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

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PRINTED: 08/07/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: GRAYS GULCH

ALTERNATE NAMES:
BLACK DIAMOND

MARICOPA COUNTY MILS NUMBER: 643

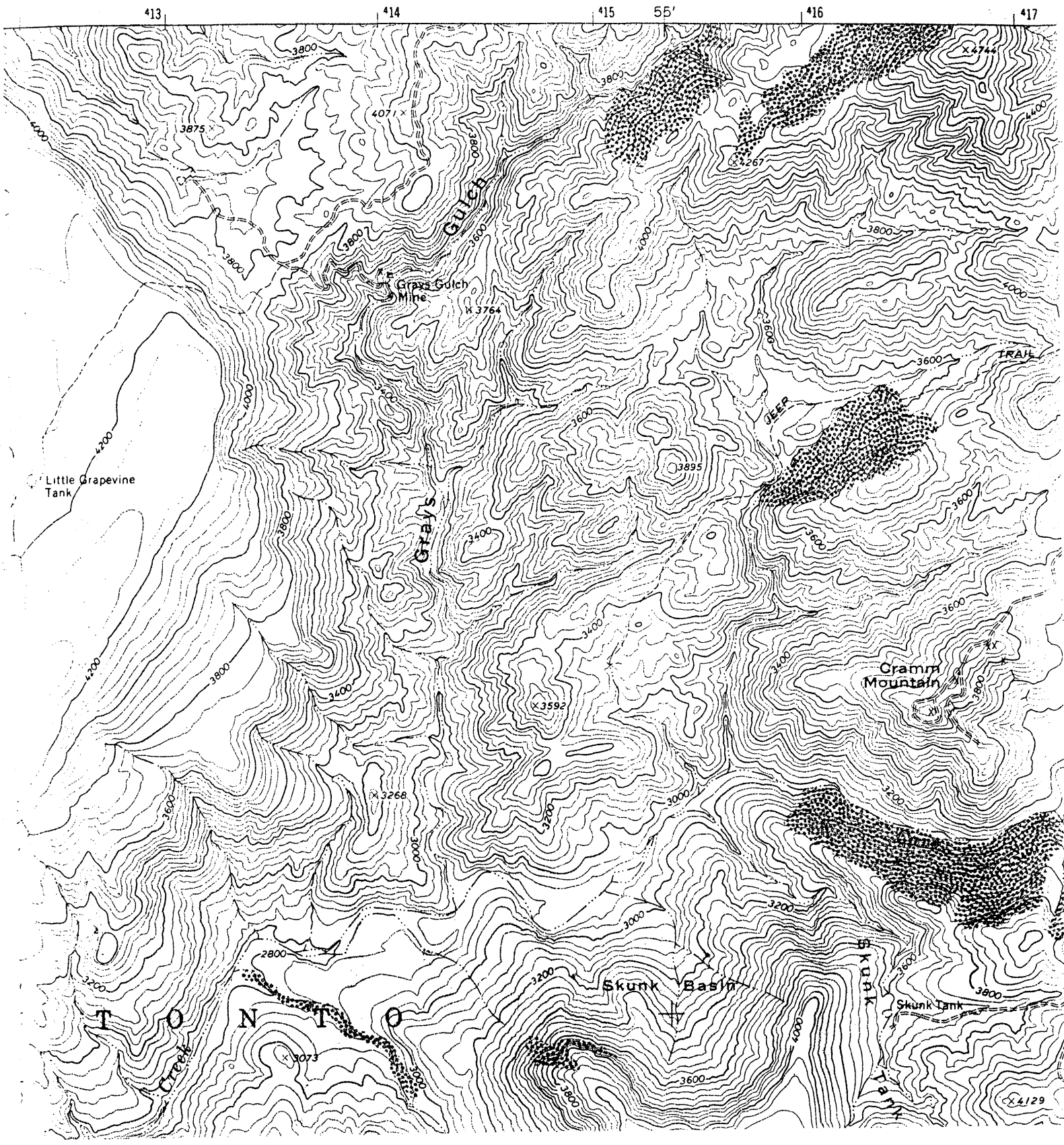
LOCATION: TOWNSHIP 8 N RANGE 4 E SECTION 34 QUARTER SE
LATITUDE: N 33DEG 59MIN 19SEC LONGITUDE: W 111DEG 55MIN 48SEC
TOPO MAP NAME: NEW RIVER MESA - 7.5 MIN

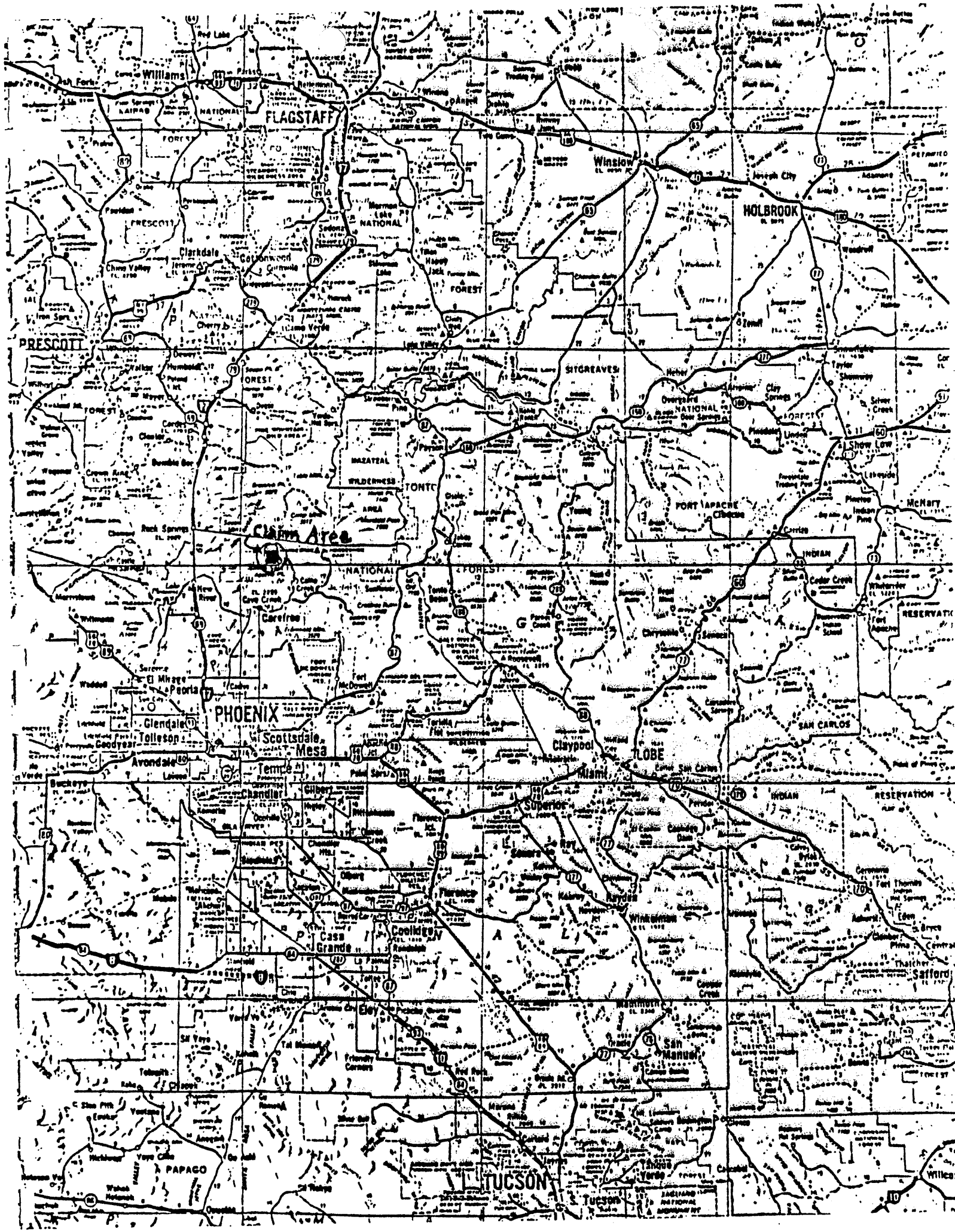
CURRENT STATUS: PAST PRODUCER

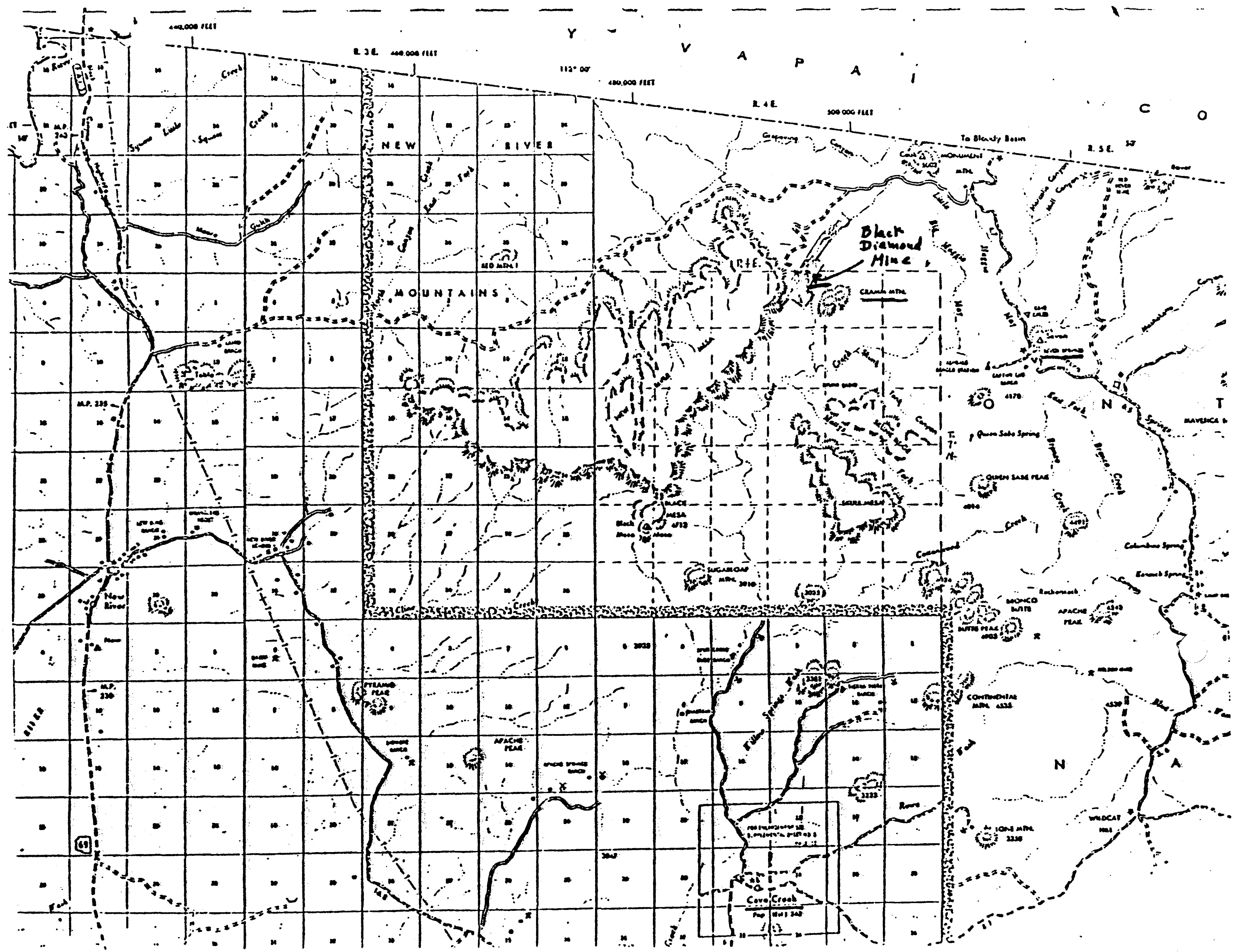
COMMODITY:
COPPER SULFIDE
SILVER
GOLD
COPPER OXIDE

BIBLIOGRAPHY:
USGS NEW RIVER MESA QUAD
ADMMR GRAYS GULCH FILE
ADMMR GRAYS GULCH COLVO FILE
NEVADA BUREAU OF MINES, REPORT 33, P 39, 1979

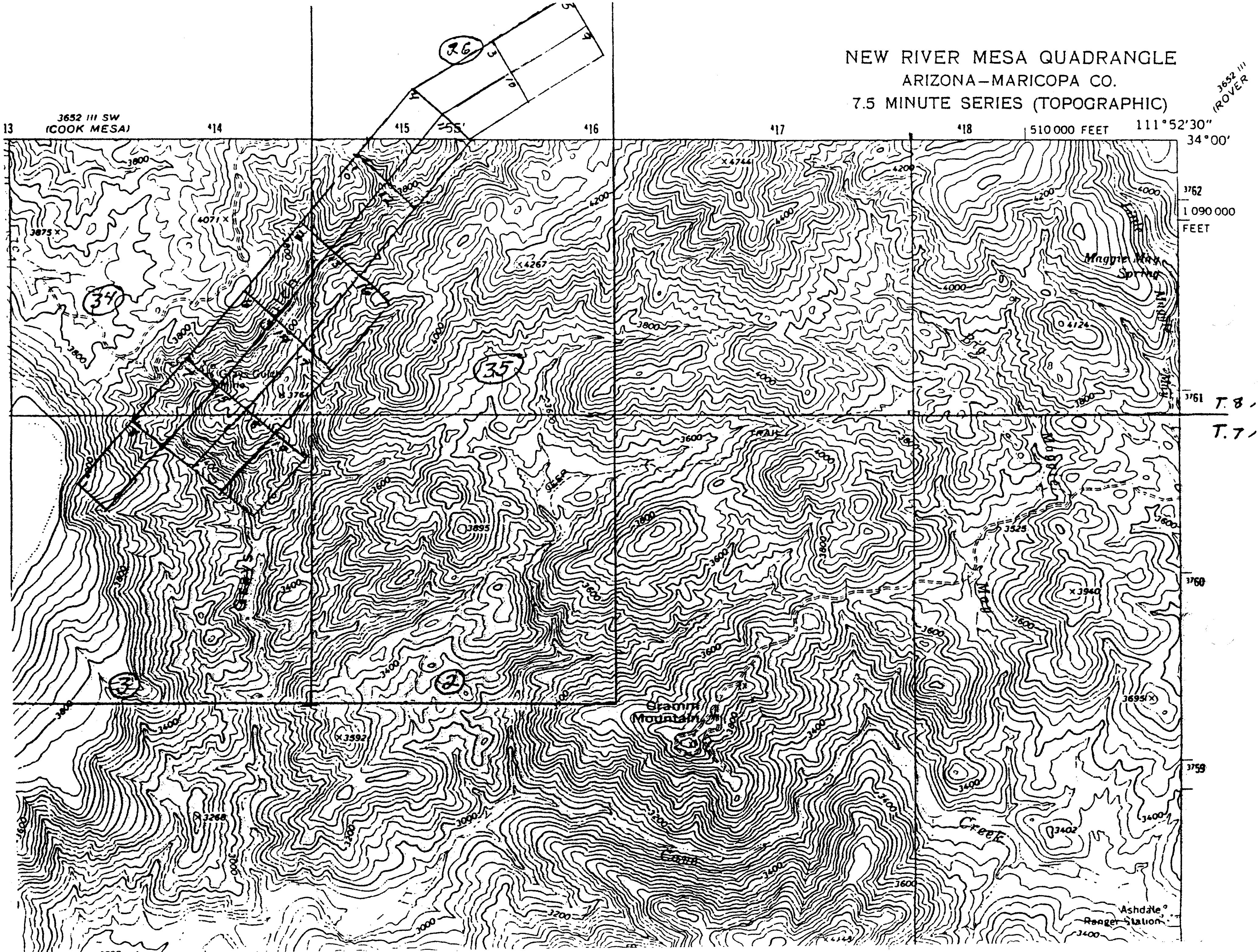
NEW RIVER MESA QUAD T8N, R4E, Sec 34

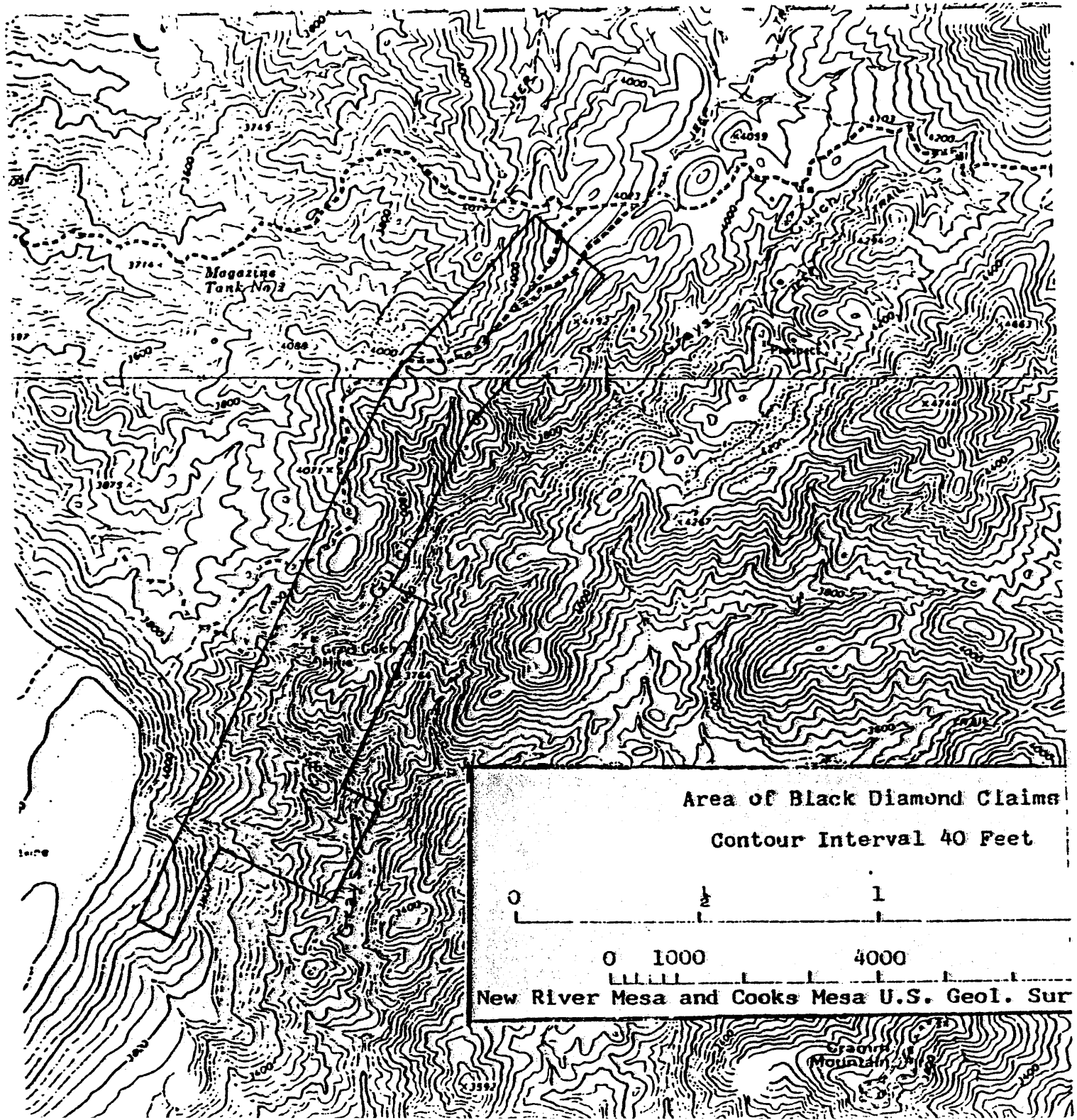



Williams
FLAGSTAFF
Winslow
HOLBROOK
PRESCOTT
Clarkdale
Cottonwood
Jerome
Chino Valley
Cherry
Lake Valley
SITGREAVES
Overgaard
Show Low
Pinetop
Lakeside
McNary
PORT APACHE
Cibecue
Clarkdale
Rock Springs
Carefree
Cave Creek
New River
Tonto Basin
Cedar Creek
Whiteriver
RESERVATION
El Mirage
Peoria
Glendale
Tolleson
Goodyear
Avondale
PHOENIX
Scottsdale
Mesa
Tempe
Chandler
Gilbert
Claypool
GLOBE
Miami
SAN CARLOS
Superior
Florence
Coolidge
Casa Grande
Eloy
Winkelman
Hayden
Kearny
Mammoth
San Manuel
Thatcher
Safford
PAPAGO
TUCSON
Tucson
Tohono O'odham
Willcox


Y A V A P A I
C O
N E W
R I V E R
M O U N T A I N S
Black Diamond Mine
CRAMM MTN.
R. 3 E.
R. 4 E.
R. 5 E.
440,000 FEET
460,000 FEET
480,000 FEET
500,000 FEET
112° 00'
To Bloody Basin
MONUMENT MTN.
Queen Sabe Spring
QUEEN SABE PEAK
SUGARLOAF MTN. 3010
BLACK MESA 4112
Black Mesa
Columbine Spring
Rackensack
BRONCO BUTTE
APACHE PEAK
CONTINENTAL MTN. 4535
LONE MTN. 3230
WILDCAT HILL
PYRAMID PEAK
SQUAW PEAK
Cave Creek
New River
M.P. 235
M.P. 230
Squaw
Little
Creek
Cottonwood
East Fork
Cave Creek
69

NEW RIVER MESA QUADRANGLE
ARIZONA–MARICOPA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)




Magazine Tank No 2
Area of Black Diamond Claims
Contour Interval 40 Feet
0
½
1
0 1000 4000
New River Mesa and Cooks Mesa U.S. Geol. Sur

Arizona Department of Mines and Mineral Resources
Verbal Information Summary

Mines: 1. Black Diamond Mine and 2. Grays Gulch **Date: January 21, 1994**
County: Maricopa **Engineer: Nyal Niemuth**
Location: T8N, R4E, Sec. 35 NE, (2. Sec 34 SE)

Russel O. Riggs and Jim Allen, Attorneys at Law, 1201 South Alma School Road, Suite 1400, Mesa, AZ 85210 Phone: (602)- 827-2560 visited to obtain background to interpret some consulting reports, seek investment advice, and to learn about applying a lien on unpatented mining claims. They were being asked to either invest or loan money to property owner James Ashpole, 8026 W. Aster Drive, Peoria, AZ 85381.

Copies of a geology report by Willard Pye were made for the Black Diamond Mine file and were later found to already be present in the Grays Gulch file. The report contains indicated reserves for the property, but explains more exploration is required to convert these to proven reserves before mining could begin.

Date Printed: 07/13/93

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

Information from: **James A. Ashpole**

Company:

Address: 8026 W. Aster Drive
City, State ZIP: Peoria, Arizona 85381
Phone: 878-8265

MINE: **Black Diamond**

ADMMR Mine File: Grays Gulch
County: **Maricopa**
AzMILS Number: **643**

SUMMARY

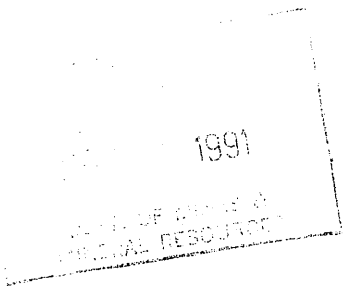
James A. Ashpole was in to to review our file on his now acquired Black Diamond mine north of Cave Creek.

He reported that the owners of the property are now:
James A. & Mary C. Ashpole
8026 W. Aster Drive
Peoria, AZ 85381
Phone (602) 878-8265

Some of the promotional history of the property was explained. He hopes they can find someone to option or purchase the property.

Ken A. Phillips, Chief Engineer Date: June 1993

ABN ENTERPRISES
4428 Center St.
Omaha, NE 68105
(402) 558-0108



Arizona Dept. of Mines
Mineral Resorces
1502 West Washington
Phoenix, Ariz. 85007

Mr. Ken Phillips,

I enjoyed our talk on the telephone the other day. It is becoming quite an education for me, since this is a totally new field for me. I really value your information and advice.

There is a challenge on the horizon I can see coming closer and closer, and that is that the owners insist the price to be set at $ 30. Mill plus. transaced as a direct buyout. Understanding from you, that will be hard to do. Have you ever heard that being done ?

Enclosed is the report on the Black Diamond, by Dr. Willard Pye. Now when you see where it is at, I am sure you can find it. What do you know about Willard Pye ? Is he conservative in his assessments ? Has he been accurate ? It appears to me there is minimal Gold in this mine, and much more Copper.

I hope you can read the report and give me your opinions on what kind of potential this mine can have. Is there enough Copper to be profitable ? What about the other minerals ?

I have another question for you. Do you know of any Japanese or Taiwan, Hongkong owned mines in the US. That seem to become the best target for marketing this property.

After you read the Dr. Willard Pye report, send me a few words if you could. I am very interested in hearing your answers to my questions, and your opinion of this mine.

Thank you.

Sincerely,

Aage Nost

Aage Nost
Owner

RESUME

WILLARD D. PYE

PERSONAL DATA

Willard Dickison Pye

Office Address:	3418 N. Forgeus Ave., Tucson, Arizona 85716
Home Address:	3418 N. Forgeus Ave., Tucson, Arizona 85716
Born:	February 20, 1915

TRAINING (College and University)

Oberlin College, Oberlin, Ohio
A.B., 1935

California Institute of Technology, Pasadena
M.S., 1937

University of Chicago, Ph.D., 1942

FIELDS OF SPECIALIZATION

Undergraduate:	Geology and Mathematics majors; Physics and Chemistry minors.
Graduate (M.S.):	Geophysics and Economic Geology (ore deposits)
Graduate (Ph.D.):	Petroleum, Ore Deposits, and Sedimentation

SCHOLASTIC HONORS

President, Geology Club, 1934-35
Phi Beta Kappa, 1935
Sigma Xi, 1937
Virgil Kirkham Fellowship in Geology (University of Chicago) 1940-42

PROFESSIONAL LICENSES

Arizona State Board of Technical Registration (Consulting Geologist) No. 4033

California State Board of Registration for Geologists No. 2654

REFERENCES

Who's Who in America

American Men of Science

Who's Who in American Education

Various oil, geological, and other directories

POSITIONS

Consulting Geologist: Full time 1970 – present; also, for short periods at various times from 1935 – 1970.

Professor of Geology, Department of Geology, University of Arizona, Tucson, Arizona, 1957 – 1970.

Chairman and Professor, Department of Geology and Geography, North Dakota State University, Fargo, North Dakota, 1947-57.

Executive Secretary, Yellowstone-Bighorn Research Association, 1954-55.

National Science Foundation Research Associate – Research Northern Great Plains, 1953-54.

Research Geologist, Princeton University, 1953-54.

Director, Elk Basin Geological Summer Field Camp, 1953-54.

The Texas Company, Rocky Mountain Division Research Geologist – special geological problems, 1946-47.

The Texas Company, in charge Idaho-Utah District, 1943-46.

National Defense Research Corporation (N.D.R.C.) - in charge classified research, for Chemical Warfare Service, 1942-43.

Illinois Geological Survey, Research Assistant, 1940-42.

University of Chicago, Instructor, 1940-42.

Carter Oil Company, Geologist, 1937-40 (Now part of EXXON corporation)

U.S. Soil Conservation Service, Sedimentation Research, 1936-37.

California Institute of Technology, Graduate Instructor, 1935-37.

Shell Oil Company, Geophysicist, 1936.

Oberlin College, Laboratory Assistant, 1933-35.

OTHER NON-COMMERCIAL ACTIVITIES (selected)

Arizona Oil and Gas Commission, Advisor, 1964-1970.

National Petroleum Council, Committee on Future Petroleum Resources of the United States, Southern Arizona and New Mexico district; also, reviewer of papers on Arizona, Utah, Western Colorado, Western New Mexico and Nevada – 1969-1970.

Director, Arizona Oil and Gas Association, 1961 – present; President 1965-66.

Director, International Geophysical Year (I.G.Y.) Aurora and Airglow studies, Northern Great Plains, 1956-57.

Director, North Dakota Institute of Regional Studies, 1956-57.

Secretary and Director, Red River Valley Investment Fund, 1957-58.

President, Northwest Investors Research, 1956-57.

Delegate and consultant to National Science Foundation conference on geology in colleges with small geology departments, 1953.

SOCIETY MEMBERSHIPS (Scientific and Professional – both current and former)

National and Regional

American Association of Petroleum Geologists

American Institute of Mining and Metallurgical Engineers

Geological Society of America

Seismological Society of America

Sigma Xi

Society of Economic Paleontologists and Mineralogists

Society of Exploration Geophysicists

SOCIETY OFFICES AND COMMITTEES

American Association of Petroleum Geologists

Committee on Stratigraphic Correlations, 1959-63

Carbonate Rock Sub-Committee, of Research Committee, 1959-61

Committee for Preservation of Samples and Cores, 1959-60

Research Committee on Subsurface Reservoir Conditions, 1948-51

American Geological Institute

Chairman, Glossary Committee on Sedimentation, 1951-56

Chairman, Glossary Committee on Paleogeography, 1951-56

Chairman, Educational Committee for North and South Dakota and Montana, 1950-54

Arizona Geological Society – Geological Society of America, Cordilleran Section

Chairman, Registration and Arrangements Committee, 1958 Joint Meeting

Editor, Stratigraphic Papers, 1959 Joint Meeting Guidebook

Field Trip Leader (Stratigraphic Trip), 1959 Joint Meeting

Arizona Oil and Gas Association

Director, 1961 – present

President, 1965-66

Chairman various committees (Speaking, Membership, Public Relations, etc.) 1961 – present

Chairman, Arizona Mineral Information Planning Committee, 1962-64

Society of Economic Paleontologists and Mineralogists

Research Committee, 1957-61

Co-chairman, Research Fund Committee, 1959-60

Steering Committee representing Society of Economic Paleontologists and Mineralogists to American Geological Institute Glossary Committee, 1953-56

Miscellaneous

Chairman, Research Committee, American Association of University Professors, 1951-52

Field Trip Leader, New Mexico Geological Society, Black Mesa Trip, 1958

Research Committee, North Dakota Geological Society, 1951-53

Chairman, Research Committee, Wyoming Geological Society, 1946-68

PUBLICATIONS

Author of approximately 50 publications on various topics including, oil and gas, coal, helium, oil shales, metallic and non-metallic mining, sedimentation, stratigraphy, paleogeological and tectonic studies, drilling and reservoir engineering, geophysics and related topics.

TRAVEL

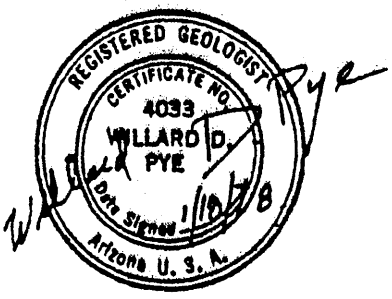
Geological work and/or travel throughout the United States and most of the provinces of Canada. Geological work in Mexico, northwestern South America, and travel and geological work throughout Europe, Near and Middle East and North Africa.

WILLARD D. PYE
Consulting Geologist
3418 North Forgeus Avenue
Tucson, Arizona 85716

Telephone 327-2956

BLACK DIAMOND CLAIMS

MARICOPA COUNTY, ARIZONA



January 18, 1978

WILLARD D. P...
Consulting Geologist
3418 North Forgeus Avenue
Tucson, Arizona 85716

Telephone 327-2956
January 18, 1978

BLACK DIAMOND CLAIMS

MARICOPA COUNTY, ARIZONA

SUMMARY

The Black Diamond property comprises 19 lode mining claims located along Grays Gulch in Sec. 3, T. 7 N., R. 4 E., and Secs. 26, 34, and 35, T. 8 N., R. 4 E., Maricopa County, Arizona, some 35 miles north of Phoenix. The property is accessible by graded gravel roads but the terrain is rugged.

The Precambrian Yavapai schist underlies most of the claim area. It has been intruded by a variety of igneous rocks. Quartz veins and siliceous dikes are frequent. The mineralization is largely in the Yavapai schist and usually it is associated with the siliceous dikes and veins.

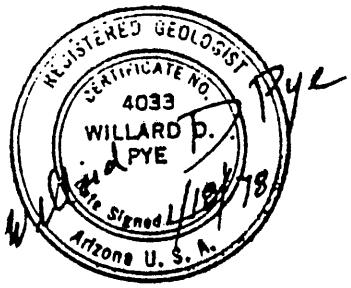
Mineralization consists of copper, silver and gold; lead and zinc are essentially absent at the surface. The copper exposed at the surface is oxidized and is composed mainly of copper carbonates; the primary copper sulfides develop at depth.

The property has been explored by geological, geophysical, (I.P. and magnetic) and geochemical methods. Approximately 10 strongly mineralized bodies are located in the claim area with several additional ones located outside of the claims. Copper content ranges from less than one percent to over ten percent. The mined ore will probably average about one percent copper with some values from the silver and gold.

Proven and Indicated Ore reserves are probably in the order of 350,000 to 500,000 tons; Inferred Ore may be several times the Proven-Indicated Ore tonnage. The estimate of the Inferred Ore tonnage under the claims depends

upon the interpretation of the continuity of the various mineralized bodies in the claim area and the depth to which they may extend.

Additional geological, geophysical, geochemical and core drilling together with assaying are necessary to transfer this Inferred tonnage to Proven or Indicated Ore tonnage.



Willard D. Pye

Willard D. Pye
Consulting Geologist
Arizona State Board of
Technical Registration #4033

BLACK DIAMOND CLAIMS

Name of Claim	Township	Range	Section	Docket	Page
Black Diamond # 1	Unsurv. 8 North	4 East	35	6374	540
Black Diamond # 2	Unsurv. 8 North	4 East	34 & 35	6374	539
Black Diamond # 3	Unsurv. 8 North	4 East	26	6374	538
Black Diamond # 4	Unsurv. 8 North	4 East	26 & 35	6595	665
Black Diamond # 5	Unsurv. 8 North	4 East	26	6595	664
Black Diamond # 6	Unsurv. 8 North	4 East	34	6595	663
Black Diamond # 7	Unsurv. 8 North	4 East	34	8660	287
Black Diamond # 8	Unsurv. 7&8 North	4 East	3 & 34	8660	286
Black Diamond # 9	Unsurv. 8 North	4 East	26	8660	285
Black Diamond #10	Unsurv. 8 North	4 East	26 & 35	8660	284
Black Diamond #11	Unsurv. 8 North	4 East	26 & 35	8660	283
Black Diamond #12	Unsurv. 8 North	4 East	35	8660	282
Black Diamond #13	Unsurv. 8 North	4 East	34 & 35	8660	281
Black Diamond #14	Unsurv. 8 North	4 East	34	8660	280
Black Diamond #15	Unsurv. 7&8 North	4 East	3 & 34	8660	279
Black Diamond #16	Unsurv. 8 North	4 East	34 & 35	8660	278
Black Diamond #17	Unsurv. 8 North	4 East	34 & 35	8660	277
Black Diamond #18	Unsurv. 7&8 North	4 East	3 & 34	8660	276
Black Diamond #19	Unsurv. 7 North	4 East	3	8660	288

WILLARD D. PYE
Consulting Geologist
3418 North Forgeus Avenue
Tucson, Arizona 85716

Telephone 327-2956
January 18, 1978

BLACK DIAMOND CLAIMS

MARICOPA COUNTY, ARIZONA

INTRODUCTION

Location

The Black Diamond group of claims is located in northeastern Maricopa County, Arizona. The claims lie in an unsurveyed area, but a projection of the township and range grid indicates that they are located approximately in Sec. 3, T. 7 N., R. 4 E., and in Secs. 26, 34 and 35, T. 8 N., R. 4 E. This locality is found on the New River Mesa and the Cooks Mesa Quadrangles of the U. S. Geological Survey 7.5 minute topographic series. The claims are some 35 miles north of Phoenix and 4 miles west of Seven Springs camp site. They lie along Grays Gulch just east of New River Mesa.

Property

The property consists of a group of 19 unpatented

load claims which trend in a northeasterly direction. They are shown on the attached claim map and their approximate location in relationship to the topography is depicted on the topographic map.

Relief and Topography

The elevation of the area is approximately 3600 feet above sea level. Relief in the claim area ranges from 400 to over 1000 feet. The claims are located along Grays Gulch in an area of rugged topography characterized by canyons and steep tributary valleys.

Accessibility

The claims are reached via the graded forestry road that extends from Cave Creek to Seven Springs camp site and then northward to Forestry Road #41. The latter road leads westward to the Black Canyon Highway (Interstate 17), about 11 miles to the east. The forestry road passes adjacent to the northern end of the claims. A graded access road leads from the forestry road into the claim area along the west side of Grays Gulch. Along the divides, road grades are gentle and there is ready access to various parts of the claims. However, where roads descend into Grays Gulch or its tributaries, grades of roads may be steep and may have to be modified for ore haulage.

The northern end of the claim area can be approached along its eastern side by a trail along the divide

between Grays Gulch and the stream to the east.

Weather and Climate

Weather is typically semi-arid. At no time of the year will climate cause a serious problem. Rainfall occurs chiefly in summer as thunderstorms. These can cause damage to roads and structures if they are not properly engineered.

Water and Power

Some water is available in Grays Gulch, especially during the rainy season. If more water is necessary, it can probably be brought in from Cave Creek where Grays Gulch empties into it. This is about two miles south of the claims.

There is no electric power in the claim area. It will have to be generated at the mine site.

Housing and Supplies

The nearest ample housing would be in the general Phoenix metropolitan area. Ranches and small towns are found nearer to the claims and might furnish some housing, or trailers can be readily moved into the area and a mine camp established.

Supplies could come from the Phoenix metropolitan area. Specialized mining tools and equipment would be available from various mining centers located to the southeast of the Black Diamond claims.

These same centers together with Tucson some 180 miles

to the south would also adequately supply technical services and technical personnel.

Mills, Smelters and Similar Facilities

No mills, smelters or related facilities are available in the claim area. Concentrates, or any direct shipping ore, would be trucked to Hayden or other smelters in the general area. The smelters in the Hayden and Miami areas would be about 150 miles distant. Others are at greater distances.

The nearest custom mill is at Pumpkin Center some 80 miles to the east.

Cement copper produced through leaching of the copper oxides in the ore at a leach facility in the mine area would go to the same smelters or might be shipped directly to one of the consumers of this type of copper concentrate.

Scope and Basis of Report

The writer first examined the property in 1969 and since that time has periodically returned to inspect developments, assessment work, and other activities on it. He also has reviewed the geophysical and geochemical work which was done in 1973. This specific information has been supplemented by his general knowledge of the area, information in his files and data in technical and other reports to which he has had access.

GEOLOGY

The main copper bearing mineral bodies of interest on the property are located in the Precambrian Yavapai or Pinal schist. Their geology and relationships are similar to those of the Iron King, Orizaba, Blue Bell and other mines of the northeastern Bradshaw Mountains and Black Canyon area.

Rock Types

The claims lie in an area of Precambrian Yavapai schist which in this area is largely composed of greenish chlorite schist derived from weakly metamorphosed sedimentary deposits, tuffs, rhyolites, andesites and related volcanic rocks. In many areas the schist carries many chert and siliceous nodules and lenses which may range from less than an inch in size to massive siliceous dikes several tens of feet across and hundreds of feet long. These siliceous or "iron" dikes usually follow the schistosity of the enclosing rock fairly closely but may cut across it at a low angle. The quartz and siliceous material may be relatively clear or the mass may be essentially a red jasper. There has been more than one period of silicification.

Quartzitic beds, and more rarely metamorphosed limestones, are sometimes found in the schist sequence. Some of the quartzitic and siliceous units have been derived from volcanic tuffs and other siliceous units inter-bedded in the original Precambrian sediments. Metamorphism and hot

aqueous solutions caused a certain amount of re-mobilization of the silica as well as the metallic minerals.

The Yavapai schist in the area has been intruded by acidic (light colored) igneous rocks which range in composition from rhyolitic to andesitic to dioritic. These intrusives occur as dikes and small masses which are fine grained and may be porphyritic. The Precambrian intrusives have been metamorphosed with the more basic ones becoming amphibolites. Some of the intrusives appear to be less metamorphosed but may be highly sheared with some tendency for the fracturing to trend parallel to the metamorphic structural trends in the schist. They probably are Precambrian in age, but could be later, such as of Laramide age. These intrusives were most frequently noted in the northern portion of the claim area. They are also well developed to the north, northwest and northeast of the claims.

Large masses of darker Precambrian granites are present both to the east and west of the claims and a smaller one to the south of the area. A few Laramide intrusives also are found to the south.

Basalts and other volcanics of Quaternary and/or Tertiary age are found at higher elevations to the west and north of the claim area.

The quartz veins present in the area may be small, irregular veins or large massive structures. The former are intimately related to the Yavapai schist structures and are of Precambrian age. These veins, veinlets and quartz pods

and stringers are often contorted, branching and net-work forming. They may cut across the schistosity but tend to trend roughly parallel to it. The massive quartz veins are probably younger than the Precambrian. Some veins are quartz filled fractures with well developed quartz crystals projecting into open cavities. There are probably three or more periods during which quartz veins developed in the rocks of the area.

Structure

The Yavapai schist lithologic units trend in a northeasterly direction and are very constant in this direction. Dip of the units is steeply to the east. No major folds are present in the claim area although minor folding and irregularities within small units of the schist are found, and the schist may be folded and warped around some of the siliceous masses.

No major faulting was observed although minor cross-faulting is present. Shearing occurs throughout the area and is best developed in the more competent, brittle rocks such as the intrusives and the quartzites and siliceous veins and dikes.

The schistosity or metamorphic grain of the rocks trends in a northeasterly direction and dips steeply to the east. It is basically parallel or almost parallel to the trend of the lithologic rock units.

Minerals

A wide variety of minerals are present in the various

rock types, but in this report only those metallic minerals which may be commercially of interest or are closely related to them will be mentioned.

Copper. The primary copper sulfides are present at the surface in only limited amounts. Chalcopyrite was observed. There may be some bornite and chalcocite present in the subsurface but these were not noted on dumps or exposures of the mineralized rock. Except for the few remnants of chalcopyrite, all of the primary copper sulfide minerals at the surface of the ground have been oxidized and altered into the secondary copper minerals.

The secondary copper minerals are well developed at numerous localities on the claims and comprise most of the surface copper minerals observable. All of the secondary copper minerals are grouped together under the general term "copper oxides".

The most abundant oxides at the surface are the copper carbonates malachite and azurite, together with the secondary copper silicate chrysocola. Other secondary copper minerals are present in smaller amounts except for an occasional local pocket. Among these other copper minerals are native copper, cuprite, copper pitch as well as others. In the Upper Tunnel on Claim 3 various copper sulfates such as chalcanthite, brochanthite and/or others are well developed along the walls and roof.

Secondary copper minerals may be as rich or richer as a source of copper as the primary sulfide minerals. Their

importance is a clue as to the type and strength of mineralization at depth along the vein. Further, the distinction is important in connection with up-grading or concentrating the copper content into an enriched product from its leaner content in the parent rock. Sulfides generally are concentrated by flotation; oxides by leaching methods to produce "cement copper". These concentrates are then shipped to a smelter for extracting the copper metal. If the parent rock is of high enough grade, either the oxide or sulfide-rich mine-run rock may be shipped directly to the smelter. No rock in the claim area was observed to be direct shipping ore.

The secondary copper minerals are usually greenish or bluish in color. The Yavapai schist and sometimes some of the associated intrusives may contain in places large amounts of fine grained chlorite, which is a greenish mica, epidote and other greenish minerals. These may give these rocks a "copper green" cast and this color has been mistaken by some in the past for secondary copper mineralization.

Silver and Gold. Assays and mine records indicate that both silver and gold are present in the claim area. The silver was probably originally a sulfide, but at the surface it may have occurred as a silver chloride or bromide or as an oxide. On Claim #3 some cerargyrite(?) may be present. One sample was found which contained a mineral which may be one of the ruby silvers.

Most of the gold probably occurs in the form of very

fine flakes of the native element gold in the quartz veins. However, some flakes were found in other types of rocks. In this area gold is frequently associated with pyrite and the copper minerals in the schist and quartzite rocks.

Iron. Although iron is not present in commercial amounts in the area, it is widely distributed throughout the veins and rocks and may be important in connection with the distribution of the various ore minerals, and in producing a secondary enrichment of copper at the base of the oxidized horizon. Iron occurs as the primary iron sulfide, pyrite, or as the primary oxide, hematite, which may be specular black or silvery, dull black or red. The secondary iron oxides are the familiar red and yellow hematite, limonite and similar minerals. Iron also occurs as part of the composition of the copper bearing minerals chalcopyrite and bornite.

Other Minerals. Lead and zinc sulfides occur in the general area as the minerals galena and sphalerite. The former is often argentiferous or silver bearing. These were not specifically noted in the claim area but geochemical analyses indicate their presence, usually in very minor amounts.

Mineralization

Metallic mineralization is concentrated (1) along fracture and shear zones, especially in the more brittle rocks, (2) near the siliceous veins and dikes, (3) near or within certain types of quartz veins, and (4) possibly asso-

ciated with certain zones in the Yavapai schist which may have been metal-rich at the time of their formation, or which have been especially susceptible to later metallic mineralization.

In other areas where the Yavapai schist has been mineralized and extensively studied and mined, it has been found that the pattern of mineralization is one in which the mineralization usually occurs as lenticular bodies both vertically and laterally. Size of the lenses may range from a few inches to tens and hundreds of feet. An average might be a few feet to a few tens of feet wide; a few tens to a few hundreds of feet high, and a few hundred to a thousand or more feet long. The lenses either follow roughly parallel to the schistosity of the Yavapai schist, although they may cut across the schistosity at a low angle, or they may follow fracture or shear zones and cut sharply across the schistose rock structure.

The lenses tend to be parallel to each other; they may overlap or may be en echelon (each lens off-set from the other). Often a siliceous dike is nearby.

The same general pattern of mineralization can be expected in the Black Diamond claims but modified by the presence of mineralized shear and fracture zones as well as other local lithologic and structural conditions.

The iron sulfide pyrite and the copper sulfide chalcopyrite and possibly some bornite were observed in chert nodules and siliceous bands in the Yavapai schist. Outside of these nodules and bands, the primary sulfides in the schist

largely have been decomposed to the secondary minerals.

Copper mineralization is shown throughout the length of the claims in the form of the secondary copper oxides. This does not mean that a continuous streak of copper bearing rock extends throughout the length of the claims, but that at various exposures throughout the length of the claims, copper minerals are present in substantial amounts. Some of the exposures will be connected; others will be found to occur on parallel, probably lenticular structures.

Depth of mineralization is unknown, but using the depth of shafts and the topographic relief, a depth of several hundred feet is amply demonstrated. In mines outside of the claim area, but of similar mineralization and geological type of rock and structure, mining and drilling have shown mineralization to extend to depths of over 2000 feet and reports indicate to over 3000 feet.

The depth of oxidation is not known. In some of the schist areas it may range into thousands of feet. On the claims, the shafts and tunnels are still in the oxidized zone although increasing amounts of primary minerals are appearing. It is probable that in the claim area the zone of oxidation will be at least several hundred feet in depth. It is not known whether a secondary zone of enrichment will be present in this area under the oxidized zone and above the primary mineralization.

Silver and gold are reported throughout the claim area. The old shafts and tunnels were developed for the gold content of the rock.

GEOPHYSICS, GEOCHEMISTRY AND DRILLING

Geophysics

Two Induced Polarization (I.P.) lines together with associated magnetic survey lines were run across the southern claims of the group. These lines each showed the presence of at least three anomalies related to mineralization. Some of them correlate with surface exposures of mineralization. Anomalies on the two lines may be off-set and not correlative between the two lines, although one of them does seem to carry across the interval between the lines.

Both the geophysical lines and the geochemical work were done independently of each other; there is no coincidence of lines and sampling points. The north line passes close to a surface mineralized area which is also a geochemical anomaly and reflects it. The southern line passes close to a geochemical anomaly but does not immediately reflect it, although a few hundred feet to the east it does show a geophysical anomaly.

Geochemistry

About 150 geochemical samples were collected over varios portions of the claim area. Many of these were concentrated near areas showing surface mineralization. The samples were analyzed for copper, zinc, lead and silver.

Copper. Ten areas of high copper concentration were found within the general area. Seven of the anomalies are

within the claim area while three lie to the east of it. Most of these anomalies coincide with surface exposures of copper mineralization. The highest sample showed over 11 percent copper.

Extending for a distance of some 12,000 feet along the western line of claims are five anomalies which appear to be in general alignment and parallel to the schistose structure. The suggestion is that these mineralized bodies may be generally related although between the bodies the areas of mineralization may pinch and swell or the bodies may be en echelon to each other or slightly offset to each other.

The other mineralized areas to the east of this trend do not show an alignment relationship but this may be due to lack of exploration and the relatively few geochemical samples which were taken in these areas. The individual bodies do show an alignment trend parallel to the schistose structure of the area.

Zinc. Although the zinc anomalies are much weaker than the copper ones, 12 are indicated with 9 of them being within the claim area and 3 lying to the east of the claims. In general the zinc anomalies coincide with the position of the copper anomalies. However, some of the zinc anomalies have only minor copper associations and some copper anomalies have very minor zinc content.

The same general mineralization pattern exists in the zinc anomaly relationships as are found for the copper and lead areas of mineralization. Rarely does the zinc content reach over one percent.

Lead. Four lead anomalies are present. These are all relatively weak. Three of them are in the southern portion of the claim area and related to the copper areas of mineralization. The fourth one is east of the southern portion of the claim area. In no case was a lead content as high as one percent found.

The pattern of the lead anomalies is similar to that of the other minerals and roughly parallel with the schistose structure of the enclosing rocks. As with the anomalies of the other metals, sampling was insufficient to prove continuity between the various mineralized areas along structural strike. They may be continuous, with probably some pinching and swelling, or may be en echelon to each other.

Silver. With rare exceptions the silver content was one or two parts per million or less although one sample showed 35 troy ounces of silver per ton of rock.

Drilling

At least two holes have been drilled upon the property but their depth, length, and what they found are unknown. Reportedly the holes were drilled at a low angle from the general area of Claim #16 presumably to intersect the main mineralized zone of Claims #13 and #2. A few fragments of drill core found in Grays Gulch wash are of chlorite schist composition. No mineralization was noted in these discarded fragments.

DEVELOPMENT

At the present time there is no mining activity on any of the claims. About two miles to the southeast on Cramm Mountain a mineralized area somewhat similar to that found in the Grays Gulch area was drilled and partly opened by a series of cuts and excavations. The rich Red Rover silver-copper-gold mine is located about 5 miles to the northeast. Reportedly it is worked out. Some 9 miles to the northwest the old Orizaba copper (originally gold-silver) mine is under re-examination. Further to the west, southwest and northwest are the Bradshaw Mountain mines.

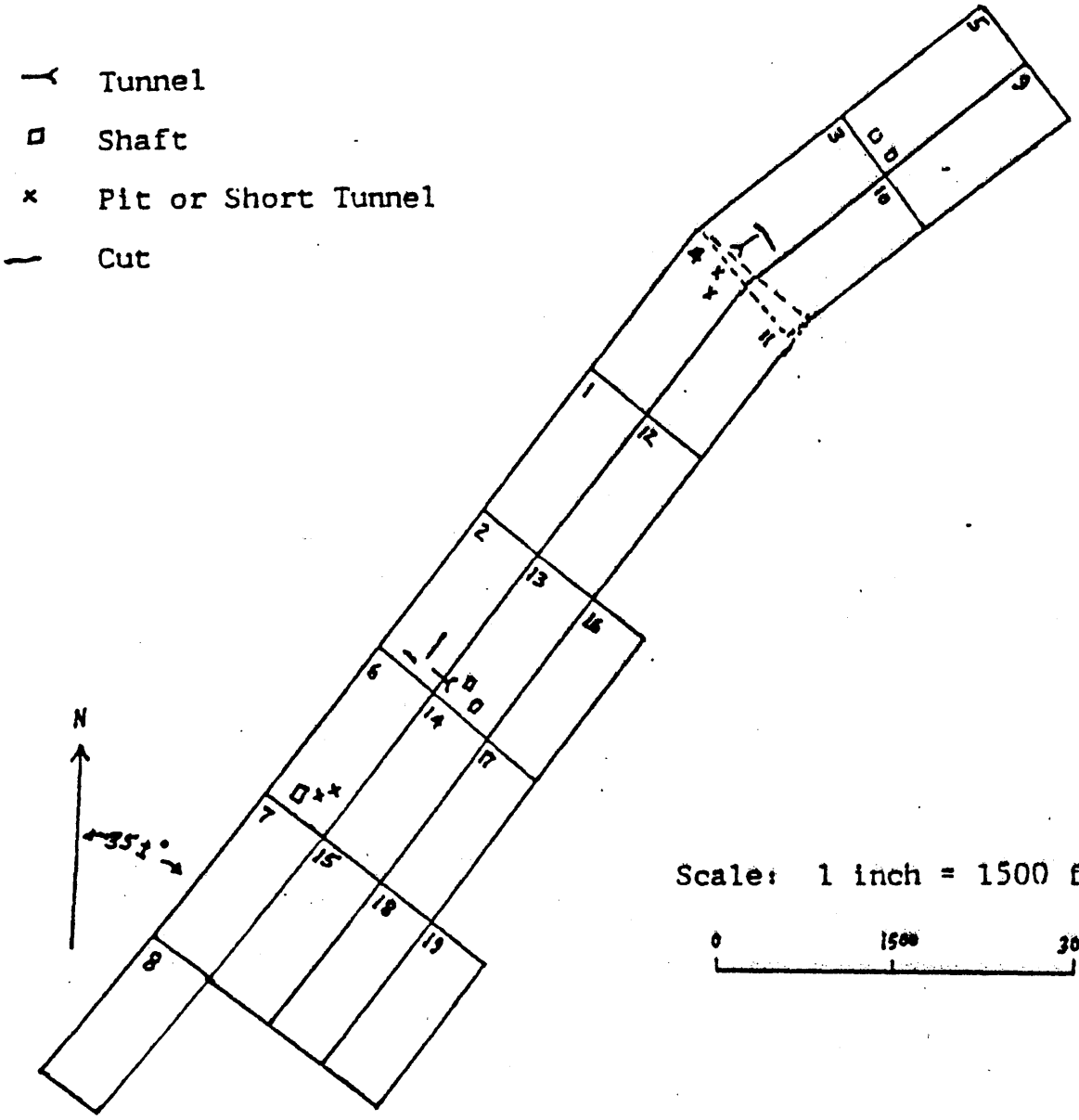
All of the above mines are basically in Yavapai schist and are similar to the geological setting of the Grays Gulch area. Most of these other mines which were abandoned or shut-down before copper was an important and well-paying metal are being re-examined. Deep ore bodies are reported.

Numerous shafts, cuts, tunnels, pits and other excavations exist in the claim area but only the more important ones will be mentioned. In addition to those on the claims, a number of shafts, cuts and prospect holes are found on the stream divide just to the east of the claims. Some of these had interesting mineralization and alteration of the rocks in which they were located.

Since the exact position of the claim boundaries was not always determinable. some of the workings near claim

BLACK DIAMOND CLAIMS

Maricopa County, Arizona



Only the more important developments or those which were seen are shown on the claim map.

boundaries may actually be located on adjacent claims rather than on the one specified.

Shafts

A number of shafts of varying depths have been sunk on various claims. A shaft on Claim #6 was not accessible but is probably 60 - 80 feet deep. It is in Yavapai schist and on the dump is a large amount of copper carbonate bearing rock. Samples from the shaft dump reportedly ran over 5 percent copper. Most of the shaft reportedly was in copper carbonate bearing rock. However, the shaft was sunk for gold and at the time it was dug there was no interest in the copper.

A shaft on Claim #5 was sunk to a depth of about 80 feet and shows good copper mineralization along a shear zone. Most of the copper is in the form of copper carbonates but native copper and other copper oxides are present. The shaft was sunk for gold and some flakes of what are probably native gold were observed. Reportedly some coarse gold has been found recently in some of the dump samples. Silver is present. Cerargyrite(?) and related silver chlorides and bromides as well as ruby silver appear to be present. Assays from the dumps reportedly ran up to 20 percent copper and several ounces of silver per ton.

A shaft a short distance to the east was also sunk in search of gold. Its location was controlled by the presence of a quartz vein showing open vein filling characteristics

and extensive malachite and azurite (copper carbonates) occurring in the vein and surrounding rock. Some primary copper sulfides are also present.

Two shafts were sunk on opposite sides of Grays Gulch creek bed near the southern end of Claim #13. The western one is inaccessible but is at least 100 feet deep. Reportedly it found some copper as well as gold, but their grade is not known. The presence of copper is confirmed by copper carbonate bearing rock on the remnants of the dump. The eastern shaft was shallow and did not reach any significant mineralization.

Underground Workings.

The "Lower Tunnel" is located in or near the southwest corner of Claim #13 near the bottom of of Grays Gulch and along its west side. It cross-cuts the schistosity and structure and was designed to intersect the mineralized vein which crops out some 200 feet higher on the hill. The tunnel is driven in a westerly direction and penetrates the mineralized zone exposed in the major cuts near the southern end of Claim #2. The tunnel face terminates in mineralized rock and the further extent of this mineralized zone at this depth is not known. Only short cross-cuts have been driven along the mineralized zone. About 20 feet of true thickness of good copper carbonate mineralization was penetrated by the tunnel. Primary sulfides were also present. The tunnel contains considerable broken rock which appears to be mainly good copper ore. Reportedly this mineralized zone

recovered 2.2 percent copper on a leach test.

The "Upper Tunnel" is located near the southern end of Claim #3. It entered along a fracture zone and was in carbonate as well as siliceous rock. A granitic intrusive is to the west and a strongly silicified jasper dike is to the east with the copper mineralization in the Yavapai schist between them. There are two levels to this mine and a start to a third level. The total vertical distance between workings is about 60 feet. The tunnel walls are extensively coated with copper sulfate minerals as well as by carbonates. High grade copper mineralization is present along the walls of both levels. Fresh wall-rock underneath the sulfate coating carries copper but in lesser amounts.

Both the Upper and Lower Tunnels were driven for gold. As in the case of the shafts, copper was of no consideration because of the difficulties of transportation, distance to smelters, and the low price of copper at the time these shafts and tunnels were being worked.

Cuts.

Along the access road leading from the west side of Grays Gulch to the mineralized areas in the Gulch and near the southern end of Claim #2 is an extensive cut across the width of the surface outcrop of the vein found in the Lower Tunnel. A short distance to the east near the line between Claims #2 and #13 is another cut parallel to the strike of the mineralized vein and over 300 feet in length. The cross-cut of the outcrop is some 200 feet above the Lower Tunnel; the other cut

is at a somewhat lesser height above the tunnel.

Both cuts carry copper mineralization at the surface along fractures, joints and to a lesser extent within the host rock. Essentially all mineralization is in the form of the copper carbonates. The vein is nearly vertical but dips slightly to the east. The mineralization is of lower grade than that found in the Lower Tunnel because of surface leaching of the ore minerals although locally high-grade pockets of mineralization may be found along the trace of the vein. The mineralized zone is silicified or in more siliceous rock than the surrounding country rock. As a result, the vein can be traced for a considerable distance to the northeast; to the southwest it is covered but probably extends to the mineralized bodies in the southern portion of the claim area which are exposed on the outcrop and whose presence is confirmed by the geochemical and geophysical work.

Above the Upper Tunnel on Claim #3 an extensive cut has been made across the mineralized vein. The rock has been highly fractured and the fracture surfaces are coated with copper carbonates as well as other copper oxides. The carbonate is not as well developed as elsewhere along the vein possibly due to greater leaching and a difference in the host-rock. However, a good copper anomaly is present.

Pits, Minor Cuts and Other Workings.

Throughout the claim area pits, minor cuts and other minor workings are found. Many of these are assessment work.

ASSAYS AND SHIPMENTS

Attached are assay sheets covering analyses of rock from claims along the western side of Grays Gulch. Copper ran from 2.60 to 32.30 percent, silver ran from 0.7 to 9.8 ounces per ton of rock, and gold ran from 0.01 to 0.30 ounces per ton of rock.

A composite sample reportedly taken from the cut along the access road on Claim #2 and over a width of 30 to 50 feet showed 1.9 percent copper.

In April, 1968, a 27,340 pound car load of ore from the Black Diamond claims on the west side of Grays Gulch was sent to Inspiration Consolidated Copper Company smelter. Most of this ore came from the cut on the access road on Claim #2 and pockets of copper bearing rock along that mineralized vein. At the time of the shipment there was only the road cut on Claim #2 and it was little more than the cut necessary for the road. Its present enlargement to a considerable extent is due to quarrying the copper carbonate bearing rock as an ornamental building stone. Some rock was added to the shipment from rock found on the dump of the Upper Tunnel. The shipment may be considered hand sorted. The settlement sheet showed 5.55 percent copper, 1.54 ounces of silver and 0.60 ounces of gold per ton.

In the assays and shipments, the lead and zinc content of the samples and ore were not considered. The geochemical analyses confirm their low content in the claim area.

MINING AND PROCESSING

Although well developed exposures of copper bearing rock are found at the surface, because of the steepness of the dip of the vein and its relatively narrow width, surface mining techniques will be limited and before long mining will have to be by underground methods.

If grade of rock is rich enough, it can be shipped directly to the smelter. If it is not high enough, the copper contained in the rock will have to be concentrated. Since the copper ore at the surface occurs in the form of oxides, concentration of it will be by means of leaching the copper from the ore. Since the enclosing rock is not high in lime, leaching will probably be by sulfuric acid. The copper will be removed from the sulfate solution by passing it over scrap iron or scrap aluminum to produce "cement copper" which can then be shipped to a smelter for further refining or it may be shipped directly to a consumer of cement copper such as some of the brass manufacturing companies.

As mining proceeds to depth, the content of copper sulfides will increase as the primary and/or secondary copper mineralization is reached and the zone of oxidation is left behind. These sulfides will be concentrated by means of flotation.

If assays indicate that gold and/or silver are present in high enough quantities to be worth extracting, provisions for taking them out can be made, probably by flotation.

RESERVES

The classification of ore reserves into Proven, Indicated and Inferred is based upon the degree of certainty that the tonnage estimate of the ore is present underlying the property. Proven Ore (Measured Ore, Blocked-Out Ore) is determined from exposures in outcrops, cuts, pits, shafts, mine workings, drill holes and otherwise where measurements are so closely spaced that the computed tonnage will have a high degree of accuracy. Indicated Ore (Probable Ore) is computed from observable data which are projected for a reasonable distance on the basis of geological evidence and the tonnage computed is reasonably assured but not absolutely certain. Inferred Ore (Possible Ore) is computed largely on broad knowledge of the geological environment and the character of the mineralization. Few measurements are available. The computed tonnage is a reasonable estimate rather than a quantitative amount.

For the purpose of this report the tonnage of Proven and Indicated Ore will be combined. Tonnage of these two will be at least 350,000 and possibly 500,000 tons. Depending upon the estimated continuity of the various mineralized bodies as shown by geological, geophysical and geochemical work and knowledge of the general character of the mineralization and geology of the area, the Inferred tonnage of ore may range from an additional 500,000 to possibly as

great as several million tons. The grade of this ore should be around one percent copper although there will be areas which may carry better than five percent copper; on the other hand there will also be leaner areas than the one percent average.

It is certain that in addition to the Proven and Indicated copper ore tonnage, a large Inferred Ore tonnage is probably available from the claims since the regularity and persistence of the veins suggest a considerable continuity of the mineralized vein system.

In the above tonnage estimates no depth projection more than 100 feet below the lowest exposed mineralized point has been used for the Indicated Ore. The tonnage of the Indicated and Inferred Ore which can be recovered will be largely controlled by mining methods and costs. An increase of metal values with depth may off-set these mining costs to some extent.

Drilling is essential to further evaluate the claim area and to transfer Inferred Ore to the Indicated Ore catagory. Additional geological and geochemical work coupled with coverage of the balance of the claim area by deep geophysical (I.P.) exploration will further delimit the extent of the mineralized bodies and their relationships. Assays will be necessary to determine mineral values and grades in the various mineralized bodies as they are explored and defined.

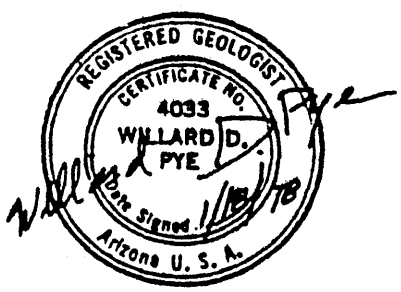
CONCLUSIONS

The Black Diamond Claims cover a well mineralized area. The main metals present are copper, silver and gold and the grade is high enough to be of ore quality. Lead and zinc are minimal at the surface but could increase at depth. At least 350,000 and possible 500,000 tons of Proven and Indicated Ore are present underlying the claims along the west side of Grays Gulch. In addition, there are possibly several millions of tons of Inferred Ore underlying the claims as indicated by geological, geophysical and geochemical exploration to date.

Concentration of the surficial copper oxides will be by leaching techniques. When the primary and enrichment sulfide zones are reached below the oxides, concentration of the metal values will be by flotation.

Further geological, geophysical and geochemical exploration of the claims is necessary, together with assays, in order to determine the extent, continuity and grade of the mineralized bodies. Finally, core drilling should be undertaken to verify the other exploration findings and to determine continuity with depth and grade and character of mineralization at depth.

Willard D. Pye



Willard D. Pye
Consulting Geologist
Arizona Board of Technical
Registration #4033

BLACK DIAMOND MINE
"Estimated MINIMUM"
TONNAGE

STRIKE OF ORE BODY INDICATES AT LEAST 1500 FEET LENGTH
" " " 30 FEET WIDTH
" " " 500 FEET DEPTH

1500 FT. X 30 FT. X 500 FT. = 22,500,000 Cu. Ft. ÷ 12 Cubic Feet per TON = 1,875,000 TONS ORE.

COPPER	.01 %, = 20lbs.	per TON X 1,875,000 TON =	37,500,000 lbs. X $ .68 LB. =	$ 25,500,000.00
GOLD	.05 OZ	per TON X 1,875,000 TON =	93,750 OZ. X $185.00 OZ. =	$ 17,343,750.00
SILVER	.50 OZ	per TON X 1,875,000 TON =	937,500 OZ. X $ 5.30 OZ. =	$ 4,968,750.00
(BASED ON BLOCKED PROVEN AND INDICATED ORE.....				$ 47,812,500.00)

*WITH 10 OR MORE TIMES THIS AMOUNT ON INFERRED ORE TOGETHER WITH OTHER BY PRODUCTS NOT INCLUDED ABOVE

PRODUCTION

500 TON DAILY X 5 DAYS WEEKLY X 50 WEEKS YEARLY = 125,000 TON YEARLY X $25.50 PER TON = $ 3,187,500.00 YEARLY GROSS

1,875,000 TON ORE ÷ 125,000 TON PRODUCTION YEARLY = 15 YEARS RESERVES PLUS

Shop No. 1995-R
File No. 1334-R-E

VALUES
Latest Quotation

1 oz. Gold.....
1 oz. Silver.....
1 lb. Copper.....
1 lb. Lead.....
1 lb. Zinc.....

THIS CERTIFIES
Samples submitted for assay contain as follows:

Date 9-AUG-1966

Arizona Assay Office

815 NORTH FIRST STREET
Phone: 253-4001

Tunnel at N. end of property? Type

Phoenix, Arizona 85001
P. O. BOX 1148

Short Ton ..... 2000 Lbs.
Short Ton Unit ..... 20 Lbs.
Long Ton ..... 2240 Lbs.
Long Ton Unit ..... 22.4 Lbs.

MARKS	SILVER PER TON Ozs.	SILVER PER TON Tenths	VALUE PER TON	GOLD PER TON Ozs.	GOLD PER TON 100ths	VALUE PER TON	TOTAL VALUE PER TON of Gold & Silver	PERCENTAGE COPPER	REMARKS
DIAMOND # 1	9	.9	$12.25		.04	$1.40		32.30	Top Hole C-3 Cut above T-3
DIAMOND # 3		.7	9.87		.30	$10.50		2.60	Tunnel T-3

#1: Cut on Claim #3 above Upper Tunnel. Collected from old cut. A new has recently obliterated the old cut.

3: Upper Tunnel, Claim #3.
Sampled by Mr. Smith(?)

Charges $ 11.00

Assayer [signature]

REGISTERED ASSAYER
CERTIFICATE
JACK STONE
No. 5479
U.S.A.

ANDY CHUKA, PRINT

Shop No. 2231
File No. 1533 HGH

VALUES
Latest Quotation

1 oz. Gold
1 oz. Silver
1 lb. Copper
1 lb. Lead
1 lb. Zinc

THIS CERTIFIES
Samples submitted for assay contain as follows:

Date 2 DEC 1966

Arizona Assay Office

815 NORTH FIRST STREET
Phone 253-4001

Phoenix, Arizona 85001
P. O. BOX 1148

Short Ton .... 2000 Lbs.
Short Ton Unit .... 20 Lbs.
Long Ton .... 2240 Lbs.
Long Ton Unit .... 22.4 Lbs.

BLACK DIAMOND

MARKS	SILVER PER TON Ozs.	SILVER PER TON Tenths	VALUE PER TON	GOLD PER TON Ozs.	GOLD PER TON 100ths	VALUE PER TON	TOTAL VALUE PER TON of Gold & Silver	PERCENTAGE COPPER				REMARKS
Black D. #1 #5	4.0		$5.20	.18	5	6.50		8.40				Gray Hole
[illegible]												[illegible]
[illegible]												[illegible]

— S-6 Dump

Sample from Dump of shaft on Claim #6. Sampled by Mr. Smith.

Other samples from other prospects, therefore, removed by Mr. Smith.

REGISTERED ASSAYER
CERTIFICATE EXPIRES
JACK E. A. STONE
31

Charges $ 12.00

Assayer [signature]
JACK STONE Reg. No. 5479

ANDY CHUKA, PRINT

FORM 12 A K. P. S.

INSPIRATION CONSOLIDATED COPPER COMPANY

SMELTING DEPARTMENT

ASSAY CERTIFICATE

Inspiration, Arizona

Name Black Diamond Mining Co

MINE

Class _____ Lot _____ Date March 14 1967

Smelter Lot	Per Ton of 2000 Lbs. Oz. Silver	Per Ton of 2000 Lbs. Oz. Gold	Per Cent Copper	Per Cent Insoluble	Per Cent SiO_2	Per Cent Al_2O_3	Per Cent Fe	Per Cent CaO	Per Cent S	Per Cent
	6.54	0.020	20.37		56.5	5.8	3.7	0.8	5.0	

Chief Chemist

Assay of composite sample, Mainly from C-2A and some from broken rock from T-3. Composite of material to be shipped.

Assay of composite sample, mainly from cut on Claim #2 but some from broken rock from Upper Tunnel. Composite of material to be shipped to smelter. Sample collected and prepared by Mr. Smith et al.

Shop No. 2425
File No. 1954 S M

Date 27 APRIL 1967

VALUES
Latest Quotation
1 oz. Gold.....
1 oz. Silver.....
1 lb. Copper.....
1 lb. Lead.....
1 lb. Zinc.....

THIS CERTIFIES
Samples submitted for assay contain as follows:

Arizona Assay Office

815 NORTH FIRST STREET
Phone: 253-4001

Phoenix, Arizona 85001
P. O. BOX 1148

MR. RICHARD SMITH
720 E. ROBERTS ROAD
PHOENIX ARIZONA

Short Ton ..... 2000 Lbs.
Short Ton Unit ..... 20 Lbs.
Long Ton ..... 2240 Lbs.
Long Ton Unit ..... 22.4 Lbs.

MARKS	SILVER PER TON Ozs.	SILVER PER TON Tenths	VALUE PER TON	GOLD PER TON Ozs.	GOLD PER TON 100ths	VALUE PER TON	TOTAL VALUE PER TON of Gold & Silver	PERCENTAGE COPPER	REMARKS
~~DIAMOND # 2~~	.8		$1.00	.01		$ .36		5.00	From claim 13; Pit SE. of S-13B
~~DIAMOND # 3~~	2.2		$2.75	.06		$ 2.10		5.21	Broken rock from inside T-3
~~DIAMOND # 5~~	3.2		$4.00	.06		$ 2.10		13.72	S-6, Grays Hole Dump

#2: From Claim #13; pit southeast of easter shaft in south part of calim.
#3: Broken rock from inside "Upper Tunnel" on Claim #3.
#5: Dump at shaft on Claim #6.

Samples, Collected by Mr. Richard Smith.

THE CERTIFIED ASSAYER
OFFICIAL EXPIRES
Jan 31, 1967
PHOENIX, U.S.A.
JACK STONE Reg. No. 5479

Charges $ 16.50 PAID

Assayer .....

ANDY CHUKA, PRINT

m 13

P. [illegible] ON GOLD VALUE

pockets along vein N.E. of C-2A; some broken rock from T-3.

INSPIRATION CONSOLIDAT[ED] COPPER CO.

SMELTING DEPARTMENT

[Ou]r Lot 9005 Shipper Lot 1 DATE May 13 1968

[Acco]unt of Black Diamond Mining Company Date Received April 30 1968

Street 113 E. Rivera Drive City Tempe, Arizona

CAR Initial	CAR Number	WET WEIGHT	Moisture %	DRY WEIGHT
CC	921	27,340	7.06	25,410

N. Y. QUOTATIONS

Copper (per lb.) 42.213 ¢

Less 5.251 = 36.962 ¢

Silver (per oz.) 231.400 ¢

Gold (per oz.) $32.20

ASSAY and ANALYSES	Copper %	Silver Oz.	Gold Oz.	Silica %	Alumina %	Iron %	Lime %	Sulpher %
	5.55	1.54	.060	53.0	1.8	13.4	2.5	—

PAYMENTS PER TON	DEBITS	CREDITS	Valuation For Freight
Copper 111.00 Lbs. per ton, less 10 % 99.90 Lbs. at 36.962 ¢ per Lb.	$	$ 36.93	$
[Silv]er 1.54 Ozs. per ton, less 5 % 1.46 Ozs. at 231.400 ¢ per Oz.		3.38	
Gold .060 Ozs. per ton, less — % .060 Ozs. at $32.20 per Oz.		1.93	
Excess Metal Values $42.24 − 15.00 = $27.24 First $25.00 @ 10% 2.24 @ 5%	2.50 .11		
Treatment Charge	9.50		
TOTALS	12.11	42.24	
Net Value per ton		30.13	

Net Value for Freight Charges, per wet ton $

Royalty to be paid to 12.705 Dry tons at $ 30.13 $ 382.80

Sampling tons at

Rock mainly from cut along road on Claim #2 and from pockets and exposures to northeast of cut; some broken rock from "Upper Tunnel" on Claim #3. Shipment by R. Smith et al.

Freight

Trucking

AMOUNT DUE SHIPPER 382.80

Less % Royalty

NET AMOUNT DUE SHIPPER $ 382.80

Correct [signature]

Approved R. F. Masion [signature]

VALLEY ASSAY OFFICE

AND ORE TESTING LABORATORY

MEMORANDUM OF ASSAY

Made for Richard D. Smith — Tempe, Arizona, Sept. 10, 1973

SAMPLE NO.	PER TON OF 2000 POUNDS AVOIRDUPOIS — GOLD, Platinum				SILVER				COPPER, OR			LEAD OR Platenum, Oz.			ZINC, OR			TOTAL	
	AT	PER OUNCE			AT	PER OUNCE			AT	PER LB.		AT	PER LB.		AT	PER LB.			
	OZS.	100's	$	Cts.	OZS.	100's	$	Cts.	%	$	Cts.	%	$	Cts.	%	$	Cts.	$	Cts.
1	0.	03			0.	60			.30			.03							
2					0.	90			9.7										
3	0.	03			1.	80			0.60										

#1: Upper Tunnel, Claim 3 "Black Ore".
#2: Lower Tunnel, Claim 13, Out East Side.
#3: Upper Tunnel, Claim 3, On Top of Cut; ? East.
Samples collected by Mr. Smith

REMARKS:

NO.

CHARGE $ 41.00 Pd.

BY T. Lee Hoyle
Registered Assayer.

VALLEY ASSAY OFFICE

AND ORE TESTING LABORATORY

MEMORANDUM OF ASSAY

Made for Richard D. Smith — Tempe, Arizona Sept. 10, 1973

SAMPLE NO.	PER TON OF 2000 POUNDS AVOIRDUPOIS								COPPER, OR			LEAD OR Platenum, Oz			ZINC, OR			TOTAL	
	GOLD, PLATINUM				SILVER														
	AT	PER OUNCE			AT	PER OUNCE			AT	PER LB.		AT	PER LB.		AT	PER LB.			
	OZS.	100's	$	Cts.	OZS.	100's	$	Cts.	%	$	Cts.	%	$	Cts.	%	$	Cts.	$	Cts.
1	0.	03			0.	60			.30			.03							
2					0.	90			9.7										
3	0.	03			1.	80			0.60										

#1: Upper Tunnel, Claim 3 "Black Ore".
#2: Lower Tunnel, Claim 13, Cut East Side.
#3: Upper Tunnel, Claim 3, On Top of Cut, ? East.
Samples collected by Mr. Smith

REMARKS:

NO.

CHARGE $ 41.00 Pd.

BY T. Lee Hoyt
Registered Assayer.

Arizona Testing Laboratories

815 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Mr. R. D. Smith
3101 West Evans Drive
Phoenix, Arizona 85023

Date May 27, 1977

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4355	Black Diamond	0.01	0.70	1.15%			

Open Face - Claim #1
Hanging Wall
Fresh Wall Rock.
N. side of Road -
W. side of vein
Vein = 30' wide ±

Open cut, Claim #1, Hanging Wall. Fresh wall-rock north side of road, west side of vein; vein is 30 ± feet wide.

Samples by Mr. Smith.

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean

Claude E. McLean, Jr.