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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: NEWMONT AGUA FRIA GOLD

ALTERNATE NAMES:  
BELL RANCH

YAVAPAI COUNTY MILS NUMBER: 1028

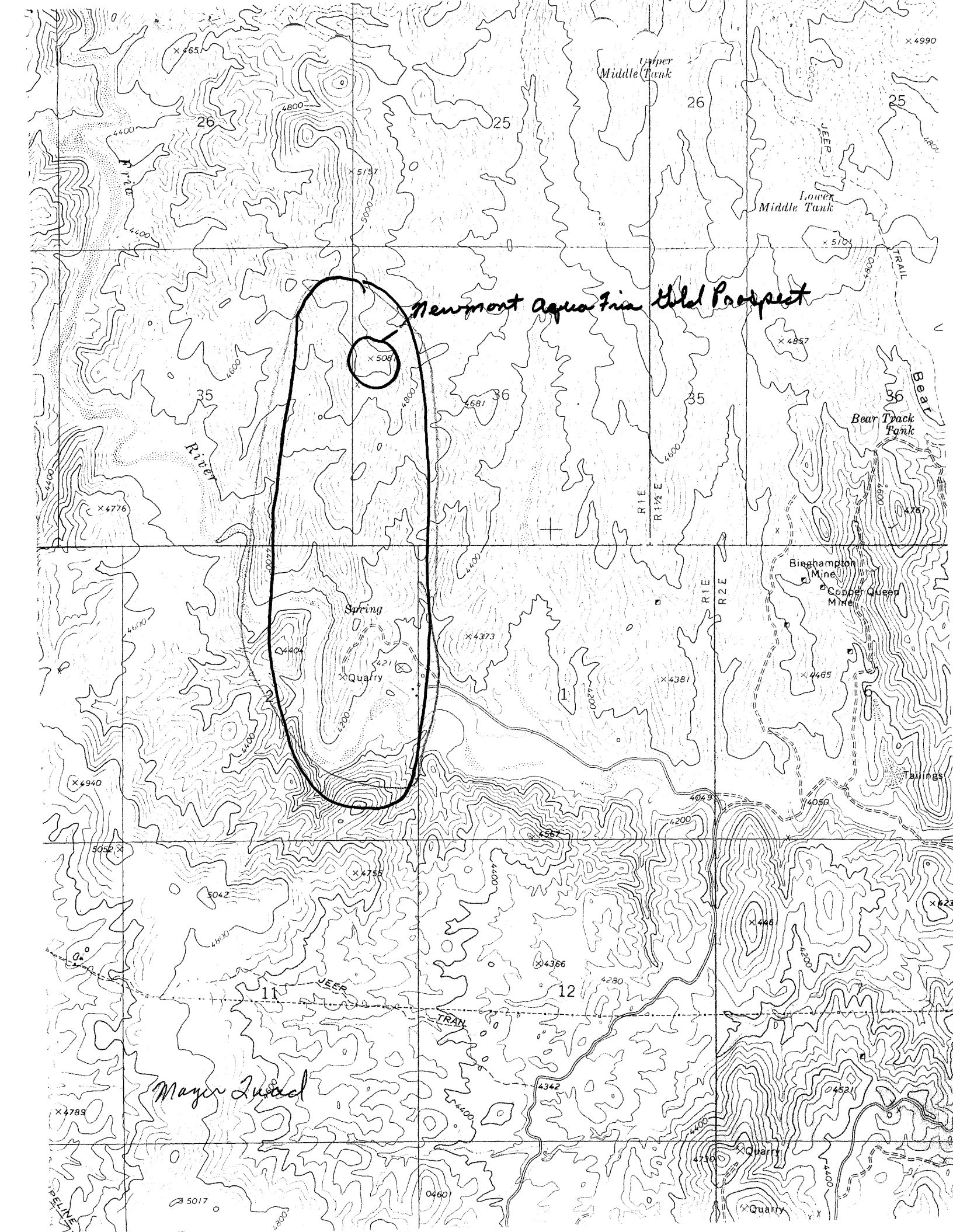
LOCATION: TOWNSHIP 12 N RANGE 1 E SECTION 2 QUARTER C  
LATITUDE: N 34DEG 27MIN 05SEC LONGITUDE: W 112DEG 13MIN 30SEC  
TOPO MAP NAME: MAYER - 7.5 MIN

CURRENT STATUS: EXP PROSPECT

COMMODITY:  
GOLD  
COPPER

BIBLIOGRAPHY:

USGS MAYER QUAD  
STATE OF AZ LAND DEPT PERMIT 7725200, 7725300  
& 7752400 PERMIT INC. ALL SEC. 35 and 26  
EXCEPT W2NE T13N-R1E  
ADMMR NEWMONT AGUA FRIA GOLD FILE  
SWAN, HAUSEN, NEWALL, 1981, PROCEEDINGS OF  
METALLURGICAL SOC., AIME, PROCESS MINERALOGY  
SEG GUIDEBOOK SERIES VOL. 1, 1987 P. 143.



*Newmont Aquatic Hold Prospect*

x 5087

Spring

Quarry

Binghamton Mine

Copper Queen Mine

Bear Track Tank

*Mayer Road*

Quarry

Quarry

Upper Tank

Middle Tank

Lower Middle Tank

River

River

Bear Track

Tank

Tailings

R1E

R1 1/2 E

R1E

R2E

JEEP

TRAN

TRAIL

JEEP

TRAIL

RELIN

NEWMONT AGUA FRIA GOLD PROSPECT

YAVAPAI COUNTY  
T13N R1E Sec 36 & 2

MILS Yavapai Index: Mayer 18 #1008  
Newmont Permit #1028

Process Mineralogy by Donald M. Hausen & Won C. Park, The Metallurgical Society  
of AIME pp 143 - 157 (included in file) 1981

Mayer Quad 7.5 min. (included in file)

NEWMONT AGUA FRIA GOLD PROSPECT

YAVAPAI COUNTY

NJN WR 7/20/84: Jeff Rinker, geologist with Placer Development, reported that a large part of Newmont's work at the Newmont Agua Fria Gold Prospect (f) Yavapai Co. was done on private property in Sec 35. When they finished, all of their sampling, trenching and drill data was turned over to the owners of the land which belong to the Bell (?) Ranch.

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NJN WR 2/1/85: Gary Eaton of Lac Minerals (c) reported Bower Metals of New Jersey has leased the Bell Propety (Bell Ranch portion of the Newmont Agua Fria Gold Property- file) Yavapai County and is beginning exploration there. Someone else has leased the state portion of the property.

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Location of site: Bell Ranch gold prospect

County: Yavapai

Quadrangle: Mayer

Commodities: Au

Location of site: Prospect and shallow shaft.

Production: Not determined.

Production: No recorded production.

Ore minerals: gold

Gangue: Gangue minerals include pyrite, arsenopyrite, quartz, chlorite, and calcite. Goethite and montmorillonite occur in the oxidized zone.

Alteration: Alteration includes silicification, sericitization, chloritization, and carbonatization(?).

Metamorphic grade: Lower greenschist facies.

Unit name: Iron King Volcanics of the Big Bug Group, Yavapai Series.

Lithology: The host rocks for massive sulfide lenses are quartz-chlorite and quartz-sericite schists that are inferred to represent cherty rhyolite tuff and metagraywacke. The gold occurs principally in sulfide-facies iron formation.

Age: The age of the host rocks is about 1.75 Ga as determined by Anderson and others (1971).

Volcanism: Calc-alkalic volcanism (Swan and others, 1981). A white rhyolite dome with local siliceous sinter is about 1.5 km north of the prospect.

Sedimentary rocks: Associated sedimentary rocks include sulfide-, oxide-, and carbonate-facies iron formation; chert, and fine-grained clastic metasediments.

Ore types: Gold-bearing strata is chiefly sulfide-facies iron formation that contains up to 20 percent disseminated sulfides and local lenses of massive sulfides up to 30 cm thick.

Ore texture: Gold occurs chiefly as fine-grained inclusions (1 to 10 microns) in pyrite or in iron oxide pseudomorphs after pyrite.

Structure: The prospect is 2 to 3 km west of the Shylock Fault. The host rocks are locally isoclinally folded.

Geometry: The gold-bearing units are up to 100 meters thick and can be traced along strike for about 1.6 km.

Comments: The Bell Ranch gold prospect occurs in the distal portion of a stratigraphically asymmetrical white rhyolite dome complex. Sulfide-facies iron formation distal to the dome contains anomalous amounts of Au, Sb, As, Cu, Pb, Zn, and Ag.

Coordinates: Latitude 34-27-55.602N Longitude 112-13-11.000W

Reporter: M. Donnelly

Affiliation: Noranda

References: Anderson, C. A., and Blacet, P. M., 1972, Precambrian geology of the northern Bradshaw Mountains, Yavapai County, Arizona: U.S. Geological Survey Bull. 1336, 82 p.

Anderson, C. A., Blacet, P. M., Silver, L. T., and Stern, T. W., 1971, Revision of Precambrian stratigraphy in the Prescott-Jerome area: U.S. Geol. Survey Bull. 1324C, 15 p.

Swan, M. M., Hausen, D. M., and Newell, R. A., 1981, Lithological, structural, chemical, and mineralogical patterns in a Precambrian strataform gold occurrence, Yavapai County, Arizona: in Process Mineralogy Symposium: AIME Annual Meeting 110, Chicago, Illinois, 1981, Proceedings, Met. Soc. of AIME, p. 143-157.

12. S. S. Adams, H. S. Curtis, and P. L. Hafen, "Alteration of Detrital Magnetite-Ilmenite in Continental Sandstones of the Morrison Formation, New Mexico," IAEA-SM-183/36.
13. F. Dimanche and P. Bartholome, "The Alteration of Ilmenite in Sediments," Mineral Science Engineering, V. 8, No. 3, July, 1976.
14. J. D. Wells, and T. E. Mullens, "Gold-Bearing Arsenian Pyrite Determined by Microprobe Analysis, Cortez and Carlin Gold Mines, Nevada," Econ. Geol., V. 68 (1973) pp. 187-201.
15. P. Joralemon, "The Occurrence of Gold at the Gatchell Mine, Nevada," Econ. Geol., V. 46, No. 3 (1951) pp. 267-309.

LITHOLOGICAL, STRUCTURAL, CHEMICAL AND MINERALOGICAL PATTERNS IN A  
PRECAMBRIAN STRATIFORM GOLD OCCURRENCE  
YAVAPAI COUNTY, ARIZONA

M. M. Swan Newmont Exploration Limited Tucson, Arizona	D. M. Hausen Newmont Exploration Limited Danbury, Connecticut	R. A. Newell Newmont Exploration Limited Tucson, Arizona
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A stratiform gold occurrence of Precambrian age located 20 miles southeast of Prescott, Arizona, within the Agua Fria Mining District, displays chemical, mineralogical, structural and lithological patterns indicative of a distal, exhalative volcanogenic environment. Metavolcanic and metasedimentary rocks of the Proterozoic Yavapai Series (1775-1820 m.y.) host the mineralization and are characterized by greenschist grade metamorphism, steeply-plunging penetrative folds and steeply-dipping schistosity. Mineralization is confined to a 100m thick stratigraphic section that is comprised of a series of thin auriferous massive sulfide beds and intercalated schist containing disseminated sulfides. The mineralization extends more than 4km along strike. Coincident with, and largely confined to the mineralized strata, are anomalous amounts of As, Sb, Cu, Pb, Zn and Ag and associated silicification, sericitization and carbonatization. This exhalative mineralized system is interpreted to have been deposited in a paleotopographic low on the distal flank of a submarine rhyolite dome and to represent the final episode of a Precambrian volcanic cycle.

*From: Process Mineralogy  
by Donald M. Hausen  
& Won C. Park  
pp. 143-157*