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DISTRICT: Copper Basin  
PROPERTY: Commercial Mining Company  
LOCATION: 6 miles in air line E. of Skull Valley Station -  
12 miles S.W. of Prescott.  
OWNERS: Commercial Mining Company - Phelps Dodge Corporation

CLAIMS - 19

"Snow Bird"	"Bronze Statue"
"Head Center"	"Red Bird"
"Bonnie Doon"	"Copper Smith"
"Quartz Hill Cross"	"Aztec"
"Blue Border"	"Copper Chief"
"Copper Bell"	"Rob Roy"
"Copper Nugget"	"Valley Forge"
"Blue Jay"	"Pine Hollow"
"Carbuncle"	"Chicago"

NOTES:

GEOLOGY

Gabarina Hill, in which principle orebodies occur as well as Smelter Hill and a small hill on Boehm's property, consist of stocks of quartz porphyry and rhyolite greatly sheared in two directions; first, a series of fractures in a N.E. direction which will probably prove on further development longer axis of orebodies - another series of fractures striking N.W., along which principal high grade ore is found. Other fracturing and faulting occurred subsequent to mineralization.

Primary ores were deposited, as pyrite and chalcopyrite, along fracture planes - probably deep seated mineralization was accompanied by considerable silicification. Irregularity of fracture zones resulted in irregular primary deposits and subsequent leaching deposited secondary ores in a similar irregular manner following principal fracture planes, and at times replacing entire rock mass.

Probability of finding an evenly disseminated body of sulphide ore is doubtful, altho there should be encountered bodies of commercial sulphides on fracture planes below zone of oxidation, as well as possible small areas of disseminated ore of 1 to 1½% Cu.

DEVELOPMENT

Developed by means of tunnels and commercial oxide ores of shallow depth. Maps 1 and 2 under Commercial Mining Company illustrate openings and position of present orebodies, as well as grade. Property in condition for large production of low grade ore without further development.

Past Production	15,000 tons	6 to 8% ore
	100,000 "	3½% ore
Estimated by A.B. Peach	300,000 "	2% ore
	200,000 "	1½ to 2% ore

Ore occurs as a carbonate and oxide with some malacconite and chalcopyrite, sulphur about 1%, Insoluble high.

DATA

Railroad survey to main line - 8 miles  
Tram line " " " " 5.9 "

Cost Railroad standard - \$20,000 & up per mile  
Cost Tram - about \$130,000.00



NOTES - Data (Continued)

Distance to Power - 10 miles  
Probable cost of Line - \$15,000.00

Pipe Line & Pumping Plant for  
pumping oil from Railroad to  
Mine - \$20,000.00

Mining Cost 2% ore - from \$1.75 to \$2.00 in  
bins, including all taxes, etc.

Freight, Skull Valley to Humboldt - \$1.00

Freight Haul - Mine to Skull Valley - \$2.50 to  
\$2.75

CONCLUSIONS

Ore should be amenable to treatment by volatilization process, and logical location for plant would be at the mine, with electric power transmitted from Prescott or better, by way of Walker to Senator and thence to Commercial. By pumping oil, the only necessary haul would be limestone, salt and product.

I am inclined to believe Mr. Peach's estimate of 300,000 tons of 2% ore, or better, the careful sampling would be necessary to determine exact amount such ore. In addition, the Loma Prieta and Commercial Mines could ultimately furnish a large tonnage of  $1\frac{1}{2}$  to  $1\frac{3}{4}$ % sulphide ore.

Arrangements have been made to obtain Phelps Dodge assay plans thru Mr. Thompson, possible, however, that lower grade ores may have to be sampled.

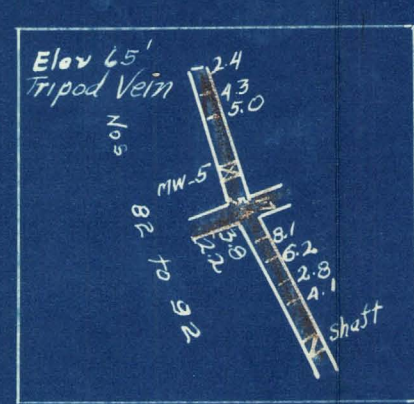
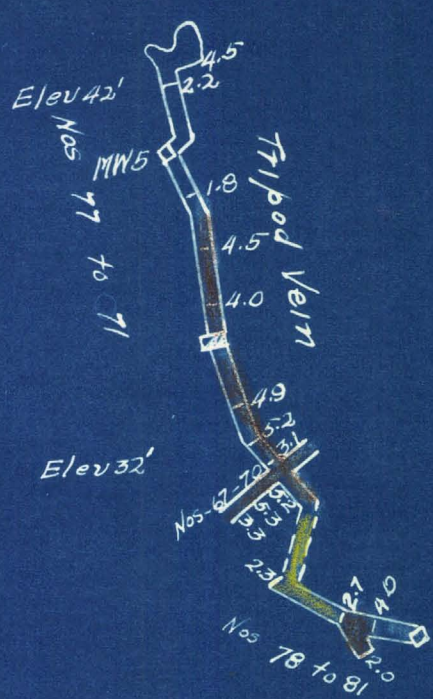
In addition to ores in place, there is from 2000 to 4000 tons higher grade sand carbonate ore that is available.

Tests should be made on Loma Prieta ore as well as on some of Commercial disseminated ores.

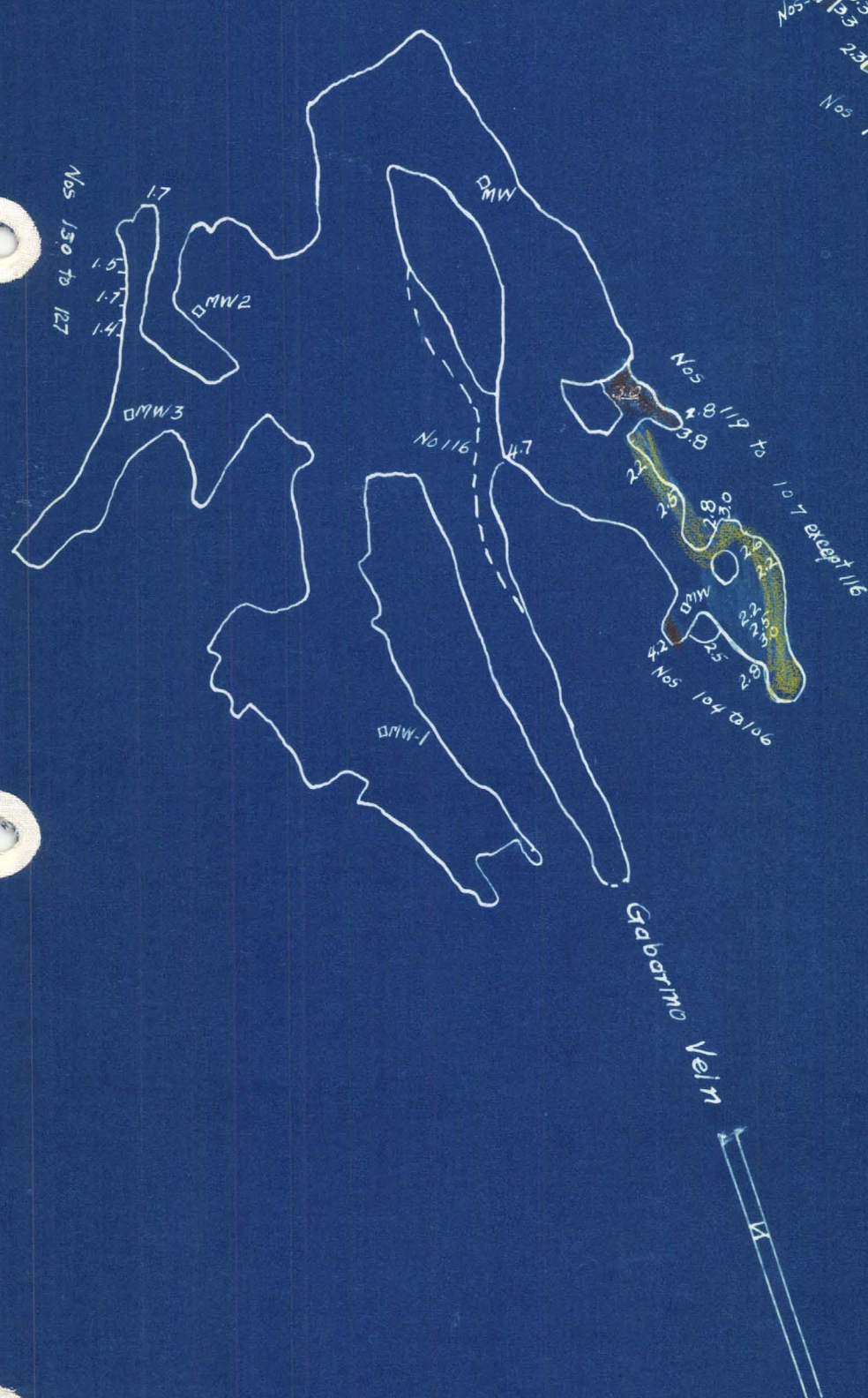
W.V.DeC.

*See also. D-2. 19(a) - Claim map.*





Note Tripod ore averages 4.3%



# Assay Plan of Stopes Gabarino Hill

June 1918 Scale 1"=50'

2.75% Minimum  
2.00% to 2.75%

D. 2. 19



Commercial Mine

Fred Sherrer has acquired a lease on the Commercial Mine at Skull Valley, Arizona, owned by the Phelps Dodge Corporation. He plans to ship 100 tons of copper ore daily to the Phelps Dodge Smelter at Clarkdale, Arizona.

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