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**GENERAL REPORT
IDA MINES CONSOLIDATED
AND
HISTORY OF THE
GRANITE HILL MINING DISTRICT
JOSEPHINE COUNTY - OREGON**

E. L. MacNaughton.

HISTORY OF THE
GRANITE HILL MINING DISTRICT
JOSEPHINE COUNTY - OREGON.

I N D E X

Letter of Transmittal	Page
Acknowledgements	
Introduction.	1
Geology	1
History of District	2
Granite Hill Mine	2
Red Jacket Mine	3
Ida Mine.	4
Columbian Mine.	6
Klondike.	6
Red Jacket Placer	7
Granite Hill Placer	7
Forest Queen Placer	7

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Various Government and State reports and bulletins were used in connection with the Geology and the history of the Granite Hill Mining District.

HISTORY OF THE
GRANITE HILL MINING DISTRICT
JOSEPHINE COUNTY - OREGON

The Granite Hill Mining District embraces nearly the entire watershed of Louse Creek and its tributaries. Covering an area of about 18 square miles, and between approximately 42°29' and 42°31' North latitude and 123°13' (which is the eastern boundary of Josephine County) and 123°21' West Longitude, covering the south half of the township (T 35 S., R 5 W.). It is reached by motor road from Grants Pass (a city on the Southern Pacific Railway and on the Pacific Highway) over the Louse Creek County road. The center of the district being 4 miles in a direct line northeast of Grants Pass.

The topography of the area is very rugged with hills ranging some 1500 to 2500 feet above the valley. In the eastern half the valley is very narrow while in the western it varies from 1/4 to 1/2 miles in width.

GEOLOGY

The general geology of the district as taken from J. S. Diller's report (U. S. G. S. Bull. 546) shows that the area is composed chiefly of igneous rocks of the following types:- Greenstones, Serpentine, Granodiorite, Quartz Diorite, Gabbro, Dacite Porphyry and Andesine. With Greenstones the oldest and Andesines the youngest.

The granodiorite outcrops at only two places in the district, chiefly along and east of the North Fork Creek and also on both sides of the South Fork Creek. It is in this body of granodiorite that the Granite Hill Mine is located. Walker Mountain in the Northwest part consists chiefly of Serpentine and Gabbro, and on it are located the Baby, Gopher and Dick mines. Elk Mountain which lies west of the North Fork is of Greenstone, Granodiorite and serpentine, and the only mine known on it being the Klondike.

The hills north and south of the Middle Fork are mostly greenstone with some intruded quartz diorite, small areas of serpentine and dacite porphyry. It is in this locality that the Ida Mine is located. The remainder of the area is essentially greenstone.

HISTORY OF DISTRICT

According to the best information available the first discovery of gold in the district was made by a man employed by Mr. Savage, which discovery later became the Granite Hill Mine. The mine was purchased by Mr. Hull who operated a 5 stamp mill for about a year on ore taken from a shoot just west of the present shaft, at which time he sold it to the American Goldfields Company, this was about 1901. Hull and Flemm located and worked the Red Jacket Mine, on the South Fork, and it is authoratively stated that they took out about \$10,000.00, while working the discovered ore shoot down to a depth of about 80 feet. This property they also sold to the same Company. Later Hull and Beck opened and worked the Red Jacket Placer. This placer was afterwards restaked by the American Goldfields. It was this same company who first worked the Ida Mine. About 1925 Seeley and Gage started to work on the Forest Queen Placer.

The following records of the mines in this district has been obtained from various sources and is considered fairly authentic. The discription of the Granite Hill Mine was obtained from U.S.G.S. reports and local information.

GRANITE HILL MINE

No definite records can be obtained as to the actual amount of money that the Granite Hill Mine produced under Hull's ownership, statements vary from \$5,000.00 to \$15,000.00 but the work he did and the returns received were sufficient to induce the American Goldfields to purchase the property in 1901. This mine is about 8 miles northeast of Grants Pass, and lies in the S.W. quarter of Sections 29, T 35 S., R 5 W.

It was developed extensively between 1902 and 1907 by American Goldfields and then sold to the Oregon Gold Mines Company who worked the property until 1915

at which time the mine was flooded by underground waters, which entered the mine at the extreme west end of the 4th. level. The flooding of the mine took place so rapidly that none of the underground equipment was salvaged and still remains there todate.

The mine was equiped with a 30 stamp mill, having 10 foot amalgamating plates, 6 frue vanners, crusher 150 H.P. electric motor. Together with air compressor, hoist drills etc. Electricity was brought from Grants Pass.

The mine was opened by a vertical shaft said to be 430 feet deep, now filled with water. It is reported to be developed by 5,000 feet of workings on the 2nd level and about 7,000 feet on the other two levels. The vein is said to obtain a width of 12 feet on the 3rd. level and 14 feet on the 4th. level, and to have an average width of about 5 feet, and strikes about east and west and dips about 70° south, The vein filling consists of quartz, chalcopryite, galena and pyrite, carrying gold both as free and also associated with the sulphides. The sulphides make up less than 1 % of the ore. and as concentrates (vanner products) carried from \$75.00 to \$150.00 per ton and were shipped to the Selby Smelter.

The average value of the ore treated in 1927 was \$5.00 in free gold per ton, and during the years 1904 to 1907 the production reported was \$65,000.00 No record could be found as to the production during later years.

The country rock is granodiorite with pale green hornblende altering to chlorite. To the east of this intrusion is greenstone and to the west serpentine.

According to Mr. Morphy former superintendent at the mine the richest ores were found in three shoots each having a length along the vein of over 150 feet and a pitch to the west of south. The zone of oxidation extends to a depth of more than 400 feet from the surface.

No record could be found of the production of, or work of the Oregon Gold Mines but they operated the mine continuously until it was flooded.

RED JACKET MINE

This mine was discovered by Hull and Flemm who are reported to have taken out \$10,000.00 from the top of

an ore shoot. After the sale of the mine to the American Goldfields Company the mine was opened by a shaft which was sunk to a depth of 75 feet, and this ore shoot stopped to this depth. A crosscut was driven some 400 feet west to intersect a parallel vein.

Equipment at the mine consisted of a hoist, compressor and other mining equipment. The ore was hauled to the Granite Hill Mill for reduction.

There are two known parallel veins having a north and south strike and standing nearly vertical and at least two east-west cross veins. The workings were confined chiefly to the north-south veins.

The veinfilling in the east vein consists of quartz, pyrite, small amounts of chalcopyrite, and calcite, with gold both as free and also associated with the sulphides. The west vein that of quartz, chalcopyrite, bornite, galena, pyrite and calcite, also carrying gold and silver. The east-west veins of quartz, pyrite, pyrrhotite and calcite with gold.

After closing of the Granite Hill Mine Hull again returned to the Red Jacket and opened a small east-west vein 500 feet north of the shaft, and by use of an arrastra claims to have recovered some \$9,000.00 from the drift only, which is some 200 feet long.

The total production of the Red Jacket Mine is quoted at \$40,000.00

The west vein has about 3% sulphides, and assays over a width of 5 feet about \$12.00 per ton. The east vein assays from \$1.40 to \$28.00 with an average value of about \$11.20 according to the assays made by Mr. Snider in 1935.

The Red Jacket Mine is now under contract to Mr. Leavering who has opened up some high grade ore in two places. He is now contemplating the installation of a small mill.

IDA MINE

The discoverer of the Ida Mine is unknown but it is known that the American Goldfields Company opened the mine with a drift about 50 feet above the present adit, this drift is about 150 feet long and tapped the first ore shoot about where the present tunnel cuts the main vein. Ore was hauled from the Ida to the Granite Hill Mill. No record can be found as to production of the mine during their ownership, but on the statement of men who worked in the mill, the Ida ores were the richest that they handled.

After the Granite Hill Mine was closed in 1915 due to being flooded, the Ida Mine was restaked by E. Young who installed a 2 stamp mill and worked thru the Granite Hill drift, later he sold the property to Freeman, who drove the present drift and tapped the ore shoot at a lower level, he in turn installed a 6 foot Lane Mill and worked the property until 1921, when it was purchased by J. C. Edwards, who did a small amount of work and in 1925 sold the mine to the Edwards Mining Company, and the first real attempt at mining was commenced.

The total amount of development work done by them, consists of 1600 feet of drifts, crosscuts, stopes opened, and a shaft 86 feet deep, also a raise 125 feet to the surface.

Milling under the Edwards Mining Company had a checkered career and underwent many changes. The first attempt on the part of the company under the management of Mr. Edwards, was the installation of a cyanide leaching plant. The leaching of this ore is a very simple process, but leaching the ore ground in a Lane Mill without the separation of the sand and slimes proved its downfall, due to the slimes forming a water seal in the leaching vats, and without any attempt whatever towards separation of the sand and slimes Mr. Edwards junked the entire plant. In 1928 the management was turned over to Mr. Potter who built the present mill. During construction of this mill Mr. Potter had a complete test made on the ore by the Denver Equipment Company, which is quoted in the report on the Ida Mine, which showed the possible recovery of 95 %, but when the mill was constructed and put into operation by him this report was ignored, and this together with the following quotation from a former report on the Ida Mine as follows: "gross mismanagement and complete ignorance of practical milling practice", resulted in the closing down of the mine in 1930 by the directors of the Company. In 1931 Mr. Archerd, president of the Company, took over the management of the mine and on the advice of two reliable mining engineers changed the flow sheet to conform to the above mentioned report, and over a period of three months proved that the values could be saved, in fact he states that the recovery of the values was about 95%. Much credit for the results must be given Mr. Bartels whose competent advice chiefly enabled Mr. Archerd to make this recovery. The mine is at present closed, the only work that has been done since 1932 has been confined to opening up new ore bodies chiefly on the surface, and to a small extent underground.

COLUMBIAN MINE

The Columbian Mine is purely a prospect, it is located on the extensions of the veins of the Ida and Little Mac Mines on the top of the Columbian Hill to the north of the Ida.

Years ago a vein, which has since been traced as far as the Ida Mine, was opened by an opencut some 300 feet in length, one ore shoot was found and this was entered by a crosscut about 50 feet below the surface, and the ore stoped and hauled some 5000 feet to the North Fork Creek where it was milled in an arrastra. A test made on this ore shoot in 1933 is stated to have returned better than \$20.00 in free gold with concentrates averaging the same amount. A lower crosscut was also driven but owing to the difficulty of driving by hand work in this hard rock it was abandoned before it reached the vein. This crosscut was sampled in 1923 and showed a value of \$1.25 per ton its entire length, there are two well defined indications of veins in the crosscut, but no work has been done on them. Two shafts were sunk some 500 and 600 feet northwest of the above workings, and it was reported that ore was taken out of the first shaft having a value of \$300.00 per ton, and it is from this shoot that some \$6,500.00 was taken about 1915, according to a report on the Columbian.

This property is in greenstone, on its western side is in contact with granodiorite and on the eastern side is intruded with serpentine.

The property is owned by the Pacific Gold Company.

KLONDIKE MINE

This property is located halfway up Elk Mountain on the Southern side and has been opened by 4 drifts on two different veins. A small stamp mill was erected on this property a number of years ago, and the oxidized surface ores were worked. No report can be found of its production. The present owners state that the northern veins carry good values.

The country rock is entirely greenstone and the vein filling similar to that of other mines in the district.

PLACER MINES

RED JACKET PLACER

This placer was opened by Hull and Beck shortly after Hull sold the Red Jacket Mine to the Granite Hill. A ditch was run connecting the North Fork, Middle Fork, and the South Fork a distance of about 2½ miles, and from there to the head of the Red Jacket Hill, giving a head of about 125 feet.

The ground worked by Hull and Beck consisted of about 5 acres. Hull is reported to having stated that the placer yielded them about \$65,000.00

GRANITE HILL PLACER

This placer was opened and first worked by Gage and Seeley, and after doing considerable work, consisting of a drainage tunnel about 1000 feet long found that the tunnel was some 12 feet above bedrock and they then abandoned the property. Only a small amount of work has been done on the property since that time. Numerous test pits have been dug, with values stated to range from 25 cents to \$1.25 per yard.

The property was purchased and a company has been formed with the intention of working the ground by means of a dredge.

FOREST QUEEN PLACER

This placer was first worked by Seeley and Gage by means of a rubble elevator. This is the richest placer on Louse Creek, with values ranging from 25 cents to \$2.45 per yard, and with an average value of about \$1.00 per yard.

The property is still being worked, but under different management.

It is located in the western part of the Granite Hill Mining District on Louse Creek just 3 miles west of the Ida Mine.

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INDEX

	Page
Summary - - - - -	1

PART 1. DESCRIPTION

Property- - - - -	2
Location - - - - -	2
Titles - - - - -	2
Vegetation - - - - -	3
Water - - - - -	3
Climate - - - - -	3
Roads and Transportation - - - - -	3

PART 2. GEOLOGY and ORE DEPOSITION

Topography - - - - -	3
General Geology - - - - -	4
Economic Geology - - - - -	5
Ore Deposition - - - - -	7

PART 3. PRODUCTION

Ida Mines Consolidated Assay Record - - - - -	11
Development - - - - -	16
Flow Sheet Ida Mill - - - - -	17
Ore and Metallurgical Test with Mill Test - - - - -	19

PART 4. ASSETS

Inventory and Cost of Machinery & Equipment - -	22
Value of underground and Surface Works - - -	24
Positive Ore Reserves - - - - -	24
Possible Ore Reserves - - - - -	24
Recapitulation of Assets - - - - -	25

Part 5.

Recommendations - - - - -	25
Conclusions - - - - -	28
Addendum, i.e. Maps of Location, Topography, Claims workings and Assay.	

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SUMMARY

The geology, as outlined, is favorable as to depth and size of the ore deposit; depth being based on the type of the deposit and also on the depth obtained at the Granite Hill Mine, the assay values as shown would indicate, with proper metallurgical treatment, a very profitable operation in gold recovery.

The property is favorably located as to roads and transportation.

The economic qualities as to water, timber, power etc, as well as the topography are exceptional.

The ores are of a simple type amenable to either flotation, cyanidation, or a combination of both, and that either method will show a high recovery is evidenced by the attached metallurgical reports and results.

Due to the present condition of the mine the recommended immediate development is of vast importance, not only will such a program develop a considerable body of ore but it will prove the existence and persistence of the various veins to a depth below the present tunnel level of 100 feet, or a depth below the surface of some 250 feet. Further such development work should open up some 100,000 tons of millable ore.

In view of the fact, that considerable ore is available in the present workings and stopes in the mine, that a high grade body of ore was opened up by a level driven some 45 feet below the collar of the shaft and with the other underground and surface workings, also the completeness of the plant, it would appear that the expenditure of sufficient money to carry out this development work and the putting of the mill into operation is amply justified.

**PART 1.
DESCRIPTION**

PROPERTY

The property, which is the subject of this report, embraces two groups of claims, which combined form the Ida Mines Consolidated, which are known as the Ida Group and the Little Mac Group. The individual claims are named as follows:-

IDA GROUP

Blackjack Quartz Claim
Blackjack No 1 Quartz Claim
Buckskin Quartz Claim
Wild Rose Quartz Claim
Oregon Quartz Claim

LITTLE MAC GROUP

Big Rock Quartz Claim
Big Mac Quartz Claim
Little Mac Quartz Claim
Little Mac Junior Quartz Claim

Note:- The last three claims of the Little Mac Group being fraction claims.

LOCATION

The property under consideration in this report is located in the unorganized Granite Hill Mining District, Josephine County, Oregon, approximately 8-1/2 miles northeasterly from Grants Pass, the county seat of Josephine County, a station on the Southern Pacific Railway, in sections 25 and 26, T 25 S., R 5 W. of the Willamette Meridian, on Louse Creek in the Grants Pass Quadrangle. Southerly 450 miles from San Francisco and northerly 270 miles from Portland.

TITLES

The titles as to the claims and the water right of this property are clear. The claims are unpatented and are held under the laws of the United States and the State of Oregon, governing locating and holding of mining claims. All assessment work is completed to date.

VEGETATION

The hills are thickly wooded. The timber consisting chiefly of Red Fir, some Cedar, Pine and Tamarck. There is sufficient red fir on the claims to supply all the timber necessary for mining purposes.

WATER

The question of water supply is always an important one in connection with any mining operation and very often the deciding factor in operating a mine profitably. Sufficient water can be had both for mill and camp, from the Middle Fork of Louse Creek, where the Edwards Mining Company owns a water right, which was issued about 1924.

CLIMATE

Climatic conditions are favorable. No hindrance as to weather conditions effecting continuous operations during the year.

ROADS And TRANSPORTATION

The mine, as previously stated, lies 8-1/2 miles northeasterly from Grants Pass, a city on the Southern Pacific Railway, which would be the shipping point from and to the mine. The road from Grants Pass to the mine could be considered as being in good repair except for the first two miles, which is part of the paved Pacific Highway. The balance of the road being a County road, with an easy grade to the property.

PART 2.

GEOLOGY AND ORE DEPOSITION

TOPOGRAPHY

The mine is situated on Louse Creek with rugged hills on both sides. The area being drained by

the Middle Fork of Louse Creek.

The area included in the claims attains an elevation on the south side of the Creek of some 3100 feet, and on the north of about 3200 feet, the west end of the property having an elevation of only 2500 feet.

The valley floor surrounding the various creeks in the different sections has an elevation of approximately 2200 feet.

The main tunnel elevation being about 2223 feet.

GENERAL GEOLOGY

The igneous rocks of this quadrangle are of several different kinds and differ somewhat widely in age. They occur in irregular shaped areas and dikes, some are intrusive, others show undoubted effusive characteristics. In the field the chief types noted being greenstone, serpentine, granodiorite, quartz diorite, dacite porphyry and small amounts of andesine.

The age of these rocks range from the paleo-egic to the tertiary, and in the order named above.

The general term greenstone in this area has been applied to the igneous rocks of more or less greenish color which are so altered as not to be distinguished under the microscope. When fresh and fully crystalline, greenstone is commonly granular like gabbro, varying in other areas from a diorite to the earlier andesite, and in some cases to fine grained basaltic greenstone.

The greenstones were followed by the general intrusion of the peridotites altered by hydrothermal action to serpentine, which cuts the great masses of greenstone and does not contain bodies of ore, yet some large ore deposits are found with the serpentine forming one of the contact bodies. The serpentine is composed chiefly of olivine and pyroxene with considerable chromite and magnetite. These bodies appear to have no effect on the mineralization in this area.

The most important intrusion is that of the granodiorite and the quartz diorite. These intrusions formed the backbone of the Siskiyou Mountains.

It is from this intrusion that the main mineralization sprung.

The intrusion of the dacite prophyry occurred following that of the granodiorite, it is found on the property in the form of Mikes of which two have been determined to date.

ECONOMIC GEOLOGY

The geology of this property is similar to that of the quadrangle and the effect of the various intrusive bodies being similar to that of this general mineralized area, covering a distance from south of the Rogue River to north of Graves Creek with an average width of about a mile. The chief rocks being greenstone, granodiorite, quartz diorite, dacite porphyry and serpentine.

The main ore body is found in greenstone and diorite which has been sheared and brecciated. The shearing is due to the diverse stresses and earth movements involved in the formation of the Siskiyou and Klamath mountains. The shearing is wide spread as a whole, but on this property is confined to a series of narrow parallel belts forming numerous shearzones varying in width from 8 to 25 feet, with a general trend of east and west. This condition forms the main structural factor in these ore deposits .

The mineralization of the property occurs in greenstone and diorite, of the intrusion the quartz was the first gangue mineral formed, it is as a rule fine grained, a certain percentage of the pyrites were carried and deposited with the quartz. Then fracturing occurred and pyrite, some phalcopyrite, minutes amounts of arsenic, antimony and mercury, together with calcite were deposited as an overlapping series probably in the order named.

The mineralogy of the ores, (according to Diller, Kay, Winchell and Shenon all of the U.S.G.S.) is evidence of their hypogene (deep seated) origin. That is, the mineral assemblage, as shown, belong to Lindgrens mesothermal type, deposited at moderate depths by hot solutions. The source of these solutions has not been definitely established, but is credited to the batholithic intrusions of the granodiorite and quartz diorite.

It is to be particularly noted that these solutions effected the country rock beyond the limits of the quartz intrusions and in some cases for a distance of some 3 or 4 feet from the quartz. The solutions apparently arising along the planes of fracture replacing the adjoining material, as can be noted at various points in the mine where greenstone has been completely replaced by sulphides.

In connection with the theory that the deposits belong to the mesothermal type, the following evidence directly supports the view:

(a) Solutions which formed the gold ores are associated with (if not identical with) solutions which deposited ores of mercury and antimony. There is no known adequate source whence surface waters could obtain these elements, where as they are known to be formed from gasses of volcanoes.

(b) The solutions which formed the gold ores apparently invariably contain small amounts of copper, lead, zinc, arsenic and tellurium, all elements known to be derived from magmatic sources.

The visible minerals are chiefly quartz, calcite, pyrite with small amounts of chalcopyrite, some arsenic and antimony. The gold content is present as free and also associated with the sulphides. An analysis of the concentrates to determine only the mineral content made by the Selby Smelting Works of the American Smelting and Refining Company gave the following results:

Gold	3.02 Oz.	Insol	22.8%
Silver	1.00 "	Iron	35.6%
Lead	nil	Zinc	nil
Copper	0.4%	Sulphur	30.1%
Arsenic	0.1%	Antimony	0.8%

These concentrates were especially picked with a view towards establishing the mineral content rather than the gold value.

Only one fault has been found on the property todate, this occurs at the end of the main drift some 50 feet beyond the shaft. It has not yet been definitely determined whether or not this is a movement fault or one caused by an intrusion. The apparent vertical striations tends one to lean towards the intrusion theory. The country rock east of the fault has different characteristics from that in the other workings it is softer, very fine grained, and extremely dark colored, of course this difference may be due to movement. Before

any definite conclusions can be drawn a microscopic study should be made of this rock. But it is definitely known that the veins are cut off by this fault. The gouge in the fault has the appearance of serpentine, but when the drift was later driven thru the fault, it was then determined that this was not serpentine.

The fault line is not regular, as will be seen from the maps, this irregularity also enhances the intrusive theory.

Where cut the fault has the following strike and dip:

Right Drift	Strike N 88° W.	Dip 65° S & E.
Main Drift	" S 65° W.	" 55° "
50 Ft. north of vein	" S 61° W.	" 55° "

It can be seen from the above that the fault has a flatter dip than the veins, so it would seem that deeper workings will carry further to the east, than those of the present level, before encountering the fault.

Some 200 feet east of the fault on the surface a series of holes were dug in an effort to locate some ore or indications of ore beyond the fault. Values were found in these holes ranging from 35 cents to \$7.35 per ton, indicating that the possibilities of ore in the area beyond the fault are worth investigating.

ORE DEPOSITION

The vein system of the Ida and Little Mac groups can be considered as a whole, for in most cases the veins of the Ida can be traced across the Little Mac Group, and in one instance, a vein has been traced on the surface from the fault on the east side of the Ida Group across the little Mac Group and further across the Golden Eagle Claim of the Columbian Group, a distance of about 3000 feet. The porphyry dike is also traceable across the Ida and Little Mac Groups. Further, the main vein of the Granite Hill Mine, so I am advised, has been traced from the Granite Hill across the High Tariff Claim and into the Little Mac Junior Claim, and its possible extension into the northwest portion of the Ida Group.

The vein system of the underground workings will be discussed first and then those of the surface showings.

VEIN SYSTEM OF THE UNDERGROUND WORKINGS

Four veins have been opened and fairly well developed in the present underground workings, and two other veins have been cut by crosscuts, of these the most important from size and development are the main, right, right angle and the left vein. The draw and surprise veins have had no work done on them. A seventh vein called the motherlode has been opened by a tunnel 160 feet long at a higher elevation than the present workings. Also a vein has been opened by a tunnel on the Little Mac Claim called the Little Mac Vein.

MAIN VEIN

This vein was first opened by the Granite Hill at a point some 50 feet above the present adit. In the present workings the vein was encountered about 100 feet from the portal of the adit, and has been drifted on some 255 feet. Its strike is about S 80° E. and dip 76° S. The average width of this vein based on the area stoped was about 4 feet. Four Stopes have been opened on the vein, with an average length along the drift of 50 feet each. No. 1 stope has been completely worked out. No. 2 about three-fourths stoped. No. 3 & 4 about one-third stoped. There are actually only two ore shoots in this main vein uncovered to date, the first about 110 feet long and the second 95 feet. The average values of the ore based on the existing assay record and present price of gold, is about \$8.77 per ton.

RIGHT VEIN

This vein was out by the Right Crosscut about 58 feet from the Main Vein, and was drifted on about 155 feet easterly, at which point it contracted the fault. This vein has a strike of N 86° E. and a dip of 85° S. Two ore shoots were opened up and stoped out, the first being 60 feet long and the second 80 feet. The average width of the stoped ore being 30 inches in No. 1 stope and 48 inches in No. 2. The average assay value of the ore in No. 1 being \$10.00 per ton and in No. 2 based on car grab samples \$6.00 and on channel samples \$7.35 per ton.

RIGHT ANGLE VEIN

This vein was out by the Right Crosscut at a point 72 feet south of the Main Vein and 14 feet south of the Right Drift. It was drifted on some 50 feet easterly. This drift did not cut the fault and there are no indications of the fault to be seen in the drift. The vein has a strike of N 86° E and a dip of 88°.

It is a wide vein but split at the face by a horse, its average width being about 4 feet, and average value about \$11.02 per ton. One stope was opened in this vein and stoped some 25 feet above the drift. The average value of the ore stoped being \$4.90 per ton

LEFT VEIN

This vein was cut by the Left Crosscut some 30 feet north of the Main Vein and drifted on some 75 feet. The face of this drift falls some 140 feet short of the fault. It has a strike of S 79° E and dip of 75° S. One small stope was opened, but the vein as a whole is not very promising on this level. Its average width is 53 inches and its average value \$7.89 per ton. The quartz is badly split and fractured.

DRAW VEIN AND SUPRISE VEIN

These veins were cut in the Left and Right crosscuts extensions. The Draw vein being some 120 feet north of the Main and the Surprise 105 feet south of the main vein. No work has been done on them to date. The Draw vein has a strike of S 80° E and is nearly vertical. The Surprise vein parallels the Right Angle vein. The assays of each show values good enough to warrant further development work on them.

MOTHERLODE VEIN

This vein was opened by an adit called the 400 foot level by the Granite Hill. It is about 160 feet long and was driven to intersect a strong showing of quartz found on the surface. Its strike is S 75° E dip vertical. The quartz is some 10 feet wide on the surface and 8 feet in the drift. The assay values range from \$2.10 to \$21.00 on the samples taken from the drift and from \$3.00 to \$60.00 on surface samples. It is this vein that has been traced across the creek to the Little Mac Claim, and also to the summit of the Columbian Mountain.

LITTLE MAC VEIN

This vein was opened up across the Creek some 430 feet north and west of the main adit, and appears to be an extension of the Motherlode. It is the only vein opened by underground works on the Little Mac Group. This adit is 85 feet long, and the vein strikes N 34° W dip vertical. Average width is 30 inches, and average value \$5.19 per ton.

VEIN SYSTEM SURFACE WORKINGS

A number of veins have been opened on the surface by means of opencuts, and in some cases have been traced for considerable distance on both sides of the Creek. All of the work being confined to the following claims: Blackjack, Balckjack No. 1, Big Mac, Little Mac and Little Mac Junior.

On the Blackjack and the Blackjack No. 1 the following veins have been opened on the surface commencing at a point directly above the end of the Right crosscut and going westward;- Pocket Ledge, Porphyry Ledge, Cow Ledge, Bunkhouse ledge and Big Fissure Ledge. Some of these have also been opened on the north side of the Creek, in the Northwest portion of the Blackjack and on the Little Mac Junior Claims. Other opencuts on the Big Mac and the Blackjack claims show promise of veins, but am convinced that they are extensions of the veins found in the underground workings.

POCKET LEDGE

This ledge was opened by a small tunnel some 30 feet southwest of the collar of the air raise. It is reported to have produced some \$10,000.00. This ledge lies against the Porphyry intrusion and should be cut by the Right crosscut within the next 30 feet.

PORPHYRY LEDGE

This is a large intrusion of Dacite porphyry. The rock is altered and of a brownish color, with phenocrysts of feldspar and quartz in an aphanatic groundmass. The phenocrysts make up nearly half the area of the rock. According to Diller "The rock consists of plagioclase feldspar, no ferromagnesian minerals, the groundmass which is somewhat porphyritic also consists of feldspars and quartz. The chief secondary minerals being kaolin, epidote, zoisite and small amounts of magnetite, some pyrite and pyrrhotite. It is considered closely related to the dominantly feldspatic phases of the quartz diorite".

This ledge or dike has been opened at numerous points on the property, chiefly at the south east corner of the Blackjack No. 1, on the Little Mac Junior, and at the south east corner of the Blackjack where it has a width of some 40 feet.

A number of assays have been made on this porphyry and all of them show some values, assays being; \$11.90, \$.35, \$7.00 and \$22.40 per ton

COW LEDGE

This ledge has been opened at two points on the surface, one near the bunkhouse, the other near the air raise, and where opened the width of the ore was 30 inches. The strike is about S 75° E, dip vertical. Assays range from \$8.00 To \$25.00.

BUNKHOUSE LEDGE

This ledge has been opened by a cut on the ditch about the elevation of the collar of the air raise, and has a width of 30 inches, and assays \$6.30, \$477.55 and \$12.60

FISSURE LEDGE

This ledge has been opened south of the sawmill in a large fissure, it appears to be in line with the vein of the Granite Hill Mine. No assays have been taken but the ledge pans free gold.

PART 3

PRODUCTION

IDA MINES CONSOLIDATED ASSAY RECORD

The following list of assays were taken from the records kept at the Ida Mine, and consist of the results of some 10 different samplers and assayers, of which 6 were entirely independent of and had no connection with the Ida Mine or the Edwards Mining Company. It will be noted from the assay map that numerous samples were assayed by firms of national repute, such as Albert Hanks, of San Francisco, C. M. Fassett of Spokane, and Paul Sohl of Grants Pass.

For detailed information of the assays see attached ASSAY MAP, which gives location and length of all samples. Sample numbers corresponding in each case.

A test run was made in 1934 to ascertain whether or not the values extended into the walls of the vein. This was done by drilling holes into the walls and collecting the drillings for assaying. The holes averaged 8 feet long and gave the following results.

Results of Test Drill Holes

Sam Sample No.	Width	Value
1	8 feet	\$0.70
2	"	0.35
3	"	1.05

Sample No	Width	Value
4	8 ft.	\$0.70
5	"	0.70
6	"	0.35
7	"	3.50
8	"	0.35
9	"	trace
10	"	"
11	"	0.35
12	"	0.35
13	"	1.40
14	"	trace
15	"	0.35
16	"	0.35
17	"	trace
18	"	0.35
19	"	0.35
20	"	1.05
21	"	1.40

ASSAYS OF MAIN VEIN

22	96" inches	20.65
23	84"	11.90
24	41"	8.90
25	60"	6.10
26	21"	21.00
27	chute	11.90
28	chute	8.60
29	40 inches	20.20
30	48 "	8.90
31	40 "	12.50
32	chute	8.30
33	chute	8.40
34	180 "	6.10
35	144 "	6.20
36	120 "	8.40
37	144 "	12.80
38	180 "	6.10
39	180 "	8.10
40	42 "	8.45
41	54 "	92.40
		29.50

RIGHT VEIN

42	24 "	15.01
43	30 "	8.20
44	36 "	20.10
45	31 "	8.60
46	20 "	2.80
47	26 "	20.00
48	24 "	8.50
49	28 "	8.60

<u>Sample No.</u>	<u>Width</u>	<u>Value</u>
50	26 inches	5.50
51	21"	4.80
52	34"	3.71
53	24"	3.60
54	36"	7.70
55	14"	1.40
56	50"	2.70
57	14"	6.30
58	60"	2.80
59	37"	4.80
60	25"	2.80
61	26"	4.30
62	30"	7.08
63	53"	21.35
64	33"	6.01

RIGHT DRIFT - Car grab samples:-.

44 tons	5.25
21 "	1.74
40 "	7.35
27 "	3.15
10 "	2.10
15 "	10.50

<u>Sample No.</u>	<u>Width</u>	<u>Value</u>
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RIGHT ANGLE VEIN

65	24"	15.20
66	36"	12.00
67	36"	3.15
68	24"	12.80
68 a	chute	28.00
69	60"	10.40
70	45"	1.75
71	67"	10.00
72	78"	16.00
73	66"	9.45
74	80"	15.00
75	34"	6.30
76	86"	20.00
77	34" 2	7.70
78	24"	4.80
79	96"	6.00
80	92"	4.80
81	60"	419.30
82	34"	7.70
83	86"	6.20
84	78"	0.70

Sample No.	Width	Value
85	80 inches	1.00
86	72 "	16.80
87	77 "	4.80
88	72 "	7.60
89	97 "	3.60
90	120 "	46.80
91	34 "	1.20
92	125 "	25.40
93	48 "	7.00
94	45 "	1.75
95	45 "	5.25
96	50 "	1432.90
97	50 "	9.10
98	84 "	1.75
99	132 "	4.30
100	156 "	13.01
101	120 "	14.00
102	156 "	12.51

RIGHT ANGLE DRIIFT - Car grab samples:-

25 tons	2.80
49 "	6.30
3 "	16.80
5 "	7.70
4 "	7.70
4 "	1.40
28 "	2.45

Sample No.	Width	Value
Left Vein:		
103	96 "	4.20
104	60 "	4.41
105	14 "	2.80
106	Stope 38 "	2.80
107	" 18"	7.70
108	" 38"	8.40
109	" 40"	trace
110	" 48"	"
111	" 18"	6.30
112	" Grab	36.00
113	" "	10.00
114	" "	4.00
115	" "	12.75
116	" "	15.40
117	96 "	13.60
118	78 "	18.21
119	96 "	4.20
120	60 "	trace
121	38 "	527.80
122	90 "	12.60
123	Face 36"	6.70
124	" 60"	6.00
	" 66"	

Sample No.	Width	Value
LEFT CROSSCUT: 60		
128	60 inches	\$ 2.97
127	36 "	2.47
128	60 "	2.85
129	48 "	17.01
130	120 "	5.00
131	60 "	16.25
132	Right wall 70 "	2.80
133	" " 60 "	5.95
134	roof 36 "	2.10
135	" 36 "	28.00
136	Wall 36 "	1.75
137	" 29 "	5.25
138	Right wall 30 "	9.27
139	L. $\frac{1}{2}$ roof 38 "	17.50
140	R. " 38 "	4.55
141	Left wall, first 75 feet of Crosscut	11.20

RIGHT CROSSCUT

142	Left wall from Maindrift to right drift	2.40
143	Same	3.01
144	Same	0.70
145	Both wall of crosscut at point of surprise vein each 6 "	7.70
146	As above But 12"	2.80
147	" " " 8"	4.90

DRAW VEIN

148	sample at face 24"	14.00
149	" " 20"	21.00
150	" " 38"	6.40
151	" " 29"	6.40
152	Much Pile	2.10

400 FOOT ADIT

154	Face	105.70
154	Face minus 2'	0.35
155	" " 8'	Trace
156	" " 10'	4.55
157	" " 20'	8.40
158	" " 30'	3.50
159	" " 40'	2.80
160	" " 42'	1.43
161	" " 62'	0.70

<u>Sample No.</u>	<u>Width</u>	<u>Value</u>
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LITTLE MAC ADIT

162	30 inches	\$ 1.40
163	38	7.00
164	24	7.00
165	24	9.80
166	24	2.10
167	30	6.30
168	12	17.00
169	24	4.90
170	48	4.20
171	18	5.60
172	18	11.20
173	24	3.50
174	30	7.00
175	42	3.50
176	42	2.80
177	36	2.10

SURFACE OPENCUTS

# 1	Above 400 ft. adit 40"	\$60.00
2	" " " 130"	3.00
3	" Draw Vein 40"	26.00
4	" Left Vein	12.60
5	Cut on main vein	11.90
6	" " "	8.40
7	" " "	4.90
8	Cow Ledge above ditch	25.50
9	Bunkhouse ledge	8.30
10	" " "	477.55
11	Cow Ledge Near Bunkhouse	8.00

The above assays based on Gold at \$35.00 per ounce.

DEVELOPMENT

The development to date has been a total of 1589 feet, of underground workings, consisting of:

Adits	315 Feet
Drifts	750 "
Crosscuts	313 "
Shaft	86 "
Raise	125 "

Eight stopes have been opened in the mine, 4 in the Main Drift, 2 in the Right Drift, 1 in the Right Angle and 1 in the Left Drift, of these, No. 1 in the Main drift and Nos. 1 and 2 in the Right Drift have been

(5) The crushed ore is elevated by a bucket flight elevator some 20 feet to a fine ore bin. The elevator is set at 60°, with 5 IS buckets on 18" centers and has a capacity of 6 tons per hour.

(6) The fine ore bin has a capacity of .75 tons.

(7) The ore is taken from the fine ore bin by a 14 inch belt feeder, to a

(8) 14" x 10' belt conveyor feeding direct to the ball mill.

GRINDING

(9) The grinding is done by a 5 x 4 Williamson Ball mill, running at 26 R.P.M., which runs in a closed circuit with a Dorr Classifier.

Total ball charge 4800 pounds, Ball consumption 1.45 lbs. per ton, liner consumption about 0.24 lbs. per ton.

(10) The mill discharges to a SS-C-20 Dorr Simplex Classifier size 3 ft. x 16' 8". Set to give an overflow product of about 85 mesh. The overflow going to a conditioner, while the sands are returned to the ball mill.

(11) The conditioner a 4 x 4 tank with an impellor driven from the jackshaft of the flotation machine, where the pulp is mixed with the reagents.

(12) From the conditioner the pulp enters the second cell of the Fahrenwald Flotation Machine, which consists of three 25 x 25 inch rougher cells and one 25 x 25 inch cleaner cell. The concentrates from the rougher cells pass first to the cleaner cell while the tails pass direct to the table. This machine has a capacity of 50 tons in 24 hours.

(13) The concentrates from the cleaner cell is the finished gold concentrates, ready to be prepared for the smelter or to be cyanided. The tails from this cell are returned to the rougher cells for retreatment.

(14) The tails from the rougher cells are passed direct to a No. 6 Wilfly Table which acts both as a concentrator and as a pilot for the flotation cells.

The concentrates obtained goes to the flotation concentrate and the tails to waste.

As we have 86 tons of tailings this would be a value of 0.06½ cents per ton.

This test shows how exceptionally well your ore is adapted to such milling. The results shown by the test are unusual and could not be obtained in your mill, but your mill will show at least a 95% recovery.

CYANIDE REPORT Copy of report by Chas. D. Richmond
 metallurgist, of Oakland, California

The following results were obtained from a laboratory test made on a sample of raw concentrates furnished by the Edwards Mining Company. The object in view is to determine whether or not the material could be treated by cyanide and what the extraction and the consumption of chemicals would be.

TEST NO. 1

Procedure: Sample of raw concentrates
 Head value oz. Gold per ton 2.74
 Strength of KCN 0.25%
 Ground to minus 100 mesh.

<u>Time of treatment</u>	<u>Residue Gold</u>	<u>Extraction</u>
24 hours	1.44	47.4%
72 "	1.22	50.1%
122 "	0.56	79.6%
170 "	0.52	81.0%

Acidity of ore 7.4 lbs. CaO per ton.
 This extraction could be improved by finer grinding.

TEST NO. 2

Procedure: Sample of raw concentrates
 Ground to 100 mesh and roasted
 Head value oz. Gold 2.74
 Strength of KCN 0.186%

<u>Time of treatment</u>	<u>Residue Gold</u>	<u>Extraction</u>
24 hours	0.76	72.5%
72 "	0.24	91.3%
122 "	0.14	95.0%
170 "	0.04	98.5%

Consumption of cyanide 12.2 lbs. per ton ore.

Note: Later proved that grinding to 200 mesh in cyanide solution gave results equal to test No2.

MILL RUN TEST BY Mr. Archerd in present Mill

The following mill test run was made during the period of Jan. 21, 1932 to April 2, 1932, operating the mill a total of 16 days. Flow sheet was from classifier to table, table tails to flotation machine.

Mine Sample	heads	Concentrates		Tails
		Table	Flotation	
\$10.00		\$150.00	Lost	\$0.40
10.00		168.00	\$124.00	0.50
16.00		190.00	Lost	Lost
16.00		190.00	118.00	trace
20.00		180.00	104.00	0.80
6.00		180.00	104.00	0.80
4.80		124.00	140.00	0.40
	\$6.20			
Lost	6.50	104.00	108.00	0.40
16.80		140.00	119.20	0.90
7.60		11.20		0.80
3.60		Lost		
46.80		Lost	78.60	3.40
25.40		136.00	80.00	
	30.40	148.00	Lost	
	76.00	244.00	476.00	
4.30				

Note:- It will be noted that there were very few head samples due to the fact that they used samples taken from the muck pile after each round was fired. These I have been told were large and carefully taken samples. A number of assays it will be noted were lost in assaying, these were not rerun, so show as lost. The above was taken from the books kept at the Ida Mine.

INVENTORY AND COSTS OF MACHINERY & EQUIPMENT

POWER PLANT

110 Atlas Diesel Complete	\$8,000.00
100 KVA Generator	1,023.00
Switchboard Complete	325.00
6 HP Gas engine	90.00
POWER TOTAL	\$9,738.00

MILL:

Crusher	\$ 25.00	Motor	\$184.00
Elevator	200.00	"	70.00
Feeder	100.00		
Ball Mill	5326.00	"	650.00
Flotation	875.00	"	147.00
Classifier	1045.00	"	70.00
Oil Feeder	55.00		
Table	700.00	"	70.00
Amalgam. B,	70.00		
Ball Charge	140.00		
Motor 5 HP			135.00
Belt Conveyer	50.00		
Dewaterer	60.00		
Drier	50.00		
2 Pumps	140.00		
MILL TOTAL			\$10,458.00

ASSAY OFFICE:

Pulverizier	\$125.00
Crusher	64.00
Motor 3 HP	88.00
Button Balance	225.00
Pulp Balance	35.00
Counter scales	15.00
Refining furnace, burner	100.00
Assay furnace, burner	50.00
Sampler	25.00
Buckboard, muller	20.00
ASSAY OFFICE TOTAL	\$747.00

BLACKSMITH SHOP:

Compressor	650.00
Motor	275.00

Drill Sharpener	\$1,100.00
Forge	28.00
Anvil & Tools	25.00
Power emery & motor	44.00
Blacksmith vice	12.00
Pipe vices & dies	15.00
Little Giant Taps & Dies	25.00
Blower	13.00
BLACKSMITH TOTAL	\$2,174.00

MINE EQUIPMENT:

Truck ore car	99.00
1200 feet track	795.00
Sullivan Drifter	1,100.00
Stoppers	580.00
Column bars complete	192.00
Drill rod sets	10.00
Drill steel	85.00
Buffalo Blower 30"	55.00
400 ft. Blower pipe	140.00
2000 ft. pipe	350.00
hoist, cable, buckets	800.00
Mine Total	\$4,206.00

CAMP EQUIPMENT:

Truck	1,240.00
Drag saw	105.00
Camp Buildings	3,000.00
Fuel Oil Tanks	372.00
CAMP TOTAL	\$4,717.00

MILL BUILDINGS complete \$4,000.00

INSTALLATION \$5,000.00

TOTAL COST OF EQUIPMENT AND INSTALLATION

Power Plant	\$ 9,788.00
Mill total	10,458.00
Assay Office	747.00
Blacksmith Shop	2,174.00
Mine Total	4,206.00
Camp total	4,717.00
Mill Buildings	4,000.00
Installation	5,000.00
TOTAL COST	\$41,040.00

The above figures do not take into consideration such items as, water mains in camp, sundry items not at present installed and other various items.

The above figures are the actual cost of the above items as taken from the books of the Company.

VALUE OF UNDERGROUND and SURFACE WORKS

The underground workings represent a total cost of about \$36,936.00. This figure is based on drifts at \$15.00 per foot, which included the opening of stopes, etc. Tunnels, crosscut and raise at \$10.00, Shaft at \$25.00 and surface opencuts at \$3,000.00.

POSITIVE ORE RESERVES

The present ore reserves based on the ore above the drifts and stopes only in the underground workings. The continuity of the veins from the tunnel to the surface has been proven by the stopes, air raise and actual outcroppings on the surface, are confined to the Right Angle, Main and Left veins, and are estimated at 15,000 tons with an average value of \$8.00 per ton.

POSSIBLE ORE RESERVES

It is impossible at this time to make an estimate of the possible ore reserves. Before this can be done intelligently, considerable development work will have to be done. It is definitely known that the ore carries 45 feet below the present working level, this is proved by the fact that at a point 45 feet below the collar of the shaft, a drift was driven on the Main Vein for a distance of 60 feet, and it was also found that the ore increased in width and value. It must also be born in mind that at the Granite Hill Mine, the ore not only went down some 420 feet but the veins increased in width and values. The Granite Hill Mine is some 200 feet lower than the Ida Tunnel and it is reasonable to expect that the ores in the Ida will carry to the same depth as that in the Granite Hill. It must be understood of course that the Granite Hill Mine was not bottomed and that ore showed in the sump and floor of the lowest drift. It appears from all indications that the potentialities of this mine are very great and that a large body of ore should be opened by the recommended development work.

RECAPITULATION OF ASSETS

Equipment & Machinery	\$ 41,040.00
Value of Underground works	38,938.00
Value of Positive ore	<u>120,000.00</u>
TOTAL POSITIVE ASSETS.	\$197,978.00

PART 5.

RECOMMENDATIONS

Recommendations in regard to reopening and operating the Ida Mine will be discussed under two main divisions, i.e.

Immediate development with operating present mill.

Future development with increased milling capacity.

IMMEDIATE DEVELOPMENT WITH OPERATING PRESENT MILL

Due to the lack of a large body of ore reserves it will be found necessary to do considerable development work before any decision can be made with regards to enlarging the present plant capacity, with this thought in view will discuss the immediate requirements under the following headings:-

- (1) Immediate development.
- (2) Mining equipment.
- (3) Present milling plant
- (4) Cost of development and improvements.

(1) IMMEDIATE DEVELOPMENT WORK: The object to be obtained in this development work is two fold, first, to increase the present ore reserves, and second, to open and definitely determine the various ledges definitely known to exist by surface workings. To do this it is recommended that the following:-

- (a) To sink the present shaft a further distance of about 44 feet giving a total depth of about 130 feet, and drift west at a depth of 100 feet on the main vein (or the 400 foot level). Which would readily increase the present ore reserves.

- (b) Continue the left crosscut a distance of 50 feet to intersect the Motherlode vein.
- (c) Extend the Right Crosscut a distance of 200 feet to cut the Pocket Ledge, Perpyry Dine, Cow Ledge and Bunkhouse Ledge, all at a point some 130 feet below the surface.
- (d) At a selected point on the 600 foot level (or 100 feet below the present level which is called the 500 foot level) drive a crosscut 200 feet to cut the Ledges mentioned in (c).

Due to the fact that the present shaft has not been completely timbered, a crew could be immediately started to complete this timbering, and while this work was being done, one crew could be started to work on the Right crosscut and a second crew on the Left. By the time the Left crosscut was completed the timbering of the shaft should be finished and both crews could then be started sinking the shaft. On completion, these crews could be used to drift on the Main vein and to open up this body of ore for milling.

The above outlined development work would develop a large body of positive ore in the Main Drift and at the same time should open up from all indications on the surface, at least some 100,000 tons of ore in the underground workings. The mine would then be in a position where large bodies of ore could easily be developed on these various veins which have been cut and determined on by the proposed crosscuts.

- (2) **MINE EQUIPMENT:** To carry out the above outlined work it would be advisable to make the following changes and additions to mining equipment:-

Exchange present compressor and motor for one of 350 cu. ft. capacity.

and purchase the following:-

- Electric hoist
- 2 - Heavy jackhammers
- 2 - Ore cars
- 1 - ore skip
- 500 ft. 10" ventilating pipe

- (3) **PRESENT MILLING PLANT:** The present milling equipment is ample for present milling operations, being used, however, as a flotation plant, certain minor repairs and alterations are necessary, such as a new roof, new decking for table etc. Would recommend that the present crusher be exchanged for one of the rolling or wheeling jaw type of about 9 x 16. The advantage of such a crusher would be finer crushing and lower operating costs.

(4) COST OF DEVELOPMENT AND IMPROVEMENTS: The total outlined development work, mine equipment, and putting into operation the present mill and operating same for a period of 60 days would cost about as follows:-

Development work	\$ 7,998.00
Mine equipment	2,050.00
Mill & camp	2,500.00
Operation, mill 60 days	<u>10,000.00</u>
Total estimated cost	\$22,548.00

Note:- In the above estimated costs for operating the mill for 60 days are carried as capital expense this is due to the fact that it would take 30 days in which to obtain first shipment of concentrates and a further 30 days for the smelter to return receipts from said shipment.

FUTURE DEVELOPMENT WITH INCREASED MILLING CAPACITY

Future development work will of necessity be to a certain extent regulated from the facts found in the results of the Immediate Development Program, especially in regard to those veins in and near the present underground workings. But it might be well to bring to notice that fact that numerous veins and vein indications exist on the north side of the Creek and these should, as convenient, be opened and explored. This can be done from a tunnel driven into the hill at the level of the present dump, and also by the extension of the Main Drift under the Creek.

The adit on the Little Mac Claim should be extended to the claim limits, and from this adit crosscuts should be driven chiefly towards.

INCREASED MILLING CAPACITY:- In connection with any increase in milling capacity it is recommended that thorough tests be made with a view towards cyaniding the entire ore. This is by far the most satisfactory method of handling this ore. It has already been proved that the ore is amenable to the cyanide process, and it is simply a matter of determining which type of equipment would give the best results at the least cost.

CONCLUSIONS

In conclusion will say that in viewing the character and amount of work done upon the property the present showings of ore in the mine, the conditions as represented by the surface workings, completeness of the plant etc., it is my opinion that the property is worthy of expenditure of sufficient capital to carry out the proposed development work.

Yours respectfully,

E. L. MacNaughton.

XERO XERO

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 20,095

September Term, 19 66.

C. F. Pruess, Sr., Executor,
et al.

Civil 1331-62

Appellants

United States Court of Appeals
for the District of Columbia Circuit

v.

Stewart L. Udall,
Secretary of Interior,

FILED FEB 20 1967

Appellee

Nathan J. Paulson
CLERK

Appeal from the United States District Court for the District of Columbia.

Before: Bazelon, Chief Judge, Edgerton, Senior Circuit Judge, and Burger, Circuit Judge.

JUDGMENT

This case came on for consideration on an appeal from the United States District Court for the District of Columbia and was submitted on the briefs and record pursuant to order of this court granting appellant's motion to submit this case; and

Whereas in Pruess v. Udall, 123 U.S.App.D.C. 301, 359 F. 2d 615 (1965), in remanding this case for further proceedings consistent with our opinion, we said that 28 U.S.C. §1391(e) [read in connection with §1404(a)] "was intended to relieve plaintiffs of the burden of litigating far from their residences, to relieve the courts in the District of Columbia of some of their case load, and to take advantage of the expertise district judges acquire in the problems peculiar to their areas" (123 U.S.App.D.C. at 304, 359 F. 2d at 618);

And whereas it appears that the District Court, upon our remand, in ruling upon the plaintiffs' motion to transfer the case to Oregon, failed to give due weight to those criteria, and did not consider the fact that an action between the same parties involving the same land was instituted by the government and was pending in the District Court in Oregon;

And whereas, if discretion had been exercised in the light of those matters, the plaintiffs' motion for transfer must have been granted; it is ordered and adjudged by this court

That the judgment of the District Court on appeal in this case is vacated and the case is remanded to the District Court with directions to transfer it to the United States District Court for Oregon.

Per Curiam

Dated: FEB 20 1967

PROJECT NAME: IDA

OWNER(S): FORMERLY: SCORE RESOURCES LTD

METAL(S): GOLD
SILVER

EXPL. STATUS: TARGET OUTLINE
ACTIVITY STATUS: INACTIVE
(PAST PRODUCER)

OPERATION-TYPE: UNDERGROUND

MINESEARCH #: 057763

MOST RECENT SOURCE: APRIL 1985

LOCATION

STATE: OREGON
COUNTY: JOSEPHINE
LONGITUDE: 123.15.12
LATITUDE: 42.29.42

GENERAL COMMENTS

SCORE TERMINATED ITS EXPLORATION OF THIS PROPERTY IN 1984. (OG 4/85)

WORK HISTORY

EARLY 1900'S: GOLD WAS PRODUCED.

1933: AN E L MACNAUGHTON REPORT CALCULATED RESERVES TO BE 22,000 ST OF 0.40 OZ/ST AU, WITH POSSIBLE RESERVES OF TWO MILLION ST GRADING 0.2 OZ/ST AU. (SCORE PR 11/2/83)

1984: SCORE CONDUCTED AN EXPLORATION PROGRAM.

1984: SCORE TERMINATED ITS EXPLORATION PROGRAM ON THIS PROPERTY.
(OG 4/85)

SUBCONTRACTORS

ROBERT WOLFE, P ENG, RECOMMENDED A DRILL PROGRAM IN HIS REPORT DATED 7/15/83. (GCNL 8/4/83)

See over

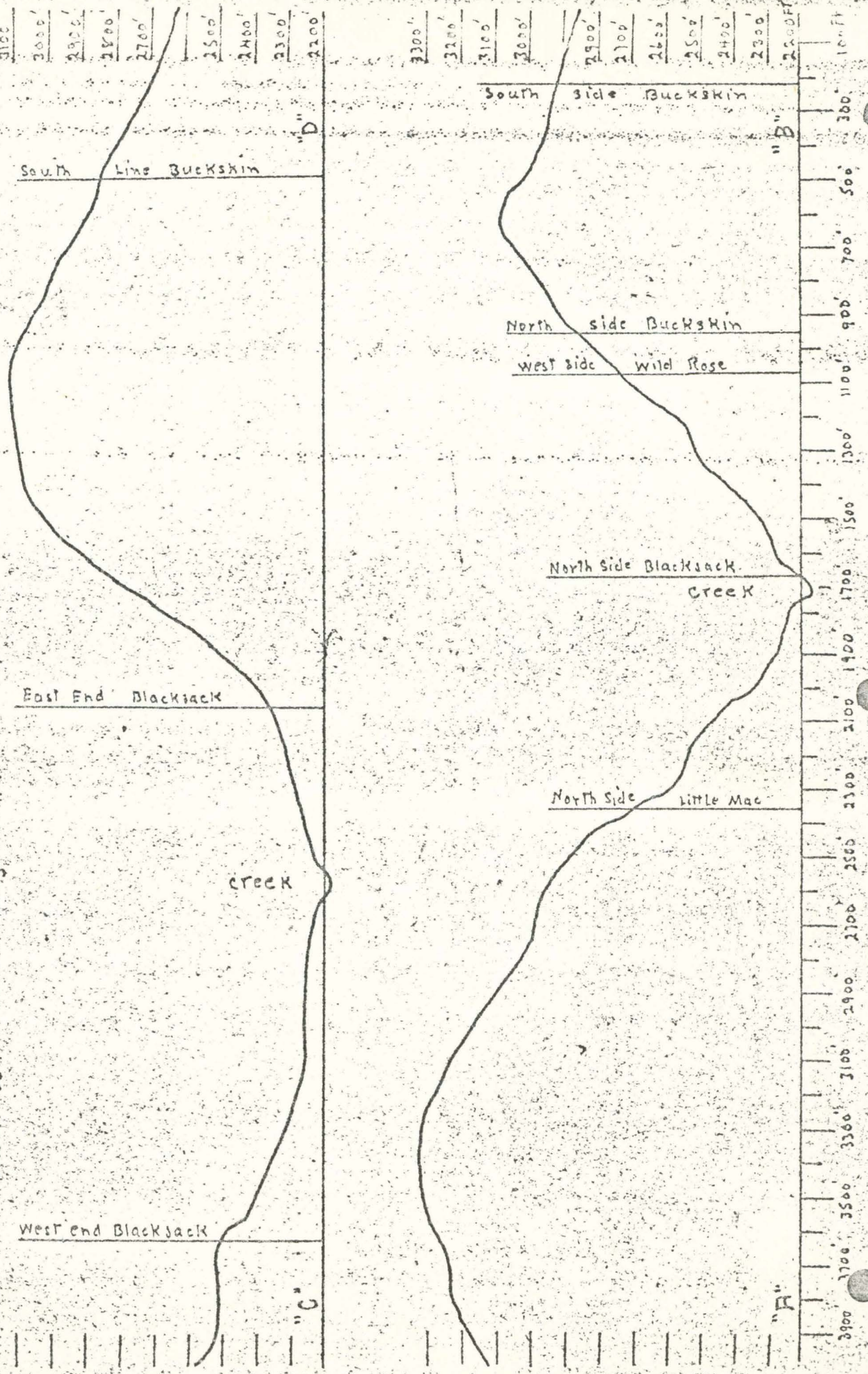
ASSAY NR.	NAME OF CLAIM	SAMPLER (Person)	TYPE OF SAMPLE (chip or grab)	Description	RESULTS			
					Au	Ag	Cu	
1958	SG-279	Big Mack	C. F. Pruess, Sr.	1' channel	vein qtz	Nil	Tr	0.10%
1959	TG-57	Wild Rose Claim	" "	Grab	" "	0.20	0.40	Tr
"	TG-76	Wild Rose	Len Ramp	10' chip	limonite	0.14	Tr	
"	TG-77	Big Rock	" "	5' chip	metavol	trace	nil	
"	TG-78	Oregon #4	" "	metavol grab	w/chalco	Nil	Trace	Trace
"	TG-79	Big Mac	" "	grab from ore pile	vein qtz	0.84	trace	trace
"	TG-80	Big Mac Discovery	" "	chip 6" vein	veingqtz	trace	nil	
"	TG-81	Big Mac	" "	chip 6" vein	metavol	0.01	nil	
"	TG-82	Little Mac	" "	1' chip	qtz & clay	nil	nil	
"	TG-110	Wildrose	C.F. Pruess	6 cuts 3' x 18"	vein qtz	0.66	trace	
"	TG-111	Wildrose	" "	2' x 10"	metavol	0.98	0.20	
"	TG-149	Buckskin	" "	Grab	mass. Cr			Cr 40.60%
"	TG-192	Wild Rose	" "	grab	talcy green	0.005	nil	
"	TG-193	Buckskin #4	" "	"	serp & green.	Nil	Nil	
1960	UG-210	Ida	" "	5' x 2" chip	feldspar etc.	0.01	Nil	
"	UG-213	Clementine & Hill top	" "	4' x 2" chip	pyroxene etc.	0.03	----	
"	UG-343	Ida (Buckskin discovery)	" "	Grab	vein qtz	trace		6.80%
1961	VG-215	Hilltop	" "	2' chip	metavol	0.33	0.40	
1963	XG-223	Buckskin	" "	30" chip	serp, sooty py.	0.03	nil	0.60%
"	XG-224	Wild Rose	" "	36"	qtz, green-	0.36	0.20	
1966	AAG-66	Ida Big Mac	" "	2'	vein qtz	1.44	0.40	
"	AAG-67	" " "	" "	10'	vein qtz	0.40	0.40	
"	AAG-81	Buckskin	" "	16"	gossan	0.03	trace	6.80%
"	AAG-82	Little Mac	" "	5'	f.g. granite	nil	nil	
1967	ABG-234	Buckskin	Len Ramp	grab	sulfides	0.12	nil	9.83%
1968	ACG-3	Ida - Wild Rose	C. F. Pruess	6' chip	sulfides	0.14	0.26	7.85%
"	ACG-4	" " "	" "	4' chip	sulfides	0.13	0.27	3.10%
"	ACG-12	" " "	" "	Grab	gossan	0.01	nil	trace
"	ACG-13	" " "	" "	"	dike rock	nil	nil	
1971	AFG-37	" " "	" "	Grab	sulfides	nil	nil	9.10%
"	AFG-38	" " "	" "	60' chip	greenstone	nil	nil	trace Ni

There are many additional assays but the results were not that encouraging.

ALG-67	1977	Ida Mine	C. F. Pruess	Grab sample	greenstone	2.58	0.45	
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ASSAY NR.	NAME OF CLAIM	SAMPLER (Person)	TYPE OF SAMPLE (chip or grab)	Descrip- tion	RESULTS		
					Au	Ag	Cu
1941 - BG-541	Black Jack	W. D. Bowser	5' channel	Vein qtz	0.08	Trace	
" BG-542	" "	" " "	Same	with pyrite	0.07	"	
" BG-867	Black Jack	" " "	heads		0.20	-----	
" BG-868	" "	" " "	Tails		0.02	-----	
" BG-1237	" "	James Turner	1-3 & 2-6 ' channel	quartz/pyrite	0.08	Trace	
" BG-1291	" "	Charles Archard	# 3-4' channel		0.13	0.1	
" BG-1292	" "	" "	# 4-3' channel	" "	0.03	Trace	
1942 CG-35	Black Jack	Charles Archard	concentrates	from ore test	3.78	0.30	
" CG-111	Black Jack	" "	slimes	flotation	0.30	Trace	
" CG-112	" "	" "	Concentrates	table	0.94	0.10	
" CG-191	Black Jack	" "	from muck pile		0.13	nil	
" CG-192	" "	" "	Concentrates		0.58	0.4	
1951 LG-320	Centennial	C. F. Pruess	qtz.limonitic clay	3' channel	Nil	Nil	
" LG-321	" "	" "	8' channel	limonite	Tr	Nil	
1953 NG-213	Ida	Len Ramp	8"	vein qtz	0.08	Tr	Nil
" NG-214	"	Len Ramp	20"	" "	0.02	Nil	Nil
" NG-215	"	Len Ramp	Grab	conc.sulphides	0.03	Nil	Tr
1955 PG-18	Ida	C.F. Pruess	Crushed qtz(left stringer)		0.12	----	
" PG-19	"	" "	"		Nil	Nil	
" PG-410	Ida	" "	vein mat'le with dissem.		0.02	Nil	
" PG-411	"	" "	pyrite cubes		0.04	Tr	
1956 QG-186	Ida	" "	Grab	Qtz vein	0.35	3.30	1.20
" QG-187	"	" "	Grab	" "			
1957 RG-61	Ida	" "	Grab	meta volc.	1.30	0.50	
" RG-62	"	" "	Chip	contact (?)	0.03	Nil	Tr
1957 RG-130	Buckskin No. 1	" "	3' channel	green rock			Ni. 0.10%
" RG-244	Hilltop #1	" "	Grab NW corner	vein qtz	0.08	0.50	
" RG-245	Clementine #2	" "	Face	"	0.01	Tr	
" RG-534	Oregon claim	" "	Grab	metavol.	0.01	Nil	
" RG-535	Big Rock claim	" "	Grab	fault breccia	trace	Nil	
1958 SG-14	Oregon hole No. 15 near line of W. R.	" "	Grab	hornblende	0.02	Tr	
" SG-15	Oregon - old hole above road (North end)	" "	Grab	metavol	nil	nil	
" SG-205	Buckskin	Len Ramp	Channel (3 1/2')	serp-greenstone	Nil	Nil	
" SG-206	Buckskin	" "	Grab	serp.	0.01	nil	
" SG-207	Wild Rose	" "	Grab	greenstone	Nil	trace	

TOPOGRAPHIC CROSSSECTIONS
 ALONG LINES "A-B" and "C-D"
 Prepared for Report by
 2-13-33 E.L. MACNAUGHTON .EM.



RECORD IDENTIFICATION

RECORD NO..... M061015
RECORD TYPE..... XIM
COUNTRY/ORGANIZATION. USGS
DEPOSIT NO..... DDCMI 100-204
MAP CODE NO. OF REC..

REPORTER

NAME..... JOHNSON, MAUREEN G.
UPDATED..... B1 03
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION

DEPOSIT NAME..... IDA MINE
SYNONYM NAME..... SEE GRANITE HILL

MINING DISTRICT/AREA/SUBDIST. GRANTS PASS

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100310 PACIFIC NORTHWEST
PHYSIOGRAPHIC PRDV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 01 49

QUAD SCALE QUAD NO OR NAME
1: 62500 GRANTS PASS

LATITUDE LONGITUDE
42-29-45N 123-15-08W

UTM NORTHING UTM EASTING UTM ZONE NO
4704634.4 479269.5 +10

TWP..... 35S
RANGE..... 05W
SECTION.. 26
MERIDIAN. W.M.

LOCATION COMMENTS: SE 1/4

COMMODITY INFORMATION

COMMODITIES PRESENT..... AU AG CU PB SB AS HG

OCCURRENCE(S) OR POTENTIAL PRODUCT(S):

POTENTIAL.....

OCCURRENCE..... CU SB HS

ORE MATERIALS (MINERALS, ROCKS, ETC.):

PYRITE, CHALCOPYRITE, FREE GOLD; GALENA; STIBNITE, ARSENOPYRITE, CINNABAR?

COMMODITY SUBTYPES OR USE CATEGORIES:

3.59 AU:AG

COMMODITY COMMENTS:

INTERESTING ASSORTMENT

EXPLORATION AND DEVELOPMENT

STATUS OF EXPLOR. OR DEV. 4

PRESENT/LAST OWNER..... PREUSS (1975)

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:

SHEAR ZONE

FORM/SHAPE OF DEPOSIT: QUARTZ STRINGERS

SIZE/DIRECTIONAL DATA

SIZE OF DEPOSIT..... SMALL

STRIKE OF OREBODY..... EAST

COMMENTS(DESCRIPTION OF DEPOSIT):

8 VEINS

DESCRIPTION OF WORKINGS

SURFACE AND UNDERGROUND

COMMENTS(DESCRIP. OF WORKINGS):

ABOUT 2000 FEET OF WORKINGS

PRODUCTION

YES

SMALL PRODUCTION

ANNUAL PRODUCTION (ORE, COMMOD., CONC., OVERBURD.)

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
1 ORE SML		1.456	TONS		
2 AU SML		.219	OZ	.151	OZ/T
3 AG SML		.061	OZ	.042	OZ/T
23 ORE, SML		1.456*	TONS	1890-1942	0.15 AU, 0.04 AG

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... PERM-TRI
 HOST ROCK TYPES..... GREENSTONE
 IGNEOUS ROCK TYPES..... DIDRITE

PERTINENT MINERALOGY..... QUARTZ

IMPORTANT DRE CONTROL/LOCUS.. SHEAR ZONE IS SERIES OF NARROW PARALLEL BELTS TO 25 FT WIDE

LOCAL GEOLOGY

NAMES/AGE OF FORMATIONS, UNITS, OR ROCK TYPES

- 1) NAME: APPLGATE GROUP
- AGE: PERM-TRI

COMMENTS (GEOLOGY AND MINERALOGY):

ARSENIC, ANTIMONY, AND MERCURY MINERALS ARE LATE

GENERAL COMMENTS

RECORD NUMBER (M013415) HAS BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES

- 1) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100
45P
- 2) BROOKS, H.C. AND RAMP, L., 1968, GOLD AND SILVER IN OREGON; ODGMI BULL. 61, P. 227
- 3) OREGON METAL MINES HANDBOOK, 1942, ODGMI BULL. 14-C, VOL. 2, SEC. 1, P. 79

GENERAL REPORT
IDA MINES CONSOLIDATED
GRANITE HILL MINING DISTRICT
JOSEPHINE COUNTY - OREGON

E. L. MacNaughton.

I N D E X

	Page
Summary - - - - -	1

PART 1. DESCRIPTION

Property- - - - -	2
Location - - - - -	2
Titles - - - - -	2
Vegetation - - - - -	3
Water - - - - -	3
Climate - - - - -	3
Roads and Transportation - - - - -	3

PART 2. GEOLOGY and ORE DEPOSITION

Topography - - - - -	3
General Geology - - - - -	4
Economic Geology - - - - -	5
Ore Deposition - - - - -	7

PART 3. PRODUCTION

Ida Mines Consolidated Assay Record - - - - -	11
Development - - - - -	18
Flow Sheet Ida Mill - - - - -	17
Ore and Metallurgical Test with Mill Test - - - - -	19

PART 4. ASSETS

Inventory and Cost of Machinery & Equipment - - - - -	22
Value of underground and Surface Works - - - - -	24
Positive Ore Reserves - - - - -	24
Possible Ore Reserves - - - - -	24
Recapitulation of Assets - - - - -	25

Part 5.

Recommendations - - - - -	25
Conclusions - - - - -	28
Addendum, i.e. Maps of Location, Topography, Claims workings and Assay.	

GENERAL REPORT
IDA MINES CONSOLIDATED
GRANITE HILL MINING DISTRICT
JOSEPHINE COUNTY - OREGON

SUMMARY

The geology, as outlined, is favorable as to depth and size of the ore deposit; depth being based on the type of the deposit and also on the depth obtained at the Granite Hill Mine, the assay values as shown would indicate, with proper metallurgical treatment, a very profitable operation in gold recovery.

The property is favorably located as to roads and transportation.

The economic qualities as to water, timber, power etc, as well as the topography are exceptional.

The ores are of a simple type amenable to either flotation, cyanidation, or a combination of both, and that either method will show a high recovery is evidenced by the attached metallurgical reports and results.

Due to the present condition of the mine the recommended immediate development is of vast importance, not only will such a program develop a considerable body of ore but it will prove the existence and persistence of the various veins to a depth below the present tunnel level of 100 feet, or a depth below the surface of some 250 feet. Further such development work should open up some 100,000 tons of millable ore.

In view of the fact, that considerable ore is available in the present workings and stopes in the mine, that a high grade body of ore was opened up by a level driven some 45 feet below the collar of the shaft and with the other underground and surface workings, also the completeness of the plant, it would appear that the expenditure of sufficient money to carry out this development work and the putting of the mill into operation is amply justified.

PART 1.
DESCRIPTION

PROPERTY

The property, which is the subject of this report, embraces two groups of claims, which combined form the Ida Mines Consolidated, which are known as the Ida Group and the Little Mac Group. The individual claims are named as follows:-

IDA GROUP

Blackjack Quartz Claim
Blackjack No 1 Quartz Claim
Buckskin Quartz Claim
Wild Rose Quartz Claim
Oregon Quartz Claim

LITTLE MAC GROUP

Big Rock Quartz Claim
Big Mac Quartz Claim
Little Mac Quartz Claim
Little Mac Junior Quartz Claim

Note:- The last three claims of the Little Mac Group being fraction claims.

LOCATION

The property under consideration in this report is located in the unorganized Granite Hill Mining District, Josephine County, Oregon, approximately 8-1/2 miles north-easterly from Grants Pass, the county seat of Josephine County, a station on the Southern Pacific Railway, in sections 25 and 26, T 25 S., R 5 W. of the Willamette Meridian, on Louse Creek in the Grants Pass Quadrangle. Southerly 450 miles from San Francisco and northerly 270 miles from Portland.

TITLES

The titles as to the claims and the water right of this property are clear. The claims are unpatented and are held under the laws of the United States and the State of Oregon, governing locating and holding of mining claims. All assessment work is completed to date.

VEGETATION

The hills are thickly wooded. The timber consisting chiefly of Red Fir, some Cedar, Pine and Tamarch. There is sufficient red fir on the claims to supply all the timber necessary for mining purposes.

WATER

The question of water supply is always an important one in connection with any mining operation and very often the deciding factor in operating a mine profitably. Sufficient water can be had both for mill and camp, from the Middle Fork of Louse Creek, where the Edwards Mining Company owns a water right, which was issued about 1924.

CLIMATE

Climatic conditions are favorable. No hindrance as to weather conditions effecting continuous operations during the year.

ROADS And TRANSPORTATION

The mine, as previously stated, lies 8-1/2 miles northeasterly from Grants Pass, a city on the Southern Pacific Railway, which would be the shipping point from and to the mine. The road from Grants Pass to the mine could be considered as being in good repair except for the first two miles, which is part of the paved Pacific Highway. The balance of the road being a County road, with an easy grade to the property.

PART 2.

GEOLOGY AND ORE DEPOSITION

TOPOGRAPHY

The mine is situated on Louse Creek with rugged hills on both sides. The area being drained by

~~The most important intrusion is that of the granodiorite and the quartz diorite. These intrusions formed the backbone of the Siskiyou Mountains.~~
the Middle Fork of Louse Creek.

The area included in the claims attains an elevation on the south side of the Creek of some 3100 feet, and on the north of about 3200 feet, the west end of the property having an elevation of only 2500 feet.

The valley floor surrounding the various creeks in the different sections has an elevation of approximately 2200 feet.

The main tunnel elevation being about 2223 feet.

GENERAL GEOLOGY

The igneous rocks of this quadrangle are of several different kinds and differ somewhat widely in age. They occur in irregular shaped areas and dikes, some are intrusive, others show undoubted effusive characteristics. In the field the chief types noted being greenstone, serpentine, granodiorite, quartz diorite, dacite porphyry and small amounts of andesite. ?

z The age of these rocks range from the paleo-geologic to the tertiary, and in the order named above.

The general term greenstone in this area has been applied to the igneous rocks of more or less greenish color which are so altered as not to be distinguished under the microscope. When fresh and fully crystalline, greenstone is commonly granular like gabbro, varying in other areas from a diorite to the earlier andesite, and in some cases to fine grained basaltic greenstone.

The greenstones were followed by the general intrusion of the peridotites altered by hydrothermal action to serpentine, which cuts the great masses of greenstone and does not contain bodies of ore, yet some large ore deposits are found with the serpentine forming one of the contact bodies. The serpentine is composed chiefly of olivine and proxime with considerable chromite and magnetite. These bodies appear to have no effect on the mineralization in this area.

The most important intrusion is that of the granodiorite and the quartz diorite. These intrusions formed the backbone of the Siskiyou Mountains.

It is from this intrusion that the main mineralization sprung.

The intrusion of the dacite porphyry occurred following that of the granodiorite, it is found on the property in the form of ikes of which two have been determined to date.

ECONOMIC GEOLOGY

The geology of this property is similar to that of the quadrangle and the effect of the various intrusive bodies being similar to that of this general mineralized area, covering a distance from south of the Rogue River to north of Graves Creek with an average width of about a mile. The chief rocks being greenstone, granodiorite, quartz diorite, dacite porphyry and serpentine.

The main ore body is found in greenstone and diorite which has been sheared and brecciated. The shearing is due to the diverse stresses and earth movements involved in the formation of the Siskiyou and Klamath mountains. The shearing is wide spread as a whole, but on this property is confined to a series of narrow parallel belts forming numerous shearzones varying in width from 8 to 25 feet, with a general trend of east and west. This condition forms the main structural factor in these ore deposits .

The mineralization of the property occurs in greenstone and diorite, of the intrusion the quartz was the first gangue mineral formed, it is as a rule fine grained, a certain percentage of the pyrites were carried and deposited with the quartz. Then fracturing occurred and pyrite, some phalcopyrite, minutes amounts of arsenic, antimony and mercury, together with calcite were deposited as an overlapping series probably in the order named.

The mineralogy of the ores, (according to Diller, Kay, Winchell and Shenon all of the U.S.G.S.) is evidence of their hypogene (deep seated) origin. That is, the mineral assemblage, as shown, belong to Lindgrens mesothermal type, deposited at moderate depths by hot solutions. The source of these solutions has not been definitely established, but is credited to the batholithic intrusions of the granodiorite and quartz diorite.

It is to be particularly noted that these solutions effected the country rock beyond the limits of the quartz intrusions and in some cases for a distance of some 3 or 4 feet from the quartz. The solutions apparently arising along the planes of fracture replacing the adjoining material, as can be noted at various points in the mine where greenstone has been completely replaced by sulphides.

In connection with the theory that the deposits belong to the mesothermal type, the following evidence directly supports the view:

(a) Solutions which formed the gold ores are associated with (if not identical with) solutions which deposited ores of mercury and antimony. There is no known adequate source whence surface waters could obtain these elements, where as they are known to be formed from gasses of volcanoes.

(b) The solutions which formed the gold ores apparently invariably contain small amounts of copper, lead, zinc, arsenic and tellurium, all elements known to be derived from magmatic sources.

The visible minerals are chiefly quartz, calcite, pyrite with small amounts of chalcopyrite, some arsenic and antimony. The gold content is present as free and also associated with the sulphides. An analysis of the concentrates to determine only the mineral content made by the Selby Smelting Works of the American Smelting and Refining Company gave the following results:

Gold	3.02 Oz.	Insol	22.8%
Silver	1.00 "	Iron	35.6%
Lead	nil	Zinc	nil
Copper	0.4%	Sulphur	30.1%
Arsenic	0.1%	Antimony	0.8%

These concentrates were especially picked with a view towards establishing the mineral content rather than the gold value.

Only one fault has been found on the property todate, this occurs at the end of the main drift some 50 feet beyond the shaft. It has not yet been definitely determined whether or not this is a movement fault or one caused by an intrusion. The apparent vertical striations tends one to lean towards the intrusion theory. The country rock east of the fault has different characteristics from that in the other workings it is softer, very fine grained, and extremely dark colored, of course this difference may be due to movement. Before

any definite conclusions can be drawn a microscopic study should be made of this rock. But it is definitely known that the veins are cut off by this fault. The gouge in the fault has the appearance of serpentine, but when the drift was later driven thru the fault, it was then determined that this was not serpentine.

The fault line is not regular, as will be seen from the maps, this irregularity also enhances the intrusive theory.

Where cut the fault has the following strike and dip:

Right Drift	Strike N 88° W.	Dip 65° S & E.
Main Drift	" S 65° W.	" 55° "
50 Ft. north of vein	" S 61° W.	" 55° "

It can be seen from the above that the fault has a flatter dip than the veins, so it would seem that deeper workings will carry further to the east, than those of the present level, before encountering the fault.

Some 200 feet east of the fault on the surface a series of holes were dug in an effort to locate some ore or indications of ore beyond the fault. Values were found in these holes ranging from 35 cents to \$7.35 per ton, indicating that the possibilities of ore in the area beyond the fault are worth investigating.

ORE DEPOSITION

The vein system of the Ida and Little Mac groups can be considered as a whole, for in most cases the veins of the Ida can be traced across the Little Mac Group, and in one instance, a vein has been traced on the surface from the fault on the east side of the Ida Group across the little Mac Group and further across the Golden Eagle Claim of the Columbian Group, a distance of about 3000 feet. The porphyry dike is also traceable across the Ida and Little Mac Groups. Further, the main vein of the Granite Hill Mine, so I am advised, has been traced from the Granite Hill across the High Tariff Claim and into the Little Mac Junior Claim, and its possible extension into the northwest portion of the Ida Group.

The vein system of the underground workings will be discussed first and then those of the surface showings.

VEIN SYSTEM OF THE UNDERGROUND WORKINGS

Four veins have been opened and fairly well developed in the present underground workings, and two other veins have been cut by crosscuts, of these the most important from size and development are the main, right, right angle and the left vein. The draw and surprise veins have had no work done on them. A seventh vein called the motherlode has been opened by a tunnel 160 feet long at a higher elevation than the present workings. Also a vein has been opened by a tunnel on the Little Mac Claim called the Little Mac Vein.

MAIN VEIN

This vein was first opened by the Granite Hill at a point some 50 feet above the present adit. In the present workings the vein was encountered about 100 feet from the portal of the adit, and has been drifted on some 255 feet. Its strike is about S 80° E. and dip 76° S. The average width of this vein based on the area stoped was about 4 feet. Four Stopes have been opened on the vein, with an average length along the drift of 50 feet each. No. 1 stope has been completely worked out. No. 2 about three-fourths stoped. No. 3 & 4 about one-third stoped. There are actually only two ore shoots in this main vein uncovered to date, the first about 110 feet long and the second 95 feet. The average values of the ore based on the existing assay record and present price of gold, is about \$8.77 per ton.

RIGHT VEIN

This vein was cut by the Right Crosscut about 58 feet from the Main Vein, and was drifted on about 155 feet easterly, at which point it contracted the fault. This vein has a strike of N 86° E. and a dip of 85° S. Two ore shoots were opened up and stoped out, the first being 60 feet long and the second 80 feet. The average width of the stoped ore being 30 inches in No. 1 stope and 48 inches in No. 2. The average assay value of the ore in No. 1 being \$10.00 per ton and in No. 2 based on car grab samples \$6.00 and on channel samples \$7.35 per ton.

RIGHT ANGLE VEIN

This vein was cut by the Right Crosscut at a point 72 feet south of the Main Vein and 14 feet south of the Right Drift. It was drifted on some 50 feet easterly. This drift did not cut the fault and there are no indications of the fault to be seen in the drift. The vein has a strike of N 86° E and a dip of 88°.

It is a wide vein but split at the face by a horse, its average width being about 4 feet, and average value about \$11.02 per ton. One stope was opened in this vein and stoped some 25 feet above the drift. The average value of the ore stoped being \$4.90 per ton

LEFT VEIN

This vein was cut by the Left Crosscut some 30 feet north of the Main Vein and drifted on some 75 feet. The face of this drift falls some 140 feet short of the fault. It has a strike of S 79° E and dip of 75° S. One small stope was opened, but the vein as a whole is not very promising on this level. Its average width is 53 inches and its average value \$7.89 per ton. The quartz is badly split and fractured.

DRAW VEIN AND SUPRISE VEIN

These veins were cut in the Left and Right crosscuts extensions. The Draw vein being some 120 feet north of the Main and the Suprise 105 feet south of the main vein. No work has been done on them to date. The Draw vein has a strike of S 80° E and is nearly vertical. The Suprise vein parallels the Right Angle vein. The assays of each show values good enough to warrant further development work on them.

MOTHERLODE VEIN

This vein was opened by an adit called the 400 foot level by the Granite Hill. It is about 160 feet long and was driven to intersect a strong showing of quartz found on the surface. Its strike is S 75° E dip vertical. The quartz is some 10 feet wide on the surface and 8 feet in the drift. The assay values range from \$2.10 to \$21.00 on the samples taken from the drift and from \$3.00 to \$60.00 on surface samples. It is this vein that has been traced across the creek to the Little Mac Claim, and also to the summit of the Columbian Mountain.

LITTLE MAC VEIN

This vein was opened up across the Creek some 430 feet north and west of the main adit, and appears to be an extension of the Motherlode. It is the only vein opened by underground works on the Little Mac Group. This adit is 85 feet long, and the vein strikes N 34° W dip vertical. Average width is 30 inches, and average value \$5.19 per ton.

VEIN SYSTEM SURFACE WORKINGS

A number of veins have been opened on the surface by means of opencuts, and in some cases have been traced for considerable distance on both sides of the Creek. All of the work being confined to the following claims: Blackjack, Balokjack No. 1, Big Mac, Little Mac and Little Mac Junior.

On the Blackjack and the Blackjack No. 1 the following veins have been opened on the surface commencing at a point directly above the end of the Right crosscut and going westward;- Pocket Ledge, Porphyry Ledge, Cow Ledge, Bunkhouse ledge and Big Fissure Ledge. Some of these have also been opened on the north side of the Creek, in the Northwest portion of the Blackjack and on the Little Mac Junior Claims. Other opencuts on the Big Mac and the Blackjack claims show promise of veins, but am convinced that they are extensions of the veins found in the underground workings.

POCKET LEDGE

This ledge was opened by a small tunnel some 30 feet southwest of the collar of the air raise. It is reported to have produced some \$10,000.00. This ledge lies against the Porphyry intrusion and should be cut by the Right crosscut within the next 30 feet.

PORPHYRY LEDGE

This is a large intrusion of Dacite porphyry. The rock is altered and of a brownish color, with phenocrysts of feldspar and quartz in an aphanatic groundmass. The phenocrysts make up nearly half the area of the rock. According to Diller "The rock consists of plagioclase feldspar, no ferromagnesian minerals, the groundmass which is somewhat porphyritic also consists of feldspars and quartz. The chief secondary minerals being kaolin, epidote zoisite and small amounts of magnetite, some pyrite and pyrrhotite. It is considered closely related to the dominantly feldspatic phases of the quartz diorite".

This ledge or dike has been opened at numerous points on the property, chiefly at the south east corner of the Blackjack No. 1, on the Little Mac Junior, and at the south east corner of the Blackjack where it has a width of some 40 feet.

A number of assays have been made on this porphyry and all of them show some values, assays being; \$11.90, \$.35, \$7.00 and \$22.40 per ton

COW LEDGE

This ledge has been opened at two points on the surface, one near the bunkhouse, the other near the air raise, and where opened the width of the ore was 30 inches. The strike is about S 75° E, dip vertical. Assays range from \$8.00 To \$25.00.

BUNKHOUSE LEDGE

This ledge has been opened by a cut on the ditch about the elevation of the collar of the air raise, and has a width of 30 inches, and assays \$6.30, \$477.55 and \$12.60

FISSURE LEDGE

This ledge has been opened south of the sawmill in a large fissure, it appears to be in line with the vein of the Granite Hill Mine. No assays have been taken but the ledge pans free gold.

PART 3

PRODUCTION

IDA MINES CONSOLIDATED ASSAY RECORD

The following list of assays were taken from the records kept at the Ida Mine, and consist of the results of some 10 different samplers and assayers, of which 6 were entirely independent of and had no connection with the Ida Mine or the Edwards Mining Company. It will be noted from the assay map that numerous samples were assayed by firms of national repute, such as Albert Hanks, of San Francisco, C. M. Fassett of Spokane, and Paul Rohl of Grants Pass.

For detailed information of the assays see attached ASSAY MAP, which gives location and length of all samples. Sample numbers corresponding in each case,

A test run was made in 1934 to ascertain whether or not the values extended into the walls of the vein. This was done by drilling holes into the walls and collecting the drillings for assaying. The holes averaged 8 feet long and gave the following results.

Results of Test Drill Holes

Sam Sample No.	Width	Value
1	8 feet	\$0.70
2	"	0.35
3	"	1.05

Sample No	Width	Value
4	8 ft.	0.70
5	"	0.70
6	"	0.35
7	"	3.50
8	"	0.35
9	"	trace
10	"	"
11	"	0.35
12	"	0.35
13	"	1.40
14	"	trace
15	"	0.35
16	"	0.35
17	"	trace
18	"	0.35
19	"	0.35
20	"	1.05
21	"	1.40

ASSAYS OF MAIN VEIN

22	96" inches	20.65
23	84"	11.90
24	41"	8.80
25	60"	9.10
26	21"	21.00
27	chute	11.90
28	chute	5.60
28 a	40 inches	20.40
29	48 "	8.90
30	40 "	12.50
31	chute	6.30
32	chute	8.40
33	120 "	18.20
34	144 "	6.20
35	120 "	8.40
36	144 "	12.80
37	180 "	6.10
38	180 "	8.10
39	180 "	2.45
40	42 "	92.40
41	54 "	29.50

RIGHT VEIN

42	24 "	15.01
43	30 "	8.20
44	36 "	20.10
45	31 "	9.60
46	20 "	2.80
47	26 "	20.00
48	24 "	3.50
49	28 "	5.60

Sample No.	Width	Value
50	26 inches	5.60
51	21"	4.20
52	34"	3.71
53	24"	3.60
54	36"	7.70
55	14"	1.40
56	50"	7.70
57	14"	6.30
58	60"	2.80
59	37"	4.20
60	25"	2.80
61	26"	4.30
62	30"	7.06
63	53"	21.35
64	33"	6.01

RIGHT DRIFT - Car grab samples:-

44 tons	5.25
21 "	1.74
40 "	7.35
27 "	3.15
10 "	2.10
15 "	10.50

Sample No.	Width	Value
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RIGHT ANGLE VEIN

65	24"	15.20
66	36"	12.00
67	36"	3.15
68	24"	12.80
68 a	chute	28.00
69	60"	10.40
70	45"	1.75
71	67"	10.00
72	78"	16.00
73	66"	9.45
74	80"	15.00
75	34"	6.30
76	36"	20.00
77	34" 24"	7.70
78	24"	4.20
79	96"	6.00
80	92"	4.80
81	60"	419.30
82	34"	7.70
83	86"	6.20
84	78"	0.70

Sample No.	Width	Value
85	60 inches	\$ 1.05
86	74 "	16.80
87	77 "	4.80
88	72 "	7.60
89	97 "	3.60
90	120 "	46.80
91	34 "	1.20
92	123 "	25.40
93	48 "	7.00
94	45 "	1.75
95	45 "	5.25
96	50 "	1432.90
97	50 "	9.10
98	84 "	1.75
99	132 "	4.30
100	156 "	13.01
101	120 "	14.00
102	156 "	12.51

RIGHT ANGLE DRIFT - Car grab samples:-

25 tons	2.80
49 "	6.30
3 "	16.80
5 "	7.70
4 "	7.70
4 "	1.40
28 "	2.45

Sample No.	Width	Value
Left Vein:		
103	96 "	4.20
104	60 "	4.41
105	14 "	2.80
106	Stope 38 "	2.80
107	" 18"	7.70
108	" 38"	8.40
109	" 40"	trace
110	" 48"	"
111	" 18"	6.30
112	"	36.00
113	Grab "	10.00
114	" "	4.00
115	" "	12.75
116	" "	15.40
117	96 "	13.60
118	78 "	18.21
119	96 "	4.20
120	60 "	trace
121	38 "	527.80
122	90 "	12.60
123	Face 36"	6.70
124	" 60"	6.00
	" 66"	

Sample No.	Width	Value
LEFT CROSSCUT: 60		
126	60 inches	\$ 2.97
127	36 "	2.47
128	60 "	2.85
129	48 "	17.01
130	120 "	5.00
131	60 "	16.25
132	Right wall 70 "	2.80
133	" " 60 "	5.95
134	roof 36 "	2.10
135	" 36 "	28.00
136	Wall 36 "	1.75
137	" 29 "	5.25
138	Right wall 30 "	9.27
139	L. $\frac{1}{2}$ roof 38 "	17.50
140	R. " 38 "	4.55
141	Left wall, first 75 feet of Crosscut	11.20

RIGHT CROSSCUT

142	Left wall from Maindrift to right drift	2.40
143	Same	3.01
144	Same	0.70
145	Both wall of crosscut at point of surprise vein each 6 "	7.70
146	As above But 12"	2.80
147	" " " 8"	4.90

DRAW VEIN

148	sample at face 24"	14.00
149	" " 20"	21.00
150	" " 38"	6.40
151	" " 29"	8.40
152	Much Pile	2.10

400 FOOT ADIT

154	Face	105.70
154	Face minus 2'	0.35
155	" " 8'	Trace
156	" " 10'	4.56
157	" " 20'	8.40
158	" " 30'	3.50
159	" " 40'	2.80
160	" " 42'	1.43
161	" " 62'	0.70

<u>Sample No.</u>	<u>Width</u>	<u>Value</u>
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LITTLE MAC ADIT

162	30 inches	\$ 1.40
163	38	7.00
164	24	7.00
165	24	9.80
166	24	2.10
167	30	6.30
168	12	17.00
169	24	4.90
170	48	4.20
171	18	5.60
172	18	11.20
173	24	3.50
174	30	7.00
175	42	3.50
176	42	2.80
177	36	2.10

SURFACE OPENCUTS

# 1	Above 400 ft. adit 40"	\$60.00
2	" " " 130"	3.00
3	" Draw Vein 40"	26.00
4	" Left Vein	12.60
5	Cut on Main vein	11.90
6	" " "	8.40
7	" " "	4.90
8	Cow Ledge above ditch	25.50
9	Bunkhouse ledge	6.30
10	" "	477.55
11	Cow Ledge Near Bunkhouse	8.00

The above assays based on Gold at \$35.00 per ounce.

DEVELOPMENT

The development to date has been a total of 1589 feet, of underground workings, consisting of:

Adits	315 Feet
Drifts	750 "
Crosscuts	313 "
Shaft	86 "
Raise	125 "

Eight stopes have been opened in the mine, 4 in the Main Drift, 2 in the Right Drift, 1 in the Right Angle and 1 in the Left Drift, of these, No. 1 in the Main drift and Nos. 1 and 2 in the Right Drift have been

completely worked out, the others are all partially stoped, but can be worked and do contain good millable ore.

Surface work consists of some 30 opencuts of various sizes and 4 tunnels. The tunnels are now inaccessible being purely surface tunnel workings.

FLOW-SHEET OF THE MILL AT MINE.

Mill capacity 50 tons per 24 hours.

POWER:- Electric energy derived from a 100 K.V.A. Westinghouse generator driven by a 110 H.P. Atlas Imperial Diesel Engine.

All units in this mill are independently driven by separate motors, all of which have push button line starters.

ORE:- The ore is very friable and easily crushed and ground. It is a blue and white quartz found in veins of Greenstone and Quartz diorite. Its chief minerals are Gold, Silver, Arsenic, Antimony, Copper, Pyrite, Pyrrhotite and Calcite. The values are chiefly associated with the Pyrite and Pyrrhotite and are free at about 85 mesh.

Moisture content about 3 %.

METHOD OF MILLING: The attached flow sheet shows roughly the passage of the ore through the mill in plan. The mill at present is only capable of crushing, grinding and concentrating with no means at hand for either preparing the concentrates for shipment to the smelter or for cyaniding. Except, a small homemade drier.

The ore is very amenable towards the cyanide process, as it is a straight pyrite ore with, arsenic, antimony and copper in such small amounts as not to interfere with such a process.

BREAKING: The ore comes to the mill with about 50% minus 2 inches and with larger pieces having a diameter of about 8 inches.

(2) The ore from the mine is dumped into a 45 ton coarse ore bin, from which it is
(3 & 4) fed by means of a chute to a 6 X 9 Blake Jaw crusher, having a capacity of 3 tons per hour and set to crush to 3/4 inch mesh.

(5) The crushed ore is elevated by a bucket flight elevator some 20 feet to a fine ore bin. The elevator is set at 60°, with 5 X8 buckets on 18" centers and has a capacity of 6 tons per hour.

(6) The fine ore bin has a capacity of 75 tons.

(7) The ore is taken from the fine ore bin by a 14 inch belt feeder, to a

(8) 14" x 10' belt conveyor feeding direct to the ball mill.

GRINDING

(9) The grinding is done by a 5 x 4 Williamson Ball mill, running at 26 R.P.M., which runs in a closed circuit with a Dorr Classifier.

Total ball charge 4800 pounds, Ball consumption 1.45 lbs. per ton, liner consumption about 0.24 lbs. per ton.

(10) The mill discharges to a SS-C-20 Dorr Simplex Classifier size 3 ft. x 16' 8". Set to give an overflow product of about 85 mesh. The over flow going to a conditioner, while the sands are returned to the ball mill.

(11) The conditioner a 4 x 4 tank with an impeller driven from the jackshaft of the flotation machine, where the pulp is mixed with the reagents.

(12) From the conditioner the pulp enters the second cell of the Fahrenweid Flotation Machine, which consists of three 25 x 25 inch rougher cells and one 25 x 25 inch cleaner cell. The concentrates from the rougher cells pass first to the cleaner cell while the tails pass direct to the table. This machine has a capacity of 50 tons in 24 hours.

(13) The concentrates from the cleaner cell is the finished gold concentrates, ready to be prepared for the smelter or to be cyanided. The tails from this cell are returned to the rougher cells for retreatment.

(14) The tails from the rougher cells are passed direct to a No. 6 Wilfly Table which acts both as a concentrater and as a pilot for the flotation cells.

The concentrates obtained goes to the flotation concentrate and the tails to waste.

MILL RUN TEST BY Mr. Archerd in present Mill

The following mill test run was made during the period of Jan. 21, 1932 to April 2, 1932, operating the mill a total of 16 days. Flow sheet was from classifier to table, table tails to flotation machine.

Mine Sample	heads	Concentrates		Tails
		Table	Flotation	
\$10.00		\$160.00	Lost	\$0.40
10.00		168.00	\$124.00	0.50
16.00		180.00	Lost	Lost
16.00		190.00	118.00	trace
20.00		180.00	104.00	0.30
6.00		180.00	104.00	0.80
4.80		124.00	140.80	0.40
	\$6.20			
Lost	6.50	104.00	108.00	0.40
16.80		140.00	119.20	0.90
7.60		11.20		0.80
3.60		Lost		
46.80		Lost	78.60	3.40
25.40		136.00	80.00	
	30.40	148.00	Lost	
	76.00	244.00	476.00	
4.30				

Note:- It will be noted that there were very few head samples due to the fact that they used samples taken from the muck pile after each round was fired. These I have been told were large and carefully taken samples. A number of assays it will be noted were lost in assaying, these were not rerun, so show as lost. The above was taken from the books kept at the Ida Mine.

INVENTORY AND COSTS OF MACHINERY & EQUIPMENT

POWER PLANT

110 Atlas Diesel Complete	\$8,000.00
100 KVA Generator	1,023.00
Switchboard Complete	325.00
6 HP Gas engine	90.00

POWER TOTAL \$9,738.00

MILL:

Crusher	\$ 25.00	Motor	\$184.00
Elevator	200.00	"	70.00
Feeder	100.00		
Ball Mill	5326.00	"	650.00
Flotation	875.00	"	147.00
Classifier	1045.00	"	70.00
Oil Feeder	55.00		
Table	700.00	"	70.00
Amalgam. B,	70.00		
Ball Charge	140.00		
Motor 5 HP			135.00
Belt Conveyor	30.00		
Dewaterer	60.00		
Drier	50.00		
2 Pumps	140.00		

MILL TOTAL \$10,458.00

ASSAY OFFICE:

Pulverizier	\$125.00
Crusher	64.00
Motor 3 HP	88.00
Button Balance	225.00
Pulp Balance	35.00
Counter scales	15.00
Refining furnace, burner	100.00
Assay furnace, burner	50.00
Sampler	25.00
Buckboard, miller	20.00

ASSAY OFFICE TOTAL \$747.00

BLACKSMITH SHOP:

Compressor	650.00
Motor	275.00

Drill Sharpener	\$1,100.00
Forge	10.00
Anvil & Tools	25.00
Power emery & motor	44.00
Blacksmith vice	12.00
Pipe vices & dies	15.00
Little Giant Taps & Dies	25.00
Blower	18.00
BLACKSMITH TOTAL	\$2,174.00

MINE EQUIPMENT:

Truax ore car	99.00
1260 fet track	795.00
Sullivan Drifter	1,100.00
Stoppers	580.00
Column bars complete	192.00
Drill rod sets	10.00
Drill steel	85.00
Buffalo Blower 30"	55.00
400 ft. Blower pipe	140.00
2000 ft. pipe	350.00
hoist, cable, buckets	800.00
Mine Total	\$4,206.00

CAMP EQUIPMENT:

Truck	1,240.00
Drag saw	105.00
Camp Buildings	3,000.00
Fuel Oil Tanks	372.00
CAMP TOTAL	\$4,717.00

MILL BUILDINGS complete \$4,000.00

INSTALLATION 5,000.00

TOTAL COST OF EQUIPMENT AND INSTALLATION

Power Plant	\$ 9,738.00
Mill total	10,458.00
Assay Office	747.00
Blacksmith Shop	2,174.00
Mine Total	4,206.00
Camp total	4,717.00
Mill Buildings	4,000.00
Installation	5,000.00
TOTAL COST	\$41,040.00

The above figures do not take into consideration such items as, water mains in camp, sundry items not at present installed and other various items.

The above figures are the actual cost of the above items as taken from the books of the Company.

VALUE OF UNDERGROUND and SURFACE WORKS

The underground workings represent a total cost of about \$36,938.00. This figure is based on drifts at \$15.00 per foot, which included the opening of stopes, etc. Tunnels, crosscut and raise at \$10.00, Shaft at \$25.00 and surface opencuts at \$3,000.00.

POSITIVE ORE RESERVES

The present ore reserves based on the ore above the drifts and stopes only in the underground workings. The continuity of the veins from the tunnel to the surface has been proven by the stopes, air raise and actual outcroppings on the surface, are confined to the Right Angle, Main and Left veins, and are estimated at 15,000 tons with an average value of \$8.00 per ton.

POSSIBLE ORE RESERVES

It is impossible at this time to make an estimate of the possible ore reserves. Before this can be done intelligently, considerable development work will have to be done. It is definitely known that the ore carries 45 feet below the present working level, this is proved by the fact that at a point 45 feet below the collar of the shaft, a drift was driven on the Main Vein for a distance of 60 feet, and it was also found that the ore increased in width and value. It must also be born in mind that at the Granite Hill Mine, the ore not only went down some 420 feet but the veins increased in width and values. The Granite Hill Mine is some 200 feet lower than the Ida Tunnel and it is reasonable to expect that the ores in the Ida will carry to the same depth as that in the Granite Hill. It must be understood of course that the Granite Hill Mine was not bottomed and that ore showed in the sump and floor of the lowest drift. It appears from all indications that the potentialities of this mine are very great and that a large body of ore should be opened by the recommended development work.

RECAPITULATION OF ASSETS

Equipment & Machinery	\$ 41,040.00
Value of Underground works	36,938.00
Value of Positive ore	<u>120,000.00</u>
TOTAL POSITIVE ASSETS.	\$197,978.00

PART 5.

RECOMMENDATIONS

Recommendations in regard to reopening and operating the Ida Mine will be discussed under two main divisions, i.e.

Immediate development with operating present mill.

Future development with increased milling capacity.

IMMEDIATE DEVELOPMENT WITH OPERATING PRESENT MILL

Due to the lack of a large body of ore reserves it will be found necessary to do considerable development work before any decision can be made with regards to enlarging the present plant capacity, with this thought in view will discuss the immediate requirements under the following headings:-

- (1) Immediate development.
- (2) Mining equipment.
- (3) Present milling plant
- (4) Cost of development and improvements.

(1) IMMEDIATE DEVELOPMENT WORK: The object to be obtained in this development work is two fold, first, to increase the present ore reserves, and second, to open and definitely determine the various ledges definitely known to exist by surface workings. To do this it is recommended that the following:-

- (a) To sink the present shaft a further distance of about 44 feet giving a total depth of about 130 feet, and drift west at a depth of 100 feet on the main vein (or the 600 foot level). Which would readily increase the present ore reserves.

- (b) Continue the left crosscut a distance of 50 feet to intersect the Motherlode vein.
- (c) Extend the Right Crosscut a distance of 200 feet to cut the Pocket Ledge, Porpyry Dine, Cow Ledge and Bunkhouse Ledge, all at a point some 130 feet below the surface.
- (d) At a selected point on the 600 foot level (or 100 feet below the present level which is called the 500 foot level) drive a crosscut 200 feet to cut the Ledges mentioned in (c).

Due to the fact that the present shaft has not been completely timbered, a crew could be immediately started to complete this timbering, and while this work was being done, one crew could be started to work on the Right crosscut and a second crew on the Left. By the time the Left crosscut was completed the timbering of the shaft should be finished and both crews could then be started sinking the shaft. On completion, these crews could be used to drift on the main vein and to open up this body of ore for milling.

The above outlined development work would develop a large body of positive ore in the main Drift and at the same time should open up from all indications on the surface, at least some 100,000 tons of ore in the underground workings. The mine would then be in a position where large bodies of ore could easily be developed on these various veins which have been cut and determined on by the proposed crosscuts.

- (2) MINE EQUIPMENT: To carry out the above outlined work it would be advisable to make the following changes and additions to mining equipment:-

Exchange present compressor and motor for one of 350 cu. ft. capacity.

and purchase the following:-

Electric hoist
 2 - Heavy jackhammers
 2 - Ore cars
 1 - ore skip
 500 ft. 10" ventilating pipe

- (3) PRESENT MILLING PLANT: The present milling equipment is ample for present milling operations, being used, however, as a flotation plant, certain minor repairs and alterations are necessary, such as a new roof, new decking for table etc. Would recommend that the present crusher be exchanged for one of the rolling or wheeling jaw type of about 9 x 16. The advantage of such a crusher would be finer crushing and lower operating costs.

(4) COST OF DEVELOPMENT AND IMPROVEMENTS: The total outlined development work, mine equipment, and putting into operation the present mill and operating same for a period of 60 days would cost about as follows:-

Development work	\$ 7,998.00
Mine equipment	2,050.00
Mill & camp	2,500.00
Operation, mill 60 days	<u>10,000.00</u>
Total estimated cost	\$22,548.00

Note:- In the above estimated costs for operating the mill for 60 days are carried as capital expense this is due to the fact that it would take 30 days in which to obtain first shipment of concentrates and a further 30 days for the smelter to return receipts from said shipment.

FUTURE DEVELOPMENT WITH INCREASED MILLING CAPACITY

Future development work will of necessity be to a certain extent regulated from the facts found in the results of the Immediate Development Program, especially in regard to those veins in and near the present underground workings. But it might be well to bring to notice that fact that numerous veins and vein indications exist on the north side of the Creek and these should, as convenient, be opened and explored. This can be done from a tunnel driven into the hill at the level of the present dump, and also by the extension of the Main Drift under the Creek.

The adit on the Little Mac Claim should be extended to the claim limits, and from this adit crosscuts should be driven chiefly towards.

INCREASED MILLING CAPACITY:- In connection with any increase in milling capacity it is recommended that thorough tests be made with a view towards cyaniding the entire ore. This is by far the most satisfactory method of handling this ore. It has already been proved that the ore is amenable to the cyanide process, and it is simply a matter of determining which type of equipment would give the best results at the least cost.

CONCLUSIONS

In conclusion will say that in viewing the character and amount of work done upon the property the present showings of ore in the mine, the conditions as represented by the surface workings, completeness of the plant etc., it is my opinion that the property is worthy of expenditure of sufficient capital to carry out the proposed development work.

Yours respectfully,

E. L. MacNaughton.

LR 08

IN THE
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

C..F. PRUESS, SR., Executor et al,
Appellants,

vs.

STEWART L. UDALL, Secretary
of the Interior

Appellee.

No. 23347
In forma pauperis

APPELLANT'S OPENING BRIEF

APPEAL FROM
THE UNITED STATES DISTRICT COURT OF OREGON

C. F. PRUESS, SR.,
1339 Quinn Rd.,
Woodburn, Oregon,
Phone 503-981-9825 Appellant,
Proper Person Plaintiff
and Attorney

TOPICAL INDEX	Page
INTRODUCTION - JURISDICTION	1-3
ISSUES PRESENTED	3-7
STATEMENT OF CASE	7-11
ERROR- QUESTIONS - CONTENTIONS - ARGUMENT	
Coleman and Converse-prudent man test-less strictness	11-16
Costs solely applied but NO PROOF WHATEVER	16-17-32
Profitability standard-intention to apply not published	17-18
Standards subsequent to locations retroactively applied	18
Legislating (administratively or judiciously) mining law	18-33
Contest complaint charges insufficient	18-19
Exploration-development exposed, related or in common,	
same	19-22
"Valuable mineral deposit," "Where minerals have been	
found	20-22
Substantial evidence lacking-detractions, admissions,	
no proof	22-24
Government witnesses unqualified - hearsay	26
Prudency surely-profitability fairly reasonably established	27
Citations testimony mineral contest	28-29
Reasonable doubt concept - inferences applicable	29
Miners customs-regulations-offer or reward-mandate	29-31
P. L. 167, (1955) modifies strict divestiture- "pedis	
possessio"	32-33
Full mineral examination denied by Interior-remand refused	34
Full Blackjack claim clearlisted but only half a patent	
given	34
Administrative divestiture unconstitutional as applied-	
Proceeding clears title, removes cloud, cancels rights, yet	
cuts off adequate opportunity to defend, challenge and counter-	
claim for fraud and imposition by acts of omission and	
commission	35-38
Favorable pertinent exhibits missing	35
CONCLUSION	37-40
CERTIFICATES	40

TABLE OF CASES AND AUTHORITIES

Page

Adams v. United States	318 F 2d.861-870	31
Book v. Justice Mining Co.	58 Fed. 106	30
Burke v. So. Pacific R.R. Co.,	234 U. S. 669,697	33
C. E. Niehoff V. F. T. Comm.	241 F 2d. 242	23
Cascaden v. Bartoles	162 F 2d. 267,268	31
Charlton v. Kelley	156 Fed. 433,436	20
Chrisman v. Miller	197 U.S. 313	13
Coleman v. United States	Case No.630 U.S.S.C.	11-16
Consolidated Edison v. N.L.R.B.	305 U.S. 329	23
Cummins v. Celebreeze	222 F. Supp. 285	23
Ford Motor Co. v. N.L.R.B.	305 U.S. 364	35
Gold Hill Mining Co. v. Ish	5 Oregon 103	31
Goldman v. Folson	246 F 2d. 776	23
Hatch v. United States,	212 F 2d. 28	18
Henault Mining Co. v. Tysk, (U.S.)	271 F. Supp. 474 (22545 here)	22
James J. Williams v. United States	241 F. Supp. 548	35
Kramer v. Trickel	200 Oregon 615	31
Lange v. Robinson	149 Fed. 799	22
Motor Express v. United States	119 F. Supp 298	23
Muldrick v. Brown	37 Oregon 185	5-30
O'Leary v. Brown	340 U.S. 504	23
Patterson v. Tarbell	26 Oregon 32	31
Pincus v. Reilly	157 F Supp. 549	18
Sharkey v. Candiani	48 Oregon 112	31
Shoshone v. Rutter	87 Fed. 807	15
Shreve v. Copper Belle Co.	28 Pacific 315	15-20
Stark v. Wickard	321 U.S. 288,309	31-33
Steele v. Preble	158 Oregon 641	31
The Dreghe Corp. v. Penny (U.S.)	338 F 2d. 456	22
United States v. Converse, case No.	21,697 this court	11-16
United States v. Watkins, F. Supp.	216	23
Universal Camera Co. v. N.L.R.B.	340 U.S. 474,497	23
Wells v. Celebreeze,	209 F. Supp. 444	23

STATUTES - CONSTITUTION

Title 5 USC 1000-1011	p. 1-4-17-22	Title 44 USC 303	p.4
Title 28 USC 1291-1404	p. 1-2-3-9	Title 50 USC 2181	p.14
Title 30 USC 22,23	p. 4-27	P.L.167 P.L. 208	p.5-12-32
Title 43 part 185.12	p. 21-31	U.S. Constitution	p.33

INTERIOR DECISIONS

U.S. v. Ahlstrom	p. 21	U.S. v. Lakin	p.31
U.S. v. Arnold	p.39	U.S. v. Carlisle	p.30-31
U.S. v. Belisle	p. 30	U.S. v. Mouat	p.21
Castle v. Womble	p.3-4-18-33	U.S. v. Wetmore	p.29
Peale Mining Handbook 1938	p.173		p.20
West's Fed. Practice ch.2.sec.103			p.29

IN THE
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

C. F. PRUESS, SR., Executor, et al,
Appellants,

vs.

STEWART L. UDALL, Secretary of the
Interior.

Appellee.

No. 23347

APPELLANT'S OPENING BRIEF

This is an appeal in forma pauperis from the judgment of the United States District Court of Oregon entered June 25, 1968, dismissing plaintiff's complaint for judicial review and affirming defendant's decision June 22, 1961, declaring null and void for alleged lack of discovery, six metallic lode mining claims located in Josephine County, Oregon. This appeal also covers other intermediate action deemed erroneous and deprivation of right.

JURISDICTION

Title 28 U.S.C. sec. 1291, confers jurisdiction upon the courts of appeal concerned herein. Title 5 U.S.C. , sec 1009, confers jurisdiction upon the United States District Courts concerned therein. We add that after appellants exhausted all

administrative remedies before the Department of the Interior, by reason of the then venue law Title 28 USC 1404 (a), appellants were compelled to file for judicial review in The United States District Court for the District of Columbia. Twice judgments rendered by said court were set aside for failure to judicially review and failure to transfer the case to The District Court for the State of Oregon. On February 20, 1967 The United States Court of Appeals For The District of Columbia transferred the case to the Oregon district court, to complete it.

About 1890 the IDA MINE lode was discovered by Reno, and by mesne conveyances became the property of the Granite Hill Mining Co. It also owned the Pelton Placer claim. Said company hauled ore from the Ida to their mill. Its patent proceedings eliminated the lode because it was known in the placer. Thereafter in 1920's and 1930's appellants predecessors by location and adverse possession claimed the ground and it has been held and worked ever since according to the Oregon Mines Hand Book and McNaughton's report in the application for patent both in the record herein.

In Oregon an executor cannot operate a mine. His duty is to protect, conserve and protect the assets, liquidate and sell the mining claims, pay estate claims and costs and distribute the remainder. All appellants except C. F. Pruess, Sr., are the reputed heirs and devisees of Ida G. Archerd, deceased, and with said Pruess who has a contingent interest, are the reputed owners of the mining claims involved. On March 25, 1957, to settle boundaries, titles, mineral sufficiency and to place the

property in the best condition for sale appellants by C. F. Pruess, Sr., as executor, trustee and individually filed application for patents to the Blackjack, Wildrose, Buckskin, Oregon, Big Mac and Big Rock metallic lode claims of intrinsic value and limited occurrence comprising a group and commonly known as the IDA MINE. After the case was filed in the District Court at Washington pursuant to Tit. 28 USC 1404 (a), and reversed on order of the Appellate Court, the case was remanded to Oregon.

ISSUES - QUESTIONS - ERRORS

1. The underlying questions are, (a) is defendant's decision supported by substantial evidence, and (b) is it in accordance with law, (c) was a prima-facie case made, and (d) was the prudent man test of Castle v. Womble, 19 L.D. 455, met for gold-silver, etc.
2. The major concern (a) are the claims placer or lode, (b) are widespread nonmetallic minerals involved, or are rare-precious metallid minerals of intrinsic value and limited occurrence involved, (c) do the claims have favorable location and accessibility, (d) have the mining claims been used solely for mining, (e) have expenditures been made with the reasonable prospect of success under a belief of developing a valuable minersl deposit or to mine, (f) do such deposits have such significance as that an ordinary prudent man would be justified in such expenditures.
3. Is defendant's decision supported by competent evidence and the testimony of competent witnesses or shall the decision be set aside as arbitrary, capricious, not in accordance with

law. or pre judicial.

4. An all important issue arises under appellants claim that the standard applied by the Director adopted by the Secretary interpreting the hearing examiners conclusions as he says there has not been a discovery within the mining laws as interpreted by the Department, was not first published, i.e. the intention to apply the standard applied to lode claims of metallic minerals of limited occurrence was not first published in the Federal Register. Title 5 USC 1003. Tit. 44 USC 303.

5. Issues involve the interpretation of (a) the standard applied, (b) the interpretation of "WITH REASONABLE PROSPECT OF SUCCESS IN DEVELOPING A VALUABLE MINE". whether a future event is contemplated or (c) what is meant by valuable mineral deposit whether the mineral deposit must be valuable to cause, incite or impel the claimowner to make further expenditures under the apprehension of success, or does valuable mine mean a sure thing at the grass roots (d) what is meant by free and open to exploration and purchase (tit. 30 USC 22), and (e) Is a promise and offer to reward conferred by Tit. 30 USC 22, and does it create a quasi-contractual relation when accepted by the discovery of a vein of valuable minerals, staking, doing the discovery work, recording the notice of location, and doing of the annual assessment work on the claim.

(f) Can the United States impair the obligation of such a promise, scrap the offer of reward and divest all title and right of possession and by use of arbitrary standards unpublished, get the mineral lands back into federal control without payment

or allowing saving rights?

6. In case a reasonable doubt exists as to the quantity and quality of the mineral deposits to meet the requirements for discovery, and the issue centers around such questions, should the reasonable doubt be resolved in favor of the claimowner?

7. An issue presented is whether or not a new standard added to the prudent man rule and applied after the time of the locations of rare-precious metallic lode mining claims of intrinsic value and limited occurrence, may be APPLIED RETROACTIVELY for divestiture.

8. The charges of the contest complaint appear vague, indefinite and ambiguous whether lack of discovery is claimed under the prudent man rule or based on the absence of present profitability.

9. An issue is presented that involves the full faith and credit to be given the supreme court of Oregon in Muldrick v. Brown, 37 Oregon, p. 185 (1920) establishing the law of discovery according to the customs, usages and regulations of the miners, as especially reserved by Title 30 USC 22, based on the prudent man rule announced in Castle v. Womble, 19 L.D. 455, (1894). This was ignored.

10. A further important issue is presented for determination whether or not and to what extent P.L. 167, (Multiple Use Act July 23, 1955 enacted prior to the application for patent), modifies or restricts strict divestiture administratively, of subsurface rights to discovered exposed valuable minerals of intrinsic value and limited occurrence and the saving or protective

rights in the mining locations to further explore, develop and harvest KNOWN EXPOSED VEINS in the tunnel workings, and new paralell veins, angles spurs and variations.

11. The court should consider on the issues, power to grant "pedis possessio" rights specifically and unhampered by any confusing or double meaning provisions, allow the mining locations to stand until a discovery sufficient to Interior shall be forthcoming, and the patent application held in abeyance, PROVIDING THAT THIS COURT CANNOT GRANT OTHER RELIEF.

12. An important issue is presented in the refusal of Interior to issue full patent to the Blackjack claim as surveyed in accordance with the request in the application for patent, and the admissions of the Solicitor at the hearing for clear-listing the said Blackjack claim for patent.

13. An issue is presented concerning Interior's refusal to grant three petitions for reopening, re-examination after further mineral showings, and the district court's refusal to remand to the Secretary to consider new and added evidence of an extensive gold-copper mineral deposit exposed by the United States while constructing an access condemned road through the Buckskin, Wildrose and Big Rock claims prior to the district court's decision June 25, 1968.

14. An issue arises concerning the proper proceedings on judicial review of this case and the conduct of the court and counsel for the Secretary and its bearing upon rendering justice in a cool, impassioned, fair and considerate manner, free of bias and prejudice and impatience so as to render substantial justice.

15. A serious question is presented in that important, pertinent, material and convincing written evidence and physical exhibits are missing from the record, and without which there has not been and cannot be a judicious judicial review of whole administrative record.

16. A federal question of immense importance is also presented in that appellant claims that the entire mineral contest proceedings including the laws, orders and regulations based thereon are in words most nearly described as that by fraud and imposition the United States has gotten from appellants valuable mineral lands, back into federal control without payment or saving rights, while acting as accuser, prosecutor, judge and jury of its own charges, while it is an adversary and by its own paid hearing examiner, and thereby abusing process, rights, and gaining advantages.

STATEMENT OF THE CASE

On March 25, 1957 C. F. Pruess, Sr., Executor, Trustee and individually, filed an application for patents to the Blackjack, Wildrose, Buckskin, Big Mac, Little Mac, Big Rock and Oregon lode mining claims located in Josephine County, Oregon. The claims comprise a group of rare-precious mettalic lode claims of intrinsic value and limited occurance known as the IDA MINE. On publication of the notice by the Land Office, there was no adverse by anyone.

On February 12, 1958 appellants received through the mail a contest complaint issued out of the Department of theInterior, Bureau of Land Managment, Portland, Oregon, charging:

That the lands within the limits of the claims is nonmineral in character, and

That sufficient minerals have not been found to constitute a valid discovery.

It asked that each of the claims be declared null and void.

Appellants filed written answer denying the charges and setting up title.

On October 1, 2, 20 and 21, 1959, a Department hearing Examiner conducted a hearing. Appellants produced six witnesses, two of which were at the time, an ex-government engineer and a geologist. They also submitted about 50 assays of mineral values from samples taken from the claims. In the application for patents were also two large size underground maps and an assay map showing places where the assays shown thereon were taken, some of which disclosed mineral values while deliberately taken in the country rock. Other documentary written evidence, an engineer's report, and the Oregon Metal Mines Handbook, and others, were admitted in the case. The United States offered two witnesses, engineers of the Department and some assays from mineral samples. There were over 700 pages of testimony transcribed. When the hearing opened the Examiner insisted that appellant Pruess make advance of \$408.00 towards the cost of the hearing and although appellant requested a copy thereof, he was refused. At the hearing the Solicitor for the government moved to dismiss the charges against the Blackjack claim and it was clear listed for patent. At the conclusion of the hearing the Hearing Examiner declared null and void all claims except the Blackjack claim for lack of discovery.

Appeals taken first to the Director for the Bureau and then to the Secretary of the Interior, proved futile. During all said times further work was done to better, expand the deposits and increase the mineral showings, and three separate requests were filed for reopening, further consideration, and favorable action, but each was denied and the defendant's decision of August 22, 1961 A 28641 became final.

On April 25, 1962, having exhausted all administrative remedies, appellants filed their complaint for judicial review in the United States District Court for the District of Columbia. It was necessary to file the complaint there because of the then venue law, Title 28 USC 1404 (a). On October 5, 1962 while appellant's case was pending there, the Congress passed P. L. 87-748 amending the said venue law to permit actions in the States, and for trials.

On July 13, 1962, all plaintiffs except C. F. Pruess, Sr. Executor, were stricken and said Pruess was denied the right to appear as attorney in the case because of claimed noncompliance with Rule 4 of said District Court requiring a local attorney to handle the case, notwithstanding this was a case most nearly resembling an appellate proceeding. Said C. F. Pruess, Sr. was allowed to continue as proper person plaintiff. The court also denied plaintiff's request for a default against defendant. It denied requests to transfer the case to Oregon. It denied a request for a copy of the administrative record and said court denied plaintiff's and defendant's motions for a summary judgment. By stipulation and court order the whole

administrative record and exhibits of the contest hearing were made a part of the record. An elaborate pretrial order was made and entered by said court. By reason of the continued status in forma pauperis, appellant was excused from personal appearance at the trial. The trial judge, then and there, without review of the record, at government's counsel's request, returned the administrative record to him. At the court's request government counsel prepared findings and a judgment in favor of the defendant and dismissed the action. The trial judge denied a request for a new trial and for leave to appeal in forma pauperis.

On petition the United States Court of Appeals for the District of Columbia Circuit, allowed appellant to appeal in forma pauperis. Said court, on consideration and showings, reversed and set aside the judgment of said District Court for failure to make a judicial review of the whole administrative record and for refusal to transfer the case to Oregon. There was a second trial and affirmance of defendant's decision. There was a second refusal of the trial judge to allow appellant to appeal in forma pauperis. On February 20, 1967, said Court of Appeals again reversed defendant and set aside the court's judgment. It ordered the case remanded to the United States District Court of Oregon.

Then followed several calls in the case and delays in a companion action for condemnation of two roads through the said mining claims. Because of what happened at these calls, request was made, and refused, that the reporter transcribe his notes of

the proceedings on the calls since the case was remanded to the District Court of Oregon and file them and give appellant a copy. Appellant claims the court has been confused in the proper procedure and in appellant's opinion the judge has by words and actions indicated bias for defendant and prejudice against appellants. Without a pretrial or trial, the judge of said Oregon District Court, did render a judgment on January 19, 1968 dismissing the plaintiff's complaint and in favor of the defendant. The court also insisted that defendant's motion for a summary judgment made in the District of Columbia District Court was allowed and sustained. This was not so: Nor had defendant filed a motion for summary judgment in the Oregon District Court as stated by the judge. On June 25, 1968, said judge again rendered judgment dismissing appellant's complaint and affirming defendant's decision of August 22, 1961.

On August 7, 1968, notice of appeal was filed. On a showing leave to appeal in forma pauperis was granted. On Sept. 10, 1968 the clerk of the Oregon District court transmitted to the clerk of this court the customary preliminary record with stipulation pursuant to Rule 11 of the Federal Rules of Appellate Procedure that the remaining record would be held during the time of preparing briefs. On Sept. 14, 1968, appellant supplemented the filing of the record by transmitting to the clerk of this court the judgment, notice of appeal and order allowing appeal in forma pauperis.

POINTS - AUTHORITIES - ERRORS

COLEMAN - CONVERSE on standard of discovery. In light of

the new twist given by the courts in these cases to the prudent man rule test, we will first discuss their application to this case.

It appears in the Coleman case (No. 630) that patent was refused because the court felt the stone had no special use and the location was placer claims of 720 acres of widespread stone land on which was built an expensive homesite close to Los Angeles. The court may have missed Coleman's claim that he located under the stone statute or the retroactive application of the 1955 (P.L. 167 law) to the time of locations; Yet the court concluded that sand, gravel, and stone of widespread occurrence was governed by P.L. 167, July 23, 1955, and that proof of accessibility, demand and marketability-profit, was essential, as such minerals are non-metallics. To be locatable minerals they must have a special use or purpose on the market or they are common varieties. The Supreme Court concluded that in such placer claim cases the prudent man test and the marketability standards are complementary in that the latter is a refinement of the former. Then the court realizing that what it was about to say was dicta, and foreseeing that it would sometime have to deal with a proper case and would have to decide the constitutional feature of administrative and judicial legislating mining law, did disclose the the handwriting on the wall. The court said:

"While it is true the marketability test is usually the critical factor in cases involving nonmetallic minerals of widespread occurrence, this is accounted for by the perfectly natural reason that precious metals which are in small supply and for which there is a great demand, sell at a price so high as to leave little room to doubt that they can be extracted and marketed at a profit."

The court noted that in Cameron v. United States, and Chris-
man v. Miller acquisition and use of the public lands for small
tracts was also abuse. As a matter of fact all use of public
lands for hunting lodges, fishing resorts, businesses, summer
homes, retreats etc., all disconnected from good faith mining is
condemned. Out of this disconcerting situation has arisen blan-
ket denial of patents and striking down of mining locations the
likes of which has never been seen in our history. Good and bad
alike have been dealt with summarily so that the claimowner with
any sort of meritorious mineral showing, is left out in the cold.

LODES-INTRINSIC VALUE-PRECIOUS METALS-LIMITED OCCURRENCE

Coleman leaves us with the feeling that as respects placer
claims involving nonmetallic minerals of widespread occurrence,
except where special use is shown, will be judged for sufficien-
cy by both the prudent man test and by the marketability test.
That as to metallic lode mining claims of rare-precious minerals,
of intrinsic value and limited occurrence, their sufficiency is
to be judged by only the prudent man test for a valid discovery.

PRUDENT MAN STANDARD CONTROLS with varying degrees of
strictness.

In Converse (case no. 26697) this court was forced to re-
treat from its former holdings (on reversal) and now holds the
law to be p. 8-9 in its decision "HERE WE ALSO DEAL WITH A LODE
CLAIM CONTAINING SMALL VALUES IN PRECIOUS METALS, BUT PRINCIP-
ALLY BASE METALS, COPPER, LEAD AND ZINC. THIS SECOND COMBINA-
TION OF FACTORS, WE THINK CALLS FOR A SOMEWHAT LESS STRICT APPLI-
CATION OF THE TEST. WE THINK IN SUCH A CASE IT IS STILL THE LAW

THAT THERE NEED NOT BE A FULL SHOWING OF MARKETABILITY, SUCH AS THE SECRETARY REQUIRED IN COLEMAN, SUPRA. TO US THE CASES INDICATE THAT THE PRUDENT MAN TEST, COMPLEMENTED BY THE MARKETABILITY TEST, IS TO BE APPLIED WITH VARYING DEGREES OF STRICTNESS, DEPENDING UPON THE RELATIVE POSITION OF THE PARTIES TO THE CASE."

caps our. So now it appears this court feels that in placer cases of sand, gravel, stone etc., nonmetallics of widespread occurrence without special use is governed by the prudent man test complemented by the marketability test, and in cases of base metals, a lesser degree of strictness shall be required, depending upon conditions, and position of the parties.

We observe that this court now concludes also that in cases of rare, precious metallic lode mining claims of instrinsic value and limited occurrence, that the requirements of the "UNADULTERATED" prudent man rule (without the requirement of present marketability-profitability showing obtains).

Title 50 USC sec. 2181, the Congressional Declaration policy is:

"It is recognized that the continued dependance on overseas sources of supply for stragetie or critical minerals during periods of threatening world conflict or of political instability within those nations controlling the sources, the supply of such materials gravely endangers the present and future economy and security of the United States. It is therefore declared to be the policy of the Congress that each Department and Agency of the Federal Government charged with responsibility concerning the discovery, development, production and acquisition of strategic or critical minerals and metals, shall undertake to decrease further, and to elininate where possible, the dependency of the United States on overseas sources of supply of each such materials."

In *Shreve v. Copper Bell Mining Co.*, 28 Pac. 315 (1891) the noted mining jurist said:

"Without prospecting there will be no discovered mines. Without the privilege to claim and locate and hold a discovery, there will be no prospecting. A prospect, not once in a hundred times, is a mine in sight. If the locator must show a paying mine at location, the riches in these mountains are a locked treasury. The law does not contemplate this...It is a rare claim that is a mine at the grass roots, or where the paying vein is first found at or near the surface. The history of the majority of cases, years of toil and thousands of dollars have been required to demonstrate that a mineral vein will pay to work."

In *Shoshone v. Rutter*, 87 Fed. 807, the court wisely and prudently makes clear:

"It must be borne in mind that the veins and lodes are not always the same character. In some mining districts the veins, lodes and ore deposits are so well defined as to avoid any question being raised. In other localities the veins, lodes and ore deposits are found in seams, narrow crevices, cracks or fissures in the earth, the precise extent and Character of which cannot be fully ascertained until expensive explorations are made and the continuity of the ore and the existence of the rock in place, bearing MINERALS is established. It was never intended that the locator of a mining claim must determine all these facts before he would be entitled, under the law, to make a valid location. Every vein or lode is entitled to have barren spots and narrow places as well as rich chimneys and pay chutes, or large deposits of valuable ore. When the locator finds rock in place containing mineral, he has made a discovery within the meaning of the statute, whether the rock is rich or poor, whether it assays high or low. It is the finding of the mineral in rock in place, as distinguished from float rock, that constitutes the discovery and warrants location."

"WITH REASONABLE PROSPECT OF SUCCESS" MEANS SOMETIME!

We think that the rationale of the court's thinking is that, without qualification, in cases of placer claims of nonmetallics

of widespread occurrence, both the prudent man test and the marketability test, controls in Oregon with varying strictness, depending upon conditions. As respects mineral listed in 30 USC 23, the court now holds there need not be a full showing of marketability-profitability. We take this to still permit the ordinary prudent man, not necessarily a government man, or an expert, an engineer or geologist, to make expenditures on the find if there is a REASONABLE PROSPECT OR SUCCESS THAT SOMETIME HE MAY DEVELOP A VALUABLE MINE, even if honestly mistaken. In case of the precious and base metals THE FACT FINDER IN APPLYING THE PRUDENT MAN TEST (with less strictness) MAY CONSIDER EVIDENCE AS TO THE COST OF EXTRACTION, TRANSPORTATION, MILLING, ETC. AS BEARING ON WHETHER A PERSON OF ORDINARY PRUDENT WOULD BE JUSTIFIED IN FURTHER EXPENDITURES OF HIS LABOR AND MEANS. The court then adds, "BUT THIS DOES NOT MEAN THAT THE LOCATOR MUST PROVE HE WILL IN FACT DEVELOP A PROFITABLE MINE."

What we see now in Converse is that, in view of its views expressed in its previous reversed decision, is that this court of appeals controlling mining law, and realizing that meritorious claim owners are to be dealt with with less strictness in proper cases, can and will, in the interest of justice, and to restore precious and base metal mining to its proper place, relax the rigid requirements for discovery.

STANDARD TEST OF PRESENT PROFITABILITY APPLIED - NO PROOF OF COSTS.

We pause here to say that while Interior may call for its pound of flesh, it cannot have one ounce of blood, i.e., it may

call for appellant's compliance for a valid discovery, but it cannot fail to comply with requirements (a) to prove competently and fully what were the cost of extraction, transportation, and milling he makes crystal clear on pgs. 7-8 (Director's decision) are necessary factors and which criteria are used and are applied to invalidate our claims, and (b) to prove publication of use of the said standard for discovery. FAILURE TO PROVE SUCH FACTORS IS FATAL TO ENFORCEMENT OF DECISIONS. On page 21 of the transcript of testimony at the contest hearing No, 213 Oregon, the government's witness Susie gave only vague, hearsay, guess, estimate surmise of the costs claimed, and then not as to any one mineral deposit, gold-silver, copper, etc., especially on any claim at any time. No foundation was laid to support any such statements. He was unfamiliar with operational matters of the mines in Josephine County, Oregon. IF SUCH EVIDENCE IS NECESSARY WE HAVE NOT HAD NOTICE OR OPPORTUNITY TO ADEQUATELY DEFEND. The court should note that use of the cost criteria was not just incidental BUT WAS USED SOLELY AS CONTROLLING TO INVALIDATE.

INTENTION TO APPLY STANDARD USED, WAS NOT FIRST PUBLISHED.

Admittedly, intention to apply the standard test used by the Director against our rare-precious and basemetallic lode claims of intrinsic value and limited occurrence, HAS NOT BEEN FIRST OR AT ANY TIME PUBLISHED AS REQUIRED BY TITLE 5 USC 1003 and Tit. 44 USC 303. The purpose is to put the department on record of what it requires for a valid discovery, and to put miners on

notice of what they are to meet and for the opportunity to protest. Said law places the burden of proof of first publication upon the proponent (United States) of the standard. The decision is unenforceable. Tit. 5 USC 1003, Tit. 44 USC 303; Pincus v. Reilly, 157 F. Supp. 549; Hatch v. United States, 212 F.2d., 28.

NEITHER ADMINISTRATIVE AGENCIES NOR COURTS MAY
LEGISLATE LAW.

While said administrative procedure act allows for proper rule making to carry out powers (ministerial) POWERS delegated to it by Congress, IT cannot usurp the constitutional powers given only to Congress to make new mining laws or to change existing mining laws, when such action causes divesture of title and possession to valuable mining claim locations.

SUBSEQUENT STANDARDS APPLIED RETROACTIVELY RENDERS
DECISIONS UNENFORCEABLE

The standard of profitability was applied to our claims in 1959, and given retroactive application to time of locations made in 1920-21, when such standard was not included in the test for discovery announced in Castle v. Womble, 19 L.D. 455. The claimowners made expenditures in reliance upon said "UNADULTERATED" prudent man rule for discovery. Interior admits inclusion of present profitability in its test or discovery AND ALSO IT DID APPLY THE TEST RETROACTIVELY.

THE CONTEST COMPLAINT DOES NOT CHARGE SUFFICIENT FACTS TO SHOW CLAIM OF WANT OF PRESENT PROFITABILITY OR USE OF THE COST CRITERIA.

If the test of present marketability-profitability is not properly added to or complementary to the prudent man rule for

discovery, then the contest complaint is lacking in sufficient allegations for a cause of complaint. If the cost criteria is proper and to be an integral part of the case, clear and sufficient allegations are necessary. We have had neither charge of no discovery because of want of present profitability or to meet the cost criteria, nor full opportunity to defend and disprove. Our lode claims have been taken without due process of law. All other relief failing, we are entitled to a further hearing on costs and the matter of marketability-profitability.

EXPLORATION AND DEVELOPMENT APPLIED INTERCHANGEABLY
IN THIS CASE.

On the matter of exploration and development, we contend they are largely the same because we have not done exploration work for the purpose of finding a vein of valuable ore: They have already been found and are admitted: Some are of high value.. But in the sense that we have worked on exposed veins and deposits to expose related veins, ore shoots, parallel veins, or spurs, angles and variations, or to better the exposed veins and to develop the same vein where it may pinch, to where it may swell, or from where it becomes lean, to again where it becomes rich, we are exploring and developing: That is what the evidence shows. When the Hearing Examiner and the Director found the lands mineral in character, and that enough minerals have been found to justify further exploration, the above facts were anticipated we claim they have proved for us by admissions, what is required by the prudent man rule, or at least it comes within the less restrictive application of the Converse rule.

Whether the work done is called "exploration" or "development", or both, is not the material thing. The material thing is the mineral deposit already discovered and exposed upon which work is done of such significance as to justify further expenditures with reasonable prospect of success in sometime developing a valuable mine. This court has held that the word "development" as applied to discovery, is the equivalent of "exploration." Charlton v. Kelly, 156 Fed. 433, 436. That is peculiarly so because development of a valuable mine includes exploration, of stopes, winze and shaft preparation and all related ore. All work, all expenditures, made towards developing a valuable mine, may be called either or both exploration and/or development. That is particularly so because no already sure-thing or presently profitable mineral deposit is contemplated by the prudent man rule applicable to precious minerals. The Mining Engineers Handbook (Robert Peale, (1918, p. 373, defines exploration as "the work of exploring an ore body when found. It is undertaken to gain knowledge of the size, shape, position and value of the ore body." The Handbook defines "development" as the driving of openings to and in a proved ore body for mining and handling the ore economically.

PRACTICAL DEFINITION - VALUABLE MINERAL DEPOSITS

Valuable mineral deposits, in the celebrated Shreve case 115 U.S. 393, is construed by the learned mining jurist thus:

"The law will not distinguish between different kinds and classes of ore if they have appreciable values in the metal, nor is it necessary that the ore shall be of commercial value - economical value for treatment. It is enough if it is something ascertainable