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DISTRICT: Silver.

NAME: Black Rock and Pacific.

LOCATION: Twenty six miles north of Yuma, Ariz.

OWNERS: Dr. Leon Jacobs of Yuma holds an option on this property and same was presented to the Western Metallurgical Co. thru the Harris Engineering Co. of Los Angeles.

CLAIMS: Two. Black Rock on which principal development is found, and the Pacific claim to the north, shown on attached map.

DATE VISITED: October 10, 1919.

NOTES:

G E O L O G Y

Located in old schistose rocks intruded by a coarsely crystalline biotite granite and later by andesitic flows and intrusions. The andesite is generally closely related to the ore bodies and in case of the Black Rock the schist forms the foot wall and the ore bodies occur at the contact but in a greatly reorganized and altered andesite, showing distinct movement at the contact as well as within the vein.

Strike of mineralized fractures nearly north and south with dip to the east. Considerable cross fracturing occurs and same are also mineralized. The entire hill in which the Black Rock is located would indicate that longitudinal movement has resulted in both longitudinal and cross fracturing since the blocks between fractures are roughly obliquely prismatic. At junctions of main fractures with north-east-south-west fractures the mineralization and replacement is much greater and forms large chambers, where ore has been extracted.

The fracture zone on the Black Rock is several hundred feet in length and width altho the cross fractures gradually show less mineralization and generally mineralization extends only ten to twenty five feet from main north-south fracture.

The andesite in the mineralized zone has been so altered that it appears as a crystal line limestone greatly fractured and fractures filled with chalcedony, calcite and with silver lead and zinc minerals. Lead occurs as the carbonate and galena and zinc as the carbonate or silicate. Silver values as chloride and probably some argentite with smaller amounts of arsenical and antimonial sulphides.

D E V E L O P M E N T

Consists of an incline shaft over four hundred feet in depth, on the vein except lower half where vein has swung into the hanging wall. Levels

on the 60, 90, 110 indicate an orebody 150 feet in length and four to ten feet in width with a decided rake to the south so that lower levels in the shaft below the 300 foot level would not show the ore by cross cutting to the hanging wall since the rake would carry same to the south and drifting would be necessary before cross cutting to locate the ore below the 300 foot level.

The accompanying map indicates levels and position of samples taken, which are listed below.

ORE BODIES AND TONNAGE

Reports by Mr. Trischka and Mr. Tovote would indicate a tonnage of from ten to fifteen thousand tons of ore on the dump carrying eight ounces in silver, and from three to five percent lead with zinc values ranging from three percent to twelve.

As regards tonnage the estimates of engineers stated above is probably correct but unfortunately my samples as shown below do not give an average nearly as high as stated.

Probability of additional ore on the Black Rock Claim depends on depth conditions as determined on the ore shoot mentioned and which has been extracted with the exception of a few small pillars and to exploitation of ground to the north where there are indications of an additional ore body.

The value of the Black Rock claim, I believe, depends upon conditions that may be met at the water level and altho there may be possibilities of an enriched zone on reaching the water level I am inclined to believe that if such secondary ore is found it will be low in silver and high in lead and zinc.

Due to the extreme low average value of the samples taken it was not considered necessary to run a muffle test for volatilization.

Assay Returns - Black Rock Mine

No.	Width.	Gold	Silver	Lead.
1	5'	-	1.9	5.8
2	4.5'	-	4.0	1.8
3	9'	-	8.4	3.9
4	8'	-	6.70	8.9
5	4'	-	1.80	2.6
6	4.5'	-	3.60	2.9
7	7'	-	6.0	4.9
8	4'	-	3.3	4.6
9	5'	-	2.4	3.4
10	3'	-	3.0	3.9
11	4'	-	2.4	2.2
12	4.5'	-	1.0	1.5
13	5.5'	-	1.4	2.0
14	Dump	-	4.7	5.8
15	12"	-	2.4	1.0
16	6"	-	3.7	.8
17	18"	-	1.7	1.1
Composite		-	3.5	3.07

4 oz 37

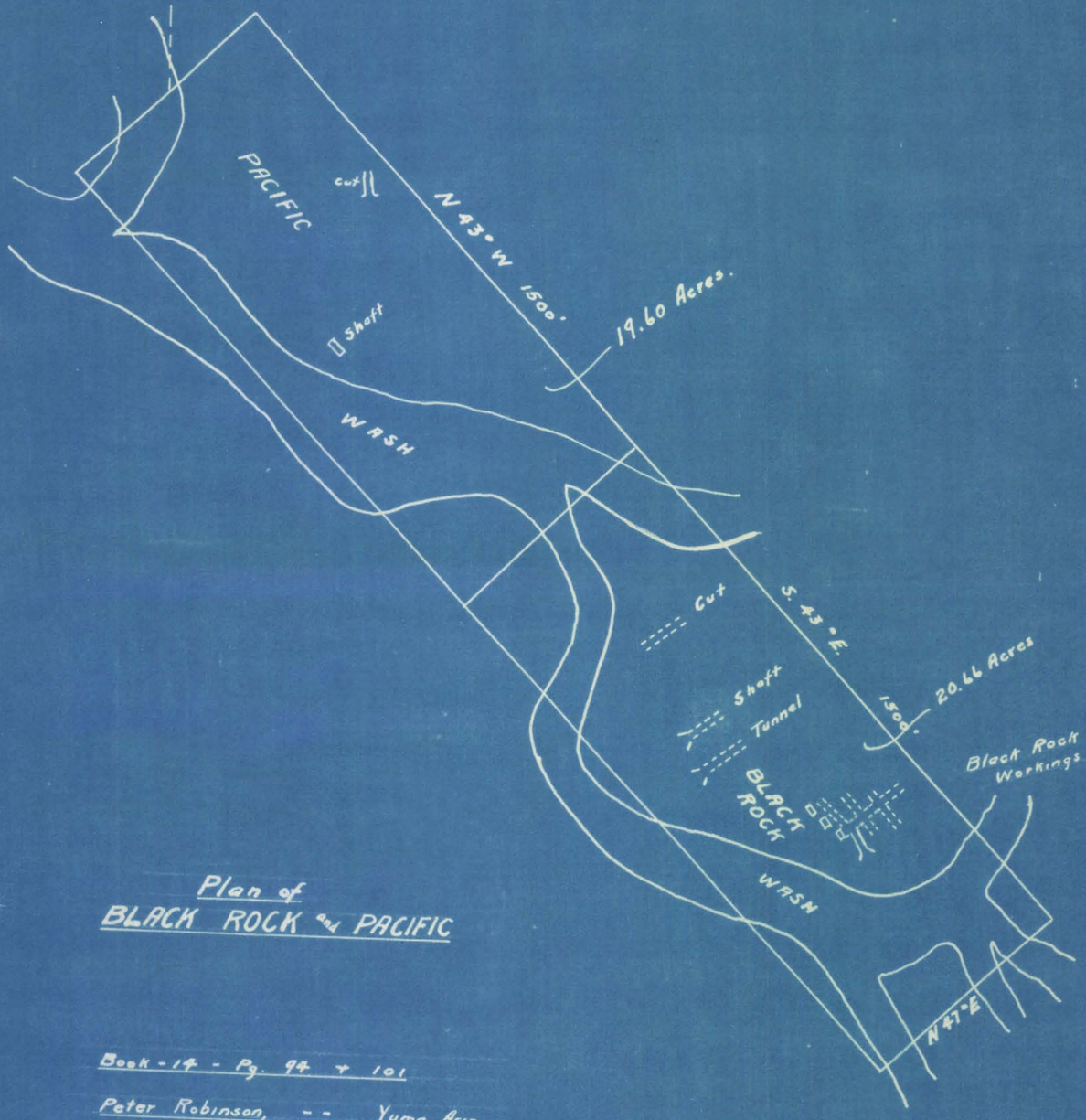
Black Rock and Pacific #3.

C O N C L U S I O N

Additional development work would be necessary to prove value of this property, which I consider unwarranted by the present ore exposures.

W. R. de Camp

Humboldt.
10.24.19
EH

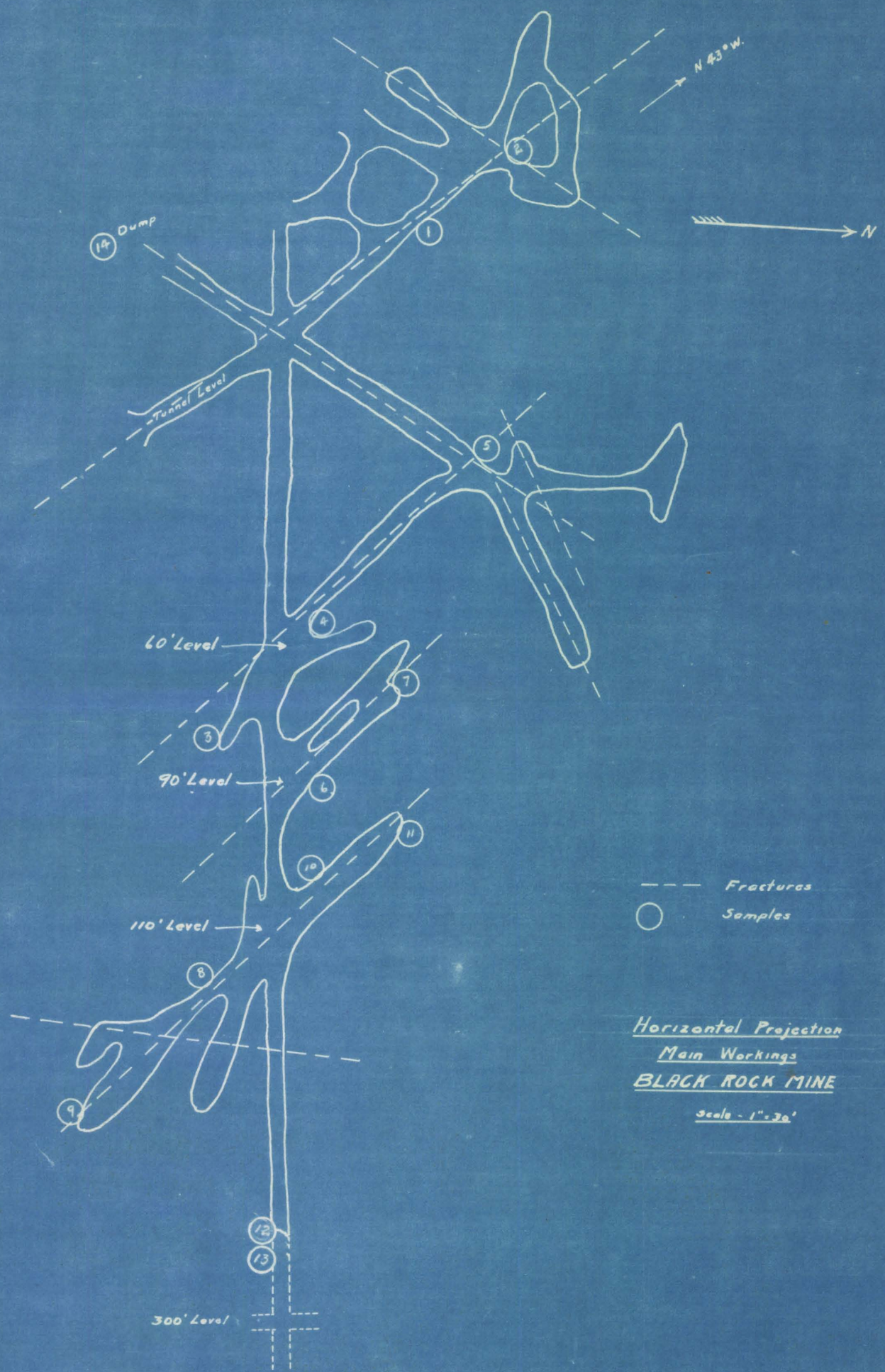


Plan of
BLACK ROCK and PACIFIC

Book - 14 - Pg. 94 + 101

Peter Robinson, -- Yuma, Ariz.

Agent for Thayer Estate.



Horizontal Projection

Main Workings

BLACK ROCK MINE

Scale - 1" = 30'

EASTERN OFFICE
25 WEST 43RD STREET
NEW YORK

CABLE ADDRESS
"PRECIP"
WESTERN UNION CODE

·WESTERN·PRECIPITATION·COMPANY·

CHEMICAL ENGINEERS

MAIN OFFICES AND LABORATORIES
1016 WEST NINTH STREET
LOS ANGELES, CALIFORNIA

August 1, 1929.

Mr. G. M. Colvocoresses,
Western Metallurgical Company,
Humboldt, Arizona.

Dear Cal:

Yesterday afternoon Mr. C. E. Batton called on us for discussion of the application of the Waelz Process to the treatment of the ore from his mine in Arizona. Mr. Batton's address is 2673 North Hollister Avenue, Altadena, California, Telephone, Niagara-4071.

Mr. Batton owns the Black Rock-Pacific group of mining claims in Arizona. These lie fifty-five miles north of Yuma by road (approximately thirty-five miles air line), and are thirty-three miles from the nearest point of the Southern Pacific Railroad, and approximately four miles from the Colorado River.

According to Mr. Batton's story, it appears that the grandfather of his wife, namely, Martin A. Keith, purchased this group of claims in 1881, paying $135,000.00 for same. Mr. Batton told the amusing incident that Mr. Keith had to pay to the previous owner the full $135,000.00 in gold cash as he would not accept a check. During the years 1881-1887 the property was developed, and the high grade lead silver ore was shipped down the Colorado River. Mr. Keith died in 1887 and the property went to the heirs who have done nothing with it since. The heirs, through the years, multiplied in numbers, and during the last few years nothing could be accomplished because the necessary signatures could not be obtained, and Mr. Batton set to work to consolidate the interest and has since then purchased all rights to the property from the various heirs, and is now in a position to negotiate with parties who may be interested in developing the mine.

According to Mr. Batton, there are three shafts on the main vein, these all being incline shafts at various dips - varying from 45° to 60°. He said that although the mine has not been worked since the '80's, the shafts are still open and inspection of the property can easily be made. One shaft is 82 feet deep, a second shaft is 200 feet deep, and the third shaft is 480 feet deep. The latter cut through the foot-wall at a depth of 300 feet, but they did not cross-cut back into the vein as the apparent intention was to sink to water level and then drift over to the sulphide ore bed, which was assumed to exist at that depth. Mr. Batton believes that this main vein will average at least 90 feet in width over a considerable extension. He also said that the outcroppings can be traced over 2,000 feet, but that no exploration has been made to determine the size of the ore body over this full length.

The average grade of ore in the portion of the veins where the shafts are located, according to Mr. Batton, will run from 8 to 10 per cent zinc, 4 per cent lead, five ounces in silver, and a small amount of gold. He stated there are high grade pockets but these must be ignored because they are too uncertain as to grade or tonnage. He said that the amount of ore definitely assured by the other shafts above mentioned (called the Black Rock shaft), is approximately 250,000 tons; that estimate of additional ore indicated by the third shaft is over 250,000 tons. Amount of ore in further extension, uncertain, and amount of sulphide ore at depth is entirely problematical.

According to Mr. Batton, the ore which has been developed is all oxidized carbonate ore in limestone, containing small shots of galena. He said that there are some other veins on the property and that one promising limestone vein runs at right angles to the main vein above mentioned.

According to Mr. Batton, the Union Carbide Company recently investigated the property and their representative, Mr. VanFleet, was on the property for two or three weeks. Mr. Batton stated that George Crerar, of Los Angeles, also investigated the property relatively recently. He says that both these men were very enthusiastic about the property, but Mr. Crerar has no finances and Mr. Van Fleet was only interested in sulphide ore, and said that his company did not want to become involved in the development of any special metallurgical process to handle the oxidized ore. It

appears, however, that Mr. Van Fleet made the following proposition to Mr. Batton: that his company would take an option on the property at $300,000.00 purchase price; that they would spend upwards of $100,000.00 to sink a shaft to ascertain whether sulphide ore would be available in quantities at depth, and in the event the sulphide ore should not be found, they would install the Waelz process method to treat the oxidized ores and operate same until they had gotten their entire money back with interest, and they would then turn the property back to Mr. Batton, together with the plant, or else purchase the property. The trouble with the proposition, according to Mr. Batton, was that they would pay no royalties and would give him no interest in the project, and that he would have had to wait until they either got their money back, or else found the sulphide ore, and Mr. Batton said this was no satisfactory proposition, to which Mr. Van Fleet agreed, but stated that his company would not pay for any property either in whole or in part, unless the desired amount of sulphide ore were available, or else a thoroughly proven commercial operation were established.

Mr. Batton has no negotiations on foot at the present time, and says he would be glad to work with us if we should find that the property is worth while. He stated that he would either sell or lease, or take an interest in a commercial venture. According to Mr. Batton, he met you some years ago, but you were not interested at that time in oxidized zinc ores and furthermore he was not fully in a position to trade. Now that he has the property in his own hands, he would like to have us investigate the mine and determine whether it is of interest to us, particularly in view of the development of the Waelz Process.

I told Mr. Batton that the grade of ore and the location of the mine, would appear to make the operation of the property a close margin proposition, but that nevertheless we would give the matter some thought, and that furthermore I would communicate with you to ascertain what you know of the property, particularly in view of the fact that the property is indicated on the map which is attached to the report which you recently sent me at New York. Will you, therefore, wire me as to whether, in your opinion, the property has any merit, and whether you believe the property would fit into the scheme which you have been working upon, or whether it would have to be handled as a separate proposition?

Mr. Batton impressed me as being a man who is not imbued with unreasonable ideas as to values, although he apparently knows very little about mining and metallurgical matters, and it seemed to me that it would be worth our while to check up on his statements, and I promised to communicate with him as soon as I hear from you.

Sincerely yours,

Walter G. Schmidt

WAS AEG

P.S. - I have looked up your recent letter, in which you state that you have run into a lead-zinc property in Southern Arizona. Comparing the statements made in your letter with the statements given to me by Mr. Batton, it would appear that these are two separate properties.

W.A.S.

MADONNA CORPORATION
50TH FLOOR - 233 BROADWAY
NEW YORK CITY
TELEPHONE: WHITEHALL 4878

August 21st, 1928

Mr. G. M. Colvocoresses,
Southwest Metals Company,
Humboldt, Arizona.

My dear Colvocoresses:

Mr. Eilers has asked me to reply to your letter of Aug. 13th regarding the Pacific Black Rock Mine near Yuma.

This proposition does not appeal to us. There is nothing in the report to show how the owner builds up his purchase price. Altho Giroux believes there are 464,000 tons of ore averaging 6.7 Ag, 4.87% Pb and 9.8% Zn and some 15,000 tons on dump about as good, he does not give any mining cost, any concentrate recoveries nor estimated sales figures. Also his method of arriving at his tonnage estimate and grade is rather sketchy. Seems to me the evidence presented does not warrant his conclusion, altho he may have other evidence not presented to back it up.

I should say that it might take half a million dollars to equip the mine, provide power, build a mill, provide roads, build houses etcetera, and this would mean only a small mill. At 50,000 tons yearly it would take 10 years to exhaust the estimated ore. Interest and amortization would double the initial investment in that time, whatever it be.

If this thing were presented on some such basis as the following perhaps one might be warranted in making a detailed investigation; no down payment; no purchase price, but half the profits after return of capital invested.

Hope to see you up here some of these fine days. Today is fine, but its been miserably hot and sticky a good deal of the time lately. Can give you some good golf when you come. Both Mr. Eilers and I send our regards.

Yours sincerely,

Kuno Doerr

Kuno Doerr
Room 5002 - 233 Broadway
New York City

August 17, 1928.

Mr. F. W.Giroux,
The Tejon Company,
Gleeson, Arizona.

Dear Mr.Giroux:

This will acknowledge your good letter of July 30th. I thank you indeed for information which you have given me concerning the Lincoln, Brestlin and Swastika. I am sorry that you are out of the management of the latter organization, but hope that the deal which you made with the other parties was a very satisfactory one from your standpoint, and in due course of time I will get in touch with Dick Kingdon or some other official of the Company and see if there would be any chance of our obtaining shipments from these properties.

Thank you for explaining the situation regarding ore tonnage at the Black Rock and Pacific Mine. The trouble with this property seems to be that the owner, Mr.Batton, is way out of sight in his terms and while every one who knows the property agrees with you in believing that there is a large tonnage and that it might eventually be operated with profit, I cannot imagine that any mining concern or responsible party will deal with Batton while he asks such an absurd figure as purchase price. I have been in correspondence with him directly and have written him to that effect, and my further interest in the Black Rock Mine will have to be entirely dependent upon his attitude in regard to a very substantial revision of his present

requirement.

In previous letters I meant to ask you something concerning your present operation at Gleeson, and to find out if you were shipping any ore which might be of interest to us, assuming that we were able to resume operations at Humboldt. Some two years ago we investigated the Gleeson district, particularly the Shannon Mine, which was then being operated by Bennie, and we thought for a time that we might be able to secure some basic copper ore which we badly needed as a flux. Of course the distance and freight rates makes such an arrangement difficult, but we found that the Shannon ore was not nearly as basic as had been supposed, and also was very low grade, and eventually I purchased sulphide copper ore from C. & A. at Bisbee and later from the United Verde at Jerome. If by chance you are developing or shipping any ore of the character which you think might be of interest to us, I would much like to correspond with you concerning same, and see if any mutually advantageous arrangement could possibly be worked out.

Next time you are up this way, please don't fail to call me on the 'phone or drop in if you find opportunity and if I happen to be at Humboldt.

With personal regards,

Sincerely yours,

GMC-s

August 10, 1928.

Mr.C. E. Batton,
23 Oak Knoll Garden,
Pasadena, California.

Dear Sir:

I have just returned to Humboldt after an absence of several days and find your letter of August 1st, which I regret not to have been able to answer in time for you to receive my reply before you plan to leave Pasadena. I note that you will be back in that City again about the 20th of this month.

I have carefully studied over all the reports and data relative to the Pacific-Black Rock Mines, and have discussed this situation with Mr. Quinn and also with Mr.Davis, and have corresponded concerning the property with Frank Giroux and obtained some advice from other parties who have seen your mine.

I fully appreciate what you have a large body of ore, the quantity of which may be substantially increased by future development work, and which probably could be treated by differential flotation in such a manner that a substantial percent of the values will eventually be recovered in satisfactory products.

It appears to me, none-the-less, that there are several metallurgical difficulties which will have to be worked out at considerable expense in treating the ore from the mine, and considering the location and other conditions, and the fact that a large sum of money will have to be expended for mining and milling equipment, providing transportation facilities, water supply, etc., I cannot feel that the terms mentioned in your letter are justified under present conditions, and doubt very much if my friends would be interested on this basis, or would care to go to further

expense for additional investigation.

I will shortly communicate with the parties who have expressed an interest in this property and give them my views on the subject, and will write you more definitely after I have heard from them again, but I shall not feel justified in recommending that they go further with the matter unless there is a certainty that you would consider very substantial revision of the terms of purchase, as set forth in your letter.

If my friends still appear to be interested and desire to have me conduct some further negotiations, we can probably arrange for a personal conference next time I am in California, at which time terms of purchase, etc., could be discussed somewhat more fully.

Yours very truly,

GMC-s

HOME OFFICE
1114 STATE STREET
SANTA BARBARA, CAL.

Black Rock

The Tejon Company

GLEESON, ARIZONA

MINE OFFICE
GLEESON, ARIZONA

July 30, 1928.

Copy Brockett Jupiter

Mr.G.M.Colvocoresses,

Humboldt,Arizona.

Dear Mr.Colvocoresses:

I have your letter of the I9th inst.,and am very glad,indeed,to get it.I landed in Prescott,monday the 23rd inst.,to meet some people from New York,who are Dick Kingdon's principals in the Gold Crown Silver Mining Co., (the new name of the Brestlin).I left tuesday afternoon,on my way back.Was on the keen jump every minute I was in Yapapai county and could not find the time to get to Humboldt for a visit with you;for which fact,I am sincerely sorry.

Brestlin and Swastika have been consolidated.My wants were all satisfied and I was kicked out;the only interest I have there now is as a stockholder.I believe that the new people are strong enough financially to make a success of the two properties.

I surely hope that the Lincoln will be under operation by your people shortly.I learned while at Swastika,that the new mill at Crown King,had started up and that they were busy taking the tangles out of it and tuning it up.Some one ought to get busy on the old Crown King mine.There is money left in that property.

With reference to the Black-Rock and Pacific,north of Yuma,and my report there--on,also the comment of Mr.T.S.O'Brien,in regard to tonnage of ore.I have not the copy of report with me;it is at Mayer among my office copies;however,as I remember it:I made two seperate examinati--ons,one that covered the Black-Rock & Pacific claims and then the next that took in the Silver Glance group and Mandan.My recollection is that the I5.000 tons dump ore was included in the total of 464.000 tons.In arriving at the above tonnage,I dont think that I considered that amount of ore blocked out,but that if the ore continued into the Silver Glance as wide as it showed in the Black-Rock & Pacific,there would be that tonnage above the 270-foot level.

Mr.C'Brien's conclusions,I think,were based on what was found by myself,on the Black Rock & Pacific, only.

Of course you understand,Mr.Colvocoress,that opinions may vary a great deal on ore tonnage when the ore is not actually blocked out and in this case,the ore is not all blocked out.The property is one of big conditions and I earnestly believe that it will make a very large and profitable mine.I talked many times with Mr.Tavote(who was engineer for the Phelps Dodge people)who had made an examination of the property and he concurred with me in the opinion.You will remember that Mr.Tavote was murdered in Mexico.He was considered a very able,conservative mining engineer.

I think it would be well for you to take a run out to the property;there are several other very inter--esting things in the Silver District.Transportation is the difficulty there now.

It is possible that I will again have to go to Yavapai county about the I5th of August,if I do,I shall certainly try to make my plans so that I can spend part of a day with you at Humboldt.

With best personal regards,I am,

Sincerely yours,

FWG/Z.

July 19, 1928.

Mr. F. W. Giroux,
c/o The Tejon Company,
Gleeson, Arizona.

Dear Mr. Giroux:

I should have sooner acknowledged your good letter of June 23rd except that you stated that you would probably be around Prescott on the 10th of this month, and I hoped to have the pleasure of seeing you personally at that time.

I thank you very much indeed for the information concerning Swastika and Brestlin, and a little later I will try to get in touch with Dick Kingdon or some other official of the Brestlin Company and find out concerning their prospects for future operations.

What you write concerning the Lincoln is most interesting and it happens that I am going to Los Angeles this afternoon and will try to see in person the engineer who is interested in resuming operations at this property. It would be a good thing for all of us if a fairly strong crowd got hold of the Lincoln and started some really conservative development in the Crown King district.

Some time ago local people approached me in regard to the Black Rock Silver-Lead-Zinc Mine near Yuma, and I happened to mention this property to some people in New York who thought they might be considerably interested. I have now received a copy of your report which is not dated, but I assume to have been made some time in 1925 or 1926. I note that you estimate 464,400 tons of ore above the 270-foot level and you also state that there are 15,000

tons of ore on the dump but I do not clearly understand whether this 15,000 is included in the 464,000 or

might be considered as an additional tonnage.

The owner, or parties representing him, sent me a copy of a letter from T. S. O'Brien, who is apparently connected with the Joshua Hendy Iron Works, and in this letter Mr. O'Brien makes the following statement: "It is my opinion that Mr. F. W. Giroux is perfectly safe in his estimate of 107,000 tons of ore in sight above the 270-foot level, which has an average value of approximately $20.00 per ton."

This statement is quite puzzling since I cannot find any where in your report the estimate of 107,000, for on the contrary the figure mentioned above is approximately four times as great, and naturally it would be most important to parties who might be interested in investigating this mine to know whether the tonnage is actually 107,000 or 464,000, - in face I think it would make all the difference in the world because I do not believe that the smaller tonnage would justify the necessary expenditure to open up and equip the property, whereas the larger tonnage might very well make the mine an attractive proposition, unless the owner is inclined to be extremely unreasonable.

Since the people whom I am representing in this matter are mining men of large means and undoubtedly are serious in desiring to thoroughly investigate, might I ask you to straighten out the apparent contradiction in the tonnage estimate referred to above, and also to give me any other information that you might care to add to that which is contained in your quite complete report.

I sincerely hope that you will be up this way before very long and will not fail to pay me a visit as there are several matters which might be of mutual interest that I would like to discuss with you.

With personal regards,

Sincerely yours,

GMC-s

Copied

#	Description	AG. oz.	% PB.
1	No. 1 Crosscut	4.5	3.2
2	" "	2.6	0.8
3	" "	2.2	0.9
4	" "	2.1	0.9
5	" "	2.	0.75
6	" "	0.9	0.6
7	" "	1.2	0.76
8	" "	2.1	0.85
9	" "	4.44	1.35
10	No. 1 Level, 4 feet across	0.8	1.38
11	" " 21'-10" "	1.	2.3
12	" " 30' "	4.25	3.32
13	" " 40' "	3.4	2.
14	" " 6' "	6.5	4.55
15	" " Fill about 100 tons	5.	4.65
16	" " Stope 5' across	4.	3.76
17	" " 10' ", 5' from shaft	4.85	3.98
17	" " Face of drift, 4'-6" across	7.85	6.1
18	No. 2 " 17' across	4.21	3.85
19	" " Black material in cross fractures one inch to four inches wide	19.5	8.76
20	" " 4' across, in 20' crosscut	3.6	2.3
21	" " 10' across, 40' from No. 20	6.15	3.3
22	" " Galena & Carbonate special	16.	17.
23	" " Cut around 60'	4.	3.05
24	" " " " Chamber 15'	2.1	1.2
25	" " 10 H. W. Streak, 4' width, back	7.2	4.38
26	" " Special,	14.	8.22
27	" " 20' across, East side shaft	4.04	2.65
28	" " 6' across, in stope below 2nd lev.	12.8	12.
29	" " 3' in extreme northwest end	10.1	8.
30	" " 9' across,	6.8	6.55
31	" " 3' across,	36.7	20.
32	" " 6' across,	40.	11.38
33	No. 3 " 12" across,	4.	5.65
34	" " 4' across,	2.3	4.
35	" " Cut around drift 10' from breast	2.85	2.
36	" " Cut around drift 20' from breast	8.1	5.2
37	" " 8-10" in stope	9.3	6.95
38	" " Cut around drift opposite stope	2.	1.5
39	" " Cut 10' from south end breast	4.	2.3
40	" " Cut across breast 4' wide	2.	4.56
41	" " 10" - 12" clean ore	11.95	5.85
42	" " 20' from breast	2.6	2.
43	" " 30' from breast	4.	3.36
44	" " Cut in east side leg of drift	3.8	2.44
45	" " " " " " " " 10' N.W.	2.	1.52
46	" " 3' streak in bottom	7.96	6.4
47	" " Stope 8' across	3.9	3.52
48	" " Cut 30' from stope	7.	3.85
49	" " 40' from breast side of drift	4.	2.76
50	" " Selected from 3 streaks 8" to 36" wide	5.1	7.1
51	" " Face of crosscut	0.9	1.
52	" " 10' from face of crosscut	2.6	2.44
53	" " 20' from face of crosscut	3.3	3.2
54	" " 30' from face of crosscut	20.6	10.15
55	" " In east crosscut 4	4.5	4.5
56	No. 4 " Beginning at north wall of crosscut every five feet to shaft	4.	2.12
57	" " Next 5 feet	1.6	1.1
58	" " Next 5 feet	2.1	1.4
59	" " Next 5 feet	2.3	2.15
60	" " Next 5 feet	2.25	1.83

#	Description		AG. oz.	% PB.
61	No. 4 Level,	Next 5 feet	1.96	1.05
62	" "	Next 5 feet	4.65	2.1
63	" "	Next 5 feet	4.	3.25
64	" "	Next 5 feet	0.6	0.85
65	" "	Next 5 feet	4.6	4.52
66	" "	Next 5 feet	3.3	4.29
67	" "	" " "	2.1	3.81
68	" "	" " "	2.	2.15
69	" "	" " "	2.	2.1
70	" "	At shaft	1.95	2.1
71	" "	6' just above shaft in crosscut	3.4	3.28
72	" "	Selected ore, six streaks 3" to 8" wide	36.1	20.
73	" "	Selected ore, half to 2 inches, 20' from shaft	25.9	18.95
74	" "	4' across, 30' from shaft	0.8	10.
75	" "	Selected seams, 12' from face	0.85	10.2
76	" "	2" streak next to gouge, hanging wall of vein	31.	30.8
77	" "	3' to 4' breast of drift	3.5	3.45
78	No. 5 "	5' wide beginning at hanging wall of shaft	1.25	0.9
79	" "	5' across, next to No. 78	0.9	0.9
80	" "	Type of ore in crosscut	0.22	1.
81	" "	5' crosscut from face, crosscut	0.24	0.98
82	" "	Talc next from foot wall	0.15	Tr.
83	Glance-shaft	Grab of 13 sacks	29.	17.9
84	"	18", end crosscut, bottom of shaft	3.5	4.75
85	"	Across 12' from fact to bottom "	3.65	3.24
86	"	Across 12' next No. 85, same crosscut	3.2	3.
87	"	Two feet in width, 8' long, 28' from bottom	24.5	18.
88	Pacific	50' down, Dan wired sample	3.	3.22
89	"	Promontory	1.14	1.52
90	"	Type high grade on dump	4.25	22.
91	"	Lead carbonate on dump	4.66	18.39
92	"	Type of black ore on dump	4.	16.2
93	"	Dwyer's black ore off of point	5.5	16.1
94	"	Jack McNeal high grade	12.35	5.2
95	"	" " " "	33.	20.18
96	Mandan		25.	19.2
97	Pacific	Dump	2.	3.
98	Mandan	High grade Gray	167.	56.
99	Mandan	High grade Red	82.2	14.1
100	Black Rock Dumps		5.	5.2
101	"		12.	3.75
102	"		8.1	5.1
103	"		5.2	3.44
104	"		8.	5.98
105	"		8.3	5.6
106	"		6.9	4.8
107	"		7.	5.69
108	"		1.4	1.56
109	"		7.5	6.50
110	"		4.4	5.9
111	Kitchen Sample		6.	5.4
112	" "	East side	4.5	4.5
113	" "	West side	2.36	2.1
114	Special	High grade on dump	38.15	44.9
115	"	Honey comb quartz, carbonate 4th level at 76' crosscut, 10' from shaft	12.8	28.
116	Pacific No. 2	McNeal	0.28	0.25
117	Mandan	McPherson's high grade	118.	56.

~~Silver Stone~~ Black Rock & Pacific

Mandan Claim Samples.

	Ag.	% PB.	% ZN.	
1)	Tr.	4.	3.50	3' 6" across Jack's fall
2)	8.50	10.	6.10	Ore streak 2' wide
3)	8.	8.	5.50	HG drift
4)	14.	5.45	8.40	In raise 3' across 20' up
5)	1.75	8.30	10.9	Zincky ore in raise
6)	2. 20	1.50		In little drift 2' across
7)	0.95	No	3.70	Tunnel
8)	1.	"	5.80	" " " "
9)	10. 10	30.10		Jack's face
10)	2.25	0.25	1.10	Tunnel near shaft 27' across
11)	2.	2.	4.20	Breast of drift
12)	0. 80	0.90	16.	Surface 5' wide
13)	4. 25			" " near Silver Gulch
14)	2.	1.	9.20	" " " " "
15)	14.50	17.	13.80	Grab from sack at Mandan
16)	5.25	3.85	8.50	Across 6' cut " " " " "
17)	2.80	0.95	2.50	14' near Winz
18)	24.00	64.	2.70	Mandan
19)	0.4		2.30	Calcite Mandan
20)	6.20	5.	6.50	3' face " " drift
21)	32.	23.		Streak Mandan S. E.
22)	0.75			Quartz material Promontory Pacific
23)	2.	5.98		" " " "
24)	0.20		2.70	" " " "
25)	1.10	10.	5.80	" " " "
26)	2.60	3.35	11.70	12' face of drift bottom of shaft
27)	0.65	2.	9.80	Zincky material from bottom
28)	2. 80	5.65	6.50	4' face in 20' drift at shaft
29)	2.	27.10	23.	Streak

Block Rock & Pacific

SILVER GLANCE Claim
~~SILVER DISTRICT~~

Sample Number	Width	Assay			
1-a	4'	18.2 oz.	Ag	30' S #36	
2-a	3'	11.0 "	"	24' S #36	
3-a	2'	5.4 "	"	6' S #36	
4-a	3'	5.3 "	"	6' N #36	
5-a	3'	5.0 "	"	6' S #35	
6-a	4'	9.3 "	"	6' S #34	
7-a	1'	17.2 "	"	6' W #31	
8-a	1'6"	13.8 "	"	6' W #30	
9-a	1'	1.0 "	"	6' W #29	2-6" stringers
10-a	3'	1.6 "	"	6' W #28	
11-a	2'6"	8.5 "	"	6' W #27	
12-a	1'	4.5 "	"	6' W #26	
13-a	4'	10.3 "	"	6' W #25	
14-a	4'	6.4 "	"	6' W #24	
15-a	5'	55.4 "	"	6' W #23	
16-a	5'	8.6 "	"	6' W #22	
17-a	6'	3.9 "	"	6' W #21	
18-a	5'	28.5 "	"	6' W #20	
19-a	7'	28.2 "	"	6' W #20	
20-a	3'6"	10.0 "	"	12' E #20	
21-a	8'	38.5 "	"	36' S #36	
22-a	3'6"	10.4 "	"	12'S #21-a	
23-a	4'	24.1 "	"	12' S #22-a	
24-a	5'	19.9 "	"	12' S #23-a	
25-a	4'	13.6 "	"	12' S #24-a	
26-a	4'	19.2 "	"	12' S #25-a	7' vein 2 sections covered
27-a	8'	12.2 "	"	12' S #26-a	
28-a	9'	13.7 "	"	12' S #27-a	
29-a	6'	19.1 "	"	12' S #28-a	
30-a	6'	40.3 "	"	12' S #29-a	
31-a	6'	40.2 "	"	12' S #30-a	
32-a	4'	17.1 "	"	12' S #31-a	
33-a	5'	23.8 "	"	12' S #32-a	3' cannot sample (cliff)
34-a	5'	7.4 "	"	12' S #33-a	
35-a	9'	23.3 "	"	12' S #34-a	
36-a	8'	9.5 "	"	12' S #35-a	
37-a	9'	4.8 "	"	12' S #36-a	
38-a	5'	9.7 "	"	resample foot wall section #46	
39-a	12'	5.5 "	"	12' W #47	
40-a	12'	7.8 "	"	12' E #47	
41-a	8'	6.4 "	"	24' E #47	

Sample Number	Width	Assay	
42-a	6'	3.4 oz. Ag.	36' E #47
43-a	4'	4.6 " "	just W. of summit of hill. S. of F. wall - vein E. of shaft - rock mon. of ore
44-a	4'	5.3 " "	about 30' W. #43-a
45-a	6'	25.9 " "	East side hill 65' E. summit S. of f. wall vein
46-a	2'	4.4	N. side B.R. shaft N. end line about 20' below small drift
47-a	2'	1.4 " "	under 46-a
48-a	3"	39.2 " ")	streak of Galena near sample
		46.3% Pb)	#17 in adit
49-a		38.1 oz. Ag	at S. end of claim
50-a	3"	90.0 " ")	streak of Galena in inclined
		49.6% Pb)	shaft close to black rock line - may be on B.R. ground

23 1/6"

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REPORT OF PACIFIC-
BLACK ROCK GROUP OF
MINING CLAIMS,
YUMA COUNTY, ARIZONA

BASIS OF REPORT.

This report has for its basis a thorough and careful examination of the Pacific-Black Rock group of mining claims, covering a period of 12 days on the property during which time 147 samples were carefully taken from the various openings, results of which are appended.

The authors experience in this field is amplified and backed by years of intimate contact with large and small operations and examinations of other mines on the mineral belt in question.

SITUATION

The property is situate in the Silver Mining District, Yuma County, Arizona, about 33 miles in a northeasterly direction from the City of Yuma, Yuma County, Arizona; the same distance from Dome, Arizona a station on the Southern Pacific railroad. The road from Dome crosses the Gila river, thence over a plateau for a distance of from 15 to 16 miles, thence striking the Black Rock wash which is followed to the mine.

The cost of transportation of any material, incoming or outgoing, would not be excessive.

ELEVATION.

Elevation above sea level is about 400 feet. The country is typical desert, such as is found a short distance from the Colorado River, very warm during the months of July, August and September, but ideal the balance of the year, allowing of outdoor work to be done the year around.

NEARBY MINES AND MINERAL BELT

The Silver district is an old district from which much wealth has been produced. High grade ore has been mined and shipped from various properties since 1878. The greatest depth so far, among the mines of the district is said to be about 600 feet, attained by the Red Cloud mine, which joins the Pacific-Black Rock group on the northwest.

GEOGOLY

Located in old schistose rocks intruded by a coarsely crystalline biotite granite and later by andesitic flows and intrusions. The andesite is generally closely related to the ore bodies, and case of the Black Rock group, the schist forms the foot-wall and the ore bodies occur at the contact, but in greatly re-organized and altered andesite, showing distinct movement at the contact as well as within the vein. The strike of mineralized fractures are nearly north and south with dip

to the east, considerable cross-fracturing occurs and some are also mineralized. The entire hill in which the Black Rock is located would indicate that longitudinal movement has resulted in both longitudinal and cross- fracturing since the blocks between fractures are roughly prismatic.

At junction of main fractures with northeast, southwest fractures the mineralization and replacement is much greater and forms large chambers where ore has been extracted. The fracture zone on the Black Rock is several hundred feet in length and width, although the cross fractures gradually show less mineralization and generally mineralization extends 10 to 25 feet from main north-south fracture. However, at cross-cut 225' northwest of main shaft, enrichment has occurred at this point over a width of 96'. 595' northwest from cross-cut, at the Glance shaft, enrichment has occurred over a width of 30' with no hanging wall in sight, 900' northwest from Glance shaft, at the Silver shaft, enrichment has occurred over a width of 30'. At this point a 450' tunnel that was driven across to the main vein, cut two other parallel veins, each showing good values over a 10' width. The andesite in the mineralized zone has been so altered that it appears as a crystalline limestone, greatly fractured and fractures filled with chalcedony, calcite, and with-silver-lead and zinc minerals. Lead occurs as a carbonate and galena, and zinc as a carbonate or silicate. Silver values as chloride and some argentite with smaller amounts of arsenical and antimonial sulphides.

DEVELOPMENT.

Consits of 4 incline shafts 800' to 1000' apart, 82', 200' 250' and 420' deep. The 82' shaft has 30' cross-cut in bottom, 100' shaft has three 30' cross-cuts, 30', 50' and 100' deep. The 350' shaft has a 450' tunnel with 90' of drifting. More development has been done at the 420' shaft than any of the others. Beginning with a 27'

cross-cut over the shaft. The other development included here consisting of drifting and cross-cutting on each level is as folhows: 20' level 255', 104' level 287', 147' level 50', 171' level 227', 270' level 88', 420' level 28', 225' northwest of shaft a 100' cross-cut.

Other work done by the owners in proving the vein is considerable. The Silver Glance claim has many open cuts where all samples taken show some values. The Mandan claim has less development but stands out prominently for possibilities. At one point a cross-cut tunnel is started on the vein showing good values. Surface samples taken just over this cross-cut would indicate an enrichment of from 60' to 100' in width of good milling ore, 300' further southwest, openings made show practically same conditions.

The possible ore one the Pacific-Black Rock group of claims is enormous. The distance between openings where ore has been proven of commercial value is more than 4000'. The widths in each opening show enrichment from 12' to 96'. Therefore I believe we may expect and average width over the entire distance of more than 25'. However, I will only include in my calculations the distance between the main 420' shaft and the Silver 250' shaft, and a depth of 270'. The ore between these two shafts is from 30' to 96' wide. I willtake as a basis a 15' width. These calculations lead me to the conclusion that we have, above the 270' level 464,400 tons of ore that will average 6.7 ozs. silver, 4.8% lead and 9.8% zinc. There is 15000 tons on the dump that samples 6.48 ozs silver, 4.96% lead and 9.6% zinc.

Openings at the Mandan, and the Pacific indicates a large and well defined ore body about 800' long that is not included in above estimate.

TITLES

Titles to the Pacific-Black Rock group are perfect. The Silver Glance, Black Rock and Pacific Claims being held under United Statespatent. The other seven, West Glance, East Glance, West Glance #2, East Glance #2, Mandan, Pacific #2, Black Rock #2 are held by right of location. The Silver Glance and Black Rock were patented in 1881. The Pacific was patentedin 1891.

CONCLUSIONS AND RECOMMENDATIONS.

The limit of ore has not been found in any of the present openings. The main 420' shaft should be sunk to the 500' level, or until water has been encountered. Development on the Red Cloud to the 500' has proved that sufficient water exists to supply a milling plant of large daily capacity. In my opinion, similar conditions will be met with at the Black Rock shaft. While enough ore is available to supply a large milling plant, from the standpoint of a miner, I would rather recommend a development campaign of from 3 to 6 months before deciding on the kind and capacity of mill to be installed. Milling tests on ore from main shaft shows a high recovery of silver-lead by flotation, with apossible saving of 85% zinc. I believe that very large bodies of zinc ore will prove ultimately to be ofgreater value than the silver-lead, and that is saying a great deal.

I recommend the Pacific-Black Rock group as a property of first importance. The ore bodies are immense, and depth will show larger bodies of higher grade.

Operation of the property, prqerly managed and financed should make one of the big mines.

(Signed) F. W. Giroux

(COPY)

The Silver Glance and Black Rock were patented in 1881 and the Pacific was patented in 1891.

All claims show strong mineralization. There are no surface improvements, such as camp buildings or machinery on the property. No extensive work has been done here for many years except annual assessments. All openings are in fair to very good condition.

The country here is typical desert, being very warm during the months of July, August and September, while the balance of the year the weather is ideal. There is no water or timber on the property. The future water situation for mining and milling purposes can be solved in two ways. There is every indication that ample water will be encountered between the five and six hundred foot levels or it is possible to secure unlimited water from the Colorado river. Either plan is feasible.

HISTORY:

The Silver Mining district is an old one with a large and profitable production to its credit. It has been worked for many years for the high grade silver and silver-lead ores. These ores were mostly handled by a local smelter a few miles away and by a mill situated on the Colorado River. I have been unalbe to get definite figures as to the total values of ores extracted from the Pacific-Black Rock property or other mines in the District, however, this production must have been considerable judging from the amount of work done. I am informed that the better grade silver ores ran up to around 1000 oz. andover to the ton. The cost of mining is said to have been around $4.00 to $5.00 per ton. This information is obtained from Messrs. C. E. Batton and J. McCneal.

GEOLOGY:

The country rock of the district and at the Pacific-Black Rock Group is an old schist highly metamorphic in proximity to the fractures but retaining its schistorsity to a marked degree. The schist has been cut by a medium chrystalline granite andlater by andesite dikes and flows. Much faulting and cross-faultin has taken place. There are two and possibly three principal ore bearing fracture systems. The north-south system with medium steep dip to the east is several hundred feet wide and traceable on the surface for at least two miles. The north-west south-east with a somewhat flat dip to the north-west appears to be the principle ore carrier and is from 15 to 150 feet wide, but usually short in extent--terminating in one of the north-south fractures.

The andesite is closely associated with the ore bodies and is the youngest rock of the district as is shown by its persistence in cutting all the other formatinns. At the Pacific-Black Rock claim the ore occurs mostly at the contact fracture. The schist being the footwall and a highly altered andesite is the hangingwall. Considerable movement has taken place at the contact and also within the vein fracture.

At the Black Rock claimthe rough prismatic blocks, the deep scored walls and the brecciated zones would indicate considerable longitidinal as well as cross movement. In the mine also are found granite and intrusions of phorphyry. While the workings have not exposed any great amount of granite I am inclined to believe that granite will form one of the walls and in places will have considerable bearing on the ore bodies. In places andesite gives every indication of being the principle mineralizing agent.

The ore occurs in a series of large irregular lenticular bodies along the strike of the fracture systems and alterations showing at the surface in the form of prominent outcrops (see views attached) which have filled the wide fractures along the contact - mineralization extending far into the highly altered zone of the wall rocks.

The andesite along the system of fractures is altered so that it appears as a recrystalized limestone, great penetration of large quantities of lime carbonates (dolomite and calcite) has occurred which haw been greatly fractured and these fractures filled with calcite, some semi-chalcedonic quartz and silver, lead and zinc minerals. The silver, lead and zonc minerals are distributed through the entire mass of the altered zone, showing concentration within the wall lines of the main and cross fractures. The limit of ore depending more upon economic consideration than the disappearance of the mettallic contents.

At the junction of the north-south fracture and the north-east southwest fracture the mineralization was very great. Here considerable ore has been extracted. At the Black Rock claim where most development work has been done the fracture zone is several hundred feet in length and width. The mineralization extends from 15 to 25 feet along the cross fractures.

A cross cut 225 feet northwest of the main shaft shows a mineralized zone 96 feet wide with the face in ore. 600 feet northwest of cross cut (Glance shaft) shows 30 feet of ore with no hangingwall in sight. 900 feet northwest of this point (Silver shaft) shows 30 feet of ore with no limit in sight. At this point a 450 foot tunnel hascut two other parallel fractures or veins showing good values for over a width of twn feet each.

In the mineralized zones so far exposed the lead occurs as a carbonate (cerussite) and residual sulphide (galena). Zinc occurs as a carbonate (smithsonite) and the oxide (calomine. Silver occurs as a chloride and some sulphide (argentite).

The mean water level of this property is between 500 and 600 feet vertical depth as determined from the workings of the Cloud mine, which joins this property on the north and is an extension of the same system of fractures.

A partial analysis of a composite sample of these ores gives: Silica, 46.7%; Lime 15.8%; Iron 6.3%; Silver 7.8 oz.; Lead 4.8%; Zinc 9.6%.

DEVELOPMENT WORK:

The Pacific-Black Rock group has been opened up by over 2000 feet of underground work, which consists of four incline shafts, tunnels, drifts and crosscuts as follows: 82 foot shaft with 30 foot cross cut in bottom; 100 foot shaft with 20 foot cross cuts at the 20 foot, 50 foot and 100 foot levels; 250 foot shaft; 450 foot tunnel with 90 foot

of drifting; 420 foot shaft; at 20 foot level 255 veet of cross cut and drifting; At 104 foot level, 287 feet of cross cut and drifting; At 147 foot level, feet of drifting--at 171 foot level, 227 feet of drifting and cross cutting--at 270 foot level 88 feet of drifting--at 420 foot level, 28 foot cross cut. The 420 foot shaft passes through the ore at the 300 foot level. 225 feet north-east of the shaft is a 100 foot cross cut.

The property has been further opened up by many open cuts on the various claims. The Mandan has the least developmentbut the ore exposed by the outcrop and in a cross cut that has been started would indicate that a good grade of mill ore could be expected for some 50 to 75 feet in width and several hundred feet in length.

ORE IN SIGHT AND PROSPECTIVE:

The estimation of positive ore of the Pacific-Black Rock group will be confined to the Black Rock claim. Here there is in sight approximately 62,000 tons of carbonate ores that average 6.7% oz. silver, 4.87% lead, and 9.8% zinc. There are also some 15,000 tons of ore on the dumps averaging 6.48 silver; 4.96% lead and 9.6% zinc.

The possible or probable ores of the entire group in the horizon of the oxidized zone alone are very great. Ore of a commercial value has been proven along the strike of the fracture system for a distance of over 4000 feet width of from 12 to 96 feet. As a basis of computation take only a depth of 250 feet and an average width of 25 feet (the openings show this to be very conservative) and there are hundreds of thousands of tons of ore of mill grade. For a more concrete example take the 1500 feet distance between the 420 foot and 250 foot shafts and assume an average width of only 15 feet and a depth of 270 feet, allowing 12 cubic feet to the ton, there are over 500,000 tons of ore in this one block which gives every indication of being profitable mill grade ore. Taking into consideration the ores exposed and the indicated at the Mandan, Pacific and various other claims of this group the tonnage of possible ore is enormous. That even the lower grade carbonate ores are amenable to profitable treatment is shown by the mettallurgical report of the Southwestern Engineering Co. (The same is attached). Zinc was not taken into consideration at the time the Southwestern Engineering Co. made tests of these ores, however, subsequent preliminary tests on the extration of the zinc values have been very satisfactory proving that these ores yield to treatment by table and flotation methods with a very high extraction of the mettalic values at a low cost.

RECOMMENDATIONS AND CONCLUSIONS:

The ore on the dumps and in sight in the mine, together with the possibilities of great tonnage of ore of the same character being developed on the various claims; the limitsof the ore bodies not being found in the present workings and the yielding of these ores to profitable treatment all go to constitute a property of merit and one that is well worthy of consideration.

I base my favorable impression of this property on the possibilities further explorations should show. Sinking should be continued on one or more of the shafts to the permanent water level or to

to the sulphide zone. This zone should be encounterd between the 500 and 600 foot levels.

Observationsmade at an adjoining property (the Red Cloud) indicate that pronounced silver and lead enrichments will occur at or near the water level. I am informed that high grade silver ores are found in streaks running through the galena. These streaks often carry values from 1000 to 3000 oz. of silver to the ton. There is every reason to believe that similar ore will be found at the Pacific-Black Rock group. Both of these properties were worked in the early days for the high grade silver ores.

In conclusion I will say that a short andintensive systematic campaign of exploration of the ore bodies above andto the water level would soon prove their economic possibilities. This exploration need not be expensive andit would regulate the size of the reduction plant and the best mode of treatment adapted to the ores. The ores of the oxidized zone and leave a nice profit besides as they alone consittute sufficient tonnage to make a mine of considerable impretance.

I strongly recommend the Pacific-Black Rock groupas a mining property of great merit andproperly financed and managed it has great possibilities of developing into one of the country's great mines.

Dated: December 15, 1926.
Prescott, Arizona.

SIGNED: J. V. McConnell,
Mining Engineer.

At the Black Rock claim the rough prismatic blocks, the deep scored walls and the brecciated zones would indicate considerable longitudinal as well as cross movement. In the mine also are found granite and intrusions of phorphyry. While the workings have not exposed any great amount of granite I am inclined to believe that granite will form one of the walls and in places will have considerable bearing on the ore bodies. In places andesite gives every indication of being the principle mineralizing agent.

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The mean water level of this property is between 500 and 600 feet vertical depth as determined from the workings of the Cloud mine, which joins this property on the north and is an extension of the same system of fractures.

A partial analysis of a composite sample of these ores gives: Silica, 46.7%; Lime 15.8%; Iron 6.3%: Silver 7.8 oz.; Lead 4.8%; Zinc 9.6%,

D-5

REPORT ON THE PACIFIC-BLACK ROCK GROUP

OF MINING CLAIMS.

YUMA COUNTY, ARIZONA.

FOR CHAS. E. BATTON.

This report is made after a personal, but limited, examination of the mining property known as the Pacific-Black Rock Group. Due credit is herewith given to Messrs. Frank W. Giroux, E.M., W. Tovote, E.M., and Carl Trischka, E.M., for measurements of workings, ore sampling s and mapping. These I found to check very favorably with my examinations of November, 1926.

Signed:
Dated: Dec. 15,1926.
Prescott, Arizona. J. V. McConnell, Mining Engineer.

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THE PACIFIC-BLACK ROCK MINING PROPERTY

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GEOGRAPHY:

The Pacific-Black mine is situated in the Silver Mining District, Yuma County, Arizona, and is about 35 miles northeasterly from the town of Yuma, and approximately the same distance from Dome, a station on the Southwern Pacific Railraod. The road to the mine crosses the Gila river at Dome, thence over a level plateau of some 15 miles to the Yuma Wash, up the wash to the Black Rock Canyon and to the mine. This property can also be reached by a good road from Yuma, via Pacacho, crossing the Colorado river by boat and then about five miles over a good road to the mine. Either route is approximately the same distance. The roads are little used and would require some work for economic transportation, however, there are no long or excessive grades so the cost of repairing roads would be light.

GENERAL DESCRIPTION:

The Pacific-BlackRock mine group consists of ten mining claims, totaling approximately 200 acres, which is mostly mineral bearing ground. The Silver Glance, Black Rock and Pacific claims are held under U.S.patents. The West Glance, East Glance, West Glance #2, East Glance #2, Mandan, Pacific #2, and the Black Rock #2, are held by right of location and annual assessment work.

The Silver Glance and Black Rock were patented in 1881 and the Pacific was patented in 1891.

All claims show strong mineralization. There are no surface improvements, such as camp buildings or machinery on the property. No extensive work has been done here for many years, except annual assessments. All openings are in fair to very good condition.

The country here is typical desert, being very warm during the months of July, August and September, while the balance of the year the weather is ideal. There is no water or timbom on the property. The future water situation for mining and milling purposes can be solved in two ways. There is every indication that ample water will be encountered between the five and six hundred foot levels or it is possible to secure unlimited water from the Colorado river. Either plan is feasible.

HISTORY:

The Silver Mining District is an old one with a large and profitable production to its credit. It has been worked for many years for the high grade silver and silver-lead ores. These ores were mostly handled by a local smelter a few miles away and by a mill situated on the Colorado River. I have been unable to get definite figures as to the total values of ore extracted from the Pacific-Black Rock property or other mines in the District, however, this production must hafe been considerable judging from the amount of work done. I am informed that the better grade silver ores ran up to around 1000 oz. and over to the ton. The cost of mining is said to have been around $4.00 to $5.00 per ton. This information is obtained from Messrs.C. E. Batton and J. McNeal.

GEOLOGY:

The country rock of the district and at the Pacific-Black Rock Group is an old schist highly metamorphic in proximity to the fractures but retaining its schistorsity to a marked degree. The schist has been cut by a medium chrystalline granite and later by andesite dikes and flows. Much faulting and cross-faulting has taken place. There are two and possibly three principal ore bearing fracture systems. The north-south system with medium steep dip to the east is several hundred feet wide and traceable on the surface for at least two miles. The north-west south-east with a somewhat flat dip to the northwest appears to be the principle ore carrier and is from 15 to 150 feet wide, but usually short in extent -- terminating in one of the north-south fractures.

The andesite is closely associated with the ore bodies and is the youngest rock of the district as is shown by its persistence in cutting all the other formations. At the Pacific-Black Rock claim the ore occurs mostly at the contact fracture. The schist being the footwall and a highly altered andesite is the hangingwall. Considerable movement has taken place at the contract and also within the vein fracture.

DEVELOPMENT WORK:

The Pacific-Black Rock group has been opened up by over 2000 feet of underground work, which consists of four incline shafts, tunnels, drifts and crosscuts as follows: 82 foot shaft with 30 foot cross cut in bottom; 100 foot shaft with 20 foot cross cuts at the 20 foot, 50 foot and 100 foot levels; 250 foot shaft; 450 foot tunnel with 90 foot of drifting; 420 foot shaft; at 20 foot level 255 feet of cross cut and drifting; at 104 foot level, 287 feet of cross cut and drifting; At 147 foot level, 50 feet of drifting-- at 171 foot level, 227 feet of drifting and cross cutting-- at 270 foot level 88 feet of drifting-- at 420 foot level, 28 foot cross cut. The 420 foot shaft passes through the ore at the 300 foot level.. 225 feet north-east of the shaft is a 100 foot cross cut.

The property has been further opened up by many open cuts on the various claims. The Mandan has the least development but the ore exposed by the outcrop and in a cross cut that has been started would indicate that a good grade of mill ore could be exposed for some 50 to 75 feet in width and several hundred feet in length.

ORE IN SIGHT AND PROSPECTIVE:

The estimation of positive ore of the Pacific-Black Rock group will be confined to the Black Rock claim. Here there is in sight approximately 62,000 tons of carbonate ores that average 6.7 oz. silver, 4.87% lead, and 9.8% zinc. There are also some 15,000 tons of ore on the dumps averaging 6.48 silver; 4.96% lead and 9.6% zinc.

The possible or probable ores of the entire group in the horizon of the oxidized zone alone are very great. Ore of a commercial value has been proven along the strike of the fracture system for a distance of over 4000 feet width of from 12 to 96 feet. As a basis of computation take only a depth of 250 feet and an average width of 25 feet (the openings show this to be very conservative) and there are hundreds of thousands of tons of ore of mill grade. For a more concrete example take the 1500 feet distance between the 420 foot and 250 foot shafts and assume an average width of only 15 feet and a depth of 270 feet, allowing 12 cubic feet to the ton, there are over 500,000 tons of ore in this one block which gives every indication of being profitable mill grade ore. Taking into consideration the ores exposed and the indicated at the Mandan, Pacific and various other claims of this group the tonnage of possible ore is enormous. That even the lower grade carbonate ores are amenable to profitable treatment is shown by the metallurgical report of the Southwestern Engineering Co. (The same is attached). Zinc was not taken into consideration at the time the Southwestern Engineering Co. made tests of these ores, however, subsequent preliminary tests on the extraction of the zinc values have been very satisfactory proving that these ores yield to treatment by table and flotation methods with a very high extraction of the metallic values at a low cost.

RECOMMENDATIONS AND CONCLUSIONS:

The ore on the dumps and in sight in the mine, together with

the possibilities of great tonnage of ore of the same character being developed on the various claims; the limits of the ore bodies not being found in the present workings and the yielding of these ores of profitable treatment all go to constitute a property of merit and one that is well worthy of consideration.

I base my favorable impression of this property on the possibilities further explorations should show. Sinking should be continued on one or more of the shafts to the permanent water level or to the sulphide zone. This zone should be encountered between the 500 and 600 foot levels.

Observations made at an adjoining property (the Red Cloud) indicate that pronounced silver and lead enrichments will occur at or near the water level. I am informed that high grade silver ores are found in streaks running through the galena. These streaks often carry values from 1000 to 3000 oz. of silver to the ton. There is every reason to believe that similar ore will be found at the Pacific-Black Rock group. Both of these propertiesware worked in the early days for the high grade silver ores.

In conclusion I will say that a short and intensive systematic campaign of exploration of the ore bodies above and to the water level would soon prove their economic possibilities. This exploration need not be expensive and it would regulate the size of the reduction plant and the best mode of treatment adapted to the ores. The ores of the oxidized zone should leave a nice profit besides as they alone constitute sufficient tonnage to make a mine of considerable importance.

I strongly recommend the Pacific-Black Rock group as a mining property of great merit and properly financed and managed it has great possibilities of developing into one of the country's great mines.

Dated : December 15, 1926.

(Signed) J. V. McConnell,
Mining Engineer.

Prescott, Arizona.

Copied

JOSHUA HENDY IRON WORKS

Manufacturers of Machinery.

San Francisco, Cal., U.S. A.,
August 25, 1926.

(777 N. Los Robles
Phone Wakefield 3312

Mr. C. E. Batton,
2673 No. Holliston Ave.,
Altadena, Calif.

Dear Sir:

With reference to your Black Rock Mine situated about thirty miles north from Dome, Arizona, which the writer visited with you on July 12th for the purpose of taking an average sample from the dump (15,000 to 20,000 tons) for metallurgical tests, and to size up the situation in a general way in orderto get thenecessary data to lay out a milling plant, I wish to state that this is one of the few mining propositions called to our attention where the values and tonnage have been found as represented by the owner and afterlooking over the upper part of the Black Rock shaft and the large veins outcropping on the surface, it is my opinion that Mr. F. W. Giroux is perfectly safe in his estimate of 107,000 tons of ore in sight above the 270 ft. level, which hasan average value of approximately $20. per ton.

The metallurgical tests made on this ore show that a high recoverycan be made by oil flotation and on a basis of 200 tons per daythe ore can be mined and milled at a profit of approximately $12.00 per ton, which would showbetter than $1,000,000.00net profit for the ore already in sight andas I see your proposition it is only a matter of water supply and proper equipment to put your property on a substantial dividend basis.

Yours very truly,

TSO:FW

(Signed) T. S. O'Brien.

Silver District

THE BLACK ROCK-PACIFIC MINE

Up Col-Side 20 M to Picacho.
Hoqui Ferry - Boat to landing.
Horses or rig from landing.

The Black Rock-Pacific Mine is situated in the SILVER Mining District, Yuma County, Arizona.

It is in airline about 40 miles North of the town of Yuma, and located in the relatively low but rugged mountain-range which flanks the Colorado River on the East.

The elevation at the mine is probably between 800' and 1000'. There is practically no vegetation in that vicinity except some ironwoods and paolo verdes along the arroyos.

The climate is the typical desert-climate of Southwestern Arizona, very hot in summer, but delightful in wintertime.

Precipitation is very small, but liable to be torrential, when it does come. There are a few scattered water-holes and intermittent springs, but generally the country is extremely arid.

The water-level is rather deep, but it seems very likely that water will be encountered in most places at about the niveau of the Colorado River.

The access to the mine is rather difficult, but not prohibitive. At present the mine is reached either by way of Dome and Castle Dome on the Arizona side of the river, or by going up the river on the California side, then ferry across and reach the mine either by trail or wagonroad. I went to Picacho, California, twenty-eight miles North of Yuma by automobile, ferried across and followed easy trails for eight to ten miles to the mine. In airline the mine is about six miles N 20 E from Picacho. The best outlet for ore or concentrates from the mine would probably be a wagonroad, perhaps ten miles in length to the river, then by barges down the river to the dam, from where there is a railroad spur to Yuma, as I am told. The river is navigable the greater part of the year, except during occasional periods of high-water.

BLACK ROCK, and the PACIFIC

The mine was worked years ago and several thousand feet of workings were opened. The greatest depth attained is 450' of inclined shaft. Considerable quantities of probably very high grade ore were shipped and more of medium grade was concentrated in mills along the river, but the general average of the ore was too low grade and too hard to concentrate for the then milling practice. Therefore, the mine was closed down after a good sized ore-body had been proven.

At present there is an ore dump, containing about 15,000 tons of ore, on the surface, while approximately 20,000 tons of ore can be figured to be in sight underground, a tonnage which could be very materially increased by little additional work. The average grade of this ore according to samples taken by Mr. C. Trischka, E.M., whose samples check rather well with a few test-samples taken by myself, is about 4.0% lead, and 7.5 to 8.0 oz. of silver. While this is low, it will, I believe, prove economic if a favorable method of concentration can be developed and a good extraction attained.

The gross value of this grade of ore is about $10.00 per ton and since the ore is found in big bodies, it can be mined easily and cheaply. The ground stands excellently without any timber. Furthermore there is absolutely no water to be handled for considerable depth, and I consider it more than likely that the horizon which will bring the water, will also bring an ore of higher grade, due to a secondary concentration of silver values.

But what impresses me most in this mine is the indication of very large bodies of zinc-ore, which might ultimately prove of far greater value than the lead-silver-ore at present considered the main value.

GEOLOGY:

The Black Rock-Pacific Mine is in a country of old schistose and semi-schistose rocks. These were intruded later by an acid intrusive, here designated as Biotite-Granite. This granite has escaped schistification entirely or nearly so. The youngest rock in immediate vicinity of the mine is an andesite, occurring both in effusive flows and in intrusive dikes. This rock has apparently a very close connection with the mineralization.

The ore occurs in irregular lenticular bodies in wide zones of fissuring and rock-alteration. The main direction of these altered zones is North-South or slightly West of North. Strong fissures of this direction frequently terminate the ore-bearing belt, but occur also within this belt and usually show increased mineralization along their course. But the main ore-carriers seem to be veins or fracture zones of North-West, South-East strike and medium flat dip North-East. The dip of the North-South fractures is normally medium-steep to the East. The relation of both fracture-systems is not very clear, but probably the North-South system is slightly younger than the North-West South-East system. While the North-South belt of altered and fissured rocks is several hundred feet wide and can be traced more or less pronouncedly for over a mile and possibly several miles, the mineralized zones or vein-systems of NW/SE strike vary in width from a few to nearly 100' but are usually of short extent and terminate against one or the other of the N/S fissures.

Only one of these ore-zones has been prospected to some extent in the Black Rock Mine. It shows a penetration of the country-rock by such abnormal quantities of dolomite-ankerite and calcite, that the whole mass appears like an altered and recrystallized limestone. In this altered zone was introduced later some

semi-chalcedonic quartz and salts of lead and zinc with accessory silver values.

The metallic minerals are more or less distributed through the entire altered zone, but are concentrated along numerous fissures and cross-fractures. The delimitation of ore depends more upon economic consideration than upon the disappearance of metallic minerals. How wide a width of ore could be stoped, can only be ascertained by close sampling after the lowest economic grade has been established. While the higher grade of material approaches generally the outlines of veins, it is so irregular in detail, that not even an approximate stoping width can be given, but it could be best described of a series of lenticular masses, subject to sudden swellings and contractions. The lead in the exposed material is principally in the form of cerussite with occasional residual kidneys of galena, while the zinc is only found in oxidized form as smithonite and calamine.

The ore-shoot, explored by the 450' incline and the main workings has a decided rake to the South and passes through the shaft between the 200' (4th) and 300' (5th) level. Deeper down it should be looked for South of the shaft along the vein.

While the ore in the dump and in sight in the mine surely does constitute an important economic item, I base my favorable conception of the mine mainly upon the possibilities of further development work. An additional 300' of depth should surely reach the water level and with it in all probability the horizon of sulphide-ore. Modern milling methods can fairly well concentrate oxidized lead-ores, but oxidized zinc-ores are almost impossible to concentrate. Sulphide ores of both metals offer a far more favorable object for concentration. While therefore the same grade of ore is more attractive in sulphide than in oxidized form to the miner, observations made at the

adjoining Red Cloud Mine, which operates upon the extension of the Black Rock-Pacific vein belt, induce me to expect a very pronounced secondary silver enrichment at or near water-level, and that therefore, the grade of the ore in the upper sulphide horizon will not only be more amenable to concentration, but also of higher average grade. The High-grade silver ore in the Red Cloud Mine is found in narrow streaks, showing a dull black metallic mineral, probably an intergrowth of altering galena with sulpho-salts of silver, in a felty decomposed schistose rock. Chloritization is rather pronounced along these streaks, but no prominent gangue-minerals accompany them. I was told that ore of that type would assay frequently from 1000 to 3000 oz. silver. There is absolutely no reason, why similar ore should not occur in the Black Rock-Pacific also, because certainly the mine must have contained very high grade ore, or it never would have been opened to such an extent in days when only high grade ore made mining attractive.

Besides the ore-shoot, upon which most of the work was done in the Black Rock Mine, there are indicated at least two more shoots on this claim and at least one on the Pacific claim. This latter has been stoped in a small way and an old wagonroad leading up to the mouth of the Pacific Tunnel, shows that ore was shipped from here. This suggests rich ore, even if the stoped width was only from 1' to 2' apparently. The mineralization and rock-alteration along the whole North-South belt is so intense, that it is only reasonable to assume, that it will persist to great depth. Disregarding the ore now in sight I consider the Black Rock-Pacific Mine an attractive development proposition. The present main shaft is not adapted to serve ultimately as a main hoisting shaft, but with little repair it will serve very

well for a prospecting shaft. My idea would be to put this shaft in good repair and drift both North and South from its present bottom as well as to continue sinking. For development purposes very little road building would be required. The adjoining Red Cloud Mine has succeeded to bring in over the present roads all material for their 300 ton mill and other equipment. This shows, that while haulage might be expensive, it is feasible right now.

To equip and repair the shaft for a good prospecting campaign should cost not over from $3,000.00 to $5,000.00.

Underground work should be very cheap under the local conditions and even with only a limited number of headings going the cost per foot should not be over $15.00 for sinking and $10.00 for drifting, in fact I believe that it could be done for considerable less. 300' of sinking would therefore require less than $5,000.00.

A total development fund of $25,000.00 would more than cover all the needs and would demonstrate the possibilities of the mine.

There is a 100' shaft farther North on Black Rock ground and a deep shaft on Pacific ground. This latter I suspect to be at least 240' deep, but it is too steep to climb without ladders; therefore, I was unable to explore it. These shafts might prove valuable as air connections later on. Without artificial ventilation the lower shaft levels could not be worked to advantage at present.

South of the Black Rock claim is the Black Jack claim, owned by C. H. Allen and associates of Yuma. This claim shows fairly attractive stringers of lead-silver ore, striking East-West in an altered and fractured zone of general North-South

direction, an extension of the Black Rock belt. This claim could be acquired very cheaply and might be considered in connection with the Black Rock-Pacific Mine.

To the North adjoins the property of the Red Cloud Mining Company, now in operation. The information gained in this mine would have a very important bearing upon the Black Rock-Pacific, as conditions are practically identical. There is though, a local occurrence of wulfenite in the Red Cloud Mine, which is not duplicated at present in the less developed Black Rock.

The Red Cloud has just completed the erection of a modern dry concentrator of 300 tons capacity. The operation of this should furnish very valuable clues for a possible treatment of the present ore in the Black Rock Mine. Ultimately, I believe flotation might be perhaps proved the best milling method, as flotation of lead-carbonates is now attempted with good success, and deepening of the mines will supply the needed water. The Red Cloud, with an inclined depth of 750' is bottomed in water, I am told. (Average dip 45°)

The estimate of tonnage available in dump and mine I have adapted from a report of Mr. Trischka, personally known to me as a reliable engineer, who was able to spend more time on the ground than my equipment permitted me on this trip. I also give a list of his samples and a reproduction of his sketch. Samples taken by myself are:

No. 1 10" streak with residual galena 4th level
Ag-5.6 oz.; Pb-10.9%

No. 2 44" vein 4th level East
Ag-2.6 oz.; Pb-7.1%; Zn-11.43%

No. 3 Composite sample of vein on 1st level
Ag-12.2 oz.; Pb-6.9%

No. 4 Test-sample from open cut on top of hill North-end of Black Rock claim, suspected to be zinc-bearing - Zn-1.24%

No. 5 10" streak in shallow cut on Black Jack claim, showing galena - Ag-10.5 oz.; Pb-21.88%

There is not indicated any marked increase of silver with galena over that with cerussite in these samples, but from all information I could gather from people familiar with the district and the officials of the Red Cloud Mine, the general experience is that the sulphide is higher in silver than the carbonate as a general rule. The total average of a great number of assays made by the Red Cloud people indicate a ratio of about 2 oz. of silver for each per cent. of lead, which would be very favorable. To my knowledge the district has been considered as free of zinc until now and I have no record of any zinc assays made. My impression is that zinc will prove ultimately the most important mineral. The only sample tested for zinc shows this more in evidence than the lead, but it also shows an exceptional low silver-value, which might indicate that the silver follows the lead in preference to the zinc. To arrive at final conclusions on the present ore-reserves and their average grade a thorough sampling of the mine would be unavoidable and at least 100 samples would have to be taken. I have not done this first because I was not equipped for this task and secondly because evena superficial examination convinces me that the present showing is favorable enough to warrant a thorough prospecting campaign. While considerable work has been done in the early days, only scientific and extended prospecting can decide the ultimate galue of the property.

That such prospecting would prove highly satisfactory is my firm conviction.

(Signed) W. Tovote

Mining Geologist.

Copied D.T.

REPORT ON

BLACK ROCK PACIFIC MINE

Near Yuma, Arizona,

for

Leon Jacobs, Captain Surgeon, U. S. A.

OWNERSHIP, LOCATION, and GENERAL

This property, known as the Black Rock-Pacific Mine, and consisting of two patented claims, is the property of Leon Jacobs, at present located at Camp Kearny, Linda Vista, California. The claims are named the Black Rock and the Pacific.

The property is located in the Silver Mining District in Yuma County, Arizona, and is approximately thirty-six miles North of Yuma, in the same county, and State. To reach the property it is necessary to follow a wagon road located along the East bank of the Colorado River. Following this road from Yuma for about twenty-six miles, we come to Nortons Landing where a smelter was operated in the early '80s (eighties), four miles further up the River we come to a road which takes us to the Mine which is about six miles inland. The mine may also be reached by a road on the California side of the Colorado and which terminates at Picacho. It is necessary to ferry the River at this place and then by trail over the mountains in a Northeasterly direction for about eight miles and we arrive at the mine.

The country is typical desert, common in the Southwestern States, a short distance from the Colorado.

No mining has been done at the mine since 1887; nevertheless, the workings are in good repair and accessible with

the exception of the lowest level, which could be reached by the aid of a stout rope. No machinery, equipment, or camp buildings of any kind are at the mine and the road leading to the mind from the Colorado is in poor shape, needing extensive though not necessarily expensive repairs to make it passable for wagons or machines. The road is located mainly in a gravely wash, but rain is so uncommon that a road once put in shape would be easily kept in repair. This is proven by the fact that the roads built thirty years ago are still traceable.

The road goes right up to the main mine workings and all the necessary supplies could be brought in by way of Railroad to Laguna, about twelve miles from Yuma, then by steamer to the River terminal of the mine road, and then by wagon to the mine. This would of course necessitate the purchase of a Steamer as no boats ply the River above Laguna Dam at this time, though the River is navigable the year around.

The water problem always a big one in the desert country could most likely be solved by drilling to the depth of several hundred feet. This would supply the camp needs and those of the mine. It is doubtful if sufficient water could be developed for a mill, which seems to make it necessary that the Mill be located at the River, or that water be pumped from the Colorado to the mine.

The property is a low grade silver-lead proposition as will be seen from the following more comprehensive remarks.

GEOLOGY:

The basic rock in the district and at the mine is a

mica schist, into which granite, lead to the assumption that sedimentary rocks once covered the schist. Andesite and Porphyry are found in the mine and with the granite make up the walls of the ore-bearing vein. The Andesite and Porphyry which were later than the granite were the mineralizers and are responsible for the ore deposits. Much faulting and cross-faulting that has taken place at the time of mineralization gives the vein the effect of being wider than it really is. The cross-faults are mineralized but only for an average length of about twenty-five feet from the main vein and then only in thin seams. This gives the vein an apparent width of about fifty or sixty feet, as a matter of fact the vein has the average width of ten feet.

The vein or ledge from which the material was taken which is to be found on the dump, is traceable on the surface for about six-hundred feet. Of this distance about three-hundred feet has been found to contain valuable mineral. Tunnels and incline shafts in the other portion of the vein have opened up unmineralized country.

WORKINGS:

On the surface, at the main workings, there is a tunnel-like open out on the main ledge, from which considerable material has been removed. This may be called the first level. The drifting or tunneling was done along the main ledge which strikes about N 60 W. and dips toward the northeast. Here as elsewhere in the mine lead carbonates, galena and some silver chloride was seen. The width of the vein filling is on the average about ten feet, the vein pinching and swelling.

From this upper or sub-surface working, two inclined shafts lead to the lower three levels (See sample map.) at

sixty feet, eighty feet, and one-hundred ten feet respectfwely. The smaller of these shafts connects with the sixty foot level on one of the cross fractures which it follows. Drifting on the sixty foot level has followed the main vein and some of the cross fractures. The other workings on the other levels are of much the same character and have developed the same conditions of the main vein and the cross fractures. The principal vein filling is a silicious breccia which has been re-cemented by calcite. The lead and silver values are found in the cementing material.

The total length of the workings is estimated at about seven-hundred feet, of which about ninety feet in length and about one-hundred twenty feet in depth have been of value in exploring the main vein. The rest of the work was done on the thin but rich cross-fracture stringers.

The dump was measured, and computation shows that it contains about 15,000 tons of ore. The amount of material taken from the workings closely approximates the tonnage on the dump, from which it may be assumed that very little ore was taken from the mine which was of shipping grade.

The workings have developed about 20,000 tons and possibly 25,000 tons more could be developed with greater depth and further exploration of the main vein. We may thus assume approximately 60,000 tons to be in sight.

Samples were taken throughout the mine as per sample map. A large dump sample weighing six hundred pounds was also taken and quartered down. These samples were assayed and gave the following results:

ASSAY RECORD

Dump Sample: Silica 47.7%, Lime 14.8%
Iron 6.3, Silver 6.8 Ton. Lead 4.1%

Mine Samples	Silver	Lead
No. 1	5.0 oz.ton	5.5%
No. 2	2.2 oz.	3.5%
No. 3	8.3 oz.	8.1%
No. 4	8.1 oz.	7.3%
No. 5	14.7 oz.	12.7%
No. 6	8.3 oz.	1.1%
No. 7	9.9 oz.	3.4%
No. 8	27.0 oz.	3.5%
No. 9	3.2 oz.	2.0%
No. 10	3.8 oz.	2.6%
No. 11	5.1 oz.	1.3%
No. 12	4.6 oz.	2.3%
No. 13	4.4 oz.	---
No. 14	2.4 oz.	---
No. 15	3.9 oz.	4.9%
Average of above	7.3 oz.Silver	3.8% Lead.

CONCLUSION:

From the foregoing it is evident that 60,000 tons of ore, assaying as a general average, 7 oz. silver, and 4% Lead, are in sight and that further development might double this tonnage. If this is so we have in this property a low grade, milling proposition. With silver at a dollar, and lead at 7¢ per pound, the gross value of the ore is $12.50 per ton. With a recovery of 85%, which is possible we still have $10.60 per ton.

The factors which will determine whether the property

is sufficiently rich to become profitable are: Costs of all kinds, such as machinery, mill equipment, transportation, road repairs, fuel, water for mill and camp purposes, and haulage.

Investigation of a treatment process is advisable.

The property is recommended as a prospect meriting extensive investigation.

Respectfully submitted,

(Signed) Carl Trischka,
E.M.

WEST GLANCE

SILVER GLANCE

EAST GLANCE

PACIFIC

MANDAN

PACIFIC NO. 2.

BLACK ROCK

BLACK ROCK NO. 2

N.

1490'

N. 43° W.

small flat remnant of vein on top of hill.

Vein 12' wide

Pacific Shaft.

Wash.

Vein 4' wide

Approximate Contact of Andesite with Schists

At this contact and in main vein above main silica + some other vein matter.

Crosscut

Black Rock Shaft 430' deep

Incline 40°

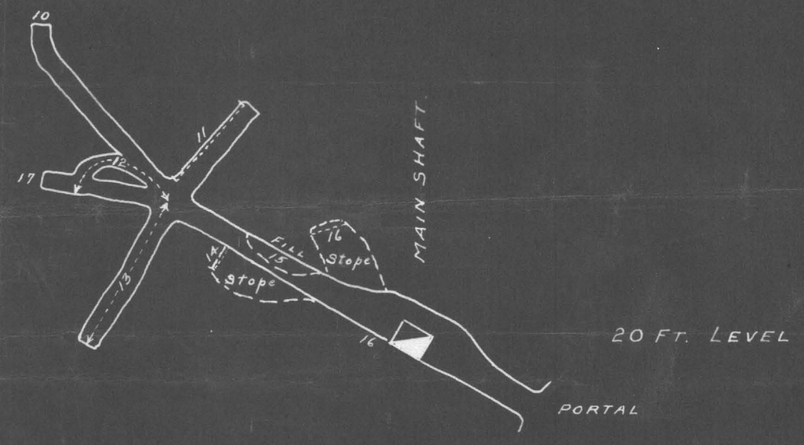
Wash

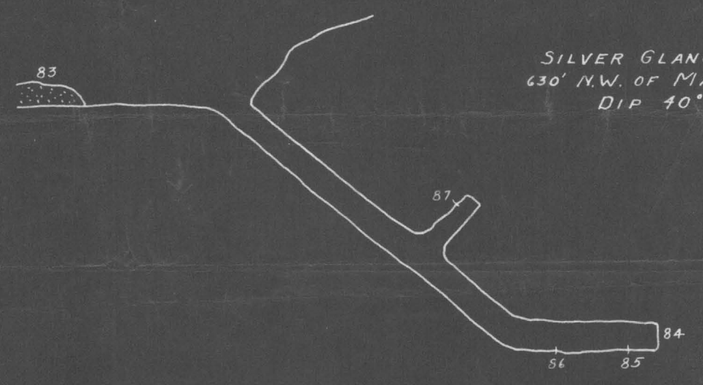
Vein outcrops strong thru' this claim.

PACIFIC, BLACK-ROCK CLAIMS
C.E. BATTON — OWNER
Scale 1" = 300'

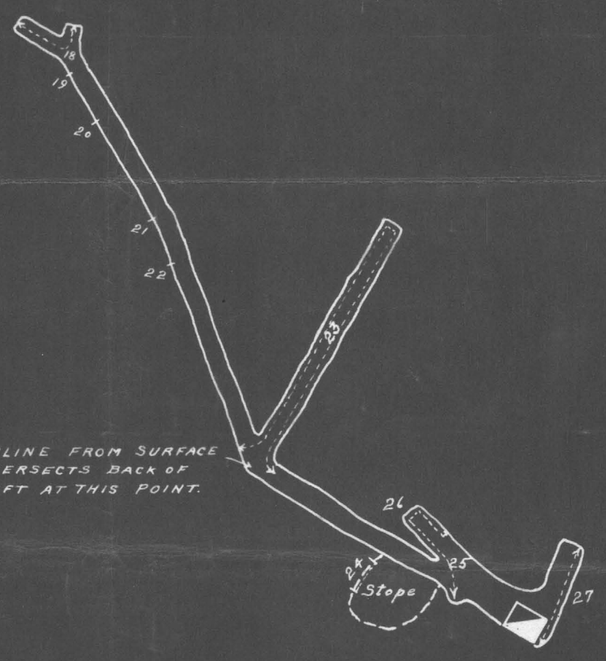
Black Rock

A Sanctuary

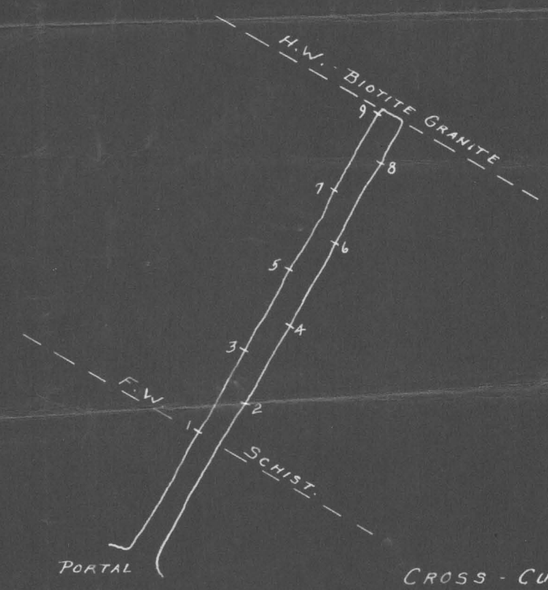




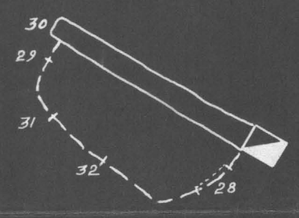
SILVER GLANCE INCLINE
630' N.W. OF MAIN SHAFT.
DIP 40° N.



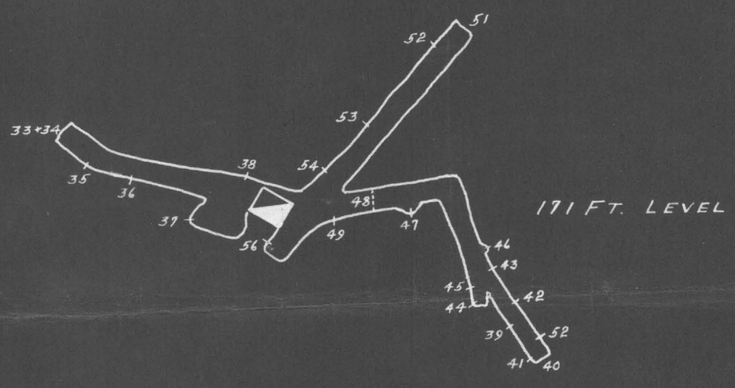
104 FT. LEVEL



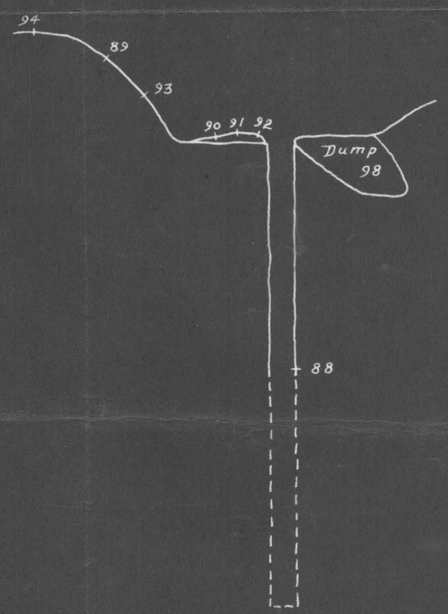
CROSS - CUT TUNNEL
200' N.W OF MAIN SHAFT.



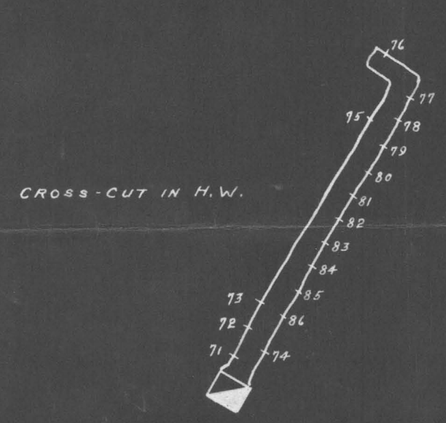
147 FT. LEVEL



171 FT. LEVEL

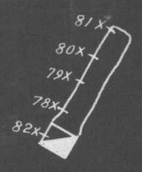


OLD SHAFT
ON
PACIFIC CLAIM



CROSS-CUT IN H.W.

270 FT. LEVEL



420 FT LEVEL

MAP
SHOWING
WORKINGS and SAMPLES
OF THE
BLACK ROCK and PACIFIC CLAIMS

TO ACCOMPANY REPORT OF
F.W. GIROUX, MINING ENGINEER.

SCALE:- 1 IN = 30 FT.

NOTE - NUMBERS REFER TO SAMPLES TAKEN.

MAP BY:- H.D. PHELPS, PRESCOTT, ARIZ.

WEST GLANCE

SILVER GLANCE

N.

1440'

N 53° W.

small flat remnant of vein on top of hill

PACIFIC

Vein 12' wide

PACIFIC SHAFT

Wash

MANDAN

EAST GLANCE

45°

Contact of Andesite with Rhyolite

All this contact and main vein shows much silica & some vein matter.

Crosscut

BLACK ROCK

Black Rock Shaft 430' deep

Inside 40' Wash

PACIFIC NO. 2.

Vein outcrops strong thru this claim.

BLACK ROCK NO. 2

PACIFIC, BLACK-ROCK CLAIMS
C.E. BATTON — OWNER
Scale 1" = 300'