Mr. John Q. Little
Nipton, California

Re: Docket DMA 855I, Lead-Zinc
Silver Rule Mine

Dear Mr. Little:

Reference is made to our letter of September 28, 1951 in which we denied your above captioned application for an Exploration Contract.

This is to advise you that we have just been informed that some years ago a merchantable concentrate was made from somewhat similar ores by means of the Humphrey Spiral and that this concentrate was sold to the International Smelting and Refining Company at Tooele, Utah. It is understood that this operation was closed down on account of exhaustion of ores.

It is suggested that you might be justified in determining whether a representative sample of the ore from the Silver Rule Mine could be concentrated in a Humphrey Spiral so as to produce a concentrate which would be acceptable to a mill or smelter, and from which you would receive a profitable revenue.

If you investigate the economic possibilities of producing a profitable concentrate, and find that it is possible, we will be pleased to recind the denial and give careful consideration to your application, if supported by additional data which would indicate that your ore can be mined and treated at a profit to you.

Sincerely yours,

(signed) FRANK E. JOHNSON ACTING

C. O. Mittendorf, Director
Production Expansion Division

PBBlakemore/meh 10/17/51
cc to: Adm. Reading File
Reports & Records
Messrs. Mittendorf, Olund
Mr. Blakemore
Region III (2)
Docket

AIR MAIL

Mr. John C. Little
Nipton, California

Re: Docket No. DMA-8552, Lead-Zinc

Dear Mr. Little:

A study of both your application for an exploration loan and the report of the field team of Region III shows that the proposed underground work actually extends the limits of known ore bodies rather than explores for unknown or new ones. The diamond drilling is to be done high in the oxidized zone and if successful would indicate oxidized ore of the type found in the vein that presently is being developed. To our knowledge there is no standard milling practice that will beneficiate your oxidized type of ore successfully and economically. The isolation of the mine and shipping costs preclude the shipment of all but small tonnages of hand-picked material to the smelters.

Because of the reasons mentioned above, we regretfully must deny your application for the requested loan.

Sincerely yours,

C. O. Wittendorf

C. O. Wittendorf, Director
Production Expansion Division

CCSelfridge/jem
9/25/51

cc to: Adm. Reading File
Reports & Records
Messrs. Wittendorf, Glund
Mr. Billings
Mr. Hote
Mr. Renuight
Mr. Selfridge
Field Team, Reg. III (2)
Docket

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Tom Lyon

DATE: 9/28/51

FROM : Mittendorf

SUBJECT:

Would you please review proposed action by Delfmage & advise if you & Billings concur

Mitt

Mr. M. 10-12-51

Mr. Billings called Mr. Selfridge down to his office to discuss the case. Mr. Billings agrees with Mr. Selfridge now, that it should be denied. Mr. Selfridge suggests that if you wish you might call Mr. Billings.

Betty

September 28, 1951

MEMORANDUM

To: Reports and Records Unit

Through: Director, Supply Division

From: Production Expansion Division

Subject: Denial - Docket DMA-8551, Lead-Zinc
Silver Rule (Crystal Springs) Mine
San Bernardino Co., California
John C. Little, Nipton, California

Reference is made to "Review of Application for Exploration Assistance", dated September 20, 1951 and field team report, dated August 29, 1951, transmitted under date of September 5, 1951, subject above.

The field team recommended a limited but lesser amount of diamond drilling and exploration (in greater part actually development) than originally requested. The diamond drilling is to test veins in the footwall of the known vein and the underground work is to extend the limits of its ore bodies thereby increasing the reserve tonnage sufficiently to warrant the erection of a mill.

Mine examination indicates that the mine contains positive ore reserves of 13,020 tons averaging 5.15 percent lead, 8.42 percent zinc, 0.0147 oz. gold and 1.56 oz. silver and probable ore reserves of 3,250 tons averaging 4.30 percent lead, 8.36 percent zinc, 0.0149 oz. gold, and 1.42 oz. silver. Recorded production of the mine is 600 tons of ore that averaged 40 percent lead and 10 oz. silver.

The lead and zinc occurs chiefly in the oxidized form. The lead minerals consist mainly of cerussite and minor galena and lesser anglesite. The zinc minerals are hydrozincite and smithsonite.

The recommended project would increase the reserve tonnage of an oxidized ore that cannot be beneficiated successful by standard milling procedures in a mine that is approximately 95 miles from the nearest railroad shipping point, Dunn on the Union Pacific Railroad. At best a limited tonnage of hand-picked galena and cerussite might be developed and shipped. Study of the submitted data did not suggest that the recommended work would open sulphide ore bodies.

C. O. Mittendorf

Therefore, the application is denied.

GCSelfridge/jem cc to: Adm. Reading File Reports & Records Docket
Messrs. Mittendorf, Olund Selfridge

UNITED STATES
DEPARTMENT OF THE INTERIOR
~~BUREAU OF MINES~~
~~REGION III~~
DEFENSE MINERALS ADMINISTRATION

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

~~1016 APPRAISERS BLDG.~~
~~630 SANSOME STREET~~
~~SAN FRANCISCO 11, CALIF.~~

OFFICE OF
~~REGIONAL DIRECTOR~~
Executive Officer
DMA Field Team
Region III

September 5, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration, Washington, D.C.

From: Executive Officer, DMA Field Team, Region III

Subject: Docket DMA-855X, Lead-Zinc - John Q. Little, Nipton, California - Silver Rule Mine, San Bernardino Co., Calif.

Reference is made to subject "Review of Application for Exploration Assistance", dated June 25, 1951.

Attached are four copies of a report "DMA-855X, Silver Rule Mine, San Bernardino County, California", by Frank J. Wiebelt, Mining Engineer, U. S. Bureau of Mines, dated August 29, 1951.

According to the examining engineer's report, the mine has produced 600 tons of ore that average 40 percent Pb and 10 oz. per ton in silver. At the present time the engineer estimates that there is a reserve of 13,030 tons of ore containing 5.15 percent Pb, 8.42 percent Zn, and a probable ore reserve of 3,250 tons containing 4.3 percent Pb and 8.36 percent Zn.

The engineer, however, does not believe that there is sufficient tonnage to warrant the erection of a mill, but he is of the opinion that a limited amount of exploration would increase the ore reserves materially. He has recommended some drifting, raising, crosscutting and diamond drilling that will cost approximately $43,800. The suggested program appears reasonable.

Docket DMA-855X is being returned herewith.

H. C. Miller
Executive Officer
DMA Field Team, Region III

Attachment

Copy to: E. H. Bailey, USGS

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
SEP 10 10 20 AM '51

SEP 11 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMA-855X, Silver Rule Mine

San Bernardino County, Calif.

Frank J. Wiebelt, Mining Engineer
U. S. Bureau of Mines

August 29, 1951

DOCKET DMA-855X

UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF MINES

SILVER RULE MINE
San Bernardino County, Calif.

(Lead-zinc)

SUMMARY

Pursuant to an application for aid for an exploration project, the Silver Rule mine was examined by an engineer[1] of the Bureau of Mines on July 14 to 16, incl. 1951.

The property consists of nine unpatented claims about 17 miles east of Tecopa, Calif., and approximately one mile north of Crystal Springs.

The deposits occur as replacements of favorable beds of limestone by lead and zinc minerals. The lead minerals consist mostly of cerussite and galena and the zinc minerals are hydrozincite and smithsonite.

The mine has a recorded production of some 600 tons of ore that averaged 40 percent lead and 10 oz. per ton in silver. The mine contains positive ore reserves of 13,020 tons containing 5.15 percent lead and 8.42 percent zinc and probable ore reserves of 3,250 tons containing 4.3 percent lead and 8.36 percent zinc.

The property does not contain sufficient developed ore reserves to warrant the erection of a mill but it is believed that the ore reserves could be materially increased by a limited amount of explor-

1/ Frank J. Wiebelt.

ation work. It is recommended that the following work be done:

1. Continue drifting on vein on second level in extreme western part of mine - 150 feet.

2. In favorable location in the above exploration work, drive a raise approximately 200 feet in length.

3. Continue third level adit to crosscut the vein and then drift on vein - 300 feet total.

4. If good ore is found in the third level exploration work, sink 100 foot winze in a favorable location.

5. Diamond drilling as follows:
   (a) On second level extend present drill hole an additional 100 feet to crosscut veins south of the main vein.
   (b) On first level drill a 200 foot hole to crosscut veins south of the main vein.
   (c) On third level drill four 50-foot holes into the walls to test for ore bodies.

This project will cost approximately $43,800.

INTRODUCTION

Pursuant to a Loan Application from John Q. Little and Belva M. Little, dated May 7, 1951, an examination of the Silver Rule mine was made by an engineer of the Bureau of Mines, Mining Division, Region III from July 14 to 16 incl., 1951. The engineer was accompanied by John Q. Little, operator of the mine and his engineer Fred W. Cook.

The property was formerly located as the Silver Rule mine. It has been relocated as the Crystal Springs but is generally known as the Silver Rule mine.

The property consists of nine unpatented claims in the Resting Springs Mining District in the Kingston Mountains in approximately sec. 7, T. 19 N., R. 10 E., San Bernardino Base and Meridian, on unsurveyed land. The claims are owned by John and Sylvia Prato of

Fontana, Calif. John Q. Little and Belva M. Little have a lease on the property for a period of ten years with five years optional renewal.

Other properties in the vicinity of the Silver Rule mine include the Noonday mine of the Anaconda Copper Co. about 11 miles northwesterly; the Kingston Mountain iron deposits 12 miles southeast; and numerous talc mines.

HISTORY

The following history is taken from a report on the property by Fred W. Cook.

Work was started at the Silver Rule early in 1900. The State Bureau of Mines report of 1915 gives some of the history. In 1910, 140 tons of ore was shipped that averaged 48% lead, 26 oz. per ton in silver and 60 cents per ton in gold. The Statistical Division of the Bureau of Mines in San Francisco has a record of some 600 tons shipped that averaged 40 percent lead and 10 oz. per ton silver and about 158 tons of zinc ore that produced 10 tons of zinc. There has doubtless been other shipments that are unrecorded. John Chambers of Tonopah, Nev. was one of the early owners.

In 1926 the property was owned by the Pacific Lead and Silver Mining Co. of Los Angeles, Calif. This company is reported to have done a little work on the property.. In 1931 the property was idle. The present owners are John and Sylvia Prato.

PHYSICAL FEATURES

The mine workings lie at an approximate elevation of 5,700 feet on the rugged southwestern slope of the Kingston Range just south of the boundary line between Inyo and San Bernardino Counties.

The property is situated about 17 miles slightly south of east of Tecopa, Calif. on State Highway 127 about 52 miles north of Baker, Calif., on U. S. Highways 91 and 466 between Los Angeles, Calif. and Las Vegas, Nev. It is accessible by automobile from Tecopa by proceeding easterly on a paved road that leads to the Noonday Mine and Mill. At about 10 miles turn right and leave the paved road at a sign "Silver Rule" "Crystal Springs" and follow a graded dirt road about 8 miles and well into the pass, turning left at a sign "Silver Rule" and at a few hundred yards distant is the mine camp at Crystal Springs. From the camp a dirt road goes up the mountain to the mine approximately one mile distant. This last mile of road is suitable only for specially geared or four wheel drive vehicles.

Crystal Spring near the mine camp supplies ample water for mine and camp use throughout the year. Other possible sources of water are about half a mile east of the camp which would flow to the camp by gravity and another source for a larger quantity would be from wells in the flats 6 miles distant. The latter wells would have to be sunk from 100 to 150 feet deep.

No growth of timber is available in the vicinity of the mine.

The nearest railroad shipping point is at Dunn, on the Union Pacific Railroad about 25 miles southeast of Baker, Calif. and 94 miles distant from the mine.

Postal and telephone service are available at Tecopa.

Power is furnished at the mine by Diesel and gasoline engines. Electric power is not available at the property.

MINE CAMP

There are two small cabins and a trailer house at the mine camp. A small building houses an electric light plant and another one is used as a shower house. One man and his wife live in one of the cabins, which is also used as boarding house and two men live in the other cabin. The trailer accommodates one person. Additional facilities will be required for a larger crew of men. The cook shack is equipped with Servel refrigerator and cook stove. The camp also has a 3,000 watt Hobart light plant.

DESCRIPTION OF THE DEPOSITS

The deposits occur as replacements of favorable beds of limestone by lead and zinc minerals. The lead minerals consist mainly of cerussite and galena with minor amounts of anglesite. The zinc minerals are hydrozincite and smithsonite. The ore also contains some silver but very little gold. The mineralized beds conform very closely with faults striking east and west and dipping 60° to 70° to the north. These faults often have ore in both the foot and hanging wall and probably are both pre- and post-mineral faults. In the western section of the mine, these faults are cut by cross faults striking N. 30° W. and dipping steeply westward close to 80°. The cross faults do not produce large displacements except at the westernmost end of levels 1 and 2 where the displacement is about 75 feet and in the eastern end of the second level where both the E-W faults

and the ore are abruptly cut off. The faulted ore bearing E-W fault on the second level has been located by a crosscut driven to the south about 75 feet. Drifting along this displaced mineralized fault has disclosed low grade values in the badly broken footwall. The ground in this drift is quite heavy and contains large boulder shaped fragments and numerous cavities lined with considerable thickness of aragonite.

Two other veins, one about 40 feet and another 150 feet south of the main vein, are on the property. The former vein is known as the "Mule Trail Vein".

MINE WORKINGS

The mine workings contain four adits. Adit number 1 is approximately 225 feet long. Adit number 2 is about 65 feet below number 1 and has approximately 570 feet of drifts and crosscuts, and a 75-foot winze. Adit number 3, approximately 70 feet vertically below adit 2, is 90 feet long. This adit has not yet reached the vein. Adit number 4, about 470 feet vertically below adit 2, is 420 feet long. It was apparently intended to intercept the vein in depth, but at about 175 feet the adit was turned to the right to follow a slip. The vein at this elevation will require about 300 feet of crosscutting from this point in the adit.

A small tunnel 20 feet in length and a small cut have been driven on veins about 150 feet and 40 feet respectively, south of the main vein.

A plan of the mine workings is shown in figure 2.

MINE EQUIPMENT

At the mine a 35-ton ore bin is connected with an ore chute about 200 feet long connecting the bin with the second level. An aerial tramway, operated by a gasoline driven hoist, is used to raise supplies up to No. 2 adit. The ore is taken from the mine bin to a larger bin located at the mine camp by a four wheel drive truck.

No. 2 adit is equipped with track, air and water pipe. A duplex air driven pump lifts water from the end of the mine access road which terminates at the mine ore bin, to adit 2.

Equipment at the mine follows:

1	12 B. Eimco mucking machine
1	Sullivan double drum hoist with scraper and cable
1	3" C. P. Leyner mounted
1	Thor #475 stoper
1	Gasoline hoist, cable and bucket (500' tramway)
2	Mine cars
800	Feet of #12 rail
1	5-ton 4-wheel drive, dump truck
1	4-wheel drive jeep

SAMPLES

Fourteen samples were taken from the mine workings. Most of them were taken to obtain a check on samples shown in a report on the Silver Rule mine by George B. Blonsky which accompanied the application for exploration aid. The analyses of these samples follows:

Sample No.	Percent Pb	Percent Zn	Ounces/Ton Au	Ounces/Ton Ag	Width Inches	Location
W-111	1.2	0.3	0.03	0.35	--	5 feet rear of face; 3rd level; mineralized material.
W-112	1.7	0.2	0.005	1.90	42	Near Blonsky's sample #38; 2nd level.
W-113	6.7	0.5	0.005	1.55	84	Near Blonsky's sample #7; 2nd level.
W-114	1.1	0.3	Trace	0.90	--	Grab from muck pile, face 2nd level.
W-115	4.8	6.6	Trace	1.30	48	6 feet below Blonsky's sample #3, 2nd level.
W-116	5.9	9.9	0.005	1.50	72	Near Blonsky's sample #3, 2nd level.
W-117	14.1	10.9	0.005	4.65	70	Near Blonsky's sample #9, 2nd level.
W-118	9.1	3.9	0.005	6.00	48	34 feet down 2nd level winze.
W-119	5.9	3.8	Trace	2.40	72	Near Blonsky's sample #19, 1st level.
W-120	3.7	5.4	Trace	0.70	54	Near Blonsky's sample #11, 1st level.
W-121	11.5	14.4	0.01	19.75	60	Near Blonsky's sample #22, 1st level.
W-122	6.0	3.3	Trace	1.40	36	Near Blonsky's sample #15, 1st level.
W-123	7.6	12.5	Trace	1.00	84	Near Blonsky's sample #34, 1st level.
W-124	10.3	8.8	0.005	3.30	60	Near Blonsky's sample #31, 1st level.

Comparison of above assays with those shown in Mr. Blonsky's report indicate that his samplingoof the mine is accurate, reliable and conservative. Mr. Blonsky's assay data is shown in figure 2.

The ore body is not uniform in grade and varies considerably within distances of only a few feet.

ORE RESERVES

The results from samples taken by the writer indicates the reliability of samples taken by Mr. Blonsky which are contained in his report on the property accompanying the DMA application for exploration loan. His estimates of positive ore reserves of 13,020 tons @ 5.15% Pb, 8.42% zinc, 0.0147 oz. Au, 1.56 oz. Ag and probable ore of 3,250 tons @ 4.30% Pb, 8.36% Zn, 0.0149 Au, and 1.42 oz. Ag are conservative.

"REVIEW OF APPLICATION FOR EXPLORATION ASSISTANCE"

The writer consulted with the applicant John Q. Little and his engineer Fred W. Cook regarding the exploration loan for the mine. The consultation resulted in a revised program of exploration somewhat less than that originally proposed. A larger program at the present time is not warranted and the results of the new proposed work should determine the advisability of additional exploration work.

The suggested program will explore the faulted section of the vein on and above the second level, the original part of the vein on and below the third level, and a parallel vein south of the original vein.

EXHIBIT A

Question 10.- The following exploration work is suggested:

(a) 1. Continue drifting on vein on 2nd level in extreme western part of mine - 150 feet.

2. In favorable location in the above exploration work, drive a raise - 200 feet more or less.

3. Continue third level adit to crosscut the vein and then drift on vein - 300 feet total.

4. If good ore is found in the third level exploration work sink 100 ft. winze in a favorable location.

5. Diamond drilling as follows:
   (a) On level 2 extend present drill hole 100 feet to crosscut veins south of the main vein.
   (b) On first level drill one 200-foot hole to crosscut veins south of the main vein.
   (c) On 3rd level drill four 50-foot holes into the walls to test for ore bodies.

(b) A map showing the major portion of the proposed work is shown in fig. 2.

The majority of the exploration will explore the main vein laterally and in depth.

Some of the diamond drilling will explore veins south of the main ore body.

(c) It is believed that all of the suggested project is "exploration" work and the exploration project is worthwhile.

(d) It is believed that within one month after approval of application is received, sufficient housing for the crew will have been completed so that actual underground work may then be started and should be completed within the succeeding five months. The entire project should require about six months.

The suggested work to be performed and the cost thereof follows:

Fixtures and improvements	$ 5,400.00
Equipment cost	14,157.00
450 ft. of drifting and crosscutting @ $25 . . .	11,250.00
200 ft. of raising @ $25	5,000.00
100 ft. of winze @ $40	4,000.00
500 ft. of diamond drilling @ $8	4,000.00
Total cost of project	$43,807.00
Total cost of project say	$43,800.00

EXHIBIT B

Question 11.- The mine camp does not have sufficient housing, change room and boarding house service to accommodate the crew required for the suggested exploration work. In order to keep good men on the job, fair accommodations will have to be provided as the Noon Day mine is not far distant from the Silver Rule mine and will attract good miners if they are dissatisfied.

Fixtures and improvements

4 Small cabins @ $525 ea.	$ 2,100.00
Enlarging change room and bath house and installing water heater	1,500.00
Enlarging kitchen and dining room (including quarters for cook)	1,000.00
1 Store room and office	800.00
Total	$5,400.00

EXHIBIT C

Question 12.- Cost of new equipment to be purchased:

1	Drifter, mounted.	$ 650.00
2	17-cu.ft. mine cars @ $245	490.00
1000	12-lb. rail @ $175/ton	350.00
1	Keg rail spikes	17.00
1	Keg fish plate bolts	17.00
50	Pair fish plates @ $.40	20.00
5	Sets drill steel @ $30	150.00
450	feet 2-inch air pipe @ $.50/ft	225.00
450	feet 3/4-inch water pipe @ $.25/ft	113.00
	Misc. pipe fittings	25.00
	Oxygen-acetylene welding outfit	100.00
1	4-wheel drive pickup.	2,000.00
1	315-cu. ft. Diesel portable air compressor. .	10,000.00
	Total	$14,157.00

Cost of rental for equipment operator proposes to rent - None.

Rental value of items of equipment which the operator now owns and which will be devoted to the work:

		Cost	Rental/mo.	
1	Servel, 9-cu. ft. refrigerator	$385	$ 38.00	6.40
1	Hobart light plant, 3,000 watts	500	50.00	8.35
1	12 B Eimco mucking machine	2600	260.00	43.35
1	Sullivan double drum hoist, scraper, cable	1250	125.00	20.85
1	3-inch G. P. Leyner, mounted	650	65.00	10.85
1	Thor #475 Stoper	475	47.00	7.90
1	Gasoline hoist, cable & bucket (aerial tram)	500	50.00	8.35
2	Mine cars @ $150 ea.	300	20.00	5.00
800	Ft. 12-lb. rail	160 mos	16.00	
1	5-ton 4-wheel drive dump truck 8 mos. old	1800	180.00	30.00
1	4-wheel drive jeep (3 yrs. old)	2000	200.00	33.35
* 1	C. P. Diamond drill & equip.	2700	150.00	45.00
	Total		$1,201.00	

* This drill will also be used at the Carbonate King mine DMA-856X

Supplies

Mine timber, wedges, nails, etc.	$1,500.00
Powder, fuse and caps	1,960.00
Resetting diamond bits	150.00
500 detachable drill bits @ $0.50? ea.	250.00
1,700 gal. Diesel fuel oil .14 1/2¢	240.00
1,500 gal. gasoline .25¢	375.00
Lubricating oil and greases	200.00
Total	$4,675.00

EXHIBIT D

Question 13.- Labor

4 Miners @ $12/day.
2 Shaft men @ $15/day
1 Diamond drill operator @ $20/day
1 Diamond drill helper @ $12/day
1 Accountant (half time) @ $14/day
1 Maintenance man (hauling water, blacksmith work) etc. @ $200/mo.
1 Utility man (half time) @ $10/day
1 Cook @ $200/mo.

Supervisory

1 Superintendent (half time) @ $20/day
1 Shift boss @ $14/day
1 Engineer (1/2 month as soon as approval of application is received and 4 days per month thereafter) @ $15/day

Recapitulation of Finances

Fixtures and improvements	$ 5,400.00
Equipment to be purchased	14,157.00
Supplies	4,675.00
Salaries and wages	16,268.00
Social Security, etc.	1,630.00
Contingencies	1,670.00
Total	$43,800.00

CONCLUSIONS

The suggested exploration program is geologically in favorable ground and should result in materially extending the present limits of the ore body. The possibility of an entire new ore body south of the main ore body will also be explored. The present ore reserves are insufficient for the installation of a mill and the results of the suggested exploration work could result in a material increase of possible ore reserves. The total amount of $116,000 for the work requested in the original application for exploration assistance is considered to be too high, but the writer considers the mine warrants a limited amount of exploration work such as outlined in this report.

McKnight 6/5/50
Billinge
Bishop

SEP 24 1951

Defense Minerals Administration

Review of Application for Exploration Assistance

To: Production Expansion Division

From: Director, Supply Division

Docket No. DMA-855

Commodity Lead, zinc

Total Amount $116,000 requested
$43,800 recommended

Govt. Participation 50% ($21,900)

1. Name and Address of Applicant John Q. Little and Belva M. Little, Nipton, California

2. Location of Property Crystal Springs (Silver Rule) Mine, Sec. 7, T. 19 N., R. 10 E., S. B. B. M., San Bernardino County, California

3. Mineral or metal Lead, zinc, silver, gold Is it listed in Section 9 of MO-5? Yes
If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good See attached field team report

b) Poor

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes

a) MF-201? No

b) MF-202 Attached to docket

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes

Is a field check needed on any of these points? Has been checked

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? Has been checked

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes, See Exhibit A, field team report

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes, see field team report

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Yes, see Exhibit A, field team report

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft.

e) Are the cost estimates reasonable?_____

f) Should more information be requested from applicant?_____

g) Is a field examination necessary to complete Exhibit A?_____

11. Exhibit B (question 23-d)*

a) Is it applicable? Yes

b) If so, are sufficient data furnished? Yes. If so, attach a draft. See Exhibit B, field team report

c) Is a field check needed? Has been checked

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? Yes If so, attach a draft. See Exhbiti C, field team report.

c) Are rents and charges reasonable? Yes

d) Is a field check needed? Has been checked

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes, See. Exhibit D, field team report

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? Has been checked

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.
Concur with field team's recommendation

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question?

Attached are:
3 copies of Form MF-103
3 " " " MF-100
3 " each of reports by Cook and Blensky
6 " of Form MF-202
1 " " Mining lease
3 " " Form MF-200 with exhibits (void)
2 " " Review of Application" for field referral
1 " " Field Team report with attached maps

Reviewed by: Erwin J. Lyons, GS

Date 9-20-51

approved
Jim Lyon

INT.-DUP. SEC., WASH., D.C. 99009

McKinzie
Brock
MG
Ferres

DEPARTMENT OF INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

JUN 25 1951

Mr. H. C. Miller
Executive Officer, DMA Field Team
Region III
1415 U. S. Appraiser's Building
San Francisco 11, California

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 855X

Commodity Lead-zinc

Applicant John Q. Little, Nipton, California

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon, Chairman
Coordinating Committee

For Bureau of Mines

For Geological Survey

Broker
for McKnight
6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 855X

Commodity Lead-zinc

Total Amount $ 116,000

Govt. Participation 50%

1. Name and Address of Applicant John Q. Little, Nipton, California

2. Location of Property Silver Rule Mine, approximately Sec. 7, T. 19 N. R. 10 E. San Bernardino County, California; near Crystal Springs

3. Mineral or metal Lead-zinc Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good X

b) Poor

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes

a) MF-201? No

b) MF-202 Needed

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies ?
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Don't know if adequate for mill

e) Power (question 13)* Yes

Is a field check needed on any of these points? Yes (b) and (d)

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Only that part in original application; additional proposals in revised application described in general terms.
If not, are there sufficient data given so that you can describe the project? No If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? No

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Not all

If not, what part of it is? Additional work too generalized to judge completely, but such items as 12 ore chutes, timber for ore bins, cross-cutting on 3d level to cut winze, and possibly timbering and enlarging present winze, are not exploration.

Is this part a worthwhile exploration project? Some of exploration is worthwhile

d) Are the cost estimates detailed? Yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? Yes, but apparently excessive new equipment is being requested to be used in later mining.

f) Should more information be requested from applicant? Yes

g) Is a field examination necessary to complete Exhibit A? Yes

11. Exhibit B (question 23-d)*

a) Is it applicable? _____

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? Yes

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? Don't know

d) Is a field check needed? Yes

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes, except manpower requirements indefinitely stated

b) Is the schedule adequate for the work proposed? ?

c) Is the schedule excessive for the work proposed? ?

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? Yes

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Don't know

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Original application (March 10) was reasonable except for certain items that could be disallowed as not exploration. Revised application on MF-103 more than doubles original request and, at $116,000, appears very high priced in proportion to worth of the prospect. There is suspicion that revised application (made by different person) may have overlapped items of first application. Revised application also wants a new compressor, new cars, and other new equipment, apparently to replace equipment they already have that may be adequate.

Reviewed by: E. T. McKnight - GS

Date 6/20/51

97692

Refer to	Noted	Date
Answered		

DEPARTMENT OF INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
JUN 27 1951
SAN FRANCISCO, CALIFORNIA

JUN 25 1951

Mr. H. C. Miller
Executive Officer, DMA Field Team
Region III
1415 U. S. Appraiser's Building
San Francisco 11, California

Dear Sir:

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Commodity Lead-zinc

Applicant John Q. Little, Nipton, California

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Very truly yours,

Tom Lynn, Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

Edwin T. McKnight
For Geological Survey

Broker to Metright
6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 855X

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(Question 14 plus general knowledge of availability)*

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a) Is the project adequately described? Only that part in original application; additional proposals in revised application described in general terms.
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a) Is it applicable? _____

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? Yes

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? Don't know

d) Is a field check needed? Yes

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes, except manpower requirements indefinitely stated

b) Is the schedule adequate for the work proposed? ?

c) Is the schedule excessive for the work proposed? ?

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? Yes

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Don't know

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Original application (March 10) was reasonable except for certain items that could be disallowed as not exploration. Revised application on MF-103 more than doubles original request and, at $116,000, appears very high priced in proportion to worth of the prospect. There is suspicion that revised application (made by different person) may have overlapped items of first application. Revised application also wants a new compressor, new cars, and other new equipment, apparently to replace equipment they already have that may be adequate.

Reviewed by: E. T. McKnight - GS

Date 6/20/51

97692

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

McKnight for Jimmell
McKnight for Moore
Inform

Docket mailed 6/25/51

June 22, 1951

Re: Docket DMA-855X

Mr. John Q. Little

Nipton, California

Dear Mr. Little:

Your application (Docket DMA-855X) for an exploration loan under the provisions of the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration. Before final decision can be taken on your request, it will be necessary to obtain additional information on your property. Your application, therefore, has been referred to Mr. H. C. Miller, Executive Officer of the Field Team, 1415 U. S. Appraiser's Building, San Francisco 11, California, for further information and advice.

Very truly yours,

Tom Lyon, Director
Supply Division

ETMcKNIGHT:emp
G 6/22/51

Copies to: H. C. Miller
Region III (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

Loan 855X

852

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

June 18, 1951

Mr. John O. Little
Nipton
California

Subject: DMA-855X
Re: Exploration Loan -
Silver Rule

My dear Mr. Little:

Receipt is acknowledged of your application and attachments for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-855X and referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on June 1, 1951.

In any future correspondence relating to your application, kindly refer to DMA-855X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel jc
Executive Secretary

L. F. Strobel:jc
cc: Strobel
✓File
Herres
Lyon

LANDON F. STROBEL

Nipton, California

May 7, 1951

(This was left on May 28; see postmark on envelope)

The Defense Minerals Administration
Department of the Interior
Washington 25, D.C.

Docket D M A 855

Gentlemen:

Herewith enclosed are forms No. 100 and 103, completed except for the information previously submitted to your office and filed by you under the docket number given above.

It is requested that these forms be combined with the former report to complete our application. Should there be further information that you require we will be glad to furnish it upon request.

Since the first application was sent to your office the cross cut to reach the faulted segment of the vein has been driven and the vein has been reached. Would it be possible to include this work in the project for future payment? It was a very important part of the exploration and at this date amounts to more than 100 feet of work.

Will you kindly mail us two more sets of Forms No. 100 for submission of a request for Priorities or allocation, maintenance, repair and operating supplies for our mines.

mailed 6/2/51 O.K.

Yours very truly,

J. Q. Little

J. Q. Little

JUN 2 1951

APR 12 1951

FILE COPY
SURNAME:

ALBrokaw
McKnight
Vergo

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

Mr. John Q. Little

Nipton, California

In reply please refer to DMA-855

Dear Mr. Little:

One of the purposes of the Defense Production Act of 1950 is the encouragement of exploration, development and mining of strategic minerals and metals. Where an applicant has proven reserves of strategic materials, Federal aid in mining can be given through procurement contracts for such materials as are in short supply. On the strength of these contracts, the applicant can obtain private financing in most instances.

The program recently approved for encouragement of exploration of strategic materials calls for participation on the part of the applicant. For zinc and lead deposits it will be necessary to match Government funds on an equal basis. Funds advanced by the Government will be considered a loan, to be repaid if the exploration is profitable, but to be canceled if unsuccessful. The details of the plan, explaining the projects that will be eligible for assistance, the terms and schedules of financing, repayment, and other pertinent information, are enclosed.

A review of your application (DMA-855) for financial aid in continuing the exploration project at the Silver Rule mine near Tecopa, California, indicates that your proposal may be considered under this exploration program. Details concerning expenditures that will be considered chargeable to exploration aid will be subject to a final determination by negotiation, but as a preliminary appraisal, we believe that the program will apply to the total amount of your application, $55,000.

Before we can proceed further with consideration of your application, which may or may not require a field examination, please indicate your willingness to provide your share of the funds needed to carry out the proposed exploration. Any modification of your original proposal that you may wish to make will be considered, but you should be specific concerning the work you wish to undertake.

ALBrokaw:emp G 4/4/51
Copy to: 2- H. C. Miller
Region III
Chief, Lead-Zinc Br.
McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
C. O. Mittendorf
Files
Enclosures

Very truly yours,

OTTO HARRES

OTTO HARRES, Chief
Lead-Zinc Branch

FILE COPY
SURNAME:

Strobel

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

March 22, 1951

Mr. John Q. Little
Nipton, California

Subject: DMA-855

My dear Mr. Little:

Receipt is acknowledged of your application and attachments of March 10, for a Government loan under the Defense Production Act of 1950.

The application was assigned docket number 855 and referred to Mr. Otto Herres, Chief, Lead-Zinc Branch, on March 21.

In any future correspondence relating to your application, kindly refer to DMA-855.

Sincerely yours,
LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

Copy to: Strobel (2)
Files
Commodity Man

(2)

856

dma 855

200 Waltham Road
Concord, California

March 10, 1951

The Deputy Administrator
Defense Minerals Administration
Department of the Interior
Washington, 25, D. C.

Dear Sir:

At the request of Mr. John Q. Little, of Nipton, California, I have prepared the attached "Statement of Facts" in regard to The Silver Rule Mine which Mr. Little has under lease.

Mr. Little is at present developing this property by diamond drilling and cross-cutting on the second level, as I have shown in pencil on the photostat of the Blonsky Map, included in this report.

This development work is being financed out of the returns from ore shipped from the Carbonate King Mine at Nipton, California. This mine also needs some prospecting work.

In order to prospect the two properties, Mr. Little must raise some funds. Therefore, we are presenting this report and request that the properties be examined by the Bureau of Mines engineers and a loan be granted if the properties meet the necessary requirements for a Government loan.

It is this writer's opinion that they do. This opinion is based on a careful study of the properties in question and many years' experience in appraising and operating mining properties.

Mr. Little has a record of about ten years' mining in this part of the State and his honesty and integrity is unquestioned. Mr. Little is not a mining engineer but employes technical help when he needs it, and is energetic in carrying out programs outlined by his engineers.

It is requested that your reply be directed to Mr. Little at the address above.

Thanking you for your usual prompt action, I am,

Very respectfully,

Fred W. Cook

Fred W. Cook

Statement of Facts as to the location
and Nature of a mineral Deposit
Made by Fred W. Cook 200 Waltham Road
Concord, California
Professional Mining Engineer Nevada License No. 571

February 26, 1951

The property was formerly located as the Silver Rule Mine. It has been relocated as the Crystal Springs but is generally known as the Silver Rule. The metal is Lead, Zinc and Silver.

The property is owned by John and Sylvia Prato of Fontana, California and is leased to John Q. Little and Belva M. Little for a period of ten years with fine years optional renewal.

There are nine unpatented Claims known as "Ome Gulch No. 1, Crystal Springs Mine, Crystal Springs Mine No. II, No. III, No. Iv also the Victory, The Iron King No. 1, No. 2, No. 3; recorded in the Mining Records of San Bernardino County, California in Book 257, Pages 287, 288, Book No. 250 Pages 99,100. Book 285 page 473, Book 297 page No. 121. Book 297 page 122, and Book 299 page 144.

The Claims are situated in approximately Sec. 7, Township 19, North, Range 10 East, San Bernardino Base and Meridian on unsurveyed land.

The property is located approximately 17 miles, east, southeast of Tecopa a post office on State Highway No. 127 about 42 miles North of Baker which is on highways Nos. 91 and 466 between Los Angeles, California and Las Vegas, Nevada.

From Tecopa proceed Easterly on a paved road that leads to the Noonday Mine and Mill of the Anaconda Copper Co. at about 10 miles turn right and leave pavement at a sign "Silver Rule" Crystal Springs" then on a graded road about 8 miles, and well into the pass, turn left at a sign "Silver Rule" and at a few hundred yards the Camp at Crystal Springs. From the Camp a road goes up the mountain to the mine approximately one mile distant. This road is best traveled by a four wheel drive vehicle.

Mr. J. Q. Little address - Nipton, California will be glad to conduct the investigating engineer to the mine and will meet him at any point on request and furnish transportation to the mine.

Anyone in Tecopa can give directions to the mine.

HISTORY OF THE MINE.

Work was started at the Silver Rule early in 1900. The State Bureau of Mines report of 1915 gives some of the history. In 1910, 140 tons of ore was shipped that averaged 48% lead, 26 oz in Silver and 60 cents in gold. The Statistical Division of the Bureau of Mines in San Francisco has a record of some 600 tons shipped that averaged 40% Lead and 10 oz. of Silver and about 158 tons of Zinc Ore that produced 10 tons of zinc. There has doubtless been other shipments unrecorded. John Chambers of Tanopah, Nevada was one of the early owners.

In 1926 the property was owned by the Pacific Lead and Silver Mining Co. of Los Angeles, California and is reported to have done a little work on the property. In 1931 the property was idle. The Bureau's 1943 report states,- "The ore occurs as irregular lenses of Lead Carbonate and Galena along a fissure in the Limestone. Lenses apparently form at the intersections of Cross fractures. Main strikes are N.W. and dips 70° N. Cross fractures are about N. 20° W and dip 70° S.W. The ore body ranges from 3 to 15 feet in width and is said to carry from 25% to 40% Pb., 10 to 12 oz. Ag and 7 to 10% Zn. The ore shoot as developed is practically 100 feet long and has been partly stoped in the two upper levels."

SHIPMENTS OF ORE MADE.

There is no record of shipments other than the 600 tons recorded by the U. S. Bureau of Mines mentioned above. Known Dimensions of the deposit are, as given by Balensky in the attached report Block "A" (See Assay Map in above report) Ore above No. 2 Level and below No. 1 Level. Length 80 feet on No. 2 Level and 170 feet on No. 1 Level shoot height on dip 90 feet. Averages width of ore 5.2 feet. 4790 tons Block "B" Above No. Level, shoot length 170 feet heigth on dip 85 feet average width 5.5 feet, 6500 tons Block "C" Ore below No. 2 Level and above No. 3 level shoot length on No. 2 level 80' and say 40' on bottom shoot height on dip 80' average width 4.0' 1730 tons.

ORE IN SIGHT.

Blocks A plus B plus C 13,020 tons. Probable ore Block D, above Block B estimated to contain 6500 tons. Total ore expected to be found East of Main Cut off fault 19,520 tons.

On account of the size of the ore shoot where it was cut off, it is not unreasonable to expect another 19,000 or 20,000 tons west of the fault.

There appears to be two other veins on the property, one about 40 feet south known as the Mule Trail Vein and the other about 150 feet south of the main vein. These veins appear to run more or less parallel to the principle vein.

A small cut on the "Mule Trail Vein" shows about 78" of fair ore mostly Galena. The other vein has a small tunnel about 20' long. The ore in this tunnel is from 12" to 20" wide, a 20" sample run 1.1% Lead 5.6% Zinc and 7.04 oz

Silver and .035 in Gold.

These two veins might add considerable to the production of the mine and are being prospected with a Diamond drill from the second level of the main workings. See D.D. hole shown on Map.

The strike of these veins is approximately East and West and dip 60° to 70° Northerly.

UNDER GROUND WORKINGS.

Besides the small tunnel mentioned above the principle vein is developed by four adits - No. 1 is approximately 225' long. No. 2 has approximately 420' of drift and Cross cuts and about 400 feet in, it has a Winze 75' deep on the vein. The ore produced has come from these two levels. There is good ore in the Winze down to about 60' and the ore appears to be coming in again at the bottom. The vertical distance between these levels is 70' (See map in Blansky's report).

Approximately 70' Vertical below No. 2 is No. 3. This level was started to conect with the Winze, it is about 90' long. It would take approximately 250' more to connect.

No. 4 is approximately 470' Vertical below No. 2 level and is 420 feet long. It was apparently intended to inercept the vein at depth, but in about 175' they turned right to follow a slip. It would take about 300' of cross cutting from this point to reach the vein at this depth.

GENERAL DESCRIPTION OF THE MINERAL SHOWING.

The minerals produced are lead, zinc, silver and small amount of gold and copper. The lead and zinc occurs mostly as Carbonates. There is some Galena but no zinc sulfides were noted. The vein has a well defined hanging wall but the foot wall is practically undefined. In places the vein is disclosed as a banded vein filling but always shows replacement deposits extending into the foot wall. There is considerable faulting both pre-mineral and post mineral (see pages 3, 4 and 5 of Blansky's report for a discussion of the faulting) The faulting has left exposed on the mountainside a profile aspect of the vein rather than a plan aspect and the vein is visable to almost the top of the mountain at least 350 feet above Level No. 2. There are Iron cut crops on top of the mountain which are doubtless outcrops of these veins but on account of the ruggedness of the terrain it is hard to decide which out crop belongs to which vein.

SAMPLING AND ASSAYS.

There have been many samples taken from the exposed ore but it is thought that the 40 samples taken by Mr. Blansky and shown on his map and in his report are about as fair a sampeling as could be done. Except that Blansky took only one sample in the Winze. Samples taken by others, one just below the collar of the winze, run 54.2% Pb. , 3.5% zn and 62.7 oz of silver and was the full width of the Winze - 57 inches, 20 feet below, across the width of the Winze the assay was Pb 21.5%, Ag 5.6 oz. Zn. 1.0%.

MINE IMPROVEMENTS.

Surface improvements consist of two cabins, washroom and swimming pool at Crystal Springs. These cabins can take care of five or six men, one being equipped with a cook stove, tables etc. for preparing meals.

At the mine is a 35 ton ore bin connected with an ore schute approximately 200' long connecting the bin with No. 2 Level also an aerial tram and gasoline hoist to raise supplies up to No. 2 Level. The ore is taken from the mine bin to a larger bin at the camp by a four wheel drive truck. From this bin it is loaded on larger trucks and hauled to the Railroad at Dunn, a station on the Union Pacific Railroad for shipment to the smelter.

The No. 2 level is equipped with track, air and water pipe and a 17 cu. ft. mine car a duplex air driven steam pump lifts waters from the end of the road to No. 2 Level. Drilling equipment consists of a 210 C F M LeRoy deisel driven portable compressor, 2 mounted Jack hammers with drilling rods and detachable bits, a stopehammer with rods and bitts.

A C.P. No. 5 Diamond drilling machine with 150' of A drilling rods and 500 ft. of E rods with core barrels, and with approximately $1000.00 worth of bits, reamers and 150 feet of Ex casing etc. A column and arm for mounting the drill for underground work an air driven duplex steam pump furnishes water for the drill.

There are various columns and bars with arms and saddles for the Jack hammers as well as air and water hose, extra detachable bits etc. Sufficient for operating the mine. Also a No. 12-B. Eimco rocker shovel, a four wheel drive truck about 5 ton capacity also a four wheel drive Willys Jeep - A 2 ton Chevrolet dump truck and a 3000 watt Kohler light plant.

DESCRIPTION OF THE PROJECT.

The objectives of the project is to break through the fault that cuts off the ore and cross cut south until the other section of the vein is picked up. If ore is found in the faulted section it will be developed by drifting on the vein and by raises. The footwall veins are being explored with a diamond drill. If ore is found in these veins it will also be developed for extraction. If shipping ore is encountered it will be shipped until sufficient ore is developed to make the installation of a mill profitable. Specifically money is needed to cross cut to the faulted segment of the vein estimated to be less than 100'. Of course it depends on the results obtained in the first Diamond Drill hole, but it is probable that at least 3 holes at the present set up will be necessary - way 450' and the same amount on the first level or say 1500 feet in all. The Winze should be sunk on the ore at least 100 feet more and if ore is developed in all the above places then the 3rd level should be extended and connected with the Winze and the ore bin connected with No. 3 level. By the time all this is accomplished there will be in sight enough ore to justify a mill.

Funds necessary for developing would be approximately as follows:

1500 feet of Diamond Drillings @ $5.50 per foot	$8,250.00
Cross Cutting for the faulted segment of the vein 100 feet @ $20.00 per foot	2,000.00
100 feet of Winze @ $35.00 per foot	3,500.00
100 feet of Cross Cutting for the veins prospected with the Diamond Drill @ $20.00 per foot	2,000.00
200 feet of drifting on vein for developing ore at $20.00 per foot	4,000.00
250 feet of Cross cutting ore 3rd Level to connect with Winze @ $20.00 per foot	5,000.00
<u>Equipment Needed</u>	
2 slushers, 1 stopehammer, 1 jack hammer, 1 truck	8,200.00
Small tools for Blacksmith shop	550.00
Tugger Hoist	1,000.00
Timbers for ore bins and timbering	4,000.00
<u>Road Work, Workers Facilities etc.</u>	
For easing grades on present road	3,000.00
Cook House & 5 Cabins, office and assay room, store house	5,000.00
	$46,500.00
Contingencies	4,500.00
Engineering & Legal services	4,000.00
	$55,000.00

Requirements of the proposed project.

Funds Required	$55,000.00
Man power on averages of ten men per day	
Construction of 8 small houses	
1 Truck, Dump for ore hauling and for hauling supplies.	
2 air driven slushers with hoists, cables and scrapers.	
1 stopehammer and 1 jack hammer with mountings, including Column and bar, arm and saddle extra drill rods and detachable bits.	
Road work 2 men with cat for 30 days	

Time required to complete the project between six and seven months with an average of ten men per day.

Fred W Cook
2/26/51

REPORT

ON

S I L V E R R U L E M I N E

EXAMINATION

Based on author's personal visit

to the property

October 1st to 7th

1950.

by

GEORGE B. BLONSKY

Mining Engineer

Registered Professional Engineer

Certificate No. 7179

State of California

GEORGE B. BIONSKY
MINING ENGINEER
1901 E. MARSHALL ST.
ROSEMEAD, CALIF.
At. 6-1079.

The following report and map on the Silver Rule Mine are made for the purpose of establishing whether the ore exposed is sufficient to warrant construction of a milling plant and, if not, whether there is enough of promise in the property to warrant additional development work aiming at finding sufficient further ore reserves to justify eventual construction of a mill.

The conclusions arrived at below are as follows:

1. Ore reserves so far exposed are insufficient to warrant construction of a mill for their beneficiation. A small speculative investment toward the solution of the main cut out fault is definitely warranted.

2. The general geology of the Silver Rule mine appears to be well enough understood to encourage the belief that the main faulting problem can be solved at a very limited expense and that substantial bodies of ore will thus be proven and will guarantee that construction of a small milling plant would be a very profitable investment.

3. The water situation at the camp is of prime importance. There is very little sense to spend important sums of money on developing additional ore, only to find later that a comparatively small sum could have proven that the 50 gal. per minute needed for the mill are not obtainable at the Silver Rule camp.

4. The bond and lease and option to purchase (a set total price of property and royalty based on % of net smelter returns payable to the owners towards the purchase price) should be settled definitely before a metallurgical plant is decided upon. Building a mill on leased ground often brings no end of trouble.

5. Metallurgical tests should be conducted on samples obtained by the writer to determine what % of Zinc carbonates, oxides and sulphates can actually be recovered. The calculations given below are based on guestimates, which may be born out or not by actual laboratory work. The margins of profit on this ore are not great and Zinc accounted as recovered represents nearly one third of the net smelter returns. It is well known that recovery of non-sulphide zinc is very difficult and often a source of disappointment.

GEOLOGY.

A study of geology and of faulting systems was made at the property and in the office on the basis of the map made for this report. It was found that the deposit is a replacement of favorable beds of lime by lead and zinc minerals which, undoubtedly, at greater depth will be found in their original sulphide form. In horizons of #1 and #2 levels, though some galena is present, most of the values are in carbonates and oxides. Some secondary anglesite and smithonite were observed while no sphalerite was seen. This is of course due to the shallowness of the workings and to the dryness of the climate. Lead is found as galena only where the rock is very dense and oxidation was prevented by lack of penetrating oxidizing solutions and gases. This was very obvious when attempts at breaking galena bearing highgrade were made.

There was very little difference in composition of rock or assay between the upper and the lower level. #2 level had narrower ore body but slightly higher content of all four metals. It was observed that wherever the body flattened, it widened, and so far as our samples show the grade generally decreased.

In the winze below the #2 level the ore appears to be steeper yet and narrower than on the #2 level. The only sample taken in the bottom of the winze is not representative, as it was taken in a lean spot in the endeavour to get to the reported high grade ore buried under muck. Fair ore extends down the winze at least 60' below #2 level. It is possible that the winze followed a post mineral fault deviating into the footwall of the vein, and that the main body of ore is left untouched in the hanging wall of the winze. This possibility should be investigated.

FAULTING:

The Silver Rule mine workings expose a very intricate and significant system of faults. Most of these are post mineral and can be classed in two groups:

a. The $\pm 60^{\circ}$ to 70° Northerly dip faults conforming very closely with the mineralized ore beds. Their strike is predominantly E & W and they generally have ore both in foot and hanging. It appears that probably these are both pre- and post-mineral faults: that is probably an original pre-mineral fault fracture provided the access to mineralizing solutions and after mineralization the plane of weakness for further movements along the same or nearly the same fracture. These are the faults followed by the former miners and show considerable mineralization from the portals in the east all the way to the west, where they

are cut off abruptly by faults belonging to the different fault system, which could be called cross faults.

b. The cross faults have a general strike N-30-W or S-30-E and a steep westerly dip close to 80°. These faults do not seem to produce large displacements except at the westernmost end of both levels and at Station 3 in #2 level, where both the E-W faults and the ore are abruptly cut out.

On the lower level the ore is again picked up at Station 5 and follows the E-W fault all the way west to a little west of Station 10, where begins a host of S-30-E faults and the ore is cut off completely. The disturbance between Stations 3 and 5 on the #2 level is more clearly understood if one studies the series of S-30-E faults in the barren crosscut west of Station 3. At this place the barren E and W crosscut exposes about 40' of fault and shear zone on the #2 level, which is also seen between Stations 3 and 5 on level #2, but does not show up on level #1, except outside the portal, because these are normal faults and the eastern block was elevated and eroded at the portal of #1 tunnel.

The main fault zone cutting ore out on the west end is a repetition of the above described eastern system of NW-SE faults. On the #2 level this western fault system is rather obscure on account of the multiplicity of faults discovered. On the other hand, if one studies them in conjunction with the cut off fault on the No. 1 level the picture becomes clearer.

The superimposition of the west ends of the two tunnels and the disappearance of the ore practically at the same coordinate on both levels prove that the same fault system is to blame for the ore cut off in both tunnels. The solution of this western limit NW-SE fault is all important for the potential future of this mine. It happens to cut the ore off right where the ore shoot became quite strong and, should the ore be found on the other side of this fault, there are very good reasons to believe that a very considerable block of virgin and profitable ore would be found. Some effort was expended towards solution of this very important fault problem on the #2 level, but very limited results were obtained.

The barren northernmost crosscut going west from Station 10 was a waste of effort just the same as the barren crosscut going west into the shear and fault zones from Station 3. All these crosscuts proved was that these faults are of major nature and that ore was removed in direction unknown.

The drift from Station 10 south done by Mr. Little followed the fault plane or planes for some 25' and uncovered the intricacy of the fault system.

The southern half of this drift from Station 11 to the face has a bearing practically identical with the bearing of the cut off fault on the #1 level some 65' above and to the S.E. This is not a coincidence, but a very indicative fact. On the #2 level at Station 11 sample No. 9 showed 70" of best ore in the mine; 13.3% Pb, 10.0% ZN, 4.8 oz. Ag, 0.025 oz Au. This appears to be a part of the ore exposed in the stope above #2 level. Farther south in the same drift at a point about Station 11 - 8' Mr. Little took out of the floor of the drift two mine car loads of high grade galena ore appearing as an isolated kidney. Farther south small spuds of galena were found in each round, but always in diminishing quantities. The limestone traversed by the drift is in badly sheared and jointed condition, all of which indicates a fault zone and a drag. When an ore body is sheared off by a fault, it is very seldom that a clean break is made. Generally along the plane of displacement between the two offset fractions of the original ore body one finds a smear of crushed ore in a general way pointing from one segment to the other. Such smears or drags are very useful in finding the faulted off segment of the ore. It is believed by the writer that there is drag evidence south of the No. 11 Station of #2 level that the faulted off and lost part of the ore on the west side of the fault has moved to the S.-E. On the other hand, the distance of such a movement can ot be judged on the #2 level; the only thing one can say is, that this movement more than probably exceeds several times the thickness of the vein.

The crosscut driven west from Station 11 paid off very poorly. It is too close to the crosscut west from Station 10 to give any additional information and it is not far enough south along the fault plane to have any chances to pick up the faulted off segment on the west side of the fault. The writer would have much rather seen the effort put into the Station 11 west crosscut extended on a short working, maybe two rounds, along the cut off fault going north from Station 10 to prove the absence of drag there and thus definitely to substantiate the theory of southeastern movement of the western block and of the faulted off segment of ore.

As the picture at the west end of the #2 tunnel is rather obscured by multiplicity of curving faults, it would be wiser to spend the money and effort for solution of this fault problem on the #1 or upper level. Here in the west end of the upper level we have a very pronounced N-35-W vertical cut off fault, the drag situation on which was partially investigated. The two small drifts along this

fault, one N.E. of Station 10 and the other S.E. in the west side of the stope, are moves in the right direction. The samples Nos. 36 and 34 fall right in line with the theory we tried to build up on the #2 level. Sample #36, if it is on the east side of the fault plane in the hanging wall of the ore bed segment which moved to the N.E. or up with respect of the western segment of ore body, should have no drag and no ore. This sample, although quite ferruginous and stained, assayed: trace Pb, trace Zn, trace Ag and nil Au. On the other hand, sample #34, if our theory of movement of the western block to the S.E. is correct, should have been taken in the drag zone in the foot wall of the known fragment of the ore body and therefore, though not rich, should indicate presence of lead and zinc. The assay of sample #34 actually is reported as: 1.4% Pb, 025 oz. Ag., 7.0% Zn, Tr. Au. The writer believes this to be a pretty good indication that probably our fault problem though not yet solved, is on the way of solution.

To complete the solution of this preeminently important fault problem, one should concentrate on #1 level. A round or two S.E. along the cut off fault should positively establish the existence or the absence of the drag in this direction. Should the drag be definitely proven to exist in this S.E. drift, then a south westerly crosscut should be driven across this fault at a point about 35' S.E. of Station #10, until the other side of the fault zone is reached and then a drift should follow S. eastwards on the west side of the fault until the west segment of the orebody is picked up. It is hoped that this would be accomplished before the finances and the courage are overtaxed by apparently dead work.

ORE RESERVES.

The survey of the Silver Dale mine shows definitely present the following blocks of ore:

1. Ore above #2 level and below #1 level:
   Shoot length 80' on #2 level and 170' on #1 level
   Shoot height on dip : 90'
   Average width of ore : $\frac{4.5 + 5.5 + 5.5}{3} = 5.2'$
   assumed cubic feet per ton : 11

$$\text{Tonnage A} = \frac{\frac{170 + 80}{2} \times 90 \times 5.2}{11} = 5325 \text{ tons}$$

less 10% for pillars -535 "

Ore in Block "A"..... 4790 tons

B. Ore above #1 level

Shoot length 170'
Shoot height on dip: take ½ of length = 85'
Average width : 5.5'

Tonnage B = $\frac{170 \times 85 \times 5.5}{11}$ = 7225

less 10% for pillars ..... -725

Ore in Block "B" 6500 tons

C. Ore below #2 level and above #3 level

Shoot length 80' on top and say 40' on bottom
Shoot height on dip 80'
Ore width 4.0'

Tonnage C = $\frac{\frac{80 + 40}{2} \times 80 \times 4.0}{11}$ = 1920 tons

less 10% for pillars -190

Ore in Block "C" 1730 tons

ORE IN SIGHT: A + B + C = 13,020 tons

D. Ore Probable above Block "B", if extending close to surface assume about 6500 tons more

TOTAL ORE EXTRACTABLE east of main cut off fault on the west side

19,520 tons

Should the main west cut off fault be successfully solved, a similar additional tonnage could be reasonably expected.

GRADE OF ORE RESERVES.

Assays of the ores sampled were below those anticipated on the basis of former reports, but are not condemning for the following two reasons:

a. Stopes sampled were not representative of virgin ore to be mined, but of faces at which the oldtimers quit mining after they took out the highgrade and were discouraged by lower grade left in the faces. One can reasonably expect that average ore, when mined lowgrade and highgrade together, will run higher than our samples.

b. While sampling it was definitely established that there were 3 types of rock in the faces:
   1. very hard limestone
   2. very hard highgrade galena bearing rock
   3. soft and crumbly medium and lowgrade ore carrying carbonates.

   In cutting samples, of course the hard lime was left alone as wall rock if it was below or above the commercial ore. The soft medium and lowgrade was fully represented. But the tough highgrade was hard to get and while it was chipped, excessive quantities of lower grade diluted the samples.

Therefore the writer believes that the average milling ore would run at least 10% better grade than our average samples and quite possibly more. This is the reason why no grade reduction for dilution in mining was applied in our calculations.

ACTUAL AVERAGE ASSAYS CALCULATED:

Block	tons	%PB	oz.Ag.	%Zn.	oz.Au		
A	4790	5.99	1.70	8.47	0.0145	sampled	) ore
B	6500	4.30	1.42	8.36	0.0149	sampled	) in
C	1730	5.99	1.70	8.47	0.0145	sampled above level	) sight
D	6500	4.30	1.42	8.36	0.0149	guestimated = probable ore.	

Total 19,520 tons maximum expectable ore

The blocks A,B. & C represent ore in sight and which definitely counted upon for milling. The Block "D" is above Block "B" and may be present, but has to be proven before it can be counted as definite ore. Therefore for metallurgical calculations only half of the ore in Block "D" will be allowed.

Average assay of the positve ore is
13,020 tons @ 5.15% Pb., 1.56 oz.Ag, 8.42% Zn., 0.0147 oz.Au

and of the probable ore is
3,250 tons @ 4.30% Pb., 1.42 oz.Ag, 8.36% Zn., 0.0149 oz.Au

Average of the total ore expected to be milled east of the cut-off fault is:
16,270 tons @ 4.97% Pb., 1.53 oz.Ag, 8.40% Zn., 0.0147 oz.Au

adding 10% to the values due to the reasons given under "Grade of Ore Reserves" we obtain:
16,270 tons @ 5.47% Pb., 1.68 oz.Ag, 9.24% Zn., 0.0162 oz.Au

CALCULATION OF ASSAY VALUE OF AVERAGE ORE

Pb	$\frac{5.47 \times 2000 \times .16}{100}$	$17.50
Zn	$\frac{9.24 \times 2000 \times .175}{100}$	$32.35
Ag	1.68 X 90	$ 1.51
Au	0.0162 X 35	$ 0.57

Total assay value ..... $51.93 per ton

16,270 tons @ $51.93 $843,000.00 assay value of ore to be milled.

NET SMELTER RETURN VALUE OF ORE TO BE MILLED.

Applying terms and prices currently used by International Smelter at Tooele, Utah, the following calculation will be made after concentration assumptions are applied:

Assay of Crude	Quantity p.ton crd.	% recovered	recovered p.ton crd.	recovered p. ton crd. 7 to 1 concentration
Pb 5.47%	109.4 lbs.	85%	101.4 lbs.	710 lbs.
Zn 9.24%	184.8 "	75	138.0 "	966 "
Ag 1.69oz.	1.680 oz.	85	1.43 oz.	10 oz.
Au 0.0162	0.0162 oz.	85	0.0138 oz.	0.0965 oz.

therefore assay of 7 to 1 concentrates per ton:
35.5% Pb, 48.3% Zn., 10 oz. Ag., 0.0965 oz. Au.

Assume that concentrates will have:
3% Insols; 5% Fe; 6% S; 2.2% CaO; 1.0% As & Sb;

Then <u>credits</u> are:

Pb - pay 90% on assay less 1.5% @ 16¢ less 2¢ per lb.

$$.90 \times (35.3 - 1.50) \times \frac{2000}{100} \times \frac{(16-2)}{100} = \$\ 85.80$$

Zn - pay 75% on assay @ 5.6¢ per lb.

$$.75 \times 48.3 \times \frac{2000}{100} \times \frac{5.6}{100} = \$\ 40.60$$

Ag - pay 95% on assay @ 90¢ per oz.

$$.95 \times \frac{90}{100} \times 10 = \$\ 8.55$$

Au - pay 91% on assay @ $35.00 per oz.

$$.91 \times 0.0965 \times 35 = \$\ 3.07$$

Total credits are $138.02

<u>Debits</u> are:

Base Smelter charge	$ 5.55
Insols @ 10¢ per unit	$ 0.30
Sulphur @ 20¢ per unit	$ 1.20
Zn @ $0.15 p. unit	$ 7.24
Lime	$ 2.00
	$ 16.29
Credit for iron @ 6¢ per unit	-$ 0.30
Therefore total deducts are	$ 15.99

Total gross credits	$138.02
Total deducts at Smelter	$ 15.99
Credit before freight	$122.03
Freight & 3% tax	-$ 12.00

Therefore Net Smelter Return
p. ton concentrate ... $110.03
N.S.R. per ton crude $15.72 (at 7 to 1 concentration)

ESTIMATE OF COSTS AND RETURNS FROM OPERATION.

With ore bodies of fair width and good free running slopes of stopes, mining per ton should not cost over $5.00. Mining costs may be kept down by the use of slushers and ore passes to the #3 level. Fairly simple milling, principally based on gravity concentration with flotation of slimes and reground table middlings only, should cost under $4.00 per ton crude, -- adding for some overhead we can assume that mining, milling and haulage to the mill will cost about $10.00 per ton crude ore.

This leaves $5.72 per ton or $5.72 x 16,270 = $93,000.00 for amortization of investment, royalty and profits.

The investment can be roughly estimated as follows:

1. Mill	$40,000.00	
2. Camp (change room, office, store room)	$10,000.00	
3. Preparation of mine (#3 tunnel, winze timber, moving of the bin)	$12,000.00	
4. Water development.....	$ 1,000.00	
	$63,000.00	
Royalties (usual) 10% of Net Smelter Returns: .10 x 15.72 x 16,270	$25,600.00	
Royalties and expenses	$88,600.0	$88,600,00
Therefore left for Profit from ORE IN SIGHT		$ 4,400.00

About 325 mill run days at 50 tons per day are expected.

C O N C L U S I O N.

It is clear that one cannot start a mining enterprise with such modest returns. This operation would give only 6% or 7% return on the capital besides amortization of all the investment. The risk involved in any mining operation demands much higher rate of returns to warrant taking the chance.

On the other hand, the lack of attractiveness of this business lies in the limited tonnage of ore developed and the consequent excessively heavy amortization charges against the returns. Such charges would be fair only, if no additional ore could be developed. On the other hand, should there be developed an equal additional tonnage, then the second year of operation would bring very handsome returns, as the heavy charges such as described above and amounting to some $63,000.00, would not be recurring and instead these sums would go into the profit column. In this way, should sufficient ore be proven for two years' operation, the profits for the two years should be about twice the $4,400.00 plus the $63,000.00 or a total of $71,800.00 or about $35,900.00 per year on about $70,000.00 original investment. Of course, the above mentioned speculative fault solution investment would have to be paid out of these profits. In other words, the doubling of ore reserves changes the picture from a rather unattractive to a very promising one.

R E C O M M E N D A T I O N S.

As most small undeveloped mines, the Silver Rule needs a little prospecting and hence some speculative capital. About 200' feet of drifting and crosscutting and 400 to 600 feet of diamond drilling should be sufficient to prove or disprove the presence of ore within reasonable distance of the present workings. Such development would cost may be as little as $3000.00, but surely no more that $6000.00 and would be very well repaid, if ore were picked up west of the main fault.

As things stand at the date of this writing, I cannot recommend the construction of a mill, but I do think that additional development along the lines described above is fully warranted and is a very good mining speculation.

As Mr. Little has established a camp at Silver Rule, has a small but congenial and efficient crew and all the needed equipment at the mine, the prospecting work suggested in this report will cost but half of what it would, should one be starting from scratch at an isolate place in the desert.

GENERAL REMARKS.

Surveying: of the main two levels - #1 and #2 and a tie between them was done with a regular surveyor's transit and is believed

to be quite accurate. The mapping of stopes and #3 and #0 levels was done with a Brunton and is consequently rough but close enough for the purpose of this report.

SAMPLING was done at as regular intervals as possible and where one expected either to find mineable ore, or in critical spots, such as at the main fault face, at the bottom of the winze or in a raise. Samples were taken at even 10 feet intervals and not where the ore looked good. A total of 41 samples was taken.

CALCULATIONS were done with a special care to approach as closely as possible actual mining conditions. Where more ore was reported than it was possible to sample, 50% additional width was allowed, unless the assay was low, in which case no additional width was calculated. In 3 places, where assays turned out very disappointing they were not calculated in the average, as it was assumed that in these three places pillars would be left. This procedure is consistent with good mining practice and on account of its use the total amount of ore calculated was reduced by 10% to allow for the exclusion of these pillars. All averages were weighted on inch width basis of each sample.

Preparation of mine for extraction of ore should include the following items and costs:

1. Timbering of main winze	$2000.00
2. Extending #3 level 250' @ $15.00	$3750.00
3. Installation of slushing equipmt.	$1350.00
4. Opening up beyond fault	$2000.00
5. Moving bin to #3 level	$1000.00
6. Extending road to #3 level	$1000.00
7. Improving access to upper levels	$ 900.00
Total	$12,000.00

Prospecting of promise to be done at an early date:

1. New 78" vein 40' south of #1 portal -- a couple of rounds
2. Bottom of winze -- clean out, follow ore if any.
3. Crosscut into hanging wall of winze.
4. Crosscut in hanging wall in raise above #2 level.
5. Slabbing off of vein matter at Station #2 on #2 level.

Map attached to this report is a result of a geological, economical and topographical study and should be carefully consulted as the above report is perused. It is hoped that it will be of help to Mr. Little in planning his future work at this promising prospect.

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Assay sheet of analyses on 41 samples obtained by Mr. Ed Eisenhauer is attached to this report.

Respectfully submitted

s/ George B. Blonsky

GEORGE B. BLONSKY.

Mining Engineer.

Registered Professional Engineer
Certificate No. 7179
State of California.

October 25, 1950.

Statement of Facts as to the location
and Nature of a mineral Deposit
Made by Fred W. Cook 200 Waltham Road
Concord, California
Professional Mining Engineer Nevada License No. 571

February 26, 1951

The property was formerly located as the Silver Rule Mine. It has been relocated as the Crystal Springs but is generally known as the Silver Rule. The metal is Lead, Zinc and Silver.

The property is owned by John and Sylvia Prato of Fontana, California and is leased to John Q. Little and Belva M. Little for a period of ten years with five years optional renewal.

There are nine unpatented Claims known as "Ore Gulch No. 1, Crystal Springs Mine, Crystal Springs Mine No. II, No. III, No. Iv also the Victory, The Iron King No. 1, No. 2, No. 3; recorded in the Mining Records of San Bernardino County, California in Book 257, Pages 287, 288, Book No. 250 Pages 99,100. Book 285 page 473, Book 297 page No. 121. Book 297 page 122, and Book 299 page 144.

The Claims are situated in approximately Sec. 7, Township 19, North, Range 10 East, San Bernardino Base and Meridian on unsurveyed land.

The property is located approximately 17 miles,east, southeast of Tecopa a post office on State Highway No. 127 about 42 miles North of Baker which is on highways Nos. 91 and 466 between Los Angeles, California and Las Vegas, Nevada.

From Tecopa proceed Easterly on a paved road that leads to the Noonday Mine and Mill of the Anaconda Copper Co. at about 10 miles turn right and leave pavement at a sign "Silver Rule" Crystal Springs" then on a graded road about 8 miles, and well into the pass, turn left at a sign "Silver Rule" and at a few hundred yards the Camp at Crystal Springs. From the Camp a road goes up the mountain to the mine approximately one mile distant. This road is best traveled by a four wheel drive vehicle.

Mr. J. Q. Little address - Nipton, California will be glad to conduct the investigating engineer to the mine and will meet him at any point on request and furnish transportation to the mine.

Anyone in Tecopa can give directions to the mine.

HISTORY OF THE MINE.

Work was started at the Silver Rule early in 1900. The State Bureau of Mines report of 1915 gives some of the history. In 1910, 140 tons of ore was shipped that averaged 48% lead, 26 oz in Silver and 60 cents in gold. The Statistical Division of the Bureau of Mines in San Francisco has a record of some 600 tons shipped that averaged 40% Lead and 10 oz. of Silver and about 158 tons of Zinc Ore that produced 10 tons of zinc. There has doubtless been other shipments unrecorded. John Chambers of Tonopah, Nevada was one of the early owners.

In 1926 the property was owned by the Pacific Lead and Silver Mining Co. of Los Angeles, California and is reported to have done a little work on the property. In 1931 the property was idle. The Bureau's 1943 report states,- "The ore occurs as irregular lenses of Lead Carbonate and Galena along a fissure in the Limestone. Lenses apparently form at the intersections of Cress fractures. Main strikes are N.W. and dips 70° N. Cross fractures are about N. 20° W and dip 70° S.W. The ore body ranges from 3 to 15 feet in width and is said to carry from 25% to 40% Pb., 10 to 12 oz. Ag and 7 to 10% Zn. The ore shoot as developed is practically 100 feet long and has been partly stoped in the two upper levels."

SHIPMENTS OF ORE MADE.

There is no record of shipments other than the 600 tons recorded by the U. S. Bureau of Mines mentioned above. Known Dimensions of the deposit are, as given by Balansky in the attached report Block "A" (See Assay Map in above report) Ore above No. 2 Level and below No. 1 Level. Length 80 feet on No. 2 Level and 170 feet on No. 1 Level shoot height on dip 90 feet. Averages width of ore 5.2 feet. 4790 tons Block "B" Above No. Level, shoot length 170 feet heigth on dip 85 feet average width 5.5 feet, 6500 tons Block "C" Ore below No. 2 Level and above No. 3 level shoot length on No. 2 level 80' and say 40' on bottom shoot height on dip 80' average width 4.0' 1730 tons.

ORE IN SIGHT.

Blocks A plus B plus C 13,020 tons. Probable ore Block D, above Block B estimated to contain 6500 tons. Total ore expected to be found East of Main Cut off fault 19,520 tons.

On account of the size of the ore shoot where it was cut off, it is not unreasonable to expect another 19,000 or 20,000 tons west of the fault.

There appears to be two other veins on the property, one about 40 feet south known as the Mule Trail Vein and the other about 150 feet south of the main vein. These veins appear to run more or less parallel to the principle vein.

A small cut on the "Mule Trail Vein" shows about 78" of fair ore mostly Galena. The other vein has a small tunnel about 20' long. The ore in this tunnel is from 12" to 20" wide, a 20" sample run 1.1% Lead 5.6% Zinc and 7.04 oz

Silver and .035 in Gold.

These two veins might add considerable to the production of the mine and are being prospected with a Diamond drill from the second level of the main workings. See D.D. hole shown on Map.

The strike of these veins is approximately East and West and dip 60° to 70° Northerly.

UNDER GROUND WORKINGS.

Besides the small tunnel mentioned above the principle vein is developed by four adits - No. 1 is approximately 225' long. No. 2 has approximately 420' of drift and Cross cuts and about 400 feet in, it has a Winze 75' deep on the vein. The ore produced has come from these two levels. There is good ore in the Winze down to about 60' and the ore appears to be coming in again at the bottom. The vertical distance between these levels is 70' (See map in Blansky's report).

Approximately 70' Vertical below No. 2 is No. 3. This level was started to conect with the Winze, it is about 90' long. It would take approximately 250' more to connect.

No. 4 is approximately 470' Vertical below No. 2 level and is 420 feet long. It was apparently intended to inercept the vein at depth, but in about 175' they turned right to follow a slip. It would take about 300' of cross cutting from this point to reach the vein at this depth.

GENERAL DESCRIPTION OF THE MINERAL SHOWING.

The minerals produced are lead, zinc, silver and small amount of gold and copper. The lead and zinc occurs mostly as Carbonates. There is some Galena but no zinc sulfides were noted. The vein has a well defined hanging wall but the foot wall is practically undefined. In places the vein is disclosed as a banded vein filling but always shows replacement deposits extending into the foot wall. There is considerable faulting both pre-mineral and post mineral (see pages 3, 4 and 5 of Blansky's report for a discussion of the faulting) The faulting has left exposed on the mountainside a profile aspect of the vein rather than a plan aspect and the vein is visable to almost the top of the mountain at least 350 feet above Level No. 2. There are Iron cut crops on top of the mountain which are doubtless outcrops of these veins but on account of the ruggedness of the terrain it is hard to decide which out crop belongs to which vein.

SAMPLING AND ASSAYS.

There have been many samples taken from the exposed ore but it is thought that the 40 samples taken by Mr. Blansky and shown on his map and in his report are about as fair a sampeling as could be done. Except that Blansky took only one sample in the Winze. Samples taken by others, one just below the collar of the winze, run 54.2% Pb. , 3.5% zn and 62.7 oz of silver and was the full width of the Winze - 57 inches, 20 feet below, across the width of the Winze the assay was Pb 21.5%, Ag 5.6 oz. Zn. 1.0%.

MINE IMPROVEMENTS.

Surface improvements consist of two cabins, washroom and swimming pool at Crystal Springs. These cabins can take care of five or six men, one being equipped with a cook stove, tables etc. for preparing meals.

At the mine is a 35 ton ore bin connected with an ore schute approximately 200' long connecting the bin with No. 2 Level also an aerial tram and gasoline hoist to raise supplies up to No. 2 Level. The ore is taken from the mine bin to a larger bin at the camp by a four wheel drive truck. From this bin it is loaded on larger trucks and hauled to the Railroad at Dunn, a station on the Union Pacific Railroad for shipment to the smelter.

The No. 2 level is equipped with track, air and water pipe and a 17 cu. ft. mine car a duplex air driven steam pump lifts waters from the end of the road to No. 2 Level. Drilling equipment consists of a 210 C F M LeRoy deisel driven portable compressor, 2 mounted Jack hammers with drilling rods and detachable bits, a stopehammer with rods and bitts.

A C.P. No. 5 Diamond drilling machine with 150' of A drilling rods and 500 ft. of E rods with core barrels, and with approximately $1000.00 worth of bits, reamers and 150 feet of Ex casing etc. A column and arm for mounting the drill for underground work an air driven duplex steam pump furnishes water for the drill.

There are various columns and bars with arms and saddles for the Jack hammers as well as air and water hose, extra detachable bits etc. Sufficient for operating the mine. Also a No. 12-B. Eimco rocker shovel, a four wheel drive truck about 5 ton capacity also a four wheel drive Willys Jeep - A 2 ton Chevrolet dump truck and a 3000 watt Kohler light plant.

DESCRIPTION OF THE PROJECT.

The objectives of the project is to break through the fault that cuts off the ore and cross cut south until the other section of the vein is picked up. If ore is found in the faulted section it will be developed by drifting on the vein and by raises. The footwall veins are being explored with a diamond drill. If ore is found in these veins it will also be developed for extraction. If shipping ore is encountered it will be shipped until sufficient ore is developed to make the installation of a mill profitable. Specifically money is needed to cross cut to the faulted segment of the vein estimated to be less than 100'. Of course it depends on the results obtained in the first Diamond Drill hole, but it is probable that at least 3 holes at the present set up will be necessary - way 450' and the same amount on the first level or say 1500 feet in all. The Winze should be sunk on the ore at least 100 feet more and if ore is developed in all the above places then the 3rd level should be extended and connected with the Winze and the ore bin connected with No. 3 level. By the time all this is accomplished there will be in sight enough ore to justify a mill.

Funds necessary for developing would be approximately as follows:

1500 feet of Diamond Drillings @ $5.50 per foot	$8,250.00
Cross Cutting for the faulted segment of the vein 100 feet @ $20.00 per foot	2,000.00
100 feet of Winze @ $35.00 per foot	3,500.00
100 feet of Cross Cutting for the veins prospected with the Diamond Drill @ $20.00 per foot	2,000.00
200 feet of drifting on vein for developing ore at $20.00 per foot	4,000.00
250 feet of Cross cutting ore 3rd Level to connect with Winze @ $20.00 per foot	5,000.00
<u>Equipment Needed</u>	
2 slushers, 1 stopehammer, 1 jack hammer, 1 truck	8,200.00
Small tools for Blacksmith shop	550.00
Tugger Hoist	1,000.00
Timbers for ore bins and timbering	4,000.00
<u>Road Work, Workers Facilities etc.</u>	
For easing grades on present road	3,000.00
Cook House & 5 Cabins, office and assay room, store house	5,000.00
	$46,500.00
Contingencies	4,500.00
Engineering & Legal services	4,000.00
	$55,000.00

Requirements of the proposed project.

Funds Required	$55,000.00
Man power on averages of ten men per day	
Construction of 8 small houses	
1 Truck, Dump for ore hauling and for hauling supplies.	
2 air driven slushers with hoists, cables and scrapers.	
1 stopehammer and 1 jack hammer with mountings, including Column and bar, arm and saddle extra drill rods and detachable bits.	
Road work 2 men with cat for 30 days	

Time required to complete the project between six and seven months with an average of ten men per day.

Fred W. Cook
2/26/51

REPORT

ON

S I L V E R R U L E M I N E

EXAMINATION

Based on author's personal visit

to the property

October 1st to 7th

1950.

by

GEORGE B. BLONSKY

Mining Engineer

Registered Professional Engineer

Certificate No. 7179

State of California

GEORGE B. BIONDY
MINING ENGINEER
1901 E. MARSHALL ST.
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At. 6-1079.

The following report and map on the Silver Rule Mine are made for the purpose of establishing whether the ore exposed is sufficient to warrant construction of a milling plant and, if not, whether there is enough of promise in the property to warrant additional development work aiming at finding sufficient further ore reserves to justify eventual construction of a mill.

The conclusions arrived at below are as follows:

1. Ore reserves so far exposed are insufficient to warrant construction of a mill for their beneficiation. A small speculative investment toward the solution of the main cut out fault is definitely warranted.

2. The general geology of the Silver Rule mine appears to be well enough understood to encourage the belief that the main faulting problem can be solved at a very limited expense and that substantial bodies of ore will thus be proven and will guarantee that construction of a small milling plant would be a very profitable investment.

3. The water situation at the camp is of prime importance. There is very little sense to spend important sums of money on developing additional ore, only to find later that a comparatively small sum could have proven that the 50 gal. per minute needed for the mill are not obtainable at the Silver Rule camp.

4. The bond and lease and option to purchase (a set total price of property and royalty based on % of net smelter returns payable to the owners towards the purchase price) should be settled definitely before a metallurgical plant is decided upon. Building a mill on leased ground often brings no end of trouble.

5. Metallurgical tests should be conducted on samples obtained by the writer to determine what % of Zinc carbonates, oxides and sulphates can actually be recovered. The calculations given below are based on guestimates, which may be born out or not by actual laboratory work. The margins of profit on this ore are not great and Zinc accounted as recovered represents nearly one third of the net smelter returns. It is well known that recovery of non-sulphide zinc is very difficult and often a source of disappointment.

GEOLOGY.

A study of geology and of faulting systems was made at the property and in the office on the basis of the map made for this report. It was found that the deposit is a replacement of favorable beds of lime by lead and zinc minerals which, undoubtedly, at greater depth will be found in their original sulphide form. In horizons of #1 and #2 levels, though some galena is present, most of the values are in carbonates and oxides. Some secondary anglesite and smithonite were observed while no sphalerite was seen. This is of course due to the shallowness of the workings and to the dryness of the climate. Lead is found as galena only where the rock is very dense and oxidation was prevented by lack of penetrating oxidizing solutions and gases. This was very obvious when attempts at breaking galena bearing highgrade were made.

There was very little difference in composition of rock or assay between the upper and the lower level. #2 level had narrower ore body but slightly higher content of all four metals. It was observed that wherever the body flattened, it widened, and so far as our samples show the grade generally decreased.

In the winze below the #2 level the ore appears to be steeper yet and narrower than on the #2 level. The only sample taken in the bottom of the winze is not representative, as it was taken in a lean spot in the endeavour to get to the reported high grade ore buried under muck. Fair ore extends down the winze at least 60' below #2 level. It is possible that the winze followed a post mineral fault deviating into the footwall of the vein, and that the main body of ore is left untouched in the hanging wall of the winze. This possibility should be investigated.

FAULTING:

The Silver Rule mine workings expose a very intricate and significant system of faults. Most of these are post mineral and can be classed in two groups:

a. The $+ 60^{\circ}$ to 70° Northerly dip faults conforming very closely with the mineralized ore beds. Their strike is predominantly E & W and they generally have ore both in foot and hanging. It appears that probably these are both pre- and post-mineral faults: that is probably an original pre-mineral fault fracture provided the access to mineralizing solutions and after mineralization the plane of weakness for further movements along the same or nearly the same fracture. These are the faults followed by the former miners and show considerable mineralization from the portals in the east all the way to the west, where they

are cut off abruptly by faults belonging to the different fault system, which could be called cross faults.

b. The cross faults have a general strike N-30-W or S-30-E and a steep westerly dip close to 80°. These faults do not seem to produce large displacements except at the westernmost end of both levels and at Station 3 in #2 level, where both the E-W faults and the ore are abruptly cut out.

On the lower level the ore is again picked up at Station 5 and follows the E-W fault all the way west to a little west of Station 10, where begins a host of S-30-E faults and the ore is cut off completely. The disturbance between Stations 3 and 5 on the #2 level is more clearly understood if one studies the series of S-30-E faults in the barren crosscut west of Station 3. At this place the barren E and W crosscut exposes about 40' of fault and shear zone on the #2 level, which is also seen between Stations 3 and 5 on level #2, but does not show up on level #1, except outside the portal, because these are normal faults and the eastern block was elevated and eroded at the portal of #1 tunnel.

The main fault zone cutting ore out on the west end is a repetition of the above described eastern system of NW-SE faults. On the #2 level this western fault system is rather obscure on account of the multiplicity of faults discovered. On the other hand, if one studies them in conjunction with the cut off fault on the No. 1level the picture becomes clearer.

The superimposition of the west ends of the two tunnels and the disappearance of the ore practically at the same coordinate on both levels prove that the same fault system is to blame for the ore cut off in both tunnels. The solution of this western limit NW-SE fault is all important for the potential future of this mine. It happens to cut the ore off right where the ore shoot became quite strong and, should the ore be found on the other side of this fault, there are very good reasons to believe that a very considerable block of virgin and profitable ore would be found. Some effort was expended towards solution of this very important fault problem on the #2 level, but very limited results were obtained.

The barren northernmost crosscut going west from Station 10 was a waste of effort just the same as the barren crosscut going west into the shear and fault zones from Station 3. All these crosscuts proved was that these faults are of major nature and that ore was removed in direction unknown.

The drift from Station 10 south done by Mr. Little followed the faults plane or planes for some 25' and uncovered the intricacy of the fault system.

The southern half of this drift from Station 11 to the face has a bearing practically identical with the bearing of the cut off fault on the 71 level some 65' above and to the S.E. This is not a coincidence, but a very indicative fact. On the 72 level at Station 11 sample No. 9 showed 70" of best ore in the mine: 13.3% Pb, 10.0% ZN, 4.8 oz. Ag, 0.025 oz Au. This appears to be a part of the ore exposed in the stope above 72 level. Farther south in the same drift at a point about Station 11 - 8' Mr. Little took out of the floor of the drift two mine car loads of highgrade galena ore appearing as an isolated kidney. Farther south small spuds of galena were found in each round, but always in diminishing quantities. The limestone traversed by the drift is in badly sheared and jointed condition, all of which indicates a fault zone and a drag. When an ore body is sheared off by a fault, it is very seldom that a clean break is made. Generally along the plane of displacement between the two offset fractions of the original ore body one finds a smear of crushed ore in a general way pointing from one segment to the other. Such smears or drags are very useful in finding the faulted off segment of the ore. It is believed by the writer that there is drag evidence south of the No. 11 Station of 72 level that the faulted off and lost part of the ore on the west side of the fault has moved to the S.-E. On the other hand, the distance of such a movement can ot be judged on the 72 level; the only thing one can say is, that this movement more than probably exceeds several times the thickness of the vein.

The crosscut driven west from Station 11 paid off very poorly. It is too close to the crosscut west from Station 10 to give any additional information and it is not far enough south along the fault plane to have any chances to pick up the faulted off segment on the west side of the fault. The writer would have much rather seen the effort put into the Station 11 west crosscut expended on a short working, maybe two rounds, along the cut off fault going north from Station 10 to prove the absence of drag there and thus definitely to substantiate the theory of southeastern movement of the western block and of the faulted off segment of ore.

As the picture at the west end of the 72 tunnel is rather obscured by multiplicity of curving faults, it would be wiser to spend the money and effort for solution of this fault problem on the 71 or upper level. Here in the west end of the upper level we have a very pronounced N-35-W vertical cut off fault, the drag situation on which was partially investigated. The two small drifts along this

fault, one N.E. of Station 10 and the other S.E. in the west side of the stope, are moves in the right direction. The samples Nos. 36 and 34 fall right in line with the theory we tried to build up on the #2 level. Sample #36, if it is on the east side of the fault plane in the hanging wall of the ore bed segment which moved to the N.E. or up with respect of the western segment of ore body, should have no drag and no ore. This sample, although quite ferruginous and stained, assayed: trace Pb, trace Zn, trace Ag and nil Au. On the other hand, sample #34, if our theory of movement of the western block to the S.E. is correct, should have been taken in the drag zone in the foot wall of the known fragment of the ore body and therefore, though not rich, should indicate presence of lead and zinc. The assay of sample #34 actually is reported as: 1.4% Pb, 025 oz. Ag., 7.0% Zn, Tr. Au. The writer believes this to be a pretty good indication that probably our fault problem though not yet solved, is on the way of solution.

To complete the solution of this preeminently important fault problem, one should concentrate on #1 level. A round or two S.E. along the cut off fault should positively establish the existence or the absence of the drag in this direction. Should the drag be definitely proven to exist in this S.E. drift, then a south westerly crosscut should be driven across this fault at a point about 35' S.E. of Station #10, until the other side of the fault zone is reached and then a drift should follow E. Eastwards on the west side of the fault until the west segment of the orebody is picked up. It is hoped that this would be accomplished before the finances and the courage are overtaxed by apparently dead work.

ORE RESERVES.

The survey of the Silver Rule mine shows definitely present the following blocks of ore:

A. Ore above #2 level and below #1 level:
Shoot length 80' on #2 level and 170' on #1 level
shoot height on dip : 90'
average width of ore : $\frac{4.5 + 5.5 + 5.5}{3} = 5.2'$
assumed cubic feet per ton : 11

Tonnage A = $\frac{\frac{170 + 80}{2} \times 90 \times 5.2}{11}$ = 5325 tons
less 10% for pillars -535 "
Ore in Block "A"..... 4790 tons

B. Ore above #1 level

Shoot length 170'
Shoot height on dip: take ½ of length = 85'
Average width : 5.5'

Tonnage B = $\frac{170 \times 85 \times 5.5}{11}$ = 7225

less 10% for pillars ..... -725

Ore in Block "B" 6500 tons

C. Ore below #2 level and above #3 level

Shoot length 80' on top and say 40' on bottom
Shoot height on dip 80'
Ore width 4.0'

Tonnage C = $\frac{\frac{80 + 40}{2} \times 80 \times 4.0}{11}$ = 1920 tons

less 10% for pillars -190

Ore in Block "C" 1730 tons

ORE IN SIGHT: A + B + C = 13,020 tons

D. Ore Probable above Block "B", if extending close to surface assume about 6500 tons more

TOTAL ORE EXTRACTABLE east of main cut off fault on the west side

19,520 tons

Should the main west cut off fault be successfully solved, a similar additional tonnage could be reasonably expected.

GRADE OF ORE RESERVES.

Assays of the ores sampled were below those anticipated on the basis of former reports, but are not condemning for the following two reasons:

a. Stopes sampled were not representative of virgin ore to be mined, but of faces at which the oldtimers quit mining after they took out the highgrade and were discouraged by lower grade left in the faces. One can reasonably expect that average ore, when mined lowgrade and highgrade together, will run higher than our samples.

b. While sampling it was definitely established that there were 3 types of rock in the faces:
   1. very hard limestone
   2. very hard highgrade galena bearing rock
   3. soft and crumbly medium and lowgrade ore carrying carbonates.

   In cutting samples, of course the hard lime was left alone as wall rock if it was below or above the commercial ore. The soft medium and lowgrade was fully represented. But the tough highgrade was hard to get and while it was chipped, excessive quantities of lower grade diluted the samples.

Therefore the writer believes that the average milling ore would run at least 10% better grade than our average samples and quite possibly more. This is the reason why no grade reduction for dilution in mining was applied in our calculations.

ACTUAL AVERAGE ASSAYS CALCULATED:

Block	tons	%PB	oz.Ag.	%Zn.	oz.Au		
A	4790	5.99	1.70	8.47	0.0145	sampled	) ore
B	6500	4.30	1.42	8.36	0.0149	sampled	) in
C	1730	5.99	1.70	8.47	0.0145	sampled above level	) sight
D	6500	4.30	1.42	8.36	0.0149	guestimated - probable ore.	

Total 19,520 tons maximum expectable ore

The blocks A, B, & C represent ore in sight and which definitely counted upon for milling. The Block "D" is above Block "B" and may be present, but has to be proven before it can be counted as definite ore. Therefore for metallurgical calculations only half of the ore in Block "D" will be allowed.

Average assay of the positve ore is
13,020 tons @ 5.15% Pb., 1.56 oz.Ag, 8.42% Zn., 0.0147 oz.Au

and of the probable ore is
3,250 tons @ 4.30% Pb., 1.42 oz.Ag, 8.36% Zn., 0.0149 oz.Au

Average of the total ore expected to be milled east of the cut-off fault is:
16,270 tons @ 4.97% Pb., 1.53 oz.Ag, 8.40% Zn., 0.0147 oz.Au

adding 10% to the values due to the reasons given under "Grade of Ore Reserves" we obtain:
16,270 tons @ 5.47% Pb., 1.68 oz.Ag, 9.24% Zn., 0.0162 oz.Au

CALCULATION OF ASSAY VALUE OF AVERAGE ORE

Pb	$\frac{5.47 \times 2000 \times .16}{100}$	$17.50
Zn	$\frac{9.24 \times 2000 \times .175}{100}$	$32.35
Ag	1.68 X 90	$ 1.51
Au	0.0162 X 35	$ 0.57
Total assay value		$51.93 per ton

16,270 tons @ $51.93 $843,000.00 assay value of ore to be milled.

NET SMELTER RETURN VALUE OF ORE TO BE MILLED.

Applying terms and prices currently used by International Smelter at Tooele, Utah, the following calculation will be made after concentration assumptions are applied:

Assay of Crude	Quantity p.ton crd.	% recovered	recovered p.ton crd.	recovered p. ton crd. 7 to 1 concentration
Pb 5.47%	109.4 lbs.	85%	101.4 lbs.	710 lbs.
Zn 9.24%	184.8 "	75	138.0 "	966 "
Ag 1.69oz.	1.680 oz.	85	1.43 oz.	10 oz.
Au 0.0162	0.0162 oz.	85	0.0138 oz.	0.0965 oz.

therefore assay of 7 to 1 concentrates per ton:
35.5% Pb, 48.3% Zn., 10 oz. Ag., 0.0965 oz. Au.

Assume that concentrates will have:
3% Insols; 5% Fe; 6% S; 2.2% CaO; 1.0% As & Sb;

Then <u>credits</u> are:

Pb - pay 90% on assay less 1.5% @ 16¢ less 2¢ per lb.

$$.90 \times (35.3 - 1.50) \times \frac{2000}{100} \times \frac{(16-2)}{100} = \$\ 85.80$$

Zn - pay 75% on assay @ 5.6¢ per lb.

$$.75 \times 48.3 \times \frac{2000}{100} \times \frac{5.6}{100} = \$\ 40.60$$

Ag - pay 95% on assay @ 90¢ per oz.

$$.95 \times \frac{90}{100} \times 10 = \$\ 8.55$$

Au - pay 91% on assay @ $35.00 per oz.

$$.91 \times 0.0965 \times 35 = \$\ 3.07$$

Total credits are $138.02

<u>Debits</u> <u>are:</u>

Base Smelter charge	$ 5.55
Insols @ 10¢ per unit	$ 0.30
Sulphur 20¢ per unit	$ 1.20
Zn @ $0.15 p. unit	$ 7.24
Lime	$ 2.00
	$ 16.29
Credit for iron @ 6¢ per unit	-$ 0.30
Therefore total deducts are	$ 15.99

Total gross credits	$138.02
Total deducts at Smelter	15.99
Credit before freight	$122.03
Freight & 3% tax	-$ 12.00
Therefore Net Smelter Return p. ton concentrate ...	$110.03
N.S.R. per ton crude	15.72 (at 7 to 1 concentration)

ESTIMATE OF COSTS AND RETURNS FROM OPERATION.

With ore bodies of fair width and good free running slopes of stopes, mining per ton should not cost over $5.00. Mining costs may be kept down by the use of slushers and ore passes to the #3 level. Fairly simple milling, principally based on gravity concentration with flotation of slimes and reground table middlings only, should cost under $4.00 per ton crude, -- adding for some overhead we can assume that mining, milling and haulage to the mill will cost about $10.00 per ton crude ore.

This leaves $5.72 per ton or $5.72 x 16,270 = $93,000.00 for amortization of investment, royalty and profits.

The investment can be roughly estimated as follows:

1. Mill	$40,000.00
2. Camp (change room, office, store room)	$10,000.00
3. Preparation of mine (#3 tunnel, winze timber, moving of the bin)	$12,000.00
4. Water development.....	$ 1,000.00
	$63,000.00

Royalties (usual) 10% of Net Smelter Returns: .10 x 15.72 x 16,270	$25,600.00	
Royalties and expenses	$88,600.0	$88,600.00
Therefore left for Profit from ORE IN SIGHT		$ 4,400.00

About 325 mill run days at 50 tons per day are expected.

CONCLUSION.

It is clear that one cannot start a mining enterprise with such modest returns. This operation would give only 6% or 7% return on the capital besides amortization of all the investment. The risk involved in any mining operation demands much higher rate of returns to warrant taking the chance.

On the other hand, the lack of attractiveness of this business lies in the limited tonnage of ore developed and the consequent excessively heavy amortization charges against the returns. Such charges would be fair only, if no additional ore could be developed. On the other hand, should there be developed an equal additional tonnage, then the second year of operation would bring very handsome returns, as the heavy charges such as described above and amounting to some $63,000.00, would not be recurring and instead these sums would go into the profit column. In this way, should sufficient ore be proven for two years' operation, the profits for the two years should be about twice the $4,400.00 plus the $63,000.00 or a total of $71,800.00 or about $35,900.00 per year on about $70,000.00 original investment. Of course, the above mentioned speculative fault solution investment would have to be paid out of these profits. In other words, the doubling of ore reserves changes the picture from a rather unattractive to a very promising one.

R E C O M M E N D A T I O N S.

As most small undeveloped mines, the Silver Rule needs a little prospecting and hence some speculative capital. About 200' feet of drifting and crosscutting and 400 to 600 feet of diamond drilling should be sufficient to prove or disprove the presence of ore within reasonable distance of the present workings. Such development would cost may be as little as $3000.00, but surely no more that $6000.00 and would be very well repaid, if ore were picked up west of the main fault.

As things stand at the date of this writing, I cannot recommend the construction of a mill, but I do think that additional development along the lines described above is fully warranted and is a very good mining speculation.

As Mr. Little has established a camp at Silver Rule, has a small but congenial and efficient crew and all the needed equipment at the mine, the prospecting work suggested in this report will cost but half of what it would, should one be starting from scratch at an isolate place in the desert.

GENERAL REMARKS.

Surveying: of the main two levels - #1 and #2 and a tie between them was done with a regular surveyor's transit and is believed

to be quite accurate. The mapping of stopes and #3 and #0 levels was done with a Brunton and is consequently rough but close enough for the purpose of this report.

SAMPLING was done at as regular intervals as possible and where one expected either to find mineable ore, or in critical spots, such as at the main fault face, at the bottom of the winze or in a raise. Samples were taken at even 10 feet intervals and not where the ore looked good. A total of 41 samples was taken.

CALCULATIONS were done with a special care to approach as closely as possible actual mining conditions. Where more ore was reported than it was possible to sample, 50% additional width was allowed, unless the assay was low, in which case no additional width was calculated. In 3 places, where assays turned out very disappointing they were not calculated in the average, as it was assumed that in these three places pillars would be left. This procedure is consistent with good mining practice and on account of its use the total amount of ore calculated was reduced by 10% to allow for the exclusion of these pillars. All averages were weighted on inch width basis of each sample.

Preparation of mine for extraction of ore should include the following items and costs:

1. Timbering of main winze	$2000.00
2. Extending #3 level 250' @ $15.00	$3750.00
3. Installation of slushing equipmt.	$1350.00
4. Opening up beyond fault	$2000.00
5. Moving bin to #3 level	$1000.00
6. Extending road to #3 level	$1000.00
7. Improving access to upper levels	$ 900.00
Total	$12,000.00

Prospecting of promise to be done at an early date:

1. New 78" vein 40' south of #1 portal -- a couple of rounds
2. Bottom of winze -- clean out, follow ore if any.
3. Crosscut into hanging wall of winze.
4. Crosscut in hanging wall in raise above #2 level.
5. Slabbing off of vein matter at Station #2 on #2 level.

Map attached to this report is a result of a geological, economical and topographical study and should be carefully consulted as the above report is perused. It is hoped that it will be of help to Mr. Little in planning his future work at this promising prospect.

Assay sheet of analyses on 41 samples obtained by Mr. Ed Eisenhauer is attached to this report.

Respectfully submitted

s/ George B. Blonsky

GEORGE B. BLONSKY.

Mining Engineer.

Registered Professional Engineer
Certificate No. 7179
State of California.

October 25, 1950.

Ed. Eisenhauser, Jr.
320-322 So. San Pedro St.
Los Angeles, California

ASSAY CERTIFICATE

Los Angeles, Calif.
Oct. 11/50

I hereby Certify that the samples described below, received from

G. B. Blensky assay as follows:

OWNER'S Mark and Sample	GOLD oz. per ton	GOLD Value per ton	SILVER oz. per ton	SILVER per ton	Total Value per ton	Percentage Of Copper	Percentage Of Lead	Percentage Of Zinc
SR								
1	trace		Trace		$ .32		.1	2.2
2	.01	$ .35	1.10	$ .99	20.83		6.2	15.0
3	Trace		.08	.07	2.31		.7	7.2
4	.005	.18	.35	.32	7.04		2.1	8.0
5	.02	.70	2.30	2.07	30.87		9.0	8.8
6	.005	.18	.33	.30	16.62		5.1	7.0
7	.01	.35	.84	.76	8.76		2.5	2.1
8	.01	.35	.78	.70	10.30		3.0	16.6
9	.025	.88	4.80	4.32	46.88		13.3	10.0
10	nil		trace		-----		trace	tr.
11	.015	.53	1.22	1.10	28.30		8.5	9.6
12	.01	.35	.26	.23	6.00		1.8	7.1
13	.02	.70	.95	.86	21.98		6.6	9.3
14	.015	.53	.32	.29	6.69		2.0	7.2
15	.01	.35	.87	.78	12.94		3.8	8.1
16	.03	1.05	1.35	1.22	29.10		8.7	11.3
17	trace		.40	.36	10.00		3.0	8.5
18	nil		trace		-----		trace	tr
19	.02	.70	1.95	1.76	22.56		6.5	10.4
20	.025	.88	2.00	1.80	5.24		1.2	6.6
21	.01	.35	.94	.85	10.13		2.9	7.0
22	.03	1.05	4.36	3.92	42.64		12.1	9.7
23	.02	.70	.77	.69	10.61		3.1	8.4
24	.025	.88	1.68	1.51	8.55		2.2	6.9
25	.02	.70	1.08	.97	5.77		1.5	6.6
26	.015	.53	2.20	1.98	23.10		6.6	11.3
27	.01	.35	.84	.76	13.56		4.00	8.5
28	trace		.45	.41	6.81		2.0	7.0
29	.02	.70	2.52	2.27	19.87		5.5	8.9
30	nil		trace		-----		nil	tr
31	.04	1.40	6.20	5.50	16.38		3.4	7.7
32	trace		.18	.16	4.32		1.3	6.9
33	trace		.20	.18	4.58		1.5	7.1
34	trace		.25	.23	4.71		1.4	7.0
35-1	.015	.53	1.28	1.15	20.35		6.0	9.2
35-2	.02	.70	2.02	1.82	12.06		5.2	8.2
36	nil		trace		-----		trace	tr
37-missing								
38	.01	.35	.98	.88	13.36		3.9	9.5
39	trace		.23	.21	7.25		2.2	7.4
40	.035	1.25	7.04	6.34	9,86		1.1	5.6
41	.02	.70	.80	.72	7.20		2.0	7.7

dmm 855

MAIR U.S. TECH

dma 855

200 Waltham Road
Concord, California

March 10, 1951

The Deputy Administrator
Defense Minerals Administration
Department of the Interior
Washington, 25, D. C.

Dear Sir:

At the request of Mr. John G. Little, of Nipton, California, I have prepared the attached "Statement of Facts" in regard to The Silver Rule Mine which Mr. Little has under lease.

Mr. Little is at present developing this property by diamond drilling and cross-cutting on the second level, as I have shown in pencil on the photostat of the Blonsky Map, included in this report.

This development work is being financed out of the returns from ore shipped from the Carbonate King Mine at Nipton, California. This mine also needs some prospecting work.

In order to prospect the two properties, Mr. Little must raise some funds. Therefore, we are presenting this report and request that the properties be examined by the Bureau of Mines engineers and a loan be granted if the properties meet the necessary requirements for a Government loan.

It is this writer's opinion that they do. This opinion is based on a careful study of the properties in question and many years' experience in appraising and operating mining properties.

Mr. Little has a record of about ten years' mining in this part of the State and his honesty and integrity is unquestioned. Mr. Little is not a mining engineer but employes technical help when he needs it, and is energetic in carrying out programs outlined by his engineers.

It is requested that your reply be directed to Mr. Little at the address above.

Thanking you for your usual prompt action, I am,

Very respectfully,

Fred W Cook

Fred W. Cook

Statement of Facts as to the location
and Nature of a mineral Deposit
Made by Fred W. Cook 200 Waltham Road
Concord, California
Professional Mining Engineer Nevada License No. 571

February 26, 1951

The property was formerly located as the Silver Rule Mine. It has been relocated as the Crystal Springs but is generally known as the Silver Rule. The metal is Lead, Zinc and Silver.

The property is owned by John and Sylvia Prato of Fontana, California and is leased to John Q. Little and Belva M. Little for a period of ten years with fime years optional renewal.

There are nine unpatented Claims known as "One Gulch No. 1, Crystal Springs Mine, Crystal Springs Mine No. II, No. III, No. Iv also the Victory, The Iron King No. 1, No. 2, No. 3; recorded in the Mining Records of San Bernardino County, California in Book 257, Pages 287, 288, Book No. 250 Pages 99,100. Book 285 page 473, Book 297 page No. 121. Book 297 page 122, and Book 299 page 144.

The Claims are situated in approximately Sec. 7, Township 19, North, Range 10 East, San Bernardino Base and Meridian on unsurveyed land.

The property is located approximately 17 miles east, southeast of Tecopa a post office on State Highway No. 127 about 42 miles North of Baker which is on highways Nos. 91 and 466 between Los Angeles, California and Las Vegas, Nevada.

From Tecopa proceed Easterly on a paved road that leads to the Noonday Mine and Mill of the Anaconda Copper Co. at about 10 miles turn right and leave pavement at a sign "Silver Rule" Crystal Springs" then on a graded road about 8 miles, and well into the pass, turn left at a sign "Silver Rule" and at a few hundred yards the Camp at Crystal Springs. From the Camp a road goes up the mountain to the mine approximately one mile distant. This road is best traveled by a four wheel drive vehicle.

Mr. J. Q. Little address - Nipton, California will be glad to conduct the investigating engineer to the mine and will meet him at any point on request and furnish transportation to the mine.

Anyone in Tecopa can give directions to the mine.

HISTORY OF THE MINE.

Work was started at the Silver Rule early in 1900. The State Bureau of Mines report of 1915 gives some of the history. In 1910, 140 tons of ore was shipped that averaged 48% lead, 26 oz in Silver and 60 cents in gold. The Statistical Division of the Bureau of Mines in San Francisco has a record of some 600 tons shipped that averaged 40% Lead and 10 oz. of Silver and about 158 tons of Zinc Ore that produced 10 tons of zinc. There has doubtless been other shipments unrecorded. John Chambers of Tonopah, Nevada was one of the early owners.

In 1926 the property was owned by the Pacific Lead and Silver Mining Co. of Los Angeles, California and is reported to have done a little work on the property. In 1931 the property was idle. The Bureau's 1943 report states,- "The ore occurs as irregular lenses of Lead Carbonate and Galena along a fissure in the Limestone. Lenses apparently form at the intersections of Cross fractures. Main strikes are N.W. and dips 70° N. Cross fractures are about N. 20° W and dip 70° S.W. The ore body ranges from 3 to 15 feet in width and is said to carry from 25% to 40% Pb., 10 to 12 oz. Ag and 7 to 10% Zn. The ore shoot as developed is practically 100 feet long and has been partly stoped in the two upper levels."

SHIPMENTS OF ORE MADE.

There is no record of shipments other than the 600 tons recorded by the U. S. Bureau of Mines mentioned above. Known Dimensions of the deposit are, as given by Balansky in the attached report Block "A" (See Assay Map in above report) Ore above No. 2 Level and below No. 1 Level. Length 80 feet on No. 2 Level and 170 feet on No. 1 Level shoot height on dip 90 feet. Averages width of ore 5.2 feet. 4790 tons Block "B" Above No. Level, shoot length 170 feet heigth on dip 85 feet average width 5.5 feet, 6500 tons Block "C" Ore below No. 2 Level and above No. 3 level shoot length on No. 2 level 80' and say 40' on bottom shoot height on dip 80' average width 4.0' 1730 tons.

ORE IN SIGHT.

Blocks A plus B plus C 13,020 tons. Probable ore Block D, above Block B estimated to contain 6500 tons. Total ore expected to be found East of Main Cut off fault 19,520 tons.

On account of the size of the ore shoot where it was cut off it is not unreasonable to expect another 19,000 or 20,000 tons west of the fault.

There appears to be two other veins on the property, one about 40 feet south known as the Mule Trail Vein and the other about 150 feet south of the main vein. These veins appear to run more or less parallel to the principle vein.

A small cut on the "Mule Trail Vein" shows about 78" of fair ore mostly Galena. The other vein has a small tunnel about 20' long. The ore in this tunnel is from 12" to 20" wide, a 20" sample run 1.1% Lead 5.6% Zinc and 7.04 oz

Silver and .035 in Gold.

These two veins might add considerable to the production of the mine and are being prospected with a Diamond drill from the second level of the main workings. See D.D. hole shown on Map.

The strike of these veins is approximately East and West and dip 60° to 70° Northerly.

UNDER GROUND WORKINGS.

Besides the small tunnel mentioned above the principle vein is developed by four adits - No. 1 is approximately 225' long. No. 2 has approximately 420' of drift and Cross cuts and about 400 feet in, it has a Winze 75' deep on the vein. The ore produced has come from these two levels. There is good ore in the Winze down to about 60' and the ore appears to be coming in again at the bottom. The vertical distance between these levels is 70' (See map in Blansky's report).

Approximately 70' Vertical below No. 2 is No. 3. This level was started to conect with the Winze, it is abo[illegible]' long. It would take approximately 250' more to connect.

No. 4 is approximately 470' Vertical below No. 2 level and is 420 feet long. It was apparently intended to intercept the vein at depth, but in about 175' they turned right to follow a slip. It would take about 300' of cross cutting from this point to reach the vein at this depth.

GENERAL DESCRIPTION OF THE MINERAL SHOWING.

The minerals produced are lead, zinc, silver and small amount of gold and copper. The lead and zinc occurs mostly as Carbonates. There is some Galena but no zinc sulfides were noted. The vein has a well defined hanging wall but the foot wall is practically undefined. In places the vein is disclosed as a banded vein filling but always shows replacement deposits extending into the foot wall. There is considerable faulting both pre-mineral and post mineral (see pages 3, 4 and 5 of Blansky's report for a discussion of the faulting) The faulting has left exposed on the mountainside a profile aspect of the vein rather than a plan aspect and the vein is visable to almost the top of the mountain at least 350 feet above Level No. 2. There are Iron cut crops on top of the mountain which are doubtless outcrops of these veins but on account of the ruggedness of the terrain it is hard to decide which out crop belongs to which vein.

SAMPLING AND ASSAYS.

There have been many samples taken from the exposed ore but it is thought that the 40 samples taken by Mr. Blansky and shown on his map and in his report are about as fair a sampeling as could be done. Except that Blansky took only one sample in the Winze. Samples taken by others, one just below the collar of the winze, run 54.2% Pb. , 3.5% zn and 62.7 oz of silver and was the full width of the Winze - 57 inches, 20 feet below, across the width of the Winze the assay was Pb 21.5%, Ag 5.6 oz. Zn. 1.0%.

MINE IMPROVEMENTS.

Surface improvements consist of two cabins, washroom and swimming pool at Crystal Springs. These cabins can take care of five or six men, one being equipped with a cook stove, tables etc. for preparing meals.

At the mine is a 35 ton ore bin connected with an ore schute approximately 200' long connecting the bin with No. 2 Level also an aerial tram and gasoline hoist to raise supplies up to No. 2 Level. The ore is taken from the mine bin to a larger bin at the camp by a four wheel drive truck. From this bin it is loaded on larger trucks and hauled to the Railroad at Dunn, a station on the Union Pacific Railroad for shipment to the smelter.

The No. 2 level is equipped with track, air and water pipe and a 17 cu. ft. mine car a duplex air driven steam pump lifts waters from the end of the road to No. 2 Level. Drilling equipment consists of a 210 C F M LeRoy deisel driven portable compressor, 2 mounted Jack hammers with drilling rods and detachable bits, a stopehammer with rods and bitts.

A C.P. No. 5 Diamond drilling machine with 150' of A drilling rods and 500 ft. of E rods with core barrels, and with approximately $1000.00 worth of bits, reamers and 150 feet of Ex casing etc. A column and arm for mounting the drill for underground work an air driven duplex steam pump furnishes water for the drill.

There are various columns and bars with arms and saddles for the Jack hammers as well as air and water hose, extra detachable bits etc. Sufficient for operating the mine. Also a No. 12-B. Eimco rocker shovel, a four wheel drive truck about 5 ton capacity also a four wheel drive Willys Jeep - A 2 ton Chevrolet dump truck and a 3000 watt Kohler light plant.

DESCRIPTION OF THE PROJECT.

The objectives of the project is to break through the fault that cuts off the ore and cross cut south until the other section of the vein is picked up. If ore is found in the faulted section it will be developed by drifting on the vein and by raises. The footwall veins are being explored with a diamond drill. If ore is found in these veins it will also be developed for extraction. If shipping ore is encountered it will be shipped until sufficient ore is developed to make the installation of a mill profitable. Specifically money is needed to cross cut to the faulted segment of the vein estimated to be less than 100'. Of course it depends on the results obtained in the first Diamond Drill hole, but it is probable that at least 3 holes at the present set up will be necessary - say 450' and the same amount on the first level or say 1500 feet in all. The Winze should be sunk on the ore at least 100 feet more and if ore is developed in all the above places then the 3rd level should be extended and connected with the Winze and the ore bin connected with No. 3 level. By the time all this is accomplished there will be in sight enough ore to justify a mill.

Funds necessary for developing would be approximately as follows:

1500 feet of Diamond Drillings @ $5.50 per foot	$8,250.00
Cross Cutting for the faulted segment of the vein 100 feet @ $20.00 per foot	2,000.00
100 feet of Winze @ $35.00 per foot	3,500.00
100 feet of Cross Cutting for the veins prospected with the Diamond Drill @ $20.00 per foot	2,000.00
200 feet of drifting on vein for developing ore at $20.00 per foot	4,000.00
250 feet of Cross cutting ore 3rd Level to connect with Winze @ $20.00 per foot	5,000.00
Equipment Needed	
2 slushers, 1 stopehammer, 1 jack hammer, 1 truck	8,200.00
Small tools for Blacksmith shop	550.00
Tugger Hoist	1,000.00
Timbers for ore bins and timbering	4,000.00
Road Work, Workers Facilities etc.	
For easing grades on present road	3,000.00
Cook House & 5 Cabins, office and assay room, store house	5,000.00
	$46,500.00
Contingencies	4,500.00
Engineering & Legal services	4,000.00
	$55,000.00

Requirements of the proposed project.

Funds Required	$55,000.00
Man power on averages of ten men per day	
Construction of 8 small houses	
1 Truck, Dump for ore hauling and for hauling supplies.	
2 air driven slushers with hoists, cables and scrapers.	
1 stopehammer and 1 jack hammer with mountings, including Column and bar, arm and saddle extra drill rods and detachable bits.	
Road work 2 men with cat for 30 days	

Time required to complete the project between six and seven months with an average of ten men per day.

Fred W. Coons

REPORT

ON

S I L V E R R U L E M I N E

EXAMINATION

Based on author's personal visit

to the property

October 1st to 7th

1950.

by

GEORGE B. BLONSKY

Mining Engineer

Registered Professional Engineer

Certificate No. 7179

State of California.

GEORGE B. BLONSKY
MINING ENGINEER
1901 E. MARSHALL ST.
ROSEMEAD, CALIF.
At. 6-1079.

The following report and map on the Silver Rule Mine are made for the purpose of establishing whether the ore exposed is sufficient to warrant construction of a milling plant and, if not, whether there is enough of promise in the property to warrant additional development work aiming at finding sufficient further ore reserves to justify eventual construction of a mill.

The conclusions arrived at below are as follows:

1. Ore reserves so far exposed are insufficient to warrant construction of a mill for their beneficiation. A small speculative investment toward the solution of the main cut out fault is definitely warranted.

2. The general geology of the Silver Rule mine appears to be well enough understood to encourage the belief that the main faulting problem can be solved at a very limited expense and that substantial bodies of ore will thus be proven and will guarantee that construction of a small milling plant would be a very profitable investment.

3. The water situation at the camp is of prime importance. There is very little sense to spend important sums of money on developing additional ore, only to find later that a comparatively small sum could have proven that the 50 gal. per minute needed for the mill are not obtainable at the Silver Rule camp.

4. The bond and lease and option to purchase (a set total price of property and royalty based on % of net smelter returns payable to the owners towards the purchase price) should be settled definitely before a metallurgical plant is decided upon. Building a mill on leased ground often brings no end of trouble.

5. Metallurgical tests should be conducted on samples obtained by the writer to determine what % of Zinc carbonates, oxides and sulphates can actually be recovered. The calculations given below are based on guestimates, which may be born out or not by actual laboratory work. The margins of profit on this ore are not great and Zinc accounted as recovered represents nearly one third of the net smelter returns. It is well known that recovery of non-sulphide zinc is very difficult and often a source of disappointment.

GEOLOGY.

A study of geology and of faulting systems was made at the property and in the office on the basis of the map made for this report. It was found that the deposit is a replacement of favorable beds of lime by lead and zinc minerals which, undoubtedly, at greater depth will be found in their original sulphide form. In horizons of #1 and #2 levels, though some galena is present, most of the values are in carbonates and oxides. Some secondary anglesite and smithonite were observed while no sphalerite was seen. This is of course due to the shallowness of the workings and to the dryness of the climate. Lead is found as galena only where the rock is very dense and oxidation was prevented by lack of penetrating oxidizing solutions and gases. This was very obvious when attempts at breaking galena bearing highgrade were made.

There was very little difference in composition of rock or assay between the upper and the lower level. #2 level had narrower ore body but slightly higher content of all four metals. It was observed that wherever the body flattened, it widened, and so far as our samples show the grade generally decreased.

In the winze below the #2 level the ore appears to be steeper yet and narrower than on the #2 level. The only sample taken in the bottom of the winze is not representative, as it was taken in a lean spot in the endeavour to get to the reported high grade ore buried under muck. Fair ore extends down the winze at least 60' below #2 level. It is possible that the winze followed a post mineral fault deviating into the footwall of the vein, and that the main body of ore is left untouched in the hanging wall of the winze. This possibility should be investigated.

FAULTING:

The Silver Rule mine workings expose a very intricate and significant system of faults. Most of these are post mineral and can be classed in two groups:

a. The $\pm 60^{\circ}$ to 70° Northerly dip faults conforming very closely with the mineralized ore beds. Their strike is predominantly E & W and they generally have ore both in foot and hanging. It appears that probably these are both pre- and post-mineral faults: that is probably an original pre-mineral fault fracture provided the access to mineralizing solutions and after mineralization the plane of weakness for further movements along the same or nearly the same fracture. These are the faults followed by the former miners and show considerable mineralization from the portals in the east all the way to the west, where they

are cut off abruptly by faults belonging to the different fault system, which could be called cross faults.

b. The cross faults have a general strike N-30-W or S-30-E and a steep westerly dip close to 80°. These faults do not seem to produce large displacements except at the westernmost end of both levels and at Station 3 in #2 level, where both the E-W faults and the ore are abruptly cut out.

On the lower level the ore is again picked up at Station 5 and follows the E-W fault all the way west to a little west of Station 10, where begins a host of S-30-E faults and the ore is cut off completely. The disturbance between Stations 3 and 5 on the #2 level is more clearly understood if one studies the series of S-30-E faults in the barren crosscut west of Station 3. At this place the barren E and W crosscut exposes about 40' of fault and shear zone on the #2 level, which is also seen between Stations 3 and 5 on level #2, but does not show up on level #1, except outside the portal, because these are normal faults and the eastern block was elevated and eroded at the portal of #1 tunnel.

The main fault zone cutting ore out on the west end is a repetition of the above described eastern system of NW-SE faults. On the #2 level this western fault system is rather obscure on account of the multiplicity of faults discovered. On the other hand, if one studies them in conjunction with the cut off fault on the No. 1 level the picture becomes clearer.

The superimposition of the west ends of the two tunnels and the disappearance of the ore practically at the same coordinate on both levels prove that the same fault system is to blame for the ore cut off in both tunnels. The solution of this western limit NW-SE fault is all important for the potential future of this mine. It happens to cut the ore off right where the ore shoot became quite strong and, should the ore be found on the other side of this fault, there are very good reasons to believe that a very considerable block of virgin and profitable ore would be found. Some effort was expended towards solution of this very important fault problem on the #2 level, but very limited results were obtained.

The barren northernmost crosscut going west from Station 10 was a waste of effort just the same as the barren crosscut going west into the shear and fault zones from Station 3. All these crosscuts proved was that these faults are of major nature and that ore was removed in direction unknown.

The drift from Station 10 south done by Mr. Little followed the faults plane or planes for some 25' and uncovered the intricacy of the fault system.

The southern half of this drift from Station 11 to the face has a bearing practically identical with the bearing of the cut off fault on the #1 level some 65' above and to the S.E. This is not a coincidence, but a very indicative fact. On the #2 level at Station 11 sample No. 9 showed 70" of best ore in the mine; 13.3%Pb, 10.0% ZN, 4.8 oz. Ag, 0.025 oz Au. This appears to be a part of the ore exposed in the stope above #2 level. Farther south in the same drift at a point about Station 11 - 8' Mr. Little took out of the floor of the drift two mine car loads of highgrade galena ore appearing as an isolated kidney. Farther south small spuds of galena were found in each round, but always in diminishing quantities. The limestone traversed by the drift is in badly sheared and jointed condition, all of which indicates a fault zone and a drag. When an ore body is sheared off by a fault, it is very seldom that a clean break is made. Generally along the plane of displacement between the two offset fractions of the original ore body one finds a smear of crushed ore in a general way pointing from one segment to the other. Such smears or drags are very useful in finding the faulted off segment of the ore. It is believed by the writer that there is drag evidence south of the No. 11 Station of #2 level that the faulted off and lost part of the ore on the west side of the fault has moved to the S.-E. On the other hand, the distance of such a movement can ot be judged on the #2 level; the only thing one can say is, that this movement more than probably exceeds several times the thickness of the vein.

The crosscut driven west from Station 11 paid off very poorly. It is too close to the crosscut west from Station 10 to give any additional information and it is not far enough south along the fault plane to have any chances to pick up the faulted off segment on the west side of the fault. The writer would have much rather seen the effort put into the Station 11 west crosscut expended on a short working, maybe two rounds, along the cut off fault going north from Station 10 to prove the absence of drag there and thus definitely to substantiate the theory of southeastern movement of the western block and of the faulted off segment of ore.

As the picture at the west end of the #2 tunnel is rather obscured by multiplicity of curving faults, it would be wiser to spend the money and effort for solution of this fault problem on the #1 or upper level. Here in the west end of the upper level we have a very pronounced N-35-W vertical cut off fault, the drag situation on which was partially investigated. The two small drifts along this

fault, one N.E. of Station 10 and the other S.E. in the west side of the stope, are moves in the right direction. The samples Nos. 36 and 34 fall right in line with the theory we tried to build up on the #2 level. Sample #36, if it is on the east side of the fault plane in the hanging wall of the ore bed segment which moved to the N.E. or up with respect of the western segment of ore body, should have no drag and no ore. This sample, although quite ferruginous and stained, assayed: trace Pb, trace Zn, trace Ag and nil Au. On the other hand, sample #34, if our theory of movement of the western block to the S.E. is correct, should have been taken in the drag zone in the foot wall of the known fragment of the ore body and therefore, though not rich, should indicate presence of lead and zinc. The assay of sample #34 actually is reported as: 1.4% Pb, 025 oz. Ag., 7.0% Zn, Tr. Au. The writer believes this to be a pretty good indication that probably our fault problem though not yet solved, is on the way of solution.

To complete the solution of this preeminently important fault problem, one should concentrate on #1 level. A round or two S.E. along the cut off fault should positively establish the existence or the absence of the drag in this direction. Should the drag be definitely proven to exist in this S.E. drift, then a south westerly crosscut should be driven across this fault at a point about 35' S.E. of Station #10, until the other side of the fault zone is reached and then a drift should follow S. Eastwards on the west side of the fault until the west segment of the orebody is picked up. It is hoped that this would be accomplished before the finances and the courage are overtaxed by apparently dead work.

ORE RESERVES.

The survey of the Silver Rule mine shows definitely present the following blocks of ore:

A. Ore above #2 level and below #1 level:
Shoot length 80' on #2 level and 170' on #1 level
shoot height on dip : 90'
average width of ore : $\frac{4.5 + 5.5 + 5.5}{3} = 5.2'$

assumed cubic feet per ton : 11

Tonnage A = $\frac{\frac{170 + 80}{2} \times 90 \times 5.2}{11}$ = 5325 tons

less 10% for pillars -535 "

Ore in Block "A"..... 4790 tons

B. Ore above #1 level

Shoot length 170'
Shoot height on dip: take ½ of length = 85'
Average width : 5.5'

Tonnage B $= \frac{170 \times 85 \times 5.5}{11} = 7225$

less 10% for pillars ..... -725

Ore in Block "B" 6500 tons

C. Ore below #2 level and above #3 level

Shoot length 80' on top and say 40' on bottom
Shoot height on dip 80'
Ore width 4.0'

Tonnage C $= \frac{\frac{80 + 40}{2} \times 80 \times 4.0}{11} = 1920$ tons

less 10% for pillars -190

Ore in Block "C" 1730 tons

ORE IN SIGHT: A + B + C = 13,020 tons

D. Ore Probable above Block "B", if extending close to surface assume about 6500 tons more

TOTAL ORE EXPECTABLE east of main cut off fault on the west side

19,520 tons

Should the main west cut off fault be successfully solved, a similar additional tonnage could be reasonably expected.

GRADE OF ORE RESERVES.

Assays of the ores sampled were below those anticipated on the basis of former reports, but are not condemning for the following two reasons:

a. Stopes sampled were not representative of virgin ore to be mined, but of faces at which the oldtimers quit mining after they took out the highgrade and were discouraged by lower grade left in the faces. One can reasonably expect that average ore, when mined lowgrade and highgrade together, will run higher than our samples.

b. While sampling it was definitely established that there were 3 types of rock in the faces:
   1. very hard limestone
   2. very hard highgrade galena bearing rock
   3. soft and crumbly medium and lowgrade ore carrying carbonates.

   In cutting samples, of course the hard lime was left alone as wall rock if it was below or above the commercial ore. The soft medium and lowgrade was fully represented. But the tough highgrade was hard to get and while it was chipped, excessive quantities of lower grade diluted the samples.

Therefore the writer believes that the average milling ore would run at least 10% better grade than our average samples and quite possibly more. This is the reason why no grade reduction for dilution in mining was applied in our calculations.

ACTUAL AVERAGE ASSAYS CALCULATED:

Block	tons	%PB	oz.Ag.	%Zn.	oz.Au		
A	4790	5.99	1.70	8.47	0.0145	sampled	) ore
B	6500	4.30	1.42	8.36	0.0149	sampled	) in
C	1730	5.99	1.70	8.47	0.0145	sampled above level	) sight
D	6500	4.30	1.42	8.36	0.0149	guestimated = probable ore.	

Total 19,520 tons maximum expectable ore

The blocks A,B. & C represent ore in sight and which definitely counted upon for milling. The Block "D" is above Block "B" and may be present, but has to be proven before it can be counted as definite ore. Therefore for metallurgical calculations only half of the ore in Block "D" will be allowed.

Average assay of the positve ore is
13,020 tons @ 5.15% Pb., 1.56 oz.Ag, 8.42% Zn., 0.0147 oz.Au

and of the probable ore is
3,250 tons @ 4.30% Pb., 1.42 oz.Ag, 8.36% Zn., 0.0149 oz.Au

Average of the total ore expected to be milled east of the cut-off fault is:
16,270 tons @ 4.97% Pb., 1.53 oz.Ag, 8.40% Zn., 0.0147 oz.Au

adding 10% to the values due to the reasons given under "Grade of Ore Reserves" we obtain:
16,270 tons @ 5.47% Pb., 1.68 oz.Ag, 9.24% Zn., 0.0162 oz.Au

CALCULATION OF ASSAY VALUE OF AVERAGE ORE

Pb	$\frac{5.47 \times 2000 \times .16}{100}$	$17.50
Zn	$\frac{9.24 \times 2000 \times .175}{100}$	$32.35
Ag	1.68 X 90	$ 1.51
Au	0.0162 X 35	$ 0.57

Total assay value ..... $51.93 per ton

16,270 tons @ $51.93 $843,000.00 assay value of ore to be milled.

NET SMELTER RETURN VALUE OF ORE TO BE MILLED.

Applying terms and prices currently used by International Smelter at Tooele, Utah, the following calculation will be made after concentration assumptions are applied:

Assay of Crude	Quantity p.ton crd.	% recovered	recovered p.ton crd.	recovered p. ton crd. @7 to 1 concentration
Pb 5.47%	109.4 lbs.	85%	101.4 lbs.	710 lbs.
Zn 9.24%	184.8 "	75	138.0 "	966 "
Ag 1.69oz.	1.680 oz.	85	1.43 oz.	10 oz.
Au 0.0162	0.0162 oz.	85	0.0138 oz.	0.0965 oz.

therefore assay of 7 to 1 concentrates per ton:
35.5% Pb, 48.3% Zn., 10 oz. Ag., 0.0965 oz. Au.

Assume that concentrates will have:
3% Insols; 5% Fe; 6% S; 2.2% CaO; 1.0% As & Sb;

Then <u>credits</u> <u>are</u>:

Pb - pay 90% on assay less 1.5% @ 16¢ less 2¢ per lb.

$$.90 \times (35.3 - 1.50) \times \frac{2000}{100} \times \frac{(16-2)}{100} = \$\ 85.80$$

Zn - pay 75% on assay @ 5.6¢ per lb.

$$.75 \times 48.3 \times \frac{2000}{100} \times \frac{5.6}{100} = \$\ 40.60$$

Ag - pay 95% on assay @ 90¢ per oz.

$$.95 \times \frac{90}{100} \times 10 = \$\ 8.55$$

Au - pay 91% on assay @ $35.00 per oz.

$$.91 \times 0.0965 \times 35 = \$\ 3.07$$

Total credits are $138.02

<u>Debits</u> <u>are</u>:

Base Smelter charge	$ 5.55
Insols @ 10¢ per unit	$ 0.30
Sulphur @ 20¢ per unit	$ 1.20
Zn @ $0.15 p. unit	$ 7.24
Lime	$ 2.00
	$ 16.29
Credit for iron @ 6¢ per unit	-$ 0.30
Therefore total deducts are	$ 15.99

Total gross credits	$138.02
Total deducts at Smelter	$ 15.99
Credit before freight	$122.03
Freight & 3% tax	-$ 12.00

Therefore Net Smelter Return
p. ton concentrate ... $110.03
N.S.R. per ton crude $15.72 (at 7 to 1 concentration)

ESTIMATE OF COSTS AND RETURNS FROM OPERATION.

With ore bodies of fair width and good free running slopes of stopes, mining per ton should not cost over $5.00. Mining costs may be kept down by the use of slushers and ore passes to the #3 level. Fairly simple milling, principally based on gravity concentration with flotation of slimes and reground table middlings only, should cost under $4.00 per ton crude, -- adding for some overhead we can assume that mining, milling and haulage to the mill will cost about $10.00 per ton crude ore.

This leaves $5.72 per ton or $5.72 x 16,270 = $93,000.00 for amortization of investment, royalty and profits.

The investment can be roughly estimated as follows:

1. Mill	$40,000.00
2. Camp (change room, office, store room)	$10,000.00
3. Preparation of mine (#3 tunnel, winze timber, moving of the bin)	$12,000.00
4. Water development.....	$ 1,000.00
	$63,000.00

Royalties (usual) 10% of Net Smelter Returns: .10 x 15.72 x 16,270	$25,600.00	
Royalties and expenses	$88,600.0	$88,600.00
Therefore left for Profit from ORE IN SIGHT		$ 4,400.00

About 325 mill run days at 50 tons per day are expected.

CONCLUSION.

It is clear that one cannot start a mining enterprise with such modest returns. This operation would give only 6% or 7% return on the capital besides amortization of all the investment. The risk involved in any mining operation demands much higher rate of returns to warrant taking the chance.

On the other hand, the lack of attractiveness of this business lies in the limited tonnage of ore developed and the consequent excessively heavy amortization charges against the returns. Such charges would be fair only, if no additional ore could be developed. On the other hand, should there be developed an equal additional tonnage, then the second year of operation would bring very handsome returns, as the heavy charges such as described above and amounting to some $63,000.00, would not be recurring and instead these sums would go into the profit column. In this way, should sufficient ore be proven for two years' operation, the profits for the two years should be about twice the $4,400.00 plus the $63,000.00 or a total of $71,800.00 or about $35,900.00 per year on about $70,000.00 original investment. Of course, the above mentioned speculative fault solution investment would have to be paid out of these profits. In other words, the doubling of ore reserves changes the picture from a rather unattractive to a very promising one.

R E C O M M E N D A T I O N S.

As most small undeveloped mines, the Silver Rule needs a little prospecting and hence some speculative capital. About 200' feet of drifting and crosscutting and 400 to 600 feet of diamond drilling should be sufficient to prove or disprove the presence of ore within reasonable distance of the present workings. Such development would cost may be as little as $3000.00, but surely no more that $6000.00 and would be very well repaid, if ore were picked up west of the main fault.

As things stand at the date of this writing, I cannot recommend the construction of a mill, but I do think that additional development along the lines described above is fully warranted and is a very good mining speculation.

As Mr. Little has established a camp at Silver Rule, has a small but congenial and efficient crew and all the needed equipment at the mine, the prospecting work suggested in this report will cost but half of what it would, should one be starting from scratch at an isolate place in the desert.

GENERAL REMARKS.

Surveying: of the main two levels -#1 and #2 and a tie between them was done with a regular surveyor's transit and is believed

to be quite accurate. The mapping of stopes and #3 and #0 levels was done with a Brunton and is consequently rough but close enough for the purpose of this report.

SAMPLING was done at as regular intervals as possible and where one expected either to find mineable ore, or in critical spots, such as at the main fault face, at the bottom of the winze or in a raise. Samples were taken at even 10 feet intervals and not where the ore looked good. A total of 41 samples was taken.

CALCULATIONS were done with a special care to approach as closely as possible actual mining conditions. Where more ore was reported than it was possible to sample, 50% additional width was allowed, unless the assay was low, in which case no additional width was calculated. In 3 places, where assays turned out very disappointing they were not calculated in the average, as it was assumed that in these three places pillars would be left. This procedure is consistent with good mining practice and on account of its use the total amount of ore calculated was reduced by 10% to allow for the exclusion of these pillars. All averages were weighted on inch width basis of each sample.

Preparation of mine for extraction of ore should include the following items and costs:

1.	Timbering of main winze	$2000.00
2.	Extending #3 level 250' @ $15.00	$3750.00
3.	Installation of slushing equipmt.	$1350.00
4.	Opening up beyond fault	$2000.00
5.	Moving bin to #3 level	$1000.00
6.	Extending road to #3 level	$1000.00
7.	Improving access to upper levels	$ 900.00
	Total	$12,000.00

Prospecting of promise to be done at an early date:

1. New 78" vein 40' south of #1 portal -- a couple of rounds
2. Bottom of winze -- clean out, follow ore if any.
3. Crosscut into hanging wall of winze.
4. Crosscut in hanging wall in raise above #2 level.
5. Slabbing off of vein matter at Station #2 on #2 level.

Map attached to this report is a result of a geological, economical and topographical study and should be carefully consulted as the above report is perused. It is hoped that it will be of help to Mr. Little in planning his future work at this promising prospect.

Assay sheet of analyses on 41 samples obtained by Mr. Ed Eisenhauer is attached to this report.

Respectfully submitted

s/ George B. Blonsky

GEORGE B. BLONSKY.

Mining Engineer.

Registered Professional Engineer
Certificate No. 7179
State of California.

October 25, 1950.

Ed. Eisenhauser, Jr.
320-322 So. San Pedro St.

ASSAY CERTIFICATE

Los Angeles, Calif.
Oct. 11/50

I hereby Certify that the samples described below, received from

G. B. Blonsky assay as follows:

OWNER'S Mark and Sample	GOLD ozs. per ton	GOLD Value per ton	SILVER oz. per ton	SILVER per ton	Total Value per ton	Percentage Of Copper	Percentage Of Lead	Percentage Of Zinc
SR								
1	trace		Trace		$ .32		.1	2.2
2	.01	$ .35	1.10	$ .99	20.83		6.2	15.0
3	Trace		.08	.07	2.51		.7	7.2
4	.005	.18	.35	.32	7.04		2.1	8.0
5	.02	.70	2.30	2.07	30.87		9.0	8.8
6	.005	.18	.33	.30	16.62		5.1	7.0
7	.01	.35	.84	.76	8.76		2.5	2.1
8	.01	.35	.78	.70	10.30		3.0	16.6
9	.025	.88	4.80	4.32	46.88		13.3	10.0
10	nil		trace		-----		trace	tr.
11	.015	.53	1.22	1.10	28.30		8.5	9.6
12	.01	.35	.26	.23	6.00		1.8	7.1
13	.02	.70	.95	.86	21.98		6.6	9.3
14	.015	.53	.32	.29	6.69		2.0	7.2
15	.01	.35	.87	.78	12.94		3.8	8.1
16	.03	1.05	1.35	1.22	29.10		8.7	11.3
17	trace		.40	.36	10.00		3.0	8.5
18	nil		trace		-----		trace	tr
19	.02	.70	1.95	1.76	22.56		6.5	10.4
20	.025	.88	2.00	1.80	5.24		1.2	6.6
21	.01	.35	.94	.85	10.13		2.9	7.0
22	.03	1.05	4.36	3.92	42.64		12.1	9.7
23	.02	.70	.77	.69	10.61		3.1	8.4
24	.025	.88	1.68	1.51	8.55		2.2	6.9
25	.02	.70	1.08	.97	5.77		1.5	6.6
26	.015	.53	2.20	1.98	23.10		6.6	11.3
27	.01	.35	.84	.76	13.56		4.00	8.5
28	trace		.45	.41	6.81		2.0	7.0
29	.02	.70	2.52	2.27	19.87		5.5	8.9
30	nil		trace		-----		nil	tr
31	.04	1.40	6.20	5.50	16.38		3.4	7.7
32	trace		.18	.16	4.32		1.3	6.9
33	trace		.20	.18	4.58		1.5	7.1
34	trace		.25	.23	4.71		1.4	7.0
35-1	.015	.53	1.28	1.15	20.35		6.0	9.2
35-2	.02	.70	2.02	1.82	12.06		5.2	8.2
36	nil		trace		-----		trace	tr
37-missing								
38	.01	.35	.98	.88	13.36		3.9	9.5
39	trace		.23	.21	7.25		2.2	7.4
40	.035	1.25	7.04	6.34	9,86		1.1	5.6
41	.02	.70	.80	.72	7.20		2.0	7.7

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 855 X

Date received 5-31-51

Participation

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

Name and address of applicant

Date May 7, 1951

FILL IN THIS BLOCK

Date of application May 7th 1951

Estimated cost $116,000.00

Mineral or metal Lead - Zinc

Percentage of Government participation 50%

Location of mine Tecopa, California

Date of filing MF-100 May 7th 1951

DMA Docket Number, if available DMA 855 X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By John Q. Little (Signature of authorized official)
May - 7 - 51 (Date)	Partner (Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Form MF-103

APPLICATION FOR AID

Name:

Silver Rule Mine
John Q. Little
Belva M. Little
Nipton, California

Docket D.M.A. 855

May 7th 1951

THE APPLICANT

* 1.
* 2.
* 3.
* 4.
* 5.
* 6.
7. Lease attached
* 8.
9. The applicant is prepared to invest 50% of the detailed cost shown in the application.
* 10.
(a)
(b)
* 11.
* 12.
* 13.
* 14.
15.
High grade ore can be shipped to the smelters at Salt Lake City Utah or San Francisco, California. It is believed that with this project enough ore reserves can be established to warrant the building of a mill to concentrate the ore on the premises.

* 16. (a)
(b)
(c)

* 17. Production
(a)
1
2
3

* 18. Ore or mineral reserves
(a)
(b)
(c)

* 19. Nothing further to state.

* Items starred have been described in an application dated 5 March 1951 Docket D.M.A. 855.

The Exploration (continued)

* 21

In addition to the proposed work itemized in the original application, the following work is now proposed -

150 feet cross cutting @ $20.00 per ft.	$ 3,000.00
700 feet Timbered prospecting raises @ $20.00 per ft.	14,000.00
12 Ore schutes timbered $100.00 each	1,200.00
200 feet Drifting on the vein @ $20.00 ft.	4,000.00
Timbering and enlarging present winze @ $20.00 per ft.	1,500.00
	$ 23,700.00

It is estimated that it will require approximately 14 months to carry the proposed exploration work to a point where sufficient ore will be in sight to justify a concentration plant.

* Items starred have been described in an application dated 5 March 1951 Docket B M A 855

The Exploration

22.

Later development, accomplished since the former application was made and sent to your office has changed materially the prospects of the exploration and has made changes in the plan of exploration necessary.

The exploration mentioned was as follows: A cross cut was started 20' west of station 11 on No. 2 level, curving to the southward and extending 75 feet, at which point the hanging wall of the faulted section of the vein was encountered. Good values in lead carbonates and sulphides were found but the footwall of the vein has not yet been defined.

The ore in the vein near the cut off in the old workings was from 12 to 15 feet thick and a very good grade. The full width and value of the faulted segment of the vein has not yet been established but it is apparent that the vein will be as good as it was when cut off by the post mineral faulting. It will doubtless add very materially to the ore reserves of the mine and produce ore that can be shipped when it is further developed. It also clarifies to a certain extent the problem of the post mineral faulting of the veins.

23.

(a) Labor - Miners and Muckers - 15 to 18 @ $12.00 per day)
Truck Drivers - 1 or 2 at $12.00 per day)- wages pro rated in footage costs of the development work.
Diamond Drill runners - 1 @ $20.00 per day)

(b) Supervisors and Clerical

1 accountant $14.00 per day - ½ time charged to other exploration)

1 shift boss @ $15.00 per day)

1 superintendent $20.00 per day - ½ time charged to other exploration.)

1 consulting engineer - $15.00 per day - ½ of his fees charged to other exploration. Fees to be paid on basis of time devoted to the project and is expected to be less as the work gets organized.)- $ 8,000.00

(c) None

* (d) See foot note

* (e) Besides the equipment specified in the former application the following equipment will be necessary:

1 - 315 cu. ft. diesel driven portable compressor	$ 10,000.00	
4 - 17 cu. ft. capacity mine cars @ $250.00	1,000.00	
1 - Chevrolet station wagon for hauling mine supplies	2,550.00	
2 - 4 wheel drive pick ups	4,000.00	
1 - stoper	650.00	
1 - mounted drifter	650.00	
1 - mounted Jack hammer	400.00	
5 - sets of steel	150.00	
1 - Light plant (10 KW)	2,500.00	
1 - Servel refrigerator for cook house	400.00	
Mine timbers	3,000.00	
		$25,300.00

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

23. (continued)

(e) continued

Contingencies		$ 4,000.00
	Total	$ 4,000.00

(f) No Rentals

(g) Rental Value of owned equipment to be used on the project (see former application for list of equipment) 1,585.00

* (h)

* (i)

Recapitulation

Item 21 - of former application	$ 24,750.00	
Item 21 of this application	23,700.00	$ 48,450.00
Item 23 of former application	$ 21,750.00	
Item 23 of this application	25,300.00	47,050.00
Contingencies-former application	$ 4,500.00	
Contingencies of this application	4,000.00	8,500.00
Supervision and Clerical & Engineering Former application	$ 4,000.00	
Supervision, Clerical and Engineering This Application	8,000.00	12,000.00
Total		$116,000.00

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

Time Schedule

Within two months after the project is approved it is expected that some of the equipment and supplies will have been purchased, men employed to make a full crew, the geological studies completed and engineering plans brought up to date and approximately $18,000 spent.

Five months after date of approval it is expected that the housing will be completed, exploration work begun in No. 3 level, the Diamond drilling program well advanced, exploration work on No. 2 level well started, most of the equipment purchased and the major part of the timber and other supplies purchased and $35,000 more money spent, a total of $53,000 to date.

Twelve months after approval the Diamond drilling should be completed, the cross cutting about finished, all machinery purchased, exploration work well along on the 2nd and 3rd levels and $40,000 more money spent, making a total of $93,000 to date.

Fourteen months after approval the exploration work should be completed and all the money spent.

As soon as the ore reserves reach a point where a concentrating plant is justified, the necessary metallurgical studies will be made on the ore and plans drawn for a mill suitable for the economic recovery of the values in the ore.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 855-X

Date received 5-21-51

Participation

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

Name and address of applicant

Date May 7, 1951

FILL IN THIS BLOCK

Date of application May 7th 1951

Estimated cost $116,000.00

Mineral or metal Lead - Zinc

Percentage of Government participation 50%

Location of mine Tecopa, California

Date of filing MF-100 May 7th 1951

DMA Docket Number, if available DMA 855 X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By John P. Lutts (Signature of authorized official)
May-7-51 (Date)	Partner (Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Form MF-103

APPLICATION FOR AID

Name:

Silver Rule Mine
John Q. Little
Belva M. Little
Nipton, California

Docket D.M.A. 855

May 7th 1951

THE APPLICANT

* 1.
* 2.
* 3.
* 4.
* 5.
* 6.
7. Lease attached
* 8.
9. The applicant is prepared to invest 50% of the detailed cost shown in the application.
* 10.
(a)
(b)
* 11.
* 12.
* 13.
* 14.
15.
High grade ore can be shipped to the smelters at Salt Lake City Utah or San Francisco, California. It is believed that with this project enough ore reserves can be established to warrant the building of a mill to concentrate the ore on the premises.

* 16. (a)
(b)
(c)

* 17. Production
(a)
1
2
3

* 18. Ore or mineral reserves
(a)
(b)
(c)

* 19. Nothing further to state.

* Items starred have been described in an application dated 5 March 1951 Docket D.M.A. 855.

The Exploration (continued)

* 21

In addition to the proposed work itemized in the original application, the following work is now proposed -

150 feet cross cutting @ $20.00 per ft.	$ 3,000.00
700 feet Timbered prospecting raises @ $20.00 per ft.	14,000.00
12 Ore schutes timbered $100.00 each	1,200.00
200 feet Drifting on the vein @ $20.00 ft.	4,000.00
Timbering and enlarging present winze @ $20.00 per ft.	1,500.00
	$ 23,700.00

It is estimated that it will require approximately 14 months to carry the proposed exploration work to a point where sufficient ore will be in sight to justify a concentration plant.

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

The Exploration

22.

Later development, accomplished since the former application was made and sent to your office has changed materially the prospects of the exploration and has made changes in the plan of exploration necessary.

The exploration mentioned was as follows: A cross cut was started 20' west of station 11 on No. 2 level, curving to the southward and extending 75 feet, at which point the hanging wall of the faulted section of the vein was encountered. Good values in lead carbonates and sulphides were found but the footwall of the vein has not yet been defined.

The ore in the vein near the cut off in the old workings was from 12 to 15 feet thick and a very good grade. The full width and value of the faulted segment of the vein has not yet been established but it is apparent that the vein will be as good as it was when cut off by the post mineral faulting. It will doubtless add very materially to the ore reserves of the mine and produce ore that can be shipped when it is further developed. It also clarifies to a certain extent the problem of the post mineral faulting of the veins.

23.

(a) Labor - Miners and Muckers - 15 to 18 @ $12.00 per day)
Truck Drivers - 1 or 2 at $12.00 per day)- wages pro rated in footage costs of the development work.
Diamond Drill runners - 1 @ $20.00 per day)

(b) Supervisors and Clerical

1 accountant $14.00 per day - ½ time charged to other exploration)

1 shift boss @ $15.00 per day)

1 superintendent $20.00 per day - ½ time charged to other exploration.)

1 consulting engineer - $15.00 per day - ½ of his fees charged to other exploration. Fees to be paid on basis of time devoted to the project and is expected to be less as the work gets organized.)- $ 8,000.00

(c) None

* (d) See foot note

* (e) Besides the equipment specified in the former application the following equipment will be necessary:

1 - 315 cu. ft. diesel driven portable compressor	$ 10,000.00	
4 - 17 cu. ft. capacity mine cars @ $250.00	1,000.00	
1 - Chevrolet station wagon for hauling mine supplies	2,550.00	
2 - 4 wheel drive pick ups	4,000.00	
1 - stoper	650.00	
1 - mounted drifter	650.00	
1 - mounted Jack hammer	400.00	
5 - sets of steel	150.00	
1 - Light plant (10 KW)	2,500.00	
1 - Servel refrigerator for cook house	400.00	
Mine timbers	3,000.00	
		$25,300.00

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

23. (continued)

(e) continued

Contingencies		$ 4,000.00
	Total	$ 4,000.00

(f) No Rentals

(g) Rental Value of owned equipment to be used on the project (see former application for list of equipment) 1,585.00

* (h)

* (i)

Recapitulation

Item 21 - of former application	$ 24,750.00	
Item 21 of this application	23,700.00	$ 48,450.00
Item 23 of former application	$ 21,750.00	
Item 23 of this application	25,300.00	47,050.00
Contingencies-former application	$ 4,500.00	
Contingencies of this application	4,000.00	8,500.00
Supervision and Clerical & Engineering Former application	$ 4,000.00	
Supervision, Clerical and Engineering This Application	8,000.00	12,000.00
Total		$116,000.00

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

Time Schedule

Within two months after the project is approved it is expected that some of the equipment and supplies will have been purchased, men employed to make a full crew, the geological studies completed and engineering plans brought up to date and approximately $18,000 spent.

Five months after date of approval it is expected that the housing will be completed, exploration work begun in No. 3 level, the Diamond drilling program well advanced, exploration work on No. 2 level well started, most of the equipment purchased and the major part of the timber and other supplies purchased and $35,000 more money spent, a total of $53,000 to date.

Twelve months after approval the Diamond drilling should be completed, the cross cutting about finished, all machinery purchased, exploration work well along on the 2nd and 3rd levels and $40,000 more money spent, making a total of $93,000 to date.

Fourteen months after approval the exploration work should be completed and all the money spent.

As soon as the ore reserves reach a point where a concentrating plant is justified, the necessary metallurgical studies will be made on the ore and plans drawn for a mill suitable for the economic recovery of the values in the ore.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 855 X

Date received 5-31-51

Participation

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

Name and address of applicant

Date May 7, 1951

FILL IN THIS BLOCK

Date of application May 7th 1951

Estimated cost $116,000.00

Mineral or metal Lead - Zinc

Percentage of Government participation 50%

Location of mine Tecopa, California

Date of filing MF-100 May 7th 1951

DMA Docket Number, if available DMA 855 X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.
*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.
*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.
*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.
15. State in detail how the ore could be shipped and how and where milled.
*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.
*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.
19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?
21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By John R. Little (Signature of authorized official)
May - 7 - 51 (Date)	Partner (Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Form MF-103

APPLICATION FOR AID

Name:

Silver Rule Mine
John Q. Little
Belva M. Little
Nipton, California

Docket D.M.A. 855

May 7th 1951

THE APPLICANT

* 1.
* 2.
* 3.
* 4.
* 5.
* 6.
7. Lease attached
* 8.
9. The applicant is prepared to invest 50% of the detailed cost shown in the application.
* 10.
(a)
(b)
* 11.
* 12.
* 13.
* 14.
15.
High grade ore can be shipped to the smelters at Salt Lake City Utah or San Francisco, California. It is believed that with this project enough ore reserves can be established to warrant the building of a mill to concentrate the ore on the premises.

* 16. (a)
(b)
(c)

* 17. Production
(a)
1
2
3

* 18. Ore or mineral reserves
(a)
(b)
(c)

* 19. Nothing further to state.

* Items starred have been described in an application dated 5 March 1951 Docket D.M.A. 855.

The Exploration (continued)

* 21

In addition to the proposed work itemized in the original application, the following work is now proposed -

150 feet cross cutting @ $20.00 per ft.	$ 3,000.00
700 feet Timbered prospecting raises @ $20.00 per ft.	14,000.00
12 Ore schutes timbered $100.00 each	1,200.00
200 feet Drifting on the vein @ $20.00 ft.	4,000.00
Timbering and enlarging present winze @ $20.00 per ft.	1,500.00
	$ 23,700.00

It is estimated that it will require approximately 14 months to carry the proposed exploration work to a point where sufficient ore will be in sight to justify a concentration plant.

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

The Exploration

22.

Later development, accomplished since the former application was made and sent to your office has changed materially the prospects of the exploration and has made changes in the plan of exploration necessary.

The exploration mentioned was as follows: A cross cut was started 20' west of station 11 on No. 2 level, curving to the southward and extending 75 feet, at which point the hanging wall of the faulted section of the vein was encountered. Good values in lead carbonates and sulphides were found but the footwall of the vein has not yet been defined.

The ore in the vein near the cut off in the old workings was from 12 to 15 feet thick and a very good grade. The full width and value of the faulted segment of the vein has not yet been established but it is apparent that the vein will be as good as it was when cut off by the post mineral faulting. It will doubtless add very materially to the ore reserves of the mine and produce ore that can be shipped when it is further developed. It also clarifies to a certain extent the problem of the post mineral faulting of the veins.

23.

(a) Labor - Miners and Muckers - 15 to 18 @ $12.00 per day)
Truck Drivers - 1 or 2 at $12.00 per day)- wages pro rated in footage costs of the development work.
Diamond Drill runners - 1 @ $20.00 per day)

(b) Supervisors and Clerical

1 accountant $14.00 per day - ½ time charged to other exploration)

1 shift boss @ $15.00 per day)

1 superintendent $20.00 per day - ½ time charged to other exploration.)

1 consulting engineer - $15.00 per day - ½ of his fees charged to other exploration. Fees to be paid on basis of time devoted to the project and is expected to be less as the work gets organized.)- $ 8,000.00

(c) None

* (d) See foot note

* (e) Besides the equipment specified in the former application the following equipment will be necessary:

1 - 315 cu. ft. diesel driven portable compressor	$ 10,000.00	
4 - 17 cu. ft. capacity mine cars @ $250.00	1,000.00	
1 - Chevrolet station wagon for hauling mine supplies	2,550.00	
2 - 4 wheel drive pick ups	4,000.00	
1 - stoper	650.00	
1 - mounted drifter	650.00	
1 - mounted Jack hammer	400.00	
5 - sets of steel	150.00	
1 - Light plant (10 KW)	2,500.00	
1 - Servel refrigerator for cook house	400.00	
Mine timbers	3,000.00	
		$25,300.00

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

23. (continued)

(e) continued

Contingencies		$ 4,000.00
	Total	$ 4,000.00
(f) No Rentals		
(g) Rental Value of owned equipment to be used on the project (see former application for list of equipment)		1,585.00
* (h)		
* (i)		

Recapitulation

Item 21 - of former application	$ 24,750.00	
Item 21 of this application	23,700.00	$ 48,450.00
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Supervision, Clerical and Engineering This Application	8,000.00	12,000.00
Total		$116,000.00

* Items starred have been described in an application dated 5 March 1951 Docket D M A 855

Time Schedule

Within two months after the project is approved it is expected that some of the equipment and supplies will have been purchased, men employed to make a full crew, the geological studies completed and engineering plans brought up to date and approximately $18,000 spent.

Five months after date of approval it is expected that the housing will be completed, exploration work begun in No. 3 level, the Diamond drilling program well advanced, exploration work on No. 2 level well started, most of the equipment purchased and the major part of the timber and other supplies purchased and $35,000 more money spent, a total of $53,000 to date.

Twelve months after approval the Diamond drilling should be completed, the cross cutting about finished, all machinery purchased, exploration work well along on the 2nd and 3rd levels and $40,000 more money spent, making a total of $93,000 to date.

Fourteen months after approval the exploration work should be completed and all the money spent.

As soon as the ore reserves reach a point where a concentrating plant is justified, the necessary metallurgical studies will be made on the ore and plans drawn for a mill suitable for the economic recovery of the values in the ore.

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMA 855-X

Date received 5-31-51

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

Name and address of applicant

Date May 7, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)

By John R. Little
(Signature of authorized official)

May - 7 - 51
(Date)

Partner
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

Form MF-100

GENERAL TECHNICAL DATA

SILVER RULE

Name

Docket No. DMA - 855

Silver Rule Mine
John Q. Little)
Belva M. Little) Nipton, California

May 7th 1951

* 1. Materials Produced:
(a) Lead and Zinc
(b) Silver and Gold

* 2. Name & Type of Mine
Silver Rule, Lead and Zinc Mine
(a) Shafts - none
(b) Drifts and Cross Cuts
(c) Tunnels and adits
(d) Linear feet of other mine openings
The mine is dry No pumps - Productive capacity will probably be 200 tons per month within two months

* 3.
(a) Distance and direction from nearest town and shipping point
(b) Mining District
(c) Township section and range
(d) County and State

4.
(a) The property is now being operated by applicants
(b) Operating under a leasehold

5. Number of years in production. The applicant has been developing the property approximately 17 months. Production should begin within two months.

6. Experience of operators
Mr. John Q. Little has been operating mines for the last nine years - and prior to that time he has had 25 years experience in the oil business as Driller, Operator, and the Oil Well supply business.

Mr. Fred W. Cook has been retained as Consultant in Mining and Operations. He has had more than 35 years experience in the mining business as engineer, operator and consultant. He is a registered professional engineer (Mining) in the State of Nevada with Certificate No. 571. Has been employed by the Government for more than five years as Civil and Mining Engineer. Was with the Army's Corps of Engineer and the Navy's C.E.C.

* 7. History
(a)
(b)
(c)

*Items starred have been fully described in application forwarded March 5, 1951.
Docket DMA-855.

8. Names and addresses of Partners

John Q. Little	Hipton, California	$10,000.00
Belva M. Little	Hipton, California	$10,000.00

9. Does not apply.

10. Production

The only production in recent years was one car of 57,092 dry tons shipped 12/4/50 which contained 8.54% lead. 6.0% zinc, 2.3 of silver, .0275 gold, 10.85% Insol., 2.9% Iron, 0.3% sulphur, 20.75% lime. This car was shipped to comply with lease provisions and not because it was thought to be commercial ore.

11. It is contemplated that production will begin within ninety days or less at the rate 150 tons per month. This will be high grade shipping ore to be shipped to the smelter. Production of mill grade ore will be carried on at at the same time and stock piled until a mill can be installed.

Since the application, dated in Feb. or March and forwarded to you under date of March 5th 1951, was made, a cross cut has been completed from the western end of the No. 2 adit thru the shear zone of the fault to the faulted section of the vein has not been reached we are sure that the vein will be about as good as the part worked out by the former operators. This Cross Cut has solved the problem of the fault system and doubtless will add a substantial amount to our ore reserves as soon as the necessary development work has been done. This Cross Cut above described runs west from Station 11 approximately 20 feet then makes a turn to the south for a distance of 75 feet where the hanging wall of the faulted section of the vein was encountered and broken thru. Lead carbonates and considerable galena was found, but another round or so will be required to find the thickness of the vein but the ore was from 12' to 15' thick up to the cut off fault.

* 12.
(a) Ore reserves
(b) Assay Maps etc.

* 13.

14. Crystal Springs furnishes water for present camp needs the year around.

15. Diesel power - produced on property.

16. During recent months 2 to three miners only have been employed.

* 17.

* 18. No particular conditions exist that have not been described.

* Items starred have been fully described in application forwarded March 5, 1951
Docket DMA-855

Form 100

General Technical Data

Silver Rule Mine
D M A 855

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

1. Materials Produced -

(a) The chief products of the mine are lead, zinc and silver - values in the order named.

(b) No by-products.

2. Name of the mine -

The mine was originally located as the Silver Rule and is still generally known by that name, altho it has been relocated as the Crystal Springs Mine. It contains the mine workings given below: viz.

(a) 75' (linear) of inside shaft (Winze)

(b) Linear feet of drifts and cross cuts -

(1) 1st adit level 225'
(2) 2nd " " 520' and at 400 feet in a winze 75' deep - on the vein. The ore the mine has produced came from these levels.
(3) 3rd adit level 90'
(4) 4th " " 420'

The distance to the vein from the end of No. 3 level is estimated to be forty or fifty feet and from No. 4 level at approximately station 1 + 75 to the vein is estimated to be 300 feet. This level is approximately 610' below No. 1 level.

(c) Answered above.

(d) Other workings - none.

The mine is dry;there is no pumping problem. Productive capacity estimated to be 200 tons per month when the high grade ore is picked up on No. 2 level - and when the proposed exploration program is completed it is estimated that 50 to 75 tons per day could be produced.

General Technical Data (continued)

3. (a) Distance to shipping point, Dunn, California, is approximately 100 miles S.E. The nearest town is Tecapa, 17 miles southwest.

(b) Resting Springs mining district.

(c) There are nine unpatented lode mining claims.

Funds necessary for exploration not estimated in former application:

150 Cross cutting for veins prospected by Diamond drill @ $20.00 per foot	$ 3,000.00	
700 ft. Timbered prospecting raises @ $20.00 per foot	14,000.00	
12 ore schutes timbered - @ $100.00 each	1,200.00	
200 feet of drifting on vein - @ $20.00 ft.	4,000.00	
Timbering and enlarging present winze @ $20.00 per foot	1,500.00	
		$23,700.00

Equipment

1 - 315 cu. ft. Diesel portable Compressor	$ 10,000.00	
4 - 17 cu. ft. mine cars @ $250.00	1,000.00	
1 - Chevrolet Station wagon	2,550.00	
2 - 4 wheel drive pick up	4,000.00	
1 - stoper	650.00	
1 - Mounted drifters	650.00	
1 - " Jack Hammer	400.00	
5 - sets of steel	150.00	
mine timbers	3,000.00	
1 - Light plant (10 KW)	2,500.00	
1 - Servel Refrigerator	400.00	
		$25,300.00
Supervision and Bookkeeping		8,000.00
Contingencies		4,000.00
Total		$61,000.00
Plus Former Report		55,000.00
Grand Total - - - - - - -		$116,000.00

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DM 4 Rus X

Date received 5-31-51

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

Name and address of applicant

Date May 7, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)

By John Q. Dibble
(Signature of authorized official)

May - 7 - 51
(Date)

Partner
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

Form MF-100

GENERAL TECHNICAL DATA

SILVER RULE

Name

Docket No. DMA - 855

Silver Rule Mine
John Q. Little)
Belva M. Little) Mipton, California

May 7th 1951

* 1. Materials Produced:
(a) Lead and Zinc
(b) Silver and Gold

* 2. Name & Type of Mine
Silver Rule, Lead and Zinc Mine
(a) Shafts - none
(b) Drifts and Cross Cuts
(c) Tunnels and adits
(d) Linear feet of other mine openings
The mine is dry No pumps - Productive capacity will probably be 200 tons per month within two months

* 3.
(a) Distance and direction from nearest town and shipping point
(b) Mining District
(c) Township section and range
(d) County and State

4.
(a) The property is now being operated by applicants
(b) Operating under a leasehold

5. Number of years in production. The applicant has been developing the property approximately 17 months. Production should begin within two months.

6. Experience of operators
Mr. John Q. Little has been operating mines for the last nine years - and prior to that time he has had 25 years experience in the oil business as Driller, Operator, and the Oil Well supply business.

Mr. Fred W. Cook has been retained as Consultant in Mining and Operations. He has had more than 35 years experience in the mining business as engineer, operator and consultant. He is a registered professional engineer (Mining) in the State of Nevada with Certificate No. 571. Has been employed by the Government for more than five years as Civil and Mining Engineer. Was with the Army's Corps of Engineer and the Navy's C.E.C.

* 7. History
(a)
(b)
(c)

*Items starred have been fully described in application forwarded March 5, 1951.
Docket DMA-855.

8. Names and addresses of Partners

John Q. Little	Nipton, California	$10,000.00
Belva M. Little	Nipton, California	$10,000.00

9. Does not apply.

10. Production

The only production in recent years was one car of 57,092 dry tons shipped 12/4/50 which contained 8.54% lead. 6.0% zinc, 2.3 of silver, .0275 gold, 10.25% Insol., 2.9% Iron, 0.3% sulphur, 20.75% lime. This car was shipped to comply with lease provisions and not because it was thought to be commercial ore.

11. It is contemplated that production will begin within ninety days or less at the rate 150 tons per month. This will be high grade shipping ore to be shipped to the smelter. Production of mill grade ore will be carried on at at the same time and stock piled until a mill can be installed.

Since the application, dated in Feb. or March and forwarded to you under date of March 5th 1951, was made, a cross cut has been completed from the western end of the No. 2 adit thru the shear zone of the fault to the faulted section of the vein has not been reached we are sure that the vein will be about as good as the part worked out by the former operators. This Cross Cut has solved the problem of the fault system and doubtless will add a substantial amount to our ore reserves as soon as the necessary development work has been done. This Cross Cut above described runs west from Station 11 approximately 20 feet then makes a turn to the south for a distance of 75 feet where the hanging wall of the faulted section of the vein was encountered and broken thru. Lead carbonates and considerable galena was found, but another round or so will be required to find the thickness of the vein but the ore was from 12' to 15' thick up to the cut off fault.

* 12.

(a) Ore reserves
(b) Assay Maps etc.

* 13.

14. Crystal Springs furnishes water for present camp needs the year around.

15. Diesel power produced on property

16. During recent months 2 to three miners only have been employed.

* 17.

* 18. No particular conditions exist that have not been described.

* Items starred have been fully described in application forwarded March 5, 1951 Docket DMA-855.

Form 100

General Technical Data

Silver Rule Mine
D M A 855

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

1. Materials Produced -

(a) The chief products of the mine are lead, zinc and silver - values in the order named.

(b) No by-products.

2. Name of the mine -

The mine was originally located as the Silver Rule and is still generally known by that name, altho it has been relocated as the Crystal Springs Mine. It contains the mine workings given below: viz.

(a) 75' (linear) of inside shaft (Winze)

(b) Linear feet of drifts and cross cuts -

(1) 1st adit level 225'
(2) 2nd " " 520' and at 400 feet in a winze 75' deep - on the vein. The ore the mine has produced came from these levels.
(3) 3rd adit level 90'
(4) 4th " " 420'

The distance to the vein from the end of No. 3 level is estimated to be forty or fifty feet and from No. 4 level at approximately station 1 + 75 to the vein is estimated to be 300 feet. This level is approximately 610' below No. 1 level.

(c) Answered above.

(d) Other workings - none.

The mine is dry;there is no pumping problem. Productive capacity estimated to be 200 tons per month when the high grade ore is picked up on No. 2 level - and when the proposed exploration program is completed it is estimated that 50 to 7t tons per day could be produced.

General Technical Data (continued)

3. (a) Distance to shipping point, Dunn, California, is approximately 100 miles S.E. The nearest town is Tecopa, 17 miles southeast.

(b) Resting Springs mining district.

(c) There are nine unpatented lode mining claims.

Funds necessary for exploration not estimated in former application:

150 Cross cutting for veins prospected by Diamond drill @ $20.00 per foot	$ 3,000.00	
700 ft. Timbered prospecting raises @ $20.00 per foot	14,000.00	
12 ore schutes timbered - @ $100.00 each	1,200.00	
200 feet of drifting on vein - @ $20.00 ft.	4,000.00	
Timbering and enlarging present winze @ $20.00 per foot	1,500.00	
		$23,700.00

Equipment

1 - 315 cu. ft. Diesel portable Compressor	$ 10,000.00	
4 - 17 cu. ft. mine cars @ $250.00	1,000.00	
1 - Chevrolet Station wagon	2,550.00	
2 - 4 wheel drive pick up	4,000.00	
1 - stoper	650.00	
1 - Mounted drifters	650.00	
1 - " Jack Hammer	400.00	
5 - sets of steel	150.00	
mine timbers	3,000.00	
1 - Light plant (10 KW)	2,500.00	
1 - Servel Refrigerator	400.00	
		$25,300.00
Supervision and Bookkeeping		8,000.00
Contingencies		4,000.00
Total		$61,000.00
Plus Former Report		55,000.00
Grand Total - - - - - - -		$116,000.00

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMA 8554

Date received 5-31-51

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

Name and address of applicant

Date May 7, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(*a*) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)

By John P. Little
(Signature of authorized official)

May - 7 - 51
(Date)

Partner
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

Form MF-100

GENERAL TECHNICAL DATA

SILVER RULE

Name

Docket No. DMA - 855

Silver Rule Mine
John Q. Little)
Belva M. Little)

Nipton, California

May 7th 1951

* 1. Materials Produced:
(a) Lead and Zinc
(b) Silver and Gold

* 2. Name & Type of Mine
Silver Rule, Lead and Zinc Mine
(a) Shafts - none
(b) Drifts and Cross Cuts
(c) Tunnels and adits
(d) Linear feet of other mine openings
The mine is dry No pumps - Productive capacity will probably be 200 tons per month within two months

* 3.
(a) Distance and direction from nearest town and shipping point
(b) Mining District
(c) Township section and range
(d) County and State

4.
(a) The property is now being operated by applicants
(b) Operating under a leasehold

5. Number of years in production. The applicant has been developing the property approximately 17 months. Production should begin within two months.

6. Experience of operators
Mr. John Q. Little has been operating mines for the last nine years - and prior to that time he has had 25 years experience in the oil business as Driller, Operator, and the Oil Well supply business.

Mr. Fred W. Cook has been retained as Consultant in Mining and Operations. He has had more than 35 years experience in the mining business as engineer, operator and consultant. He is a registered professional engineer (Mining) in the State of Nevada with Certificate No. 571. Has been employed by the Government for more than five years as Civil and Mining Engineer. Was with the Army's Corps of Engineer and the Navy's C.E.C.

* 7. History
(a)
(b)
(c)

*Items starred have been fully described in application forwarded March 5, 1951.
Docket DMA-855.

8. Names and addresses of Partners

John Q. Little	Nipton, California	$10,000.00
Belva M. Little	Nipton, California	$10,000.00

9. Does not apply.

10. Production

The only production in recent years was one car of 57,092 dry tons shipped 12/4/50 which contained 8.54% lead. 6.0% zinc, 2.3 of silver, .0275 gold, 10.25% Insol., 2.9% Iron, 0.3% sulphur, 20.75% lime. This car was shipped to comply with lease provisions and not because it was thought to be commercial ore.

11. It is contemplated that production will begin within ninety days or less at the rate 150 tons per month. This will be high grade shipping ore to be shipped to the smelter. Production of mill grade ore will be carried on at at the same time and stock piled until a mill can be installed.

Since the application, dated in Feb. or March and forwarded to you under date of March 5th 1951, was made, a cross out has been completed from the western end of the No. 2 adit thru the shear zone of the fault to the faulted section of the vein has not been reached we are sure that the vein will be about as good as the part worked out by the former operators. This Cross Cut has solved the problem of the fault system and doubtless will add a substantial amount to our ore reserves as soon as the necessary development work has been done. This Cross Cut above described runs west from Station 11 approximately 20 feet then makes a turn to the south for a distance of 75 feet where the hanging wall of the faulted section of the vein was encountered and broken thru. Lead carbonates and considerable galena was found, but another round or so will be required to find the thickness of the vein but the ore was from 12' to 15' thick up to the cut off fault.

* 12.
(a) Ore reserves
(b) Assay Maps etc.

* 13.

14. Crystal Springs furnishes water for present camp needs the year around.

15. Diesel power - produced on property.

16. During recent months 2 to three miners only have been employed.

* 17.

* 18. No particular conditions exist that have not been described.

* Items starred have been fully described in application forwarded March 5, 1951 Docket DMA-855.

Form 100

General Technical Data

Silver Rule Mine
D M A 855

Silver Rule Mine

John Q. Little
Nipton, California

Belva M. Little
Nipton, California

1. Materials Produced -

(a) The chief products of the mine are lead, zinc and silver - values in the order named.

(b) No by-products.

2. Name of the mine -

The mine was originally located as the Silver Rule and is still generally known by that name, altho it has been relocated as the Crystal Springs Mine. It contains the mine workings given below: viz.

(a) 75' (linear) of inside shaft (Winze)

(b) Linear feet of drifts and cross cuts -

(1) 1st adit level 225'
(2) 2nd " " 520' and at 400 feet in a winze 75' deep - on the vein. The ore the mine has produced came from these levels.
(3) 3rd adit level 90'
(4) 4th " " 420'

The distance to the vein from the end of No. 3 level is estimated to be forty or fifty feet and from No. 4 level at approximately station 1 + 75 to the vein is estimated to be 300 feet. This level is approximately 610' below No. 1 level.

(c) Answered above.

(d) Other workings - none.

The mine is dry;there is no pumping problem. Productive capacity estimated to be 200 tons per month when the high grade ore is picked up on No. 2 level - and when the proposed exploration program is completed it is estimated that 50 to 7t tons per day could be produced.

General Technical Data (continued)

3. (a) Distance to shipping point, Dunn, California, is approximately 100 miles S.E. The nearest town is Tecapa, 17 miles southwest.

   (b) Resting Springs mining district.

   (c) There are nine unpatented lode mining claims.

Funds necessary for exploration not estimated in former application:

150 Cross cutting for veins prospected by Diamond drill @ $20.00 per foot	$ 3,000.00	
700 ft. Timbered prospecting raises @ $20.00 per foot	14,000.00	
12 ore schutes timbered - @ $100.00 each	1,200.00	
200 feet of drifting on vein - @ $20.00 ft.	4,000.00	
Timbering and enlarging present winze @ $20.00 per foot	1,500.00	
		$23,700.00

Equipment

1 - 315 cu. ft. Diesel portable Compressor	$ 10,000.00	
4 - 17 cu. ft. mine cars @ $250.00	1,000.00	
1 - Chevrolet Station wagon	2,550.00	
2 - 4 wheel drive pick up	4,000.00	
1 - stoper	650.00	
1 - Mounted drifters	650.00	
1 - " Jack Hammer	400.00	
5 - sets of steel	150.00	
mine timbers	3,000.00	
1 - Light plant (10 KW)	2,500.00	
1 - Servel Refrigerator	400.00	
		$25,300.00
Supervision and Bookkeeping		8,000.00
Contingencies		4,000.00
Total		$61,000.00
Plus Former Report		55,000.00
Grand Total - - - - - - -		$116,000.00

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ATTORNEY AT LAW
SUITE 114, METROPOLITAN BLDG.
RIVERSIDE, CALIFORNIA

MINING LEASE

THIS MINING LEASE, made and entered into as of the 5th day of December, 1949, between JOHN PRATO and SYLVIA PRATO of Fontana, California, Lessors, and JOHN Q. LITTLE and BELVA M. LITTLE, husband and wife, of Nipton, California, Lessees,

W I T N E S S E T H:

That said lessors, for and in consideration of the rents, royalties, covenants, and agreements hereinafter contained by the said lessees to be kept and performed specifically at the time and in the manner hereinafter set forth, have let and by these presents do lease and let unto the said lessees the following described mining claims containing deposits of metallic minerals and ore, said property being situated in the Crystal Springs Mining District in the Kingston Mountain Range, in the County of San Bernardino, State of California, to wit:

One Gulch No. 1, and Crystal Springs Mine, locations of which are recorded in Book 257, pages 287-288 of Official Mining Records of the County of San Bernardino, California.

Crystal Springs Mine No. II
Crystal Springs Mine No. III, and
Crystal Springs Mine No. IV,
locations of which are recorded in Book 250, pages 99-100 of Official Mining Records of said County of San Bernardino, California.

Victory Mining Claim, location notice of which is recorded in Book 285, page 473, Mining Records of San Bernardino County, California.

Iron King No. 1, location of which is recorded in Book 297, page 121 of Official Mining Records of San Bernardino County, California.

Iron King No. 2, location recorded in Book 297, page 122; Irong King No. 3, location recorded in Book 299, page 148, Official Mining Records of San Bernardino County, California.

Provided, however, that the lessors reserve that certain cabin located approximately 300 feet south of Crystal Springs and sufficient ground around said cabin to use the same for dwelling purposes. Provided further that during the term hereof the lessees shall have the right to use all water from said springs necessary to be used in the operation, mining, and working of the properties herein leased, over and above all water which the lessors may need

to use for domestic purposes in the cabin herein reserved. It is specifically understood that nothing herein contained shall be construed by either of the parties hereto that the lessors in any manner waive any of their rights as owners of the water flowing from said springs, or of said springs.

TO HAVE AND TO HOLD unto the said lessees for the term of ten years from date hereof, and expiring on the 22nd day of November, 1959, at which time all right of possession and/or interest of the said lessees shall be fully completed, terminated, and ended unless this lease is sooner forfeited or terminated by reason of the failure, neglect, or refusal of said lessees to specifically perform each and every term, covenant, and condition herein contained at the time and in the manner as is herein provided to be performed by the said lease. Provided, however, that if at the end of the said term said lessees have faithfully performed the terms and conditions of this lease required by them to be performed hereunder, said lessees may, at their election, continue their occupancy and operation of the lands herein leased for a further term of five years on the terms and conditions as to rent, royalties, and payments as may be then agreed upon between the lessors and lessees.

In consideration of the execution of this lease by the lessors to the lessees, the said lessees do hereby covenant and agree to and with the said lessors as follows, to wit:

That on or before the 21st day of December, 1949, lessees will enter upon said mining premises and complete the building of the road thereon so as to put the same in shape for hauling ore from the mine, and do such preliminary work thereon as may be necessary to put said mining property in shape to commence actual mining of ore therefrom and thereon by February 21, 1950, and that they will actually commence mining operations and the removal of ore therefrom on or before the 21st day of February, 1950, and will ~~continuously~~ thereafter during the entire term of this lease

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diligently work and mine ore and develop the said mining property in a careful, minerlike manner necessary to good and economical mining so as to mine and take out the greatest amount of ore possible, both low grade and high grade, with due regard to the safety, development, and preservation of said mining premises, and the whole thereof, as a workable mine. That the lessees will, on the signing of this lease, pay to lessors the sum of $3,000.00 cash as advance royalties under this agreement, $1,500.00 of which advance royalties shall be deducted from the royalties due or which may become due to the lessors for the first year of lessees' operation hereunder, and the balance of fifty per cent to be deducted from royalties due or to become due to lessors as royalties hereunder for the operation of the property during the second year of the term hereof.

That the lessees shall work said mine and produce ore therefrom as aforesaid ~~steadily and continuously~~ from said 21st day of February, 1950, and shall and will mine from the mining claims hereinabove described and ship a minimum of 750 tons of ore during the first year of this lease and place the same on top of the ground and send the same to a smelter equipped and able to commercially extract minerals therefrom; and will mine from the mining claims hereinabove described a minimum of 1,000 tons of ore during the second year of the term hereof and place the same on top of the ground and ship the same to a smelter equipped and able to commercially extract the minerals therefrom; that thereafter and each year during the remaining period of the term hereof, the lessees shall and will mine from the mining claims hereinabove described a minimum of 1,200 tons each year and place the same on top of the ground and ship the same to a smelter equipped and able to commercially extract the minerals therefrom. Provided, however, that if the price of all the minerals contained in said ore shall drop below a total of $20.00 per ton for all of said minerals, then the lessees herein may be excused from mining said ore as is herein provided until the price of all of said

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minerals contained in said ore shall exceed the price of $20.00 per ton, but in no event, however, shall such mining operations be excused for a period of more than one year, it being distinctly understood that if mining operations hereunder shall cease for any reason for a period of one year, this lease shall terminate and end, and the lessors may immediately thereafter enter upon the premises herein leased, and the whole thereof and take possession of said property, together with all buildings, tracks, and other improvements placed thereon by the lessees, except the mining machinery and other personal property of lessees, and thereafter operate the same without any interference or hindrance upon the part of said lessees, or either of them, and thereupon all the interest of the said lessees shall cease, terminate and be forfeited.

The lessees shall keep accurate books of account showing the amount of ore extracted, shipped, sold, or treated, and on the 1st day of each month during the term hereof account to and pay to the lessors as rent and royalty from any and all ores so extracted, treated, or shipped, as follows:

10% of the net smelter returns of all ore mined from said property by the lessees.

It being understood that no deduction from the royalties due the lessors hereunder shall be made except for freight and smelting charges.

That the books of the lessees containing said accounts shall be open to the inspection of lessors or lessors' representatives at all reasonable times.

That the values of the minerals upon which said royalties and rents are to be determined shall be based upon the return sheets from the smelter to which said ore is shipped for treatment or reduction, true copies of which shall be furnished to lessors of each shipment.

That all ore shall be shipped in the names of the lessors

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and lessees herein, and checks for the 10% for royalty payments therefor shall be made by said smelter payable to the lessors and 90% of the net smelter returns payable to lessees herein. The royalty payments to lessors shall be forwarded by said smelter to the Bank of America National Trust and Savings Association of Riverside, California, for deposit to the credit of lessors and Jerome L. Richardson, of Riverside, California; that said Bank of America National Trust and Savings Association of Riverside, California, is hereby authorized to receive and disburse said royalty payments as the agent of the lessors as follows:

10% of the amount of said royalty payments to Jerome L. Richardson, or his nominee.

The balance thereof to the lessors herein.

That at the end of the term hereof said lessees will deliver to the lessors 10% of the ores extracted by the lessees from said property and which have not been shipped, sold, treated or reduced, and lessees may remove the remaining 90% of said ore from said property.

That the said lessees will well and sufficiently timber said mine and all tunnels or shafts thereon at all points where necessary or proper in order to keep the same in a safe condition and to permit proper mining operations and to repair all old timbering wherever it may become necessary; to furnish and install any and all machinery, tracks, cars, and all other equipment, and all work connected directly or indirectly with the mining operation of said property, as well as the delivery of said ores to the railroad, at their own and sole cost and expense. That lessees will diamond drill at least 500 feet to prospect and develop new ore bodies during the first year of the term hereof.

That said lessees will occupy and hold all cross or parallel lodes, dips, spurs, feeders, crevices, or mineral deposits of any kind which may be discovered in work under this lease, or in any tun-

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nel run to intersect any lode thereon or by the said lessees or any person or persons under them in any manner, at any point within six hundred (600) feet from the boundaries of any of said claims herein described as the property of said lessors, with the privilege to the said lessees of working the same as an appurtenance of said demised premises during the term of this lease; and not locate or record the same, or allow the same to be located or recorded, except in the name of said lessors.

To keep at all times the drifts, shafts, tunnels, and other passages and workings of said demised premises thoroughly drained and clear of loose rock and rubbish of all kinds.

To pay promptly, when due, any and all bills for labor, material, supplies, or other things used in and about the mining operation herein, and not to permit any lien or attachment to be levied against or suffered by said lessees; to carry and keep in force during the term of this lease all compensation, public liability, and other insurance, and to operate said property, and the whole thereof, strictly in accordance with any and all laws, rules, and regulations of the state of California, county of San Bernardino, or the United States Federal Government.

To post and keep posted on said premises in a plain and conspicuous place a notice of non-responsibility for and on behalf of the lessors herein, and to allow said lessors and their agents to enter upon and into all parts of said property and mine at any and all reasonable times during the term hereof for the purpose of inspecting the same.

IT IS FURTHER AGREED between the parties hereto that the lessees may construct any buildings necessary for their use on the property of lessors on the highway, which property is not herein described, and shall have the right to use water for domestic purposes, now flowing from the spring located on the property of the lessors.

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The rights of the lessees hereunder may not be assigned without the consent of lessors, but such consent may be withheld by lessors solely in the event the prospective assignee is financially incapable of carrying out the obligations of lessees hereunder.

Lessees agree to deliver up to said lessors the said premises in good order and condition, with all shafts and tunnels and other passages then used by the lessees in their operation of the mine thoroughly clear of rubbish and drained, accidents not arising from negligence alone excusing, without demand or further notice, on said 21st day of November, 1959, or at the end of an extended period as provided herein, or at such time as lessees quitclaim all of their rights hereunder to the lessors. Provided, however, that nothing herein contained shall be construed as compelling the lessors, or either of them, to furnish water for said lessees, and provided further that nothing herein contained shall in any manner be construed as giving to the lessees any interest in or to the spring now located on lessors' property or in or to the water flowing therefrom.

Upon the violation by the said lessees, or any other person under them, of any covenant, or covenants, hereinbefore reserved, the term of this lease shall, at the option of the said lessors, expire and the same and said premises shall become forfeited to said lessors, and the lessors or their agents may enter thereupon sixty (60) days after notice to lessees of such default, and failure of lessees to remedy same, without demand for possession, and enter upon said premises and dispossess all persons occupying the same, with or without force, and with or without process of law, or, at the option of said lessors, or in any other manner, lessees may at any time quitclaim unto lessors all or any portion of their rights hereunder, and upon such quitclaim their obligations hereunder to the lessors pertinent to the rights so quitclaimed shall cease and determine.

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IT IS FURTHER SPECIFICALLY AGREED AND UNDERSTOOD by and between the parties hereto that in the event uranium or any other radioactive ores of a character which may be used in the production of atomic energy be discovered on said property, or any part thereof, during the mining operations hereunder, that the said receipts from the sale of said ore shall be divided, fifty per cent (50%) to the lessors and fifty per cent (50%) to the lessees.

Any notice from lessors to lessees shall be deemed delivered by depositing same in any post office of the United States, registered, and directed to the lessees at Nipton, California. Any notice from lessees to lessors shall be deemed delivered by depositing the same in any post office of the United States, registered, and directed to lessors, care of Jerome L. Richardson, attorney at law, 3900 Market Street, Riverside, California.

IT IS FURTHER AGREED AND UNDERSTOOD by and between the parties hereto that the lessors or their duly authorized agents may at any time during the term hereof enter upon the property herein leased and every part thereof and inspect the same when such inspection can be accomplished without danger to life or property, without any hindrance or delay from the lessees, or either of them.

That lessees may at any time, anything to the contrary herein notwithstanding, terminate this lease by delivering a quitclaim deed to the premises to lessors or the successors of lessors, and upon such termination all liability and obligation of lessees to lessors shall cease, save and except the obligation to pay the royalty on any ores actually removed from the premises.

Lessors shall not sell, assign, transfer or hypothecate the premises hereby demised, in whole or in part, without first submitting to the lessees the agreement of sale, assignment, transfer or hypothecation, and at the option of lessees to be exercised within fifteen days of submittal, lessees may consummate said sale, assignment, transfer or hypothecation with lessors upon the same terms and

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State of California,
County of Riverside } ss.

On this 5th day of December in the year one thousand nine hundred and 49, before me, Frances Upchurch, a Notary Public, in and for said County of Riverside, State of California, residing therein, duly commissioned and sworn, personally appeared

JOHN PRATO, SYLVIA PRATO, JOHN Q. LITTLE and BELVA M. LITTLE
Jerome L Richardson

personally known to me to be the person....described in and whose name....s.....are.....subscribed to and who executed the within instrument, and acknowledged to me that ...the..y.. executed the same freely and voluntarily.

IN WITNESS WHEREOF, I have hereunto set my hand and Official Seal at my office in Riverside, in the said County the day and year in this Certificate first above written.

Frances Upchurch

Notary Public in and for the County of Riverside, State of California.

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conditions submitted.

That lessors warrant to lessees the peaceable enjoyment and possession of the premises hereby demised during the term hereof, without lawful let or hindrance of any person or persons whomsoever.

Performance by lessees hereunder may be excused while lessees are prevented or hindered from complying therewith, in whole or in part, by strikes, lockouts, acts of God, unavoidable accidents, laws, rules and regulations of any Federal, State, County or other Governmental agency, or other causes beyond the control of lessees, whether similar to the causes herein specifically enumerated or not.

Each and every term, clause, covenant, and condition of this lease herein contained shall extend to and include the heirs, executors, administrators, or assigns of all parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

John Prato
JOHN PRATO

Sylvia Prato
SYLVIA PRATO

Lessors

John Q. Little
JOHN Q. LITTLE

JEROME LYMAN RICHARDSON
ATTORNEY AT LAW
SUITE 114, METROPOLITAN BLDG.
RIVERSIDE, CALIFORNIA

State of California, County of Riverside } ss.

On this 5th day of December in the year one thousand nine hundred and 49, before me, Frances Upchurch, a Notary Public, in and for said County of Riverside, State of California, residing therein, duly commissioned and sworn, personally appeared JOHN PRATO, SYLVIA PRATO, JOHN Q. LITTLE and BELVA M. LITTLE Jerome L Richardson personally known to me to be the person described in and whose names are subscribed to and who executed the within instrument, and acknowledged to me that they executed the same freely and voluntarily.

IN WITNESS WHEREOF, I have hereunto set my hand and Official Seal at my office in Riverside, in the said County the day and year in this Certificate first above written.

Frances Upchurch
Notary Public in and for the County of Riverside, State of California.

GENERAL WALTER D. CLARK, PRINTER, RIVERSIDE, CALIFORNIA

MF-200
(April 1951)

Docket No. DMA 855X
Commodity Lead-Zinc

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 18th day of June, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] The Silver Rule Mine - John Q. Little and Belva M. Little of Nipton, San Bernardino County California

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of California, County of San Bernardino described as follows: [3] Mine unpatented Mining Claims, Known as one gulch No 1-, Crystal Springs Mine, No. 1, 2, 3 and 4, Victory, The Iron King No. 1, 2 and 3- Located in approx Sec 7 Twp. 19 N.R. 10 E. San Bernardino Base & Meridian

with respect to which the Operator represents and undertakes: [4]

(*a*) ~~That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:~~

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 10 days from the date of this contract shall commence work on a project of exploration for [5] Lead-Zinc; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 14 Months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

JUL 6 1951

16—64066-1

7. *Title to and disposition of prope*[illegible] All facilities, buildings, fixtures, equipmen[illegible]r other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 50 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $58,000.00, which is 50 percent of the agreed estimated total cost of this project, $116,000.00.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

John Q. Little
Belva M. Little
(Operator)

By _____

THE UNITED STATES OF AMERICA

By _____

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 5 1951
LANDON F. STROBEL
Executive Secretary

U. S. GOVERNMENT PRINTING

SILVER RULE

EXHIBIT A

The Exploration Project as set forth in an application dated February 26th, 1951 was as follows:

(a) To drive ahead through the faulted zone on the second level, and cross cut to the south and pick up the faulted section of the vein. This part of the work has been successfully accomplished. The ore has been found and although diluted by foot wall rocks pressed into the ore by the various forces of the faulting action. Some very good ore has been encountered by drifting west on the vein. Widths up to 3 feet assayed.

Au.0.06 oz ag. 10.70 oz. PG 36.1% Zn - 14.2%. It is expected that better widths and better ore will be encountered further along this vein.

(b) After the above work had been completed we were to further explore this part of the vein by drifting and raises. 200 feet of drifting and 700 feet of raises 12 timbered ore schutes.

(c) Approximately 1500 feet of diamond drilling on the first and 2nd level to prospect the foot wall veins, of this work, 100 feet has been accomplished.

(d) The winze on No. 2 level is to be enlarged and timbered and sunk 100 feet deeper.

(e) The 3rd level extended to the vein and connected to the winze from the 2nd level, and if the cut off fault is encountered on this level a cross cut to the south, run, to pick up the faulted segment of the vein a cross cut is to be run to pick up the footwall veins for explorations 200 feet of drifting on veins encountered, in Recapitulation. The proposed work will consist of -

Diamond drilling	1500 feet
Cross cutting	600 feet
Drifting	400 feet
Raises	700 feet
Ore schutes	12
Winze	
Enlarging & ~~trucking~~ Timbering	100 feet
Sinking	100 feet

For easing grades on present road the sum of $3,000.00 will be required.

SILVER RULE

Exhibit B -

Additional buildings structures etc. necessary to operate the mine.

8 cabins @ $525.00 each	$4,200.00
1 store room	1,000.00
1 office & assay room	800.00
Total	$5,000.00

SILVER RULE -

EXHIBIT 6-

Operating Equipment

(a) Furnished by Operator.

1	Diamond Drilling Machine - C.P. 5 complete with: 500' of E Rods 150 of A Rods Care barrels, Bits, Reamers etc. 150 feet Ex Casing	Rental 300.00
1	LeRoy - 210 C.F.M. Diesel Compressor Portable	300.00
1	12 B Eimco Mucking Machine	210.00
2	Mounted Jack hammers	60.00
1	3" Leyner	40.00
1	475 Thor Stoper	30.00
	Drilling Rods, detachable Bitts Columns & Arms & Cross bars & Saddles etc.	
1	Gasoline Driven Hoist with 500' of Cable & Bucket	45.00
1	4 Wheel drive 5 ton capacity Truck	400.00
1	4 Wheel drive Jeep	175.00
1	Hobart Light Plant	25.00
		$1,585.00

SILVER RULE -

EXHIBIT C - cont'd.

(b) Equipment to be rented

- None -

(c) Equipment to be purchased

		Cost
2	Slushers	$ 2500.00
1	Truck Dump	5300.00
1	Tugger hoist	1000.00
1	Set Small tools for Blacksmith shop	550.00
1	315 C.F.M. Diesel Portable Compressor	10000.00
4	17 Cu. Ft. Mine cars	1000.00
1	Chevrolet Station Wagon	2255000
2	4 Wheel Drive Pick up	4000.00
2	Stopers	1050.00
1	Mounted Drifter	650.00
2	Mounted Jack hammer	800.00
5	Sets ~~stud~~ steel	150.00
1	Light Plant (10 KV)	2500.00
1	Servel Refrigerator	400.00
1	Lot of Mine Timbers	3000.00
		$35,450.00

EXHIBIT D

LABOR & SUPERVISION

(a) Labor: Miners, Muckers & Timberman - 8 to 10
at $12.00 per day.
1 Diamond Drill Runner at $20.00 per day

(b) Supervisors: 1 to 2 shift bosses at $14.00 per day
1 accountant at $14.00 per day (1/2 salary charged to this property)
1 Superintendent $20.00 per day (1/2 salary charged to this property)
1 Consulting Engineer $15.00 per day charged to this property

SILVER RULE

EXHIBIT E

Existing facilities

1 Bldg. - Kitchen & Dining Room
1 " Bunk House
1 " Bath & Change house

The Bath & change Room will have to be enlarged at a cost of - - - - - -	$1500.00
The Kitchen & Dining Room should be enlarged at an estimated cost of - - - - - - -	1000.00
	$2500.00

Nipton Calif
June 29-1951

Defense Minerals Administration
Washington 25-D.C.

Re. MMA. 955x-
Silver Rule mine -

Gentlemen:-

Herewith enclosed form M.F.200 covering the Silver Rule mine.

The subordination agreement from the lessor will be mailed to you within a few days.

Yours very truly
John P. Pettit

MF-00
(April 1951)

Docket No. DMA 855 X
Commodity Lead-Zinc

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 18th day of June, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and[2] The Silver Rule Mine - John Q. Little and Belva M. Little of Nipton, San Bernardino County California

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of California, County of San Bernardino described as follows:[3] Mine unpatented Mining Claims, Known as one gulch No 1-, Crystal Springs Mine, No. 1, 2, 3 and 4, Victory, The Iron King No. 1, 2 and 3- Located in approx Sec 7 Twp. 19 N.R. 10 E. San Bernardino Base & Meridian

with respect to which the Operator represents and undertakes:[4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 10 days from the date of this contract shall commence work on a project of exploration for[5] Lead-Zinc; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of[6] 14 Months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

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11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 50 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $58,000.00, which is 50 percent of the agreed estimated total cost of this project, $116,000.00.

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Executed in triplicate the day and year first above written.

Luke Q. Little
Belva M. Little
(Operator)

By _____

THE UNITED STATES OF AMERICA

By DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

RECEIVED
JUL 5 - 1951
LANDON F. STROBEL
Executive Secretary

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

SILVER RULE

EXHIBIT A

The Exploration Project as set forth in an application dated February 26th, 1951 was as follows:

(a) To drive ahead through the faulted zone on the second level, and cross cut to the south and pick up the faulted section of the vein. This part of the work has been successfully accomplished. The ore has been found and although diluted by foot wall racks pressed into the ore by the various forces of the faulting action. Some very good ore has been encountered by drifting west on the vein. Widths up to 3 feet assayed.

An.0.06 oz ag. 10.70 oz. PG 36.1% Zn - 14.2%. It is expected that better widths and better ore will be encountered further along this vein.

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(d) The winze on No. 2 level is to be enlarged and timbered and sunk 100 feet deeper.

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Raises	700 feet
Ore schutes	12
Winze	
Enlarging & ~~trucking~~ Timbering	100 feet
Sinking	100 feet

For easing grades on present road the sum of $3,000.00 will be required.

SILVER RULE

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Additional buildings structures etc. necessary to operate the mine.

8 cabins @ $525.00 each	$4,200.00
1 store room	1,000.00
1 office & assay room	800.00
Total	$5,000.00

SILVER RULE -

EXHIBIT C-

Operating Equipment

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1	Hobart Light Plant	25.00
		$1,585.00

SILVER RULE -

EXHIBIT C - cont'd.

(b) Equipment to be rented

- None -

(c) Equipment to be purchased

		Cost
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1	Light Plant (10 KV)	2500.00
1	Servel Refrigerator	400.00
1	Lot of Mine Timbers	3000.00
		$35,450.00

EXHIBIT D

LABOR & SUPERVISION

(a) Labor: Miners, Muckers & Timberman - 8 to 10
at $12.00 per day.
1 Diamond Drill Runner at $20.00 per day

(b) Supervisors: 1 to 2 shift bosses at $14.00 per day
1 accountant at $14.00 per day (1/2 salary charged to this property)
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SILVER RULE

EXHIBIT E

Existing facilities

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1 " Bath & Change house

The Bath & change Room will have to be enlarged at a cost of - - - - - -	$1500.00
The Kitchen & Dining Room should be enlarged at an estimated cost of - - - - - - -	1000.00
	$2500.00

MF-200
(April 1951)

Docket No. DMA 855X
Commodity Lead-Zinc

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 18th day of June, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] The Silver Rule Mine - John Q. Little and Belva M. Little of Hinton, San Bernardino County California

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of California, County of San Bernardino described as follows: [3] Mine unpatented Mining Claims, known as one gulch No 1-, Crystal Springs Mine, No. 1, 2, 3 and 4, Victory, The Iron King No. 1, 2 and 3- Located in approx Sec 7 Twp. 10 N.R. 10 E. San Bernardino Base & Meridian

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 10 days from the date of this contract shall commence work on a project of exploration for [5] Lead-Zinc; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 14 Months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 50 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $ 58,000.00, which is 50 percent of the agreed estimated total cost of this project, $ 116,000.00.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

John P. Tully
Belva M. Tully
(Operator)

By _____

THE UNITED STATES OF AMERICA

By _____
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

U. S. GOVERNMENT PRINTING OFFICE 16

RECEIVED
JUL 5 - 1951
LANDON F. STROBEL
Executive Secretary

SILVER RULE

EXHIBIT A

The Exploration Project as set forth in an application dated February 26th, 1951 was as follows:

(a) To drive ahead through the faulted zone on the second level, and cross cut to the south and pick up the faulted section of the vein. This part of the work has been successfully accomplished. The ore has been found and although diluted by foot wall racks pressed into the ore by the various forces of the faulting action. Some very good ore has been encountered by drifting west on the vein. Widths up to 3 feet assayed.

Au.0.06 oz ag. 10.70 oz. PG 36.1% Zn - 14.2%. It is expected that better widths and better ore will be encountered further along this vein.

(b) After the above work had been completed we were to further explore this part of the vein by drifting and raises. 200 feet of drifting and 700 feet of raises 12 timbered ore schutes.

(c) Approximately 1500 feet of diamond drilling on the first and 2nd level to prospect the foot wall veins of this work 100 feet has been accomplished.

(d) The winze on No. 2 level is to be enlarged and timbered and sunk 100 feet deeper.

(e) The 3rd level extended to the vein and connected to the winze from the 2nd level, and if the cut off fault is encountered on this level a cross cut to the south, run, to pick up the faulted segment of the vein a cross cut is to be run to pick up the footwall veins for explorations 200 feet of drifting on veins encountered, in Recapitulation. The proposed work will consist of -

Diamond drilling	1500 feet
Cross cutting	600 feet
Drifting	400 feet
Raises	700 feet
Ore schutes	12
Winze	
Enlarging & ~~trucking~~ timbering	100 feet
Sinking	100 feet

For easing grades on present road the sum of $3,000.00 will be required.

SILVER RULE

Exhibit B -

Additional buildings structures etc. necessary to operate the mine.

8 cabins @ $525.00 each	$4,200.00
1 store room	1,000.00
1 office & assay room	800.00
Total	$5,000.00

SILVER RULE -

EXHIBIT C-

Operating Equipment

(a) Furnished by Operator.

1	Diamond Drilling Machine - C.P. 5 complete with: 500' of E Rods 150 of A Rods Care barrels, Bits, Reamers etc. 150 feet Ex Casing	Rental 300.00
1	LeRoy - 210 C.F.M. Diesil Compressor Portable	300.00
1	12 B Eimco Mucking Machine	210.00
2	Mounted Jack hammers	60.00
1	3" Leyner	40.00
1	475 Thar Stoper	30.00
	Drilling Rods, detachable Bitts Columns & Arms & Cross bars & Saddles etc.	
1	Gasoline Driven Hoist with 500' of Cable & Bucket	45.00
1	4 Wheel drive 5 ton capacity Truck	400.00
1	4 Wheel drive Jeep	175.00
1	Hobart Light Plant	25.00
		$1,585.00

SILVER RULE -

EXHIBIT C - cont'd.

(b) Equipment to be rented

- None -

(c) Equipment to be purchased

		Cost
2	Slushers	$ 2500.00
1	Truck Dump	5300.00
1	Tugger hoist	1000.00
1	Set Small tools for Blacksmith shop	550.00
1	315 C.F.M. Diesel Portable Compressor	10000.00
4	17 Cu. Ft. Mine cars	1000.00
1	Chevrolet Station Wagon	2550.00
2	4 Wheel Drive Pick up	4000.00
2	Stopers	1050.00
1	Mounted Drifter	650.00
2	Mounted Jack hammer	800.00
5	Sets stud	150.00
1	Light Plant (10 KV)	2500.00
1	Servel Refrigerator	400.00
1	Lot of Mine Timbers	3000.00
		$35,450.00

EXHIBIT D

LABOR & SUPERVISION

(a) Labor: Miners, Muckers & Timberman - 8 to 10
at $12.00 per day.
1 Diamond Drill Runner at $20.00 per day

(b) Supervisors: 1 to 2 shift bosses at $14.00 per day
1 accountant at $14.00 per day (1/2 salary charged to this property)
1 Superintendent $20.00 per day (1/2 salary charged to this property)
1 Consulting Engineer $15.00 per day charged to this property

SILVER RULE

EXHIBIT E

Existing facilities

1 Bldg. - Kitchen & Dining Room
1 " Bunk House
1 " Bath & Change house

The Bath & change Room will have to be enlarged at a cost of - - - - - -	$1500.00
The Kitchen & Dining Room should be enlarged at an estimated cost of - - - - - - -	1000.00
	$2500.00

MF-202

DM 7 Dsamt 855 X

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of San Bernardino, State of California, described in a certain Exploration Project Contract dated JUNE 18 th, 1951, between John Q. Little and Belva M. Little,

the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated Dec. 5th, 1949.

_____, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of June, 1951

John Prato

Silvia Prato

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of San Bernardino, State of California, described in a certain Exploration Project Contract dated JUNE 10th, 1951, between John Q. Little and Belva M. Little, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated Dec. 5th, 1949. ....., does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of June, 1951

John Prato

Silvia Prato

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

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WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of San Bernardino, State of California, described in a certain Exploration Project Contract dated JUNE 18 th, 1951, between John Q. Little and Belva M. Little, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated Dec. 5th, 1949, ..., does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of June, 1951

John Sisto

Silvia Sisto

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

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NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated Dec. 5th, 1949. _____, does by these presents subordinate all of his right, title, and interest under the provisions of said lease to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of June, 1951

John Proto

Silvia Proto

U. S. GOVERNMENT PRINTING OFFICE 940768

MF-202

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The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of June, 1951

John Prato

Silvia Prato

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The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of June, 1951

John Prato

Silvia Prato

U. S. GOVERNMENT PRINTING OFFICE 940768

John P. Little
Nipton, Calif.

The Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

19023

LANDON F. SARGENT

Figure 3.- Silver Rule mine camp
at Crystal Spring.

Figure 4.- Silver Rule mine is above terminus of road
at extreme left, not visible in picture.

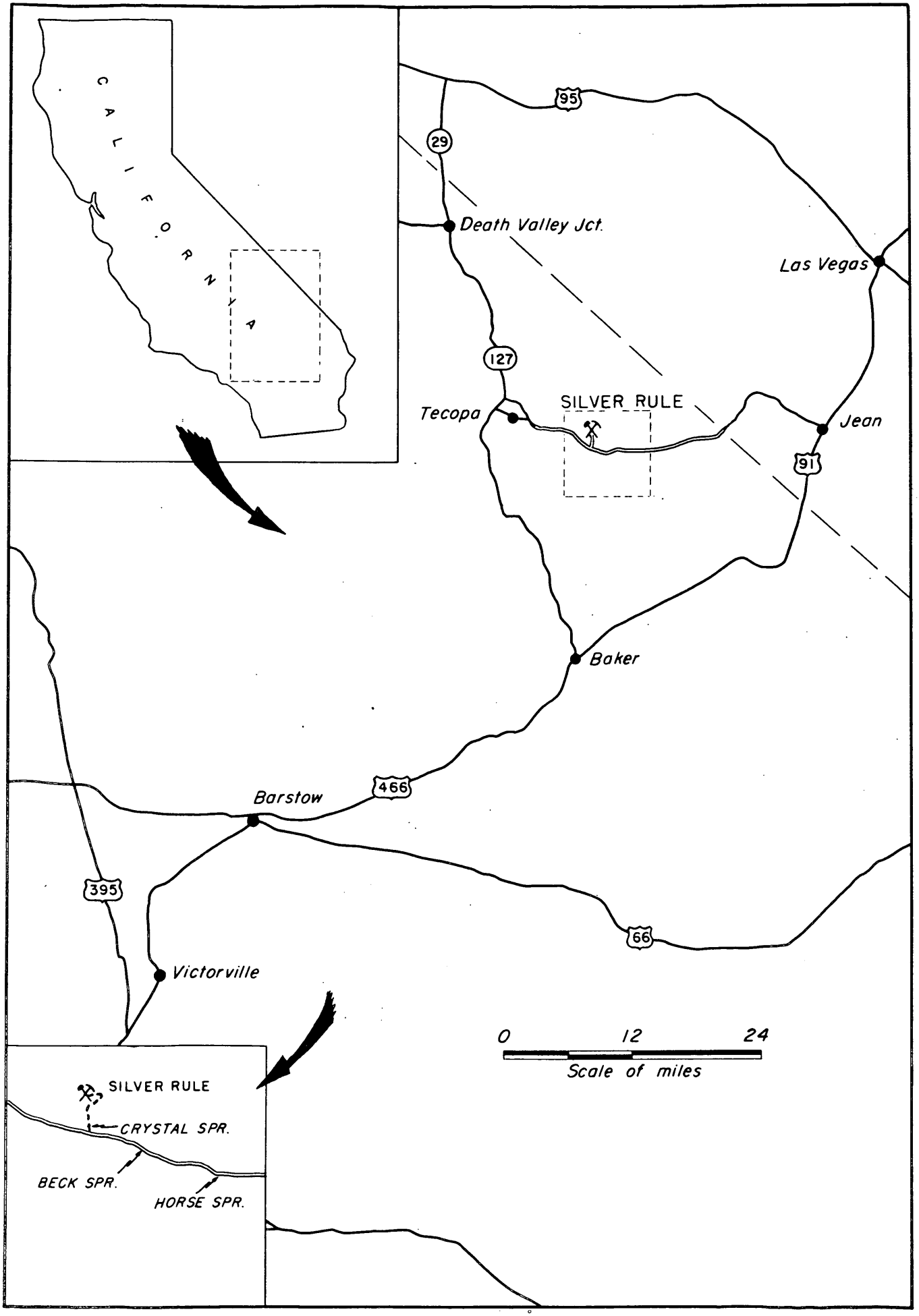
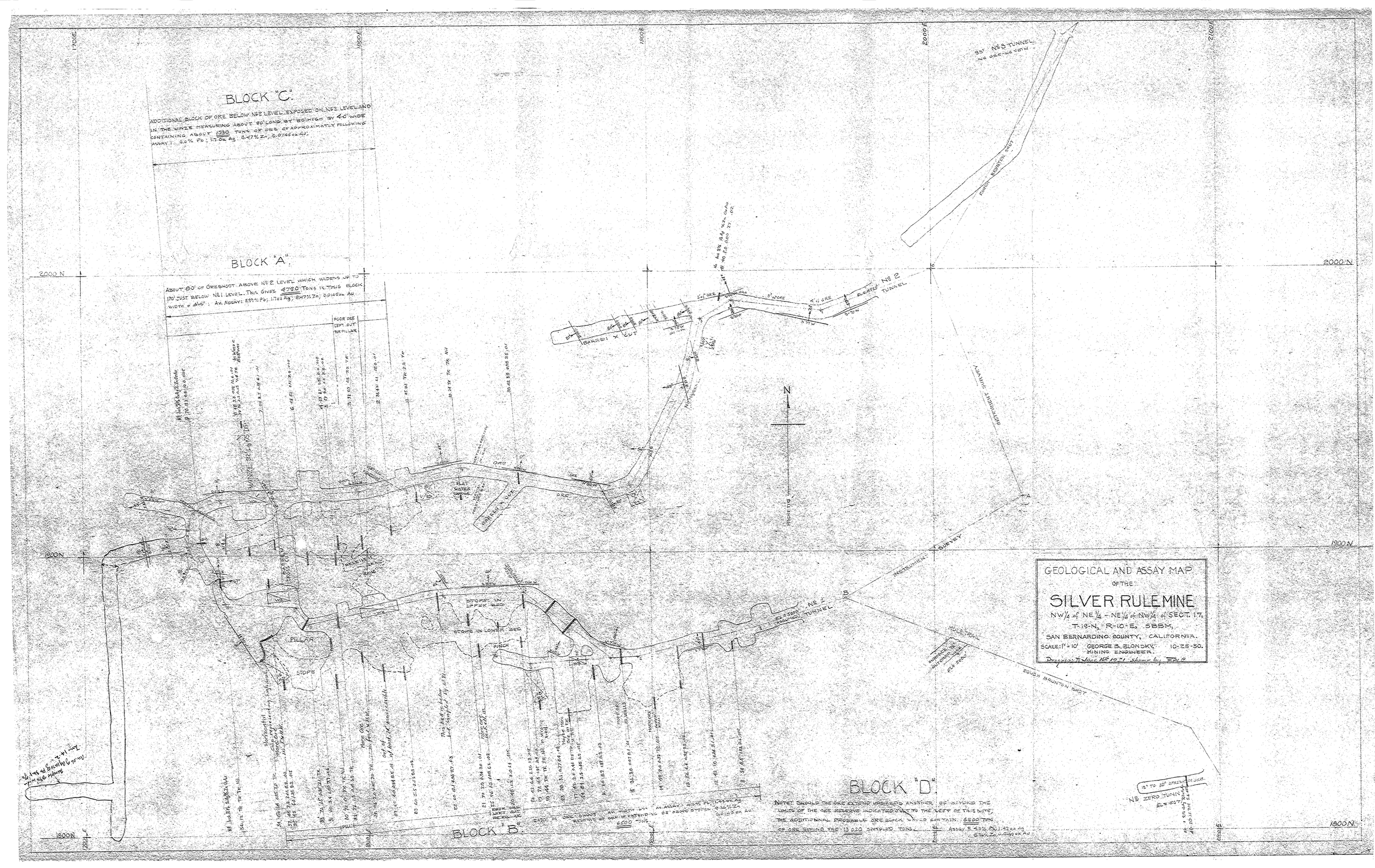


Figure 1-Location map, Silver Rule mine, San Bernardino County, California

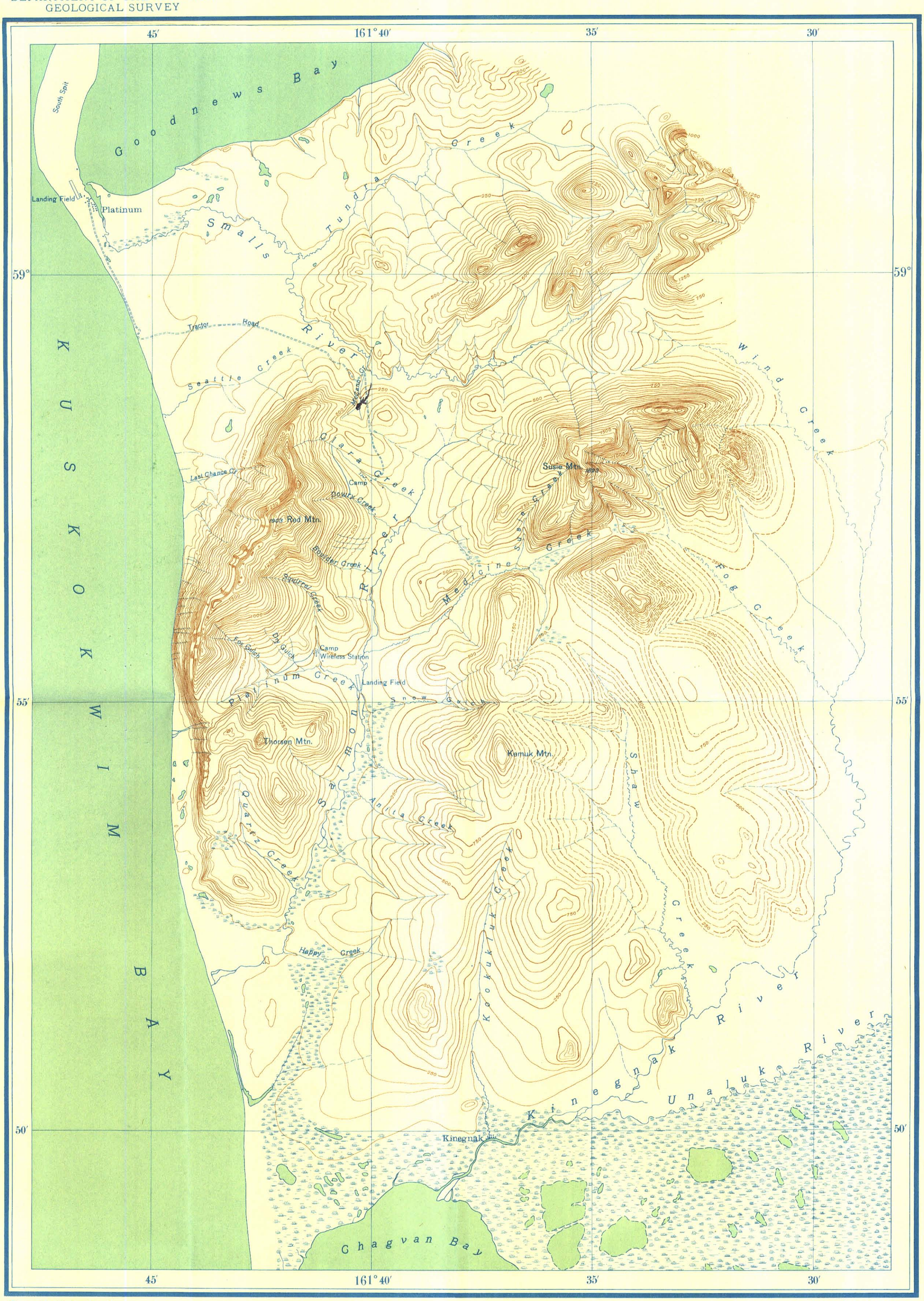
Samples from Blonsky report

Sample no.	Width in.	Au oz.	Ag oz.	Pb%	Zn%
1	45	Tr	Tr	0.1	2.2
2	36	0.01	1.10	6.2	15.0
3	72	Tr	0.80	0.7	7.2
4	53	0.005	0.35	2.1	8.0
5	33	0.02	2.3	9.0	8.8
6	42	0.005	0.33	5.1	7.0
7	84	0.01	0.84	2.5	2.1
8	48	0.01	0.78	3.0	16.6
9	70	0.025	4.8	13.3	10.0
10	24		Tr	Tr	Tr
11	54	0.015	1.22	8.5	9.6
12	42	0.01	0.26	1.8	7.1
13	56	0.02	0.95	6.6	9.3
14	48	0.015	0.32	2.0	7.2
15	36	0.01	0.87	3.8	8.1
16	60	0.03	1.37	8.7	11.3
17	42	Tr	0.40	3.0	8.5
18	44		Tr	Tr	Tr
19	72	0.02	1.95	6.5	10.4
20	48	0.025	2.00	1.2	6.6
21	72	0.01	0.94	2.9	7.0
22	60	0.03	4.36	12.1	9.7
23	78	0.02	0.77	3.1	8.4
24	84	0.025	1.68	2.2	6.9
25	96	0.02	1.08	1.5	6.6
26	42	0.015	2.20	6.6	11.3
27	60	0.01	0.84	4.0	8.5
28	96	Tr	0.45	2.0	7.0
29	60	0.02	2.52	5.5	8.9
30	72		Tr		Tr
31	60	0.04	6.20	3.4	7.7
32	72	Tr	0.13	1.3	6.9
33	72	Tr	0.28	1.5	7.1
34	156	Tr	0.25	1.4	7.0
35	42	0.015	1.28	6.0	9.2
36	12		Tr	Tr	Tr
37	48	0.02	2.02	3.2	8.2
38	42	0.01	0.98	3.9	9.5
39	36	Tr	0.23	2.2	7.4
40	20	0.035	7.04	1.1	5.6
41	48	0.02	0.80	2.0	7.7

Figure 2-Plan and assay map showing suggested exploration, Silver Rule mine


GEOLOGICAL AND ASSAY MAP
OF THE
SILVER RULE MINE
NW¼ of NE¼ - NE¼ of NW¼ of SECT. 17,
T. 19-N, R. 10-E, SBBM,
SAN BERNARDINO COUNTY, CALIFORNIA.
SCALE: 1" = 10'
GEORGE B. BLONSKY, MINING ENGINEER.
10-25-50.
BLOCK "C"
ADDITIONAL BLOCK OF ORE BELOW No 2 LEVEL EXPOSED ON No 2 LEVEL AND IN THE WINZE MEASURING ABOUT 80' LONG BY 80' HIGH BY 40' WIDE CONTAINING ABOUT 1730 TONS OF ORE OF APPROXIMATELY FOLLOWING ASSAY: 6.0% Pb; 13.0oz Ag; 0.47% Zn; 0.074oz Au.
BLOCK "A"
ABOUT 60' OF ORESHOOT ABOVE No 2 LEVEL WHICH WIDENS UP TO 170' JUST BELOW No 1 LEVEL. THIS GIVES 4790 TONS IN THIS BLOCK WIDTH = 46'. AV. ASSAY: 5.99% Pb; 1.70oz Ag; 0.47% Zn; 0.014oz Au.
POOR ORE CERT. OUT FOR PILLAR
BLOCK "B"
BLOCK "D"
NOTE: SHOULD THE ORE EXTEND UPWARDS ANOTHER 85' BEYOND THE LIMITS OF THE ORE RESERVE INDICATED OUT TO THE LEFT OF THIS NOTE, THE ADDITIONAL PROBABLE ORE BLOCK WOULD CONTAIN 6500 TONS OF ORE BEYOND THE 15020 SAMPLED TONS.
No 3 TUNNEL
No 2 TUNNEL
No 1 TUNNEL
No ZERO TUNNEL
BARREL X CUT
STOPE IN UPPER BED
STOPE IN LOWER BED
PILLAR
STOPE
PINCH
FLAT WATER TABLE
INSTRUMENT SURVEY
SOUTH BRUNTON SHOT
MULE TRAIL
2000 N
1900 N
1800 N
1700 E
1800 E
1900 E
2000 E
2100 E

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Prepared by Alaskan Branch
Topography by Gerald FitzGerald
Areas not surveyed in detail
indicated by broken lines
Surveyed in 1937

PLATINUM AND VICINITY, ALASKA

ALASKA MAP 50

Scale $\frac{1}{62500}$

1 ½ 0 1 2 3 4 Miles

5,000 0 5,000 10,000 15,000 Feet

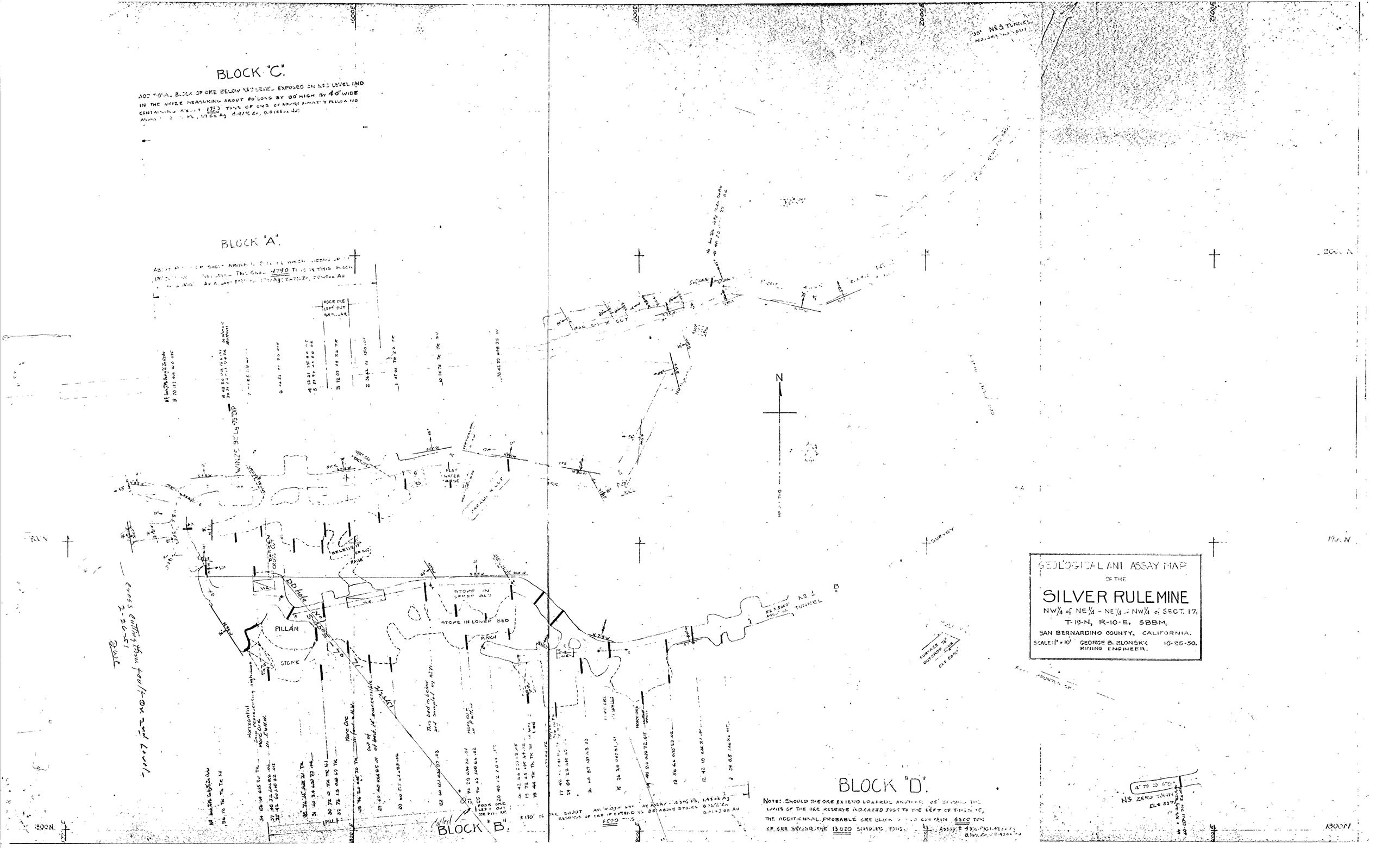
1 ½ 0 1 2 3 4 Kilometers

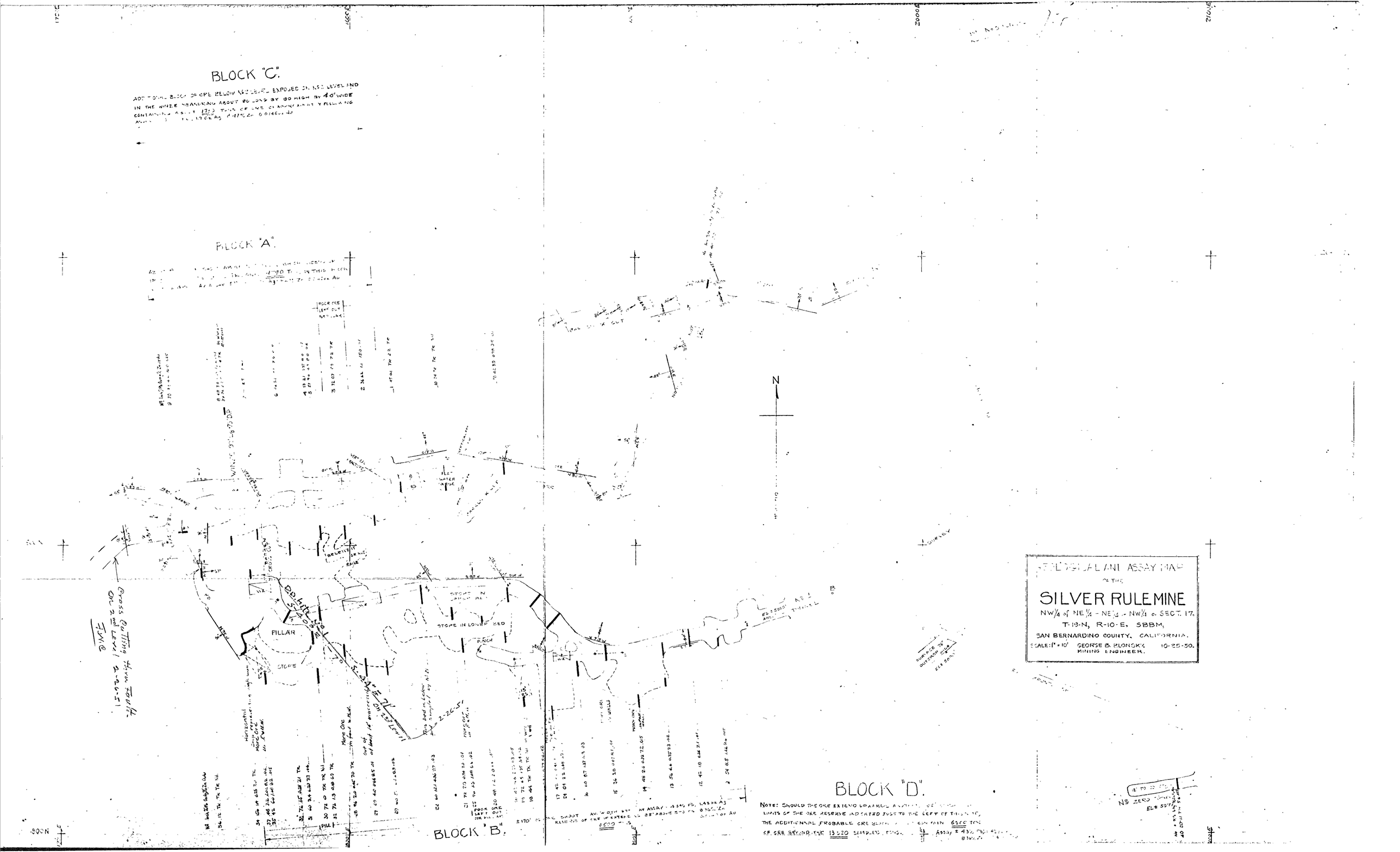
Contour interval 50 feet

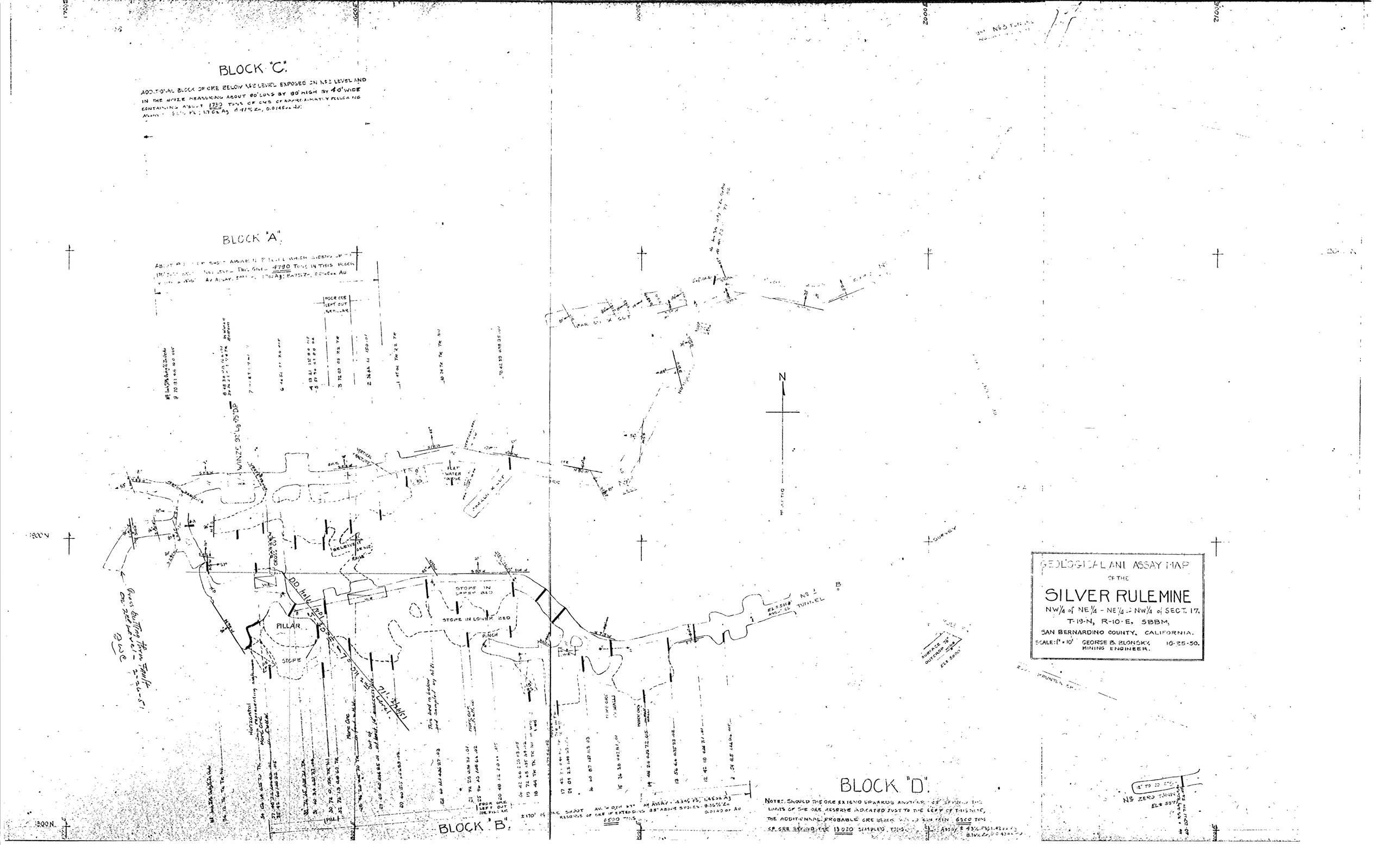
Datum is approximate mean sea level

1938

TRUE NORTH
MAGNETIC NORTH
19°
APPROXIMATE MEAN DECLINATION, 1938


GEOLOGICAL AND ASSAY MAP
OF THE
SILVER RULE MINE
NW 1/4 of NE 1/4 - NE 1/4 - NW 1/4 of SECT. 17,
T-19-N, R-10-E, SBBM,
SAN BERNARDINO COUNTY, CALIFORNIA.
SCALE: 1" = 10'
GEORGE B. BLONSKY,
MINING ENGINEER.
10-25-50.
BLOCK "C".
BLOCK "A".
BLOCK "B".
BLOCK "D".
NOTE: SHOULD THE ORE EXTEND UPWARDS ANOTHER 25' BEYOND THE LIMITS OF THE ORE RESERVE INDICATED JUST TO THE LEFT OF THIS NOTE, THE ADDITIONAL PROBABLE ORE BLOCK WOULD CONTAIN 6500 TONS OF ORE BEYOND THE 13020 SHOWN. TOTAL
N
WINZE
FLAT WATER FORCE
STOPE IN LOWER BED
PILLAR
STOPE
PINCH
SURFACE
OUTCROP
EL. 5000'
NO ZERO TUNNEL
EL. 5070'
1300 N
1900 N
2000 N
2000 E
2100 E


BLOCK "C".
BLOCK "A".
BLOCK "B".
BLOCK "D".
N
PILLAR
STOPE
STOPE IN LOWER END
PINCH
D.D. HILL
SILVER
SHAFT
WATER TABLE
Cross Cutting Hitch Tank
Ore and Level 2-26-51
This bed is below sampled by N.Z.
Horizontal Mono Ore in Fault
Mono Ore
out of bed 1st occurrence on 2nd level
Mono Ore
Mono Ore
POOR ORE LEFT OUT
SHOT
PILL
GEOLOGICAL AND ASSAY MAP
OF THE
SILVER RULEMINE
NW¼ of NE¼ - NE¼ - NW¼ of SEC. 17,
T-19-N, R-10-E, SBBM,
SAN BERNARDINO COUNTY, CALIFORNIA.
SCALE: 1" = 10'
GEORGE B. BLONSKY
MINING ENGINEER.
10-25-50.
NOTE: SHOULD THE ORE EXTEND BEYOND THE LIMITS OF THE ORE RESERVE INDICATED JUST TO THE LEFT OF THIS LINE, THE ADDITIONAL PROBABLE ORE BLOCK CONTAIN 6500 TONS OF ORE BEYOND THE 13,520 SHOWN ON MAP.
Assay = 4.5% Pb, 1.4 oz Ag, 8.5% Zn
No ZERO POINT
EL. = 5577
800N


GEOLOGICAL AND ASSAY MAP
OF THE
SILVER RULE MINE
NW¼ of NE¼ - NE¼ of NW¼ of SECT. 17,
T-19-N, R-10-E, SBBM,
SAN BERNARDINO COUNTY, CALIFORNIA.
SCALE: 1" = 10'
GEORGE B. BLONSKY, MINING ENGINEER.
10-25-50.
BLOCK "C".
ADDITIONAL BLOCK OF ORE BELOW No 2 LEVEL EXPOSED IN No 2 LEVEL AND IN THE WINZE MEASURING ABOUT 80' LONG BY 80' HIGH BY 40' WIDE CONTAINING ASSUMED 1730 TONS OF ORE OF APPROXIMATELY FOLLOWING ASSAY: 5.0% PB, 1.7 OZ Ag, 0.47% Zn, 0.014 OZ Au.
BLOCK "A".
BLOCK "B".
BLOCK "D".
NOTE: SHOULD THE ORE EXTEND UPWARDS ANOTHER 25' BEYOND THE LIMITS OF THE ORE RESERVE INDICATED JUST TO THE LEFT OF THIS NOTE, THE ADDITIONAL PROBABLE ORE BLOCK WOULD CONTAIN 6500 TONS OF ORE BEYOND THE 13,020 SAMPLED.
N
SURVEY
No 1 TUNNEL
No ZERO TUNNEL
PILLAR
STOPE
STOPE IN UPPER BED
STOPE IN LOWER BED
PINCH
FLAT WATER TABLE
WINZE 92' LG 75° DOWN
DD HALL No 1 TO No 2 LEVEL
Grass Valley Horn Fault on 2nd Level - 2-26-51 BWE
Horizontal
Vertical
Out of
This bed is below and sampled by No 2
ROCK ORE LEFT OUT NEGLIGIBLE
PAR 51 X CUT
SURFACE 75' OUTCROP
EL 5000'
MOUNTAIN
±170' of ORE SHOOT AVG WIDTH 8'
RESERVES OF ORE IN EXTENDING 88' ABOVE STOPES
6500 TONS
AVG ASSAY: 4.3% PB, 1.4 OZ Ag, 0.36% Zn, 0.0143 OZ Au
BLOCK "B"