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Lone Jack - Blackfoot Group (file)

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
REPORT OF SUPERVISING ENGINEER

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Docket No. ND-5659
" L-H Syndicate
Date of Report: Feb. 3, 1944

The project was granted a loan in the amount of $2500 in April, 1943, and an additional loan of $10,000 in July, 1943. The loan funds are exhausted and the borrower has applied for an additional loan of $2500 for the purpose of testing a parallel vein by crosscutting from his present workings in the Lone Jack Mine, and to make accessible the workings upon a vein in a contiguous claim known as the Blackfoot. Following is a summary of the situation to date with comments and recommendations regarding the proposals in the present application: Mr. Harry Lennox is the partner actively conducting the work and the term "borrower" as used in this report refers to him.

The 140 ft. level of the Lone Jack workings was made accessible by the use of a preliminary development loan of $2500, and the granting of an additional loan of $10,000 was based upon the presence of a short shoot of ore in the end of that level and upon the expectation that further work would extend the length of the ore shoot. Upon further development, however, it was found that good values in the then face of the drift dropped out within the next round and no additional ore was disclosed by drifting on the level. Mr. Frisbie's several Progress Reports describe the work which was done on the level. The shoot of ore exposed on this level has a length of 60 feet and an average grade and width as follows:

| Width | Oz au | Oz ag | %cu | %pb | %zn |
|---|---|---|---|---|---|
| 42" | .02 | 2.92 | .53 (?) | 4.97 | 4.94 |

Tonnage available in this shoot is estimated at 1200 tons. If the ore were shipped to the plant of the U. S. Smelting & Refining Company at Salt Lake City it would net the mine about $5.18 per ton after allowing 20% for dilution (see calculations in Mr. Frisbie's Progress Report dated January 20), and would not support a profitable operation. In this connection, however, it should be noted that the Tennessee-Schuylkill Mining Company is completing a mill rehabilitation program at its plant in Chloride, consisting of replacement of a wornout ball mill, replacement of the classifier by a larger one and installation of a short-cone secondary crusher. The changes are expected to result in an increase in mill capacity of about 100 tons per day, and since the mine in its present state of development will not be able to furnish the full mill capacity the Company has expressed its intention of accepting local custom ores. In the event that this local outlet for ore materializes

the net value to the mine of ore of the above grade will be substantially increased. However, since a schedule has not yet been agreed upon it is not possible to calculate closely the probable payment rates for the ore. If it is assumed that mill performance will be the same as that obtaining at the Salt Lake plant of the U. S. Smelting, Refining and Mining Co. the additional net value of the ore would amount to the savings on freight and trucking on the crude ore to Salt Lake (approximately $6.00) less transportation cost for concentrates. This latter, at the indicated high ratios of concentration, would probably not greatly exceed $1.00 per ton. The ore therefore would have a net value to the mine of approximately $10.00 per ton. It seems likely also that there would be some increase in this value because of better recoveries. This for the reason that the Tennessee-Schuylkill plant has achieved very good metallurgical results on their own ore and upon ores from other properties in the immediate vicinity of Chloride, whereas the schedule of the Salt Lake plant of the U. S. Smelting, Refining & Mining Co. is designed to cover a mixed variety of custom ores and must necessarily average down on some and up on others. It would appear from the above that, by shipping to the Tennessee-Schuylkill plant the ore shoot would yield a modest profit; and that mining of it would be justified, and might result in the finding of a larger tonnage above the level than is now indicated, or the development of ore elsewhere in the mine, as for instance, in the proposed crosscut development.

The present application proposes two pieces of work as follows:

(1) Crosscut to the hanging wall vein from the drift on the 140 foot level. This vein is partially developed in the tunnel workings above and is exposed prominently by surface croppings. The vein is equally as strong as the footwall vein, and in the tunnel workings and in the surface croppings it is somewhat more heavily oxidized than the footwall vein and contains a larger amount of residual galena crystals. Development of the hanging wall vein from the 140 ft. level was not proposed in the original program because the main development on the level was in the footwall vein and a short shoot of ore was exposed in it with ore in the face. The two veins in the tunnel workings have approximately parallel strikes. The dips are definitely determined by generally smooth hanging walls in both veins and since these dips are westerly at identical angles it is expected that the hanging wall will be intersected by crosscutting 15 to 25 feet westerly from the 140 ft. level drift. It is believed that an expenditure of $1000 will cover the cost of crosscutting to the vein and enough drifting on the vein to prove or disprove its importance.

(2) The borrower proposes to make accessible the Blackfoot shaft and workings now under water but reported to be in good condition. These workings are on another vein in a different part of the property than that which has been under development with loan funds. Since the workings are inaccessible the proposal must be treated as a preliminary development and justification for the work must be judged upon the basis of the evidence submitted. The borrower submitted considerable data with his original application

for loan, which data are on file in the Washington Office RFC, and additional data are furnished with this application. The borrower has an intimate knowledge of these workings, and the proven reliability of his statements to date lends authenticity to his statements in this instance. The Blackfoot ore differs from the Lone Jack ore in that it carries a considerably higher amount of gold, silver and copper, and a lower lead-zinc content. The past operations aimed principally at the production of the precious metals since ore containing small amounts of base metals could not be profitably marketed at the then prevailing low prices. As a consequence most of the assays were run only for gold and silver although it was known that other metals were present in appreciable amounts. It seems likely that the base metal content of the ore will be found to be greater on the lower level and in deeper development of the mine. The dump, ~~here~~, unlike the Lone Jack dump, shows a fair amount of copper mineralization.

COMMENTS:

The borrower has proven to be a reliable and efficient operator.

The borrower proposes to perform the two proposed jobs simultaneously and since his organization and plant are intact, the cost will be relatively small and the work can be accomplished within the modest amount of loan funds requested.

While development of the Lone Jack vein has been disappointing I believe that the small amount of work required to test the parallel vein ought to be done. I believe also that the data submitted on the Blackfoot workings are sufficiently authentic and attractive to justify making these workings accessible. I would therefore recommend that this additional loan be granted.

TRAVIS P. LANE
Supervising Engineer

Sup Engineers Report

L. H. Sugarwater
~~Harry Lennox~~

Docket No.
~~Date of Examination~~
Date of Report. ND 5659

The project was granted a loan in the amount of $2500 in April 1943, and an additional loan of $10,000 in July 1943. The loan funds are exhausted and the borrower has applied for an additional loan of $2500 ~~the~~ for the purpose ~~of which are to testing a parallel vein parallel to the~~ ~~by crosscutting a parallel vein~~ a testing a parallel vein by crosscutting ~~to a parallel vein~~ from his present workings ~~in~~ in the Lone Jack ~~claim~~ ~~mine~~ mine, and to make accessible the workings upon ~~and~~ a vein ~~in~~ ~~on~~ ~~another~~ a contiguous claim known as the Blackfoot. Following is a summary of the situation to date with comments ~~upon~~ and ~~the~~ recommendations regarding the proposals in the ~~new~~ present application: Mr. Harry Lennox is the partner actively conducting the work and the term "borrower" as used in this report refers to him.

The ~~borrower made accessible~~ the 140 Ft level of the Lone Jack workings ~~with~~ was made accessible by the use of a preliminary development loan of $2500, and the granting of an additional loan of $10000 was based upon the presence of a short shoot of ore in the end of that level and upon the expectation that further work would extend the length of the ore shoot. Upon further ~~of~~ development however it was found that good values in the then

face of the drift dropped out within the next round and no additional ore was disclosed by drifting on the level. Mr. Frisbie's several progress reports ~~describe the work which was done on the level.~~

The short of ore exposed on this level has a length of 60 feet and an ~~average grade and the~~ width as follows:

| Width | oz Au. | oz Ag | % Cu | % Pb | % Zn |
|---|---|---|---|---|---|
| 42" | .02 | 2.92 | .53(?) | 4.97 | 4.94 |

~~Estimated tonnage available is~~

McTP Tonnage available in this short is estimated at 1200 tons. If the ore were shipped to the plant of the American Smelting & Refining Co at Salt Lake it would net the mine about 5.18 per ton, after allowing 30% for dilution (See calculations in Mr. Frisbie's Progress Report dated Jan 30), ~~the~~ and would not support a profitable operation. In this connection, however, it should be noted that the Tennessee-Schuylkill Mining Company is completing a mill rehabilitation program at its plant in Chloride, consisting of replacement of ~~the~~ worn out ball mill, ~~and installation of~~ replacement of the classifier by a larger one and installation of a short-cone secondary crusher. The changes ~~will~~ are expected to result in an increase in mill capacity ~~by~~ of about 100 tons per day, and since the mine ~~the~~ in its present state of development will not be able to furnish the full mill capacity ~~amount of additional~~ the company has expressed its intention of accepting local custom ores. In the event that this local outlet for ore materially

the net value to the mine of ~~the above~~ ore of the above grade will be substantially increased. However, ~~until~~ since a schedule has not yet been agreed upon it is not possible to calculate closely the probable ~~value of~~ payment rates for the ore. If ~~mill performance~~ it is assumed that mill performance ~~would~~ will be the same as that obtaining at the Salt Lake plant of the U.S. Smelt Ref. & Mining Co. the additional net value of the ore ~~would be represented by~~ amount to the savings on freight and ~~trucking cost~~ on the crude ore to Salt Lake ~~amount~~ (approximately $6.00), less transportation cost for concentrates. This latter, at the indicated high ratios of concentration, would probably not greatly exceed ~~by very far~~ $1.00 per ton. The ore therefore would have a net value to the mine of approximately $10.00 per ton. It seems ~~quite~~ likely also that there would be some increase in this value ~~to the~~ because of better recoveries. This for the reason that the Tennessee ~~mill plant has~~ Schuylkill plant has achieved very good ~~excellent~~ metallurgical results on their own ore and upon ~~other~~ ores from other properties in the immediate vicinity of Chloride ~~whereas~~ the schedule of the Salt Lake plant of the U.S. Smelt Ref. & Mining Co is designed to cover a ~~large~~ mixed variety of ~~offerings of~~ custom ores and must necessarily average down on some and up on others.

It would appear from the above that, by shipping to the Tennessee Schuylkill plant the ~~indian~~ ore shoot ~~in this mine~~ would yield a modest profit; and that mining of it would be justified, and

might result in the finding of ~~more than~~ a larger tonnage above the level than is now indicated, or the ~~above the~~ the ~~finding, of by further~~ development of ~~other~~ ore, elsewhere in the mine, as for instance, in the proposed crosscut development.

R

The present application proposes two pieces of work as follows:

(1) Crosscut ~~to~~ to the hanging wall vein from the drift on the 140 Foot level. This vein is partially developed in the tunnel workings above and is exposed prominently by surface croppings. The vein is equally as strong as the ~~parallel~~ foot wall, ~~in the~~ and in the tunnel workings and in ~~the~~ the surface croppings it is somewhat more heavily oxidized than the foot wall vein and contains a larger amount of residual galena crystals. Development of the hanging wall vein from the 140 Ft ~~of the hanging wall~~ ~~development~~ was not ~~cons con~~ proposed in the original program because the ~~footwall~~ main development on the level was ~~along the~~ in the foot wall vein and a short shoot of ore was exposed in it with ore in the face. The two veins in the tunnel workings have approximately parallel strikes, ~~and~~ ~~dip~~ ~~westerly~~ ~~the dips~~ ~~are apparently identical angles.~~ ~~In the~~ The dips are ~~is~~ definitely determined by generally smooth hanging walls in both veins and since ~~these~~ vein dips are westerly at identical angles it is expected that the hanging wall will be intersected by crosscutting ~~about~~ 15 to 25 feet westerly from the 140 Ft level drift. It is ~~estimated~~ believed that an expenditure of $1000 will ~~suffice to cut~~ cover the cost of crosscutting to the vein and ~~suffice~~ enough drifting on the vein to prove or disprove its importance.

2) The borrower proposes to make accessible the ~~workings of the~~ Blackfoot shaft and workings now under water but reported to be in good condition. ~~These workings are~~ on another vein in a different part ~~on another portion~~ of the property than that ~~which~~ which has been under development with loan funds. ~~The shaft is in good condition but~~ Since the workings are inaccessible the proposal must be treated as a preliminary development and justification for the work must be judged upon the basis of the evidence submitted. The borrower submitted considerable data with his original application for loan, which ~~and these~~ data are on file in the Washington office RFC, and additional data are furnished with this application. The borrower has ~~a close knowledge of these workings~~ an intimate knowledge of these workings and the proven reliability of his statements to date ~~regarding the matters during his operations under loan account~~ concerning lends authenticity to his ~~present~~ statements in this instance. ~~The past operations on the Blackfoot yielded an ore moderately high in silver and the principal objective was the production of this metal. Since moderate amounts of lead zinc and copper~~

MoPP The Blackfoot ore differs from the Lone Jack ore in that it carries a considerably higher amount of gold, silver, and copper, and a lower lead-zinc content. The past operations ~~were~~ aimed primarily at the production of ~~the~~ the precious metals since ore containing small amounts of ~~lead and zinc~~ base metals

could not be profitably ~~handled~~ marketed at the then ~~low~~ prevailing low prices. ~~for those base metals~~.

MoP As a consequence ~~many~~ most of the assays ~~show only~~ were run only for gold and silver although it was known that other metals were present in ~~some~~ appreciable amounts. It seems likely that the base metal content of the ore will be found to be greater on the lower level and in deeper development of the mine. The dump here, unlike the Lone Jack dump, ~~contains~~ shows a fair amount of copper mineralization. ~~The dump is too scattered to be practically sampled~~.

Comments

The borrower has proven to be a reliable ~~business like~~ and efficient operator.

~~It should be noted that the above work could be can be accomplished at relatively small cost since the plant and organiz~~

~~The two~~

~~The~~

~~The borrower~~

~~It is~~ proposes ~~to carry~~ perform the two proposed jobs simultaneously and since ~~the~~ his ~~plant and~~ organization and plant are intact the cost will be relatively small and the work can be accomplished within the modest amount of loan funds requested.

While ~~the~~ ~~results of the~~ development of the Lone Jack vein has ~~to date~~ been disappointing, I believe that the ~~relatively~~ small amount of work required to test the parallel vein ought to done. before ✓

Mr P. I believe also that the data submitted on the Blackfoot workings are sufficiently authentic and attractive to justify making these workings accessible. I would therefore recommend that this additional loan be granted.

T. P. Lane

Truly

Enclosed please find my ~~report~~ report on the above-captioned project.

Encl.

Sup Engineer Report in duplicate

Docket No. ND-8203
Date of Examination June 29, 1943
Date of Report

Jane Jack - Blackfoot - (file)

Note: The Project was granted a preliminary development loan in the amount of $2500 in April 1943. The purpose of the loan was to unwater an incline shaft and make accessible for sampling a reported occurence of ore on the 150 Ft. level. The job was accomplished within the allotted funds despite serious caved conditions at two places on the level. Following exhaustion of the loan funds and application by the borrower for additional funds with which to further prosecute the mine development the property was examined on June 29, with results as noted in the following report:

1. Name and Address of Applicant

Name 'L-H Syndicate
Address Box 115
Chloride, Arizona

Correspondent Harry J. Lemon, Mgr.
Box 115
Chloride, Arizona

2 Character of Project
Development of lead-zinc-silver-gold deposit

3 Location of mine
The mine is located in T23N, R18W in the Wallapai Mining District, Mohave County, Arizona. The town of Chloride is approximately 3 miles distant by good dirt road northwesterly from the mine. The nearest shipping point and general supply center is at Kingman, Ariz., which is 25 miles distant by paved highway from Chloride. The roads are ~~exce~~ passable at all seasons except during rare severe storms when the dirt road between Chloride and the mine is sometimes impassable for short periods.

4. Applicant
The applicant is the superintendent of the grade school in Chloride. He went to the district about 11 years ago when certain pieces of mining property (including the subject

3

property) in the district were left to him by a family estate.

~~The applicant has resided in the Chloride district for the past 11 years where he is the superintendent of the grade school in Chloride that town. He was influenced in making his home in Chloride because of having inherited a number of non-operating mining properties in that district, including a petition of the property which is the subject of the present application.~~ Until undertaking the present job he had had no actual mining experience although he had at times handled the mine accounting for a number of operators in the district. ~~He has used good judgement in equipping the property, in the choosing of a mining crew and in the general details of the job during which he worked at labor underground.~~

in the manner of handling the unwatering and clean-out job and it is noteworthy that despite a difficult caved condition on

It is noteworthy that despite a serious caved condition on the the workings were made accessible

It is noteworthy that despite a serious caved condition on the 150 Ft. level the mine was made accessible

Mo-P He has shown good judgement in the manner of conducting the preliminary loan project. He worked at labor underground much of the time and it is noteworthy that despite a ~~serious~~ difficult coal condition on the 150 Ft. level the purpose of the job was accomplished within the slender budget allotted to it.

5 Loan Requested

5 $12,500; of which $2500 will be used to repay the Preliminary Development loan which was originally allotted to the project and which has been expended upon it.

6 Description of Project

A. General Features

1. There are no mine workings, mill, or other appurtenances which are not confined within the applicant's ownership.
2. The project would comply with state compensation and safety-first statutes.
3. There are no apparent legal discrepancies in the application.
4. There are no impeded right-of-way facilities.
5. There is no likelihood of surface or sub-surface trespass.

B.

1. The mine is developed by tunnel and shafts.

a. The applicant furnished rough sketches of the workings which were forwarded to RFC, Washington with the preliminary loan application. The sketch which accompanies this report was made from a compass and tape survey of the portion of the property in which the proposed work is to be done.

Note RFC not written out

b. Samples were cut with pick and mail and gathered upon canvas.

c. The workings on the Lone Jack claim were all accessible. The condition of the 150 Ft level at the bottom of the incline shaft is ~~in poor condition~~ poor because of ~~two~~ heavy cores which were cleaned up only sufficiently to allow of access to the face for inspection and sampling. The workings on the Block fort claim were inaccessible. The applicant is now engaged in bailing the shaft on this claim.

d. General Features of Deposit etc.

The property lies in the low foot hills bordering the western edge of the Cerbat mountains. The country rock is granite which is cut by numerous steep-dipping quartz vein which strike generally NW-SE. A number of these veins are present on the property of the applicant, and two of them have undergone a considerable amount of development in the past. ~~and have made a small production in the past~~. The larger and more important of these veins, on the Lone Jack claim, is developed by ~~an incline~~ a tunnel and ~~incline~~ shaft with a level at 150 Ft. ~~on the Lone Jack claim~~. ~~The other~~ vein is developed by a shallow shaft and workings (inaccessible) on the Blackfoot claim. Each of these veins has made a small production as noted in the ~~development ap~~ original application for a development loan and in a letter-report by this engineer which was forwarded to R.F.C. Washington on March 26, 1943. The chief interest in the property is centered upon the wokings on the Lone Jack claim and these workings and the sampling are described as follows: (see accompanying sketch:

The main Lone Jack vein and a ~~another~~ ~~vein~~ branch from it ~~continues nearly parallel with~~ ~~Jack vein parallels it some 30 feet to the~~ can be traced by conspicuous croppings and shallow surface cuts thrust the length of the claim. A tunnel is driven into the hill on the ~~main~~ vein for a distance of some 150 feet. At 60 from the portal a branch vein ~~of the vein~~ swings off toward the south and continues nearly parallel with the main vein. ~~The main vein and the branch vein are strong and well defined and have definite walls having definite walls vein having defi~~ vein ~~varying from 2 feet to 6 feet in width and are filled with quartz and heavily oxidized gouge and material crushed vein material. which in general shows marked leaching action. The vein material in the tunnel and in the croppings and numerous shallow cuts and trenches on the surface is heavily oxidized and~~

No P The ~~main~~ veins and ~~the branch vein~~ are strong well ~~strong~~ defined fissure veins varying from 2 to 6 feet in width between quite definite walls. The ~~vein~~ filling ~~in~~ the fissures is composed of quartz, ~~and~~ gouge and crushed vein material. The veins are ~~strong heavily~~ intensely oxidized in the tunnel and on the surface with much evidence of

leaching action. ~~Occasional~~ Fine grained galena is frequently visible in ~~small patches occasional~~ small patches ~~in these~~ in most of the surfical vein exposures.

About 100 feet northwest of the portal of the tunnel ~~an incline~~ a shaft is sunk to a depth of 158 on the vein which dips about 75° southwest, and a level has been opened southeasterly on the vein at 150 feet. The vein in the shaft and in an 8 foot stub level at 100 Ft. ~~shows is mineralized~~ shows irregular mineralization but no ore. The ~~200~~ 150 Ft. level drift ~~follows a well defined fissure~~ is driven in a well defined fissure for a distance of 220 feet from the shaft.

The Branching of the vein noted in the tunnel above is not visible on this level, possibly because ~~it pitches~~ the line of junction pitches into the hill or because the branch is not recognizable in the coved portion of the level

~~The~~ The vein in the face of the drift is 78" wide. ~~and~~ the hanging wall portion, ~~of the vein~~ represented by sample No. 1 across 42", is ~~well~~ heavily mineralized with pyrite, galena and sphalerite. ~~The balance of the vein width is~~ Sample No 2, 66" in width, was cut across the full width of the vein and included 14" of poor material on the footwall. The vein at sample No 3 is 72" wide and at No 4 is 86" wide. These two samples however were cut only across the heavily mineralized portion of the vein which at this place occurs as a continuous band or lens extending some 40 feet back from the face. ~~As noted above~~ The walls of the vein are well defined and in places the footwall forms ~~as~~ a smooth plane

The bone gorkvein can be seen cropping for several hundred feet northwest from the shaft but there has been no development in it in that direction. A narrow vein which strikes approx. 355E is exposed in several trenches about 200 ft northwest from the shaft. The vein material which is largely oxidized contains occasional grains of galena. Sample No 7 was cut in one of the trenches.

The average width of vein in the last 40 feet of the drift is 78" and the average width and value (weighted) of the ore lens is as follows:

| width | Oz Au | Oz Ag | % Cu | % Pb | % Zn |
|---|---|---|---|---|---|
| 50" | .025 | 3.47 | .19 | 5.13 | 4.66 |

~~It is worth noting that a number of samples taken by the applicant and one taken by the geologist for the Tennessee-Schylkill Corp. assay certificates for which are in general the values indicated in the above sampling.~~

~~It is worth noting that the assay returns certificates obtained~~

~~It is worth noting that the results~~

The assays listed below which are submitted with the application are the returns from a number of samples taken by the applicant and by Mr Gardner (one sample), geologist for the Tennessee-Schylkill Corp. ~~confirm the results they obtained in the above sampling.~~ confirm in general the results attained in the sampling by this engineer.

| Sample by | location | width | Oz. Au. | Oz. Ag. | % Cu. | % Pb. | % Zn. |
|---|---|---|---|---|---|---|---|
| Applicant | face | 42" | .01 | 3.80 | Not Run | 4.95 | 2.95 |
| " | " | 42" | .05 | 4.41 | " " | 5.4 | 3.4 |
| " | 5' back | 60 | .05 | 5.07 | " " | 4.9 | 5.3 |

The applicant submits a number of assay certificates representing the results of ~~obtained by~~ recent sampling in this part of the mine by himself and by the geologist for the Tennessee-Schuylkill Corporation. ~~It will be noted that the sampling by this engineer confirms in general the above results~~ results check rather closely.

The applicant has been told by the Tennessee-Schuylkill Corp that they will accept his ore on a custom basis. Heretofore that company had refused to accept custom ore in the district. Their present willingness ~~may be ascribed to the~~ to accept this ore ~~probably~~ derives principally from the fact that they are not able to supply their mill ~~with~~ at full capacity with ore from their mine. ~~The~~ also, ~~similarity of the ore to their own ore and personal relations with the applicant are probably~~ the ore is quite similar to the Tennessee-Schuylkill ore. It is possible too that personal reasons have ~~enter into the~~ influenced ~~the~~ decision.

In the absence of a mill test and a ~~quoted~~ schedule of payment the following computations for the net value of the ore

are ~~computed from~~ based ~~as~~ upon the schedule of payments by the ~~custom milling~~ U.S. Smelt & Ref. Co at Salt Lake to a ~~property neighboring~~ shipping property which is a near neighbor ~~to~~ of ~~the applicant~~ subject property and which contains similar ore. ~~(At "A" premiums for Pb, Zn, Cu.)~~

| | | | | |
|---|---|---|---|---|
| Au | .025 × $27.28 | = | .68 | |
| Ag | 3.47 × .70 × $.711 | = | 1.73 | |
| Pb + Cu | 5.32 × .80 × 4.40 | = | 3.75 | |
| Zn | 4.66 × .40 × .60 × 8.25 | = | 1.85 | |
| | | | 8.01 | 8.01 |

Bonus. ("A" premiums for Pb, Zn, Cu)

| | | | |
|---|---|---|---|
| Pb | 102.6 × .86 × $.0275 | 2.43 | |
| ~~Cu~~ | ~~3.8 × .87 × 5.00~~ | [illegible] | |
| Zn | 93.6 × .77 × .0275 | 1.98 | |
| Cu | 3.8 × .87 × .05 | .17 | |
| | | | 4.58 |

Net Payment for Metals 12.59

~~80%~~ ~~10.07~~

~~85~~ ~~10.70~~

711
7
4977

198

352

543
396
639
629
1298
197

116) 2.30

It will be noted from the description of the sampling that in places only a portion of the vein is of profitable grade. It would be practical to make a fairly clean separation and removal of the ore leaving the balance of the vein material as fill in the stope. Whatever diluent material might enter into the ore would be low grade vein matter rather than waste. A dilution factor of 10% would appear to be reasonable and the value of the ore, as computed above, and adjusted for this factor, would be .90 × 12.59 or $ 11.33.

If the ore were milled locally the net value per ton at the mine would be about as follows:

| | | |
|---|---|---|
| Net Payment for metals | | $ 11.33 |
| Less: Treatment | 3.50 | |
| Trucking | .75 | |
| | | 4.25 |
| Net Value at Mine | | $ 7.08 |

If the ore were milled at Salt Lake the net value per ton at the mine would be about as follows:

| | | |
|---|---|---|
| Net Payment for metals | | $ 11.33 |
| Less: Treatment | 3.00 | |
| Freight | 5.50 | |
| Trucking | 1.50 | |
| | | 10.00 |
| Net Value at Mine | | $ 1.33 |

There is no performance record upon which to base estimates for mining and development costs. All elements entering into these costs are high: Miners receive $6.50 per day and the rate will probably be increased to $7.50 when a decision is reached by the War Labor Board regarding proposals to increase the local scale of wages. Timber prices in small lots at Kingman are, for Oregon Pine $65 per thousand, and for native timber $45.00 per thousand. A statement regarding the probable cost of mining and development ~~cost as~~ in the present state of development of the property must necessarily be rather abitrary. It would seem that for purposes of estimation that these costs might be reasonable assumed, ~~at $4.00 and $1.50 per ton or a total of $5.50 per ton.~~ on a small scale operation, at $4.00 and $1.50 per ton respectively or a total of $5.50. The above figures indicate that a probable modest profit of $1.58 ~~which is milled locally~~ could be realized upon ore which is milled locally and that shipment to Salt Lake would be unprofitable. If the property were granted some additional premium beyond the "A" premium which is included in the above calculation the ore would yield an assured profit if milled locally; and, with maximum premiums, shipments to Salt Lake would be profitable. In the latter case the

ore would have a net payment for ~~values~~ metals value of $ 17.08 (at 90% of sample values) or a value of $7.08 at the mine.

The property would seem to be eligable within the purpose of the premium price plan to receive additional premium beyond the "A" premium if a higher price for metals were necessary for economical operation.

## Proposed Development

The applicant proposes to clean out the cores upon the 150 Ft. Level and to ~~drive the~~ drift 300 feet on the vein in a southeasterly direction on this level. With continued favorable development of the ~~the~~ ore shoot presently exposed in the end of the level the project ought to begin ~~be an~~ shipping ore at an early date and ~~ought~~ soon thereafter ~~to be on a self~~ the project ought to be self-sustaining.

## Ore Reserves

There is presently exposed a 40 foot length of ore in the end of the southeast drift on the 150 Ft. Level. It is not possible in the present state of development of the property to calculate a ~~the~~ reserve ~~reserve~~ of proven ore at this point. The water level in the shaft ~~stands~~ is at about 40 feet from the surface and there is therefore a probable height of some 100 feet of sulphide material above the level at the shaft and probably somewhat more at the end of the level which is further into the hill and therefore at a greater distance from the ~~[illegible]~~ surface. If the presently developed

return to p. 14 for Proposed Development 15

5800 25 50

or continued upward in ~~about~~ its present size to the water level then would be available in the stock ~~here~~ approximately $\frac{100 \times 4 \times 40}{12.5}$ or 1280 tons.

The face of the level is in good ore and the strength and general characteristics of the vein in the oxidized workings near the surface above and beyond the present face of the drift justifies the ~~that probability~~ expectation that ~~the short further development will on the level~~ continuation of the drift will develop a substantial extension of the presently proven shoot and/or other shoots of ore.

Proposed Dev. see page 14

Equipment, housing etc.

The property is now equipped with a 15 HP gas hoist with bucket and boiler. The hoist is adequate ~~to handle the~~ for the proposed development and for ~~a~~ limited ~~amount of~~ mining operations. The mine makes less than 3000 gallons of water per day which is easily handled by short periods of bailing.

The mine is near the town of Chloride and ~~so~~ ~~the~~ construction of camps or other housing, except ~~change house~~, will not be required

## Estimated Cost of Project

~~The estimated cost of the proposed development is tabulated below~~

Development

| | | |
|---|---|---|
| Clean out and repair 150 Ft level drift | 1000 | |
| Drift 300 ft @ 15.00 per foot | 4500 | |
| | | 5500 |

Equipment and Supplies

| | | |
|---|---|---|
| Compressor | 1000 | |
| 2 Rock Drills w/mounting (max) | 800 | |
| Air hose, bits, steel, tools | 200 | |
| Pipe, rail, misc fittings | 350 | |
| | | 2350 |
| Change house | | 150 |
| Misc. (Ins. Deposit, auto expense contingencies | | 2000 |
| Total | | $ 10,000 |

There are no objections to the project.

The development project ought to be completed within 3 months time.

## Comments of Sup. Eng.

~~A good shoot of ore is exposed in the southeast drift on the 150 Ft. level.~~

A shoot of ore of good width and quality is presently exposed in the southeast drift

on the 150 Ft. level. The face of the level is in ore and the strength ~~of~~ ~~vein~~ and general surficial characteristics of the vein ~~in~~ ~~in the oxidized workings~~ above and beyond this face ~~in the oxidized working~~ point to ~~the~~ the probable ~~presence of a substantial body of sulphide lead zinc ore~~ extension of ~~the~~ the ~~and~~ ore shoot in this direction, and the existence in the mine of a substantial amount of ~~the sulphide~~ lead-zinc sulphide ore.

An additional development loan is recommended.

T. R. Lam

L. H. Syndicate ?

| | Tons | au | ag | w | Pb | Zn |
|---|---|---|---|---|---|---|
| 1945 | 55.859 | | 156.4 | | 5865 | 7206 |
| 1946 | 1741.628 | | 5087.0 | | 132237 | 182768 |
| 1947 ① | 54.247 | | 176.3 | | 3483 | 6130 |
| | 1851.734 | | 5419.7 | | 141585 | 196304 |

Shipment $142.15

17213.42
747.82
430.10
18411.34

Total Bonus

23.84
663
-1721

7.50
14000
35
50

L-H. Syndicate

| | | |