

Final Cultural Resources Survey Report
Blue Lake Hydroelectric Project (FERC No. 2230) Expansion
Sitka, Alaska

Prepared by:



Prepared for:

City and Borough of Sitka Electric Department
105 Jarvis Street, Sitka, Alaska 99835

April, 2009

Executive Summary

The City and Borough of Sitka Electric Department, Sitka, Alaska is in the process of applying for an amendment to the Blue Lake Hydroelectric Project's (Project) FERC license to reflect two significant changes in Project design: 1) addition of new generating turbines at or near the existing powerhouse and 2) raising the Project dam as much as 83 feet. The Project would result in significant physical change primarily related to inundation of 420 acres of land around Blue Lake and in areas potentially disturbed by construction of the higher dam and new powerhouse.

Significant Project impacts in the Area of Potential Effect (APE) require compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966. The Act requires federal agencies to protect or mitigate for the loss of archaeological, historical or cultural properties that are listed or eligible for listing on the National Register of Historic Places. In October, 2008 Paleo Logics, Wrangell, Alaska conducted a cultural resources survey to address agency concern in the areas planned for the new powerhouse, pipelines and tunnels, and surge chamber on City owned property at Sawmill Creek (Lower APE), and the proposed inundation area around Blue Lake and dam site area, both in the Tongass National Forest (Upper APE).

Prior to the fieldwork, Alaska Heritage Resource Survey (AHRA) records and atlases at the Office of History and Archaeology (OHA) were reviewed for documented cultural resources in or near the APE. Based on the literature search, one site on file within the APE were segments of corduroy road/trail built in 1898 to access the Pande Basin mine from Blue Lake recorded during the Blue Lake Relicensing Project in 2005. The Office of History and Archaeology assigned the site the Alaska Heritage Resources Survey record number, SIT-733. Also in compliance with the NHPA, Paleo Logics informed the Sitka Tribe of Alaska (STA) of the archaeological survey project. STA had no additional concerns regarding the Project beyond the 2005 testimonies collected for the Blue Lake Hydroelectric Project (FERC No. 2230) Relicensing.

The field survey recorded twelve segments of corduroy in the survey area, three of which are in the APE. Cultural resources outside the APE included: nine segments of corduroy road, the Pande Basin trail to Glacier Lake, and the culturally modified tree. In consultation with the U.S. Forest Service Zone Archaeologist in Sitka, the trail(s) with segments of corduroy road was not considered eligible for the National Register.

The results of an intensive archaeological survey of the proposed Blue Lake Project Expansion as currently described in City and Borough of Sitka 2008 (SDI) should be considered to have no effect on any properties listed on or determined eligible for listing on the National Register of Historic Places. No significant cultural resources were recorded for the Blue Lake shoreline, basin, and dam site area (Upper APE), and the areas proposed for the turbine, tunnel, and surge chamber (Lower APE). A determination of "No Historic Properties Affected" is recommended by Paleo Logics.

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FINAL CULTURAL RESOURCES SURVEY REPORT

BLUE LAKE HYDROELECTRIC PROJECT (FERC NO. 2230) EXPANSION

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April, 2009

INTRODUCTION and BACKGROUND

The City and Borough of Sitka Electric Department (“City”) is in the process of applying for an amendment to the Blue Lake Hydroelectric Project’s (Project) FERC license to reflect two significant changes in Project design: 1) addition of new generating turbines at or near the existing powerhouse and 2) raising the Project dam as much as 83 feet. Collectively, these actions are referred to as the “Blue Lake Project Expansion” or simply “Expansion”. The Expansion would result in significant physical change primarily related to inundation of land around Blue Lake and in areas potentially-disturbed by construction of the higher dam and new powerhouse.

The Project is on Baranof Island, approximately 5 miles east of Sitka, Alaska, on city owned property at Sawmill Creek (formerly the Medvetche River), and on Blue Lake in the Tongass National Forest (Figure 1 MAP). Details of the Expansion are described in Scoping Document I (City and Borough of Sitka 2008), available from the City and online through the FERC website (ferc.gov).

As part of the amendment process, the Federal Energy Regulatory Commission (FERC) requires compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA). The Act requires federal agencies to protect or mitigate for the loss of archaeological, historical or cultural properties that are listed or eligible for listing on the National Register of Historic Places.

As part of this effort, the City contracted with Paleo Logics of Wrangell, Alaska to initiate 1) a review of existing information; 2) contact with Sitka Tribe of Alaska (STA), and 3) a field survey within an Area of Potential Effect (APE) to document the presence of historic properties potentially affected by the Expansion.

Cultural resources studies relative to the relicensing of the Blue Lake Project were conducted in 2004 by this author and reported in Rushmore (2005). This author conducted a literature review, interviews with STA members, and certain field work, results of which are included or otherwise referenced in this study.

OBJECTIVES

The primary objective of the Blue Lake cultural resources survey was to document historic properties within an Area of Potential Effect (APE) defined to include all Expansion-related disturbances. A determination of eligibility for listing on the National Registry of Historic Places would be made for any significant properties located within the APE.

CULTURAL RESOURCES STUDY PLANNING

After review and comment of a Draft Cultural Resources Study Plan by Alaska state and federal resource agencies and STA, the City completed a Final Cultural Resources Study Plan (“Plan”) in July, 2008. The Plan called for the following elements:

- Literature and Information Review, to include: 1) Literature Review; and 2) Contact with STA;
- Define Study Area and Area of Potential Effect (APE);
- Field Survey; and
- Draft and Final Cultural Resource Reports

AREA OF POTENTIAL EFFECT

The Area of Potential Effect (APE) was divided into two primary sub-areas, the Upper and Lower APE’s, above and below the Project dam. The Upper APE included all land and water features above the dam to the limit of inundation at the proposed spill elevation of 425ft. The Lower APE included 1) the dam itself, 2) the proposed staging area and access roads near the dam 3) Sawmill Creek, below the existing powerhouse, and 4) the proposed locations of the new powerhouse and other project appurtenances near the present powerhouse (Figure 2 MAP). The fieldwork was conducted at different levels of intensity depending on field conditions.

Most of the Expansion-related 420 acres of inundation would be in the Blue Lake Creek valley which had not been extensively surveyed as part of relicensing-related cultural resource studies. Relicensing-related field surveys in this area did, however, include documentation of a corduroy road leading to a late 19th century mining area discussed below.

PROJECT AREA BACKGROUND

PHYSICAL ENVIRONMENT

“The journey to the basin was one of considerable difficulty and, in fact, hazardous in the extreme. There is no defined trail and we traversed at times, wading through deep snow deposited upon a moss-grown country, hills were almost perpendicular. I have been a traveler all my life but this is about the hardest task I have ever undertaken. You may form some sort of the roughness of the travel when I tell you that it took us three whole days to get to our journey’s end, a distance of only eight miles from our landing” (Mr. Henry I. Willey, Civil and Mining Engineer, San Francisco: interview with a reporter of *The Alaskan*, Pande Basin, March 26, 1898).

Blue Lake occupies a narrow, U-shaped, glacially scoured valley surrounded by nearly vertical 3000-4000ft mountainous terrain. The lake is 510 ft deep, 3.5-miles long and over one-half mile wide. The lake was approximately 2-miles long prior to the dam being built in 1959. Majority of the shoreline is densely forested and very steep (Figure 3). Of primary interest within the Upper APE was the potentially-inundated valley of Blue Lake Creek, Blue Lake’s primary inflow tributary (Figure 4).

The topography of the Blue Lake basin ranges from upland muskeg to floodplain. The uplands are characterized by exposed bedrock, associated with poorly drained sediments and muskeg development, stunted hemlock and pine trees. The floodplain is an extensive deposit of cobble and boulder sized glacial outwash, capped by over-bank deposits that support old-growth Sitka spruce, Western hemlock and cedar, and a thick under-story of blueberry, huckleberry, devil’s club, red alder and other forbs and mosses. The surface of the floodplain is affected by erosion and deposition during high water events, random blow-down and massive landslides and avalanches.

REGIONAL ARCHAEOLOGICAL OVERVIEW

The cultural history of the Alexander Archipelago and northern coast of British Columbia has been reviewed in detail by a number of researchers (Ackerman *et al.* 1979; Carlson 1983; Davis 1990; Fladmark 1975; Maschner 1991, 1994; McCartney 1987; Moss 1994). As a result of these and other studies the regional chronology of human habitation of Southeast Alaska has been divided into four major periods: Paleomarine, Transitional, Developmental Northwest Coast, and Historic.

The earliest documented human presence in the region is dated to around 10,000 B.P. These early sites are attributed to what has been termed the “Paleomarine Tradition,” a marine oriented people with lithic tool kits that shared distinct Siberian characteristics (Moss 1994). Sites contain microblades, wedge-shaped microblade cores, and few or no bifacially flaked tools. Animal remains include fish bones and marine shell (Davis 1990).

The Transitional Stage (6,500-5,000 B.P.) represents a period of change between the technology attributed to Paleomarine Tradition sites and that of the later Developmental Northwest Coast Tradition. Sites from the Transitional Stage are associated with raised shorelines and faunal and floral remains which suggests cultural adaptations to a changing environment (Davis 1990).

The Developmental Northwest Coast Tradition (5000 B.P. to European contact-late 1700s) contains multiple cultural patterns divided into three phases: Early, Middle, and Late (Davis 1990:197). These sites are basically distinguished by shell midden deposits, ground stone and bone technology, human burials, the establishment of larger settlements (winter villages), specialized subsistence camps with fish traps and smokehouses, fortifications, and the use of native metal (Davis, 1990).

ETHNOGRAPHIC OVERVIEW

The Tlingit are the largest Native tribal culture in Southeast Alaska, followed by Haida and Tsimshian. The establishment of the Tlingit in Southeast has yet to be documented through the archaeological record, though it is possible that the beginning of the Developmental Northwest Coast Tradition corresponds with the Tlingit becoming a dominant presence in the region. Nearly all ethnographic groups along the Northwest Coast followed settlement systems featuring movement between large, stable villages and smaller seasonal camps oriented towards specific resources. STA and their ancestors had permanent winter villages consisting of several clans which controlled access to tangible natural resources such as salmon streams, berry patches, shellfish grounds, and offshore waters for fishing and sea mammal hunting.

Village locations are relatively predictable, since landforms figure prominently in their placement. These landforms (estuaries, protected coves, river margins) occupy a relatively small part of the total landscape of Southeast Alaska, offering restricted areas in which such sites may occur. Seasonally occupied sites and task-specific locations are found in a wider variety of landscapes, depending on the location of the desired resource. Seasonal campsites tend to be small and leave little in the way of an archaeological record, with a possible exception of alpine rock cairns, and sites oriented toward trapping fish and processing shellfish.

HISTORIC CONTACT: SITKA, ALASKA

Originally a people called the Neix̄.adi claimed land rights from Sitka to Cape Ommaney. Eventually these people were displaced and possessor rights to specific lands along the west coast of Baranof Island were divided among five Tlingit clans: the Kiks'adi, Kaagwaantaan, Chookaneidi, L'ukanx.adi, and T'akeintaan (Goldschmidt and Haas 1946). The Sitka Tribe of Alaska is the culmination of these clans.

In the late 1700s, Russian, Spanish, French, English and American ships began exploration and trading voyages along the coast of Southeast Alaska. All of the nations laid claim to the Alaskan territory, however only Russia developed early settlements at

Sitka in 1799 and at Wrangell in 1834 as part of their trade pattern among the various clans. Information collected by Goldschmidt and Haas (1946:103) and STA suggests that at the time of European contact (1799) members of the Kiks'adi clan of the Sitka Tribe had possession of Silver Bay and surrounding drainage systems, though no village sites are recorded.

Tlingit groups abandoned many traditional village and subsistence sites in the early 19th century in favor of locations where trade goods were more available after the establishment of Russian forts and trading posts. After destroying the Russian fort at Saint Archangel Michael in 1802, the Sitka Tribe was forced by the Russians to leave the Sitka area in 1804. The tribe was invited to resettle near New Archangel (Sitka) in 1822 (Arndt 1983; Krause 1956:70).

After the purchase of Alaska by the United States in 1867, a dramatic change occurred again in the lives of the Sitka Tlingit with the nonnative development of a substantial mining effort around Indian River and Silver Bay, followed closely by the fishing and timber industry (Selkregg 1976).

THE MINING ERA

Prospecting for gold in the area began around 1871 and continued on a sporadic basis well into the 1990s. Silver Bay properties, including Blue Lake basin are not rich in extractable mineral deposits and contributed little to Alaska's mining industry. The Pande Basin Gold Mining Company, also known as Glacier Lake Placer (Knopf, 1912) staked a mining claim at Glacier Lake in Pande Basin. The claim was registered in 1895 and the survey recorded in 1900.

Once at the mouth of Sawmill Creek, mining equipment was hauled up a steep, two-mile wagon road from tidewater to Blue Lake (roughly following Forest Service Road 5755), to a barge that carried equipment to the head of the lake. A trail(s) was cut from Blue Lake to Pande Basin with occasional segments of corduroy road laid down in wet or steep areas.

“Construction of the road started in June 1898, with 20 men. By the end of July the force had increased to 85 men and the job was being pushed rapidly, and expensively. So costly was the road from tidewater to Blue Lake that the plan to extend it from the lake to Pande Basin was abandoned and a pack trail [SIT-00733] was built instead for that portion of the route. A camp with bunkhouses, cookhouse and mess room was constructed on a ridge above the place where the drainage tunnel was to be started” (July 23, 1898-ALASKAN-newspaper article summary, DeArmond-Sitka, Alaska) (Figure 5).

One piece of mining equipment recorded by DeArmond includes a “Fraser & Chalmers three-stamp prospecting mill, weighing four tons, drug by horse from tidewater to Blue Lake, barged to the head of the lake and carried by Indian packers over the trail to Pande Basin.”

A 5 x 7 x 300ft-long drainage tunnel was constructed to drain down Glacier Lake by 60ft to expose the gold-bearing gravel deposits (Figure 6). The tunnel was completed on December 31, 1898. By 1899 concerns were raised amongst investors about the viability of the Pande Basin mine, and by 1905 they realized the claim's ability to produce the amount of gold as advertised was a hoax; the mine was salted. A visit to the mine site by Bittenbender and others (1999) made note that there was no evidence of gold bearing gravels, nor evidence of actual mining at the site.

EARLY SAWMILL CREEK INFRASTRUCTURE

Sawmill Creek drains Blue Lake to the west through a steep, well entrenched canyon that empties into Silver Bay. The first small generating system on Sawmill Creek was built in 1913; comprised of a small rock crib dam, flume and powerhouse, and operated until 1947. Massive flooding was recorded in 1913, 1926, 1936 and another in 1942 and 1947 that washed out portions of a 1913 rock crib dam and flume (City of Sitka 1961).

LOGGING ERA

The first major foreign investment for Japan after World War II was the contract to build the Alaska Lumber and Pulp Company (AL&P) (later Alaska Pulp Corporation, APC)) sawmill in 1957 in Silver Bay, at the mouth of Sawmill Creek. The land was acquired under the Tongass Timber Act in 1947. The plant was built in 1959, and closed in 1993. Blue Lake was planned as a source of process water, and expanded to include construction of a concrete dam to facilitate hydroelectric power and storage. The dam inundated to the 342ft contour.

In 1993 the pulp mill closed and all the parcels belonging to the mill were conveyed to the City and Borough of Sitka. When the area was re-platted, the mill property was consolidated into two lots, Lot 1 being the mill site which is now an industrial park, and Lot 2 contains the power generation facilities related to the Blue Lake Project.

STUDY COMPONENTS and METHODS

The Blue Lake Expansion cultural resources studies were comprised of three different components: 1) Literature Search, 2) Contact with STA, and 3) Field Surveys, as described below.

LITERATURE SEARCH

Alaska Heritage Resource Survey (AHRA) records and atlases at the the Office of History and Archaeology (OHA) were reviewed for documented cultural resources in or near the APE by Patricia Browne Research, Anchorage, Alaska.

CONTACT WITH STA

In compliance with the NHPA, Paleo Logics informed STA of the archaeological survey for the Expansion project. STA had no additional concerns regarding the project beyond the testimonies collected by Steve Johnson in 2005 for the Blue Lake Hydroelectric Project (FERC No. 2230) Relicensing (Rushmore 2005).

FIELD SURVEYS

The field surveys were designed to identify, document and evaluate historic properties within the APE. The surveys were conducted by a three-person crew that employed both surface and subsurface examination to ensure meeting survey goals. The crew utilized random soil probes, a metal detector survey, and hand-held GPS units to record site locations and survey boundaries. The fieldwork was recorded with daily survey notes, digital photographs, and GPS location data which were at times limited by the mountains and the density of the forest canopy.

Surveys were conducted differently in four primary sub-areas within the overall APE:

1) **Blue Lake Shoreline.** A boat survey of the Blue Lake shoreline was conducted, with surveyors going ashore where feasible to determine the potential for cultural resources. The area is considered a low probability landscape for cultural resources and was accordingly surveyed to a lower degree of detail than certain other areas in the APE. Areas in the APE above current high water levels were in many cases completely inaccessible due to very steep terrain and/or dense vegetation.

2) **Blue Lake Creek Basin.** With a more extensive APE than for 2005 investigations, additional segments of the corduroy road/trail built to access the Pande Basin mine from Blue Lake were flagged, photographed and located with GPS. The Office of History and Archaeology assigned the corduroy road/trail the Alaska Heritage Resources Survey record number, SIT-733. In addition to the trail, surveys within the Blue Lake Creek basin focused on identifying culturally modified trees (CMTs), trap cribs, can dumps, fish traps and other structures. A pedestrian survey with subsurface testing was conducted along random transects utilizing a 2 cm x 85 cm open-faced soil probe and Minelab X-Terra metal detector. Subsurface assessments were supplemented by examining exposed surface areas such as root wads (blow-down), animal trails, and stream banks.

3) **Area Near Blue Lake Project Dam.** This area included a wooded knoll adjacent to the road terminus and parking area which will be used as a staging area for dam and access road construction equipment. Much of this area has been logged and the ground surface mechanically altered. This area was heavily impacted during dam construction.

4) **Lower Sawmill Creek Area.** This area extended downstream from the Blue Lake dam and included the sites planned for the new powerhouse, pipelines and tunnels, and

surge chamber. This area is extensively excavated and disturbed as a result of powerhouse, pulp mill and water treatment plant feature construction and associated roads. The majority of this area was addressed in detail in the 2005 survey. This area is primarily bedrock and/or rock fill; subsurface testing was not conducted.

RESULTS

LITERATURE REVIEW

Based on the literature search, one recorded site was found within the APE: (SIT-733) segments of corduroy road built in 1898 (Rushmore 2005).

CONTACT WITH SITKA TRIBE OF ALASKA

STA had no additional concerns regarding the Expansion Project beyond the testimonies reiterated below that were collected by Steve Johnson in 2005 for the Blue Lake Hydroelectric Project (FERC No. 2230) Relicensing (Rushmore 2005).

In 2005 STA provided the City with results of four tribal member interviews (Attachment D). The interviews indicate that certain traditional uses, mostly associated with fishing and berry gathering, were impacted by construction of the APC mill and the Blue Lake hydroelectric project. According to STA testimonies, after construction of the APC mill there were obvious environmental changes around the mill area (i.e., dying trees, berry depletion) that led to concerns about mill-related industrial toxins. As a result of these concerns, use of the area by STA members has become limited. Interviewees also commented that construction of the Blue Lake dam was thought to be the cause of the depletion of steelhead and salmon in Sawmill Creek. State and federal agency data regarding this concern was not reviewed as part of this survey.

Interviews did not indicate Project-related impacts on or conflicts with known cultural sites, artifacts or other cultural/historical values known to the interviewees. The interviews also indicated that other drainage systems and coves around Silver Bay were more productive than the Sawmill Creek basin for most of their subsistence needs. Bays and streams at the upper end of Silver Bay around the Salmon Lake drainage system support a wide variety of resources traditionally utilized for generations. This area was reported to have been controlled by the Kiks'adi clan prior to the Russian-American Company establishing residency in Sitka Sound in 1799 (Olson 1967:75). This may be the same village of 39 people recorded in the 1880 census (Goldschmidt and Haas 1946:103).

Prior to construction of the Sawmill Creek Road, the Sawmill Creek drainage was reported to have been used as a travel route to Blue Lake and surrounding alpine areas to gain access to deer, mountain goats and trout fishing.

In a letter to the City dated June 16, 2004, Jack Lorrigan of STA noted the taking of mountain goats each spring in the Blue Lake area for use in blanket making has been on-going for generations. Today this activity is currently authorized under state and federal

subsistence regulations, under which permits for three goats are issued to STA each year. Mr. Lorrigan also mentioned that rainbow trout fishing in Blue Lake is popular with tribal members, and is becoming a seasonally anticipated traditional use in the Project area.

FIELD SURVEY

Results of field surveys are divided into four general areas: 1) Blue Lake Shoreline, 2) Blue Lake Creek Basin, 3) Damsite Area, and 4) Sitka Water Treatment Plant and Blue Lake Powerhouse Areas.

Blue Lake Shoreline

A 10 x 20m campsite reportedly used by the Sitka Boy Scouts was located along the shoreline in the northeast corner of the lake (Figure 7 MAP). Other than burned aluminum foil incorporated into the beach gravel and in the small fire hearth, the area was clean of trash. The metal detector disclosed modern coins and other small, camping-related items not considered of historical significance (Figure 8. A and B). The campsite is within the APE.

Blue Lake Creek Basin

One modern CMT was located outside the APE near Glacier Creek. The CMT appeared to be used as a martin trap. From an elongated notch carved into the trunk is a log that was leaned up against the tree which allows a martin easy access to the trap during winter. Hemlock is preferred over spruce for trap locations because of the amount of sap produced once the tree is opened. Sap can ruin animal fur and affect trap function. Many traps are attached to a wire and when triggered the catch is removed and suspended away from the CMT.

1898 Corduroy Road and Pack Trail (SIT-733)

The 1898 corduroy road, as far as this survey was able to determine, is basically a trail(s) with 12 separate segments of corduroy road placed to support travel through short areas of wet or steep ground. Eleven segments of road are in muskeg at the west end of the basin near Blue Lake (Figure 9). These are built without nails from spruce and cedar logs and average 2m wide in muskeg areas to 1m or less when used as steps on a slope (Figure 10. A and B). The tread size averaged 15-20cm in diameter. Larger timber (60-80cm diameter trees) was used for support beams and bridge construction. Old tree stumps line the road right-of-way. Once on the Blue Lake Creek floodplain no further evidence for man-made road was found between Segment 11 and the Pande Basin trail. Near the beginning of the Pande Basin trail was a 25m segment of road built along the toe slope of Pande Basin near Glacier Creek. All of Pande Basin trail to Glacier Lake is outside of the APE. Volunteers, Dean Orbison and Kent Bovee, Sitka, collected GPS coordinates and photographed the pack trail and Pande Basin mine site for the Project (Figures 11 and 12). No bottle/can dumps associated with this era was found in the survey areas.

Road Segments within the APE

Road segments in the APE include the east end of Segment 9, and Segments 10, and 11. Segment 9 is primarily steps built with logs on a slope that descends from upland muskeg into a ravine near the floodplain (Figure 13). The part of Segment 9 potentially inundated is the collapsed remains of an 8m long log bridge built to span the ravine (Figure 14). Segment 10 is a decomposed, 4m long x 1.5m wide log bridge used to span a shallow intermittent stream. All that remains of this segment are two beam timbers and a few tread logs. Built along the Blue Lake Creek shoreline is Segment 11, which is basically a well worn game trail with short segments of corduroy (Figure 15. A and B). Segment 11 is eroding into Blue Lake Creek.

Area Near Blue Lake Project Dam

In this area surveyors found modern trash, fragments from a rusted cast iron stove just inside the tree line near the parking area (Figure 16), and a partially buried 20ft joint of 3 inch metal tubing. This area in general has sustained various types of impacts in the last 40 years.

Lower Sawmill Creek Area

No cultural resources were found in this area. After two intensive surveys in 2004 and 2008, the potential for cultural remains in the areas proposed for the new turbine and infrastructure, tunnels and surge chamber is extremely low. Extensive cut and fill modifications are apparent throughout the area (Figure 17). Any potential archaeological evidence of ancestral use of the Sawmill Creek littoral zone is beneath 123 acres of fill material placed during the construction of the APC mill site in 1959. Mill construction also diverted to the south of its original position the confluence of Sawmill Creek and Silver Bay (Figure 18).

DISCUSSION

In the upper APE the archaeological survey was able to add information regarding the 1898 corduroy road/trail from Blue Lake to Pande Basin (SIT-733). Survey findings are consistent with historic newspaper accounts and business letters reviewed during the project; the Pande Basin Gold Mining Company opted for a trail rather than a road to be built from the head of Blue Lake to Pande Basin to save costs. The 1898 trail(s) is basically just that, a trail; with short segments of corduroy road placed to support travel through wet or steep ground areas. Twelve segments of corduroy were recorded in the survey area, three of which are in the APE: part of Segment 9, and all of Segments 10 and 11. These segments are in the Blue Lake Creek floodplain and are poorly preserved. Nine segments of corduroy road, the Pande Basin trail to Glacier Lake, and the CMT are outside the APE.

The potential for significant cultural resources around the dam site is extremely low based on survey findings. Impacts on the area include logging and rock fill to construct

Forest Service Road 5755 and the parking area leading to the dam, and extensive surface modifications during dam construction. The small amount of survey area not affected by construction is steep and rocky.

Based on surveys conducted in 2004 and 2008, the potential for cultural remains in the area of the proposed new turbine and infrastructure, tunnels and surge chamber is also extremely low. The area has been extensively modified with dynamite and rock fill to accommodate buildings, roads, tunnels, concrete support foundations, and storage pads. The littoral zone is beneath 123 acres of fill material, and Saw Mill Creek has been re-channelled by fill material.

CONCLUSION

In consultation with the U.S. Forest Service Zone Archaeologist in Sitka, the trail(s) with segments of corduroy road was not considered eligible for the National Register. Paleo Logics concurs with this determination. The one CMT recorded is also not eligible. No significant cultural resources were recorded for the Blue Lake shoreline, basin, and dam site area (Upper APE), and the areas proposed for the turbine, tunnel, and surge chamber (Lower APE).

RECOMMENDATION

The results of an intensive archaeological survey of the APE for the Blue Lake Hydroelectric Project Expansion, Sitka, Alaska are considered negative for impacts on cultural resources. The proposed Blue Lake Project Expansion as currently described in City and Borough of Sitka 2008 (SDI) should be considered to have no effect on any properties listed on or determined eligible for listing on the National Register of Historic Places. A determination of “No Historic Properties Affected” is recommended by Paleo Logics.

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ATTACHMENT I

The following is presented verbatim from the 2005 Blue Lake Relicensing report.

Interviews of Sitka Tribe Members, Conducted in 2005 by STA

Steve P. Johnson

First came to Sitka in 1947. Junior in High School: 15 years old. Lived on island. Father sent from New Mexico to Sitka to tan skins. EW Merrill taught Steve's dad how to tan skins. Developed tanning solutions from native plants and other things, especially hemlock. Formulas developed passed down from father to son, kept secret within family.

Historically, Blue Lake area was used as refuge to flee to when Mt. Edgecumbe erupting.

There is a story about a cave there where an octopus lived.

Blue Lake area is hard to get at. Took a lot of work to put the dam in. They put a hole through there to get the water out. One of the Tlingit men fell when working there. He was hurt. Fred Simpson (Esther Littlefield's son). At the time there was a dairy farm there run by Van Horn. The stream received most effect from the dam. It used to be when salmonberries would blossom, great amounts of steelhead were there. Stream still has small runs of smaller fish: stocked fish. Those fish are doing ok, different species of rainbow trout. A beautiful steelhead stream before that. Lots and lots. Always was a salmon stream. A summer run, early run. Not sure about winter run. Since then a lot of changes. Public kept out of there by fencing and guards. The guards would prohibit public access. Not proper because stream was salmon stream; in Alaska this should not have been allowed. And on beach there in front, lots of salmonberries. Off point, halibut and deep sea fish. Not edible anymore because of the pulp mill. Some salmon out front there at hatchery tasted like the pulp mill smelled. Also black snow. Steelhead for fresh fish, not smoked fish. After the dam was put in, the steelhead did not come back anymore. We took the shore boat over here from Japonski and then walked out to Blue Lake. Blueberries, gray currants. Huckleberries.

So san song. Kiks.adi song. Mother of boy in canoe picking berries across from peninsula. Canoe drifted off with baby boy in there. Uncles doing Russian conflict. Several uncles blew up in canoe, Hootz NaWoo. Had bullets and powder buried there. As going back, young man saw someone on deck of Russian ship and shot at him, spark jumped out and blew up canoe. All nephews killed. Older man survived and captured and sent to Kodiak. Lakenoff family.

Duck Didrickson

Old days up at Blue Lake there was no road. We would go up the creek up to the old powerhouse. We would hunt across there over 50 years ago. Up hunting, flashlight. Old dairy. Up side hill all around all the way around. See across muskeg something bobbed ahead of there. Forked horned buck. 157 pounds. Took it to cold storage to see how much it weighed.

Sawmill Creek River was noted as biggest steelhead creek in Alaska. Plenty of steelhead there, and good for trout. Trout good March April, all fingerlings coming down out of riverbeds, thousands and thousands of dolly vardens to feed on the fingerlings. Lots of deer and fish. Follow creek for 300 yards, then off to left because creek too rough. Then up to the woods. There was a regular trail there. 8-10 people would hike Blue lake trail to trout fish. Brought Uncle George Didrickson, and Harry caught a lot of trout up there. A lot of trout in the river but you had to go to the lake. That road now was built high, that was mountain goat country then. Mountain goat would come down to beach in Silver Bay. Two years ago there were a couple goat shot on road there.

When they built that dam, two friends Fred Simpson fell off the top. His leg never healed. Charlie Carlson might have worked there too. After dam, no more fish, it killed them off. It locked the fish on the dam until they died off. Now just a few scavenger trout down there. Martin Strand says 3 or 4 steelhead in the river there now each year. Up on left for mountain goat. Last one was Dave Pearson, took his son with him. Real food there, all the way on right all the way at end was best deer hunting. Blue Lake cannot hunt on either side. On right trees, but too steep.

Just on entrance going up, a few shacks up there. On the waterfront, 400-500 yards from beach. 100 yards from the river. There was an old bridge. There was an old powerhouse there too. A real old house on left. A big cable that went across there. Box to pull yourself across. Two bridges one below dairy farm. A couple bear encounters out there.

Berry picking. Lots of berry picking out there. Salmonberries. After dam, no more berries, the flow of the water did not spread out like it was supposed to. That's why alders there now. That dam killed a lot off for my people.

Heart Lake and Thimbleberry to easy get to now. Used to be that go to Thimbleberry to get blueberries and huckleberries. Now not much. All killed off. That road system with the poles they went through that. It killed off blueberries up there. Thimbleberry was one of the best places. Mountain blueberries they grow in the shade. Up there so many times with the old ladies, first up the top of hill at Jamestown Bay. Muskeg up there on side of thimbleberry, lots of deer. No more deer at Deer trail there. Now there is regular trail there. Used to be deer trail down to the beach.

Killed off herring cove. Bottom of Herring Cove is full of chains and swifterns (110 foot boom chains). There used to be Thousands and thousands of fur seals in Silver Bay.

Those seals not back since. Back there on F/V Patricia Mae: 110-15 fur seal. 1950. Fur seal have not come back since the Mill. Also impacted the fish there.

No matter what they do now to try to correct things, they cannot bring back the subsistence at Blue Lake. The berries are gone, grey currants are gone. Fish are gone. Not sure about the halibut. Every tide, the rust spreads. That whole mill was contaminated there already.

Fred Hope

Hardly any there because only famous for steelheads. People come from down south to fish there. Fast moving water and could cast for them. Normally have cohos will run into a lake and into the feeder. But in this case the lake is too high. Just a few in there. Now no more steelheads. Problem was the Pulp Mill polluted that area.

Hike to dam and to left on backside of Arrowhead. Just hike up the back. Took a rifle but did not get anything.

Berrypicking after dam. On backside of road and parking lot there is steep area there with blueberries and huckleberries. New cut so growing good.

No legends or anything. Present day would talk about the gold rush. Someone thought they could plant a good trick. Planted gold up there and tried to get people to buy property up there.

Good drinking water. Mill used it for all those years.

A cannery or other old building out there. They had a very shaky bridge, rope bridge. There was a building over there. Dairy farm on this side of river.

No volume there so no native camps. Just a few cohos and steelhead. Too big to get the cohos. Heard some talk of taking cohos out of waterfall, but the waterfall was taken out.

Story on Thimbleberry Lake. At the beginning, there was a woman. Used to have a huge run of sockeyes. Woman cleaned fish wrong way and offended sockeye people so the people left. One of the expressions was that there was a short waterfall there and sockeye would jump. When you look at the lake now it is small. Must have been earthquake or something. Sockeye people came out and went to head of Silver Bay and said lets move here. Most of them said no. It is not right for us. This explains why such a small run at head of Silver Bay. Then went to Readout. And already a family of sockeye there. Then moved to Necker Bay. Waterfall was so treacherous that had to adjust their bodies to get up that falls, made their bodies small there to get up to the lake. Story told to by Andrew Hope to Fred.

Thimbleberry and Heart Lake someone transplanted beaver there and took for a while but eventually moved out. Odd thing about that is Pulp Mill started in 1959. Ten years later a beaver showed up there. Fish and Game may know more about the beaver.

Used to get berries below and above the highway and where the factory was in Sawmill Creek. That building could have been a sawmill, that is where the name came from. It was a red building, it was torn down when started to build the Pulp Mill.

Only one story about that area. Go in on one tide and out on another tide without one stroke. Logs for half the effort because it was easy to transport logs.

On sugarloaf on silver bay side. Woman picking berries there left her baby in the canoe and tide took the canoe out to Bay. Baby found eventually on one of the islands there. This was only like 100 years ago.

No talk of clams in that area. There used to be a big sandflat there before the Mill was put in there.

A lot of plankton there. Whales there. Then fur seal. Used to go there as stopping point. Here and Biorka Island. They covered all of Silver Bay and Eastern Channel. When there in February they would be jumping out of the water. The Pulp Mill drove them out. So no one likes to talk about that.

See whales now at Starigavan, not in Eastern Channel so much anymore.

Bob Sam

No known cultural sites. Gray currants below Blue Lake were big. Big area for whole community. Picnics out there with whole community. Before Pulp Mill (mid 60s stopped going there). Trees started to look sick because of Pulp Mill.

Steelhead. Used to get them there, but once pulp mill in, no longer get steel head there. Trespassing concerns.

Blueberries. Berry picking there because previously disturbed, logged out areas. Created berry picking areas from hydro project.

Born 1953. Family had trapline from Herring Cove to hatchery. During years of Pulp Mill, trees were getting sick and dying off. Stopped berry picking because of tree condition.

Main village site was down in Herring Cove area. No smokehouses or anything.

Legend from area "The Coming of the Cross." Kiks.adi story. Coming of Christianity. Story of Cross Mountain how Tlingit people knew about Christianity. Cross Mountain is

South, Christianity came from South. Sitka-Wrangell feud. Very famous Kiks.adi woman who was supposed to marry a Kaagwaantaan man, instead married a man from Wrangell. Sitka went to war with Wrangell to try to get her back. She was a very important woman. Small pox epidemic in Wrangell. She made medicine and cured people in Wrangell. She and another lady from Wrangell only one's left with disease. She gave medicine to other woman. She comes from Silver Bay. She predicted that some day Tlingit people would put aside anger in love. Cross Mountain. Mark Jacobs had good story from this area.

Spoke with Al Gray about where families got drinking water. Most major rivers on Baranof owned by families and clans. Drinking water was very difficult to get to even up to statehood. Go to rivers. Kiks.adi used Blue Lake. Sawmill Creek. Heard people say that only use fast running water. George Lewis family, Tom Sanders family, Tom Bennett family. All major families had drinking water rights to different streams.

Deer hunting in this area between Whale Park and Mill up behind Thimbleberry. Every river had petroglyphs in the Creek. Like petroglyphs in Totem Square from Katlian Bay, Indian River and another river. They were like survey markers. Over the years petroglyphs were brought to town so they were not vandalized anymore.

May come across some pre-historic artifacts, like stones and stuff.



Figure 1. General Project Location Sitka (A-4) AK Scale 1:63,360 Limited Revisions 1975

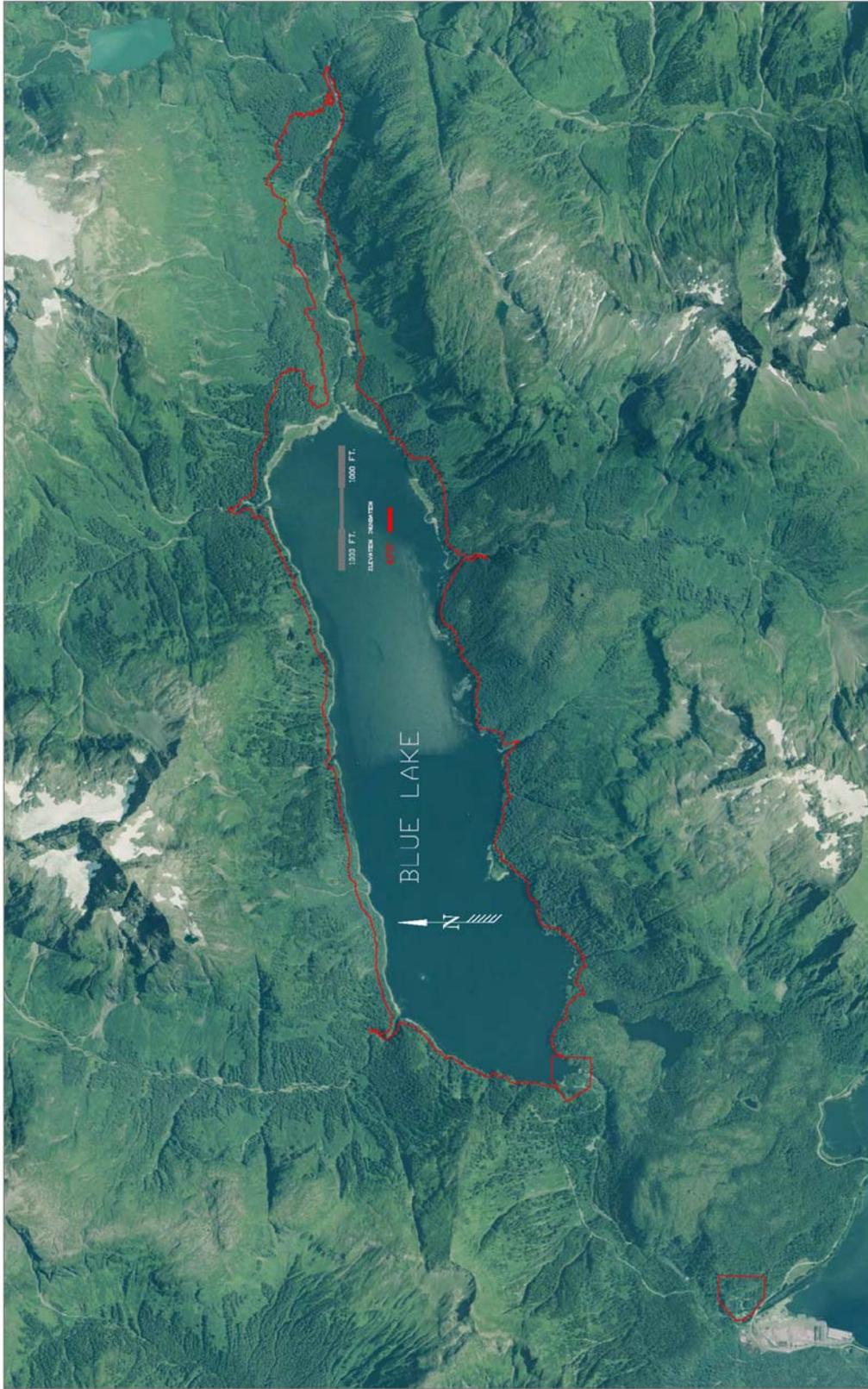


Figure 2. Project APE locations.



Figure 3. View of Blue Lake and shoreline.



Figure 4. View up-stream of Blue Lake Creek.

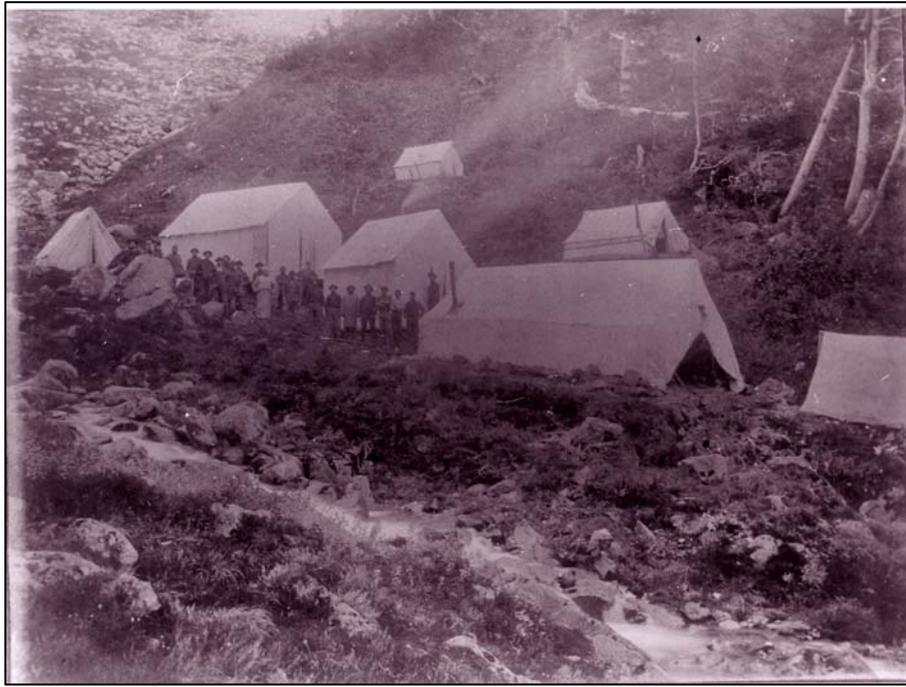
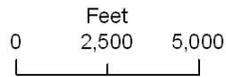


Figure 5. Pande Basin mine site, ca. 1898. Photo copied from DeArmond file. This expired placer mine is located outside the APE at approximately 457m (1371 ft) above sea level, UTM coordinates: Zone 8, Northing 6327843, Easting 495455; Quadrangle Sitka A-4: T 055S, R 065E, Sec. 1 of the Copper River Meridian.



Figure 6. Pande Basin: View of the 1898, 300ft-long tunnel that lowered Glacier Lake 60ft to access placer gold. Photo courtesy of Dean Orbison.



- Stove
- Mining Road
- ▲ Boy Scout Camp
- 425' Inundation Area

Figure 7. Map locations of the Boy Scout campground and trail segments of SIT-733.

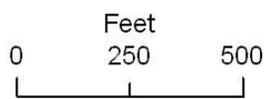
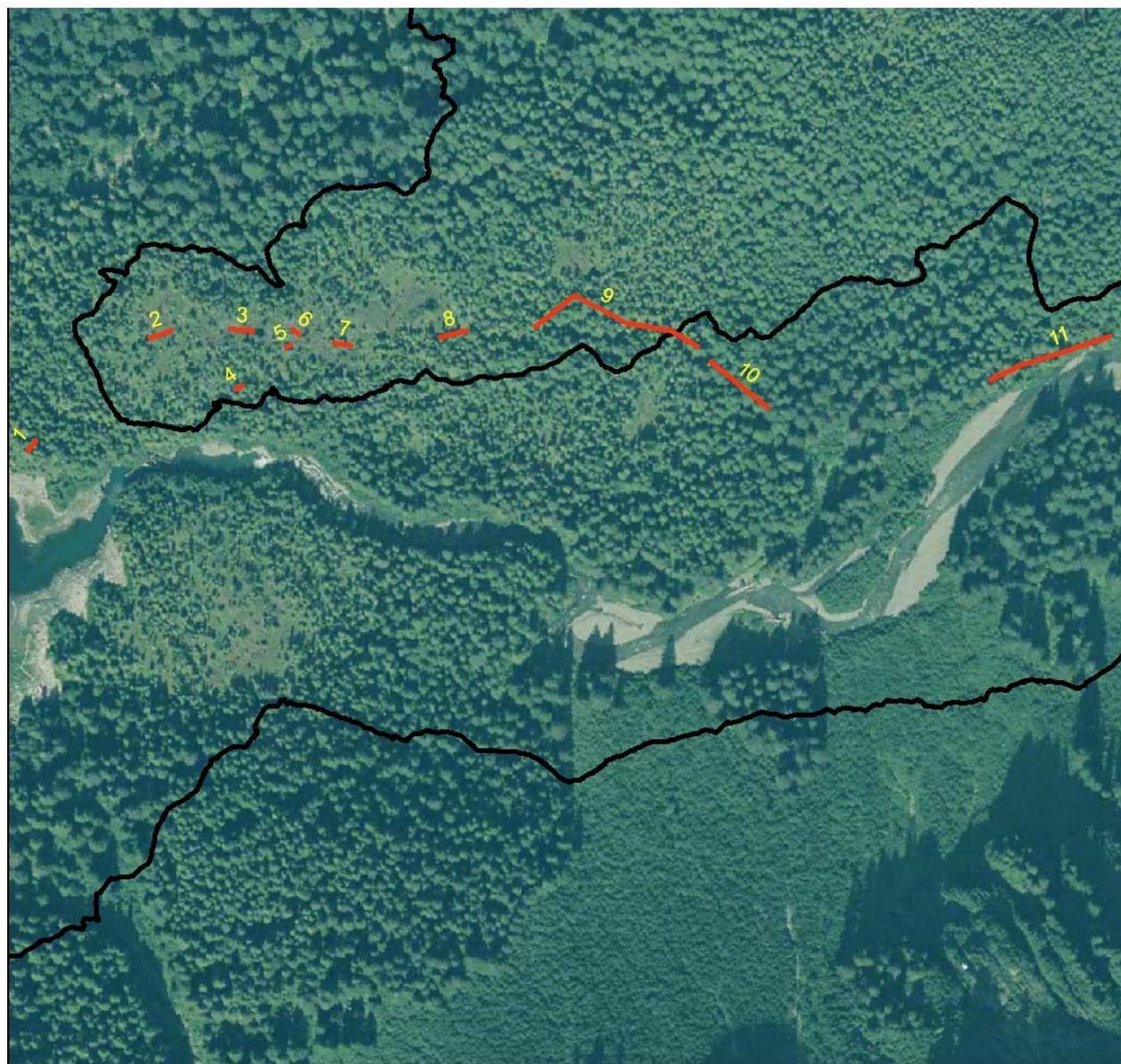


A.



B.

Figure 8. A) View of Boy Scout campground terrain. B) Metal detector survey of the Blue Lake shoreline near the Boy Scout campground.



-  **SIT733 SEGMENT**
-  **425' INUNDATION AREA**

Figure 9. Numbered segments of corduroy road. Locations for Segments 1 and 4 are considered erroneous, possibly due to GPS error.



A.



B.

Figure 10. A) View of Segment 2 in the upland muskeg area. This segment is typical of the other corduroy found in the muskeg. B) View of Segment 5.

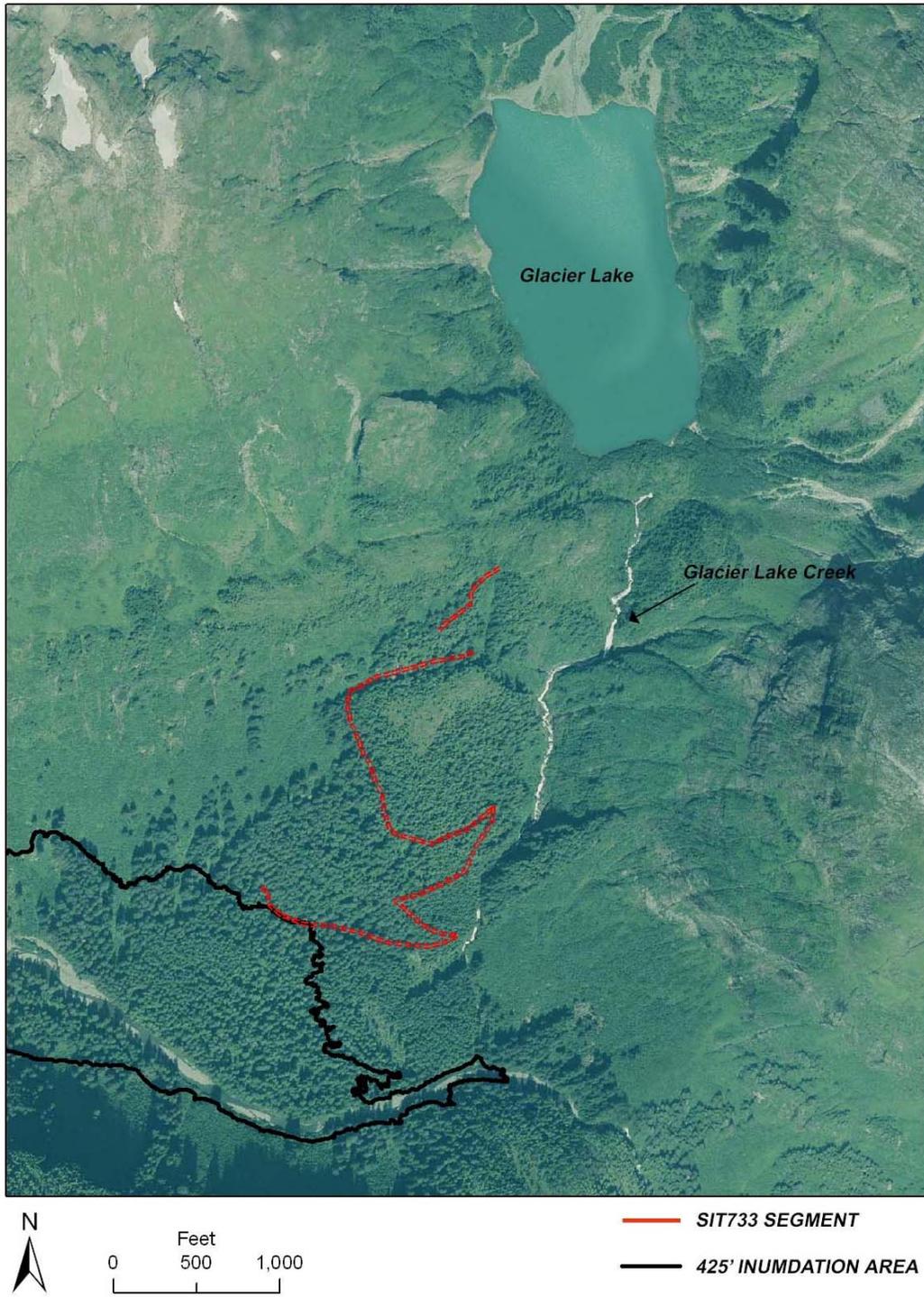


Figure 11. Pande Basin trail to Glacier Lake.



Figure 12. View of a short segment of stone steps near the beginning of the Pande Basin trail. The trail is above the proposed inundation elevation.



Figure 13. View of log steps on Segment 9. Photo was taken from the collapsed bridge at the end of Segment 9.



Figure 14. View of the collapsed remains of the bridge at the end of Segment 9.



A.



B.

Figure 15. A) View of a metal detector survey along the remains of Segment 11 next to Blue Lake Creek (right of photo). B) View of Segment 11; Blue Lake Creek is left of photo.



Figure 16. View of the survey conditions near the dam site.



Figure 17. View of the powerhouse area and Saw Mill Creek in the Lower APE.



Figure 18. View of Sawmill Creek below the powerhouse as it nears Silver Bay.

Attachment II: NATIONAL REGISTER EVALUATION FOR SIT-733

Blue Lake Hydroelectric Project (FERC No. 2230) Expansion: Sitka, Alaska

Alaska Heritage Resources Survey record number, SIT-733.

The following evaluation of SIT-733's eligibility for the National Register is based on physical examination and documentary research. For SIT-733 to qualify as a National Register site it must meet one of the National Register Criteria for Evaluation by:

- **Being associated with an important historic context** *and*
- **Retaining historic integrity of those features necessary to convey its significance.**

Criteria for Evaluation

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of significant persons in or past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded or may be likely to yield, information important in history or prehistory.

Narrative Description

1898 Blue Lake Creek Pack Trail (SIT-733)

During a time when hundreds of mining claims were being staked throughout the mountainous islands of Southeast Alaska, the Pande Basin Gold Mining Company, also known as Glacier Lake Placer staked a mining claim at Glacier Lake in Pande Basin (**Association**). The claim was registered in 1895 and the survey recorded in 1900. To access the mine with equipment and supplies a road had to be built from tidewater to Pande Basin. According to the July 23, 1898-ALASKAN-newspaper article construction of the road from tidewater to Blue Lake started in June 1898 and by the end of July the expense for the road to Blue Lake (roughly following Forest Service Road 5755) was so costly that the plan to extend it from the lake to Pande Basin was abandoned and a pack

trail was built instead for that portion of the route. Archaeological evidence for the pack trail supports the idea of expedient, simple construction methods over the expense of construction longevity (**Workmanship, Feeling**). By 1899 concerns were raised amongst investors about the viability of the Pande Basin mine, and by 1905 the claim's ability to produce the amount of gold as advertised was deemed a hoax; the mine was never operated (**Criterion A**). A visit to the mine site by Bittenbender and others (1999) made note that there was no evidence of gold bearing gravels, nor evidence of actual mining at the site. Silver Bay mining properties, including Blue Lake basin are not rich in extractable mineral deposits and contributed little historical significance to Alaska's mining industry (**Criterion A**).

The only physical evidence in the APE for the location of nearly 5000 feet of pack trail that would have been necessary to traverse the muskeg is limited to approximately 85 linear feet of corduroy constructed in 11 individual segments. Nine of the segments recorded are classified as "standard corduroy", the simplest to construct of the three generally recognized types of corduroy road (Standard Corduroy, Corduroy with Log Stringers, and Heavy Corduroy) (**Workmanship**). A standard corduroy road is the most frequently used and consists of a single layer of small diameter logs laid directly on the ground perpendicular to the direction of travel. Segments are simple man-made features that vary in length from 5 to 10 feet, and average 4 to 6 feet in width. There is absolutely no physical evidence of the pack trail between the segments. The size of the segments suggests foot traffic only. Two short segments of corduroy with log stringers were recorded in the Blue Lake Creek floodplain. Associated with bridge construction, these are basically a standard corduroy road that is more substantial and has two layers. Built without nails or wire to maintain the structural integrity, these segments are completely deteriorated and/or collapsed. No heavy corduroy, consisting of three layers (tread and stringers laid on sleepers) was recorded in the project area.

The site does not contain significant diagnostic evidence that could link the site to the early mining era in and around Silver Bay (**Association**). No bottle/can dumps, structures, fire hearths, etc., associated with this era was found in the survey areas.

Conclusion

SIT-733 does not possess significance in American history, architecture, archeology, engineering, or culture when evaluated within the historic context of the geographic area. The site does not meet any of the Criteria Considerations (i.e., contain links to important events or persons, design or construction features, or research potential that make the property important). Based on these findings, SIT-733 is not significant under the National Register Criteria and is not recommended for inclusion.

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