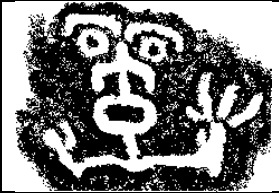


BRITISH COLUMBIA ARCHAEOLOGICAL IMPACT ASSESSMENT INTERIM REPORT FORM



1. REPORT TITLE

2015-0101-11435	Archaeological Impact Assessment of Proposed Pacific Inland Resources CP667 Block 612
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2. MANAGEMENT SUMMARY

2.1	<i>Protected HCA Sites:</i>	GiSq-24 (GiSq-11435-T2); GiSq-25 (GiSq-11435-T3); GiSq-26 (GiSq-11435-T4); GiSq-27 (GiSq-11435-T5); GiSq-28 (GiSq-11435-T6); GiSq-29 (GiSq-11435-T7)
2.2	<i>Brief Overview of Study:</i>	ARCHER CRM Partnership (ARCHER) conducted an AIA on the subject project at the request of Kelsey Stasiuk and Alan Baxter of Pacific Inland Resources (PIR). Four (4) locations were shovel tested yielding positive results. Additionally, protected pre-AD 1846 CMTs were recorded as well as not protected post-AD 1846 CMTs.
2.3	<i>Results:</i>	<p>As a result of this assessment, one hundred (100) subsurface tests were placed at four (4) locations exhibiting archaeological potential, with positive results. One (1) test from one of the assessed locations proved positive for archaeological remains, resulting in the identification of previously unrecorded site GiSq-28. It is recommended that PIR manage for the site through avoidance and project redesign; or mitigation through further work.</p> <p>Additionally, pre-AD 1846 CMTs at five (5) locations were identified, resulting in the identification of previously unrecorded sites GiSq-24, GiSq-25, GiSq-26, GiSq-27 and GiSq-29. It is recommended that PIR manage for the CMT sites through avoidance or project redesign which can be achieved by leaving a 30 m wind-firm buffer around the sites boundaries. If avoidance is not feasible and the proponent wishes to commence with any work within the boundaries or these sites, it is recommended that the client obtain a <u>Section 12 Site Alteration Permit</u> (SAP).</p> <p>Six (6) AOPs were identified inside the proposed block boundary or immediately adjacent to the block boundary. These areas have been flagged with purple ribbon and placed 15 m from the terrace edge and marked with a hand-held GPS unit for avoidance. If ground altering activities are to be planned within the AOPs further assessment is recommended by means of subsurface testing.</p> <p>Post-1846 CMTs (11435-cmt) were also recorded outside of protected CMT site boundaries. These CMTs are not protected under the <i>Heritage Conservation Act</i> (HCA).</p>
2.4	<i>Management Recommendations:</i>	<p>Our assessment of the proposed Pacific Inland Resources CP667 Block 612 resulted in the identification of archaeological sites GiSq-24, GiSq-25, GiSq-26, GiSq-27, GiSq-28 and GiSq-29 inside proposed project boundaries. It is recommended that Pacific Inland Resources manage for the sites by avoidance through project redesign; avoidance through modified operations; or by obtaining a Section 12 SAP.</p> <p>Site-specific recommendations are provided below, followed by general recommendations related to further development of the project area.</p> <p>GiSq-28 recommendations presented in order of preference:</p>

1. **Avoidance through project redesign.** GiSq-28 is located immediately adjacent to the proposed project footprint as assessed, and will be impacted by harvest activities. Avoidance can be achieved by excluding the entire site from the study area and by leaving a wind-firm buffer (minimum 30 m) of standing trees around the boundary of the site area.
2. **Mitigation through further work.** If harvest activities cannot avoid the area of site GiSq-28, further assessment and evaluation of this site is recommended. The results of such an assessment will determine the nature of additional mitigation that may be recommended. This may include: (A) the acquisition of an HCA Section 12 Permit if it becomes apparent that a representative sample of cultural material remains are likely to have been recovered, (B) further archaeological excavation & data recovery if remains at the site prove to be extensive and/or dense, or (C) avoidance.
3. **Acquisition of a HCA Section 12 Permit.** If avoidance is not feasible, it is recommended that the project proponent acquire a HCA Section 12 Site Alteration Permit prior to timber harvest.

GiSq-24, GiSq-25, GiSq-26, GiSq-27 and GiSq-29, recommendations presented in order of preference:

1. **Avoidance through project redesign.** GiSq-24, GiSq-25, GiSq-26, GiSq-27 and GiSq-29 are located in the proposed project footprint as assessed, and will be impacted by harvest activities. Avoidance can be achieved by excluding the entire site from the study area and by leaving a wind-firm buffer (minimum 30 m) of standing trees around the boundary of the site area.
2. **Acquisition of a HCA Section 12 Permit.** If avoidance is not feasible, it is recommended that the proponent acquire an HCA Section 12 Site Alteration Permit prior to development activities in the project footprint. Issuance of this permit is warranted as information has been collected on a representative sample of CMTs found at sites GiSq-24, GiSq-25, GiSq-26, GiSq-27 and GiSq-29.

The following study area management recommendations are presented for consideration regarding Pacific Inland Resources CP667 Block 612:

1. It is recommended that the area(s) of archaeological potential (AOP2, AOP3 and AOPs 5 through 7) identified in the field be avoided. If these AOPs cannot be avoided further archaeological investigations are recommended (i.e. additional AIA with shovel testing).
2. If the above recommendations are implemented, no further archaeological work is recommended provided that the boundaries of the study area are not extended beyond the areas included in the archaeological assessment.
3. It is recommended that if any further development activities are to occur within areas of archaeological potential not surveyed, additional archaeological assessment should take place.

11435-cmt:

This is a post-1846 CMT site located in the study area as assessed, and may be impacted by development activities.

1. No further work is recommended for these CMTs. CMTs at this site post-date AD 1846 and do not represent exceptional, unique, or scientifically significant examples of culturally modified trees. They are therefore not protected under the Heritage Conservation Act.
2. A sufficient sample of increment cores has been collected to capture a representation in the variation of stripping ages of lodgepole pine CMTs within the site. (Muir & Moon 2000).

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. As such, and with respect to these latter areas, it is recommended that no further archaeological concerns be expressed for the proposed project footprint as illustrated in the attached Figure 1.

3. ADMINISTRATIVE INFORMATION

3.1	<i>Permit Holder:</i>	Elissa Gagnon	3.2	<i>Permit Holder Affiliation:</i>	ARCHER CRM Partnership 952 Fourth Avenue Prince George, BC, V2L 3H8 T: 250-562-0444 F: 250-562-0445 E.Gagnon@archercrm.ca
3.3	<i>Proponent Contact:</i>	Alan Baxter	3.4	<i>Proponent Affiliation:</i>	Pacific Inland Resources PO Box 3130 Smithers, BC, V0J 2N9 T: 250-847-2656 Alan.Baxter@westfraser.com
3.5	<i>Proponent Contact:</i>	Kelsey Stasiuk	3.6	<i>Proponent Affiliation:</i>	Pacific Inland Resources PO Box 3130 Smithers, BC, V0J 2N9 T: 250-847-2656 Kelsey.Stasiuk@westfraser.com
3.7	<i>Interim Report Author(s):</i>	Elissa Gagnon			
3.8	<i>Interim Report Date & Version:</i>	January 9, 2017, V1			
3.9	<i>Notification of Work Date:</i>	March 15 th , 2016: Lake Babine Nation.			
3.10	<i>OGC Ref No.:</i>	N/A			

4. PROPOSED DEVELOPMENT

4.1	<i>Description:</i>	Pacific Inland Resources: Cutting Permit 667 Block 612 • 43.3 ha.
4.2	<i>Location:</i>	This development is located 16.9 km northwest of Fort Babine, 10.8 km north of French Peak, and 75 m south of Nichyeskwa Creek. Specifically the study area is located at NAD 83 UTM Zone 9, center coordinate N: 6146431, E: 639850.

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>
09/11/15	Elissa Gagnon (N)	Steve Plasway	Jonathan Wilson
10/11/15	Elissa Gagnon (N)	Steve Plasway	Jonathan Wilson
04/06/16	Tyler Thorpe (Y)	Dylan John	N/A
08/09/16	Elissa Gagnon (N)	Patricia Lindsay	Howie Alexis, Hanjo Zink
09/09/16	Elissa Gagnon (N)	Patricia Lindsay	Howie Alexis, Hanjo Zink
15/09/16	Elissa Gagnon (N)	Patricia Lindsay	Howie Alexis, Hanjo Zink

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:
- ☒ Review of Provincial Heritage Register
Date Accessed: April 5, 2016 and January 09, 2017.
- ☒ Other

Details: Prior to fieldwork, the study area was subject to an in-office archaeological map review identifying areas of archaeological potential and the potential presence of protected CMTs. Information used included RAAD, ILRR, orthophotographs, and records of prior archaeological assessments. Identified areas and timber stands of archaeological potential subject to possible impact were visually assessed by crew members on the ground. The terms and conditions guiding the overview and identification of archaeological potential are defined in the corresponding Permit Application.

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

<i>Borden No.</i>	<i>Distance & Direction from the Proposed Development</i>	<i>Site Type</i>	<i>Permit No. of Previous Visits</i>	<i>Site in Conflict (Y/N)</i>
GiSq-19	Within proposed boundary	CMT	2015-0101	Yes
GiSq-24	Within proposed boundary	CMT	N/A	Yes
GiSq-25	Within proposed boundary	CMT	N/A	Yes
GiSq-26	Within proposed boundary	CMT	N/A	Yes
GiSq-27	Within proposed boundary	CMT	N/A	Yes
GiSq-28	Within proposed boundary	Lithic	N/A	Yes
GiSq-29	Within proposed boundary	CMT	N/A	Yes
GiSq-17	674 m NW	CMT	2015-0101	No
GiSq-18	899 m NW	CMT	2015-0101	No
GiSq-22	944 m SW	CMT	2015-0101	No
GiSq-16	970 m NW	CMT	2015-0101	No
GiSq-21	1227 m SW	CMT	2015-0101	No

6.2. In-field Methodology

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

Date Accessed: May 4th, 2016 and September 8th, 9th and 15th, 2016.

During the field assessment the study area was visually assessed by two (2) crews with two (2) to three (3)

crew members walking parallel to each other, spaced in a manner that would enable maximum coverage depending on visibility and archaeological potential of the area. Where applicable, natural and anthropogenic soil exposures (eroded banks, tree throws, etc.) in the project footprint were visually examined for cultural remains in disturbed or secondary contexts.

The depths of the tests varied from 38 to 43 cm, at which point glacial-fluvial sediments were encountered and the test was discontinued. All sediments from the evaluations were screened through ¼" mesh.

Areas exhibiting potential to contain archaeological materials that were not subjected to subsurface testing were recorded using a hand-held GPS unit, photographed and flagged with purple ribbon 15 m from terrace edge for avoidance.

Culturally modified trees (CMTs) in or adjacent to the study area were sought given the presence of mature timber. Where identified, CMTs were recorded, cored and a sample of modifications photographed. Under direct training and instruction from ARCHER CRM Partnership, Chin-nee Services Ltd. conducted CMT sampling, under permit 2015-0101 on the subject project. This arrangement was agreed to between Frank Craig (former permit holder) and Alan Baxter of Pacific Inland Resources. All dendrochronological sampling has been collected in the standards outlined in permit 2015-0101 and all collected samples have been analyzed by ARCHER in its lab. ARCHER has collected samples for data quality control and have collected three (3) CMT samples for dendrochronological analysis.

6.2.1	Number of Crew Members:	2-3	6.2.2	Crew Spacing:	10-15 m
6.2.3	Other:	Only the block boundary was surveyed as the interior of the block was deemed to have low potential. Crew spacing was 10-15 m in areas of high potential and widened to 20 m in areas of low potential where visibility was excellent. Chin-nee Services Ltd. conducted a CMT survey of the study area.			

6.3. In-field Observations

The proposed block is situated south of Nichyeskwa Creek. The northern boundary of the study area is terraced along Nichyeskwa Creek. An additional unnamed stream is located along the south boundary. The proposed study area is characterized by undulating terrain with terraces, knolls and low-lying areas. The center of the study area lacks significant hydrological features and is generally featureless.

The forest cover consists of lodgepole pine, sub-alpine fir, and white spruce. The understory and ground cover includes blueberry, soapberry, alder, mosses, and lichens. Isolated areas containing Devil's club were also identified during the field assessment.

Six (6) areas of archaeological potential were observed (AOP2, AOP3 and AOPs 5 through 7) in the field and have been flagged with purple ribbon 15 m from the terrace edge and marked with a hand-held GPS unit for avoidance. The remainder of the study area was deemed low archaeological potential based on the lack of prominent landforms and the poorly drained terrain. Potential for CMTs was also noted based on mature forest cover and type. Six (6) previously unrecorded archaeological sites (GiSq-24 through 29) were identified within the study area consisting of five (5) pre-AD 1846 CMT sites and one (1) subsurface lithic site.

6.4. Results

CMT sites GiSq-24, GiSq-25, GiSq-26, GiSq-27 and GiSq-29 were identified. Stripping events at this site pre-date AD 1846. Refer to 7. *Archaeological Site Summary* below for detailed site descriptions.

One protected subsurface lithic archaeological site, GiSq-28, was recorded. Refer to 7. *Archaeological Site Summary* below for detailed site description.

Table 3. Assessment Results

Subsurface Test Area	Description*	Dimensions (L x W)	Subsurface Tests		
			Total	Positive	Negative
TL1	Tests were placed in a judgemental and a systematic pattern (3 lines 3 m apart with 5 m spacing) on a terrace and point landform 15 m north of an unnamed stream. Refer to appended Subsurface Test Log for detailed stratigraphy.	40 m NE-SW x 6 m NW-SE	19	0	19
TL4	Tests were placed in a systematic pattern (3 lines 2 m apart with 3 m spacing) on a terrace 80 m north of Nichyeskwa Creek. Refer to appended Subsurface Test Log for detailed stratigraphy.	40 m NW-SE x 6 m NE-SW	37	0	37
TL10	Tests were placed in a systematic and judgmental pattern on a point landform 18 m north of an unnamed stream. Refer to appended Subsurface Test Log for detailed stratigraphy. GiSq-28 was identified at this location.	47 m NW-SE x 20 m N-S	34	1	33
TL11	Tests were placed in a systematic pattern (2 lines 3 m apart with 5 m spacing) on a point landform 15 m east of an unnamed stream. Refer to appended Subsurface Test Log for detailed stratigraphy.	25 m N-S x 3 m E-W	10	0	10

* For detailed stratigraphy for each test location please see appended Subsurface test log (Appendix 1).

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

AOP # Area	Description	Dimensions (L x W)
AOP2	A terrace elevated between 2 to 4 m is located 37 m southwest of Nichyeskwa Creek. This landform is located immediately outside the flagged block boundary and has been flagged with purple ribbon and marked using a hand-held GPS unit.	110 m NW-SE x 15 m NE-SW
AOP3	A point landform elevated ~30 m and is located 35 m south of Nichyeskwa Creek. This landform is located outside the flagged block boundary and has been flagged with purple ribbon and marked using a hand-held GPS unit.	15 m N-S x 10 m E-W
AOP5	A terrace elevated ~30 m is located 105 m southwest from Nichyeskwa Creek. This landform is located immediately inside the flagged block boundary and has been flagged with purple ribbon and marked using a hand-held GPS unit.	210 m N-S x 20 m E-W
AOP6	A terrace elevated 20 m is located 60 m north from an unnamed creek. This landform is located inside the flagged block boundary and has been flagged with purple ribbon and marked using a hand-held GPS unit.	60 m NE-SW x 20 m NW-SE
AOP7	A terrace elevated 15 m is located 42 m northeast from an unnamed creek. This landform is located inside the flagged block boundary and has been	85 m NW-SE x 15 m NE-SW

	flagged with purple ribbon and marked using a hand-held GPS unit.	
AOP8	A terrace elevated 12 m is located 46 m north from an unnamed creek. This landform is located inside the flagged block boundary and has been flagged with purple ribbon and marked using a hand-held GPS unit.	185 m E-W x 5 m N-S

7. ARCHAEOLOGICAL SITE SUMMARY

7.A	Borden No.	GiSq-24	7.A1	New/Revisited:	New
7.A2	Site Type:		Traditional Use – Culturally Modified Tree – Bark-stripped – Cambium Stripped (lodgepole pine)		
7.A3	Impact Assessment:		<p>Archaeological site GiSq-24 is located within the eastern boundary. It is situated on a terrace above an unnamed creek and is 390 m south of Nichyeskwa Creek. Forest cover consists of lodgepole pine, white spruce and subalpine fir. Understory consists of bunchberry, blueberry, soapberry, alder, and mosses</p> <p>Three (3) cambium stripped lodgepole pine CMTs are present within the site boundaries and have been marked using a hand-held GPS unit and demarcated with blue CMT flagging.</p> <p>Two (2) increment core samples (66%) were removed for dating purposes and yielded two (2) reliable dates (66%) of AD 1811 and 1841. One (1) tree (CMT2) was flagged and recorded using a handheld GPS and has been included within the site boundary given the proximity to confirmed pre-AD 1846 CMTs. This tree is deemed to pre-date AD 1846. All CMTs (100%) were recorded in detail. Cored CMTs were photographed. Refer to appended CMT table for detailed CMT morphology and dates.</p>		
7.A4	Management Recommendations:		It is recommended that PIR manage for the site through avoidance and project redesign; or by obtaining a Section 12 Site Alteration Permit. Detailed site management recommendations are presented in Section 2.4.		
7.A5	Significance Evaluation:		<p>Scientific Significance: Low: Culturally modified trees can contribute to our understanding of the past land use, travel routes, and subsistence activities in this region. However, these modifications represent the most common type of CMT recorded in this region. No associated trail feature was identified. As a result the site is of low scientific significance.</p> <p>Ethnic Significance: High: The relevant First Nations rate all archaeological sites in their traditional territories as high.</p> <p>Public Significance: Low: Site location is difficult to access and would hold little interest for the general public.</p>		

7.B	Borden No.	GiSq-25	7.B1	New/Revisited:	New
7.B2	Site Type:		Traditional Use – Culturally Modified Tree – Bark-stripped – Cambium Stripped (lodgepole pine)		
7.B3	Impact Assessment:		<p>Archaeological site GiSq-25 is located within the southwestern boundary. It is situated on undefined flat terrain 460 m south of Nichyeskwa Creek. Forest cover consists of lodgepole pine, white spruce and subalpine fir. Understory consists of bunchberry, blueberry, soapberry, alder, and mosses</p> <p>Three (3) cambium stripped lodgepole pine CMTs are present within the site boundaries and have been marked using a hand-held GPS unit and</p>		

		<p>demarcated with blue CMT flagging.</p> <p>Two (2) increment core samples (66%) were removed for dating purposes and yielded one (1) reliable date (33%) of AD 1854 (CMTDD3). One (1) CMT core sample was collected but proved to be too rotten for analysis. This tree is deemed to date pre-AD 1846 due to the forest age class (age class 8) and the proximity to existing pre-AD 1846 CMTs. One (1) tree (CMT2) was flagged and recorded using a handheld GPS and has been included within the site boundary given age class of the tree stand (age class 8) and the proximity to confirmed pre-AD 1846 CMTs. This tree is deemed to pre-date AD 1846. One (1) CMT (DD3) post-date AD 1846 and fall inside the site boundary, but has not been used to define the site area. All CMTs (100%) were recorded in detail. Cored CMTs were photographed. Refer to appended CMT table for detailed CMT morphology and dates.</p>
7.B4	Management Recommendations:	It is recommended that PIR manage for the site through avoidance and project redesign; or by obtaining a Section 12 Site Alteration Permit. Detailed site management recommendations are presented in Section 2.4.
7.B5	Significance Evaluation:	<p>Scientific Significance: Low: Culturally modified trees can contribute to our understanding of the past land use, travel routes, and subsistence activities in this region. However, these modifications represent the most common type of CMT recorded in this region. No associated trail feature was identified. As a result the site is of low scientific significance.</p> <p>Ethnic Significance: High: The relevant First Nations rate all archaeological sites in their traditional territories as high.</p> <p>Public Significance: Low: Site location is difficult to access and would hold little interest for the general public.</p>

7.C	Borden No.	GiSq-26	7.C1	New/Revisited:	New
7.C2	Site Type:	Traditional Use – Culturally Modified Tree – Bark-stripped – Cambium Stripped (lodgepole pine)			
7.C3	Impact Assessment:	<p>Archaeological site GiSq-26 is located within the central part of the block. It is situated on undefined flat terrain 285 m south of Nichyeskwa Creek. Forest cover consists of lodgepole pine, white spruce and subalpine fir. Understory consists of bunchberry, blueberry, soapberry, alder, and mosses</p> <p>One (1) cambium stripped lodgepole pine CMT is present within the site boundaries and have been marked using a hand-held GPS unit and demarcated with blue CMT flagging.</p> <p>No increment core sample was removed for dating and no measurement data was recorded. However, due to the age class of the forest (class 8), and the proximity of existing pre-AD 1846 CMT sites in the area, the CMT was deemed to date to pre-AD 1846.</p>			
7.C4	Management Recommendations:	It is recommended that PIR manage for the site through avoidance and project redesign; or obtain a Section 12 Site Alteration Permit. Detailed site management recommendations are presented in Section 2.4.			
7.C5	Significance Evaluation:	<p>Scientific Significance: Low: Culturally modified trees can contribute to our understanding of the past land use, travel routes, and subsistence activities in this region. However, these modifications represent the most common type of CMT recorded in this region. No associated trail feature was identified. As a result the site is of low scientific significance.</p> <p>Ethnic Significance: High: The relevant First Nations rate all archaeological sites in their traditional territories as high.</p>			

		Public Significance: Low: Site location is difficult to access and would hold little interest for the general public.
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7.D	Borden No.	GiSq-27	7.D1	New/Revisited:	New
7.D2	Site Type:	Traditional Use – Culturally Modified Tree – Bark-stripped – Cambium Stripped (lodgepole pine)			
7.D3	Impact Assessment:	<p>Archaeological site GiSq-27 is located within the central part of the block. It is situated on undefined flat terrain 285 m south of Nichyeskwa Creek. Forest cover consists of lodgepole pine, white spruce and subalpine fir. Understory consists of bunchberry, blueberry, soapberry, alder, and mosses.</p> <p>One (1) cambium stripped lodgepole pine CMT is present within the site boundaries and has been marked using a hand-held GPS unit and demarcated with blue CMT flagging.</p> <p>Six (6) increment core samples (35%) were removed for dating purposes, and yielded six (6) reliable dates ranging between AD 1843 and 1875 (1843, 1855, 1861, 1865 x2, and 1870). Eleven (11) trees of age class 8 were flagged recorded using a handheld GPS and have been included within the site boundary given the proximity to confirmed pre-AD 1846 CMTs. Three (3) CMTs post-date AD 1846 and fall inside the site boundary, but have not been used to define the site area. Two (2) post-AD 1846 CMTs (CMT FF1 and FF9) were identified outside the site boundary area. A sample of eleven (11) CMTs (64%) were recorded in detail. Cored CMTs were photographed. Refer to appended CMT table for detailed CMT morphology and dates.</p>			
7.D4	Management Recommendations:	It is recommended that PIR manage for the site through avoidance and project redesign; or obtain a Section 12 Site Alteration Permit. Detailed site management recommendations are presented in Section 2.4.			
7.D5	Significance Evaluation:	<p>Scientific Significance: Low: Culturally modified trees can contribute to our understanding of the past land use, travel routes, and subsistence activities in this region. However, these modifications represent the most common type of CMT recorded in this region. No associated trail feature was identified. As a result the site is of low scientific significance.</p> <p>Ethnic Significance: High: The relevant First Nations rate all archaeological sites in their traditional territories as high.</p> <p>Public Significance: Low: Site location is difficult to access and would hold little interest for the general public.</p>			

7.E	Borden No.	GiSq-28	7.E1	New/Revisited:	New
7.E2	Site Type:	Precontact – cultural material – subsurface – lithic			
7.E3	Impact Assessment:	<p>The site is situated on an east facing point landform above the confluence of two unnamed creeks at an elevation of 813 m. The site consists of a small scatter of lithic debitage of two obsidian flakes and one chert flake. The site area measures 47 m NW-SE by 20 m N-S and has been flagged with yellow “ARCHER No Work Zone”.</p> <p>No cultural matrix is present. The soil stratigraphy is relatively uniform across the site area.</p> <p>The site area is currently intact and no past disturbance was observed.</p>			
7.E4	Management Recommendations:	It is recommended that PIR manage for the site through avoidance and project redesign; or by obtaining a Section 12 Site Alteration Permit. Detailed site management recommendations are presented in Section 2.4.			

7.E5	Significance Evaluation:	<p>Scientific Significance: Low: The site is a small, low density lithic scatter with no cultural matrix is present.</p> <p>Ethnic Significance: High: The relevant First Nations rate all archaeological sites in their traditional territories as high.</p> <p>Public Significance: Low: Site location is difficult to access and would hold little interest for the general public.</p>
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7.F	Borden No.	GiSq-29	7.F1	New/Revisited:	New
7.F2	Site Type:	Traditional Use – Culturally Modified Tree – Bark-stripped – Cambium Stripped (lodgepole pine)			
7.F3	Impact Assessment:	<p>Archaeological site GiSq-29 is located immediately outside the northwestern boundary. It is situated on a terrace above Nichyeskwa Creek. Forest cover consists of lodgepole pine, white spruce and subalpine fir. Understory consists of bunchberry, blueberry, soapberry, alder, and mosses</p> <p>Two (2) cambium stripped lodgepole pine CMTs are present within the site boundaries and have been marked using a hand-held GPS unit and demarcated with blue CMT flagging.</p> <p>One (1) increment core sample (50%) was removed for dating purposes and yielded one (1) reliable date (50%) of AD 1829. One (1) tree (CMTOUT) was flagged and recorded using a handheld GPS and has been included within the site boundary given age class of the tree stand (age class 8) and the proximity to confirmed pre-AD 1846 CMTs. This tree is deemed to pre-date AD 1846. A sample of one (1) CMT (50%) was recorded in detail. The cored CMT was photographed. These CMTs are located immediately outside the northwest proposed boundary. Refer to appended CMT table for detailed CMT morphology and dates.</p>			
7.F4	Management Recommendations:	It is recommended that PIR manage for the site through avoidance and project redesign; or by obtaining a Section 12 Site Alteration Permit. Detailed site management recommendations are presented in Section 2.4.			
7.F5	Significance Evaluation:	<p>Scientific Significance: Low: Culturally modified trees can contribute to our understanding of the past land use, travel routes, and subsistence activities in this region. However, these modifications represent the most common type of CMT recorded in this region. No associated trail feature was identified. As a result the site is of low scientific significance.</p> <p>Ethnic Significance: High: The relevant First Nations rate all archaeological sites in their traditional territories as high.</p> <p>Public Significance: Low: Site location is difficult to access and would hold little interest for the general public.</p>			

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

Elissa Gagnon, B.A.,RPCA
Permit holder

9. REFERENCES CITED

Muir, R.J., and H. Moon
2000 *Sampling Culturally Modified Tree Sites*. British Columbia Ministry of Forests and Range, Aboriginal Affairs Branch, Copies available from Archaeology Branch, Victoria, BC.

Subject Report Citation:

ARCHER CRM Partnership
2017 *Archaeological Impact Assessment of Pacific Inland Resources Permit 667 Block 612*. HCA Permit 2016-0101. ARCHER CRM Partnership file 11435, Submitted to Pacific Inland Resources. Copies on file at the Archaeology Branch, Victoria, BC.

10. REPORT DISTRIBUTION

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11. SHAPE FILES

- ☒ Study area shape files have been sent to archsiteform@gov.bc.ca. As per Section 8 of the Permit Application and Bulletin 24, Study area shapefiles will be submitted on the anniversary date of the Permit.

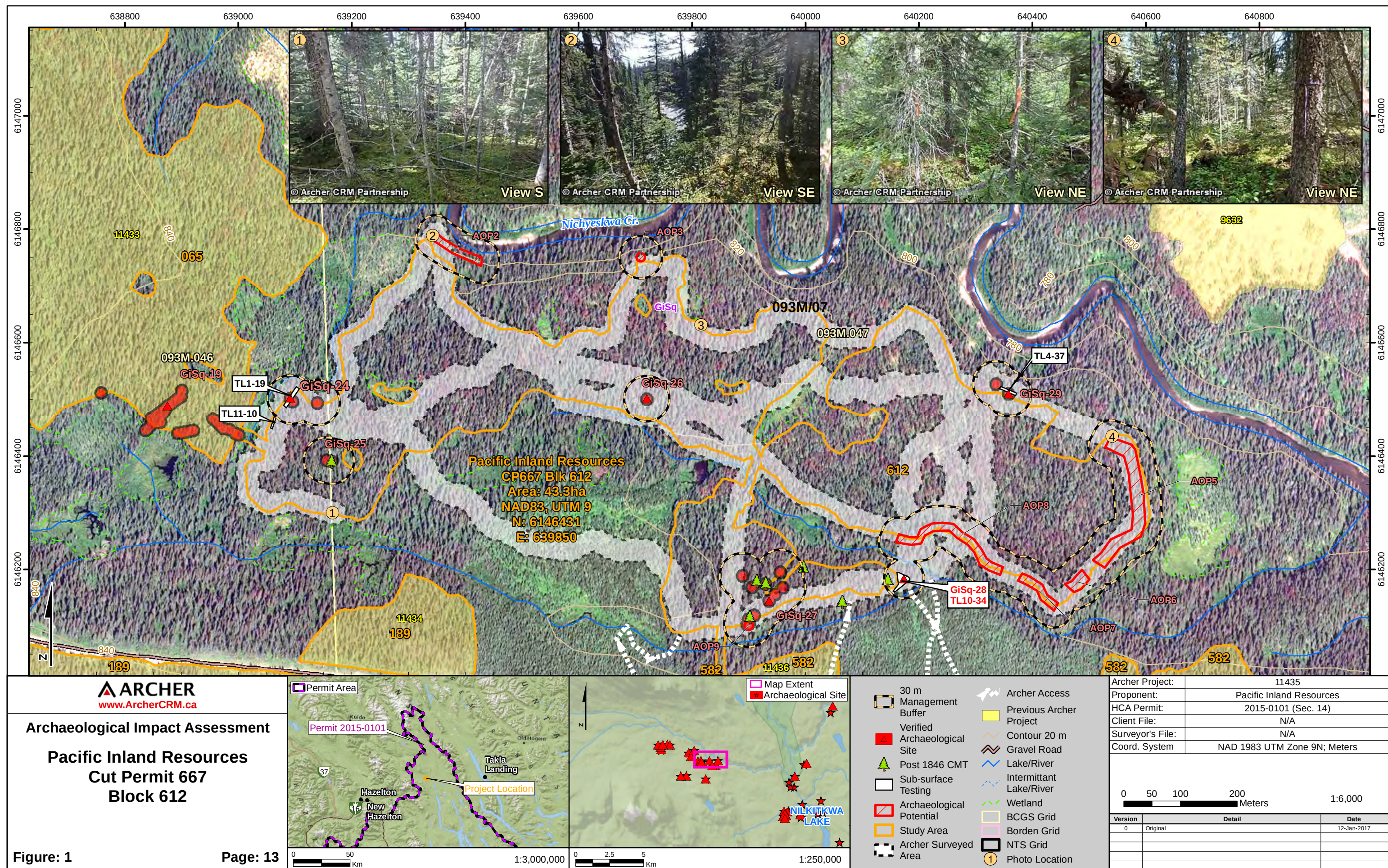
12. APPENDICES

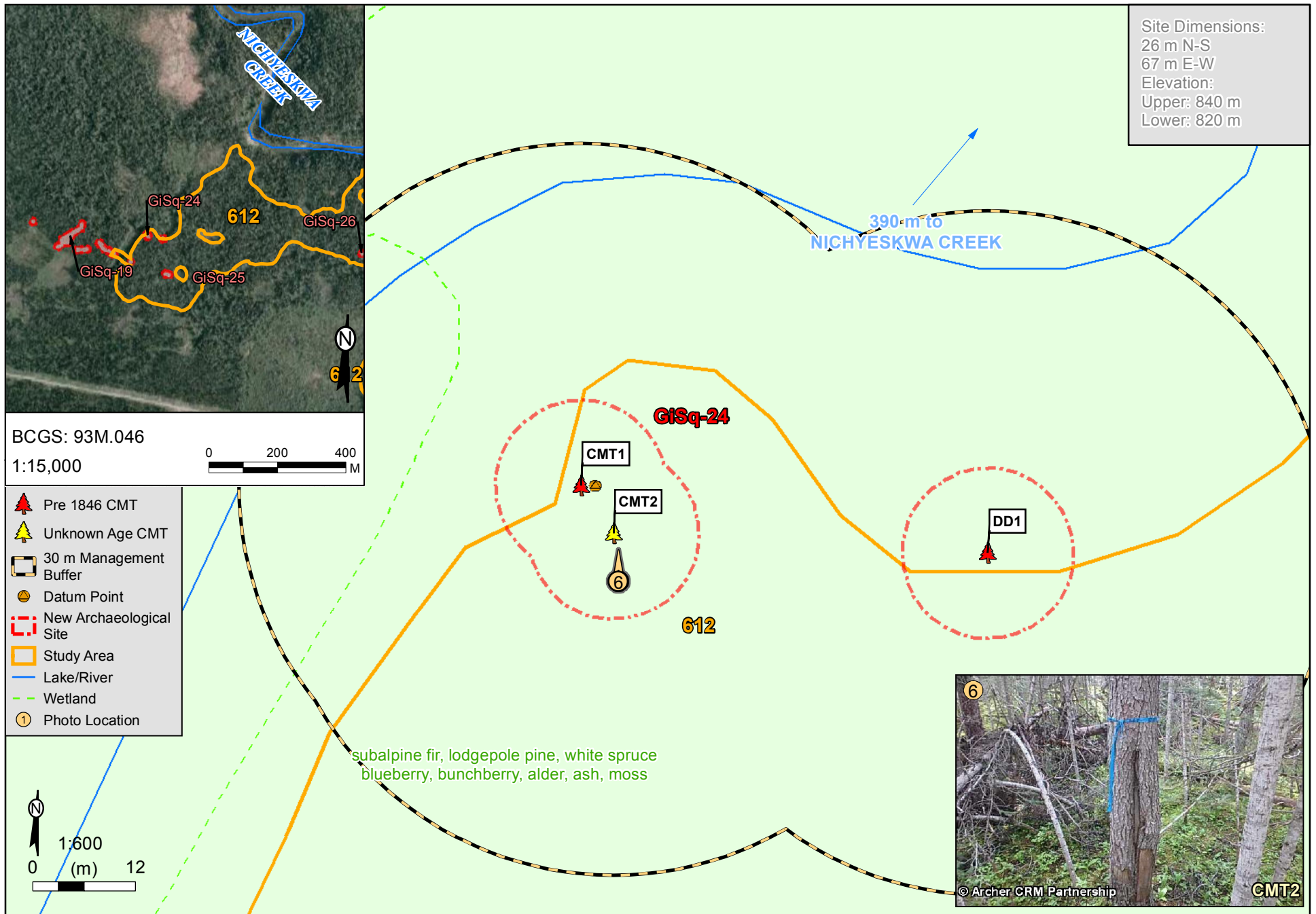
Required:

- ☒ General Area Map (Figure 1)
- ☒ Study Area Map (Figure 1)
- ☒ Photo Plates (Figures 1, 6 and 9)

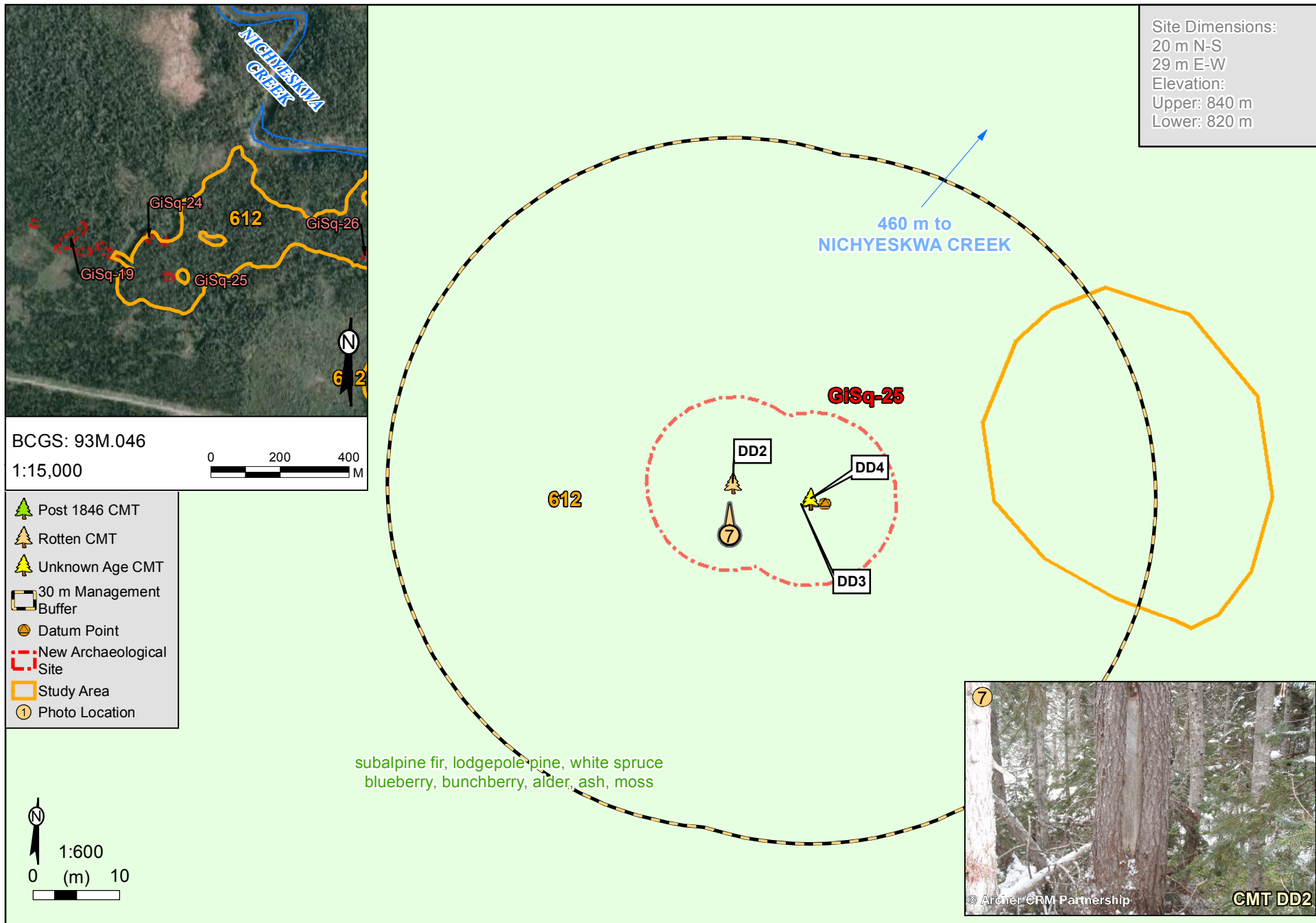
If Applicable:

- ☒ Detailed Development Map (Figure 1)
- ☒ Subsurface Test Log (Appendix 1)
- ☒ Site Forms, Site Maps and Related Documents (Figures 2-9, also see Appendices 2-7)
- ☐ Other Details:

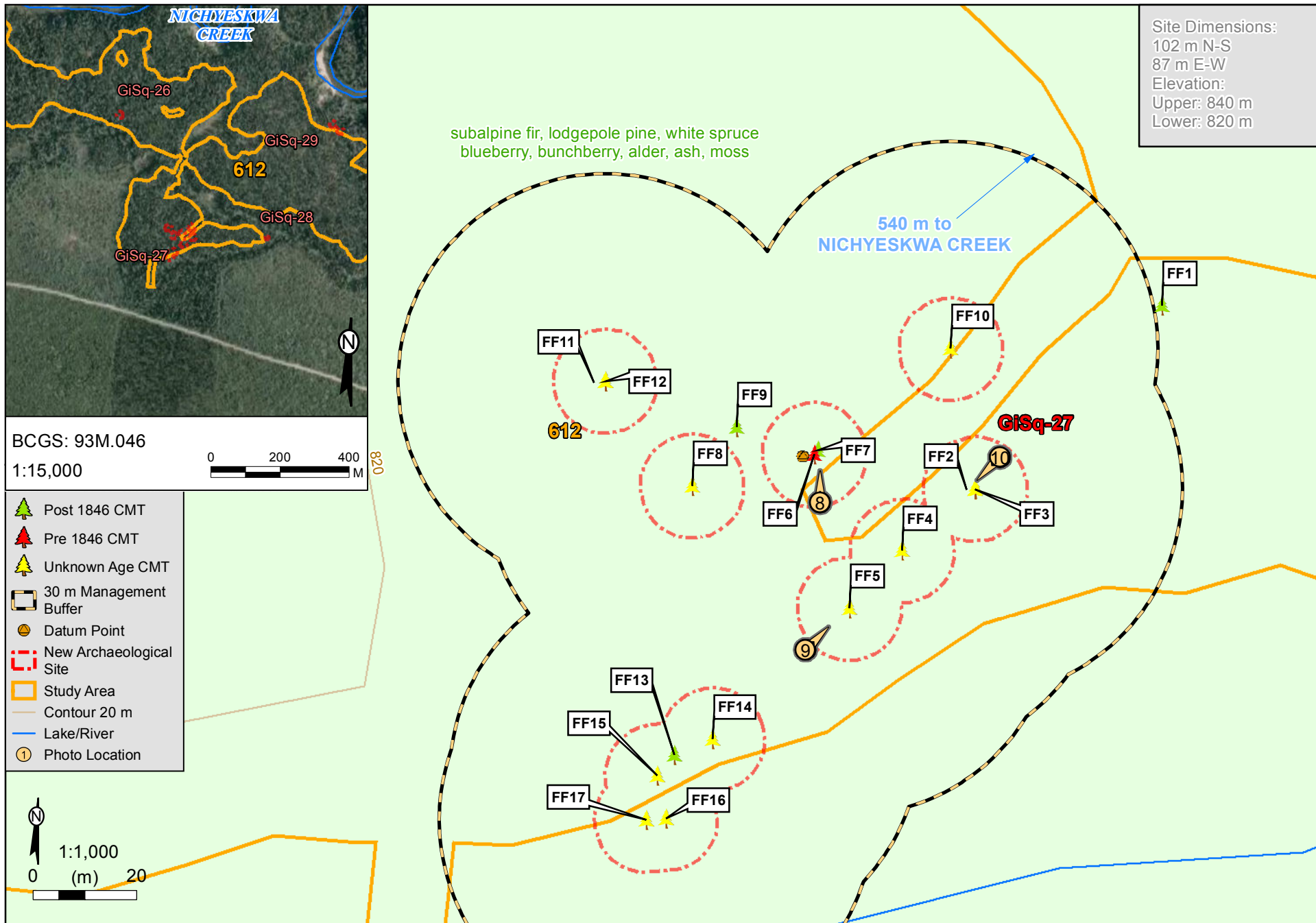




ARCHER	Figure No.	Archaeological Site #'s: Temp/Borden	HCA Permit	Project no.	Fieldwork Date of Completion	Datum Point NAD 83, UTM Zone 9	14
	2	GiSq-11435-t2/GiSq-24	2015-0101	11435	15/09/2016	E: 639091, N: 6146502	



ARCHER	Figure No.	Archaeological Site #'s: Temp/Borden	HCA Permit	Project no.	Fieldwork Date of Completion	Datum Point NAD 83, UTM Zone 9	15
	3	GiSq-11435-t3/GiSq-25	2015-0101	11435	15/09/2016	E: 639163, N: 6146391	

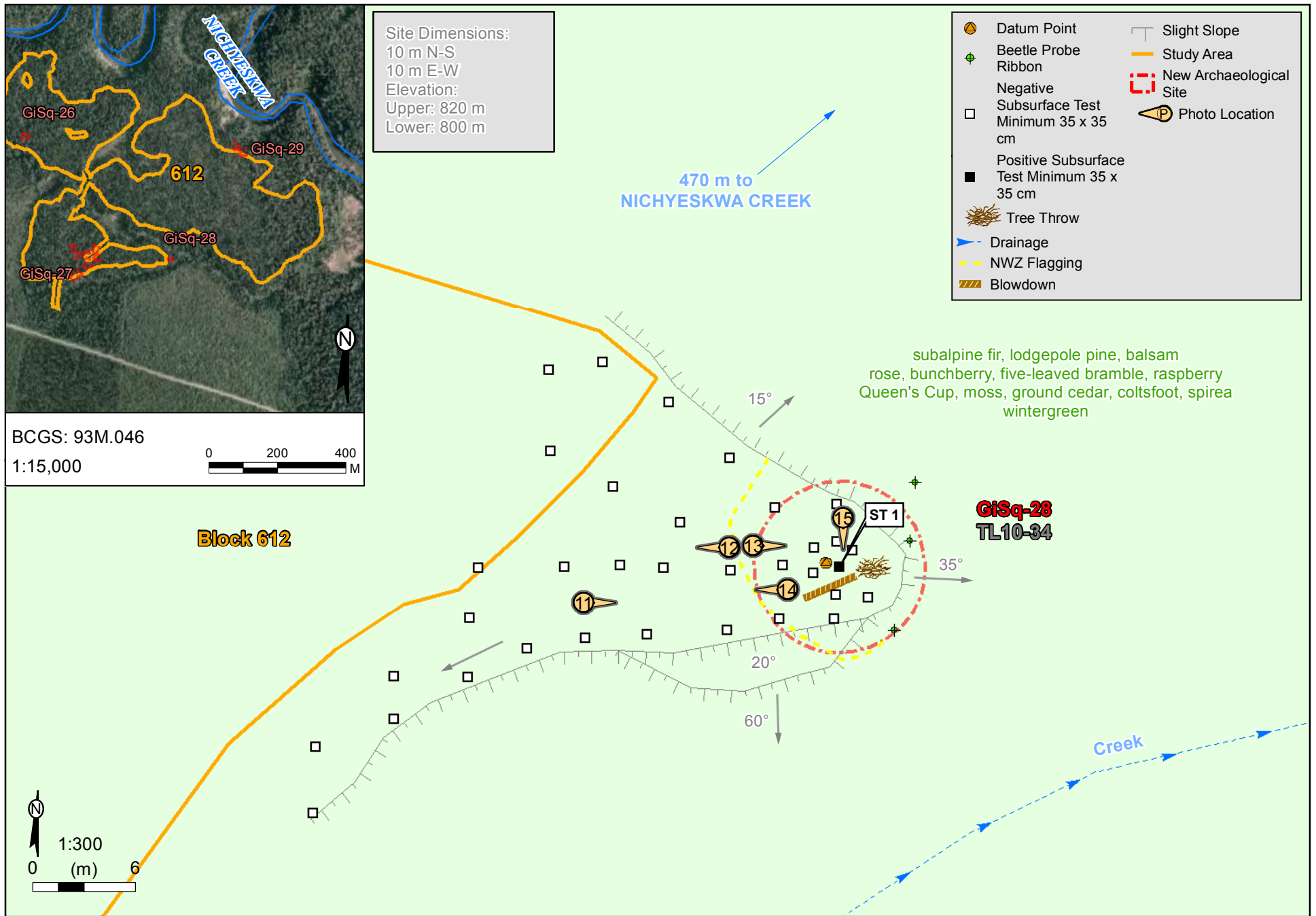


ARCHER	Figure No.	Archaeological Site #'s: Temp/Borden	HCA Permit	Project no.	Fieldwork Date of Completion	Datum Point NAD 83, UTM Zone 9	17
	5	GiSq-11435-t5/GiSq-27	2015-0101	11435	15/09/2016	E: 639928, N: 6146174	



See Figure 5 for photo locations.

	Figure #: 6	Archaeological Site GiSq-11435-t5/GiSq-27 Photos	HCA Permit #: 2015-0101	Fieldwork Date of Completion 15/09/2016	18
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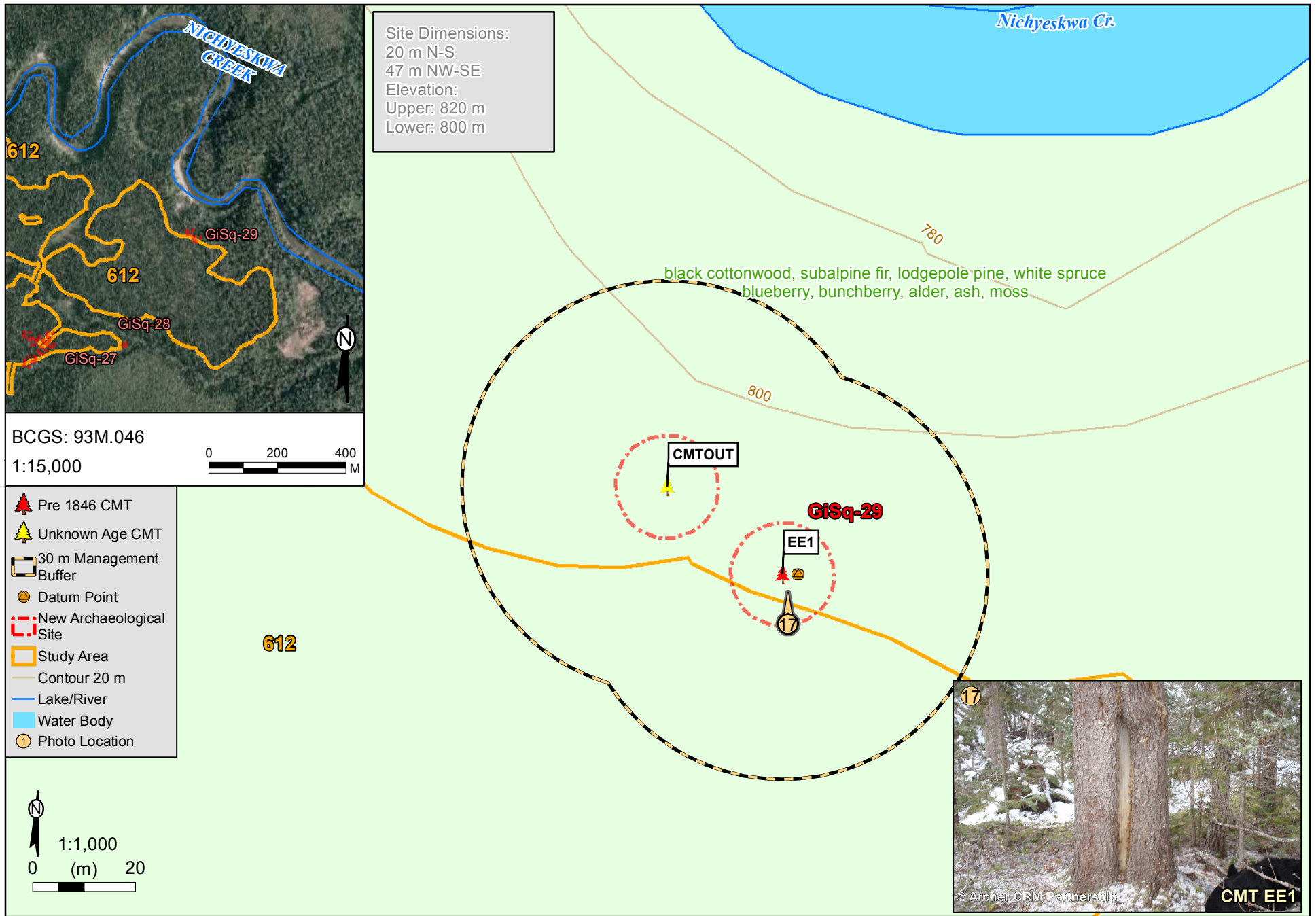


ARCHER	Figure No.	Archaeological Site #'s: Temp/Borden	HCA Permit	Project no.	Fieldwork Date of Completion	Datum Point NAD 83, UTM Zone 9	19
	7	GISq-11435-t6/GISq-28	2015-0101	11435	15/09/2016	E: 640173, N: 6146184	



See Figure 7 for photo locations.

	Figure #: 8	Archaeological Site GiSq-11435-t6/GiSq-28 Photos	HCA Permit #: 2015-0101	Fieldwork Date of Completion 15/09/2016	20
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ARCHER	Figure No.	Archaeological Site #'s: Temp/Borden	HCA Permit	Project no.	Fieldwork Date of Completion	Datum Point NAD 83, UTM Zone 9	21
	9	GiSq-11435-t7/GiSq-29	2015-0101	11435	15/09/2016	E: 640357, N: 6146510	

Test Location ID	Test/Profile ID #	Stratigraphy Observed (measurements in cm)	Comments
TL1-19	Negative shovel test	0-8 cm littermat; 8-36 cm red-brown silty-sand with mixed inclusions; 36-38 cm medium tan silty-clay with mixed inclusions.	Stratigraphy is uniform throughout the test location.
TL4-27	Negative shovel test	0-7 cm littermat; 7-9 cm grey silt; 9-22 cm orange sand - no inclusions; 22-38 cm medium brown sand - no inclusions.	Stratigraphy is uniform throughout the test location.
TL10-34	Positive shovel test ST1	0-5 cm littermat; 5-15 cm red-brown silty medium grain sand with 5% rounded pebbles; 15-33 cm medium brown sand with 15% rounded pebbles; 33-43 cm brown-grey coarse sand.	Stratigraphy is uniform throughout the test location.
TL11-10	Negative shovel test	0-7 cm littermat; 7-36 cm red-brown silty-sand with mixed inclusions; 36-38 cm medium tan silty-clay with mixed inclusions.	Stratigraphy is uniform throughout the test location.



British Columbia Site Inventory Form

Borden Number: GiSq-24

Protected by Legislation: YES

Identification:

<i>Temporary Number</i>	<i>Site Name</i>	<i>Assigned By</i>	<i>Date Assigned</i>
GiSq-11435-t2		Gross, Peter	17/Nov/2016

Map Reference:

GIS Populated

<i>Latitude</i>	<i>Longitude</i>	<i>UTM Easting</i>	<i>UTM Northing</i>	<i>UTM Zone</i>	<i>Historic Source Latitude</i>	<i>Historic Source Longitude</i>	<i>UTM Easting</i>	<i>UTM Northing</i>	<i>UTM Zone</i>
55 26'42"	-126 48'3"	639112	6146498	9			639091	6146502	9

Map Sheet

<i>Number</i>	<i>Spatial Accuracy</i>
93M.046	1:10K
93M/07	1:10K

Accuracy Remarks

2015-0101: Site digitized using shapefile provided by GIS department. Location matches GIS coordinates and detailed site map. Size matches site dimensions.

Site Location:

<i>Description</i>	<i>Site Access</i>
2015-0101: The site is located approximately 17.6 km northwest of the north-western arm of Babine Lake. Specifically it is located 389 m at 42° to Nichyeskwa Creek; 9.5 km at 119° to the north end of Nilkitkwa Lake; and 10.8 km at 201° to French Peak.	2015-0101: From Smithers, head south on Hwy 16 for approximately 6 km, turn left (west) onto Babine Lake Road and continue till 50.5 km before turning left (northwest) onto the 4000 Forestry Service Road (FSR). Travel on the 4000 FSR for 55.5 km and the turn left (northwest) onto the 455 FSR and continue for 7.3 km before parking. The site is located 489 m at 351° from this location.

Street Address:

<i>Street Number</i>	<i>Street Name</i>	<i>City</i>	<i>Postal Code</i>

Site Dimensions:

<i>Length (m)</i>	<i>Width (m)</i>	<i>Site Area</i>	<i>Comments</i>
67 E -W	26 N -S		2015-0101: Site boundaries are based on the observed location of CMTs and a 10 m buffer. CMTs were demarcated with blue CMT flagging.

British Columbia Site Inventory Form

Borden Number: GiSq-24

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
820-840	-19-4663	2015-0101: Elevation derived from 1:20 000 TRIM contour data.

Biogeography

Type	Name	Description
Minor Drainage		2015-0101: Nichyeskwa Creek is approximately 390 m northeast.
Micro Topography		2015-0101: On a terrace landform.
GIS VegetationZone	SBSmc2	
GIS EcoRegion	Fraser Basin	
GIS Drainage	BABINE RIVER	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS RegionalDistrict		Buckley-Nechako	
Provincial	Forestry	Pacific Inland Resources	2015-0101: Cut Permit 667 Block 612.
GIS LandDistricts		Cassiar District	
GIS Municipalities		Bulkley-Nechako, Subd. B	

Site Typology:

Class	Type	Sub Type	Descriptor
TRADITIONAL USE	Culturally Modified Tree	bark-stripped	cambium-stripped

CMT

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
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CMTs (n=3)

Feature Remarks

2015-0101: Two (2) increment core samples (66%) were removed for dating purposes and yielded two (2) reliable dates (66%) of AD 1811 and 1841. One (1) tree (CMT2) was flagged and recorded using a handheld GPS and has been included within the site boundary given the proximity to confirmed pre-AD 1846 CMTs. This tree is deemed to pre-date AD 1846. All CMTs (100%) were recorded in detail. Cored CMTs were photographed. Refer to appended CMT table for detailed CMT morphology and dates.

Cultural Material :

Type	Status	Repository	Date
Other Sample	Collected	Archer CRM Partnership	04/Jun/2016

Details

2015-0101: Increment cores were collected from two (2) CMTs.

British Columbia Site Inventory Form

Borden Number: GiSq-24

Chronology:

<i>Method</i>	<i>Source</i>	<i>Chronology Remarks</i>
Dendrochronology	2015-0101: Increment cores from CMT1 and CMT DD1.	2015-0101: Two (2) increment core samples were removed for dating purposes, and yielded reliable dates of AD 1811 (DD1) and 1841 (CMT1). Two cored CMTs pre-date 1846. See attached CMT table for more information.

<i>From Date</i>	<i>From Date Qualifier</i>	<i>From Date Calendar</i>	<i>To Date</i>	<i>To Date Qualifier</i>	<i>To Date Calendar</i>
1811	Exact	AD	1841	Exact	AD

Radiocarbon Dates:

<i>RCD Unadjusted</i>	<i>RCD Unadjusted Variation (+/-)</i>	<i>RCD Lab Name</i>	<i>RCD Lab No.</i>	<i>RCD Adjusted</i>
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RCD Remarks

Site Condition:

<i>Condition</i>					<i>Disturbance History</i>		
<i>Assessed By</i>	<i>Assessment Date</i>	<i>Permit Number</i>	<i>Issuing Agency</i>	<i>Recommendation</i>	<i>History</i>	<i>Factor</i>	<i>Remarks</i>
Plasway, Steve	09/Nov/2015	2015 101	Arch	2015-0101: Site avoidance or acquisition of S12 SAP prior to harvest.	Present	Insect Infestation	2015-0101: One (1) tree is dead from the mountain pine beetle infestation.
					Present	Arch Investigation	2015-0101: Increment core samples were obtained for dating purposes. Site is in good condition.

Site Visit:

<i>Type</i>	<i>Date of Visit</i>	<i>Affiliation</i>	<i>Permit</i>	<i>Permit Type</i>	<i>Issuing Agency</i>	<i>Permit Holder</i>	<i>Recorder</i>
Recording (no t	09/Nov/2015	Archer CRM Pa	2015 101	Inspection	Arch		Wilson, Jonathan

Project Description:

2015-0101: AIA of Pacific Inland Resources CP667 Block 612 (November 9, 2015 and May 4, 2016).

British Columbia Site Inventory Form

Borden Number: GiSq-24

References:

<i>Report Title</i>	<i>Report Date</i>	<i>Report Authors</i>	<i>Comments</i>
2015-101, AIAs of various forestry developments in the Babine BCTS operating area.		Craig, Frank;	2015-101: Active permit.

Images:

<i>Type</i>	<i>Repository</i>	<i>Photographer</i>	<i>Image Date</i>	<i>Description</i>	<i>Image Caption</i>
Digital Image	Archer CRM Partne	John, Dylan	15/Sep/2016	2015-0101: Photo of CMT2.	

Remarks:

<i>Date</i>	<i>Remarks</i>
09/Nov/2015	2015-0101: Chin-nee Services Ltd. conducted CMT sampling, under permit 2015-0101 on the subject project. All dendrochronological sampling was collected as per standards outlined in permit 2015-0101 and samples have been analyzed by ARCHER in its lab.

Attached Documents:

<i>Type</i>	<i>Description</i>	<i>Filename</i>
Map	2015-0101 sitemap	GiSq-24 2015-0101 sitemap.pdf
Detailed Data Table	2015-0101 CMT Table	GiSq-24 2015-0101 CMT_Table.pdf

Site #:	GiSq-24 (GiSq-11435-t2)	Development:	PIR CP 667 Block 612											Date:	09/11/2015 and 04/06/2016		Recorders:	Chin-nee Services Ltd. and ARCHER CRM Partnership										
CMT #	Species	Alive?	Type	No. Scars	Scar No.	Scar Morph (W, OT, H)	SDE (°)	SLP (°)	SLP DIR	DBH (cm)	HAG	LEN	WID	DEP	Scar Shape	Top Shape	Cut Mark	Basal "V"	Cut Branch	Chop	Core Y/N	Core Hgt	Photo #	Comments				
DD1	PL	A	CS	1	1	W	333	0	N/A	43.2	10	83	7	6	L	R	N/A	N/A	N/A	N/A	Y	74	43	1811				
1	PL	A	CS	1	1	W	200	0	N/A	30	55	55	13	6	L	T	N/A	1	N/A	N/A	Y	105	5	1841				
2	PL	D	CS	1	1	W	300	0	N/A	30	65	52	6	4	L	T	N/A	N/A	N/A	N/A	N	N/A	6					

Legend **All dimensions measured in centimeters (CM)**

SP (Species): PL (lodgepole pine), At (Aspen), E (Birch), Pa (Whitebark pine), Py (Yellow pine), S (Spruce)

A/D: A (alive) or D (dead)

Type (Site type descriptor): T (Tapered), R (Rectangular), G (Girdled), O (Other), CS (Cambium stripped)

Scar Morph: W (Window), OT (Open Top), H (Healed))

SDE (Side of tree): measured in degrees

SLP (Slope): Slope of terrain in degrees

SLP DIR: Direction of slope

Scar shape: R (Rectangular), C (Columnar), G (Girdled), IT (Inverted triangle), T (Triangle), L (lenticular), H (Healed), BD/BO (Blaze - Diamond or Oval), IR (Irregular)

Top Shape: (S) Square, C (Round), X (X-cut), MX (Multi-X cut), SL/SR (Stepped - Left or Right), AL/AR (Angled - Left or Right), T (Tapered), IR (Irregular)

Cutmark: Y (yes), N (no) **Basal V:** Y (yes), N (no) **Cut branch:** Y (yes), N (no) **Chop:** Y (yes), N (no) **Core:** Y (yes), N (no) **Core Hgt:** Height of core in cm, or R (Rotten)

British Columbia Site Inventory Form

Borden Number: GiSq-25

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
GiSq-11435-t2		Gross, Peter	17/Nov/2016

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
55 26'38"	-126 48'0"	639159	6146392	9

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
		639163	6146391	9

Map Sheet

Number	Spatial Accuracy
--------	------------------

93M.047	1:10K
93M.046	1:10K
93M/07	1:10K

Accuracy Remarks

2015-0101: Site digitized using shapefile provided by GIS department. Location matches GIS coordinates and detailed site map. Size matches site dimensions.

Site Location:

Description

2015-0101: The site is located approximately 17.5 km northwest of the north-western arm of Babine Lake. Specifically it is located 460 m at 32? to Nichyeskwa Creek; 9.4 km at 118? to the north end of Nilkitkwa Lake; and 10.8 km at 201? to French Peak.

Site Access

2015-0101: From Smithers, head south on Hwy 16 for approximately 6 km, turn left (west) onto Babine Lake Road and continue till 50.5 km before turning left (northwest) onto the 4000 Forestry Service Road (FSR). Travel on the 4000 FSR for 55.5 km and the turn left (northwest) onto the 455 FSR and continue for 7.3 km before parking. The site is located 387 m at 352? from this location.

Street Address:

Street Number	Street Name	City	Postal Code
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Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
29 E -W	20 N -S		2015-0101: Site boundaries are based on the observed location of CMTs and a 10 m buffer. CMTs were demarcated with blue CMT flagging.

British Columbia Site Inventory Form

Borden Number: GiSq-25

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
820-840	-19-4663	2015-0101: Elevation derived from 1:20 000 TRIM contour data.

Biogeography

Type	Name	Description
Micro Topography		2015-0101: On flat terrain.
Minor Drainage		2015-0101: Nichyeskwa Creek is approximately 460 m northeast.
GIS Drainage	BABINE RIVER	
GIS EcoRegion	Fraser Basin	
GIS VegetationZone	SBSmc2	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Cassiar District	
GIS Municipalities		Bulkley-Nechako, Subd. B	
GIS RegionalDistrict		Buckley-Nechako	
Provincial	Forestry	Pacific Inland Resources.	2015-0101: Cut Permit 667 Block 612.

Site Typology:

Class	Type	Sub Type	Descriptor
TRADITIONAL USE	Culturally Modified Tree	bark-stripped	cambium-stripped

CMT

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
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CMTs (n=3)

Feature Remarks

2015-0101: Two (2) increment core samples (66%) were removed for dating purposes and yielded one (1) reliable date (33%) of AD 1854 (CMTDD3). One (1) CMT core sample was collected but proved to be too rotten for analysis. This tree is deemed to date pre-AD 1846 due to the forest age class (age class 8) and the proximity to existing pre-AD 1846 CMTs. One (1) tree (CMT2) was flagged and recorded using a handheld GPS and has been included within the site boundary given age class of the tree stand (age class 8) and the proximity to confirmed pre-AD 1846 CMTs. This tree is deemed to pre-date AD 1846. One (1) CMT (DD3) post-date AD 1846 and falls inside the site boundary, but has not been used to define the site area. All CMTs (100%) were recorded in detail. Cored CMTs were photographed. Refer to appended CMT table for detailed CMT morphology and dates.

British Columbia Site Inventory Form

Borden Number: **GiSq-25**

Cultural Material :

<i>Type</i>	<i>Status</i>	<i>Repository</i>	<i>Date</i>
Other Sample	Collected	Archer CRM Partnership	09/Nov/2016

Details

2015-0101: Increment cores were collected from two (2) CMTs. One (1) core was too rotten for analysis.

British Columbia Site Inventory Form

Borden Number: GiSq-25

Chronology:

Method	Source	Chronology Remarks
Dendrochronology	2015-0101: Increment cores from CMTDD2 and CMT DD3.	2015-0101: Two (2) increment core samples were removed for dating purposes, and yielded one (1) reliable date of AD 1854 (DD3). See attached CMT table for more information.

From Date	From Date Qualifier	From Date Calendar	To Date	To Date Qualifier	To Date Calendar
1854	Exact	AD	1854	Exact	AD

Radiocarbon Dates:

RCD Unadjusted	RCD Unadjusted Variation (+/-)	RCD Lab Name	RCD Lab No.	RCD Adjusted
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RCD Remarks

Site Condition:

Condition					Disturbance History		
Assessed By	Assessment Date	Permit Number	Issuing Agency	Recommendation	History	Factor	Remarks
John, Dylan	09/Nov/2016	2015 101	Arch	2015-0101: Site avoidance or acquisition of S12 SAP prior to harvest.	Present	Arch Investigation	2015-0101: One increment core sample was obtained for dating purposes. Site is in good condition.

Site Visit:

Type	Date of Visit	Affiliation	Permit	Permit Type	Issuing Agency	Permit Holder	Recorder
Recording (no t	09/Nov/2015	Archer CRM Pa	2015 101	Inspection	Arch		Wilson, Jonathan

Project Description:

2015-0101: AIA of Pacific Inland Resources CP667 Block 612 (November 9, 2015).

References:

Report Title	Report Date	Report Authors	Comments
2015-101, AIAs of various forestry developments in the Babine BCTS operating area.		Craig, Frank;	2015-101: Active permit.

British Columbia Site Inventory Form

Borden Number: GiSq-25***Images:***

<i>Type</i>	<i>Repository</i>	<i>Photographer</i>	<i>Image Date</i>	<i>Description</i>	<i>Image Caption</i>
Digital Image	Archer CRM Partne	Plasway, Steve	09/Nov/2015	2015-0101: Photo of CMT DD2.	

Remarks:

<i>Date</i>	<i>Remarks</i>
09/Nov/2015	2015-0101: Chin-nee Services Ltd. conducted CMT sampling, under permit 2015-0101 on the subject project. All dendrochronological sampling was collected as per standards outlined in permit 2015-0101 and samples have been analyzed by ARCHER in its lab.

Attached Documents:

<i>Type</i>	<i>Description</i>	<i>Filename</i>
Map	2015-0101 site map	GiSq-25 2015-0101 sitemap.pdf
Detailed Data Table	2015-0101 CMT Table	GiSq-25 2015-0101 CMT_Table.pdf

Site #:	GiSq-25 (GiSq-11435-t3)			Development:			PIR CP667 Block 612			Date:	09/11/2015			Recorders:	Chin-neeh Services Ltd.									
CMT #	Species	Alive ?	Type	No. Scars	Scar No.	Scar Morph (W, OT, H)	SDE (°)	SLP (°)	SLP DIR	DBH (cm)	HAG	LEN	WID	DEP	Scar Shape	Top Shape	Cut Mark	Basal "V"	Cut Branch	Chop	Core Y/N	Core Hgt	Photo #	Comments
DD2	PL	A	CS	1	1	OT	10	18	122	41	39	88	10	6	L	S	N/A	Y	N/A	Y	Y	124	44	ROTTEN
DD3	PL	A	CS	1	1	OT	360	18	122	32.5	10	154	46	4	C	IR	N/A	Y	N/A	Y	Y	153	45	1854
DD4	PL	A	CS	2	1	OT	335	18	122	40.7	0	160	19	11	C	IR	N/A	N/A	N/A	N/A	N	N/A	46	
DD4	PL	A	CS	2	2	W	105	18	122	40.7	72	59	7	11	L	AR	Y	N/A	N/A	N/A	N	N/A	47	

Legend

All dimensions measured in centimeters (CM)

SP (Species): PL (lodgepole pine), At (Aspen), E (Birch), Pa (Whitebark pine), Py (Yellow pine), S (Spruce)

A/D: A (alive) or D (dead)

Type (Site type descriptor): T (Tapered), R (Rectangular), G (Girdled), O (Other), CS (Cambium stripped)

Scar Morph: W (Window), OT (Open Top), H (Healed))

SDE (Side of tree): measured in degrees

SLP (Slope): Slope of terrain in degrees

SLP DIR: Direction of slope

Scar shape: R (Rectangular), C (Columnar), G (Girdled), IT (Inverted triangle), T (Triangle), L (lenticular), H (Healed), BD/BO (Blaze - Diamond or Oval), IR (Irregular)

Top Shape: (S) Square, C (Round), X (X-cut), MX (Multi-X cut), SL/SR (Stepped - Left or Right), AL/AR (Angled - Left or Right), T (Tapered), IR (Irregular)

Cutmark: Y (yes), N (no) Basal V: Y (yes), N (no) Cut branch: Y (yes), N (no) Chop: Y (yes), N (no) Core: Y (yes), N (no) Core Hgt: Height of core in cm, or R (Rotten)

British Columbia Site Inventory Form

Borden Number: GiSq-26

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
GiSq-11435-t4		Gross, Peter	17/Nov/2016

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
55 26'41"	-126 47'28"	639720	6146501	9

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
		639720	6146501	9

Map Sheet

Number	Spatial Accuracy
93M.047	1:10K
93M/07	1:10K

Accuracy Remarks

2015-0101: Site digitized using shapefile provided by GIS department. Location matches GIS coordinates and detailed site map. Size matches site dimensions.

Site Location:

Description

2015-0101: The site is located approximately 17.3 km northwest of the north-western arm of Babine Lake. Specifically it is located 285 m at 5? to Nichyeskwa Creek; 9 km at 120? to the north end of Nilkitkwa Lake; and 11.1 km at 201? to French Peak.

Site Access

2015-0101: From Smithers, head south on Hwy 16 for approximately 6 km, turn left (west) onto Babine Lake Road and continue till 50.5 km before turning left (northwest) onto the 4000 Forestry Service Road (FSR). Travel on the 4000 FSR for 55.5 km and the turn left (northwest) onto the 455 FSR and continue for 7.3 km before parking. The site is located 691 m at 46? from this location.

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
20 E -W	20 N -S		2015-0101: Site boundaries are based on the observed location of CMTs and a 10 m buffer. CMTs were demarcated with blue CMT flagging.

British Columbia Site Inventory Form

Borden Number: GiSq-26

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
820-840	-19-4663	2015-0101: Elevation derived from 1:20 000 TRIM contour data.

Biogeography

Type	Name	Description
Micro Topography		2015-0101: On flat terrain.
Minor Drainage		2015-0101: Nichyeskwa Creek is approximately 285 m north.
GIS Drainage	BABINE RIVER	
GIS VegetationZone	SBSmc2	
GIS EcoRegion	Fraser Basin	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
Provincial	Forestry	Pacific Inland Resources	2015-0101: Cut Permit 667 Block 612.
GIS LandDistricts		Cassiar District	
GIS Municipalities		Bulkley-Nechako, Subd. B	
GIS RegionalDistrict		Bulkley-Nechako	

Site Typology:

Class	Type	Sub Type	Descriptor
TRADITIONAL USE	Culturally Modified Tree	bark-stripped	cambium-stripped

CMT

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
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CMTs (n=1)

Feature Remarks

2015-0101: No increment core sample was removed for dating and no measurement data was recorded. However, due to the age class of the forest (class 8), and the proximity of existing pre-AD 1846 CMT sites in the area, the CMT was deemed to date to pre-AD 1846.

Cultural Material :

Type	Status	Repository	Date
Other Sample	Observed	Archer CRM Partnership	09/Nov/2016

Details

2015-0101: One (1) CMT was observed in the field.

British Columbia Site Inventory Form

Borden Number: GiSq-26

Chronology:

<i>Method</i>	<i>Source</i>	<i>Chronology Remarks</i>
		2015-0101: No increment core sample was removed for dating and no measurement data was recorded. However, due to the age class of the forest (class 8), and the proximity of existing pre-AD 1846 CMT sites in the area, the CMT was deemed to be pre-AD 1846.

<i>From Date</i>	<i>From Date Qualifier</i>	<i>From Date Calendar</i>	<i>To Date</i>	<i>To Date Qualifier</i>	<i>To Date Calendar</i>
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Radiocarbon Dates:

<i>RCD Unadjusted</i>	<i>RCD Unadjusted Variation (+/-)</i>	<i>RCD Lab Name</i>	<i>RCD Lab No.</i>	<i>RCD Adjusted</i>
<i>RCD Remarks</i>				

Site Condition:

<i>Condition</i>					<i>Disturbance History</i>		
<i>Assessed By</i>	<i>Assessment Date</i>	<i>Permit Number</i>	<i>Issuing Agency</i>	<i>Recommendation</i>	<i>History</i>	<i>Factor</i>	<i>Remarks</i>
Plasway, Steve	09/Nov/2015	2015 101	Arch	2015-0101: Site avoidance or acquisition of S12 SAP prior to harvest.	Present	Insect Infestation	2015-0101: A portion of the trees in the proposed block are dead from the mountain pine beetle.

Site Visit:

<i>Type</i>	<i>Date of Visit</i>	<i>Affiliation</i>	<i>Permit</i>	<i>Permit Type</i>	<i>Issuing Agency</i>	<i>Permit Holder</i>	<i>Recorder</i>
Recording (no t	09/Nov/2015	Archer CRM Pa	2015 101	Inspection	Arch		Wilson, Jonathan

Project Description:

2015-0101: AIA of Pacific Inland Resources CP667 Block 612 (November 9, 2015).

References:

<i>Report Title</i>	<i>Report Date</i>	<i>Report Authors</i>	<i>Comments</i>
2015-101, AIAs of various forestry developments in the Babine BCTS operating area.		Craig, Frank;	2015-101: Active permit.

British Columbia Site Inventory Form

Borden Number: GiSq-26**Images:**

<i>Type</i>	<i>Repository</i>	<i>Photographer</i>	<i>Image Date</i>	<i>Description</i>	<i>Image Caption</i>
Digital Image	Archer CRM Partne	Plasway, Steve	09/Nov/2015	2015-0101: Photo of CMT.	

Remarks:

<i>Date</i>	<i>Remarks</i>
09/Nov/2015	2015-0101: No further work is recommended for this site. The significant amount of CMT morphology and age data collected in this contiguous forest stand is sufficient.

Attached Documents:

<i>Type</i>	<i>Description</i>	<i>Filename</i>
Detailed Data Table	2015-0101 CMT Table	GiSq-26 2015-0101 CMT_Table.pdf
Map	2015-0101 site map	GiSq-26 2015-0101 sitemap.pdf

Site #:	GiSq-26 (GiSq-11435-t4)			Development:		PIR CP667 Block 612					Date:	09/11/2016			Recorders:	Chin-neeh Services Ltd.									
CMT #	Species	Alive ?	Type	No. Scars	Scar No.	Scar Morph (W, OT, H)	SDE (°)	SLP (°)	SLP DIR	DBH (cm)	HAG	LEN	WID	DEP	Scar Shape	Top Shape	Cut Mark	Basal "V"	Cut Branch	Chop	Core Y/N	Core Hgt	Photo #	Comments	
CMT	No Data Recorded																								
<p>Legend All dimensions measured in centimeters (CM)</p> <p>SP (Species): PL (lodgepole pine), At (Aspen), E (Birch), Pa (Whitebark pine), Py (Yellow pine), S (Spruce)</p> <p>A/D: A (alive) or D (dead)</p> <p>Type (Site type descriptor): T (Tapered), R (Rectangular), G (Girdled), O (Other), CS (Cambium stripped)</p> <p>Scar Morph: W (Window), OT (Open Top), H (Healed)</p> <p>SDE (Side of tree): measured in degrees</p> <p>SLP (Slope): Slope of terrain in degrees</p> <p>SLP DIR: Direction of slope</p> <p>Scar shape: R (Rectangular), C (Columnar), G (Girdled), IT (Inverted triangle), T (Triangle), L (lenticular), H (Healed), BD/BO (Blaze - Diamond or Oval), IR (Irregular)</p> <p>Top Shape: (S) Square, C (Round), X (X-cut), MX (Multi-X cut), SL/SR (Stepped - Left or Right), AL/AR (Angled - Left or Right), T (Tapered), IR (Irregular)</p> <p>Cutmark: Y (yes), N (no) Basal V: Y (yes), N (no) Cut branch: Y (yes), N (no) Chop: Y (yes), N (no) Core: Y (yes), N (no) Core Hgt: Height of core in cm, or R (Rotten)</p>																									

British Columbia Site Inventory Form

Borden Number: GiSq-27

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
GiSq-11435-t5		Gross, Peter	17/Nov/2016

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
55 26'30"	-126 47'17"	639923	6146156	9

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
		639928	6146174	9

Map Sheet

Number	Spatial Accuracy
93M.047	1:10K
93M/07	1:10K

Accuracy Remarks

2015-0101: Site digitized using shapefile provided by GIS department. Location matches GIS coordinates and detailed site map. Size matches site dimensions.

Site Location:

Description

2015-0101: The site is located approximately 16.9 km northwest of the north-western arm of Babine Lake. Specifically it is located 486 m at 8? to Nichyeskwa Creek; 8.6 km at 118? to the north end of Nilkitkwa Lake; and 10.9 km at 206? to French Peak.

Site Access

2015-0101: From Smithers, head south on Hwy 16 for approximately 6 km, turn left (west) onto Babine Lake Road and continue till 50.5 km before turning left (northwest) onto the 4000 Forestry Service Road (FSR). Travel on the 4000 FSR for 55.5 km and the turn left (northwest) onto the 455 FSR and continue for 7.3 km before parking. The site is located 675 m at 83? from this location.

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
102 N -S	87 E -W		2015-0101: Site boundaries are based on the observed location of CMTs and a 10 m buffer. CMTs were demarcated with blue CMT flagging.

British Columbia Site Inventory Form

Borden Number: GiSq-27

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
820-840	-19-4663	2015-0101: Elevation derived from 1:20 000 TRIM contour data.

Biogeography

Type	Name	Description
Minor Drainage		2015-0101: Nichyeskwa Creek is approximately 540 m northeast.
Micro Topography		2015-0101: On flat terrain.
GIS VegetationZone	SBSmc2	
GIS EcoRegion	Fraser Basin	
GIS Drainage	BABINE RIVER	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS RegionalDistrict		Buckley-Nechako	
GIS Municipalities		Bulkley-Nechako, Subd. B	
GIS LandDistricts		Cassiar District	
Provincial	Forestry	Pacific Inland Resources	2015-0101: Cut Permit 667 Block 612.

Site Typology:

Class	Type	Sub Type	Descriptor
TRADITIONAL USE	Culturally Modified Tree	bark-stripped	cambium-stripped

CMT

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
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CMTs (n=17)

Feature Remarks

2015-0101: Six (6) increment core samples (35%) were removed for dating purposes, and yielded six (6) reliable dates ranging between AD 1843 and 1875 (1843, 1855, 1861, 1865 x2, and 1870). Eleven (11) trees of age class 8 were flagged recorded using a handheld GPS and have been included within the site boundary given the proximity to confirmed pre-AD 1846 CMTs. Three (3) CMTs post-date AD 1846 and fall inside the site boundary, but have not been used to define the site area. Two (2) post-AD 1846 CMTs (CMT FF1 and FF9) were identified outside the site boundary area. A sample of eleven (11) CMTs (64%) were recorded in detail. Cored CMTs were photographed. Refer to appended CMT table for detailed CMT morphology and dates.

Cultural Material :

Type	Status	Repository	Date
Other Sample	Collected	Archer CRM Partnership	09/Nov/2015

Details

2015-0101: Increment cores were collected from six (6) CMTs.

British Columbia Site Inventory Form

Borden Number: GiSq-27

Chronology:

<i>Method</i>	<i>Source</i>	<i>Chronology Remarks</i>
Dendrochronology	2015-0101: Increment cores from CMT FF1, FF3, FF6, FF7, FF9 and FF13.	: 2015-0101: Four (4) increment core samples were removed for dating purposes, and yielded four (4) reliable dates of AD 1843 (FF6), 1855 (FF13), 1861 (FF3) and 1865 (FF7). Two (2) increment cores were dated (FF1 and FF9) but are outside the site boundary. See attached CMT table for more information.

<i>From Date</i>	<i>From Date Qualifier</i>	<i>From Date Calendar</i>	<i>To Date</i>	<i>To Date Qualifier</i>	<i>To Date Calendar</i>
1843	Exact	AD	1870	Exact	AD

Radiocarbon Dates:

<i>RCD Unadjusted</i>	<i>RCD Unadjusted Variation (+/-)</i>	<i>RCD Lab Name</i>	<i>RCD Lab No.</i>	<i>RCD Adjusted</i>
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RCD Remarks

Site Condition:

<i>Condition</i>					<i>Disturbance History</i>		
<i>Assessed By</i>	<i>Assessment Date</i>	<i>Permit Number</i>	<i>Issuing Agency</i>	<i>Recommendation</i>	<i>History</i>	<i>Factor</i>	<i>Remarks</i>
Plasway, Steve	09/Nov/2015	2015 101	Arch	2015-0101: Site avoidance or acquisition of S12 SAP prior to harvest.	Present	Arch Investigation	2015-0101: One increment core sample was obtained for dating purposes. Site is in good condition.
					Present	Insect Infestation	2015-0101: Several trees are dead from the mountain pine beetle infestation.

Site Visit:

<i>Type</i>	<i>Date of Visit</i>	<i>Affiliation</i>	<i>Permit</i>	<i>Permit Type</i>	<i>Issuing Agency</i>	<i>Permit Holder</i>	<i>Recorder</i>
Recording (no t	09/Nov/2015	Archer CRM Pa	2015 101	Inspection	Arch		Wilson, Jonathan

Project Description:

2015-0101: AIA of Pacific Inland Resources CP667 Block 612 (November 9, 2015).

British Columbia Site Inventory Form

Borden Number: GiSq-27

References:

<i>Report Title</i>	<i>Report Date</i>	<i>Report Authors</i>	<i>Comments</i>
2015-101, AIAs of various forestry developments in the Babine BCTS operating area.		Craig, Frank;	2015-101: Active permit.

Images:

<i>Type</i>	<i>Repository</i>	<i>Photographer</i>	<i>Image Date</i>	<i>Description</i>	<i>Image Caption</i>
Digital Image	Archer CRM Partne	Plasway, Steve	09/Nov/2015	2015-0101: Photos of CMTs FF3, FF5 and FF6.	

Remarks:

<i>Date</i>	<i>Remarks</i>
09/Nov/2015	2015-0101: Chin-nee Services Ltd. conducted CMT sampling, under permit 2015-0101 on the subject project. All dendrochronological sampling was collected as per standards outlined in permit 2015-0101 and samples have been analyzed by ARCHER in its lab.

Attached Documents:

<i>Type</i>	<i>Description</i>	<i>Filename</i>
Map	2015-0101 site map	GiSq-27 2015-0101 sitemap.pdf
Detailed Data Table	2015-0101 CMT Table	GiSq-27 2015-0101 CMT_Table.pdf
Image Other	2015-0101 Photoplate	GiSq-27 2015-0101 photoplate.pdf

Site #:	GiSq-27 (GiSq-11435-t5)	Development:	PIR CP667 Block 612	Date:	10/11/2015	Recorders:	Chin-neeh Services Ltd.																	
CMT #	Species	Alive ?	Type	No. Scars	Scar No.	Scar Morph (W, OT, H)	SDE (°)	SLP (°)	SLP DIR	DBH (cm)	HAG	LEN	WID	DEP	Scar Shape	Top Shape	Cut Mark	Basal "V"	Cut Branch	Chop	Core Y/N	Core Hgt	Photo #	Comments
FF1	PL	A	CS	1	1	OT	65	0	N/A	44.6	0	149	22	14	C	S	N/A	N/A	N/A	N/A	Y	110	49	1870
FF2	PL	D	CS	1	1	OT	55	0	N/A	37	8	131	18	13	C	IR	N/A	Y	N/A	N/A	N	N/A	50	
FF3	PL	A	CS	1	1	W	99	0	N/A	32.5	0	112	8	5	L	T	N/A	N/A	N/A	N/A	Y	85	51	1861
FF4	PL	A	CS	1	1	W	61	0	N/A	47	71	85	6	8	L	AL	Y	N/A	N/A	N/A	N	N/A	52	
FF5	PL	A	CS	1	1	OT	246	0	N/A	48	11	101	15	4	R	O	N/A	N/A	N/A	N/A	N	N/A	53	
FF6	PL	A	CS	1	1	W	73	0	N/A	49.5	33	93	9	10	L	IR	N/A	Y	N/A	N/A	Y	106	54	1843
FF7	PL	A	CS	1	1	W	90	0	N/A	56.2	75	61	9	12	L	O	N/A	N/A	N/A	N/A	Y	113	55	1865
FF8	PL	A	CS	1	1	W	107	0	N/A	44.2	71	49	3	10	L	T	N/A	N/A	N/A	N/A	N	N/A	57	
FF9	PL	A	CS	1	1	OT	125	0	N/A	38.6	58	72	12	8	L	IR	N/A	N/A	N/A	N/A	Y	122	56	1865
FF10	PL	D	CS	1	1	OT	320	0	N/A	54	0	130	18	6	L	IR	N/A	N/A	1	N/A	N	N/A	58	
FF11	No data recorded																							
FF12	PL	D	CS	1	1	OT	131	0	N/A	49.2	0	163	29	18	C	AR	Y	N/A	N/A	N/A	N	N/A	59	
FF13	PL	A	CS	1	1	OT	360	0	N/A	47.1	0	121	9	9	L	S	Y	N/A	N/A	Y	Y	118	60	1855
FF14	No data recorded																							
FF15	No data recorded																							
FF16	No data recorded																							
FF17	No data recorded																							
Legend All dimensions measured in centimeters (CM) SP (Species): PL (lodgepole pine), At (Aspen), E (Birch), Pa (Whitebark pine), Py (Yellow pine), S (Spruce) A/D: A (alive) or D (dead) Type (Site type descriptor): T (Tapered), R (Rectangular), G (Girdled), O (Other), CS (Cambium stripped) Scar Morph: W (Window), OT (Open Top), H (Healed)) SDE (Side of tree): measured in degrees SLP (Slope): Slope of terrain in degrees SLP DIR: Direction of slope Scar shape: R (Rectangular), C (Columnar), G (Girdled), IT (Inverted triangle), T (Triangle), L (lenticular), H (Healed), BD/BO (Blaze - Diamond or Oval), IR (Irregular) Top Shape: (S) Square, C (Round), X (X-cut), MX (Multi-X cut), SL/SR (Stepped - Left or Right), AL/AR (Angled - Left or Right), T (Tapered), IR (Irregular) Cutmark: Y (yes), N (no) Basal V: Y (yes), N (no) Cut branch: Y (yes), N (no) Chop: Y (yes), N (no) Core: Y (yes), N (no) Core Hgt: Height of core in cm, or R (Rotten)																								

British Columbia Site Inventory Form

Borden Number: GiSq-28

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
GiSq-11435-t6		Gross, Peter	17/Nov/2016

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone	Historic Source	Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
55 26'30"	-126 47'3"	640173	6146184	9				640173	6146184	9

Map Sheet

Number	Spatial Accuracy
93M/07	1:10K
93M.047	1:10K

Accuracy Remarks

2015-0101: Site digitized using shapefile provided by GIS department. Location matches GIS coordinates and detailed site map. Size matches site dimensions.

Site Location:

Description	Site Access
2015-0101: The site is located approximately 16.8 km northwest of the north-western arm of Babine Lake. Specifically it is located 668 m at 29? to Nichyeskwa Creek; 8.4 km at 120? to the north end of Nilkitkwa Lake; and 11.1 km at 207? to French Peak.	2015-0101: From Smithers, head south on Hwy 16 for approximately 6 km, turn left (west) onto Babine Lake Road and continue till 50.5 km before turning left (northwest) onto the 4000 Forestry Service Road (FSR). Travel on the 4000 FSR for 55.5 km and the turn left (northwest) onto the 455 FSR and continue for 7.3 km before parking. The site is located 960 m at 81? from this location.

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
47 NW -SE	20 NE -SW		2015-0101: Site boundary was defined by a 5 m buffer around the singular positive test as per Archaeology Branch guidelines. Total shovel tests (n=34), one of which was positive (n=1) for cultural material. Site boundary was flagged with "ARCHER No Work Zone" flagging.

British Columbia Site Inventory Form

Borden Number: GiSq-28

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
800-820	-19-4663	2015-0101: Elevation derived from 1:20 000 TRIM contour data. Specific elevation of 813 m (ST1) was taken from a hand-held GPS unit.

Biogeography

Type	Name	Description
Minor Drainage		2015-0101: Nichyeskwa Creek is approximately 470 m northeast. An unnamed creek is located 13 m southeast.
Micro Topography		2015-0101: On a 6 m elevated point landform.
GIS Drainage	BABINE RIVER	
GIS VegetationZone	SBSmc2	
GIS EcoRegion	Fraser Basin	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS RegionalDistrict		Buckley-Nechako	
GIS Municipalities		Bulkley-Nechako, Subd. B	
Provincial	Forestry	Pacific Inland Resources.	2015-0101: Cut Permit 667 Block 612.
GIS LandDistricts		Cassiar District	

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
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Feature Remarks

Cultural Material :

Type	Status	Repository	Date
Artifact	Collected	UNBC	08/Sep/2016

Details

2015-0101: One (1) chert tertiary flake and one obsidian tertiary flake from ST1. Artifact table attached as related document.

British Columbia Site Inventory Form

Borden Number: GiSq-28

Stratigraphy:

<i>Minimum</i>	<i>Maximum</i>	<i>General Stratigraphy Remarks</i>
0.05	0.10	2015-0101: 0-5 cm (Layer 1) littermat; 5-15 cm (Layer 2) red-brown silty medium sand with 5% rounded pebbles (CH); 15-33 cm (Layer 3) medium brown sand with 15% rounded pebbles; 33-43 cm (Layer 4) grey-brown course sand. No subsurface test log attached

British Columbia Site Inventory Form

Borden Number: GiSq-28

Site Condition:

<i>Condition</i>					<i>Disturbance History</i>		
<i>Assessed By</i>	<i>Assessment Date</i>	<i>Pemit Number</i>	<i>Issuing Agency</i>	<i>Recommendation</i>	<i>History</i>	<i>Factor</i>	<i>Remarks</i>
Lindsay, Patricia	08/Sep/2016	2015 101	Arch	2015-0101: Site avoidance or acquisition of S12 SAP prior to harvest.	Present	Arch Investigation	2015-0101: Shovel tests were placed at the site to an average depth of 30 cm dbs. Site is in good condition.

References:

<i>Report Title</i>	<i>Report Date</i>	<i>Report Authors</i>	<i>Comments</i>
2015-101, AIAs of various forestry developments in the Babine BCTS operating area.		Craig, Frank;	2015-101: Active permit.

Images:

<i>Type</i>	<i>Repository</i>	<i>Photographer</i>	<i>Image Date</i>	<i>Description</i>	<i>Image Caption</i>
Digital Image	Archer CRM Partne	Lindsay, Patricia	08/Sep/2016	2015-0101: 5 photos of site area, and 1 of artifacts.	

Remarks:

<i>Date</i>	<i>Remarks</i>
08/Sep/2016	2015-0101: No further work.

Attached Documents:

<i>Type</i>	<i>Description</i>	<i>Filename</i>
Map	2015-0101 site map	GiSq-28 2015-0101 sitemap.pdf
Detailed Data Table	2015-0101 Artifact table	GiSq-28 2015-0101 Artifact Table.pdf
Image Other	2015-0101 Photoplate	GiSq-28 2015-0101 photoplate.pdf

Catalogue	Artifact Category	ArtifactType	Weightg	Color	Material	Opacity	Patterning	Location:	#	DBScm	count	RBCM#
6042	Debitage	Flake, Tertiary	1.00	Black	Chert	Opaque	Solid	Test Pit	1	5 to 10	1	GiSq-28: 1
6043	Debitage	Flake, Tertiary	0.80	Black	Obsidian	Semi- translucent	Solid	Test Pit	1	5 to 10	2	GiSq-28: 2

British Columbia Site Inventory Form

Borden Number: GiSq-29

Protected by Legislation: YES

Identification:

Temporary Number	Site Name	Assigned By	Date Assigned
GiSq-11435-t7		Gross, Peter	17/Nov/2016

Map Reference:

GIS Populated

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
55 26'41"	-126 46'52"	640347	6146519	9

Historic Source

Latitude	Longitude	UTM Easting	UTM Northing	UTM Zone
		640357	6146510	9

Map Sheet

Number	Spatial Accuracy
93M/07	1:10K
93M.047	1:10K

Accuracy Remarks

2015-0101: Site digitized using shapefile provided by GIS department. Location matches GIS coordinates and detailed site map. Size matches site dimensions.

Site Location:

Description

2015-0101: The site is located approximately 16.9 km northwest of the north-western arm of Babine Lake. Specifically it is located 83 m at 17° to Nichyeskwa Creek; 8.4 km at 122° to the north end of Nilkitkwa Lake; and 11.4 km at 207° to French Peak.

Site Access

2015-0101: From Smithers, head south on Hwy 16 for approximately 6 km, turn left (west) onto Babine Lake Road and continue till 50.5 km before turning left (northwest) onto the 4000 Forestry Service Road (FSR). Travel on the 4000 FSR for 55.5 km and the turn left (northwest) onto the 455 FSR and continue for 7.3 km before parking. The site is located 1.2 m at 66° from this location.

Street Address:

Street Number	Street Name	City	Postal Code

Site Dimensions:

Length (m)	Width (m)	Site Area	Comments
47 NW -SE	20 NE -SW		2015-0101: Site boundaries are based on the observed location of CMTs and a 10 m buffer. CMTs were demarcated with blue CMT flagging.

British Columbia Site Inventory Form

Borden Number: GiSq-29

Environment:

Elevation (metres above Sea Level)

User Elevation	GIS Elevation	Elevation Comments
800-820	-19-4663	2015-0101: Elevation derived from 1:20 000 TRIM contour data.

Biogeography

Type	Name	Description
Minor Drainage		2015-0101: Nichyeskwa Creek is approximately 70 m northeast.
Micro Topography		2015-0101: On a terrace.
GIS VegetationZone	SBSmc2	
GIS EcoRegion	Fraser Basin	
GIS Drainage	BABINE RIVER	

Tenure/Reserves:

Jurisdiction	Tenure/Reserves T	Description	Tenure Remarks
GIS LandDistricts		Cassiar District	
GIS Municipalities		Bulkley-Nechako, Subd. B	
Provincial	Forestry	Pacific Inland Resources.	2015-0101: Cut Permit 667 Block 612.
GIS RegionalDistrict		Buckley-Nechako	

Site Typology:

Class	Type	Sub Type	Descriptor
TRADITIONAL USE	Culturally Modified Tree	bark-stripped	cambium-stripped

CMT

Feature Description Table

Feature #	Length	Width	Dia.	Depth	DBS from	DBS To	Shape	Orientation	Berm/Rim	Colour
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CMTs (n=2)

Feature Remarks

2015-0101: One (1) increment core sample (50%) was removed for dating purposes and yielded one (1) reliable date (50%) of AD 1829. One (1) tree (CMTOUT) was flagged and recorded using a handheld GPS and has been included within the site boundary given age class of the tree stand (age class 8) and the proximity to confirmed pre-AD 1846 CMTs. This tree is deemed to pre-date AD 1846. A sample of one (1) CMT (50%) was recorded in detail. The cored CMT was photographed. These CMTs are located immediately outside the northwest proposed boundary. Refer to appended CMT table for detailed CMT morphology and dates.

Cultural Material :

Type	Status	Repository	Date
Other Sample	Collected	Archer CRM Partnership	10/Nov/2015

Details

2015-0101: One (1) increment core was collected.

British Columbia Site Inventory Form

Borden Number: GiSq-29

Chronology:

<i>Method</i>	<i>Source</i>	<i>Chronology Remarks</i>
Dendrochronology	2015-0101: Increment core from CMT EE1.	2015-0101: One (1) increment core sample was removed for dating purposes, and yielded one (1) reliable date of AD 1829 (EE1). See attached CMT table for more information.

<i>From Date</i>	<i>From Date Qualifier</i>	<i>From Date Calendar</i>	<i>To Date</i>	<i>To Date Qualifier</i>	<i>To Date Calendar</i>
1829	Exact	AD	1829	Exact	AD

Radiocarbon Dates:

<i>RCD Unadjusted</i>	<i>RCD Unadjusted Variation (+/-)</i>	<i>RCD Lab Name</i>	<i>RCD Lab No.</i>	<i>RCD Adjusted</i>
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RCD Remarks

Site Condition:

<i>Condition</i>					<i>Disturbance History</i>		
<i>Assessed By</i>	<i>Assessment Date</i>	<i>Permit Number</i>	<i>Issuing Agency</i>	<i>Recommendation</i>	<i>History</i>	<i>Factor</i>	<i>Remarks</i>
Plasway, Steve	10/Nov/2015	2015 101	Arch	2015-0101: Site avoidance or acquisition of S12 SAP prior to harvest.	Present	Arch Investigation	2015-0101: One increment core sample was obtained for dating purposes. Site is in good condition.
					Present	Insect Infestation	2015-0101: Several trees in the proposed block are dead from the mountain pine beetle infestation.

Site Visit:

<i>Type</i>	<i>Date of Visit</i>	<i>Affiliation</i>	<i>Permit</i>	<i>Permit Type</i>	<i>Issuing Agency</i>	<i>Permit Holder</i>	<i>Recorder</i>
Recording (no t	10/Nov/2015	Archer CRM Pa	2015 101	Inspection	Arch		Wilson, Jonathan

Project Description:

2015-0101: AIA of Pacific Inland Resources CP667 Block 612 (November 10, 2015).

British Columbia Site Inventory Form

Borden Number: GiSq-29

References:

<i>Report Title</i>	<i>Report Date</i>	<i>Report Authors</i>	<i>Comments</i>
2015-101, AIAs of various forestry developments in the Babine BCTS operating area.		Craig, Frank;	2015-101: Active permit.

Images:

<i>Type</i>	<i>Repository</i>	<i>Photographer</i>	<i>Image Date</i>	<i>Description</i>	<i>Image Caption</i>
Digital Image	Archer CRM Partne	Plasway, Steve	10/Nov/2015	2015-0101: Photo of CMT EE1.	

Remarks:

<i>Date</i>	<i>Remarks</i>
10/Nov/2015	2015-0101: Chin-nee Services Ltd. conducted CMT sampling, under permit 2015-0101 on the subject project. All dendrochronological sampling was collected as per standards outlined in permit 2015-0101 and samples have been analyzed by ARCHER in its lab.

Attached Documents:

<i>Type</i>	<i>Description</i>	<i>Filename</i>
Map	2015-0101 site map	GiSq-29 2015-0101 sitemap.pdf
Detailed Data Table	2015-0101 CMT Table	GiSq-29 2015-0101 CMT_Table.pdf

Site #:	GiSq-29 (GiSq-11435-t7)			Development:			PIR CP667 Block 612			Date:	10/11/2016			Recorders:	Chin-nee Services Ltd.									
CMT #	Species	Alive ?	Type	No. Scars	Scar No.	Scar Morph (W, OT, H)	SDE (°)	SLP (°)	SLP DIR	DBH (cm)	HAG	LEN	WID	DEP	Scar Shape	Top Shape	Cut Mark	Basal "V"	Cut Branch	Chop	Core Y/N	Core Hgt	Photo #	Comments
EE1	PL	A	CS	1	1	W	13	0	N/A	59.1	16	100	9	10	L	R	N/A	N/A	N/A	N/A	Y	103	48	1829
CMTOUT	No data recorded																							
<p>Legend All dimensions measured in centimeters (CM)</p> <p>SP (Species): PL (lodgepole pine), At (Aspen), E (Birch), Pa (Whitebark pine), Py (Yellow pine), S (Spruce)</p> <p>A/D: A (alive) or D (dead)</p> <p>Type (Site type descriptor): T (Tapered), R (Rectangular), G (Girdled), O (Other), CS (Cambium stripped)</p> <p>Scar Morph: W (Window), OT (Open Top), H (Healed)</p> <p>SDE (Side of tree): measured in degrees</p> <p>SLP (Slope): Slope of terrain in degrees</p> <p>SLP DIR: Direction of slope</p> <p>Scar shape: R (Rectangular), C (Columnar), G (Girdled), IT (Inverted triangle), T (Triangle), L (lenticular), H (Healed), BD/BO (Blaze - Diamond or Oval), IR (Irregular)</p> <p>Top Shape: (S) Square, C (Round), X (X-cut), MX (Multi-X cut), SL/SR (Stepped - Left or Right), AL/AR (Angled - Left or Right), T (Tapered), IR (Irregular)</p> <p>Cutmark: Y (yes), N (no) Basal V: Y (yes), N (no) Cut branch: Y (yes), N (no) Chop: Y (yes), N (no) Core: Y (yes), N (no) Core Hgt: Height of core in cm, or R (Rotten)</p>																								