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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: GRANDVIEW

ALTERNATE NAMES:

NO. 1 PAT. CLAIM 3591
NUMBER FOUR PAT. CLAIM 3592A
NUMBER FIVE PAT. CLAIM 3592A
GRAND CANYON
CANYON COPPER
LAST CHANCE PAT. CLAIM 1358A

COCONINO COUNTY MILS NUMBER: 408

LOCATION: TOWNSHIP 30 N RANGE 4 E SECTION 5 QUARTER NE
LATITUDE: N 36DEG 01MIN 02SEC LONGITUDE: W 111DEG 58MIN 34SEC
TOPO MAP NAME: VISHNU TEMPLE - 15 MIN

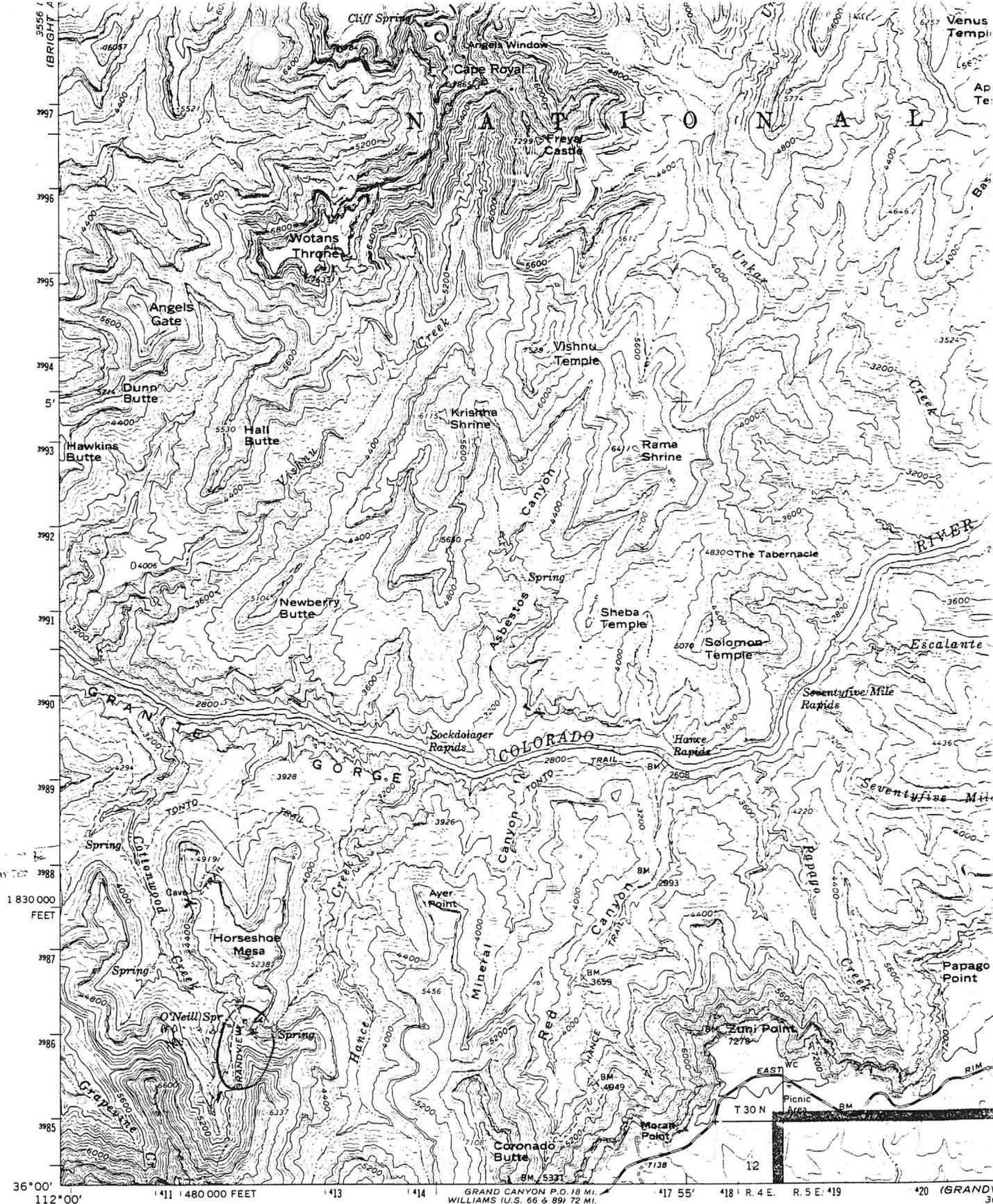
CURRENT STATUS: PAST PRODUCER

COMMODITY:

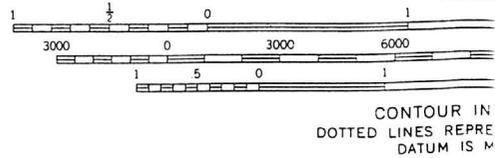
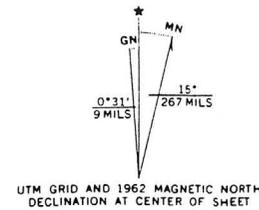
COPPER OXIDE
URANIUM
SILVER
CLAY KAOLIN
CALCIUM CALCITE
TELLURIUM
IRON HEMATITE
SELENIUM

BIBLIOGRAPHY:

ADMMR GRANDVIEW FILE
BLM MINING DISTRICT SHEET 102
EMMONS, S.F., USGS BULL. 260, P. 221-232
US-AEC PRELIM. RPT. 172-479, P. 57
ROSEVEARE, G.H., AZZBM BULL. 180
MOORE, R. & ROSEVEARE, G., AZBM BULL. 180,
P. 259
USBM CRIB #W016025
PGJ/F.022(82) MARBLE CANYON QUAD, ARIZ & UTAH



Mapped, edited, and published by the Geological Survey in cooperation with the Arizona Interstate Stream Commission Control by USGS and USC&GS
 Topography by photogrammetric methods from aerial photographs taken 1954 and 1960. Field checked 1962
 Polyconic projection. 1927 North American datum 10,000-foot grid based on Arizona coordinate system, central zone 1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue
 Where omitted, land lines have not been established



THIS MAP COMPLIES WITH NA²⁷ FOR SALE BY U. S. GEOLOGICAL SURVEY, DE A FOLDER DESCRIBING TOPOGRAPHIC MA

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

Coconino

~~COCONINO COUNTY, ARIZONA~~

GRANDVIEW MINE

MILS #408 - 6 AKA's - Grandview Mine (file)

- MM 3978 Cyanotrichite, Antlerite & Malachite
- 3979 Azurite & Cyanotrichite
- 3980 Azurite & Cyanotrichite
- 3981 Azurite & Cyanotrichite
- 3982 Azurite & Cyanotrichite
- 3983 Azurite & Cyanotrichite
- 3984 Azurite & Cyanotrichite
- 3985 Antlerite & Malachite
- 3986 Antlerite & Malachite
- 3987 Antlerite & Malachite
- 3988 Antlerite & Malachite
- 3989 Antlerite & Malachite
- 4001 ~~Antlerite~~ after Horn Coral
Azurite

ARIZONA

COCONINO CO.

~~GRAND CANYON~~

Grandview Mine (File)

MILS # 408

6- AKA's

Grandview mine (file)

MM 7723 Cyanotrichite

M MS K

LAST CHANCE MINE file COCONINO COUNTY

Notes on the Grandview Mine, Grand Canyon National Park, Arizona

In 1951, the U. S. Atomic Energy Commission contracted with Dr. Russell Gibson, Harvard University to make a radiometric reconnaissance survey of "red bed" copper deposits in the southwestern United States for their uranium content, and possible production capabilities.

He examined 36 properties in 4 states - Arizona, New Mexico, Texas, and Oklahoma. Properties examined in Arizona were the Anita Mine, Grandview Mine, White Mesa district, and the Warm Springs district. The old Grandview copper mine in Grand Canyon National Park exhibited the greatest uranium concentration of all the 36 properties examined. The section on the Grandview Mine from Gibson's final report to the AEC is attached. His report is referenced as follows:

Gibson, Russell, 1952, Reconnaissance of some red bed copper deposits in the southwestern United States: U. S. Atomic Energy Commission Report RMO-890, Technical Information Service, Oak Ridge, Tennessee, 78 pages.

Although the report was printed and ready to be distributed by Oak Ridge in 1952, it was not released to the public until August 15, 1967. The delay, I am told, was due to the fact that Gibson had not obtained "Permission to Publish" forms from all the property owners. The National Park Service, owner of the Grandview Mine, was reported to have been the last one to sign.

William L. Chenoweth

January 23, 1987

Attachments:

Pages 69-71, RMO-890

Report No. 33

Locality No. 5

Date of examination August 21 and 22, 1951

Name of property Grand View Mine. Owner is National Park Service. (The mine is in Grand Canyon National Park)

State Arizona

County Coconino

District Grand Canyon

Location Sections 4 and 5, T. 30 N., R. 4 E. One and one-half miles northeast of Grandview (four and one-half miles by trail) and 2460 feet lower. In 1951 the trail was in such bad shape that it could not be travelled by mules.

Geologic environment Red Wall (Mississippian). The ore-bearing rocks are red to gray, coarsely crystalline limestone, that, near the veins, is bleached and silicified; white, friable limestone; and red shale, in part silicified and bleached. The beds dip 10° - 15° northeasterly.

Type of deposit The deposits include two general types: narrow veins in limestone ranging from 4 to 8 inches in width that strike N. 25° - 30° W. and dip 75° easterly to vertical; and a mineralized zone of shale and fractured limestone 5 to 15 feet wide trending in a general northwesterly direction in which the ore is disseminated and present also in small irregular veins. The dominant minerals in both types of deposits are limonite, malachite and azurite; a little chrysocolla is present and insignificant amounts of covellite, chalcocite, chalcopyrite and metatorbernite.

Microscopy A polished section of limonitic material

higher in copper minerals than most of the ore, contains about 25 per cent malachite and azurite, and two per cent chalcocite, chalcopyrite, and covellite. Chalcocite grains 0.01 - 0.10 mm. across contain small ragged residual grains of chalcopyrite almost completely replaced by chalcocite. A little covellite is intergrown with some of the chalcocite. Irregular grains of malachite are intergrown with limonite, and malachite-azurite veins up to 0.30 mm. wide cut across the limonite.

Under the binocular microscope a little metatorvernite was identified associated with very small amounts of barite in crevices of clayey, limonitic ore.

Development

Development includes two caved shafts, several prospect pits, and two adits. A lower adit driven in a southwesterly direction has about 800 feet of workings comprising a drift and three crosscuts. An upper adit, 200 feet higher, has more extensive workings.

Radioactivity and sample data

In the lower (crosscut) adit radioactivity ranges from 30 times background near the portal to 60 or 65 near the southwest end, and radioactivity seems to be as high in the crosscut as it is in the drifts on the narrow veins. Nowhere does the ore or wall rock give figures higher than these. A channel sample (F6315) six inches long cut across one of the veins where it is six to eight inches wide and where radioactivity was 65 times background yielded, upon assay, 0.015% U_3O_8 .

In the upper adit radioactivity ranges commonly from 2 to 5 times background, and exceptionally 12 times or more.

At a very few places the radioactivity of the mineralized wall rock showing spotty limonite and copper carbonates was 300 times background but 20 to 40 cubic inches would include all the radioactive material of this grade.

Outcrop showing copper mineralization over a length of 70 feet and dumps exhibit radioactivity of two to five times background, and exceptionally 10 times.

Sample data

<u>Number</u>	<u>Type of sample</u>	<u>Equivalent U₃O₈</u>	<u>Chemical assay U₃O₈</u>
F6315	Channel sample across vein 6 to 8 inches wide.	.020	.015
F6316	Dump sample (grab) combined from 5 pits	.165	.189
F6317	Channel sample across outcrop of mineralized zone. Length 14 feet.	.051	.057

References

S. F. Emmons, Copper in the Red Beds of the Colorado Plateau: U.S.G.S. Bull. 260, pp. 221-232, 1905.

H. H. Waesche, The Grand View copper prospect: Grand Canyon Nature Notes, Vol. 8, No. 12, pp. 250-258, 1934.

A report in the files of the U. S. Geological Survey. The Geological Survey examined the mine (as a copper producer) at the request of the National Park Service.