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PROGRESS REPORT

COPPER LAKE'S CHARLOTTE GOLD-SILVER-COPPER PROSPECT

MARICOPA COUNTY, ARIZONA

From Information Provided By Gerald Weathers

July 15, 1978

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INTRODUCTION

The Charlotte Prospect Geological Report was submitted May, 1972 in which a Phase I exploration program was recommended. Phase I, a drilling program, was designed to probe a structural zone to shallow depths over a strike length of 1,700 feet and width of 200', but concentrating in an area bounded by a shaft to the west and a large trench to the east. High grade gold-silver ore pockets had been mined from the shaft, and assays of bulk samples from the trench ranged from .08 to .13 oz. Au/ton.

CONCLUSIONS

A portion of the Phase I exploration program has been completed and assays of surface, trench and drill hole samples compared. There is a large variance between these assays as illustrated in this report; often the bulk sample assays are 10 times greater than adjacent percussion drill hole sample assays. Evaluations of grades based on drill samples are subject to error due to sample loss, the small segment of mineralized ground probed by the drill and lack of correlation between assayed samples collected from various exploration methods. Also, the assays in the .01 - .1 oz. Au/ton range are approaching the accuracy limits of the fire assay technique.

Measured reserves, based primarily on percussion drill hole sample results, are 112,500 tons .06 oz. Au, 13 oz. Ag/ton. Indicated reserves are 594,700 tons, in which the grade has not been calculated due to insufficient information; however, it is assumed the grade will be comparable to the measured reserves. Inferred reserves are 5,000,000 tons.

According to recent reports, .06 oz. Au/ton is regarded as ore grade in open pit gold mines.

Bulk samples from the dumps and trench face have been submitted for heap leach tests. (The trench face sample assays 0.18 oz. Au and .40 oz. Ag/ton. See Exhibit H.)

Boyles Bros. Drilling Co. is drilling the third diamond drill hole. The hole is located in a valley south of the shaft and is designed to probe the projected structure at depth.

The Heinrich Geophysical Company has contracted to run an I.P. survey over the property in an effort to delineate an anomaly which may represent an underlying copper sulfide ore body related to the copper bearing surface outcrops.

RECOMMENDATIONS

It is strongly recommended that the large trench be extended and deepened to the southwest to test the subsurface probed by Drill Hole 3 and Core Hole 1. (Refer to Fig. VI). Bulk samples of the material should be taken for assay and beneficiation tests. The remainder of the material removed should be stockpiled for a possible pilot plant ore source.

It is also recommended that splits of the pulps from the bulk samples be submitted to various selected assay laboratories for comparative sample assay

results. The assays should be compared with drill sample assays, representing the same material, to develop a dependable factor for ore reserve evaluation based on drill sample assays.

After satisfactory completion of the bulk sampling program, it is recommended the indicated reserve area be drilled on a grid pattern.

GOLD-SILVER PROSPECTING PHASE

PERCUSSION DRILL HOLES

Thirty-two 2" diameter percussion holes totalling 4,228 feet were drilled into the mineralized structure to depths ranging from 80 to 230 feet. (Refer to Fig. VI, Charlotte Plan Map showing drill hole locations). Drill cutting samples were collected at 10 foot intervals and submitted to the Iron King Laboratories for sample preparation and fire assay for gold and silver. Check samples were submitted to the Rocky Mountain Geochemical Laboratories for assay by atomic absorption methods. The gold assays are in close agreement; the silver assays are not. (Refer to Exhibit G - Assay Certificates). Sample rejects and pulps are stored for future reference.

The sample collecting device on this drill was crude resulting in a large proportion of fine cuttings loss and also the percussion drill was unable to probe to the desired depths due to the cavernous, broken subsurface rock conditions. Either no cuttings were returned from the bottom hole depths or the rods were seized in the soft, faulted ground.

DIAMOND CORE DRILL HOLES

Because of the difficulty in collecting complete samples from percussion drilling, a diamond drilling program was initiated in an attempt to check the percussion drill holes and also to probe the structure at depth.

Diamond Core Drill Hole No. 1 was drilled vertically adjacent to Percussion Drill Hole No. 3 using a N.C. face discharge bit (2.4" core diameter). The hole was stopped at a depth of 170 feet, passing through the cavity encountered at 80 feet in Percussion Drill Hole No. 3. The diamond drill hole was drilled without return circulation due to the cavernous, faulted, permeable subsurface rock condition.

Diamond Core Drill Hole No. 2 was drilled near percussion Drill Hole No. 25, using an N.X. face discharge bit (1.78" core size). Abundant use of drill mud and additives resulted in a return circulation permitting collection of sludge samples.

Core recovery ranged from 100% in unbroken ground to 37% in the mineralized, faulted, brecciated structure.

Diamond Drill Hole No. 3 is being drilled 550 feet southwest of the shaft and is designed to probe the projected structure 440 feet below the surface.

SAMPLE ASSAY COMPARISONS

DIAMOND CORE DRILL NO. 1 WITH PERCUSSION DRILL HOLE 3:

Assays of split core samples from Diamond Drill Hole No. 1 are not complete; information will be submitted upon receipt of this information.

DIAMOND CORE DRILL NOLE NO. 2 WITH PERCUSSION HOLE NO. 25:

Diamond Drill Hole No. 2 split core sample assays, sludge sample assays and No. 25 Percussion Drill Cutting Sample assays are tabulated below:

<u>Internal</u>	<u>Core</u>		<u>Sludge</u>		<u>Percussion</u>	
	<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>
20-30'	.01	.22			Tr.	0.0
30-40'	Tr.	.26			.01	0.0
40-50'	Tr.	.20			.025	0.18
50-60'	.01	.14			.020	0.00
60-70'	.04	.16			.015	0.17
70-80'	.02	.26			.125	0.48
80-90'	.02	.10	.005	.24	.03	0.27
90-100'	0.20	0.50	.03	.27	.02	0.28
100-110'	0.01	0.24				
100-104'			.05	.21	.07	0.15
104-110'			.038	.12		
110-120'	0.01	0.23	.035	.32	.04	0.12
120-130'	0.012	0.37			.038	0.14
133-142'			.02	.37		
130-140'	.005	0.14			.007	0.04

The sludge sample assays approximate the percussion sample assays, otherwise there is little correlation between assays of samples from corresponding intervals.

PERCUSSION HOLE NO. 3 WITH TRENCH MUCK SAMPLES:

Assays of Percussion Drill Hole No. 3 samples from 20 feet to 80 feet in depth averaged .08 oz. Au/ton and .2 to .4 oz. Ag/ton. 10 foot interval sample cuttings from 10 to 30 feet assayed .01 and a trace of gold; however, a 50 lb. sample from the trench face 18 feet to 24-1/2 feet below the surface adjacent to

the drill hole assayed 0.18 oz. Au/ton and 0.40 oz. Ag/ton (Refer to Exhibit H). This sample was submitted to the U. S. Bureau of Mines for leach tests. Muck samples from the south end of the trench have assayed in excess of 0.1 oz. Au/ton.

This comparison suggests the percussion sample assays may represent one tenth the actual gold content of the rock.

COMPARISON OF CORE DRILL HOLE SAMPLE ASSAY WITH A FACE SAMPLE ASSAY FROM THE SHAFT WORKINGS:

A drift was extended westward on the 120 level of the shaft, by former operators, to intersect an interval in a diamond core drill hole that assayed 0.02 oz. Au/ton. A 4.9' sample across the face of the drift at the drill hole intersection assayed 0.26 oz. Au/ton. (Refer to Fig. IV - Plan and Assay Map of Charlotte Mine). This comparison indicates the drill hole sample assay to be one-tenth the actual gold content in the rock.

ORE GRADE ESTIMATE

According to verbal reports, ore grades of open pit gold mines are in the .06 oz. Au/ton range, wherein fine gold-silver particles can be recovered using the heap leach method.

The Charlotte Prospect is mineralized with very fine free gold particles, thus the ore should be amenable to this method of recovery.

MINING COST ESTIMATE

The apparent dip of the top of mineralized zone from the surface southward through Holes 6-3 is 5°. (Refer to Fig. VI). A contractor has bid 17¢/ton to mine this zone.

LEACH TEST SAMPLES

Three bulk samples totalling 158 lbs. have been submitted to the U. S. Bureau of Mines for heap leach testing for recoverable gold and silver. Sample No. 1 was taken from the shaft dump from which samples assayed 0.14 Au; Sample No. 2 was taken from the trench muck pile from which samples assayed .08 Au, and Sample No. 3 was taken from the trench face, assaying 0.18 Au and 0.40 Ag. (Refer to Exhibit H.)

RESERVES

The reserves to date are based primarily on percussion sample assays subject to correcting pending receipt of more accurate assay data.

MEASURED RESERVES

(From dimensions revealed by drill holes and surface outcrops. Grades are weighed averages).

BLOCK A:

200' x 100' x 45' thick. Assuming 12 cubic feet/ton in place = 75,000 tons @ 0.06 oz. Au/ton. .2 - .15 oz. Ag/ton.

BLOCK B:

A right triangle contiguous to Block A, 200' x 100' x 45' ÷
12 ft. ³/ton = 37,500 tons @ 0.07 oz. Au/ton. ².2 - .5 oz Ag/ton.
Total measured reserves = 112,500 tons. .06 oz. Au, .3 oz. Ag/ton.
(Refer to Fig. VI - Reserves, Charlotte Mine).

INDICATED RESERVES

(Based on Drill Hole Information and Geologic Projections)

The southernmost line of percussion drill holes encountered the mineralized structure immediately below the surface 150 feet south of the structure outcrops. (Refer to Fig. VI).

Grade determinations have been omitted due to the lack of sufficient drill holes in this block and discrepancy in assays; however, it is assumed the grade will be comparable to the grade of Blocks A and B.

BLOCK C:

$860' \times 150' \times 50'$ thick $\div 12$ ft. ³ in place (assumed) = 537,500 tons.

(Refer to Fig. VI).

BLOCK D:

$1/2(250 \times 100) \times 50 \div 12 = 52,000$ tons.

BLOCK E:

$1/2(50 \times 50) \times 50 \div 12 = 5,200$ tons.

TOTAL = 594,700 tons.

INFERRED RESERVES

(Based on shaft, pits, trench, and outcrop sample assays, plus structural projections - Refer to Fig. V - United Mines Geologic and Gold Assay Map of a Portion of Charlotte Prospect).

The mineralized structure has been traced intermittently along its strike for 4,000 feet, and contains gold values to the bottom or 120 level of the shaft.

Assuming an average width of 200 feet and omitting the 1,000 feet of structure in Blocks A, B, C, D, and E.

BLOCK F:

$3,000' \times 200 \times 100$ feet deep $\div 12$ ft. ³/ton = 5,000,000 tons.

COPPER POTENTIAL

Copper oxides occur in small pits on the western portion of the prospect and as oxides and sulfides near the bottom of Diamond Core Drill Hole No. 1.

It is possible that copper sulfides occur at depth, but not necessarily directly below the presently drilled area.

A bid of \$4,000 has been received from Heinrich Geoexploration Co. to run "8 to 10 lines along 4,000' of strike, across a 200' wide structural zone, of induced polarization surveys and interpretations at roughly 500 feet of depth according to good technical and economic practice in the industry."

The contract has been submitted with this report.

Gerald Weathers

July 15, 1973

CHARLOTTE GOLD-SILVER PROSPECT

MEASURED RESERVES

BLOCK A:

	<u>Width</u>		<u>Length</u>		<u>Depth</u>		<u>Density</u>	<u>Au(.06/ton)</u>	<u>Ag(.15/ton)</u>
(1)	200	x	100	x	45	÷	12 ft ³ /ton	4,500 oz.	11,250 oz.
(2)	200	x	100	x	90	÷	12 ft ³ /ton	9,000 oz.	22,500 oz.
(3)	200	x	100	x	135	÷	12 ft ³ /ton	13,500 oz.	33,750 oz.
(4)	200	x	100	x	180	÷	12 ft ³ /ton	18,000 oz.	45,000 oz.

Based on Current Prices of Au @ \$400/oz. & Au @ \$11.00/oz.:

(1)	4,500 oz.	x	\$400/oz.	=	\$1.9 Million Au	11,250	x	11	=	\$123,750 Ag
(2)	9,000 oz.	x	\$400/oz.	=	\$3.6 Million Au	22,500	x	11	=	\$247,500 Ag
(3)	13,500 oz.	x	\$400/oz.	=	\$5.4 Million Au	33,750	x	11	=	\$371,250 Ag
(4)	18,000 oz.	x	\$400/oz.	=	\$7.2 Million Au	45,000	x	11	=	\$495,000 Ag

BLOCK B:

Area = 1/2(200 x 100) = 10,000 S.F.

	<u>Area</u>	x	<u>Depth</u>	÷	<u>Density</u>	=	<u>Tons of ore</u>	x	(.07oz/ton)Au	x	(.3oz/ton)Ag
(1)	10,000	x	45	÷	12 ft ³ /ton	=	37,500	x	.07	=	2,625 oz (x.3) = 11,255 oz
(2)	10,000	x	90	÷	12 ft ³ /ton	=	75,000	x	.07	=	5,250 oz (x.3) = 22,500 oz
(3)	10,000	x	135	÷	12 ft ³ /ton	=	112,500	x	.07	=	7,875 oz (x.3) = 33,750 oz
(4)	10,000	x	180	÷	12 ft ³ /ton	=	150,000	x	.07	=	10,500 oz (x.3) = 45,000 oz

CHARLOTTE GOLD-SILVER PROSPECT

MEASURED RESERVES (Continued)

BLOCK B: (Continued)

	@ \$400/oz. Au	&	\$11/oz. Ag
(1)	2,625 x 400 = \$1,050,000	11,250	x 11 = \$123,750
(2)	5,250 x 400 = \$2,100,000	22,500	x 11 = \$247,500
(3)	7,875 x 400 = \$3,150,000	33,750	x 11 = \$371,250
(4)	10,500 x 400 = \$4,200,000	45,000	x 11 = \$495,000

INDICATED RESERVES

BLOCK C:

$$860' \times 150' \times 200' \text{ thick} \div 12 \text{ ft.}^3/\text{ton} = 2,150,000 \text{ tons.}$$

BLOCK D:

$$1/2(250 \times 100) \times 200 \div 12 = 208,334 \text{ tons.}$$

BLOCK E:

$$1/2(50 \times 50) \times 200 \div 12 = 20,834 \text{ tons}$$

$$\text{TOTAL} = 2,379,167 \text{ tons}$$

Assuming ore grade is same as A

$$2,379,167 \text{ tons} \times .06 \text{ oz/ton Au} = 142,750 \text{ oz. Au}$$

$$2,379,167 \text{ tons} \times .15 \text{ oz/ton Ag} = 356,875 \text{ oz. Ag}$$

Assuming \$400/oz Au & \$11/oz Ag

$$142,750 \times 400 = \underline{\$57,100,000 \text{ Au}}$$

$$356,875 \times 11 = \underline{\$3,925,625 \text{ Ag}}$$

INFERRED RESERVES

BLOCK F:

3000' x 200' x 150 feet deep \div 12 = 7,500,000 tons

Assuming ore grade is constant @ .06 & .15

7,500,000 tons x .06 oz/ton Au = 450,000 oz. Au

7,500,000 tons x .15 oz/ton Ag = 1,125,000 oz. Ag

Assuming \$400/oz. Au & \$11/oz. Ag

450,000 x 400 = \$180,000,000 Au

1,125,000 x 11 = \$12,375,000 Ag

SUMMARY

At this point, using outmoded collection methods and insufficient test depths, it is not certifiable how much ore can be mined or at what grade the ore will assay. However, based on an extrapolation of the existing data plus a minor increase in production which was assumed to acknowledge current technology, the following yield is possible:

Total ore tonnage: 10,329,168

Total mineral yield:

Au @ .06 oz/ton = 619,750.1 oz. Au

Ag @ .15 oz/ton = 1,549,375.2 oz. Ag

Total mineral value (Au & Ag only):

619,750.1 x \$400/oz. = \$247,900,032 Au

1,549,375.2 x \$ 11/oz. = \$17,043,127.2 Ag

TOTAL VALUE = \$264,943,159.2

Arizona Testing Laboratories

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

For: Isbell & Pritchard
Development Corporation
4812 East Berneil Drive
Paradise Valley, AZ, 85253

Date: April 21, 1978

Lab. No.: 6699

Received: 4-17-78

Marked: Composite of 9216 & 9218

Submitted by: Mr. Gil J. Matthews

REPORT OF QUALITATIVE SPECTROGRAPHIC EXAMINATION

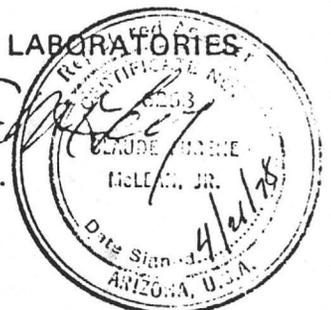
<u>ELEMENT</u>	<u>APPROXIMATE PERCENT</u>
Boron	0.01
Silicon	Major Constituent
Aluminum	8.0
Manganese	Intermediate Constituent
Magnesium	2.0
Lead	0.1
Copper	0.01
Iron	4.0
Molybdenum	0.01
Calcium	2.0
Vanadium	0.005
Sodium	1.0
Zinc	0.5
Titanium	0.1
Silver	0.01
Strontium	0.4

cc:
Mr. Gil J. Matthews
13126 N. 20th Lane
Phoenix, AZ. 85029

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.
Claude E. McLean, Jr.



Arizona Testing Laboratories

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

For **Isbell & Pritchard**
 Development Corporation
 4812 East Berneil Drive
 Paradise Valley, Arizona 85253

Date **April 21, 1978**

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
6699	9209	0.01	0.05				
	9210	trace	trace				
	9211	0.02	0.30				
	9212	0.02	0.10				
	9213	0.05	0.10				
	9214	0.03	0.05				
	9215	0.01	0.05				
	9216	0.16	4.4				
	9217	0.02	0.15				
	9218	0.05	1.70				
	9219	0.01	0.05				
	9220	0.01	0.05				
	9221	0.04	0.10				
	9222	0.06	0.20				
	9223	0.11	0.20				
	9224	0.05	0.15				
	9225	0.09	0.20				
	9226	0.02	0.05				
9227	0.02	trace					

cc: Mr. Gil J. Matthews
 13126 N. 20th Lane
 Phoenix, AZ. 85029

Respectfully submitted,

ARIZONA TESTING LABORATORIES

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