



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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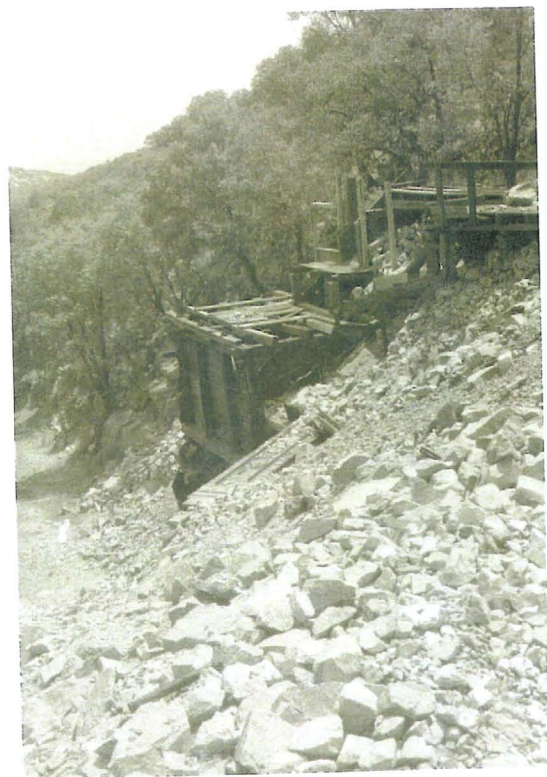
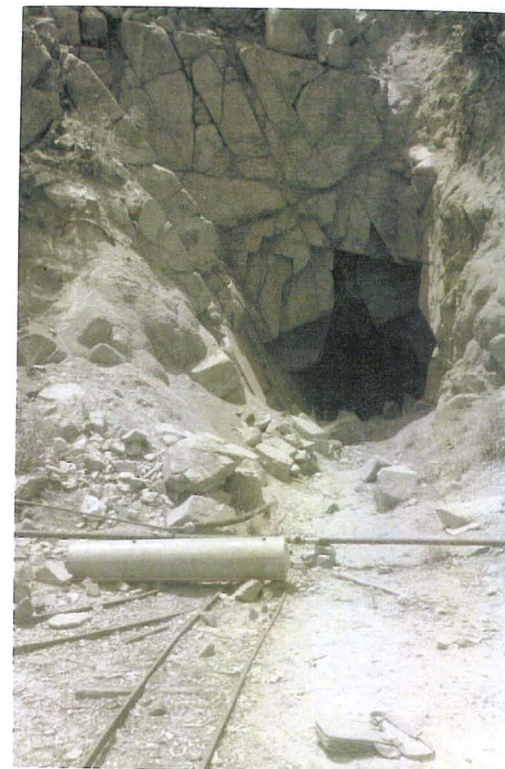
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HEINRICHS GEOEXPLORATION COMPANY
MINERAL ENGINEERING CONSULTANTS AND CONTRACTORS
GEOPHYSICAL, GEOLOGICAL AND ECONOMIC APPRAISALS
TUCSON, ARIZONA

WALTER E. HEINRICHS, JR.
E. GROVER HEINRICHS

PHONE: MAIN 2-4202
806-808 WEST GRANT ROAD
MAIL: P. O. BOX 5671

July 7, 1960

Mr. John A. Willey
402 T. W. Patterson Building
Fresno 21, California

Dear Mr. Willey:

Enclosed is our report for the appraisal of your patented claims, Line Boy, Joe Wheeler, Ivanhoe, Winnebago Chief and Golden Granite, located in Santa Cruz County, Arizona.

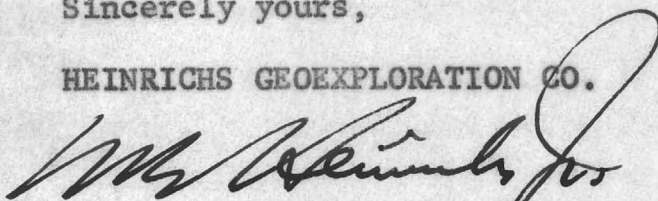
If you have any further questions after reading the report, please let us know and we will endeavor to answer them.

The three patent plats you sent us are also enclosed, as well as a topographic map of the area with some pertinent inserts, snapshots of the Line Boy and our final billing.

It was a pleasure to be of service to you on this project and if we can be of any further assistance, either in an advisory capacity or in direct negotiation in your behalf with any possible buyer, please let us know.

Sincerely yours,

HEINRICHS GEOEXPLORATION CO.



Walter E. Heinrichs, Jr.
President & General Manager

WEH:jh

Encl: 9

ECONOMIC APPRAISAL

of the

PATENTED CLAIMS: LINE BOY, GOLDEN GRANITE

JOE WHEELER, IVANHOE AND WINNEBAGO CHIEF

for

JOHN A. WILLEY

July 1960

by

**HEINRICHS GEOEXPLORATION COMPANY
P. O. Box 5671 Tucson, Arizona**

At the request of Mr. John A. Willey of Fresno, California, a reconnaissance inspection was made on 30 June 1960 and 1 July 1960 over five patented mining claims in the Duquesne Mining District, Santa Cruz County, Arizona. The claims are the Line Boy, Golden Granite, Joe Wheeler, Ivanhoe and Winnebago Chief, located on unsubdivided land in T24S, R16E, Gila and Salt River Base & Meridian.

CONCLUSIONS

The claims, which are in two separate areas, have some economic value. If it is desired to sell them or enter into any other type of financial agreement such as lease-option, royalty, etc. now appears to be a possibly propitious time.

Although the land has some potential economic value, as discussed later, the claims do not appear worthy of the expenditure of time or money for further mineral exploration with the possible exception of the Line Boy, which is a doubtful exception. There are, however, at least three possibilities that could tend to make the ground of value. One is real estate value. Since it is patented ground it can be used as homesites by persons desiring a hideaway type place in the hills, or conceivably as a ranch headquarters if it were possible to obtain control of sufficient grazing leases to go with it. (Promoters have and are advertising remotely situated land parcels in the southwest in

such a way as to make them sound attractive to people not familiar with the region and the conditions that prevail).

Another possible value concerns four of the claims but probably excluding the Line Boy. They adjoin well mineralized ground and mines that have had some good production. Anyone interested in acquiring and working the latter and having need of adjoining ground for any such operating reasons as dump space, mill site, tailings pond, water wells, housing, etc., might wish to purchase or otherwise control the Joe Wheeler, Ivanhoe, Winnebago Chief and Golden Granite. Under present day methods of exploration and operation, companies tend, by a combination of staking open ground and dealing for valid claims, to get control of quite large areas.

A third possibility could be the presence of some of the rare or exotic minerals. The intrusive rocks on which the claims are located are definitely mineralized and could conceivably carry some of the rarer strategic elements that are scarce and becoming in great demand. This is purely a speculative thought but a definite possibility. Union Carbide's Nuclear Division has been staking claims in the area, with a Mr. J. E. Morgan as representative, and they may be one of the parties who have contacted you. We saw several new corner and end monuments and one location monument with a notice for the Am #5 lode claim located 19 June 1960. Also there is a newly bulldozed road in

the area and we could hear the dozer still at work. Some blasting was also heard. The enclosed topographic map shows the approximate area where we saw new monuments, etc. Some of the monuments appear to be on the Winnebago Chief and the Ivanhoe, with the claims going apparently south and west of there. This activity lends some credence to the speculation of an occurrence of some rare mineral. A check at the Santa Cruz County Courthouse on 1 July 1960 revealed that the claim location notices had not yet been filed.

RECOMMENDATIONS

Land that is owned outright is very scarce in the mountains of Arizona, and the taxes likely very nominal if you wish to keep the land for sentimental or speculative purposes. If you wish to sell the property this may be a very auspicious time to do so because of the current activity in the area. Indications are that the claims will never produce economic amounts of mineral of the copper, lead, zinc, molybdenum, precious metals categories, with the possible exception of the Line Boy. It is impossible to say how much the claims are worth but naturally you will want to make the best deal possible and this will depend somewhat on how much you are able to learn about why the property is sought and the intended use for it. A minimum price for a patented mining claim, which is on the order of 20 acres, should be *at least* \$1,000.00 and if there has been some production of mineral, as

there was on the Line Boy, it should be ^{at least} several times that amount.

GEOLOGIC ENVIRONMENT AND POSSIBILITIES

The group of claims comprising the Joe Wheeler, Ivanhoe, Winnebago Chief and Golden Granite lie just west of the limestone and sedimentary contact that has made some good producing mines. The nearest ones to the claims are the Belmont and the Lead King. The claims themselves are on granitic rocks of quartz monzonite and biotite granite or diorite that is quite fractured and contains mineralized veins and seams. These appear to be rather minor as there are not sufficient structural or stratigraphic localizers. However, because of their proximity to the contact they cannot be entirely ruled out for having some possible potential.

The Line Boy appears to be on a contact of an intrusive into an intrusive with some structural control and faulting. Alteration is very marked over a considerable area and is largely sericitization. The country rock again is a biotite quartz monzonite, almost a quartz grano-diorite in places, but with some aplitic facies also. On the dump around the shaft with the old headframe, some good samples of copper and molybdenite ore were found. Some of this ore also was contained in a magnetite gangue. About 200 feet west is another shaft and a tunnel which appears to have had ore production, but the dump shows little other than a heavy concentration of pyrite. A little copper sulfide and oxide was seen, and the creek bed for a considerable distance

is stained blue and green due to leaching of copper from the dump. The mine does not appear to have been developed to much depth and there could likely be at least some small tonnage remaining. However, the economics at present mitigate against any attempts to try to work the mine without first proving up considerable tonnage. A long road haul and then a long rail haul would be involved in getting ore to the nearest custom mill and smelter and a small operation could not hope to survive against this cost. Careful geologic mapping, tracing the magnetite ore bearing zone with a hand magnetometer from the surface, and some diamond drilling might find ore reserves sufficient to warrant re-opening the mine, but it appears to be a costly risk in the light of the possible tonnage that might be found. It might, however, be a worthwhile project for strictly venture capital such as tax money.

SCOPE AND PROCEDURE

On 30 June 1960, a geologist and a trained field assistant, employees of Heinrichs Geoexploration Company of Tucson, Arizona, went from Tucson to Duquesne and then to the Line Boy which was found without difficulty. An old trail goes to a point across the gulch opposite the tunnel. This old road showed evidence of recent use. After leaving the Line Boy a stop was made for a few minutes at the Benton tunnel and dump which is a short distance off the trail road. Rock type and mineralization observed there

was similar to that at the Line Boy. The following day, 1 July, the other four claims were inspected and the crew returned to Tucson in the evening. No trail was found into these claims but the U. S. Mineral Monument and some of the Patent Corners were located so as to be sure of being on the right ground.

Rock types were noted, and dumps, shafts and tunnels studied briefly. Adjoining mines were looked at briefly for comparisons. The Belmont mine just to the east has an entirely different rock and mineral association. The Santo Niño group at some distance to the west, which has had considerable production, appears to have associations similar to the Line Boy.

The Line Boy is approximately two miles south of the other group and it was in the course of getting around between them that several new monuments and other activity of the Union Carbide Company was noted.



Read and Approved by:

Walter E. Heinrichs, Jr.
Walter E. Heinrichs, Jr., Pres.
Heinrichs Geoexploration Company
P. O. Box 5671, Tucson, Arizona

July 8, 1960

Respectfully submitted,

John W. Marlatt
John W. Marlatt, Geologist

Chris S. Ludwig
Chris S. Ludwig, Field Assistant

HEINRICH'S GEOEXPLORATION COMPANY
MINERAL ENGINEERING CONSULTANTS AND CONTRACTORS
GEOPHYSICAL, GEOLOGICAL AND ECONOMIC APPRAISALS
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WALTER E. HEINRICH, JR.
E. GROVER HEINRICH

PHONE: MAIN 2-4202
806-808 WEST GRANT ROAD
MAIL: P. O. BOX 5671

July 7, 1960

S T A T E M E N T

To: Mr. John A. Willey
402 T. W. Patterson Building
Fresno 21, California

Re: Economic Appraisal of the Patented Claims: Line Boy,
Golden Granite, Joe Wheeler, Ivanhoe and Winnebago Chief.
Santa Cruz County, Arizona. July 1960

Services: 2 men, (J.W.M. & C. S. L.)
1 3/4 days @ \$100.00/day-----\$175.00

Expenses:
1 Vehicle--@ \$7.50/day-----
237 miles @ \$0.10/mile----- 38.70

Living expenses:----- 20.10

Report ----- 20.00

\$253.80

Received: 6/30/60----- 200.00

Balance due: ----- \$53.80

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS



Claim locations sketched in in red with locations approximately
X where new claim monuments were seen.
--- Newly bulldozed road.
Apparent area of interest to Union Carbide Co. circled in blu

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

DUQUESNE QUADRANGLE
ARIZONA-SANTA CRUZ CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 LOCHIEL 15' QUADRANGLE



M E X I C O

17'30"

— 17'30

100 000
FEET

31°15' 110°45'

870 000 FEET

SCALE 1:24000

1 MIL

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 25 FEET
DATUM IS MEAN SEA LEVEL

Mapped by the Army Map Service
Published for civil use for the Geological Survey

Control by USC&GS, USGS, and USCE

Topography from aerial photographs by stereoplanigraph methods
Aerial photographs taken 1946. Field check 1948

Polyconic projection. 1927 North American datum
10,000-foot grid based on Arizona coordinate system,
central zone



No distinction is made between barns, dwellings, commercial and industrial buildings

TRUE NORTH
MAGNETIC NORTH
13°

APPROXIMATE MEAN DECLINATION, 1948

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

Heavy-duty  4 LANE | 6 LANE Light-duty 

Medium-duty 4 LANE | 6 LANE Unimproved dirt

 U. S. Route State Route

DUQUESNE, ARIZ.
SW/4 LOCHIEL 15' QUADRANGLE
N3115-W11037.5/7.5

1948