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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: EL ORO MINE

ALTERNATE NAMES:

ORO MINE  
NIL DESPERANDUM  
GOLDEN EAGLE GROUP

SANTA CRUZ COUNTY MILS NUMBER: 115

LOCATION: TOWNSHIP 23 S RANGE 10 E SECTION 13 QUARTER SW  
LATITUDE: N 31DEG 25MIN 22SEC LONGITUDE: W 111DEG 16MIN 55SEC  
TOPO MAP NAME: ORO BLANCO - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER SULFIDE  
GOLD  
LEAD  
SILVER  
ZINC

BIBLIOGRAPHY:

REPORT OF THE REGION CONTIGUOUS TO THE  
MONTANA MINE  
INDEX OF MINING PROPERTIES IN SANTA CRUZ CO.  
SANT CRUZ CO. RECORDER'S RECORDS  
ADMMR EL ORO MINE FILE  
PRIVATE PAPERS

NO NAME GROUP (file) 5-25-40

NAVAJO & COCONINO  
COUNTIES

GRINDING PEBBLES

ORO MINE

SANTA CRUZ COUNTY

Report on the Region Contiguous to the  
Montana Mine, Ruby, Arizona 1934  
and maps. Geology files

Structure & Mineralization of the Oro  
Blanco Mining District. By Dr. Louis H.  
Knight Jr. 1970 Geology files

See: ABM Bull. 191, Pg. 65, T23S, R10E. Sec. W. Cen 13



ORO MINE

SANTA CRUZ COUNTY

MG WR 10/1/82: There are seven contiguous patented claims comprising the mining property best known as the Oro in the Oro Blanco mining district, Santa Cruz county. Six claims covered by Mineral Survey No. 3688 are: Oro, Connecting Link, Henry, Julia, Thirteen and Weso. The seventh claim, the Nil Desperandum, is covered by Mineral Survey No. 4018. The current owner of these seven claims is Mr. Samuel B. Williams, 218 Genesee St., Geneva, New York 14456.

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MG WR 3/9/84: Visited the Oro mine (Santa Cruz Co.). No visible signs of recent activity. The last part of the road to the mine, from Warsaw Canyon to Holden Canyon, is very rough, requiring a 4-wheel drive vehicle. Ruins of the original (?) mill building, constructed of stone, occur on the south side of Holden Canyon just below the Oro adit. Adjacent to the mill ruins and crossing the wash are remnants of what appears to be a suspension bridge. The Julia shaft is caved and the headframe is collapsed. An old steam boiler and ore scraper are near the shaft. Very little dump material anywhere.

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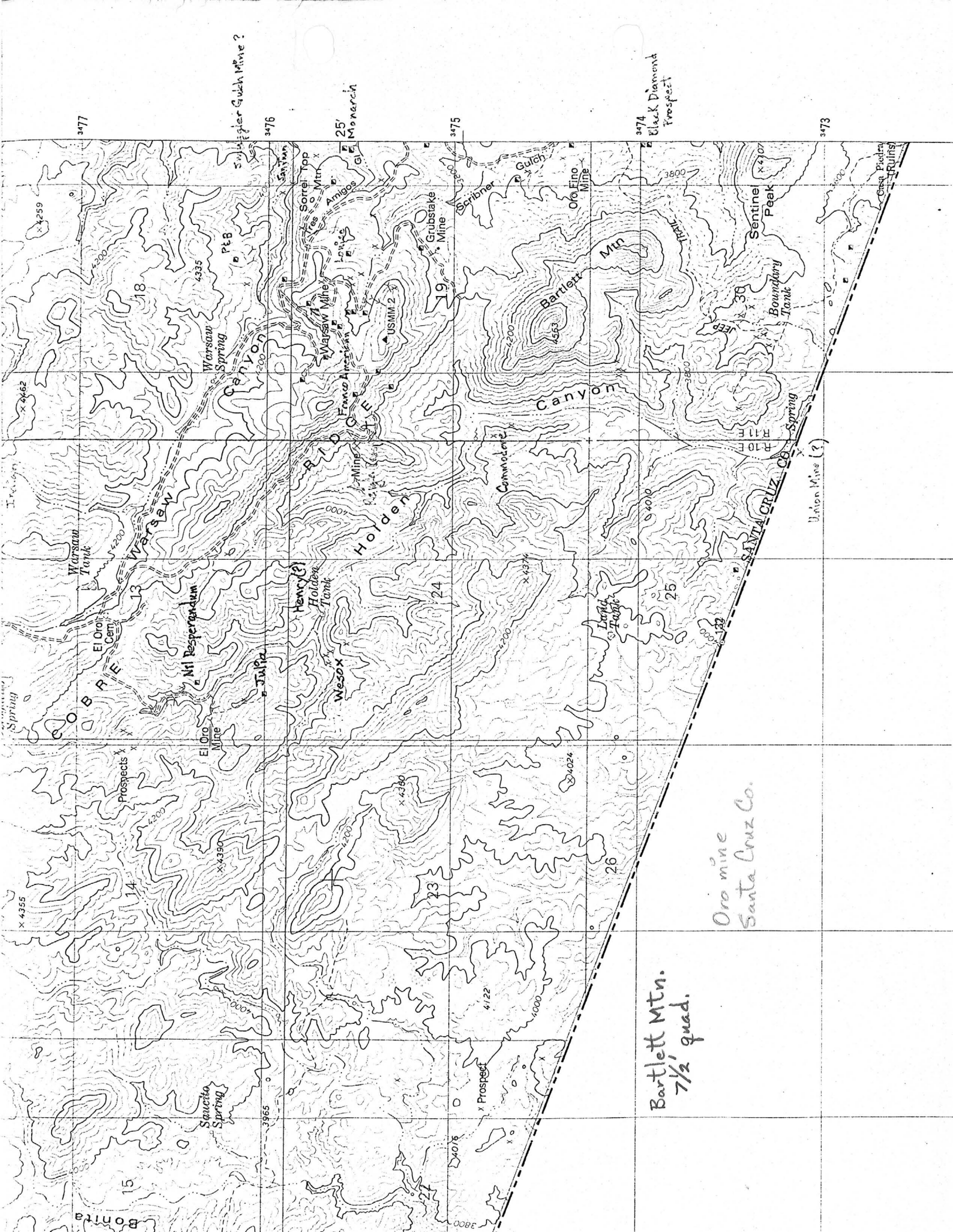
ORO MINE

SANTA CRUZ COUNTY  
ORO BLANCO DIST.

G. W. Williams, Geneva, New York, owner of the Oro Mine in the Oro Blanco district of Santa Cruz County, Arizona, has authorized the unwatering of the mine's 340-foot Julia' shaft. Reports indicate that the shaft is bottomed in a good grade of ore, Williams said. H. Clyde Davis, Tucson, Arizona, will direct the work.

Taken from MINING WORLD, June, 1960, p 60.

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# DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

## FIELD ENGINEERS REPORT

Mine      ORO MINE      Date      August 1, 1949  
District      Oro Blanco Mining District      Engineer      George A. Ballam  
Subject:      Report

The Oro group of 7 patented claims is located in the Oro Blanco Mining District some 5 miles south of the Fred Noon ranch on the Arivaca-Ruby road, from which it is reached by 3 miles of rough road south of the Austerlitz Mine, just off the Warsaw-Austerlitz road. This road could be readily improved.

This department was called upon to furnish information of an economic nature, by Mr. Geo. B. Williams of Geneva, N. Y., on this property which has been held since 1894 by members of his family and himself. It has been extensively developed but has produced only about \$30,000 in bullion from a stamp mill and later vanners.

The assets of the original company were acquired by Mr. Williams in 1904 and he patented 7 of the claims in 1922. He is desirous of retaining possession of them for a son, but is in doubt as to immediate steps to be taken to benefit the property at present.

The mine has been developed on the 150 and 340 foot levels from a 60° inclined shaft. A 600 foot tunnel was driven to connect the 150 foot level now under water, but work was discontinued some 60 feet before contact and it has been determined that, due to error, the tunnel is 28 feet below the drift on this level. Water stands at about 60 feet in the shaft which is on the Julia claim. The tunnel is about 50 years old but is in perfect condition.

A number of claims north and south of the patented claims were originally held by the company but assessment work has not been done since 1922. It would be advisable to relocate claims for water and other milling considerations and, since they have not been taken by others, the procedure would be a mere formality. The most westerly of these claims, both north and south, showed considerable copper together with gold, and it would be further advisable to locate three (3) claims, end-lining along this strike and side-lining the patented claims, to round out the group.

Complete geological reports, assay maps, and other data, together with a present survey of the situation, would indicate that Mr. Williams should (1) immediately relocate the original unpatented claims; (2) locate 3 claims adjoining on the west along the copper showings; and (3) when the gold situation warrants extend the mill tunnel some 60 feet and raise 28 feet to provide an ore chute and man-way to connect with the 150 foot workings; (4) proceed to unwater the mine and open up the original shaft for ventilation and additional utility.



Report on Oro mine. J. A. Ballam 8/1/49

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A number of claims north and south of the patented claims were originally held by the company but assessment work has not been done since 1922. It would be advisable to relocate these claims for water and other milling considerations and since they have not been taken by others, the procedure would be a mere formality. The next westerly of these claims both north and south showed considerable copper together with gold, and it would be further advisable to locate 3 claims, including along this strike and delineating the patented claims to round out the group.

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① immediately relocate the original unpatented claims; ② locate 3 claims

adjoining on the west along the  
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the mill tunnel some 60 feet and  
raise 28 feet to provide an ore chute  
and manway to connect with the  
150' workings; ④ proceed to  
unwater the mine and open up  
the original shaft for ventilation  
and additional ~~water~~ utility. ③

Mrs Hunt—

Mr Williams would like a  
copy of this report mailed him  
c/o Fred Noon, Ruby Star Route, Tucson.  
(Please forward.)

My mileage on this trip  
was 396 and on the Hillside trip  
240. No other expenses.

Ballam

396  
240  
—  
636  
7  
—  
44.52

# DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

## OWNERS MINE REPORT

Date August 19, 1939

Mine Oro Mine

District Oro Blanco District, Santa Cruz Co. Location Santa Cruz County, Arizona

Former name Oro Mine

Owner G. B. Williams

Address Geneva, New York

Operator

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Gold

Men Employed

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

Operations: Present

ORO MINE

Au

Santa Cruz

12 - 1

T 23 S, R 10 E

Operations Planned

G. B. Williams, Geneva, N. Y.

'39

Number Claims, Title, etc.

Seven Patented claims, Title clear. Taxes all paid.

**Description: Topog. & Geog.** The Oro Blanco mining district is part of a range having its southern extension in Sonora, Mexico and its northern termination in the Baboquivra Valley. The altitude doesnot exceed 6,000 feet. A small area of massive granite is exposed in the southwest part of the district but porphyritic rocks overlying conglomerate and shale are the principal rocks of the district. The conglomerate is composed of fragments of andesite, rhyolite, quartzite and limestone and rests upon the shale.

**Mine Workings: Amt. & Condition**

The main work has been done on or near the Julia shaft where there is over 2,000 feet of shafts and tunnels. (The Julia Shaft is 340 feet deep.) The Julia shaft is underwater. Most of it can be drained by the extension of the Mill tunnel 80 feet, now in 581 feet.

(over)



There are three principal veins in the Oro group--the Oro 30 feet wide, the Julia 18 feet wide and the Rafael 6 feet wide occurring along three parallel faults that extend north westerly and south easterly, several miles. This fault zone has for its formation rhyolite, andesitic and dioritic-  
**Geology & Mineralization** porphyry. Many cross faults are in evidence along the zone and more important ore bodies are found in the vicinity of these faults. The gold occurs with the sulphides and where copper or lead occur the values increase. The superintendent stated the veins will predominate in copper in depth with gold values in the vicinity of the faults. I have estimated 10,000 tons of an \$11.90 ore at the Julia shaft only and if the values from the 150 foot to the 340 foot level continue as in the first 150 feet there would be 7,092 tons of a \$40 ore average.

**ORE POSITIVE & PROBABLE ORE DUMPS, TAILINGS** There are no ore dumps. The tailings are in the gulch above the dam. I do not know whether they can be recovered or not. They probably contained \$20,000.  
**Mine, Mill Equipment & Flow Sheet**

The mine is equipped with track, two horse whin and cars.

#### Road Conditions, Route

Road conditions to the Austerlitz mine from Arrivaca to the Ruby are good. From there to the Oro mine, a distance of Four miles, the road could be repaired at a very nominal cost.

#### Water Supply

A masonry dam holds 1,200,000 gallons of water and can be enlarged to 4,000,000 gallons cheaply. With adequate drainage territory being at the head water of the Altar Valley we get rains every year.

**Brief History** The mine was owned and operated by Rochester business men in 1894 to 1899. \$30,000 in gold was sent to the mint. I believe \$20,000 additional was lost by improper milling. This ore came largely from the Julia shaft above the 150 foot level. The property is now owned solely by myself. In 1911 the mine was unwatered. Considerable work was done on the 340 foot level and it was established that the gold values went down. The superintendent was killed and nothing has been done to the property since.  
**Special Problems, Reports Filed**

I believe there are no special problems involved in the property.

#### Remarks

I have so much confidence in the property that I wish to retain a half interest. The property might be termed a sleeper as I have not tried to dispose of it since 1913.

**If property for sale:** Price, terms and address to negotiate. The property is for sale to high class experienced mining men. Six claims are held for \$100,000. I would give a half interest in the property for \$50,000 to be expended on the property in development with plans mutually satisfactory. If the seven claims were wanted the price would be \$125,000 with \$60,000 to be expended for one half interest. This last claim the Nil Desperandum has one ore shoot about 200 feet in length. Samples taken from the center of the shoot for a four foot average assayed from \$7.75 to \$10.20. Assay maps and engineer reports can be seen at the home of Fred C. Noon, Box 28, Ruby Star route, Tuscon, Arizona.

Signed

Use additional sheets if necessary.

*G. B. Williams*

Return Report to:  
A. H. Noon  
Arivaca  
Arizona

#### LOCATION

The Oro Group of mining claims is situated in the Oro Blanco mining district, Santa Cruz county, Arizona, 40 miles from Amado, a station on the Southern Pacific Railway.

#### PROPERTY

The group consists of seven patented claims: the Oro, Julia, Wesox, Connecting Link, Henry and the Nil Desperandum, each 1500 feet by 600 feet, and the Thirteen, 1500 feet by 300 feet. This composes a total area of 150 acres.

#### TOPOGRAPHY & GEOLOGY

The Oro Blanco mining district is part of a range having its southern extension in Sonora, Mexico, and its northern termination in the Babequivers Valley. The altitude does not exceed 6,000 feet, insuring excellent climatic and working conditions. There has been great erosion of the extrusive porphyritic rocks. A small area of massive granite is exposed in the southwest part of the district but porphyritic rocks overlying conglomerate and shale are the principal rocks of the district. The conglomerate is composed of fragments of andesite, rhyolite, quartzite and limestone and rests upon the shale. Some of the highest peaks of the district are composed of conglomerate capped by rhyolite. Several flows of rhyolite and dioritic and other porphyrys rest on the conglomerate and these and the conglomerate

have been extensively fissured and faulted. A prominent feature of the western part of the district in which the Oro is situated is the unbroken lines of huge outcropping dikes extending long distances.

The three principal veins of the Oro group are the Oro vein, 30 feet wide; Julia vein, 18 feet wide and the Rafael vein, 6 feet wide, occurring along three parallel fault lines which extend northwesterly and southeasterly several miles. This fault zone, traversed by the veins of the group, has for its formation, deep seated rhyolitic, andesitic and dioritic porphyry.

#### DEVELOPMENT

Development work consists of a shaft on the Julia lode 340 feet deep with levels driven at 100, 150 and 340 feet depths, aggregating 1350 feet in sinking, drifting and cross-cutting. The seepage of water at the 340-foot depth amounts to only 30 gallons per day. No timbering has been found necessary in sinking or drifting throughout the mine, except the usual stulls necessary in stoping operations. The cost of driving 70 feet in the west cross-cut and on the Rafael vein at the 340-foot level in 1913, covering a period of 6 weeks, was \$6.25 per foot. The average shift work, single handed, 8 hours per shift, was 9 inches per man. In the north drift and east cross cut where the rock is harder, the average was 6 to 9 inches.

#### EQUIPMENT

A reservoir holding 1,200,000 gallons and which can be enlarged to 4,000,000 gallons at a moderate cost, has been erected. The mill buildings and mine equipment are probably worthless now.

## DETAIL DEVELOPMENT

### JULIA SHAFT

This shaft has been sunk to a depth of 340 feet on the vein and inclines at an angle of 58 degrees. Three levels have been driven on the vein at 100, 150 and 340-foot depths.

Development on the 100-foot level consists of a drift 200 feet long, the north end of which is inaccessible. Near the end of the drift, a cross-cut runs west 50 feet without disclosing ore.

The following data obtained from Superintendents' reports furnishes an estimate of the extent of ore mined and milled.

"The first 70 feet was driven on a small streak on the hanging wall with the main ore body several feet to the west. A winze was then sunk which disclosed the ore on the foot wall 8 feet in width, averaging \$8.00 per ton. Drifts were run on the ore north and south, the former a distance of 108 feet. The vein was again picked up further north and east and considerable ore 8 feet in width and of an average value of \$8.00 per ton was stoped and milled from this part of the property."

At present this part of the property is inaccessible due to caving of the hanging walls.

In a report to the company, dated August 6, 1897, the superintendent stated that "the ledge at the 100-foot level, about 180 feet in was 38 feet wide, 9 feet of which assayed \$10.00 per ton and the balance \$2.50 to \$6.00 per ton". From the shaft north 120 feet, the ore has been stoped to a height of 35 feet. A block of ground several feet high was left supporting the roof. Above this the vein has been stoped to the surface. The average of the ore milled was \$8.00, width of ore shoot 5 feet. The Mint returns from bullion



In places the pyrites are massive, a foot or more in width, making a direct shipping product, but as it does not lend itself favorable to stripping, it is best suited to mill concentration in conjunction with the milling ore. The concentrates from the ore made roughly by panning assay \$278.00 gold per ton, the ratio of concentration being above 30 tons into one.

There is no data available to show the degree of concentration obtained in the mill and no accurate estimate could be made with the facilities for testing at hand.

There are two cross-cuts from this drift which prove the vein to be 18 feet wide, 5 feet of which on the hanging wall includes the ore shoot mentioned above. The remaining 13 feet assay \$2.00 per ton.

The ventilation throughout the works is good, no mechanical ventilation being necessary. Excellent air conditions can be maintained by extending the drift on the Oro vein or stringer-cut in the east cross-cut 60 feet and sinking 24 feet which would make connections with the mill tunnel, now in 563 feet.

#### 150-FOOT LEVEL -- SOUTH DRIFT

At the south end of the station on this level, a north and south fault has displaced the vein easterly 15 feet. A drift runs southeast from the station 25 feet on the vein, which is 6 feet in width. The drift was extended westerly, developing 4 feet of ore and disclosing the footwall. A horse has caused a split in the vein at the junction of the drifts.

derived from plating this ore in the stamp mill amounted to \$30,000 the larger part of which came from this part of the property. It is estimated that \$20,000 additional was lost by improper milling.

#### 150-FOOT LEVEL -- NORTH DRIFT

This drift runs northwesterly from the station 180 feet. One hundred eighteen feet from the station, an east and west fault occurs. The extent of displacement of the vein at this point has not been determined. Thirty-five feet further north the vein is again encountered in this drift and extends to the face where it is again faulted. A cross-cut from this face extends east 115 feet and cuts the Julia vein 15 feet in, which is the extent of the displacement, and the Oro vein or a stringer from it, 62 feet from the main drift. Both veins are low grade where encountered in the cross-cut, assaying from \$1.00 to \$3.00 gold per ton.

A few feet of drifting north on the Julia vein from the cross-cut should develop ore, as it is possible that the ore shoot opened on the 100-foot level, 176 feet in, on north drift, extending downward, lies north of this cross-cut.

For a distance of 83 feet from the station, the vein averages from \$1.00 to \$2.00 per ton, when the main ore shoot opened on the 100-foot level begins and extends to the east and west fault, 118 feet from the shaft. The ore shoot is 5 feet in width and about 35 feet in length, averaging \$8.00 gold per ton.

The character of the ore is an iron sulphide in quartz stringers with occasional sulphides of copper and lead, and carbonate of copper.

The ore is low grade in the drifts, assaying about \$2.00 gold per ton. The westerly drift should be extended 40 feet to tap the ore shoot on which the "Sam" shaft was sunk and which milled \$40.00 per ton.

From the end of the westerly drift 50 feet from the station, a cross-cut west 28 feet cuts the Rafael vein, which at this point is 6 feet wide and assays \$2.00 per ton gold, evidently cut between ore shoots.

Drifts should be extended from this point north and south to develop the ore shoots which were worked on the surface.

From Grocers Report  
regarding work at  
Lutton & Julia  
Shaft.

340-FOOT LEVEL

No levels were run between the 150 and the 340-foot stations, although some high grade ore, \$160 per ton gold, was encountered at the 250-foot depth.

One hundred <sup>twenty</sup> seven feet of drifting has been done on this level, 35 feet of which is on the Rafael and 92 on the Julia veins. A cross-cut 70 feet westerly cuts the Julia vein near the shaft. At this point, it is 18 feet wide and averages \$2 gold per ton and is apparently faulted. What was supposed to be the fault line was followed in the cross-cut, when the Rafael vein was cut 40 feet from the Julia.

A drift on the Rafael vein from the cross-cut 35 feet shows it to be from 3 to 5 feet wide. The vein is low grade, a gouge 4 inches wide assays \$6 and the remainder from \$1 to \$2. The vein at the face of the drift is in part composed of individual grains, the effect of abrasion, a characteristic of the veins found along the faults. No evidence is apparent of extensive faulting in the drift on the Rafael vein nor is any fault line discernible east of the Julia vein.

The Julia vein is displaced near the station by an intrusion of porphyritic rock 25 feet thick. The north drift discloses the vein after passing through this intrusion 25 feet from the station. At this point, it is the same in width and grade as at the station but at a distance of 40 feet, quartz stringers carrying iron and copper sulphides with some galena are disclosed which in a few feet widen to 5 feet of vein material. Samples taken along the vein around this vicinity in widths of 6 to 12 inches, assay from \$8 to \$100 gold per ton.



The increase in the grade of the ore depends upon the increase in the quantity of sulphide in the quartz stringers.

Sample No. 1	40 feet from station and across 8 inches	\$ 1.60 gold
2	42	2 11.08
3	43	6 15.00
4	45	6 24.00
5	46	6 37.60
6	47	6 52.00
7	48	6 52.00
8	50	4 47.75
9	52	8 8.80
10	55	12 104.00
11	60	12 80.00
12	62	12 8.00
13	63	48 4.00
14	64	8 41.00
15	96	4 28.00
	(with 3% copper and 5% lead)	
16	96	12 17.00

The ore in the bottom of the winze, 12 feet for 6 to 8 inches assayed \$100 gold. It is wider in the middle than at either end and may be explained by the presence of an east and west fault. The displacement of about 2 feet. I had one assay in the previous run (specimen) that went \$400 gold, principally sulphide. The ore assayed recently had very little copper or lead. In another foot of depth, it might run \$150 or \$200 as in the previous run last week. The streak runs from \$100 to \$200.

Assayed some from breast of north drift, ran \$120 with a width of about 5 or 6 inches. Looks good for ore in depth with these values in drift and winze. Tried some from both sides--on either side of good ore. Values showed \$2 and \$3 in gold. Some of the bluish rock on left side of vein ran \$4 in gold.

The winze is 12 feet deep with a drift of about 12 feet north.

### SUMMARY

The ore-shoots with some exceptions opened along the veins of this group, occur in the vicinity of the intersection of east and west faults with the veins, and prospecting has been confined mainly to these places.

In the vicinity of the Julia shaft, five ore-shoots have been opened and of these only one has been developed to any extent. Its continuity has been proven to a depth of 340 feet. The value of the ore is higher in the vicinity of the cross faults, suggesting a second solution richer in metallic content than the solution from which the veins first derived their metals.

Both the Julia and Rafael veins are strong and well defined in the lower level and the character of the ore and the situation of the ore-shoots encourages the belief that a large and profitable ore body will be developed at 500 feet or less in depth. I think that the Forty feet of drifting south and 15 feet of drifting north on the Rafael vein at the 340-foot level should encounter the ore-shoots opened on the surface. Further drifting north and south on the Julia vein at the 340-foot level should disclose other ore bodies. The Rafael vein where cut in the cross-cut from the south drift, 150-foot level, should be drifted on north and south to cut the ore-shoots disclosed at surface.

Alexander J. Fraser

PLACE	ASSAY NO. ORIGINAL	CONCENTRATES		ORIGINAL ASSAY VALUE	CONCENTRATES
340 level	591	608	12" heavy lead 10' from face	\$ 8	\$ 128
"	478	612	2' four or five paces from face, Aug. 26, 1913	2	\$ 36
"	467	613	4' sixty-three feet from shaft	4	\$ 83
"	434	617	Near south end of shoot	12.80	\$ 48
"	429	566	10" to 12" breast	104	\$ 457.60
"	433	518	50' from shaft, heavy lead	52	\$ 1061.20
"2	404	517	42' from shaft, 30% bright iron	1.08	\$ 95
"	439	515	45' from shaft	52	\$ 256
150 level North		614	Opposite little cross cut		\$ 64
"	" 418	516	5-foot average	8	\$ 2080 (Pan for free gold)
"	"	520	5-foot average	8	\$ 278.40
"	South 595	615	4' on Rafiel vein	low	\$ 32
"	" 487	519	Rafiel vein	1	\$ 175
Mill Desperandum	441	616	Float south of water shaft	21.60	\$ 32
		619	Dirty concentrates of mill run made by Gould in 1899. Shipped by me in 1912 before panning		\$ 12.80
		621	Concentrates of 619 after panning.		\$ 288