

Mining District: PYRAMID DISTRICT
(Silver, Gold, Uranium, Copper, Diatomite, Zinc, Lead)

T. 23-24 N., R. 20-21 E.
Washoe County, Nevada
USGS Sutcliffe 15-min. quadrangle (1957)

GENERAL BACKGROUND

The Pyramid area is located about 30 miles north of Reno, at the junction of the Virginia Mountains and the Pah Rah Range. Mullen Pass, an east-northeast-trending structural lineament, approximately bisects the area. The district was first organized in 1866 and encompasses about 20 sections. Maximum productivity occurred prior to 1890. From 1890 to the present there has been only limited, small-scale mining activities. Incomplete records indicate the extraction of about 3,000 tons of gold and silver ore grossing approximately \$95,000 (1). The bulk of the production came from the Franco-American (Nevada Dominion, Blondin) Mine located in sections 15 and 16, T. 23 N., R. 21 E.

Uranium was discovered in the Pyramid area in 1954. Most of the uranium mineralization occurs northwest of Mullen Pass, although several uranium prospects are in the southern portion of the area. Production figures for uranium from the district are not available, but presumably the figures are not large. The uranium prospects were not examined by the writers.

Poorly exposed diatomite, perhaps as much as 20 feet thick, is located in sections 3 and 4, T. 23 N., R. 21 E. The diatomite was not examined.

GEOLOGICAL AND TECHNICAL DATA

The oldest rocks exposed in the Pyramid area are Tertiary ash-flow tuffs of the Hartford Hills Rhyolite. (Mesozoic metamorphic rocks crop out a short distance outside the area and presumably underlie the Hartford Hills Rhyolite within the district.) Propylitic alteration and bleaching is common in the Hartford Hills Rhyolite. Overlying the Hartford Hills Rhyolite are volcanic rocks and associated sedimentary rocks of the Pyramid Sequence. Dacite plugs of the Kate Peak Formation intrude both the Pyramid Sequence and the Hartford Hills Rhyolite.

Economic mineralization in the Pyramid area occurs in northwest-trending veins, up to 10 feet wide, that cut the Hartford Hills Rhyolite. Ore bodies occur as small veinlets, stringers, pods, disseminations, and lenses of massive sulfide. The lenses are commonly small and extend only a few feet along strike. The ore-bearing veins are commonly oxidized to

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depths of 100 feet or greater. Primary sulfide ore is a mixture of argentiferous enargite and pyrite with barite and gold (gold tenor is usually less than 0.05 ounce per ton). Some ore contained abundant sphalerite and lesser amounts of galena. The associated gangue minerals are quartz, calcite, and silicified and sericitized rhyolitic tuff.

According to Bonham (1) vein sulfide material taken from the dump at the Franco-American Mine assayed 25 percent zinc, 6.5 percent lead, 0.18 percent copper, 8.36 ounces of silver per ton, and a trace of gold.

Uranium mineralization occurs as disseminations and encrustations along high-angle faults in ash-flows of the Hartford Hills Rhyolite. Many of the faults are in close proximity to diabase dikes intruded into the ash-flows, and in these instances the dikes also contain some uranium mineralization. The uranium minerals present are autunite, sabugalite, uranospinite, and phosphuranylite and gummite(?). Bonham (op. cit.) postulates a genetic link between uranium mineralization and the Hartford Hills Rhyolite by suggesting that the uranium was leached from the ash-flows by heated groundwater with subsequent precipitation and concentration in favorable environments.

The diatomite deposit is included in the Pyramid Sequence. The material is white with a pink to yellowish cast, and the average brightness is about 70 percent. Abundant non-opaline material is present in the diatomite (1).

POTENTIAL FOR DEVELOPMENT

Ore in the Pyramid area is thoroughly oxidized to the depth of 100 feet and partially oxidized to the deepest mine workings--about 500 feet. Undoubtedly, favorable values were the result of secondary enrichment and were confined to the zone of heaviest oxidation. Several mines in the area, which have little or no recorded production are, nevertheless, located on veins similar to those at the Franco-American Mine, which produced most of the precious metals from the area. These properties could be subject to exploration by small operators in anticipation of discovering ore shoots similar to those at the Franco-American Mine, should the price of silver and gold rise enough to make the venture profitable. However, the ore tenor can be expected to decrease rapidly below the zone of oxidation, and future exploration will probably be confined to depths less than 500 feet below the present surface.

Economic Tertiary or pre-Tertiary mineralization in the basement rocks is a possibility. However, basement rocks are estimated by projection to be at a depth of about 2,500 feet and, under this circumstance, are of dubious potential.

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The Pyramid area will undoubtedly continue to be the site of prospecting activities and a small potential exists for the future production of silver and gold. Future silver and gold production, if any, will probably come from underground workings. Uranium production could come from open pits, underground workings, or a combination of both.

A number of prospects in the Pyramid area contain sufficient uranium concentrations to constitute acceptable ore-grade standards previously established by the AEC's procurement programs. At individual properties, however, mineralization is generally of limited extent, and under the present price structure, extraction is probably economically submarginal. Nevertheless, these several uranium prospects, when considered as a whole, constitute what is probably a potential future uranium reserve. Economic considerations will play a vital role in the future development of these properties. As increased demands for uranium occur--primarily for electric power generation--the Pyramid area will be of interest to uranium prospectors, and at least some production will be likely. Past workings consist of numerous prospect pits, shafts, and adits. Some of the uranium has been produced from small open pits.

The diatomite deposit is impure, poorly exposed, and limited in extent. Competition from the established Eagle-Pitcher quarry makes it unlikely that this diatomite will be exploited in the future.

COMPANIES AND CLAIMANTS ACTIVE IN AREA

The Pyramid area is heavily staked with lode and placer mining claims. The following list identifies some of the claimants in the area:

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| 1. JOHANNA Group
Johanna Cameron
1630 Van Ness, Reno
Jan. 1968
(4 lode claims) | 2. OWL LODGE Group
A. C. Wilson
1490 Glendale, Sparks
(4 lode claims) | 3. BENT SHAFT #1
Jan. 1972 |
| 4. NEVADA DOMINION Group
Claude Chaplin
Star Rt., Sutcliffe
Mar. 1972
(7 lode claims) | 5. CONTINENTAL LODGE #1
R.P. Lageson, Jr., et.al.
Feb. 1972 | 6. MALACHITE Group
B.C. Curtiss, et.al.
PO Box 5121, Reno
1959, 1961, 1962
(4 lode claims) |
| 7. RED BLUFF Group
U.S. Mining & Expl.Inc.
Reno
(14 lode claims) | 8. LUCKY POT, POT LUCK
Elmer Weckesser
1775 Hillboro, Reno
Apr. 1970, May 1972
(2 lode claims) | 9. BLUE BIRD Group
Claude Chaplin
Star Rt., Sutcliffe
(5 lode claims) |

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| 10. SUGARLOAF Group
✓ J.H. Taylor
1450 Skyline, Reno
Sept. 1968
(3 lode claims) | 11. LYNX Group
M. Shokahi
(10 lode claims)
relocated(?) by
A. Vezne in May 1970
7510 Yorkshire, Reno | 12. LUCAL Group
Luke Aiuevich, et.al.
Jun., Dec. 1969
(2 lode claims) |
| 13. DOUBLE JACK Group
J.H. Taylor, et.al.
1450 Skyline, Reno
Apr.-Dec. 1969
(2 placer, 24 lode claims) | 14. MILLIE Group
J.H. Walton, Jr.
Star Rt., Sutcliffe
(4 lode claims) | 15. SILVER BELL
Mrs. Mabel Burns
1037 Haskell, Reno
1912
(1 lode claim) |
| 16. KELLEY Group
George Bechtolt
Star Rt., Sutcliffe
Aug. 1968, Mar. 1970
(2 lode claims) | 17. NEEDLE ROCK Group
Mrs. M. Lockett
(3 lode claims) | 18. BROKEN ARROW #1
D. Liston
1212 Old Oakland Rd.
San Jose, Calif.
Jun. 1964
(1 lode claim) |
| 19. MARGARITA
B. C. Curtiss
Mar. 1965
(1 lode claim) | 20. THUNDERBIRD Group
John Dietrich
710 B St., Sparks
(15 lode claims) | 21. ARMSTRONG CLAIM #1
Homestake Mining Co.
100 Bush, 26th Floor
San Francisco, Calif. |
| 22. HOPELESS Group
J. J. Waltman
Box 886, Litchfield, CA
(7 lode claims) | 23. LOWARY Group
H. Maue
682 Mt. Rose, Reno | 24. RED BLUFF GROUP
G. Delongchamps
24 Rock, Reno
(10 lode claims) |
| 25. BING Group
T. Chambers
67 E. 6th, Sun Valley
(11 lode claims) | 26. LOST PARDNER Group
James Colfer
140 Hubbard Way
Jun. 1964
(4 lode claims) | |

SELECTED REFERENCES

1. Bonham and Papke: Geology and Mineral Resources of Washoe and Storey Counties, Nevada; Nev. Bur. Mines Bull. 70, 1969.
(Includes Geologic Map of Resource Area)
2. Overton: Mineral Resources of Douglas, Ormsby, and Washoe Counties; Univ. Nev. Bull. 9, 1947.

FIELD EXAMINATION

Bennett and Webb (silver-gold properties only), Nov. 1972

Bennett, Jan. 1973

Taken from:

Mineral Resources Inventory and Analysis

of the

Pyramid Resource Area

Carson City District
Nevada and California

by

R. E. Bennett and H. W. Mallery

1973

*see Washoe County-general
file for the complete
introduction to this report
Item 50*