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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: PALO VERDE GROUP

ALTERNATE NAMES:
- MS 2568 ORION
- NORTH STAR
- JANE
- BIG AND LITTLE DIPPER

PINAL COUNTY MILS NUMBER: 147B

LOCATION: TOWNSHIP 3 S RANGE 13 E SECTION 14 QUARTER S2
LATITUDE: N 33DEG 10MIN 07SEC LONGITUDE: W 110DEG 59MIN 30SEC
TOPO MAP NAME: HOT TAMALE PEAK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- COPPER SULFIDE
- COPPER OXIDE
- GOLD
- SILVER

BIBLIOGRAPHY:
- ADMMR PALO VERDE GROUP FILE
- BLM MINING DISTRICT SHEET 634

REPORT

ON

PALO VERDE GROUP

NEAR KELVIN PINAL COUNTY ARIZONA.

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The Palo Verde group of mining claims is located in the Riverside mining district, Pinal county, State of Arizona about one mile south of the Ray Junction station on the Arizona Eastern R.R. on the west side of the Gila River at an elevation of about 2000 feet above sea level.

The group consists of twenty claims and fractions, viz;- Palo Verde I; Palo Verde II, Palo Verde III, Palo Verde IV, Palo Verde Fraction, Jane, Jane Fraction, North Star, North Star Fraction, New Hope, Sure Thing, New Moon, New Moon Fraction, Full Moon, First Quarter, Last Quarter, Orion, Little Dipper, Big Dipper and Morning Star.

The ground covered by the group is mountainous being a part of the Tortilla Mt., range. Though rough the country is not unusually steep. The Gila River, flowing on the east, later swinging around to the north and then west and encircling the neighboring properties, has a very steep bank along the Palo Verde IV claim. Directly west from the river the country rises rapidly, affording excellent tunnel sites on the northern claims.

The property is easily reached over trails connecting with good wagon roads. The wagon roads of the adjoining property, the Kelvin Sultana, can easily be extended across the Palo Verde I and II to the Jane claim.

The proximity of the Gila River insures abundant water for all purposes. As in all other parts of the surrounding country there is no timber of any kind on the property.

The principal rock masses are granite and Diabase. Small areas of limestone occur on claims at the southern end of the group. Acid porphyry dikes, running both east and west cut both the granite and the diabase.

The granite is probably the oldest rock met with. It is a fine grained, light colored granite consisting chiefly of orthoclase, quartz and biotite. In texture it varies from moderately fine grained to coarsely porphyritic, the individual feldspar crystals frequently beeing an inch square. This granite is probably a part of the great granitic mass underlying the entire district and by Dr. Weed thought to be the origin of the Ray Consolidated Copper Co., ore deposits.

The diabase is intrusive, somewhat irregular in its distribution. In the immediate vicinity it occurs chiefly as large dikes from three to eight hundred feet wide having a general north and south direction. Narrower dikes and sheets are met in the underground workings in neighboring mines. The diabase in fine grained, greenish-black and very compact. By reason of two planes of jointing it breaks readily in mining operations. On weathering it yields a dark colored, rich soil. The most extensive mineralization of the district appears to be in the diabase.

The limestone is undoubtedly a remnant of a series that has been erroded. It is highly altered and in some instances there are extensive developments of contact metamorphic minerals such as garnet, tremolite etc.

The acid porphyry dikes seem to have little or no connection with the mineralization. There are variations of texture in any given dike as well as between individual dikes. They are all of later origin that the diabase intrusion. In general they strike east and west with a steep dip to the south. No contact meatamorphic features are developed along the dikes.

The ore occurs in veins which strike east and west, cutting both diabase and granite. The dip is to the south and is fairly constant. Usually the strike will vary when the vein passes from one rock mass to another but within 50-ft it will resume its original course. The veins are well defined, simple fissures, that show widths from two to seven feet on the surface. In the diabase the zone of oxidation does not extend very deep, sulphide ores being encountered near the surface. In adjoining properties oxidized ore has been found in the granite at a depth of 300-ft. In the unoxidized portions of the vein, iron pyrite and chalcopyrite are the principal minerals.

The principal metal in the ores is copper. Gold and silver occur in lesser amounts. Excepting on the Jane vein the gold content is low. Here the vein is more siliceous and carries higher gold values. In general the silver content is around two ounces. The copper content varies from two to twenty-four percent.

The carbonate ores in the diabase within easy reach by easy mining methods should be immensely profitable at the prevailing price of copper. Leasers working at shallow depths on the adjoining properties have shipped considerable carbonate ore during the past year. The surface ores on the Little Dipper carry high silver values as well as copper.

The most northerly vein of the group which crosses the Palo Verde I and IV is one of the strongest in the district. It can be traced westward into the principal mineralized portion of the Ray Arizona ground. On the surface of the Palo Verde I it has a width of two feet and assays over 7% copper. Farther west the vein becomes more siliceous and on the Ray Arizona ground carries mostly gold and silver.

The Palo Verde II vein shows some ore as high as 20% copper on one cropping. This vein can be opened up most easily and to best advantage from the east end.

The strongest and most promising vein of the group is the Jane vein. To the east on this same vein on adjoining ground at a point about two hundred feet lower some excellent ore has been found. Towards the west the vein becomes more siliceous as it gets nearer the granite and shows an increase in gold values. At depth this ought to produce some excellent ore. The outcrop near the centre of the claim is about seven feet wide.

The North Star vein is a strong vein exposed prominently above the discovery work on the North Star claim. It is siliceous at the western end but carries good values in copper. The extention is covered by the North Star Fraction.

The Full Moon covers an area of limestone at its contact with the granite. There is abundant evidence of metamorphic action along this contact with the development of characteristic minerals. The heavy iron capping may indicate correspondingly important bodies of copper ore below.

The Little Dipper vein has produced some very excellent ore at shallow depths. Almo t no development work has been done on a fine streak of very high grade ore occuring at the west end of the claim. The Last Quarter claim covers the extention of this vein

The development work on the Palo Verde group is not very extensive. There is nothing more pretentious than a twenty-foot shaft. However the indications of copper at and near the surface are very abundant. The property has some neighbors that are more extensively developed. On the north is the property of the Kelvin Sultana Copper Company, opened up to a depth of five hundred feet. On the 500-ft level a crosscut has been started southward towards the strongest vein on their property which is about five hundred feet north of the most northerly vein of the Palo Verde group. On the west is the property of the Ray Arizona Copper Company. The site on which the Arizona Hercules Copper Company will construct its 2000 ton concentrator is just across the river.

While the extraction of high grade oxidized ores from shallow workings is permissible under the existing high prices of copper the serious effort towards the development of the property should be directed towards deeper exploration. As has been stated before the property offers excellent tunnel sites and advantage should be taken of them in opening up the property. The natural conditions as well as the location of the property favor economical operating and the costs should be low.

Kelvin, Arizona.
October 25, 1916.

ASSAYS PALO VERDE GROUP.

(1) Jane, outcrop	1.3 oz silver	.72 oz gold	6.61 % Cu.
(2) Jane, discovery work,	.5	.12	6.57
(3) Jane, lower outcrop,			10.27
(4) Palo Verde I location work,			9.70
(5) " " east slope,			12.86
(6) Palo Verde II Loc. Work,			9.50
(7) Palo Verde Frac.,			15.74
(8) North Star,			21.31
(9) Little Dipper,	5.0		3.65
(10) Palo Verde III			15.55