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08/07/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: RED CLOUD

ALTERNATE NAMES:

YAVAPAI COUNTY MILS NUMBER: 132

LOCATION: TOWNSHIP 14 N RANGE 9 W SECTION 29 QUARTER W2
LATITUDE: N 34DEG 31MIN 20SEC LONGITUDE: W 113DEG 13MIN 45SEC
TOPO MAP NAME: BAGDAD - 15 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:

COPPER SULFIDE
ZINC

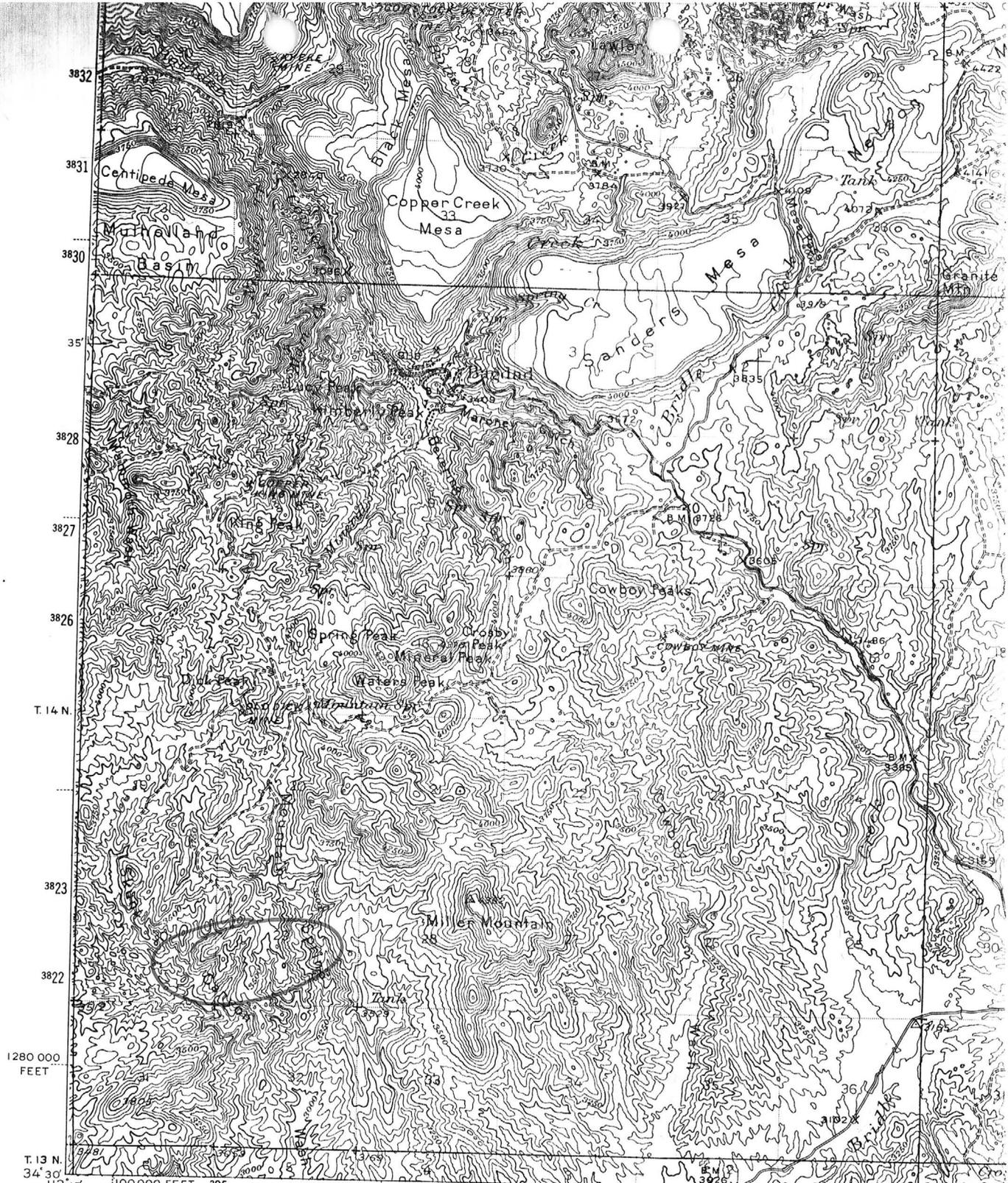
BIBLIOGRAPHY:

ADMMR RED CLOUD MINE FILE
BLM AMC FILE 53176
CLAIMS ALSO IN SEC 17, 19, 20 & 30

RECNO M800225
REC_TYPE S
REP_DATE 81 11
FIL_LINK USBM 004 025 1665
REP ROTH, FRANCES A. (DEWITT, ED)
REP_AFF ABGMT
DIST OLD DICK DISTRICT
COUNTY YAVAPAI
STATE_CODE AZ
C'TRY_CODE US
PHYS 12
DRAIN 15030203
QUAD1 BAGDAD (1948)
Q1_SCALE 62500
ELEV 3400 FT
UTM_Z +12
ACC NO UTM MARKINGS ON MAP
TOWNSHIP 014N
RANGE 009W
SECTION 29,30
SECT_FRACT NE OF NE OF SW; SE
MERIDIAN GILA AND SALT RIVER
POSITION 6.8 MILES SOUTH-SOUTH WEST OF LAWLER PEAK
LOCATION RED CLOUD CLAIM LOCATED AT END OF DIRT ROAD IN SEC 29
SITE RED CLOUD MINE
LAT 34.5222
LONG -113.2314
C'TRY_NAME UNITED STATES
COMMOD ZN CU AU PB AG
ORE_MAT SPHALERITE, CHALCOPYRITE, GALENA, CHALCOCITE
MAJOR ZN CU
MINOR AU PB AG
CLH_USE 93/12/15
PROD S
LOC_STRUCT MASSIVE SULFIDE LENSES PARALLEL FOLIATION AND BEDDING
STATUS 8
YR_DISC APPROX 1900
NAT_DISC B
YRFST_PROD 1947
YRLST_PROD 1951
OWNER LAWLER ESTATE (1967)
OPER C.A. WALTERS, GOODWIN MINING COMPANY (1951)
EXPL_COM 3 UNPATENTED CLAIMS ARE THE RED CLOUD, RUDKINS, AND QUEEN
BEE. RATHER EXTENSIVE DRILLING PROJECTS HAVE BEEN COMPLETED
ON PROPERTY, BUT ONLY TO 150 FT DEPTHS
DEP_TYPE MASSIVE SULFIDE - STRATIFORM
DEP_FORM LENS
DEPTH_BOT 100
D_B_U FT
DEP_SIZE S
STRIKE N 20 E TO N 40 E
DIP NW
PLUNGE_DIR SW
PLUNGE STEEPLY
DDESC_COM SAME STRATIGRAPHIC HORIZON IS COPPER QUEEN MASSIVE SULFIDE
DEPOSIT TO NORTH
QUAD250 PRESCOTT
DEPTH_WK 100
D_W_U FT
LEN_WK 300
L_W_U FT
DWORK_COM SHAFTS (100 FT DEEP) ON RED CLOUD AND RUDKINS CLAIMS

3

MIN_AGE PROT U/PB ZIRCON EQUAL TO OR OLDER THAN 1.70 MILLION
 YEARS
 NORE_MINS QUARTZ, CHLORITE, CALCITE, PYRITE
 ORE_CNTL STRATIGRAPHY, IGNEOUS ACTIVITY
 REG_STRUCT FOLIATION IN PRECAMBRIAN METAVOLCANIC ROCKS TRENDS N 20 E TO
 N 30 E
 ALTER CHLORITIZATION, PYRITIZATION
 HRU_AGE PROT U/PB ZIRCON EQUAL TO OR OLDER THAN 1770 MILLION
 YEARS|PROT U/PB ZIRCON EQUAL TO OR OLDER THAN 1770
 MILLION YEARS
 HRU_NAME BRIDLE FORMATION, UNNAMED METAANDESITE|DICK RHYOLITE
 NAME ROTH, FRANCES A. (DEWITT, ED)
 DATE 11/01/81
 CONT_CODE NA
 GEOL_COM DEPOSIT IS MASSIVE SULFIDE LENS IN PROTEROZOIC METAVOLCANIC
 ROCKS. DEPOSIT LOCALIZED AT OR NEAR CONTACT OF RHYOLITE AND
 ANDESITE.
 GEN_COM INFO.SRC : 2 UNPUB REPT
 REF AZ DEPT MIN. RESOURCES FILE DATA|USBM-ABGMT FILE DATA
 CONT_NAME NORTH AMERICA
 STATE_NAME ARIZONA
 WORK_TYPE U
 COMMOD_TYP M
 DATE_ISSUE 95/5/18
 PROF_ID 100
 PROF_LOC 100
 PF_COMMOD 100
 PROF_EXPL 100
 PFDESC_DEP 25
 PFDESC_WRK 100
 PROF_GEOL 71
 PROF_REF 100
 PROF_ALL 77
 HR_AGE_MV PROT U/PB ZIRCON DATE = 1770 MILLION YEARS OR OLDER
 HR_TYPE_MV METARHYOLITE, METAANDESITE
 AR_AGE_MV PROT U/PB ZIRCON DATE = 1770 MILLION YEARS OR OLDER
 AR_TYPE_MV RHYOLITE, ANDESITE
 TYPE R
 AFFIL ABGMT
 DEP_CODE 12500
 HUC 15030203

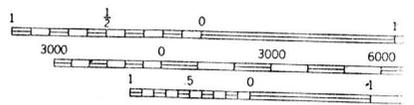
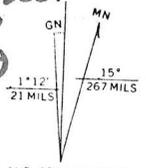


3352 IV NE
(Armstrong Mtn. NE
1:24 000)

Mapped by the Geological Survey
1945

Red Cloud
T14N R9W
Dec 29, 30

ROAD CLASSIFICATION
1964
Medium-duty ——— Light-duty ———
Unimproved dirt - - - - -



UTM GRID AND 1945 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

CONT
DA1

FOR SALE BY U. S. GEOLOGICAL SURVEY
A FOLDER DESCRIBING TOPOGR

Bagdad, Aug 15'

RED CLOUD MINE

YAVAPAI COUNTY

Interviewed Bill White and his wife at their place in Jackrabbit Flat (near Congress). He has obtained a deal on the Red Cloud Mine in the Bagdad region. The mine is owned by the Lawler estate and is very near the Old Dick and Copper Queen mines. He formerly was the supt. on the Swastika job which is suspended indefinitely. Mr. White hopes to be able to finance development of the Red Cloud soon. TPL WR 11-26-60

Visited Bill White at Yarnell. He was in charge of the Swastika exploration project of a year ago. Mr. White advised that he and a group of associates are now drilling the Red Cloud property owned by the Lawler estate which lies in close proximity to the Old Dick and the Copper Queen mines near Bagdad. The initial hole is drilling at 120'. Boyles Bros. is the contract driller. TPL WR 7-15-61

Standard Metals under jurisdiction of Arthur Still are preparing to drill the Red Cloud property south of the Old Dick. The Red Cloud is part of the Lawler Estate. FTJ WR 9-8-67

Drilling stations are being bulldozed on the Lawler Claims adjoining Zannaris by Standard Metals. FTJ WR 11-10-67

No activity on the Zannaris property nor the Lawler claims, although Standard Metals still holding option. FTJ WR 6-20-69

Gresov of Standard Metals Corporation reported that during the last year 1,385 feet of diamond drilling was completed at the Red Cloud group of claims. This property is southwest of Bagdad, near the Old Dick mine, and was a part of the Lawler Estate. N. Hall Thorne, Kingman, is resident manager for Standard Metals. Tom Miche, Box 5068, Yucca, is project supt. at the Antler. Pay Dirt 10-1969

Reference: AMJ 11/19/68, p. 26

SHATTUCK DENN MINING CORPORATION

and

SUBSIDIARIES

Humboldt

Office

March 15, 1966

Date

TO: C. R. Sundeen**SUBJECT:** RED CLOUD PROPERTY
Bagdad Area**FROM:** J. Olaf Sund**TYPE:** Zinc, Copper etc.**LOCATION:**

The property includes a block of unpatented claims in which three are critical. These are called the Rudkins, Red Cloud and Queen Bee. They are located in the Bagdad area of the Eureka Mining District. Specifically they are situated in sections 29 and 30 of T-14-N and R-9-W.

OWNERS:

The fee owner of the property is the Lawler Estate. It is presently held under lease or option by McFarland and Hullinger. A.R. Still has recommended an extensive exploration program to the present lessees and they in turn are looking for a partner.

TERMS REQUESTED:

Direct contact will have to be made with McFarland and Hullinger but it is understood that they would be willing to enter into a liberal agreement with Shattuck Denn Mining Corporation.

INTRODUCTION:

The following report is largely based on a report by A.R. Still and is merely a brief summary of this report. No attempt will be made to give detailed descriptions etc. Instead the reader is referred to the detailed report on the claims for McFarland and Hullinger by A.R. Still in March 1965.

HISTORY:

The claims were first located prior to 1900. Shafts were sunk on the Red Cloud claim and Rudkins claim as well as a connecting adit to the shaft on the Red Cloud claim. All of the above penetrated to only 100 feet. Early in World War II and early in the 1950's modest efforts were made in the Red Cloud adit which produced a little copper oxide ore.

In 1953, Cyprus studied the area and drilled five shallow diamond drill holes, mostly around the Red Cloud adit. Sub-ore grade mineralized intersections were made. In 1957, Ventures of Canada examined the claims in detail but for reasons not related to the claims, dropped their option. A single drill hole only was completed in 1963, again in the Red Cloud area and intersected some copper mineralization. In March and April of 1965, Cyprus again optioned the claims and drilled five more short holes,

two of which were on the Red Cloud and Rudkins claims and three others on the Queen Bee Claims. The drilling on the Queen Bee was intended to drill under a trenched gossan zone exposed by McFarland and Hullinger.

SUMMARY OF HISTORY:

It is important to note and realize that all of the above work, including the latest efforts by Cyprus, did not have the advantage of, or apparently did not take into account, the present knowledge of the geologic structural controls on these massive sulphide ore deposits. That is to say, the very important structural feature of the area as pointed out by A. R. Still in his report, namely, the southwestern plunge (see geological summary) was seemingly not considered while laying out the drill holes completed to date. Similarly the drill holes were very short and penetrated to an approximate vertical depth of 100 feet only. This overlooks another general feature that the ore deposits are reached at vertical depths of 150 to 200 feet.

GEOLOGY:

Massive copper and zinc sulphide deposits are one of the important types of mineralization in the Bagdad area. Three such deposits that have been exploited to date include the Old Dick, the Copper King and the Copper Queen mines. All occur in a similar type geological environment, namely Precambrian schist at or near a contact with massive Precambrian meta-rhyolite "intrusives". The ore deposits are generally lenticular zones with a short strike length up to 300 feet, widths up to 84 feet and plunge lengths several times the strike length. All of the above productive deposits strike northeasterly or northerly and plunge to the southwest. Although the geological environment is similar none of these three ore bodies are on the same geological contact.

The mineralogy is simple and very nearly the same at each mineral deposit, being mainly sphalerite, chalcopyrite and pyrite. They are considered to represent replacement type sulphide veins and lenses along zones of faulting and fracturing near the above contact. Surface expressions are apparently discreet as only small outcroppings of gossan overlie two of the deposits and the third was represented by a zone of silicification.

The pertinent part of the Red Cloud property is situated in the same geological setting as the above productive properties. That is to say, it straddles a northeasterly trending contact between meta-volcanic schists and meta-rhyolitic porphyry "intrusives". The schists are principally andesitic flows and tuffs with some quartz porphyry. Within these schists there is a nearly continuous 4000 foot long zone or belt of silicification that contains three distinct areas of gossan that are probably after massive sulphides. In fact, these Red Cloud claims are on the same contact as the Copper Queen deposit and only about one-half mile to the southwest. At a number of places along the silicified zone such features as the foliation and probable fault movements etc. all display a consistent southwesterly rake at 60 degrees.

ECONOMIC FEATURES:

The details of the potential targets for drilling etc. on each of the three claims are included in Still's report, pages 12 to 21 inclusive. The targets on each claim may be summarized as follows:

A. Red Cloud Claim:

Gossan after sulphides on surface-150 feet x 12 feet.
 Possibly high in zinc and copper.
 Gossan associated with moderately mineralized silicified shear zone.
 Mineral lineations in schist rake to the southwest at about 60 degrees.

B. Queen Bee Claim:

Lenticular patches of gossan at or near surface are nearly continuous for 115 feet x 8 feet.
 Gossan after zinc and copper mineralization.
 The above was tested by Cyprus but drill holes were too short, too shallow and too far north.

C. Rudkins Claim:

Gossan at north end with brecciated, limonite stained flinty quartz about 200 feet x 30 feet and after pyrite.
 Yellow and orange fluffy gossan after iron carbonate with anomolous copper, lead and zinc.
 Quartz tourmaline brecciated intrusives.

 This claim is completely untested.

D. Area Between Gossan Ratches:

The areas between the above gossans are strongly silicified. These may be the upward silicified tops of potentially economic grade mineralization at depth.

Samples collected by the writer assayed as follows:

<u>Sample No.</u>	<u>Location & Description</u>	<u>Au</u>	<u>Ag</u>	<u>Pb</u>	<u>Zn</u>	<u>Cu</u>
12151	Queen Bee red iron gossan in schist	Tr	Tr	Tr	0.2	0.18
12152	Queen Bee brown gossan in silic schist	Tr	Tr	Tr	Nil	0.14
12153	Queen Bee red spongy sil.schist	Tr	Tr	Tr	Tr	0.22
12154	Queen Bee brown rusty oxide	Nil	Tr	Nil	0.5	0.62
12156	Queen Bee Cu oxide in sil.schist	Tr	Tr	0.2	3.5	1.26
12157	Queen Bee brown gossan in silic. schist	Tr	Tr	0.1	0.2	0.12
12158	Red Cloud And. schist w/silicif. gossan & Cu	Nil	Tr	Tr	Nil	0.06
12164	Rudkins Silic.schist & qtz w/copper	Nil	Tr	Tr	Nil	0.88

CONCLUSIONS:

The Red Cloud claims encompass a favorable geological environment that is typical of the structural setting for the known massive sulphide deposits in this area. The structural feature herein has silicified and mineralized (gossan) zones that are similar to the surface expressions over the other ore deposits.

RECOMMENDATIONS:

The early and even most recent work has not been adequate to either prove or disprove the ore possibilities on these claims. The property easily warrants exploration as outlined by A. R. Still. The writer is in full agreement with this proposed program. Furthermore, in the monthly report of February 1965, Paul Gilmour reported the following after his initial investigation:

"...The property certainly looks interesting from a geological standpoint. It covers 4000 feet of the contact on which the Copper Queen occurs and contains three interesting showings of base-metal sulphides, only one of which has been superficially explored. The project would be worth considering if it comes up again."

EXPLORATION WORK REQUIRED:

The known massive sulphide deposits of this area are not particularly amenable to geophysical exploration because the high sphalerite content and the relatively short strike length of the mineral lenses. However, as pointed out by Still, it would be desirable to do some geophysical test work prior to the expense of diamond drilling with the expectation that some ore-bearing zone might be indicated. There is probably enough pyrite and chalcopyrite associated with any sphalerite lens that an Electro-magnetic or Induced Polarization test would yield positive results. The E.M. test could be accomplished with our own instrument presently on order. Consideration regarding an I.P. test should await the results of an initial E.M. test.

Still has outlined eleven diamond drill holes to test the entire 4000 foot long structure. These include:

Rudkins Claims

DDH--A	Brg.--S-50° E	Incl. 60°	depth 500'
DDH--B	" S-50° E	" 60°	" 500'
DDH--C	" S-50° E	" 65°	" 425'
DDH--D	" S-50° E	" 60°	" 375'
		Total	<u>1800'</u>

These four holes would intersect any local modification in the regional plunge of the mineralized silicified zone. The writer would reverse the order, D through A.

Red Cloud Claims

DDH--E Brg.--S-43° E incl. 60° depth 450'
 To test grade increase between RCS-1 and 2 and to test under surface silicification to north.

DDH-F Brg.-S-45° E incl. 50° depth-350'
 To test the south rake of a sulphide lens at the Red Cloud shaft.

DDH-G Brg.-S-45° E incl. 70° depth 650'
 Location controlled by "F" above-to test the down continuation of above sulphide lens.

DDH-H Brg-S-45° E incl. 67° depth-400'
 Expand data from above and previous drilling. This hole may actually not be necessary.

Queen Bee Claims

DDH-1	Brg. S-40° E	incl. 65°	depth 400'
DDH-J	" S-40° E	" 65°	" 400'
DDH-K	" S-40° E	" 65°	" 400'
		Total	<u>1200'</u>

These three holes should intersect a down plunge of the gossan type mineral zone on surface at 300 foot depth.

The above eleven holes represent an initial test. Favorable results would require some follow-up drilling.

Total footage as above--4850'

Total cost (based on Thatcher's estimate) --\$23,500.00

Probable follow-up drilling -- \$10--15,000.00

Misc. Costs (tests and boxes etc.) \$1,000.00

Total approximate--\$36,000.00
(exclusive of supervision etc.)

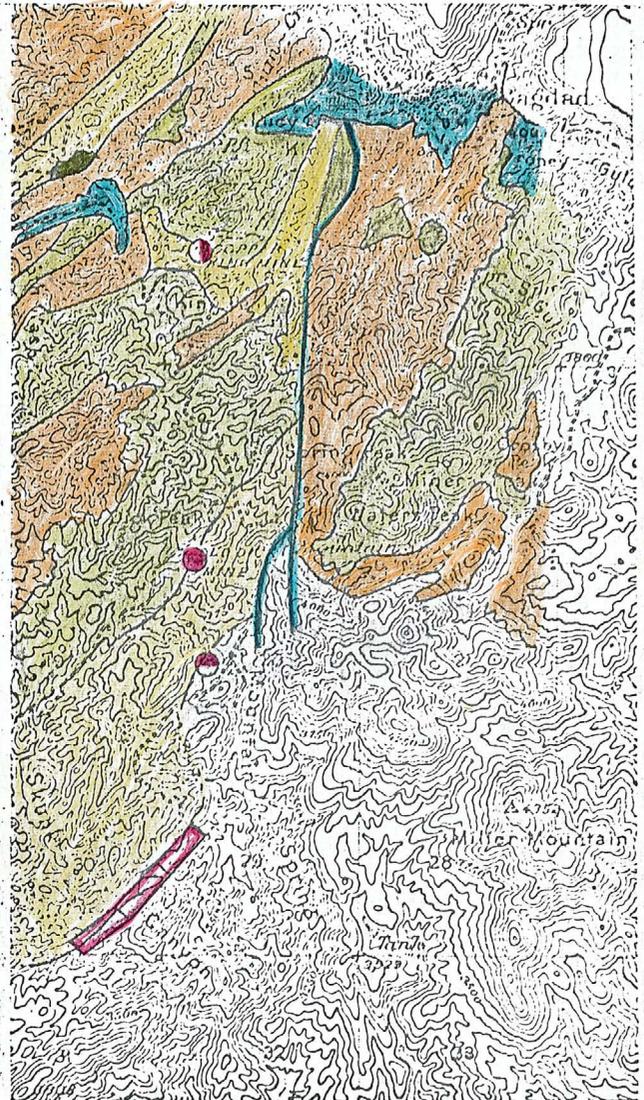
EXPLANATION

Rocks:

- Laramide ( Quartz-monzonite
- ( Granite, alaskite porphyry & gabbro
- Precambrian ( Meta-rhyolite
- ( Yavapai schist
- ( Fault (major)

Mines:

-  Old Dick
-  Copper Queen
-  Copper King
-  Red Cloud patented claims



INDEX AND GENERALIZED GEOLOGIC MAP

PART OF EUREKA MINING DISTRICT

Yavapai County, Arizona

A. R. Still

1" = 1 mile

March '65

Note: Topography and geology after U.S.G.S.