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Century Refining

Walt
Don C. DBC

PANHANDLE EASTERN PIPE LINE COMPANY

P. O. BOX 1071

GARDEN CITY, KANSAS 67846

February 15, 1967

M. D. CURRAN
CONSULTANT



Mr. Grover Heinrichs
Heinrichs Geoexploration Company
P. O. Box 5671
Tucson, Arizona 85703

Dear Mr. Heinrichs:

Confirming telephone conversation today, we have decided to forget the Banegas property which I previously mentioned to Mr. Walter Heinrichs, but do have another Copper prospect in Arizona on which we would like you to make a preliminary examination and to advise me as to whether we will be justified in the expense for further exploratory work, and if so, the recommended procedure and your best estimate of the cost of your services for such further work. I understand that you will bill us at the rate of \$150.00 per day plus traveling expenses of your representative for the preliminary examination. Your invoice for this work should be sent for my attention to the Century Refining Company, P. O. Box 459, Garden City, Kansas.

The Copper prospect to be examined is located in Range 14 West, Township 11 North, Sections 2, 3, 10, 11, 14 and 15, comprising about 100 claims. It is owned by the Arizona Mineral Research and Development Corporation whose principal stockholder and President is:-

Mr. Edwin E. Lowrey
5526 North 30th Drive
Phoenix, Arizona
Phone (602) 266-1457

Mr. Lowrey can only be available to show the property on Saturdays and Sundays. Please phone him and make arrangements for meeting him. Mr. Mark Stepelton who is employed by us will be with Mr. Lowrey and will accompany you. He says it may take as much as three days time for this preliminary examination, and that your representative will require a jeep or

February 15, 1967

other four wheel drive to get to the property because it is rather inaccessible. It is located north out of Salome, Arizona, in the area south of Bill William River and about two and one-half miles from the Alamo Dam. I understand that Wickenburg is the nearest town on the main highway. Pursuant to your telephone advice, I understand that your representative will arrange with Mr. Lowrey to begin his examination of this property Saturday morning, February 25th next.

While your representative is in the area, Mr. Stepelton would like him to take a preliminary look at a Silver property, which will require an additional day, and I would like your advice as to whether the property merits further exploratory examination, the recommended work, and an estimate of your services for such work.

I maintain an office at Century Refining Company where the telephone number is Bridge 6-7655 (Code 316) but I do some work at my home in Garden City where my telephone number is Bridge 6-7217 (Code 316).

Yours truly,



M. D. Curran

MDC:mndo

cc: Mr. Mark Stepelton

RECONNAISSANCE GEOLOGIC INVESTIGATION

LOWREY PROPERTY

MOHAVE COUNTY, ARIZONA

For

Mr. M. D. Curran

February 1967

By

**Heinrichs Geoexploration Company
P.O. Box 5671 Tucson, Arizona 85703
Phone: 623-0578 Area Code: 602**

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Mohave County Geologic Map

GENERAL LOCATION
OF
LOWREY PROPERTY
MOHAVE COUNTY
ARIZONA



INTRODUCTION

At the request of Mr. M. D. Curran of Garden City, Kansas, a very brief reconnaissance geologic investigation of the Lowrey Property, Mohave County, Arizona was conducted on February 25 and 26, 1967. Mr. E. E. Lowrey, Mr. M. D. Curran, and Mr. Mark Stapleton, were present at various times during the investigation.

CONCLUSIONS AND RECOMMENDATIONS

There were no claim location maps available for this investigation of the property that properly correlate with the land net. For clarity in future communications and as a legal safeguard, a claim location map should be prepared and checked in the field. A rough sketch plan was prepared by Mr. Lowrey, this was not to scale or tied to the section corners.

The copper seen is in an oxidized form as fracture fillings in silicified limestone and altered schist. A little pyrite was the only sulfide noted. It is possible that more sulfides are present in the schist at depth and at least three reconnaissance induced polarization (I.P.) lines are recommended to explore this possibility. These lines should be run N-S across the southernmost group of claims (Pasa Manana Area) in the vicinity of the specular hematite outcrops with a 250' dipole spacing, one in an E-W direction (250' dipole spacing) across the exposed copper oxide showing in the gully at approximately Blackhawk 9 and 14 claims, the third line should run N-S (500' dipole spacing) across the Blue Jay Group west of the deeper shafts present just east of this group. These lines would give a representative induced polarization sampling to the area. If these lines show interesting anomalism, further geologic investigation is recommended along with additional I.P., or other geophysics, testing, evaluating, and sampling methods.

OBSERVATIONS

A limestone identified as Redwall and Martin on the published geologic map of Mohave County is present as erosional remnants on the highest elevations within the property. This limestone is very silicified and fractured and contains copper oxides in the fractures. In places, specular hematite is present as fracture fillings and as small replacement features, generally near the base of the unit. This limestone is a dull, deep brown color, even on freshly broken surfaces. The limestone does not appear to be a host rock for copper replacement although the sulfides (pyrite) found were in this unit in fractures.

Beneath the limestone, a highly stained and altered zone of schist grades downward into less altered schist. Most of the specular hematite seen was in the lower part of the more intensely altered schist. The schist contains a large percentage of quartz and in places is very red which may indicate that pyrite has been leached from these areas. These very red areas are in the upper part of the schist and grade downward to a more brownish alteration color. There is also some chlorite and minor epidote visible in the schist. The copper oxides occur as fracture fillings and very little is in the foliation planes.

The deeper shafts on the claims immediately to the east of the Blue Jay Group (and off the Lowrey Property) are in the schist and as well as could be seen, are located on the larger fractures and the showings seem to be of better quality, and are deeper in the section than those actually on the Lowrey Property. In one instance the fragments on the dump indicate that the copper oxide is in a fault breccia and is a strong showing. There is a good possibility of an enriched zone and copper sulfides with depth in the schist. This can probably be best examined by the induced polarization technique as previously noted.

In the southwestern U.S., most of the copper deposits are related to "Laramide" intrusives of the monzonite-diorite type.

To the north and northwest of this property there are intrusions of a more acidic nature which may have contributed to the silicification and alteration of the area. These intrusions are considered to be Laramide in age (see map). To the NE and SW, quaternary basalts are also present.

A working silver mine is located a few miles to the east of the property but was not visited. Mr. Lowrey states that a "Cleopatra Mine" somewhere just west of this property has shipped some copper ore in the past, and he has some records of this but I have not seen them. These may or may not duplicate information in our files. A preliminary copy of the topographic map and aerial photos of this area are available from the U.S. Geological Survey and should be obtained for proper location of the claims on this property.

Respectfully submitted,

HEINRICHS GEOEXPLORATION COMPANY

Donald B. Cooley

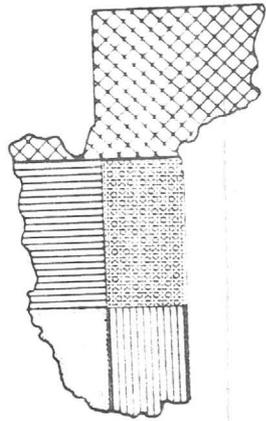
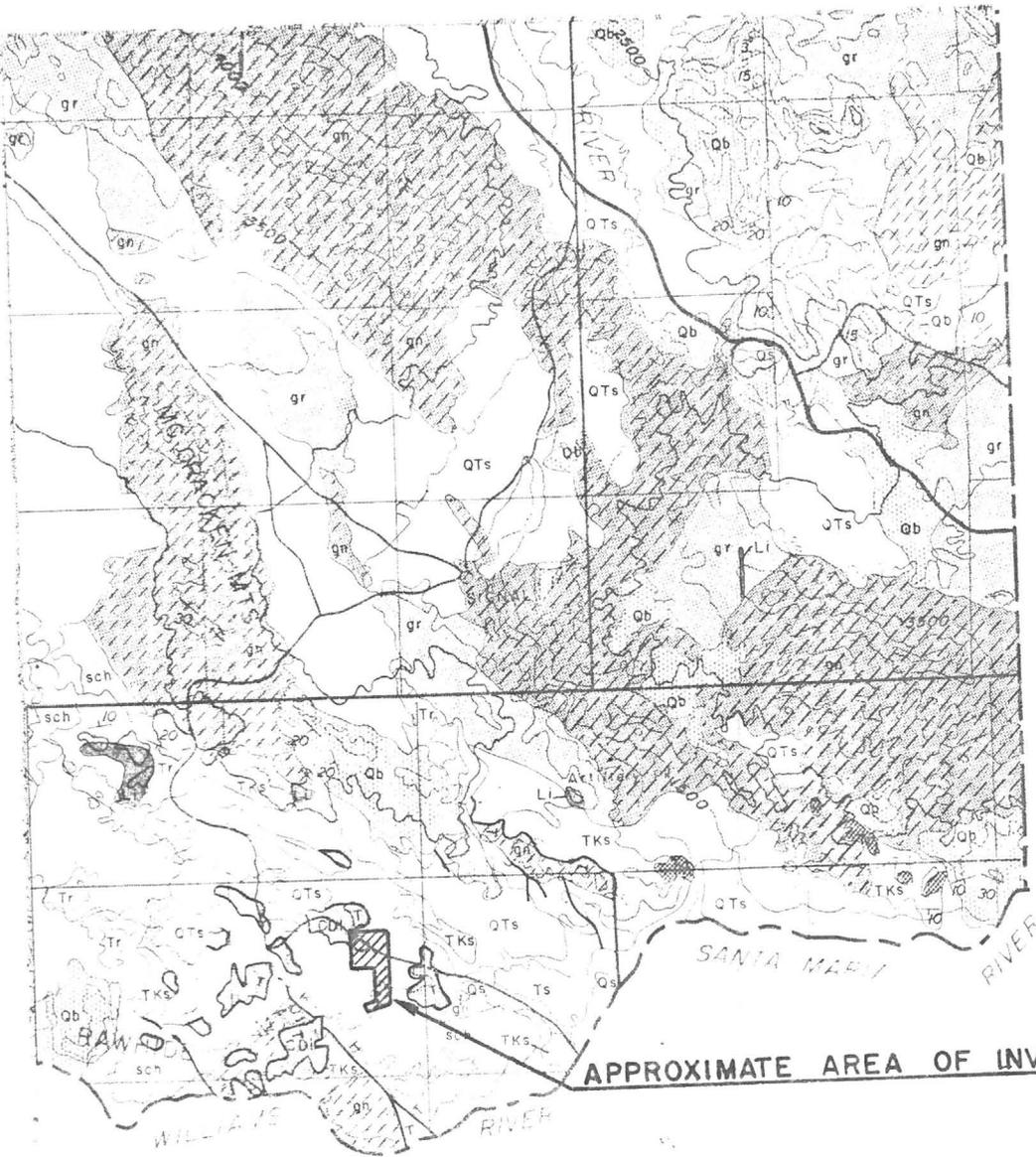
Donald B. Cooley
Geologist

APPROVED:



March 3, 1967
Tucson, Arizona

Map showing sources of topographic data.



-  U.S. Geol. Survey
Topographic Map of Arizona (1956)
-  Army Map Service.
Needles, Calif. 2^{1/2} sheet (unpublished)
-  Army Map Service.
Kingman, Arizona 2^{1/2} sheet (unpublished)
-  Army Map Service.
Prescott, Arizona 2^{1/2} sheet (unpublished)
-  Army Map Service.
Williams, Arizona 2^{1/2} sheet (unpublished)

APPROXIMATE AREA OF INVESTIGATION