



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: RAY KELVIN

ALTERNATE NAMES:
LAST CHANCE
MARBLE KING

PINAL COUNTY MILS NUMBER: 161

LOCATION: TOWNSHIP 3 S RANGE 13 E SECTION 1 QUARTER C
LATITUDE: N 33DEG 08MIN 15SEC LONGITUDE: W 111DEG 00MIN 30SEC
TOPO MAP NAME: TEAPOT MOUNTAIN - 7.5 MIN

CURRENT STATUS: DEVEL DEPOSIT

COMMODITY:
LEAD
SILVER
COPPER
GOLD
ASBESTOS

BIBLIOGRAPHY:
ADMMR RAY KELVIN CO. FILE
AZ. MINING JRNL. APRIL 1918, P. 20, JUNE 1918
P. 7
BLM MINING DISTRICT SHEET 656
ADMMR FILES-ADOT MAP 1949, P. 3

R E P O R T

of

RAY-KELVIN MINING COMPANY

by

ARTHUR L. KELLEY

Mining Engineer.

Inv. Co. No.

937

Filed April 18-1918

SUMMARY OF FACTS

Contained in the Following Pages



First and foremost the property of the RAY KELVIN COMPANY contains those surface features which have long been recognized as characteristic of underlying ore bodies, namely; croppings of lead silver ore on contact between schist and limestone; presence of copper, in secondary form, within zones of faulting, contact and replacement, showing distinct evidence of leaching and every phase of metamorphism, or alteration of which these rocks are capable of undergoing; beds of serpentinous limestone containing asbestos and strata high in hydrocarbon, a powerful agent of mineral precipitation.

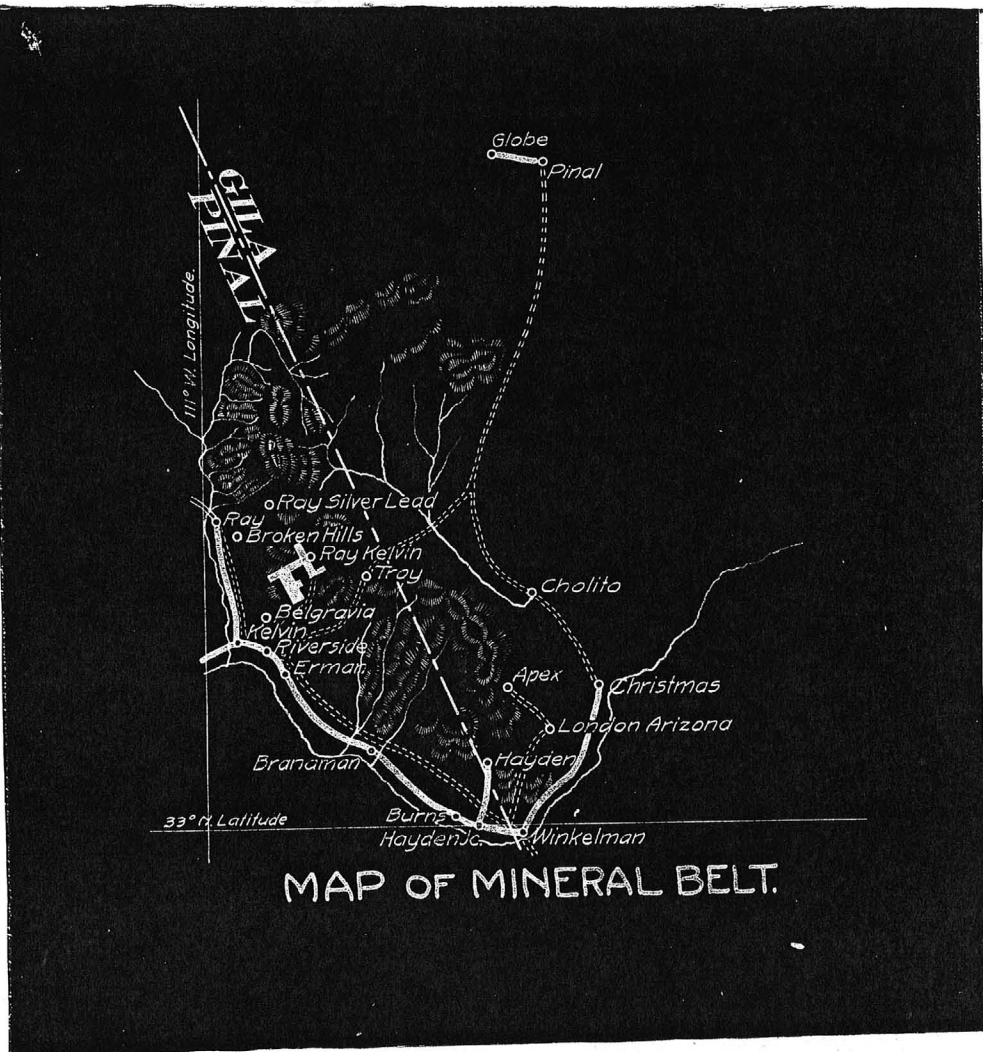
Second: It will be noticed that this property is most favorably situated in the heart of a well recognized and developed mineral belt with wagon road communication, water, favorable mill site and but a few miles from a very large smelter and of sufficient acreage to admit of unlimited expansion.

It may be stated that such properties, so favorably situated are very rare.

We have spent much time and money satisfying ourselves as to the merits of this property.

Third: It will be the policy of this company to do all work where the showing is best, to make no surface improvements other than those warranted by ore developed, to establish a leasing system in order to

hasten and cheapen development and to cautiously but surely
expand.



(Place this under the drawing)

Birdseye View of Mineral Belt showing its vast extent and the location of the Ray Kelvin property with reference to the large producers and its proximity to the rail road at Kelvin, the concentrating plant at Belgravia and the smelter at Hayden.

Review of District:

The Ray Consolidated located at Ray is producing 300,000 tons of copper ore per month.

The Ray Hercules located at Ray is preparing for an enormous production by erecting a _____ ton concentrating plant at Belgravia.

Ray Silver Lead is shipping 700 tons of lead-silver ore per month.

Broken Hills are developing on gold lead and silver ore (shipping).

Troy is developing on copper ore.

Chilito is leasing on copper ore.

Apax is producing hundreds of tons of gold ore per month.

London, Arizona, is producing 200 tons of copper ore per month.

Christmas is producing 7500 tons of copper ore per month.

The U. S. Vanadium is developing on vanadium ore.

The Ray-Kelvin adjoins the Ray-Silver Lead on the north, Troy on the east. The North East is heavily capped by quartzite, the South and South West by recent river gravels.

Geology: The map showing the geological detail along the great fault is self explanatory with respect to the position of the various formations and the occurrence of ore and iron cappings along the fault and contact, however, some explanation is necessary as to the physical character of these different formations.

The diorite is the principal intrusive and is only exposed in an unaltered condition in a few places where erosion has carried away its chistos exterior. The diorite schist is quite prevalent and is composed almost entirely of biolite mica.

The porphyry is very soft, free from grit and is colored white and faint blue on the surface and red or pink at a slight depth. It is traceable from the great fault to the Marble King group where it borders a large exposure of hornblend andesite.

The porphyry exposed on the Last Chance Claim in the Elder group as an intrusive dyke is coarse grained and acid being a quartz porphyry nearly approaching granite. The basic varieties are also visable in that locality but no where, so thoroughly decomposed as along the great fault.

The siliceous dyke, lying within the fault, is really a breccia, composed of quartzite, quartz and a feldspathic mineral with a very small basic mineral. It is badly crushed through and its entire length.

Of the sedimentaries the overlying limestone is the youngest and rests at varying angles upon the tops of all the ridge West of the fault. It is of a gray color, contains fossils and shows no evidence of being of economical importance.

The older strata, shown in the cross sections A - B and C-D, resting at a high angle, are free from / fossils, and are colored yellow, red and black, varying in density and composition from chert to soft crumbly calcite and iron oxide.

Those strata resting on the quartzite and schist are the oldest of the lime stone series and are altered to chert, serpentine and marble, they also contain large cavities and veins or zones of a porous yellow silicate.

The quartzite underlies the entire sedimentary series and appears in a series of "step faults", beginning a few hundred feet east of the asbestos beds and extending to the top of Troy Mountain.

Attention is called to its dip at the fault in section C-D where, owing to its density it may well be considered as forming a natural spillway for any solutions carrying leached minerals from deposits in the overlying formations east of the fault.

ORES ON THE CONTINENTAL GROUP

Copper carbonates, as stains, have been found in every formation and in many places on the surface as well as in the prospect shafts on the lead silver ore. It has been found "in place" in the porphyry, at the point marked on the map, in sufficient quantity and of such a variety, being chalcocite, azurite and chalcophyrite, as to mark this locality as being one, most favorable to the accumulation of large bodies.

The black mark on section C-D indicates a zone of crumbly iron and calcite showing some free gold and being a zone from which copper has been leached. We may reasonably expect to obtain copper in commercial quantities along the great fault.

The lead silver ore occurs on the surface as unattached nuggets of argentiferous galena, large quantities were picked up while clearing for a prospect shaft. Beneath the surface it occurs in veins, but may be expected to form in bodies between the lime and quartzite as it does at the Ray Silver lead.

The asbestos is exposed in patches over a large area and there is no reason why they should not develop into deposits of commercial value.

Ores on the Last Chance Group.

Tunnels No. 2 and No. 3 are in iron throughout their entire extent. The iron containing copper carbonates and chalcocite. From the drawing marked "elevation" it will be noticed that these tunnels terminate in an incline,

indicating that the porphyry is probably dome shape and that by extending tunnel No. 1 it will soon interest the zone and at a point just beneath the garnet cropping shown on the map of the claims at that depth copper sulphide will probably appear. It would not be assuming too much to connect No. 2 and No. 3 with a large black line, indicating that those strata lying between are replaced by the iron capping.

Experience the world over points to the occurrence of iron and garnet as being the best of indications for copper deposits and as the iron here contains considerable unleached copper there can be no question as to the development of this property into a producing copper mine.

The Marble King Group also contains large croppings of iron and garnet and there is no question but that it will yield.

There is conclusive evidence that the sulphide zone is near the surface on the Ray-Kelvin property.

(Signed) Arthur L. Kelley

See: Arizona Mining Journal April 1918 p. 20 ;
June, 1918, p. 7;

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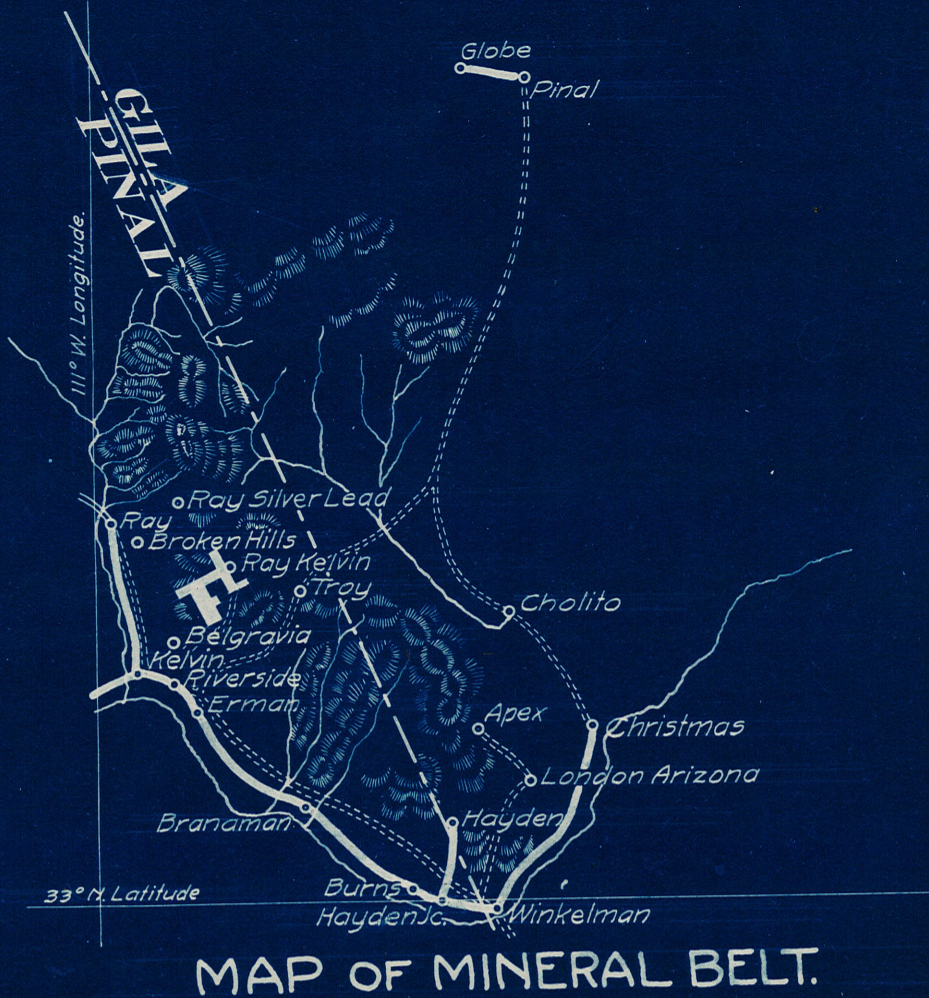
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