4170 0009

(13)
Item 8

Report of Investigation

APACHE MERCURY CLAIMS

Sand Springs Mining District

Churchill County, Nevada

by

Joseph V. Tingley

Reno, Nevada

July 3, 1970

TABLE OF CONTENTS

ILLUSTRATIONS

SUMMARY

The Apache Mining Company, of Reno, Nevada, has succeeded in discovering mercury mineralization in an area where mercury has not previously been known. The discovery is in the Sand Springs mountains about 33 miles southeast of Fallon, Nevada.

Cinnabar has been found to occur as veinlets and coatings on bedding planes and fracture surfaces in thin-bedded carbonaceous limestones. Mineralization seems to be confined to silicified rocks which occur along a steep, range-front fault and to a silicified zone on the eastern limb of a tight, northwest-plunging syncline. Surface showings are strong, and there is the possibility of the two mineralized structures intersecting at depth.

It is felt that there is potential on this property for the development of a good tonnage of mineable ore, and a detailed exploration program is recommended.

A program to explore the discovery outcrop would cost an

estimated $6372.00. Additional work needed to evaluate the eastern portion of the property would cost an estimated $25,000.00. These stated costs are for contract trenching, drilling, and sample analysis only. Supervision and labor costs would have to be added.

INTRODUCTION

At the request of Mr. Fred Collins, Apache Mining Company, a field examination of the Apache mercury prospect was made on June 20, 1970.

LOCATION

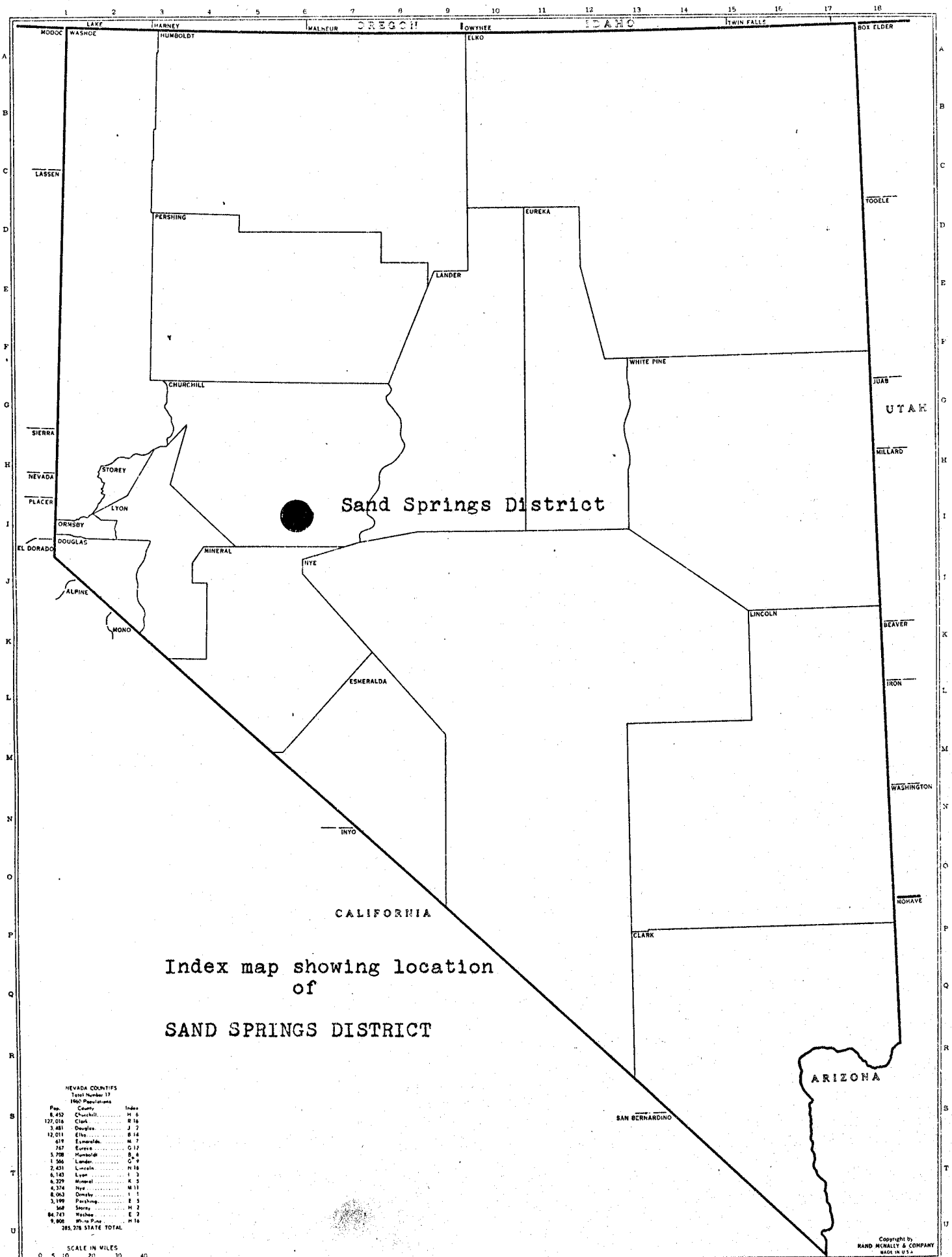
The Apache mercury prospect is located in the western portion of the Sand Springs mountain range about 33 miles southeast of the town of Fallon. The claims cover the western slope of a group of hills which protrude to the west from the main Sand Springs range, and are in the southern half of Township 15 North, Range 31½ East, Churchill County, Nevada.

RAND McNALLY

STATE COUNTY OUTLINE MAP

NEVADA

SIZE 8½ x 11



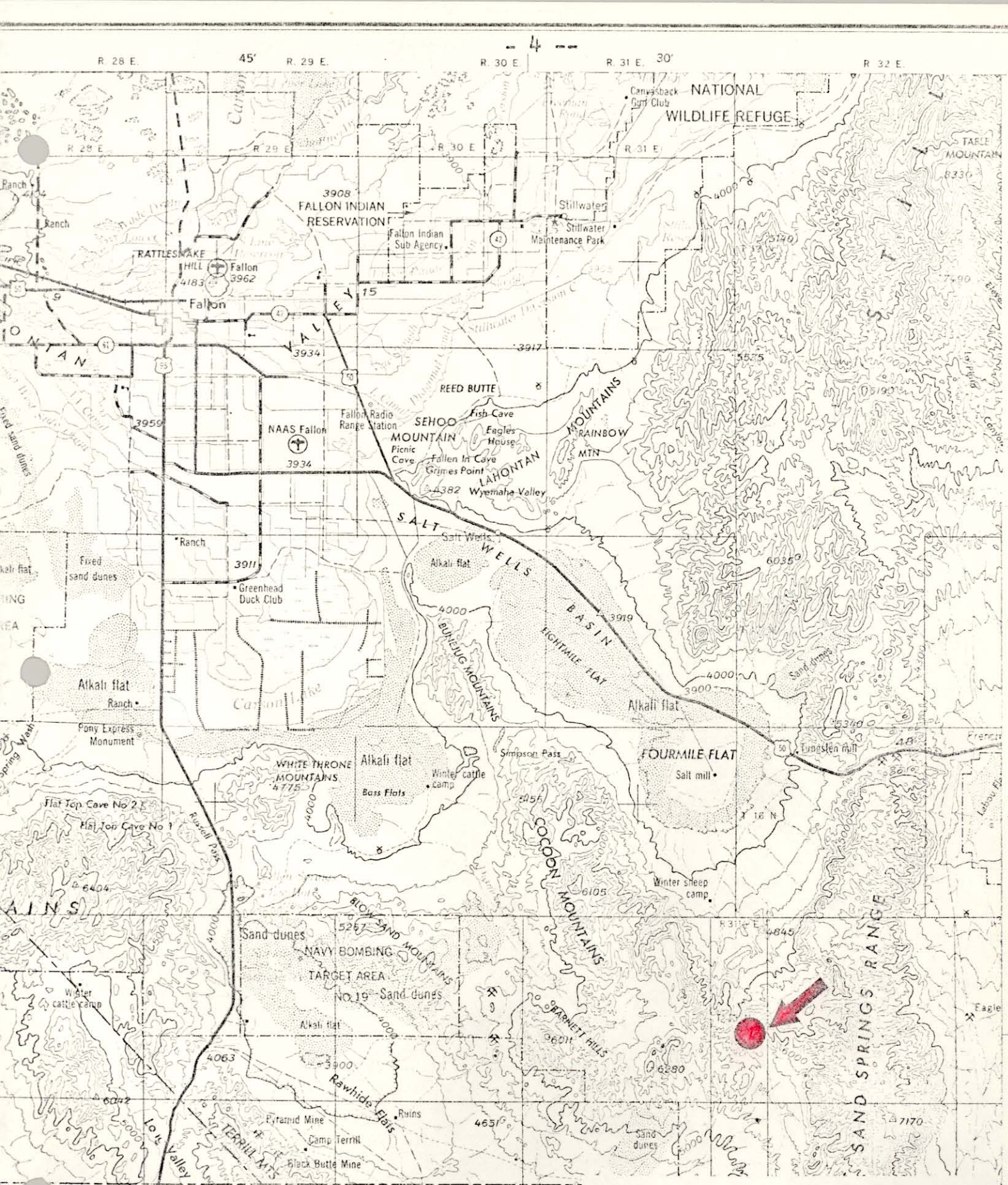
Index map showing location of

SAND SPRINGS DISTRICT

NEVADA COUNTIES
Total Number 17
1960 Populations

Pop.	County	Index
8,452	Churchill	H 6
127,016	Clark	R 16
3,481	Douglas	J 2
12,011	Elko	B 14
619	Esmeralda	M 7
767	Eureka	G 12
5,708	Humboldt	B 6
1,566	Lander	Q 9
2,431	Lincoln	N 16
6,143	Lyon	I 3
6,329	Mineral	K 5
6,374	Nye	M 11
8,063	Ormsby	I 1
3,199	Pershing	E 5
568	Storey	H 2
84,743	Washoe	E 2
9,906	White Pine	H 16
285,278	STATE TOTAL	

SCALE IN MILES
0 5 10 20 30 40



Index map showing location of

APACHE CLAIM GROUP

Scale: 1 inch = 4 miles

The claim area is reached by traveling U.S. Highway 50 east from Fallon to a point where the road passes the western extremity of the Sand Springs mountains. At this point, a fair dirt road turns south along the eastern margin of Fourmile Flat. The midpoint of the claim group is 11 miles south of Highway 50 on this dirt road.

LAND STATUS AND OWNERSHIP

The property is held by right of mining location by the Apache Mining Company, P.O. Box 5508, Reno, Nevada. The company has located ten lode claims covering the area of the discovery outcrop, and is currently validating an additional group of claims. When all planned location work is completed, the group will consist of 60 claims.

HISTORY

There is no record of mercury production from the Sand Springs district. Gold has been mined from the Summit King (Dan Tucker) mine at the north end of the district, and there is mention of tungsten occuring on the granite-

sediment contact in the central part of the range. The old Rawhide gold district is about 11 miles to the south.

Considering the accessibility of this area and its proximity to the famous Rawhide camp, it is surprising that the Apache cinnabar occurrence has remained undiscovered until the present day. The main mineralized outcrop is cut by a major drainage, and dry-stream panning should have led to the discovery of the area long ago.

The group of people who have formed the Apache Mining Company discovered this new mercury district while conducting a prospecting program along the western side of the Sand Springs range. The discovery was made in the late spring of 1970.

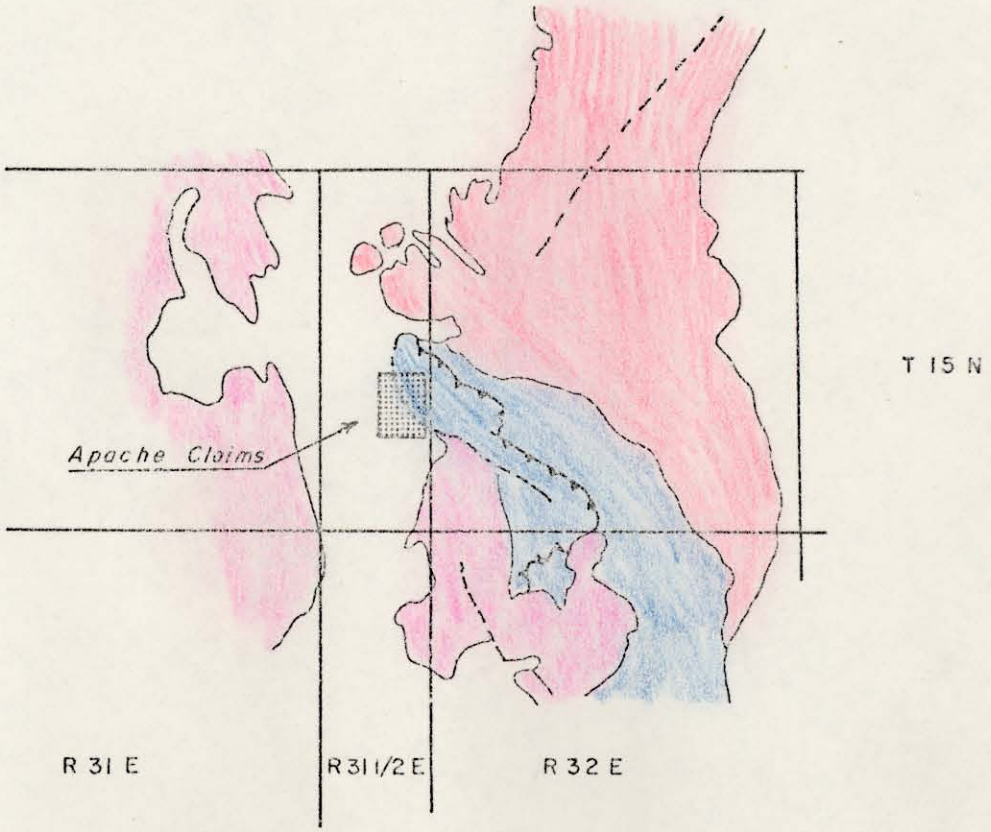
GEOLOGY

The Sand Springs range is composed of Jurassic metamorphic rocks which have been intruded by a large granitic pluton. Tertiary rocks cap these older rocks on the west side of the range and across the north end.

GEOLOGIC MAP

SAND SPRINGS DISTRICT

Scale: 1 : 200,000



Explanation

Alluvium		Jurassic metasediments	
Tertiary volcanics		Fault	
Granite		Thrust fault	

Geology after Willden & Speed, 1968

In the eastern portion of the Apache claim group, outcrops consist of thin-bedded carbonaceous limestones which have been tightly folded and silicified. In general, these rocks strike to the north, and dip steeply to the east or west.

Willden and Speed, on their 1968 Churchill County geologic map, show a thrust fault contact east of the Apache property boundary. Although this area was not seen during the property examination, it should be investigated for signs of mineralization. A steep normal fault cuts the western part of the range near the center of the claim area. It strikes northwest and separates Jurassic sediments on the east from alluvium and volcanics on the west.

MINERALIZATION

Mercury mineralization was seen in three separate locations within the area examined. The main zone, the discovery outcrop, is a silicified zone about 100 feet long and 10 to 20 feet wide which outcrops alongside an east-west trending dry wash. The outcrop strikes North 30° East and dips steeply to the northwest. Cinnabar and calcite occur as veinlets and coatings along bedding plane and fracture

surfaces in a silicified, carbonaceous limestone. The best mineralization occurs on the south or footwall side of this structure. The silicified outcrop is the eastern limb of a tightly folded syncline which plunges steeply to the northwest. The core of this syncline coincides with the wash, and is covered with gravel. The western limb of the syncline outcrops and contains traces of cinnabar. Samples from the main eastern zone have assayed as high as 147 pounds of mercury per ton. This is, of course, for a very narrow zone on the footwall of the outcrop. During the examination of the property, a 7.5 foot chip sample was taken across the west face of the outcrop. This sample assayed 7.8 pounds mercury per ton. Sample descriptions and results are included in the appendix of this report.

To the west of the main mineralized area, cinnabar has been found along the steep range-front fault. Very little sampling has been done along this structure, but evidence of silicification can be seen for several hundred feet each way along the fault trace.

Approximately 600 feet up the wash to the east of the first

area, cinnabar occurs in a silicified zone along a North 10° West fault structure. Mineralization seems to occur at the point the fault intersects a gentle anticlinal structure which plunges to the west.

Other occurrences of cinnabar are reported by the property owners, but they were not examined during this study.

ORE RESERVES

Not enough development work has been done on the Apache property to allow any estimate of ore tonnage to be made. Mercury mineralization is known to extend for over 100 feet along the strike of the discovery outcrop, but trenching, drilling, and sampling is needed to allow tonnage calculations to be made

CONCLUSIONS AND RECOMMENDATIONS

The Sand Springs mercury occurrence is similiar to occurrences in the Poverty Peak district of Humboldt County and the

Pershing district of Pershing County. Both of these districts are noted for production from high-grade orebodies of moderate size.

Since the Sand Springs discovery is in a completly new area, there is good reason to believe a producing mine will be developed in the district. It is felt that the surface indications on the Apache claims are strong enough to support a detailed exploration program.

The purpose of this program would be two-fold. The discovery outcrop would be explored to determine if there is ore of suitable tonnage and grade to plan a mining operation. At the same time, a detailed sampling program would be conducted over the major portion of the property to outline any other areas of mercury mineralization.

Recommended Program

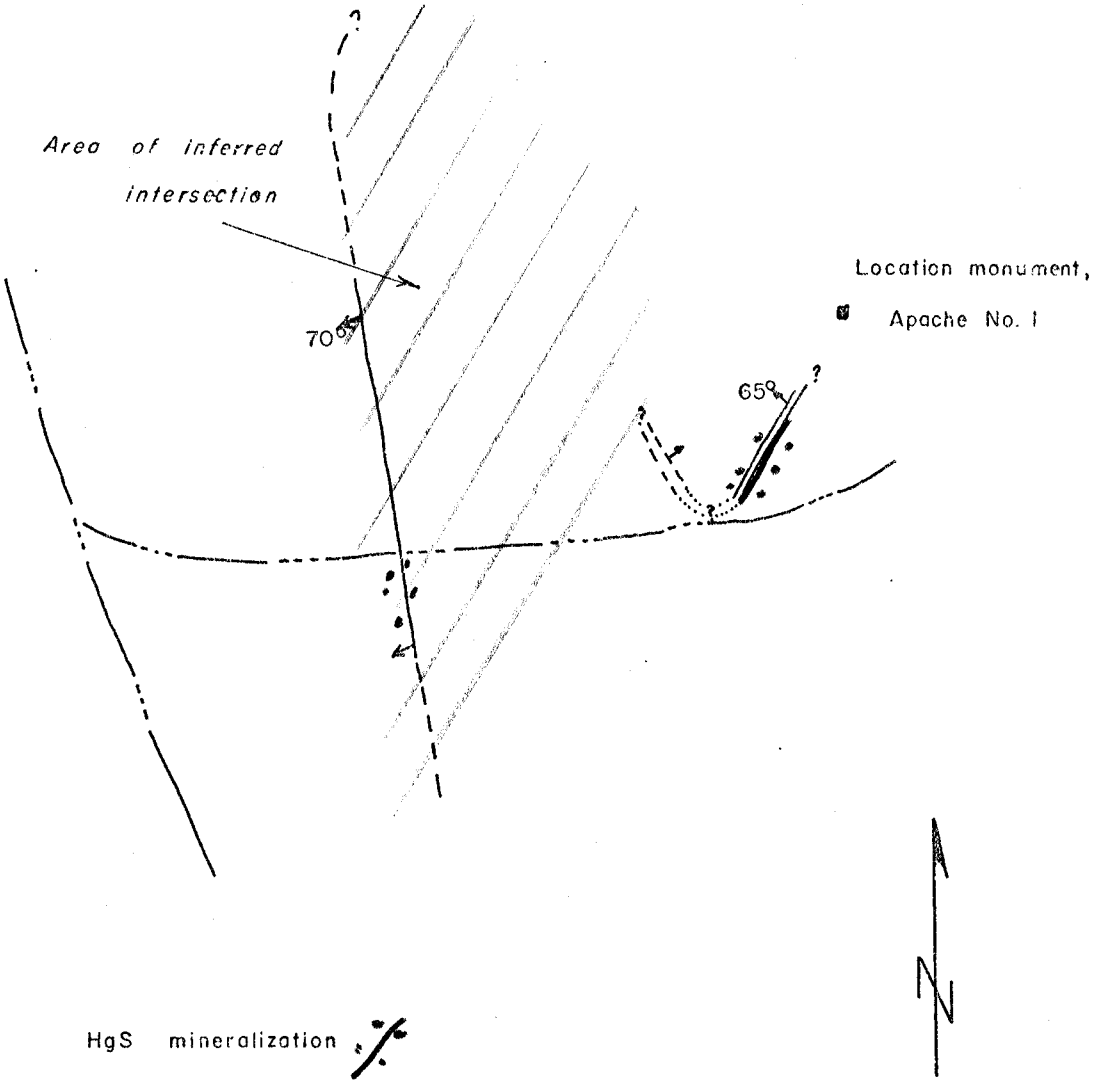
The immediate need on the Apache property is to more completely expose and explore the discovery outcrop. It is felt that a tonnage of mineable ore could be quickly blocked out by trenching along the strike of the outcrop followed by drilling. Trenching is needed to expose the northeastern extension of the zone.

Three drill holes should be positioned to cut the discovery outcrop at depth. Drill sites should be selected immediately northwest of the outcrop. The first hole would be drilled on an angle to cut the mineralized zone 100 feet below its outcrop. The other two holes would be placed to intersect the zone 200 feet below surface (one hole) and to test the zone along its strike (one hole).

There is a good possibility that the steeply plunging, mineralized synclinal structure on Apache #1 could intersect the range-front fault at depth. This could be a very favorable structural condition, and a sizeable orebody could be found in the area of intersection. This possibility should be checked by drilling.

In addition, at least the eastern half of the property should be carefully sampled on a grid to help outline additional mineralized structures.

The sample grid would be established by compass and pace, and would consist of a number of east-west lines laid out on no more than 200 foot spacings. Samples would be taken at 50 foot intervals along each line. Any anomalous areas would



Sketch map

APACHE CLAIM NO. 1

Approximate scale, 1" = 100'

be sampled again on a closer sample spacing. Trenching and drilling would be planned for any areas outlined during the sampling program.

The recommended program therefore consists of:

1. Trenching and drilling the discovery outcrop.
2. Drilling the area of intersection (inferred) of the frontal fault and the discovery structure.
3. Grid sampling the eastern half of the claim area.
4. Trenching and drilling any anomalous areas developed during the sampling program.

Estimated Cost

1. Trenching and drilling discovery outcrop:

   Trenching and drill site preparation, D-8 Cat with hydraulic blade and ripper, estimated three days.

   24 hours at $35.00 per hour ..... $ 840.00

   Mobilization, (from Fallon), 66 miles at $2.00 per mile ..... $ 132.00

   Drilling, Diamond drill, B-X size, three holes, estimated 500 feet of drilling.

1. (cont.)

500 feet at $10.00 per foot $5000.00

Sample assay work, samples from both trenching and drilling,

100 samples at $4.00 per sample ..... $ 400.00

Total $6372.00

2. Drilling intersection area:

Drilling, Diamond drill, N-X size, one hole, estimated 500 feet of drilling.

500 feet at $12.00 per foot $6000.00

Sample assay work,

50 samples at $4.00 per sample .....$ 200.00

Total $6200.00

3. Grid Sampling:

Sample assay work,

Estimated 2400 samples at $2.00 ..... $4800.00

Total $4800.00

4. Trenching and drilling of anomalous areas:

Assuming at least two areas will be outlined for work,

Trenching and drilling, including assay work,

Estimated 1000 feet of N-X drilling,

1000 feet at $12.00 per foot	$12,000.00
Cat work and assay work	$ 2,000.00
Total	$14,000.00

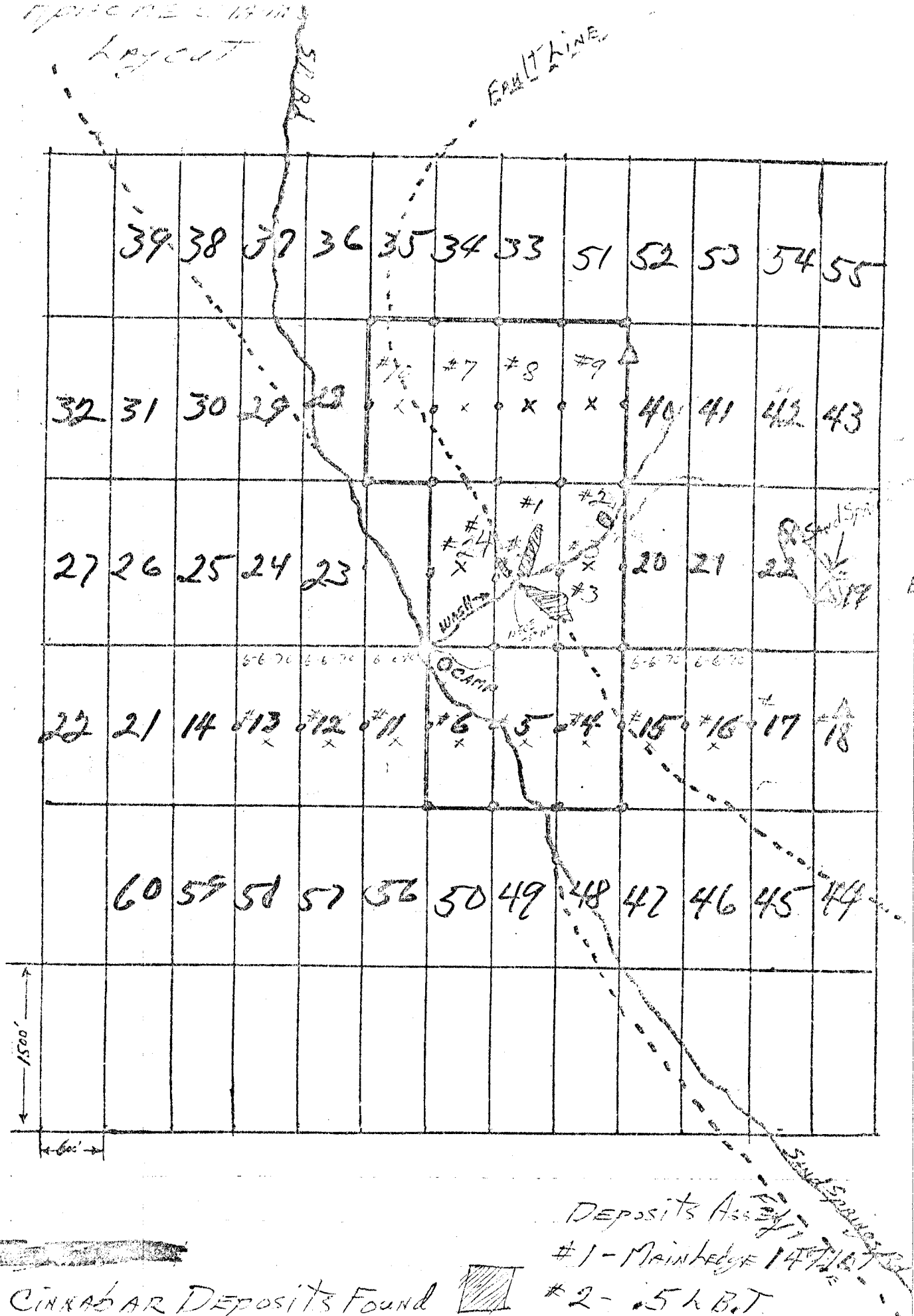
The above figures should be viewed as estimates only. They do not include the cost of supervision for the work, nor do they include the cost of labor involved in collecting samples.

Respectfully submitted,

Joseph V. Tingley, P.E. #2644

Mining Geologist

APPENDIX



Deposits Assay:
#1 - Main Ledge 14% Hg
#2 - .5% Hg
#3 - ?
#4 - 1.5% Hg

CINNABAR Deposits Found

S

Do NOT write on this page. For Laboratory use only.

Report No. 00762 Date: April 10, 1970

Sample Number	SAMPLE DESCRIPTION	Ounces Per Ton	
		Gold	Silver
	Mercury - 147 lbs/Ton	0.02	0.46
	Impure limestone with clear calcite vein and cinnabar.		
	Gold and silver not expected.		

Merrill P. Allen

M. P. Allen
Nevada Mining Analytical Laboratory

JOHN N. BUTLER, P.E.
Metallurgical Engineer
PHONE: Home - 323-3845
Office - 784-6691

May 9, 1970

Report of mercury assays run on cinnabar samples taken on May 6, 1970, by James R. Fyfe and John N. Butler, property staked by Collins, et al, located approximately ten miles from Rawhide, Nevada.

	Hg. lbs./ton
Sample No. 1 — N. E. Portion of Ledge, 30" wide	0.55
Sample No. 2 — To right of Sample No. 1, 4'2"	.30
Sample No. 3 — To right of No. 2, 3'0"	12.13
Sample No. 4 — Talus below Nos. 2 and 3	3.11
Sample No. 5 — Muck pile in drift hole	.85
Sample No. 6 — Across face at claim marker, 11'0"	.50

James R. Fyfe

John N. Butler

M-S and W Co.

SAMPLE ANALYSIS REPORT

SAMPLE NUMBER	Hg ppm	Hg lbs/ton	SAMPLE NUMBER
Collins #1	3882	7.8	
" #2	513	1.0	
" #3	206	.41	

To Joseph Tingley
P.O. Box 3033
Reno Nev 89505

(Copy)

BY L. G. Walters

DATE June 25, 1970

SAMPLE LOG

Sample No.	Location	Length	Description - Remarks	Hg (pounds/ton)				Coll. By
Collins 1		7.5'	Chip sample, measured perpendicular to strike of beds, 2.2' of thin-bedded, partially recryatallized carbonaceous limestone, minor Feox staining on outcrop, some visible HgS and calcite veining, 1.0' of black carbonaceous material along a central fault zone, then 4.3' of black, silicified limestone with HgS and calcite along bedding planes.	7.8				J.V.
Collins 2		6.0'	Sample taken on strike of mineralized zone, approx. 35' east of Sample #1, same general rock type, some visible HgS.	1.0				J.V.
Collins 3		6.0'	Chip sample across silicified zone (same as sampled by #1 and #2, approx. 30' east of #2 on strike) Poor sample due to poor rock exposure.	0.41				J.V.