

-4970 0059

CARGOLD MINING AND DEVELOPMENT

CORPORATION

7760

W. T. CARSON • W. T. CARSON, JR.

P.O. BOX 346 • HUGHSON, CALIFORNIA

PHONE: TUXEDO 3-4375 • KELLOGG 7-2516 (Modesto)

October 1, 1960

Mr. F. J. Miller Allegheny California

Dear Mr. Miller:

This letter and the enclosed material will inform you of the background and recent activities of the Carson Land and Development Corp. and the Cargold Mining and Development Corp. It has been impossible to complete a detailed report in this short time, however, the enclosed materiallwas taken from existing reports.

The principal shareholders and directors of the above companises are as follows:

Wm. T. Carson, Jr.
W. T. Carson
J. H. Wrenn
John K Northrop
Walter J Cerny
Dr. Robert R. Moon

Paul R. Repath

Pres. of Carson L and D Corp.

Pres. of Cargold Mining and Development Corp.

Consulting Mining Engineer

Former Pres. of Northrop Aircraft, Inc.

V. Pres. in Charge of Engineering, Northrop.

Pres. of Corp. producing and retailing

Jewelry. Ph D. in Economics U. C. Berkeley, Calif.

Manufacture, Los Angeles

The principal officers William T. Carson and William T. Carson Jr. Have both been trained in the Engineering Profession and are now ranching near Modesto, California Mr. William T. Carson Has been farming for approximately thirty-five years, however, he recieved his formal education in the field of mining engineering. William T. Carson, Jr. was educated in the field of aeronautical engineering and formerly as employed at Northrop Aircraft Inc. Hawthorne, California. During the war period of 1943 to 1946 he was secretary to the Board of Awards, New York Ordnance District, New York.

The Pioneer Title Company issued a Policy of Title Insurance on the Tybo Mine Property and a deed was delivered to the Carson Land and Development Corp. on August 21, 1960. Since that time four leases have been reviewed and an option given to Joint venture with you and the company you are forming. The material in Maps, drill logs assays etc., that accompanied the deed show the mine has considerable value. A detailed report on the mine, slag, and tailing is now being compiled based upon the new material available.

Carson Land and Development Corp. has renegotiated the leases on all to the Zamora River, Nambija River and Yacuambi River Placer Concession as well as the Nangaritza River Concession. Twenty five kilometers additional ground below the original lease has been acquired on the Zamora River. We are now awaiting the retur of the signed leases. Consequently, IT would like to review the latest

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ITEM [59]

STATE: COLORADO COUNTY: LAS ANIMAS API 05-071-06236 FIELD: WILDCAT 33S-65W 18 NW NW 732 FNL 935 FWL STATUS: AB-LOC

**OPR: EVERGREEN OPERATING** 

11-18 BURRO FEDERAL

ELEV: 7240 GR (VERTICAL)

PROJ DEPTH/FM: 1780 TRINIDAD PERMIT #95-145

LOC DESCRIPTION: 3 MI SE UNNAMED FLD(VERMEJO) 3 1/2 MI NW VALDEZ, CO; LAT: 3717730 LONG:

10471831;

**OPER ADD:** 1512 LARIMER ST STE 1000, DENVER, CO, 80202 PHONE (303) 534-0400;

Finlayson's report on the Zamora area and Wallis' report on the Nangaritza are well done and are being proven conservative by the values from the test pitting now being obtained on other concessions. Forexample, Howard Morrison's concession on the Bomboiza River reports considerably higher values, an average of \$1.79 per cubic yard. In addition, Mr. Snyder's test pitting has averaged \$1.92 per cubic yard. All test pitting is under the supervision of reputable engineering firms. It must be born in mind that each group is equipped with telescoping casings and efficient pumps that will allow a considerably higher recovery of values than was originally available to either Finlayson or Wallis. Mr. Finlayson refers to the poor recovery in his samples. I would also call attention to the enclosed map of Finlayson's test work on the Nambija and Zamora Rivers.

If an average of 50¢ net per cubic yard were realized on a minimum estimate of 150,000,000 dollars available on the Zamora, the concession would be valued at 75,000,000 dollars. This yardage is contained in the original Namibija—Yacuambi concession. It is estimated an additional 700,000,000 dollars have been added to this concession since the balance of the Zamora has been acquired. The Nangaritza is less accessable but it is estimated as having 500,000,000 to 700,000,000 cubic yards of placer gravels. The road to the town of Zamora has been completed thereby making that concession easier to supply. Mr. Morrison has to fly all of his equipment into the Bombeiza River.

I hope the enclosed information will serve to acquaint you with our two companies.

Sincerely,

Wm. T. Carson, Jr.

CARGOLD MINING AND DEVELOPMENT CORP.

COTTALABLE

October 1, 1960

#### SUMMARY

# OF THE OPERATION AND INVENTORY OF CARGOLD MINING AND DEVELOPMENT CORPORATION

The following report reviews the organization and inventory of Cargold Mining and Development Corporation. It contains an evaluation of the inventory proposed for operation. A review of the Officers, Directors, and Consulting Engineers is presented as a reference and to establish the necessary background for the documents and reports presented herein.

#### CARGOLD MINING AND DEVELOPMENT CORPORATION:

The Cargold Mining and Development Corporation was not organized for short term or speculative ventures, for in its By-Laws the following provision is made: "Authority to sell or transfer any assets of the Corporation shall first be approved by a vote of at least seventy (70) percent of the holders of shares of the Corporation".

The purpose of this Corporation is to acquire, hold, work, sell, or operate mines bearing gold, silver, and other associated minerals; also to purchase, own, improve, equip, operate, sell, or manage farms and to engage in any agricultural pursuit or undertaking in this country or any foreign country.

The Corporation has a total authorized capital stock of ten million (10,000,000) shares. The stock is nonassessable. The principal office of the Corporation is in the office of William J. Raggio, District Attorney, Washoe County Court House, Reno, Nevada. All corporate development and organization with reference to stock, taxes, etc., will be reviewed by Mr. Graham Sterling of O'Melveney and Meyers, Los Angeles.

#### CORPORATE STRUCTURE

The development of the corporate structure of Cargold Mining and Development Corporation and Carson Land and Development Corporation has been accomplished under the guidance of Mr. Graham Sterling of O'Melveny and Myers, Los Angeles, and Mr. William J. Raggio, District Attorney, Washoe County, Reno, Nevada. At present Carson Land and Development Corporation, a Nevada corporation, is petitioning the Secretary of State of the State of Nevada to drop its par value to zero.

To review our present position: Carson Land and Development Corporation will be the holding company, the owner of all real property which it will lease to the operating company, Cargold Mining and Development Corporation. In any organizational or preliminary financing, shares of stock in both corporations will be issued. The operating company, Cargold, will retain all profits and finance all operating ventures within its own structure. Therefore, in any secondary financing only the Cargold Mining and Development Corporation will petition the Securities and Exchange Commission.

All steps taken in issuing stock and assigning inventory and leases will be accomplished under the recommendations set forth by Mr. Sterling and the Tax Counsel of O'Melveny and Myers. A separate report on the best procedure to follow in the issuance of stock will be furnished in the near future.

#### TYBO MINE

In the past few weeks considerable marketing research has been accomplished with respect to the crude ore, old smelter slag, tailings, concentrate from a milling plant and the general economic picture of Tybe.

The American Smelting and Refining Company Plant at Selby, California furnished an acceptance schedule and their Zinc Plant at Amarillo, Texas has given a schedule. Photostatic copies of these schedules are contained in this report.

The International Smelting and Refining Company of Salt Lake City, Utah, has furnished both lead and zinc acceptance data. This company will bid on the silver-lead schedule and all Tybo products when production is certain. Mr. Burt of I. S. & R. stated that in recent years they had made a geological study of Tybo that resulted in a favorable summary, however, a clear working agreement was not available on the property at that time. Mr. Burt has volunteered access to all I. S. & R. technical data on Tybo. Since I. S. & R. is a subsidiary of Anacondo Copper Company, Cargold will attempt to determine if Mike Keldale, the Chief Consulting Geologist for Anacondo Copper Company made any reports on Tybo.

Mr. Burt has requested that samples of the Tybo slag be shipped to him for analysis. I. S. & R. will then make an offer on the slag under present market conditions. Since I. S. & R. is familiar with the Tybo slag, there is a possibility of shipping the unprocessed slag direct. This would result in a return without any outlay by Cargold for the loading and shipping would be paid by the smelter.

#### RICO ARGENTINA OPERATION:

Cargold contacted Sherman Hinkley, General Manager of the Rico Argentina Company, Colorado, and the following information was obtained. Mr. Hinkley reported that they were working in 5 Pb, 6 Zn and 3 Ag and 0 Au with a 200 ton per day mill. They are grinding to 100 minus to release the values. Their milling cost is \$2.50 per ton.

Rice Argentina is shipping a bulk concentrate based on the following acceptance schedule: Zinc \$4.78 per cwt., Lead \$8.30 per cwt. with an \$18.00 per ton freight rate and \$4.00 per ton treatment cost. The zinc concentrate must be 50 percent.

In view of the above statement, Ivan Nicholas Laboratory was contacted and Mr. Nichols stated that he was running controls for Rico Argentina and that their ore is very similar to Tybots ore in nature and almost identical in iron and sulfide properties. Further, comparison was made in that both ores have the lead and zinc locked in iron sulfides and they are released between a grind of 65 minus and 100 minus. There has been no trouble from the flotation standpoint and values are easily recovered. Rico Argentina recovery is 90% for lead and 85% for zinc and a bulk concentrate is obtained. This allows for a cheaper operation than attempting to separate the lead and zinc.

On the basis of a 100 ton per day mill, and compared to Rico Argentinats operation with a similar ore, it is estimated that the milling cost at Tybo would run \$3.50 per ton. However, Tybo mill heads will be of a higher value. Further investigation and analysis reveal Tybo ore to be .04 gold, 8 oz. silver, 8 percent lead and 8 percent zinc.

Mr. Lyle Hubbard, Mine Superintendent for Kenecott Mining Company at Ruth, Nevada, formerly worked below ground at Tybe. He gave permission to

quote him as saying that the ore in upper levels averages 6 to 7 feet and in some places is as wide as 15 feet. However, at lower levels, 500 to 900 feet, the miners skipped ore shoots that narrowed to 6 feet. On the 1000 foot level 15 to 20 men worked in 60 foot stopes. In fact, he worked for 2 years in just one stope area with no selective mining. This statement agrees with Cargoldos findings for on the 300 foot level a pod measuring 40 feet in width was found. Mr. W. T. Carson personally observed this.

DETAILED ECONOMICS:

A recent trip to the Tybo property resulted in an increased estimate of broken ore from 3,000 to 5,000 tons. A grade of .04 gold, 8 ezs. silver, 8% lead and 8% zinc was shown in the analysis of samples taken on the property.

#### A. SLAG:

Two shipments to the Selby Plant of A. S. & R. in 1944, when translated into present market values, average the following:

Weight in Dry Tons	96.465 tons
Gold value per ounce per ton	.20 ez. or \$7.00
Silver value ounce per ton	5.17 oz. or \$4.6
Lead value per cent per ton	3.875 or \$9.30
Gross Market Value	20.95 per ton
Estimated tonnage available	30,000 tons

For immediate income, with no investment by Cargold, direct shipment would be the course to follow. In the case of direct shipment (no processing) to I. S. & R. it is estimated that only \$1.00 per ton net would be realized or \$30,000.00 net.

Truck Freight to Railhead 4.90/ton

Railroad freight 3.50/ton

Loading Charge (front end loading) .25/ton

TOTAL EXPENSE 8.65/ton

No royalty, property free and clear

#### B. UNDERGROUND ORE:

QUALIFICATION: The following reserve estimate concerns only the depth to the 400 foot level that is available through the 2-G Shaft. The major reserves of the Tybo mine, between the 1,000 and 1,300 foot levels, will be accessible after the Hale's Shaft has been rehabilitated. Narrow widths shown on the 400 foot and 300 foot assay plan compiled in 1926 are disproved by the fact that existing stopes show 6 foot to 10 foot ore widths in place of 2 foot to 3 foot widths shown on the plan.

The last 300 feet of the 300 foot level, running southeasterly, was driven by the Hall Brothers in 1940. They report all drift cubics shipped with "Backs" left intact. There are 600 feet of virgin backs above that level. The water problem has been thoroughly investigated and will not prove too difficult to solve.

#### C. RESERVE ESTIMATE:

Broken ore 5,000 tons

Values per ton:

Gold
Silver
Lead
Zinc
8.0 %
8.0 %

Total value per ton

\$46.00

300 and 400 foot level developed

25,000 tons

Per ton values same as above

\$46.00

400 foot level, drift out and raises

25,000 tons

Per ton values same as above

\$46.00

Milling above reserves (Based on 100 ton milled per day)

A 15% mill loss will be assumed due to the sliming of the non-sulphide complex, etc.

Total values in one days operation per A. S. & R. Schedule:

4.0 oz. Au. 800

800 ozs. Ag

8 Tons Pb

8 Tons Zn

Less 15% mill loss = 85% Recovered

3.4 ozs. Au. 680 ozs. Ag.

13,600 lbs. Pb.

13,600 lbs. Zn.

Total Gross Value per day

\$2,799.25

Note: A small portion of the above 15% estimated mill loss will be in the form of lead-silver in zinc concentrates. Part of the silver may be salvaged on the payment schedule.

#### D. PRODUCTION COSTS:

First 50 working days labor cost and supply cost while handling the 5,000 tons of broken ore.

#### MINING DEPT.

Two shift per day operation.

2 mucking machine operators @ \$20 per day each 2 Trammers @ \$16.00 per day each	\$	40.00
l lead miner-timberman, assist trammers pocket pulling		20.00
2 Hoistmen @ \$20 per day ea.	ä	40.00
Workman's Comp. Underground  # Hoistmen	•	132.00 9.20 1.60
	\$	142.80
Supplies, fuel, timber, powder, etc.		60.00

The first 5,000 tons with a gross market value of \$46 will be reduced to \$39.10 with the 15% mill and marketing loss (High) marketable metal out of the first 5,000 is estimated to be valued at \$195,500.

After the first 5,000 tons of broken ore have been extracted and breakage is commenced the labor and supply cost will be as follows:

l mucking machine operator 5 combination miners—timbermen @ \$20 each 2 Motormen @ \$20 each 2 Skiptenders generally servicing primers, etc @ \$16 2 Hoistmen @ \$20 each	\$ 20,00 100,00 40,00 32,00 40,00
	\$ 232,00
Workman's Comp. Underground  # # Hoistmen	19.20
	\$ 252.80
Supplies, fuel, powder, air, etc.	105.00
Total mining dept. cost per day when producing the 25,000 tons of in place ore	\$ 357.80
MILLING DEPT.	
1 Crusherman (crush out in 8 hrs. grease rest) 3 mill operator @ \$20 per day each 1 concentrateman, gentl mill utility	\$ 16.00 60.00 16.00
Workman <sup>‡</sup> s Compensation	\$ 92.00
Total Daily Mill Labor	\$ 101.20
Mill Reagents, carried parts cost, maintenance power cost, expendable parts, replacement	60,00
Total Estimated Mill cost 100 TPD	\$ 161,20
GENERAL:	
l General Superintendent l Heavy Duty experienced mine-mill mechanic l Truck Driver, overall utility man	30.00 22.00 20.00
Workman <sup>®</sup> s Compensation	\$ 72.00 7.20
William S Compensation	\$ 79.20

Total Direct	daily production cost	1st 5,000 tons	\$ 443.20
Total Direct	daily production cost	New Breakage	598,20
	or per ton		5.98

It is suggested to first work a 40 hour week to keep over time to a minimum and as soon as possible a staggered mill shift should be effected. In this way the mill can operate seven days a week and no overtime experienced except in the case of the mechanic on emergency repair jobs. With the installation of adequate storage the mine can produce two days extra mill run in five days of mining. As soon as this policy can be instituted the mining and milling cost will be reduced below the \$5.98 cost per ton shown above. It should be pointed out that the \$5.98 cost per ton would probably be over \$10.00 per ton if the exploration, development, and grade proof had not already been effected by the former operator.

#### E. MARKET ANALYSIS:

The following analysis is based on the schedules offered by the American Smelter and Refining Company and the International Smelting and Refining Company. These are open schedules that can be improved when a definite production schedule is available. I. S. & R. has indicated a desire to discuss a purchase schedule for silver-lead concentrates against the A. S. & R. schedule listed below.

The A. S. & R. schedule is effective March 29, 1960 on an estimated daily silver-lead concentrate output from a 100 ton mill

GOLD: 4 ounces per day. 15% mill loss or 3.4 oz.
Pay 91.14% of 3.4 @ \$35.00

\$ 108,50

SILVER: 800 ounces per day.

15% mill loss or 680 ozs. @ 90¢ per oz.

Pay 95% market less l¢ per ounce
680 @ (90 x 95) -l

574.60

LEAD: 87 tons per day
15% mill loss or 13,600 lbs.
Pay 90% of 13,600 = 12,240
Less 2¢ @ 12¢ lb. market
12,240 x 10¢

\$ 1,224,00

Note:  $66\frac{1}{2}\%$  wet lead assay deduct  $1\frac{1}{2}\%$  for calculations

ESTIMATED DAILY MARKET PAYMENT
Less treatment charge \$7.50 with 10¢ credit for
each unit over 30% Pb @ 65% concentrate equals
\$4.00 base or 4 x 6.8 tons

1,907.10

- 27-20

NET ESTIMATED SMELTER PAYMENT PER DAY

\$ 1,879.20

Zinc 10% free excess charged at 30¢ per unit

Moisture: minimum deduction of 1% moisture will be made from wet weight when over 1% contained actual moisture will be deducted.

TRUCKING COST: Existing bid  $3\frac{1}{2}$ ¢ per ton mile to Selby 387 miles = 13.55 per ton 6.8 tons lead plus 3.43 tons gangue and other minerals plus 5% moisture = 10.74 ton 10.74 x 13.55

145.52

ESTIMATED NET AG, AU, PB PER DAY TO CONCENTRATE BIN

\$ 1,734.38

The following calculations are based on I. S. & R., Great Falls, Montana market:

ZINC: 8 tons per day 15% mill loss 13,600 lbs. Pay 80% E. St. Louis Price, \$46.00 Base Charge 13,600 x 80% = 10,880 @ 12¢ 1,305.60 6.8 tons Zn plus other metals, gangue 5.556 tons plus 5% moisture 12.88 tons @ \$46.00 base 592.48 140 miles truck @ 3½¢ ton mile 4.90 RR Freight 17.93 22.83 22.83 x 12.88 Total Freight 294.00 TOTAL BASE AND HAULAGE 886.48 TOTAL ZINC NET TO CONCENTRATE BIN 419.12

Total Net to Mine Concentrate Bin @ 100 ton per day treated for a sulfide ore	\$ 2,190.57
Direct daily cost before management overhead	443.20
POSSIBLE DIRECT OPERATING NET	\$ 1,747.37
Direct daily cost before management overhead and amortization while running 25,000 to 50,000 above the 400 foot elevation	598,20
POSSIBLE DIRECT OPERATING NET - NEW BREAKAGE	\$ 1,592.37

By proper drying the 5% moisture content might be lowered in the filtered concentrates and reduce some freight.

Mr. Burt of I. S. & R. has made an offer to Cargold for some ore to be consigned to their selective flotation plant at Tooele, Utah. This will depend on samples now being supplied I. S. & R.. On the basis of the herein listed head values they would pay \$22 smelter net.

Costs involved:

Net I. S. & R.	22.00 per ton
Less 140 miles trucking to railhead 4.90 Less Railroad freight 3.50	8.40
Net to bin	8.40 13.60
Probable net on broken ore	10.00 per ton

The above may be a source of income along with the slag while the milling plant is being installed. This would give Cargold approximately \$50,000 above operating cost.

Detailed specifications and cost estimates for a 100 ton mill are now being compiled.

#### ECUADORIAN PLACER

Cargold has secured a transit survey map that shows the location and values of drill holes and test pits put down in the years 1939 to 1941 by the Zamora Mines Corporation. The area surveyed includes approximately 15 million cubic yards of placer gravels. The values obtained are excellent for surface values. However, since the nature of the geology in this region is one of continuous concentration with heavier particles working down, it will be necessary to test drill to bed rock and put in deep test pits in order to obtain a true picture of the values from the surface to bed rock. Once this has been accomplished, a true value of this property will be established. It must be pointed out that the average surface values shown on the transit map are two to three times higher than the values mined by dredge boat in California. In addition, the values per cubic meter will increase with depth to bed rock. The surface values alone would dictate further development and installation of a dredge boat operation.

Mr. Walter Johnson of the Walter Johnson Company, San Francisco, was contacted and asked to recommend a test program for this property together with estimated costs. Mr. Johnson has supplied a preliminary estimate, a copy of which is included in this supplemental report.

In Cargold's original report, it was stated that Mr. Howard P. Morrison has a concession similar to Cargold's approximately 50 miles north of the Zamora River. Mr. Morrison has contracted the Walter Johnson Company to handle the test work on his concession. Mr. Johnson has shipped a drill, telescoping casing, and other necessary test equipment to the Morrison Concession. Cargold has completed an agreement with Mr. Morrison providing

for the transfer of this test equipment, if in good working condition, to Cargold in Ecuador at the termination of the testing program. This will effect a considerable saving to Cargold and should facilitate the test work on our property.

Cargold\*s concession is now far more accessible than in the past due to the completion of a road over the Andes to the settlement of Zamora. Heavy equipment transportation will not be as expensive as originally contemplated. Mr. Morrison will have to fly the major portion of his equipment over the Andes to his concession. The 16 mm film taken on Cargold\*s concession shows the rough area that the road transverses. It covers the same area shown on the transit survey map.

The final signing of the lease agreements on this property will be on May 2, 1960. Therefore, our test program will have to be implemented prior to August 1, 1960. Mr. Johnson has assured us that he can meet this schedule by moving directly from Mr. Morrison's concession to Cargold's property.

#### BOMBOIZA PLACER CONCESSION

The following information was obtained from a Drill Line Map furnished by Morrison - Stanton Enterprises, 1745 K Street, N. W., Washington, D. C.:

Location: Bomboiza River, Tunduli Riffle, Ecuador, S. A.

Drill Line: Number 5

MUNICIPAL SELECTION DELICATION OF THE PARTY OF THE PARTY

DRILL NO.	DEPTH - FT.	VALUE PER CU. YD.
DL 5 - 1	10.0	\$ 1.35
DL 5 - 2	24.0	1.18
DL 5 - 3	32.0	1.62
DL 5 - 4	38.5	0.65
DL 5 - 5	35.0	1.14
DL 5 - 6	36.0	4.19
DL 5 - 7	27.0	2.45
	Average	\$ 1.79

All equipment has been flown in. There are four more drill lines to sample. Complete information will be furnished to Carson Land and Development Corp. as it is obtained.

# UNION ENGINEERING CO.

610 South Broadway :: LOS ANGELES 14, CALIFORNIA MAdison 8-8550

September 6, 1960

Mr. W. T. Carson P. O. Box 346 Hughson, California

Dear Mr. Carson:

Jimmy Wren writes me that you expect to put me on your Board of Directors, as discussed when you were here, and that I will receive a block of stock, all of which is very gratifying. I am sure I can be of a lot of help to you in carrying on the operations of your Company.

He also tells me that you are expecting to prospect and drill the Pratt Playa section in Ecuador on Wren and Finlayson's first concession. As you perhaps know, I have a substantial interest in two concessions, both of which have been signed and published and we have made preliminary examination of both of them. Mr. McGord reports the first concession has a limited yardage of good gravel but that the second concession, on which he spent two months time prospecting, has a very large yardage and the equalized average of all of his samples was \$1.92 per cubic yard. On one large bench, which he estimates has two progmillion cubic yards of gravel, his samples ran from \$1.00 to \$2.00 per cubic yard. We have shipped down a drill to Guayaquil and shortly expect to do some drilling on this concession.

In my opinion Ecuador has some very fine placer deposits and Wren and Finlayson's two concessions and my second one are not far apart and I believe constitute the best part of the Oriente district for placer.

I am pleased to know, also, that you have acquired the Tybo property and I believe it can be put back into production based on its old operating record.

My very best regards and hoping to see you soon, I am

Very truly,

B. M. Snyder Juyder

BMS:as

#### PLACER GOLD CONCESSION REVIEW

by Mr. Charles M. Heron

Cargold hired Mr. Charles M. Heron, Consulting Engineer, San Gabriel, California, to review the data presented herein as an unprejudiced third party. In a letter to Mr. John K. Northrop, Mr. Heron makes the following report:

"(c) The Ecuador placer deposits, - although the data given are not an adequate basis for a definite appraisal --, is the type of operation which has big possibilities. The report you left with me states concerning the original attempt to determine the size and grade of the deposits by drilling -"The above drilling not being satisfactory from an accurate sampling standpoint, it was decided to supplement this work with actual gravel sluicing to as great a depth as possible, and to sink pits using hand operated pumps and windlasses". I know of no substantial dredging operation which has maintained an average grade of \$1.25 per cubic yard, mentioned as the average of 200 pans taken from dried pits and tested by sluicing. However, these results seem to warrant a thorough and well organized preliminary examination, with the test pits or drill holes systematically distributed over a substantial area. There is nothing in the report to show where any sampling mentioned was done or whether it established a cross section of the gravel deposit or was confined to a small area where there was a concentration of values. The fact that a large percentage of the gravel is below the water level necessitates special methods of sampling, perhaps in some cases the use of a caisson,

This is the type of project which should be passed upon by an engineer particularly qualified in placer and dredging, qualifications which I make no pretense of having. Dredging is a low-cost big-tonnage operation (comparable to open pit mining in copper, for example), but the preliminary sampling and appraisal, because of the high costs of equipment, must be carefully done under experienced supervision. Establishment of a temporary camp, the clearing of a landing strip for airplanes and the bringing in of adequate equipment and men for the testing operation are absolute essentials, involving a substantial expenditure. Certainly the first step for a prospective investor in the project would be a careful examination by a competent and qualified placer engineer. I have made some effort to find out who is the best of the few placer and dredging specialists.

From the information presented, a drag line dredge seems to be the sort of an operation which would be required. Such a dredge will probably represent an investment of nearly \$500,000.00. Preliminary to such an expenditure an absolute determination should be made of reserves of gravel, of a grade and quality to justify such an investment. One of the first steps, of course, will be the preparation of

an airstrip of sufficient length and surface quality to permit the landing of fairly heavily loaded planes. The drilling should be accompanied by an accurate survey, to show the location of the drill holes or testpits with careful records as to depth and grade,"

In summary, Mr. Herron states:

"The Ecuador placer project has attractive possibilities, which seem to warrant careful investigation by a competent placer specialist. There is no question in my mind but that the owners of the concession are honestly convinced of the merits of the project, but I feel that their conclusions may not be based on adequate knowledge. Preliminary investigation such as I have suggested above may easily involve an expenditure of \$50,000 to \$100,000."

Since Mr. Herron's report the material on the placer concession has been expanded by the following items:

- A. Transit Survey of the Pratt Playa and values listed by Mr. Finlayson
- B. An additional economic analysis as suggested by Mr. Dennis A. C. Dalliston formerly of South American Development Corporation
- C. Color pictures of the concession

During later conversations, Mr. Heron stated that a transit survey was quite necessary and that when available he would be glad to review and report further.

Mr. Heron recommended Walter Johnson, Engineering Consultant, as a placer mining engineer qualified to pass on this project.

#### WALTER W. JOHNSON COMPANY

DESIGNERS AND BUILDERS

BUCKET DREDGES

SUCTION DREDGES

PLACER MINING MACHINERY 625 Market Street

TELEPHONE: SUTTER 1-4537

SAN FRANCISCO 5. CALIFORNIA

CABLE ADDRESS: RETLAW

April 15, 1960

Cargold Mining & Development Co. Post Office Box 3068 Modesto, California

Attention of Mr. W. T. Carson

#### Gentlemen:

Confirming our telephone conversation of yesterday, below is an estimate of drilling expenses per month in Ecuador which we gave to Mr. H. P. Morrison last November:

1 Driller	\$700.00
1 Panner	700.00
l Native Cook	100.00
2 Native Laborers	60.00
Food	400.00
Compensation, etc.	300.00
Transportation - two men round	
trip \$1800. per month based on	ı
6 mos.	300.00
Gas and Oil	150.00
Freight on Drill - S.F. and	
return \$1500 - per month	250.00
Parts, rope, drill shoes, etc.	100.00
Telegraph, incidentals, etc.	150.00
Drill Rental	750.00
	the second second second second second second

Total Estimated Cost per Month \$3960.00

This estimate needs to be revised as we were unable to engage a driller for Mr. Morrison for \$700. a month and expenses. The driller who is leaving for Ecuador next month will receive \$1,000. per month. If a panner is sent from the States, which would be desirable, it would be necessary to pay the panner the same salary.

It is possible that the drill Mr. Morrison is using will be available for use on your project in the event that he is through with his drilling before you are ready to start. In ground 50' deep the drill should average one hole every three days. The drilling rate necessarily depends on the physical conditions of the deposit.

We would undertake to organize, direct, and manage your drilling program for a fee of \$1500. a month. All drilling expenses to be paid by your

Cargold Mining and Development Co. Attention of Mr. W. T. Carson April 15, 1960

Page 2

company. If sufficient values should be established to justify an operation we would want a fee of \$5,000 for writing the report. This figure includes the time but not the expenses of our representative who would necessarily have to visit the property before a report was written.

Trusting the above information will be sufficient for your purpose at this time, we remain

Very truly yours,

WALTER W. JOHNSON COMPANY

Walter W. Johnson President

WWJ/jc

Phone ELgin 9-9962

Mr. James H. Wren 4297 D Sreet Sacramento, Calif.

# NICHOLS LABORATORIES, INC.

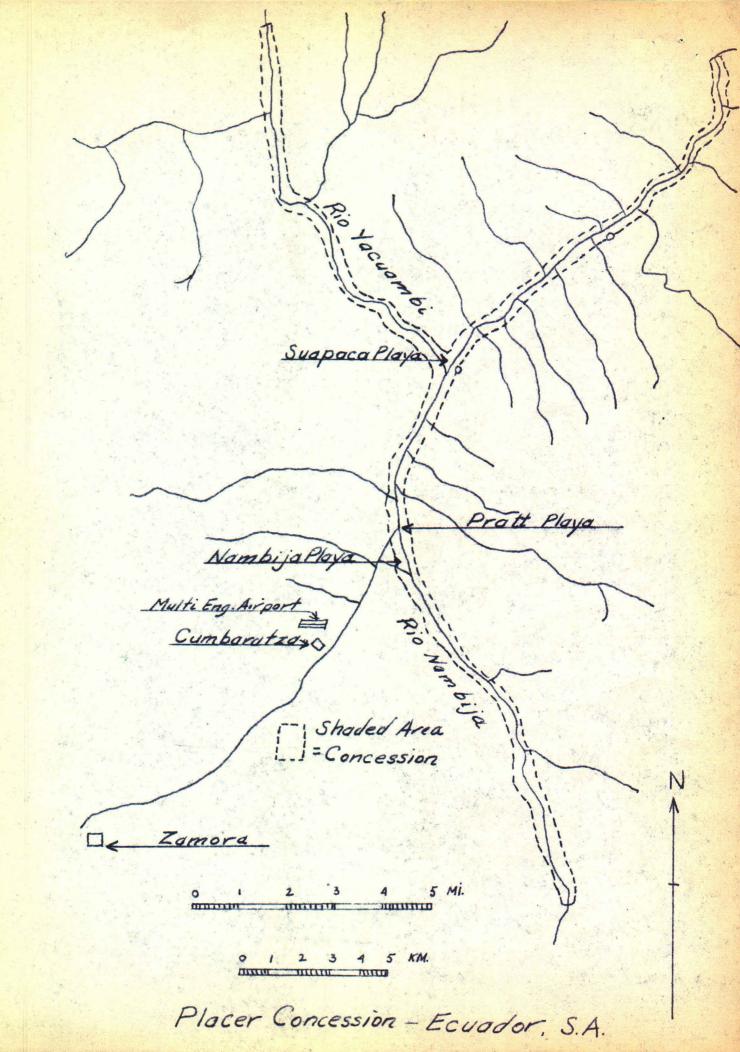
ASSAYERS & CHEMISTS
C. Ivan Nichols, Mgr.
160 South West Temple Street
Salt Lake City I, Utah

April 18, 1960

									, -/-	**	
WE HAVE ASSAYE	D	1	SAM	PLES				ASSAY P	ER TON	OF 2000	POUNDS
DESCRIPTION	NO.	GOLD	SILVER	WET LEAD	COPPER %	ZING %	INSOL %	%	%	%	VALUE OF GOLD PERTON
TS 1		0.155	9.70	3.6		0.9					
			* 2					9			
			s		THIS	IS THE	TABLE	S SLAG	CONC	TS.	
,			~		8		×				

CHARGES \$ 4.00

di Jani Muhl,



# LABORATORY REPORT

### ABBOT A. HANKS, Inc.

ENGINEERS, ASSAYERS, CHEMISTS, METALLURGISTS **CONSULTING - TESTING - INSPECTING** 

> ESTABLISHED 1866 **624 SACRAMENTO STREET** SAN FRANCISCO 11, CALIFORNIA TELEPHONE GARFIELD 1-1697

Lab. No.

36847

Date

October 13, 1958

Submitted by

Nichols Laboratories, Inc. 160 So. West Temple Street Salt Lake City 1, Utah

Sample Mark Black Sands 858

# QUALITATIVE SPECTROGRAPHIC ANALYSIS

# **Metals Found** and Estimated Percentage Range

	Less than .03%	.03% to .30%	.30% to 3%	3% to 30%	30% to 100%
(	Chromium Copper Silver Sbalt Sodium Molybdenum	Aluminum Calcium Magnesium Vanadium Gold Nickel	Titanium Zirconium Silicon Manganese		Iron
				NOTE: THIS BLACK IS FROM THE PRAT TEST SANDS CONCE WITH OUT FREE IR OF THE PRODUCT W WITH THE FREE IR ABOVE PERCENTAGE UALLATATIVE ANALYS PROPORTIONATELY	T PLAYA INTRATE COMPOSITE ON REMOVED. 2/3s IAS FREE IRON. ON REMOVED IS ON THE

Remarks 2cc James H. Wren & Co. 4297 D Street Sacramento, Calif. lec Nichols Laboratories

RESPECTFULLY SUBMITTED.

ABBOT A. HANKS, INC.

ylnal Signed by MARTIN P. QUIST

Spectro-Chemist

Martin P. Quist

# J. H. WREN & CO.

CONSULTING MINING ENGINEERS

CABLE ADDRESS

APRIL 14. 1960

PHONE GLADSTONE 6-0922
4297 D STREET
SACRAMENTO, CALIF.

TO:

MR. W. T. CARSON, JR.

**EROM**:

JAMES H. WREN.

SUBJECT :

RIO NAMBIJA AND RIO ZAMORA CONFLUENCE, ECUADOR, S. A.

THE ZAMORA MINES CORPORATION, AS LISTED IN THE FORMAL REPORT OF THE ZAMORA, ECUADOR CONCESSION, CONDUCTED AN EXPLORATION TEST DRILLING, PITTING, AND CHANNELING PROGRAM DURING THE YEARS 1939 TO 1941 UNDER VERY PRIMITIVE CONDITIONS WITH THE DRILLING BEING DONE WITH A HAND OPERATED UNIT. TRANSPORTATION FROM LOJA, ECUADOR WAS BY MEANS OF MULE BACK OVER THE ANDES, NO PROJECT SITE COMMUNICATION OTHER THAN NATIVE RUNNER, ETC. THE HEREWITH ATTACHED EXPLORATION PLAN WAS PART OF THE RESULTS.

THE ATTACHED PLAN WAS COMPILED FROM A TRANSIT SURVEY BY AN EXPERIENCED GRADUATE ENGINEER. THE PHOTOSTAT IS ONE TAKEN OFF OF A PRINT WHICH IN TURN HAD BEEN TRACED. Mr. D. C. FINLAYSON CHECKED AND APPROVED OF THE PRINT'S ACCURACY.

PLEASE NOTE THAT ALTHOUGH THE HOLES, PITS AND CHANNELS WERE GENERALLY OF SHALLOW NATURE THAT EXCELLENT SURFACE VALUES WERE PROVEN. THIS AREA OF FAST EROSION, WITHOUT THE DEPOSITION AND REDEPOSITION CHARACTERISTIC OF THE TERTIARY CHANNELS OF THE SIERRA NEVADA RANGE, IS ONE OF CONTINUOUS CONCENTRATION WITH THE HEAVIER PARTICLES AND PIECES OF GOLD CONTINUALLY WORKING DOWN TOWARDS BEDROCK. A MODERN POWER DRILLING PROGRAM COUPLED WITH A CASED TEST PITTING PROGRAM TO DELIVER ACTUAL BEDROCK CHARACTER AND GOLD CLEANUP VALUE SHOULD ADEQUATELY PROVE THE ORIGINAL GRADE ESTIMATE OF \$1.25 PER CUBIC YARD. THE TEST PITTING PROGRAM DESIGNED TO CHECK A LIMITED NUMBER OF HOLES ALREADY DRILLED AND THOSE PLANNED WILL DELIVER A HIGHLY ACCURATE EVALUATION. THE PLAN WILL ORIENT THE REPORT READERS RELATIVE TO RIVER POSITION AND THE RELATIONSHIP OF THE NAMBIJA TO THE ZAMORA.

J. H. WREN & CO.

JAMES H. WREN.

