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Pima

County

Arizona

Sec. 13

T. 17S

R. 12E

5274.06'

S 89° 55' W

Helmet Peak - Sahuarita Mt.

HAMMERMILL
PAPER
MADE IN U.S.A.

TWIN
GUILLES
ROAD

WARING

5282.64'

S 89° 57' W

600 Scale

Pima County Arizona
Sec. 12 T. 17S R. 12E
5273.40' N89°58'W

HARRY EMMETT TURNER
pat. 11/9/56

2

320 Acres

TWIN BUTTES ROAD

Helmet Peak - Sahuarita Rd.

5274.06' S89°55'W

600 Scale

Pima County Arizona
Sec. 19 T. 17S R. 13E
N 89° 47' E

Assessor's Record Map
Book 68

Lot 1
37.83 AC.

Lot 2
37.88 AC

Lot 3
37.93 AC

Lot 4
37.98 AC

HAMMERMILL
BOND
MADE IN U.S.A.

TWIN
OUTLET
ROAD

Maynard & Alice Gayler

N 89° 51' E

600 Scale

July 11, 1960

Mr. Arthur Goldbaum
Attorney at Law
505 Arizona Land Title Building
Tucson, Arizona

Dear Mr. Goldbaum:

Enclosed are the original and ~~one copy~~ of our report on the appraisal of your property in the S $\frac{1}{2}$ of Section 12, the N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 13, T17S, R12E and the S $\frac{1}{2}$ of Section 19, T17S, R13E, Pima County Arizona. We were able to get on with this job sooner than we had anticipated.

We trust the report will be of value to you and help to clarify your position. No mention was made in the report that we are equipped, experienced and available to conduct detailed geophysical examination studies of the subsurface. Our feeling was that since you do not have the mineral claims to the ground you would not wish to go to this expense, but we will gladly discuss methods and costs with you if you so desire.

It has been a pleasure to be of service to you and if you have any further questions regarding the matter after reading the report, or if we can be of any other assistance, please feel free to call us.

Our billing is enclosed.

Very truly yours,

Walter E. Heinrichs, Jr.

WEH:jh
Encl: 3

MINERAL POTENTIAL

of

S $\frac{1}{2}$ SECTION 12, N $\frac{1}{2}$ N $\frac{1}{2}$ SECTION 13, R12E, T17S

and

S $\frac{1}{2}$ SECTION 19, R13E, T17S, G&SRB&M

Pima County, Arizona

for

Arthur Goldbaum

July 1960

by

**HEINRICHS GEOEXPLORATION COMPANY
P. O. BOX 5671 TUCSON, ARIZONA**

INTRODUCTION

At the request of Mr. Arthur Goldbaum on 5 July 1960, Heinrichs Geoexploration Company of Tucson, Arizona undertook to evaluate certain parcels of land as to the possible adverse effects mining claims and mineral exploration activities could have on said land if it were to be subdivided for sale as home sites. These lands include the S $\frac{1}{2}$ of Section 12, the N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 13, both in Township 17S, Range 12E and S $\frac{1}{2}$ of Section 19, Township 17S, Range 13E. This report summarizes our findings and conclusions.

CONCLUSIONS

Although there are practically no outcrops of rock on any of the lands involved, and what few outcrops there are are not mineralized or else very weakly so, the bedrock under the alluvium almost anywhere in the district is known to be mineralized and is at depths shallow enough for modern practical mining methods. Much of the mineralization is undoubtedly not of economic quality or grade now, nor is it ever likely to be so. However, there is a possibility, even a probability, that as the economics of mining change with improved technological advances and metal prices increase, some of the mineralized rock may be minable in the future. The mineral rights to all of the ground in the sections considered in this report have

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been held for several years by various individuals and mining companies and it is unlikely that these mining claims will be allowed to lapse in the near future. A sketch map at the end of this report shows the ownership of mineral claim groups as of this date.

In order to more thoroughly and conclusively appraise the mineral potential, considerable expensive diamond core drilling and geophysical exploration has been done in the district and the sections under consideration have not been excluded from these activities. Also there has been some churn drilling for water wells in adjacent sections. Drillers have reported seeing metallic mineralization in the cuttings. Personal conversations with various personnel of the mining claimants involved confirm that the drills have, at places, encountered mineralization of sufficient interest to warrant keeping the claims valid for further exploration and study.

It is highly unlikely that much, if any, of the two areas under consideration is underlain by valuable mineral deposits, but until it can be proved beyond any doubt that there are none, some search activity will always be in progress. Presently the area is "hot" and there is much activity in the district--both speculative and otherwise.

RECOMMENDATIONS

Having claim posts, location pits and occasionally drill-rigs working on one's property will make most home owners unhappy, and the knowledge that these things are legal will tend to mitigate against premium prices for lots in this district. However, these factors need not interfere to the point of causing the abandonment of a subdivision project. Progress and growth is such that it will happen eventually anyhow. Lots and homes there would be especially desirable ~~at present~~ to persons employed in the operating mines of the district who now commute considerable distances. The sale of lots and the present construction of homes in other subdivisions in the area such as the Curly Horn Ranches and Wrangler Ranches demonstrates that people will buy and build over mineral ground. The ones mentioned, especially Curly Horn, are on similar ground that is claimed, staked and occasionally drilled.

If it is desired to consider going ahead with part of the project and abandoning part, it is suggested that possibly the S $\frac{1}{2}$ of Section 12 may have greater mineral potential and the N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 13 and the S $\frac{1}{2}$ of Section 19 the lesser mineral potential.

Another consideration is that it might be possible to consummate a package sale of the land surface rights to one of the mining companies holding the mineral claims on the ground,

but doubtless the financial return would not approach the long range potential that might eventually be realized via subdivision development and sale.

SCOPE AND PROCEDURE

The work involved preceding this writing was divided into three phases. First a research was made of known available literature and data on the district. This included study of various geologic reports and maps of the district, including the recently published U. S. Geological Survey Bulletin by John R. Cooper, "Some Geologic Features of the Pima Mining District, Pima County, Arizona". University theses, and the Arizona Geological Society Guidebook II on Southern Arizona, publications by the Arizona Bureau of Mines, and data in our own files from previous work in the district were utilized.

A two man crew then spent the day of 7 July 1960 in the field locating claim posts, inspecting location pits, looking for signs of mineralization, noting drill hole locations and in general checking the geologic environment as reported in the literature.

Finally, on 8 July 1960 a research was made of courthouse records to determine ownership of mining claims and present status.

GEOLOGIC ENVIRONMENT & HISTORY OF PAST WORK IN AREA

The geology of the Pima Mining District is complex as is often the case where major mines are developed. An attempt is made here to state something about it briefly in non-technical or layman fashion. If a more detailed and technical interpretation is desired it is suggested that the Cooper report or some of the University of Arizona theses on the area be read.

There is a very ancient bedrock core of granite upon which were deposited sediments that eventually formed beds of limestone and quartzite. These were changed and disturbed by processes of both erosion and movements of large areas of the earth's crust so that the rocks were crumpled, folded and twisted. These movements are along zones known to geologists as faults and are essentially the weaker places in rocks where they fracture. These weak areas, fractured by faulting, are favorable zones for later intrusions by molten rocks and/or fluids carrying high mineral content. The Pima district shows a setting of complex intrusion and mineralization with a variety of rock types. These occurred during and after the movement of sedimentary beds of limestone, etc. After the ore bearing solutions deposited the minerals by solidification in favored zones the district again had a history of movement so that some of the ore bodies were displaced from their original emplacement positions. During and since then the process of erosion, which is more or less continuous,

exposed some of these ore bodies and buried others under a blanket of alluvium. Early miners found the exposed mineral outcrops and mined them to start the history of the area as a mining district.

After intermittent mining the district was relatively dormant in the late 1940's. In 1949 new and bold exploration methods were tried in the district utilizing geophysical techniques to attempt to learn something about what might be hidden under the deeper alluvium. This resulted in the discovery of the Pima Mine which touched off exploration in the area on a concentrated and concerted effort which has not yet abated. Other major ore deposits have been found already and are being developed. Thus it is the hope of finding still more that keeps people doing geology, geophysics and drilling in the district, including on the land of interest evaluated in this report.

MINERAL CLAIMANTS IN THE AREA

Most of the S $\frac{1}{2}$ of Section 12 is covered by the Peak Claims of the Pima Mining Company. In the Southwest corner of the section are some claims originally located by the Eagle-Picher Company, especially the Piedra Claims, now owned by Banner Mining Company. Most of the N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 13 is covered by a portion of the Fox Claim group of Mr. V. L. Cook and Mr. E. A. Todd. A part of the northwest corner of the section is covered by a portion of the Coffee Claim group located by Mr. R. A. Michel,

an employee of Bear Creek Mining Company which is a subsidiary of Kennecott Copper Corp.

The S $\frac{1}{2}$ of Section 19 is covered by a portion of the Copper Core group located by George Edwards and Wallace Sevits.

All claims appear to have been properly posted and recorded and location holes dug according to law. Since most of these holes were dug in alluvium there is no true valid lode discovery of mineral in place on many of the claims and some of these claims possibly could be contested in court, but even then, the ground would still be open to location and potential mineral perfection by other third parties. In some cases, drill holes have subsequently been put down and undoubtedly have proved mineral discovery on the particular claims drilled. Not every claim has been drilled however. Such drill holes as could be readily located are plotted on the map. Pima Mining Company appears to have sufficient drill holes to prove mineral on most of the S $\frac{1}{2}$ of Section 12. Affidavits of labor filed for the Copper Core group show that drilling was done on the group but it was not determined if any of the holes were on the S $\frac{1}{2}$ of Section 19. The latest drilling there was in 1959 for the Phelps Dodge Corporation. The affidavit of labor for this period also lists geophysical work by Phelps Dodge over the area. It is also known that much other geophysical work has been done

and is being done over various parts of the district by both private companies and the U. S. Geological Survey.

Apparently all claims on S $\frac{1}{2}$ Section 12, N $\frac{1}{2}$ N $\frac{1}{2}$ Section 13 and S $\frac{1}{2}$ Section 19 are in good standing with the claimants complying with the laws pertaining to holding mineral claims.

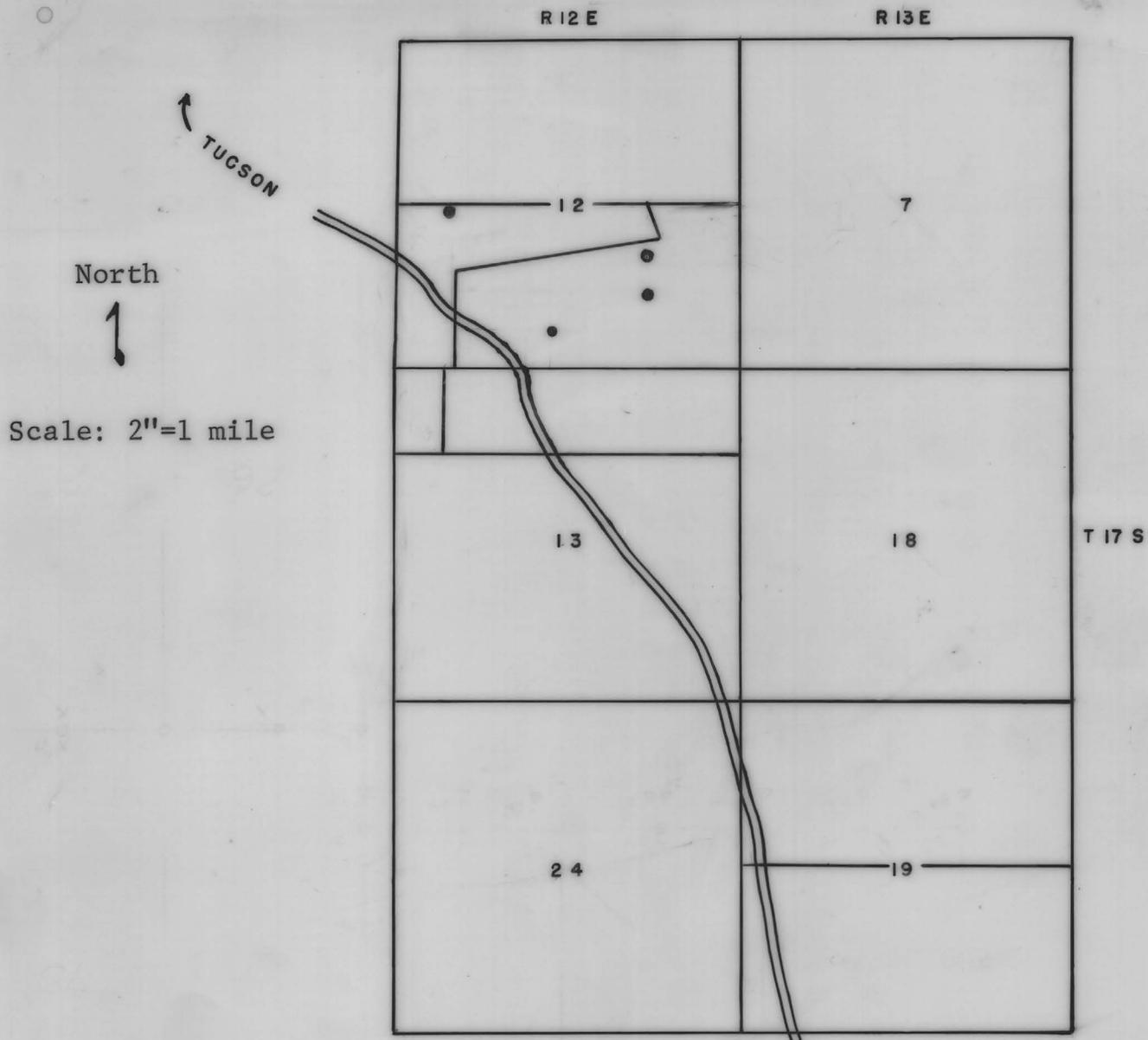


Respectfully submitted,

John W. Marlatt, Geologist

Approved by: Walter E. Heinrichs, Jr.

11 July 1960
P. O. Box 5671
Tucson, Arizona



- Part of Pima Mining Co.
Alpha & Peak claims.
- Part of Banner Mining Co.
Piedra, Valle, Blitz &
Cholla claims.
- Part of Fox claim group.
- Part of Coffee claim group.
- Part of Copper Core claim
group.
- Drill holes actually seen
on the ground.

MINERAL CLAIM OWNERSHIP
in
S $\frac{1}{2}$ Sec. 12 & N $\frac{1}{2}$ N $\frac{1}{2}$ Sec. 13 T17S, R12E
and
S $\frac{1}{2}$ Sec. 19, T17S, R13E, G& SRB&M
Pima County, Arizona
JULY, 1960