ARCHAEOLOGICAL MONITORING OF SOIL TESTING AT THE PANHANDLE SMELTING AND REFINING COMPANY SITE (10BR539), NEAR PONDERAY, IDAHO, IN MAY 2023

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Introduction

Alta Science & Engineering, Inc. (Alta) is working with the City of Ponderay (City) to develop a public park adjacent to Lake Pend Oreille at the location of the former Panhandle Smelting and Refining Company (PSRC) site. Prior to development of the park, Alta and the City are conducting a series of soil tests. After reviewing a description of the planned undertaking, the Idaho State Historic Preservation Office (SHPO) recommended that an archaeologist monitor all ground-disturbing excavation associated with soil testing in the vicinity of the PSRC site. Monitoring was previously conducted at the site in November 2011 (Sappington and Longstaff 2012a) and again in May 2012 (Sappington and Longstaff 2012b) prior to the development of the adjacent Pend Oreille Bay Trail. At that time historic cultural resources were encountered in 16 of the 19 test pits and it was evident that historic artifacts and features are frequent in the vicinity of the site.

The PSRC site is an inactive facility located approximately 400 feet south of the City of Ponderay. The PSRC site consists of original smelter ruins, a small pile of unprocessed ore, several building depressions, and a slag dump. The slag dump is a local landmark known as Black Rock and it is weathering onto the shore of the lake.

The PSRC site was recorded as archaeological site 10BR539 in 1985 (Miss and Hudson 1986). Prior to a modification of a railroad grade, the U. S. Army Corps of Engineers, Seattle District (COE), requested an evaluation of the site to determine its eligibility for nomination to the National Register of Historic Places (Renk 2001). That report provides an excellent history of the smelter and the author concluded that 10BR539 was eligible for the National Register of Historic Places under criteria A and D (Renk 2001).

Access to the PSRC site is from the adjacent trail which has increased pedestrian and vehicle traffic to the area which has become a popular swimming and recreation destination during the summer. There are elevated levels of lead, zinc, and other metals in the slag dump and nearby soil. The topography is mostly glacial terrace with some localized flood plain and the soils are predominantly sand overlying silt and clay (IDEQ 2006:4).

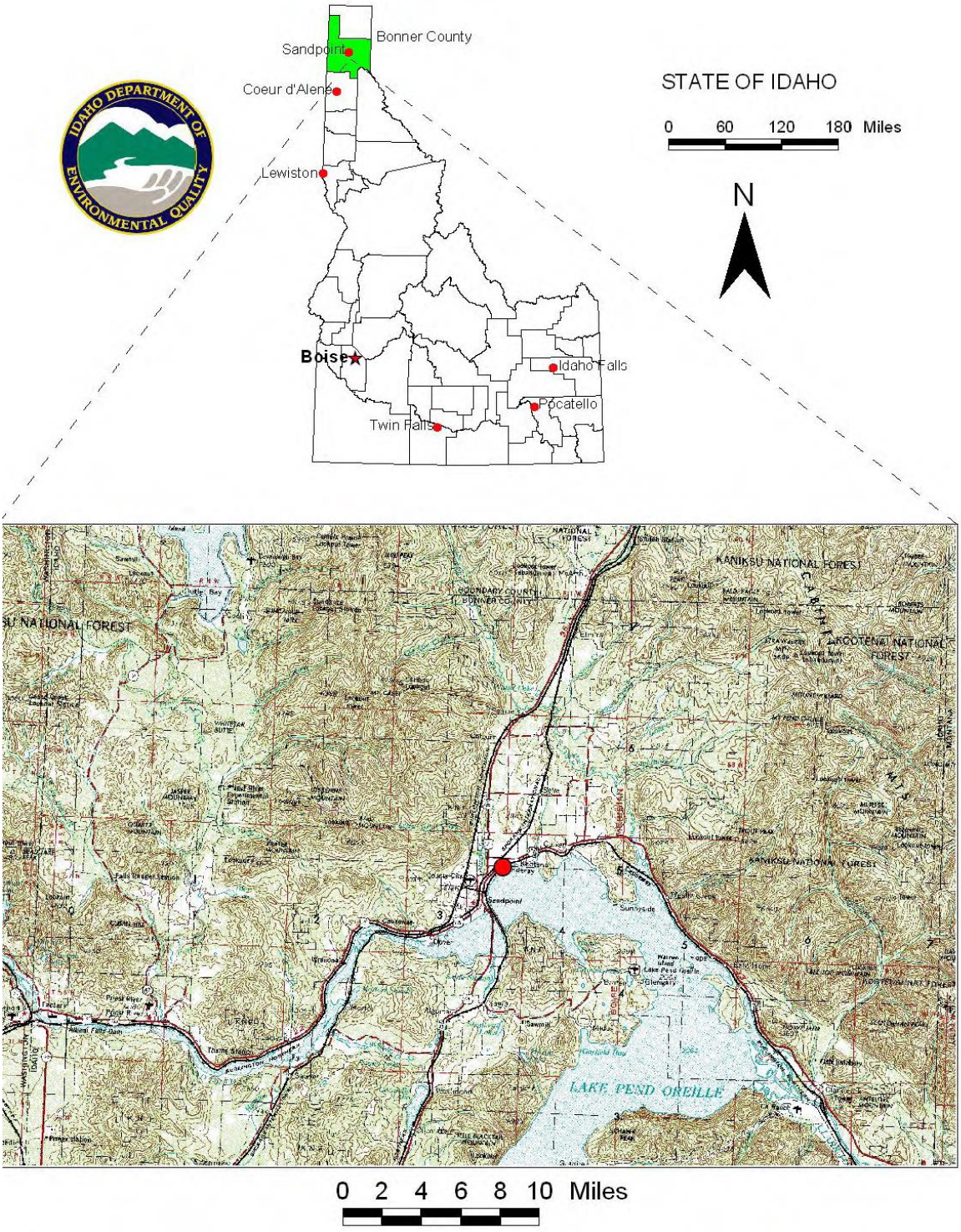

Figure 1. Map of the general project area. The location of the Panhandle Smelting and Refinery Company (PSRC) site (10BR539) is indicated by the red circle (adapted from IDEQ 2006: Figure 2-1).

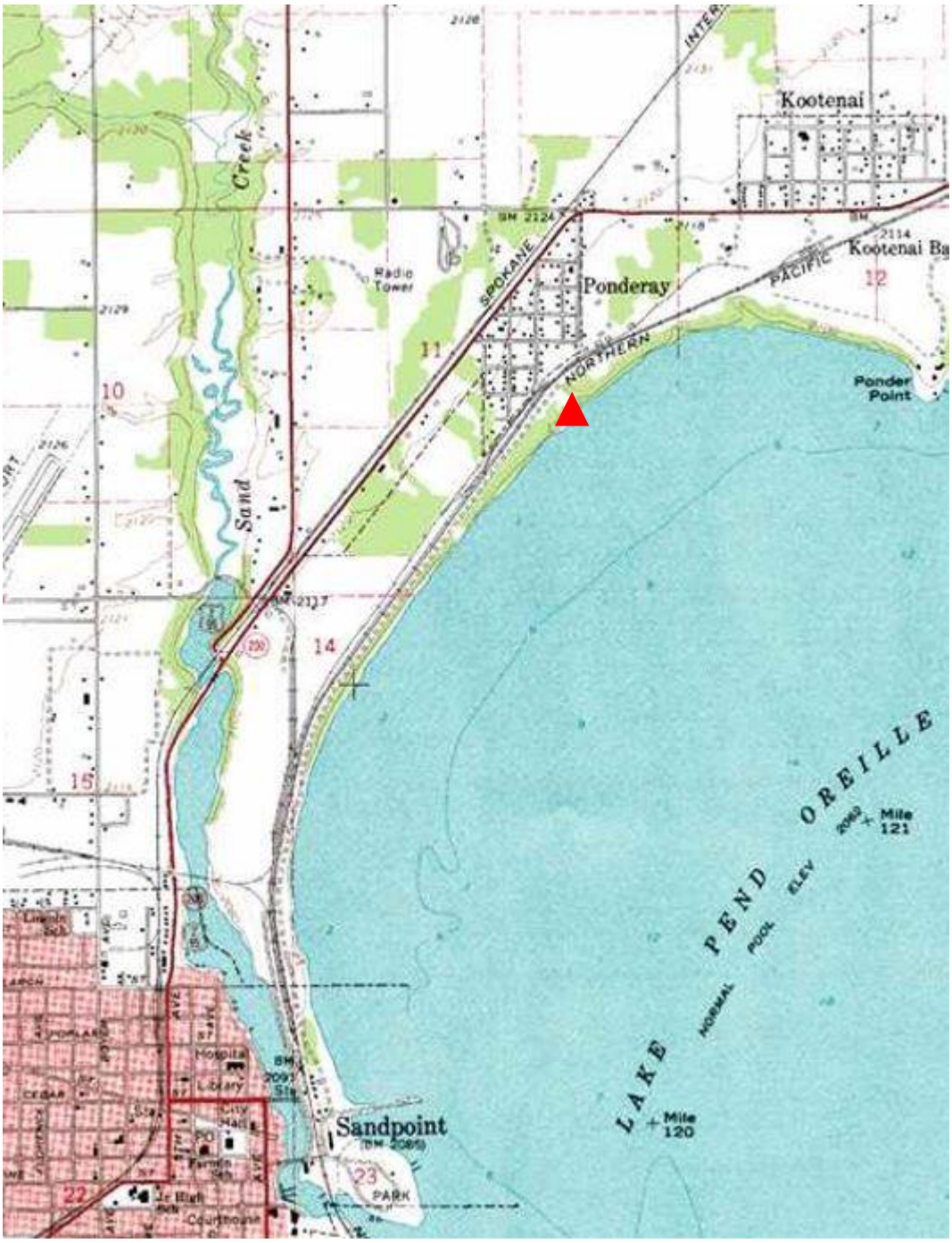

Figure 2. Location of the PSRC project area. The project area is the Area of Potential Effect (APE) and it is indicated by the red triangle. Adapted from the Sandpoint, ID quadrangle.

Figure 3. Aerial photograph of the portion of the PSRC site discussed in this report. The 13 soil sample units are labeled SS-1 to SS-13 (map labeled and provided by Tom Jenkins, Alta). Black Rock is just north of SS-1; note the dock on Lake Pend Oreille at the lower center.

The history of the PSRC site is one of contentious management, accusations, and lawsuits rather than a record of actual smelting. Planning for the smelter began in 1902 and the townsite of Panhandle (the name was changed to Ponderay by early 1905) began to grow up adjacent to the smelter at that time. Construction of the smelter began in 1904; the first lead bars were poured in 1907 and the smelter ran sporadically through March 1909. Following foreclosures and various sales, salvage crews had dismantled the plant by December 1922 (IDEQ 2006:4). Since that time, there has been little activity in the area with the exception of recent recreational use.

The project area is located well within the territory of the Kalispel Indians (Lahren 1998: Figure 1). Like other Plateau tribes, the Kalispel followed a seasonal round with subsistence based on a combination of wild foods including fish, game, and plant. Settlement centered on winter camps that were situated along the major drainages such as the Pend Oreille River while other seasonal camps were at locations where camas, berries, game, and other resources could be gathered and hunted. There are numerous precontact sites around Lake Pend Oreille but none appear to be in the vicinity of the APE.

Discussion

The author met with Alta and City personnel at the trail access parking lot in Sandpoint on 2 May 2023. We traveled together to the PSRC site where the author monitored the excavation of 13 soil test units. The locations of all units were determined by Alta Project Manager Derek Forseth and all excavation was conducted by Alta Environmental Scientist Tom Jenkins. All test units were situated along the lake shoreline adjacent to 10BR539 (Figure 3, Table 1). All excavation was conducted manually using a soil auger. The author recorded GPS points at each unit using a Garmin Etrex 32 instrument. The diameter of each unit was approximately 3 inches; the depth of each unit below the surface (BS) varied with conditions and results. Changes in soil composition, texture, and color were recorded by Mr. Jenkins and the following descriptions have been adapted from his field notes. Representative sediment samples were collected by Alta personnel for later analysis; no artifacts or samples were collected by the archaeological monitor.

Table 1. Summary of all soil test units at 10BR539, 2 May 2023.

Unit	mE	mN	Depth below surface (BS)
SS-1	534776	5349867	84 inches
SS-2	534791	5349871	30 inches
SS-3	534796	5349882	28 inches
SS-4	534801	5349900	72 inches
SS-5	534809	5349892	50 inches
SS-6	534804	5349876	126 inches
SS-7	534784	5349865	120 inches
SS-8	534785	5349159	102 inches
SS-9	534751	5349840	30 inches
SS-10	534739	5349826	12 inches
SS-11	534698	5349809	12 inches
SS-12	534810	5349909	32 inches
SS-13	534820	5349918	36 inches

SS-1

Three strata were described in SS-1. The upper 12 inches consisted of well-sorted light gray silty sand to fine sand. The next 12 inches was tan buff silty clay to fine sand. From 24 to 84 inches (2-7 feet) BS the sediment was light gray silty sand to very fine sand. No cultural resources were encountered.

Figure 4. Photograph of SS-1 taken at the beginning of excavation. Note Black Rock at the left and Lake Pend Oreille in the background. The view is to the east.

Figure 5. Photograph of sediment excavated in SS-1. The surface material is at the left.

SS-2

Only one stratum was described in SS-2 and it was from the surface to 30 inches BS. The sediment consisted of slag cobbles up to 4 inches in width with very few fines. No cultural resources were encountered.

Figure. 6 Photograph of SS-2 during excavation. Note Black Rock at the right and the dock in the left background. The view is to the west.

Figure 7. Photograph of sediment from SS-2. The upper material is at the left.

SS-3

Only one stratum was described in SS-3 and it was consistent from the surface to 28 inches BS. The sediment consisted of slag with some sands. No cultural resources were encountered.

Figure 8. Photograph of SS-3 during excavation. The view is to the west.

Figure 9. Photograph of sediment from SS-3. The upper material is at the left.

SS-4

Three strata were described in SS-4. Overall, the sediment was similar to SS-1. The uppermost 12 inches consisted of well-sorted light gray coarse sand. From 12 to 24 inches BS the moist sediment was tan buff silty clay to fine sand. From 24-36 inches BS the sediment was dark gray very fine silty sand; this stratum continued to 72 inches (6 feet) BS, changing only from moist to wet below 60 inches (5 feet) BS. No cultural resources were encountered.

Figure 10. Photograph of SS-4 during excavation. Note Black Rock in the center background and the dock in the left background. The view is to the west.

Figure 11. Photograph of sediment from SS-4. The upper stratum is at the left.

SS-5

Three strata were described in SS-5. The upper 12 inches consisted of gravel and cobble slag. From 12 to 30 inches BS the sediment was moist dark brown-red silty sand with some gravel. From 30 to 50 inches BS the sediment was gray clay; water was present at 42 inches BS. No cultural resources were encountered.

Figure 12. Photograph of SS-5 during excavation. Note Black Rock in the right background and the dock in the center background. The view is to the west.

Figure 13. Photograph of sediment from SS-5. The upper stratum is at the left.

SS-6

Three strata were described in SS-6. The upper 22 inches consisted of gravel slag and gray sands. The next stratum was brown silty to sandy clay. Gray clay was encountered at 30 inches BS and water was present at 40 inches BS; the clay continued to 126 inches BS. No cultural resources were encountered.

Figure 14. Photograph of SS-6 during excavation. The view is to the west.

Figure 15. Photograph of sediment from SS-6. The upper stratum is at the left.

SS-7

Two strata were described in SS-7. From the surface to 18 inches BS it was the same gravel slag and gray sand as in the upper stratum in SS-6. Gray clay was present from 18 to 120 inches BS. No cultural resources were encountered.

Figure 16. Photograph of SS-7 during excavation. The view is to the west.

Figure 17. Photograph of sediment from SS-7. The upper stratum is at the left.

SS-8

Three strata were described in SS-8. The upper 6 inches was black slag gravel. From 5 to 12 inches BS the sediment was gray sandy clay. From 12-102 inches (1 foot to 8.5 feet) BS the sediment was gray clay. No cultural resources were encountered.

Figure 18. Photograph of SS-8 during excavation. The view is to the west.

SS-9

Four strata were described in SS-9. The upper 6 inches was light gray sand and gravel. From 6 to 24 inches BS the sediment was gray clay. From 24 to 30 inches BS the unit was composed of organics (decomposed driftwood and roots); water was present at 30 inches BS. From 30 to 60 inches BS the sediment was dark gray silty sand to very fine sand. No cultural resources were encountered.

Figure 19. Photograph of sediment from SS-9. The upper stratum is at the left.

SS-10

Two strata were described in SS-10. Coarse dark brown sand was present from the surface to 10 inches BS and clay was present from 10-12 inches BS. Water was encountered at 2 inches BS and excavation ended at 12 inches BS. No cultural resources were encountered.

Figure 20. Photograph of SS-10 during excavation. The view is to the southwest.

SS-11

One stratum was described in SS-11 and it consisted of silty sand with very fine sand and some angular rock. Water was encountered at 3 inches BS and excavation ended at 12 inches BS. No cultural resources were encountered.

Figure 21. Photograph of SS-11 during excavation. The view is to the west.

Figure 22. Photograph of SS-11 with excavated sediment.

SS-12

Two strata were present in SS-12. The upper 3 inches was gravel and cobble slag. From 3 to 48 inches BS the sediment was very fine tan-buff silty sand. Water was encountered at 28 inches BS and the hole collapsed at 48 inches BS. No cultural resources were encountered.

Figure 23. Photograph of SS-12 during excavation. The view is to the west.

SS-13

Two strata were present in SS-13. The upper 6 inches consisted of slag gravel with black-red coarse gravel and sand. From 6 to 36 inches BS the sediment was very fine silty sand. Water was encountered at 6 inches BS and the hole collapsed at 36 inches BS. No cultural resources were encountered.


Figure 24. Photograph of SS-13 during excavation. The view is to the west.

Summary and Management Recommendations

Archaeological monitoring was conducted at the Panhandle Smelting and Refining Company site during subsurface soil testing along the shoreline of Lake Pend Oreille on 2 May 2023. A total of 13 test pits were excavated to as deep as 126 inches (10.5 feet) BS. The surface of the project area was surveyed during monitoring and occasional fragments of nondiagnostic glass and ceramic fragments, as well as aluminum and plastic containers, were observed. Most items were clearly modern and associated with recent recreational use of the shoreline. There was no evidence of lithic material, fire-modified rocks, or any indication of a pre-contact occupation on the shoreline. No recent, historic or precontact items were encountered in any of the test units.

Although no cultural resources were encountered during this project, the PSRC site was considered eligible for nomination to the National Register of Historic Places in 2001 under criteria A and D. It is therefore recommended that future ground-disturbing activities at the site continue to be monitored by a qualified archaeologist.

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