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FINAL REPORT

(60)  
Item 9

GEOPHYSICAL AND DRILLING EXPLORATION  
GOOD HOPE PROPERTY  
ELKO COUNTY, NEVADA

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Exploration Contract 2303  
Docket No. OME-6854  
(Silver-Gold)

ALEXANDER VON HAFFTEN  
GREAT BASIN EXPLORATION COMPANY  
3898 Washington Street  
San Francisco, California 94118

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## I N T R O D U C T I O N

Geophysical and rotary drilling exploration on the Good Hope property, Elko County, Nevada, was completed in October, 1972 under an exploration contract between the United States Government, Department of Interior (U. S. Geological Survey, Office of Mineral Exploration) and Alexander von Hafften, d/b/a, Great Basin Exploration Company of San Francisco, California. Work done under Exploration Contract 2303, Docket No. OME-6854 (Silver-Gold) was to explore for disseminated silver-gold-bearing ore bodies in Tertiary volcanic rocks by conducting a geophysical survey using the induced polarization (IP) method and by drilling promising anomalies using rotary drilling. Under terms of the contract, the Government loaned Great Basin Exploration Company seventy-five percent of the funds estimated for completing the program scheduled in the contract.

The induced polarization survey was conducted by Heinrichs Geoexploration Company of Tucson, Arizona. Preparation of access roads and drill sites was done by Vega Construction and Trucking Company of Elko, Nevada. Eaklund Drilling Company of Carlin, Nevada, did the rotary drilling, and all assaying of samples from the drill holes was done by Union Assay Office, Inc. of Salt Lake City, Utah. Field supervision, sample preparation, and all geologic work was accomplished by an outside consultant, Dr. Edmond F. Lawrence, Mining Geologist, of Reno, Nevada. Financial control and administration was by Mr. Alexander von Hafften of San Francisco, California.

## OPERATIONAL SUMMARY

Induced polarization (IP) surveys were conducted over the Good Hope property, Elko County, Nevada, by Heinrichs Geoexploration Company of Tucson, Arizona during the interim May 30 to June 10, 1972. Eight lines were run, Lines H, I, J, K, L, M and O on a 300-foot dipole spacing and Line N on a 600-foot spacing. All lines were oriented northwesterly to cross the main geologic trends except Line N which was oriented northeasterly along the zone of interest. The dual frequency IP technique was used with sending frequency pairs of 3.0 with 0.3 hz on some lines and 1.0 with 0.1 hz on others as indicated on the sectional data sheets. A GEOEX MK-7 IP system was used to obtain the data. The array used was the collinear dipole-dipole electrode configuration with "n" intervals ranging from 1 through 6. Copies of the resulting report by Heinrichs Geoexploration Company have been submitted previously to the Office of Mineral Exploration by Great Basin Exploration Company.

In accordance with the letter from Mr. Roscoe M. Smith of the Office of Mineral Exploration, dated July 31, 1972, authorizing Great Basin Exploration Company to proceed with the work in Stage II of the contract, bulldozing and drilling contractors were contacted. Access roads and drill sites were prepared with a Catapillar 46-A (D-8) bulldozer by Vega Construction and Trucking Company of Elko, Nevada. Care was taken to minimize any damage to the surface. Drilling was commenced on August 28, 1972 by Eaklund Drilling Company of Carlin, Nevada. In accordance with the contract and subsequent amendments, nine holes were drilled as follows:

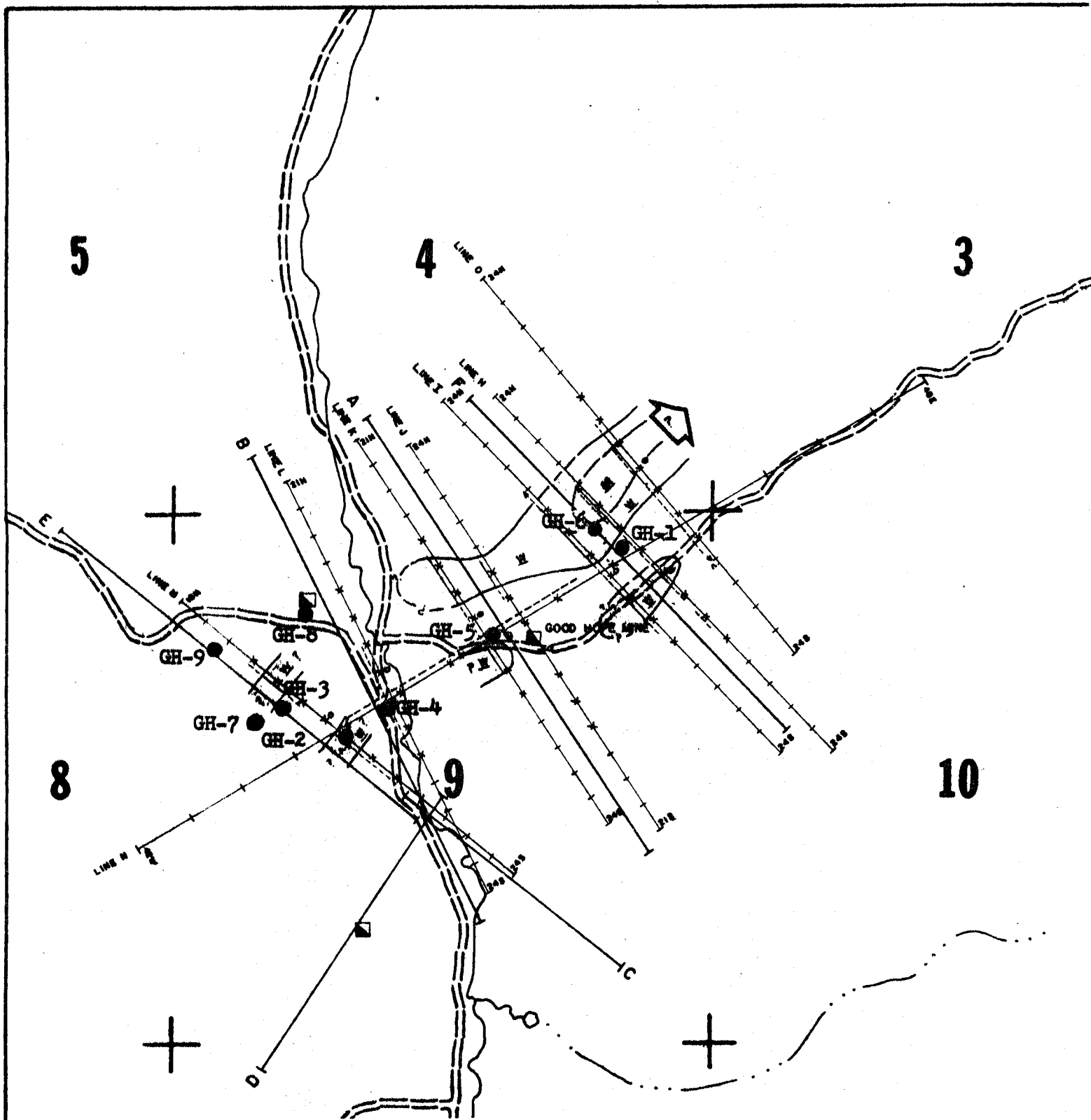


Figure 1 Location of rotary drill holes, Good Hope Mining District, Elko County, Nevada, showing relationship to induced polarization anomalies (Heinrichs, 1972).

<u>Drill Hole No.</u>	<u>Total Depth</u>
1	600 Feet
2	560 "
3	510 "
4	600 "
5	360 "
6	140 "
7	200 "
8	93 "
9	60 "

Total Footage 3,123 Feet

A Mayhew drill rig and a Mission hammerdrill was used by Eaklund Drilling Company to drill all of the holes. Each hole was completed not less than 5 inches in diameter. Holes Nos. 1 through 5 were cased as necessary. Casing was removed from Hole No. 1, but was left in Holes Nos. 2 through 4. All drill cuttings were logged by an outside consultant, Dr. Edmond F. Lawrence, Mining Geologist. Splits were taken of significantly mineralized cuttings for assaying by Union Assay Office, Inc. of Salt Lake City, Utah for silver and gold. The balance of the drill cuttings have been split, with one portion being stored in suitable containers and identified by hole number and depth in Reno, Nevada. The rest of the samples have been stored in canvas sample bags and identified by hole number and depth at Good Hope, Nevada. These samples are available for Government inspection and possible use. Drill logs and true copies of assay certificates showing sample intervals have been made a part of this final report. Stage II of the exploration contract was completed in October, 1972.

## FINANCIAL SUMMARY

The cost for each item of work in Stages I and II, and the total cost for the completed project under Exploration Contract No. 2303, Docket No. OME-6854 (Silver-Gold) has been summarized on page 5 of this report. All drilling costs have been tabulated on page 6, and all assaying charges by Union Assay Office, Inc. of Salt Lake City on page 7. Other items in the summary are self-explanatory. The Government participation under the contract is seventy-five percent of the cost of each item.

The total estimated cost of the project under the contract was \$27,100.00. The total actual cost of the work performed under this contract was \$27,019.91. The Government participation at seventy-five percent is \$20,264.93, while the cost to Great Basin Exploration Company is \$6,754.98.





# SUMMARY OF DRILLING COSTS

Drill Hole Number	<u>Drilling:</u>					
	Total Depth	0 - 300 feet @ \$4.50/ft.		300 - 600 feet @ \$6.00/ft.		
		Feet	Cost	Feet	Cost	
1	600	300	\$1,350.00	300	\$1,800.00	
2	560	300	1,350.00	260	1,560.00	
3	510	300	1,350.00	210	1,260.00	
4	600	300	1,350.00	300	1,800.00	
5	360	300	1,350.00	60	360.00	
6	140	140	630.00			
7	200	200	900.00			
8	93	93	418.50			
9	60	60	270.00			
	3,123	1,793	\$8,968.50	1,130	\$6,780.00	

Drill Hole Number	<u>Reaming, setting, pulling casing:</u>		<u>Casing lost in hole:</u>	
	Hours	Cost @ \$25.00/hr.	Feet	Cost @ \$1.25/ft.
1	2	\$ 50.00		
2	1	25.00	20	\$ 25.00
3	1	25.00	20	25.00
4	1	25.00	20	25.00
5	1	25.00	10	12.50
		\$150.00		\$ 87.50

Drill Hole Number	<u>Cement:</u>		<u>Additives:</u>	
	Sacks	Cost @ \$2.25/sack		
1	2	\$ 4.50	4 sacks mud	@ \$4.15 \$16.60
2	1	2.25	1 sack mud	@ 4.15 4.15
4	1	2.25	5 gals additive	@ 6.13 30.65
5	1	2.25		
		\$11.25		\$51.40

## Mobilization and demobilization of drilling equipment:

From Carlin, Nevada to Good Hope	\$250.00
	\$250.00

Total Drilling Cost - Stage II \$16,298.65

# SUMMARY OF COSTS FOR ASSAYING

<u>Drill Hole Number</u>	<u>Number of Assays</u>	<u>Cost @ \$3.50/Assay</u>
1	33	\$115.50
2	36	126.00
3	21	73.50
4	40	140.00
5	16	56.00
6	28	98.00
7	40	140.00
8	19	66.50
9	12	42.00
	<hr/>	<hr/>
	245	\$857.50

G E O L O G I C R E P O R T  
B Y  
E D M O N D F. L A W R E N C E  
M I N I N G G E O L O G I S T

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The Good Hope property of Great Basin Exploration Company is located in northern Elko County, approximately ninety-five miles by road northwesterly from Elko, Nevada. The geography and geology has been described in a report by Knox (1970), a copy of which has been submitted to the Office of Mineral Exploration.

Geology

The Good Hope Mining District lies in an area of Tertiary volcanics consisting of Miocene and Pliocene welded tuffs, Miocene andesite, and Pliocene dacite. There are three outcrops of limestone that have been tentatively correlated with the Miocene Humboldt Formation (Knox, 1970, p. 14). There is one outcrop of Ordovician Vinini (or Valmy) quartzite on the northeast edge of the district. This formation probably underlies the Tertiary volcanic rocks in most of the area.

The Miocene welded tuffs have been intensely silicified and argillized. Most of this alteration is spatially associated with Miocene andesitic intrusives. Knox (1970, p. 14) concluded that the addeite is directly related to the mineralization, and that hydrothermal solutions were either introduced simultaneously with the intrusion of the andesite, or the intrusive may have provided paths for later transfer of the ore solutions from depth. There are numerous random veinlets and several larger veins containing pyrite, arsenopyrite, pyrrargyrite, and freibergite in a gangue of quartz and sparse calcite. Approximately \$100,000 in silver has been mined from the area.

### Geochemical Surveys

Payne (1967) selected the Good Hope District for geochemical exploration because of its similarity to the Tuscarora district. He used arsenic, mercury and silver as indicators, and delineated several anomalies which coincide with the anomalous zones in the IP surveys by Knox and Heinrichs. Oesterling (1966) also ran geochemical surveys over the area, and outlined two geochemical anomalies.

### Geophysical Surveys

Knox (1970, p. 55) conducted magnetic, electromagnetic (VLF), and induced polarization (IP) surveys over the mineralized areas, and made suggestions for exploration. Lawrence (letter report, 1971) made certain recommendations for exploring the area. Based on these recommendations, Great Basin Exploration Company applied for assistance from the Office of Mineral Exploration in June, 1971. During these negotiations, it was agreed that further geophysical work would be desirable to help delineate the anomalies discovered by Knox. Geophysical surveys consisting of induced polarization (IP) and resistivity methods were conducted by Heinrichs Geoexploration Company during the interim May 30 to June 10, 1972 under Stage I of the contract. Anomalies were noted by Heinrichs on all eight lines, and generally confirmed the earlier work by Knox. A description of these anomalies and recommendations for future work were made in a report, copies of which have been submitted to the Office of Mineral Exploration by Great Basin Exploration Company.

### Drilling Program

At the conclusion of the geophysical surveys under Stage I of the contract, the geophysical data was reviewed by Lawrence (letter, July 13, 1972) and recommendations were made for drilling five holes under Stage II of the contract. The location of these proposed drill holes was based on integrated

geophysical, geochemical, and geological data, including the recommendations made by Heinrichs Geoexploration Company, Richard Knox, and Dr. Tsvi Meidav, Professor of Geophysics. These recommendations were reviewed by the Office of Mineral Exploration, and Great Basin Exploration Company was authorized to proceed with Stage II of the contract. Based upon geologic data obtained from the earlier holes, it was recommended that four additional holes be drilled under an amendment to the original contract. Nine holes were drilled for a total footage of 3,123 feet. The objective, description and results of the nine holes are as follows:

Good Hope No. 1 Rotary Drill Hole

Drilled at F-2200 plus 100 feet northeast, which is equivalent to H-500N plus 100 feet southwest. This hole was drilled to intercept the zone of highest PFE (percent frequency effects) at the n-4 or n-5 level. It was recommended by the field geophysicist for a depth of 450 to 600 feet. The veins and faults on the surface at F-1820 appear to be dipping to the south. Payne (1967) showed both mercury and silver anomalies in this area.

This drill hole intercepted 225 feet of quartz latite tuff from the surface, 85 feet of andesite, and 290 feet of quartz latite tuff to the bottom of the hole (see P. A-1). The tuff was oxidized to 20 feet, and gray in color from 20 to 135 feet. It became darker in color from 135 feet to the contact at 225 feet. The tuff beneath the andesite is also darker in color, becoming lighter in color away from the contact.

No silver-gold mineralization was observed in the drill cuttings from the hole. Only traces of silver were indicated in the assays, while gold in trace amounts was fairly consistent throughout the hole. Cinnabar was observed in trace amounts near the surface. Arsenopyrite occurred sporadically as grains in the groundmass and along fractures. Some pyrite was observed in the upper

part of the hole, but was more plentiful nearer the bottom. It occurred as one percent to two percent at 500 to 550 feet and three to six percent at 550 to 600 feet. The amount of pyrite observed would probably account for the IP anomaly. Good Hope No. 6 Drill Hole was drilled approximately 390 feet north of this hole to further test the IP anomaly near the surface in the area of the mercury, arsenic, and silver geochemical anomalies.

#### Good Hope No. 2 Rotary Drill Hole

Good Hope No. 2 Rotary Drill Hole was drilled along Line M at 300S, which would be 200 feet northeast from E-3300. This hole was drilled to intercept the zone of highest PFE (percent frequency effects) at the n-4 level. This is in an area of quartz veinlets in highly silicified tuff. It was recommended by the field geophysicist for a depth of 450 feet, with a maximum of 600 feet.

This hole intercepted quartz latite tuff at 0 to 215 feet, welded andesitic tuff at 215 to 260 feet, welded quartz latite tuff at 260 to 400 feet, andesite at 400 to 420 feet, and quartz latite tuff at 420 to the bottom of the hole at 560 feet. This rock contains one to seven percent pyrite at 85 to 215 feet;  $\frac{1}{2}$  to 3 percent at 215 to 400 feet, 10 to 20 percent at 400 to 420 feet, and 1 to 4 percent pyrite at 400 to 560 feet. No other sulfides or silver minerals were observed in the cuttings. A few traces of gold and silver were found in the assays in the upper part of the hole. The amount of pyrite observed in this hole should be enough to account for the IP anomaly in this area. Judging from the cutting, no significant mineralization was found.

#### Good Hope No. 3 Rotary Drill Hole

Good Hope No. 3 Drill Hole was drilled at E-2600, which would be 200 feet southwest of M-400 N. This hole was drilled to intercept the zone of

highest PFE (percent frequency effects) near the area of high arsenic, mercury, and silver anomalies. The tuff in this area is highly silicified and contains quartz veinlets.

The drill hole intercepted quartz latite tuff at 0 to 180 feet, andesitic tuff at 180 to 267 feet, andesite at 267 to 420 feet, and andesitic tuff at 420 to 510 feet. The rock contains a trace of pyrite to 110 feet; two to four percent at 110 to 180 feet, four to five percent at 180 to 267 feet, one to four percent at 267 to 420 feet, one to two percent at 420 to 475 feet, and traces to one-half percent at 475 to 510 feet. Arsenopyrite was seen as occasional grains. A few traces of cinnabar and pyrargyrite were observed at 345 to 355 feet.

The amount of pyrite observed in this hole is probably enough to account for the IP anomaly along this line. Judging from the cuttings, no significant mineralization was found.

#### Good Hope No. 4 Rotary Drill Hole

Good Hope No. 4 Drill Hole was drilled at L-300S plus 100 feet southwest, which is opposite B-2400. It was drilled to explore the zone of highest PFE (percent frequency effects).

This hole cut silicified quartz latite tuff at 0 to 25 feet, greenish gray andesitic tuff at 25 to 80 feet, andesite at 80 to 305 feet, andesitic tuff at 305 to 530 feet, and quartz latitic tuff at 530 to 600 feet. These cuttings contained a trace to two percent pyrite at 0 to 80 feet, traces to five percent at 80 to 305 feet, traces to one percent to 425 feet, one to two percent at 425 to 530 feet, and two to four percent at 530 to 600 feet. No other sulfides or silver minerals were observed in the hole. The assays showed 0.01 ounces gold per ton at 505 to 510 feet, and traces in two other



samples; and traces of silver in only two samples. Judging from the cuttings, no significant mineralization was found in this hole.

#### Good Hope No. 5 Rotary Drill Hole

Good Hope No. 5 Drill Hole was drilled at A-2750 plus 80 feet west. It was drilled to explore the zone of higher PFE (percent frequency effects) in the area of the old Good Hope mine. It was recommended by the field geophysicist that this hole should cut the zone at 250 feet, or a maximum depth of 400 feet. It was moved to the west because of slightly higher PFE along Line K. Also, this was in an arsenic and silver anomaly (Payne, 1967).

Andesite was found from the surface to 25 feet, quartz latite tuff at 25 to 180 feet, and andesitic(?) tuff at 180 to the bottom at 360 feet. Minor amounts of magnetite were disseminated in the andesite. Traces to one percent pyrite were found in the cuttings at 25 to 180 feet, and traces to two percent at 180 to 360 feet. No other sulfides or silver minerals were observed. The assays revealed 0.01 ounces of gold and 2.4 ounces of silver at 95 to 100 feet and traces in four other samples. Judging from the cuttings, no significant mineralization was found.

#### Good Hope No. 6 Rotary Drill Hole

Good Hope No. 6 Drill Hole was placed at F-1820 feet, directly on a spot of silicified quartz latite tuff with numerous quartz veinlets that contained trace amounts of pyrargyrite, pyrite, and arsenopyrite at the surface. This was also the zone of highest PFE (percent frequency effects) at the surface, and was apparently at the nearest-surface expression of the same zone that dipped southward toward Good Hope No. 1 Drill Hole. This appeared to be the same zone cut near the bottom of that hole. Also, this spot was near the center of the silver, mercury, and arsenic anomalies described by Payne (1967).

Oxidized tuff was cut at 0 to 35 feet, and greenish gray quartz latite

tuff at 35 to 140 feet. Traces to three percent pyrite and trace amounts of arsenopyrite were found in this hole. Traces of pyrargyrite were observed at 35 to 40 feet and at 80 to 85 feet. The assays showed some gold at 0 to 50 feet, with 0.400 ounces of gold per ton and no silver at 35 to 40 feet. The section from 0 to 25 feet contained 0.01 to 0.02 ounces of gold per ton and traces to 0.2 ounces of silver. Although the one sample may be of economic interest, the low tenor of the rock, both above and below, would make this of doubtful value. There is a possibility that further drilling might outline an ore body of economic value, but the lack of values in Drill Hole No. 1 only 380 feet to the south would discourage further drilling.

#### Good Hope No. 7 Rotary Drill Hole

Good Hope No. 7 Drill Hole was drilled at a distance of 168 feet in a S30°E direction from the northwest corner of Bataan No. 1 mining claim. It is approximately 280 feet in a S56°W direction from Good Hope No. 3 Drill Hole. This hole is in a highly silicified quartz latite with considerable iron oxide, and numerous quartz veinlets along the northwesterly striking shear zone.

The hole cut silicified quartz latite tuff at 0 to 95 feet and gray quartz latite tuff at 95 to 200 feet. There were trace amounts of pyrite at 35 to 95 feet, and traces to two percent at 95 to 200 feet. Traces of arsenopyrite were found at 95 to 100 feet. No other sulfides or silver minerals were observed. Assays revealed trace amounts of gold and silver scattered throughout the hole, but none of economic value.

Judging from the cuttings, no significant mineralization was found in the hole.

#### Good Hope No. 8 Rotary Drill Hole

Good Hope No. 8 Drill Hole was located S35°W - 142 feet from B-1500,

to explore for a possible mineralized zone between the two old mining shafts where ruby silver and other sulfides had been found on the dumps. Grab samples from these dumps assayed 0.015 ounces of gold and 11.00 ounces of silver per ton. It is also in the near-surface expression of the IP anomaly that dips southward to Good Hope No. 4 Drill Hole.

This hole cut 93 feet of quartz latite tuff, of which the upper 35 feet was oxidized. It contained traces to two percent pyrite, and trace amounts of arsenopyrite. Pyrargyrite occurred as traces. Assays revealed trace amounts of gold and silver in the upper 70 feet of the hole.

Judging from the cuttings, no significant mineralization was observed in this hole.

#### Good Hope No. 9 Rotary Drill Hole

Good Hope No. 9 Drill Hole was located on Line E at 1950 feet plus 50 feet to the east for the purpose of testing the intersection of two veins for the possibility of an ore shoot raking to the northeast. It is also in the area of the strong arsenic, mercury, and silver anomalies (Payne, 1967).

Sixty feet of quartz latite tuff was cut in this hole. Pyrite was present only in trace amounts. Traces of pyrargyrite were seen in the cutting at 20 to 40 feet, and a few grains of cinnabar was found at 45 to 50 feet. Assays revealed trace amounts of gold and silver throughout the hole.

Judging from the drill cuttings, no significant mineralization was observed in this hole.

#### Summary

The drilling program at Good Hope under Exploration Contract 2303, Docket No. OME-6854 (Silver-Gold) did not reveal any significant mineralization, with the possible exception of the one sample interval at 35 to 40 feet in Good Hope No. 6 Drill Hole that assayed 0.04 ounces of gold per ton.

to explore for a possible mineralized zone between the two old mining shafts where ruby silver and other sulfides had been found on the dumps. Grab samples from these dumps assayed 0.015 ounces of gold and 11.00 ounces of silver per ton. It is also in the near-surface expression of the IP anomaly that dips southward to Good Hope No. 4 Drill Hole.

This hole cut 93 feet of quartz latite tuff, of which the upper 35 feet was oxidized. It contained traces to two percent pyrite, and trace amounts of arsenopyrite. Pyrargyrite occurred as traces. Assays revealed trace amounts of gold and silver in the upper 70 feet of the hole.

Judging from the cuttings, no significant mineralization was observed in this hole.

#### Good Hope No. 9 Rotary Drill Hole

Good Hope No. 9 Drill Hole was located on Line E at 1950 feet plus 50 feet to the east for the purpose of testing the intersection of two veins for the possibility of an ore shoot raking to the northeast. It is also in the area of the strong arsenic, mercury, and silver anomalies (Payne, 1967).

Sixty feet of quartz latite tuff was cut in this hole. Pyrite was present only in trace amounts. Traces of pyrargyrite were seen in the cutting at 20 to 40 feet, and a few grains of cinnabar was found at 45 to 50 feet. Assays revealed trace amounts of gold and silver throughout the hole.

Judging from the drill cuttings, no significant mineralization was observed in this hole.

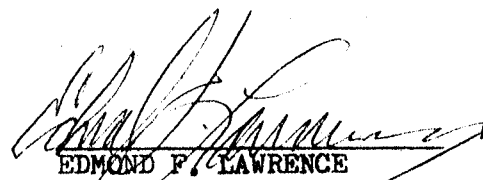
#### Summary

The drilling program at Good Hope under Exploration Contract 2303, Docket No. OME-6854 (Silver-Gold) did not reveal any significant mineralization, with the possible exception of the one sample interval at 35 to 40 feet in Good Hope No. 6 Drill Hole that assayed 0.04 ounces of gold per ton.

and no silver. This appeared to be a sporadic occurrence. Pyrargyrite (ruby silver) was observed in cuttings from sample intervals in several of the holes, but was also too sporadic to be of economic interest. Only one sample at 95 to 100 feet in Good Hope No. 5 Drill Hole assayed over one ounce per ton in silver.

Enough pyrite was observed in all of the holes to account for the induced polarization (IP) anomalies found by Knox and by Heinrichs. The depth estimations made by Knox and Heinrichs were amazingly accurate.

The widespread mineralization observed at the surface in the Good Hope Mining District appear to consist principally of pyrite, with a small amount of arsenopyrite, and minor amounts of gold and silver. A few traces of cinnabar and pyrargyrite were observed on the surface and in the drill cuttings. Quartz veinlets with minor calcite occur throughout the area and in the drill holes. The andesite appear to be intrusive, and the pyrite mineralization is spatially associated with it. The welded tuffs are chloritized near the contacts with the andesite. The widespread alteration halo over the area appear to be due to argillization and silicification. Some of the clay alteration is the result of surface weathering.

  
EDMOND F. LAWRENCE  
P. O. Box 8044  
University Station  
Reno, Nevada 89507

November 20, 1972

## REFERENCES

- Heinrichs, 1972, Induced polarization survey in the Good Hope area, Elko County, Nevada, Heinrichs Geoexploration Company, 6 p.
- Knox, Richard D., 1970, Geological and geophysical investigations of the Good Hope Mining District, Elko County, Nevada, Master Thesis, University of California, Riverside, California, 76 p.
- Oesterling, William A., 1966, Silver potential of Allied properties in the Good Hope District, Elko County, Nevada, private report, 13 p.
- Payne, Anthony L., 1967, Geological report, Good Hope Mining District, Elko County, Nevada, private report, 26 p.

APPENDIX

## Descriptive Drill Log:

Good Hope No. 1  
Rotary Drill Hole  
August, 1972

<u>Feet</u>	<u>Description</u>
0 - 20	Quartz-latite(?) tuff, buff in color, with 5%-10% shards; highly argillized with limonitic stains; traces cinnabar, traces pyrite.
20 - 40	Quartz-latitic tuff, gray to buff-gray in color, occasional grains of pyrite.
40 - 135	Quartz-latite tuff, gray in color, with anhedral to subhedral crystals of plagioclase, 3%-10% lithic fragments, and occasional glass shards; slightly to moderately argillized and completely argillized at 65 feet; occasional grains of arsenopyrite at 85-90 feet and at 130-135 feet; a few scattered grains of pyrite at 40-85 feet, traces to $\frac{1}{2}\%$ at 85-105 feet and 1% to 2% at 105-135 feet.
135 - 225	Quartz-latitic tuff, darker gray in color, gray black at 200-225 feet; traces pyrite with minute veinlets of quartz and pyrite at 165-170 feet; traces arsenopyrite at 150-155 and 185-190 feet.
225 - 310	Andesite(?), gray-black in color, with 30% to 40% euhedral laths of plagioclase; chloritized, with 3% to 10% calcite, moderately argillized; almost completely argillized at 275-285 feet; traces of pyrite, except 1% to 2% at 275-305 feet; pyrite occurs as disseminated grains, blebs and small pods; traces of arsenopyrite at 270-275, 285-295 and 300-305 feet; 3% to 10% calcite.
310 - 430	Quartz-latitic(?) tuff, gray in color; 10% to 40% subhedral to euhedral crystals of plagioclase, 1% to 5% hornblende crystals, and glass shards; chloritized and argillized, with minor amounts calcite; traces pyrite, with minute veinlets of quartz and pyrite at 320-325 feet and 1% pyrite at 410-415 feet; less than $\frac{1}{2}\%$ arsenopyrite at 380-385 feet.
430 - 500	Quartz-latitic tuff, greenish gray in color, with 10% to 40% crystals of plagioclase; feldspars soft and chalky; traces to $\frac{1}{2}\%$ pyrite and several minute veinlets of pyrite at 440-445 feet.
500 - 600	Quartz-latitic tuff, welded, gray in color; propylitized with 5% to 10% calcite; 1% to 2% pyrite at 500-550 feet, and 3% to 6% at 550-600 feet; traces arsenopyrite at 575-580 feet and 590-595 feet.
Bottom	



ASSAY REPORT  
UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary  
P. O. Box 1528

Great Basin Exploration Company  
Mine 3898 Washington Street  
San Francisco, CA 94118

Salt Lake City, Utah 84110

RESULTS PER TON OF 2000 POUNDS September 12, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH 1-1	None	None	10 -	20 feet							
1-2	Trace	0.1	85 -	90 "							
1-3	None	None	115 -	120 "							
1-4	Trace	None	120 -	130 "							
1-5	Trace	None	230 -	240 "							
1-6	Trace	None	250 -	260 "							
1-7	None	None	260 -	270 "							
1-8	Trace	None	280 -	290 "							
1-9	Trace	None	450 -	455 "							
1-10	Trace	None	455 -	460 "							
1-11	None	0.2	460 -	465 "							
1-12	None	None	490 -	495 "							
1-13	None	None	495 -	500 "							
1-14	None	None	500 -	505 "							
1-15	Trace	None	505 -	510 "							
1-16	None	None	510 -	515 "							
1-17	Trace	0.2	515 -	520 "							

Remarks

Charges \$ 59.50

*Glen P. Williams*

## Descriptive Drill Log:

Good Hope No. 2  
Rotary Drill Hole  
September, 1972

<u>Feet</u>	<u>Description</u>
0 - 25	Quartz latite tuff, welded, oxidized, reddish brown in color; 10% to 20% plagioclase laths and 5% to 10% glass shards; completely argillized, a few scattered pseudomorphs of limonite after pyrite.
25 - 85	Quartz latite tuff, white in color, with some yellowish brown staining by limonite; some pyrophyllite at 30-60 feet; 3% to 10% calcite as an alteration product; no sulfides noted.
85 - 215	Quartz latite tuff, gray in color, 10% to 20% plagioclase, 3% quartz, and 5% to 10% glass shards, with occasional biotite and hornblende; $\frac{1}{2}$ % pyrite at 85-95 feet, 1% to 2% at 95-125 feet, $\frac{1}{2}$ % at 125-140 feet, 5% to 7% at 140-160, 2% to 3% at 160-195 feet, and 1% at 195-215 feet; pyrite occurring as minute pods, narrow veinlets, and disseminated grains in the groundmass; occasional trace of arsenopyrite.
215 - 260	Welded andesitic(?) tuff, gray in color; with $\frac{1}{2}$ % to 2% pyrite as small pods, narrow veinlets, and disseminated grains; chloritized and argillized, with 3% to 5% calcite.
260 - 400	Welded quartz latite tuff, lighter gray in color; with 20% to 30% subhedral to euhedral plagioclase laths and 2% to 3% glass shards; 1% to 3% pyrite, usually subhedral to euhedral, occurring as minute pods, veinlets and disseminated grains.
400 - 420	Andesite(?), black in color, aphanitic, with 10% to 20% pyrite as minute randomly oriented veinlets, and as minute pods and individual grains; partly chloritized.
420 - 560	Quartz latite tuff, gray in color; with 10% to 20% plagioclase laths, 2% to 5% quartz and 3% to 5% glass shards; chloritized and argillized, with 3% to 15% calcite; 2% to 4% pyrite at 420-430 feet; 1% to 2% at 430-530 feet, and 1% at 530-560 feet.
Bottom	

Telephone 363-3302

Hand  
Sample Serial 29296-29313

ASSAY REPORT  
UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary

Mine Great Basin Exploration Co.  
3898 Washington St.  
San Francisco, CA 94118

P. O. Box 1528  
Salt Lake City, Utah 84110

RESULTS PER TON OF 2000 POUNDS October 5, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH 2-3	Trace	None	10	15 feet							
2-9	None	None	40	45 "							
2-23	None	None	110	115 "							
2-24	None	None	115	120 "							
2-28	Trace	0.1	135	140 "							
2-31	None	None	150	155 "							
2-32	None	None	155	160 "							
2-33	None	0.1	160	165 "							
2-34	None	0.2	165	170 "							
2-40	None	0.1	195	200 "							
2-44	None	None	215	220 "							
2-45	None	0.4	220	225 "							
2-46	None	None	225	230 "							
2-47	None	1.0	230	235 "							
2-59	None	0.2	290	295 "							
2-60	None	0.2	295	300 "							
2-68	None	None	335	340 "							
2-69	None	None	340	345 "							

Remarks

Charges \$ 63.00

*Glen P. Williams*

Telephone 363-3302

Hand  
Sample Serial 29314-29331

ASSAY REPORT  
UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary  
P. O. Box 1528

Mine Great Basin Exploration Co.  
3898 Washington Street  
San Francisco, CA 94118

Salt Lake City, Utah 84110

RESULTS PER TON OF 2000 POUNDS

October 5, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH 2-73	None	None	360	365 "							
2-74	None	None	365	370 "							
2-79	None	None	390	395 "							
2-80	None	None	395	400 "							
2-81	None	None	400	405 "							
2-82	None	None	400	410 "							
2-83	None	None	410	415 "							
2-84	None	None	415	420 "							
2-85	Trace	0.3	420	425 "							
2-91	None	None	450	455 "							
2-92	None	None	455	460 "							
2-93	None	None	460	465 "							
2-98	None	None	485	490 "							
2-99	None	0.1	490	495 "							
2-106	None	None	525	530 "							
2-108	None	0.2	535	540 "							
2-109	None	None	540	545 "							
2-112	None	None	555	560 "							

Remarks

Charges \$ 63.00

*G. P. Williams*

## Descriptive Drill Log:

Good Hope No. 3  
Rotary Drill Hole  
September, 1972

<u>Feet</u>	<u>Description</u>
0 - 10	Alluvium
10 - 110	Silicified quartz latite tuff, buff in color; 10% to 20% plagioclase and minor amounts glass shards; 5% to 20% limonite and traces of carbonate; partly argillized at 10-35 feet; $\frac{1}{2}$ % pyrite at 10-30 feet, with only traces at 35-110 feet.
110 - 180	Quartz latitic(?) tuff, gray in color, partly argillized with 2% to 3% calcite, almost completely argillized at 175-180 feet. 2% to 4% pyrite as disseminated grains and minute veinlets, occasional grains of arsenopyrite.
180 - 267	Tuff(?), andesitic, gray in color; moderately argillized, with small amounts of calcite; 4% to 5% pyrite as disseminated grains, small pods and veinlets.
267 - 420	Andesite, gray in color, with numerous subhedral to euhedral phenocrysts of plagioclase; slightly argillized; 265-290 feet: 3% pyrite 290-345 feet: traces to 1% pyrite 345-360 feet: 2% to 4% pyrite 360-420 feet: traces to 1% pyrite traces pyrargyrite at 345-355 feet; trace cinnabar at 350-355 feet; tuffaceous texture at 320 to 420 feet.
420 - 475	Andesitic tuff, gray in color; slightly argillized with 3% calcite; 1% to 2% pyrite as disseminated grains, small pods and minute veinlets.
475 - 510	Andesitic(?) tuff with considerable magnetite as disseminated grains; 15% calcite at 475-480 feet and 5% at 480-510 feet; traces to $\frac{1}{2}$ % pyrite as disseminated grains.
Bottom	

Telephone 363-3302

Hand  
Sample Serial 27425-27452.....ASSAY REPORT  
**UNION ASSAY OFFICE, Inc.**W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary  
P. O. Box 1528

Salt Lake City, Utah 84110

Great Basin Exploration Co.

3898 Washington Street

San Francisco, CA 94118

RESULTS PER TON OF 2000 POUNDS

September 22, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-3-1	Trace	None	0 -	5 "							
2	Trace	0.2	5 -	10 "							
3	Trace	None	10 -	15 "							
4	Trace	None	15 -	20 "							
5	Trace	None	20 -	25 "							
GH-3-23	Trace	None	110 -	115 "							
24	Trace	None	115 -	120 "							
25	Trace	None	120 -	125 "							
26	None	None	125 -	130 "							
27	None	None	130 -	135 "							
28	None	None	135 -	140 "							
29	None	None	140 -	145 "							
30	None	None	145 -	150 "							
GH-3-41	None	None	200 -	205 "							
42	Trace	None	205 -	210 "							
43	None	None	210 -	215 "							
44	None	None	215 -	220 "							
45	None	None	220 -	225 "							
46	None	None	225 -	230 "							

Remarks.....

Charges \$ 98.00

*G. P. Williams*

Telephone 363-3302

Hand  
Sample Serial...27453-27473...ASSAY REPORT  
**UNION ASSAY OFFICE, Inc.**W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary  
P. O. Box 1528  
Salt Lake City, Utah 84110Mine Great Basin Exploration Company  
3898 Washington Street  
San Francisco, CA 94118

RESULTS PER TON OF 2000 POUNDS

September 22, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-3-47	None	None	230	235 feet							
" 48	None	None	235	240 "							
" 49	None	None	240	245 "							
" 50	None	None	245	250 "							
" 51	None	None	250	255 "							
" 52	None	None	255	260 "							
" 53	None	None	260	265 "							
GH-3-65	None	None	320	325 "							
" 66	None	None	325	330 "							
" 67	None	None	330	335 "							
" 68	None	None	335	340 "							
" 69	None	None	340	345 "							
" 70	None	0.1	345	350 "							
" 71	None	None	350	355 "							
" 72	None	None	355	360 "							
GH-3-81	None	None	400	405 "							
GH-3-95	None	None	470	475 "							
GH-3-98	None	None	485	490 "							
GH-3-100	None	None	495	500 "							
" 101	None	None	500	505 "							
" 102	None	None	505	510 "							

Descriptive Drill Log:

<u>Feet</u>	<u>Description</u>
0 - 10	Silicified tuff, oxidized; reddish brown in color, a few pseudomorphs of limonite after pyrite.
10 - 25	Silicified tuff, quartz-latic, gray in color, with shards of glass, biotite fresh; slightly argillized at 10-15 feet, but highly argillized at 15-25 feet; 1% to 2% pyrite as disseminated grains.
25 - 80	Andesitic(?) tuff, greenish gray in color; very fine-grained, with numerous minute plagioclase crystals, plagioclase usually soft and argillized; trace to $\frac{1}{2}$ % pyrite as disseminated grains.
80 - 305	Andesite with numerous minute phenocrysts of plagioclase, and a few subhedral to euhedral phenocrysts of hornblende; greenish gray in color; groundmass usually highly chloritized and argillized, with 5% to 10% calcite; occasional areas of celadonite; three to five feet of andesitic tuff interlayered at 265-270 feet; 80-125 feet: less than $\frac{1}{2}$ % pyrite as disseminated grains 125-130 feet: 5% pyrite as small pods and veinlets, with calcite 130-150 feet: $\frac{1}{2}$ % to 1% pyrite as disseminated grains 150-200 feet: traces of pyrite 200-305 feet: $\frac{1}{2}$ % pyrite as disseminated grains
305 - 365	Andesitic tuff(?), greenish-gray in color; occasional lithic fragments and a few glass shards; similar to 25-80 feet above; $\frac{1}{2}$ % to 1% pyrite, usually as disseminated grains, but in calcite veinlets at 330-360 feet; 5% to 15% calcite.
365 - 425	Same as above, except with only a trace to $\frac{1}{2}$ % pyrite; at 410-415 feet, a quartz veinlet with small amounts pyrite and calcite.
425 - 530	Andesitic tuff, argillized, with numerous veinlets of calcite; 30% to 40% calcite at 490-520 feet. 425-480 feet: 1% pyrite as disseminated grains and in minute veinlets, usually associated with calcite 480-485 feet: 2% pyrite 485-530 feet: less than $\frac{1}{2}$ % pyrite
530 - 600	Quartz-latic(?) tuff, moderately silicified, with some argillization; slightly chloritized in places; with 2% to 4% pyrite as disseminated grains and as numerous veinlets containing calcite and occasional quartz; pyrite up to $\frac{1}{2}$ inch across.

Bottom



Telephone 363-3302

Hand Sample Serial.....26359-26370.....

# ASSAY REPORT

## UNION ASSAY OFFICE, Inc.

Mine Great Basin Exploration Co.

3898 Washington Street

San Francisco, CA 94118

W. C. WANLASS, President

L. G. HALL, Vice President

G. P. WILLIAMS, Treasurer

GERALDINE A. WANLASS, Secretary

P. O. Box 1528

Salt Lake City, Utah 84110

RESULTS PER TON OF 2000 POUNDS September 15, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH 4-2	None	None	5 - 10 feet								
4-24	None	None	115 - 120 "								
4-25	None	None	120 - 125 "								
4-26	None	None	125 - 130 "								
4-80	None	None	395 - 400 "								
4-92	None	None	455 - 460 "								
4-93	None	None	460 - 465 "								
4-96	None	None	475 - 480 "								
4-102	None	None	505 - 510 "								
4-103	None	None	510 - 515 "								
4-107	None	None	530 - 535 "								
4-109	None	None	540 - 545 "								
GH-4-112	0.010	0.1	555 - 560 feet								
113	None	None	560 - 565 "								
114	None	None	565 - 570 "								
115	Trace	None	570 - 575 "								
116	None	0.1	575 - 580 "								
117	None	None	580 - 585 "								
118	Trace	None	585 - 590 "								
119	None	None	590 - 595 "								
120	None	None	595 - 600 "								

Descriptive Drill Log:

<u>Feet</u>	<u>Description</u>
0 - 25	Andesite(?), black in color; with 10% to 35% subhedral to euhedral phenocrysts of plagioclase; partly chloritized and argillized, with 5% calcite; minor amounts of magnetite as minute grains.
25 - 180	Quartz latite tuff, gray in color, with 5% to 10% plagioclase crystals, 3% to 5% glass shards and scattered lithic fragments; partly argillized and chloritized, with 10% calcite at 130 feet, 5% calcite at 130-160 feet and 1% at 160-185 feet; traces to $\frac{1}{2}$ % pyrite at 55-70 feet, 1% at 70-80 feet, trace to $\frac{1}{2}$ % at 80-160 feet, 1% at 160-170 feet, and traces at 170-180 feet; pyrite occurring as minute veinlets and disseminated grains.
180 - 360	Andesitic(?) tuff, dark gray to greenish gray in color, with 20% to 40% subhedral to euhedral plagioclase laths, 1% to 5% hornblende crystals and occasional glass shards; chloritized and partly argillized; 1% pyrite at 180-190 feet, traces at 190-210 feet, 3% at 210-250 feet, 1% to 2% at 250-270 feet, $\frac{1}{2}$ % to 1% at 270-305 feet, traces at 305-315 feet, 1% to 2% at 305-360 feet; pyrite occurring as minute pods, narrow veinlets, and disseminated grains.
Bottom	

Telephone 363-3302

Hand  
Sample Serial 32853-32868

ASSAY REPORT  
**UNION ASSAY OFFICE, Inc.**

W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary

P. O. Box 1528

Salt Lake City, Utah 84110

Mine Great Basin Exploration Co.  
3898 Washington Street  
San Francisco, CA 94118

RESULTS PER TON OF 2000 POUNDS

November 7, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-5											
12	None	0.1	55	60 feet							
19	Trace	None	90	95 "							
20	0.010	2.4	95	100 "							
31	None	0.4	150	155 "							
32	Trace	0.1	155	160 "							
39	None	None	190	195 "							
40	None	None	195	200 "							
46	None	None	225	230 "							
47	None	None	230	235 "							
48	None	None	235	240 "							
52	None	None	255	260 "							
53	None	None	260	265 "							
58	None	None	285	290 "							
70	None	0.2	345	350 "							
71	None	None	350	355 "							
72	None	None	355	360 "							

Remarks

Charges \$ 56.00

*Glen P. Williams*

Good Hope No. 6  
Rotary Drill Hole  
October, 1972

Descriptive Drill Log:

<u>Feet</u>	<u>Description</u>
0 - 35	Quartz latite tuff, silicified, buff in color; with 10% to 20% plagioclase subhedral to euhedral crystals and 3% to 5% glass shards; a few scattered pseudomorphs of limonite after pyrite; slightly chloritized in places; partly argillized; 1% pyrite at 30-35 feet.
35 - 140	Quartz latite tuff, greenish gray in color; highly argillized, and partly chloritized with up to 3% calcite; 2% to 3% pyrite at 35-55 feet, 1% at 75-80 feet and trace amounts in balance; trace of arsenopyrite at 35-40 feet; traces of pyrargyrite at 35-40 feet and 80-85 feet.
Bottom	

line

Great Basin Exploration Co.

3898 Washington Street

San Francisco, CA 94118

W. C. WANLASS, President  
 L. G. HALL, Vice President  
 G. P. WILLIAMS, Treasurer  
 GERALDINE A. WANLASS, Secretary  
 P. O. Box 1528  
 Salt Lake City, Utah 84110

RESULTS PER TON OF 2000 POUNDS

November 7, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-6											
1	0.010	0.2	0	5	Feet						
2	0.010	0.2	5	10	"						
3	0.010	0.2	10	15	"						
4	0.020	None	15	20	"						
5	0.010	None	20	25	"						
6	Trace	None	25	30	"						
7	0.020	0.1	30	35	"						
8	0.400	None	35	40	"						
9	0.030	None	40	45	"						
10	Trace	None	45	50	"						
11	None	0.1	50	55	"						
12	None	None	55	60	"						
13	None	0.1	60	65	"						
14	None	None	65	70	"						
15	None	None	70	75	"						
16	None	None	75	80	"						
17	None	None	80	85	"						
18	None	None	85	90	"						
19	Trace	None	90	95	"						
20	None	None	95	100	"						
21	None	0.1	100	105	"						
22	None	None	105	110	"						
23	Trace	0.1	110	115	"						
24	None	None	115	120	"						
25	None	0.1	120	125	"						
26	None	None	125	130	"						
27	None	None	130	135	"						

ASSAY REPORT  
 UNION ASSAY OFFICE, Inc.

Descriptive Drill Log:

<u>Feet</u>	<u>Description</u>
0 - 95	Silicified quartz latite tuff, buff in color, with 10% to 20% plagioclase, 3% to 5% quartz crystals and 5% to 10% glass shards; welded; groundmass appears to have been highly silicified before weathering, presently highly argillized, plagioclase soft and chalky; stained yellowish brown by limonite, with a few pseudo-morphs of limonite after pyrite; several quartz veinlets up to $\frac{1}{4}$ inch wide; one quartz vein one-half inch wide containing minor pyrite at 60-65 feet; traces pyrite at 35-95 feet.
95 - 200	Quartz latite tuff, gray in color, with 10% to 25% plagioclase laths, 3% to 5% quartz crystals and 5% glass shards; welded; shows some oxidation; highly argillized to bottom of hole, with small amounts chlorite at 105-200 feet; 1% to 2% pyrite at 95-110 feet, $\frac{1}{2}$ % to 1% at 110-145 feet, trace at 145-170 feet, trace to $\frac{1}{2}$ % at 120-195 feet, 1% at 190-195 feet, and trace at 195-200 feet; traces of arsenopyrite at 95-100 feet; pyrite usually disseminated, but occasionally in minute veinlets.

Bottom

Telephone 363-3302

Hand  
Sample Serial 33011-33026ASSAY REPORT  
UNION ASSAY OFFICE, Inc.W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary

P. O. Box 1528

Salt Lake City, Utah 84110

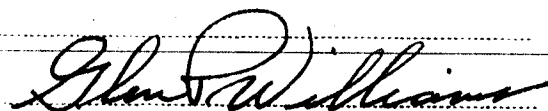
Great Basin Exploration Co.  
Mine 3898 Washington Street  
San Francisco, CA 94118

RESULTS PER TON OF 2000 POUNDS November 8, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
CH-7											
1	None	0.3	0 -	5 Feet							
2	None	0.1	5 -	10 "							
3	Trace	0.1	10 -	15 "							
4	Trace	0.1	15 -	20 "							
5	Trace	None	20 -	25 "							
6	Trace	0.1	25 -	30 "							
7	Trace	0.1	30 -	35 "							
8	Trace	0.1	35 -	40 "							
9	Trace	0.1	40 -	45 "							
10	Trace	None	45 -	50 "							
11	Trace	0.2	50 -	55 "							
12	Trace	None	55 -	60 "							
13	Trace	0.1	60 -	65 "							
14	Trace	None	65 -	70 "							
15	Trace	0.1	70 -	75 "							
16	Trace	0.1	75 -	80 "							

Remarks

Charges \$ 56.00



Telephone 363-3302

Hand  
Sample Serial 33305-33328ASSAY REPORT  
UNION ASSAY OFFICE, Inc.W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary  
P. O. Box 1528  
Salt Lake City, Utah 84110

Great Basin Exploration Co.

3808 Washington Street

San Francisco, CA 94118

RESULTS PER TON OF 2000 POUNDS

November 10, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-7											
17	Trace	None	80	85 Feet							
18	None	None	85	90 "							
19	None	0.1	90	95 "							
20	Trace	0.1	95	100 "							
21	None	None	100	105 "							
22	None	0.2	105	110 "							
23	Trace	None	110	115 "							
24	0.010	None	115	120 "							
25	Trace	None	120	125 "							
26	Trace	0.2	125	130 "							
27	None	None	130	135 "							
28	None	0.1	135	140 "							
29	None	None	140	145 "							
30	None	None	145	150 "							
31	None	None	150	155 "							
32	None	None	155	160 "							
33	None	None	160	165 "							
34	Trace	None	165	170 "							
35	Trace	0.2	170	175 "							
36	Trace	None	175	180 "							
37	None	0.1	180	185 "							
38	Trace	None	185	190 "							
39	None	0.1	190	195 "							
40	Trace	None	195	200							



Descriptive Drill Log:

Good Hope No. 8  
Rotary Drill Hole  
October, 1972

<u>Feet</u>	<u>Description</u>
0 - 30	Quartz latite tuff, buff in color; groundmass completely argillized with relict plagioclase crystals; apparently 20% plagioclase laths and 5% glass shards; groundmass appears to have been silicified before argillization; 10% chlorite and 3% calcite; a few pseudomorphs of limonite after pyrite.
30 - 93	Quartz latite tuff, gray in color; with 10%-25% plagioclase laths, occasional quartz grains, and 5% glass shards; 1% to 2% pyrite at 30-50 feet, and trace to 1% at 50-93 feet; pyrite occurs as disseminated grains, small pods and minute veinlets; traces of arsenopyrite, usually as spangles along fractures; trace of pyrargyrite; some oxidation to bottom of hole.

Bottom

Telephone 363-3302

Hand  
Sample Serial..... 33329-33347ASSAY REPORT  
**UNION ASSAY OFFICE, Inc.**W. C. WANLASS, President  
L. G. HALL, Vice President  
G. P. WILLIAMS, Treasurer  
GERALDINE A. WANLASS, Secretary  
P. O. Box 1528  
Salt Lake City, Utah 84110

Great Basin Exploration Co.

3898 Washington Street

San Francisco, CA 94118

RESULTS PER TON OF 2000 POUNDS

November 10, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-8											
1	Trace	0.2	0	5 Feet							
2	Trace	0.5	5	10 "							
3	None	None	10	15 "							
4	Trace	None	15	20 "							
5	Trace	0.3	20	25 "							
6	Trace	0.5	25	30 "							
7	Trace	0.4	30	35 "							
8	Trace	0.7	35	40 "							
9	Trace	0.2	40	45 "							
10	Trace	0.1	45	50 "							
11	Trace	None	50	55 "							
12	0.010	0.4	55	60 "							
13	Trace	None	60	65 "							
14	Trace	0.5	65	70 "							
15	None	None	70	75 "							
16	None	None	75	80 "							
17	None	None	80	85 "							
18	None	None	85	90 "							
19	None	None	90	93							

Descriptive Drill Log:

Good Hope No. 9  
Rotary Drill Hole  
October, 1972

<u>Feet</u>	<u>Description</u>
0 - 25	Quartz latite tuff, with 5% to 10% glass shards; buff in color; almost completely argillized to a montmorillonitic clay, some yellowish brown stains of limonite.
25 - 60	Quartz latite tuff, yellowish brown to reddish in color; 10% to 30% laths of plagioclase, usually soft and chalky, 5% to 10% glass shards; occasional grains of pyrite; traces of pyrargyrite at 20-40 feet; small amounts manganese oxide at 25-30 feet; traces cinnabar at 45-50 feet.
Bottom	

Telephone 363-3302

Hand Sample Serial. 33348-33359

# ASSAY REPORT

## UNION ASSAY OFFICE, Inc.

W. C. WANLASS, President

L. G. HALL, Vice President

G. P. WILLIAMS, Treasurer

GERALDINE A. WANLASS, Secretary

P. O. Box 1528

Salt Lake City, Utah 84110

Great Basin Exploration Co.

Mine 3898 Washington Street

San Francisco, CA 94118

## RESULTS PER TON OF 2000 POUNDS

November 10, 1972

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Wet on Ore	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
GH-9											
1	Trace	0.1	0	5 Feet							
2	Trace	None	5	10 "							
3	Trace	None	10	15 "							
4	Trace	None	15	20 "							
5	Trace	None	20	25 "							
6	Trace	0.1	25	30 "							
7	None	0.1	30	35 "							
8	None	0.2	35	40 "							
9	None	0.1	40	45 "							
10	None	0.1	45	50 "							
11	None	0.2	50	55 "							
12	None	None	55	60							

Remarks.....

Charges \$ 42.00



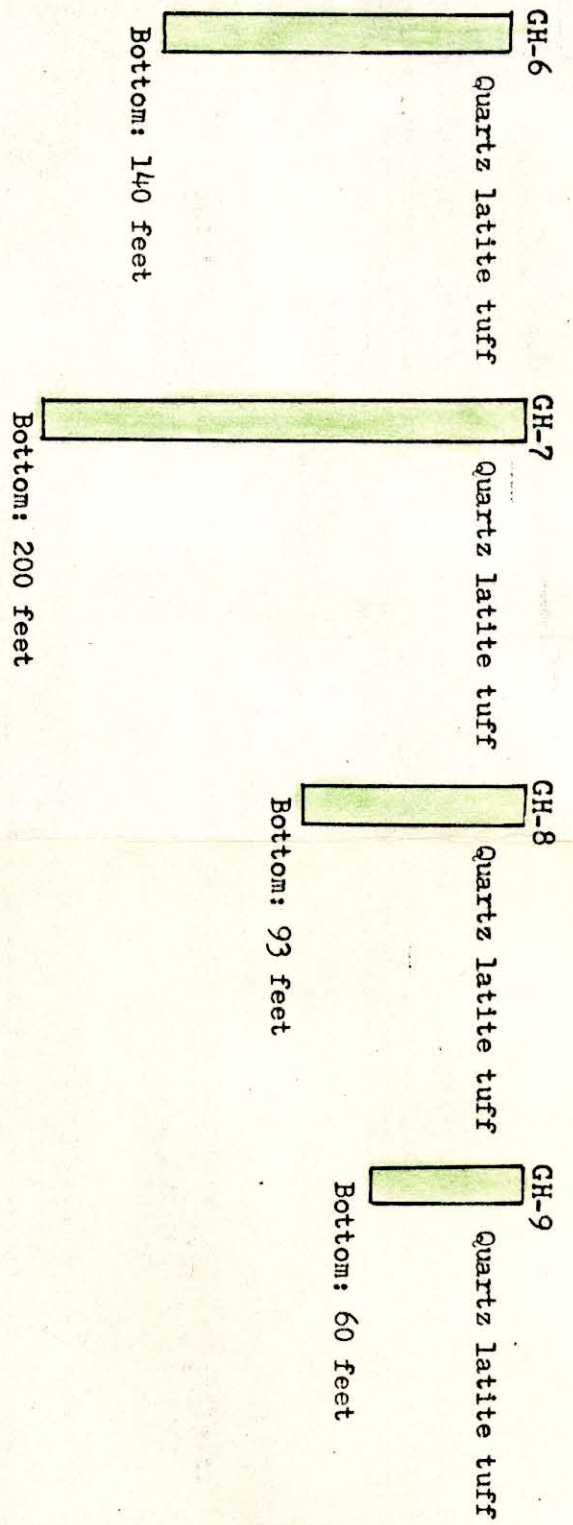


Figure 3. Drill logs, Good Hope No. 6 through 9 (Scale: 1 inch = 80 feet)

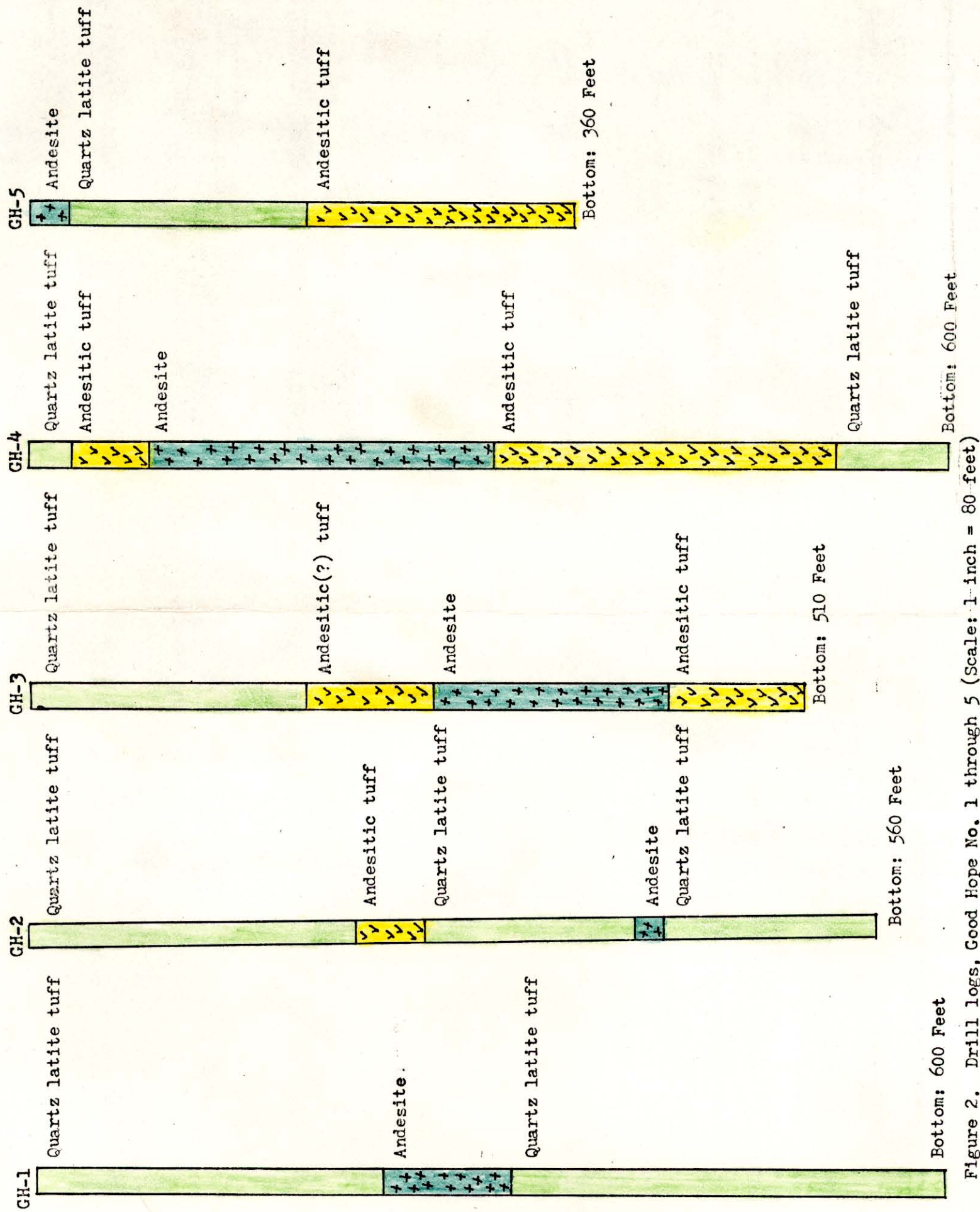


Figure 2. Drill logs, Good Hope No. 1 through 5 (Scale: 1-inch = 80-feet)



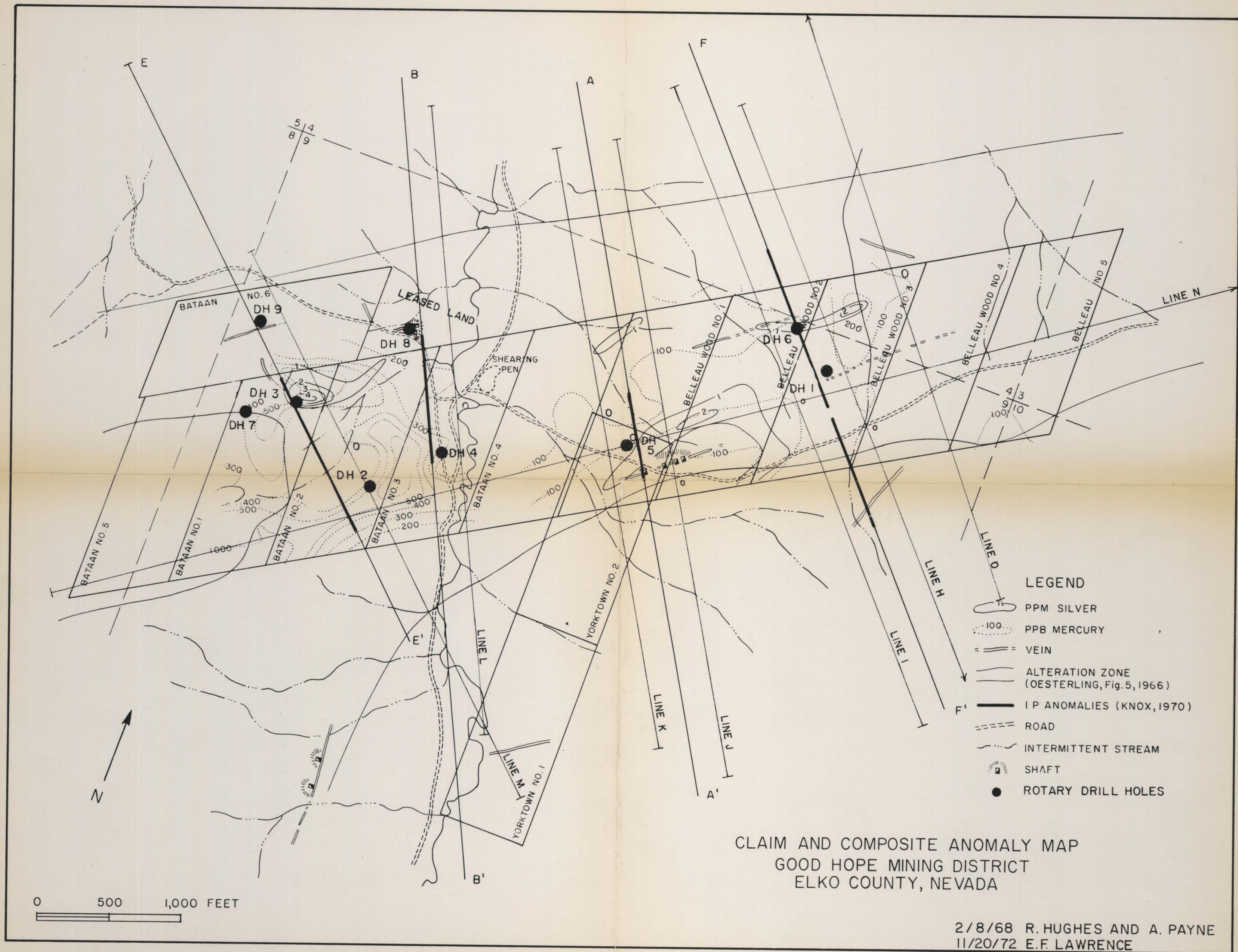


PLATE I MAP SHOW LOCATION OF DRILL HOLES

2170 0009