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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., AZBM BULL. 180
- MOORE, R. & ROSEVEARE, G., AZBM BULL. 180, P. 259
- USBM CRIB #W016025
- PGJ/F.022(B2) 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
ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

COCONINO CO.

GRANDVIEW MINE

MILS # 408 - 6 AK12 - GRANDVIEW MINE

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

ARIZONA

COCONINO CO.

GRANDVIEW MINE

MILS # 408
6 - AK12
GRANDVIEW MINE (408)

MM 7723 Cyanotrichite
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:


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 (Mississippean). 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 metatorvnite was identified associated with very small amounts of barite in crevices of clayey, limonitic ore.

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% U₃O₈.

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**

<table>
<thead>
<tr>
<th>Number</th>
<th>Type of sample</th>
<th>Equivalent $U_3O_8$</th>
<th>Chemical assay $U_3O_8$</th>
</tr>
</thead>
<tbody>
<tr>
<td>F6315</td>
<td>Channel sample across vein 6 to 8 inches wide.</td>
<td>.020</td>
<td>.015</td>
</tr>
<tr>
<td>F6316</td>
<td>Dump sample (grab) combined from 5 pits</td>
<td>.165</td>
<td>.189</td>
</tr>
<tr>
<td>F6317</td>
<td>Channel sample across outcrop of mineralized zone. Length 14 feet.</td>
<td>.051</td>
<td>.057</td>
</tr>
</tbody>
</table>

**References**


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.