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PLACER MINING SITES CONTENTS

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ABSTRACT:

Gold rushes and placer operations brought thousands of miners and settlers to Idaho immediately after gold discoveries at Pierce in 1860. In a little more than two years, Idaho was established to accommodate that sudden movement of frontier expansion, and placer mining continued as a significant element in Idaho development for a century or so. Cultural resources relating to placer activities have survived in a variety of locations as well as in a number of forms that require specialists in mining history and technology, archaeology, architectural history, and ethnic (primarily Chinese) history to interpret and evaluate.

1. Associated Historic Contexts

1. Development Sequence and Relation to Lode Mining

Rich western placer mining districts generally went through a series of episodes--some exciting and others discouraging--typical of nineteenth-century mineral operations. (R. W. Paul, Mining Frontiers of the Far West, 1848-1880 [New York, 1963], 9-10.) Idaho was no exception.

An initial stage of systematic prospecting led to a gold rush that brought a band of adventurers to a remote mountain area. Some rushes were frauds, but in many other camps, a shortage of valuable claims disillusioned most of those who arrived in search of sudden wealth. Some areas were worked out fairly quickly, at least for most miners using technology and equipment then available. Chinese miners--more industrious and skillful than most--would take over in areas that had lower grade placers capable of additional production. Twentieth-century dredging also followed in areas with deposits that could not be worked by earlier procedures. In many camps where placer gravels could be traced to gold lodes, quartz mining sustained a local economy during an era when other placers camps became ghost towns. Each mining area had a distinctive local history that developed out of a rather standard general context.

2. Placer Mining Methods and Technology

Prospectors started off with pans to locate gold deposits, but depended upon a variety of equipment for mining production. Their choices reflected elevation and contour of ground where water was available, depth of overburden and deposits to bedrock, and any possibility of washing tailing out to a lower expanse for discard. In adverse situations they resorted to rockers or to dip sluices, but for more favorable deposits they utilized ground sluicing, hydraulic giants that left characteristic hydraulic pits, or eventually to hydraulic elevators or to dredges and drag lines. Various kinds of sluice boxes and more elaborate recover devices were associated with their approaches selected to meet local circumstances characteristic of their districts.

3. Chinese Mining

Chinese miners began to come to North Idaho as early as 1864, in spite of white resistance to letting them enter the country. From modest beginnings around Pierce, the Chinese spread out over the territory, so that by 1870 the majority

of Idaho's miners were Chinese. Decided cultural differences (including a major language barrier) set the Chinese apart from other miners; one of the results of these differences is that Chinese mining left traces still distinguishable from the patterns of various kinds of white mining. Regularly excluded from the mining camps as long as white miners, accustomed to higher wages, could work profitably, the Chinese employed hand labor on a scale the whites could not afford. Chinese miners hoped to save enough from their meager earnings to support their families in China and build up a retirement investment on wages the whites would not accept. They wound up with lower grade placers that did not appeal to white miners--or with ground full of boulders, or too far from the water, or otherwise too difficult for whites to wish to work. Chinese miners also went to a lot of effort to clean up bedrock (into which heavy gold tends to work during placering operations) the whites did not bother with. White miners had to move and to pile large quantities of boulders. Yet they tended to use more power equipment and less hand labor than was characteristic of the Chinese. Neatly piled stacks and rows of boulders, each carefully hand washed in a time-consuming process that white miners were less inclined to employ, often mark old Chinese placers. Differing both from dredged tailings and other traces of white operations, such remains of early Chinese mining may be seen around many Idaho placer camps where oriental miners of a bygone generation toiled countless hours to maintain the Idaho gold reproduction in places that white miners had deserted.

4. Major Idaho Placer Areas

At least 29 mining areas in Idaho account for most placer production, although a number were significant primarily for leading to lode discoveries. Those with a reasonable amount of placer gold include:

Atlanta: A party of prospectors led by John Stanley left Warren's, July 4, 1863, and tried Bear Valley and Stanley Basin before crossing to the middle fork of the Boise River where they struck gold on Yuba River. Although an effort to conceal this discovery succeeded at least partially, a rush from Idaho City after August 8 attracted a host of eager prospectors who failed to find anything valuable there. Not until well after a Yuba mining district was organized, July 20, 1864, did a second rush follow from Rocky Bar to Yuba River, September 19. Only two months remained in the season, but the Atlanta lode was found that winter.

Banner: Prospectors radiating out from Boise Basin discovered placers on Crooked River in the summer of 1863. These were traced to a quartz lode, July 6, 1864, and the Banner Mine was located August 8.

Boise Basin: Discovered August 2, 1862, by a party from Florence and Auburn, Boise Basin gained prominence as the major mining region of the Northwest in 1863 and 1864. With a population of 20,000 during the gold rush, the basin ranked as the largest of Idaho's early mining communities. The placers were sufficient there to employ miners equipped with hydraulic giants for more than two decades. Quartz discoveries, commencing on Granite Creek late in 1862, also tended to give the basin mines greater stability, and the Gold Hill at Quartzburg continued productive until 1938. Commencing with Pioneerville (known as Hogem during the early days) October 7, 1862, several communities sprang up in the basin that winter, and for the next few years, Idaho City, Placerville, and Centerville became Idaho's leading camps. In 1863 Atlanta, and Banner--expanded the mining region of southwestern Idaho substantially, and the founding of Boise in the summer after the basin discovery resulted directly from mining advance. With the Blackfoot excitement in Montana in 1865 and 1866, and the rush to Loon Creek in 1869, the basin lost its surplus population. But Idaho City--in spite of a series of disastrous fires--still dominated Idaho's mining camps in 1870, although a Chinese influx in 1868 made its population more than half Oriental.

Proposals for an enormous Boise Basin bedrock flume project, which would have required consolidation of placer claims on a scale unheard of in Idaho, were considered for more than twenty years after their rush to the basin subsided. Finally a series of dredging operations that continued through the depression raised Boise Basin's gold production to 2.9 million ounces. This ranged in value from one to two billion dollars as gold prices fluctuated between 1980 and 1984.

Boise River: Placer operations on the Middle Fork of the Boise River below Atlanta go back to August, 1863, when a rush from Idaho City led to scattered discoveries. Extensive early workings in the Boise King area farther down the river include an early hydraulic ditch from Black Warrior and some surprisingly large-scale Chinese operations high on the ridges above the river there. Some large hydraulic giant operations at Twin Springs came at the turn of the century, and there are other placer areas along the entire middle fork. A dredge at Boise King produced some \$200,000 in 1940-1942 and 1946. Another \$150,000 may have

come from Twin Springs and from other bars along the river below Queen's River. In addition to these placers, a lode location in August, 1903, led to considerable activity on Black Warrior Creek from 1904 to 1906, and to occasional revivals there after that time.

Cariboo Mountain: A rush to Cariboo Mountain, September 8, 1870, followed gold discoveries there that summer. Mining began the next season, although the district was not fabulous, and Chinese were at work there in 1872. Lode discoveries in 1874, together with short placer seasons arising from lack of water, lengthened the life of the camp. Production continued for more than a decade (\$200,000 in 1879, for example), and renewed interest helped in 1886.

Coeur d'Alene: Gold was known on the Coeur d'Alene before 1860, and reports of a big discovery, May 27, 1865, set off a false rush long before A. J. Pritchard's extended prospecting led to a Coeur d'Alene quartz location, April 25, 1882, and to placer discoveries that created excitement in the fall of 1883 and led to the Coeur d'Alene gold rush of 1884. (Promotional literature issued by the Northern Pacific Railway, February 1, 1884, contributed substantially to the rush, much of which came on the railway.) Placers on the north fork produced almost \$260,000 in gold in 1884 and \$376,000 in 1885.

Deadwood: Several parties of prospectors went to work at Deadwood in the summer of 1863, and work resumed in the summer of 1864. A mining district was organized October 17, 1864, but the Deadwood excitement soon lapsed. Then Nathan Smith's party discovered some hopeful prospects and organized a new Deadwood mining district, August 16, 1867. A rush to Deadwood followed in 1868, but with the Loon Creek rush of 1869, interest in Deadwood diminished. Although there was quartz activity later, Deadwood City was a ghost town in 1876. Deadwood mining resumed from 1924 to 1932, with a lead-zinc yield of about a million dollars.

Dixie: Although a rush to Dixie came during the same week as the rush to Florence in August, 1861, work for practical purposes apparently did not begin around Dixie for more than twenty years. At least there is no record of any community there in the early days, and claims recorded in 1884 in what appears to have been the new camp of Dixie mark the beginning of serious activity. Quartz prospects there came into prominence after the panic of 1893, and by 1896, Dixie had attained some importance. Production records for the nineteenth century are lacking but more than \$100,000 was

recovered after 1900--mostly from a drag line placer operation during the depression. Some \$270,000 placer and \$50,000 quartz are recorded, and Dixie's total very likely did not exceed \$1,500,000.

Elk City: As soon as weather permitted prospecting, parties from Pierce set out to examine the surrounding country, and by the middle of May, 1861, fifty-two miners were on their way to the south fork of the Clearwater, where gold had been noticed in 1856 by a white traveler on the Nez Perce trail.

Gold was found before the end of May, and a mining district was organized June 14. The South Fork got off to a slow start, but Elk City was established before the end of July, and some handsome strikes August 1 and 2 improved the reputation of the district enormously. By then the diggings there were rated as an ounce a day, and the dust was relatively good--about \$16 per ounce. Some 800 or 1,000 miners were there by late August, but the rush to Florence swept away almost all the miners by the end of September, so there was little opportunity for big production the first season. Elk City revived in June, 1862, when a surplus of miners overflowed from Florence, but production rates again were rather low. Even though ditches were dug for water during the 1863 operations, the season was a bad one, and recovery was poor. The camp, though, went on, and with hydraulic giants, a relatively small number of miners began to work a lot of placer ground. By 1872, Chinese placers predominated. Quartz properties go back to 1870, but production did not begin on any scale until 1902; some \$725,000 quartz production has been recorded. Work at Elk City has gone on now for over a century, and with extensive dredging and dragline operations total production may have reached as high as sixteen million. By 1984, this value had appreciated to two or three hundred million.

Florence: Fabulous reports of production at Florence startled the entire Pacific Coast in the fall of 1861. Production got underway within six weeks of the original discovery, August 19 and 20, and during October and November some of the miners there were taking out hundreds of dollars a day. The district was not large, but what there was of it seemed incredibly rich--at least as reported in the newspapers--and except for its isolation and hard winters, Florence was exactly the kind of mining zone that prospectors had dreamed of finding. In spite of an exceptionally difficult first winter, thousands of hopeful miners joined the rush to Florence, and some 10,000 actually reached the mines there the next spring. The trouble was that only about 3,000 could find work there at all, so most

had to look for other mines. Production reached about \$50,000 per day in 1862, after which most of the best deposits were pretty well worked out. Florence was a good but unspectacular camp in 1863, and then went rapidly down hill. Chinese worked there for years, and in 1896 there was a considerable quartz promotion, with New Florence established April 5. Quartz mining there, however, did not compare with the old placers, and the greater part of the district's production came in the one big year of 1862--with most of the rest in the two adjoining seasons. For a relatively small area, though, Florence turned out an astonishing production--in the neighborhood of \$9,600,000. Between 1980 and 1984, Florence's gold had increased in value to a range of \$150,000,000 depending upon price fluctuations in those years.

Gibbonsville: Placers found on Anderson Creek in the summer of 1877 proved to be low grade, but they were traced to a promising vein in September.

Leesburg: Placers discovered July 16, 1866, at Leesburg led to a rush to the Lemhi country, and a mining district was organized August 10. Some 3,000 claims (many more claims than miners) were recorded the first fall, and four or five hundred miners spent the winter there. By April 1867, the population of Leesburg rose to about 2,000, but a late mining season that spring left most of them idle. The gold was coarse and assayed high (\$18.40); some of the claims in the first fall paid \$8 to \$20 a day, and in a few instances, much more. The Leesburg rush brought mines to a whole new area, and led immediately to the founding of Salmon as a service community for the new mines. Quartz discoveries were expected right from the first season, although the few that were made in 1879, 1880, and 1892 never did compare with the placers. A seventeen-mile ditch and flume system expanded Leesburg's placer operations in 1908, but substantial recovery with hydraulic giants was delayed until 1926, when a couple of years of production became possible. A dragline operation, responsible for \$80,000 from 1939 to 1942, and a large modern placer program in 1982 augmented Leesburg's production to about \$6,250,000.

Lemhi: Placer workings in such areas as Bohannon's Bar (\$200,000) went back at least to 1900 or earlier. Although an early dredge failed at Bohannon's Bar, early hydraulic giants on Kirtley Creek southeast of Salmon operated successfully, as did a \$1,200,000 dredge enterprise from 1908 to 1911.

Little Smoky: Originally located in 1864, the Little Smoky placers were worked intermittently until 1879, when quartz discoveries boomed the district. The main production came in 1884, when about \$1,200,000 worth of ore was shipped to Ketchum and smelted.

Long Valley: Gold Fork placers, discovered at Copeland in 1863, came into production in 1864, and two other Long Valley districts followed at Hawkeye and Lake City. Miners from Long Valley also had some Salmon River south fork placers across a high ridge separating those drainages. Deep placers at Copeland's Bar finally were largely worked out in 1870-1872, but a nine-mile ditch to serve Hawkeye was delayed until 1879.

Loon Creek: Nathan Smith took a prospecting party from Leesburg to Loon Creek in May of 1869; reports of good placers there led to a Loon Creek rush from Leesburg on July 19 and Idaho City on August 14. Loon Creek was the big Idaho excitement that year. Immediate offshoots included discoveries at Yellow Jacket and Yankee Fork. Placering on Loon Creek continued for a number of years, with the Chinese who had barely begun to enter the area in 1870, soon taking it over.

Miller's Camp: Secesh River placers were noticed not long after the discovery of nearby Warren's, and Miller's Camp seems to have been active from 1863 on, with about fifty people there. Activity at Ruby Meadows continued through the depression, and a \$500,000 production may have resulted.

Newsome and Clearwater Station: Concurrent with the rush to Elk City, John Newsome discovered placer ground on Newsome Creek in the early summer of 1861, and three hundred men were at work in July. Soon the mining area was enlarged. Late in July, 1862, placers rated at \$10 to \$20 per day became active on the south fork of the Clearwater near the mouth of Newsome Creek, and by the next season Clearwater Station (located near the Leggett Creek placers just below the mouth of Newsome) took second only to Elk City among the south fork camps. Newsome itself did not have much population after 1862; although an 1864 ditch helped during the early years, most of the early production was confined to the lower part of the stream. Activity revived at Newsome during the panic of 1893, and altogether, the Leggett placers, Moose Meadow placers, Old Golden placers, followed by dragline operations during the depression (suspended in July, 1940), may have raised the Newsome-Golden placer total to something like \$1,600,000.

Orogrande: Crooked River placers were known by 1862, and quartz at Orogrande became prominent in 1896. A mill ran intermittently from 1902 to 1931, yielding \$70,000 and activity resumed in 1932 during the depression. Including early placers, the Gnome Quartz Mine, and recent dredging Orogrande produced at least \$640,000.

Owyhee: Although Owyhee placers were noted by the Boise Basin discovery party on June 28, 1862, they went unnoticed until after Michael Jordan's party made a big strike, May 18, 1863. The Owyhee rush was an especially exciting one, and although placers there did not amount to much, important silver lodes came to light.

Palouse: Placers rated at \$10 a day were struck not far from later Moscow in 1866, and whites and Chinese were at work on twenty North Palouse claims found the first season. Some activity went on for years: after an initial decline, placer operations revived in 1884 and benefited from national economic depressions after 1893 and 1930. A dredge above Harvard reworked some old Chinese ground from 1940 to 1942, producing slightly over \$550,000.

Pierce: Although gold was well known in more than one Idaho district before prospecting started around Pierce on September 30, 1860, the Pierce discovery marked the beginning of mining in Idaho. Miners from Pierce then went on to find Elk City and Florence, and from there to Warren's and Boise Basin.

Several thousand prospectors joined the Clearwater gold rush in the spring of 1861. Since the mining season commenced late that year because of an exceptionally bad spring, and since the rush to Elk City that summer and to Florence that fall drained away most of the miners, production did not immediately reach the level that was expected of the district: the first season's yield, though, approached a million dollars worth, and a force of several hundred white miners produced from four to eight hundred thousand dollars a season until the Chinese took over the district in 1865 and 1866. Chinese placering continued there for twenty or thirty years, and some quartz discoveries in 1879 led eventually to a revival of Pierce, primarily in the decade or so after 1896.

Rocky Bar: Prospectors trying to determine the extent of the Boise mining region set out from Boise Basin as soon as possible in the spring of 1863, and discovered placers on Feather River. Then a quartz prospect was located May 7 not far above Rocky Bar. The South Boise gold rush followed

just after the middle of May. Placers on Red Warrior and on Elk Creek at Happy Camp were of some consequence, but the South Boise mines primarily were quartz.

Salmon River: Prospected by the Florence discovery party in July 1861, the Salmon River bars were eclipsed instantly by Florence. But by March 1862 miners driven out of Florence by deep snow and a hard winter began to work some of the better claims, which ran from five to twelve dollars a day.

By the summer of 1862, the entire Salmon River Canyon from later Salmon City on down had been prospected (with some difficulty) and white and Chinese miners worked the richer bars for many seasons. Total production reached \$2,500,000.

Shoup: Placering around Shoup began in 1868-1869, but more than a decade went by before much attention was paid to that area. Then lode discoveries in 1880 led to large scale mining there.

Snake River: Fine gold occurs for hundreds of miles along Snake River, and if economical recovery were possible, exceptionally large production could result. The particles are so fine that three or four thousand must be collected to get a penny's worth of gold [at a value of \$35 an ounce!], and collecting that many particles often is not easy. A rush of 2,000 miners to Upper Snake River led to serious disappointment in the late summer of 1863, but mining on Snake River below Salmon River was undertaken in 1863 and 1864. Operations in the two decades after 1869 were scattered all along Snake River for hundreds of miles, and some of them were productive. Although processing problems never were really licked, recovery of more than two million of an estimated several billion dollars of Snake River fine gold has been recorded.

Stanley: John Stanley's Atlanta discovery party came through Stanley Basin from Warren's in the summer of 1863, and several miners were busy there by 1868. At that time an hydraulic giant was operating at Robinson's Bar. Some gold was placered in and around Casino Creek during the time that the Yankee Fork area was active. Small scale dredging commenced in 1899, and a lode development north of Stanley soon followed.

Warren's: Organized as a mining district July 22, 1862 (a little less than two weeks before discovery of Boise Basin), Warren's had a steady development, in contrast to the spectacular rush and decline that marked neighboring Florence from which Warren's was discovered. In its second

season it was the leading camp of North Idaho and an 1866 to 1868 quartz excitement brought in two stamp mills. From 1874 to 1876 Chinese miners took over the placers, and quartz properties were worked at times during the Chinese period. Finally the Little Giant mine commenced to pay dividends from 1883 through the rest of the century. Although lode mining never matched the placers at Warren's, the district was kept active until a steam shovel dredging operation failed at the turn of the century. A steam dredge finally was employed successfully from 1931 to 1942, producing about \$4,500,000. Altogether Warren's lodes and placers accounted for about \$16,120,000 in value.

Yankee Fork: Named by Joel Richardson's party of Yankees from Montana who prospected the stream unsuccessfully at the time of the Leesburg discoveries, Yankee Fork was the scene of extensive attempts at placer mining beginning in 1870 after the Loon Creek rush brought mines to that part of the country. D. B. Varney and Sylvester Jordan located claims on Jordan Creek in 1870, and were followed by many others; the placers, though, ran \$3 to \$4 per day, and with wages of \$6, they did not pay. Better placers discovered the next year led to organization of a mining district, with sixty or so miners in the summer and about fifteen in the winter. Some minor placer operations occurred intermittently from then until the depression, when low-grade placers were dredged with success (\$1,800,000) during the 1939-1942 and 1946-1951.

2. Associated Property Types

1. Surface Evidence in Mining Areas Sites in which evidence of placer mining has survived include examples of:

1. excavation
2. ground sluicing
3. hydraulic pits
4. rocker and long tom tailings
5. hillside claims (high bars)
6. hydraulic elevator operations
7. drag line deposits
8. dredge tailings
9. tunnels and shafts into buried placers

Each of these classes of surface evidence of placer mining offers informational opportunities suitable for investigation through appropriate research designs.

Different technologies for placer mining responded to variety of terrain, availability of water, potential locations for sluices and other gold recovery equipment, depth of bedrock, richness of placer gravel, and other factors that controlled choices of equipment to be employed. A temporal sequence of available processes also is reflected in surface evidence of placer mining that survives around old gold camps. An understanding of ways in which miners functioned in various periods of placer mining is gained through examination and analysis of these classes of sites. Accurate generalization concerning mining history depends upon documentary research and site examination of these areas.

2. Ditch and Flume Systems; Pipes and Reservoirs

Mining operations depended upon availability of large amounts of water at sufficient height above placer deposits to employ efficient gold recovery systems. Some ditches had to be extended for many miles in order to make mining practical. Water delivery systems controlled each choice of recovery device, and local mining production can be understood only when water sources and transmission is identified.

3. Architectural Evidence in Mining Camps

Aside from Pierce, which has grown far beyond its gold rush population, none of Idaho's old placer camps had emerged as a town of any considerable size. A number of major early centers survive with modest population. Elk City, Warrens, Idaho City, Placerville, Murray, and Gibbonsville have adapted as forest or recreational centers, most of which retain architectural reminders of mining that was prominent more than a century ago. Other camps have become true ghost towns, with only a few mining era buildings--or, as with places like Florence, none at all. Buildings in mountainous locations that have deep winter snow tend not to remain intact. Some places communities had substantial brick structures that retain their early significance.

4. Archaeological Sites (Locations of Tents, Structures, Trash Dumps, and Equipment)

Significant information for mining as well as social history can be gained from archaeological examination of occupied location (tent and building sites, trash dumps, and other standard subjects) suitable for

historical archaeology. Experienced investigators can handle these classes of cultural resources adequately, and comparisons among mining camps contribute to a better appreciation of Idaho's early settlers. Appropriate archaeological research designs control such enterprises.

5. Promotional Sites

Some representation of placer activity, in addition to imaginary or non-commercial gold lodes, is included in this significant aspect of mining history. Site examination enhances documentary investigation of these enterprises, which sometimes were associated with more successful or legitimate mining operations.

6. Local Trails and Roads

Access to placer camps always was an important feature of successful mining, and roads or trails constitute a class of sites that need to be taken into account in identifying and evaluating local cultural resources. Some have undergone considerable later improvement, but many have survived unmodified in later trails tend to disappear in places, but their grades--often along ridges or similar locations of superior access--can be recovered by careful investigation.

3. Geographical Data for Placer Mining

Idaho's placer camps thrived in many mountain locations that are explained in geological context and documentary sources. prospectors who penetrated vast tracts of non-gold-bearing terrain became expert in learning where to find wealth, which was distributed over more than sixteen counties. Southeastern Idaho is represented minimally, and significant placer camps are absent north of Murray. For further information, consult historic sites reports:

466	Coeur d'Alene River and Lake	649	Shoup
643	Palouse-Potlatch timberlands	601	Lemhi Valley
194	Pierce-Weippe	204	Yankee Fork
600	Slate Creek-Florence	282	Stanley Basin
195	Elk City	198	Boise Basin
197	Warren's	662	South Boise mines
606	Long Valley	622	Owyhee
650	Leesburg	205	Cariboo Mountain

4. Identification and Evaluation Procedures

Competent, experienced mining historians and engineers are required to identify evidence of various kinds of placer operations (locations of production with rockers of hill claims, ground sluicing, long tom production, hydraulic pits, hydraulic elevators, dredging and drag line enterprises, and a variety of recent recovery methods) and to interpret their significance in local history. Amateurs (archaeologists, architectural historians, or other inexperienced cultural resource specialists) do not participate in this process with much success unless they know what they are examining and can explain accurately what placer process was employed at a particular site, why it was adopted, and what can be learned from a close inspection and description of surface evidence. Appraisal of this class of material and determination of local significance cannot be done by amateurs either. Historical investigation as well as site examination is essential for evaluation of these resources which provide important information for western mining history as well as for an understanding of Idaho's cultural heritage.

Experienced architectural historians can evaluate mining area structures that have not deteriorated too severely. Ghost towns generally are not noted for brilliance in architectural preservation, and ruins frequently have not survived unmolested. Federal land managing agencies have spent many years industriously destroying this class of cultural resource, and many mining camps are located in areas where log structures deteriorate naturally and rapidly. Anything that remains is likely to be of unusual cultural resource value on that account. Other mining camps in dry, isolated areas have had better survival rates, although they often do not appear to be architectural treasures. They need to be evaluated by mining historians as well as by architectural historians in order to have an adequate appraisal of their local significance.

Historical archaeologists are required to identify and evaluate resources such as trash dumps and barn or cabin sites. When mining equipment (such as barrel amalgamators or parts of dredges, for example) is encountered, a mining specialist (needed anyway for placer tailings and similar remains) is necessary.

Trails, roads, and similar mining access routes require historical context for identification and appraisal. So do mining promotions, for which standard placer or lode practices sometimes applied but often did not. Such features had substantial local significance that has to be

understood as an important aspect of mining history.

Publications--450 N. 4th Street, Boise, ID 83702--208-334-3428