CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

The following file is part of the Grover Heinrichs Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

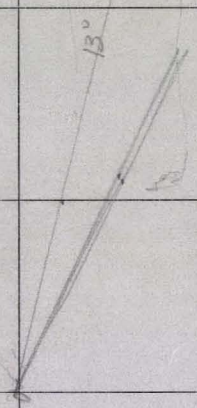
The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

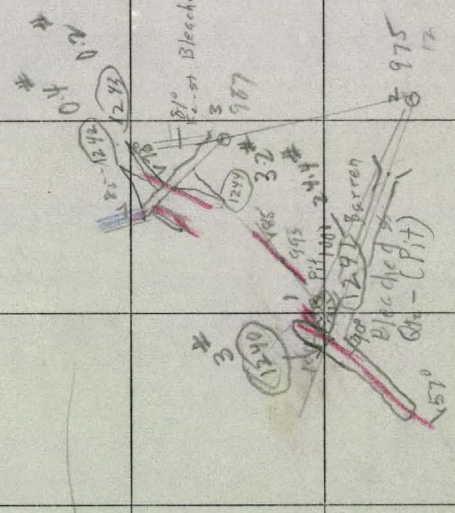
QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

N
1" = 50'

JAW
7/13/60
Mine





Open Cut Workings

WISSER AND COX
CONSULTING GEOLOGISTS

John Hamacher

77 CALHOUN TERR
SAN FRANCISCO
SUTTER 1-6922

July 18, 1960

Mr. John Hamacher
77 Calhoun Terrace
San Francisco, California

Re: Jaw Quicksilver Prospect

July 13 - 1 day in field
July 14 - 1/3 day studying data on Mercy Mine and regional geology
July 15 - as above, and writing report, 1 day

2-1/3 days @$150	$ 350.00	
		350.00
Auto, 330 miles @10¢/mile	33.00	
Dinner, Tracy (3)	8.44	
Quicksilver assays (copy attached)	35.00	
	76.44	76.44
		426.44
LESS: Advance received 7/12		-250.00
NET DUE		$ 176.44

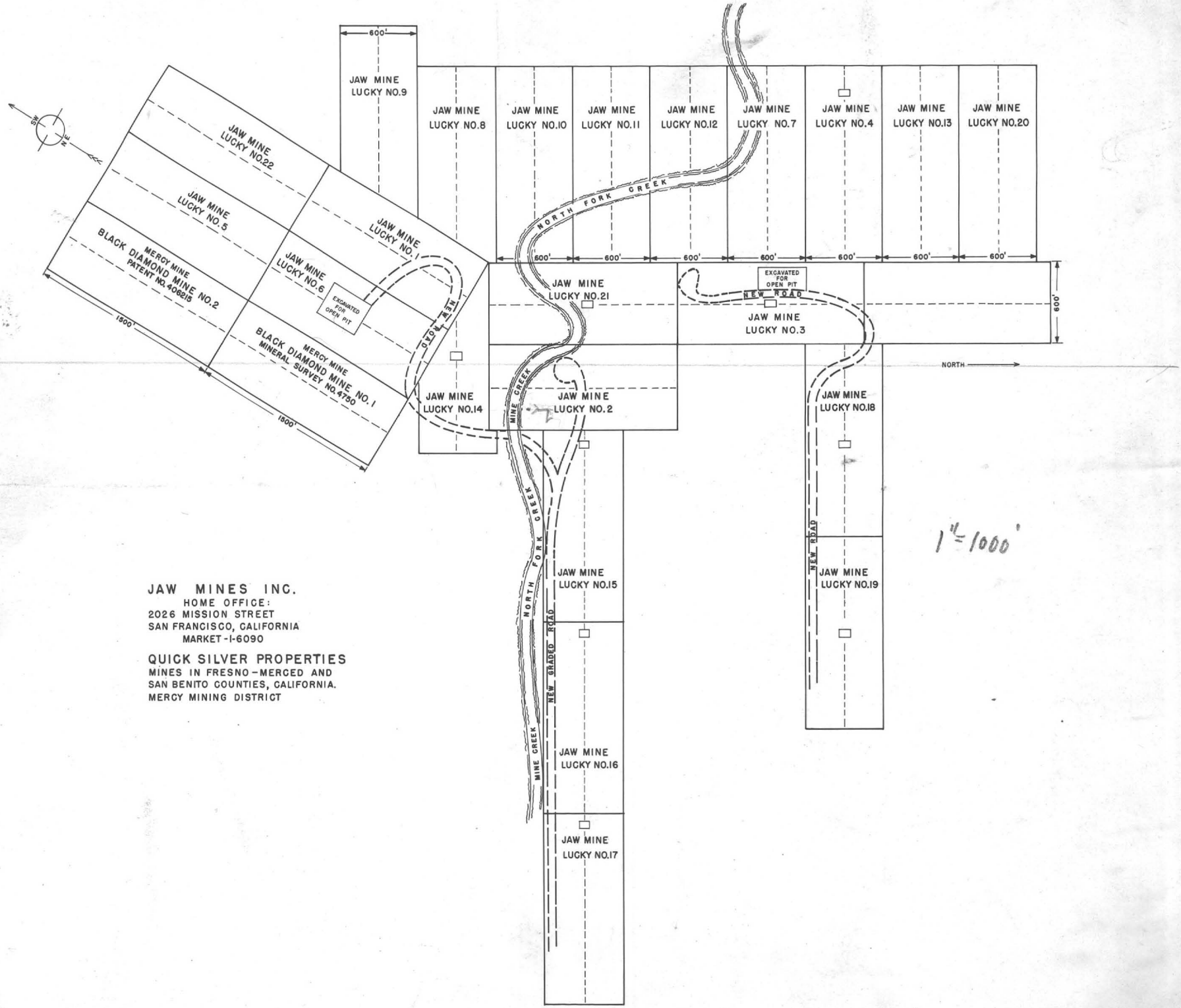
HAMMACHER BILLING

July 13, 1 day in field
July 14 1/3 day, ~~examining~~ data on Mercy mine and regional geology
July 15, as above and writing report 1 day

~~2x1/2xdays~~ 2 1/3 days @ $150 $350

Expense Account

Car, 330 miles @ 10c per mile	$33.00	
Dinner, Tracy (3)	8.44	
Quicksilver assays	35.00	
	~~76.44~~	$350.00
		76.44
		~~26.44~~
		426.44
		250.00
	Received	
	Amount due	$ 176.44



1" = 1000'

JAW MINES INC.
HOME OFFICE:
2026 MISSION STREET
SAN FRANCISCO, CALIFORNIA
MARKET-1-6090

QUICK SILVER PROPERTIES
MINES IN FRESNO-MERCED AND
SAN BENITO COUNTIES, CALIFORNIA.
MERCY MINING DISTRICT

Jaw Mine 7/13/60

Adit 80' N from gulch. Follows mainly FW of hill qtz dyke 40° E. Consid. alt., Fe stain, Hgs in FW-Zone may be from narrow to 8-10' wide.

Vein outcrops on S side gulch - adit in S side FW. Seems less mineralized

Dump Said to average 2oz

Open Cut Area N 80W adit ⊥ Structure (35')

T at end, Said to be vein Qtz vein, steeper than the other. S drift 44' Vein dips 57 E. Hanging wall, Strike N 40E. Admit zone is not ore - except sugary qtz in hole in floor. Sample.

200' W of N adit portal att. of meta rocks = N30W 76° E.

On immediate FW of Qtz. Vein, it = N10°E 90°

Qtz. vein splits going S near gulch - HW Rock dips 15° E.

300' down gulch from N adit is big basic igneous Je - St.

JAW MINE

Fresno and Merced Counties. On lower east flank of Diablo Range, which here borders the San Joaquin Valley on the wes . As the crow flies, 16 miles S8W from Los Banos. Reached from Dos Palos,vis Mercy Hot Springs road,paved to turn off to mine,about 32 road miles.

Diabl Range carries Stayton district,on the NW; Central San Benito District (Mercy mine is 5 miles north of this) and New Idria district on the SE.

Country Rock.* Franciscan. Mainly sandstone with lesses fine-laminated shale. Sandstone is quite fine-grained,grains subangular.mainly feldspar, with locally abundant quartz and some ferromganesians. The sandstone is locally somewhat schistose,the schistoity being sub-parralel to the bedding.

About 300 ft. east of the portal of the north adit is an exposure of basic ogneous rock,surficially deeply iron-stained,which may be a sill in the Franciscan. It is dark,dense,and usually called greenstone.

Structure: 200' west of the north adit portal the schistose sediments strike N30W and dip 76E.The strike is the typical one for Coast Ranges Franciscan.In the immediate footwall of the quartz vein along which the North adit was driven,the sediments strike N10E and dip vertically. The quartz vein lies along a planar,well-defined surface and persists for a considerable distance to the north,and probably to the south. It splits going S,just N of the gulch;the HW split,which divereges in strike from the main of footwall branch,dips 15 E.

The main quartz vein follows what is probably a rather important fault. possibly a thrust.

The open pit workings,on a hill about 2000' SW of the North Adit,develop a narrow,rather irregular quaftz vein which apparently does not follow astrong structure such as that followed by the North vein. This vein dipa much more steeply than does the north vein,approaching 90. Reconnaissance suggests the the North vein crops out several hundred feet west of the above vein.

Mineralization is directly connected with veins of white "bull" qtz.

Mineralization.-The sandstone away fro the quartz veins mentioned is hard. dense,and entirely ungavorable for quickilver mineralization. In a zone enclosing these veins,however, in the area of the North Adit and in the open pit area to the south, the sandstone is hydrothermally altered to a light buff to whitish color,and is somewhat porous.This whitish rock is stained with iron oxide,largely along fracture faces.Although the bleacing is probably due to alteation of the feldspar grains to clay,there is probably also some silicific_tion,because the altered zones stand up above the surrounding country,resisting erosion. This is notably true in the open pit area.

Cinnabar in yhe metallic form,with metallic oystre,seems sparse;most of the cinnabar occurs as fed "paint",coating thinly fracture faces. A very small amount of cinnabar can make a lot of "paint".

North Adit.* This was driven 80 feet,almost due north,and mainly in the immediate footwall of the quartz vein along the Thrust(?). It was not in ore at the portal,as shown by barren sandstone extending to the veih,but is said to have entered ore a few feet in. Here the rock is bleached,iron-stained, and considerably shattered,suggesting late movement along the fault. The cinnabar distribition seems very erratic,occurring on spots rathervthan uniformly. The shattered quartz vein carries sparse HgS,both as paint and in metallic form, but nost of the cinnabar seems to occur in the altered, somewhat shattered sandstone in the footwall of the quartz vein.

The ore zone widens going north,but it is doubtful if it exceeds 8 ft.in width. However, the adit would bring in backs of several hundred feet if extended nrothward,and since it is along an i,portantbfault zone which is mineralized,it is not a bad prospect. Before exnding it north, would recommend a west ctossut,to determing the western limit of ore,and an east cross-cut through the quartz vein,to see of the HW side of the vein is mineralized.

Open Pit Workings- Called by Morrison the best showing. The map furnished us calls this area "excavated for open pit" but the only recent surface excavation consists of a abroad swath cut by a bulldozer,eastward up the hill, which failed to remove all the soil.

Chief attraction in this area is a small but prominent outcrop of bleached,iron-stained and somewhat silicifed sandstone adjacent to a narrow quartz vein dipping steeply east. This is an old working,poking around. Jaw Co.drove a tunnel 45' northwest to get under this vein,which strikes NE,and drifted on it 30' SW. It looks hungry and all the ore they claim here is in a small hole at the intersection of the crosscut tunnel and the vein. Sigar quartz. Sample

The vein pinches to a narrow stringer in the S face.

Mercy Mine.- Quicksilver deposits of central San Benito and northwestern Fresno Counties,Caluf., R.G.Yates and L.S.Hilpert, Calif.Jour. Mines & Geology,v.41,Jan1945,p.25-28.

Ore occurred in two places (1) at the South Hill workings,and (2) at the North Hill workings,about 1000' to the NNW.

The South Hill workings seem to have made the bulk of the production (total 1682 flasks). In kaolinized Franciscan sandstone which encloses a zone of HT altered fault breccia trending N30E. The altered zone includes several parallel veins of dark,brecciated qtz.polished by fault movement. These from several inches to over 3' thick,strike NE,dip50-75S. Ore mined in open pitn200 x 50 x 30, and underground,in the same NE zone,SW pf the pit. HgS with iron sulfides as impregnations in breccia fratments,as crystal fillings in openings in the breccia,and as impregnations in the altered sandstone.

Underground ~~pf~~ (SW) ore shoots was 40' long,20' wide and extended from surface down 90',where it ended.

The open pit or NE ore shoots seems to have extebded hearly the full length of the pit (200').High grade HgS steaks occurred on pr near the silicified rib or veib,,but altered breccia and ss several feet from the rib also carried considerable HgS.

Open pit ore body,20' wide in places,seems to pitch to NE. At extreme end of pit an in.cined winze explores the ore body to a depth of 30' below the pit floor. Winze goes down on ore,and at the intersection with the crosscut east from bottom of winze is another good showibg of HgS. In 1941 they were mining low grade overlooked in orevious operations. Much of it contained 6 lbs.or more and included several high-grade pockets.

Both the NE and SW ore bodies are on parts of the silicified shear where it strikes about N15E;between the shoots the shear strikes more to the NE. More ore shoots may be found under the gravel cover N and E of the N end of the open pit.

"Any furthrr development of the mine should explore below the present workings and also explore along the trend Of the breccia zone in the rocks below the gravel cover."

North Hill Workings: These seem to date from the 19th century,while the South Hill NE shootmwas being mined at least as late as 1941.

Zones of kaolinized ss are smaller and more erratic than on S Hill. Several veins of white,coarsely crystalline qtz are exposed on the N hill;str strike N, dip E;a few inches to over 10 ft.thick. Different from ribs orn veins of silicifoed breccia on S Hill;white qtz veins probably formed earlier than silicified breccia ribs or Hg deposits.

N Hill ore came from 2 ore bodies,each exhausted. One OB in and along the border of,the westernmost white qtz. vein. Qtz ore body strikes N,dips E 55. Outcrop inconspicuous Ore body enlarged downwar;on lowest adit,140' below outcrop,stope dimensions 30 x 20'. Ore both within and along borders of qtz vein.

Fault Ore Body: NE of qtz ore body, exploited by same adit. Fault N60E, dip steep S. Crops out for 200'. Ends to E along slightly mineralized NW fault.; dies out to W. Extends from surface to below the 110' level, but does not reach the main adit or 140' level. Stope extends for 100' plus on strike, pitches E along fault from surface to 110' level. Stoped for 80' on sub-level(110'); here 4-6' wide.

Prospect NE of Mercy Mine.-It was noted above that Yates and Hilpert recommended exploration along the trend of the breccia zone below the gravel cover. The accompanying small-scale map, from USGS Bull.603 by Anderson and Pack, suggests that this is part of a major prospect. Mercy Hot Springs lies on or close to a major fault which bounds the Franciscan on the east, as far south as the NE fault which butts on this fault about 1.5 miles S of Mercy Hot Springs. The hot springs on or near the fault is a favorable sign for quicksilver and it looks possible that said fault was the major ore channel for the quicksilver deposits of the Mercy mine.

The Mercy Hot Springs fault is subparallel with the San Andreas rift and only 20 miles northeast of it. The South Hill Mercy ore bodies in the breccia zone show sigzag ore control (see p.4) indicating left-lateral strike faulting. The Mercy fault zone, striking NE, may be a complementary shear plane to the Mercy Hot springs fault; if so, movement on thet latter fault would be right-lateral, conforming to movement on the San Andreas rift.

The Mercy ore bodies occurred in Franciscan sandstone; as the small-scale map shows, there are probably 1.4 miles of Franciscan between the Mercy mine and the major fault. Although mineralized outcrops in the Mercy area stand up above the surrounding surface, such prominent outcrops could be easily concealed by the terrace gravels covering the Franciscan between the Mercy mine and the fault.

Nothing is known of present claim ownership in this region; but the matter seems to warrant investigation.


MERCED CO
FRESNO CO
N Adit
Qvct. Terrace
Gravel
Jf
Sec. 32 T13S R10E
SEC. 5 T 14S R 10E
Open Pit Workings (?)
18W
17W
16W
19W
1700
1800
Fault
Ore body
North Hill
Workings
Quartz Ore body
QAl
Pump
Jfa
70°
55°
OPEN PIT
SOUTH HILL
WORKINGS
Qvct. Terrace
Gravel
QAl
Qvct. Terrace gravel
Kaolinized sandstone & shale
White quartz vein
Silicified fault zone
1"=200'
MERCY MINE