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Edward J. Kennedy (Son?)
Margaret R. Kennedy
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} unpatented claims

A

GEOLOGIC

and

EXPLORATION POSSIBILITY

REPORT

on the

LONE STAR CLAIMS

Yavapai County, Arizona

by

R. E. Mieritz
Mining Consultant
Phoenix, Arizona

March 13, 1969

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INTRODUCTION

At the request of Mr. Sherwood B. Owens, Tucson, Arizona, the writer examined the Lone Star group of claims in Yavapai County, Arizona, located approximately four airline miles northeast of Mayer, Arizona, a small community on State Route 69 about 60 miles north of Phoenix.

CONCLUSIONS

As a result of the geologic conditions observed on the ground and the writers geological knowledge of this district, the following conclusions are forwarded:

(1) Copper mineralization, as both oxide and sulphide minerals, are exposed in the area of development and mapped by the writer,
(2) Such mineralization occurs as two distinct, separate modes--(a) lenticular lenses paralleling to some degree the laminations of silicified, iron stained zones in the schist, the common rock type of the district and (b) as disseminated sulphides in a silicified, strongly metamorphosed schist (?) or possibly a diorite porphyry, not commonly exposed in the district, and
(3) With evidence of such geological conditions, two exploratory targets and potential exist.

PROPERTY, LOCATION & ACCESSIBILITY

The Lone Star property consists of three patented claims (M.S. 4601), eight unpatented claims, four of which are less than the normal 600 foot width and one fraction (filling in between two groups of patented claims. (See Map 2)

These claims lie in Sections 7, 8, 17 and 18 of T. 12 N., R. 2 E. of G. & S. R. B. & M. in Yavapai County about 4 miles north east of Mayer Arizona. Travel to the property from Phoenix is north on Intrastate Highway 17 and State Route 69 to Cordes Junction and then following State Route 69 to Mayer. At Mayer, just south of the Motel-Restaurant on the highway, a county maintained ranchers road bears eastward towards the "U" Cross Ranch. This road is not a good wet weather road but travel to the property (about 4 miles) on this road--bearing to the right at all "Ys"--is possible by outomobile. Entrance to the patented claims is through a "locked" gate, --the three patented claims being almost completely fenced.

FACILITIES

A small house trailer and two small buildings exist near

the inclined shaft. There is electric power on the property (at the buildings) and during the winter months the small wash which traverses the three patented claims more or less down the middle of the side lines, does run a small stream of water which dries up during summer. A small spring about the center of the Lone Star claim does "seep" water all year long. The incline shaft near the wash on the Stonewall claim also makes some water.

REGIONAL GEOLOGY & MINERALIZATION

For the most part, the regional picture is one of schist, granite and diorite porphyry, all of pre-cambrian age. The nearest exposure of Quaternary basalt is about one mile to the southeast and there only sparsely evidenced.

The general regional trend of the schist is N. 10° to 30° E. with local strike and dips to the east and west of this trend. For the most part, the dips are very steep to the east and west as well as being vertical.

The Mayer area is one of strong copper mineralization as evidenced by the presence of many early day deep underground mines such as the Blue Bell, DeSoto, Stoddard, Binghamton and more recently the Iron King mine which shut down just last year. All these mines had similar structural control for their mineralization--namely the schistosity, silicification in certain zones and the lenticular shapes both horizontally and vertically with high grade "eyes" of 5, 6 to 8% copper. The Blue Bell mine--not completely mined--still has "good ore" at the 1500 foot level (according to historical notes from the famous Colvocoresses' files.) The Iron King mine had mineral to 3000 feet.

It can be observed on Map 1 that the DeSoto, Blue Bell, Stoddard, the Lone Star and the Binghamton are all on the "general" trend of the schistosity and even more striking, all in a "narrow band" (assumed to be the same) because the writer is familiar with the N. 25-30°E. strike at DeSoto and the N. 20-25°E. strike at the Silver Bell as well as the N. 15°E. strike at the Stoddard, the N. 10-15°E. strike at the Lone Star and the N. 5-10°E. strike at the Binghamton.

The copper mineralization at these mines occurs as chalcopyrite, bornite and some chalcocite with a fair amount of pyrite. The oxidation zone (copper oxides) depth varies in each mine. Oxide copper was evidenced on the 500 level of the Blue Bell mine.

LOCAL GEOLOGY & MINERALIZATION

The local geology and mineralization is not much different than the regional picture. Local variations of the schist

strike and dip and small mineralized quartz fissure zones are in evidence on the property. The hills on both sides of the main wash traversing the three patented claims are made up of light, tan and brown schist with varying degrees of weathering making the schist quite soft and it forms much soil. Ridges, or prominent outcrops, are most generally silicified schist zones, quartz fissures and what might be termed a jasperoid, - mostly silica. This silicification is of course, more resistant to weathering. The silicified schist and quartz fissures are, most generally, mineralized with copper oxides. Weathering, however, may have removed the mineralization evidence in some instances as regard the silicified schist zones.

The silicification of the schist and the accompanying copper mineralization is the same pattern as at the other "oldie" mines previously mentioned and shown on Map 1. There is one such large prominent silicified schist zone on this property with a trend length of 700 to 800 feet and 70 to 100 feet wide. This zone not only shows strong silicification but also strong iron oxide of dark brown to red, dispersed copper oxides usually as malachite and azurite as well as a strong fracture pattern.

Development of this zone is very limited by "old" workings of open stopes (pretty well gleamed), underground drifts, etc and more recently by a shallow pit across part of the zones' width near the crest of the hill. It is thought that this silicified zone will not "deviate" from the regional mineralization pattern and should thus host lenticular bodies of copper sulphides the dimensions of which might be 50 to 70 feet long, 10 to 30 feet wide and 100 to 150 foot heights. A suspected grade could be 5% up to 8% copper. Such suspected "lenses" might be on the hanging wall, footwall or in between and in echelon both vertically and horizontally.

The above described zone is an excellent target all along its trend. The pattern of mineralization discribed above is also common to the old mihes DeSoto, Blue Bell and Stoddard, thus, not a thought of imagination.

The vertical extent of the steep dipping schist in the district is not known but the Blue Bell and Iron King mines had demonstrated depths in excess of 1500 feet. The rocks (schist) on the slopes in the area mapped by the writer are usually light, tan to brown in color. However, the "main wash" traversing the patented claims, exposes in places in its floor, a gray-green rock which is both massive and schisty in character. The same rock is also exposed in the small wash near the southeast corner of the Lone Star patented claim and again in the large pit near the "main wash" and the middle of the east side line of the Missing Link patented claim.

The importance of this rock is that it appears to be significantly mineralized with pyrite and copper sulphide such that

it can not be dismissed nor ignored. Two samples were taken of this material and the results were encouraging. (See paragraph on Sampling)

Although limitedly exposed, the writer is of the opinion that an un-comformity may exist between the gray-green, massive, schisty rock type and the overlying light, tan to brown schist. The contact appears to be at and on the present floor of the main wash and its "small tributary". Soil, creek gravel and rock talus "hide" this contact but the "large pit" in the main wash helps support the thought of two different rock types--the "underlain and the "overlain". Nonethe-less, the presence of pyrite and copper sulphide in this gray-green rock indicates a "second" potential target which must definitely be investigated by core drilling.

One core drill hole near the large pit in the main wash was drilled in a N. 82°E. direction at -70°. The core was saved but there is no record of the geology or footage. The core was found in some wooden core trays, covered with ground or soil, some core was found scattered on the ground. The writer did observe pyrite and chalcopyrite as disseminations and in veinlets in all the core which consisted of the gray-green rock, tenatively now classified as a diorite--perhaps of porphyrytic texture. It is reported the hole reached a depth of 150 feet.

The same rock is also exposed in the large pit near the main wash and also shows mineralization.

SAMPLING

Four character samples were taken and their locations are shown on Map 3. The discriptions and results of these samples are as follows:

Sample	Discription	% Cu.	Oz. Au	Oz. Ag
"A"	Chip sample across 25 ft. of shallow face in new pit in silicified schist zone showing copper oxides	0.71	Tr.	0.20
"B"	Chip sample, 10 feet long, east wall of large pit from face to fissure. Chalcanthite, malachite, and copper sulphides	3.03	0.01	0.25
"C"	Chip sample, 15 ft. across main wash floor-approx. 200 ft downstream from large pit and 200 ft. up stream from "water fall" in main wash. (gray-green rock)	0.60	Tr.	0.15
"D"	Composite sample of all core found near drill hole located near large pit in main wash. (gray-green rock)	0.80	Tr.	0.15

TARGET POTENTIALS

Since possible potentials in both targets are very limited defined or identified using the existing evidence, it is most difficult to forward or forecast tonnage and grade figures of a meaningful nature. At best they would be "guesses"

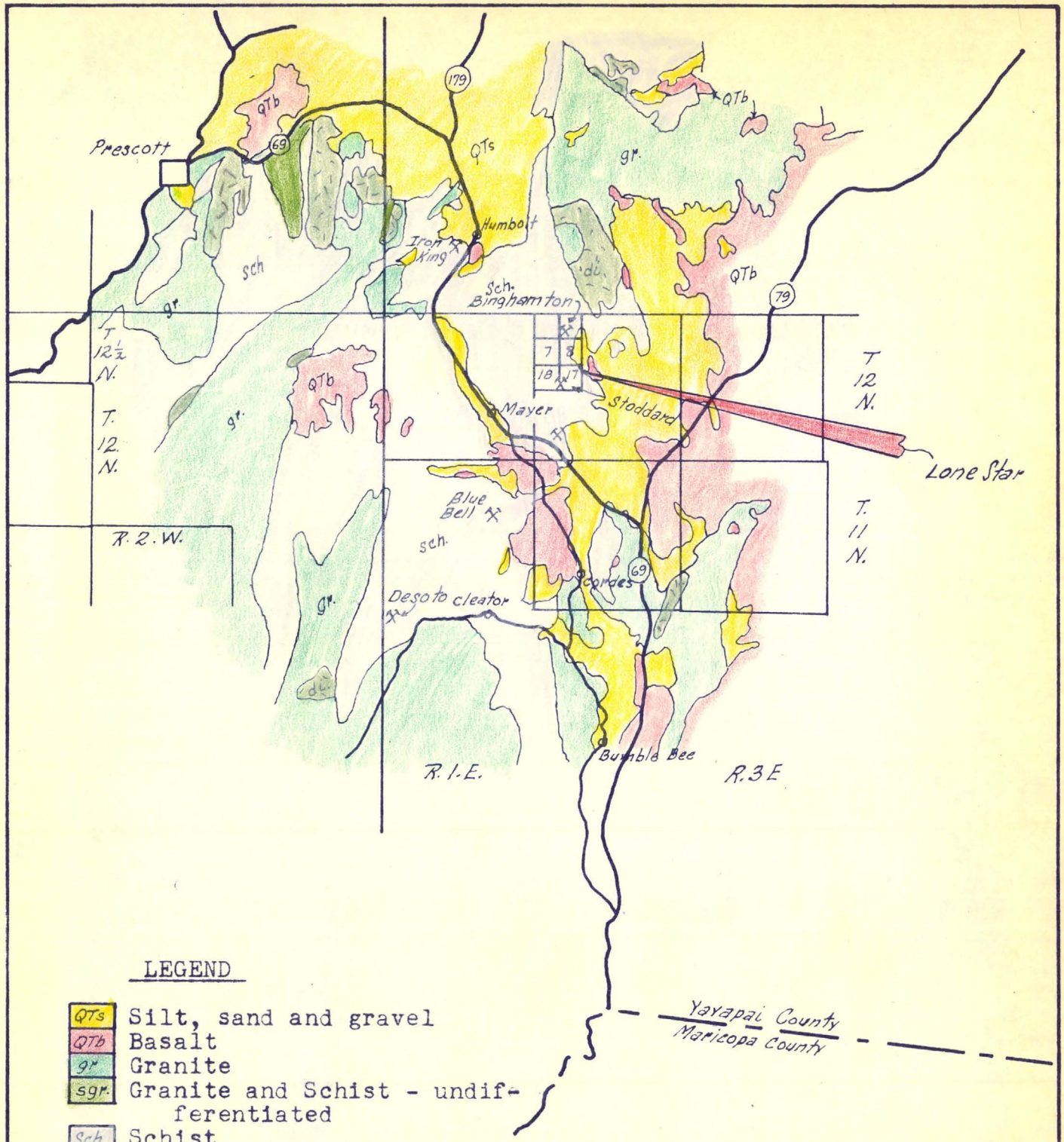
The larger potential, ofcourse, is the gray-green rock (diorite porphyry ?). In this instance there is 600 feet exposed in the "main wash", 350 feet exposed in the "tributary wash" and 150 feet deep in the drill hole. Area-wise, this could approximate 18,000 tons per foot of depth. Any extension of length and breadth in the area would, ofcourse, increase the tons per foot of depth.

It is thought that both targets can produce substantial potentials worthy of production in the near future. One of low tonnage but high grade, the other of great tonnage but of low grade, one an underground operation, the other a possible open pit.

Respectfully submitted,

R. E. Mieritz,
Mining Consultant
Phoenix, Arizona

March 13, 1969



LEGEND

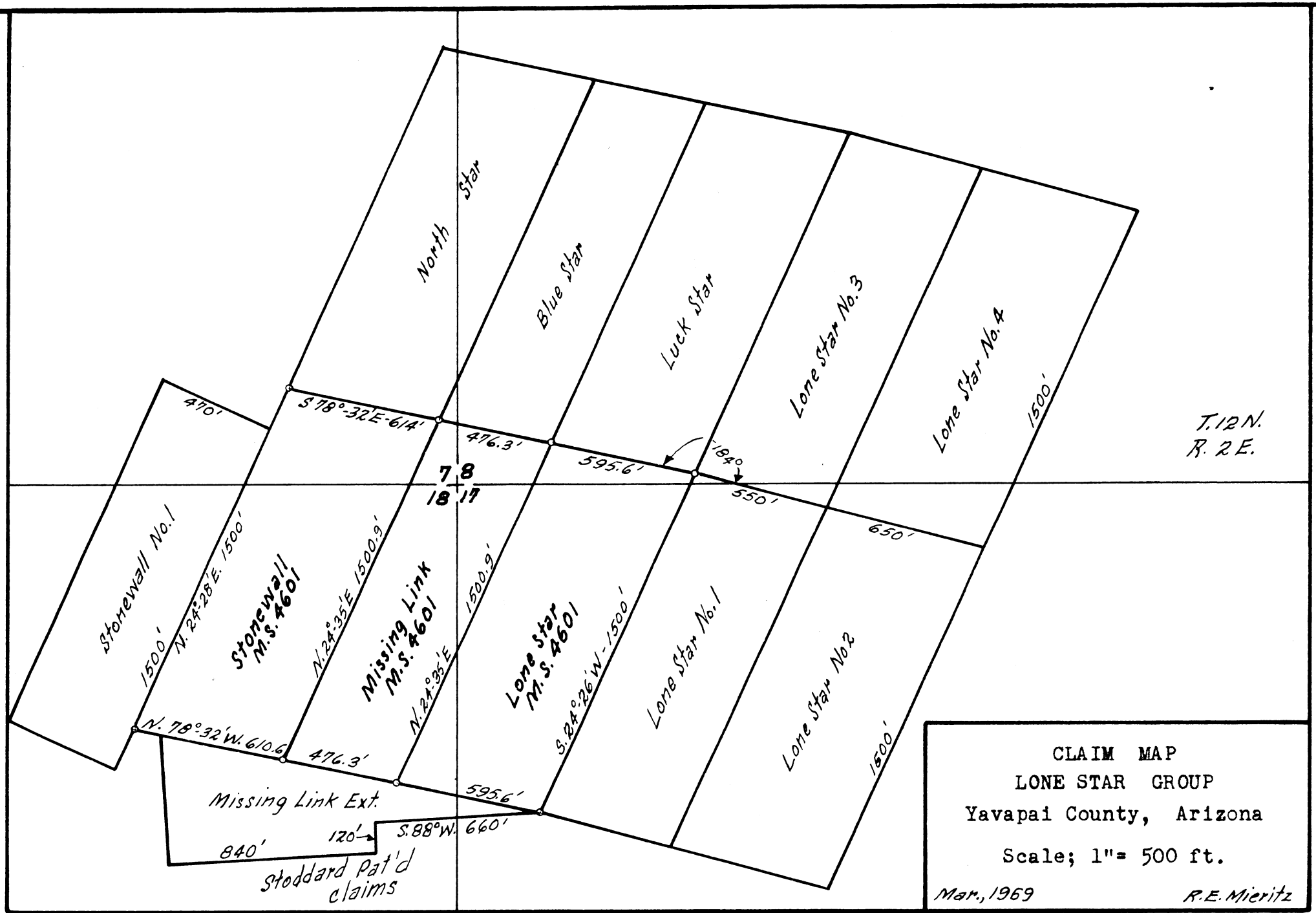
QTs	Silt, sand and gravel
QTb	Basalt
gr.	Granite
sgr.	Granite and Schist - undifferentiated
Sch	Schist
dl.	Diorite porphyry

GEOLOGIC MAP
Portion of
Yavapai County, Arizona

Scale: 1" = 6 miles

Feb., 1969 R.E. Mieritz

Map 1


North Star
Blue Star
Luck Star
Lone Star No.3
Lone Star No.4
1500'
T.12N.
R.2E.
S.78°-32'E-614'
476.3'
595.6'
184°
550'
650'
470'
7 8
18 17
Stonewall No.1
1500'
N. 24°-28'E. 1500'
Stonewall M.S.4601
N.24°-35'E 1500.9'
Missing Link M.S.4601
N.24°-35'E
1500.9'
Lone Star M.S.4601
S.24°-26'W-1500'
Lone Star No.1
Lone Star No.2
1500'
N. 78°-32'W. 610.6'
476.3'
595.6'
Missing Link Ext.
120'
S.88°W. 660'
840'
Stoddard Pat'd claims
CLAIM MAP
LONE STAR GROUP
Yavapai County, Arizona
Scale; 1"= 500 ft.
Mar., 1969
R.E. Mieritz

Map 2

Stonewall

Stonewall No. 1

North Star

Missing Link

Blue Star

Luck Star

Lone Star No. 3

Lone Star

Lone Star No. 1

T. 12 N.

R. 2 E.

7 18 8 19 17 Flag

Mayer

Trailer

Buildings

Silcrift No. 1

light Sch. CuO_x, yel-grn. Py. Sl.

Qtz.

light Schist Red FeO_x, CuO_x

Portal caved

Open Stopes

Qtz. plug Jasper

Heavy Red FeO_x. $CuSO_4$, CuO_x, CuS.

Samp. "B"

Gray-green schist(?)

Quite massive in many places. exposed in wash floor. possible unconformity. CuS, Py exposed.

Samp. "C"

FeO_x CuO_x in Qtz.

Samp "D"

White Sch. Tan-Brwn Silicified

Tan-Brwn Schist

Schist shows smooth top on surface - fault? - N 20° E, 18° E. dip

Brwn Sch.-Red FeO_x, CuO_x

Samp. "A."

Jasper

Flag

Silicified

FeO_x

FeO_x, CuO_x, 4'S, 1/4 - 30' deep

Tan - Brwn Schist.

White Qtzy Schist, FeO_x

White Qtzy Schist

pit FeO_x, CuO_x Stg Siliceous Hanging wall.

Brwn, Platy weathered Schist

Missing Link Ext.

GEOLOGIC SKETCH

Portion of

LONE STAR CLAIMS

Yavapai County, Ariz.

Scale: 1" = 200 ft.

Mar., 1969 R.E. Mieritz

Map 3