PRINTED: 11/19/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LEROY MINE

ALTERNATE NAMES:
- BLACK HAWK
- CLIMAX
- COMET
- GOLD QUEEN
- JACK DEMPSEY
- STANDARD
- LOST HOPE
- ONEIDA

COCHISE COUNTY MILS NUMBER: 83

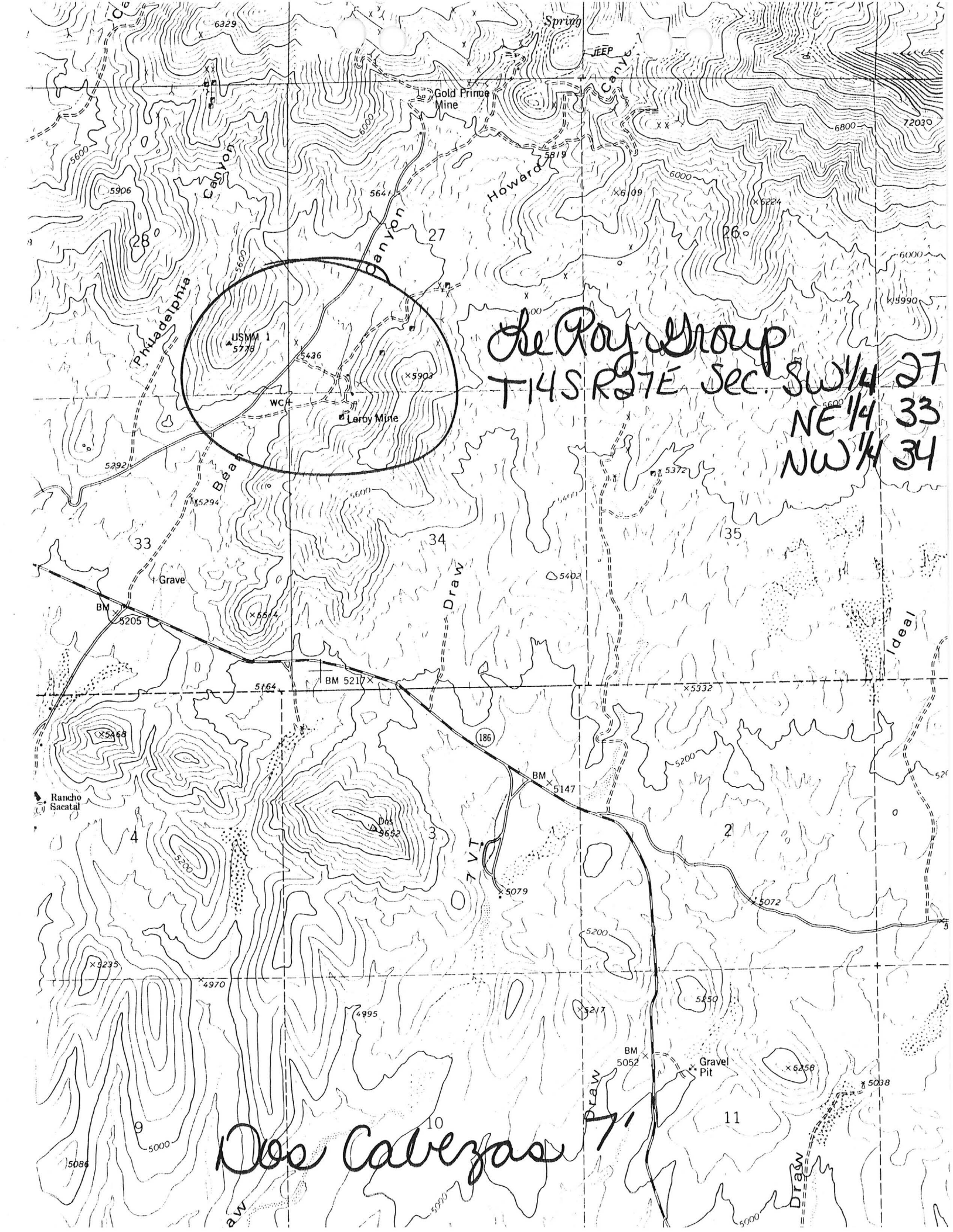
LOCATION: TOWNSHIP 14 S RANGE 27 E SECTION 27 QUARTER SW
LATITUDE: N 32DEG 11MIN 04SEC LONGITUDE: W 109DEG 33MIN 57SEC
TOPO MAP NAME: DOS CABEZAS - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- LEAD SULFIDE
- ZINC SULFIDE
- SILVER
- COPPER SULFIDE
- GOLD LODE

BIBLIOGRAPHY:

- KEITH, S.B., 1973, AZBM BULL. 187, P. 62
- ADMMR LEROY MINE FILE
- USAEC 172-478, P. 25
- MINES HANDBOOK, 1926
- AZBM BULL. 137, P. 120-121
- ADDNL HOLDING IN T14S-R27E SEC. 33 & 34
- USBM 1949 MINERALS YEARBOOK



LeRoy Group
T14S R27E Sec. SW¼ 27
NE¼ 33
NW¼ 34

5-17-57

LeROY MINE
DOS CABEZAS DIST.
COCHISE COUNTY

Optioned by O'Keefe Dev. Company

John J. O'Keefe,
Consultant Petroleum Engr. - Geol.

822 E. Compton Bldg.,

Compton, California

& 8 others.

k

Copy of Mine Owners Report covering property listed with the Department of Mineral Resources has been furnished to -

Chas. E. Lees, 240 N. Cliffwood Ave., Los Angeles, Calif.

DEPARTMENT OF MINERAL RESOURCES
J. S. Compal, Director

LE ROY

Au, Ag, Pb, Cu, Zn

Cochise 2 - 2 T 14 S, R 27 E

W. I. Crawford, Box 4, Patagonia '44

NAME OF MINE: LE ROY

COUNTY: COCHISE
DISTRICT:
METALS: PB,ZN

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	Thomas Bean, Dos Cabezas	5/1/44	Financing
12/44	Jas. R. Cray, 1916 E. 1st St, Tucson		
1/47	Dorsey Bros., Dos Cabezas	2/47	Shipping

LE ROY MINE

COCHISE COUNTY
DOS CABEZAS DISTRICT
T14S R27E Sec. SW¼ 27
NE¼ 33
NW¼ 34

AEC 172-478 p. 25
See: ~~Eagle-Picher "C" Confidential files~~ Crawford report
Now in This file

ABM Bull. 187, p. 30
" "

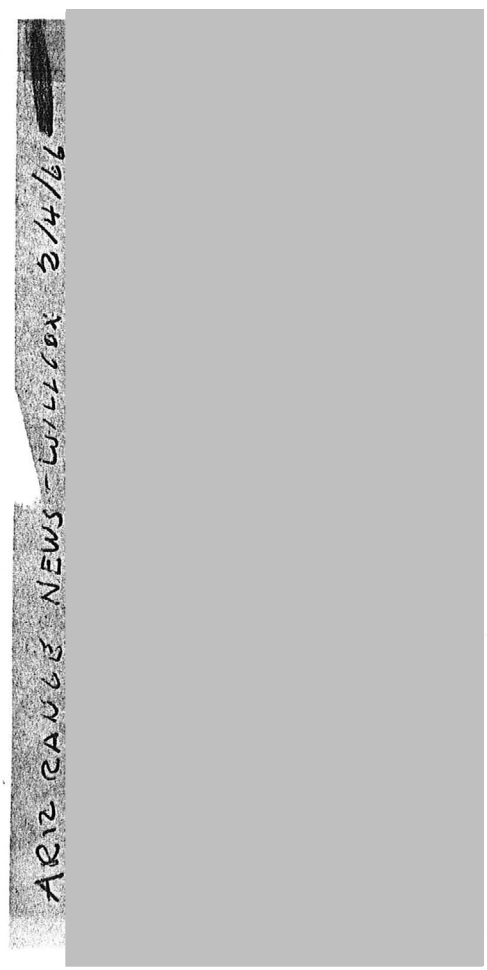
MILS Sheet sequence number 0040030169

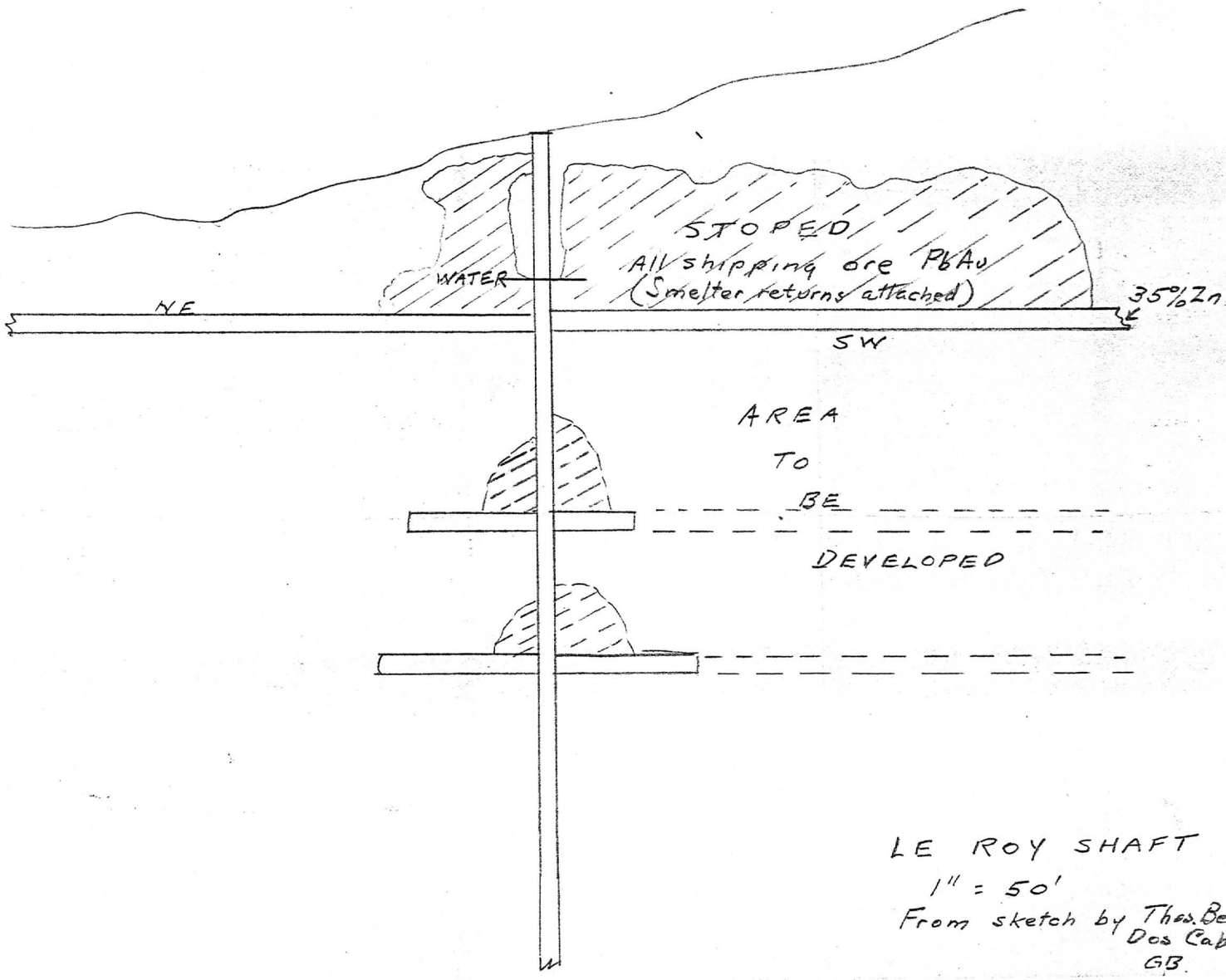
MILS Cochise County Index #83

AKA: Black Hawk, Climax, Comet, Oneida, Gold Queen, Jack Dempsey, Standard, Lost Hope, War Eagle

See: Map I-1310-B P. 51; Mineral Deposit Map of the Silver City 1^{o} x 2^{o} Quad., NM & AZ

Dos Cabezas 7' Quad (included in file)

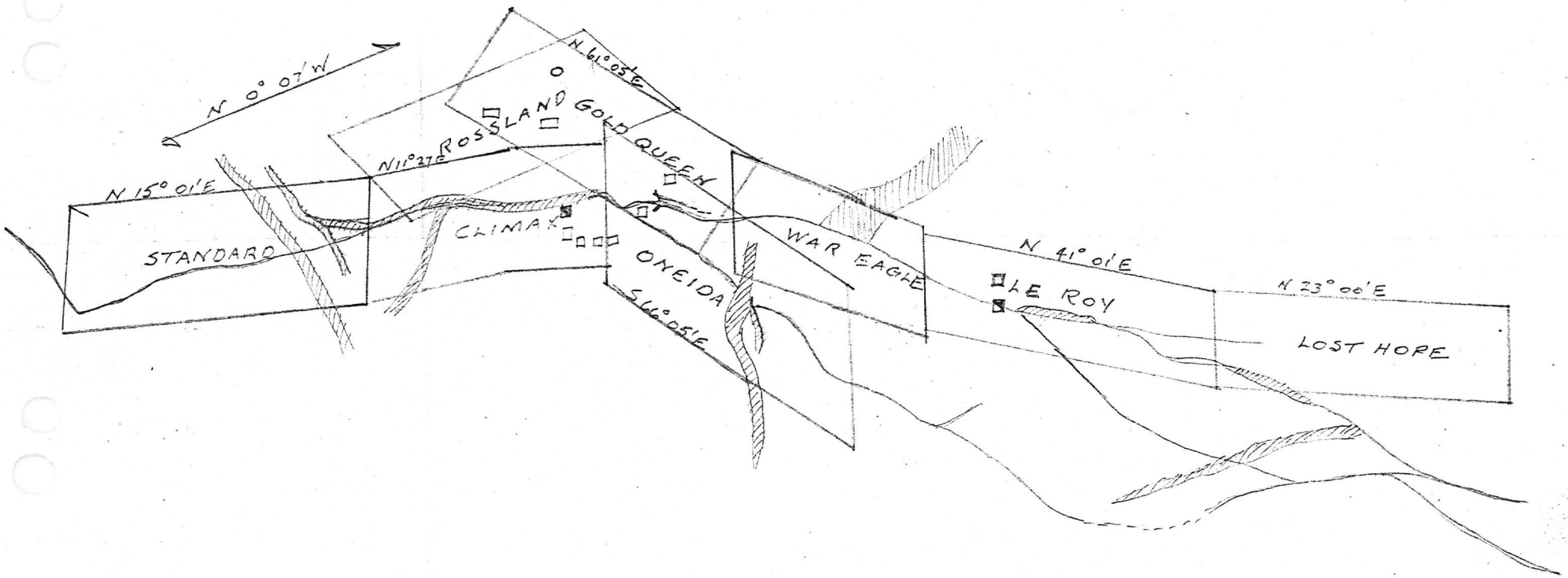




LE ROY SHAFT

1" = 50'

From sketch by Thos. Bean
Dos Cabezas
GB.



Veins
Basic Intrusives
Buildings □

LE ROY GROUP
DOS CABEZAS
SCALE 1" = 600'
Twp 14 S R 27 E

LEROY MINE OCHISE COUNTY

MG WR 8/16/85: Visited the LeRoy mine (Cochise Co). The dump at the Climax (southern) shaft is large. The headframe and Fairbanks Morse hoist are in poor to fair condition. Although the shaft collar needs repair, the 2-compartment shaft appears to be in good condition. It is inclined about 75°. There is a small amount of mill tailings below (west) of the shaft. There are several buildings in good condition east of the shaft and a residence north of the shaft. One of the buildings contains several hundred feet of drill core. I understand that the owner, Mr. Edgar Anderson, lives with his daughter and son-in-law, Ruth & Paul Avila, Taylor Road, Willcox, Az. phone 384-2868.

LeROY MINES

COCHISE COUNTY
DOS CABEZAS DISTRICT

Do Not Reproduce

The Gordon Miles Mining Company of Dos Cabezas and Beverly Hills, Calif. are in the process of reactivating the old, Hyde, Climax and Le Roy mines at Dos Cabezas. Some drilling has been done. (This is the Tom Bean holdings). GWI Quarterly Report 6-30-70

Mine Visit - Headframe down at the Leroy mine. GWI WR 12/5/70

The Gordon Miles Mining Co. has been active, staking claims etc. at Dos Cabezas. GWI Quarterly Report 10-1-70

The Gordon Miles Mining Co. at Dos Cabezas is still prospecting around the Dos Cabezas area. GWI Quarterly Report 12-31-70

Mine visit - Climax mine. Not working at present. GWI WR 2-8-71

Dos Cabezas Mts.: The Gordon Miles Mining Co. is looking around in the range. They did a little work at the LeRoy and Climax. GWI QR 4-1-71

The Gordon Miles Mining Company is still looking around in the Dos Cabezas district with headquarters for their exploration at Dos Cabezas. GWI QR 6-30-71

The Gordon Miles Mining Company at Dos Cabezas is still acquiring claims. GWI QR 9/71

The Gordon Miles mining co. at Dos Cabezas has acquired some claims near the Mascot mine, Dos Cabezas and have been reported to have been working on a deal with the Tout interests. GWI QR Oct-Dec '71

Learned in the field that Mr. Charles Lee of the Gordon Miles Mining Company of Dos Cabezas, Arizona, Beverly Hills California, had been doing a little drilling up on the Central Copper property which they have possession of at the present time. Other than that and some little assessment work in the area, very little work is being done at the present time. GWI WR 10/3/72

Le Roy

LEAD-ZINC QUESTIONNAIRE

October 22 1957.

Do you approve of the Emergency Lead-Zinc Committee's seeking relief for the lead-zinc industry and has it your authorization to speak for you? Yes

What Arizona Mines and Mills in the lead-zinc class do you control?

(1) None at this time

(2)

Which ones are operating? (1) None (2)

If not operating, when shut down? (1) (2) Early Fall

Number employed, prior to shut-down, in mine, mill or sections thereof producing lead or zinc ores? (1) 4 (2)

Number so employed on January 1, 1957? (1) 4 (2)

Number so employed on October 1, 1957? (1) 0 (2)

Remarks No returns possible under present conditions.

Tyrone Mining Co.
Company

By: William D. Tenicle
Signature

Please fill in NOW, tear off, and mail to:

Arizona Department of Mineral Resources
Mineral Building, Fairgrounds
Phoenix, Arizona

Department Mineral
Resources.

Dos Cabezas
Ariz Aug-19/50

Mr. Chas. H. Dunning:
In regard to your letter of July 19/50
My Le Roy Mine is being worked by
Taylor & Dorsey. as lessee. We will
Ship 50 to 60 Tons of ore Every 40 to
60 days. Average in Lead Value Should
be 23%, Also Contains zinc, Gold & Silver.
This Last one we have opened up is Large
for us. 11 feet wide in Some Places. and
3 feet of Steele Galena in Others.
The Property is not for Sale, under the
ordinary run of buyers. And I would not
be interested in a Loan, I dont think
it would help us any at present time.
Condations may Change one way or the
Other any Time, But as long as we have
good Shipping ore Available we of course
would not need any help.
Now I have Just obtained another
Property. in Wood Canyon. That in my
opinion Will Develop in to a good
Lead Producer. And May Show up
a Lot of Scheelite. Indacations are
it Will. There are two drawbacks one
is That about 1½ Miles of road

would have to be constructed. And about
4 miles of already existing road
would have to be repaired. This however
could be done at no great expence.
The property could be developed by tunnel
by Driveing along vein or mineral Fault
for a distance of 1200' to 1500' feet
This amount of work should determin
The Value of The Property. And I am
Sure it will be good. The vein is big enough
The Average width should be 3 to 4 feet wide
Formation is Favorable for Lead and copper
Also Tungsten. The mine operated on Small
Scale as a high Value Silver mine some
50 years Ago, Not over 200' feet of work
Was done at That time and very little
Sence.
The whole Property as it now stands
consists of one claim. More could be had
by location. We are open for a deal on
This Claim. are if The Goverment Set
up on Loan's is are becomes Favorable
I may consider a Loan. However you
know I was not Interested in The
old Set up we had. As you know when
I start a mine I am reasonably Sure of
Some Shipping ore. Milling ore Takes to long
and Costs to much. Some one Else can Take
ores- When it reaches that Stage.

Yours Very Truly

T. P. Bean

Box [illegible] Phoenix Ariz.

cc mailed 3/5/46

Sunnyslope,
Prescott, Ariz;
March 4, 1946

Department of Mineral Resources,
Phoenix, Ariz;

Att: George Ballam:

Dear George:-

Herewith the data on the LeRoy property at Dos Cabezas which you so kindly let me have a few weeks ago. Thank you very much for it.

I was not able to get away to have a look at the mine until last week when I spent the better part of three days there. I had a nice visit with Mr.Bean who was very cooperative. He lacks definite data on the underground situation and there are no assay maps or longitudinal sections available so that it is practically impossible to get any sort of an accurate picture of what one might expect if he reopened the mine. Incidentally. Mr.Bean claims that he has the title in good shape,- brought a suit last summer and finally obtained judgement with clear title last August.

The type of ore deposition is such that a geophysical survey should give a good line on what to expect and I would not be interested until such a survey was made. I may be able to get around to having that done if I can't find something more attractive in the near future. At any rate, I am not now interested, so there is no reason why the Department should not present the data to other potential purchasers so far as I am concerned. Mr.Bean has promised a lease on the LeRoy shaft to some local people and I told him that I thought he should go thru with it if he is satisfied with the ability of the other party to do what is necessary.

Thanking you again for the dope,

Sincerely,

Fred.

Fred Gibbs.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Le Roy Mine Date June 15, 1955.

District Dos Cabezas Dist., Cochise County Engineer Axel L. Johnson

Subject: Present Status --- Information from Thomas P. Bean, Owner.

For location and other information, see report of October 13, 1954.

Present Status This mine is now closed down. Very little work was done by the former lessee since the date of last report, and the mine is now open for leasing to an other party.

Proposed Plans The owner, Mr. Bean, is now negotiating with another company in regard to leasing of the property.

1

A[illegible]C[illegible]A DEPARTMENT OF MINER[illegible]OURCES

Mineral Building, Fairgrounds

Phoenix, Arizona

Via Telephone

1. Information from: Charles Lee

   Address: Dos Cabezas Star Rte

2. Mine: Hyde - Climax - Le Roy. 3. No. of Claims - Patented 7

   Unpatented ?

4. Location:

5. Sec 27-28-33-34 Tp 14 S Range 27E 6. Mining District Dos Cabezas

7. Owner: Anderson + Bean estate

8. Address:

9. Operating Co.: Gordon Miles Mining Co.

10. Address: Dos Cabezas Star Rte Willcox

11. President: Miles - Kernaghan 12. Gen. Mgr.: Secy T. Gordon - Gallup.

13. Principal Metals: 14. No. Employed:

15. Mill, Type & Capacity:

16. Present Operations: (a) Down ☒ (b) Assessment work ☐ (c) Exploration ☐
    (d) Production ☐ (e) Rate tpd.

17. New Work Planned: Want to acquire adjoining properties instal a - 100 to 200 flotation mill.

18. Miscl. Notes:
    Charles Lee → Consulting Geological Engineer at present time working as Project Eng.
    L. Stuckradt working for Co

Date: 8-13-70

(Signature)

(Field Engineer)

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: L. Stickradt
   Address: Dos Cabezas
2. Mine: Climax (Le Roy Mines) 3. No. of Claims - Patented 7
   Unpatented
4. Location: Dos Cabezas
5. Sec 20-29 Tp 14S Range 27E 6. Mining District Cochise
7. Owner: Mrs. T.P. Bean.
8. Address: Dos Cabezas Ariz
9. Operating Co.: Don't know
10. Address:
11. President: Charles Lee, Geologist 12. Gen. Mgr.:
13. Principal Metals: Ag Au Pb Zn Cu 14. No. Employed:
15. Mill, Type & Capacity:
16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☒
    (d) Production ☐ (e) Rate tpd.
17. New Work Planned:
18. Miscl. Notes: Report 6 holes drilled up to 150' deep each. Last summer

(Taken from GWI Quarterly Report 9/1969) - Roy Lindsey - 6-150' holes at Climax Shaft, Charlie Lee, Geologist. A little exploration work by the owners was done at the Le Roy property. It was dewatered and the shaft repaired. Mr. Anderson also did assessment work on his tungsten claim in Wood Canyon.

Date: 10-7-69 (Signature) (Field Engineer)

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LeRoy Mines - Climax Shaft Date April 8, 1965

District Dos Cabezas District, Cochise Co. Engineer Axel L. Johnson

Subject: Mine Visit. Information from Mrs. Thelma Bean and J.A. Kennedy.

References: Report of Oct. 9, 1964

Present Activity: (1) Shaft repairs, mostly on week ends.
(2) Pumping water

Review of Recent Operations: Since report of Oct. 9, 1964, the shaft has been repaired down to a depth of 150 ft. below the collar, - to about 8 ft. below the 142 ft. level.

The top 32 ft. is concreted as shown in the Oct. 9, 1964 report. Some concreting was done just below the 32 ft. bearing set. Below 40 ft. little timber was required since the shaft is mostly in solid rock at that depth. Sets, however, had to be put in for support of the ladders and shaft runners, which were later installed down to the 142 ft. level.

2 or 3 men are working on weekends.

1 man (J. A. Kennedy) takes care of the pumps. Water is being pumped for about 3 hours every day, and this is estimated at about 2500 gal. per day.

Proposed Plans: Repairing and sampling of the 142 ft. level will be done next, before the shaft is repaired below this level.

Mine Visit - Mrs. Bean of Dos Cabezas about area activity and on her property. (shaft repairs and dewatering). Have discussed leasing with party from Phoenix.

GWI WR 6/5/65

Visited LeRoy and Climax property of Mrs. Bean at Dos Cabezas. Mrs. Bean, her sister, Mrs. Violet Beals and brother Mr. Edgar Anderson were at the property having buried Mr. J. A. Kennedy the day before.

GWI WR 2/4/66

Mine Visit to the LeRoy Mine at Dos Cabezas, according to Mrs. Bean the Joplin Industries had talked about a deal but had given up.

GWI WR 4/8/67

Mine visit to LeRoy mine at Dos Cabezas. Mr. Anderson at property.
GWI WR 11-16-68

Oliver Anderson (Brother of Mrs. Bean) unwatered the Climax shaft down to the 288' level so that the level could be sampled and evaluated. There is supposed to be 300 to 400' of drift on that level. The shaft is 420' and dips 70 degrees to the west. A California company (not identified) is reported to be paying for the dewatering and will do the sampling.
GWI Quarterly Report 3/1969

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LeRoy Mines - Climax Shaft Date Oct. 9, 1964

District Dos Cabezas District, Cochise Co. Engineer Axel L. Johnson

Subject: Mine Visit. Information from Mrs. Thelma Bean and J. A. Kennedy.

References Report of April 10, 1964

Present Activity Shaft repairs, mostly on week ends.

Review of Recent Operations The following work has been done at the Climax shaft
(1) Concreting the top of the Climax shaft down to a depth of 32 ft. below collar.
(2) Erecting a headframe.
(3) Installing electric power
(4) Repairing of old gasolene hoist.
(5) Repairing old compressor.
(6) Installing bucket.

Proposed Plans Since the shaft is badly caved below the 32 ft. station, the location of the bearing set, above which the concreting is finished, it is found necessary to add some more concrete shaft sets below this point. Concreting the shaft down to from 39 ft. to 40 ft. below the collar is planned, but additional concreting may be found to be necessary. Further down in the shaft, wooden sets will be used.

The shaft is reported to be 435 ft. deep, with the 1st level at 142 ft. below the collar, and the water level now at 70 ft. below the collar.

As the shaft repair work continues downward, the water will be pumped out to below the 142 ft. level elevation, and the 142 ft. level will be cleaned out, repaired and sampled.

Working on the project, mostly on week ends are J. A. Kennedy, Edgar Anderson and Oliver Anderson, the latter two being brothers of Mrs. Thelma Bean, the owner.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LeRoy Mines - Climax Shaft Date April 10, 1964

District Dos Cabezas District, Cochise Co. Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from Mrs. Thelma Bean

References: Report of April 11, 1963, & previous reports.

Present Mining Activity: None at present.

Review of Recent Operations: Concreting of the Climax shaft to a distance of 32 ft. below the collar has been completed.
A headframe has been erected.
Electric power is now being installed.

Proposed Plans: It is planned to install a mine hoist, after which shaft repairs and retimbering below the 32 ft. bearing set will be continued. Superficial inspection shows the shaft badly caved below the 32 ft. station, and the water stands at 70 ft. below the collar. It is hoped that the shaft timbers will be in better shape below the present water level.

As the shaft repair proceeds downward, the water will be pumped out, and the 1st level, 142 ft. below the collar, will be examined.

Edgar Anderson and Oliver Anderson, brothers of Mrs. Thelma Bean, will be doing the work, mostly on week ends, and this will be started in a week or two.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LeRoy Mines - Climax Shaft Date April 11, 1963

District Dos Cabezas District, Cochise Co. Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from Mrs. Thelma Bean & J.A. Kennedy.

References: Report of April 15, 1959, et al

Location: About 2 miles north of Dos Cabezas

Number of Claims: 7 patented claims. On account of overlaps, this is equivalent to about 6 patented claims.

Owner: Mrs. Thelma Bean, Box 5, Dos Cabezas, Ariz.

Principal Minerals: Lead, zinc, copper with high gold & silver values.

Present Mining Activity: Concreting the top of the Climax shaft. 2 men working part time.

Old Mine Workings at Climax
(1) Climax shaft - 435 ft. deep, slightly inclined.
(2) 250 Ft. of drifts on the 142 ft. level.
(3) 750 ft. of drifts on the 288 ft. level.
(4) Blackhawk tunnel - 400 ft. long, connecting with the Climax shaft @ 15 ft. below the collar.
(5) Over 500 ft. of crosscuts on the 3 levels.

Review of Present Operations: The top of the Climax shaft was caved in to a depth of about 20-25 ft. below the collar, and requires repairs before any of the lower levels of the shaft can be reached for examination or exploration.

Concreting of the shaft was started at a distance of 32 ft. below the elevation of the original shaft collar, where a bearing set was anchored in solid rock surrounding the shaft. Concreting has now proceeded upward for 25 ft. to a point 7 ft. below the collar. Mr. Kennedy, one of the workers, reported that the concrete walls were 9" thick and that the structure was inclined 4 in. per foot (about 72 degrees). Engineer was unable to get the dimensions of the shaft compartments, as they were covered up to cure the concrete, but will get this information later.

Proposed Plans: (1) To dewater, clean out & repair the shaft to the 142 ft. level. Water has been reported to stand at 70 ft. below collar - but this is not known for sure.
(2) To clean out, repair & sample the 142 ft. level.
(3) Sell or lease the property with price & terms to be arrived at later.

Extract from Arizona Lode Gold Mines and Gold Mining - Arizona Bureau of Mines, Bulletin No. 137.

The Le Roy property is 1½ miles northeast of Dos Cabezas. Its principal claims, which were located in 1878, passed through several ownerships, and were obtained by the Le Roy Consolidated Mines Company prior to 1920. A few thousand tons of gold-silver-lead ore were produced, but no records or estimates of the amount are available. In 1925-1926, the Dorsey brothers shipped, from the Le Roy shaft, five cars of carbonate ore that contained from $35 to $40 worth of gold, silver, and lead per ton. In 1926-1927, the Arilead Company is reported to have shipped several cars of ore from the Climax shaft. During the following year, dump material was treated in a small mill. During 1928-1933, several cars of ore were shipped from the mine. In 1933, A. M. Bell installed a small mill on the property and produced some concentrates.

Here, granite, intruded by diabase dikes, forms rolling hills. The vein system strikes northeastward and dips about 65° SE. Its ore consists of coarse-textured grayish-white quartz with scattered pyrite, galena, sphalerite, and chalcopyrite.

Underground workings on the Le Roy claim include an inclined shaft, more than 300 feet deep, with water at 70 feet. On the 70-foot level, the vein is 3 to 4 feet wide. Developments on the Climax claim include a 300-foot inclined shaft and more than 2,000 feet of workings. The vein ranges in width from a few to 8 inches and in places separates into a stringer lode 4 or 5 feet wide. Its ore occurs in erratically distributed bunches.

Mrs. Thelma Bean, Box 5, Dos Cabezas, is owner of the LeRoy, Climax and Oneida Mines. Mrs. Bean discussed these properties with Mr. Johnson.

MEMO ALJ Weekly Report April 15, 1963

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine: LeRoy Mines — Date: April 15, 1959

District: Dos Cabezas District, Cochise Co. — Engineer: Axel L. Johnson

Subject: Present Status. Information from Thos. P. Bean & Personal visit.

References: Report of Feb. 11, 1959

Lessee: (on Mine Dump only) J. R. Schaffer, P.O. Box 775, Ajo, Ariz. (also Albuquerque) Lease was given to mill the dumps only. Lease provides for 10% straight royalty.

Principal Minerals: Gold

Present Activity: No work done at present. Mr. Schaffer, the lessee, is reported as making arrangements for drilling a well to provide water for the milling operations.

Ore Values: Mr. Bean estimates the ore in the dumps leased out to average about $9.00 per ton in Gold values, about $5.70 per ton of this being recoverable. He states that about 2/3 of the gold is free gold, and the remaining 1/3 occurs as gold tellurides.

Milling Facilities: No change from report of Feb. 11, 1959.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Le Roy Mine Date Feb. 11, 1959

District Dos Cabezas District, Cochise Co. Engineer Axel L. Johnson

Subject: Field Engineers Report. Information from Mrs. Thomas P. Bean & Personal Visit.

Locafion About 2 miles north of Dos Cabezas.

Number of Claims 6 patented claims.

Owner Thomas P. Bean, Box 5, Dos Cabezas.

Lessee (on mine dumps only) J. R. Schaffer, P. O. Box 775, Ajo, Ariz. (also Albuquerque) Lease was given to mill the dumps only.

Principal Minerals Gold

Present Mining Activity No mining activity. A small pilot mill had been erected on the property, but it was not operating. Lessee was not there.

Ore Values Dump reported by Mrs. Bean to average from $5.00 to $10.00 per ton in Gold. Some of the Gold ore reported to be Gold tellurides.

Milling & Marketing Facilitites Lessee has installed a small pilot mill on the property. This consists of (1) Jaw crusher, driven by a 6 cyl. enginer, (2) a home made ball mill (3) Flume with a copper plate bottom, leading from the ball mill discharge.

The mill test operations were described by Mrs. Bean to be about as follows:

(1) Crush material to 1/4 inch in jaw crusher.
(2) Grind ore fine in home made ball mill, which discharges on the flume.
(3) Apply catalytic agent on the copper plates on the bottom of the flume.
(4) Apply mercury on top of the catalytic agent on the plates at bottom of flume.

Proposed Plans Mr. Bean reports that the lessee plans to drill a well at or near the dump site to develop waterfor milling purposes.

Additional Lease is said to include the Oneida dump, nearest the pilot mill, and also the Le Roy dump and the Climax dump.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Le Roy Mine Date Oct. 13, 1954

District Dos Cabezas District, Cochise Co. Engineer Axel L. Johnson

Subject: Report of Mining Operations. Information from Thomas P. Bean, Owner.

Location 2 miles north of Dos Cabezas. See my report of June 9, 1954.

Number of Claims 6 patented claims.

Owner Thomas P. Bean, Box 5, Dos Cabezas, Ariz.

Lessee William K. Pratt, Dos Cabezas, Ariz. and Albuquerque, N. Mex. (Leased Feb. 15) Mr. Pratt is leasing all of the Le Roy mine, including the Climax, the Oneida, and the Le Roy claims. Now working only in the Oneida Tunnel.

Sub-Lessees None now. Former sublessees quit on June 14, 1954.

Principal Metals and Minerals Lead, Zinc and Copper sulphides, with high Gold and Silver values, the gold and silver being contained in the lead and zinc sulphides.

Number of Men Employed 3

Production Rate No production. Operator doing exploration and develppment work. Expect to be in production soon.

Geology See my report of June 9, 1954.

Ore Values See my report of June 9, 1954.

Ore in Sight and Probable Ore in Sight negligible. See my report of June 9, 1954 for Probable Ore.

Milling Facilities None.

Mine Workings and Past History See my report of June 9, 1954.

Present Operations In the past 7 weeks, since operations were resumed about Aug. 26, operators have done 70 ft. of drifting along the vein, and about 30 ft. of xxxx raising. Operators are now getting ready to stope ore.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Le Roy Mine (Oneida Tunnel Lease) Date July 26, 1954.

District Dos Cabezas District ----Cochise Co. Engineer Axel L. Johnson

Subject: Report of Mining Operations

References For Location, Number of Claims, and Owner ----see my report of June 9, 1954.

Lessee William K. Pratt, 2412 1/2 Floral Road NW, Albuquerque, N. Mex.

Sub-Lessees The Sub-Lessees, Ivan Rowe and his two partners, quit operating the mine on June 14. The reason given by Mr. Bean, the owner, is that the 3 partners had a disagreement amongst themselves regarding the operation of the mine. Mr. Bean reports, that, a s a consequence they closed down their operations and have given up the sub-lease. Mr. Bean reports, however, that the lessee, William K. Pratt, is going ahead with his contract, and will m either operate the mine himself or sub-lease it to some other parties. At present, however, no work is being done.

Principal Minerals and metals. Lead, Zinc and Copper sulphides, with high Gold and Silver values, the gold and silver being contained in the lead and zinc sulphides.

Number of Men Employed None at present.

Production Rate None.

References For Geology, Ore Values, Ore in Sight and Probable, Milling and Marketing Facilities, Present Mine Workings, and Past History ----see my report of June 9, 1954.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Le Roy Mine (Oneida Tunnel Lease) Date June 9, 1954

District Dos Cabezas District ---Cochise Co. Engineer Axel L. Johnson

Subject: Field Engineers Report ----Personal Visit & Information from Thomas P. Bean, Owner.

Location Secs. 20 & 29 -- T 14 S -- R 27 E.
Go east from Willcox for 15. 0 miles to Dos Cabezas. Pass through Cabezas, and continue for about 1/2 mile east of town. Turn left (north), and drive 1 1/2 miles on good road to the mine.

Number of Claims 6 patented claims in the Le Roy mine holdings.

Owner Thomas P. Bean, Box 5, Dos Cabezas, Ariz.

Lessee William K. Pratt, Dos Cabezas, Ariz. and Albuquerque, N. Mex. (Leased Feb. 15)
Mr. Pratt is leasing the whole property of 6 patented claims from Mr. Bean. Lease calls for a 15 % royalty, with a minimum royalty of $300 per month.

Sub-Lessees Ivan Rowe, Dos Cabezas, Ariz. and 2 partners have taken a sub-lease from Mr. Pratt of the Oneida Tunnel part of the mining property. (Sub-Leased on April 1,1954)
Sub-lessees contract to pay a royalty of 25 %, with a minimum royalty of $300 per month. The sub-lessees are now operating the property.

Principal minerals and metals. Lead, Zinc and Copper sulphides, with high Gold and silver values, the gold and silver being contained in the lead and zinc sulphides.

Number of Men Employed 3 men (the 3 sub-lessees) ---1 shift only.

Production Rate None yet. Sub-lessees are doing development work.

Geology The country rock is Granite, with diabase intrusions, and also some pegmatites. The ore vein at the Oneida tunnel strikes N & S, dips about 64 degrees to the west, and cuts across the diabase intrusion in the granite, and continues through the granite. The vein varies in width from a few inches to 2 ft., with a possible average of about 14 inches. The vein material consists of galena, sphalerite, chalcopyrite, pyrite, and quartz. Mr. Bean reports that occassionally he has found some niccolite (NiS), and arsenopyrite(FeAsS). The vein has been cut off by a large fault. The ore on the south side of the fault has been mined out above the level of the Oneida tunnel, while the ore on the north side of the fault has not yet been touched.

Ore Values Following are the estimated ore values of the vein material, as given to me by Thomas P. Bean, The owner:- Lead ---10 %. Zinc ---6 %. Copper ---- 0.35 %. Silver ----- 8.5 oz. Gold ---- 1.5 oz. Value approx. $70 per ton.

Ore in Sight and Probable Ore in sight to date is negligible. Operators drifted 70 ft. to intersect the vein on the north side of the fault, and have now drifted 15 ft. on the vein. Vein is about 14 inches wide at that point, with a considerable amount of quartz found in the vein, as well as lead and zinc sulphides. The depth of the drift is now about 180 ft. below the surface, and, according to Mr. Bean, this depth will increase to 400 ft. below the surface by driving the drift north along the vein. The probable amount of ore in the ore vein is, therefore, quite large, assuming that the vein continues north for some distance, and that it is mineralized continuously up to the surface. Writer recommended to the sub-lessees that they take a representative sample of the ore vein of the 15 ft. cut by the drift, in order to get information on the approximate value of the ore in the vein near the point where they expect to start stoping operations.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LeRoy Mine (Oneida Tunnel Lease) Date June 9, 1954.

District Dos Cabezas District -- Cochise Co. Engineer Axel L. Johnson

Subject: Field Engineers Report --- Personal Visit & Information from Thomas P. Bean, owner.

Milling and Marketing Facilities No milling facilities on the property. Past operators have all shipped the ore direct to the smelter.

Present Mine Workings (Oneida Tunnel only) The old part of the Oneida Tunnel extends for a distance of 490 ft. into the mountain, and in a northerly direction along the ore vein. The ore vein above this tunnel has been all stoped out by previous operators. At a point about 460 ft. from the entrance of the tunnel, the ore vein was found to be cut by a fault. This resulted in limiting past mining operations to the area on the south side of the fault.

The present operators started a side drift about 400ft. from the tunnel entrance and drifted in a north-easterly direction for 70 ft., at which point they picked up the ore vein on the north side of the fault. They then turned the drift to follow the ore vein and drifted for about 15 ft. along the ore vein.

Past History of LeRoy Mine Since first discovery was made about 1880 until 1914, the mine was operated by small mine operators, either owners or lessees at intermittent periods, and with varying results.

In 1914, the property was acquired by the LeRoy Consolidated Mining Co., who patented the property in 1916 or 1917, and worked the property until 1922, with Frank Peterson as their mine manager. Between 1922 and 1942, the LeRoy Consolidated Mining Co. had the property leased out to several lessees, and operations were conducted intermittently.

In 1942, LeRoy Consolidated Mining Co. sold the property to Thomas P. Bean, the present owner of the property. Since 1942, Mr. Bean has had the property leased out to several lessees, most of whom operated the property only for short periods. One of these lessees was Dorsey and Taylor.

On or about Feb. 15th last, Mr. Bean leased out the property, including all the 6 patented claims to William K. Pratt, on the lease terms mentioned on page 1 of this report. On or about April 1st last, Mr. Pratt sub-leased the Oneida Tunnel part of the property to Ivan Rowe and his 2 partners, according to the terms mentioned on page 1 of this report.

Present Operations The present operators of the property, Mr. Ivan Rowe and 2 partners, started their mining operations on April 22. They have drifted for 70 ft. in a north-easterly direction off the main tunnel, and intersected the vein, after which they turned the drift and drifted for an additional 15 ft. in the ore vein.

Proposed Plans Operators plan to start a raise near the breast of the drift, and raise all the way to within 10 or 20 ft. of the surface, and then cutting a small drift out to the surface for ventilation. The raise will be sampled and then cribbed, and will be in the ore vein at an incline of about 64 degrees.

Operators will then begin stoping operations above the drift, leaving a narrow pillar of ore just above the drift, and then stoping the ore vein almost up to the surface. The stope will be kept at a width of 36 inches at all places, regardless of the width of the ore vein. The ore and the rock will be blasted separately in the stope ----first the ore and then the waste rock. Short holes of about 3 ft. will be drilled, long drilling faces being used. After operations get under way, most, if not all the waste will be used to fill up the mined portion of the stope below the working face. Estimated mining cost (overall) -----about $20.00 per ton, not including royalties.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Le Roy ✓ Date February 17, 1944

District Dos Cabezas Engineer George A. Ballam

Subject: Preliminary report

The Le Roy group comprising 3 patented and one unpatented claims, is located one and one-half miles northeast of Dos Cabezas in the southwest slope of the Dos Cabezas range, one mile east of the DosCabezas Willcox highway and about 16 miles southeast of Willcox. It is reached by a good road from the highway. It is under bond and lease to Jas. R. Cray of Tucson.

Country rock is a coarsely crystalline granite intruded by diabase dykes adjacent to and containing a coarse grayish quartz carrying pyrite, chalcopyrite, galena and sphalerite. These veins have a northeasterly strike and dip about 65° southeast. There are also some dykes striking at right angles to this series which have not been fully explored.

The property is developed by two shafts, Climax and LeRoy, some 2000 feetapart withmidway between a tunnel and winze on the Oneida claim. The LeRoy shaft, vertical, is reported by E.D. Wilson to be somewhat over 300 feet deep, with water now standing at about 50 feet. At about 70 feet, there are drifts in both directions, some 200 feet northerly and about 700 feet southerly. Several thousand tons of ore have been stoped and shipped from this level over a distance of 275 feet and almost to the surface, most of it being in the southerly drift. An examination of smelter returns representing about 1000 tons of this ore showed values of about 0.80 oz. Au, 20 ozs. Ag, 28% Pb and about 1% Cu. Zinc penalties were excessive, many shipments showing $12 to $15 per ton zinc and sulfur penalties. Thos. Bean, who has beem associated with operation of the property for many years, and who is now living at the camp as watchman, reported that work was discontinued in the south drift when 35% zinc was encountered.

There are additional levels at 140 and 190 feet with 75 and 125 feet of drifting on either side of the shaft. Some ore was stoped on both levels but high zinc was again encountered, increasing with depth, with corresponding decrease in gold-lead values. The vein has widened to about four feet on the lower levels from 18 inches and up on the 70-foot level. Timber seems to be in fair shape. Ground is reported to stand well.

The Climax shaft, 2000 feet to the southwest, is sunk on an incline to a reported depthof over 300 feet. Water stands at about 70 feet. There are over 2000 feet of workings on three levels. The ore here is more erratically distributed in bunches in stringer lodes four to five feet wide, and such returns as were available indicated gold-lead values characteristic of a higher horizon, with low zinc.

The Oneida tunnel, stopes and winze appear to be badly caved. Bean reported gold as high as 16 ozs. associated with steel galena, which caused the early operators to sink a winze about 100 feet where values went out. In all openings it appears that gold is directly associated with lead and yields to zinc at about 100 feet with copper coming in, indicative of

leaching and secondary enrichment.

There is considerable equipment, and several buildings on the property, most of which is in good condition, a watchman having lived constantly at the camp. Ample water is available for all purposes as planned. For milling, if such were indicated, it is probable that water could be developed as has been done on the Dives and Mascot, neighboring properties. Mexican labor is available in Dos Cabezas. I spoke to two miners who are anxious for this property to get started, and Bean reports that more are available.

George A Ballam

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date 1-16-44

Name of Mine [illegible]

Owner or Operator [illegible]

Address [illegible]

Mine Location [illegible]

Filing Information

File System.....

File No.....

This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)

Production.....; Development ✓; Financing ✓; Sale of mine.....;

Experimental (sampling).....; Owner's occasional trip.....;

Other (specify).....

PRODUCTION: Past and Future.

	Tons
Approx. tons last 3 months	
Approx. present rate per 3 months	
Anticipated rate next 3 months	
If in distant future check (X) here	

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	35 La Salle	950	63
Light or Service Trucks			
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Copper Lead Zinc

REMARKS:

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By George A Ballam

February 17, 1944

MEMORANDUM

Le Roy Group
Dos Cabezas dist.

To: Director, Dept. Mineral Resources
From: George A. Ballam

J. M. Cray of Tucson has a bond and lease on the Le Roy group and is planning on making application for a preliminary development loan. I was somewhat familiar with the property and he asked me to go to it with him to aid him in filing application for loan.

It would seem that the Le Roy shaft is the logical place to commence operations. The shaft is in better shape, workings are newer with better ground, and there is a fairly good block of zinc ore which has not been worked. This is one of those things which looks too good to have been overlooked, and one might ask why. I believe the reason is obvious when the available smelter returns - representing a couple of thousand tons- have been examined. It is only during the present emergency that this zinc situation has been partially relieved so that zinc becomes an asset rather that the liability indicated in attached copies of returns (end of Lindsley report). I am also enclosing a partial list of other shipments which is quite representative, and includes , ore shipped from the Le Roy.

Operators in the past have always exploited the high gold values which have invariably been associated with galena or cerussite in the upper levels, and with the incidence of zinc these values dropped and work soon ceased.

This ore - sulfides - is amenable to differential treatment, but the unfavorable position of zinc in the past has operated against so handling it as long as shipping ore was available. Cray proposes for the present to ship either by truck or rail to Shattuck-Denn which has reported favorably on mill samples.

There is a good-sized dump containing at least 2000 tons of milling ore as the attached assay sheet indicates. This was a grab sample but I believe it is representative of the type of ore former operators were obliged to reject on account of excessive penalties. It appears that 15% to 18% zinc was about their cut-off point.

Bean will manage the property. He is a good miner and thoroughly familiar with all the workings. He says he can get a full crew together any time he gets the word to go.

In my opinion a preliminary loan of $4000 to $4500 is warranted to unwater the LeRoy, to repair the shaft , to clean out drifts, and to extend either or both of the lower drifts 100 feet or so to the south to make available the known block of zinc ore south of the shaft.

Am attaching maps and report in the event Cray does not have them with his application.

George A Ballam

May 27, 1943

Mr. Thomas P. Bean
Box 5
Dos Cabezas, Arizona

Dear Mr. Bean:

I was very glad to get your letter and to know that you have a lease on the old Le Roy Mine.

It is possible to get a loan on such a property. I am sending you the RFC Revised Mine Loan Circular and also a mimeographed copy of the form on which a loan application has to be made. This will show you the information necessary to furnish. If you are then ready to apply for a loan, you should write to William S. Gohring, RFC Mine Loan Division, 325 Heard Building, Phoenix, Arizona for three copies of the application form of which you fill in two and mail them to Phoenix and retain the other one for your files.

For rehabilitating a shaft and opening a mine for sampling and examination there is a limit of $5000 for such a loan. In order to get the loan you must submit authentic records, if possible, showing just what ore will be encountered if and when the mine is unwatered. In order to get a loan you must sell the project to the RFC just exactly the same as though you were trying to sell it to a hard-headed mining business man. By that I mean you must supply factual data showing that the mine warrants unwatering.

If you do this, I doubt very much if you will have any difficulty in getting a loan. It usually takes from two to three weeks to get a loan through. Apart from gathering and preparing the information necessary, there should be no expense.

I am also enclosing a copy of the form for filing your intention to hold mining claims together with a copy of the Act authorizing this.

With best wishes and kindest regards, I am

Very truly yours,

J. S. Coupal, Director

JSC:kk
Enclosures

Mr J. S. Coupal Director-
Dept, Mineral Resources
Phoenix Ariz

D S Cabezas Ariz
May-25/43

Dear Mr Coupal:

I can obtain a Lease on The old LE Roy Mine here at Dos Cabezas.
This Mine as you know was a high grade Shipper, in Lead, Zinc, Silver Gold and Some Copper:
The Shaft I would operate is 335 feet Deep. And Full of Water. And Am Sure The Whole Thing would Need re Timbering what I would like to know Could I obtain a Loan, on a condition of this kind. As you know an under-ground Examination and Sampling is out of the Question. As it will involve a considerable Expence. I would Also like to know if a loan Could be obtained. How long it would Take to get it, And at What Expence to Me. I have Always Mined Gold And have never been interested in other Metals. To a degree involving any personal Expenditure. And I have not Changed. I would like to help out in our present Shortage. if a way Could be Found.

Yours Very Truly
Thos. P. Boan
Dos Cabezas Ariz Box-5:

Department of Mineral Resources
413 Home Builders Building Phoenix

Dos Cabezas Ariz
May-25-43

Dear Sirs;-

I would like to have copy The Approved Bill, Together With The Forms required in filing Notices of Intention to hold Mining Claims.

I would Like Aneaugh Forms to cover Two Groups of 9 Claims Each, and one Group of 4-Claims, For Three different owners.

Yours Very Truly
Tom. R. Beam
Box-5
Dos Cabezas
Ariz.

m L-2

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date June 5, 1939.

Mine Le Roy

District Dos Cabezas, Cochise Co. Location 18 miles east from Willcox

Former name None

Owner W. I. Crawford Address Dos Cabezas, Arizona.

Operator Same Address

President Gen. Mgr.

Mine Supt. Mill Supt.

Principal Metals Gold, Silver, Lead, Copper (Zinc) Men Employed

Production Rate 30 tons high grade ore per mo. Mill: Type & Cap.

Power: Amt. & Type (Compressor C P 310 cu ft
(Hoist 40 hp F-M.

Operations: Present Idle

Operations Planned Dependant on financing.

Number Claims, Title, etc. 10 claims , 7 patented 3 unpatented lode claims.

Description: Topog. & Geog. On relatively level ground, two miles from old town of Dos Cabezas.

Mine Workings: Amt. & Condition Development work totals about 3500 feet. Main workings two shafts located about 2000 feet apart, one 435 feet deep the other 265. Both shafts have drifts and stopes.

(over)

Geology & Mineralization Fissure vein in granite. Width of milling grade ore 1' to 5', Width of Shipping grade ore 0.5' to 3'. Strike of vein NE, dip of vein 55 deg. NW. Ore is oxidized to 75 ft, sulphide ores below. Zinc is minor in oxidized zone. Increases in sulphide zone.

Ore: Positive & Probable, Ore Dumps, Tailings (2) 2500 T. No.

Ore shows in third level of both ~~xxfxx~~ shafts. Shipping returns show 1.6 oz gold, 10 to 40 oz silver, 10% to 60% lead, 1% Copper. S

Mine, Mill Equipment & Flow Sheet Mine equipment includes blacksmith shop with drill sharpener.

Road Conditions, Route Road good. From Willcox to Dos Cabezas 16 mi. Dos Cabezas to mine 2 mi. Can drive practically any place on property.

Water Supply Water stands about 65 ft below surface in both shafts. Both shafts make about 10,000 gallons per day (combined output).

Brief History Property has been worked intermittenly for past forty years. In 1920 was equipped and worked full force.

Special Problems, Reports Filed A. L. Flagg, Box 2345, Phoenix has made report which can be attached to this report.

Remarks

If property for sale: Price, terms and address to negotiate. Property is for sale at $30,000 on term payments, $200 per month for first three months and $500 per month thereafter. Will negotiate on other terms, lease, lease and bond, or working arrangement.

Signed W. I. Crawford,
Dos Cabezas, Arizona.

Use additional sheets if necessary.

REPORT ON THE LE ROY CONSOLIDATED MINES,
DOS CABEZAS, ARIZONA.

Dos Cabezas, Arizona
15 August, 1921.

Mr. Frank Peterson,
President,
Le Roy Consolidated Mines Co.,

Dear Sir:

In accordance with your instructions, I have, while acting as superintendent of the Le Roy Mines, examined the same, and herewith submit report.

GENERAL SUMMARY.

The factors contributing to successful mining operations are present; i.e., ore of good value and quantity, that is amenable to metallurgical treatment; accessability; ample transportation facilities; adequate water supply; an abundance of labor, and a climate that permits continuous operations.

GENERAL CONCLUSIONS AND RECOMMENDATIONS.

Excellent exposures of ore have been made, considering the relatively small proportion of the vein that has been prospected.

We may expect to encounter the ore in shoots of mixed sulphides, which will decrease in lead and gold values, and increase in copper and zinc values, as greater depth is reached.

The complex nature of the ore demands separqtion of the zinc prior to shipment to a smelter. The zinc is then removed as a source of penalty, and is added as a source of revenue.

I would recommend testing the ore for treatment process, with the idea of later erecting a fifty ton mill.

Development work should be pushed well ahead of shipping or milling needs, both to insure a steady supply of ore, and to permit of uniformity of mine output.

In my opinion, which is based on knowledge gained by a close study of conditions during the five month period in which I was employed as superintendent, I consider the property very valuable, and believe that further exploration will result in the development of a profitable mine.

NEAR BY PROPERTIES.

W Within the district are three other properties that have undertaken development work on a considerable scale.

The first of these, in magitude of operation, being, the Central Copper Company, which company, with subsidiaries, has expended over $5,000,000 in development of low grade copper deposits, which occur in the recent lavas to the northward of the gold-silver-lead-zinc belt.

In a still different geological horizon, also to the northward of the Le Roy Group, the Gold Prince and Dives companies have developed on different portions of a large fissure vein in limes and shales.

At the Dives mine, a ten stamp mill amalgamates the gold, which is mostly free, while the presence of considerable amounts of sulfide caused the erection of a concentrating mill, by the Gold Prince Company.

FACILITIES:

(A) TRANSPORTATION:

The Mascot and Western Railroad, a subsidiary of the Central Copper Company, connects the town of Dos Cabezas with the Southern Pacific at Wilcox, sixteen miles distant.

The Le Roy Consolidated Mines Company owns its own private right-of-way, with loading yard, at a spur of the Mascot and Western. (since discontinued). Transportation to and from the mine is by truck, slightly over 16 miles, on good roads to the railroad at Wilcox.

(B) POWER:

There is no power distribution system in the locality, and each mine must supply its own unit. The Le Roy equipment includes fuel oil engines.

(C) WATER:

Good water for domestic purposes is obtained by pumping from shallow wells.

For future metallurgical uses, the normal flow of mine water, supplemented by pumping from shallow wells, will suffice.

CLIMATE:

The climate is such that work can be carried on without interruption throughout the year. The winters are open and mild, while the altitude alleviates the extreme heat of summer.

TOPOGRAPHY:

The topographyof the Le Roy group is that of Piedmont hills, rising from the desert, and flanked by the higher peaks of the Dos Cabezas range, the main peaks of which rise to an altitude of over 8,000 feet above sea level.

GEOLOGY:

The country rock of the gold-silver-lead-zinc area is a coarsely crystalline granite. In the granite mass are intrusions of diabase, for the most part being in narrow dikes trending north-easterly and south-westerly. Other dikes of diabase trend approximately at right angles to the named series.

Fissures within the diabase, or roughly paralell, are filled with quartz, and form the ore-bodies.

It is altogether probable that the vein fissures were formed by the shrinkage due to the cooling of the diabase dikes.

The fact that the quartz veins cut the diabase upon entering or leaving the granite, establishes the fact that the quartz is more recent than the diabase.

The ore deposit is characteristic of those formed at intermediate depth by ascending thermal waters, and in genetic connection with intrusive rocks. (See Lindgren, "Mineral Deposits", page 513.)

"This class yields a large proportion of the gold production of the world, as well as much of its silver, copper and zinc". (see Lindgren, "Mineral Deposits", page 515.)

Within the fissure, we find three different classes of vein stuff.

First, we have on the surface, or very close thereto, the oxidized zone, which is characterized by very high gold values with small amounts of lead carbonates. The zinc and copper, being more readily soluble, have been leached out and redeposited at greater depth, along with most of the lead.

These oxidized pockets represent the "stubs" of old ore shoots, and are not found continuously along the outcrop, but intermittently.

Second, both on the surface, and at depth, we find areas that are barren, or commercially so.

Third, are the ore shoots, consisting of irregular shaped "bonanzas" of mixed sulphides of lead, zinc, iron and copper, and containing gold and silver values.

These shoots may be only a few feet across, or may have a breadth and depth of over a hundred feet, as in the case of the main ore shoot in the Climas shaft.

Usually there is a fairly sharp line of demarcation between ore and waste.

Comparing this deposit to others of similar type, we may expect a gradual decrease of gold and lead values with greater depth, and a corresponding increase in copper and zinc.

EQUIPMENT:

Attached is a list of such machinery and equipment as are now on the property.

DEVELOPMENT:

In the Climax mine, about 1400 feet of development work has been done, partly by former owners, but for the most part by the present company.

Former development was directed wholly within the oxidized zone. The old workings have since caved, and are now inaccessible.

The exploration and discovery of the sulfide zone is due to the efforts of the present management.

On the first level, driven to explore beneath the old workings, and directly beneath the old stopes, ore of good value was uncovered. The tenor is about as follow:

Gold, .75 oz., silver, 3.7 oz., lead, 12.5%, zinc, 6.0%. The width of the vein at this place varies from eight to eighteen inches; the breadth is about thrity five feet, with the face of the drift still in ore.

In sinking the shaft, at a depth of about sixty-six feet below the first level, another ore shoot was encountered. This ore shoot persisted for a depth of one hundred and thirty feet further, or to a point three hundred and thirty eight feet below the collar of the shaft.

A station was cut for a second level, at two hundred and thirtyeight feet below the collar of the shaft.

Fifty feet below the second level, a third level was started. On this level, a total of seven hundred and two feet of drifting was done, exposing the large ore shoot found in the shaft, laterally, for a distance of over one hundred feet, the greater portion of the shoot being to the northward of the shaft.

Several smaller shoots were exposed in drifting to the southward of the shaft. One of these has a breadth of about thirty feet, and is almost directly underneath the shoot uncovered on the first level, indicating possibility of continuity of the ore between levels. The face ofthe south drift shows about two feet of ore, worth approximately fifty dollars per ton.

On the Oneida vein (which is the extention of the Climax vein) former owners drifted three hundred and sevety feet, but very evidently followed a small stringer part of the way, rather than the main vein.

At a point one hundred and fifty feet from the adit, the present management found the vein in the floor of the drift, and sank a winze to a depth of one hundred feet. For some distance from the beginning, very good ore was encountered. At a depth of thirty seven feet, a drift was started, and ore was uncovered for a distance of about eighty feet along this drift. The south face is still in ore, which shows higher gold values than average.

A cross-cut drift on this same level, to the eastward, intercepted another lode, which appears on the surface. At the point of interception, no values are in evidence. By continuance of this cross-cut, two other lodes will be intercepted within a short distance.

At the Le Roy mine, the shaft has reached a depth of three hundred and twenty eight feet.

The very slight development on the two lower levels sufficed to developmentship of ore from each level.

The lower levels show good gold values, and we would recommend further lateral and vertical development from this shaft.

A shipment was also made from the first level, from the small stope adjacent to the shaft. The south drift shows good values for a distance of about one hundred and twenty feet from the shaft.

In the north drift, two veins, more or less parallel, finally join shortly before reaching the present face.

Two excellent ore shoots were found recently in this drift, one being in the present face.

Summarizing the development work, we maysay that very satisfactory showings of ore have been made, considering the comparatively small amount of work that has been done. None of the veins have been adequately explored, and some very promising surface showings have not been explored at all.

By further development, both in depth and laterally, we may expect to discover other ore bodies, with a reasonable degree of surety.

Development should be kept well ahead of the needs of a mill, or of a shipping output.

SAMPLING:

In as much as no ore is "blocked out" or "positive", in the parlance of engineering, ie.e., exposed on four sides, any attempt at exact and systematic estimation of quantities, and of tenor, would at this stage be unjustifiable.

The sampling was done conservatively, and is intended merely to indicate the values we may expect to find when the ore is finally blocked out, and sampled according to accepted rules.

The best obtainable sample is that of an unsorted shipment to a smelter. No such shipment has been made from this property, but the shipment from the Climax, under date of March, 1921, very nearly approximates the conditions of the ore in place, being ten per cent higher in value.

At the time the writer sampled the mines, the second and third levels of the Le Roy mine were under water.

However, reliable data, gathered by a mining engineer of known repute and integrity, were available, and used as correct assumption in arriving at conclusions.

METHODS AND COSTS:

(A) MINING

The mining of the ore presents no serious problem. One of several standard overhand stoping methods could be used to advantage in the wider portions of the vein, while narrow seams could be recovered by "resuing", or separately breaking ore and waste.

Under the conditions of production, the mining of ore should not cost to exceed eight dollars per ton, and in all probability, the cost would be much less.

(B) REDUCTION:

In the past, the mine has been considered only in the light of a shipper of high grade smelting ore.

There are many vital objections to such a plan.

In the ore deposits, and on the dumps, are considerable quantities of ore which are twoo low grade to ship directly at a profit. In addition to this, the zinc content should be segregated, thereby eliminating it as a source of penalty, and adding it as a source of profit.

Zinc concentrates bring at the refineries, in normal times, about thirty to thirty-five dollars per ton. From this price, must be deducted about six dollars per ton for freight to Oklahoma or Kansas refineries.

Therefore, it would seem that seperation, if brought about at a reasonable cost, is highly desirable.

Recent metallurgical improvements have resulted in greatly increased efficiency in the separation of lead and zinc. Advances have been chiefly along the line of differential flotation.

The estimated cost of a fifty ton mill is thrity thousand dollars. The cost of operation should not exceed one dollar per ton. In fact, at most plants, the cost ranges between fifty and sevety-five cents per ton.

The zinc penalty would be eliminated, the insoluble penalty reduced. Between $4.00 and $5.00 wouddbe realized from each ton of ore for its zinc content, while the lead-copper-gold-silver concentrates would be enriched in proportion to the ration of concentration, thereby effecting great saving in freight and treatment charges.

A partial list of smelter returns is appended.

Respectfully submitted,

Norman D. Lindsley,
Mining Engineer.

SMELTER RETURNS

All shipments made to the Consolidated Kansas City Smelting and Refining Company, at its El Paso works.

First shipment: 12,158 pounds

Date	Assays		Value	Shipped by
6 Feb. 1916	Gold	1.76 oz.	$35.20	Norton-Morgan
	Silver	22.8 "	12.48	Commercial Co.,
	Lead	28.5%	23.23	Wilcox, Arizona.
	Iron	13.8%	.69	
			$72.10	
Penalties, Insoluble		36%		
Sulphur		1.5%	3.75	
Net value			$68.35 Per ton	

Second shipment: 21,192 pounds

11 Nov. 1916	Gold	1.80 oz	$36.00	Demarest & Morgan.
	Silver	31.7 oz	19.79	
	Lead	33.4%	28.98	
	Copper	.34%	1.46	
	Iron	1.50%	.77	
			$86.99	
Penalties, Insol.		25.0%		
Sulphur		1.7%	2.71	
Net Value			$84.28 Per ton	

Third shipment: 92,392 pounds

3 Feb. 1917	Gold	1.02 oz	$20.40	
	Silver	24.0 oz	16.98	
	Lead	28.9%	28.45	
	Copper	1.3%	1.36	
	Iron	10.0%	.50	
			$67.69	
Penalties, Insol.		22.0%		
Sulphur		13.0%	5.20	
Net Value			$62.49	

The following shipments were all made by the Le Roy Consolidated Mines Company.

Date, January, 1918. Weight, 82,902 pounds

	Assay	Value
Gold	.93 oz.	$18.60
Silver	20.2 oz.	19.09
Lead	29.6%	27.32
Copper	1.96%	3.84
Iron	10.5%	.57
		$69.42
Penalties,		
Insol	13.9%	
Zinc	18.8%	
Sulphur	18.8%	7.63
	Net Value	$61.79 Per Ton

Date, July 29, 1918. Weight, 66,706 pounds

	Assay	Value
Gold	.74 oz	$14.80
Silver	22.1 oz	20.92
Lead	33.0%	33.15
Copper	1.78%	3.51
Iron	10.0%	1.25
		$75.63
Penalties,		
Insol	11.9%	
Zinc	19.2%	
Sulphur	19.2%	8.50
	Net Value	$67.13 Per Ton

"Second Class" shipped August 29th, 1918 Weight, 89,754 pounds.

	Assay	Value
Gold	.78 oz	$15.60
Silver	7.9 oz	7.48
Lead	11.0%	10.21
Iron	10.2%	1.36
		$34.65
Penalties		
Insol.	34.4%	
Zinc.	18.5%	
Sulphur	12.4%	$12.34
	Net Value	$22.31

Note: This class of ore would make an excellent mill-feed. Much of the same grade remains on the dump.

COPIES OF PARTIAL ORE SHIPMENTS FROM LE ROY GROUP, DOS CABEZAS, ARIZONA

ORE	ASSAYS	POUNDS
Gold	1.76 oz	12,158
Silver	22.8 "	
Lead	28.5%	
Iron	13.8%	
Gold	1.80 oz	21,192
Silver	31.7 "	
Lead	33.4%	
Copper	.34%	
Iron	1.50%	
Gold	1.02 oz	92,392
Silver	24.8 "	
Lead	28.9%	
Copper	1.3%	
Iron	10.0%	
Gold	.93 oz	82,908
Silver	20.0 "	
Lead	20.6%	
Copper	1.96%	
Iron	10.5%	
Gold	.74 oz.	66,706
Silver	22.1	
Lead	33.0%	
Copper	1.78%	
Iron	10.0%	
Gold	.79 oz.	89,754
Silver	7.9	
Lead	11.0%	
Iron	10.2%	
Gold	.86 oz	92,634
Silver	8.3 "	
Lead	12.9%	
Copper	1.19%	
Gold	.84 oz.	101,418
Silver	10.2 "	
Lead	20.2%	
Copper	.01%	

REPORT ON THE LE ROY CONSOLIDATED MINES,
DOS CABEZAS, ARIZONA.

Dos Cabezas, Arizona.
15 August, 1921.

Mr. Frank Peterson,
President,
Le Roy Consolidated Mines Co.,

Dear Sir:

In accordance with your instructions, I have, while acting as superintendent of the Le Roy Mines, examined the same, and herewith submit report.

GENERAL SUMMARY.

The factors contributing to successful mining operations are present; i.e., ore of good value and quantity, that is amenable to metallurgical treatment; accessability; ample transportation facilities; adequate water supply; an abundance of labor, and a climate that permits continuous operations.

GENERAL CONCLUSIONS AND RECOMMENDATIONS.

Excellent exposures of ore have been made, considering the relatively small proportion of the vein that has been prospected.

We may expect to encounter the ore in shoots of mixed sulphides, which will decrease in lead and gold values, and increase in copper and zinc values, as greater depth is reached.

The complex nature of the ore demands separation of the zinc prior to shipment to a smelter. The zinc is then removed as a source of penalty, and is added as a source of revenue.

I would recommend testing the ore for treatment process, with the idea of later erecting a fifty ton mill.

Development work should be pushed well ahead of shipping or milling needs, both to insure a steady supply of ore, and to permit of uniformity of mine output.

In my opinion, which is based on knowledge gained by a close study of conditions during the five month period in which I was employed as superintendent, I consider the property very valuable, and believe that further exploration will result in the development of a profitable mine.

NEARBY PROPERTIES.

Within the district are three other properties that have undertaken development work on a considerable scale.

The first of these, in magitude of operation, being, the Central Copper Company, which company, with subsidiaries, has expended over $5,000,000 in the development of low grade copper deposits, which occur in the recent lavas to the northward of the gold-silver-lead-zinc belt.

In a still different geological horizon, also to the northward of the Le Roy group, the Gold Prince and Dives companies have developed on different portions of a large fissure vein in limes and shales.

At the Dives mine, a ten stamp mill amalgamates the gold, which is mostly free, while the presence of considerable amounts of sulfide caused the erection of a concentrating mill, by the Gold Prince Company.

FACILITIES.

(A) TRANSPORTATION.

The Mascot and Western Railroad, a subsidiary of the Central Copper Company, connects the town of Dos Cabezas with the Southern Pacific at Wilcox, sixteen miles distant.

The Le Roy Consolidated Mines Co. owns its own private right-of-way, with loading yard, at a spur of the Mascot and Western. (since discontinued) Transportation to and from the mine is by truck, slightly over 16 miles , on good roads to the railroad at Wilcox.

(B) POWER.

There is no power distribution system in the locality, and each mine must supply its own unit. The Le Roy equipment includes fuel oil engines.

(C) WATER.

Good water for domestic purposes is obtained by pumping from shallow wells.

For future metallurgical uses, the normal flow of mine water, supplemented by pumping from shallow wells, will suffice.

CLIMATE.

The climate is such that work can be carried on without interruption throughout the year. The winters are open and mild, while the altitude alleviates the extreme heat of summer.

TOPOGRAPHY.

The topography of the Le Roy group is that of Piedmont hills, rising from the desert, and flanked by the higher peaks of the Dos Cabezas range, the main peaks of which rise to an altitude of over 8,000 feet above sea level.

GEOLOGY.

The country rock of the gold-silver-lead-zinc area is a coarsely crystalline granite. In the granite mass are intrusions of diabase, for the most part being in narrow dikes trending north-easterly and south-westerly. Other dikes of diabase trend approximately at right angles to the named series.

Fissures within the diabase, or roughly paralell, are filled with quartz, and form the ore-bodies.

It is altogether probable that the vein fissures were formed by the shrinkage due to the cooling of the diabase dikes.

The fact that the quartz veins cut the diabase upon entering or leaving the granite, establishes the fact that the quartz is more recent than the diabase.

The ore deposit is characteristic of those formed at intermediate depth by ascending thermal waters, and in genetic connection with intrusive rocks.(1)

"This class yields a large proportion of the gold production of the world, as well as much of its silver, copper and zinc".(2)

Within the fissure, we find three different classes of vein stuff.

First, we have on the surface, or very close thereto, the oxidized zone, which is characterized by very high gold values with small amounts of lead carbonates. The zinc and copper, being more readily soluble, have been leached out and redoposited at greater depth, along with most of the lead.

These oxidized pockets represent the "stubs" of old ore shoots, and are not found continuously alongthe outcrop, but intermittently.

Second, both on the surface, and at depth, we find areas that are barren, or commercially so.

Third, are the ore shoots, consisting of irregular shaped "bonanzas" of mixed sulphides of lead, zinc, iron and copper, and containing gold and silver values.

These shoots may be only a few feet across, or may have a breadth and depth of over a hundred feet, as in the case of the main ore shoot in the Climax shaft.

Usually there is a fairly sharp line of demarcation between ore and waste.

Comparing this deposit to others of similar type, we may expect a gradual decrease of gold and lead values with greater depth, and a corresponding increase in copper and zinc content.

EQUIPMENT.

Attached is a list of such machinery and equipment as are now on the property.

DEVELOPMENT

In the Climax mine, about 1400 feet of development work has been done, partly by former owners, but for the most part by the present Company.

Former development was directed wholly within the oxidized zone. The old workings have since caved, and are now inaccessible.

The exploration and discovery of the sulfide zone is due to the efforts of the present management.

On the first level, driven to explore beneath the old workings, and directly beneath the old stopes, ore of good value was uncovered. The tenor is about as follow:

Gold, .75 oz., silver, 3.7 oz., lead, 12.5%, zinc, 6.0%. The width of the vein at this place varies from eight to eighteen inches; the breadth is about thirty five feet, with the face of the drift still in ore.

In sinking the shaft, at a depth of about sixty-six feet below the first level, another ore shoot was encountered. This ore shoot persisted for a depth of one hundred and thirty feet further, or to a point three hundred and thirty eight feet below the collar of the shaft.

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(1) Lindgren, "Mineral Deposits", page 513.
(2) " " " " 515.

A station was cut for a second level, at two hundred and thirty eight feet below the collar of the shaft.

Fifty feet below the second level, a third level was started. On this level, a total of seven hundred and two feet of drifting was done, exposing the large ore shoot found in the shaft, laterally, for a distance of over one hundred feet, the greater portion of the shoot being to the northward of the shaft.

Several smaller shoots were exposed in drifting to the southward of the shaft. One of these has a breadth of about thirty feet, and is almost directly underneath the shoot uncovered on the first level, indicating possibility of continuity of the ore between levels. The face of the south drift shows about two feet of ore, worth approximately fifty dollars per ton.

On the Oneida vein(which is the extention of the Climax vein) former owners drifted three hundred and seventy feet, but very evidently followed a small stringer part of the way, rather than the main vein.

At a point one hundred and fifty feet from the adit, the present management found the vein in the floor of the drift, and sank a winze to a depth of one hundred feet. For some distance from the beginning, very good ore was encountered. At a depth of thirty seven feet, a drift was started, and ore was uncovered for a distance of about eighty feet along this drift. The south face is still in ore, which shows higher gold values than average.

A cross-cut drift on this same level, to the eastward, intercepted another lode, which appears on the surface. At the point of interception, no values are in evidence. By continuance of this cross-cut, two other lodes will be intercepted within a short distance.

At the Le Roy mine, the shaft has reached a depth of three hundred and twenty eight feet.

The very slight development on the two lower levels sufficed to developmentship of ore from each level.

The lower levels show good gold values, and we would recommend further lateral and vertical development from this shaft.

A shipment was also made from the first level, from the small stope adjacent to the shaft. The south drift shows good values for a distance of about one hundred and twenty feet from the shaft.

In the north drift, two veins, more or less parallel, finally join shortly before reaching the present face.

Two excellent ore shoots were found recently in this drift, one being in the present face.

Summarizing the development work, we may say that very satisfactory showings of ore have been made, considering the comparatively small amount of work that has been done. None of the veins have been adequately explored, and some very promising surface showings have not been explored at all.

By further development, both in depth and laterally, we may expect to discover other ore bodies, with a reasonable degree of surety.

Development should be kept well ahead of the needs of a mill, or of a shipping output.

SAMPLING.

In as much as no ore is "blocked out" or "positive", in the parlance of engineering, i.e., exposed on four sides, any attempt at exact and systematic estimation of quantities, and of tenor, would at this stage, be unjustifiable.

The sampling was done conservatively, and is intended merely to indicate the values we may expect to find when the ore is finally blocked out, and sampled according to accepted rules.

The best obtainable sample is that of an unsorted shipment to a smelter. No such shipment has been made from this property, but the shipment from the Climax, under date of March, 1921, very nearly approximates the conditions of the ore in place, being ten per cent higher in value.

At the time the writer sampled the mines, the second and third levels of the Le Roy mine were under water.

However, reliable data, gathered by a mining engineer of known repute and integrity, were available, and used as correct assumptions in arriving at conclusions.

METHODS AND COSTS.

(A) MINING.

The mining of the ore presents no serious problem. One of several standard overhand stoping methods could be used to advantage in the wider portions of the vein, while narrow seams could be recovered by "resuing", or separately breaking ore and waste.

Under the conditions of production, the mining of the ore should not cost to exceed eight dollars per ton, and in all probability, the cost would be much less.

(B) REDUCTION.

In the past, the mine has been considered only in the light of a shipper of high grade smelting ore.

There are many vital objections to such a plan.

In the ore deposits, and on the dumps, are considerable quantities of ore which are too low grade to ship directly at a profit. In addition to this, the zinc content should be segregated, thereby eliminating it as a source of penalty, and adding it as a source of profit.

Zinc concentrates bring at the refineries, in normal times, about thirty to thirty five dollars per ton. From this price, must be deducted about six dollars per ton, for freight to Oklahoma or Kansas refineries.

Therefore, it will be seen that seperation, if bro't about at a reasonable cost, is highly desirable.

Recent metallurgical improvements have resulted in greatly increased efficiency in the separation of lead and zinc. Advances have been chiefly along the line of differential flotation.

The estimated cost of a fifty ton mill is thirty thousand dollars. The cost of operation should not exceed one dollar per ton. In fact, at most plants, the cost ranges between fifty and seventy five cents per ton.

The zinc penalty would be eliminated, the insoluble penalty reduced. Between $4.00 and $5.00 would be realized from each ton of ore for its zinc content, while the lead-copper-gold-silver concentrates would be enriched in proportion to the ration of concentration, thereby effecting great saving in freight and treatment charges.

A partial list of smelter returns is appended.

Respectfully submitted,

Norman D. Lindsley,
Mining Engineer.

SMELTER RETURNS.

All shipments made to the Consolidated Kansas City Smelting and Refining Company, at its El Paso works.

First shipment: 12,158 pounds

Date	Assays		Value	Shipped by
6 Feb.1916	Gold	1.76 oz	$35.20	Norton-Morgan
	Silver	22.8 "	12.48	Commercial Co.,
	Lead	28.5%	23.23	Wilcox, Arizona.
	Iron	13.8%	.69	
			$72.10	
Penalties,	Insoluble	36%		
	Sulphur	1.5%	3.75	
	Net value,		$68.35	Per ton.

Second shipment: 21,192 pounds

11 Nov. 1916	Gold	1.80 oz	$36.00	Demarest & Morgan.
	Silver	31.7 oz	19.79	
	Lead	33.4%	28.98	
	Copper	.34%	1.46	
	Iron	1.50%	.77	
			$86.99	
Penalties,	Insol.	25.0%		
	Sulphur	1.7%	2.71	
	Net value,		$84.28	Per ton.

Third Shipment: 92,392 pounds Peterson & Morgan.

3 Feb.1917	Gold	1.02 oz	$20.40	
	Silver	24.0 oz	16.98	
	Lead	28.9%	28.45	
	Copper	1.3%	1.36	
	Iron	10.0%	.50	
			$67.69	
Penalties,	Inso	22.0%		
	Sulphur	13.0%	5.20	
	Net Value,		$62.49	

The following shipments were all made by the Le Roy Consolidated Mines Company.

Date, January, 1918. Weight, 82,902 pounds.

Assay.		Value.
Gold	.93 oz	$18.60
Silver	20.2 oz	19.09
Lead	29.6%	27.32
Copper	1.96%	3.84
Iron	10.5%	.57
		$69.42
Penalties,		
Insol	13.9%	
Zinc	18.8%	
Sulphur	18.8%	7.63
	Net value	$61.79 Per ton.

Date, July 29, 1918. Weight, 66,706 pounds.

Assay		Value
Gold	.74 oz	$14.80
Silver	22.1 oz	20.92
Lead	33.0%	33.15
Copper	1.78%	3.51
Iron	10.0%	1.25
		$75.63
Penalties,		
Insol	11.9%	
Zinc	19.2%	
Sulphur	19.2%	$ 8.50
	Net value	$67.13 per ton.

"Second Class" shipped August 29th, 1918 Weight, 89,754 pounds.

Assay		Value
Gold	.78 oz	$15.60
Silver	7.9 oz	7.48
Lead	11.0%	10.21
Iron	10.2%	1.36
		$34.65
Penalties,		
Insol.	34.4%	
Zinc	18.5%	
Sulphur	12.4%	$12.34
	Net value	$22.31

Note: This class of ore would make an excellent mill-feed. Much of the same grade remains on the dump.

COPIES OF PARTIAL ORE SHIPMENTS FROM LE ROY GROUP, DOS CABEZAS, ARIZONA.

ORE	ASSAYS	POUNDS
Gold	1.76 Oz.	12,158
Silver	22.8 "	
Lead	28.5%	
Iron	13.8%	
Gold	1.80 Oz.	21,192
Silver	31.7 "	
Lead	33.4%	
Copper	.34%	
Iron	1.50%	
Gold	1.02 Oz.	92,392
Silver	24.8 "	
Lead	28.9%	
Copper	1.3%	
Iron	10.0%	
Gold	.93 Oz.	82,908
Silver	20.0 "	
Lead	20.6%	
Copper	1.96%	
Iron	10.5%	
Gold	.74 Oz.	66,706
Silver	22.1 "	
Lead	33.0%	
Copper	1.78%	
Iron	10.0%	
Gold	.79 Oz.	89,754
Silver	7.9 "	
Lead	11.0%	
Iron	10.2%	
Gold	.86 Oz.	92,634
Silver	8.3 "	
Lead	12.9%	
Copper	1.19%	
Gold	.84 Oz.	101,418
Silver	10.2 "	
Lead	20.2%	
Copper	.01%	

ORE	ASSAYS	POUNDS
Gold	.33 Oz.	77,458
Silver	16.02 "	
Lead	27.4%	
Copper	1.00%	
Gold	.27 Oz.	80,507
Silver	14.4 "	
Lead	28.9%	
Copper	1.08%	
Gold	.16 Oz.	71,597
Silver	11.8 "	
Lead	29.1%	
Copper	.85%	
Gold	.34 Oz.	90,882
Silver	15.4 "	
Lead	29.5%	
Copper	.90%	
Gold	.65 Oz.	52,549
Silver	8.4 "	
Lead	21.0%	
Copper	1.18%	
Gold	.96 Oz.	58,801
Silver	11.00 "	
Lead	15.7%	
Copper	.88%	
Gold	.63 Oz.	7,385
Silver	22.3 "	
Lead	42.4%	
Copper	1.31%	
Gold	1.97 Oz.	39,137
Silver	14.5 "	
Lead	14.5%	
Copper	1.93%	
Gold	1.58 Oz.	105,227
Silver	21.81 "	
Lead	25.1%	

ORE	ASSAYS	POUNDS
Gold	1.84 Oz.	97,579
Silver	25.1 "	
Lead	31.4%	
Copper	.84%	
Gold	1.76 Oz.	12,158
Silver	22.8 "	
Lead	28.5%	
Iron	18.8%	
Gold	1.80 Oz.	21,192
Silver	31.7 "	
Lead	33.4%	
Copper	.34%	
Iron	1.50%	
Gold	1.02 Oz.	92,392
Silver	20.0 "	
Lead	28.9%	
Copper	1.9%	
Iron	10.0%	
Gold	.93 Oz.	82,902
Silver	20.2 "	
Lead	29.0%	
Copper	1.26%	
Iron	10.5%	
Gold	.74 Oz.	66,706
Silver	22.1 "	
Lead	33.0%	
Copper	1.79%	
Iron	10.00%	
Gold	.78 Oz.	89,754
Silver	7.9 "	
Lead	11.0%	
Iron	10.2%	
Gold	.86 Oz.	92,684
Silver	8.3 "	
Lead	10.9%	
Copper	1.19%	
Total pounds		1,698,064

Approximately 849 tons

Dos Cabezos, Arizona.

June 19th. 1936.

Mr. L.N.Dana,

Cherryvale.

Kansas.

My dear Mr. Dana;

From such information as is available, I give you a rough estimate as to the probable tonage in sight on the Crawford Property.

The total distance between the two shafts is 2000ft. on the North end, LeRoy shaft, the vein is about 2½ ft wide, carrying values as shown in Smelter sheets from $ 40.00 to $ 100.00.
at the South end, Climax shaft the vein is 4 ft. to 5 ft. wide and carries values from $ 7.00 to $ 10.00.

The Climax shaft is 435 ft. deep, the LeRoy shaft 265 ft. assuming the average width of the vein as 3 ft. and the known depth as 435 ft. using 12 cu. ft. to the ton. would show the estimated tonnage to be 108,700 ton with an estimated value of $ 15.00 per ton.

There has been some stoping done, but most of the ore was taken out from the drifts and shafts, there having been no cross-cutting done on any of the levels. At one time there was a small mill on the place but can find no record of the production.

Experence in opening other mines in this District has shown that numerous parallel veins occur of good size and value.

Surface indications show that the vein extends both to the north and south for a considerable distance.

Any maps that there may have been of the workings seem to have been lost or thrown away.

I beleive the estimates given, are conservative both as to tonnage and values.

Crawford is taking out some high grade ore now, on what might be called the 100 ft level about midway between the two shafts, the H.G. being about 3 ft wide.

In my opinion a thorough examination would show that there is a much greater tonnage available.

yours truly

A R Wallace

C. W. GABRIELSON
PRESIDENT

JOHN A. CAMPBELL,
SECRETARY-TREASURER

CONSOLIDATED GOLD MINES COMPANY, LTD.
P. O. BOX 279 NO. 10-11 MAZE BLDG. TEL. 132
BISBEE, ARIZONA

OPERATING GOLD MINES AT
DOS CABEZAS, ARIZONA

Dos Cabezos, Arizona.

May 28th. 1936.

Mr. E.D.Morton.

Ruby, Arizona.

My dear Mr Morton;

Your letter of the 25thinst. received.

I understood from Mr.Dana that you and Mr. MacKallor were to come over here to look at the Le Roy Mine, about which I think he had spoken to some of your people. I think this is a very likely property and worth going over. Would it be possible for you to make the trip. This is a fairly well developed mine with full equipment of machinery,etc. A good many cars of ore have been shipped from it with good returns. It lies just South of the Gold Prince and East of the Dives. I believe it can be developed into a paying property at a small expense and would make a very good stand by for a possible custom mill. So far as to this property there are no newdevelopments Things are at a stand still awaiting money from the East which has not as yet been forthcoming. Trusting I may see vou,with best regards

yours truly
A B Wadleigh

COPY

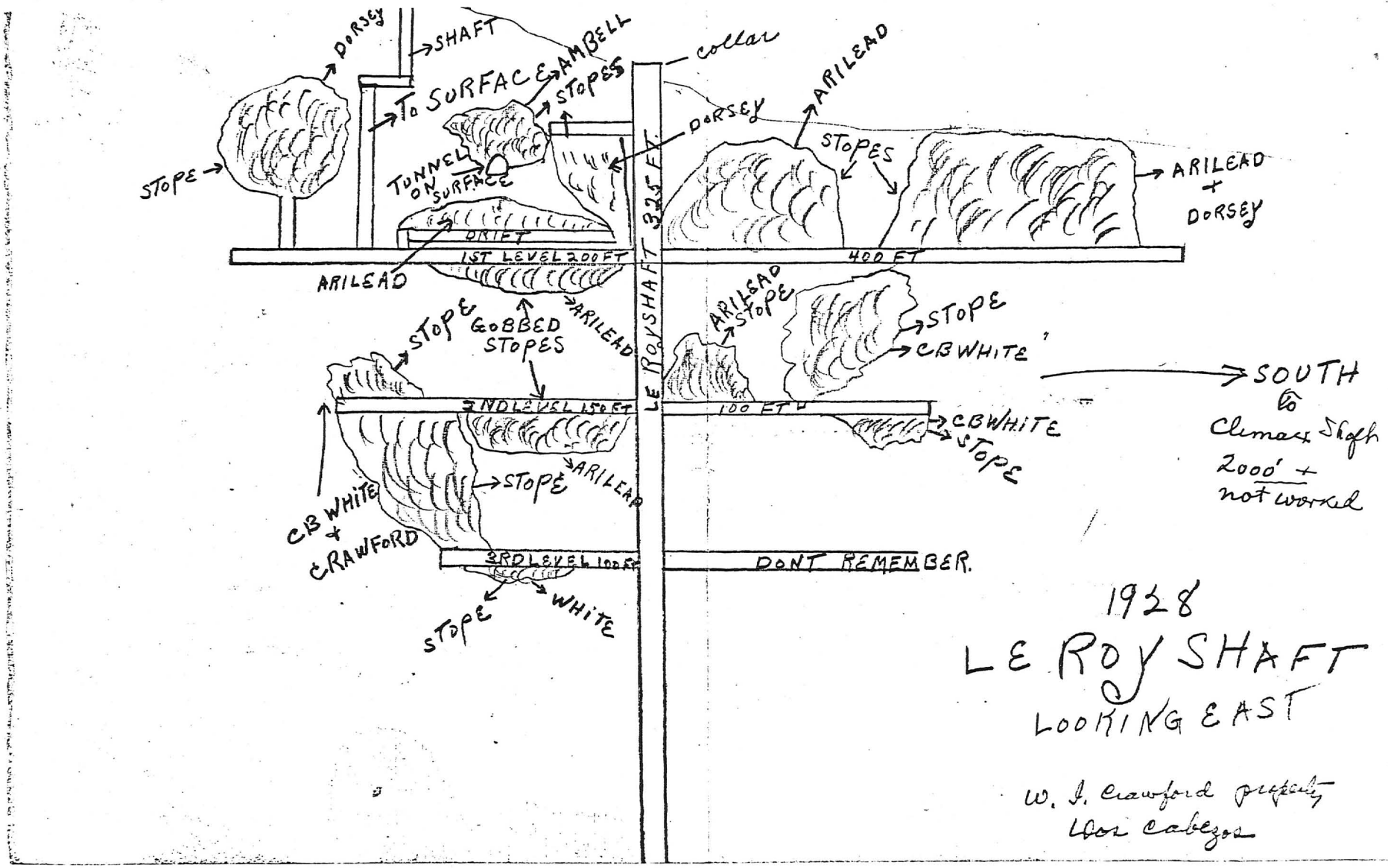
6/30/36

L. N. D.

I managed to get the other map in time to send with this. These maps will give an idea of the workings, including stopes. All the ore that was taken out was high enough to ship. There is still plenty of high grade ore in the stopes that has not been taken out and as you can see. The ground between the LeRoy and Climax has not been touched. The more I look into this property the better it shows one great advantage is that it is all equipped ready to start so that a good amount of ore could be blocked out and developed pending the matter of a mill. I will write you more, as I want to get this off on today's mail.

ABW

W. L. Crawford property

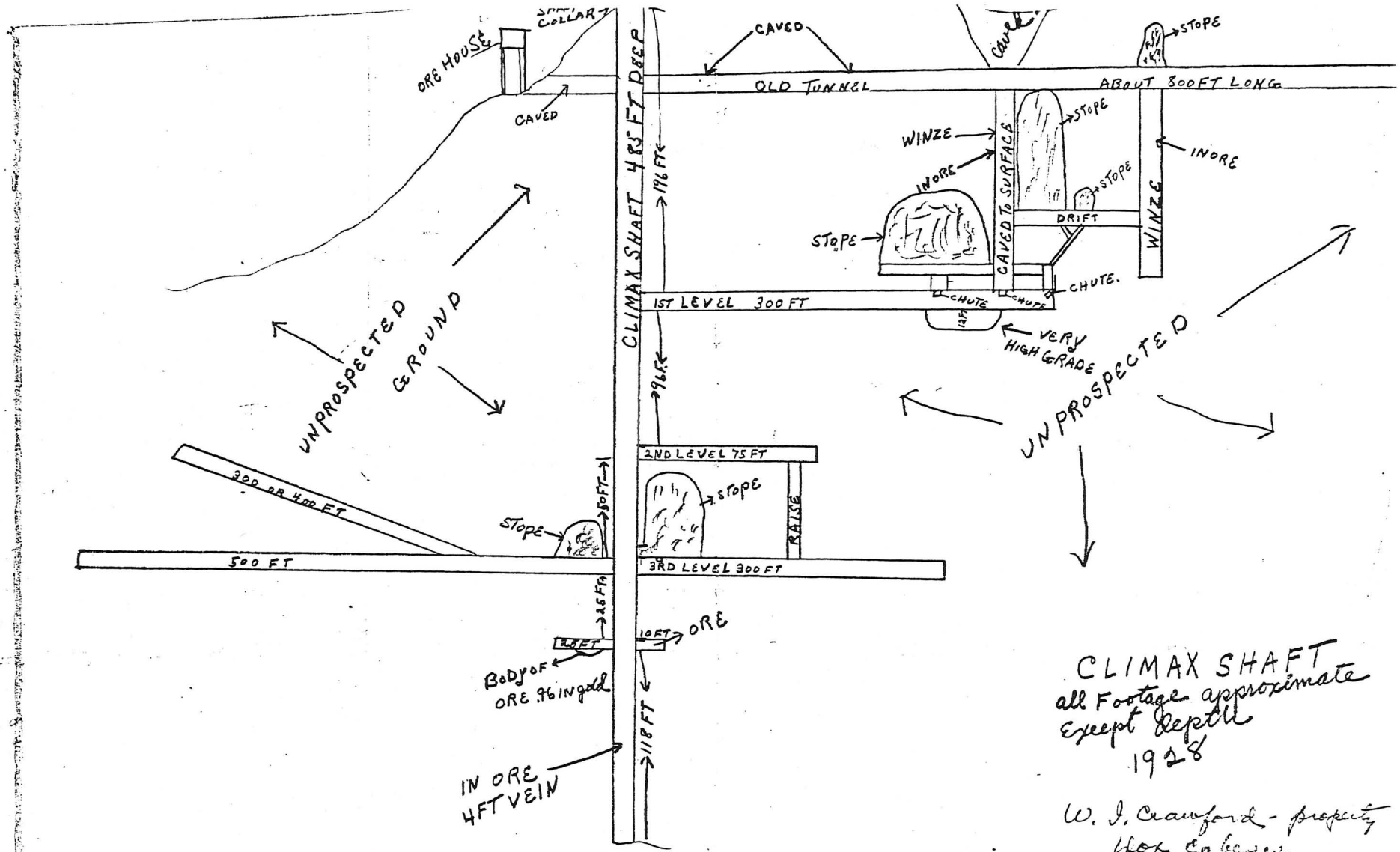


1928

LE ROY SHAFT

LOOKING EAST

W. J. Crawford property
Las Cabezas



CLIMAX SHAFT
all Footage approximate
Except Depth
1928

W. I. Crawford - property
Wax Calegon

Extracts from report on
LE ROY CONSOLIDATED MINES COMPANY,
Norman D.Lindsley,
August 15th,1921

"GEOLOGY:

The country rock of the gold-silver-lead-zinc area is a coarsely crystalline granite. In the granite mass are intrusions of diabase,for the most part being in narrow dikes trending north-easterly and south-westerly. Other dikes of diabase trend approximately at right angles to the first named series. Fissures within the diabase,or roughly parallel,are filled with quartz,and forms the ore bodies. It is altogether probable that the vein fissures were formed by the shrinkage due to the cooling of the diabase dikes.The fact that the quartz veins cut the diabase upon entering or leaving the granite,establishes the fact that the quartz is more recent than the diabase."

"The ore deposit is characteristic of those formed by ascending thermal waters,and in genetic connection with intrusive rocks. "This class yields a large proportion of the gold production of the world,as well as much of its silver,copper and zinc.' "

"Within the fissures we find three different classes of vein stuff. First we have on the surface,or very close thereto,the oxidized zone,which is characterized by very high gold values with with small amount of lead carbonates.The zinc and copper,being more soluble,have been leached out and redeposited at greater depth,along with most of the lead. These oxidized pockets represent the stubs of old ore shoots,and are not found continuously along the outcrop but intermittently."

" Second,both on the surface and at depth we find areas that are barren,or commercially so."

"Third,are the ore shoots,consisting of irregular-shaped 'bonanzas' of mixed sulphides of lead-zinc-iron and copper,and containing gold values. These shoots may be only a few feet across,or,may have a breadth and depth of over a hundred feet,as in the case of the main ore shoot in the Climax shaft. Usually there is a fairly sharp line of demarcation between ore and waste. Comparing this deposit to others of a similar type,we may expect a gradual decrease of gold and lead values with greater depth,and a corresponding increase in copper and zinc content. "

The following ore shipments,not listed elsewhere,were given in the Lindsley report:

January 1918, 82,908 lbs, Gold, 0.93 oz; Silver 20.0 oz; Lead 20.6%; Copper 1.96%; Iron 10.5%; Insol.13.9%; Zinc 13.8%; Sulphur 18.8%.

July 1918; 66,706 lbs; Gold, o.74; Silver 22.1 Oz; Lead 33.0%; Copper 1.76%; Iron 10.0%; Insol.11.9%;Zinc 19.2%;Sulphur 19.25.

August 1918, 89,754 lbs; Gold 0.78 oz; Silver 7.9 oz; Lead 11.0%; Iron 10.2%; Insol. 34.4%; Zinc 16.5%; Sulphur 12.4%.

March 1921; 92,634 lbs; Gold 0.86 oz; Silver 8.3 oz; Lead 19.9%; Copper 1.19%; Insol.28.2%; Sulphur 28.2%;

Commenting on the last shipment,Lindsley says: "Smelter returns of ore encountered while sinking the Climax shaft. This ore is graded up a very little from the mine run of the ore shoot as encountered,and may be considered as typical of the Climax ore bodies."

Extract from report by
Leon Feuchere, Ingenieur des Mines,
Ecole Nationale Superieure des Mines de Paris.
October 10,1927.

"In my opinion,the Climax shaft has good possibilities,but has just reached the top of the ore formation,and another 300' to 500' of sinking, with adequate development drift,should show good grade of ore in quantity."

"Summing up the facts between the Climax and LeRoy,as seen by the facts above and as will be shown more plainly by the average of the shipping,grade of the LeRoy is far superior to that of the Climax,and the amount of ore shown in the former is at least ten times superior to that of the latter."

"The tonnages aggregate as follows:

LeRoy,	291.74 tons
Climax	248.82 "
Mixed shipment	38.73 "
Mill ore	44.88
One car not recorded	50.00
TOTAL ore shipped	674.17 tons

"The average assays of ore shipped run as follows:

	Au	Ag	Pb	Cu	Zn	Ins.	Value.
Climax	.54	11.43	23.0	.98	--	27.1	$45.88
LeRoy	1.22	20.6	27.08	1.39	16.8	24.7	$70.16

"From the shipments the following benefits were incurred:

LeRoy,	$19,526.219
Climax,	7,511.756
Mixed,	1,481.740
Mill ore,	1,001.273
Grand Total,	$29,510.985 "

PARTIAL LIST OF ORES SHIPPED, LE ROY MINES, DOS CABEZAS, ARIZ.

Date	Dry Weight	Oz Au	Oz Ag	% Pb	% Cu	% Insol.	% Zn	% S	Notes.
1-2-16	6.709	1.76	22.8	28.5		36.0		1.5	
11-11-16	10.596	1.80	31.7	33.4	0.34	25.0		1.7	
12- 3-17	46.146	1.02	24.0	28.9	1.30	22.0		13.0	
1- 5-26	3.6925	0.63	22.3	42.4	1.3o	10.2	17.5	17.6	
1- 6-26	29.4005	0.96	11.09	15.7	0.88	31.2	19.0	12.9	(1)
3 -1-26	48.7895	1.54	25.10	31.4	0.84	29.0		2.1	(1)
4-12-26	52.6135	1.58	21.61	25.1		37.2		1.6	(1)
6-4-26	19.5685	1.57	14.5	14.5	0.95	49.6		4.8	(1)
5-10-27	35.7985	0.16	11.8	29.1	0.85	26.2		16.0	
6-10-27	45.441	0.34	15.4	29.5	0.90	22.6		17.3	
7-12-27	26.2745	0.65	8.4	21.0	1.15	27.4		18.0	
1-26-28	20.651	0.975	7.86	19.0	0.89	34.3		15.0	(1)
3-15-28	25.569	1.08	7.8	6.7		56.2		3.2	(4)
3-21-28	31.1355	1.00	5.7	17.0	0.71	36.0	11.9	13.7	(5)
6-14-28	11.965	1.28	14.87	16.2	0.86	54.0	0.7	1.2	(1)
8- 3-28	36.869	1.52	15.65	15.1	1.06				
6-24-29	9.814	2.356	14.13	41.4		40.8	10.7		(5)
6-24-29	16.086	0.773	7.08	14.3		12.9	22.4	23.6	(5)
6-12-29	6.08	1.17	22.44	13.1	1.48	17.8	23.5	19.7	(1)
4-30-30	10.815	2.995	21.52	47.5	0.85	1.6	15.7	21.8	(5) Sb 0.6%
4-30-30	12.818	0.607	7.60	10.3	1.33	16.2	20.8	23.0	(8)
6- 7-30	6.33	4.211	18.56	39.4		2.6	14.6	18.6	(6)
6- 7-30	9.266	0.649	7.31	8.7	0.86	20.6	23.5	17.4	(1)
6 -7-30	3.522	0.601	6.33	11.6	1.55	14.4	27.6	23.8	(7)
11-17-30	42.996	1.052	20.75	27.7	1.53	16.6	17.0	18.0	(1)
2-14-31	36.175	0.97	15.04	19.5	1.23	23.2	17.8	16.1	(3)
4- 8-31	27.203	2.367	13.83	21.3	1.04	7.8	19.8	19.6	(3)
4- 8-31	17.904	1.566	6.65	14.6	0.81	34.6		14.2	Office Tunnel
7-22-31	28.284	1.097	7.65	12.5	0.77	36.8	12.2	14.9	" "
7-22-31	18.094	2.382	14.56	22.7	1.14	11.9	20.0	20.3	(1)
1-18-32	19.638	1.03	5.6	10.55		52.8	7.0	6.6	(1)
6-21-32	5.536	0.79	7.5		0.25				(1)
7- 7-32	26.0525	1.035	8.9	9.3		64.7			(1)
7-25-32	3.999	1.83	9.2	14.0				14.8	(1)
7-25-32									(6)
8- 2-32	12.756	0.52	3.5		0.4				(5)
8- 2-32	3.008	1.60	4.1	8.4				1.0	(6)
8-30-32	14.974	0.81	6.7	9.0	0.62		9.5		(2)
9-14-32	8.715	1.69	10.4	17.0	0.72		21.8		(2)
2-27-33	5.7985	1.93	13.7	25.2	0.86		16.5		(2)
3-12-33	8.0695	2.38	12.6	23.7	0.88		16.5		(2)
3-12-33	4.3905	1.118	15.3	24.7	1.80		16.7		(2)
5-29-33	4.4075	2.30	8.1	16.8	0.75	15.7	16.8	22.1	(2)
6-12-33	4.047	2.342	8.1	16.8	0.75	15.7	16.8	22.1	(2)
7-21-33	2.755	1.60	10.0	16.3	0.79		19.5	16.1	(2)
7-31-33	3.809	1.83	9.8	18.0	0.83		19.6	18.1	(6)
8 -8-33	6.831	0.64	16.8	24.0	1.38		19.3	19.9	(6)
9-25-33	8.890	1.17	8.9	11.1	0.52	47.9	4.0	5.3	(6)
10-25-33	8.0485	0.50	7.0	15.1	0.56		11.1	10.7	(4)
9-25-33	6.385	2.13	8.9	19.0	0.78	11.2	16.5	21.2	(6)
10-25-33	4.9025	2.93	5.8	15.9	0.76		13.5	22.5	(6)
10-25-33	7.8885	1.313	5.1	12.6	0.51	6.5		10.9	(6)
11-14-33	11.798	1.72	5.9	15.3	0.98	8.7	15.5	21.0	
12-14-33	2.301	4.18	8.4	19.0	1.55	10.2	16.0	21.8	(6)

Explanation of Notes:

(1) Le Roy, but not segregated
(2) Le Roy 3d Level, South
(3) Leroy, 3d Level North
(4) Le Roy, Pump back of ore house
(5) Climax, but not segregated.
(6) Climax Dump.
(7) Climax, 3d level
(8) Climax, 2nd level.

C O P Y.

REPORT - LE ROY CONSOLIDATED MINES COMPANY.

The property of the Le Roy Consolidated Mines Company is situated two miles easterly from the village of Dos Cabezos, Cochise county, Arizona. The Mascot & Western Railway connects Dos Cabezos with the main line of the Southern Pacific Railway at Wilcox, a distance of sixteen miles north-westerly.

The Mascot & Western Railway Company constructed a bridge across a wash and extended their line a short distance towards the LeRoy Consolidated Mines Company's property and leased to the Company a piece of ground upon which its has built its own private loading and unloading platform for its private use only.The Company also purchased a strip of land through a pasture,fenced on both sides,insuring a private road from its rianroal landing to the mine,shortening the haul and eliminating grades.

CLAIMS.

The property holdings consist of seven claims as follows: Standard,Climax, Oneida, Gold Queen,War Eagle,LeRoy and Last Hope.

EQUIPMENT.

The property is exceedingly well equipped with machinerny and substantial buildings as follows:

2 - 15 HP Western Gas Engine Hoists,one at each shaft.
1 - 325 cu.ft.capacity CP air compressor,
1 - Leyner Drill Sharpener,
4 - Ingersoll-Rand Jackhammers,
2 - CC 11 stopers,with abundant supply of steel,
2 - Large ventilating blowers,12" pipe,
2 - Gas Engines for operating blowers;one at each shaft,
1 - 3 ton capacifty F.W.D. truck,
1 - Ford runabout,
Mine and surface trackage complete,
Full supply of skips,ore buckets and water skip,
Good supply of pipe,steel and general supplies,
Completely equipped blacksmith shop with pipe cutting equipment up to two inches.
Complete supply of carpenter and general tools
1 - 2000-ft air line connecting both shafts
1 - Telephone equipment connecting office and all workings,
1 - Force pump and engine furnishing domestic water to all buildings.
1 - 750 gal 7 ga,iron welded oil tank,adapted to use on truck for transferring fuel oil.
Ore bin and ore-sorting house, 16 x 40, located at LeRoy workings.
Complete equipment of glavanised tanks for all purposes,
2 - Head frames completely equipped for hoisting,
1 - Engine room containing hoist,air compressor at Climax,adobe construction
1 - Change room at Climax,
1 - Change room at LeRoy shaft,
1 - Hoist house with hoist at LeRoy shaft,
1 - 30 x 60 building,Manager's residence,
1 - 16 x 26 office building
1 - 30 x 60 Boarding house furnished and ready,
1 - 30 x 60 Building for sleeping quarters for miners,containg 12 rooms equipped with beds.
1 - Building housing pump and well,
1 - 24 x 30 Warehouse,concrete floor,storing supplies,
1 - Gardge for F.W.D. truck,
1 - Garage for Company's automobile,
1 - Oil house,
2- Powder magazines.

All the buildings are adobe construction and shingled roofs,excepting engine room,blacksmith shop and LeRoy hoist house.These are covered with corrugated iron. Roofs are all painted and in good order.

GEOLOGY.

The formation in which the main fissure and tributary veins occur is granite with diabase intrusions as hereafter described.

The strike of the fissures is northeast and southwest,with an average dip of 60 degrees to the northwest. The fissure is believed to be continuous between the Climax and LeRoy workings,a distance of 2000 feet. This conclusion is based upon the various small shafts and openings on the vein covering the greater distance. About 600 feet, however,is covered by a deep coating of erosion,preventing the croping from showing. The fissure is well defined 2000 feet to the southwest of the Climax shaft,also some distance to the northeast from the LeRoy shaft.The openings of the vein between the LeRoy and Climax shafts were made by so-called "Gofers",I.E. miners digging for high grade in days gine by.

Two large diabase dikes with northwest and southeast strike cut the granite at right angles to the main fissure.The most northerly dike crosses the main fissure 650 feet south of the LeRoy shaft.It gradually tapers and pinches out 150 feet beyond the fissure on the east side.The limits of the other dikes were not determined,but branches from it are found along the fissure.

Subsequent movement along the fissure developed the sheeted structure in the diabase as well as in the granite,thus permitting the entrance of mineral bearing solutions which deposited the quarts,gold,silver and lead-zinc minerals as lenses along the fissure.

In the Climax drift near the shaft the quarts lenses are between granite walls, while further along near the old workings the two,walls are either diabase or granite o or the rocks alternate as hanging or footwall,proving conclusively that the vein filling took place after the dikes were formed.

LE ROY WORKINGS.

The outcrop of the vein at the collar of the shaft is small,but at a depth of 18 feet the ore body opened to a width of 2½ feet carrying gold,silver and lead. The assay values as determined by smelter return sheets were:gold 1.8 oz, silver 31.7 oz, lead 33.4%, copper 1.34% and iron 15%, showing a net return of $81.28 per ton.

Just below this point the ore begins to diminish in size and 45 feet below the collar of the shaft it pinches to a seam for a few feet than gradually increases in size to 2½ feet at the first level.

A station was cut in the shaft 75 feet below the surface at which point the first level is located and a drift was run north 40 feet and south 179 feet.At this point a carload of ore was extracted from a small stope shown on the underground plan,and shipped to the El Paso smelter. The smelter return sheet shows the value per ton shipped from this stope to be 1.2 oz gold, 24.6 oz silver,26.6% lead, 1.29% copper,iron 10% and sulphur 12%.The sheet shows a net return to the Company os $2,748.20 for the car of 46 tons.

From this point the shaft was continued to a depth of 202 feet from the surface the ore widening out and narrowing practically as shown in the shaft from the surface to the first level.

At a point in the shaft 134 feet from the surface,a second level was cut and a drift run 34 feet north and 32 feet south.At this point a second car of ore was extracted from a small stope shown on the accompanying plan and shipped to the smelter. The return sheet from the smelter showing the assay value of the ore shipped to be; gold 0.92 oz, silver20.2 oz; lead 29.8%, zinc 18.8%, copper 1.96%, and iron 10.5%, returning to the Company net $2,088.90 for the car of 33 tons.

At a point 176 feet below the collar of the shaft a third station was cut and a drift run 61 feet north and 64 feet south.At this point a third car of ore was extracted from the small stope shown on the plan and shipped to the smelter.The return sheet from the smelter shows the assay values to be: gold 0.74 oz, silver 22.1 oz, lead 33.2%,zinc 19.2%, iron 10%, lime 4.1% and sulphur 19% returning to the Company net 2,088.90 for the car of 33 tons.

Below the third level the shaft was continued 25 feet and is now used as a sump

There is a 20 foot sump at the bottom of the shaft from which the water is drawn once a week in keeping the mine dry. A pump operated by air is installed on the platform above the sump and then the mine is in operation the water is drawn by means of the pump.

A large exhaust bowler for mine ventialtion is installed at the mouth of the shaft. The blower has a ten inch galvanized iron pipe connection extending to the bottom of the mine. The blower is operated by a 4 H.P. engine.

Conditions in the bottom of the workings indicate the pay shoot pitching to the north, in which case it will be encountered in the shaft shortly after sinking is resumed, and the probabilities are that pay ore would be continuous in the shaft south to the known pay shoot under the old workings.

An ore bin and sorting platform is constructed on the surface ready for shipping operations, but up to date no ore has been extracted for shipment.

OFFICE TUNNEL, ONEIDA CLAIM.

In the early days a very rich pay shoot was discovered on the fissure 600 feet to the north of the Climax shaft and on the Company's claim known as the Oneida. A 75 foot shaft was sunk on this find and it is said that $40,000 was extracted from the hole Later a tunnel was run into the hill 370 feet by some miners with a view of encountoring at depth the ore shoot referred to above. The tunnel was started at a point near the Company's present office.

The fissure was crossed at a point in the tunnel 120 feet from its mouth and being pinched to a small seam was not considered to be the main vein, and the tunnel was driven the balance of the 370 feet in granite. In exploring the tunnel the present Manager discovered the point where the vein had been crossed and sunk a 20 feet prospecting winze opening up a fine body of ore running from eight to fourteen inches in thickness.

RECOMMENDATIONS.

To open up this property and place it on a stable shipping basis I would suggest the following development: Continue at once the sinking of the winze in the ore in which is known as the Office Tunnel. Continue sinking both Climax and LeRoy shafts. Continue the Climax drift south at the bottom of the shaft. Continue the LeRoy drifts south on the second and third levels.

Present indications warrant this work, and three months active development work should open the ground to product at least 50 tons of mill and shipping ore daily. The length of time daily shipments may be made will depend upon the manner in which development is pushed ahead of extraction.

If the present percentage of mine values should continue I would recommend the installation of a fifty or hundred ton mill and zinc-lead separating plant. The saving in zinc values eliminating freight and smelter penalties would very soon pay for the construction of such a plant.

The vein is a true fissure and continues persistently over a long distance and from results of development work completed to date, I consider the property very valuable, and through the further opening up, as above suggested, it should prove a substantial paying mine.

(Signed) John Boyle, Mining Engineer.

765 South Harvard Boulevard,
Los Angeles, California,
August 5th, 1919.

(The above copied from a copy, March 16th, 1938,
at Phoenix, Arizona by A.L. Flagg)

The writer visited the properties of the LeRoy Consolidat Mines Co.,March 14th and 15th,1938,for the purpose of making a preliminary survey. No critical examination was attempted,no samples were taken for assay.In short,the visit was very brief and investigations of a preliminary nature 0nly.

The property cosnsist of seven patented and three unpatented claims in the Dos Cabezos mining district,Cochise county,Arizona. The nearest railway station is at Wilcox,on the Southern Pacific,eighteen miles distant.There is daily mail service to the old mining town of Dos Cabezos,two miles from the property.There is also telephone and telegraph service.

From Wilcox to the settlement at Dos Cabezos the dirt road is in very good condition.The two miles of road from the town to the camp are not kept up by the county but the road is very good.One or two trips over it with a blade will put it in fine condition.

On the property are several well built,adobe houses,as follows: bunk house, boarding house,warehouse (with concerete floor) engine house, blacksmith shop, garage,office and managers residence. These houses are in a good state of preservation but some repairs are necessary.With a little attention now these buildings will be serviceable for many years.

There is a fair amount of equipment on the property,enough to carry on quite a development campaign.There is good compressor and engine which drives that and the hoist at the Climax shaft was turned over within a few weeks.In all probability a minimum amount of reconditioning will be necessary to put the equipment in working order.Some small tools may be lacking but the equipment as it is is almost all that is necessary,and it seems to have been well cared for.

The principal workings are two inclined shafts,two thousand feet apart.They are two compartment shafts,fully equipped.The Climax shaft is 435 feet deep while the LeRoy shaft is 265 feet deep.These two shafts and an adit,known as the Office Tunnel,which connected with a very old hundred foot shaft,are the most important workings.The Office Tunnel is about four hundred feet long.There is water in both of the shafts to within less than one hundred feet of the surface.The collar of the Climax shaft is caved,but the condition is not serious and can be repaired very quickly and at no great expense.In all probability all the work underground is in fair shape but will need some attentions.There are three levels off each shaft The adit or Office Tunnel,is open and in working order.The total amount of effective development is about 3500-ft.

There are a number of old workings which have been caved and inaccessible for a number of years.These are probably of little future value as they were shallow in the beginning. They are useful now only as they assist in the study of the areal geology of the property.

A trip over the surface for about 3500 feet along the stike of the principal mineralized area was made.Old openings were examined,the 400-ft adit was examined and the 265 ft shaft was entered to a depth of about 60-ft.Dumps afforded considerable amount of information on the mineralogy of the deposits.There is very indication of extensive mineralization over this distance.The nature of the vein or veins seems to be to follow a dike intruded into the country rock, first on on one side of the dike then on the other.The widths mined so far have been narrow because the material sought was the high grade streak which will measure from 4 to 30 inches.Shoots are reported to be one hundred feet in length or over.Such exposures as could be seen give some promise of mining widths of three to five feet of milling ore but not enough information is available to make any safe estimate of this factor.It is probable that the geology is not quite as simple as set out in some old reports.

So far as is known there is not a crosscut on the entire property.Even as a matter of course some croscutting should have been done.In this connection there seems to be very valid reasons for development of this type and in its absence the existing development can hardly be considered very satisfactory.

A considerable amout of time was given to questioning the present owner about conditions underground.There is no recorded data concerning the width and value of the ore exposed in the workings off the shafts.There is no accurate survey of

the underground workings.However,the present owner seems to be familiar with all of the work,knows the history of the property and is well informed on the physical conditions underground.

A copy was made of all the smelter settlement sheets available,and the pertinent data regarding shipments tabulated.A copy of that data is attached hereto. It is well known that a much greater amount of ore was shipped than is accounted for in the tabulation.It is believed to have been of practically the same general nature and same metallic content as that covered by the sheets which are on file at the property.

Copies of three reports are available at the property.These were prepared in 1919, 1921 and 1927 respectively. None of the original maps which were a part of these reports are available.

Shipments of ore have been made since 1933,which is the last given in the tabulation but none of the settlement sheets for these later shipments are to be had.The last shipments were made in 1937.

After examining all the data vailable and making the hurried investigation outlined above,the following conslusions were reached:

(1) There is enough evidence of a tangible nature to justify the expenditure necessary to unwater the two shafts and sample the whole property.

(2) That a preliminary study of the geology should be made at the time of sampling for the purpose of projecting further development.

(3) That if the values and volumes of ore tributary to the workings in thw two shafts check out a moderate development campaign is justified.

(4) In the event the property is taken over for development the present equipment and facilities constitute the equivalent of a cash investment of several thousand dollars.

(5) That there is a reasonable expectation that the property can be developed into a profitable mining venture at a very reasonable cost.It seems likely that little headway will be made trying to make the property profitable by shipping ores.To realize the greatest possible amount out of the ores they must be treated on the ground.Though earning capacity cannot be calculated now conditions are such that one might expect that,considering the probable small investment,the returns will be satisfactory.

Phoenix,Arizona,
March 16th,1938.

Consulting Engineer.

PARTIAL LIST OF ORES SHIPPED, LE ROY MINES, DOS CABEZOS, ARIZ.

Date	Tons Dry Wt/	Oz Au	Oz Ag	% Pb	% Cu	% Insol	% Zn	% S	Notes
1/16	6.709	1.76	22.8	28.5		36.0		1.5	
11/16	10.596	1.80	31.7	33.4	0.34	25.0		1.7	
12/17	46.146	1.02	24.6	28.9	1.30	22.0		13.0	
1/26	3.6925	0.63	22.3	42.4	1.30	10.2	17.5	17.6	
1/26	29.8005	0.95	11.09	15.7	0.88	31.2	19.0	12.9	(1)
3/26	48.7895	1.54	25.10	31.4	0.84	29.0		2.1	(1)
4/36	52.6135	1.58	21.81	25.1		37.2		1.6	(1)
6/26	19.5685	1.57	14.4	14.5	0.95	49.6		4.8	(1)
10/26	26.643	1.43	17.90	20.80		40.80		2.9	
10/26	47.255	1.46	19.30	26.10	0.94	33.60		7.6	
12/26	51.979	1.12	8.10	14.30	0.76	45.40		7.0	
1/27	44.251	1.10	9.00	12.70		48.30		4.2	
3/27	50.706	0.84	10.20	20.20	0.91	36.00		13.50	
4/27	38.729	0.35	16.30	27.40	1.00	23.80		16.80	
4/27	40.253	0.27	16.40	28.90	1.0	21.80		18.00	
5/27	35.7985	0.16	11.8	29.1	0.85	26.2		16.0	
6/27	45.441	0.34	15.4	29.5	0.90	22.6		17.3	
7/27	26.2745	0.65	8.4	21.0	1.15	27.4		18.0	
1/28	28.651	0.975	7.8	19.0	0.89	34.3		15.0	(1)
3/28	31.1355	1.08	7.8	8.7		58.2		3.2	(4)
3/28	25.589	1.00	5.7	17.0	0.71	36.0	11.9	13.7	(5)
6/26	54.193	0.66	6.21	17.10	0.76	34.00	14.0	13.4	
6/28	38.016	1.32	12.86	17.90	1.05	29.40	15.1	14.5	
6/28	18.912	1.26	12.00	15.20	0.60	50.80	1.9	1.2	
6/28	11.983	1.28	14.87	16.2	0.88	54.0	0.7	1.2	(1)
8/28	36.869	1.52	15.65	15.1	1.06				
8/28	48.104	0.62	9.91	16.50	0.95	24.20	18.80	15.90	
11/28	39.323	0.85	20.00	20.70	1.96	16.40	21.30	20.0	
6/29	16.086	0.77	7.08	14.3		12.9	22.4	23.6	(5)
8/29	21.452	1.17	9.12	22.00	0.91	18.20	15.70	19.90	
9/29	8.08	1.17	22.44	13.1	1.48	17.8	23.5	19.7	(1)
10/29	5.238	7.236	16.80	49.00		1.0	6.9	20.3	Concentrates
12/29	2.752	0.435	15.75	48.80	0.84	9.30	12.90	17.80	
12/29	14.232	1.78	6.35	27.70	0.83	2.70	15.60	27.30	
4/30	10.815	2.995	21.52	47.5	0.85	1.6	15.7	21.8	(5) 0.6% Sb
4/30	12.818	0.607	7.60	10.3	1.33	16.2	20.8	23.0	(8)
5/30	4.528	2.519	13.79	44.60	0.89	1.20	13.10	21.40	
5/30	2.034	0.325	26.84	62.00	1.29	5.0	8.60	17.1	
8/30	6.33	4.211	118.56	39.4		2.6	14.6	18.6	(6)
8/30	9.266	0.649	7.31	8.7	0.86	20.6	23.5	17.4	(1)
8/30	3.522	0.601	6.33	11.6	1.55	14.4	27.6	23.8	(7)
11/30	42.996	1.052	20.75	27.7	1.53	16.6	17.0	19.0	(1)
2/31	36.175	0.97	15.04	18.5	1.23	23.2	17.8	16.1	(3)
4/31	27.203	2.367	13.83	21.3	1.04	7.8	19.8	19.6	(3)
4/31	28.284	1.566	6.65	14.6	0.61	34.6		14.2	Office Tunnel
7/31	17.904	1.097	7.65	12.5	0.77	36.8	12.2	14.9	" "
7/31	18.094	2.382	14.56	22.7	1.14	11.9	20.0	20.3	(1)
7/31	33.660	0.593	16.76	24.50	1.27	23.20	18.5	16.6	
1/32	19.638	1.03	5.6	10.55		52.8	7.0	6.6	(1)
6/32	7.205	1.12	3.00		0.32				
6/32	5.536	0.79	7.50		0.25				
7/32	26.052	1.035	8.9	9.3		64.7			(1)
7/32	3.999	1.83	9.2	14.0				14.8	(1)
8/32	12.756	0.52	3.5		0.40				(6)
8/32	3.008	1.60	4.1	8.4				2.0	(5)
8/32	14.974	0.81	6.7	9.0	0.62			9.5	(6)
9/32	8.715	1.69	10.4	17.0	0.72		21.8		(2)
6/32	7.205	1.12	3.00		0.32				
12/32	26.908	1.17	15.85	22.50	1.55		18.5		

Date	Tons Dry Wt	Oz Au	Oz Ag	% Pb	% Cu	% Insol	% Zn	% S	Notes
2/33									
2/33	5/7985	1.93	13.7	25.2	0.86		16.5		(2)
3/33	8.0695	2.38	12.6	23.7	0.88		16.5		(2)
3/33	4.3905	1.118	15.3	24.7	1.80		16.7		(2)
5/33	4.0476	2.30	8.1	16.8	0.75	15.7	16.8	22.1	(2)
6/33	4.047	2.342	8.1	16.8	0.75	15.7	16.8	22.1	(2)
7/33	2.755	1.69	10.0	16.3	0.79		19.5	16.1	(6)
7/33	3.809	1.83	9.8	18.0	0.83		19.6	18.1	(6)
8/33	6.831	0.64	16.8	24.0	1.38		19.3	19.9	(6)
9/33	8.890	1.17	8.9	11.1	0.52	47.9	4.0	5.3	(4)
10/33	8.0485	0.50	7.0	15.1	0.56		11.1	10.7	(6)
9/33	6.385	2.13	8.9	19.0	0.78	11.2	16.5	21.2	(6)
10/33	4.9025	2.93	5.8	15.9	0.76		13.5	22.5	(6)
10/33	7.8885	1.313	5.1	12.6	0.51	6.5		10.9	
11/33	11.1789	1.72	5.9	15.3	0.98	8.7	15.5	21.0	
12/33	2.301	4.18	8.4	19.0	1.55	10.2	18.0	21.8	

Explanation of Notes.

(1) Le Roy, but not segregated
(2) Le Roy, 3d Level, south
(3) Le Roy, 3d Level, north
(4) Le Roy, Dump back of ore house,
(5) Climax, but not segregated
(6) Climax dump
(7) Climax, 3d level
(8) Climax, 2nd Level.