CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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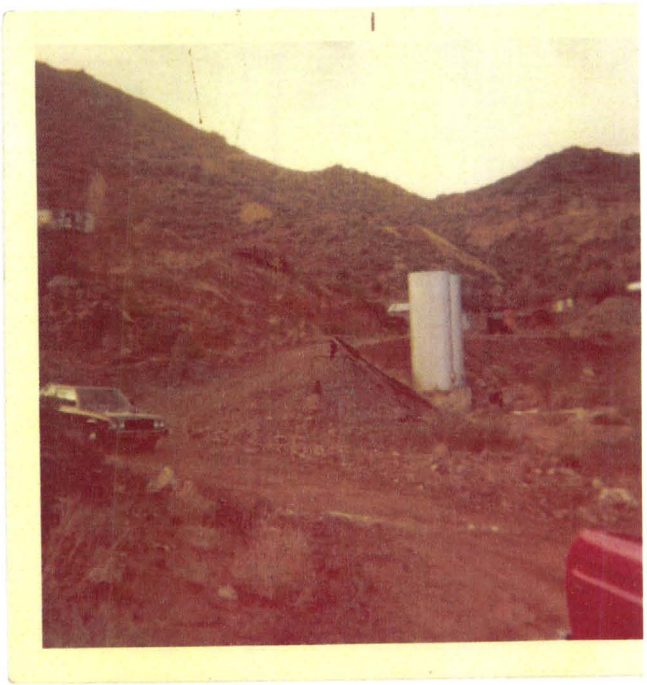
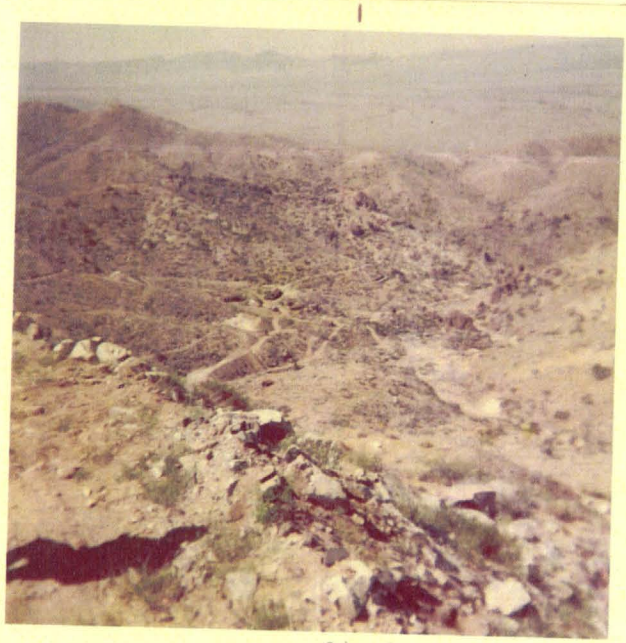
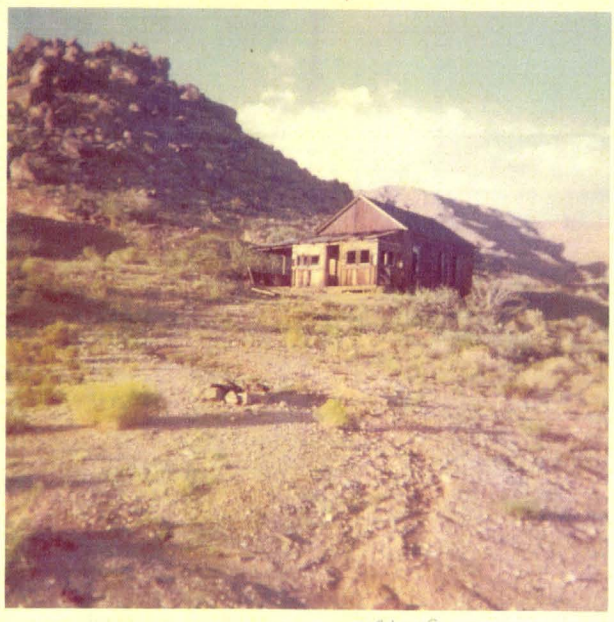



NOTICE!
SEP 14
CHILD





D. K. Martin

4728 N. 21st Ave
Phoenix, Ariz 85015

Mr. Charles E. Goetz
P. O. Box 2228
Phoenix, Arizona

Dear Mr. Goetz:

Enclosed are copies of the location notices for the Chico Property with exception of Ada #1 and Ninety Eight. These have been requested from Kingman.

I will however record the enclosed claims with the BLM with the Affidavit of Labor for 1977-1978.

Very truly yours,

D. K. Martin

encl;

12-16-66

"EXHIBIT A"

PARCEL NO. 1

Two patented mining claims, one being the Little Boy designated as Mineral Survey No. 2159, embracing a portion of Section 5, T22N, R17W in the Wallapai Mining District, Mohave County, Arizona, the United States Patent of which is of record in the Office of the County Recorder of said Mohave County, Arizona in Book 25 of Mining Deeds, Pages 271-273; and True Blue designated as Mineral Survey No. 2653, embracing a portion of Section 31, T23N, R17W in the Wallapai Mining District, Mohave County, Arizona, the United States Patent of which is of record in the Office of the County Recorder of said Mohave County, Arizona in Book 248 of Mining Deeds, Page 462.

PARCEL NO. 2

Forty-nine (49) unpatented mining claims located in Mohave County, Arizona:

Designation	Status	Original Book-Page	Amended Book-Page	BLM or MS #	Date of Location
Ada #1		5-X 237		A MC 34859	10-10-64
Ada #2		5-X 238		A MC 24860	10-10-64
Bonnie Jack	Amended	6-D 328	6-E 440	A MC 34861	10-01-66
Bonnie Jack #1	Amended	6-D 326	6-E 442	A MC 34862	10-01-66
Bonnie Jack #2		6-E 444		A MC 34863	1- 5-67
Cashier	Amended	5-W 70	6-E 417	A MC 34864	09-02-64
Cashier Extension	Amended	5-W 71	6-E 419	A MC 34865	09-02-64
Charles G. #1		6-F 160		A MC 34866	04-01-67
Charles G. #2		6-F 161		A MC 34867	04-01-67
Hassayampa	Amended	5-W 343	6-4 421	A MC 34868	10-02-64
Little Boy #2	Amended	5-D 400	5-M 283	A MC 34869	02-05-58
Little Boy #3	Amended	5-D 401	5-M 285	A MC 34870	02-05-58
Little Boy #4	Amended	5-D 402	5-M 287	A MC 34871	02-05-58
Little Boy #5	Amended	5-D 403	5-M 289	A MC 34872	02-05-58
Little Boy #6	Amended	5-D 404	5-M 291	A MC 34873	02-05-58
Little Boy #7		5-M 295		A MC 34874	03-16-61
Little Boy #8		5-M 297		A MC 34875	03-16-61
Mammoth #1	Amended	5-W 72	6-E 445	A MC 34876	09-02-64
Mammoth #2	Amended	5-W 344	6-E 447	A MC 34877	10-02-64
Mammoth #3	Amended	5-W 345	6-E 449	A MC 34878	10-02-64
Mammoth #4	Amended	5-W 73	6-E 451	A MC 34879	09-02-64
Mammoth #5	Amended	6-D 327	6-E 453	A MC 34880	10-01-66
Mammoth #6		6-E 455		A MC 34881	01-05-67
Mammoth #7	Amended	6-A 408	6-E 457	A MC 34882	01-01-66
Mammoth #8	Amended	6-A 409	6-E 459	A MC 34883	01-01-66
Mammoth #9		6-H 463		A MC 34884	01-10-68
Mammoth #10		6-H 464		A MC 34885	01-10-68
Mammoth #11		6-I 261		A MC 34886	03-01-68
Mammoth #12		6-I 262		A MC 34887	03-01-68
Mammoth #13		6-I 263		A MC 34888	03-01-68
Mammoth #14		6-I 264		A MC 34889	03-01-68
Mammoth #15		6-I 265		A MC 34890	03-01-68

Mammoth #16		6-I	266		A MC	34891 03-01-68
New Years	Amended	5-W	346	6-E 430	A MC	34892 10-02-64
New Years Extension	Amended	5-W	347	6-E 432	A MC	34893 10-02-64
Ninety Eight "98"	Amended	4-C	427	5-M 293	A MC	34894 01-11-52
Panama	Amended	5-W	74	6-E 427	A MC	34895 09-02-64
Panama Extension		6-E	429		A MC	34896 01-05-67
Pasadena	Amended	6-A	407	6-E 423	A MC	34897 01-01-66
Pasadena #1	Amended	6-A	406	6-E 425	A MC	34898 01-01-66
Scotty "Scottie"	Amended	5-W	75	6-E 434	A MC	34899 09-02-64
Scotty "Scottie" Extension "1"	Amended	5-W	76	6-E 436	A MC	34900 09-02-64
Scotty "Scottie" Extension "2"	Amended	6-B	91	6-E 438	A MC	34901 11-01-65
WD #1		235	859		A MC	34902 08-29-74
WD #2		235	895		A MC	34903 08-29-74
WD #3		235	858		A MC	34904 08-29-74
WD #4		235	897		A MC	34905 08-29-74
WD #5		235	899		A MC	34906 08-29-74
WD #6		235	901		A MC	34907 08-29-74

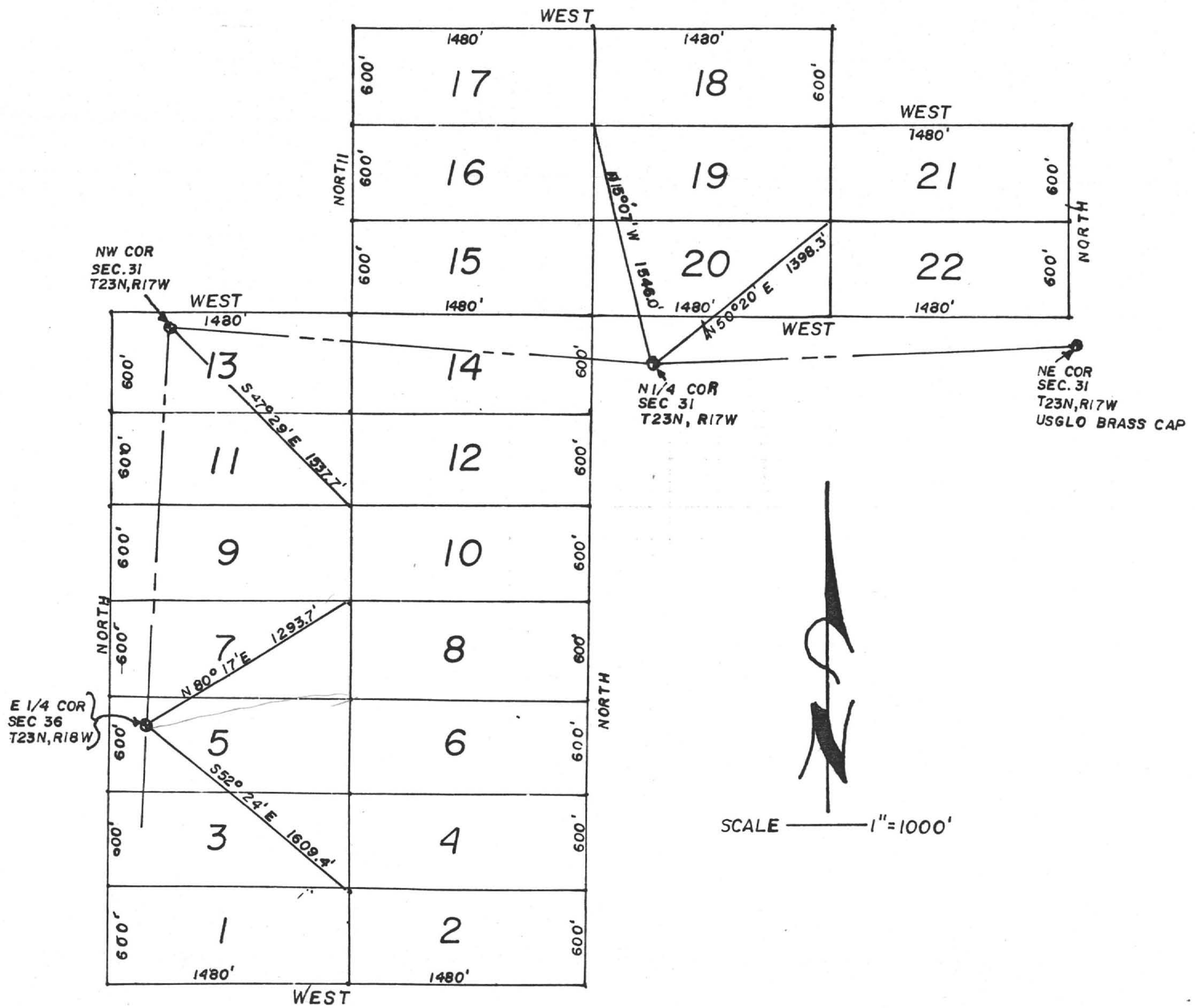
PARCEL NO. 3

Six (6) unpatented mining claims all located in the Wallapai Mining District in Section 31, T23N, R17W, Mohave County, Arizona, as follows:

(1) Bromide #1, filed in Book 5N, Pages 178-179;
(2) Bromide #2, filed in Book 6B, Page 327;
(3) Black Hawk #1, filed in Book 5D, Pages 453-454;
(4) Black Hawk #2, filed in Book 5N, Pages 176-177;
(5) Black Hawk #3, filed in Book 5W, Pages 460-461; and
(6) Last Chance, filed in Book 5G, Page 18.

References to book and page for the unpatented claims of Parcels 2 and 3 are references to the County Recorder, Mohave County, Arizona.

CHICO CLAIMS 1-22 LOCATION — SECTIONS 30 & 31, T23N, R17W & SECTION 36, T23N, R18W
G.& S.R.B.M., WALAPAI MINING DISTRICT
MOHAVE COUNTY, ARIZONA



INDEXED
MICROFILMED
PROOFED
INDEXED MINES
81-5958
Recorded at Request of [illegible]
FEB 20 1981 - 11 20 AM
in book 693 of Official Records, Pages 242-243
Records of Mohave County, Arizona
Joan McCall
Recorder
By [illegible]
Deputy Recorder
3rd

BOOK 693 PAGE 243

PACIFIC
REGIONAL
OPERATIONS, INC. P.O. Box 716 • Scottsdale, Arizona 85252 • (602) 994-3147

SUMMARY OF GEOLOGICAL REPORT
CHICO MINES PROPERTY
WALLAPAI DISTRICT, MOHAVE COUNTY, ARIZONA

The Chico Mines Property consists of 51 contiguous mining claims, two patented, located in Sections 29, 30 and 31, T23N, R17W, and Sections 5 and 6, T22N, R17W, GSRM, Mohave County, Arizona.

The property is bounded on the east by Stockton Hill Camp, a late 1800's silver bonanza, on the south by the Golconda Camp, once the largest lead-zinc-silver producer in the area and bounded on the north by the Pennzoil-Duval copper-moly porphyry, an active open pit mine.

The property is located in the central portion of the Cerbat Mountain Range, one of the many north-south trending, fault-block ranges of the southwest desert. Rocks exposed at the surface include metamorphosed pre-Cambrian igneous and sedimentary rocks cut by Mesozoic (?) intrusives and Tertiary extrusives.

The ore deposits on the Property may be of as many as three types; Vein deposits of primary base metal-silver sulfides; oxidized, near surface veins often greatly enriched in precious metals; and, copper-moly porphyry, an extention of the Duval orebody.

The most favorable loci for ore is at the junction of veins and randomly placed along the vein in shoots or lenses. Several major veins trend northwest and intersect with the northeast trending Broncho Dyke on the Chico Property.

Results of field reconnaissance indicate the following:

A.) Primary sulfide minerals, mostly pyrite, arsenopyrite, galena, sphalerite and chalcopyrite, are found in most of the accessible workings on the property.

B.) An oxidized zone, 50-300 feet deep, consisting of a vein swarm greatly enriched in precious metal, and representing a considerable amount of ore, is present in the southwest portion of the property bordering Stockton Hill. This zone may be minable by surface methods and amenable to cyanidation.

C.) Rock equivalents of the Duval orebody are present on the Chico Property and abundant copper sulfate precipitate may be noted in the stream bed located in the west-central portion of the Property. This suggests the southward extention of the Duval orebody into the Chico Claims.

D.) Previous mining operations on the Chico Claims have produced some sizable mine dumps. The possibility of precious metal recovery from these dumps should not be overlooked. Cursory examination indicates in excess of 150,000 tons of material averaging 0.02 ounces gold per ton and 1.5 ounces silver per ton.

PACIFIC
REGIONAL
OPERATIONS, INC. P.O. Box 716 • Scottsdale, Arizona 85252 • (602) 994-3147

April 20, 1981

Stan West Corporation
2701 E. Camelback Road
Phoenix, Arizona 85016

Attention: Mr. Scott Norris

Re: Chico Mining Claims Property
Mohave County, Arizona

Dear Scott:

As a follow up to our telephone conversation this morning, please find enclosed the following maps and reports for the Chico Mining Claims:

Geologic Summary
Geological Report
Annotated Bibliography
Prospect Map

We have been conducting geologic studies in the Chico Mining Claims area of northwest Arizona since early 1980. Our attention was directed to these mining claims by the presence of an extensive area traversed by numerous high-grade mineralized veins and the existance of open pit mining operations immediately to the northwest.

Field geologic studies were conducted to trace the major mineralized veins through the claims. The integration of these studies with available electromagnetic surveying and geologic literature supported our securing 51 existing claims, Subsequently, 22 mining claims have been staked by Pacific Regional Operations, Inc. (see attached Chico Prospect Map).

The recent opening of a 150 ton/day ball mill and floatation circuit approximately 30 miles from the claims and the scheduled opening, in 3 months, of a second mill, 5 miles from the claims, has provided a resurgence of activity in the area.

We consider the merits of the Chico Prospect can be best appreciated by an on-site evaluation. We will be happy to conduct you through the Property at your convenience.

Yours very truly,

PACIFIC REGIONAL OPERATIONS, INC.

W. G. Kardos
President

PACIFIC
REGIONAL
OPERATIONS, INC. P.O. Box 716 • Scottsdale, Arizona 85252 • (602) 994-3147

GEOLOGICAL REPORT
CHICO MINES PROPERTY
WALLAPAI MINING DISTRICT
MOHAVE COUNTY, ARIZONA

LOCATION:

The Chico Mines Property lies in the central portion of the Cerbat Mountain Range, approximately 10 miles northwest of Kingman and 200 miles northwest of Phoenix, Arizona. The claims, 73 contiguous (2 patented), encompassing over one square mile, extend from near the summit of the range to the foothills with a relief of 1,500 feet. Located in Sections 29, 30 and 31 of Township 23N, Range 17W, and Sections 5 and 6, Township 22N, Range 17W, Gila and Salt River Meridian, Mohave County, Arizona, these claims are accessible via four miles of unimproved county and private roads from U. S. Highway 93.

HISTORY AND PRODUCTION:

The Chico Mines property lies centrally in an area rich and colorful in Arizona mining history. Bordering the claims on the east is the famous silver bonanza ghost camp of Stockton Hill, where rich silver discoveries brought miners to the area in 1863. Oxidized silver ores (up to 3,000 ounces per ton) were mined at Stockton Hill with the bulk of production during the 1870-80 period. Bordering the claims to the south is the Golconda Ghost Camp whose namesake mine was reportedly "shot in" by its German owners at the outbreak of World War I. The owners abandoned the claims by returning to Germany. The Union Basin Mining Company immediately reentered the Golconda, and their smelter receipts show the company producing more than three million dollars worth of zinc, gold and silver during the duration of the war. During this time, the Jamison, True Blue and Little Boy Mines, located on the Chico claims, carried on minor operations and shipped ore to the Golconda mill. A disasterous fire at the mill halted operations in 1919, and the Golconda has been dormant since.

During the second world war, premium prices for copper, lead and zinc renewed activity in the area. The Alpha mine and the Summit mine, both located immediately to the east on veins which cross the Chico properties, shipped ore to the Tennessee mill. The Tennessee-Schuylkill mine, located 7 miles north of the Chico claims, produced 150 tons per day of crude ore averaging 7% zinc, 3.5% lead and 20 ounces of silver per ton. For the duration of the war, mill capacity limited development in the area.

The value of metals produced from the District during the years 1904-48, (U. S. Bureau of Mines 1948 Annual Report) was about 22.5 million dollars at 1948 prices, (nearly 1 billion dollars at today's prices). Values were principally in lead and zinc, but with substantial amounts of copper, silver and gold.

During the 1950's and 1960's there was sporadic development on the Chico property when the government paid a bonus for silver. The Mint, Cashier and '98 mines produced 20-50 ounce per ton silver ore. In this interim, the Jamison mine was developed to the 400-foot level and stockpiled low-grade copper-lead-zinc ore. A small mill was installed and operated for a brief time on the property but production statistics are unavailable. Approximately 1,000 tons of ore remain stockpiled.

Currently Pennzoil-Duval Corporation, bordering the Chico property to the northwest, is reportedly producing 18,000 to 20,000 tons per day of open pit ore averaging 0.5% copper and 0.045% molybdenum, plus other metals.

GEOLOGY AND ORE DEPOSITS:

The Cerbat Mountains constitute one of the many north-south trending, fault-block ranges of the southwest desert. They consist primarily of metamorphosed pre-Cambrian igneous and sedimentary rocks, cut by later intrusions of Mesozoic (?) granite and monzonite porphyries, known locally as the Ithaca Peak Granite, and by Tertiary volcanic dykes. Centering around the Ithaca Peak intrusive, mineralization is typically copper and molybdenum sulfides, now being mined by Duval. Surrounding the intrusive is a zone several miles wide of lead-zinc-silver bearing veins which gradationally change into veins of intense silver mineralization.

The vein type ore deposits occur in clefts or cracks in the country rock in which the mineral material precipitated from aqueous solution (hydrothermal fissure veins). It is probable that these fissures formed from forces accompanying the implacement of the Ithaca Peak intrusive. With the intrusive acting as a heat engine, a convecting hydrothermal system developed that set up a hypogene enrichment-process which deposited ore and gangue minerals near the top of the convecting cell and extracted metals and sulfur from sources at depth. Conceivably, as the solution approached the fissure level, it boiled, thereby distilling the acid forming constituants CO_2 and H_2S. Cooling and a slight pH rise of the residual liquids, due to loss of acid forming constituants, may be regarded as the mechanism of sulfide precipitation. Exposure of the veins to normal weathering processes oxidized the ore and, to a point, enriched it by the downward migration of slightly acidic rainwater carrying metals in solution.

Many veins, occuring in nearly vertical fault fissures, strike northwest and outcrop for considerable distances. The fault fissures are largely occupied by breccia with abundant shearing and some gouge. Ore lenses, or shoots, though not continuous are numerous and tend to have greater vertical rather than horizontal extent. Concentrations of extremely hi-grade ore appear to favor vein junctures. These concentrations are attributable to chemical and physical changes which enhanced mineral deposition at the fissure level of the convecting cell.

Most of the veins appear to be associated with the Bronco Dyke. The Dyke is a prominant linear structure which traverses the Chico Property for three-fourths of a mile. It varies from 20-70 feet in width, strikes N10E and dips 60^{o} SW. The Dyke is composed of at least four rock types and cuts all lithologic units in the area. It is composed primarily of Ithaca Peak granite, an equivalent of the Duval Orebody. The Ithaca Peak granite is, in turn, intruded by smaller dykes of rhyolite, andesite, quartz and diabase. A considerable amount of sulfide material was carried up by the ascending solutions of subsiding igneous activity as evidenced by the many small, fracture filling sulfide veinlets ubiquitious in the granite fraction of the Dyke, and by numerous massive sulfide lenses randomly spaced along the Dyke and at dyke-vein intersections. Conditions of rock associations are reported to be similar throughout the 400 foot depth of present workings, now flooded, on the Dyke, therefore, any precipitating effect the country rock had on ascending (or decending) solutions are duplicated to a depth

of at lease 400 feet. The open, permeable, nature of the Dyke is evidenced by the considerable alteration (chloritic, sericitic) of all major rock units composing the dyke, which also enhances the probability of secondary enrichment. Geochemical sampling has shown the dyke to be anomolous in silver, lead and zinc. Electromagnetic surveying has also indicated anomolous areas centered on the Dyke.

At least six major vein systems traverse the Chico claims trending northwest from Stockton Hill towards intersections with the Bronco Dyke. They are the Summit Vein, the Alpha Vein, the Nighthawk-Cashier Vein, the Mint-'98 Vein, the Logas Vein and the Little Boy-Jemison Vein (see prospect map). These veins are primarily composed of sheared, fractured, crushed and recemented quartz. They are generally less than six feet wide with an attendant gouge zone of clays one to two feet thick which favors the foot wall but, often as not, occurs on both walls of the vein. These veins are separate structures which contain known concentrations, shoots or lenses, of high-grade ore. These concentrations are of limited tonnage, perhaps several thousands of tons each, and are randomly contained within the veins with a tendancy toward vein junctures with other structures, such as dykes or other veins. "Barren" quartz vein material is usually gray in color with pyrite laced microcrystalline chalcedony masses enclosing fragmented milky quartz, this "barren" material generally carries several ounces of silver per ton. Results from limited electromagnetic surveying are inconclusive, but suggest several anomolous areas which probably are indicative of shallow ore deposits along the vein.

The primary mineralization in the Chico Property is an assemblage of chalcopyrite, galena, sphalerite, argentite, pyrite and arsenopyrite together with a variety of sulfa salts and gangue minerals. The oxidized portion of the veins range from 50 to 300 feet deep and may be very rich in silver chlorides, silver bromides and native silver with lesser concentrations of native gold.

ORE RESERVES:

The Chico property contains base metal silver veins, oxidized silver-gold veins and, possibly stockwork type copper. Data from past developments, publications and reports are insufficient, or unavailable, to completely delineate the ore bodies for volumetric analysis. However, there is ore exposed in various underground workings and in many places on the surface; prospect pits, trenches, dumps, etc.

More than 1,000 tons of base metal-silver ore has been stockpiled from the Bronco Dyke and reportedly much more is exposed in the Jamison mine, now flooded, which is developed to the 400-foot level. Mill test results done by Denver Equipment Company's ore testing division, averaged 0.03 ounces gold per ton, 1.9% copper, 6.0 ounces silver per ton, 1.7% zinc, 0.92% lead and 9.5% iron. Results from laboratory batch selective floatation tests show the ore can be beneficiated to recover nearly 90% of the copper, lead, zinc and silver and approximately 40% of the gold. High grade shoots encountered in the Jamison mine ran as high as 12 ounces gold per ton, 50 ounces silver per ton, 12% copper, 6% lead and 2% zinc. The Dyke traverses the property for nearly three-fourths of a mile. It could yield in excess of 10 million tons of ore.

Numerous veins traverse the Chico Property. Oxidized portions of these veins are known to contain ore shoots rich in silver and gold. Assays imply these shoots can be surface worked for 20 ounces per ton silver. The shoots are generally less than three feet wide and extend to an average depth of 100 feet. Although some of these oxidized ore shoots have been completely mined out, many high-grade ore shoots remain (some can be traced at the surface.). One ore

shoot (14 inches wide) was traced by this author for over a quarter mile. Surface assays average 27 ounces silver per ton and 0.08 ounces gold per ton (see assays 15, 17 and 18) and samples from underground workings at the 50-foot level, on the same vein, assays average 47 ounces silver per ton and 1.9 ounces gold per ton (see assays 8 and 11). The extent and tenure of these underground workings is unknown since they are presently caved in at the 50-foot level.

Previous mining operations on the Chico Claims have produced some sizable mine dumps. The possibility of precious metal recovery from these dumps should not be overlooked. Cursory examination indicates in excess of 150,000 tons of material averaging 0.02 ounces gold per ton and 1.5 ounces silver per ton.

Rock equivalents of the Duval orebody are present on the Chico Property and abundant copper sulfate precipitate may be noted in the stream bed located in the west-central portion of the Property (see water assay number 13). This suggests the southward extention of the Duval orebody into the Chico Claims.

CONCLUSION:

On the basis of surface observations and in the accessible old workings, plus facts provided by local people of reputation, it is our opinion that the Property contains well developed structures with strong-to-moderate copper, lead, zinc, gold and silver mineralization. We also conclude that the Property may contain a large mass of low-grade copper, lead, and zinc mineralization.

The Chico Property could then, at some later date, produce by either underground or surface mining methods. In either case, it is our opinion adequate exploration will justify a major mining investment.

PACIFIC REGIONAL OPERATIONS, INC.

William Vanderwall
Geologist

October 20, 1981

interested party | contact | - information sent | - on property | - Remarks
comp
Key indiv.

1. Bright & Company - Mr. G. L. Richards - too short option period

(1) SANTA MARIA CORP - F. THORNDIKE; SENT PACKAGE June '80 ~~August 1980~~, PACKAGE RETURNED AUGUST 1980, ~~NO REASON GIVEN FOR REJECTION~~. Properties in Peru politically tied up and unable to proceed

(2) CONSULTANTS INTERNATIONAL, PACKAGE GIVEN SEPT. 80, COULD NOT PLACE W/ MINING PRINCIPAL.

(3) GENE BIRCH - in office August 8, 1980 ~~PACKAGE SENT NOV. 80~~, TOURED PROPERTY NOV. 17, 1980 - SUBMITTED INFORMATION TO DICK KNOWLES 9-16-80, Harold Earls, Oklahoma City; Saudia Arabian Prince

(4) KNOWLES GROUP - 4 PACKAGES SENT DEC. 1980, TOURED PROPERTY WITH BOB KNOWLES 10-8-80, 12-13-80,
They presented to Jewish Investment Group
Ben Fegelson Group of Doctors in Pittsburgh 2-17

A. ~~[illegible]~~ →
2-20 Duval
Mgr. Min Permit

(5) REO ALGOM - PACKAGE SENT MAR 1981, TOURED PROPERTY APRIL 9 & 10, 1981, DECLINED PARTICIPATION MAY 19, 1981 DUE TO DUPONT EXPLORATION PROGRAM.

(6) STAN WEST CORP, PACKAGE DELIVERED MAY 5, 1981, NO RESPONSE PRESUMABLY BECAUSE CURRENT OPERATIONS IN CENTRAL AZ. MOUNTAINS WAS ENOUGH TO MONOPOLIZE BUDGET.

~~5~~-14 Bob Hughes →
6-18 Tom [illegible]
6-24 Duval

5-15 Julius Schmidt metalurgist
Bob Hughes

(7) DICK HALL, PACKAGE SENT 8-31-81, TOURED PROPERTY 9-14-81, SENT ORE RESERVE POTENTIAL 9-18-81, INVOLVEMENT PENDING. EXCHECKER

(8) MATT ALLEN - PACKAGE SENT 9-18-81 - TOURED PROPERTY 10-17-81 - SUBMITTED TO M. MIQUEL WHOSE INVOLVEMENT IS PENDING

(9) FISCHER WATT MINING CO. - PACKAGE SENT 10-20-81 - TOURED PROPERTY 11-4-81 - INVOLVEMENT PENDING.

APPRECIATED

(10) NORANDA - PACKAGE SENT 9-9-81, TOURED PROPERTY 11-10-81, INVOLVEMENT PENDING.

(11) BEAR CREEK Mining Co. - PACKAGE SENT 11-2-81 - INVOLVMENT PENDING

(12) FREEPORT MINERALS - PACKAGE SENT 11-2-81 - INVOLVEMENT PENDING

(13) NEWMONT EXPLORATION - PACKAGE SENT 11-2-81 - INVOLVEMENT PENDING.

(14) ST. JOE AMERICAN CORP. - SKELETON PACKAGE SENT NOV. 5 1981 - WAITING FOR RESPONSE.

Chico

2-10-81 Bob Knowles – program for exploration

2-11-81 Dick Knowles – send info – Jewish group interested in Gold

2-17-81 ✓ ✓ other ~~Group~~ Ben Fogelson Group Drs. in Pittsburgh

Ben Fogelson – will ck & call back

2-20 Duval – ~~Mark~~ Mark Miller Mgr. Mineral Park – no immediate interest –

3-9 ✓ Mark Miller – not interested

3-19 Dick Knowles – wants purchase to Rio Algom

Pittsburgh people turned down

(8) 5-5 Dick Knowles – limited partnership

5-12 Dick Knowles – mill

5-14 Dick Knowles – Procedures – Bob Hughes – Mill

5-15 Bob Knowles – on property Monday with Julius & Bob Hughes

Ky. Coal man

June 10 Bob Kam~~tt~~ – info on Knowles trade

June 6-17 Bob Knowles has man interested – There Friday, Sat, Sunday

6-18 (Tom Bumgartner out of mine) continue for $15,000 for 2 months

~~6-18~~ 6-23 Bob Knowles – doesn't want to get personally involved R

6-24 Ralph – maps for Duval meeting Friday

6-25 Leisner

7-10 Ralph – not sure wants to go on – up to ears in other projects

7-13 ~~Dick~~ Bob not want us to press

7-23 Bob Knowles – will see Duval when get back

8-24 Bob Knowles – Richard Hall contact – doesn't think Tom Bumgartner will come up with what we want – ~~See~~ Garby of Duval, ~~[illegible]~~ they had turned down for time being

8-29 Bob Knowles – Hall like to look at property, works for Hefner

Bob said Rio Algom working with Dupont on another project said found some copper porphyry but too deep – won't give info

9.13 Ralph – busy as hell at office – Dick Knowles one to come up with money

Bob – reminded invoice due

9-14 Dick Hall Ex checker on property –

9-17 Ore potential & Map

9-21 Dick Hall – showed excitement – people busy for week or two

9-27 Ralph - Bob due back in week, will call Knowles, will get back in touch with Dodie Monday

Chico

6-20-80 Met T.W. Anderson

6-26-80 Thorndike - 1st observations $15.90 silver a little high
need metallurgical analyses to determine recovery

~~6-30~~ 7-24 F.A. Thorndike teletype to determine course

7-29 Thorndyke turn down - reason later

8-7 Bob Smith - recommends Gene Burch - Saudia Arabian Money

8-8 Gene Burch in office - Harold Earls in OKC interested
to property

8-19 Harold Earls - like to get involved - offshore money not
in yet.

8-22 Gene Burch just got off phone with Bob Knowles - potential
candidate with Harold Earls still strong

8-26 Gene Burch - within next 2 weeks a 30 day escrow to be set up
with Earls - if Earls doesn't go will give time for
Saudia Arabian ~~prince~~ - terms set forth

8-27 Bob Smith contacted ~~for~~ commission

9-16 Package from Gene Burch to Dick & Bob Knowles

9-26 Dick Knowles - involved in mining - think it would be
good opportunity to look at each other for future action together

10-8 Bob Knowles on Chico Claims - Go to Goetz & lay cards on table -
have ability to sell with good knowledge of claims, set up
small mining operations -
Big mining concern wouldn't come in to mine small claims,
small veins.

10-20 Dick Knowles - need more geology - consider starting mining operation &
let Gene Burch TN - close friend is President of Duval - Dad help
oversee

10-28 Meeting - Ralph Darling, Bob Knowles, Goetz ~~then~~
discussed our mutual program.

12-4 Dick Knowles - Jewish investment group interested in Gold

12-8 Dick Knowles - 1st discussion of Knowles Group

12-9 Meet Bob & Ralph in Las Vegas

PACIFIC
REGIONAL
OPERATIONS, INC. P.O. Box 716 • Scottsdale, Arizona 85252 • (602) 994-3147

May 19, 1981

TRADE POTENTIAL FOR CHICO CLAIMS
MOHAVE COUNTY, ARIZONA

POTENTIAL PURCHASERS

1. Rio Algom Limited	As of this date, not sure final report of Mr. Bob Shewmann has been completed. Suggest we have Bill Vanderwall contact Bob Shewman to secure Dupont core data and ascertain if they have made a decision regarding the claims.
2. Stan West	Interested and impressed with size of property and tenure of ore shoots. Unable to inspect claims, but assure will later this week. Potential sale, joint venture or possibly other association.
3. Eastern Coal Company	Interest to be ascertained today.

LIMITED PARTNERSHIP

A. Investor	Provides funds for exploration of Chico Claims to the state where mining operations are justified or determination not to proceed. Allocated all exploration costs, partnership formation costs and management fee (later two limited to 15% of total). Will receive interest in rights to property and all available tax credits during exploration phase.
B. Knowles et al and PRO	
1. General Partners	Those individuals willing and able to be active in partnership management.
2. Special Class Limited Partners	Investors prior to formation of Limited Partnership earn paid up interest in Partnership.

C. Proposed Program

1. Surveying to confirm claim boundaries, locate geological and geochemical mapping and corehole sites.
2. Reopen and maintenance of strategic roads on the property, dewater critical mines and evaluate potential of old workings.
3. Geologic mapping to identify critical lithology and structure, evaluate old workings and collect appropriate samples.
4. Geochemical sampling, analyses and mapping to delineate areas of buried mineralization.

5. Intergration of all available data for optimum areas of concentration.

6. Diamond core drilling and analysis of optimum areas to determine ore values and volumetrics.

7. Evaluation of results in report expected to be completed within 6 months of initiation of program.

D. Proposed Application of Funds

1. Management Fee 6%	$ 38,000
2. Organization and offering expenses 9%	57,000
3. General, Administrative and overhead costs 6% first year	38,000
4. Mining lease of property	50,000
5. Exploration - proposed program	450,000
	$633,000

E. Proposed Partnership Costs & Revenues

a. Before Payout of Investor Costs

	Interest	Exploration	Operating and Mainagement Fee	Offering Costs
Original Investors	20%	*$112,500 *(already paid in)	$15,200	$ -0-
Limited Partners	79%	445,500	60,040	56,430
General Partners	1%	4,500	760	570
	100%	$562,500	$76,000	$57,000

b. After Payout of Investor Costs

Original Investors	13.33%
Limited Partners	52.67%
General Partners	34.00%
	100.00%

Mill Research - 10-26-81

Az. Dept of Nat'l Resources
Mineral Building, Fairgrounds
Phx. Az. 85007
255-3791
Mr. Dick Beard, Engineer
Knew of no custom mills in Az
reccommended call:

① Az Small Miners Assoc.
269-8694 (Knew of none in Az)

② Calif. Division of Mines and Geology
1416 9th Street, Rm 1341
Sacramento, Calif. 95814
Mr. James Davis 916-445-1825
Recommended call - Calif. Div. of Mines & Geo
District Office
445-5716
Calif. BLM
District Office
484-4217
Mining Assoc. of Calif.
209-223-1129

Recommended call
Don Fife - Converse Ward Davis Dixon (Geologist)
1440 S. State College Blvd.
PO Box 6288
Anaheim, Calif. 92806
714-772-2151

Don Fife Recommended call:
Wayne Johnson - Johnson Engineering
20800 Kendal Dr.
San Bernidino, Calif. 92407
714-887-5120

SENT WAYNE JOHNSON COPY OF METALLURGICAL TESTS – 10-26-81. RECIEVED WORD HE COULD MAKE BULK CONCENTRATE FROM ORE WHICH WOULD RECOVER 75% OF COPPER & SILVER. NEEDED 400 lbs OF ORE AND $500 TO TEST CONCENTRATION.

COST TO MILL 50 TONS OR MORE $30/TON – SHIPPING COST per SANTA FE $30/TON.

③ NEVADA BUREAU OF MINES & GEOLOGY
U of N, RENO, 89557
784-6987
MR. JOHN SHILLING
RECOMMENDED CALL

NEVADA Mining Assoc.
323-8575
RECOMMENDED CALL
KENNECOTT, Miguel
MR. RASSMUSSEN
SAID KENNECOTT HAS SHUT DOWN CONCENTRATOR
RECOMMENDED CALL
CORONADO MINERALS CO.
Lovelock, Nev.
273-2640
STATED COULD NOT HANDLE ORE AT THIS TIME FULL CAPACITY FROM OWN MINE.

④ UTAH GEOLOGICAL & MINERAL SURVEY
606 BLACKHAWK WAY

SALT LAKE CITY, UTAH 84108
581-6831
MARTH SMITH (581-3066)
COULD NOT RECOMMEND ANYONE BUT SENT STATE LIST OF OPERATING MILLS IN UTAH. NO CUSTOM MILLERS ON LIST.

⑤ NEW MEXICO BUREAU OF MINES AND MINERAL RESOURCES
CAMPUS STATION
SOCORRO, N. M. 87501
835-5420
FRANK KOTLOWSKI
KNEW OF ONE MILL IN MAGDALENA, WOULD CONTACT OWNER AND HAVE HIM GET IN TOUCH WITH PRO IF INTERESTED.

GLEN STEVENSON OF
GLG DEVELOPMENT CORP,
PO BOX 1036
SOCORRO NM 87801
CALLED 10-27-81 TO GET SPECIFICS ON ORE, ASKED FOR 50 lbs TO CONCENTRATE BUT NEEDED $35/TON TO CONCENTRATE + MIN. $30/TON TO HAUL FROM KINGMAN. HOWEVER, HAS PORTABLE MILL NEAR COMPLETE 40 TPD FLOATATION WHICH COULD MAKE CONCENTRATE ON SITE, WILL BE READY NEXT SPRING — TOLD HIM TO KEEP IN TOUCH, SENT METALLURGICAL REPORT 10-27-81

⑥ AFTER MAKING ALL THESE LONG DISTANCE CALLS DICK BEARD FROM THE ARIZONA DEPT OF NATURAL RESOURCES CALLED TO SAY HE HAD JUST HEARD FROM SPRINGOLD MILL IN KINGMAN THAT THEY WERE NEAR

completing THEIR 250 TPD FLOATATION MILL AND WERE LOOKING FOR CUSTOM ORE.

Springgold – LAS VEGAS
702-382-7510

SPOKE WITH VIRGINIA WHO SAID MR. COOPER WOULD BE GETTING IN TOUCH – BUT NEVER HAS EVEN THOUGH I HAVE REPEATEDLY CALLED THE VEGAS OFFICE. VIRGINA IS CERTAIN HE WILL CALL WHEN MILL IS READY 30 DAYS FROM 10-26-81 AND IS INTERESTED IN CUSTOM MILLING CHICO ORE. PRICE $30/TON ?? $5/T HAULAGE – Springgold MILL IS APPROX 20 MILES FROM CHICO CLAIMS ON HWY 68.

Chuck Porter - Lloyd Jackson Prescott

~~Alanco~~ -

Reingruber - all firing up - thinks 20 - 30,000 tons from surface - at old workings small / crew 20-do took 100# 2oz/ton 20 - 40 tons out

nothing but good things Reingruber
take $3000 to fix puck Road - $2000 - 3000
to get down old workings - old S
2 sub levels 100' & 200'
3 sub levels ore 3 faces
10' channel sampling

50,000 oz

25% value
$7,501 om

8 297

5 100# 5-10 tons

EQUITABLE CORP. — CERBAT MILL OWNERS
BOB HUGHES - PRES - 702-382-7556
BOB ? - GEN MANAGER -
TYRO MILL FORMAN - GEORGE 602-754-2608

4-24-81

HUGHES OUT OF TOWN - TALKED WITH BOB THE GENERAL MANAGER -

ANTICIPATE 30-60 DAY TO COMPLETION
200-250 TPD CAPACITY
CHICO & SUMMIT ORES VERY SIMILAR
COULD MIX ORE OR LEASE, SELL SMALL CAPACITY OR TAKE % OF CONCENTRATE.
TALKED 20-50 TPD CAPACITY - TALKED IN GENERAL TERMS - MADE NO COMMITMENT.

5-6-81

TALKED W/ HUGHES - STILL NEEDS 30 DAYS OR SO THEN SOME TIME TO WORK BUGS OUT. IS ANXIOUS TO TALK ABOUT CHICO ORE — TOLD HIM C.E. KNOWLES WOULD GET IN TOUCH WITH HIM THIS WEEK.

5-6-81 CALLED C.E. KNOWLES GAVE HIM THE INFO ON CERBAT MILL, BOBS TELEPHONE # — TRIED TO IMPRESS ON HIM THE NEED FOR SOME CAPACITY NOW WITH OPTION TO INCREASE LATER. EXPLAINED CHICO ORE CHARACTERISTICS (STOCKPILED) AND HIGH GRADE VEINS. SAID HE'D CALL RIGHT AWAY. WILL KEEP US INFORMED.

5-6-81 ALLEN ST. JAMES; INTERESTED PRIMARILY IS BRONCO DYKE AREA, VERY IMPRESSED WITH SIZE OF PROPERTY AND TENURE OF ORE SHOOTS WOULD BE CONSIDERING UNDERGROUND MINING. WANTED TO KNOW HOW PRO FIT INTO CLAIMS - TOLD HIM PRO HAD STAKED SOME AND HAD OPTION TO PURCHASE SOME. WANTED TO KNOW HOW PRO WANTED TO HANDLE CLAIMS, SALE, JOINT VENTURE OR WHAT - TOLD HIM PRO HAD NOT DECIDED AND WAS WILLING TO LISTEN TO ANY PROPOSAL.

WENT OVER ROCK TYPES, VEIN IMPLACEMENT, ORE ZONING, DUVAL ORBODY AND ROCK EQUIVALENTS ON CHICO PROPERTY. WENT OVER PREVIOUS OPERATIONS ON THE PROPERTY.

ST. JAMES IS ANXIOUS TO SEE THEM BUT TIED UP WITH R.I. MINING TILL NEXT THURSDAY - HAS NO VEHICLE AVAILABLE SO I VOLENTEERED TO DRIVE - MAYBE SEND HIM BACK TO PRESCOTT BY AIR -

FIGURES 2 DAYS TO LOOK AT PROPERTY - WILL MEET HIM NEXT WED. NITE AND LEAVE PRESCOTT THUR. MORN.

Read to WSK
6/2/81
DAK

6-1-81 Telephone Correspondence

Bob Sherman - Did not analize remainder of samples, side-stepped "why not" question - said to try telephoning Dupont for data, was generally friendly but cool.

Dupont - Wilmington Delaware - 1-302-774-1000
Property inventory - Real estate department talked with Ann # Ruthy(?) will try to find info and call Pro back.

Allen St. James - 1-445-9744 -
Would still like to see Chico but is tied up on drilling for 1-2 more months. Very apologetic for canceling out last time. Invited me up to see their operation in Prescott. Will call when he has the two days to look at Chico.

Mrs. Hardy - CN Leach, Cloride 1-757-2011
Has Leach operation going and is not sure if they have extra space for Pro ore - does not want to buy ore - may be able to work on % deal but will have to talk with partners - probably 1st of next week. Asked me to stop by next time in Kingman.

Reingruber -
Would like to get moving - told him lawyer had to ok lease and soon as he did we'd send him a copy or deliver one to him in Cloride when we come up. Must call him towards end of week. Thurs.

Hold off

GENERAL –

DUVAL AND NORANDA ARE DRILLING IN CROWN KING. DUVAL GEOLOGIST TED SAYS OTHER DUVAL GEOLOGIST "WILL" JUST FINISHED THESIS AT MINERAL PARK AND WE SHOULD BE ABLE TO READ IT AT U of A LIBRARY. TED SAYS, WILL SAYS EVERYWHERE DUVAL DRILLS UP THERE, Kingman THEY FIND copper-Moly ORE. MAY MEET WILL NEXT WEEKEND.

NORANDA GEOLOGIST TOM, AN AQUAINTANCE OF MINE FROM ASU, SAYS NORANDA WILL DRILL 5 TO 10 HOLES, EACH SEVERAL 100 FEET DEEP, TO TEST THE GLADIATOR VEIN (GOLD) WHILE DUVAL IS DRILLING A COPPER AREA. NORANDA NEGOTIATING WITH STAN WEST FOR THIER CLAIMS UP THERE SO MAYBE STAN WEST WILL GET A FINANCIAL SHOT IN THE ARM AND GET REINTERESTED IN CHICO. ALL AGREE THAT open pit MINING IS OUT OF THE QUESTION AROUND CROWN KING FOR ENVIRONmental & RECREATIONAL REASONS BUT NORANDA IS LOOKING AT UNDERGROUND SITUATION. DUVAL IS LOOKING AT SURFACE MINING BUT ON OTHER SIDE OF TOWERS MOUNTAIN OUT OF THE FORREST AND OUT OF VIEW. BOTH HAVE JUST STARTED DRILLING.

Call U of A if
I find thesis
we can see it
and copy?

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Exploritory Drilling - Chico Property - July 14, 1981
Air Rig - Clark Oliver Mining and Drilling Co.

Hole 2 loc. 1625 W of E line } Sec. 31
2200 N of S line }

Sample I.D. #	Depth	Description	—ppm— Au Ag Cu Pb Zn	Panned Concentrates
	0-5	DK, Limonitic rhyolite + Mn Stain		minor py (silvery)
	5-10	Limonite Rhyo- Lightening		"
	10-15	Rhyo - minor limonite stain		"
	15-20	" "		"
2-20-25	20-25	Rhy - minor stain (Fe + Mn)	Tr. 3 350 70 340	" ASSAY
	25-30	Rhyo		"
	30-35	Rhy + Diabase (?) limonite stain		py inc.
	35-40	Diabase limonitic stain		minor py
	40-45	Diabase		"
2-45-50	45-50	Diabase	Tr. 2 45 40 300	py inc. ASSAY
	50-55	Gouge (small H_2O)		py inc.
	55-60	Gouge + altered qtz		minor py + ccp
2-60-65	60-65	LT. Amorphous qtz (?)	9. 53 .29% .10% 2.9%	minor py + ccp ASSAY
	65-70	" " (?)		" " "
	70-75	Diabase (more H_2O)		minor py
	75-80	Diabase		"
	80-85	Diabase		"
	85-90	DK qtz (?) greenish		"
	90-95	DK qtz (?)		"
	95-100	LT, Green and red qtz		py inc.
	100-105	reddish qtz		minor py
2-105-110	105-110	reddish qtz	12. 58 .3% 1300 2.6%	" ASSAY
	110-111	gouge (H_2O)	.5 4 230 100 1100	"
2-111-115	111-115	Hard fresh granite (diorite)		barren ASSAY
	115-120	" " "		"

TD 120 making approximately 2 gpm H_2O

DK = dark
py = pyrite
ccp = chalcopyrite
rhy = rhyo = Rhyolite
LT = light
qtz = quartz
v = very
f = fine
inc = increase
dec = decrease
mag = magnetite
ga = galena

34 ppm ≅ 1 oz

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Exploritory Drilling - Chico property - July 15, 1981

Hole 1 LOC. 1750 W OF E LINE, 1650 N OF S LINE } SEC. 31

	Depth	Description	— ppm — Au Ag Cu Pb Zn	Panned Concentrates
	0-5	overburden + decomposed granite		minor py (silvery)
1-5-10	5-10	granite	TR. TR 30 30 280	" ASSAY
	10-15	granite + rhyolite		v. minor py
	15-20	granite + rhyo (H_2O)		v. minor py
	20-25	granite + rhyo (rhyo inc.)		minor py
	25-30	rhyolite + in.granite		"
1-30-35	30-35	rhyolite	TR 0 10 25 40	" ASSAY
	35-40	rhyo		"
	40-45	"		"
	45-50	"		"
	50-55	rhyo + f. gr. qtz.		py inc.
	55-60	rhyo + f. gr. qtz. inc.		py inc.
	60-65	rhyo		minor py
	65-70	rhyo		minor py
1-70-75	70-75	gray qtz	7 45 .24% .10% 2.1%	py + ccp (minor) ASSAY
	75-80	granite		minor py
	80-85	granite		"
	85-90	granite		"
	90-95	granite + qtz (?)		"
	95-100	hard granite (diorite)		minor py
	100-105	" " "		barren
1-105-110	105-110	" " .03 "	3 120 100 520	" ASSAY
	110-115	" " "		"
	TD 115	making less than 1 gpm H_2O		

Hole 3 LOC. 1200 E OF W LINE, 1100 S OF N LINE

	0-5	decomposed granite		minor py + mag (?)
	5-10	dec granite		minor py + mag (?)
	10-15	granite (diorite)		minor mag (?)
	15-20	"		"
	20-25	" (2 gpm H_2O)		"
	25-26	gouge + qtz shards		minor py
	26-30	granite (diorite)		" + mag.
3-30-35	30-35	fresh granite (hard)	.1 1 45 35 230	" ASSAY
	35-40	"		"
	40-45	" (H_2O inc)		"
	45-50	granite fresh		minor py + mag (?)
	50-55	granite + rhyo		barren
3-55-60	55-60	rhyo	TR. 1 40 120 210	" ASSAY
	60-65	rhyo		"
	65-70	rhyo		v. minor bronze py

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ppm
Au Ag Cu Pb Zn

Exploritory Drilling - Chico Property - July 16, 1981

Hole 3 cont. HFW 25' after 12 hours

	70-75	rhyo						v. minor bronze py
	75-80	rhyo						barren
	80-85	rhyolite (H_2O inc)						barren
	85-90	rhyo						"
	90-95	rhyo						"
	95-100	rhyo						"
	100-110	rhyo						"
	110-115	rhyolite + gray f. gr. qtz.						minor py + ccp (?) + ga
3-115-120	115-120	rhyo + qtz	45	430	.95%	.5%	7.8%	py + ccp + ga inc. Assay
	120-122.5	rhy + qtz inc.						py + ccp + ga inc.
3-120-125	122.5-125	"	54	430	.88%	.45%	7.4%	" " " Assay 1/5 sample
	125-127.5	" qtz dec.						decreasing
	127.5-130	rhyo + minor qtz						decreasing
	130-135	rhyo + granite						minor py + ccp
	135-140	granite + minor rhyo						py + ccp inc
	140-145	granite (hard dioritic)						barren
	145-150	granite " "						minor py + mag
3-150-155	150-155	granite	4	38	660	450	.26%	" Assay

TD 155 making 10 gpm H_2O

ODEX Ore Stockpile Holes
#1 5' to sand
#2 5' to sand
#3 6' to sand

approximately 5/8 of expected ore volume

14 drill samples + 2 expl. samples = 16 samples for Cu Pb Zn Ag Au

= 528.00 less 20% disc.

= 422.40

	Ppm Au	Ag	Cu	Pb	Zn
WE-SS	1.2	220	1.5%	.73%	6.8%
NL-DO	0.17	21	680	400	.22%

Arizona Testing Laboratories

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

For: Pacific Regional Operations Inc.
Post Office Box 716
Scottsdale, Arizona 85252

Date: July 24, 1981

Lab. No.: 2648

Samples of Ore received 7/22/81
Submitted by Bill Vanderwall

GEOCHEMICAL ANALYSIS

Sample Marked	Gold ppm	Silver ppm	Copper ppm	Lead ppm	Zinc ppm
1-5-10	Trace	Trace	30	30	280
1-30-35	Trace	Nil	10	25	40
1-70-75	7. .21 oz	45. 1.32 oz	0.24 %	1100	2.1 %
1-105-110	0.03	3	120	100	520
2-20-25	Trace	3	350	70	340
2-45-50	Trace	2	45	40	300
2-60-65	9. .260 oz	53 1.56 oz	0.29 %	1100	2.9 %
2-105-110	12. .350 oz	58 1.71 oz	0.31 %	1300	2.6 %
2-111-115	0.5	4	230	100	1100
3-30-35	0.1	1	45	35	230
3-55-60	Trace	1	40	120	210
3-115-120	45. 1.32 oz	430. 12.65 ozs	0.95 %	0.50 %	7.8 %
3-120-125	54. 1.59 oz	430. 12.65 ozs	0.88 %	0.45 %	7.4 %
3-150-155	4. .12 .04	38 1.12	660	450	0.26 %
NL-DO	1.2	220 6.47	1.5 %	0.73 %	6.8 %
WE-SS	0.17 .005 oz	21 .62 oz	680 .06 %	400 .04	0.22 %

Respectually submitted

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

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EXPLORATION PROGRAM

Pacific Regional Operations, Inc. (PRO) is exploring for precious metals northwest of Kingman, Arizona. High-grade silver and gold ore and substantial amounts of copper, lead and zinc have been produced from this area. Mining activity began in the 1860's, with the majority of the production occurring prior to 1920. Current production is restricted primarily to the Duval open-pit mine which produces 18,000-20,000 tons/day of low-grade copper and molybdenum ore as well as other metals.

A literature search confirmed by PRO's field work, suggests the presence of substantial ore reserves. To prove the ore reserves required for large scale mining operations, detailed exploration (core drilling, geochemical and geological studies) will be necessary.

Option To Purchase - 51 Claims

PRO has an Option To Purchase 51 contiguous mining claims, located adjacent to the Duval mine. Several mines located on the property aid in the delineation of reserves and indicate an increase in volume and value of ore with depth.

Three types of ore deposits on this property are: Vein deposits of base-metal silver ore which may extend to depths in excess of 1,400 feet; near surface veins enriched in precious metal, known to carry as much as two ounces gold and 60 ounces silver per ton; and, a major mineralized zone which intersects the above veins. Volumetric analysis indicates in excess of ten million tons of ore. (Stockpiled ore on the property averages in excess of $100/ton.)

PRO Staked Claims

Adjacent to the Duval mine, and overlapping the above claims, PRO has staked 22 unpatented lode mining claims which contain vein deposits of base-metal silver ore and rock equivalents of the Duval orebody. The Duval Corporation is drilling exploration holes, offsetting these PRO claims, in an effort to extend their open-pit mining operation.

Current Activity

PRO is conducting field geological studies, sampling and assaying mineralized areas, and doing a literature search on patented mining claims, state land and federal lands in this area. These lands have been shown to contain numerous, high grade-low tonnage vein deposits which, when combined, could support a major mining venture. PRO will acquire options, exploration permits and/or mineral leases on any properties which justify exploitation.

ESTIMATED EXPLORATION COSTS

Claim Acquisitions	
51 Claims Payment 7-1-81	$ 15,000
Payments to 2-82 for 51 Claims (est.)	30,000
5 Projects to be acquired from current activity-1st year cost	25,000
	$ 70,000
Exploration	
Drilling coreholes	$
51 Claims	175,000
Other Claims	80,000
Geological, Geochemical, Geophysical	
51 Claims	100,000
Other Claims	50,000
Engineering, Dewatering, Roadwork	
51 Claims	60,000
Other Claims	30,000
Surveying	
51 Claims	10,000
Other Claims	10,000
	$515,000
Management	$ 65,000
TOTAL COSTS	$650,000

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EXPLORATION OF CHICO PROPERTY:

1. LABOR: Geologist $2,500/mo.); Assistant $1,250/mo)
   Samples (4 @ $160/wk.)
   Miscellaneous ($2,500/mo.)

2. Geological study materials: $75/wk.

3. Laboratory Work: ($5,000/mo.)

4. Equipment: Field $1,000 + $75/wk.
   Geochem $1,000 + $75/wk.
   Vehicle: $750/mo.

5. Drilling: Core $40/foot $150,000
   12 hours up to 300' deep

6. Road work, trenches and miscellaneous $5,000/mo.

Estimated Time - Six Months.
Estimated Total Cost -

Labor:	$ 52,860	
Materials:	1,800	
Lab Work:	30,000	
Equipment:	10,100	
Drilling:	150,000	
Core Analysis:	25,000	
Road Work:	30,000	
	$384,760	
Surveying:	$ 10,000	
Engineering	50,000	
Office	6,000	
	$365,000	
Land	135,000	(6 months)
Total	$500,000	

BASIC PLAN AND COST ESTIMATES FOR DETAILED GEOLOGICAL EXPLORATION AND ENGINEERING FEASIBILITY OF THE CHICO MINES PROPERTY.

OPERATIONS DURING THIS RECONNAISSANCE WILL CONSIST OF FOUR WELL ORGANIZED, CONCURRENT PROJECTS, NAMELY: SURVEYING
GEOLOGIC/GEOCHEMICAL MAPPING
DRILLING
ENGINEERING

① SURVEYING: THE IMPORTANCE OF ACCURATE SURVEYING CANNOT BE OVER EMPHASISED. DELINEATING THE CHICO CLAIMS, ESTABLISHING TRAVERSES AND LOCATING DRILL HOLE SITES IS PARAMOUNT TO ANY WELL PLANNED EXPLORATION OF UNPATENTED MINING CLAIMS FOR LEGAL AND PRACTICAL REASONS.

survey to block out and establish boundary

IT IS ESTIMATED ALL SURVEYING WORK, EXCEPT DRILL HOLE LOCATIONS, CAN BE ACCOMPLISHED IN 10 WORK DAYS AT A COST OF LESS THAN $10,000.

② GEOLOGIC/GEOCHEMICAL MAPPING: DETAILED MAPPING THE SURFACE GEOLOGY, LIKE OLD FASHIONED AND CLASSICAL PROSPECTING, RELIES MAINLY ON WALKED OUT TRAVERSES. THIS MAPPING IS EXPECTED TO IDENTIFY CRITICAL LITHOLOGY, STRATIGRAPHY AND STRUCTURE AS WELL AS LOCATE OLD WORKINGS.

GEOCHEMICAL MAPPING FROM SAMPLES COLLECTED AT REGULAR INTERVALS ALONG THE SAME TRAVERSES WILL DELINEATE AREAS OF MINERALIZATION WHICH MAY OTHERWISE BE BURRIED OR HIDDEN FROM VIEW AND OVER LOOKED.

THE GEOLOGICAL AND GEOCHEMICAL MAPS SHOULD CORRELATE TO INDICATE FAVORABLE LOCATIONS TO DRILL. THE TWO, CONCURRENT, MAPPING PROGRAMS SHOULD TAKE 30-40 WORK DAYS. LABOR, MATERIALS, EQUIPTMENT AND ASSAYS COULD COST AS MUCH AS $100,000.

③ DIAMOND DRILLING AND CORE ANALYSIS IS NECESSARY TO DELINEATE SUFACE ANOMOLIES AT DEPTH FOR A VOLUMETRIC ANALYSIS. IT IS SUSPECTED THAT UP TO 12 HOLES WILL BE REQUIRED AVERAGING 300 feet IN DEPTH. CORES OF MINERALIZED ZONES WILL BE STUDIED FOR MINERALOGICAL AND DEPOSITIONAL CHARACTERISTICS. DRILLING TIME IS ESTIMATED TO BE 60 TO 80 WORK DAYS IF ONE RIG IS USED. CORE ANALYSIS WILL REQUIRE 15-25 ADDITIONAL WORK DAYS. TOTAL COST FOR DRILLING AND CORE ANALYSIS IS ESTIMATED NOT TO EXCEED $175,000.

④ ENGINEERING: AQURING RELIABLE "GROUND PROOF" ENGINEERING ESTIMATES OF THE OLD WORKINGS AND potential NEW WORKINGS IS ESSENTIAL SO THAT REOPENING THE WORKS WILL HAVE A STRONG BASIS IN FACT.
ENGINEERING WORK WILL COINCIDE WITH ② AND ③ ABOVE AND MAY REQUIRE THE FULL 145 WORK DAYS, AND COST UP TO $60,000.
THIS ENGINEERING WILL PROVIDE FOR THE REOPENING AND MAINTAINANCE OF ALL STRATEGIC ROADS ON THE PROPERTY AS WELL AS THE REOPENING AND DEWATERING OF CRITICAL MINES. THE ENGINEER WILL

PROVIDE A SEPARATE REPORT ON EACH PERTINENT WORKING WHICH WILL ELABORATE ON FEASIBILITY AND SCALE FOR FUTURE WORKING, PRESENT EXTENT OF WORKING AND ROCK FABRIC CHARACTERISTICS. THE ENGINEER WILL PROVIDE A SIMILAR REPORT ON ANY PROPOSED NEW WORKING ON THE PROPERTY.

THE GEOLOGIST WILL BE RESPONSIBLE FOR COLLECTING ASSAY SAMPLES IN THE ENGINEERS DOMAIN, NAMELY MINES, CUTS AND PITS.

THIS ENGINEERING WORK WILL BE CONTRACTED TO A RELIABLE ENGINEER, WHO WILL PROVIDE HIS OWN LABOR FORCE, EQUIPTMENT, INVENTORY REPAIR, ETC. THE ENGINEER WILL BE SUBSIDIZED IN THE AMOUNT OF $10,000 FOR ROADWORK, CUTS, DRILL SITE PREPARATION, etc. NEEDED BY ①, ②, ③ ABOVE.

OFFICE WORK DURING THE PROJECT WILL ACCOUNT FOR AND BALANCE FUNDS, PROVIDE PHONE SERVICE, SECRTARIAL, ETC., FOR THE GEOLOGICAL AND ENGINEERING STAFF. $6,000 SHOULD BE ADAQUATE FOR THIS SERVICE WHICH WILL LAST FOR THE ENTIRE PROJECT.

LENGTH OF PROJECT 6 MONTHS
COST OF PROJECT $365,000
LAND PAYMENTS 135,000 (6 MONTHS)

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EXPLORATION OF CHICO PROPERTY:

1. LABOR: Geologist $2,500/mo.); Assistant $1,250/mo.) – expenses
   Samplers (4 @ $160/wk.)
   Miscellaneous ($2,500/mo.) welders ect. misc. workmen

2. Geological study materials: $75/wk.

3. Laboratory Work: ($5,000/mo.) assays, geochem

4. Equipment: Field $1,000 + $75/wk. – Geolog. study
   Geochem $1,000 + $75/wk. – samplers auger tubes
   Vehicle: $750/mo.

5. Drilling: Core $40/foot $150,000
   12 holes up to 300' deep

6. Road work, trenches and miscellaneous ~~$5,000/mo.~~ 10,000 for drillsites

Estimated Time - Six Months.
Estimated Total Cost -

Labor:	$ 52,860	
Materials:	1,800	
Lab Work:	30,000	
Equipment:	10,100	
Drilling:	150,000	
Core Analysis:	25,000	
Road Work:	10,000	
	$279,760	
Surveying:	$ 10,000	
Engineering	50,000	← Clearwater Jamison, 1 mint 35 Cardinal, Mohawk
Office	6,000	
	$345,760	
Land	135,000	(6 months)
Total	$480,760	
Contingency	19,240	
	$500,000	

mining Bronco Dyke

SURFACE ~~SITUATION~~

POTENTIAL RESERVES BY DELINEATION OF THE MINERALIZED PORTION OF THE BRONCO DYKE. LIMITED SURFACE AND BULLDOZER RIP SAMPLES of ~~INDICATE~~ THE MINERALIZED PORTION OF THE DYKE ~~IS~~ COMPOSED OF SHEARED, FRACTURED AND HIGHLY ALTERED GRANITE, suggest an AVERAGING 0.13 ozs gold per TON AND 2.59 OUNCES silver per TON. THIS MINERALIZATION is projected to Averages 30 FEET WIDE AND ~~IS PRESUMED TO~~ persist TO A DEPTH OF 30 FEET ~~AS WELL AS~~ ~~persist~~ FOR A LENGTH OF THREE FORTHS OF A MILE. THE ORE IS MINEABLE BY SUFACE METHODS AND IS presumed TO BE AMENABLE TO CYANIDATION.

IF SO: $30' \times 30' \times 3/4$ mi. $\div$ 12.5 cu.ft/ton = 285,120 Tons.

AND (0.13ozs x $350/oz) + (2.59ozs x $8/oz) = $66.22/TON

$3200 leach pad refin

FURTHER $66.22/T

less $25/T Mining costs

less $1/T LEACH FACILITY AND REFINERY CONST. COSTS.

less $1.5/T Milling AND REFINING COSTS

less 6.62/T PRICE STABILITY DISCOUNT 10%

less 6.62/T RECOVERY FACTOR 10%

less 6.62/T BULK SALES DISCOUNT 10%

18.86 Net profit per TON

285,000 x $18.86 per TON = $5,375,100

ASSUME 500 TONS per DAY PRODUCTION - 300 DAYS per YEAR gives 2 YR. MINE LIFE. DATE OF FIRST PRODUCTION ESTIMATED AT 1 YR FROM START OF EXPLORATION. PAY OUT EXPLORATION (575,000) AND LAND AQUISITION COSTS (1,300,000) IN 0.66 YRS AFTER FIRST PRODUCTION — RETURN 2.5:1 IN TWO YEARS.

3

UNDERGROUND SITUATION (Mining Bronco Dyke)

POTENTIAL RESERVES BY DELINEATION OF THE MINERALIZED PORTION OF THE BRONCO DYKE. LIMITED DRILLING DATA, STOCKPILED ORE TENURE AND ENGINEER'S REPORTS INDICATE THE MINERALIZED PORTION OF THE DYKE IS COMPOSED OF QUARTZ AVERAGING .25 ozs. gold per TON, 7 OUNCES SILVER AND 2% COPPER WHICH HAS AN AVERAGE WIDTH OF 4 FEET, AVERAGE DEPTH OF 600 FEET AND A STRIKE LENGTH OF THREE-FORTHS OF A MILE. THESE DIMENTIONS ARE CONVERTED TO TONS BY MULTIPLYING LENGTH TIMES WIDTH TIMES DEPTH AND DIVIDING BY 12.5 CUBIC FEET TO THE TON DENSITY FACTOR. THIS EXERCISE YIELDS A POTENTIAL RESERVE OF OVER 750,000 TONS OF ORE. THE AVERAGE VALUE per TON Assuming $350/ton gold, $8 per TON SILVER AND $.75 per POUND COPPER gives $173.50 per TON, gross VALUE.

FURTHER: $173.5

less	75.	/ TON Mining COSTS	
less	1.33	/ TON MILL AND REFINERY CONST. COSTS	
less	6.50	/ TON MILLING AND REFINING COSTS	
less	17.35	PRICE STABILITY DISCOUNT	10%
less	17.35	RECOVERY factor	10%
less	17.35	BULK SALES DISCOUNT	10%
	38.62	NET profit. per TON	

250 T/DAY
$1,000

750,000T TIMES $38.62 = $28,965,000

Mining AT 250 TONS per DAY - 300 DAYS per YEAR gives 10 YR. MINE LIFE. PAY OUT EXPLORATION (575,000) AND LAND AQUISITION COSTS (1,300,000) IN 0.65 yrs FROM DATE OF FIRST PRODUCTION - ESTIMATED AT 2 YR. FROM START OF EXPLORATION program. RETURN RATIO APPROX. 10:1

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CHICO MINES PROPERTY

The Chico Mines Property consists of 51 contiguous mining claims (two patented) comprising approximately 640 acres and located in the Wallapai Mining District of northwest Arizona.

The Property is bounded on the east by Stockton Hill Camp, a late 1800's silver bonanza, on the south by the Golconda Camp, once the largest lead-zinc-silver producer in the area and bounded on the north by the Pennzoil-Duval copper-moly porphyry, an open pit mine.

On the Property, rocks exposed at the surface include metamorphosed pre-Cambrian igneous and sedimentary rocks cut by Mesozoic (?) intrusives and Tertiary extrusives. The ore deposits exist as vein deposits of primary base metal-silver sulfides; oxidized, near surface veins often greatly enriched in precious metals; and, possibly a copper-moly porphyry, an extention of the Duval orebody.

The largest structure, the Broncho Dyke, a fracture which traverses the property for three-fourths of a mile, is intruded primarily by Ithica Peak Granite, host rock of the Duval orebody, and minor quartz. Limited shallow drilling showed the quartz in the Dyke to average four feet in thickness and to carry 0.3 ounces gold per ton. If the quartz persists for the entire length of the Dyke, it could represent over one million tons of ore.

A program integrating geology, geophysics and drilling is proposed to delineate ore reserves on the Chico Property. Total cost for the program is estimated at $575,000 and the minimum time required is estimated to be six months.

PROPOSAL

#1 PRO offers an Option To Purchase the Chico Property by:

1. Conducting a drilling and geological program, estimated cost $575,000.

2. Assuming PRO's Option-Purchase installment payments; $50,000 through 12-1-82; $60,000 additional through 6-1-83.

Upon satisfaction of above, the Chico Property may be acquired for $1,200,000 consideration prior to 6-1-83. PRO shall retain a 6% ORR interest with an Option-To-Convert said ORR to 25% W.I.

- RHYOLITE DYKE (ORE SHOOT IN CENTER OF DYKE)
- $CuSO_4$ - $ZnSO_4$ ON STREAM BED
- DETROIT DUMP & VEINS -
- ORE STOCKPILE - JAMISON ACTIVITY
- BRONCHO DYKE - ASSOC. DIGGINGS
  1) OWENS INCLINED SHAFT
  2) ELESEBETH TUNNEL
  3) JAMISON (HAULAGEWAY)
- DYKE - PE GRANITE ALTERATION ZONE
- URANIUM ZONE
- CASHIER VEIN - TUNNEL & SHAFT
- Mint-98, NIGHTHAWK VEIN, JAMISON VEIN } ON MINT HILL
- GRANITE PORPHYRY, MICA SCHIST DYKES }
- NW OVERLOOK, DYKE ALTERATION ZONE, COGAS TUNNELS (STOCKWORK & OREPOD IN EASTERN TUNNEL) GOSSAN AND COGAS OPEN CUT AT HILL TOP - DUVAL OPERATION
- EAST ARM OF BRONCHO DYKE, AND ALPHA MINE
- NIGHTHAWK DUMP & WORKS, MINT DUMP & WORKS, MICA SCHIST CONTACT
- LITTLE BOY VEIN & WORKS
- GOLCONDA GHOST CAMP.
- VEIN projections FROM GOLCONDA GROUND
- 98' MINE & OREPOD
- GOETZ SHAFT & ORE STOCKPILE
- FOLLOW '98 VEIN TO MINT HILL OVERVIEW
- JAMISON OREPOD -
- OUTCROPPINGS OF ITHICA PEAK GRANITE IN BASIN
- DRIVE BY CERBAT MILL (AT DISTANCE)

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SUMMARY OF GEOLOGICAL REPORT
CHICO MINES PROPERTY
WALLAPAI DISTRICT, MOHAVE COUNTY, ARIZONA

The Chico Mines Property consists of 73 contiguous mining claims, two patented, located in Sections 29, 30 and 31, T23N, R17W, and Sections 5 and 6, T22N, R17W, GSRM, Mohave County, Arizona.

The property is bounded on the east by Stockton Hill Camp, a late 1800's silver bonanza, on the south by the Golconda Camp, once the largest lead-zinc-silver producer in the area and bounded on the north by the Pennzoil-Duval copper-moly porphyry, an active open pit mine.

The property is located in the central portion of the Cerbat Mountain Range, one of the many north-south trending, fault-block ranges of the southwest desert. Rocks exposed at the surface include metamorphosed pre-Cambrian igneous and sedimentary rocks cut by Mesozoic (?) intrusives and Tertiary extrusives.

The ore deposits on the Property may be of as many as three types; Vein deposits of primary base metal-silver sulfides; oxidized, near surface veins often greatly enriched in precious metals; and, copper-moly porphyry, an extention of the Duval orebody.

The most favorable loci for ore is at the junction of veins and randomly placed along the vein in shoots or lenses. Several major veins trend northwest and intersect with the northeast trending Broncho Dyke on the Chico Property.

Results of field reconnaissance indicate the following:

A.) Primary sulfide minerals, mostly pyrite, arsenopyrite, galena, sphalerite and chalcopyrite, are found in most of the accessible workings on the property.

B.) An oxidized zone, 50-300 feet deep, consisting of a vein swarm greatly enriched in precious metal, and representing a considerable amount of ore, is present in the southwest portion of the property bordering Stockton Hill. This zone may be minable by surface methods and amenable to cyanidation.

C.) Rock equivalents of the Duval orebody are present on the Chico Property and abundant copper sulfate precipitate may be noted in the stream bed located in the west-central portion of the Property. This suggests the southward extention of the Duval orebody into the Chico Claims.

D.) Previous mining operations on the Chico Claims have produced some sizable mine dumps. The possibility of precious metal recovery from these dumps should not be overlooked. Cursory examination indicates in excess of 150,000 tons of material averaging 0.02 ounces gold per ton and 1.5 ounces silver per ton.

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March 23, 1981

GEOLOGICAL REPORT
CHICO MINES PROPERTY
WALLAPAI MINING DISTRICT
MOHAVE COUNTY, ARIZONA

LOCATION:

The Chico Mines Property lies in the central portion of the Cerbat Mountain Range, approximately 10 miles northwest of Kingman and 200 miles northwest of Phoenix, Arizona. The claims, 73 contiguous (2 patented), encompassing over one square mile, extend from near the summit of the range to the foothills with a relief of 1,500 feet. Located in Sections 29, 30 and 31 of Township 23N, Range 17W, and Sections 5 and 6, Township 22N, Range 17W, Gila and Salt River Meridian, Mohave County, Arizona, these claims are accessible via four miles of unimproved county and private roads from U. S. Highway 93.

HISTORY AND PRODUCTION:

The Chico Mines property lies centrally in an area rich and colorful in Arizona mining history. Bordering the claims on the east is the famous silver bonanza ghost camp of Stockton Hill, where rich silver discoveries brought miners to the area in 1863. Oxidized silver ores (up to 3,000 ounces per ton) were mined at Stockton Hill with the bulk of production during the 1870-80 period. Bordering the claims to the south is the Golconda Ghost Camp whose namesake mine was reportedly "shot in" by its German owners at the outbreak of World War I. The owners abandoned the claims by returning to Germany. The Union Basin Mining Company immediately reentered the Golconda, and their smelter receipts show the company producing more than three million dollars worth of zinc, gold and silver during the duration of the war. During this time, the Jamison, True Blue and Little Boy Mines, located on the Chico claims, carried on minor operations and shipped ore to the Golconda mill. A disasterous fire at the mill halted operations in 1919, and the Golconda has been dormant since.

During the second world war, premium prices for copper, lead and zinc renewed activity in the area. The Alpha mine and the Summit mine, both located immediately to the east on veins which cross the Chico properties, shipped ore to the Tennessee mill. The Tennessee-Schuylkill mine, located 7 miles north of the Chico claims, produced 150 tons per day of crude ore averaging 7% zinc, 3.5% lead and 20 ounces of silver per ton. For the duration of the war, mill capacity limited development in the area.

The value of metals produced from the District during the years 1904-48, (U. S. Bureau of Mines 1948 Annual Report) was about 22.5 million dollars at 1948 prices, (nearly 1 billion dollars at today's prices). Values were principally in lead and zinc, but with substantial amounts of copper, silver and gold.

During the 1950's and 1960's there was sporadic development on the Chico property when the government paid a bonus for silver. The Mint, Cashier and '98 mines produced 20-50 ounce per ton silver ore. In this interim, the Jamison mine was developed to the 400-foot level and stockpiled low-grade copper-lead-zinc ore. A small mill was installed and operated for a brief time on the property but production statistics are unavailable. Approximately 1,000 tons of ore remain stockpiled.

Currently Pennzoil-Duval Corporation, bordering the Chico property to the northwest, is reportedly producing 18,000 to 20,000 tons per day of open pit ore averaging 0.5% copper and 0.045% molybdenum, plus other metals.

GEOLOGY AND ORE DEPOSITS:

The Cerbat Mountains constitute one of the many north-south trending, fault-block ranges of the southwest desert. They consist primarily of metamorphosed pre-Cambrian igneous and sedimentary rocks, cut by later intrusions of Mesozoic (?) granite and monzonite porphyries, known locally as the Ithaca Peak Granite, and by Tertiary volcanic dykes. Centering around the Ithaca Peak intrusive, mineralization is typically copper and molybdenum sulfides, now being mined by Duval. Surrounding the intrusive is a zone several miles wide of lead-zinc-silver bearing veins which gradationally change into veins of intense silver mineralization.

The vein type ore deposits occur in clefts or cracks in the country rock in which the mineral material precipitated from aqueous solution (hydrothermal fissure veins). It is probable that these fissures formed from forces accompanying the implacement of the Ithaca Peak intrusive. With the intrusive acting as a heat engine, a convecting hydrothermal system developed that set up a hypogene enrichment process which deposited ore and gangue minerals near the top of the convecting cell and extracted metals and sulfur from sources at depth. Conceivably, as the solution approached the fissure level, it boiled, thereby distilling the acid forming constituants CO_2 and H_2S. Cooling and a slight pH rise of the residual liquids, due to loss of acid forming constituants, may be regarded as the mechanism of sulfide precipitation. Exposure of the veins to normal weathering processes oxidized the ore and, to a point, enriched it by the downward migration of slightly acidic rainwater carrying metals in solution.

Many veins, occuring in nearly vertical fault fissures, strike northwest and outcrop for considerable distances. The fault fissures are largely occupied by breccia with abundant shearing and some gouge. Ore lenses, or shoots, though not continuous are numerous and tend to have greater vertical rather than horizontal extent. Concentrations of extremely hi-grade ore appear to favor vein junctures. These concentrations are attributable to chemical and physical changes which enhanced mineral deposition at the fissure level of the convecting cell.

Most of the veins appear to be associated with the Bronco Dyke. The Dyke is a prominant linear structure which traverses the Chico Property for three-fourths of a mile. It varies from 20-70 feet in width, strikes N10E and dips 60^{o} SW. The Dyke is composed of at least four rock types and cuts all lithologic units in the area. It is composed primarily of Ithaca Peak granite, an equivalent of the Duval Orebody. The Ithaca Peak granite is, in turn, intruded by smaller dykes of aplite, rhyolite, diabase and quartz. A considerable amount of sulfide material was carried up by the ascending solutions of subsiding igneous activity as evidenced by the many small, fracture filling sulfide veinlets ubiquitious in the granite fraction of the Dyke, and by numerous massive sulfide lenses randomly spaced along the Dyke and at dyke-vein intersections. Conditions of rock associations are reported to be similar throughout the 400 foot depth of present workings, now flooded, on the Dyke, therefore, any precipitating effect the country rock had on ascending (or decending) solutions are duplicated to a depth

of at lease 400 feet. The open, permeable, nature of the Dyke is evidenced by the considerable alteration (chloritic, sericitic) of all major rock units composing the dyke, which also enhances the probability of secondary enrichment. Geochemical sampling has shown the dyke to be anomolous in silver, lead and zinc. Electromagnetic surveying has also indicated anomolous areas centered on the Dyke.

At least six major vein systems traverse the Chico claims trending northwest from Stockton Hill towards intersections with the Bronco Dyke. They are the Summit Vein, the Alpha Vein, the Nighthawk-Cashier Vein, the Mint-'98 Vein, the Logas Vein and the Little Boy-Jemison Vein (see prospect map). These veins are primarily composed of sheared, fractured, crushed and recemented quartz. They are generally less than six feet wide with an attendant gouge zone of clays one to two feet thick which favors the foot wall but, often as not, occurs on both walls of the vein. These veins are separate structures which contain known concentrations, shoots or lenses, of high-grade ore. These concentrations are of limited tonnage, perhaps several thousands of tons each, and are randomly contained within the veins with a tendancy toward vein junctures with other structures, such as dykes or other veins. "Barren" quartz vein material is usually gray in color with pyrite laced microcrystalline chalcedony masses enclosing fragmented milky quartz, this "barren" material generally carries several ounces of silver per ton. Results from limited electromagnetic surveying are inconclusive, but suggest several anomolous areas which probably are indicative of shallow ore deposits along the vein.

The primary mineralization in the Chico Property is an assemblage of chalcopyrite, galena, sphalerite, argentite, pyrite and arsenopyrite together with a variety of sulfa salts and gangue minerals. The oxidized portion of the veins range from 50 to 300 feet deep and may be very rich in silver chlorides, silver bromides and native silver with lesser concentrations of native gold.

ORE RESERVES:

The Chico property contains base metal silver veins, oxidized silver-gold veins and, possibly stockwork type copper. Data from past developments, publications and reports are insufficient, or unavailable, to completely delineate the ore bodies for volumetric analysis. However, there is ore exposed in various underground workings and in many places on the surface; prospect pits, trenches, dumps, etc.

More than 1,000 tons of base metal-silver ore has been stockpiled from the Bronco Dyke and reportedly much more is exposed in the Jamison mine, now flooded, which is developed to the 400-foot level. Mill test results done by Denver Equipment Company's ore testing division, averaged 0.03 ounces gold per ton, 1.9% copper, 6.0 ounces silver per ton, 1.7% zinc, 0.92% lead and 9.5% iron. Results from laboratory batch selective floatation tests show the ore can be beneficiated to recover nearly 90% of the copper, lead, zinc and silver and approximately 40% of the gold. High grade shoots encountered in the Jamison mine ran as high as 12 ounces gold per ton, 50 ounces silver per ton, 12% copper, 6% lead and 2% zinc. The Dyke traverses the property for nearly three-fourths of a mile. It could yield in excess of 10 million tons of ore.

Numerous veins traverse the Chico Property. Oxidized portions of these veins are known to contain ore shoots rich in silver and gold. Assays imply these shoots can be surface worked for 20 ounces per ton silver. The shoots are generally less than three feet wide and extend to an average depth of 100 feet. Although some of these oxidized ore shoots have been completely mined out, many high-grade ore shoots remain (some can be traced at the surface.). One ore

shoot (14 inches wide) was traced by this author for over a quarter mile. Surface assays average 27 ounces silver per ton and 0.08 ounces gold per ton (see assays 15, 17 and 18) and samples from underground workings at the 50-foot level, on the same vein, assays average 47 ounces silver per ton and 1.9 ounces gold per ton (see assays 8 and 11). The extent and tenure of these underground workings is unknown since they are presently caved in at the 50-foot level.

Previous mining operations on the Chico Claims have produced some sizable mine dumps. The possibility of precious metal recovery from these dumps should not be overlooked. Cursory examination indicates in excess of 150,000 tons of material averaging 0.02 ounces gold per ton and 1.5 ounces silver per ton.

Rock equivalents of the Duval orebody are present on the Chico Property and abundant copper sulfate precipitate may be noted in the stream bed located in the west-central portion of the Property (see water assay number 13). This suggests the southward extention of the Duval orebody into the Chico Claims.

CONCLUSION:

On the basis of surface observations and in the accessible old workings, plus facts provided by local people of reputation, it is our opinion that the Property contains well developed structures with strong-to-moderate copper, lead, zinc, gold and silver mineralization. We also conclude that the Property may contain a large mass of low-grade copper, lead, and zinc mineralization.

The Chico Property could then, at some later date, produce by either underground or surface mining methods. In either case, it is our opinion adequate exploration will justify a major mining investment.

PACIFIC REGIONAL OPERATIONS, INC.

William Vanderwall
Geologist

October 20, 1981

5-17 Chico Jamison On stockpile

.04 Gold $320 $12.80

6 Silver $6.50 39.00

$51.80/t. 80% rec. 80% sales = 33.15/t

$33.15 X 1500 X .05 = $2486.75

4-2 Chuck Springgold $38-40 to mill, $10 to haul 80% rec.

THESE mineralized veins PARTIALLY EXPOSED By the three shafts will supply ORE to THE Little Boy Cyanide LEACH operation. Generally, the veins ARE oxidized to a depth of 200 feet; they increase in thickness from 1 foot AT THE surface to 2.5 feet AT 200' AND gold AND silver values increase significantly FROM 0' to 50'.

Ore reserve AND tenure calculations ARE AS follows.

3 veins X 200' deep X 1.75 ft. wide X 100' long.
= 105,000 cubic feet = 3,889 cubic yds
3,889 cu. yd. X 3.0 tons/cu.yd = 11,667 tons of ore

Average ore tenure = 1.65 oz. Ag/ton 11.89 oz Ag/ton '98 shaft
surface to 200' 0.20 " 7.61 " Little Boy "
0.47 " 49.32 " goetz "
AVE- 0.77 Ag 22.94 Ag

11,667 tons ÷ 50 tons/DAY = 233 DAYS @ 20 Dy/mo = 12 mos.

— Economics —

.77 oz Ag/ton X $600/oz X 1000 tons/mo = $462,000/mo.
22.94 oz Ag/ton X $15/oz X 1000 tons/mo = 344,100/mo
total = 806,100

Less 20% Recovery factor = 644,880
Less 20% price adj. for impure Bullion sale = 483,660
Less 20% price stability factor = 322,440

monthly Revenue $322,440

Estimated START UP COSTS (3 months time)

~~consideration for trade & geo costs~~	~~60,000~~	
Engineering Cost	15,000	
legal & title	10,000	
survey	5,000	
Eqpt. purchase	50,000	15,000 eng. ~~geo~~ ANAL.
Metallurgical pilot plant	50,000	
* operating LEACH plant	500,000	
contingency 10	8,500 ~~28,500~~	~~10,000 geological consideration~~
	$ 698,500	

~~* LEACH plant completely BUILT AND operating ON premises by ESCAPOLE FAMILY.~~

Estimated monthly operations (surface mining)

LABOR (All) + supervision	20,000 ✓
insurance	5,000 ✓
LABOR (pilot plant)	2,000 ✓
Eqpt. Lease (office, mine, leach)	20,000
leach chemicals & explosives ✓	6,000 ✓
pilot plant supplies ✓	3~~5~~,000
General AND ADMINISTRATIVE	10 ~~4~~,000 ✓
contingency 15%	10,000
Fuel	5,000
	80,000

ANALYSIS OF monthly income to payout

Monthly revenue	322,440
5~~#~~% royalty	~~9,673~~
	312,767
operations	80,000
	232,767
LAND payment	50,000
	182,767 net income

— AREA B —

EXPAND operations AND/or move operations

Begin mining AREA B — AVERAGE ore grade IS 20oz silver/ton AND 0.03 gold/ton at surface (ASSAY #18) AND 0.55 gold/ton AND 63oz silver per ton AT 50' depth (ASSAY #8 - goetz shaft).

Vein Length 600'; vein WIDTH 1.75ft AVE; vein depth 200'.

ORE Reserve ESTIMATE

600' X 1.75' X 200' = 7778 cubic yds

7778 yd^3 X 3.0 tons/yd^3 = 23,333 tons

23,333 X 100 tons/DAY = 233 DAY = 12 mos. @ 20 DAY/mo

Ore tenure, AVE VALUES 0'–200',

.03	20.0	(ASSAY #18)
.55	63.0	(ASSAY #8 50' level)
.20	7.61	(Little Boy surface to 200' average)

Au. AVE. 0.26oz/ton Ag. AVE. 30.20oz/ton

0.26 oz Au/ton X $600/ton X 1000 tons/mo = $156,000

30.2 oz Ag/ton X $15/ton X 1000 tons/mo = 453,000

609,000

Less 60% — VARIOUS Recovery & SALES factors = 243,600

monthly Revenue (50T/D) 243,600

monthly Revenue (100T/D) 487,200

eqpt for 50 T/D open pit operation
for CN LEACH PAD

— LEASE —

Mining

1 D-7 DOZER	2760/mo
2 Front end LOADER & BACK HOE	2760/mo ea
2 5 ton DUMP	1100/mo ea
1 compressor	500/mo
2 JACK HAMMERS	600/mo ea
1 portable DRILL	2500/mo
Office SPACE (trailer + eqpt)	860/mo

LEACH

1 D-7 DOZER	2760/mo
1 ORE CRUSHER + (conveyor-purchase)	2760/mo [illegible]
1 GENERATOR	340/mo
	20,000

PURCHASE

2 4x4 PICKUPS	20,000
SAFTY EQPT	1,000
VARIOUS HAND TOOLS	5,000
Explosive Detonators	5,000
BUILDING (STORAGE)	10,000
Directional conveyor 100'	5,000
CORDS & HOSES	4000
	50,000

Pilot PLANT

ASSAY MACHINE	35,000	Atomic Absorb
Building & fixtures	10,000	
Supplies	5,000	
	50,000	

LABOR

6 HEAVY Eqpt operators	– 60/HR x 160hrs = $9600/mo
2 LABORERS	– 10/HR x 160hrs = 1600/mo
1 supervisor	– 2000/mo
1 crusher operator	– 6/HR x 160hrs = 960
WATCHMAN	800/mo
1 chemist	– 2000/mo
1 geologist	– 2000/mo
1 office person	– 800/mo
insurance $20/DAY/person	$5200

total LABOR + insurance $27,000

PROBABLE CASE; 3 VEINS, EACH 150' long by 200' DEEP by 1 3/4' WIDE = 17,500 tons OF ORE @ $322/ton; 50 tons/DAY = 1.5 year

		Sept.	Oct.	Nov.	Dec.	Jan 81	Feb	March	Apr	May	Jun
1		1	2	3	4	5	6	7	8	9	10
2	Revenue (Area A)					322500	322500	322500	322500	322500	322500
3	Revenue (Area B)										
4											
5	Costs										
6	Leach Plant	250000			250000						
7	Start up	49625	49625	49625	49625						
8	Land purchase	25—	25—	25—	25—	50—	50—	50—	50—	50—	50—
9	Operations (mo)	80—	80—	80—	80—	80—	80—	80—	80—	80—	80—
10	Exploration										
11	3% Royalty					10000	10—	10—	10—	10—	10—
12											
13	NET CASH FLOW	<404625>	<154625>	<154625>	<404625>	182500	182500	182500	182500	182500	182500
14	Cum. CASH FLOW		<559250>	<713875>	<1118500>	<936000>	<753500>	<571000>	<388500>	<206000>	<23500>
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

operations before depletion; go to 100 t/D AFTER six months gives 1 year depletion

1	2	3	4	5	6	7	8	9	10	
Jul	Aug	Sept	Oct	Nov.	Dec.	Jan 82	Feb	Mar	Apr - Dec.	
										1
645000	645000	645000	645000	645000	322500	322500	Depleted			2
				Begin Area B →	243600	243600	487200	487200	4384800	3
										4
									TD Depletion	5
									OF Area B	6
										7
75 —	75 —	75 —	75 —	75 —	75 —	100 —	100 —	100 —	900 —	8
147 —	147 —	147 —	147 —	147 —	147 —	147 —	147 —	147 —	1323000	9
Area B Exploration	5000	5 —	5 —	5 —						10
20 —	20 —	20 —	20 —	20 —	17 —	17 —	15 —	15 —	135 —	11
										12
403000	398 —	398 —	398 —	398 —	327100	302100	225200	225200	2026800	13
379500	777500	1175500	1573500	1971500	2298600	2600700	2825900	3051100	5077900	14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										28
										29
										30
										31

MINIMAL CASE; 3 VEINS, 100' long by 200' DEEP 1¾' WIDE = 11,667 TONS ORE IN AREA A @ $322/TON; 50 tons/day gives 1 YEAR

	Sept	Oct	Nov	Dec.	Jan '81	Feb	Mar	Apr	May	Jun
REVENUE (Area A)					322500	322500	322500	322500	322500	322500
Revenue (Area B)										
Costs —										
LEACH PLANT	250000			250000						
START UP COSTS	49625	49625	49625	49625						
LAND Costs	25000	25—	25—	25—	50000	50000	50—	50—	50—	50—
EXPLORATION Cost									Exploration of Area B Begins →	5—
MONTHLY OPERATIONS	80000	80—	80—	80—	80—	80—	80—	80—	80—	80—
3% ROYALTY					10000	10—	10—	10—	10—	10—
NET CASH FLOW	<404625>	<154625>	<154625>	<404625>	182500	182500	182500	182500	182500	177500
CUMULATIVE CASH FLOW		<559250>	<713875>	<1118500>	<936000>	<753500>	<571000>	<388500>	<206000>	<2850·

operations before depletion; 90 to 100% WHEN Area B IN LAST MO'S BEFORE A IS Depleted

Jul	Aug	Sept	Oct	Nov	Dec.	Jan '82
322500	322500	322500	322500	322500	322500	ORE Depleted
75 —	75 —	75 —	75 —	75 —	75 —	
5 —	5 —	5 —	Exploration shows NO MINABLE ORE in Area B			
80 —	80 —	80 —	80 —	80 —	80 —	80 — clean up move out
10 —	10 —	10 —	10 —	10 —	10 —	10 —
152500	152500	152500	157500	157500	157500	(80 →
124000	276500	429000	586500	1744000	1901500	1821500

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CHICO PROPERTY
ORE POTENTIAL
SUMMARY

All the attendant geological features or conditions which are responsible for the formation of economic ore deposits in the Wallapai Mining District occur on the Chico Property.

Direct evidence of ore underground exists in most old workings which exploited the oxidized portions of the veins. The size and extent of mine dumps suggest fifty thousand tons of ore have been removed from the upper portion of the ore-bodies. The primary sulfide zones are shown to persist for depths exceeding four hundred feet. Assayed sulfide material yields as high as 12 ounces gold per ton and 50 ounces silver per ton with 12% copper, average tenure is 0.5 ounces gold per ton and 10 ounces silver per ton with 2% each of copper, lead and zinc. We consider that at least an additional fifty thousand tons of such sulfide ore remains, drilling could significantly increase that estimate.

Indirect evidence of mineralization of the property exists in the form of extensive iron and manganese stained gossans, spring water testing 6.7 ppm copper, 87 ppm zinc and 2 ppb silver, and zones of secondary copper enrichment occuring in the largest structural component of the Chico Property. Silver enrichment of the gossans averages 3 ounces per ton and goes as high as 20 ounces per ton with minor amounts of gold. The sulfide equivalent of a gossan, drilled in July, 1981, assayed 1.3 ounces gold per ton but only 12.5 ounces silver. Perhaps the ground water, containing 80 ppm clorine, preferentially enriches the oxide zone with cerargarite (Ag Cl) while transporting gold in various auro-chloro compounds.

The largest structure, the Broncho Dyke, a fracture which traverses the property for three-fourths of a mile, is infilled primarily by Ithica Peak Granite, host rock of the Duval orebody. The granite in turn was intruded by diabase, rhyolite and quartz. Geochemical samples of the Dyke have revealed areas anomolous in silver, lead and zinc. Shallow drilling showed the quartz in the Dyke to average 6 feet in thickness and to carry 0.3 ounces gold per ton. If the quartz persists for the entire length of the Dyke, it could represent over one million tons of ore. The nature, rock associations and attitude of the Dyke enhances the possibility of secondary copper enrichment.

A development drilling program is paramount for the delineation of ore reserves on the Chico Property.

September 18, 1981

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GEOLOGICAL SUMMARY
CHICO MINING CLAIMS
WALLAPAI DISTRICT, MOHAVE COUNTY, ARIZONA

(1) The Chico Mines property comprises 51 claims (2 patented) located in Sections 31 and 32, Township 23N, Range 17W, and Sections 5 and 6, Township 22N, Range 17W, GSRM.

(2) The claims are bounded on the north by the Pennzoil-Duval claims; an active open pit porphyry copper operation; and bounded on the south by the Golconda Mines group which was the second largest base metal producer in the district.

(3) Rocks exposed at the surface include pre-Cambrian igneous and metamorphic rocks intruded by the Ithaca Peak granite which is centered just north of the Chico claims. This intrusive is thought to be the source of most mineralization since mineralized zones radiate out from the center of the granite intrusion.

(4) The ore deposits on the claims may be of as many as three types. Porphyry copper-molybdenum in the north, a continuation of the Duval ore body; vein deposits of primary sulfide minerals which extend to depths of 1,500 feet or more, and possibly widening with depth; and the oxidized portions of the vein deposits which occur near or at the surface and are often greatly enriched in silver.

(5) The most favorable loci for ore is at the junction of veins. At least four major veins trend northwest from Stockton Hill and intersect with the manganese stained "Black Dyke" (Broncho Dyke) which traverses the Chico claims. These are the Alpha Vein, the Cashier Vein, the Little Boy Vein, and the 98 Vein, (see Project map).

(6) Results of spot check assays and preliminary field reconnaissance indicate the following:

(A) An oxidized zone, enriched in silver is present in the southeast half of the Chico claims and on the entire Black Hawk claims.

(B) Considerable ore lies in the oxidized zone 50-300 feet deep, averaging approximately 20 ozs. of silver per ton and 0. ozs. of gold per ton.

(C) This oxidized zone may be mined by surface methods or shallow underground methods.

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GEOLOGICAL REPORT
CHICO MINES PROPERTY
WALLAPAI MINING DISTRICT
MOHAVE COUNTY, ARIZONA

LOCATION:

The Chico Mines Property lies in the central portion of the Cerbat Mountain Range, approximately 10 miles northwest of Kingman and 200 miles northwest of Phoenix, Arizona. The claims, 73 contiguous (2 patented), encompassing over one square mile, extend from near the summit of the range to the foothills with a relief of 1,500 feet. Located in Sections 29, 30 and 31 of Township 23N, Range 17W, and Sections 5 and 6, Township 22N, Range 17W, Gila and Salt River Meridian, Mohave County, Arizona, these claims are accessible via four miles of unimproved county and private roads from U. S. Highway 93.

HISTORY AND PRODUCTION:

The Chico Mines property lies centrally in an area rich and colorful in Arizona mining history. Bordering the claims on the east is the famous silver bonanza ghost camp of Stockton Hill, where rich silver discoveries brought miners to the area in 1863. Oxidized silver ores (up to 3,000 ounces per ton) were mined at Stockton Hill with the bulk of production during the 1870-80 period. Bordering the claims to the south is the Golconda Ghost Camp whose namesake mine was reportedly "shot in" by its German owners at the outbreak of World War I. The owners abandoned the claims by returning to Germany. The Union Basin Mining Company immediately reentered the Golconda, and their smelter receipts show the company producing more than three million dollars worth of zinc, gold and silver during the duration of the war. During this time, the Jamison, True Blue and Little Boy Mines, located on the Chico claims, carried on minor operations and shipped ore to the Golconda mill. A disasterous fire at the mill halted operations in 1919, and the Golconda has been dormant since.

During the second world war, premium prices for copper, lead and zinc renewed activity in the area. The Alpha mine and the Summit mine, both located immediately to the east on veins which cross the Chico properties, shipped ore to the Tennessee mill. The Tennessee-Schuylkill mine, located 7 miles north of the Chico claims, produced 150 tons per day of crude ore averaging 7% zinc, 3.5% lead and 20 ounces of silver per ton. For the duration of the war, mill capacity limited development in the area.

The value of metals produced from the District during the years 1904-48, (U. S. Bureau of Mines 1948 Annual Report) was about 22.5 million dollars at 1948 prices, (nearly 1 billion dollars at today's prices). Values were principally in lead and zinc, but with substantial amounts of copper, silver and gold.

During the 1950's and 1960's there was sporadic development on the Chico property when the government paid a bonus for silver. The Mint, Cashier and '98 mines produced 20-50 ounce per ton silver ore. In this interim, the Jamison mine was developed to the 400-foot level and stockpiled low-grade copper-lead-zinc ore. A small mill was installed and operated for a brief time on the property but production statistics are unavailable. Approximately 1,000 tons of ore remain stockpiled.

Currently Pennzoil-Duval Corporation, bordering the Chico property to the northwest, is reportedly producing 18,000 to 20,000 tons per day of open pit ore averaging 0.5% copper and 0.045% molybdenum, plus other metals.

GEOLOGY AND ORE DEPOSITS:

The Cerbat Mountains constitute one of the many north-south trending, fault-block ranges of the southwest desert. They consist primarily of metamorphosed pre-Cambrian igneous and sedimentary rocks, cut by later intrusions of Mesozoic (?) granite and monzonite porphyries, known locally as the Ithaca Peak Granite, and by Tertiary volcanic dykes. Centering around the Ithaca Peak intrusive, mineralization is typically copper and molybdenum sulfides, now being mined by Duval. Surrounding the intrusive is a zone several miles wide of lead-zinc-silver bearing veins which gradationally change into veins of intense silver mineralization.

The vein type ore deposits occur in clefts or cracks in the country rock in which the mineral material precipitated from aqueous solution (hydrothermal fissure veins). It is probable that these fissures formed from forces accompanying the implacement of the Ithaca Peak intrusive. With the intrusive acting as a heat engine, a convecting hydrothermal system developed that set up a hypogene enrichment process which deposited ore and gangue minerals near the top of the convecting cell and extracted metals and sulfur from sources at depth. Conceivably, as the solution approached the fissure level, it boiled, thereby distilling the acid forming constituants CO_2 and H_2S. Cooling and a slight pH rise of the residual liquids, due to loss of acid forming constituants, may be regarded as the mechanism of sulfide precipitation. Exposure of the veins to normal weathering processes oxidized the ore and, to a point, enriched it by the downward migration of slightly acidic rainwater carrying metals in solution.

Many veins, occuring in nearly vertical fault fissures, strike northwest and outcrop for considerable distances. The fault fissures are largely occupied by breccia with abundant shearing and some gouge. Ore lenses, or shoots, though not continuous are numerous and tend to have greater vertical rather than horizontal extent. Concentrations of extremely hi-grade ore appear to favor vein junctures. These concentrations are attributable to chemical and physical changes which enhanced mineral deposition at the fissure level of the convecting cell.

Most of the veins appear to be associated with the various dykes. The Broncho Dyke is a prominent linear structure which extends from the Golconda Mine northeast through the Chico claims (as shown on prospect map). It cuts all lithologic units in the area and appears to intersect with no less than four major veins on the Chico property. The Dyke is composed of dioritic to diabasic rock with an aphanitic texture. It varies from 20 to 70 feet in thickness, strikes N 10 E and dips 60° SW. Evidence of mineralization in the Dyke is from manganese stained gossan caps, in place mineralization underground and the number and extent of workings on the Dyke. Other dykes on the property include granite porphyry, aplite and rhyolite but are, presumably, less mineralized than the Broncho Dyke.

At least four major vein systems traverse the Chico claims trending northwest from Stockton Hill and intersecting with the Bronco Dyke. They are the Summit and Alpha Veins, the Cashier Vein, the Mint-'98 Vein and the Little Boy Vein (see

of at lease 400 feet. The open, permeable, nature of the Dyke is evidenced by the considerable alteration (chloritic, sericitic) of all major rock units composing the dyke, which also enhances the probability of secondary enrichment. Geochemical sampling has shown the dyke to be anomolous in silver, lead and zinc. Electromagnetic surveying has also indicated anomolous areas centered on the Dyke.

At least six major vein systems traverse the Chico claims trending northwest from Stockton Hill towards intersections with the Bronco Dyke. They are the Summit Vein, the Alpha Vein, the Nighthawk-Cashier Vein, the Mint-'98 Vein, the Logas Vein and the Little Boy-Jemison Vein (see prospect map). These veins are primarily composed of sheared, fractured, crushed and recemented quartz. They are generally less than six feet wide with an attendant gouge zone of clays one to two feet thick which favors the foot wall but, often as not, occurs on both walls of the vein. These veins are separate structures which contain known concentrations, shoots or lenses, of high-grade ore. These concentrations are of limited tonnage, perhaps several thousands of tons each, and are randomly contained within the veins with a tendancy toward vein junctures with other structures, such as dykes or other veins. "Barren" quartz vein material is usually gray in color with pyrite laced microcrystalline chalcedony masses enclosing fragmented milky quartz, this "barren" material generally carries several ounces of silver per ton. Results from limited electromagnetic surveying are inconclusive, but suggest several anomolous areas which probably are indicative of shallow ore deposits along the vein.

The primary mineralization in the Chico Property is an assemblage of chalcopyrite, galena, sphalerite, argentite, pyrite and arsenopyrite together with a variety of sulfa salts and gangue minerals. The oxidized portion of the veins range from 50 to 300 feet deep and may be very rich in silver chlorides, silver bromides and native silver with lesser concentrations of native gold.

ORE RESERVES:

The Chico property contains base metal silver veins, oxidized silver-gold veins and, possibly stockwork type copper. Data from past developments, publications and reports are insufficient, or unavailable, to completely delineate the ore bodies for volumetric analysis. However, there is ore exposed in various underground workings and in many places on the surface; prospect pits, trenches, dumps, etc.

More than 1,000 tons of base metal-silver ore has been stockpiled from the Bronco Dyke and reportedly much more is exposed in the Jamison mine, now flooded, which is developed to the 400-foot level. Mill test results done by Denver Equipment Company's ore testing division, averaged 0.03 ounces gold per ton, 1.9% copper, 6.0 ounces silver per ton, 1.7% zinc, 0.92% lead and 9.5% iron. Results from laboratory batch selective floatation tests show the ore can be beneficiated to recover nearly 90% of the copper, lead, zinc and silver and approximately 40% of the gold. High grade shoots encountered in the Jamison mine ran as high as 12 ounces gold per ton, 50 ounces silver per ton, 12% copper, 6% lead and 2% zinc. The Dyke traverses the property for nearly three-fourths of a mile. It could yield in excess of ~~10 million~~ tons of ore.

Most of the veins appear to be associated with the Bronco Dyke. The Dyke is a prominant linear structure which traverses the Chico Property for three-fourths of a mile. It varies from 20-70 feet in width, strikes N10E and dips 60^{o} SW. The Dyke is composed of at least four rock types and cuts all lithologic units in the area. It is composed primarily of Ithaca Peak granite, an equivalent of the Duval Orebody. The Ithaca Peak granite is, in turn, intruded by smaller dykes of rhyolite, andesite, quartz and diabase. A considerable amount of sulfide material was carried up by the ascending solutions of subsiding igneous activity as evidenced by the many small, fracture filling sulfide veinlets ubiquitious in the granite fraction of the Dyke, and by numerous massive sulfide lenses randomly spaced along the Dyke and at dyke-vein intersections. Conditions of rock associations are reported to be similar throughout the 400 foot depth of present workings, now flooded, on the Dyke, therefore, any precipitating effect the country rock had on ascending (or decending) solutions are duplicated to a depth

(1) LIMITED SURFACE SAMPLING OF THE GRANITE FRACTION OF THE BRONCO DYKE, IN THE VACINITY OF THE JAMISON MINE, HAS SHOWN IT TO CARRY LOW GRADE GOLD-SILVER VALUES. SAMPLES TAKEN OVER FIFTY FEET AVERAGED 0.13 OZS. GOLD PER TON AND 2.59 OZS. SILVER PER TON. OXIDATION AND SECONDARY ENRICHMENT ARE PRESUMED TO BE THE AGENTS RESPONSIBLE FOR THE VALUES SINCE LOWER VALUES ARE ENCOUNTERED BELOW THE ZONE OF OXIDATION, WHICH APPEARS TO PERSIST FOR 30 TO 50 FEET. THE ZONE IS MINEABLE BY SURFACE METHODS AND MAY BE AMENABLE TO HEAP LEACHING BY CYANIDE. THE GRANITE IS CONTINUOUS FOR THREE-FORTHS OF A MILE AND AVERAGES THIRTY FEET IN WIDTH, CONSEQUENTLY IT COULD REPRESENT MORE THAN A QUARTER MILLION TONS OF ORE.

(2) PRIMARY SULFIDE PORTIONS OF THE ORE SHOOTS HAVE, FOR THE MOST PART, BEEN LEFT INTACT PROBABLY DUE TO THE COMPLEXITY OF THE ORE AND SOMEWHAT LESSER AMOUNTS OF PRECIOUS METAL VALUES. ALTHOUGH THIN, USUALLY LESS THAN THREE FEET WIDE, THE SULFIDE PORTION OF THE ORE SHOOTS USUALLY CONTAIN SUBSTANTIAL VALUES IN COPPER OR ZINC WITH SEVERAL OUNCES OF SILVER PER TON AND LESSER GOLD. AT LEAST SIX SUCH ORE SHOOTS ARE KNOWN ON THE PROPERTY, OTHERS HAVE BEEN INDICATED BY ELECTROMAGNETICS AND STILL OTHERS ARE INDICATED BY SURFACE EXPRESSION. BASED ON LIMITED UNDERGROUND EXPOSURES, AND INFERENCE, IT MAY BE POSSIBLE TO DEVELOP 25,000 TO 50,000 TONS OF ORE AVERAGING $250 per TON IN BASE AND PRECIOUS METALS.

shoot (14 inches wide) was traced by this author for over a quarter mile. Surface assays average 27 ounces silver per ton and 0.08 ounces gold per ton (see assays 15, 17 and 18) and samples from underground workings at the 50-foot level on the same vein, assays average 47 ounces silver per ton and 1.9 ounces gold per ton (see assays 8 and 11). The extent and tenure of these underground workings is unknown since they are presently caved in at the 50-foot level.

Previous mining operations on the Chico Claims have produced some sizable mine dumps. The possibility of precious metal recovery from these dumps should not be overlooked. Cursory examination indicates in excess of 150,000 tons of material averaging 0.02 ounces gold per ton and 1.5 ounces silver per ton.

Rock equivalents of the Duval orebody are present on the Chico Property and abundant copper sulfate precipitate may be noted in the stream bed located in the west-central portion of the Property (see water assay number 13). This suggests the southward extention of the Duval orebody into the Chico Claims.

CONCLUSION:

On the basis of surface observations and in the accessible old workings, plus facts provided by local people of reputation, it is our opinion that the Property contains well developed structures with strong-to-moderate copper, lead, zinc, gold and silver mineralization. We also conclude that the Property may contain a large mass of low-grade copper, lead, and zinc mineralization.

The Chico Property could then, at some later date, produce by either underground or surface mining methods. In either case, it is our opinion adequate exploration will justify a major mining investment.

PACIFIC REGIONAL OPERATIONS, INC.

William Vanderwall
Geologist

~~October 20, 1981~~
JAN 15, 1982