NPS Form 10-900
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NPS/WHS Word Processor Format
(Approved 03/88)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

RECEIVED
MAY 10 1990
NATIONAL REGISTER

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16).
Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries. Use letter quality printers in 12 pitch. Use only 25% or greater cotton content bond paper.

1. Name of Property

historic name Holden Mining and Smelting Co.

other names/site number Holden Lixiviation Works, Holden-Marolt Complex

2. Location

street & number 1000 Block West Highway 82 N/A not for publication

city, town Aspen X vicinity

state Colorado code CO county Pitkin code 097 zip code 81611

3. Classification

Ownership of Property	Category of Property	No. of Resources within Property	
		contributing	noncontributing
___ private	___ building(s)	2	2 buildings
X public-local	X district	1	___ sites
___ public-State	___ site	___	1 structures
___ public-Federal	___ structure	___	___ objects
	___ object	3	3 Total

Name of related multiple property listing:
Historic Resources of Aspen, MRA

No. of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this _x_ nomination __ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property x meets__ does not meet the National Register criteria.
__See continuation sheet.

Barbara Sudler 5-2-90

Signature of certifying official Date

State Historic Preservation Officer, Colorado Historical Society
State or Federal agency or bureau

In my opinion, the property __ meets __ does not meet the National Register criteria. __ See continuation sheet.

Signature of commenting or other official Date

State or Federal agency or bureau

5. National Park Service Certification

I, hereby, certify that this property is:

✓ entered in the National Register
__ See continuation sheet — Patrick Andrus — 6/22/90

__ determined eligible for the National Register. __ See continuation sheet

__ determined not eligible for the National Register.

__ removed from the National Register

__ other, (explain:) _____

for Signature of the Keeper Date

6. Functions or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
INDUSTRY/PROCESSING/EXTRACTION	VACANT/NOT IN USE
Processing Site	RECREATION/outdoor recreation

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)
	foundations sandstone
OTHER/Industrial Vernacular	walls wood/weatherboard
	roof asphalt shingle
	other

Describe present and historic physical appearance.

The Holden-Marolt Complex is located on the west bank of Castle Creek, approximately one mile south of the confluence of the Roaring Fork River on the far western boundary of the City of Aspen, Colorado. The site contains one contributing site (ruins of the mill), two contributing buildings (the sampling works and salt shed), one non-contributing structure (Marolt Ditch) and two non-contributing buildings (Opal Marolt House and metal garage). The nomination is for the mill site and surroundings, sampling works building and the salt shed located within the 2.5 acre parcel which was the mill site historically.

The site is characterized by its fairly level setting with indigenous vegetation. Native trees, shrubs and grasses surround the area, creating a natural park like setting. The two contributing buildings are located at the end of a long dirt driveway. The non-contributing buildings are located up a slope approximately 300 feet to the west of the contributing resources. The irrigation ditch meanders throughout the parcel.

The sampling works building has maintained its original exterior appearance though evidence of deferred maintenance is present. A small shed addition was attached to the south end circa 1940. This addition does not detract from the integrity of the resource. This building is 77 feet long, 42 feet wide and is 1.5 stories high. The platform loading dock runs the length of the west elevation and is protected by a wide overhang. Original wood frame double hung, six over six light windows remain, some with original glazing. Six original wood frame and sided industrial style doors remain. The building exterior is faced with vertical boards and the side gable roof has wood shingles.

The sampling works interior beam work remains intact. The trusses span the full width of the resource with iron rod tension members and additional tubing. Other than the beam work and some wiring the interior has been heavily altered and is not considered significant.

The second building has one story, wood frame and a gable roof. Originally used as a salt shed, it is located 66 feet to the south of the sampling works. Approximately 50% of that building has been removed, but the remaining portion is unaltered and is contributing to the significance of the district.

X See continuation sheet

The ruins of the original mill are structural and archaeological, indicating the size of the building to be over 250 feet long and heavily used. The most predominant remains are large portions of the laid sandstone foundation wall which utilized cut random ashlar peachblow sandstone. Some portions of this massive wall have deteriorated due to years of water drainage, as well as in the demolition/dismantling itself; other portions are in remarkably good condition. Nine pairs of large wooden piers on concrete foundations remain, mostly in badly deteriorated condition, constructed of approximately 27 2x12's nailed together. These are evenly spaced lower down the slope from the sandstone foundation wall.

The remains of this very large building and its associated outbuildings lie mostly on or against the hillside slope, approximately 100 feet from the bank of Castle Creek. The period of time represented by the ruins is from 1891 to 1910.

The original Holden Company office building, now known as the Opal Marolt House is considered non contributing. Alterations in the late 1930s and 1940s raised the structure, added aluminum siding and two entryway porches. An additional noncontributing building, the two car metal garage/storage shed is located approximately 40 feet to the southwest of the Opal Marolt House.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties: ___ nationally ___ statewide X locally

Applicable National Register Criteria X A ___ B ___ C X D
Criteria Considerations (Exceptions) ___ A ___ B ___ C ___ D ___ E ___ F ___ G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
INDUSTRY	1891-1893	1891

Cultural Affiliation
N/A

Significant Person
N/A

Architect/Builder
Hunt and McDonald Stonework

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Holden Lixiviation Works, also known as the Holden-Marolt Complex, was constructed 1891-1893 in Aspen, Colorado. It is significant under Criterion A for its association with the mining history of Aspen during the period 1891-1893. It is one of the few remaining sites from the industrial aspects of Aspen's mining history. The site meets criterion D for the importance of the information it is likely to yield regarding the smelting process.

This nomination is submitted as an addition to the Historic Resources of Aspen, MRA listing. Accompanying this nomination is a Mining and Milling context document to be added to the original overview.

The two contributing buildings, the sampling works and the salt shed, meet the registration requirements in the multiple property amendment for mining industrial process buildings in that they are associated with a significant trend in the local milling industry and they are still able to convey the feeling and function of the mill complex. The salt shed and sampling works buildings are considered contributing due to their original location, functional association to overall milling process, and original materials. The alterations to the salt shed have not altered its character or fabric, only its dimensions.

The historic archaeological remains of the original mill also meet the registration requirements. The ruins of the (five story) building are located to the east of the sampling works and salt shed buildings. The mill ruins and overall 2.5 acre parcel contain a number of historic artifacts and cultural remains. A

X See continuation sheet

one day surface study in May, 1989, believed to be the first study of its kind on that site, used volunteers under the guidance of a professional regional archaeologist. The survey revealed a high density of surface materials, such as porcelain insulators, rusted metal washers, bolts, screws, pipes, cans, crumbled bricks and round wooden cable wheels. The reconnaissance removed only five sensitive diagnostic artifacts from the site for permanent curation.

The mill site has archaeological potential because deposits are in situ and relatively unmolested based on the field reconnaissance of May, 1989. Secondly, the amount of surface scatter, specifically the industrial refuse recorded indicate that the potential exists at the site to examine both the milling technology of lixiviation and the industrial work place of a mill in Aspen during the silver boom 1891-93. This is reinforced by the written record which remains available about the mill. The available documents do not address either the spatial layout of the mill in detail, nor do they adequately describe how the workers adapted to the lixiviation process. This mill site is the only remaining undisturbed mill site associated with Aspen's mining history.

The Holden Lixiviation Works (Holden-Marolt Complex), part of the diversification effort, was constructed in 1891. The Holden Mining and Smelting Company was incorporated in 1890. Edward R. Holden operated a milling company in Leadville and came to Aspen to take advantage of the silver production. The company was the largest and most extensive works in the city. The new enterprise obtained the exclusive right for the Roaring Fork/Pitkin "territory" of treating ore by the Russell patented process of lixiviation. When the complex was constructed, it was the only one in Colorado using this method of ore reduction. While the Holden Works were innovative in Colorado, the process had been used throughout the western United States since the 1880s. The technology was basically that of leaching. The silver ores were roasted with salt. Silver Chloride results which could then be dissolved by sodium or calcium hyposulfite. An alkaline sulfide is added to the solution and silver was then precipitated. One of the earliest and best known lixiviation mills was the Bertrand Mill near Eureka, Nevada. While the method met with success it had some pitfalls. The recovery rate of silver was somewhat low, but later changes in the process increased the percentage of silver recovered. However, cyanide leaching became the most popular method in the late nineteenth century and replaced the lixiviation process. Holden was the last lixiviation works to be built in Aspen.

The Holden Mill was a major employer in Aspen, hiring 100 men at opening, and 50 a few months later. The complex cost one-quarter of a million dollars to build and was located on 20 acres. Hydroelectricity provided power for the mill. The site was on a spur of the Colorado Midland Railroad. The railroad and loading dock were located up the bank from the mill on a level portion of land. Ore was unloaded onto the sampling works platform from the railcars. After sampling, the ore was conveyed to the dryers and then drawn by tramcars and dumped into the self-feeders of the stamp mill. After the salt and ore were crushed, they were elevated to the top of the chloridizing furnace. After passing through the furnace, the ore was placed on the floor and allowed to cool. After cooling was completed the ore was dumped into ore vats and the leaching solution applied.

The silver was precipitated into silver sulphide. The silver which remained in the precipitating tank was then drawn off, filtered, dried and sampled and prepared for shipment. 10,000 ounces of silver to the ton was the product. By 1892 100 tons of ore were being treated daily at the Holden plant at a cost of $12 per ton. However, the crash of the next year resulted in the plant closing.

A.E. Carlton, owner of the Colorado Midland purchased the Holden land as part of a ranch he opened near Aspen. The Marolt family purchased the site during the 1930s. The main buildings of the lixiviation works were removed or left idle. The Marolts converted two of the extant mill buildings, the sampling works and the salt shed, into a barn and a storage shed, and they rehabilitated the mill office into their residence.

9. Major Bibliographical References

Anonymous. The Aspen Daily Times. 15 November 1891.

Opal Marolt. Personal Communications with Roxanne Eflin, City of Aspen Preservation Planner. Fall, 1988.

Kight, William. "Preliminary Reconnaissance of the Holden Mill Site, Aspen, Colorado." May, 1989, Draft report on file with the City of Aspen.

Previous documentation on file (NPS): X See continuation sheet _
preliminary determination of
individual listing (36 CFR 67)
has been requested
___previously listed in the National Register
___previously determined eligible by the National Register
___designated a National Historic Landmark
___recorded by Historic American Buildings Survey # _____
___recorded by Historic American Engineering Record # _____

Primary location of additional data:
X State Historic Preservation Office
___Other State agency
___Federal agency
X Local government
___University
___Other
Specify Repository:
_____

10. Geographical Data

Acreage of property 2.5 acres

UTM References

	Zone	Easting	Northing		Zone	Easting	Northing
A	1/3	3/4/1/5/6/0	4/3/3/9/5/6/0	B	/	/ / / / /	/ / / / / /
C	/	/ / / / /	/ / / / / /	D	/	/ / / / /	/ / / / / /

__ See continuation sheet

Verbal Boundary Description

Beginning at a point at the northeast pier of the Marolt Pedestrian bridge, proceed west 290 feet to the center of the Marolt Ditch, then proceed west northwest 175 feet to the southwest corner of the non-contributing metal garage structure, continuing on that same line 128 feet to the center of the driveway.

X See continuation sheet

Boundary Justification

The site includes approximately 2.5 acres of the oignial Holden Mill site. It includes the majority of the built environment of the original milling complex. The boundaries also include the land identified

X See continuation sheet

11. Form Prepared By

name/title Carol Drake Mehls of Western Historical Studies and Roxanne Eflin
organization Aspen/Pitkin Planning Office date January 27, 1990
street & number 130 South Galena Street telephone 303-920-5096
city or town Aspen state CO zip code 81611

The Aspen Daily Times, November 15, 1981, October (no date), 1891.

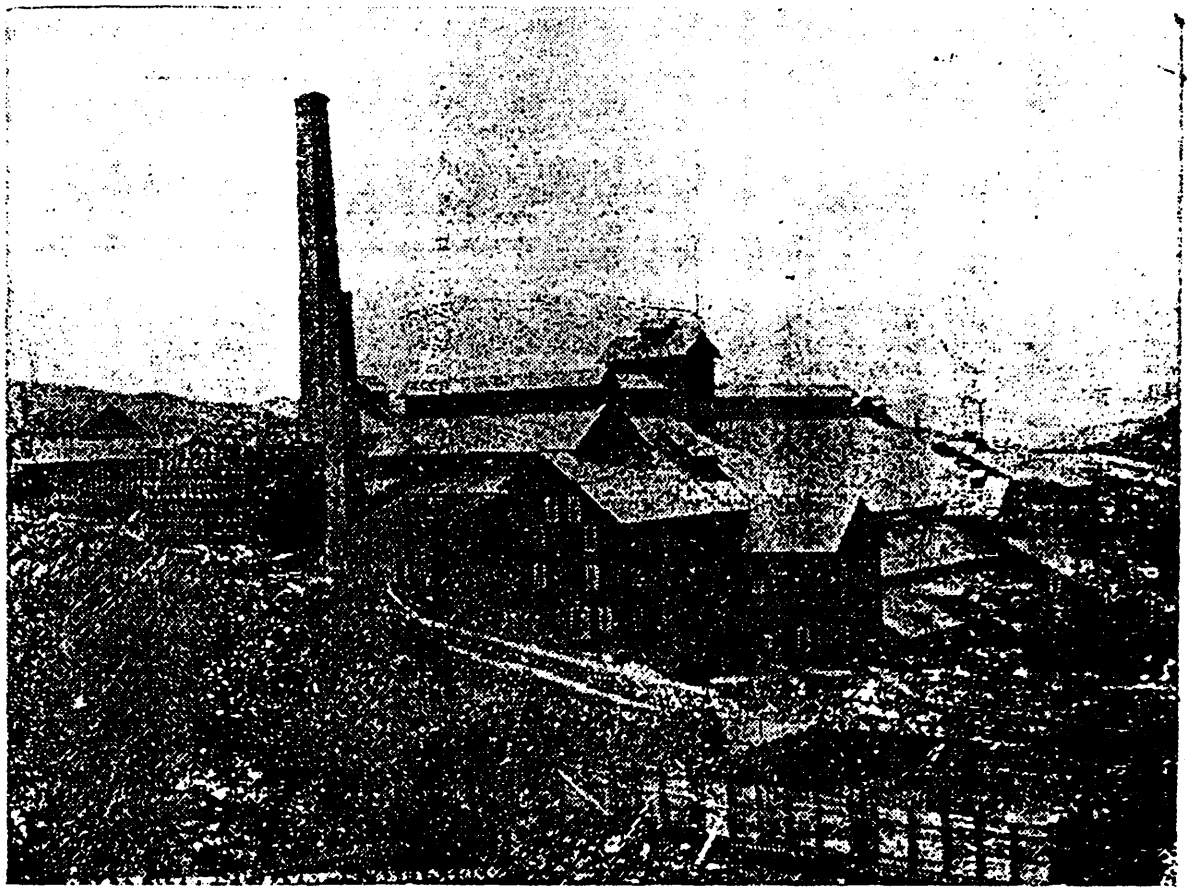
The Daily Chronicle, August 28, 1891.

BOUNDARY DESCRIPTION CON'T.
Proceed 150 feet north northeast near the center of the driveway to the center of the bridge over the Marolt Ditch, then proceed east along the north bank of the Marolt Ditch 180 feet, then proceed north 180 feet, proceed east 395 feet to the 7,8760 topographic elevation line, proceed south along the 7,870 topographic line 240 feet, proceed southwest 220 feet to the point of beginning.

BOUNDARY JUSTIFICATION CON'T.
during the archaeological reconnaissance has containing the majority of the artifacts and materials associated with the buildings and ruins.

JAN 15 1953

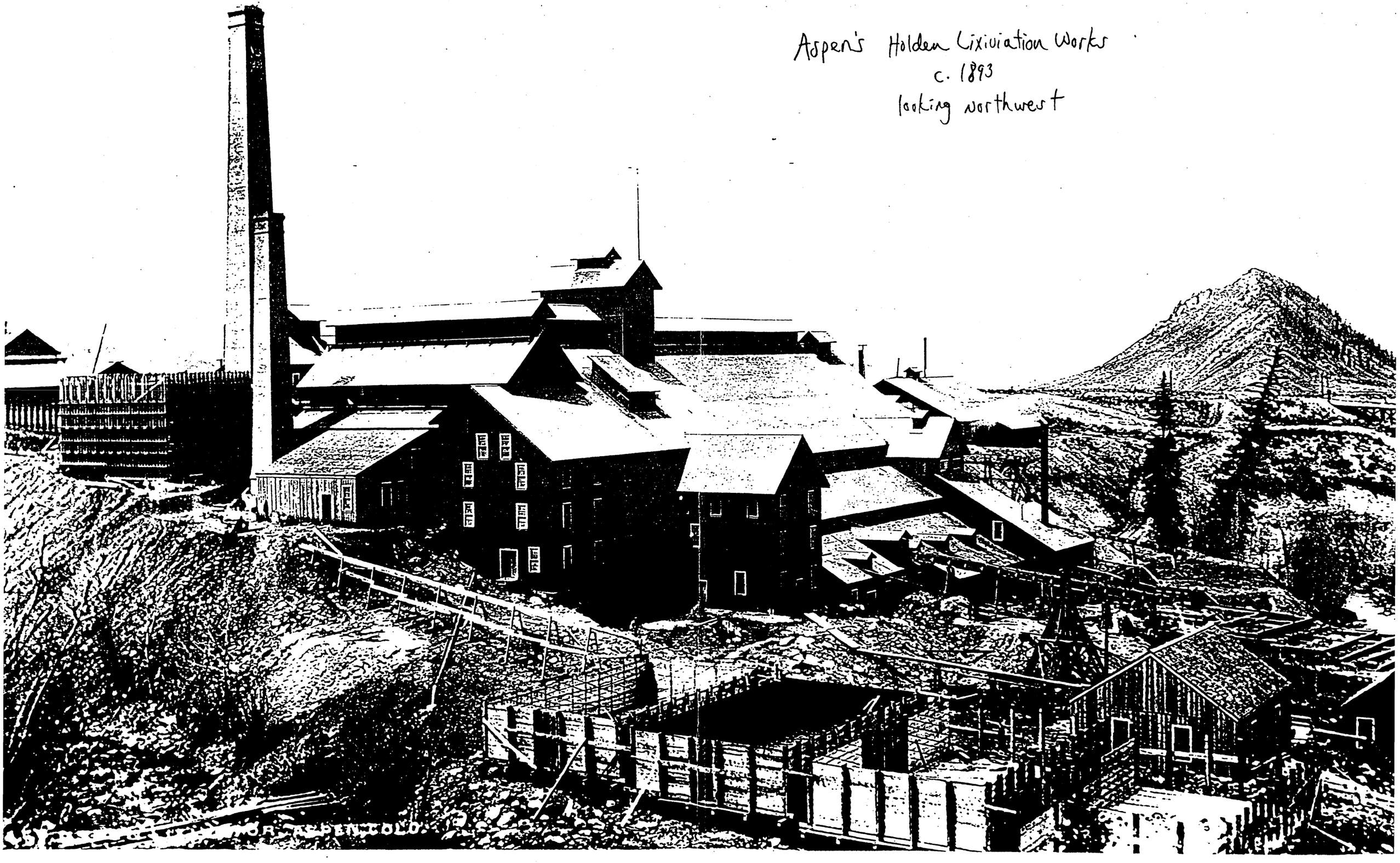
Pictured here in its heyday is the old Lixiviation Works built by Ebon Holden on Castle Creek. The Lixiviation works was an early day ore separation process. Mr. Holden came from Leadville to build it and ran it for three or four years until it was closed down in 1893 when the District Court brought a lawsuit against it for $199,310.15. The last of the old chimney is still standing near the west end of Main street and it has been purchased by Jake Lewis and is being dismantled. One of the buildings is being used as a granery on the Midland ranch by Mike Marolt.



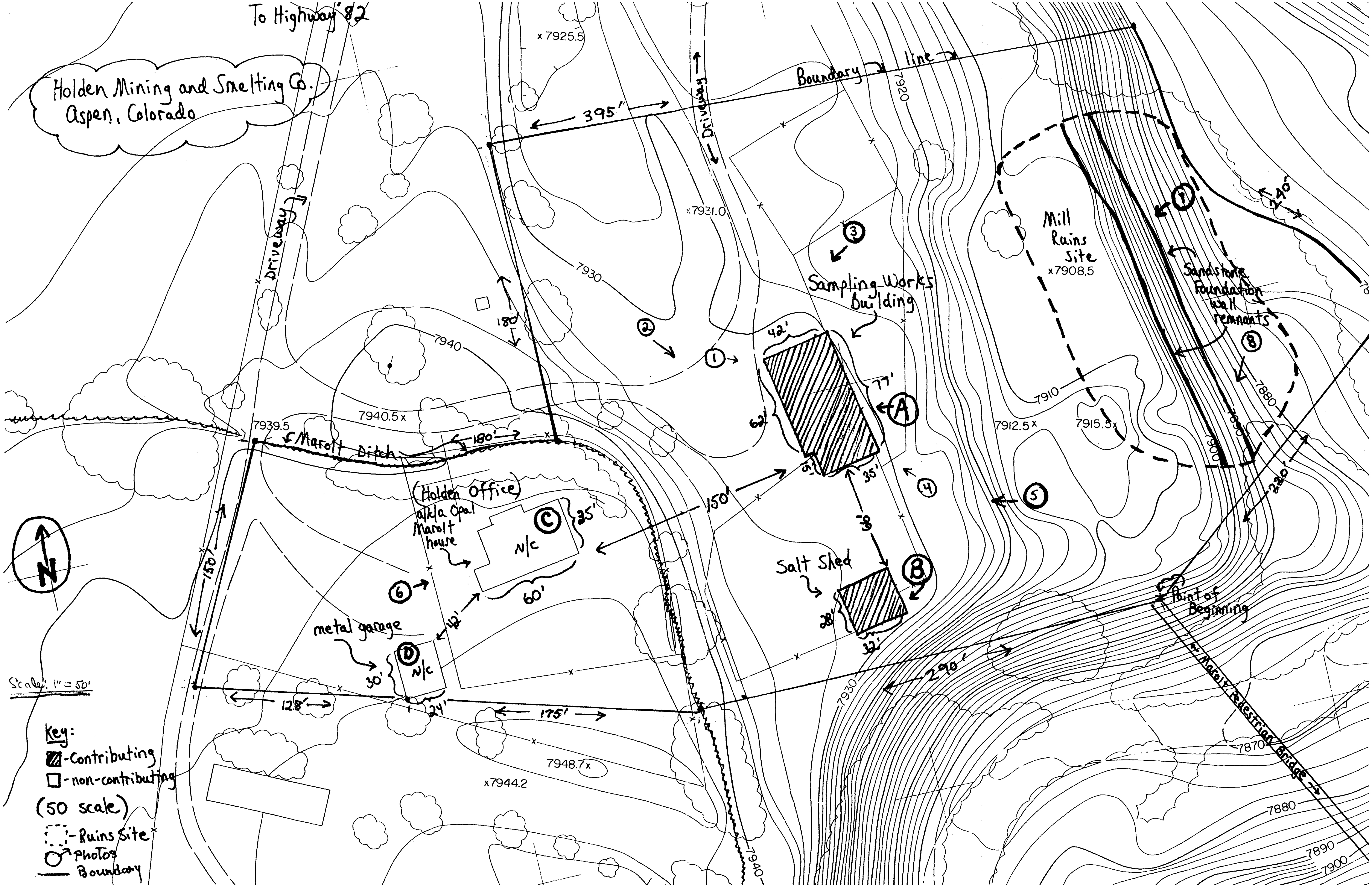
Source: Aspen Historical Society

Newspaper clipping, name of paper unknown

Aspen's Holden Lixiviation Works
c. 1893
looking northwest



Source: Aspen Historical Society ca. 1893



To Highway 82
Holden Mining and Smelting Co.
Aspen, Colorado
Boundary line
Driveway
395'
x7925.5
7920
x7931.0
7930
7940
180'
Mill Ruins Site
x7908.5
Sandstone Foundation wall remnants
240'
Sampling Works Building
42'
77'
62'
35'
A
B
C
D
7910
7912.5 x
7915.5x
7880
7890
7939.5
7940.5 x
Marolt Ditch
150'
(Holden Office)
a/k/a Opal Marolt house
N/C
35'
60'
Salt Shed
28'
32'
metal garage
30'
24'
12'
128'
175'
290'
220'
Point of Beginning
Marolt Pedestrian Bridge
7930
7870
7880
7890
7900
7948.7x
x7944.2
N
Scale: 1" = 50'
Key:
- Contributing
- non-contributing
(50 scale)
- Ruins Site
Photos
Boundary