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James Doyle Sell Mining Collection

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AMERICAN SMELTING AND REFINING COMPANY
Tucson Arizona

J. H. C.
FEB 28 1967
J. R. W.
MAR 1 1967

February 24, 1967

W.E.S.

TO: J. H. COURTRIGHT MAR 20 1967
FROM: B. J. DEVERE

MR. ~~WES~~ ~~EBU~~ ~~FAS~~ ~~BAS~~
READ AND RETURN _____
PREPARE ANSWERS _____ HANDLE _____
FILE ☒ INITIALS _____

PARADISE PROSPECT
CHIRICAHUA MOUNTAINS
COCHISE COUNTY, ARIZONA

Introduction

Mr. Juan Munoz, a prospector, brought to the company's attention a copper prospect in the Chiricahua Mountains, in Cochise County, Arizona. The preliminary examination, in November 1966, indicated the property to be one of interest. Before a more detailed examination could be completed Superior Oil Company optioned the property from Mr. Munoz.

Summary and Recommendations

Spotty copper mineralization in the form of malachite, melaconite and chalcopyrite is evident in an area approximately 3500 feet long by 600 feet wide, narrowing at both ends. The copper mineralization is found in a series of altered Paleozoic sediments along the contact of a pyritized quartz monzonite; specifically, these sediments are altered to tactites, hornfels, and magnetites. Large zones of gossan occur at the outcrop.

As the property seems to hold some potential, a close watch of Superior Oil's activities in the area may prove beneficial.

General

The Paradise Prospect is located in the Chiricahua Mountains, California Mining District, Cochise County, Arizona. The exact location is shown on the attached index map A.

The topography is quite steep and vegetation quite dense throughout the area of interest. Outcrops are poor and roads to the property non-existent--all of which makes the evaluation of the area more time-consuming than normal.

Considerable development work had been done on the property prior to 1910. Two deep shafts were put down as part of the development and exploration. These are the Planet Shaft (400 feet deep) and the Mars Shaft (250 feet deep). Additional adits and workings have partially explored the mineralized area to the southwest of the Mars Shaft. The locations of the shafts and other workings are shown on the attached geologic sketch map B.

In 1918, Mr. G. G. Anderson examined the property for the company. At the time of his visit, all work had ceased. Mr. Anderson felt the area to be one of widespread mineralization but too low grade to be of interest at that time.

Samples taken from the Mars Shaft and assayed by Anderson gave the following results:

50	feet	below	the	surface,	Mars	Shaft	0.84	%	Cu.
60	"	"	"	"	"	"	1.56	"	"
130	"	"	"	"	"	"	1.20	"	"
140	"	"	"	"	"	"	1.08	"	"
160	"	"	"	"	"	"	0.60	"	"
170	"	"	"	"	"	"	1.44	"	"
200	"	"	"	"	"	"	0.84	"	"
250	"	"	"	"	"	"	0.24	"	"

The Planet Shaft was caved and could not be visited by Anderson, but examination of the dump indicated that the shaft never did hit any mineralization.

None of the other workings were mapped or sampled by Anderson.

In my preliminary examination 7 dump samples were taken from workings throughout the mineralized area. These sample results are shown on the attached geologic sketch map B; they averaged 1.60% Cu.

The Lower Mars adit was mapped and sampled. The attached geologic underground map C and accompanying sample map D shows the general grade of the material, .35% Cu. average with some lead and zinc, still within the leached zone of the altered and mineralized sediments. There is no area open for inspection at the present time which shows the character and/or grade of the sulfides in altered sediments.

The area has been mapped in a reconnaissance fashion on 1" = 2000' photographic base (see attachment B).

The quartz monzonite porphyry stock contains disseminated pyrite which I believed to be hydrothermal metallization, but there does not seem to be any pervasive hydrothermal alteration. The weak alteration that is present is probably super-

gene, due to natural weathering.

There are several undetermined features: (1) There is the possibility that the mineralized tactite and hornfels represent only erosional remnants above the intrusive stock. The stock appears to dip under the sediments and thus could limit the mineralization to a thin scab of tactite, hornfels and gossan. (2) But in the same light there could be extensive mineralization in favorable limestone horizons along the contact of the intrusive.

One of the most important questions is whether the weakly mineralized tactite represents one bed in the Paleozoic sequence and the strongly mineralized hornfels another. The large gossan zones could represent a replacement of a favorable bed or could be caused by structural weaknesses.

There was sufficient pyrite to neutralized the calcium carbonate of the hornfels secondarily enrich a zone in the pyrite rich intrusive beneath the sediments.

All these theories are very much in question, and considerable work will have to be done before any or all of them could be proven true or false.

Superior Oil, who now holds an option on the ground, should be testing the area in the near future. Any work they do in the area (road building, etc.), would be a very great help in evaluation of the property at some future date. Aerial photographs of the region at a 1" = 2000' scale and 1" = 400' blow ups of the area of interest are enclosed in the files with this report.

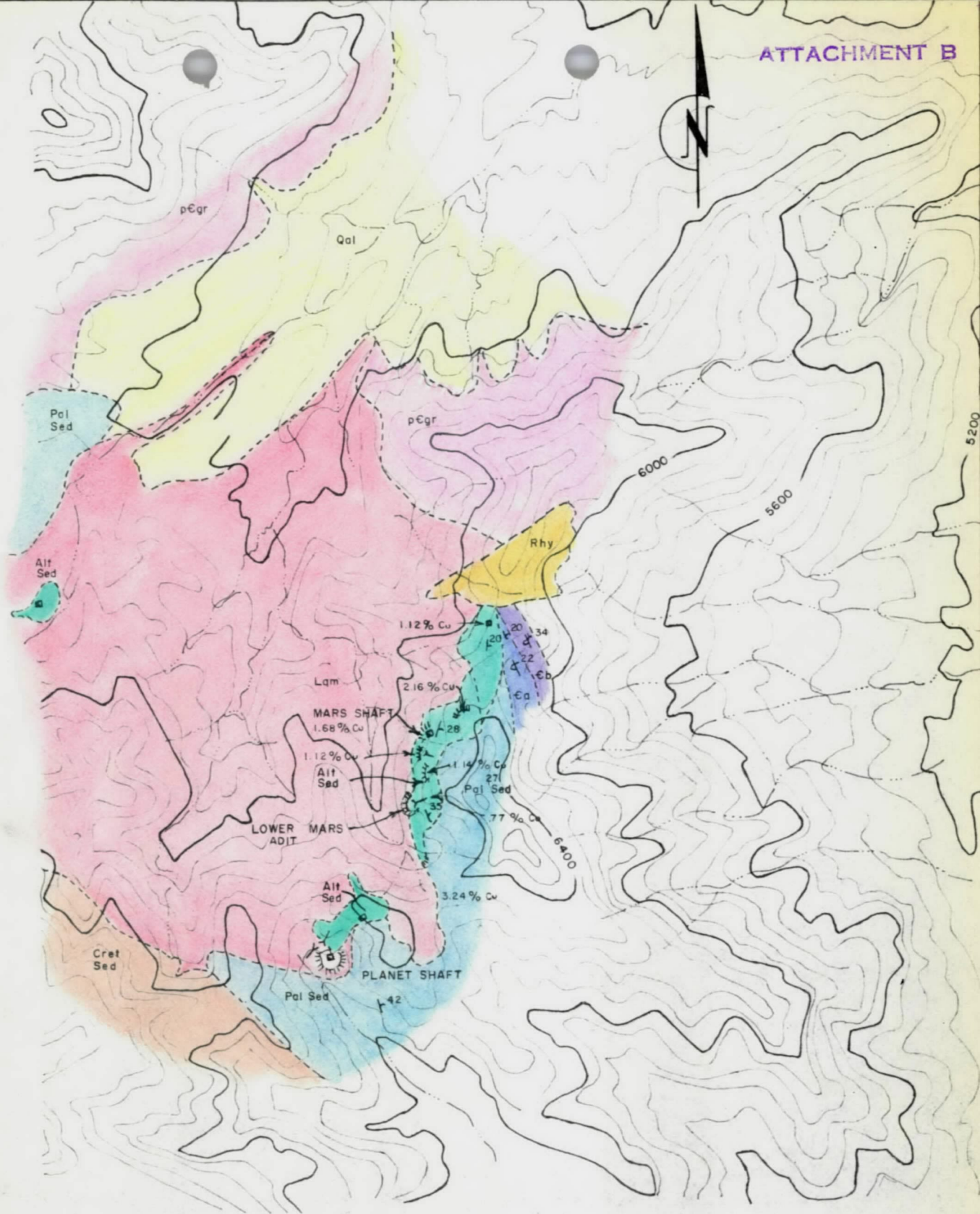
If the opportunity presents itself Asarco should take another close look at the Paradise Prospect area.

The general region north of the Paradise Prospect area should be examined in a reconnaissance fashion as time permits. The northeast slope of the Central Chiricahua Mountains is a region of extensive pre-laramide rocks and some mineral production. This general region has not received the intense exploration pressure as has most of southern Arizona largely due to the remoteness and lack of roads into the region.

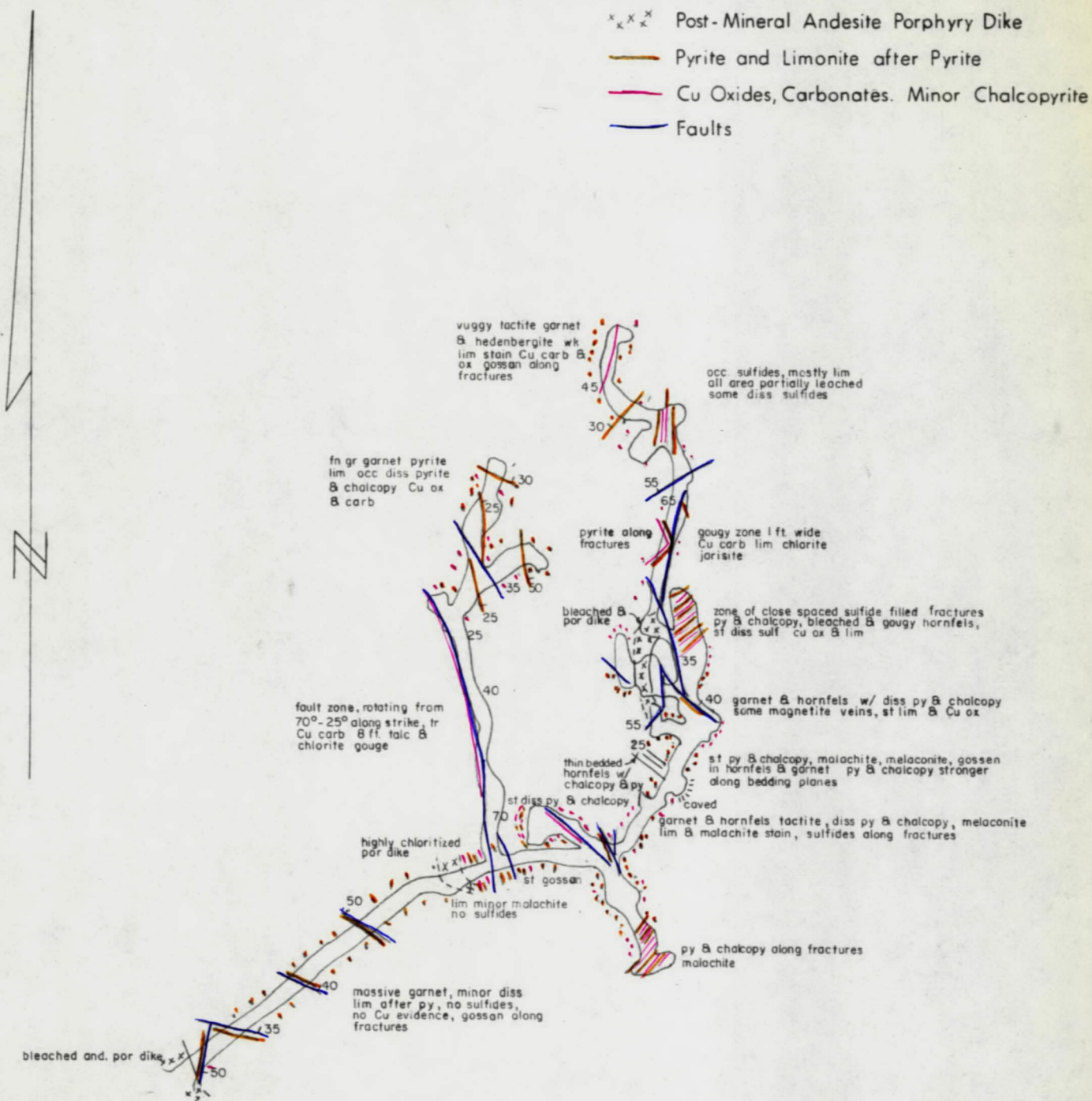
Burton Devere, Jr.
BURTON DEVERE, JR. *by mg*

BD/mg
Attachements





Geologic Sketch Map
PARADISE PROSPECT
 CHIRICAHUA MT., COCHISE COUNTY, ARIZONA
 SCALE 1" = 2000' Approx.

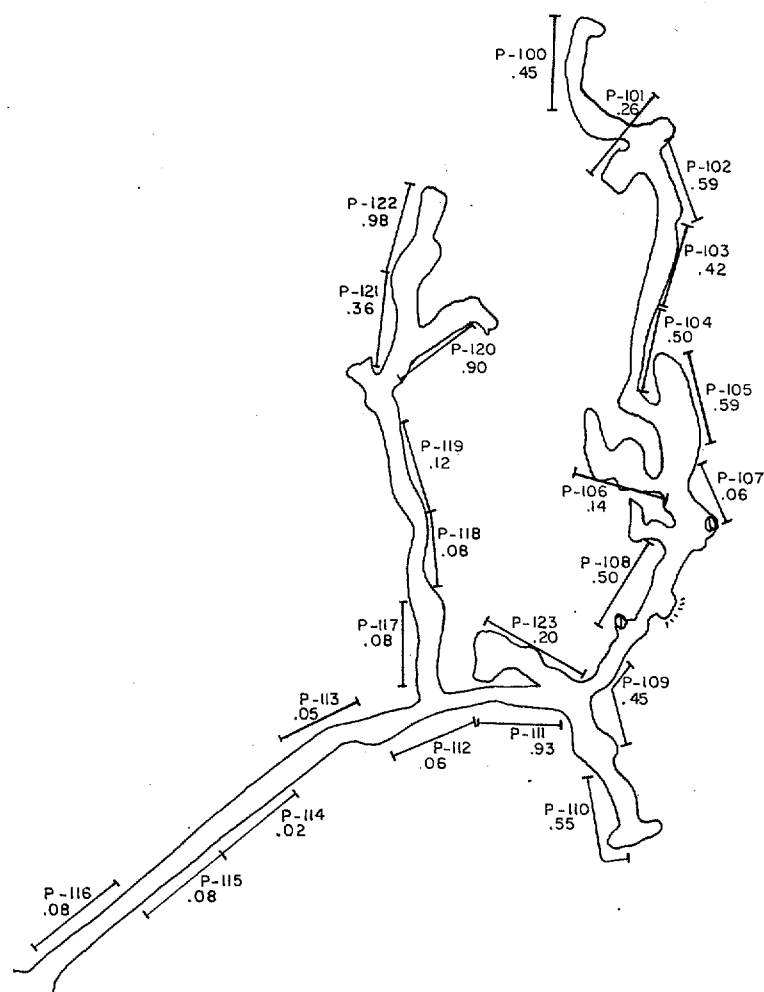


PARADISE PROSPECT
MARS SHAFT LOWER ADIT
Brunton and Tape Survey

1" = 50'

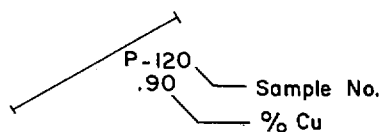
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BJD



LEGEND

COMPOSITES		% Pb	% Zn
	P-100 - 104	.27	1.28
	105 - 109	.09	2.29
	110 - 114	.03	0.36
	115 - 119	.02	0.54
	120 - 123	.01	0.89



PARADISE PROSPECT
SAMPLE MAP

MARS SHAFT LOWER ADIT
Brunton and Tape Survey

1" = 50'

11/29/66

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