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6600.89
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Pinal County
San Pedro mine

Docket BND-4402
R.C. Jamison + Rush T Sill
3033 Hollyridge Drive
Hollywood, Cal

Progress Report

On Jan 17, 1943 I visited the above captioned manganese mine in order to inspect the progress to date.

Funds for this project were available on Dec 14, 1942 and actual construction work started about the first of January 1943. A loan of $11,000 was granted and on Jan 17th the balance of funds remaining amounted to $6039.02. The applicants informed me that they had purchased all of the equipment necessary for the project and would soon start underground mining. At the time of my visit they had constructed a combination office and warehouse, partly constructed a 40 ton ore bin, were installing a gasoline hoist, + a compressor was on ~~the~~ delivery. They were also ~~sinking~~ digging a water well which was down 35 feet but had not encountered water as yet.

A crew of five men were employed and work seemed to be progressing satisfactorily so within the next month the property should be shipping manganese.

The applicants informed me that they had negociated a contract for the sale of their manganese to the Kaiser Co at Fontana and this contract was more favorable than the one with the Metals Reserve

Company. They estimated that their net profit per ton on 28% manganese would be about $4 per long ton under the Kanner Contract instead of the anticipated $2.82 per ton under the Metals Reserve Contract.

Construction work to date has been well done and apparently no ~~money~~ money has been wasted.

Wm B M.
Sr Eng

Re Jamison & Sill
Docket No

Truly

I am enclosing a Supplemental Supervising Engineer's report under the above-captioned docket, together with an application for an additional loan.

W. V. T

Enclosures
Application for loan
Supplemental Report

T. [illegible]

Supplemental Report

Docket No B-ND-4402

Date of Report

The borrower has expended practically all of the $14,000 loan which was ~~loaned~~ granted to the project and has requested an additional loan in the sum of $5,000. Following receipt of the application ~~for an~~ visited the project ~~visited~~ (May 5, 1943) and noted the progress to date under the loan, ~~was noted~~ and appraised the situation ~~was appraised~~ relative to the proposals contained in the application for an additional loan. At the time of my visit the project was idle because of lack of funds.

Reference is made to my Supervising Engineer's report and map dated Oct 6, 1942, and to a Progress Report made by Wm. B. Maitland, Supervising Engineer, dated Jan 17, 1943.

Since Mr. Maitland's visit the one line has been ~~was~~ completed and hoist and compressor installed, and the shaft has been sunk to a depth of 97 feet or 52 feet from the old bottom. Other underground work in the mine has consisted of: advancing the north face of the No 1 tunnel several rounds, cutting out several rounds in the vein in the shaft with the hope of opening a higher grade shipping ore, and the starting of a level (advanced 10 ft north) at a depth of 76 feet ~~under~~ which is below

~~was~~ the lower limit of ore developed in the shaft. In addition to the above work 10 miles of road on the bank of the San Pedro River ~~a road~~ was constructed with the cooperation of the ~~County~~ Pima County Highway Department, and a loading ramp was built ~~at~~ on the R. R. siding at Winkelman. The well mentioned in Mr. Maitland's report was carried to bedrock at 50 feet, without however developing water. The ore bin contains approximately 35 tons of ore ~~assaying 28% Mn O.~~

The shaft development was disappointing in that the ore cut off sharply at a depth of 55 feet. The probable shallow nature of the deposit was pointed out in ~~the~~ my original report although it ~~was~~ seemed reasonable to expect a somewhat greater depth of ore than has actually been found in the shaft. The bottom of the shaft shows a strong fissure but no manganese and I do not believe that there is any hope for more ore at depth. In view of the demonstrated shallow depth of ore the ~~probable ore~~ original estimate of 8000 tons of indicated probable ~~ore~~ ore in the mine must be revised downward to somewhere around 4000 tons, ~~than~~ ~~and~~ and the development of further ore would depend upon lateral extension of the presently proven ore or upon ~~exploration development~~ of one or more of ~~the~~ the formable surface showings at other places on the property.

The ~~applica~~ borrower has ~~arranged a~~ contracted with ~~contract~~ the Kaiser Company to take 5000 tons of ore. A copy of the contract is enclosed with this report. Payment for ore of the anticipated grade (28% MnO) F.O.B. Winkleman ~~works~~ out at $9.25 per ton. This compares with a price of $12.14 ~~paid~~ for this class of material delivered to the Metals Reserve stock pile at Deming, New Mexico. Freight and handling cost (amounting to approximately $5.00 per ton) in the latter case must be borne by the seller and the net ~~figure~~ ~~result~~ return therefore would be $7.14 per ton or $2.11 less than would be the case if the material were shipped to Kaiser. After deducting an ~~estimated~~ $1.50 cost for trucking from the mine to Winkleman the anticipated net to the mine on material shipped to Kaiser would be $7.75. Mining costs ought not to be high at this property and the above figure, ~~should show a substantial profit~~ even after a generous allowance ~~is made~~ for mining cost, should permit the realization of a sufficiently large ~~substantial~~ profit ~~per ton~~ ~~sufficient~~ to repay the original loan plus whatever small additional loan ~~which~~ would be required ~~necessary~~ to put the ~~put the~~ mine ~~into production~~

The applicant requests ~~$~~ additional funds in amount of $5000. It is my opinion that a considerably smaller sum would

suffice. In making this statement I have in mind that the property is equipped and partially developed and that the further proposed development i.e. opening a level ~~at the~~ from the shaft near the base of the main ore, would be productive of ore from the start. Funds would be required ~~needed~~ to ~~take care of current~~ cover presently due rental payments on equipment, the purchase of a stoper, and payment of insurance deposit. Also, provision would have to be made ~~provided~~ for carrying payrolls and supplies and miscellaneous expenses until returns from shipments begin to come in ~~become regular~~ ~~[illegible]~~ regularly. I believe that $2,500 ought ~~ot~~ to be ample to cover ~~for the~~ above items and I would recommend a further loan in that amount. However, consideration of the granting of this loan ~~be~~ should be made contingent upon the clearing up of a ~~the~~ complaint ~~of~~ made by Mr. Branch one of the property owners. A copy of Mr. Branch's letter is enclosed herewith. We have informed the applicant of the contents of this letter. The project would have been producing earlier and probably would not have needed additional funds except for the drawn out contract negotiations with the Kaiser company ~~contract~~. During the negotiations which, ~~appeared daily to be on the~~ over a period of several months, appeared daily to be on the point of consummation a crew was ~~[illegible]~~ maintained at the property and operations ~~were continued at the point~~

which is self-explanatory

were carried on in a desultory fashion with the result that a considerable amount of the loan funds was expended ~~without~~ [redacted] with small accomplishment. Except for the above criticism I believe that there has been no waste, and I consider that the property is in good shape to commence immediate production.

T. J. Shea
Sup. Eng.

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
SUPPLEMENTAL REPORT OF SUPERVISING ENGINEER

Docket No. B-ND-4402 - - - - Jamison & Sill
Date of Report - - - - - - - - -July 31, 1943

I am enclosing herewith an application for additional loan in the sum of $3,000.00 by the above captioned borrower. The project was granted an original loan in the sum of $11,000.00, followed some months later by an additional loan of $2,500.00. In the event that the present additional loan is granted, the indebtedness to the Reconstruction Finance Corporation will total $16,500.

The work performed at the property to date of June 12, has been covered by a Supplemental Report and two Progress Reports. Since June 12, the South drift from the shaft at 55' has been advanced to 40' from the shaft and a North drift was driven 20' from the shaft at this level. These drifts are at the base of the ore shoot. Two low grade (20.9% Manganese and 21.8% Manganese) cars have been shipped. Both of these cars were derived from development and the product was not as clean as would be the case when the main ore body is stoped. As was noted in the Supplemental Report referred to above the shaft development proved disappointing and resulted in a considerable reduction in the indicated tonnage of ore available in the mine. Work at the property was suspended early in July because of uncertainties regarding the marketing and settlement for ore shipments and because of the applicant's belief that the funds then on hand ($1,120.00) would not suffice to put the property on a self-sustaining basis.

Analysis of the operation to date reveals that development in the mine has amounted to only 52' of shaft sinking and approximately 70' of drifting. During the course of this work two low grade carloads of ore were shipped. The borrower has not yet begun to stope ore. This is a rather sorry showing in view of the amount of money spent ($12,379.73) and the fact that the property contains a partially developed block of shipping ore which presents no difficulties in its further development or mining.

The applicant blames his poor showing chiefly upon delays and confusion regarding the contract for the purchase of the ore by The Kaiser Company. The recent correspondence between an official of that Company and the applicant is appended to the application and it seems that the marketing situation will henceforth be more satisfactory.

COMMENTS OF SUPERVISING ENGINEER

It is my opinion that a more aggressive and competent direction of the project would have assured its

success by this time. If the $3,000.00 additional loan requested is granted the applicant will have cash on hand amounting to $4,120.00. This amount of money ought to put the property into production on a self-sustaining basis. Preparation for mining the ore body above the 55' level involves only the extension of the South drift another 60' and the cutting out and building of several chutes.

While the performance record of the applicant does not permit of any optimistic expectations it would seem that further work would assure the production of a considerable amount of Manganese and repayment of at least a part of the Reconstruction Finance Corporation Loan. For these reasons there would appear to be some justification for granting an additional loan to the project.

T. P. LANE
Supervising Engineer

RECONSTRUCTION FINANCE CORPORATION

MINING SECTION

P R O G R E S S R E P O R T

Docket No. B-ND-4402 R.C. Jamison & R. T. Sill
Date of Inspection - - - - - - - -June 12, 1943
Date of Report - - - - - - - - - -June 17, 1943

The property which was recently granted an additional loan, was visited on June 12, 1943. Work at the property had been resumed several days prior to the visit, this resumption of work following upon several months of idleness.

A carload of ore was shipped recently, but returns were not yet available. It is expected that the assay of the material will be low because of the inclusion in the last part of the car of considerable low grade material from the shaft dump. The Kaiser Company contract under which the material was shipped provides for payment of the Manganese F.O.B., Winkleman and the already mined low grade material therefore is worth shipping so long as it will cover the cost of loading and trucking (and providing it does not run the Manganese content of the car down below the minimum acceptable grade.)

A drift which is being driven northerly on the vein at the lower limit of the ore (depth 55') has been advanced in ore, several rounds from the shaft. The crew comprises: a foreman, hoistman and two men underground. Another shift was to be put on immediately in this heading.

T. P. LANE
Supervising Engineer

Mr. Tully

Please find herewith my Sup. Eng. Report on the San Pedro Mine under the above captioned docket.

The applicant has not been engaged in the development of an ore body at this property and has made no expenditure beyond that for traveling and assaying. Under ~~the~~ a strict interpretation of the law, therefore, the applicant cannot qualify for a development loan.

I consider that this property has real merit and ought to bring out a substantial amount of manganese within a short time and I have therefore recommended a development loan with the thought that ~~there~~ ~~might be~~ some way might be found to get around the above restriction.

No P Many applications for loans on worthwhile properties would fall under this restriction because the heretofore extremely unfavorable market conditions have discouraged interest in mining development. This is particularly true of low and medium grade manganese deposits.

The applicants in this case are thoroughly responsible people and know the mining business.

V. T. Y.

4 [illegible] (4 (Ce)

Docket No B-ND-4402
Date Authorization for Exam. Rec'd Sept. 2, 1942
Date of Examination, inclusive, Sept 21, 1942
Date of Report

1. Name and Address of Applicant

Name: R. C. Jamison & Ruth T. Bill
3033 Hollyridge Drive
Hollywood, Calif.

Correspondent R. C. Jamison,
1232 San Vincente Blvd.
Santa Monica, Calif.

2. Character of Project
Development of Manganese deposit.

3. Location of Mine: T 6S.; R 16E.
The mine is located in the Feldman mining district, Pima Co., Arizona, ~~in T R 16E~~ The nearest rail point and supply center, Winkelman, Arizona, is 12 miles by good dirt road from Winkelman. At about 10 miles from Winkelman the road crosses the San Pedro river and proceeds 2 miles up Camp Grant Wash ~~to~~ the camp and lower mine workings which are at the mouth of a gulch leading into the wash. The San Pedro river

an intermittent stream and during periods of high waters the crossing is impossable. Such periods seldom last more than two weeks.

In the event that a substantial production is developed at the mine a road could be constructed at small cost ~~up the river up~~ 7 miles along the river bank ~~up~~ to a bridge crossing near Mammoth. The distance to Winkelman by this route would be ≈ 6 miles.

4 Applicant

The applicant is a partnership composed of two partners. Both are middle-aged men. Mr. R. C. Jamison ~~has been~~ is interested ~~for many years~~ in iron mining in Minnesota and for many years has been connected with mining operations in the West, notably as ~~President~~ formr President and General Manager of the 79 Lead-Copper Co at Hayden, Arizona; and as operator ~~with~~ (~~Pear~~ Jamison and Peacock) of the Crescent Manganese ~~Mine~~ at Port Angeles, Washington. Mr. Rush T. Sill is ~~an~~ construction and mining engineer with wide ~~operation~~ experience in mining and metallurgical ~~operation~~ engineering, ~~and mine operation~~. The management of the project therefore would be competently handled.

5. Loan Requested

The Applicant requests a Development loan in the sum of $20,000

6. Description of Project

A. General Features

1. There are no mine workings etc. which

are not confined within the applicants ownership

2. The proposed project would comply with with state compensation and safety-first statutes.
3. There are no apparent legal discrepancies in the proposed project.
4. There are no impeded Right-of way facilities.
5. There is no likelihood of surface or sub-surface trespass during the project

B <u>Existing Development</u>

1. The mine is opened by tunnels and shafts.
   a. The accompanying sketches are made from a compass and tape survey of the workings.
   b. Samples were cut with pick and mail and gathered on canvas. Assays are shown on accompanying assay certificate. Analysis of No 3 sample indicates that content of objectionable impurities are well below minimum specification for acceptable material at Metals Reserve stock piles
   c. The mine is accessible except for 1 shaft (described below), and the workings are in good condition.

   d. General Features of deposit etc.
   The mine is located in a gulch ~~which tributary to~~ Camp Grant Wash. The hills in the immediate vicinity of the mine rise about 300 above it.
   The country rock is limestone

d. General Features of Deposit etc.

The property, known as the San Pedro Mine, comprises 5 claims held by annual assessment work, and is to be operated by the applicant under lease from the owners on a profit-sharing basis. A copy of the lease agreement is contained in the supporting data furnished with the application, which see.

The deposit was first worked in 1917 and during that year and the succeeding year 15 or more cars of ore were shipped according to the Bulletin of the Arizona Bureau of mine, "Manganese Ore Deposits in Arizona". The material was screened and sorted to obtain a product carrying 40% manganese.

The topography of the region is one of low hills divided by steep gullies and sand washes. The hills in the immediate vicinity of the mine rise to 300 ft above it.

The country rocks are limestone, conglomerates and hard white quartzites. The vein upon which the development to date has been performed occurs along a contact between a gray limestone and a diabase sill which in turn lies upon a quartzite mass. The vein, which varies from a few inches to 4 feet in width, strikes approximately N 45 W and dips 45° NE. The strike in general conforms to the bedding of the ~~hanging wall~~ limestone hanging wall. The manganese ore minerals are pyrolusite, manganite, and psilomelane,

the first of these predominating. These minerals have been deposited in the openings of the fissure and, with silica have replaced the limestone to some extent. Gangue minerals are chiefly calcite ~~with some~~ and crushed wall rock and some quartz and iron oxide. The ~~fissure~~ foot wall of the fissure is a smooth slickensided plane with striations which indicate a movement in a steep Northeast direction. The hanging wall of the vein is less well defined.

The principal workings are approximately 400 feet of the strike of the vein and

~~and~~ consist of 3 tunnels, a shaft, and wings. Other workings on the property include ~~a~~ a large cut some 1000 ft NW from the principal workings, and ~~several~~ several shallow cuts at intervals on ~~the~~ ~~the strike of the vein~~. Following is a more detailed description of the workings and the sampling.

The large cut noted above has been made near the top of the ridge and ~~considerable~~ some ore is said ~~appears~~ to have been removed from here. The remnant of a sorted pile at the foot of the hill indicates that the working place produced a shipping grade of ore. ~~The cut was not cleaned out and could not be satisfactorily sampled. The vein here appears to dip 45° SW with strike~~ ~~The cut had not been cleaned out and~~ was full of surface dirt and low grade vein material and ~~therefore the~~ ~~and~~ strike ~~of the~~ and dip of the vein could not be accurately ascertained. It appears however to strike N 45° W and dip ~~SW~~ 45° SW. Samples No 1 ~~was cut~~ and No 2 were taken at each end of the cut ~~and~~ and were ~~about~~ 23' apart. ~~on strike.~~ These samples assayed as follows

Sample No	Width	% Mn
No 1 (south end)	40"	23.86
No 2 (north end)	42"	14.40

There were no further openings on the vein beyond the ends of the cut.

The upper tunnel, No 3, of the main workings (see accompanying sketch) is driven into the hill for a distance of 75'. ~~Beginning at 10 feet in from the portal and for a length of 50 feet on the level the vein has been stoped below the level for a slope distance of 75 feet on the dip. Beyond the~~

~~stope on the level and in the face of the drift the vein has feathered out into a number of narrow stringers~~

MoP The vein has been stoped below the level to a depth of 75 ft on the dip and for a length of 50 ft at the level. The vein in the face of the drift ~~has~~ feathered out into a number of stringers of manganese. No information was available regarding the work which was done here but judging from the size of the opening the greater part of the past production was probably derived from this stope. The shoots appear to have been largely worked out below the level. Some ore remains in the north wall where sample No. 3 ~~was taken~~ shows 18" of ore assaying 49.47% Mn. In the bottom of the stope in the north end the ore has narrowed down to 5 or 6" of this same class of material. The bottom ~~was is~~ was covered with muck and could not be examined. The south end of the stope shows only very low grade material. Above the level samples Nos 4 and 5 show a ~~fair~~ good grade of material in a small longitudinal opening immediately above the level. Beyond this point the back has been broken out a short distance above the level ~~and~~ exposing low grade material.

MoP The condition in the bottom of the stope suggests that the ~~ore~~ shoot ~~is~~ bottoms there ~~altho~~ this ~~statement cannot be~~ fact cannot be conclusively stated because of the muck covering the floor and also, as noted above, no information is available regarding the mode of occurrence of the ore. The ~~shoot~~ vein appears to have been

narrower and somewhat higher in grade than in the workings lower down the hill and it is possible that the ore was in-and-out and that work was stopped at a place where the values were low. If the ore ~~vein were projected upward on dip it would~~ actually bottoms here the total extension of ore in depth in the fissure would be about 110 ft. (the vein crops on the hillside some 20-40 ~~above the level~~ on dip above the level).

A vertical shaft was sunk about 50' east from the portal of the above tunnel to a depth of approximately 35 feet. The shaft was inaccessible but it could be seen that it inclined toward the ~~south~~ east at that depth, apparently having intersected the vein at that point. ~~The inclined portion of the shaft appears to be filled with rock.~~ The dump contains considerable manganese. No information is available regarding the ~~extent of~~ this working place but the size of the dump suggests that it is not extensive.

Another tunnel No 2 has been driven in on the vein ~~for a point~~ directly in the bottom of the gulch at a point 150 feet SE and 60 ft lower than the upper tunnel. The vein "croppings" showing heavy manganese content are visible at intervals between tunnels No. 3 and No 2. Samples from this tunnel are shown on the accompanying sketches. Sample No 12 is cut across the vein several feet out from the portal of the tunnel and the croppings which visibly between this point and tunnel No 1 below show good manganese content.

~~Tunnel No. 1 which has been driven into the~~

Tunnel No. 1 which was driven first as a crosscut and then in a NW direction, connects with a ~~shallow~~ shallow shaft ~~[illegible]~~ and beyond the shaft develops 75 ft of continuous ore ~~in its NW end a~~ the sampling of which is shown on the accompanying sketches. The foot wall as in the plows in the mine is ~~a~~ smooth. ~~wall~~. The hanging wall is not always exposed in the drift. The material lying immediately against the foot wall is often low grade containing much iron oxide calcite and some hard quartz. Some of this material could be kept out of the ore in breaking. The samples have ~~included all the material~~ been cut to the wall except No. 18. In this case the hard low grade material against the foot wall was wider than usual and a separate sample (No 17) was cut across it.

1 line up

The shaft extends 40. ft on dip below the level and shows good ore in the bottom and in the walls ~~[illegible]~~ (samples No. 23, 24 and 25).

The main shoot of ore appears to terminate a short distance south of the shaft but bold croppings a short distance south of No 1 ~~the~~ tunnel portal extend along the bluff and hillside on the east side of the gulch. No work has been done in this direction here.

Proposed Development

1. Applicant's proposal to continue the shaft down on the vein to 100 ft below the stripping, and to drift both ways on the vein at that depth appears to be a logical procedure.

2. Applicant is not mining at the present time. The deposit is comparatively low grade and has not been attractive during the past 25 years because of unfavorable market conditions.

3. Expected ~~a. Probable~~ mining rate would be around 50 tons of ore per day.

3 The applicant originally proposed to mill the ore on the property but in view of the recent establishment of a low grade stock pile at Deming, New Mexico the intention now is to ship to this purchaser.

b, c, d. Drift, crosscut, and raise progress would be at approximately 4 ft. per 8-hr shift and operations would be on a 2-shift per day basis.

e The applicant proposes ~~To~~ eventually to mill the ore on the property and anticipates that ~~devel~~ the proposed development will justify the erection of a plant having a minimum capacity of 50 tons per day.

~~would be a possible future con[illegible]~~

f. g. ~~[illegible]~~). A sample ~~which~~ of the ore was tested by the Bureau of mines in Salt Lake City to determine its amenability to concentration. ~~[illegible]~~ Complete data regarding this test is not available but the applicant showed this engineer a letter from the ~~the~~ Salt Lake office of the Bureau of mines ~~in~~ which ~~it was~~ contained a statement to the effect that by using jigs and tables a feed containing ~~[illegible]~~ 25% Mn. was concentrated to 40% Mn. with a recovery of 80%. ~~[illegible]~~

~~largely pyrolusite which [illegible] tends to [illegible] crush powder to a fine powder this engineer is inclined to question the such favorable results such as the above from gravity concentration.~~

h. Not applicable

i. Wages have varied widely during recent months and a fixed scale therefore cannot be listed. Miner's wages would be probably be $6.00 to 6.50 per 8 hr. shift.

D

1. There is no equipment on the property.

2. There is no mill on the property.

3. Not applicable

~~[illegible]~~

4. Following Equipment would be required for the project: Hoist, compressor, rock drills steel, rails, pipe, water tank, misc. tools (all listed in detail below under estimated costs).

~~2 Tons No. 8 rails~~
~~1 ½ Ton Truck~~
~~1 2000 gal water tank~~
~~600 ft~~

5. Present project does not propose mill construction

6. There are no housing facilities on the property.

7. Construction of bunk houses and mess house is not contemplated. ~~The men~~ Employees would live in Winkelman or at near by ranches. Mine buildings required would include: 1. change house, 1. office and store room, and 1. compressor house and blacksmith shop.

8. 1 Truck would be required.

E Cos Estimate

1 ~~Deposit is a Vein~~ Vein Deposit

a The ground stands without timber support and breaks easily.

Mining and development cost is estimated at $3.00 per long ton.

b.c.d Cost for drifting, crosscutting, and raising is estimated at $12 per foot

e. Cost for sinking winzes (one compartment, shallow) is estimated at $20 per foot.

f. Cost for shaft sinking (2 compartment, shallow) is estimated at $30 per foot.

g. Milling cost is estimated at $1.50 per long ton.

h. Trucking cost from the mine to Winkelman is estimated at $1.50 per long ton.

i. Concentrates and crude ore containing over 35% Mn would be shipped to the Metals Reserve Company's stock pile at Phoenix, the railroad freight to be absorbed by the latter. In the event that it is desired to ship material containing less than 35% Mn this material would be sent to ~~Deming, New~~ the Metals Reserve Company's concentrating ore stock pile at Deming New Mexico. The freight rate from the mine to that point would be $4.03 ~~per~~ per long ton with an unloading charge of $.70 per long ton. These charges would be borne by the shipper.

j. There would be no treatment ~~charge~~ cost.

k. There would be no royalty cost. The property is to be operated under lease on a profit-sharing basis with the owners.

l. Timber requirement would not be large. Oregon pine timbers cost $60-65 per thousand board ft. at Winkelman, Arizona.

m. Total cost for ore that is milled on the ground is estimated as follows (per long ton):

	$
Mining and development	3.00
Milling	1.50
~~Trucking to RR (at Kozell)~~	~~.75~~
Total	$4.50

Total costs for ore that is shipped to Deming, New Mexico, is estimated as follows (per long ton):

Mining and Development	$3.00
Trucking to R.R.	1.50
R.R. freight to Deming	4.03
Unloading at "	70
Total	$9.23

2. Not Applicable

3. Approximate premium on payroll for State Compensation requirements would be around $200 per month for the development project.

F. Ore Reserves

1, 2. Tonnage now blocked out is not accurately measurable, ~~but~~ and is roughly estimated as follows (long tons

~~Between No. 1 level and surface 600 tons~~
~~Between No. 2 level " " 350~~
~~Above No 3 level and in stope 200~~
~~1150~~

Place	Long tons	Ave. % Mn
No 1 level to surface	600 "	28.0
No 2 " " "	350 "	22.6
No 3 " " " & stope	200 "	38.4
Total & Ave.	1150	28.16

~~3. Estimated profit per ton if milled on the property:~~
~~Value of 40% Mn concentrate $26.00~~

$$K = \frac{40}{.80 \times 28.16} =$$

3 Estimated Profit per long ton if milled on the property. (assuming 40% Mn concentrate and 80% recovery) would work out as follows:

(K) Ratio of Concentration $= \frac{40}{.80 \times 28.16} = 1.77$

Value of 40% Conc. = $26.00 per ton
less trucking = 1.50 " " "
24.50

value per ton ore $= \frac{24.50}{1.77} =$ $13.84

less Total cost 4.50
Estimated Profit $9.34

4. The sampling in tunnels Nr 1 and Nr 2 and in the wings indicates a continuous ore of profitable grade for a length on the vein of 175 feet with good ore continuing in each end. The proposed development could reasonably be expected to block out ore which together with that already proven above the tunnel levels would have a length of 200 feet, height of 125 feet and a width of 4 feet or:

$$\frac{200 \times 12.5 \times 4}{12.5} = 8000 \text{ long tons.}$$

Insert 15A

5. Probable average Mn content of the above block of ore would be 26.60 % Mn (weighted ave of the samples) and estimated profit per long ton if milled on the property (assuming 40% Conc and 80% recovery) would work out as follows:

$$K = \frac{40}{.80 \times 26.6} = 1.88$$

Value per ton $= \frac{24.50}{1.88} =$ $13.07

Insert

~~[illegible]~~ Ore now in sight in the No 1 ~~[illegible]~~ level workings is not included in the above estimate, nor is any account given to the the area between the end of No 2 tunnel and the No 1 stope. It seems very probable that considerable ore will be found in this area.

$26.60 \times (.40 \times .16)$

less total cost 4.50

Estimated Profit $8.55

If this ore were sent to Deming the value and anticipated profit would be

$26.60 ($.40 + $.016) = $11.07

less Total Cost 9.23

Profit $1.84

7 A. There are no men now employed on the property

B. It is anticipated that the development project would employ 7 men as follows.

1 Boss
2 muckers
2 miners
2 hoist and compressor.

C. Project contemplates operating 2 shifts per day, 7 days per week.

8 A. There are no local or regional objections to the project.

B. The proposed development would be carried on in one and

B. The project promises to develop a substantial tonnage of manganese at relatively small cost within a relatively short period of time.

9 A. 4 Months

B. Operations would be conducted the year-round.

C. Project contemplates building mill upon successful completion of proposed development.

It is anticipated that Class B and Class A loans would be paid off within 2 years time.

10 Estimated Cost of Project.

A Total Development

A Sink 50 ft @ $30.00 per foot ~~2400.00~~ $1500
Drift 600 ft @ $12.00 " " 7200.00
Raise 300 ft @ 12.00 " " 3600.00 — 12,300.00

B Purchase of Equipment (partly used)

1 Hoist	$600.00
1 Compressor	1000.00
2 Rock Drills	900.00
600 ft 2" pipe & fits	150.00
600 ft 1" pipe & fits	100.00
2 Tons 8 lb mine Rail	80.00
2000 gal Water Tank	50.00
1 1/2 Ton Truck (used)	850.00
Misc. tools fits. steel etc	370.00
~~1 1/2 Ton Truck~~	~~4000.00~~

4100

C Construction

1 Change Room (10X20) @ 2.00 sq ft	200.00
1 Office & storage 10X20 " "	200.00
1 Compressor House & Blacksmith Shop (12X24)	240.00

640

D General Expense

1. Supervision is included in development costs
2. Insurance 150.00
3. Compensation 800.00
4. Interest during project 400.00

1350
1610
~~710~~

E Contingencies

Total 20,000

~~E. No contingencies~~

II Nature and Sources of Revenue

A.

1. It is anticipated that some income will be derived from ~~[redacted]~~ high grade and easily sorted ore encountered at times during the development. This ore would be shipped to the Metals Reserve stock pile at Phoenix, Arizona.

The property would not become self sustaining upon completion of the present project.

2. A second (Class A) loan would be required for self liquidation of the property

(a) Approximately $30,000 would be needed: $20,000 for construction of 50 ton a day gravity concentrator, and $10,000 for working capital

3 Property should be self-sustaining within 2 years

4. ~~None Also~~ General remarks are noted below

~~Sampling of the property indicates the presence of a st~~

~~Development of the property can reasonably be~~

Comments of Sup. Eng.

The project can reasonably ~~be expected~~ be expected ~~to~~ develop in excess of 8000 tons of ore ~~average~~ which ~~would average which~~ according to the samples ~~which were done~~ taken during ~~of~~ this examination would run out at 26.60% Mn

~~The project holds promise of~~

~~The project promises~~

~~This ore could be shipped at~~

P

A narrow profit margin (around $2.00 per long ton) could be realized by shipping this ore to the low grade stock pile ~~at~~ of the Metals Reserve Co. at Deming, New Mexico; or the material ~~ore~~ might be more economically handled by screening and sorting to a plus 35% Mn content and shipping to the stock pile at Phoenix Arizona. In the latter case the ore would enter a higher bracket in the price schedule, also railroad freight would be paid by the purchaser. Whether this increased income per unit of manganese produced would offset the increased cost for sorting and selective mining, and ~~the~~ reduced ultimate production is a matter which could be determined only when the actual development in ore

is undertaken.

The most logical program would appear to be one which envisaged the construction of a mill at the property upon successful completion of the development project covered by this report. The ore mineral is chiefly pyrolusite which tends to break down into considerable powdery manganese and for this reason, in this engineer's opinion, the material will not be easily milled. However, the milling test that was made by the Bureau of Mines at Salt Lake City carries sufficient authority to justify the belief that milling of the ore would be practical. The estimated profit margin of around $8.50 per long ton ~~is sufficiently wide to rather wide and sufficiently wide~~ on the basis of the recovery and grade of concentrate shown in the test is rather wide and ~~if recoveries results in actual milling were considerably poorer the operation would still be~~ ~~providing grade of concentrate does not fall below 35% the o~~

~~if actual~~ if results in actual milling showed somewhat poorer recovery, or a lower grade of concentrate (above 35% min however), or both, there would still be room for a satisfactory margin of profit. ~~[illegible]~~

The condition in the bottom of the No 1 stope suggests that the ore extends to somewhat over 100 feet in depth below the outcrop. Whether this would be a limiting depth throughout the rest of the mine cannot be foretold at the present time.

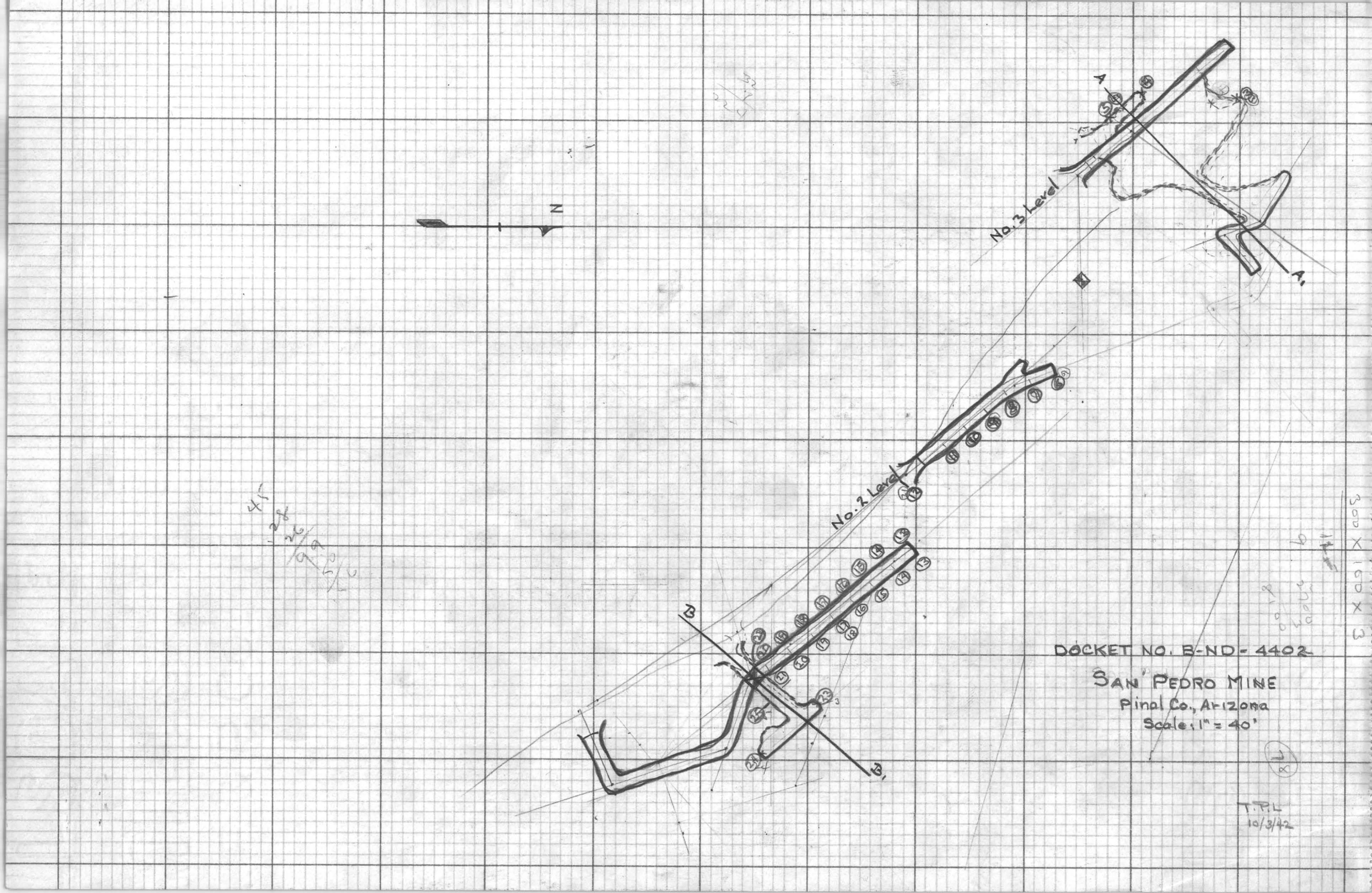
~~Development~~ Exploratory work on strike beyond the principal workings is quite limited and except for the large cut 1000 feet NW of No 3 tunnel no serious attempt has been made to open ore. The overburden in this Northwest direction is generally quite heavy. Southwest of No 1 Tunnel ~~the~~ croppings showing heavy manganese content are visible in a cliff on the edge of the gulch and at intervals on the hillside for several hundred feet. No work has been done on this end of the property.

The proposed development outlined in this report seems certain to open places on the vein which will produce a shipping product (plus 25% mm) or material which can be easily sorted up to a shipping grade. The prospect therefore is for an appreciable output of manganese at an early stage in the project.

A Development loan appears to be justified.

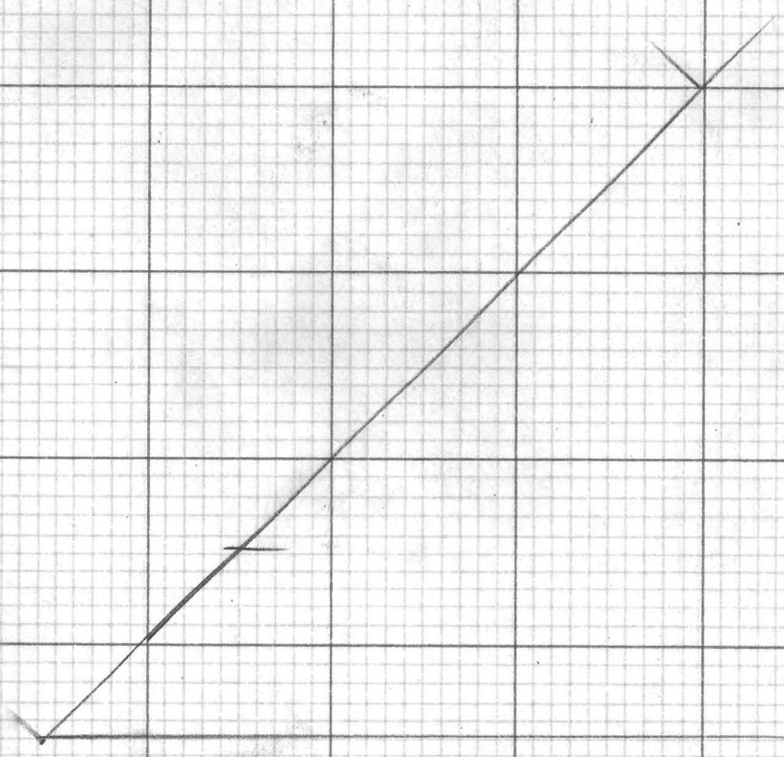
V. T. L.

Enclosures
All work Data
2 Sketches
1 assay cert.
5 Photographs (furnished by Applicant)


N
No. 3 Level
No. 2 Level
A
A1
B
B1
DOCKET NO. B-ND-4402
SAN PEDRO MINE
Pinal Co., Arizona
Scale: 1" = 40'
T.P.L
10/3/42

1500
7200
3600
300

Sec and Mins



Buildings

Change Room ~~& shop~~ 10x20 } @ $2/ft
Office ~~&~~ 10x20 store house
Compr. & Shop 10x24

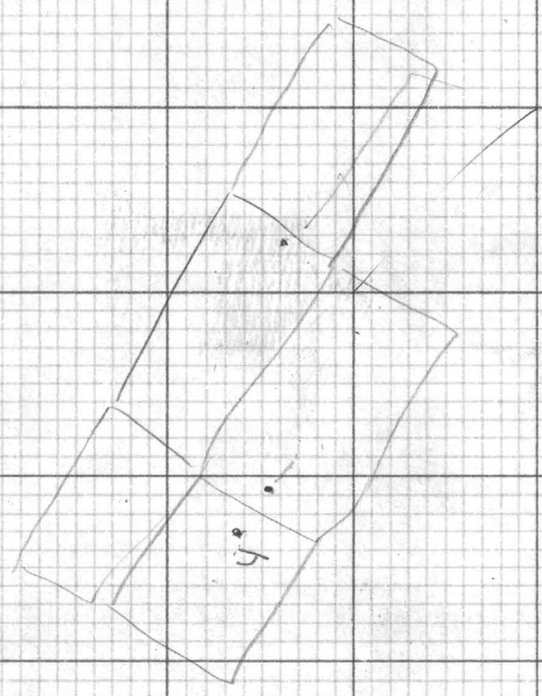
Compr. 150 — 600
2 Rocks 900 — 200 400
Rails 8# 2 ton @ $80.00
600 2" Pipe
600 1"
fittings

4000 ft 1½

1½ Truck 800.00 — 4 — 8
60.00 — 6

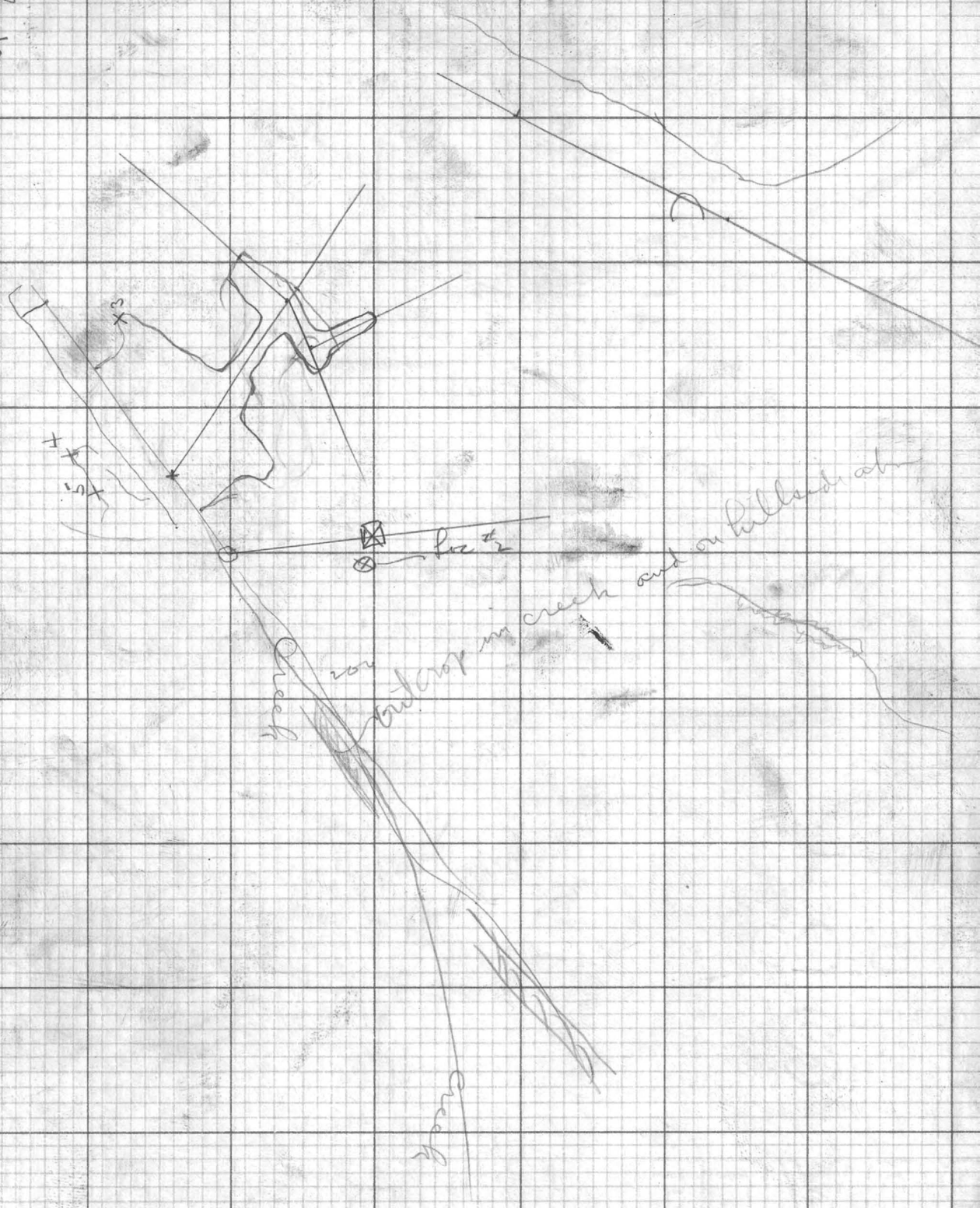
2000 gal tank

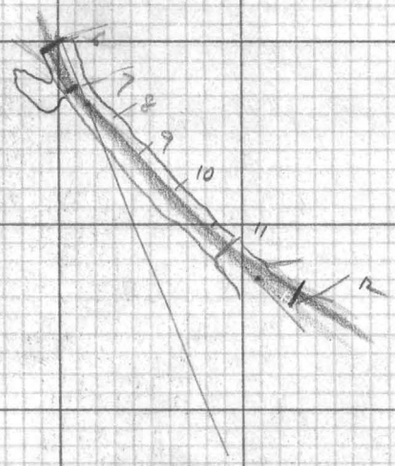
2 Compost shaft @ $30.00



Portal 6.0
N56W 14.5
60
75

face




6
7
8
9
10
11
12

3	1.5	×	49.47	=	74.21		
4	1.8	×	37.10	=	66.78		
5	2.2	×	32.01	=	70.42	211.41	38.44
	5.5						
6	3	×	23.42	=	70.26		
7	3.5	×	28.37	=	99.30		
8	3.2	×	27.33	=	87.46		
9	2.9	×	15.00	=	43.50		
10	3.4	×	15.06	=	51.00		
11	2.8	×	26.48	=	74.14	425.66	22.60
	18.80						
12	3.3	×	35.93	=	118.57		
13	6	×	33.17	=	199.02		
14	5.5	×	21.82	=	120.01		
15	5.0	×	25.75	=	128.75		
16	4	×	30.99	=	123.96		
17	2.4	×	30.70	=	81.05		
18							
19	4.2	×	30.70	=	128.94		
20	4.7	×	34.66	=	162.90		
21	4.8	×	18.62	=	89.47		
22	5.7	×	24.58	=	140.11		
23	4.2	×	21.24	=	89.20		
24	2.4	×	30.99	=	74.38		
25	3.5	×	29.53	=	103.36	1559.72	28.00

13) 55.70

$\frac{13}{5^2}$ 37

80 4.4

2196.79 27.45

18.8
557
745 (3.9
19 | 17
52
175

745) 198538

2660

50

26.00

13
4

40

800

e. The applicant proposes eventually to ~~build a~~ mill the ore on the property and anticipates that development will justify a plant of 50 tons per day minimum capacity.

file