consists of basalt lithic debitage. The remaining shovel tests at all locations were negative. Four additional areas of archaeological potential, AOP4, AOP 5, AOP 6 & AOP7, were observed and recorded as illustrated in Figure 1 and described in Table 4 below. AOP5 and AOP7 are possibly situated outside block boundaries, however, it should be noted that block layout/flagging had not been completed at the time of survey. No subsurface testing was conducted at the AOPs.	
2.4	*Management Recommendations:*	
	Our visual inspection and subsurface testing program of the proposed BCTS Stuart Nechako cutblock SAL082 resulted in the identification of archaeological site GfRw-9 which is protected under the *Heritage Conservation Act* (HCA), and is located inside proposed project boundaries. Site-specific recommendations are provided below followed by general recommendations related to further development of the project area. **GfRw-9 recommendations presented in order of preference:** **1. Avoidance through project redesign.** The site is located within the proposed study area boundaries as assessed and will be impacted by timber harvest activities. Avoidance can be achieved by excluding the entire site areas from the impact area and leaving a minimum 30 m buffer in which no harvesting activities will occur around the boundary of the site area. **2. Avoidance through modified operations.** If harvest is to proceed up to the flagged site boundary of GeRw-8 trees within the flagged boundary of the site must be "stubbed." Stubbing will prevent blowdown and subsequent soil and/or feature disturbance. All potential blowdown trees within the site boundaries must be stubbed to no less than 1 m to prevent wind fall and to remain as a site indicator for future development activities (disking, planting, etc…). During stubbing no trees can be felled, yarded, or skidded within the site boundaries. The harvested trees must be lifted outside of the site area (cherry picked). This harvesting activity should be monitored by an approved individual who is fully aware of harvesting procedures in regard to protected archaeological sites. Re-planting within the site area would require further assessment prior to site preparation. **AOP4, AOP5, AOP6 & AOP7:** Identified areas of archaeological potential may be impacted by timber	

	harvest and related activities. Management recommendations are as follows: **1.** If AOPs are to be subject to timber harvest and/or other ground altering activities, additional work including shovel testing will be required. **2.** Alternatively, the AOPs may be avoided by excluding them from the timber harvest area and implementing a 30 m machine free buffer around each AOP perimeter. With respect to the remainder of the assessed project area, our visual and subsurface testing program did not result in the identification of additional archaeological or other cultural heritage remains. Based on the results of the present AIA archaeological remains are not anticipated in the remaining portions of the study area. As such, there are no further archaeological concerns for the proposed project footprint as illustrated in the attached Figure 1.

3. ADMINISTRATIVE INFORMATION

3.1	*Permit Holder:*	Frank Craig *F.Craig@archercrm.ca*	*3.2*	*Permit Holder Affiliation:*	ARCHER CRM Partnership T: 250-567-9496
3.3	*Proponent Contact:*	David Zurevinski *David.Zurevinski@gov.bc.ca*	*3.4*	*Proponent Affiliation:*	BCTS Stuart Nechako T: 250-567-6331
3.5	*Interim Report Author(s):*	Nicole Jackman			
3.6	*Interim Report Date & Version:*	January 10, 2020, V1			
3.7	*Notification of Work Date:*	July 19, 2019: • McLeod Lake Indian Band • Nak'azdli Whut'en			
3.8	*OGC Ref No.:*	N/A			

4. PROPOSED DEVELOPMENT

4.1	*Description:*	British Columbia Timber Sales Stuart Nechako proposed cutblock SAL082: • Logging block for timber harvest • 343.2 ha
4.2	*Location:*	The block is located east of the Salmon River and Salmon Lake at NAD 83 UTM Zone 10 UTM Coordinates (approximate center) 453576 E, 6082396 N.

5. FIELD CREW

Table 1. Field Crew

Date (dd/mm/yy)	*Field Director (on site? Y/N)*	*Field Supervisor*	*Other Field Personnel*
29/10/19	Marina Russel (Y)	N/A	Gregory Ketlo, Harold Alexis
30/10/19	Marina Russel (Y)	Gene Kristiansen	Harold Alexis, Gregory Ketlo
31/10/19	Marina Russel (Y)	N/A	Gene Kristiansen, Harold Alexis, Gregory Ketlo

6. ARCHAEOLOGICAL METHODS & RESULTS

6.1. Pre-field Methodology

☒ Archaeological potential and sites are indicated on the Study Area Map

☐ An AOA and /or archaeological predictive model exists for the study area

Details:

☒ Previous field studies influenced this assessment

Details: ARCHER CRM Partnership 2012

☒ Review of Provincial Heritage Register

Date Accessed: January 9, 2020

☒ Other

Details: Details: Prior to fieldwork, the study area was subject to an in-office map review, this included identifying areas of archaeological potential and determining the potential presence of protected Culturally Modified Trees (CMTs). Information used during the review included Remote Access to Archaeological Data (RAAD), orthographic photos, and records of previous archaeological assessments. Identified areas of potential which could be impacted by development activities were subject to field assessment by crew members on the ground. The terms and conditions guiding the overview and identification of archaeological potential are defined in the corresponding permit.

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

Borden No.	*Distance & Direction from the Proposed Development*	*Site Type*	*Permit No. of Previous Visits*	*Site in Conflict (Y/N)*
GfRw-9	Overlaps with block	Precontact; subsurface lithic	2019-140	Y
GfRw-7	1.2 km south	Precontact; subsurface lithic	2011-0076	N

6.2. In-field Methodology

☒ Subsurface test measurements are a minimum of 35 x 35 cm

Date Accessed: October 29-31, 2019

Where available, natural and anthropogenic soil exposures (eroded banks, tree throws, etc.) in the project footprint were visually examined for cultural remains. Shovel testing was conducted in assessed areas of high potential. The depths of the tests averaged around 25-36 cm depth below surface (dbs), at which point glacial sediments were encountered and the test was discontinued. All sediments from subsurface tests were screened through ¼" mesh.

CMTs in or adjacent to the subject project were sought given the presence of mature forest cover.

6.2.1	*Number of Crew Members:*	2-4	*6.2.2*	*Crew Spacing:*	15-20 m
6.2.3	*Other:*	Transects were spaced according to archaeological potential, forest density and ground surface visibility.			

6.3. In-field Observations

The study area is generally undulating with some terracing along the pond and streams. Ephemeral drainages with poorly defined margins were observed throughout, along with moderately well-defined terraces and breaks in slope along the southwest and southeast boundaries. Forest cover consists of lodgepole pine, aspen, mixed spruce and subalpine fir, with moderate blowdown. Shrubs and ground cover observed in the understory include willow, rose, alder, juniper, highbush cranberry, soapberry, kinnikinnick, and bunchberry.

The block boundary was not flagged at the time of survey although old flagging was noted in the block.

Fire scars were observed throughout the study area and moderate deadfall was present throughout. No other previous disturbances were noted.

6.4. Results

A total of 119 shovel tests were completed at five test locations at the south end of Block SAL082. Three shovel tests from one of the assessed locations (TL8) proved positive for archaeological material resulting in the identification of previously unrecorded site (Figure 1). The site consists of a basalt lithic debitage. The remaining shovel tests at all locations were negative (Table 3). Refer to *7. Archaeological Site Summary* below for detailed site description.

Four additional areas of archaeological potential, AOP4, AOP 5, AOP 6 & AOP7, were observed and recorded in the block as illustrated in Figure 1 and described in Table 4. No subsurface testing was conducted at the AOPs.

Table 3. Assessment Results

Subsurface Test Area	*Description**	*Stratigraphy*	*Dimensions (m) (L x W)*	*Subsurface Tests*		
				Total	*Positive*	*Negative*
TL1	A flat point along a west-facing terrace overlooking a stream complex 15 m to the west. Judgementally placed tests produced negative results.	Stratigraphy is uniform throughout: 0-3 cm dbs duff; 3-21 cm medium brown silty sand 15% gravel; 21-34 cm medium brown silty sand 25% gravel & cobbles.	10 x 5 m	10	0	10
TL2	A break in south-facing slope toward a stream & wetland complex 45 m to the south. Judgementally placed tests produced negative results.	Stratigraphy is uniform throughout: 0-8 cm dbs duff; 8-17 cm grey silty sand; 17-27 cm orange brown silty sand 10% gravel; 27-36 cm light brown silty sand 30% pebbles.	10 x 4 m	10	0	10
TL3	A flat point along a south-facing terrace overlooking a stream & wetland complex 10 m to the south. Judgementally placed tests produced negative results.	Stratigraphy is uniform throughout: 0-3 cm dbs duff; 3-4 cm burnt soil and charcoal; 4-5 cm grey silty sand; 5-16 cm orange brown silty sand; 16-25 cm light brown silty sand 20% cobbles.	8 x 5 m	10	0	10
TL8	A 3 m high wide,	Stratigraphy is	68 x 20 m	65	3	62

Subsurface Test Area	*Description**	*Stratigraphy*	*Dimensions (m) (L x W)*	*Subsurface Tests*		
				Total	*Positive*	*Negative*
GfRw-9	north-south oriented, rounded knoll overlooking a stream & wetland complex 15 m to the south. Systematically & judgementally placed tests produced three positive tests and site GfRw-9 was recorded.	generally uniform throughout. See Section 7 for detailed test location and site stratigraphy.				
TL9	A flat, south-facing terrace overlooking a stream & wetland complex 15 m to the south. Systematic tests placed in two lines 3 m apart produced negative results.	Stratigraphy is uniform throughout: 0-5 cm dbs duff; 5-6 cm heavy black organic; 6-9 cm red/brown silt 5% gravel; 9-25 cm orange/brown silt 5% gravel; 25-30 cm grey/brown silty clay.	21 x 6 m	24	0	24

Table 4. Locations identified as having archaeological potential (not subject to impact assessment)

AOP ID#	*Orientation*	*Description*	*Dimensions (m) (L x W)*
AOP4	N/S	A 3 m high knoll located within the block was marked at either end with purple flagging tape. No shovel testing was conducted at the AOP.	30 x 10 m
AOP5	N/S	A 1 m high knoll estimated as 20 m southeast of the block was marked at either end with purple flagging tape. No shovel testing was conducted at the AOP.	10 x 6 m
AOP6	N/S	A 4 m high point located within the block was marked at either end with purple flagging tape. No shovel testing was conducted at the AOP.	6 x 6 m
AOP7	NE-SW	A 3 m high terrace estimated as 15 m east of the block was marked at either end with purple flagging tape. No shovel testing was conducted at the AOP.	30 x 15 m

7. ARCHAEOLOGICAL SITE SUMMARY

7.A	*Borden No.*	GfRw-9	*7.A1*	*New/Revisited:*	New Dimensions: 20 m N-S; 13 m E-W
7.A2	*Site Type:*		Precontact – Cultural Material – Subsurface – Lithic		
7.A3	*Impact Assessment:*		The site is situated on a 3 m high wide, north-south oriented, rounded knoll overlooking a stream & wetland complex to the south (Figure 3). A total of 65 shovel tests were completed at the location, three of which proved positive for archaeological materials, and 14 of which are inside the flagged site boundary. Three grey basalt tertiary flakes were recovered @ 1-15 cm dbs. The site was demarcated with yellow ARCHER “No Work Zone” flagging.		

		ST1 Stratigraphy 0-4 cm dbs duff/loose brown littermat; 4-15 cm red/brown silt [cultural]; 15-35 cm grey silty clay. *ST3 Stratigraphy* 0-9 cm dbs duff/loose brown littermat; 9-15 cm red/brown silt [cultural]; 15-32 cm grey silty clay. The site is currently in good condition with minimal damage from blowdown and archaeological investigation.
7.A4	*Management Recommendations:*	Avoidance through project redesign; avoidance through modified operations; mitigation through further work.
7.A5	*Significance Evaluation:*	**Scientific Significance:** Low - The site is a low density subsurface lithic site. No diagnostic artifacts, cultural stratigraphy, or faunal material was identified. **Ethnic Significance:** High - The relevant First Nations rate all archaeological sites in their traditional territories as high. **Public Significance**: Low - Site location is difficult to access and would hold little interest for the general public.

8. DISCLOSURE STATEMENT & SIGNATURE

Project footprint boundaries illustrated on the attached map(s) indicate those areas subject to the archaeological assessment described in this report, unless otherwise noted. If future or final construction and development plans differ from those presented here, the results of this assessment may not be applicable in part or in whole.

To address the prospect of unanticipated archaeological remains being discovered, it is recommended that the proponent inform its employees and contractors of this possibility. If archaeological materials or other heritage remains are uncovered during construction, work in the area of the find must immediately cease and the Archaeology Branch and/or ARCHER informed. It is recommended that the proponent also promptly inform the relevant First Nations concerning any unanticipated archaeological findings.

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

It is my opinion that the reported fieldwork and this corresponding report were completed in agreement with the requirements of the relevant Heritage Inspection Permit issued by the Archaeology Branch. I concur that the above information is true given available information.

Sincerely,

ORIGINAL DOCUMENT SIGNED

Nicole Jackman, *M.A., RPCA*
Field Director, on behalf of,

Frank Craig, *B.A., RPCA*
Permit holder

9. REFERENCES CITED

ARCHER CRM Partnership
2012 *Archaeological Impact Assessment of Proposed British Columbia Timber Sales Cutblock SAL082*. HCA Permit 2011-0076. ARCHER CRM Partnership file 9608 Submitted to BCTS Stuart Nechako. Copies on file at the Archaeology Branch, Victoria, BC.

Subject Report Citation:

ARCHER CRM Partnership
2019 *Archaeological Impact Assessment of Proposed British Columbia Timber Sales Cutblock SAL082*. HCA Permit 2019-0140. ARCHER CRM Partnership file 13158 Submitted to BCTS Stuart Nechako. Copies on file at the Archaeology Branch, Victoria, BC.

10. REPORT DISTRIBUTION

Contact	*Affiliation*
David Zurevinski 250-567-6331 *David.Zurevinski@gov.bc.ca*	British Columbia Timber Sales Stuart Nechako 1560 BC-16, Vanderhoof, BC, V0J 3A1
Damian Hind 250-953-3334 Damian.Hind@gov.bc.ca	Archaeology Branch 1250 Quadra St, Victoria, BC V8W 2K7

11. SHAPE FILES

☒ Study area shape files have been sent to archsiteform@gov.bc.ca Study area shapefiles will be submitted on the anniversary date of the Permit.

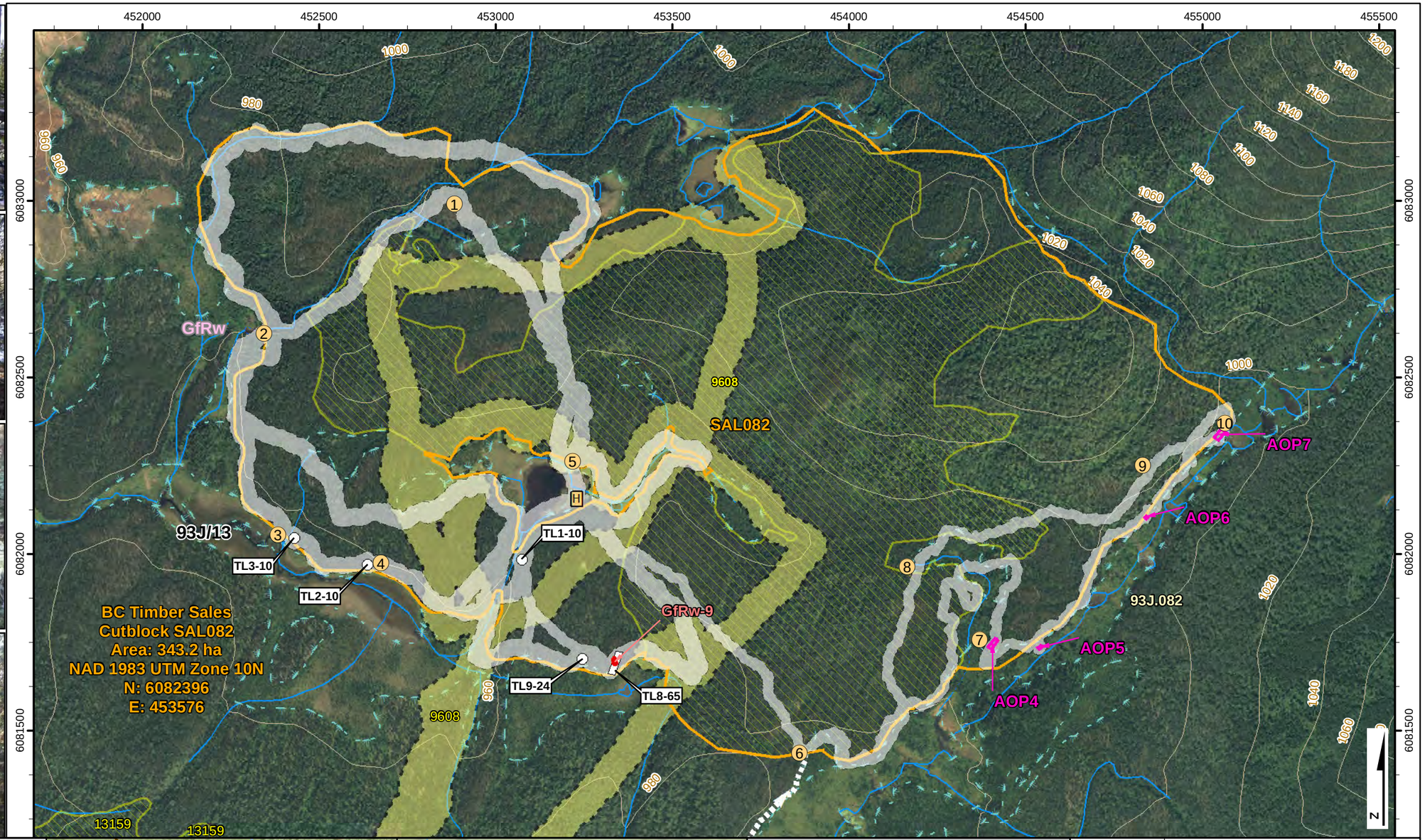
12. APPENDICES

Required:

☒ General Area Map (Figure 1)
☒ Study Area Map (Figure 1)
☒ Photo Plate(s) (Figures 1, 2 & 4)

If Applicable:

☒ Detailed Development Map (Figure 1)
☐ Subsurface Test Log
☒ Site Forms, Site Maps and Related Documents (Figure 3; Appendix 1 - artifact table & siteform)
☐ Other details:



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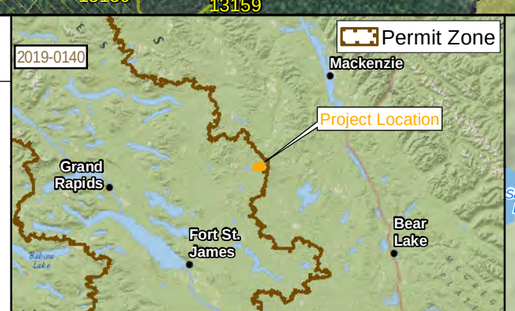
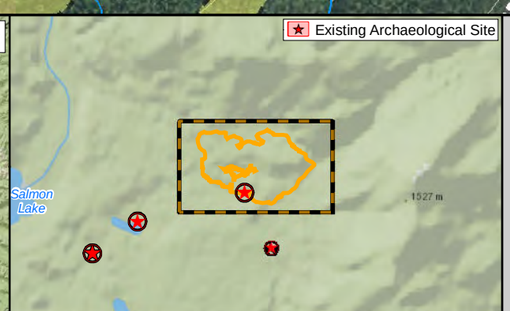
Archaeological Impact Assessment

BC Timber Sales
Cutblock SAL082
Detailed Results Map

Figure: 1 **Page:** 8





- Existing Archaeological Site (location verified)
- Helicopter Pad
- Subsurface Testing
- Archer Access
- Archer Survey Area
- Archer Surveyed Area Previous Years
- Study Area
- Archaeological Potential - Verified
- Archer Previous Project
- Water Body
- Intermittant Water Body
- Wetland
- Contour 20 m
- Photo Location
- BCGS Mapsheet
- Borden Grid (archaeology)
- NTS Mapsheet

Archer Project:	13158
Proponent:	BC Timber Sales
HCA Permit:	2019-0140 (Sec. 14)
OGC AMS AA#:	N/A
Surveyor's File:	N/A

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0 125 250 500 Meters 1:12,000

Version	Detail	Reviewed by:	Date
0	Original		10-Jan-2020

Basemap: Service Layer Credits: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

NAD 1983 UTM Zone 10N; Meters

DRM - o.leblanc - 10-Jan-2020

View NE

View NW

View S

View W

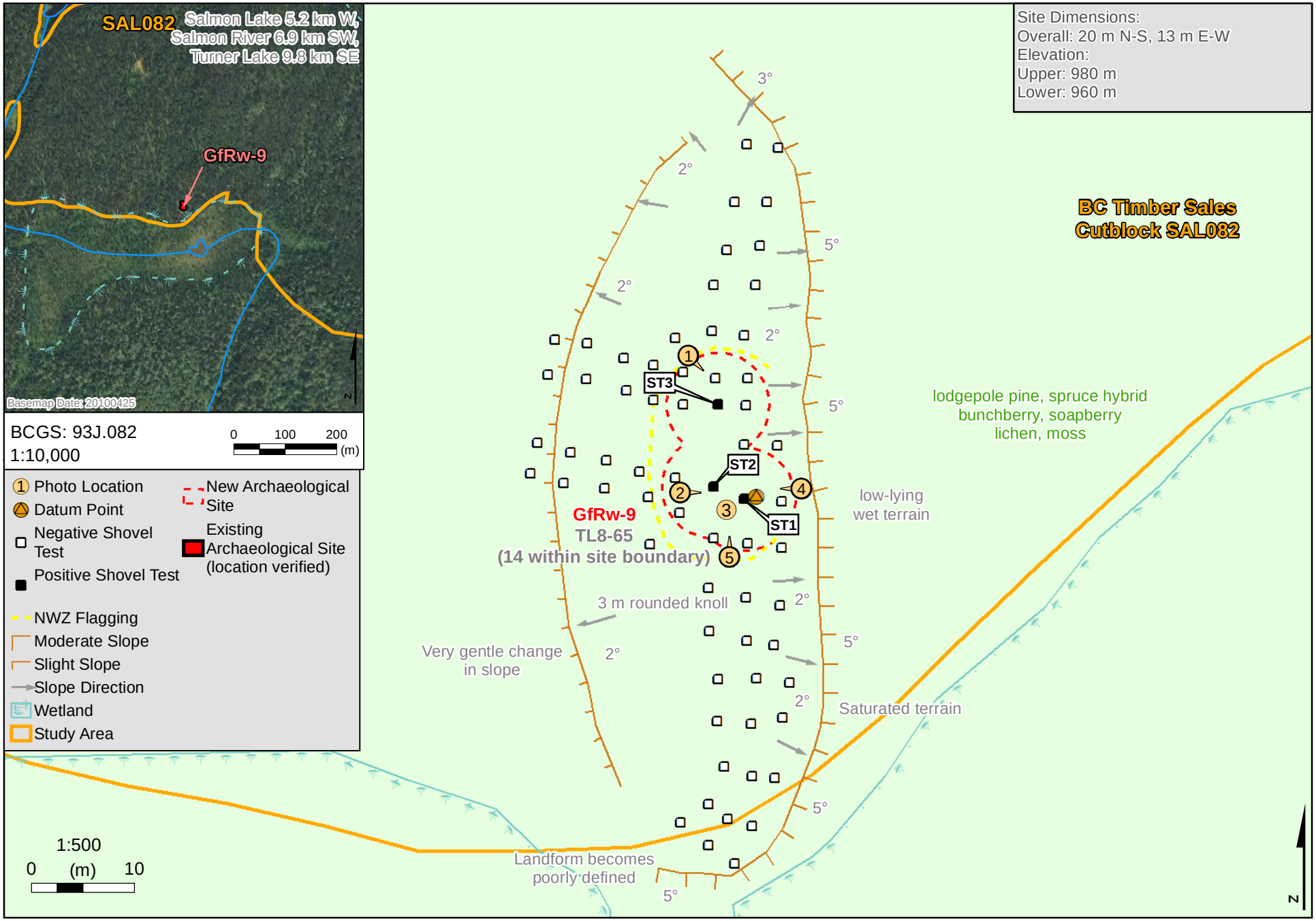
ViewW

View NE

See Figure 1 for photo locations.

ARCHER 13158	***Figure:*** 2	**Photo Plate:** BC Timber Sales - Cutblock SAL082	***HCA Permit*** 2019-0140	***Date*** 2019-11-21	9

PP - o.leblanc, November 21, 2019



ARCHER	Figure No.	Archaeological Site #'s: Temp/Borden	HCA Permit	Project no.	Fieldwork Date of Completion	Datum Point NAD 1983 UTM Zone 10N	10
	3	GfRw-13158-t1/GfRw-9	2019-0140	13158	31/10/2019	E: 453337, N: 6081692	

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

DSM - o.leblanc, Date Saved: 10-Jan-2020 3:45:26 PM

1 View across site to wetland

2 View from ST2 to edge and wetland

3 View of site with flagging

4 View from base of slope of site area

5 View of whole site

6 Artifact - Basalt debitage flake, tertiary

See detailed sitemap for photo locations.

ARCHER 13158	***Figure:*** 4	Archaeological Site GfRw-13158-t1/GfRw-9 Photos	**HCA Permit #:** 2019-0140	**Fieldwork** *Date of Completion* 31/10/2019	11

PP - o.leblanc, January 10, 2020

Provincial Catalogue #	Catalogue	Artifact Category	ArtifactType	Weightg	Color	Material	Opacity	Pattern	Location	#	DBScm	Count	Cataloguer
Prov#0001	7780	Debitage	Flake, Tertiary	0.10	Grey	Basalt	Opaque	Solid	Test Pit	1	4-8	1	NJACKMAN
Prov#0002	7781	Debitage	Flake, Tertiary	0.10	Grey	Basalt	Opaque	Solid	Test Pit	2	4-15	1	NJACKMAN
Prov#0003	7782	Debitage	Flake, Tertiary	0.10	Grey	Basalt	Opaque	Solid	Test Pit	3	10-15	1	NJACKMAN

British Columbia Site Inventory Form

Borden Number: GfRw-9

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
GfRw-13158-t1		Russell, Marina	31/Oct/2019

Map Reference:

GIS Populated					Historic Source				
Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
54 52'49"	-123 43'38"	453335	6081696	10			453337	6081692	10

Map Sheet Number	Spatial Accuracy
93J/13	GPS
93J.082	GPS

Accuracy Remarks

2019-140: Site location, shape and size digitized using shapefile. Location matches GIS coordinates, size/shape match site form dimensions.

Site Location:

Description	Site Access
2019-140: The site is 5.2 km east of Salmon Lake, 6.9 km northeast of Salmon River, and 9.8 km northwest of Turner Lake.	2019-140: From Mackenzie travel south on Highway 39S for 28.9 km. Turn west onto Highway 97S and proceed 16.4 km. Turn west onto Carp Lake Road and proceed 31.2 km. Continue southwest onto McLeod Tsilcoh Road for 31.9 km. Turn north onto logging road and follow ~730 m to northwest (keep right at "Y" in road). Turn east onto logging road and follow ~ 1.3 km. The site can be accessed on foot ~ 1.3 km to north at provided coordinates. Site location accessed during current assessment via helicopter.

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
20 N-S	13 E-W		2019-140: Site dimensions based on observed location of three positive subsurface tests and a 5 m buffer. The site was demarcated with yellow ARCHER “No Work Zone” flagging.

British Columbia Site Inventory Form

Borden Number: GfRw-9

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
960-980	-19-4016	2019-140: Elevation derived from 1:20 000 TRIM contour data.

Biogeography

Type	Name	Description
Minor Drainage		2019-140: Stream & wetland complex immediately south of knoll.
GIS Drainage	SALMON RIVER	
Micro Topography		2019-140: Site is situated on a 3 m high wide, north-south oriented, rounded knoll.
GIS EcoRegion	Fraser Basin	
GIS VegetationZone	SBSmk1	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS Municipalities		Fraser-Fort George, Subd. A	
GIS LandDistricts		Cariboo District	
Provincial	Forestry	2019-140: BCTS Stuart Nechako.	2019-140: Cutblock SAL082.
GIS RegionalDistrict		Fraser-Fort George	

Site Typology:

Class	Type	Sub Type	Descriptor
PRECONTACT	Cultural Material	Subsurface	Lithics

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
Feature Remarks										

Cultural Material :

Type	Status	Repository	Date
Artifact	Collected	Exploration Place	31/Oct/2019

Details

2019-140: Basalt debitage (n=3). Artifact table attached.

British Columbia Site Inventory Form

Borden Number: **GfRw-9**

Stratigraphy:

Minimum	Maximum	General Stratigraphy Remarks
0.04	0.15	2019-140: Stratigraphy is generally uniform. ST1: 0-4 cm dbs duff/loose brown littermat; 4-15 cm red/brown silt; 15-35 cm grey silty clay. ST2: 0-5 cm duff; 5-17 cm red brown silt; 17-27 cm+ grey silty clay. ST3: 0-9 cm dbs duff/loose brown littermat; 9-15 cm red/brown silt;15-32 cm grey silty clay.

British Columbia Site Inventory Form

Borden Number: GfRw-9

Site Condition:

Condition

Assessed By	Assessment Date	Pemit Number	Issuing Agency	Recommendation
Russell, Marina	31/Oct/2019	2019 140	Arch	2019-140: Site avoidance is recommended, otherwise further archaeological work may be warranted.

Disturbance History

History	Factor	Remarks
Present	Arch Investigation	2019-140: A total of 14 subsurface tests placed inside the site boundary to average depth of 32 cm. An additional 51 tests were placed while determining site extent along the associated landform.
Future	Logging	2019-140: Site identified during the AIA of a proposed cutblock. If avoidance is practiced, no impacts are expected.
Past	Other	2019-140: The site is currently in good condition with minimal damage from forest blowdown.

References:

Report Title	Report Date	Report Authors	Comments
2019-140			

Attached Documents:

Type	Description	Filename
Document, Combined	2019-140 Site map, Photo plate, Artifact table	GfRw-9 2019-140 Site map, Photo plate, Artifact table.pdf