



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.



MAIL: P.O. BOX 1738 • WICKENBURG, AZ 85358
(520) 684-0325 • FAX (520) 684-0328

June 3, 2001

Nyal Niemuth, Mining Engineer
Arizona Dept. of Mines and Mineral Resources
1502 West Washington
Phoenix, Arizona 85007-3210

Dear Nyal,

Thanks for the information you provided in our telephone conversation on 6/1/01. I'm enclosing a copy of our Preliminary Geologic Report on the Bullard Mine Property, Yavapai Co., Az., for the Department's files, along with our c.v.'s for your own information. If you know of anyone interested in the Bullard property, they can contact either Mike or myself at our Wickenburg office. I'll stop in and say hello the next time I get down to Phoenix. Thanks again.

Best Regards,

William C. Berridge, P.G., President
Auric Resources International, Inc.

encl: Bullard Mine Geologic Report
WCB & MRS c.v.'s



MAIL: P.O. BOX 1738 • WICKENBURG, AZ 85358
(520) 684-0325 • FAX (520) 684-0328

PRELIMINARY GEOLOGIC REPORT ON THE BULLARD MINE PROPERTY

BULLARD (PIERCE) MINING DISTRICT
YAVAPAI COUNTY, ARIZONA

Prepared For
Canadian Mining Company Ltd.
2300-1066 West Hastings,
Vancouver, BC, Canada V6E 3X2

By

William C. Berridge, P.G., President
Michael R. Smith, R.G., V.P. Mine Development

June 30, 2000



William C. Berridge
6/30/00

OFFICE: 1020 W. WICKENBURG WAY, SUITE E-9 • WICKENBURG, AZ 85390

CONTENTS

page

EXECUTIVE SUMMARY.....	1
INTRODUCTION.....	2
MAP COVERAGE.....	2
LAND STATUS AND CLAIM DATA.....	5
HISTORY OF EXPLORATION, MINING AND EVALUATIONS.....	5
Pre-1978 Activity.....	5
Post-1978 Activities.....	9
REGIONAL SETTING AND ANALOGOUS DEPOSITS.....	11
GEOLOGY OF THE BULLARD MINE AREA.....	12
General.....	12
Target Areas.....	15
SELECTED REFERENCES.....	16
STATEMENTS OF QUALIFICATIONS.....	17
APPENDIX A. AGS Open File Report 92-1.....	In pocket

ILLUSTRATIONS

page

Figure 1. Regional location map.....	3
2. Bullard Mine location map.....	4
3. Bullard Mine patented claims on Yavapai County Assessor's plat..	6
4. View of Bullard Peak and Bullard Mine, looking north.....	7
5. View of Bullard vein, looking north.....	13

6.	View of Bullard vein and unnamed adit, looking north.....	13
7.	View of Bullard vein - brecciated quartz + chrysocolla + hematite..	14
Plate 1.	Bullard geological map.....	In pocket
2.	Bullard cross sections.....	In pocket

EXECUTIVE SUMMARY

The Bullard Mine property consists of 25 patented lode mining claims covering an area of approximately 500 acres, located about 11 miles northwest of Aguila, Arizona, along the southeastern flank of the Harcuvar Mountains, in west-central Arizona.

The earliest dated activity in the Bullard Mining District was the construction of a smelter in 1887 or 1888, by the Yuma Copper and Silver Company. In 1895, John Bullard acquired the ground which had been abandoned by the Yuma Copper and Silver Company, and secured patented titles in 1907. The earliest geological report (1907?) indicates that the Bullard vein ranges from 1-5 ½' thick, and averages 0.36 opt Au and 2.9% Cu. In 1913, A.S. & R. Co. mapped and sampled the Bullard Mine, and reported grades of 0.25 opt Au and 2.67% Cu. In 1939 and 1941, Bullard Gold Mines Inc. shipped approximately 5,500 tons of ore, yielding 2.2% Cu, 0.34 opt Au and 0.26 opt Ag.

In 1987, the Freeport McMoRan Gold Co. drilled ten holes in the southwestern portion of the patented claims and in areas to the west and southwest. Their last hole hit significant mineralization at 45' deep, showing 5' of 0.09 opt Au, just above the Bullard detachment fault. In 1989 and 1990, Cominco American Resources Inc. drilled 42 holes, both on and off of the patented claims. Ore-grade drill hole intercepts were obtained at the northeast corner of the patented claims, with assays up to 0.25 opt Au at depths up to 200'. At the southwest corner of the patented claims, Cominco had one ore-grade intercept, but most of the holes were drilled into the unaltered footwalls of the veins, while most of the altered wallrocks are on the hanging walls of the veins.

In 1992, the history and geology of the Bullard district was summarized in Arizona Geological Survey Open-File Report 92-1, titled Mineral Deposits of the Bullard District, Harcuvar Mountains, Yavapai County, Arizona. The report states that ***“the mineralogic and structural similarities of the Bullard and Copperstone districts suggest that potential exists for a major gold deposit in the area of the Bullard district”***.

The regional setting of the Bullard district is typical of detachment fault gold deposits. The geology of the Bullard district is dominated by the Bullard detachment fault, which strikes northeasterly and dips moderately to the southeast, separating a footwall metamorphic core complex from hangingwall Miocene volcanic and sedimentary rocks. The mineral deposits in the Bullard district consist of veins and fracture fillings along shear zones with quartz, hematite, calcite, pyrite, barite, chrysocolla, malachite, brochantite, and local Mn-oxides. The most extensive vein in the district is the Bullard, which is up to six feet thick and has a strike length of 1,500 feet. About 50 veins have been observed in the Bullard mine area. Mapping by Auric Resources International, Inc. (ARI) personnel indicates that the Bullard fault, as mapped by Reynolds and Spencer (1984), does not have the clean linear trace indicated on their map. There appear to be corrugations in the fault surface, the southeast plunging crests of which line up with the northwesterly trend of vein swarms. These vein swarms may represent leakage up from the crests of corrugations in the Bullard fault, at depth. The Bullard fault at these locations is inferred to have good potential for mineralization analogous to that found at Copperstone.

INTRODUCTION

The Bullard Mine property (Plate 1, Figures 1 and 2) consists of 25 patented lode mining claims covering an area of approximately 500 acres within Sections 1, 2, 10, 11 and 12, Township 8 North, Range 10 West, Gila and Salt River Base Meridian, Yavapai County, Arizona.

The project area is approximately 11 miles northwest of Aguila, Arizona, along the southeastern flank of the Harcuvar Mountains, in west-central Arizona. The property (Figure 2) is easily accessible from Wickenburg, Arizona, via 23 miles of paved road (US Highway 60) and 11 miles of well-graded gravel roads.

The topography ranges from low relief alluvial fans and pediments to rugged peaks and ridges. Elevations range from 2,400 feet to 3,124 feet above sea level, at Bullard Peak (Plate 1). The climate is moderate, with warm summers and cool winters, and year-round operations may be conducted. The area receives only limited rainfall (usually less than 10 inches per year), with most occurring during the summer monsoon (late June or early July) and in the winter. Vegetation is sparse to moderate and is typical of the Southwestern Desert scrub biotic community within the Lower Sonoran Life-zone. Shrubs and trees include brittlebrush, palo verde, century plant and catclaw; and local cacti include saguaro, cholla, barrel, ocotillo, prickly pear and beavertail.

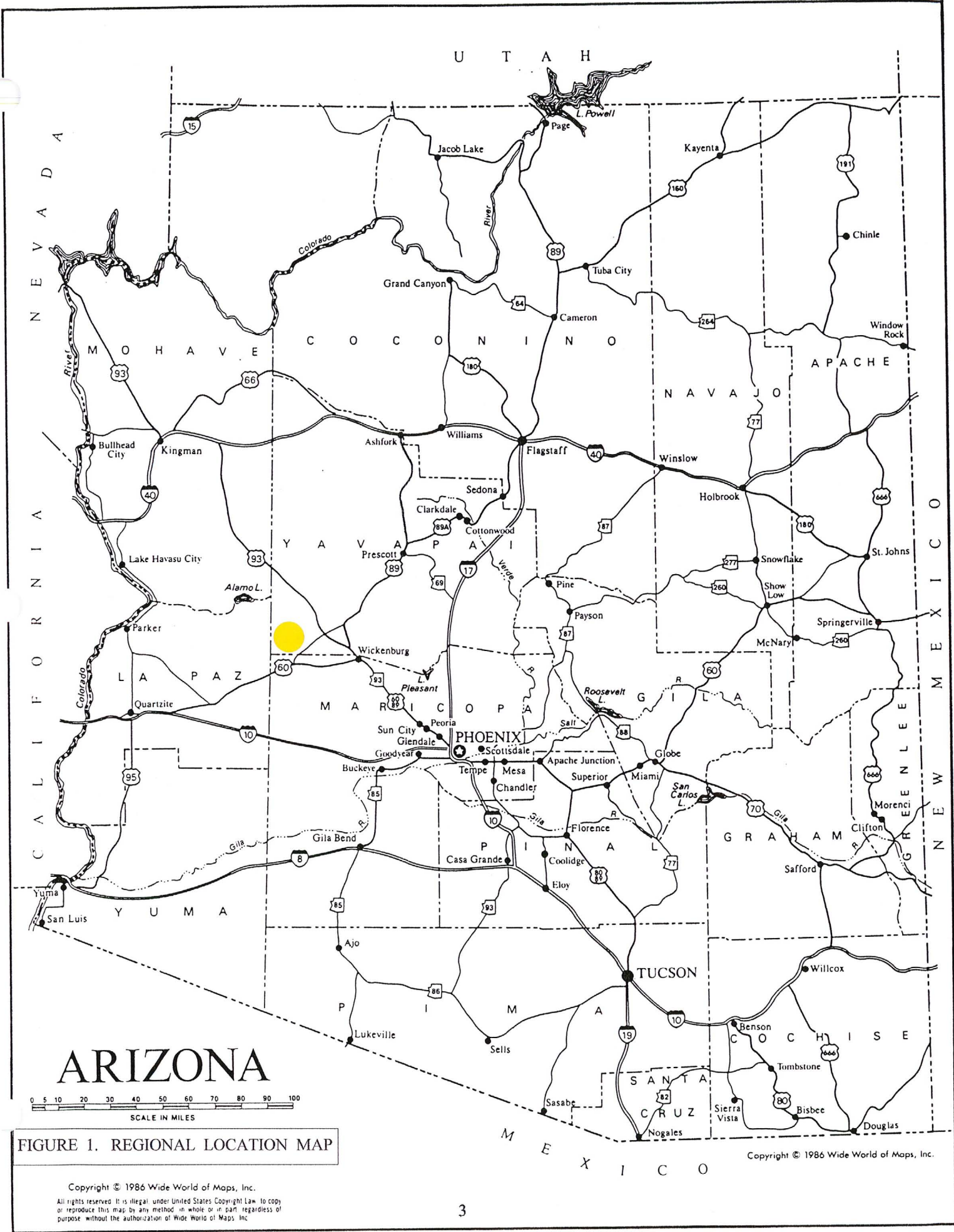
The unpatented portions of the project area are under the jurisdiction of the U S. Bureau of Land Management, located in Phoenix, Arizona.

MAP COVERAGE

The Bullard Mine property is located in the Smith Peak, Arizona 7.5' topographic quadrangle, 1967, scale 1:24,000. This area is also covered by the Alamo Lake 30x60' topographic quadrangle, 1995, scale 1:100,000 and the Prescott 1x2 Degree (AMS) topographic quadrangle, 1970, scale 1:250,000.

The general geology is shown on the Geologic Map of Arizona, 1988, scale 1:1,000,000 and the Geologic Map of Yavapai County, 1958, scale 1:375,000 provided by the Arizona Geological Survey and the Arizona Bureau of Mines, respectively.

The best available geological map is the Arizona Bureau of Geology and Mineral Technology Open-File Report 84-4, entitled "Geologic Map of the Aguila Ridge-Bullard Peak Area, Eastern Harcuvar Mountains, West-Central Arizona", by S. J. Reynolds and J. E. Spencer, 1984, scale 1:24,000. Other unpublished geological maps are available and were used for field reconnaissance, but they have many inadequacies.



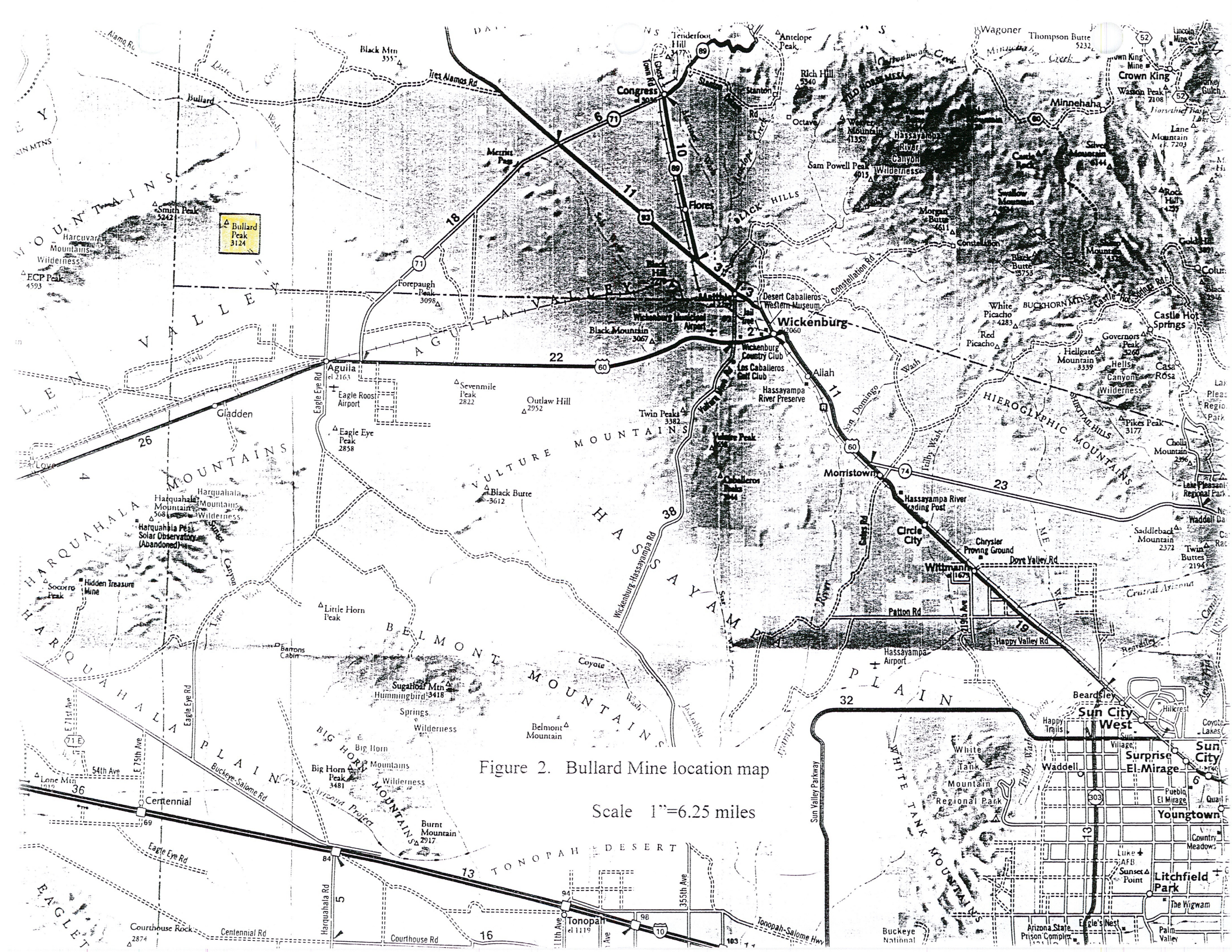


Figure 2. Bullard Mine location map

Scale 1"=6.25 miles

The geological map (Plate 1) which accompanies this report composites topography from the Smith Peak 7.5' topographic quadrangle; geology and drill hole locations from the ABGMT Open-File Report 84-4; prospect/mine locations, drill hole data, claim boundaries and modified geology from the unpublished maps; and ARI's reconnaissance mapping at a scale of 1:6,000 (1"=500').

LAND STATUS AND CLAIM DATA

The property (Plate 1) consists of 25 patented lode claims which cover an area of 496.8 acres within T8N, R10W, S 1, 2, 10, 11 and 12, G& SRM, Yavapai County, Arizona. These claims are shown on the Yavapai County Assessor's Plat of the Bullard (Pierce) District (Figure 3), at an actual scale of 1"=2,164' (reduced from the original scale of 1"=1,000').

The Canadian Mining Company Ltd., Vancouver, B.C., Canada, has an option on all of the patented claims in the contiguous Bullard block, with the exception of the Amazon, Chancellor and South Wing. The mineral and surface rights of all adjoining areas are under the jurisdiction of the U.S. Bureau of Land Management, located in Phoenix, Arizona.

HISTORY OF EXPLORATION, MINING AND EVALUATIONS

The history of the Bullard district can be separated into pre-1978 and post-1978 activities. Pre-1978 activities concentrated on exploration and production of copper, while post-1978 activities focused on gold exploration and limited development.

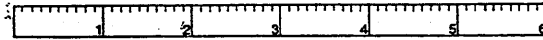
Pre-1978 Activity:

The earliest dated activity was the construction of a smelter in 1887 or 1888 (Durfee, 1907-1910?), the ruins of which can still be seen in the SE ¼ of Section 10, Township 8 North, Range 10 West. According to records obtained from the Arizona Department of Mines and Mineral Resources (ADMMR), this smelter was built by the Yuma Copper and Silver Company, but was only operated for a very short period of time, since the nearest railway station from which coke and other supplies had to be hauled, by horse and wagon, was at Maricopa, about 100 miles away.

In 1895, John Bullard, a former Confederate soldier who had extensively prospected in the Harcuvar Mountains, acquired the ground which had been abandoned by the Yuma Copper and Silver Company. He secured patented title to his lode claims from the U.S. Government in September, 1907.

In a geological report written between 1907 and 1910, Mr. E.W. Durfee, E.M. reported that the Bullard vein (Figure 4) averages 2-3' in thickness (ranging from 1-5 ½') and averages 0.36 opt Au, 0.50 opt Ag and 2.9% Cu. Durfee collected approximately 70 samples at 15 foot intervals along the western ½ of the Bullard vein, as exposed in

1-800-345-7334



SCALE IN 1/10 OF AN INCH

200-04-2

ENTERED JUL 19 1907

PIERCE DISTRICT

MAP 200-04-3

MAP 200-04-3

MAP 200-04-1

MAP 200-04-3

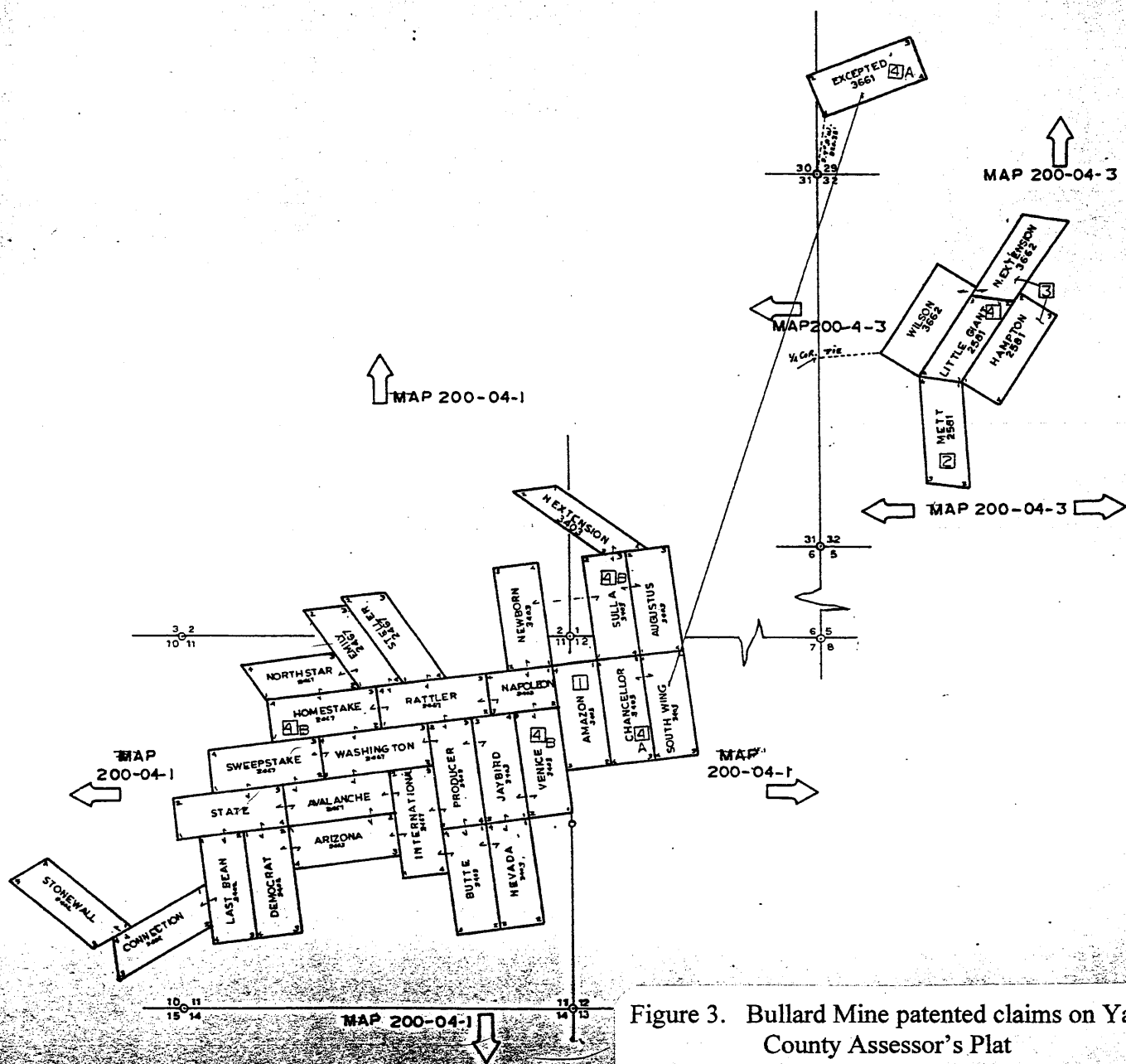
MAP 200-04-1

MAP 200-04-1

MAP 200-04-1

SCALE 1" = 1000'
T.D. 1700

The Assessor's plans are designed for use by the Assessor's Department only. They are drawn from information obtained from legal instruments of record and are not intended to reflect conditions as they may exist on the field.



SECS. 1, 2, 10, 11 & 12 - 8-10W & SECS. 29, 30 & 32 - 9-9W

Figure 3. Bullard Mine patented claims on Yavapai County Assessor's Plat
Scale 1"=2,164'



Figure 4. View of Bullard Peak and Bullard Mine,
looking north

surface outcrops and in limited underground workings. According to Durfee, *“These samples were taken across the full width of the vein and measurements made at right angles to the dip and noted in each case.”* Durfee posted assay results from his samples on a longitudinal section of the Bullard vein, which shows the sample locations, widths, % Cu and \$/ton in Au. He divided the ore developed into two blocks (“L” and “M”) called *“Positive”* ore and one block (“N”) called *“Probable”* ore, and calculated tonnage estimates using a tonnage factor of 12 cubic feet of ore per ton. His estimated ore reserve of the *“Positive”* ore blocks is 43,700 tons averaging 2.94% Cu and \$7.53/ton Au (at \$20.67/oz Au). The *“Probable”* ore block is estimated to contain 34,100 tons of the same grade. **(Although his ore reserve definitions and estimates were acceptable at the time of his report, they should be considered as an “inferred mineral resource” rather than “reserves”, under the new standard definitions in the Canadian Securities Administrators proposed National Instrument 43-101).** Durfee also reported that a 900’ well located near the old smelter intersected a 7’ thick ore zone at an unknown depth (see cross section A-A’, Plate 2). In his description of the Bullard Mine geology, Durfee erroneously reported *“The rocks are sedimentary, composed principally from highly metamorphosed limestone; ...”* a mistake that was surprisingly carried forward through 1984.

In 1913, A.S. & R. Co. (now ASARCO) mapped and sampled the Bullard Mine, and reported grades of 0.25 opt Au, 0.50 opt Ag and 2.67% Cu (Sansone, 1984?). This map, at a scale of 1” = 40’, is on file at the Arizona Department of Mines and Mineral Resources (ADM MR) office in Phoenix, Arizona.

From March, 1939, through July, 1941, Bullard Gold Mines Inc. shipped approximately 5,500 tons of ore from the Bullard Mine to the Hayden smelter, Hayden, Arizona, a distance of approximately 180 miles. This ore yielded 2.2% Cu, 0.34 opt Au and 0.26 opt Ag, according to smelter settlement sheets on file with the 1st National Bank of Arizona. These sheets were analyzed and tabulated by renowned Arizona mining engineer Mr. Arthur L. Flagg, who presented his summary to the attorney for the Bullard Estate, in a letter dated September 10, 1941.

In 1943, Mr. William B. Maitland produced a map of the Bullard vein at a scale of 1”=40’, for Bullard Gold Mines Inc. This map (based upon the 1913 map & survey by A.S. & R. Co.) shows sample locations, widths and assay values of gold and copper, for 34 channel samples and 1 grab sample. Weighted average calculations based upon Maitland’s sample results indicate the Bullard vein will average 3.2’ in thickness and contain 0.25 opt Au and 3% Cu. One of the best channel samples (taken over a 6’ vein thickness) assayed 0.50 opt Au and 9.25% Cu.

In 1944, the U.S. Bureau of Mines drilled four “A” size (30mm diameter) core holes, up to 92’ in depth, on the ridge above the Bullard vein, and two of these holes penetrated the vein. They reported grades of 0.20 opt Au and 1.3% Cu over a 5.2’ width in one hole and 0.07 opt Au and 2.9% Cu over a 2.8’ width in the second hole. The USBM plotted the

drill hole locations on a geological map at a scale of 1" = 100'; and the locations, widths and assay results on cross section maps at a scale of 1" = 40' (USBM, 1944).

In 1957, Mr. Louis F. Bombardieri, Chief Engineer for Shattuck Denn Mining Corporation (operators of the Iron King Mine), Humboldt, Arizona, prepared a two page memo which summarized his one day examination of the Bullard Mine property. He paraphrased Durfee's description of the Bullard Mine geology (including the erroneous reference to "*highly metamorphosed limestones*" described above) and reported that a 40" sample he collected from the bottom of the "Wooten Shaft", at a depth of approximately 70', assayed 0.05 opt Au, 0.60 opt Ag and 2.50% Cu. He concluded that the property would require further examination and several drill holes before contemplating any further development.

In 1967, PMC-Powdered Metals Corporation (an Arizona copper refining company) staked a contiguous block of 55 lode mining claims covering an area of approximately 1,100 acres in the Rudy Pass area, approximately 5 miles east of the Bullard property. They commissioned a mining assessment, which was done by Mr. F.C.Ramsing, E.M. . In a report dated April 27, 1967, Ramsing concluded that the property "*contains an area about 8 x 1 miles that has the potential of a large open pit copper mine*" and that "*No large mining company would fail to drill this Laramide intrusive which shows copper over such a wide area...*". He recommended that a preliminary drill program be undertaken, since the property had never been drilled for copper. Ramsing's 8 x 1 mile area of potential included both the Bullard and Little Giant properties. Subsequent to Ramsing's report, PMC acquired approximately 680 acres of patented mining claims in the Bullard and Little Giant groups, to supplement the 1,100 acres of unpatented lode mining claims already held. According to ADMMR records, PMC conducted a churn drilling program in 1969 but the results are unavailable for this report. According to an article published in Metals Week on July 28, 1969, PMC geologists were making a final investigation of their new copper property (the old Bullard gold mine) before breaking ground using "*the world's first portable copper processing plant*", scheduled for completion in mid-1970. The PMC portable three-cell plant, using a patented "Harlan Process" was to produce 99.9% pure copper powder from raw ore (containing at least 2% Cu in oxide form) in four hours, using leaching and electrolytic extraction, at an annual production rate of 625/tpy copper. In November, 1973, ADMMR personnel visited the property and saw no exploration or mining activity. PMC went bankrupt in 1973 or 1974, and the ADMMR Bullard file contains no PMC production records.

Post-1978 Activity:

In 1978, Mr. Michael C. Sansone, a real estate developer from Phoenix, Arizona, entered into an agreement with two local prospectors (John Moore and Gene Pyers) and staked 166 lode claims (the ACM claims) which surrounded the Bullard patents. Sansone also acquired 32 patented, 5-acre millsites (4 miles southeast of the Bullard mine) and obtained a long-term lease on a 15 acre, fully equipped, patented mill site (now owned by the Canadian Mining Company Ltd.), in the town of Aguila, Arizona, 11 miles southeast

of the Bullard mine. Sansone intended to mine the property for gold and copper ores which would be processed at the Aguila site. However, on September 9, 1978, John Moore was killed while attempting to deliver an ore truck to the property. In 1979, Sansone discontinued development and made the property available for lease/purchase.

In November, 1979, Contract Mining Corporation (CMC), Yuma, Arizona, leased 25 patented claims in the Bullard group (Sansone, 1984?). According to ADMMR files, in 1980, CMC was mining a footwall vein (reportedly from 4' to 20' "wide"), beneath and parallel to the Bullard vein, at a rate of 20 tpd, and shipping "silica" (with oxide copper and some precious metals) to the Hayden, Arizona, smelter as flux. DeLise (1981) reported that CMC shipped approximately 4,000 tons from 1980 through 1981, and production records were unavailable.

In 1981, NRG Resources acquired a 60% interest in the Bullard property from CMC and commissioned Mr. Knoxie DeLise, a registered geologist from California, to conduct a geological evaluation of their patented claims and the surrounding unpatented ACM claims held by Sansone. DeLise (1981) concluded that "*There are five potentially favorable areas for investigation and possible production.*". These areas include the Bullard vein, the John Moore area, the North Hill area, the International vein area and the area immediately south of the Bullard vein. **He provides "reserve" estimates for these areas, but his data should be considered as "Exploration Information" under SME, CIM and National Instrument 43-101 resource/reserve guidelines.** Although his geological map contains some significant errors (e.g. the presence of Paleozoic marine sediments), it is generally useful.

In 1981, Sansone leased the ACM claims to the Unity Mining Co.(UMC). They did limited surface excavation to expose veins at the west end of Bullard Peak, near the Bullard detachment fault, in the Unity area. **(Note: The Bullard detachment fault is hereinafter referred to as the Bullard fault).**

In 1984, Sansone commissioned a sampling program done (on the ACM claims) by a Mr. E. Thomas Riggs, under the supervision of Mr. Cadmus L.G. Goss, PE. Riggs collected 29 samples from veins located in the Unity area, the John Moore vein, the Owl vein, the Broken Ladder area and the Accident Hill area. The latter three areas are off of the Bullard Geological Map (Plate 1) and are located up to one mile southwest of the Unity area. The samples seem to be of discrete veins, with some assays to 1+ opt Au (Riggs, 1984).

In April, 1984, Sansone commissioned a geological report done (on the ACM claims) by Mr. Jeffery W. Geise. Geise completed a report that is very similar to the DeLise report, however, he recognized the presence of a metamorphic core complex and attendant detachment faulting. His tonnage and grade estimates (as those in the DeLise report) should also be considered as "*Exploration Information*". His geological report and accompanying map are generally useful.

In September, 1985, the Resource Exploration and Development Co.(REDCO), Reno, Nevada, optioned the ACM claim group from Sansone, and conducted a reconnaissance sampling program in areas west and southwest of Bullard Peak. They looked at only the southwestern portion of the ACM claims and did not have access to the Bullard mine patents. The sampling/mapping that was completed appears to have been well done and they produced good sample site maps and sample descriptions. They confirmed the presence of narrow, high grade veins up to 1.54 opt Au. At the Broken Ladder prospect they obtained grades between 0.08 and 0.21 opt Au, in three sub-adjacent samples, representing zones 5' to 10' wide. A five foot channel sample at Unity, in the hanging wall of a vein assayed at 0.27 opt Au. Hanging wall mineralization at the John Moore vein assayed 0.11 opt Au.

In 1987, the Freeport McMoRan Gold Co. drilled ten holes, at four locations, in the southwestern portion of the ACM claims (Spencer and Reynolds, 1992). They did not have access to the Bullard mine patents. Only one of the holes hit significant mineralization, in the Unity area (Appendix 1). At 45' deep, their last drill hole (BPR-10) intersected 5' of 0.09 opt Au, just above the Bullard fault.

In 1989 and 1990, Cominco American Resources Inc. drilled 42 holes, in the North Hill and John Moore areas (Spencer and Reynolds, 1992). Ore-grade drill hole intercepts were obtained from the north end of the North Hill vein, with assays up to 0.25 opt Au at depths up to 200'. At the John Moore vein, only one ore-grade intercept was obtained, but most of the holes were drilled into the unaltered footwall of the vein, while most of the silicified wallrocks are on the hanging wall. A few drill holes were located in the hanging wall of the John Moore vein, but only slightly anomalous Au values were intercepted. All of their drill holes were structurally high above the Bullard fault.

In 1992, the history and geology of the Bullard district was summarized in Arizona Geological Survey Open-File Report 92-1, titled Mineral Deposits of the Bullard District, Harcuvar Mountains, Yavapai County, Arizona, by J. E. Spencer and S. J. Reynolds (Appendix 1). They state that *"the presence of several areas of anomalous gold, distributed over much of the district, indicates that mineralizing fluids were gold bearing and affected a large area"* and that *"virtually identical breccias (as at Copperstone) are present north and northeast of Bullard Peak, but have not been drilled"*. They conclude that ***"the mineralogic and structural similarities of the Bullard and Copperstone districts suggest that potential exists for a major gold deposit in the area of the Bullard district"***.

REGIONAL SETTING AND ANALOGOUS DEPOSITS

The regional setting of the Bullard district is typical of detachment fault gold deposits and is well described in Spencer and Reynolds' 1992 report (Appendix 1). Other detachment fault deposits in southwestern Arizona and southeastern California include the Mesquite, Copperstone, Picacho, Imperial, Rand, American Girl, and Moreau properties. The Mesquite mine is operated by Newmont at a cash cost of \$176/ounce, produces about

160,000 ounces per year and their remaining reserves contain 595,000 ounces of gold. Mesquite's total life-of-mine reserve is reported to be over three million ounces of gold. The Copperstone mine is now being optioned by Asia Minerals Corp. and the total reserves (mined reserves plus un-mined resources) are 1,200,000 ounces of gold, which includes 709,000 ounces in an underground resource at a grade of about 0.50 opt Au. The Picacho mine is operated by Glamis Gold and appears to have had a total production of about 300,000 ounces of gold. The Imperial mine, owned by Glamis, is scheduled to produce 120,000 ounces of gold per year, for at least 10 years. The Rand mine (Glamis) has produced 240,000 ounces of gold and has about 560,000 ounces remaining. The American Girl Mine, which was operated by MK Gold Company, started production in 1987, at a rate of about 70,000 ounces per year. In 1993, their reserves stood at 477,000 ounces, which included underground reserves at a grade of 0.25 opt Au. The Moreau property is under option by Echo Bay Exploration Inc. and has intercepts of up to 0.097 opt Au over 45 feet.

GEOLOGY OF THE BULLARD MINE AREA

General

The geology of the Bullard district is dominated by the Bullard fault, which strikes northeasterly and dips moderately to the southeast. It separates the footwall Harcuvar metamorphic core complex from hangingwall Miocene volcanic and sedimentary rocks. The footwall plutonic and metamorphic rocks are mylonitic with pervasive chlorite-epidote alteration and local Fe-Cu-oxide mineralization. The hangingwall volcanic and sedimentary rocks are pervasively altered by K-metasomatism, to a holocrystalline mixture of K-feldspar, hematite, calcite, quartz and epidote.

The mineral deposits in the Bullard district consist of veins and fracture fillings along shear zones. The mineralogy of the veins is typical of detachment fault deposits, with quartz, specular and earthy hematite, calcite, pyrite, barite, chrysocolla, malachite, brochantite, and locally Mn-oxides. The most extensive vein in the district is the Bullard, which is up to six feet thick and has a strike length of 1,500 feet (Figures 5, 6 and 7). About 50 veins have been observed in the Bullard mine area, ranging in significance from the Bullard down to veins with thicknesses in inches and strike lengths in tens of feet. The broad distribution of the smaller veins indicates the potential of the district, relative to the many un-drilled targets in the Bullard mine vicinity.

The wallrocks adjacent to the veins are locally silicified, with the presence of specular hematite. Sampling data from REDCO (1985) and Riggs (1984) indicate that the altered wallrocks locally contain significant gold mineralization. Many locations along the hangingwall of the Bullard vein are silicified and contain abundant hematite, but have not been sampled. There are many areas with silicified ridges that have a core vein of quartz plus Cu-oxides. Wallrock silicification is most prominent on the hangingwall of veins. ARI has no data that these areas have been systematically mapped and sampled.

Geological Map (Plate 1), to the southwest of the Unity area, there is another corrugation indicated in the Broken Ladder area. These revelations about structural controls in the district are a direct result of basic field mapping, that if followed up with similar efforts, will likely result in good drill targets.

Target Areas

Five drill holes have been proposed, as indicated on the Bullard Geological Map (Plate 1) and cross sections (Plate 2). Drill hole DH1 is intended to penetrate the Unity vein, near Freeport's drill hole BPR10, which intersected 5' of 0.089 opt Au. It might be deepened to intersect the Bullard fault. DH2 is designed to test both the Unity vein and Bullard fault. Both of these holes are located in the area of a corrugation crest. DH3 and DH4 are designed to test the Bullard vein down dip, again in a corrugation crest area. DH5 is intended to drill the 40' thick International vein, which is the thickest in the district. Any of the last three drill holes might be deepened to test the Bullard fault. There is no direct data to determine the location of the Bullard fault at depth; it has been hypothetically indicated on the cross sections (Plate 2).

Located about 2,000' east of the North Hill vein is a N60W striking ridge of silicified volcanic rocks with abundant barite, called the BOB vein. It crops out for about 200' and is at least 30' thick. The vein projects toward a drill hole, B37, which intersected five feet of 0.09 opt Au, at 300 feet. This intercept was never followed up to the southeast, toward the BOB vein.

The ore grade intercepts at the north end of the North Hill vein could be followed up. Drill holes following the vein down dip and along strike to the south might reveal significantly better intercepts.

In general, the three mile strike length of the Bullard fault, in areas adjacent to the known mineralization, presents a large target for detailed mapping and sampling. Once the geochemistry of the mineralization is understood, an appropriate sampling program covering the area may result in drill targets. Biogeochemical sampling developed several exploration targets for Echo Bay at the Moreau property. The Moreau property is located in west-central Arizona and has a geological and botanical environment which is very similar to that at Bullard.

SELECTED REFERENCES


- DeLise, K. C., 1981, A Geologic Investigation of the Bullard Mine, Aguila, Arizona, 36 p., 8 figs.
- Durfee, E. W., 1907-1910?, Report of the Bullard Mines, Pierce Mining District, Yavapai County, Arizona, 7 p., 1 map.
- Flagg, A.L., 1941, Analysis of Bullard Mine Shipments, March 1939 - July 1941, 2p.
- Geise, J. W., 1984, A Geological Investigation of the Bullard Mine, Aguila, Arizona, 17 p., 1 map.
- Maitland, W. B., 1943, Home Group, Pierce Mining Dist., Yavapai Co., Arizona, Bullard Gold Mine Inc., 1 map.
- Ramsing, F. C., 1967, A Mining Report of a Group of Claims Held By Powdered Metals Corporation, 4p. and 1 map.
- REDCO, 1985, Bullard Peak Property, Yavapai County, Arizona, 20 p. and figs.
- Reynolds, S. J. and Spencer, J. E., 1984, Geologic Map of the Aguila Ridge-Bullard Peak Area, Eastern Harcuvar Mountains, West-Central Arizona: Arizona Bureau of Geology and Mineral Technology Open-File Report 84-4, scale 1:24,000.
- Riggs, E. T., 1984, A Preliminary Geological Investigation on Mining Properties of Michael C. Sansone, Bullard Peak Area, Yavapai County, Arizona, 28 p. and maps.
- Sansone, Michael C., 1984?, Historical Background, Bullard Peak, Mining, 71 p. and maps.
- Spencer, J. E. and Reynolds, S. J., 1992, Mineral Deposits of the Bullard Mineral District, Harcuvar Mountains, Yavapai County, Arizona: Arizona Geological Survey Open-File Report 92-1, 19 p. and maps.
- USBM, 1944, "Untitled", 2 p. and 4 maps.


STATEMENT OF QUALIFICATIONS

I, William C. Berridge, of Wickenburg, Arizona, hereby certify that:

1. I am a graduate of Northern Arizona University with a Bachelor of Science Degree (1973) in Geology.
2. I have practiced my profession as a Geologist in the United States and Mexico for 27 years.
3. I am a registered Professional Geologist in the State of Wyoming, License Number PG-3142.
4. I am a member in good standing of the Geological Society of America (GSA); the Society for Mining, Metallurgy and Exploration (SME); the Canadian Institute of Mining, Metallurgy and Petroleum (CIM); the Geological Society of Nevada (GSN); and the Arizona Geological Society (AGS).
5. I am the President of Auric Resources International, Inc.(ARI), a private Arizona corporation, with offices at 1020 W. Wickenburg Way, Ste. E-9, Wickenburg, Arizona 85390. ARI has an interest in the Bullard property by virtue of its stock ownership in Canadian Mining Company Ltd., a finder's fee and an NSR agreement.
6. I am a Director of Canadian Mining Company Ltd., a public Canadian corporation, that controls the subject property in this report.

Dated in Wickenburg, Arizona this 30th day of June, 2000.


William C. Berridge, P.G., President
Auric Resources International, Inc.


6/30/00

STATEMENT OF QUALIFICATIONS

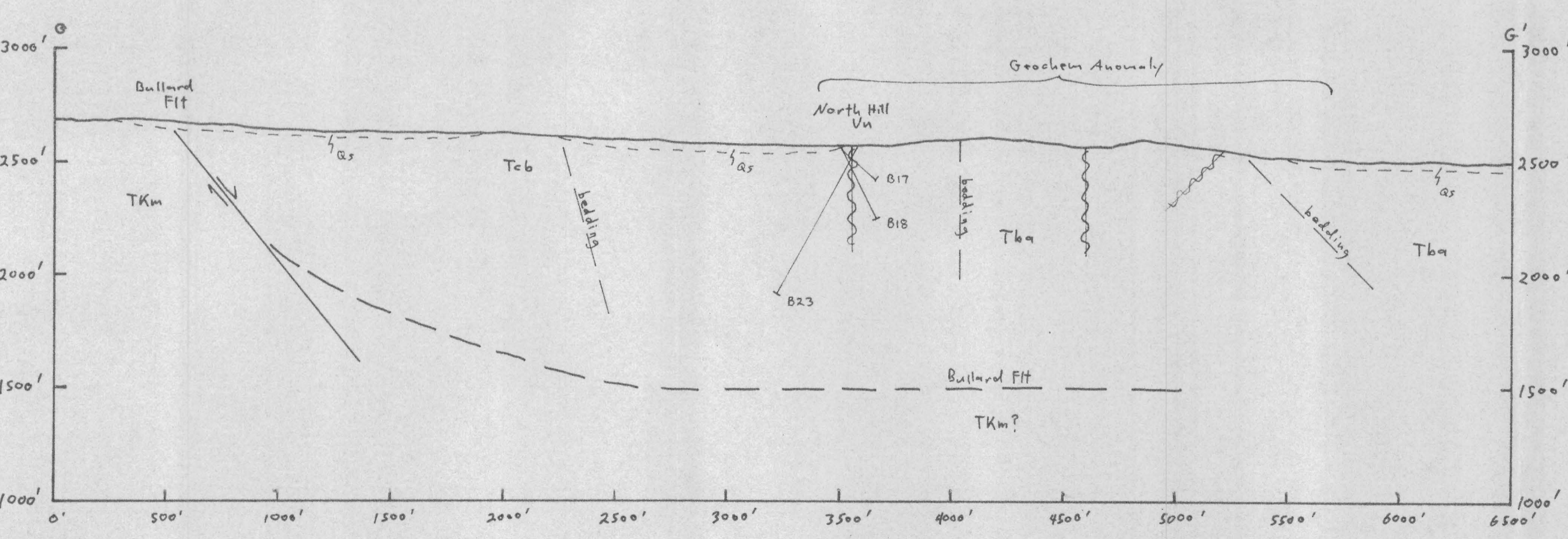
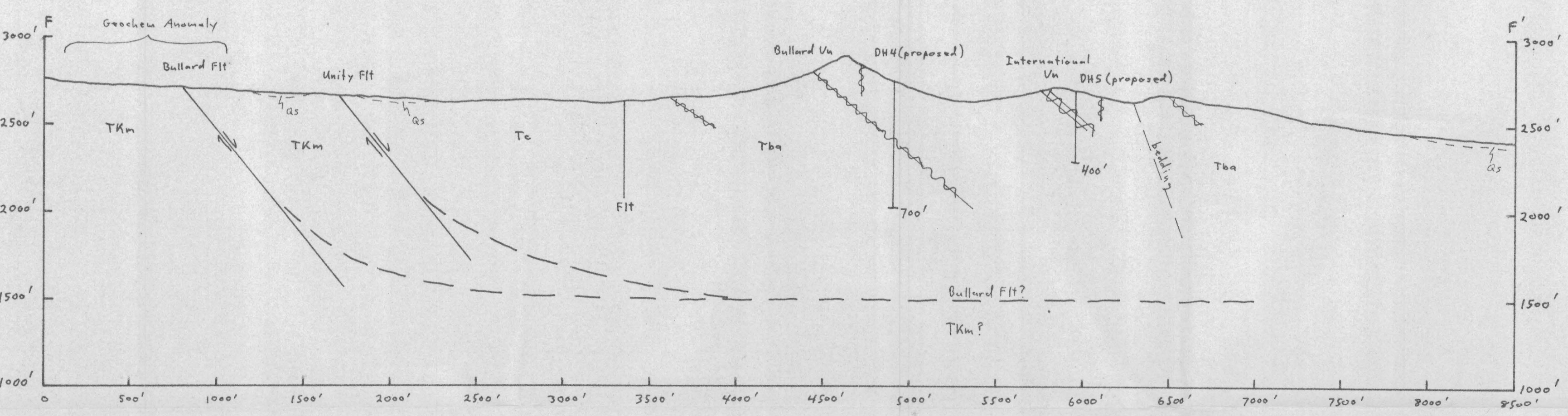
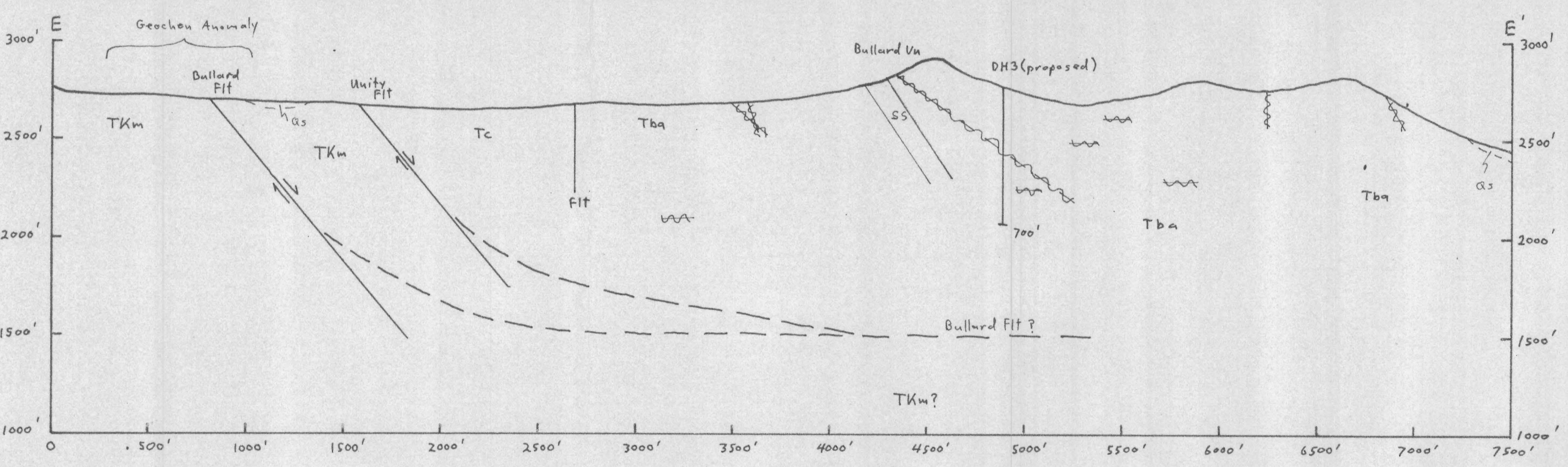
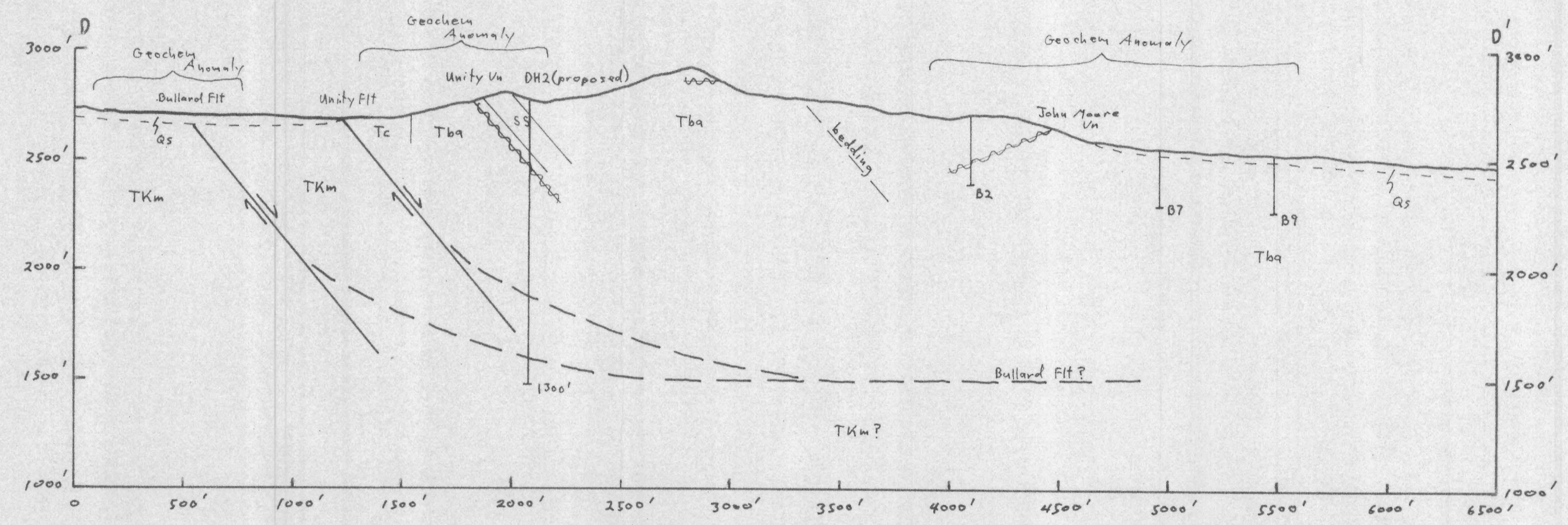
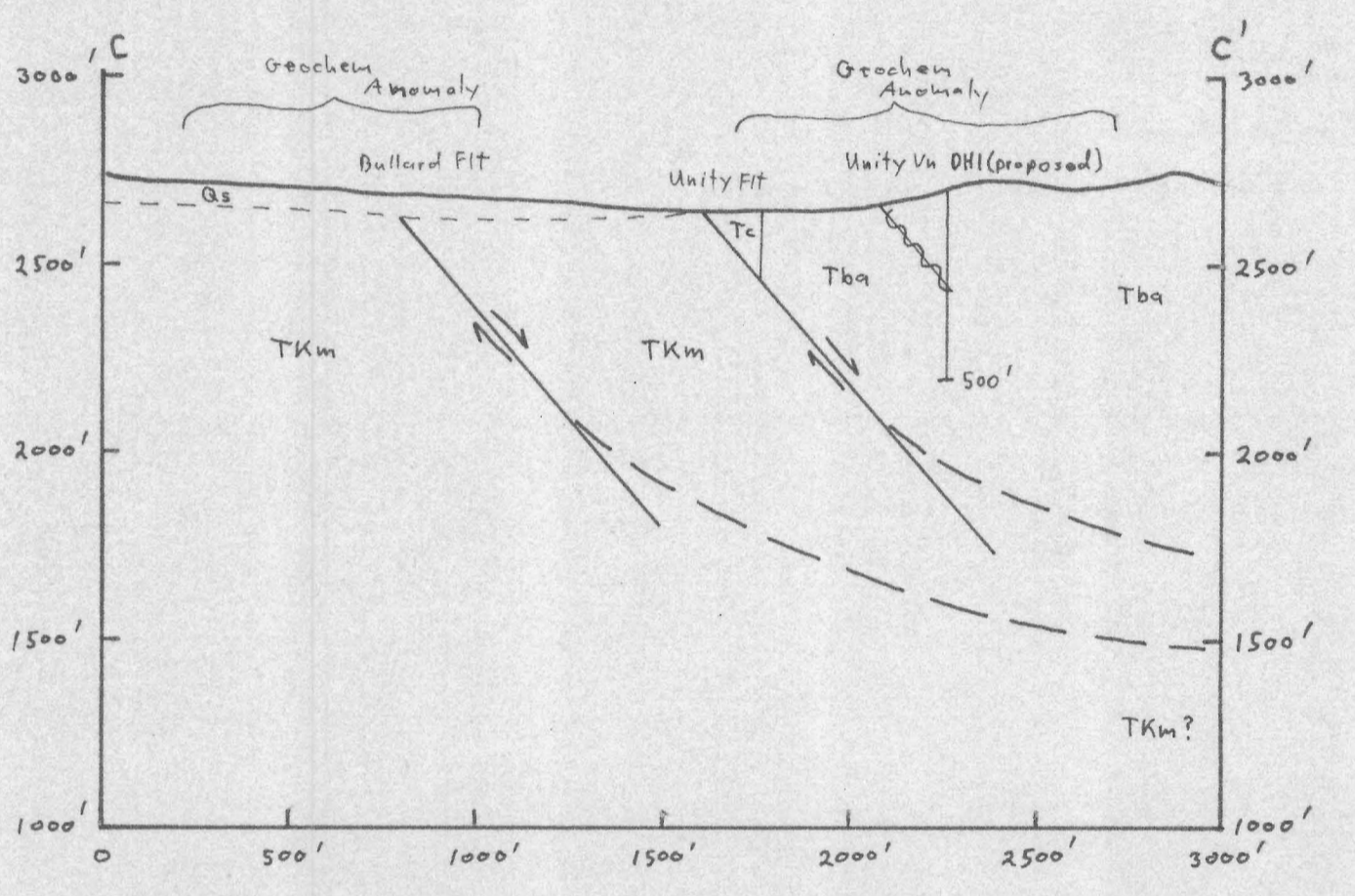
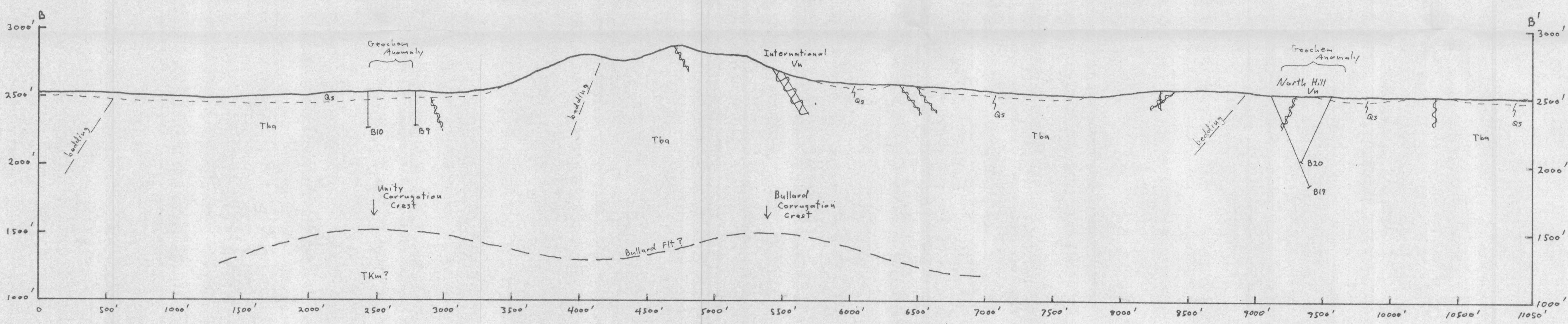
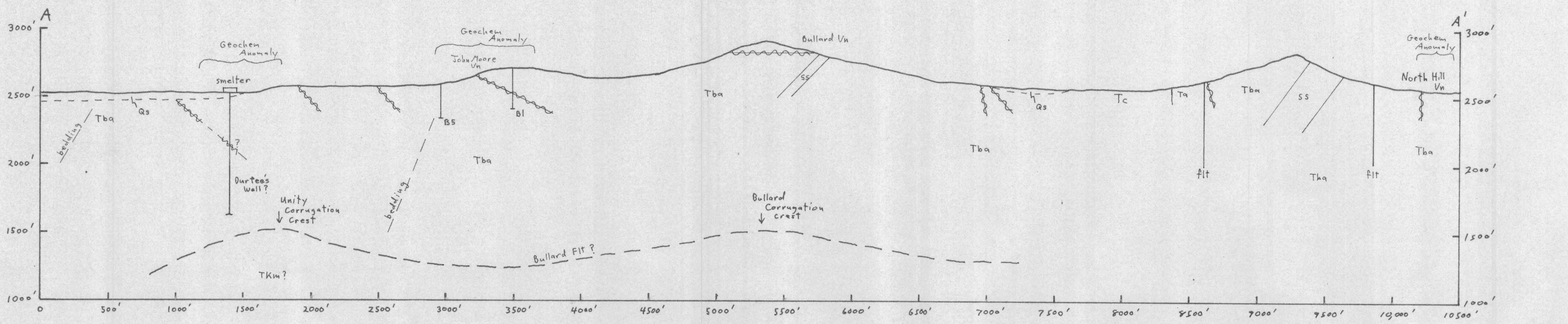
I, Michael R. Smith, of Wickenburg, Arizona, hereby certify that:

1. I am a graduate of Arizona State University with a Bachelor of Science Degree (1979) in Geology.
2. I am a graduate of the Mackay School of Mines, University of Nevada - Reno with a Master of Science Degree (1981) in Geology.
3. I have practiced my profession as a Geologist in the United States, Peru, Bolivia, Ecuador, Colombia, Chile and Canada for 22 years.
4. I am a Registered Geologist in the State of Arizona, Certificate Number 35031.
5. I am the Vice President of Mine Development and a director of Auric Resources International, Inc.(ARI), a private Arizona corporation, with offices at 1020 W. Wickenburg Way, Ste. E-9, Wickenburg, Arizona 85390. ARI has an interest in the Bullard property by virtue of its stock ownership in Canadian Mining Company Ltd., a finder's fee and an NSR agreement.

Dated in Wickenburg, Arizona this 30th day of June, 2000.

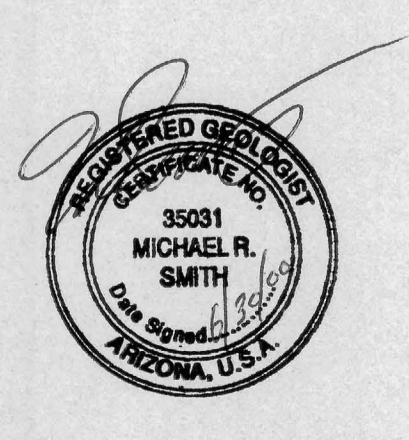

Michael R. Smith, R.G., Vice President of Mine Development
Auric Resources International, Inc.

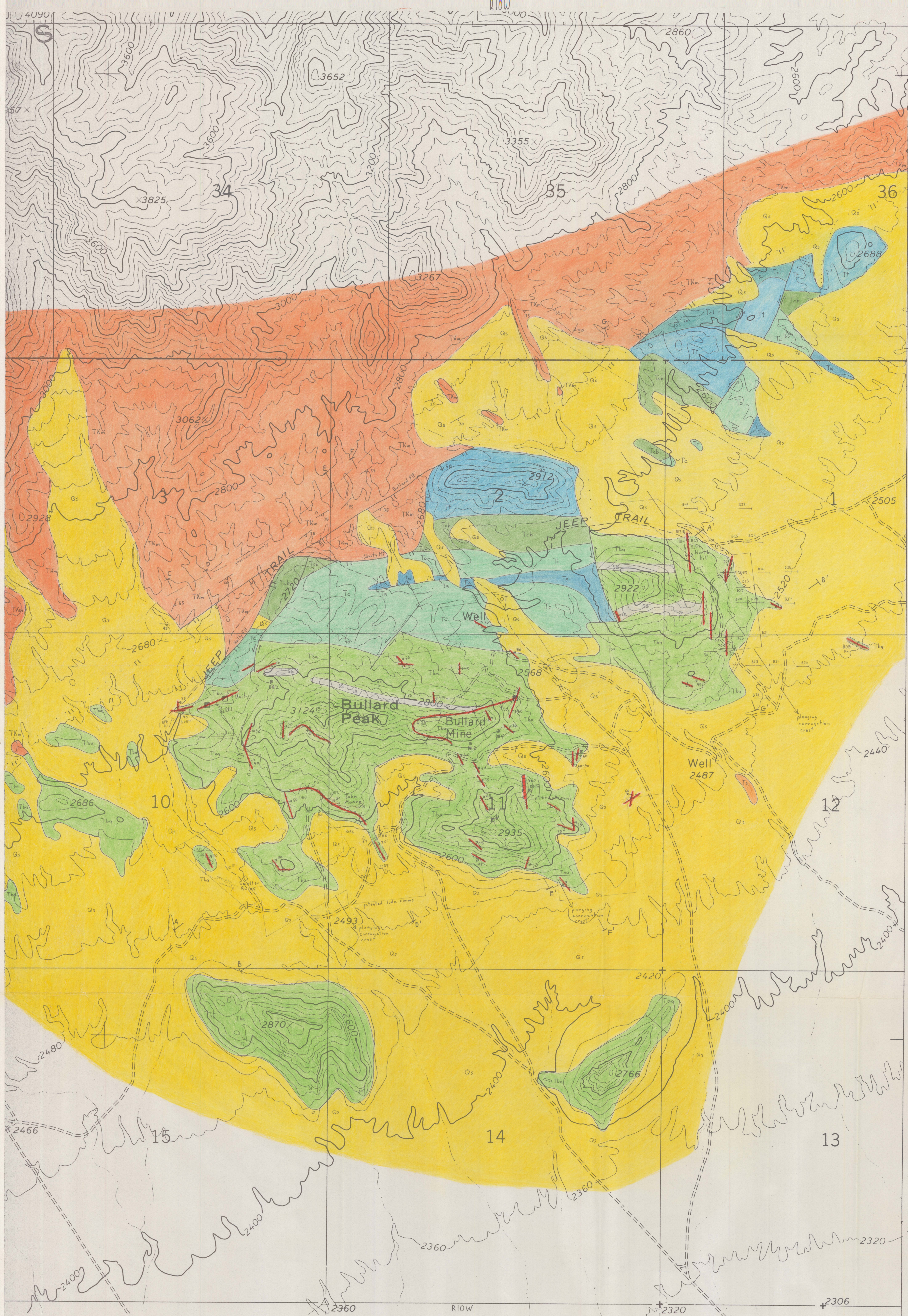




Mapped by Michael R. Smith January to April, 2000
(modified from Spencer, J.E. and Reynolds, S.J., 1992)

BULLARD MINE PROJECT
PLATE 2
BULLARD GEOLOGICAL
CROSS SECTIONS
AURIC RESOURCES INTERNATIONAL, INC.
P.O. BOX 1738
WICKENBURG, ARIZONA 85358
(520) 684-0325



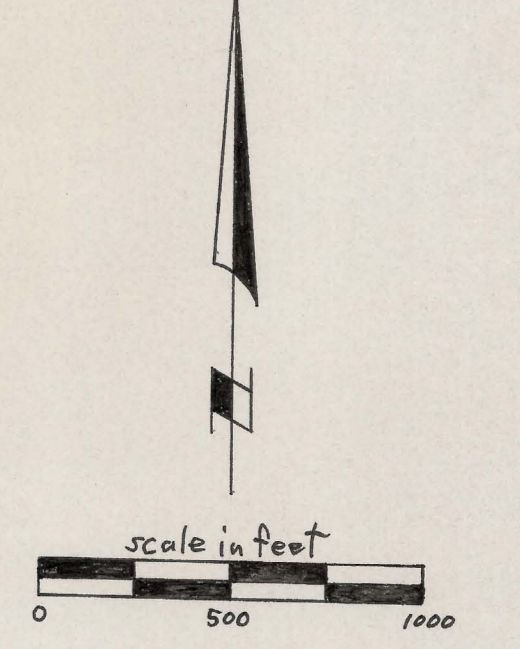


(DATE CREEK RANCH SW)
 3352 II SW

5'
 3773
 T. 9 N.
 T. 8 N.
 3772
 3770
 3769
 2'30"
 3768
 2360
 RIOW
 2320
 2306

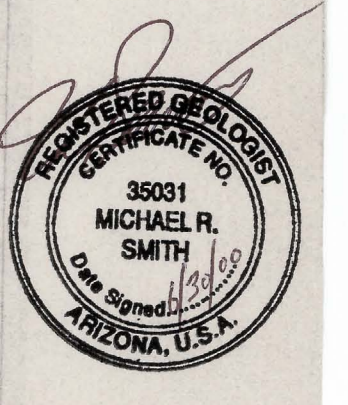
EXPLANATION

- MAP UNITS**
- Qs - Surficial deposits (Quaternary)
 - Ts - Sandstone, siltstone and conglomerate (lower Miocene)
 - Tba - Intermediate to mafic composition volcanic rocks (lower Miocene)
 - Ss - Sandstone and conglomerate within map unit Tc (lower Miocene)
 - Tt - Andesite interbedded or intruded into map unit Tc (lower Miocene to upper Oligocene)
 - Tc - Upper conglomerate (lower Miocene to upper Oligocene)
 - Tcb - Conglomerate and sedimentary breccia (lower Miocene to upper Oligocene)
 - Tl - Tuff (lower Miocene to upper Oligocene)
 - Tcs - Conglomerate and conglomeratic sandstone (lower Miocene to upper Oligocene)
 - TKm - Mylonitic crystalline rocks (early Proterozoic to Tertiary protolith with Tertiary mylonitic fabric)
- MINERALIZATIONAL ALTERATION**
- Vms - Veins with chrysocolla, brookite, malachite, chalcophytic and native gold as ore minerals, with quartz, calcite and specular hematite, calcite, barite, fluorite and local manganese oxides as gangue minerals. Slight to moderate silicification common in hanging wall of veins. Chlorite-epidote-stren oxide alteration is pervasive in TKm along detachment faults.
- MAP SYMBOLS**
- Lithologic contact, dashed where approximately located or inferred.
 - Bullard and Unity detachment fault, double bar on hanging wall, dotted where approximately located or inferred.
 - Fault, dotted where approximately located or inferred.
 - Geochemical anomaly or mineralized area.
 - Road, jeep trail to county graded road.
 - Patented lode claim block.
 - Cross section end points.
 - Adit, horizontal to inclined to 25 degrees.
 - Shaft, vertical to declined to 40 degrees.
 - Existing drill hole, inclined.
 - Existing drill hole, vertical.
 - Proposed drill hole.
 - Bedding attitude.
 - Vein attitude.
 - Foliation, related to mylonites.



Mapped by: Michael R. Smith, January to April, 2000
 (modified from Spencer, J.E. and Reynolds, S.J., 1992)

BULLARD MINE PROJECT
PLATE 1
BULLARD GEOLOGICAL MAP
 AURIC RESOURCES INTERNATIONAL, INC.
 P.O. BOX 1738
 WICKENBURG, ARIZONA 85358
 (520) 684-0325



APPENDIX A.

MINERAL DEPOSITS OF THE BULLARD MINERAL DISTRICT,
HARCUVAR MOUNTAINS, YAVAPAI COUNTY, ARIZONA

Jon E. Spencer
Arizona Geological Survey
845 N. Park Ave.
Tucson, AZ 85719

Stephen J. Reynolds
Department of Geology
Arizona State University
Tempe, AZ 85287-1404

May, 1992

Arizona Geological Survey Open-File Report 92-1

19 page text

*Available online at
AZGS Document
Repository.*

This report is preliminary and has not been edited or
reviewed for conformity with Arizona Geological Survey
standards

CURRICULUM VITAE

Personal

Name: **Michael R. Smith**

Citizenship: USA

Age: 44

Marital Status: Married

Passport #: Z7327551

Registered Geologist, Arizona: #35031

Home Telephone: 520-684-1152

Home Fax: 520-684-1411

Office Telephone: 520-684-0325

E-mail address: nazca@primenet.com

Professional Experience

- June 2000 to present **Auric Resources International, Inc.:** Vice President Mine Development.
-Managing all aspects of mine development; geological assessment, resource/reserve analysis, exploration/development program design and management.
- Dec. 1999 to present **Nazca Engineering, Inc.:** Vice President and co-owner.
-Conducting soils testing, surveying and designing cuts/fills relative to construction of residential structures.
- April 1996 to present **Minerales Ensenada S.A.:** President, Partner and Consultant in Colombia and Russia.
-Organized exploration programs, data packages and mine production as basis of mining companies listed on Colombian exchange.
-Conducted review of Au ore metallurgy and designed gravimetric/cyanidation flow sheet to increase recovery for Buritica Mill, in Colombia.
-Calculated ore reserves and designed mining program for Buritica Mine.
-Directed property reviews, program design, training of staff and corporate structuring, in Colombia.
-Evaluation of Russian Ag and Sn mines to increase profitability and initiate feasibility study to develop reserves and resources fully.
-Review of mineral reserves and exploration potential of the Vladivostok region.
- Oct. 1993 to Mar. 1996 **Barrick Gold Corporation:** General Manager of Exploration and Development, in Peru, Bolivia, Colombia and Ecuador.
-Responsible for Cerro Corona feasibility study (90 million tm Au/Cu porphyry, 1.1 g/tm Au, 0.5% Cu, open pit, CIL and flotation).
-Managed all aspects of geology, drilling, reserves, metallurgy, mine design, infrastructure and environmental assessment, for Cerro Corona Project.
-Conducted QA/QC programs for all assaying done for exploration and feasibility work.
-Conducted quality reviews of all core logging, mapping, cross sections, interpretive geology, mine/mill design, and EIS for Cerro Corona feasibility study.

- Directed all exploration/feasibility activities in Peru, Bolivia, Ecuador and Colombia, six offices - annual budget averaged \$14,000,000.
- Personally hired all staff, which turned out to be top notch.
- All projects completed on time and to corporate gratification.
- Conducted all investor relations in Peru, as well as negotiations with property owners, usually in Spanish.
- Relationships with public and mining sector were successfully managed.
- Maintained direct contact with Barrick executives, including Bob Smith, John McDonough, and Ken Thomas.

Oct. 1987 to
Oct. 1993

Barrick Goldstrike Mines Inc.: Chief Mine Geologist at Goldstrike Mine in Nevada, on the Carlin Trend.

- Key member of team which built the 2,000,000 oz/year and 500,000 tpd mine.
- Managed all design and operational aspects of engineering geology, including ore control, slope stability, hydrology and mine highwall dewatering.
- Developmentally and operationally worked with most other mine divisions.
- Worked on the design of the early underground mine development plan for the Post and Betze deposits, prior to the discovery of the open-pit shape of the orebodies.
- Conducted thermal modeling of ore zones for ventilation evaluations.
- Maintained decline advance controls for: geology, rock stability and dewatering.
- Instituted program to computerize geology database for engineering geology applications.
- Highwall stabilization programs led to enhanced ore recovery and safety.
- Conducted mine dewatering/hydrology evaluations and managed horizontal drain installation for slope depressurization.
- Managed pit highwall monitoring program for land slide identification, remediation and early warning system.
- Designed and managed drilling programs(up to 10 rigs) to demonstrate higher grade and 10% higher ounce reserve, as predicted via drill assay analysis.
- Conducted first accurate review of Mickle discovery to develop ore controls for reserve modeling.
- Developed blasting program to enhance pit highwall stabilization.
- Completed ore density evaluations.
- Developed sampling procedures for blast hole drill rigs and ore control.
- Designed QA/QC program and assay flow sheet for assay lab/ore control.
- Initiated sulfide concentrate purchase program to boost sulfide levels to reduce autoclave operating costs.
- Metallurgical modeling led to mill optimization and enhanced recovery.
- Designed and completed trace element(32+) modeling for life of mine ore characterization, applied largely to processing and refinery issues.
- Managed leach pad ore delivery to maximize and predict Au recovery.
- Designed and managed sampling/characterization of ore crushing/grinding parameters.
- Designed and carried out mine waste rock characterization program for acid mine drainage management, including humidity cell testing/analysis and waste dump design for containment.

- Geochemically characterized As content of mine dewatering water, applied to water treatment plant capacity.
- Developed stockpile management program resulting in enhanced recovery.
- Developed geological controls for regional hydrogeological modeling and groundwater.
- Authored professional papers regarding engineering geology and numerical modeling of geological data.
- Wrote ore co-mingling agreement considered by Barrick and Franco Nevada to be the best seen.
- Was committee chair for Loss Control programs.
- Represented Mine Geology Department and occasionally Technical Services Division at daily meetings with mine management and with visiting corporate staff.
- Presented weekly descriptions of mine geotechnical stability programs, mining and milling to all new employees.
- Managed interaction with adjacent mining company regarding joint operations in same open pit.
- Managed contractors doing drilling, crushing, trucking and technical evaluations.
- Wrote budgets, periodic reports, special evaluation reports and procedures guides.
- Strong points included people organization, timely project completion, multi-disciplinary problem solving, program conceptualization to integrate geology with other disciplines, mining operations, ore discovery, metallurgy/processing mine development and investor/auditor relations.

May 1983 to
Oct. 1987

- Pacific Silver, Silver King, and Alta Gold:** Chief Mine Geologist in Nevada.
- Worked as Mine Geologist at the 300 tpd underground Buckskin mine(Au/Cu).
 - Daily duties included underground mine/stope design, daily mining face sampling/survey/mapping at the Buckskin.
 - Conducted QA/QC evaluations of Buckskin Assay Lab.
 - Worked as Chief Geologist to manage production, development and exploration projects, bringing the Star Pointer mine into production.
 - Developed skarn ore control models and ore reserve classification scheme at Ward Mountain mine
 - Designed and carried out geostatistical ore reserve grade verification and subsequent adjustment.
 - Logged drill core and drew cross sections.
 - Worked in all aspects of projects, including exploration, extensive drilling, reserve calculation, mining, processing and administration.

Oct. 1982 to
May 1983

- Brass Ring and Tundra Gold Mines:** Project Geologist in Nevada
- Management of reserve definition drilling programs in Nevada.
 - Worked on geology of the Victorine Mine.
 - Logged drill core and drew geological cross sections.
 - Managed exploration and drilling crews.
 - All projects completed on time and within budget.

Sept. 1981 to **Conoco Minerals:** Project Geologist at Nevada underground Cu development
 Oct. 1982 project, called Pumpkin Hollow.
 -Developed skarn zonation models for ore reserve estimate and ore characterization.
 -Logged drill core and drew geological cross sections.
 -Focused on detailed geology/reserve definition and mine engineering.
 -Developed skarn zonation model leading to discovery of additional high grade Cu reserves.
 -Designed computerization of core logging data for map generation.

1973 to 1981 Summer and self-employed part time
 -Evaluated Mississippi Valley type deposits, Mo porphyry deposits, W skarn deposits in Alaska for WGM, via helicopter.
 -Explored for U in Arizona, Utah and New Mexico with Mobil.
 -Mapped porphyry Cu and Mo deposits in Nevada and did detailed evaluations of skarn systems for Conoco.
 -Self employed in collecting/selling crystal specimens, turquoise jewelry manufacture, building maintenance, “nanny”, construction and retail.

Education

Master of Science, Geology
 Mackay School of Mines
 Reno, Nevada
 1981

Bachelor of Science, Geology
 Arizona State University
 Tempe, Arizona
 1979 - Magna Cum Laude

Various specialty short courses and seminars, including Minerals Economic Analysis (Stermole), Geostatistics, Mining Law, Personnel Management, Interviewing Techniques, Mine Dewatering.

Miscellaneous

Languages:	Fluent in Spanish Russian (studied, very rusty)	Hobbies:	Mineral collecting, carpentry, fishing, hunting, camping,
------------	--	----------	--

Computer Skills: Microsoft Word, WordPerfect 6.0; spreadsheets, e-mail and Internet, Medsystem, Qpit, Modflow applications
 Mathematical modeling - groundwater, ore reserves, geotechnical

Adaptability: Created modern mining organizations, with North American work standards, in mixed urban, rural, US, and South American environments.

Publications: Engineering Geology of the Betze/Post Pit, Engineering & Mining Journal, 1994.
 Geology of the Star Pointer Deposit, Geological Society of Nevada, 1986.
 Epidote From The Julie Claim, Mineral County, Nevada, Mineralogical Record, 1982.
 Various regarding: computerized and model driven mining/processing operations, geology of various ore deposits.

Other: President of Rio Vista Hills Homeowners Association - 1999.

CURRICULUM VITAE

WILLIAM C. BERRIDGE, P.G.
Registered Professional Geologist
Wyoming Lic.# PG-3142
P.O. Box 1738
Wickenburg, Arizona 85358

Ph: (520) 684-0325 Fax: (520) 684-0328

E-mail address: auricres@futureone.com

EDUCATION

1964-1968 Prescott High School, Prescott, Arizona
1968-1972 Northern Arizona University, Flagstaff, Arizona
B.S. Geology (extended major)
Geography (extended major)
1974-1977 Graduate Studies (geology & mineral economics)
Gemological Institute of America, L.A., Calif.
Diamond Grading Course

EXPLORATION EXPERIENCE

2/99-
present

ZEO-TECH ENVIRO CORPORATION (ZEO:CDNX)
THE CANADIAN MINING COMPANY LTD. (CNA:CDNX)
Vancouver, BC, Canada

Position: Director

2/89-
present

AURIC RESOURCES INTERNATIONAL, INC.
Wickenburg, Arizona

Position: President, CEO
Targets: Volcanogenic Au in pC metavolcanics
and sediments; placer Au in Tertiary
sediments; mesothermal Au in Mesozoic
intrusive rocks; mesothermal detachment-
fault related Au deposits
Areas: Arizona, Utah, Colorado, California,
Nevada, Mexico
Duties: Management of lode and placer mining
operations; geologic mapping; geochemical
sampling; claim staking; land status
studies; literature research; report
writing; area selection; jv's with
pubcos. Clients/ j.v. partners have
included Yarnell Mining Co. (Bema Gold
U.S.); Atna Resources Ltd.; The Canadian
Mining Company Ltd.; Groundwater

100 ppm for the NURE Program of the U.S.
Dept. of Energy
Areas: Death Valley, Calif., AMS quadrangle
Winnemucca, Nevada, AMS quadrangle
Duties: Budget/time projections; literature
search; geologic mapping; rock, soil,
heavy minerals, and H₂O geochemical
sampling; ground & airborne
scintillometer & gamma-ray spectrometer
radiometric surveying; core & cuttings
logging; E-log evaluation; evaluation &
compilation of all data for publication
using U.S.G.S. standards

3/77-1/78

B & B MINING COMPANY (NORANDA), Prescott, Az

Position: Project Geologist
Target: U in carbonaceous sedimentary rocks
of the pC Apache Group
Area: Sierra Ancha Mts., Gila Co., Arizona
Duties: Managed exploration activities &
coordinated same with j.v. partner,
Wyoming Minerals Corp.; literature
search; recon & detailed geologic
mapping; rock geochemical sampling;
aerial photo mapping; McPhar TV-1
scintillometer surveying; drill target
recommendations; report writing; crew
supervision

8/74-3/77

AMERICAN SELCO, INC. (SELECTION TRUST LTD),
Prescott, Arizona

Position: Exploration Geologist
Targets: Stratabound polymetallic massive
sulfides in pC metamorphic environments;
volcanogenic Au deposits in pC terrain;
Au in pC banded iron formations
Areas: Arizona, California, Nevada
Duties: Recon & detailed geologic mapping;
rock & soil geochemical sampling; VLF,
EM-17, Mag, and I.P. geophysical surveys;
road & drill site construction;
supervised core & rotary drilling
programs; core & cuttings logging; land
status studies; line cutting & surveying;
property contract negotiations;
assessment drilling & filings; crew
supervision; report writing

11/72-8/74

KALIUM CHEMICALS LTD (PPG INDUSTRIES),
Prescott, Arizona

Position: Assistant Geologist

Targets: Pb/Ag replacement deposits in Pal-
eozoic carbonates; W-bearing tactite
deposits; epithermal Au veins in Tertiary
volcanic rocks; volcanogenic Au in pC
metavolcanics & sediments; stratabound
polymetallic sulfides in pC terrains; Au
veins in highly deformed Mesozoic
sedimentary rocks; Ag deposits as
disseminations & veins in felsic Laramide
intrusive rocks

Areas: Arizona, California, Nevada, Utah,
Idaho, Montana

Duties: Literature search; land status
studies; area selection; claim staking;
recon & detailed geologic mapping; rock &
soil geochemical surveys; I.P., VLF, &
magnetometer geophysical surveys;
airborne recon & aerial photo mapping;
road building; supervised core & rotary
drilling programs; operated Winkie drill;
logged core & cuttings; conducted
underground bulk sampling; property
negotiations; crew supervision; report
writing

8/72-11/72

McALESTER FUEL COMPANY, McAlester, Oklahoma

Position: Mine Worker

Target: Heap-leaching of copper silicate
ores using sulfuric acid

Area: Zonia Mine, Kirkland Jct., Arizona

Duties: Operated carbon tanks; pumped sulf-
uric acid; laid pipe & sprinkler systems;
washed copper precipitate from scrap iron

5/70-8/70

NUCLEAR DYNAMICS, INC., Phoenix, Arizona

Position: Field Assistant

Target: Roll-front uranium deposits

Area: Casper, Wyoming

Duties: Logged & correlated rotary drill
cuttings; evaluated & correlated E-log
data

TEACHING EXPERIENCE

Fall 1974 Yavapai College, Prescott, Arizona
Course Taught: Geology for Hobbyists

Spring 1975 Yavapai College, Prescott, Arizona
Courses Taught: Geology for Hobbyists
Ore Deposits of Arizona

Fall 1975 Yavapai College, Prescott, Arizona
Courses Taught: Geology for Hobbyists

ADDITIONAL TRAINING

Courses:

Volcanic Rocks and Their Vent Areas (Drs. Noble, Rose, Sheridan, Wollenberg, and Silberman): 1978, MacKay School of Mines Symposium, Univ. of Nevada, Reno

Uranium Geology and Exploration (Dr. Richard DeVoto): 1979, Bendix Field Engineering Corp./ U.S.D.O.E. Symposium, Grand Junction, Colorado

Lithium-Bearing Pegmatites (Drs. Jahns, Foord, Wolfe, and Kampf): 1976, Mineralogical Society of America/ FM Symposium, Tucson, Arizona

Gold Symposium: 1981, MacKay School of Mines, Univ. of Nevada, Reno

Statistical Evaluation of Mineral Resources: 1979, Bendix Field Engineering Corp./ U.S.D.O.E. Symposium, Reno, Nevada

Uranium and Thorium Research and Resources Conference (Drs. Nash, Hills, Warren, Grauch, Peterson, Otton, et.al.): 1977, U.S. Geological Survey Symposium, Golden, Colorado

Porphyry Copper Deposits (Drs. Gilbert, Lowell, Anthony, Titley, Beane, et.al.): 1974, Mineralogical Society of America/ FM Symposium, Tucson, Arizona

Mineralogy of Zeolites: 1976, Mineralogical Society of America Symposium, Tucson, Arizona

Mineralogy of Feldspars: 1975, Mineralogical Society of America Symposium, Tucson, Arizona

Folio Report Writing (Dr. Michael Stroud, Shipley Associates): 1979, Bendix Field Engineering Corp./ U.S.D.O.E. Seminar, Reno, Nevada

Technical Writing and Editing (Dr. Robert Tippetts, Shipley Associates): 1978, Bendix Field Engineering Corp./ U.S.D.O.E. Seminar, Reno, Nevada

Helicopter Safety Training (Dept. of the Interior, Office of Aircraft Services): 1978, Bendix Field Engineering Corp./ U.S.D.O.E. Seminar, Reno, Nevada

Four-Wheel Driver Training Program (International Training, Inc.): 1980, Bendix Field Engineering Corp./ U.S.D.O.E. Seminar, Reno, Nevada

Defensive Driving Course (National Safety Council): 1978, Bendix Field Engineering Corp./ U.S.D.O.E. Seminar, Univ. of Nevada, Reno

Management By Objectives (Bendix Corporation): 1978, Bendix Field Engineering Corp. Seminar, Reno, Nevada

Standard First Aid & Personal Safety: 1978, The American National Red Cross, Reno, Nevada

Basic Life Support Course in CPR: 1979, The American National Red Cross, Reno, Nevada

PROFESSIONAL ORGANIZATIONS

Geological Society of America (GSA)
Society for Mining, Metallurgy and Exploration (SME)
Canadian Institute of Mining, Metallurgy and Petroleum (CIM)
Arizona Geological Society (AGS)
Geological Society of Nevada (GSN)

PUBLICATIONS

Berridge, W.C., 1986, Written Communication in Wrucke, C.T., Otton, J.K. and Desborough, G.A., Summary and Origin of the Mineral Commodities in the Middle Proterozoic Apache Group in Central Arizona, in Beatty, B. and Wilkinson, P.A.K., eds., Frontiers in Geology and Ore Deposits of Arizona and the Southwest, Arizona Geological Society Digest, Vol. XVI, p. 12-17.

Berridge, W.C. and Wolverson, N.J., 1982, Uranium Resource Evaluation of the Winnemucca 2 Degree Quadrangle, Nevada, U.S. Dept. of Energy Open File Report PGJ/F-129(82), 33 pp., 2 Figs., 5 Tables and 15 Plates.

Berridge, W.C., 1982, Uranium Resource Evaluation of the Death Valley 2 Degree Quadrangle, California and Nevada, U.S. Dept. of Energy Open File Report PGJ/F-083(82), 50 pp., 4 Figs., and 25 Plates.

Berridge, W.C., 1975, Geologic Features, in Las Vegas Ranch Ruins East and West, Barnett, F., 1978, Museum of Northern Arizona Bulletin 51, 107 pp.

Berridge, W.C., 1973, Personal Communications, in Mineralogy of Arizona, Anthony, J.W., Williams, S.A., Bideaux, R.A., and Grant, R.W., 1995, pp. 300, 307 and 344.

REFERENCES

Dr. H.D. Bruce Wilson, Emeritus Prof. Geology (ret.)
Canadian Mining Hall of Fame
Winnipeg, Man.
(204) 453-3579

Mr. Bern Brynelsen, Exec. V.P., Noranda (ret.)
Canadian Mining Hall of Fame
Vancouver, B.C.
(604) 224-0733

Dr. James K. Otton, Geologist
U.S. Geological Survey
Denver, Colorado
(303) 236-8020 office

Dr. Willard P. Leedy, Consulting Geologist
Rifle, Colorado
(970) 625-0550

Mr. George Ryberg, Consulting Geologist
Prescott, Ariz.
(520) 778-2591

Mr. Chuck M. Dickens, P.G., President
Groundwater Resources Consultants, Inc.
Tucson, Arizona
(520) 326-1898

Mr. G.E. (Ted) Holmes, PE
Peoria, Arizona
(602) 974-4106