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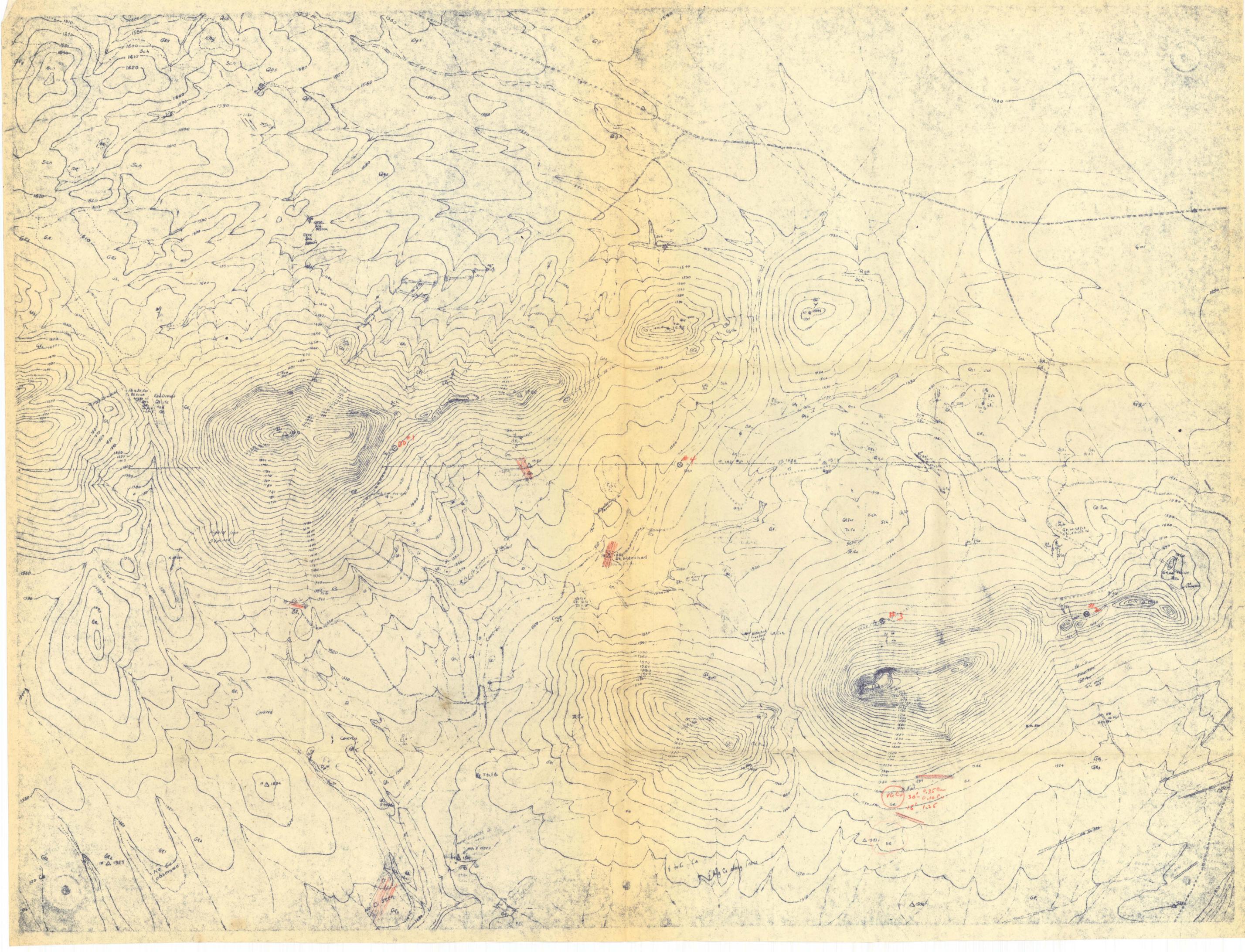
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NOTES: TRANSWORLD EXPLORATIONS, EDWIN A. BRIGHT, FIELD REPRESENTATIVE
PO BOX 1582, DALLAS, TEXAS.

PRELIMINARY GEOLOGICAL OBSERVATIONS, Mineral Butte Area
County, Arizona, By Curtis W. Lovelace, Phoenix Ariz. 25 March 1964

Pg. 2 "Aerial reconnaissance shows this mineralization to cover a larger area West of the investigated ground, but lack of time and a detailed survey of that region." (This is not further verified)

Recommendations Pg. 3. "Further, sub-surface exploration in the form of four diamond drill core holes, averaging 600 to 1000 feet in depth, promising churn drill holes; numbers one and four, plus two or three at widespread points in order to better identify the deposit"

Mining History, Pg. 3. "Four production shafts, five churn drills, and some forty-odd exploration pits dating from around 1920.

The production shafts, two inclined and two vertical, averaging in depth, contain over five hundred feet of tunnels and drifts and are all located in apparent copper ore, but were reportedly worked for silver and gold as well.

The churn drill holes were sunk in the prominent outcrops to depths of 555 feet, 580 feet, 1310 feet and 1505 feet.

The forty or so exploration pits that dot the area average four to five feet deep."

Geologic History Pg. 4 "Surface indications seem to indicate that the schist, since uncovered by erosion, are of early or middle Tertiary origin. The schist is injected into older Archean (?) schist. Later, Tertiary and Quaternary gravels and conglomerates covered the area, but today due to relative erosion, we are able to see, in addition to the granitic outcrops, schist outcropping to the North and West. It is entirely possible that dikes have been intruded along fault zones and the less resistant schist fault have eroded away leaving the dikes rising above the terrain.

Copper Minerals Identified to Date Pg. 4.

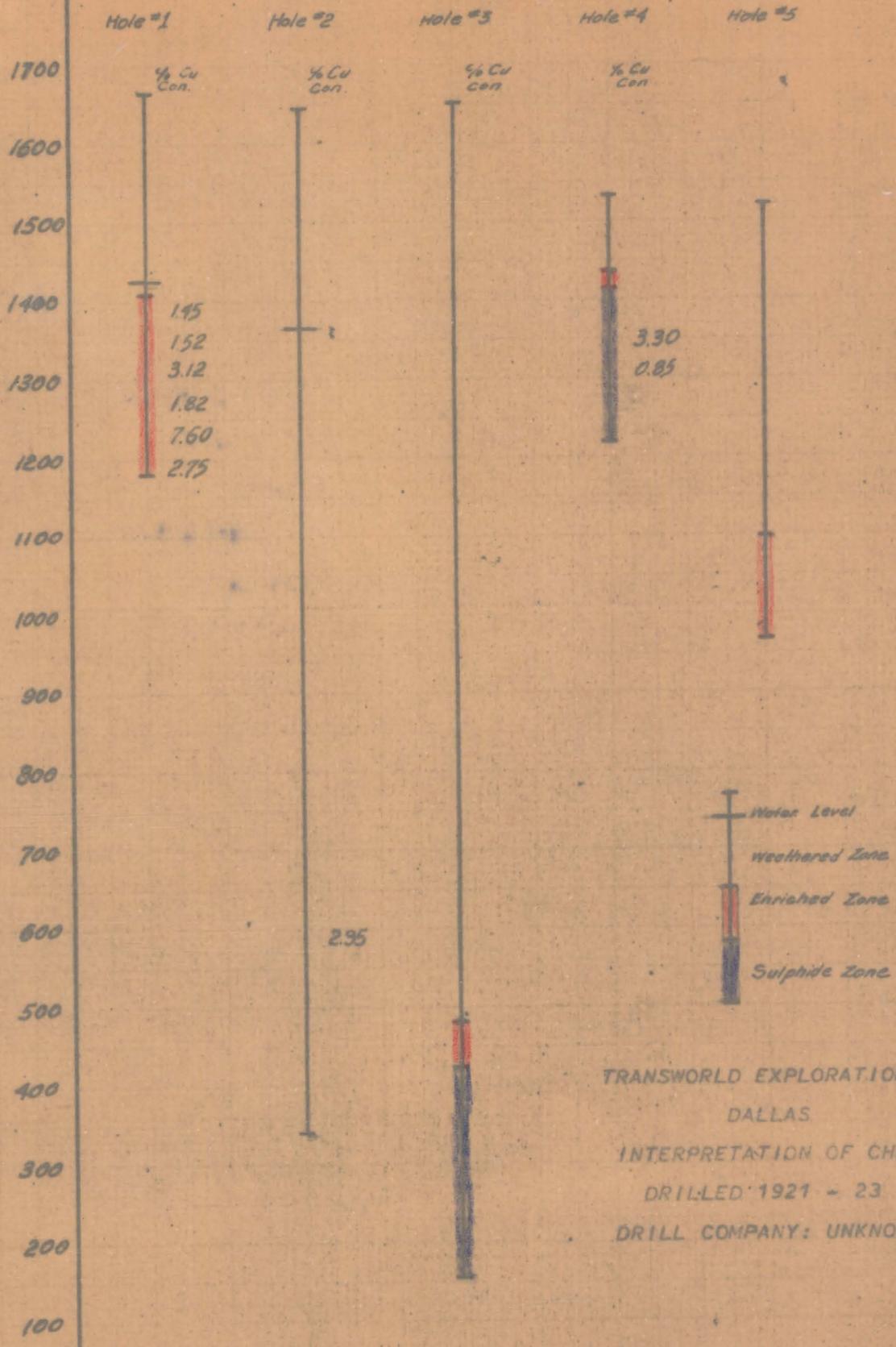
1. Native copper; Chrysocolla; Malachite; Azurite; Cuprite; Chalcocite; Torbernite.

Mineralization Pg. 4 "The mineralization of this area is due to the intrusion of a number of granitic dikes or apophyses, their resulting zones of fracture and their associated mineral solutions."

"The two major dikes are both approximately 0.5 mile in length and 100 feet in width. They consist of a porphyritic granite which in some places shows a vesicular structure due to weathering. To the North and West lie the schist. In some places these beds are dipping almost vertically as a result of the intrusion of the two dikes.

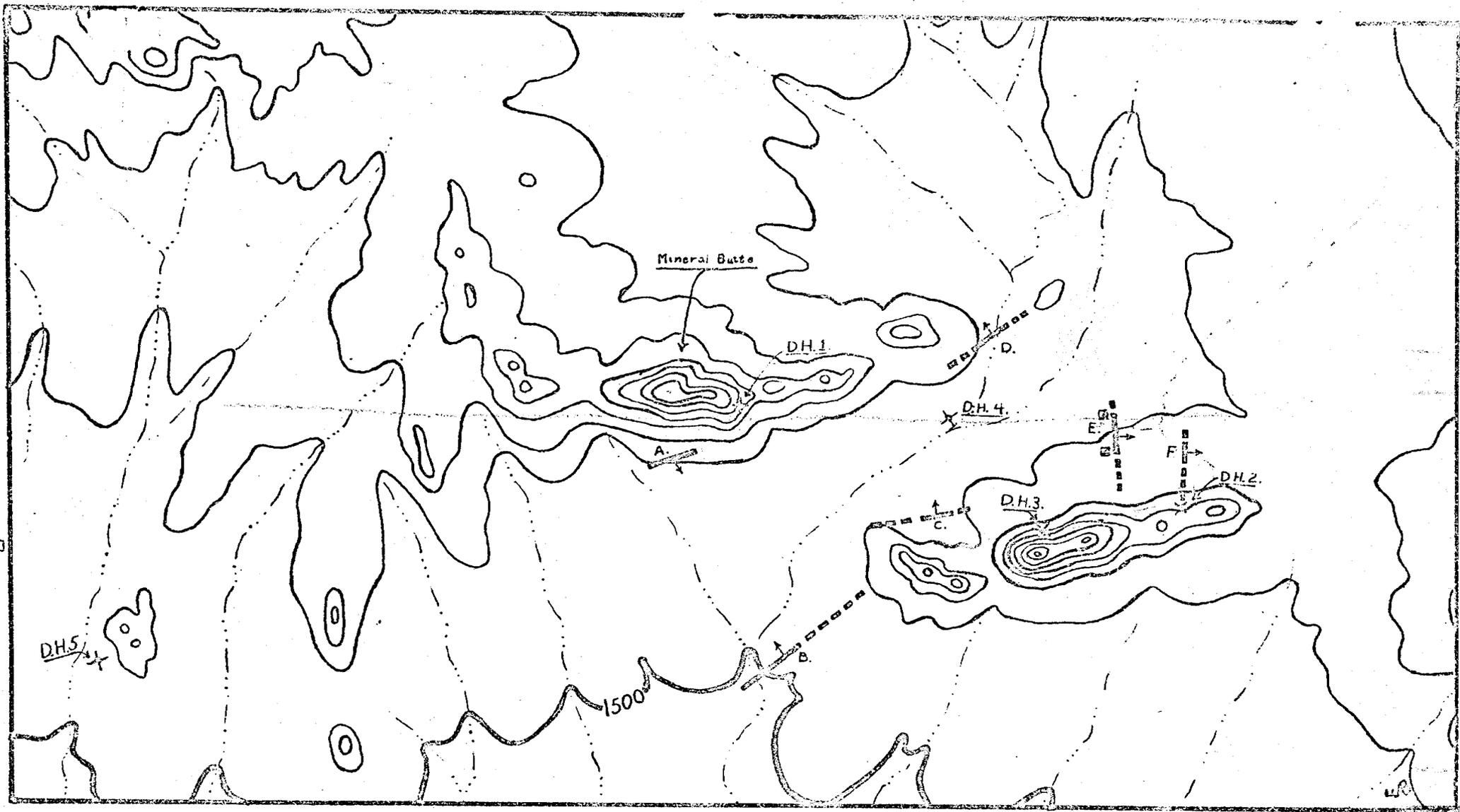
Between and around the two main dikes are six veins probably related to the profound fracturing evident in this area. Three of these veins (A, B, and C) assay at the surface of about 2 to 3% copper but due to high alumina content veins E and F would probably require special smelting. -- Vein A is the one which shows acceptable ore at the surface. -- Vein A -- native copper. Veins E & F show abundant malachite stainings, with some chrysocolla. Veins B & C show large amounts of chrysocolla and malachite staining in a large grained porphyry with a good bit of kaolinization. The veins are about 100 yards long with B & C over 200 yards in length. None of the veins are believed to be the main ore body but merely "shoots" from a large deposit some distance below."

Transworld Expl. Pers. Resp. for this Report: Curtis W. Lovelace, Edwin A. Bright, take-offs, maps, Betty J. Bright, Pilot "



TRANSWORLD EXPLORATIONS
 DALLAS
 INTERPRETATION OF CHURN DRILL LOGS
 DRILLED 1921 - 23
 DRILL COMPANY: UNKNOWN

NOTE: COPY FROM REPORT ON 3/20/59, By DPMc



TRANSWORLD EXPLORATIONS
Dallas

Topographic Map of Mineral Butte Area
Showing Location of Veins and Churn Drill Holes.

Approx. Mn.
Decl. 1950.

DONALD P. MCCARTHY

CONSULTING GEOLOGIST

551 WEST SECOND PLACE

MESA, ARIZONA

TELEPHONE WOODLAND 4-0148

December 24, 1961

GEO. FREEMAN

Mr. ~~Gene Moran~~

~~1416 W. Ruth Ave.~~

Bx 597

~~Phoenix, Arizona~~

Casa Grande, ARIZ

Dear Sir:

Some time ago I wrote a letter for Mr. Rodney to take with him to a meeting with Miami Copper Co. describing his claims in the Mineral Butte Area, Pinal Co., Ariz. The original letter was dated Febr. 28, 1960. I was unable to be present at that meeting in person, however at a later date I did have opportunity to discuss the property with personnel of Miami Copper. They seemed to be very interested in it but apparently could not get together with Mr. Rodney on terms of an exploration option. The same remark applies equally to several other Mining Cos including A.S. & R., Bear Creek, Phelps Dodge, and other lesser companies.

So much of that letter as applies to this discussion, namely, the possibilities for patenting the ground, is repeated herein:

"..I am supplying the following information which I have accumulated on the property in the hope that it will be of some help:

If you will please refer to the "Preliminary Map", a copy of which has been furnished you, I will attempt to describe various features so that you can distinguish them on the map. And also point out on the map the sites of the various samples which assays are included herewith. (NOTE: MAP NOT INCLUDED HERE)

The geology as I have worked it out to date, is as follows:

A very coarsely crystalline syenite-granite overlain by

Pre-Cambrian schist was intruded during Tertiary time by two large parallel dikes which have an east-west trend. The north dike forms Mineral Butte and the ridge extending eastward therefrom. The south dike lies south of the boundary of the Gila Indian Reservation and is very similar in all respects to the north dike. The material composing these dikes is quite siliceous, due to alteration; and may be considered a granite-porphry similar to other stock-like masses in Arizona. It is not readily distinguishable from the older granite which it intruded; however, close examination reveals some differences in the field in the form of a finer texture, more white orthoclase as opposed to the coarse pink of the old granite, and frequently on weathered outcrops a finely laminated, sheaf-like, appearance. The schist near the intrusions has been altered to a great extent in some places, so that it is almost indistinguishable from the dike-material. Much sericite as well as residual schistosity is about the only field clue in this case.

A dioritic rock occurs as an intrusion into the old granite about 1400 feet southeast of Mineral Butte. And the latest igneous activity apparently was the intrusion of many basic dikes which range up to 5 feet in width and are up to 600 feet in length. Several of these dikes show good copper staining. And some of the ore-shipments have been made from them. Generally, the dikes appear to have been intruded along fault planes or other fractures.

Copper occurrences are shown in red on the map. The degree of density is a measure of the relative abundance of copper staining in the rocks. A very faint red indicates a trace of copper on the surface rocks. A very good show of copper is a dark red on the map and indicates locations where the rocks have assayed over 1 percent copper. Aside from the basic dikes which frequently carry copper, fractures in the old granite are favored sites of mineralization. Your big dozer-pit southeast of Mineral Butte is one such place, and as we have discussed in the past, this rock should pay its way to the Superior Smelter, and net a small profit, with careful strip mining. Another similar area lies south of the South-Butte (an area of circular outline on the map).

C Concerning assays, I have sampled across the big dozer pit referred to above and have the following results: 1.45% Cu at a distance of 30 feet from the east end of the pit; 1.55% Cu at the west end of the pit (Pit is 70-feet long). A bulk sample of finer material scooped from the pit and which could represent a mining product was determined to run 2.5% by Magma Copper and also the same sample split carefully, reported 2.6% copper at AS&R smelter at Hayden. A sample taken from this pit by one of the geologists from another copper company reported as follows: Ag. Oz/T. Trace; Au. Oz/T. Trace; Cu. % 1.73; Mn. % Trace; Mo. % Nil. This geologist also sampled the sidewalls of the incline and the drifts to a depth of over 50 feet in the "Bat Cave". Caving prevented reaching the face of the drifts. His sample here showed: Ag 0.04 oz/T.; Tr. Au; 3.80 percent Cu.; Tr. Mn; and Mo. not determined. His third sample from a small prospect pit situated 800-feet northwest of the South Butte ran: Ag 0.06 oz/T.; Tr Au; 2.78 % Cu.; Tr Mn; Nil Mo. I have also sampled the Bat Cave at the bottom of the sump at the vein exposure. Here, the basic dike was 5-feet thick and a channel sample showed 3.69 % Cu. The depth of this sample was 79 feet from the collar of the incline. In addition I have been furnished a copy of an old smelter report from the smelter at Hayden, Arizona which is presumably a record of shipments made from the Bat Cave 30 years ago. It follows:

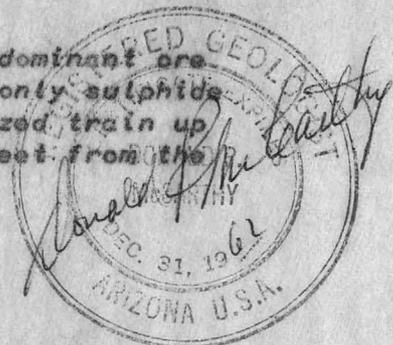
Date	Smelter Lot No.	Tons	% Copper	Ozs. Gold	Ozs. Silver
12/21/29	1237	52	3.65	.08	1.34
2/1/30	94	52	2.93	.155	.80
3/10/30	239	49	2.25	.18	.80
4/25/30	407	55	2.00	.14	.95
4/25/30	420	42	2.10	.12	1.05
5/2/30	442	50	1.90	.15	.80
6/12/30	617	35	2.70	.14	.80
6/12/30	618	12	8.50	.12	2.00
6/25/30	743	46	4.76	.12	1.15
9/12/30	915	5.7	2.34	.10	.90
9/12/30	914	35	3.28	.12	1.05

Total 433.7 Tons

One additional note, Chrysocolla is the predominant ore mineral of copper exposed so far. Pyrite is the only sulphide seen in the field and it occurs on the old bulldozed train up the southeast side of Mineral Butte exactly 600 feet from the top of the butte in a southeast direction. "

Yours very truly,

Donald P. McCarthy



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The production shafts, two inclined and two vertical, average 1000 feet in depth, contain over five hundred feet of funnels and drifts and are all located in apparent copper ore, but were reportedly worked for silver and gold as well.

The churn drill holes were sunk in the prominent outcrops to depths of 555 feet, 580 feet, 1310 feet and 1505 feet.

The forty or so exploration pits that dot the area average 40 to 50 feet deep."

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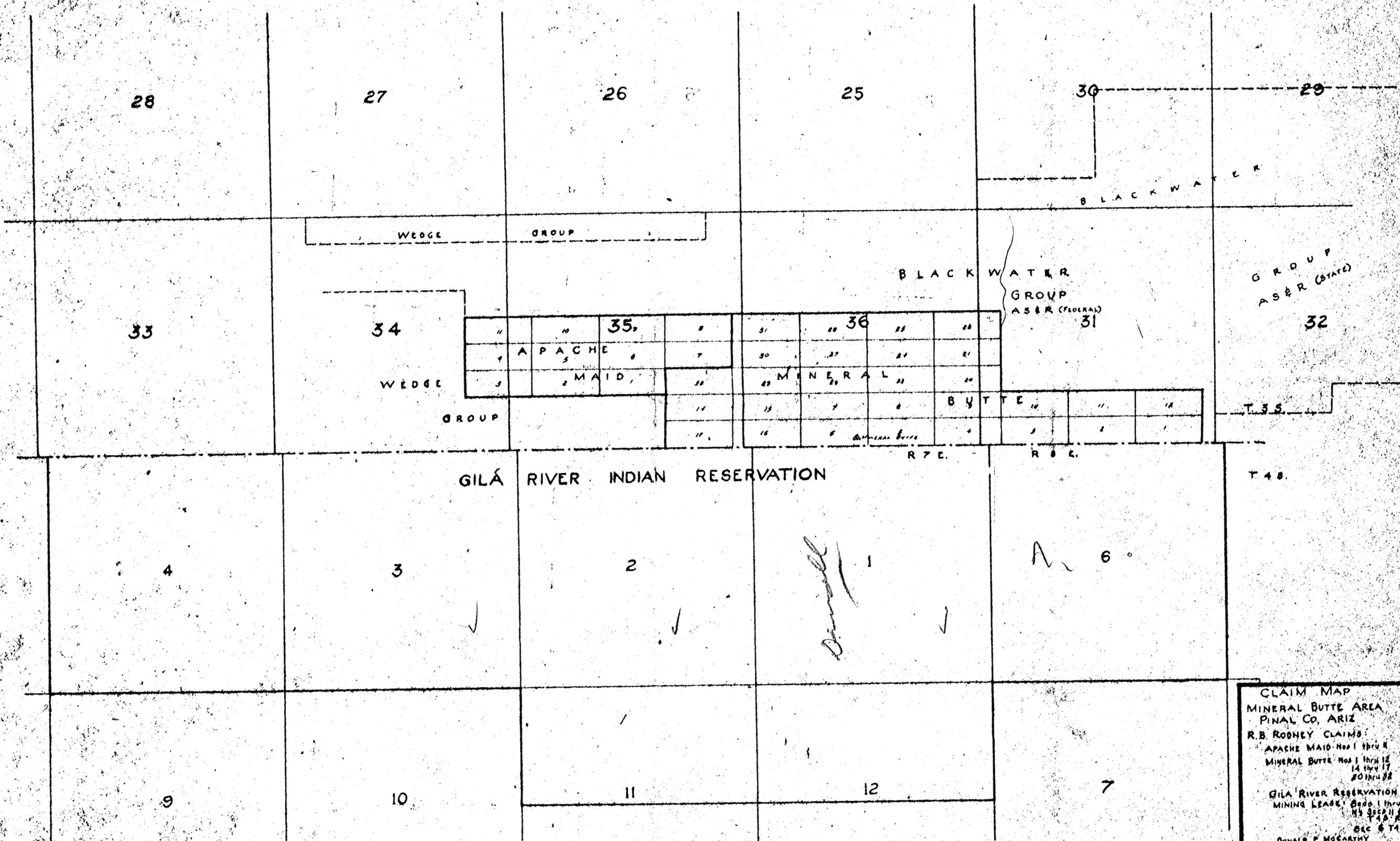
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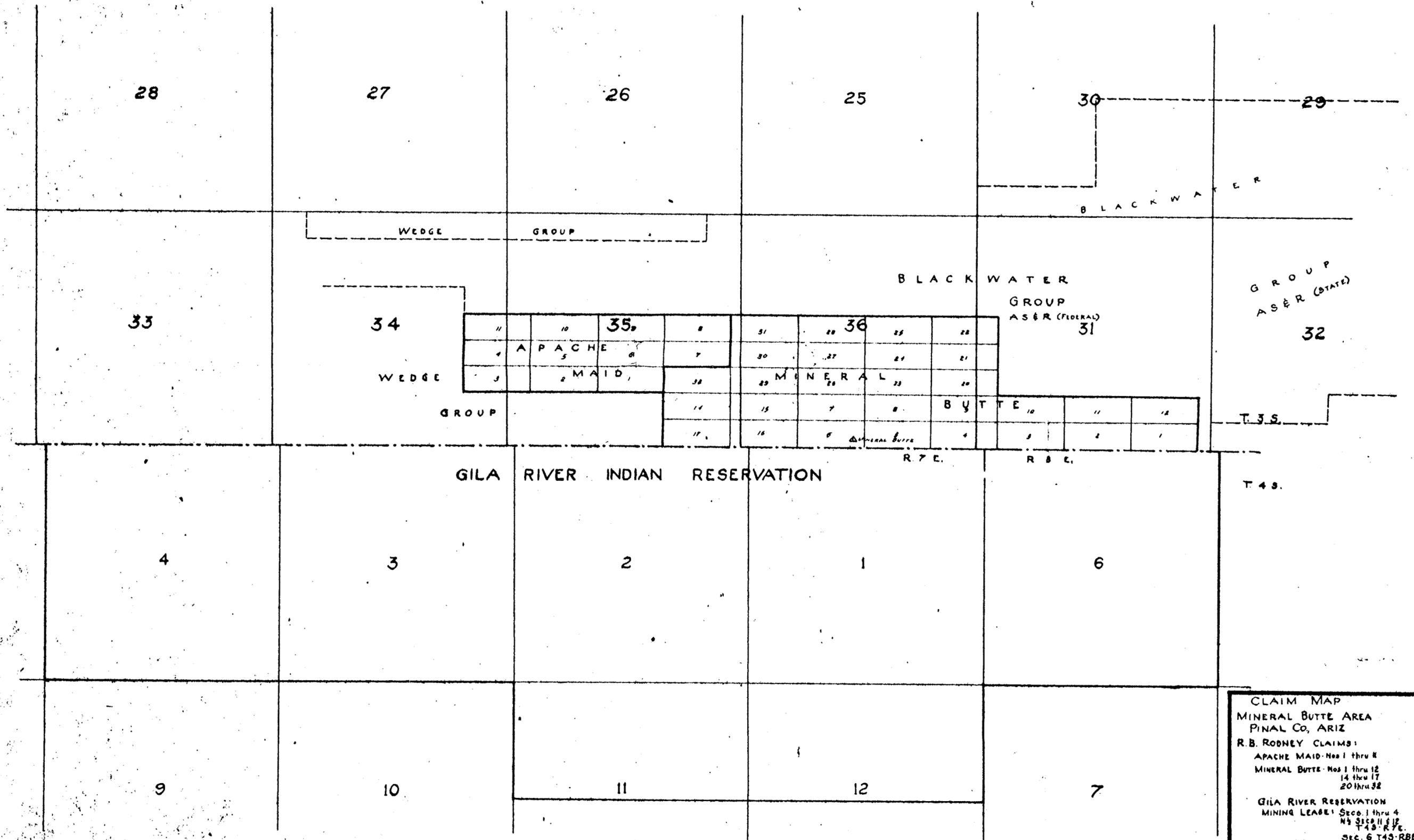
Between and around the two main dikes are six veins probably of secondary origin. The most prominent is vein A which is about 100 yards long and 2 to 3 feet wide. Veins E and F would probably require special smelting. Vein A is one which shows acceptable ore at the surface. Vein A -- native copper. Veins E & F show abundant malachite stainings, with some chrysocolla. Veins B & C show large amounts of chrysocolla and malachite staining in a large grained porphyry with a good bit of kaolinization. The veins are about 100 yards long with B & C over 200 yards in length. None of them are believed to be the main ore body but merely "shoots" from a large deposit some distance below."

Transworld Expl. Pers. Rep. for this Report: Curtis W. Lovelace, Wall W. Carrington, Mineralogist, Edwin A. Bright, take-offs, maps
Berry W. Bright, Pilot "

T3S
R7&8E



CLAIM MAP
 MINERAL BUTTE AREA
 PINAL CO. ARIZ
 R.B. RODNEY CLAIMS:
 APACHE MAID Nos 1 thru 4
 MINERAL BUTTE Nos 1 thru 12
 14 thru 17
 20 thru 22
 GILÁ RIVER RESERVATION
 MINING LEASES Nos 1 thru 4
 14 thru 17
 20 thru 22
 T3S R7E
 DEC 6 1915 RBE
 DONALD P. MCCARTHY
 FEB. 1920



CLAIM MAP
 MINERAL BUTTE AREA
 PINAL CO, ARIZ
 R.B. RODNEY CLAIMS:
 APACHE MAID - Nos 1 thru 8
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 14 thru 17
 20 thru 22
 GILA RIVER RESERVATION
 MINING LEASES: Secs. 1 thru 4
 N3 Secs 11 & 12
 T4S-R7E.
 SEC. 6 T4S-R8E
 DONALD P MCCARTHY
 FEB. 1929