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PRINTED: 11-19-2009

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: IMPERIAL GROUP

ALTERNATE NAMES:
- BULLIS
- PATENTED CLAIMS MS 2006
- BLACK IRON GROUP
- TULE UNPAT. CLAIM
- WINDSOR MINE
- FINNEGAN GROUP

GRAHAM COUNTY MILS NUMBER: 163D

LOCATION: TOWNSHIP 6 S RANGE 20 E SECTION 6 QUARTER E2
LATITUDE: N 32DEG 56MIN 25SEC LONGITUDE: W 110DEG 20MIN 11SEC
TOPO MAP NAME: COBRE GRANDE MTN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- LEAD SULFIDE
- COPPER SULFIDE
- SILVER
- GOLD
- CADMIUM

BIBLIOGRAPHY:

- USGS PP. 461, GEOLOGY OF THE KLONDYKE QUAD, 1964, P. 144
- ROSS, CLYDE P., USGS BULL. 763, 1925, P. 91
- ADMMR IMPERIAL GROUP FILE
- ADMMR BLACK IRON GROUP FILE
- ADMMR U FILE
- BLM AMC FILE 6032

USGS Bull. 763 p. 88 (Bullis Group)

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine: Lead King

Date: Nov. 17, 1966

District: Aravaipa - Graham County

Engineer: G. W. Irvin

Subject: Interesting prospect

Location: In the bottom of Stowe Gulch near Tule Canyon near center of the north edge of sec. 6, T6S, R20E.

Detailed information is from page 137 of USGS P.P. 461.

Reason for this report: Dr. Lacy of the University informed the engineer that it was an interesting prospect, that it needed work and that the ore was relatively high in Cadmium.

Average assays by Herb Hatter who shipped nine carloads in 1951 - 7.7% Zn, 0.7% Pb, 0.8 oz. Ag, and 0.2 Cd

USGS Bull. 763, p. 88 (Bullis Group)

REPORT ON THE IMPERIAL GROUP OF MINING CLAIMS

ARAVAIPA MINING DISTRICT

GRAHAM COUNTY, ARIZONA .

C.E. VON PETERSDORFF.

****

GEOGRAPHY: This property is situated in Twp. No. 6 S., Rge 20 E. Gila & Salt River Base & Meridian, Aravaipa Mining District, Graham County, Arizona, 70 miles N-W of Wilcox, a station on the Southern Pacific R.R., and 3 miles S-E of Aravaipa P.O. on the State Highway, leading from Bisbee to Globe, at an elevation of 5500' to 6000' above sea-level. Wilcox is the principal town of the Sulphur Spring Valley, 200 miles W of El Paso and 90 Miles East of Tucson, Elevation 4163' above sea-level:

THE SULPHUR SPRING VALLEY: Is about 100 miles long and from 10 to 30 miles wide. Its greatest extension is N-W and S-E containing approximately half a million acres of fertile, irrigable land and is now being settled by farmers, the large stock ranches formerly occupying it having withdrawn to the foothills. Sufficient corn, grain, general farm produce and vegetables can be raised here to supply a large mining population . The water shed is a few miles N-W of Ft Grant, 35 miles from Wilcox, and the country drops off rapidly forming the Aravaipa Canyon, containing in its upper part fine agricultural lands. West of Dunlap's Ranch the Canyon narrows and finally runs into the San Pedro River at Old Camp Grant, some 10 miles N-W of Mammoth.

ACCESSIBILITY: An excellent wagon road leads from Wilcox past Bonita, (3 miles W of Ft Grant), Eureka Springs, Klondyke and Dunlap's Ranch to Aravaipa at an elevation of 4390' above sea-level. There is a bi-weekly mail service between Wilcox and Aravaipa . Beyond Aravaipa there is a gap of 10 miles and then the wagon road continues from Stanley to San Carlo on the Gila River and the Gila Valley, Globe and Northern Railway, a distance of 15 miles. This gap will be closed very shortly and the state highway from Globe to Douglas will then be complete. The present state road from Wilcox to Aravaipa forms part of it. The El Paso & South-Western Railroad contemplates the extension of its Courtland Branch to Globe and the surveys follow in a general way the State Highway. It will pass, therefore, within a few miles of the Imperial Mine. Other surveys have been made by the Southern Pacific and it is possible that a railroad will be built through this section before long. At present 4 miles of well constructed wagon road connects the property with the Stage road near Dunlap's, and easy trails lead to the P. O. at Aravaipa.

FREIGHT RATES: The railroad freight rate for ore in carload lots from Wilcox to El Paso is 3 dollars per ton and the wagon freight from the mines to Wilcox is $15.00 per ton in large quantities, small lots are charged for at the rate of $1.00 per hundred pounds. These rates can be reduced somewhat, if the production of ores warrants making contract with independent freighters.

TIMBER, FUEL, SUPPLIES & LABOR: The price of mine timbers at Wilcox is $30.00 and that of lumber $35.00 per M: At the mine it costs from $70.00 to $80.00 per M. Fire wood for camp and domestic purposes is obtainable in sufficient quantities on the property.

For hoists, pumps and other machinery, Gasoline is the cheapest fuel obtainable under the present conditions; in the future the coal beds lying some 20

miles to the North may be developed and improve the fuel supply Blacksmith coal costs now $1.00 in Wilcox and $2.00 at the mine per 100 lbs., Powder per Box $10.00 at Wilcox, and Fuse $.05 per 100', caps $0.85 per 100 and other mine supplies at similar prices, which are somewhat higher than at the larger supply points as for instance, El Paso and Tucson, buying in large quantities these prices will be reduced. At present Mexican labor is used almost exclusively in the district. Mexican miners earn $2.50 per day, surface laborers $2.00, and Indians $1.75 per day. White miners, Blacksmith, Carpenters, Timber-men, Tool sharpeners, etc., earn from $4.00 to $4.50 per day. With supplies at their present cost and using Mexican labor at the above mentioned rate of pay, it would cost to mine a ton of ore on the Imperial Group as follows: Quarrying the extensive surface deposits $0.75 per ton; extracting the ore from tunnels $4.00 to $5.00 per ton; and from shafts by means of a hand windlass from $6.00 to $8.00 per ton. It is not practacable to handle ore with windlasses at greater depths than 100'.

WATER: A few miles below Dunlap's Ranch and some 7 miles from the Imperial Group of claims, the Aravaipa Canyon narrows and falls off very rapidly; Here a constant flow of 1500 m.i. of water has been measured, which would furnish ample power for all practical purposes.

CLIMATIC CONDITIONS: From records kept at the P.O. in Aravaipa it appears that the Maximum temperature rarely rises above 90F, and that the minimum rarely falls below freezing point. Summer rains occur in July and August and Winter rains with slight snow-fall in January and February. The climate is equable and work can be carried ow at all times during the year.

GENERAL DESCRIPTION OF THE PROPERTY: The Imperial Group of claims embraces an area of more than 560 acres and consists of 28 claims of which 9 are patented. The attached map shows their location. The patented claims are the following; Imperial, Black-Oak, Winsor, Western, Acorn, Apex, Lular, Teco and Iron King. The other surveyed claims are; Anna, Josie, Maggie, Anita, Keynote, Little Johnnie, Nogi, May Tustin, San Antonio, White Oak, Blue Oak, Octavia, Flying Dutchman, St Louis, Red Oak and Copper Queen. The Unsurveyed claims are ; Creston, Lone Jack, and Good Luck. Adjoining this group on the W. are the following unsurveyed claims, ½ interest being owned by others; Vulture, Lookout, Aleman, Lead King, Red Queen, Red Ruby, Ben Hur, No. 1, and Ben Hur No. 2. The Imperial Group of claims and ½ interest in the last named 8 claims are owned by Mrs Josephine W. Bullis, of San Antonio, Texas, Towards the N-W are the claims belonging to the Aravaipa Mining Co.; Towards the N. of the Ruby are claims belonging to Mrs Firth and others and adjoining the Imperial Group on the E. is the property of the Rio Tinto Mining Co. About 2 miles S. of the Anna Claim is the Grand Reef Property. None of these properties are at present in operations.

GEOLOGY. The general features are limestone overlying the Granite and Schist, cut through by porphyry dykes, which are in part mineralized. On Imperial Hill, the central portion of this property, there are 3 large and numerous smaller well defined dykes of quartz-porphyry, Rhyolite and Andesite porphyry carring mineralized veins varying in width from 3 or 5' to 20' and 30'. The main dyke is the extension of the Grand Reef Dyke and can be traced through the Anna, Josie, Maggie, Anita, Black Oak, Western, Acorn, Nogi White Oak, Blue Oak, Red Oak, Copper Queen, Teco and Iron King claims. Towards the E. of this dyke, granite is exposed, while towards the W. a limestone cap overlies schist and is cut by another large dyke passing through the Imperial, Winsor, Lular and Octavia claims; Beyond this again the limestone makes its appearance on the surface and a third dyke cuts through the apex, Vulture, Aleman and Ruby claims. Smaller ledges run through the intervening masses of limestone, diabase, schist and quartzite and form a mineralized zone approximately 2,000' wide. The 3 dykes referred to form prominent croppings varying from 30' 200' in width, and are tracable for a long distance N.; It is probable that they join the Black Oak

claim. This however remains to be prooved by more extensive development work than has been done so far. The geberal strike of these dykes is N & S. with the dip to the W. averaging 70° . Local variations are caused by displacements and will not extend far down.

DEVELOPMENT WORK: Following the main dyke from Grand Reef property for 2 miles in a Northerly direction a number of shafts and surface cuts are noted, where lead ore as well as iron-copper ore is exposed on the dumps. The anna is the first claim of the Imperial group, on this and the Josie, and the location shafts show the same character of ore but no other development has been done. On the Maggie the dyke crops out very strong and on the Anita there is a shaft 60' deep, but not accessible on account of water. On the Black Oak there is a well-timbered, double compartment shaft, sunk to a depth of 115' and a cross-cut run 267', but without striking the ore. Work has been abandoned here several years ago and the cross cut has been allowed to cave; In this case, as in most of the other shafts, it was impossible to reach the bottom on account of the water which has accumulated. I can only give the information received from Mr Thomas Finnican, who has been in charge of the property for many years, and is thoroughly familiar with the work done; This refers to the places that I could not examine personally. About 125' higher up the hillside, and some 150' further W, there is another shaft which was sunk on the ore to a depth of 100', following the incline of the foot-wall, 73°; at the bottom there is a cross-cut 32' long passing through 18' of iron-copper ore and 8' of silver ore which continues in the breast. This silver ore-vein may be the same as that on the nexy dyke and sunk on, in the Winsor shaft. Samples from these ore bodies gave the following results:

Iron-Copper Ore	0.01 ozs.	Gold,	1.9 ozs.	Silver,	4.48 %	Copper,
Silver Ore,	0.13 ozs.	"	22.9 "	"	0.60	"

The croppings which were cut on the surface to make room for the shaft show 28' of ledge matter, of which 20' are iron-copper ore; The silver vein does not show on the surface. With depth, no doubt, the percentage of copper will increase and the oxides and carbonates will be replaced with sulphides. Near the S-W corner of this claim and on the Western the same croppings occur; a shaft was sunk here 60' deep on a 10' streak of black iron-copper ore, giving the same values as the sample taken in the other shaft. The ledge at this point is 20' wide.

The shaft on the Acorn is well timbered 4½' x 6½' in size and sunk on the incline of the footwall 72°, to a depth of 229', where a drift in the ore extends 250' S. and a cross-cut 14' E. The bottom of the shaft being in accessible on account of water, samples were taken from points 132 and 72' below the surface, respectively and gave the following result.

132',	Trace of Gold,	3.6 ozs.	Silver,	2.95%	Copper.
72'	0.02 ozs."	2.3 "	"	2.15%	"

A sample from the dump from ore extracted from the bottom drift gave; Trace of gold, 1.1 ozs. silver, and 5.68% Copper. The croppings which are cut at the surface near the shaft show 20' of ore with seams of Azurite, Malachite and some sulphides.

In the gulch at the bottom of the hill (Bullis Gulch) are surface cuts and a tunnel, which was extended to connect with the shaft at a depth of 100', but is inaccessible as the entrance is caved. A little further up the gulch there is a fine well on the Nogi claim. The ledge crosses the gulch and the dyke shows over 200' wide on the opposite slope on ground covered by the White Oak and Blue Oak claims. On these claims are several shafts, one of which is 71' deep with a cross-cut 24' long; the ore wherever encountered is of the same character as on the previously mentioned claim, but no extensive development has been done. On the Red Oak, on the Northern slope of this hill a 6' shaft was sunk on a seam in which ~~the extra~~ large detached masses of copper ore were encountered

running from 10% to 18% in copper. The dyke again crops out on the Teko and Iron King Claims. On the former there is a fine spring, called Bullis Spring, and near it a cabin at the base of the dyke. Lead seams occur here and have been mined in former years but [illegible] surface exposures of mineralized porphyry vary in width from 8' to 30'. On the Copper Queen claim there is a double compartment shaft 55' in limestone, following a stringer of copper silver ore, assaying 0.02 Gold, 6.2 ozs. Silver, and 2.6 copper. On the Iron King are surface cuts on ore averaging 2 % copper. Near the end line of the Teko close to the Iron King a shaft was sunk on the croppings to the depth of 30'. The ore body is 2' wide at this point and a picked sample from the dump gave 0.01 Gold, 2.9 ozs. Silver, and 8.3 % copper. The ore body can be traced on the surface for 600'. At the base of this hill, in the Tule Gulch, some 200' below this shaft and about 300' S-W of it, is a tunnel about 240' long with the breast caved, which was run to cut the vein. Just below it are the Tule Springs, giving an abundance of good water. Returning to Imperial Hill the croppings of the second dyke appear on Imperial claim, where there is a shaft 60' deep sunk about 12 years ago, a sample from this dump assays as follows: 0.02 ozs. Gold, 6.4 ozs. Silver, and 2.51% Copper. The dyke shows up very strongon the Winsor claim, where the mineralized belt is exposed for 80' in width. The shaft is sunk on the foot wall and follows its incline of 70° for 200'. At the bottom are several hundred feet of drifts and cross cuts, which are inaccessible at present on account of water. At the depth of 60' however is a crosscut 75' long, which I sampled with especial care, as the indications for shipping ore were most favorable. The first 4 samples were taken in 2' sections across the shaft, - the next 4 samples in a like manner along the crosscut; An average sample was taken of the remainder of the crosscut, and one was taken from the breast;- the results are as follows;

Across shaft 8' of ore in 2' sections:

#1, 0.02 ozs. Gold, and 28.8 ozs. Silver,
2, Trace of Gold, and 1.7 ozs. Silver,
3, 0.06 ozs. of Gold, and 10.6 ozs. Silver,
4, 0.05 ozs. Gold, and 0.08 ozs. Silver.

Along crosscut 8' of ore in 2' sections.

#5 0.11 ozs. Gold, and 4.1 ozs. Silver,
6, 0.02 ozs. Gold, and 70.9 ozs. Silver,
7, 0.09 ozs. Gold, and 6.8 ozs. Silver,
8, 0.08 ozs. Gold, and 18.1 Ozs. Silver,

Average sample for remainder of crosscut, 34':

#9, 0.09 ozs. Gold, and 3.9 ozs. Silver,

Breast of Crosscut:

#10 0.19 ozs. Gold, and 1.3 ozs. Silver,

In one of the crosscuts at the bottom of thr shaft an 8' streak of copper ore was struck, - a sample taken from the dump gave :

0.03 ozs. Gold, 3.2 ozs. Silver and 5.7 % Copper.

On this claim are at present the most favorable showings of any in the group: While the croppings are tracable across the gulch into the adjoining claims, no development has been done there. The third dyke cropps on the Apex claim, and runs through the Vulture and Aleman into the Ruby claim held in partnership with Mr Landsman. On the Vulture claim is a shaft 100' deep with a crosscut at the bottom 24' long; as this shaft is full of water I took a sample from the dump which assayed;

0.04 ozs. Gold, 4.2 ozs. Silver, and 0.6 % copper, with 38.8% lead.

The croppings of the ledge at this point are 30' wide with many parallel stringers and veins, making the mineralized belt, exposed here about 70' wide. While this ore carries a very high percentage of lead near the surface, it is expected that in depth the lead will be replaced by copper, as in the other ledges on the property. On the Aleman claim towards the North the Dyke crosses the gulch with [illegible] to 100' wide; in the bottom of the Gulch there is a tunnel, driven on the ore with several hundred feet of drifts and crosscuts, which are however, mostly caved and inaccessible. Samples from points attainable average 10 ozs. Silver and 2% copper, with about 10% Iron, but as this ore is evidently leached out, it is probable that the values are considerably higher further in.

On the Red Ruby claim on the opposite side of the Gulch there is a shaft 28' deep on an iron-copper vein 6' wide: This ore runs 4% in copper and 12% in iron, the width of the cropping is 30' at this point and bounded by Limestone here as on the Apex and Vulture towards the E.

The Lead King claim lies W. of the Red Ruby and a number of surface cuts expose ore 4' wide, assaying 0.02 ozs. Gold, 3.5 Ozs. Silver, 6.05% Copper and 0.3 % Lead. The two Ben Hur Claims extend West towards the property of the Aravaipa Mining Company, but no development work of any magnitude has been done on them.

ESTIMATE OF ORE AND VALUATION: With the exception of the Black Oak, Acorn and Winsor, the development work done so far is insufficient to form estimates of either tonnage or values of ore. On the Black Oak and Acron the tonnage available for extraction as shown by underground workings and surface exposure, I estimate at 100,000 tons of ore, carrying 0.01 ozs. Gold, 2.2 ozs. Silver, and 4% Copper, and having at the present time and prices a value of $15.80 per ton, making a total value of $1,580,000.00

On the Winsor, I estimate the available tonnage at 50,000 tons of ore carrying 0.07 ozs. Gold, and 14.63 ozs. Silver, and having at the prevailing prices a value of $10.76 per ton, making a total value of $538,000.00.

There is a rich streak 2' wide in the Winsor crosscut that would produce ore worth $45.84 per ton, if it could be extracted separately; In order to mine it, some of the adjacent ore will have to be broken as well, -see Assays 6, 7, and 8,- and the value of the ore produced would not be more than $21.61, which is insufficient under present conditions, the handicap being the high freight charges; As soon as these are reduced by reconstruction of a railway, all of these ores could be extracted at a profit. Under prevailing circumstances the values contained in the ores could be made available by a concentration plant and the Winsor Silver ores could be treated advantageously by the Cyanide process.

PROBABLE ORE: In view of the continuous croppings of the main dyke for a distance of approximately 3 miles covered by claims of this group, and the uniformity of the ore, wherever exposed by natural causes or development, it is probable that at least 4 times the amount of ore estimated on the Acorn and Black Oak is in place on the claims on the main dyke . This is not taking into consideration the probability of the ore going down to a greater depth than disclosed by the various shafts and gulches. It would be quite safe therefore to estimate the probable tonnage at 500,000 tons, representing in value $7,900,000.00. In the case of the Winsor Ore bodies, I believe that the probable ore can safely be estimated at 150,000 tons having a value of $1,614,000.00.

RECOMMENDATIONS: In order to develop this property more fully, I recommend that the now existing crosscuts on the Winsor and Black Oak be extended until the mineralized zone is cut through in both dir4ections. On the Acorn a crosscut should be started on the 72' level and carried through the ledge both ways. On the Teko the existing tunnel should be extended until the vein is cut: The crosscut on the Vulture should be extended and the ore body cut through in both directions. As there are no pumps on the grpund at present and as tunnel work is much cheaper than sinking the shafts, I would recommend that the now existing shafts

be not continued in depth, but that tunnel sites be selected and future development work done in that way. Below the Winsor shaft is an excellent location for a tunnel, which would be driven to work the bottom of the present shaft and connect on the ore. On the Aleman a tunnel should be run into the dyke towards the S. and on the Ruby towards the N.; On the Acorn a tunnel should be run towards the Black Oak, and on the White Oak at a point opposite the Acorn a tunnel would develop the entire hill and disclose large quantities of ore easy of extraction. By these means the development of the property would be attained at the lowest cost and would be practically entirely in ore, which could be stored on the various dumps until arrangements for treatment on the ground, concentration or shipment are perfected.

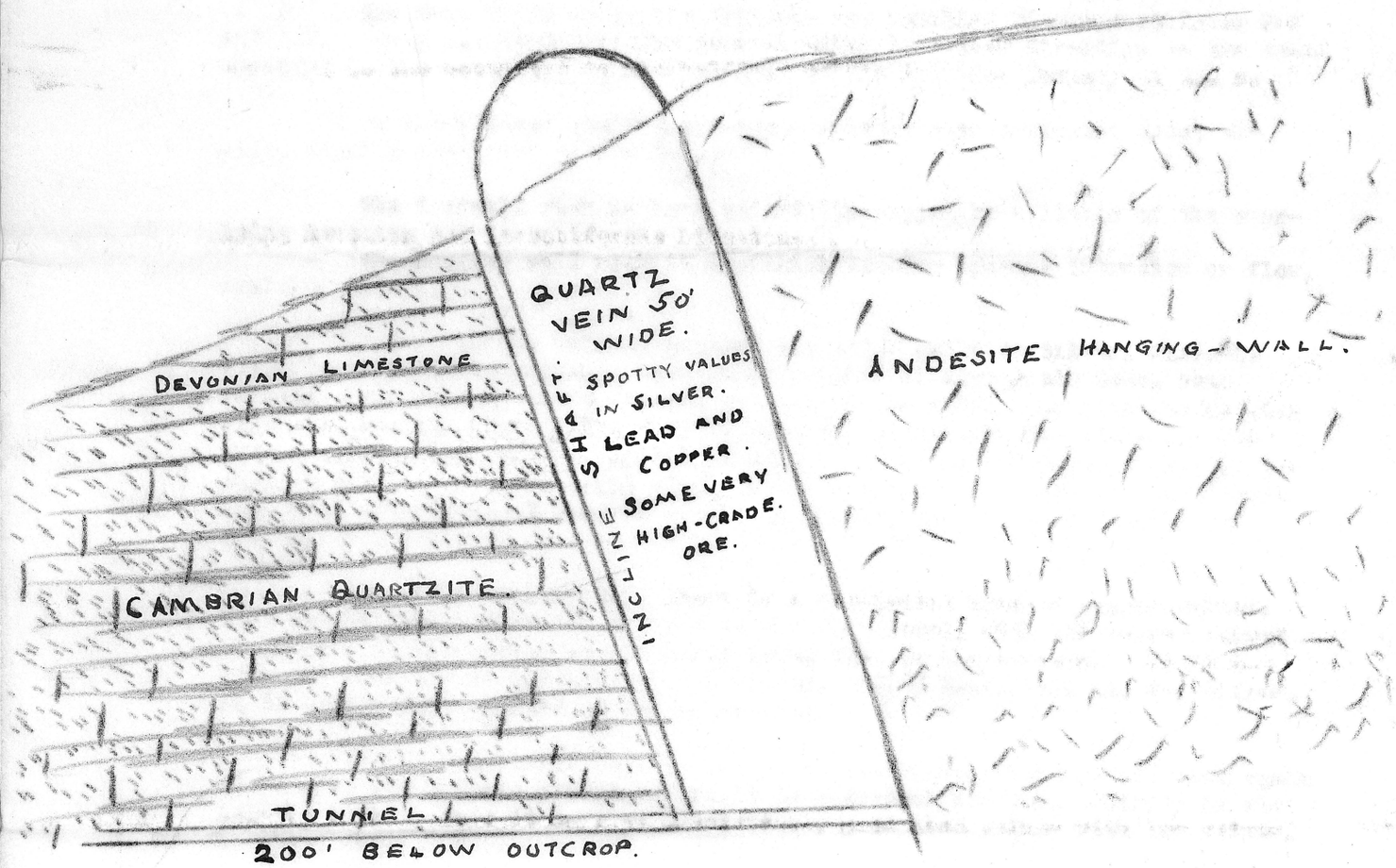
In order to develop the width of the ore bodies, crosscuts should be driven from these various tunnels at regular intervals. A tunnel started at an appropriate point in Stowe Gulch, W. of the Imperial Hill, and driven at right angles to the several dykes and ledges, would be the best means of opening up that highly mineralized portion of the property and would at the same time be the easiest way to mine the ore encountered.

CONCLUSION: While the development work is not sufficiently extensive to warrant a definite opinion as to the ultimate future of the property, this group of claims possesses great merit as a prospect and I am led to believe by the facts given in this report that further exploration would result in the discovery of additional ore bodies of great value and prove the continuity of the mineralized zones along the entire extent of the dykes. The values so far discovered prove that these claims would soon become paying mines if the present transportation difficulties were overcome, either by the construction of a railroad or by the establishment of a concentration plant on the ground in connection with a cyanide or leaching plant for the treatment of gold-silver ores.

Signed---- C. F. von Petersdorff.

Tucson, Arizona, September 21, 1912.

1912



PROBABLY UNDERLAIN BY DIABASE, SIMILAR TO ORE BEARING COUNTRY ROCK AT SUPERIOR, ARIZ.

PROFILE OF BULLIS VEIN (WINSOR VEIN)
BULLIS MOUNTAIN.

Bullis Mountain Vein System, Aravaipa Mining District, Graham Co. Ariz.

The main veins on Bullis Mountain are parallel fissures striking N-W and S-E. They can be traced for several miles in either direction to the Grand Reef to the South and to the holdings of the Aravaipa Company to the N.

On the Windsor claim the vein is a large quartz-fissure about 50' wide, dipping about 60° to the S-W.

The footwall rock is hard quiartzite capped by a little of the overlying Devonian and Carboniferous Limestone.
The Hanging wall rock is a pinkish looking igneous intrusion or flow, prabably Andesity.

Values in the vein as exposed are principally in Silver, which is mostly present as Chloride. Some large bunches of high grade Lead, both Carbonate and Galena, are scattered throughout the vein, both near the Hanging Wall and near the Foot- Wall, with no apparent preference for either. The silver values seem to have no real relation to the lead content. Some of the highest grade silver ore being simply white quartz. At times the high grade lead will assay several hundred ounces in Silver, and at times it will run only a few ounces.

Near the hanging wall there is a persistent area of copper values. This can be traced from the surface to the 200' level, with the copper values possibly a little higher on the lower level than on the surface. It is about 12' wide and assays about 1.5 % Copper, 1.5 % Lead, and 10. ozs Silver. It is completely oxidized as far as exposed.

About a thousand feet to the N. of the Winsor workings the vein again appears on the Vulture ground, where it is a typical fissure, entirely in the igneous rock. Here it carries consistently good lead values with low silver, possibly about 6 ozs.

Some 2,000' to the E of the Vulture is an area of limestone which carries some large Actinolite or Tremolite croppings stained black with Manganese, very similar to those on the Aravaipa property. A short tunnel driven into the hill under one of these shows a large area of lead-zinc ore, part sulphide and part carbonate, which looks very promising for prospecting with depth. There are also several big transverse fissures which cut the vein system at right angles and which show some values.

(The following is in reply to a specific question enquiring whether any of the mines in the district had been "bottomed")

To date no workings in the district have entered the underlying granite. Possibly it is very deep. It appears that the country has been intruded by a sill of Diabase between the Quartzite and possibly above the Mescal Limestone, which is not exposed anywhere in the immediate vicinity.

The above was furnished by a Geologist and Engoneer resident to the Section under consideration. Permission can no doubt be obtained to give his name if necessary.

1928. E.A.J.

THE TEN STRIKE AND BULLIS GROUPS OF CLAIMS:

These claims are located on what is known as the Grand Reef System in the Aravaipa Mining District, Graham County, Arizona, 56 miles N-E of Tucson, and 48 Miles S.E. of Globe, and 62 Miles S-W of Clifton.

The strike of the System as a whole is about N 20° W. The formation to the of the System is Granite. The lode averages about 50' in Width, although sometimes being as much as 200' in width. The hanging wall is porphyry. It is highly probable that the magma was formed at the same time that the Granite was formed and the mineralization of the lodes took place.

The ores in the Ten Strike Group are principally Lead-Silver ores,- the high grade running about 45 % Lead, 20 ozs. in Silver, $1.00 in Gold and 3 % Copper. The ore in place averages about 12 % Lead, 7 ozs. in Silver, a trace of gold, and 1½ % Copper. Most of the insolubles are composed of Silicates, making the ore an easy concentrating proposition.

In the Ten Strike Group there is opportunity with a reasonable amount of development work to open up large bodies of concentrating ore and considerable high grade ore, about 25 carloads have been shipped from this group. There is a considerable showing of Copper ores on the surface of this group, in the shape of Copper Carbonates and Copper Gossan and Sulphides.

Running water in the Aravaipa Canyon about 3 miles from the property. The amount of water in the stream is over 100 M.I. on a fall of 75' to the mile.

The shipping point generally used at the present time is Cork on the Arizona & Eastenn Railway, distance of 40 miles over a good road.

THE BULLIS GROUP OF CLAIMS:

Situated N of the Ten Strike, on the same Grand Reef Vein System, is located mostly on Imperial Hill.

Imperial Hill is composed of intrusive Rhyolite,- the contact it between it and the Granite to the E. is graditional and numerous dykes and cross-fractures lead into the 4 large veins on the property. These veins as developed by the workings show values in Copper of 5½ % on what is known as the Acron Vein and 20 ozs. Silver values in what is known as the Winsor Vein, and 20% lead in the Vulture Vein.

There is a large vein on the W side of Imperial Hill of a width of about 150', showing good values in Lead and Silver in the outcrop.

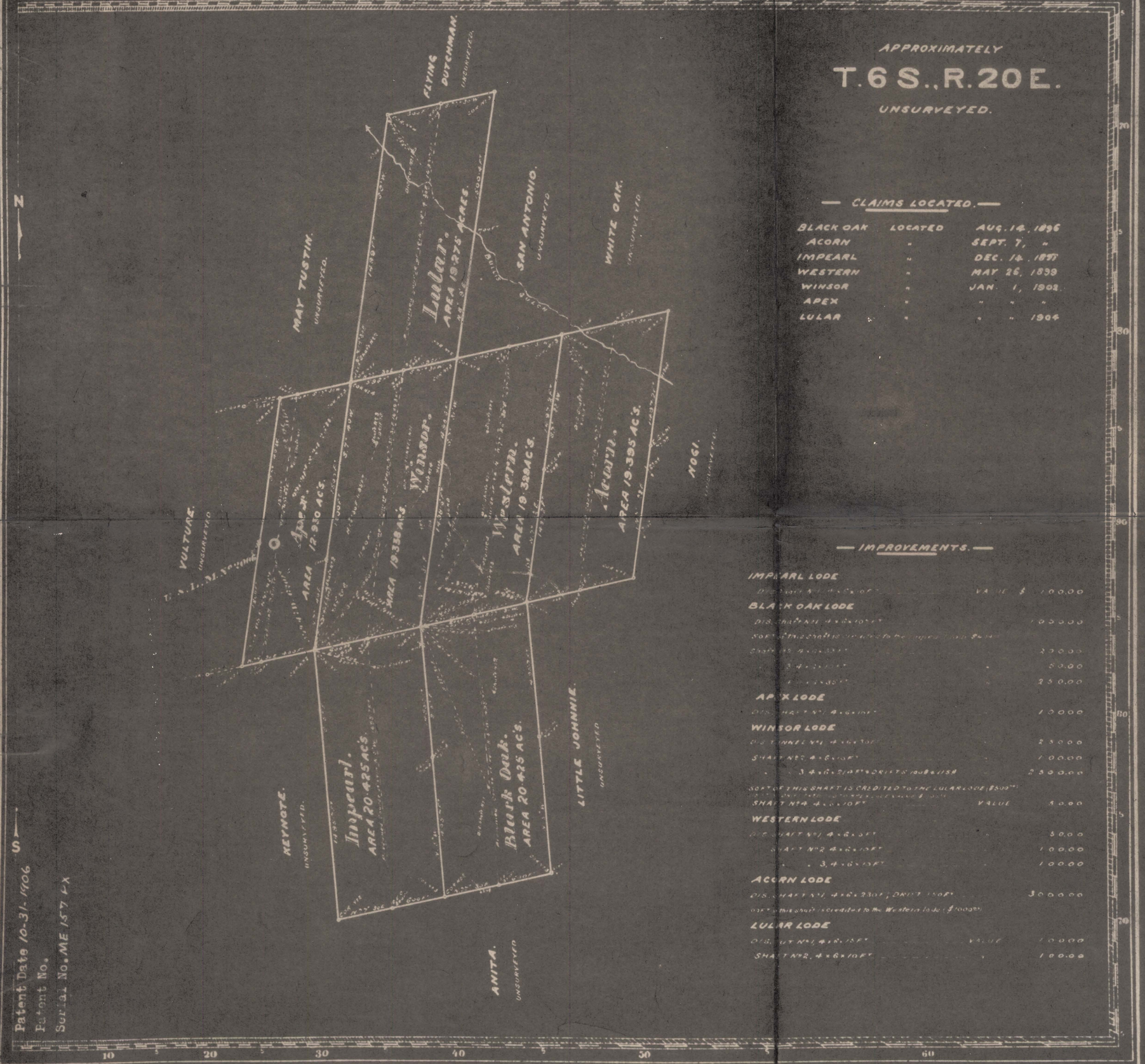
The workings on these claims are at an elevation of about 5500', and about 1800' above the level of Stow Gulch, 3000' W. of the Easterly side lines of the Bullis Group.

The property is reached by a good wagon road and is about 50 miles from Cork on the Arizona & Eastern Railroad.

There is abundant eater in the Aravaipa Canyon.

Reference is made to Bull. 763 U.S.G.S., by Clyde P. Ross, Aravaipa & Stanley Mining Districts, Graham County, Arizona.

BULLIS, LANDSMAN, FRITH AND MERTZ GROUPS
ARAVAIPA MINING DISTRICT.
GRAHAM Co., ARIZ.
1928.
GROUP.
BULLIS (IMPERIAL).
LANDSMAN.
FRITH.
MERTZ.
NOT FROM SURVEY:
SCALE APPX. 1" - 400'
E. A. JACKSON.
725 S. BIXEL ST.
LOS ANGELES, CAL.
Aravaipa Mining Company.
ANDESITE
DIORITE.
IRON CROSS
RHYOLITE TRIANGLE
Quartzite
LIMESTONE
Rhyolite Dyke
GEORGE No. 1
GEORGE No. 2
BEN HUR
DIORITE.
RHYOLITE
BEN HUR #3
RED CROSS No. 1
MOLKE.
BUFFALO
ROAD TO TUE SPRINGS.
RED RUBY.
RED CROSS 2.
COPPER COIN.
LANDSMAN CAMP
LOOKOUT.
LEAD KING
RED CROSS 3.
MOLKE. No. 2
Schist
VULCHIER
SHAFT 100' PB.
ALEMAN.
RED QUEEN.
RED CROSS No. 4.
KEYNOTE
APEX
PAT. 2006.
MAY TUSTIN.
IMPERIAL.
PAT. 2006.
WINDSOR
PAT. 2006.
OCTAVIA.
LULAR.
PAT. 2006.
BLACK OAK.
PAT. 2006.
WESTERN.
PAT. 2006.
FLYING DUTCHMAN.
ANITA.
SAN ANTONIO.
LITTLE JOHNNIE
ACORN
PAT. 2006.
ST. LOUIS
WHITE OAK.
MAGGIE.
JOSIE
ANNA.
NOGI.
RED OAK
BLUE OAK TRAIL
COPPER QUEEN.
Aravaipa Copper Co.
TEKO
PAT. 2016.
IRON KING.
PAT. 2016.
WAGON ROAD
To WILLCOX AND FT. THOMAS



APPROXIMATELY

T. 6 S., R. 20 E.

UNSURVEYED.

— CLAIMS LOCATED. —

BLACK OAK	LOCATED	AUG. 14, 1896
ACORN	"	SEPT. 7, "
IMPEARL	"	DEC. 14, 1897
WESTERN	"	MAY 26, 1898
WINSOR	"	JAN. 1, 1902
APEX	"	" " "
LULAR	"	" " 1904

— IMPROVEMENTS. —

IMPEARL LODE

DISCOVERY SHAFT NO. 1 4×6×10 FT — VALUE $ 100.00

BLACK OAK LODE

DISCOVERY SHAFT NO. 1 4×6×10 FT — 100.00

SOFT OF THIS CREDIT IS CREDITED TO THE IMPEARL LODE $50.00

SHAFT NO. 2 4×6×10 FT — 200.00

" " 3 4×6×10 FT — 50.00

" " 4 4×6×30 FT — 250.00

APEX LODE

DISCOVERY SHAFT NO. 1 4×6×10 FT — 100.00

WINSOR LODE

DISCOVERY SHAFT NO. 1 4×6×10 FT — 200.00

SHAFT NO. 2 4×6×10 FT — 100.00

" " 3 4×6×21 FT 2 OR 3 FEET 10 FT × 11 FT — 2500.00

50% OF THIS SHAFT IS CREDITED TO THE LULAR LODE ($500.00)

SHAFT NO. 4 4×6×10 FT — VALUE 50.00

WESTERN LODE

DISCOVERY SHAFT NO. 1 4×6×10 FT — 50.00

SHAFT NO. 2 4×6×10 FT — 100.00

" " 3 4×6×10 FT — 100.00

ACORN LODE

DISCOVERY SHAFT NO. 1 4×6×23 FT; DRIFT 15 FT — 300.00

COST OF THIS SHAFT IS CREDITED TO THE WESTERN LODE ($100.00)

LULAR LODE

DISCOVERY NO. 1 4×6×10 FT — VALUE 100.00

SHAFT NO. 2, 4×6×10 FT — 100.00

Claim Located — see table — 190

Mineral Survey No. 2006

Lot No.
Gila — Land District.

PLAT

OF THE CLAIM OF
JOHN L. BULLIS

KNOWN AS THE
Black Oak, Acorn, Impearl, Apex, Winsor, Western and Lular

IN ARAVAIPA MINING DISTRICT,
GRAHAM COUNTY, ARIZONA
Containing an Area of 131.117 Acres.
Scale of 500 feet to the inch.
Variation 13° E

SURVEYED Jan. 17-19 1905 BY
Philip Contzen
U.S. Deputy Mineral Surveyor.

The Original Field Notes of the Survey of the Mining Claim of John L. Bullis known as the Black Oak, Acorn, Impearl, Apex, Winsor, Western and Lular

from which this plat has been made under my direction, have been examined and approved, and are on file in this Office; and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon said Mining Claim by claimant or his grantors, and that said improvements consist of see table

that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office, Phoenix, Ariz. May 15, 1905

Frank A. Gilpatrick
U.S. Surveyor General for Arizona