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SILVER MINE

HACKBERRY SILVER MINE
MOHAVE COUNTY, ARIZONA

*1978
was being
handed out
at Las Vegas
Alice meeting
Company data*

This mine is located 27 miles northeast of Kingman, Arizona 3 miles west of the village of Hackberry on the northeast slope of the Peacock mountains. It is 3 miles from the double track and main line of the Santa Fe Railroad and 3 miles from U.S. Highway #66 and 2 miles from electric power lines at an elevation of 4800 feet in juniper and pinion pines. Water is in abundance. The mine, presently, is about full of water, standing 90 feet below the collar of the vertical shaft. There are 5 shafts on the property, 4 are incline. Deepest shaft is 950 feet.

There are 12 patented claims covering approximately $1\frac{1}{2}$ miles of the Main Hackberry Vein and the Hillside Vein and our recent (1978) geological mapping shows several additional veins branching out in crows foot form with some "horse-tailing" in places.

According to reports written shortly before the closing of the mine in 1918 there are 450,000 tons of 32 ounce silver ore reserves partly blocked out. Thirty-two ounces was the average of 278 samples taken before the mine closed down in December of 1919. Litigation was the apparent reasons the mine shut down. Chief minerals are silver, gold, copper, lead, zinc, & cadmium. Silver runs 32 oz., gold $\frac{1}{8}$ th oz. (samples have run up to 2 oz.), copper 1%, lead 8%, zinc 5-6% and cadmium has run up to 8 pounds. The chief ore is argentite. The vein strikes northwest and southeast and dips 40 degrees to the southwest and runs from 16 feet to 60 feet wide (Hackberry Vein). The Hillside Vein dips about 70 degrees to the Southwest.

According to the 1918 report by Mr. A. L. Johns, "on the 600 and 700 foot levels the vein is 22 feet wide with 19 feet averaging 25 ounces and 3 feet averaging 100 ounces in silver".

The 450,000 tons estimated by Mr. Johns averaging 32 ounces per ton are within 2 ore bodies 11 to 1200 lineal feet along the vein. For silver alone: 450,000 tons plus the values of the balance in gold, copper, lead, zinc and cadmium.

450,000 tons
X 32 ounces
900,000
1,350,000
14,400,000 ozs. gross

The property is free and clear of debt, the taxes are paid.

The owners are interested in a small, medium to large mining company well financed which would enter into a "joint-venture".

We have a large file, 5 or 6 inches thick, on the property with surface and underground maps showing levels at the 200 foot, 325 foot, 450 foot, 500 foot, 600 foot, 700 foot, 800 foot and 900 foot levels.

As an after thought the 450,000 estimated tons of reserves within the working area of the mine is within 1200 feet along the south end of the vein, the Hackberry Vein, with several thousand feet of additional veins to explore by core drilling or trench work making this a very challenging and interesting property.

We live in Las Vegas and would be glad to visit with any one qualified to investigate this mining property;

The owner is: Nicholas M. Hughes
6094 Carlsbad Avenue
Las Vegas, Nevada 89110

Phone: 702- 452-2598

NOTE: I will be attending the Interenational Mining Congress at the Convention Center Monday, Tuesday, Wednesday and Thursday, Oct. 9-12th each day and several times each day (between sessions) I will call home and check with Mrs. Hughes to receive any calls. Please leave your name, title, phone number, name of company and address in case we are unable to meet at the convention center. Thank you, N.M.H.

DISTRICT

Hualapai, Ariz.

LOCATION

2 miles South of Hackberry, Ariz.

PROPERTY

Hackberry Mine. Silver, lead.

OWNERS

Hackberry Consolidated Mining Co.
James. A. Murray, of Butte, Montana.
G. S. Holmes, Salt Lake City, Utah.
Wm. Nagle of Hackberry, Ariz., Mgr.

DATE VISITED

October 29, 1918. By J. L. White.

NOTES

Country Rock; Porphyry. The vein is a fissure in porphyry, strike about N & S. Dip 30° W.

Surface workings in the old days have a record of a production of three million dollars silver. The vein has been opened for 900mfeet by a shaft and levels started at each 100 feet. On the 600 level the vein has been opened for 600 feet under the old workings. Some shipping ore is being mined at present. The average grade of ore that it is expected to mine is 20 to 25 oz. The ore is from 4 to 8 feet in width.

A large amount of money is being spent in equipment for the property. A 200 ton flotation mill is in the course of construction near the collar of the shaft. In all it appears to be a well arranged plant. A power plant of three 200 HP Fairbanks Morse Hothead engines is under way, two of the engines being on the ground. Electric power for the mill and pumps will be generated. Compressors and hoist will be driven by separate engines.

In the Mill are: Blake Crusher; Hardinge Ball Mill; Classifier; K & K flotation cells, 8 in number; 4 Vein Pan Motion Vanners and one Wilfley Table; three 30 foot Dorr Thickeners; two Oliver and one Portland Filters.

It is hoped to make a concentrate of 250 oz. silver and 45% lead. There is some gold and zinc in the ore. Argentiferous galena is the principal value.

The Mill, etc. seems a little premature. Mining will be expensive.

DISTRICT:

Maynard

PROPERTY:

Hackberry Mine and Mill

LOCATION:

On the eastern slope of the Peacock mountains and about three miles by wagon road from the town of Hackberry on the S. F. R. R. and about eight hundred feet higher.

OWNERS:

Company of Butte, Montana people
Wm. Nagel, Manager, Address Hackberry
T. D. Walsh, Mill Supt.
Jim Rice, Mine Supt.

DATE VISITED:

August 29, 1919

Property was visited more with the idea of ascertaining the possible production of lead-silver concentrates than to determine value of mine.

NOTES:

Geology

A quartz porphyry, the veins being replacements by quartz along a series of fractures striking north 30° west and dipping to the south about 40°. The extreme southern or hanging wall fracture is the most highly mineralized, said mineralization consisting of a quartz filling or replacement, the hanging wall portion of which, for a distance of from two inches to four feet, is impregnated with Galena, Sphalerite, brittle silver and carries some gold; probably associated with the sulphides. Percentage of lead and zinc is low and does not exceed one percent of rock volume.

Development

The property is opened by means of an inclined shaft on the vein eight hundred feet, and drifts have been driven on the four hundred, six hundred seven hundred and eight hundred foot levels. Some of these drifts have cut into old workings, from which the higher grade ores were extracted. Shaft equipped with skip of 2.5 tons capacity and 600 and 800 foot levels have shallow skip pockets.

Property is in condition to produce approximately one hundred tons per day, but further development will be necessary before production can be maintained up to the capacity of the Mill.

Equipment

Power plant consisting of three 200 H.P.Y. type Fairbanks Morse vertical two cylinder engines, burning crude oil. One engine maintained in reserve. Engines connected to 440V-A.C. Generators.

Mine equipped with electric hoist, sharpening machine and compressor. Mounted jackhammers used for drifting, and stoping machines for stoping and raising.

Mill equipped with a 220 ton flotation mill as per attached flow sheet.

Mining costs due to flat pitch of the vein and to a bad hanging wall which requires close timbering, as well as filling, are high, and would range from five to six dollars per ton. Milling costs should be very reasonable as only three men

NOTES (Cont'd)

are required in the mill, and although no figures were obtainable, I should judge that considering power and pumping, their milling cost should be approximately two dollars and fifty cents per ton.

Freight on concentrates to Selby - \$6.50 per ton
Treatment on concentrates " - \$6.50 " "

Conclusions

The mine has several blocks of ground developed that show from ten inches to three and a half feet of ore that is of good grade, but at present they are mining from two to five feet of quartz with this ore, with the result that run of mine material is so low that a profit on present operations is negligible. By mining the width of ore stated above their mill heads could be maintained at fifteen to thirty ounces silver with one percent lead and about the same amount of zinc, and there would be a profit on the operation. This would necessitate a capacity of not to exceed one hundred tons per day with present ore opened or better than this by maintaining capacity at seventy-five tons daily and running the mill one shift the better grade material could be treated. This would not permit of economical milling or power operations but should be a decided improvement over present system.

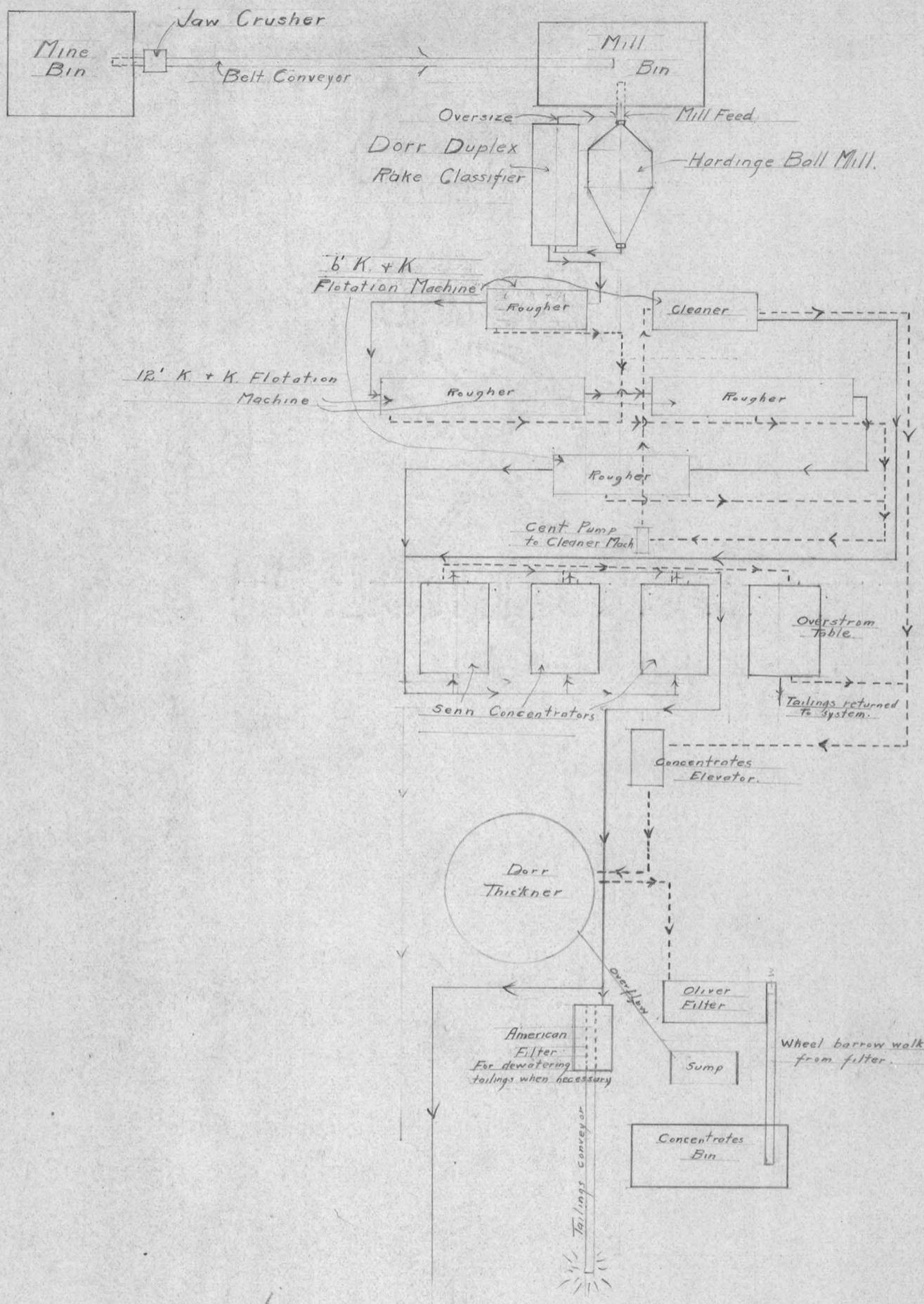
There has been no attempt to maintain mine maps, and assay maps are unknown. Apparently, the foreman is attempting to judge by sight the grade of ore being developed; with the obvious result.

A tendency on the part of the management to distort facts as to ratio of concentration, values, etc. - but ascertained that mill heads are about eight to ten ounces silver, saving from eighty to eighty-three percent, whether grinding to thirty-five, or six percent plus one hundred mesh. Concentrates carry from 300 to 350 ounces silver, 16% lead, 12% zinc, \$16.00 gold, 15 to 30% iron and 20% - up insoluble.

At present the mill is operating one shift and treating seventy-five tons of ore, making a car of concentrates of the above grade about every twelve days. If operating at full capacity they could produce not to exceed eight cars of concentrates per month.

The management claims they will be able to ship two cars a week of fifty ounce ore or better from the north end of the property within the next sixty days.

Property has considerable merit, plant is well constructed and arranged for economical treatment, though it is very evident that both the management and the owners have over-reached themselves, both as to capacity of mill and in their disregard for careful investigation and scientific mining.



OK Doc

Concentrates
Tailings

Flow sheet of
HICKBERRY MINE CONCENTRATOR
Hickberry, Ariz.

Hackberry mine

CONSOLIDATED ARIZONA SMELTING COMPANY
HUMBOLDT, ARIZONA

*File
Decamp*

G.M. COLVOCORESSES.
GENERAL MANAGER
E.S. SMITH,
ASS'T GENERAL MANAGER

H.

Kingman Ariz,
August 29. 1919

File

Mr G.M. Colvocoresses. Gen. Mg'r.
Con's. Ariz. Smelting Co.
Humboldt, Ariz.

Dear Sir:-

We arrived here this evening after a day spent at the Hackberry mine; which, although very interesting was not profitable from the standpoint of lead production. The ores are very siliceous and carry only about one percent lead and nearly an equal amount of silver. Mill heads average about twelve ounces, ratio of concentration from twenty two to twenty five to one, and concentrates average from three hundred to three hundred and fifty ounces in silver, sixteen dollars gold, sixteen percent lead and twelve percent zinc. Recent shipments have been made to Selby, treatment charge six fifty per ton with some penalty on zinc and freight charge of six fifty per ton.

32?

The mill is running only one shift and producing a car of concentrates every twelve days from about seventy five tons of ore treated. Future production at capacity of mill will produce a car of concentrates every four to five days. In addition to the mill production Mr Wm Nagel the manager contemplates some work on the north end of the property which he anticipates will furnish about two or three cars weekly of ore carrying from fifty ounces up in silver, about one percent lead and zinc and with low values in gold. This ore will average about eighty percent insoluble and it is Nagel's desire to ship this to you in order to save on freight. I gave him a general idea of treatment charges on this class of ore but think it best at this time to take the matter up with him by letter so that he will have at hand a statement from the company as to rates on this class of material. When he is actually ready to ship you can of course make some permanent arrangement.

*Write
Nagel
re 50 gr. ore
9/9/19
E.S.*

Found a tendency on the part of the officials to exaggerate values but came to the conclusion that heads were as above stated, also their extraction about eighty percent and on present class of ore they stand to make a small profit per ton. Only fifteen men working in the mine on development as it is quite evident that in spite of the fact that their mine looks good, the mill is a little larger than was necessary at this time though development possibilities look encouraging.

I had a long talk with Nagel about the Copper Giant and on my return trip will go up and get a sample of

CONSOLIDATED ARIZONA SMELTING COMPANY
HUMBOLDT, ARIZONA

G. M. COLVOCORESSES,
GENERAL MANAGER
E. S. SMITH,
ASS'T GENERAL MANAGER

this material for a Volatilization test. He stated they had about one hundred and thirteen thousand tons of two and a quarter percent ore developed carrying an ounce in silver and one dollar in gold, You probably have the record there on this tonnage but since the material is quite siliceous and the difficulties of water concentration are great I thought the ore might be adapted to Volatilization provided the percentage of sulphides was not too high and although Nagel stated the ratio was about fiftten to one, I can hardly reconcile this with the grade of ore, since I understand the values are in chalcopyrite and assume therefore a ratio of ten to one would be more correct,

a
Otman is working tho hardly up to capacity due to scarcity of men although the strike at Divide is bringing in a few men.

Have some interesting dope on this district and may spend most of the next week in the vicinity of Stockton Hill, Cerbat and Chloride, later going to Mc Cracken and probably to Silver Lake, Cal to the Avawatz mine.

Writing this in the faint hope that you will receive same before my return.

Yours very truly,



San Diego Cal.

Dec. 10. 1918

RECEIVED
DEC 13 1918
ARR 12/11

Consolidated Arizona Smelting
Humboldt Ariz.

~~Jack~~
Sents i

In reply to your letter of Nov 8th
will say, that I have no reports or maps
No shipments made, and not very
much work on property - I think the
deepest shaft is about 65 ft.

I had the following assays from the
"Uncle Sam" claim.

	R. H. H.		Gold	Silver
Depth of shaft	6 ft.	width of vein 7 inches	144 ⁰⁰	120
Depth of "	20 ft	" " " 16 inches	91.20	140
Depth of "	40 ft.	width of vein 32 "	25 ⁴⁵	
Depth of "	43 ft.	width of vein 32 "	33 ⁰⁰	57 100

at a depth of 24 ft. south drift 10 ft from
shaft 20 inch width assayed 116⁰⁰ Gold

By the Western Metallurgical Co. Denver Colo.

All the other assays were by R. H. Hetherington
Prescott Arizona.

I did not take any of the samples
so I cannot say how they took them. Brown &
Walker took the samples. I seen some

rock on dump that showed gold
which came out of shaft

Struck water at about 40 ft. and the
ledge seemed to quit a few ft below
water level, at least Mr. Abbe said it
played out, but a miner that worked
on the claim said the ledge made a
turn below water level, and that Mr. Abbe
keep going on straight ahead, as to this I
dont know - Mr. Abbe is no miner, he is
now in charge of the Copper Giant, and
was half owner in my claims

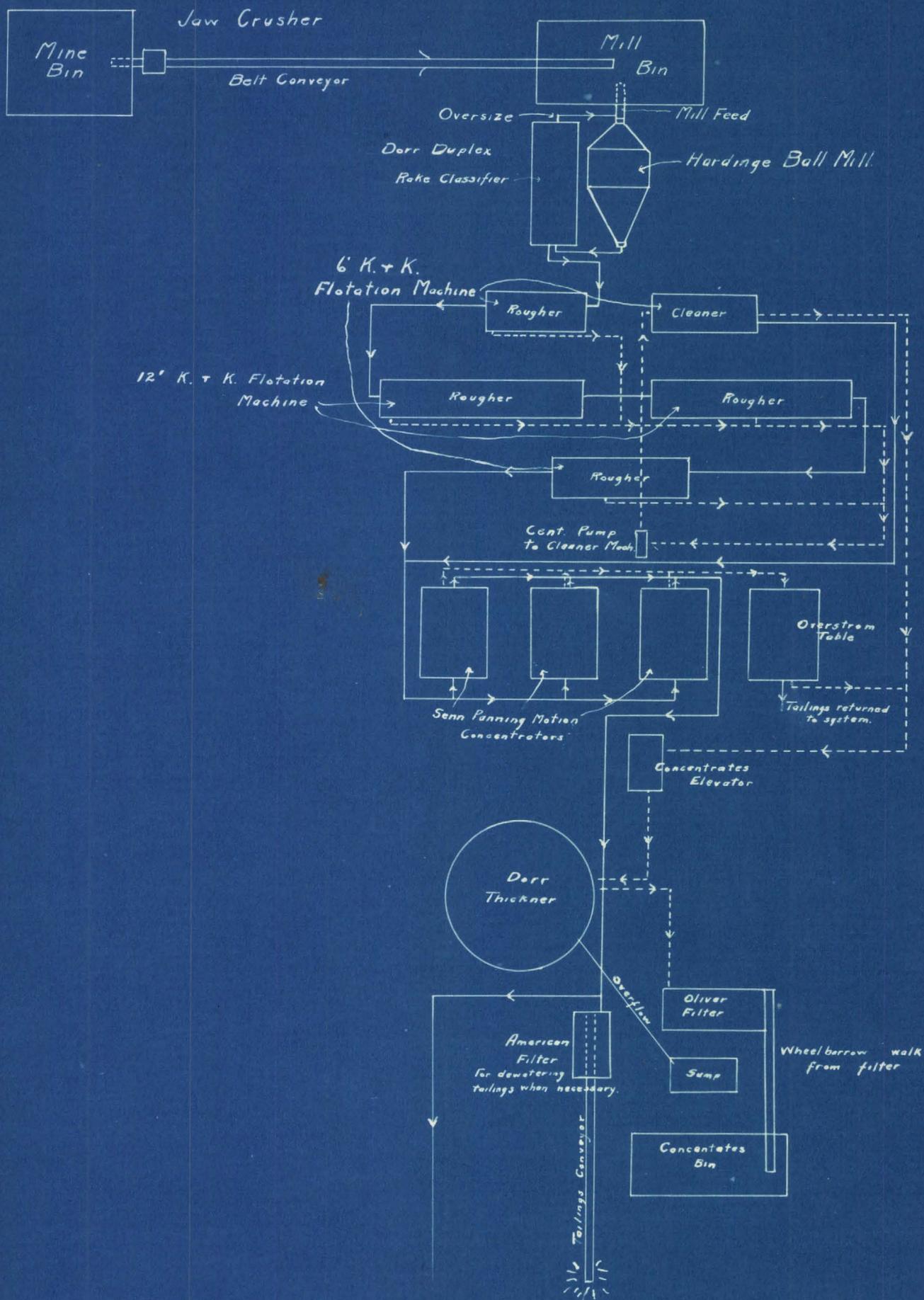
I am

Yours truly

Michael M. Bred

3570 6th St

San Diego
Calif



Concentrates -----
 Tailings -----

Flow sheet of
HACKBERRY MINE CONCENTRATOR

Hackberry, Ariz.