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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: J.K.C. AND S. GROUP

ALTERNATE NAMES:

GILA COUNTY MILS NUMBER: 18

LOCATION: TOWNSHIP 4 S RANGE 15 E SECTION 36 QUARTER NE
LATITUDE: N 33DEG 02MIN 48SEC LONGITUDE: W 110DEG 45MIN 29SEC
TOPO MAP NAME: HAYDEN - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:
COPPER
SILVER
GOLD

BIBLIOGRAPHY:
USGS HAYDEN QUAD
ADMMR J.K.C. AND S. GROUP FILE
CLAIMS EXTEND INTO SEC 25, 26 & 35 T4S-R15E
& SEC 31 & 32 T4S-R16E

02/13/91

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& SEC 31 & 32 T4S-R16E

COPY

2227 Budlong,
Los Angeles, California

Mr. E. P. Peers
930 Transamerica Building,
Los Angeles, Calif.

Dear Sir:

Mr. John K. Papassimakes has requested that I write you with regard to the results of my sampling of the J. K. Group of properties near Hayden, Arizona, and also relative to the tonnages available in these properties.

Taking as a basis an average depth of 200 feet, which I believe very conservative, in view of the fact that the Christmas Mine on the same Diabase has not bottomed the Diabase at 500 feet, the tonnage indicated in the Diabase approximates 550 Million tons. The tonnage indicated in the Andesite approximates 250 Million tons. The total therefore approximates 800 million tons.

Allowing one half of this tonnage as commercial grade ore the net available tonnage at the depth mentioned approximates 400 Million tons.

During a period of six months I have taken from time to time, as cuts have been made through the property, some 200 samples which averaged in gold in excess of \$3.00, and in silver 2.6 ozs. and in copper one and one half percent. In checking the aggregate of sampling done from time to time by others I found my totals confirmed by in excess of ten cents, my total average of values being \$6.72. Copper base at that time was 8 cents.

My metallurgical tests as well as qualitative analysis did not disclose any deviation from these values nor any probable difficulties in recovery.

The property is ideally situated with respect to all factors involved in a low cost large operation and geological aspects of this property as well as of the section would indicate, in my opinion possible increasing values with depth and undoubtedly a tonnage far in excess of the tonnages I have estimated.

/s/

HOWARD H. SWENSON

CONSULTING ENGINEER

HHS/leb

COPY

John Daniell
Consulting Mining Engineer
Los Angeles, California

6845 Alta Loma Terrace,
Los Angeles, Calif.
Jan. 25, 1937

Dear Sir:

I made an inspection and examination of the F. K. C. & S. Group of properties in the fall of 1935.

The property is located within a few miles of Winkelman, Arizona, and also Hayden, Arizona, where the milling and smelting works are located and used in connection with large operations of the Ray Mine belonging to the Nevada Consolidated Mining Co.

The J. K. C. & S. group is a very large one, comprising 107 mining claims or more than 2000 acres. A paved highway passes through the property as does the Gila River, a large and unfailing supply of water.

From a geological standpoint the property is interesting and possesses many favorable factors and indications. During the Paleozoic periods vast thicknesses of sedimentary beds had been deposited consisting principally of limestones, shales, sandstones etc. These beds were elevated in a comparatively recent geological period, or during the Tertiary times. During this era eruptive activity was underway and characterized by large intrusives and dikes. Rocks of rhyolite, andesite, granitic and diabasic types are prevalent in the neighborhood. The sedimentaries were elevated as a result of compression due to the earth's tangential strains and also to the upward forces accompanying the intrusives.

After elevation, erosion removed the overlying beds in certain sections, exposing the underlying intrusives and dikes; subsequent movement and pressure in and of the earth's crust caused pronounced shattering and brecciation of the eruptives through which channels solutions traveled.

There is a succession of intrusive belts on the property, principally diabasic in character but at times varying into andesitic class. These belts carry disseminated values in gold, silver and copper.

At the time I visited the property active operations were in progress both productive and of a development character. Many large and fresh exposures of the ore was in evidence and shipments were being made therefrom.

Smelter returns from these shipments indicated 1 1/2 copper content, 2 ounces of silver and \$3.50 in gold per ton. Many copper stalings may be seen on the surface of the property, but below surface exposures copper sulphides are present.

I took many large sized channel samples in the open slopes and gold values

in the assays of the disseminated areas averaged practically \$3.00 per ton. Other sections where vein formations exist averaged higher.

With associated values as shown by the smelter returns, that is, 2 ounces of silver at \$.76 and 10 pounds of copper at 12.60 cents the combined values in the ore are \$5.77 per ton, from which \$5.20 should be recovered with a 90% extraction factor. An ore of this value should prove very commercial and is considerable in excess in value from ores worked by many of the large operating copper mining companies.

(signed) JOHN DANIELL

Sou. Pacific R.R. spur; Gila River; Paved Highway and electric power line all pass directly through this property.

R E P O R T

on the

J. K. C. & S. GROUP

BANNER MINING DISTRICT

GILA COUNTY

ARIZONA

Prepared for

JOHN K. PAPASSIMAKES

December 1930

By

Joe D. Scott

Mining Engineer
(Prof. Nevada School Mines)

LOCATION

The J. K. C. & S. Group is located in the Banner Mining District, in Gila County, Arizona.

The Gila River flows through the southeastern portion of the group and the Christmas branch of the Southern Pacific railroad parallels the river for a distance of four thousand feet through the property. The Globe Highway, lying along the river, passes through the property, and Finney siding is located within two thousand feet of the southwestern boundary of the group.

The American Smelting and Refining Company's smelter is located at Hayden, just five miles by rail from the property.

The Christmas Group joins it on the northeast and the London-Arizona Group on the northwest. Winkelman, the local supply point, is just four miles from the property on the Globe Highway.

PRODUCTION OF THE DISTRICT

Estimates of the production of this district vary so much that it is almost impossible to obtain any authentic record.

Mr. Ross, in his report in Bulletin No. 771, says "550,000 tons of copper ore, 6,500 tons of lead-silver ore, a little zinc, two small shipments of vanadium, and gold ores to the value of tens of thousands of dollars."

The production compiled from reports on the three principal producers would be as follows:

Christmas	1,157,784 tons copper ore
London-Arizona	55,000 tons copper ore
Schneider Mountain	<u>15,000</u> tons copper ore
	1,227,784 Total Copper Production.

The Seventy-nine mine, the Apex and the London-Arizona have produced about 12,000 tons lead ore.

ORE OCCURRENCES

The ore deposits of the group are of two main classes and may be termed: disseminated deposits, in which the disseminations occur through the Andesitic dikes and sills which occur in the southern and central portions of the group and cover an area of approximately three hundred and seventy-five acres.

The copper disseminations are in the form of chalcopyrite, chalcocite and small amounts of native copper, which occurs in small veinlets through the finer grained dikes crossing the southeastern portion of the group.

Disseminations are also found throughout the diabase which covers the greater portion of the north-central and eastern sections of the Group, an area of approximately eight hundred acres. Here disseminations occur in the form of pyrite, chalcocite, chalcopyrite, bornite and small films of covellite. The disseminations being richer adjacent to the dikes and sills of the porphyritic diorite which cut through the formation.

The second class may be called contact metamorphic deposits and occur in the Tornado Limestone which covers the northwestern portion of the Group and portions of J.K. Nos. 88, 12, 14, 18, 17, 20, 22, 24, 51, 9, 8, 53, 36, 35, 34, 33, 32, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 11, 10, and 9. Here the replacement occurs adjacent to dikes of porphyritic diorite and along the contacts between the Tornado and Martin Limestone and the latter and Troy Quartzite which underlies it. This is the class of deposits which has been and is being mined by the Christmas Company up to the present time.

SAMPLING AND PROSPECTING

The ores of this Group are found throughout the dikes and sills of altered andesite which are of Cretaceous age and which have been intruded from a Magma of the same material at great depth. The great diabase sill which extends from the central portion of the Saddle Mountain District westward through the J. K. C. & S., London-Arizona, Apex, Schneider Mountain and Seventy-Nine properties and which shows a thickness of from five hundred to a thousand feet, and covers an area of about eight hundred acres of this group.

A thorough sampling of this sill on the Schneider Mountain Group shows the sill to contain an average copper content of one and five tenths per cent copper. Sampled along the contacts with the porphyritic diorite on the J. K. C. & S. Group, the copper content runs from one and five hundredths per cent to two and twenty-two hundredths per cent, or an average copper content of one and sixty-three hundredths per cent.

The Andesitic sills and dikes sampled along the dikes and across the out crops where they are dissected by the main canyon and the south canyon, shows an average copper content of one and seventy-six hundredths per cent and an average gold and silver value of \$5.60.

The contact metamorphic deposits were not sampled as their area is unobtainable because no development work has been done on them and their outcrops are limited. On the adjoining London-Arizona group their copper content ran from four to eighteen per cent and

and gold and silver values from sixty cents to \$2.40.

Sample sheet attached shows the result of all sampling done on the property and is clearly indicative of what may be expected at depth.

At no place in the district has the lower limit of the diabase been reached and the occurrence of commercial ore in the andesite has never been discovered until you called my attention to it about two months ago.

I consider this discovery the most important of recent years to this district, as it adds an immense tonnage of commercial ore to the assets of the district.

PROSPECTIVE ORE

Since this property is purely in the prospective stage, the ore which can be figured as prospective ore must be estimated from the evidence gained by the sampling of that partially exposed and that which is probable from the history of the adjacent properties.

The andesite body exposed on the surface has an approximate area of three hundred and seventy-five acres, and assuming a depth of two hundred feet, this would give a tonnage of

$\frac{43560 \times 375 \times 200}{13} = 235,923,077$ tons. Assuming one fourth of this

area to be commercial ore, would give a tonnage of 58,980,769 tons, with an average copper content of at least one and five tenths per cent and an average gold and silver value of \$5.60.

The diabase body occupies an area of approximately eight hundred acres and has a thickness of from four hundred to one thousand feet. But taking the average depth as only two hundred feet to be

conservative, this would give a tonnage of $\frac{43,560 \times 800 \times 200}{13} = 536,123,077$

tons. Taking one tenth of this body as ore, the tonnage would be 53,612,307 tons. This with an average copper content of one and five tenths per cent.

I am not considering the contact metamorphic deposits because as already stated, there is no way of estimating their size or the average value of the ore; altho these deposits on the Christmas and London-Arizona Groups have produced, so far, all the ore mined on both properties.

Without considering the contact metamorphic deposits as probable ore, this would give a total prospective ore supply of 58,980,769 tons plus 53,612,307 tons or 112,593,076 tons.

CONCLUSIONS

In summing up the principal features of the J. K. C. & S. Group, a number of factors must be considered.

First, the immense estimated tonnage of probable ore which is only a portion of the tonnage indicated by the outcrops of the mineralized diabase and andesite on the property.

Second, the disseminations of copper values throughout the greater portion of the diabase are clearly shown by the sampling done on various outcrops on this property and the complete sampling of the same sill on the London-Arizona and Schneider Mountain Groups.

Third, the continuity of the diabase is clearly shown, both on this property and the adjoining groups.

Fourth, the altered Andesite body is clearly traceable and samples taken over its surface prove its general surface mineralization.

Fifth, the mineralization in the andesite is clearly of two classes - deposition and magmatic segregation - proving its deep-seated origin.

Sixth, the presence of large contact metamorphic deposits in the limestones of adjacent groups, under exactly the same geological conditions, makes it more than probable that such deposits exist on this Group.

These factors all lead to the conclusion that the investment required for proving the ore on this Group is more than justified by the showings on the property.

RECOMMENDATIONS

I would recommend that the eighty acres of the Andesite be immediately drilled in two acre blocks to a depth of four hundred feet. This block to include all of the J. K., J. K. 4, J. K. 5 and J. K. 85 claims.

This can be done with fifty four drill holes sunk in each corner of each two acre block. The total cost of this work would be \$43,200. After this block is proven, the erection of a ten thousand ton flotation plant similar to that of the Nevada Consolidated Company at Hayden will be justified. This, together with the erection of a power plant, camp, and tramways, will cost \$1,500 per ton unit, and that expenditure will be fully justified by the ore reserve which will be developed.

Respectfully submitted,

/s/ J. D. Scott

Mining Engineer

ASSAY SHEET

J. K. C. & S. GROUP

		<u>Oz. Au</u>	<u>Oz. Ag</u>	<u>% Cu</u>	<u>Total Value</u>
No. 1	Andesite dike 10 ft. J.K.	.42	1.02	1.98	\$ 11.56
No. 2	Andesite dike 100 ft. J.K.	.26	.95	1.65	8.81
No. 3	Andesite dike J.K. 85- 10 ft.	.34	.80	1.20	8.22
No. 4	Andesite sill J.K. 4 Porphyry contact	.22	.95	1.05	6.60
No. 5	Andesite dike J.K. 25	.26	.82	1.52	7.02
No. 6	Andesite sill J.K. 25	.20	.95	1.02	5.95
No. 6	Andesite sill J.K. 27	.23	.82	1.25	6.29
No. 7	Andesite dike J.K. 26	.44	.64	1.95	11.35
No. 8	Andesite sills J.K. 81	.30	.62	1.82	9.40
No. 9	Andesite dike J.K. 79	.18	.37	1.20	5.92
No.10	Andesite dike J.K. 85	.45	.60	1.82	11.58
No.11	Andesite sill J.K. 57	.18	.30	1.05	5.28
No.12	Andesite sill J.K. 7	.21	.18	1.05	5.96
No.13	Andesite sill J.K. 54	.15	.20	.85	4.98
No.14	Andesite sill J.K. 38	.16	.35	.90	5.10
No.15	Andesite dike J.K. 70	.14	.25	1.05	4.65
No.16	Andesite dike J.K. 71	.15	.20	.92	4.92
No.17	Andesite dike J.K. 73	.15	.28	.95	5.18
No.18	Andesite dike J.K. 3	.14	.20	1.02	4.62
No.19	Andesite dike J.K. 2	.15	.25	.83	4.42
No.20	Andesite dike J.K. 32	.16	.15	.90	4.38
No.21	Andesite sill J.K. 84	.15	.21	1.05	4.86

		<u>Oz. Au</u>	<u>Oz. Ag</u>	<u>% Cu</u>	<u>Total Value</u>
No.22	Andesite sill J.K. 86	.30	Tr	1.08	\$ 7.78
No.23	300 ft. Andesite sill J.K. 26 and 27	.15	.11	1.02	4.90
No.24	Diorite Porphyry dike J.K. 27	Tr	Tr	Tr	---
No.25	Diorite Porphyry dike J.K. 83	Tr	Tr	Tr	---
No.26	Gypsum outcrop J.K. 7	.05	.10	Tr	.13
No.27	Iron oxide in lime J.K. 8	.22	.85	Tr	4.64
No.28	Four foot face location J.K.	.38	.70	1.63	10.68
No.29	Andesite dike J.K. 87	.15	.06	1.02	4.90
No.30	Olavene J.K. 75 and 76	.08	.07	Tr	.19
No.31	Diorite Porphyry J.K. 75	Tr	Tr	Tr	---
No.32	Andesite dike J.K. 27	.21	Tr	1.05	6.04
No.33	Contact Andesite J.K. 85 & 5	.24	.17	.95	6.46
No.34	Four foot location J.K. 28	.25	.60	.90	6.67
No.35	J.K. No. 4 Andesite dike	.36	Tr	1.20	9.22
No.36	Andesite J.K. 4	.315	.25	1.05	7.98
No.37	Diabase general sample	.06	.18	1.42	3.72
No.38	Diabase contact J.K. 3	Tr	Tr	1.58	3.91
No.39	Diabase General average contact	.05	.10	1.39	3.63
No.40	Diabase Lime contact J.K. 9, 10, 11	Tr	Tr	1.52	3.90

John Daniell
Consulting Mining Engineer
Los Angeles, California

6845 Alta Loma Terrace,
Los Angeles, Calif.
Jan. 25, 1937

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The J. K. C. & S. group is a very large one, comprising 107 mining claims or more than 2000 acres. A paved highway passes through the property as does the Gila River, a large and unfailing supply of water.

From a geological standpoint the property is interesting and possesses many favorable factors and indications. During the Paleozoic periods vast thicknesses of sedimentary beds had been deposited consisting principally of limestone, shales, sandstone etc. These beds were elevated in a comparatively recent geological period, or during the Tertiary times. During this era eruptive activity was underway and characterized by large intrusives and dikes. Rocks of rhyolite, andesite, granitic and diabasic types are prevalent in the neighborhood. The sedimentaries were elevated as a result of compression due to the earth's tangential strains and also to the upward forces accompanying the intrusives.

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There is a succession of intrusive belts on the property, principally diabasic in character but at times verging into andesitic class. These belts carry disseminated values in gold, silver and copper.

At the time I visited the property active operations were in progress both productive and of a development character. Many large and fresh exposures of the ore was in evidence and shipments were being made therefrom.

Smelter returns from these shipments indicated 1% copper content, 2 ounces of silver and \$3.50 in gold per ton. Many copper stainings may be seen on the surface of the property, but below surface exposures copper sulphides are present.

I took many large sized channel samples in the open stopes and gold values

in the assays of the disseminated areas averaged practically \$3.00 per ton. Other sections where vein formations exist averaged higher.

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(signed) JOHN DANIELL

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