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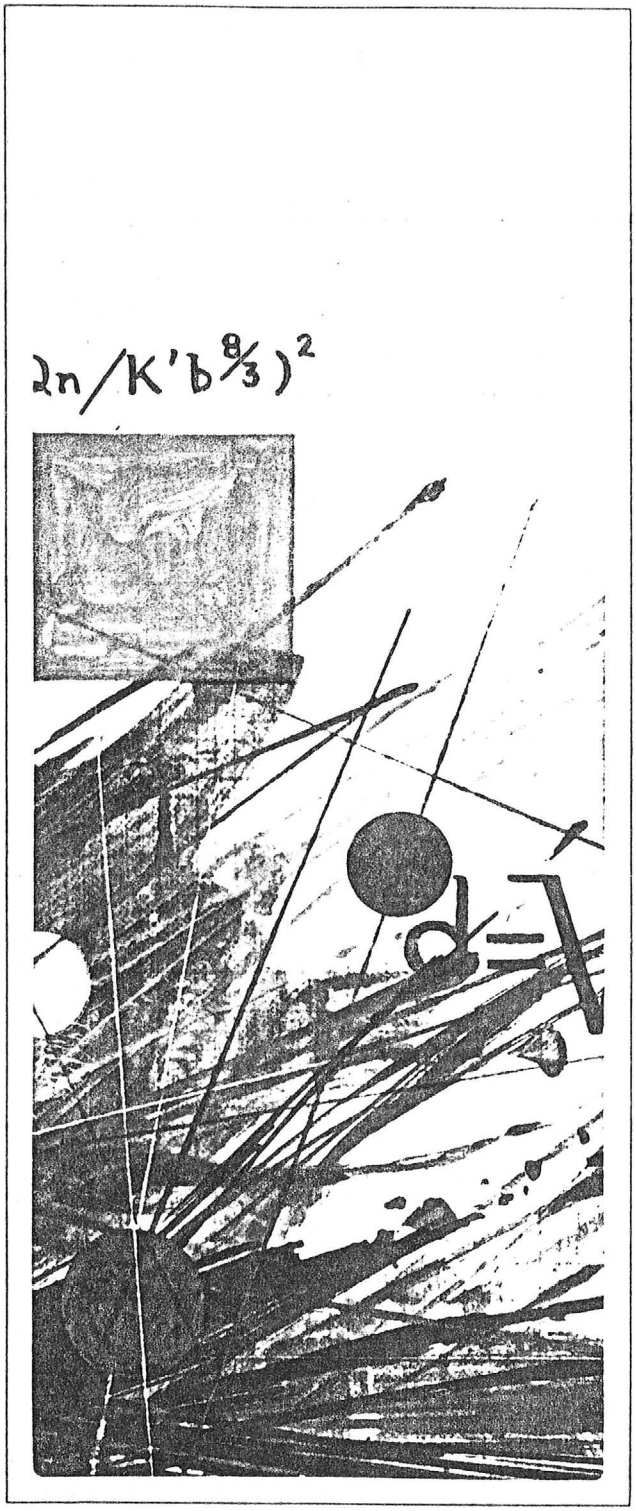
COE & VAN LOO



Consulting Engineers & Planners

INTRODUCTION:

REPORT HEREIN IS RELEVANT TO THE ECONOMIC VIABILITY OF IMPRESSIVE AMOUNTS OF SILVER AND GOLD CONTAINED IN WIDESPREAD SAND AND ALLUVIUM DEPOSITS ON THE SEA-TEC CONSTRUCTION PLACER CLAIM NO. 3 LOCATED SOUTH OF THE SETTLEMENT OF WICKENBURG, ARIZONA.

APPRAISAL OF MINERAL POTENTIAL OF THE SUBJECT PROPERTY IS PRESENTED AND BASED UPON THIS POTENTIAL AS DETERMINED THROUGH PROFESSIONAL ENGINEERING RECOMMENDATIONS ARE FOR IMMEDIATE PRODUCTION AFTER A MINOR AMOUNT OF CONFIRMATORY RESEARCH.

PROPERTY, LOCATION, ACCESS:

LOCATED IMMEDIATELY WEST OF THE OLD VULTURE GOLD MINE SITUATED SOME 15 MILES SOUTHWEST OF WICKENBURG, ARIZONA, GOLD-DUST CLAIM NUMBER 3, 20.00 ACRES IN ALL, IS SITUATED IN THE MIDDLE SOUTHEAST CORNER OF SECTION 33, T6N, R6W, VULTURE MINING DISTRICT.

ACCESS IS EASILY ATTAINED BY THE VULTURE ROAD COMMENCING 3 MILES WEST OF WICKENBURG ON HWY. 60 TRAVELLING SOUTH 15 MILES

TO THE VULTURE MINE THENCE WEST BY DESERT ROAD ONTO THE SUBJECT PLACER CLAIM 2.5 MILES WEST OF THIS TURNOFF.

TOPOGRAPHICALLY, THE SUBJECT CLAIM IS UNDERLAIN BY SAND AND DETRITAL MATERIAL FORMING A GENTLY ROLLING TOPOGRAPHY VIEWED AS BEING ESSENTIALLY FLAT CUT BY SMALL GULLIES. ALTITUDE ABOVE SEA LEVEL IS 2150 FT.

GEOLOGY; STRUCTURE, CONCENTRATIONS, MINERALOGY:

THE REGION HAS BEEN KNOWN FOR NUMEROUS YEARS TO BE PROLIFIC IN SILVER AND GOLD, PROSPECTING BEING CONCENTRATED ESSENTIALLY UPON ROCK OUTCROP, RESULTING IN THE VULTURE MINE ITSELF AS WELL AS NUMEROUS OTHER PROPERTIES.

WEATHERING HAS ERODED MOUNTAIN RANGES REGIONALLY DEPOSITING DETRITAL MATERIAL WHICH UNDERLIES THE GOLD-DUST NO.3 CLAIM. TO SOME DEGREE THEN, SILVER-GOLD HAS BEEN CONCENTRATED THROUGH NORMAL PLACER METHODS, AND OVER THE YEARS HAS LIKELY BEEN REWORKED TO ASSIST IN FURTHER PRECIOUS METALS CONCENTRATIONS THUS INCREASING GRADE OF THESE TWO PRECIOUS METALS FOUND IN ABUNDANCE ON THE PROPERTY.

INTERPRETATION OF RESULTS OF A RECENT GEOPHYSICAL PROGRAM CONDUCTED IN THE REGION OF THE PROPERTY CONCLUDE THAT THE UNDERLYING ANDESITES AND RHYOLITE FLOWS ARE HEAVILY FAULTED. SUBSEQUENT RECENT DRILLING THROUGH 520 FT. OF DETRITAL MATERIAL

INTO THE UNDERLYING ROCKS PRODUCED HOT WATER IN ABUNDANCE INDICATING THAT A DEEP SEATED PLUTON OR MASS OF LIQUID ROCK IS THE SOURCE OF MINERALIZATION. ASCENDING HOT WATER SOLUTIONS CARRYING PARTICLES OF SILVER AND GOLD INVADE THE DETRITAL MATERIAL FROM BELOW DEPOSITING THEIR LOAD OF PRECIOUS METALS THUS VASTLY ENRICHING THE UNCONSOLIDATED MATERIAL ON THE PLACER CLAIM, THE PROCESS REFERRED TO IS "HYDROTHERMALISM".

MINERALOGY:

BECAUSE GOLD AND SILVER CANNOT BE DETECTED EMPLOYING THE CHIEF AVENUE OF ASSESSMENT, COMMERCIAL ASSAY HOUSES WHICH RELY UPON THE NORMAL FIRE ASSAY, ROUTINE METHODS OF DETERMINING GOLD-SILVER CONTENT CANNOT BE EMPLOYED AS THE CHARACTER OF THE ORE FALLS OUTSIDE THE SCOPE AND APPLICIBILITY OF METHODS NORMALLY EMPLOYED FOR DETERMINATIONS.

PRECIOUS METAL PARTICLES ARE TOO MINUTE, SUBMICRONIC, COLLOIDAL, AND PORTIONS POSSIBLY SOLUABLE IN FLUIDS SUCH AS WATER. FURTHER, IT HAS RECENTLY BEEN DETERMINED THAT SILVER-GOLD VALUES ARE LOCKED INTO TELLURIUM, A SEMIMETALLIC ELEMENT THAT RELEASES ITS PRECIOUS METALS IN CONCENTRATED SULPHURIC ACID, OR WHEN HEATED ABOVE 845° F.

ESSENTIALLY BECAUSE OF THE ABOVE REASONS, FIRE ASSAY IS NON APPLICABLE AND NORMAL METHODS OF MECHANICAL CONCENTRATION

OF THE ORE CANNOT BE PERFORMED. PROBABLY BECAUSE OF THE VERY NATURE OF THE GOLD-DUST NO.3 DETRITAL DEPOSIT OF SILVER AND GOLD THE HIGHLY VALUABLE PRODUCTS HAVE NOT BEEN DISCOVERED UNTIL RECENTLY.

DETERMINATIVE METHODS, ORE GRADES, TONNAGES, DOLLAR VALUES:

A SPECIFIC WET CHEMICAL ASSAY FORMULA EMPLOYED BY CONSULTANT W. LUEGGE, P.E., LANCASTER, CALIFORNIA, IS APPLICABLE IN ASCERTAINING THE TRUE GRADES OF BOTH GOLD AND SILVER ON THE GOLD-DUST NO. 3 CLAIM.

TO FURTHER SUBSTANTIATE AND CORRELATE MR. LUEGGE'S ORE VALUES, FURNACING HAS BEEN EMPLOYED BY THE WRITER, AND IS REGARDED AS A SMELT WHERE THE ROCK ORE IS MELTED TO A LIQUID UNDER CERTAIN REAGENTS, AND LEAD IS INTRODUCED AS THE PRECIOUS METALS COLLECTOR RESULTING UPON COOLING IN A DORE BAR WHICH CAN THEN BE ASSAYED BY FIRE ASSAY OR ANY OTHER METHOD TO RESULT IN SILVER AND GOLD IN HAND AMOUNT BEING REPRESENTATIVE OF THE SAMPLE MELTED.

IN BOTH OF THE ABOVE METHODS, IT IS NOTED THAT ANY ELEMENTS THAT MAY INHIBIT NORMAL FIRE DETERMINATIONS ARE OVERCOME RESULTING IN ACCURATE ASSAYS OF THE ACTUAL GOLD AND SILVER IN THE GOLD-DUST NO.3 CLAIM. HIGH RELIABILITY IS ACHIEVED.

A COMPOSITE SAMPLE TAKEN BY THE WRITER FROM SURFACE DETRITAL

SAND MATERIAL, UNSCREENED, REPRESENTATIVE OF A 700 FT. LONG TRAVERSE UPON GOLD-DUST NO.3, RESULTED IN THE FOLLOWING PRECIOUS METALS VALUES, OUNCES PER TON: GOLD, 0.97; SILVER, 28.8; PLATINATE GROUP METALS, 0.15. TOTAL METAL VALUES PER TON EMPLOYING CURRENT MARKET PRICES EQUATES TO AN ASTONISHING $242.21 NOT INCLUDING PLATINATE GROUP CONTRIBUTIONS.

EMPLOYING A NOT FULLY AUTHENTICATED METHOD OF CRUSHED ORE INTO A MERCURY BATH WITH MERCURY AS A CATHODE UNDER 5 VOLTS, RECOVERABLE VALUES IN HAND FROM RETORTING THE MERCURY ARE 1.3 OZ. GOLD, 7.8 OZ. SILVER FOR TOTAL VALUE OF $195.26 PER TON!

IT IS NOTEWORTHY THE ABOVE VALUES EQUATE CLOSELY TO ORE VALUES DETERMINED BY THE AUTHOR ON DETRITAL SANDS ADJACENT TO THE GOLD-DUST NO.3.

GIVEN DIMENSIONS OF THE GOLD-DUST NO. 3 CLAIM AS 660 FT. WIDE AND 1320 FT. IN LENGTH, AN IMPRESSIVE 87,000 TONS OF ORE-BEARING MATERIAL IS AVAILABLE PER VERTICAL FOOT OF ADVANCE.

FLOWSHEET ANALYSIS:

RESEARCH PERFORMED ON LIKE ORE MATERIAL AS THAT WHICH OCCURS ON THE GOLD-DUST NO. 3 PROPERTY INDICATES NON AMANABILITY OF SUCH ORE TO BE MECHANICALLY CONCENTRATED. SUCH RESEARCH INCLUDES TABLING AT DIFFERENT MESH SIZES, GOLD BOWL, TROMMEL, CORDEROY BELT, AIR AND WATER CONE CONCENTRATIONS AFTER PULVERIZATION, ETC., AND VARIOUS SPECIFIC GRAVITY SAND FRACTIONS TESTS SHOWING ORE

GOLD-DUST CLAIM NO. 3 FOR EACH ONE FOOT OF VERTICAL ADVANCE.

DETRITAL SAND ORE IS NON AMENABLE TO MECHANICAL CONCENTRATION BUT RESPONDS POSITIVELY TO 5% SOLUTION OF HYPOCHLORITE-HYDROCHLORIC ACID AT 10:T CONCENTRATION UNDER 120 HR. LEACH TO RECOVER THROUGH LEAD-HCL ION EXCHANGE 65% OF SILVER AND 76% OF GOLD, OR $155.77/TON HEAD CRUDE ORE NET OPERATING PROFIT ALLOWING $15.00 FOR TOTAL MINING-TREATING COSTS. A 1,000 TONS PER WEEK LEACH PAD-PRECIPITATOR PLANT WOULD COST IN THE REGION OF ABOUT $100,000 AND TAKE 4-6 WEEKS FOR ERECTION.

PRIOR TO PLACING GOLD-DUST NO.3 INTO PRODUCTION, IT IS RECOMMENDED BENCH TESTING AND PILOT PLANT RECOVERY BE PERFORMED PREFERABLY AT MOUNTAIN STATES ENGINEERS, TUCSON, TO ACHIEVE OPTIMUM RECOVERY OF PRECIOUS METALS AT ESTIMATED COST $2,000.00.

BECAUSE OF IDEAL CLIMATIC ENVIRONMENT, ORE LEACHING IS REGARDED AS HIGHLY EFFICIENT ON A YEAR AROUND BASIS. WATER IS CONSERVED THROUGH RECYCLING, AND CAN BE OBTAINED NEARBY.

REGISTERED PROFESSIONAL ENGINEER
G.L. KLEIMAN
PROVINCE OF ONTARIO

G.L. KLEIMAN

PHOENIX, ARIZONA,
MAY 20, 1976

SUMMARY:

WORK COMPLETED TO DATE ON GOLD-DUST CLAIM NO. 3 INDICATES AN EXTRAORDINARILY LARGE AND HIGH GRADE PRECIOUS METALS ORE-BODY CARRYING ABUNDANT SILVER AND GOLD PRECIOUS METALS, BOTH RECOVERABLE THROUGH CHLORIDE LEACHING.

THE MORE SALIENT FEATURES OF THE SUBJECT PROPERTY ARE THE FOLLOWING:

1. VAST ORE TONNAGES.
2. EXCEPTIONALLY HIGH GRADE SILVER AND GOLD.
3. AMENABLE TO RECOVERY BY INEXPENSIVE OPEN PIT MINING.
4. EASY ACCESS.
5. EXCELLENT YEAR AROUND CLIMATE.
6. INITIAL CAPITAL OUTLAY SMALL TO INITIATE PRODUCTION.
7. NIL WASTE OVERBURDEN.
8. NO ECOLOGICAL PROBLEMS ANTICIPATED.
9. WORLD WIDE DEMAND FOR PRODUCIBLE PRECIOUS METALS.
10. EXCELLENT PRESENT AND FUTURE PRECIOUS METALS MARKETS.
11. SHORT TIME PERIOD TO PRODUCTION.
12. STABLE GOVERNMENT WITH REALISTIC TAX POLICIES.
13. LONG MINING POTENTIAL.
14. FEDERAL GROUND ELIMINATES ROYALTY PAYMENTS FROM PRODUCTION.
15. ORE AMENABLE TO KNOWN PROCESSING PROCEDURES.
16. NEARBY SOURCE OF LABOR AND COMMODITY.
17. MULTIMETAL CONTRIBUTION HEDGES AGAINST SINGLE METAL DOWN MARKET.
18. ORE GRADE LIKELY INCREASES IN VALUE WITH DEPTH.

NOT DISPROPORTIONALLY CONFINED TO BLACK SANDS NOR MAGNETIC FRACTIONS. IT IS CONCLUDED THEREFORE SILVER-GOLD OCCURS PROPORTIONALLY DISSEMINATED THROUGHOUT THE ORE MEDIA IN MINUTE PARTICLES, COLLOIDAL AND SUBMICRONIC, AND THAT HYDROMETALLURGY WOULD BE APPLICABLE FOR RECOVERY.

RESEARCH PERFORMED BY MR. L. LUEGGE ON NEARBY ADJACENT LIKE ORES UTILIZING CHLORIDE LEACHING METHODS PROVED SUCCESSFUL. THE EXPERIMENT EMPLOYED HOUSEHOLD BLEACH OR CHLOROX OF 100 ML., 30 GRAMS ORE PULVERIZED TO -200 MESH, 10 ML. HYDROCHLORIC ACID, AGITATED THROUGH STIRRING AT 70°F FOR 120 HOURS, AND A LEAD-HCL. COLLECTOR. SUCH BENCH TEST RECOVERED 65% OF SILVER AND 76% OF GOLD. ALTHOUGH OPTIMUM CONDITIONS WERE LIKELY NOT REACHED, ORE RECOVERY WOULD BE HIGHLY ECONOMIC EQUATING TO ABOUT $170.77 OR $155.77 PER TON NET OPERATING PROFIT ALLOWING $15.00/TON ALL-INCLUSIVE MINING-PROCESSING. COST OF LEACHING PAD TO HOLD 1,000 TONS TO BE PROCESSED WEEKLY, AND PRECIPITATOR PLANT WOULD BE ABOUT $100,000, ERECTION TIME 4-6 WEEKS.

TITLE:

FIELD EXAMINATION SHOWS MINERAL CLAIM IS PROPERLY STAKED AND LOCATION IS SHOWN AS BEING UNDER JURISDICTION OF FEDERAL MINERAL RIGHTS THUS ELEVIATING ALL STATE AND FEDERAL TAXES ON PRODUCTION, OTHERWISE A 5.5% ROYALTY TAX WOULD BE APPLICABLE.

THE REGION IS UNDER AUTHORITY OF THE BUREAU OF LAND MANAGEMENT,

FULL COOPERATION BEING PROMISED WITH NIL ENVIRONMENTAL ADVERSITY TO OPERATING CHLORIDE LEACHING FACILITIES.

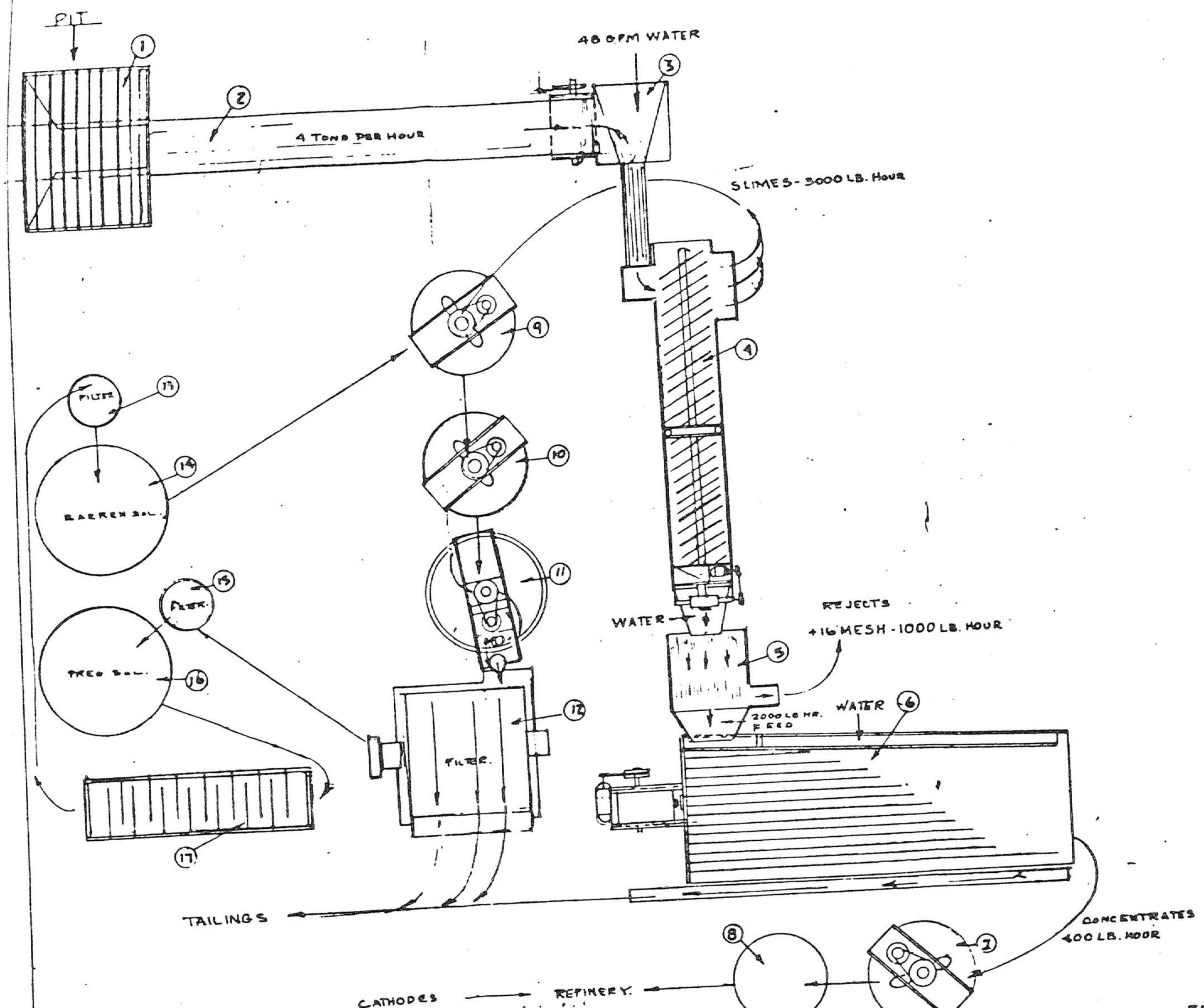
FOR LEGAL COSTS OF $1,600, A 5 ACRE MILL SITE WILL BE PATENTED ON THE SUBJECT CLAIM. ALTHOUGH IT IS NOT NECESSARY TO RAISE CLAIM STATUS TO PATENT FOR MINING PURPOSES, FURTHER PROTECTION IS PROVIDED AND IS THUS RECOMMENDED.

CONCLUSIONS AND RECOMMENDATIONS:

PROFESSIONALLY PERFORMED FIELD AND RESEARCH STUDIES TO DATE PROVE VAST AMOUNTS OF EXCEPTIONALLY HIGH GRADE SILVER AND GOLD EXIST ON GOLD-DUST NO. 3 CLAIM IN DETRITAL SAND MATERIAL RECOVERABLE THROUGH WELL-ACCEPTED AND WIDELY PRACTISED CHLORIDE LEACH-PRECIPITATOR FACILITIES.

SOURCE OF PRECIOUS METALS APPEARS TO BE ORIGINALLY FROM NORMAL WEATHERING OF MOUNTAIN RANGES, REWORKED FOR FURTHER CONCENTRATION, THEN SUBJECT TO HYDROTHERMALISM FROM ASCENDING MINERALIZED HOT WATER SOLUTIONS FROM DEEP-SEATED PLUTON AS SUPER CONCENTRATIONS

ORE IS NON ASSAYABLE UNDER NORMAL FIRE ASSAY METHODS ACCOUNTING FOR NON DISCOVERY TO DATE, HOWEVER WET CHEMICAL DETERMINATIONS BY CONSULTANT L. LUEGGE, P.E., SUPPORTED BY GOLD-SILVER RECOVERY FROM FURNACING 100 POUND SAMPLES OF ORE INDICATE GRADE TO BE 0.97 OZ. GOLD AND 28.8 OZ. SILVER PER TON FROM SURFACE MATERIAL. 87,000 TONS OF ORE MATERIAL IS INDICATED ON THE



SCHEMATIC FOR 100 TON PER DAY SAND AND SLIME TREATMENT PLANT. SCALE APPROX 1/8"=1'

PLOT PLAN

BASED ON WORK DONE
BY J. HENDERSON.
2325 WEST EL MORO
MESA, ARIZONA 85202
(602) 962-9767

QTY	PART NUMBER	DESCRIPTION
	17	ELECTROWIN CELLS (6 VOLT. RES...
	16	PREG. SOLUTION STORAGE 5'x5'...
	15	CLARIFIER (FILTER) FOR KCN PRE...
	14	BARREN SOLUTION TANK 5'x5...
	13	CLARIFIER (FILTER) FOR KCN S...
	12	3'x5' DRUM FILTER TAILS RINSE...
	11	60" THICKENER FOR KCN SERV...
	10	SAME AS No 7 FOR KCN SE...
	9	SAME AS No 7 FOR KCN SE...
	8	30"x36" RINSE TANK
	7	4'Ø x 4' H MIXING TANK ACID S...
	6	No 6 WILFLEY TABLE
	5	16 MESH DSM SCREEN
	4	24" SAND WASHER x 14'L.
	3	3'x3'x4' MIXING CHAMBER w/6" F...
	2	24"W x 24'L FEEDER BELT
	1	5'x6' HOPPER w/ 6" GRIZZLY BARS

PILOT PLANT
GRAVITY AND
LEACH CIRC...
KING SOLOMON'S ...
VULTURE MINING D...
ARIZONA
PLACER SA...
PROTECTION FOR FOUR HUNDRED TON ...

J.W. LOWER
ENGINEER
RESIDENCE
602-830-8581

SCALE 1/8" = 1'
H 00-002

THE VULTURE MINING DISTRICT
AN EXPLORATION POTENTIAL
PRELIMINARY REPORT

FOR

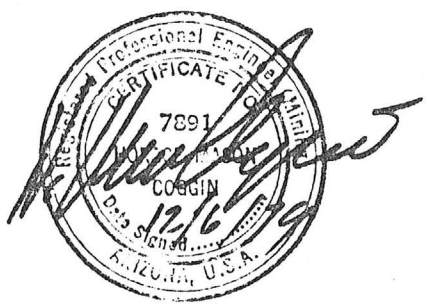
RABBI - ABRAHAM NOVITSKY
KING SOLOMON'S MINES
C/O UNITED STATES PERLITE LTD.
166 MONTAGUE STREET
BROOKLYN, NEW YORK 11201

BY

H. MASON COGGIN, P.E. & L.S.

4550 NORTH 12TH STREET
PHOENIX, ARIZONA 85014

DECEMBER 5, 1979



INTRODUCTION

The Vulture Mine, one of Arizona's oldest and most notorious gold mines, presents an exploration potential under current gold prices of $400/ounce.

The mine produced an estimated 20[(1)] to 400[(2)] million dollars from 1864 to 1942 when it was closed by the general gold mine closing order at the start of World War II.

A complex geology, in which post mineral faulting and post mineral volcanics may have covered and/or displaced strike and dip extensions of the Vulture vein. This as well as other veins in the immediate area, may provide viable exploration targets in the King Solomon's Mines Group of 5600 acres.

HISTORY

The Vulture deposit was discovered in the early 1860's[(3)] by a group of California miners prospecting the area at a time when the Arizona territory was being explored.

Lack of water and nearly every other commodity necessary to support and protect a mining community prevented development in a logical and technically appropriate manner. The main ore shoot was consequently depleted in 1872. It was not until new management, funding, and applied technology after 1900 that new ore shoots were found, the mine re-opened and worked almost continuously until 1942 by mining new reserves and reworking old tailings and waste dumps.

LOCATION

The Vulture Mine is located in Section 36, Township 6 North, Range 6 West, Gila and Salt River Base and Meridian, about 14 miles Southwest of Wickenburg, Arizona.

GEOLOGY

Regional geology is a series of pre-Cambrian schists with dikes and irregular masses of granite locally overlain by post mineralization volcanics and later aluviam.

The Vulture vein is a singular identifiable structure which strikes east and west and dips to the north generally at 42 degrees. Mineable widths in the vein vary from a few inches to over 50 feet. Vein mineralization is primarily quartz with blocks of both hanging and foot wall materials included. Alteration of these included blocks and portions of the wall rock include chloritization, quartz, calcite and sericite.

Ore forming minerals include free gold, silver, galena blende and chalcopyrite.

Post mineral faulting has offset the vein and ore sheets with devastating effects.

ORE GRADES

The Vulture Mine is particularly well-known for its high grade ores. Pockets and small lenses of this high grade material may have run well over 100 to 200 ounces per ton. No doubt much of this picture rock was highgraded from the mine or stolen by the miners.

On an average, the Vulture ores ran over one ounce per ton initially and finally graded down to less than 3/4 of an ounce per ton.

This unusually high grade was the result of two unusual conditions. One was the high cost of mining in this remote location which necessitated the taking of only the higher grade ores. The second reason was the clean cutoff between the ore shoots and the barren vein materials.

A geologically recent covering of volcanics and valley fill covers the pre-Cambrian surface in the surrounding area. This cover prevents examination or surface exploration for continuation of the vein along strike or similar veins along the chloritic schist to sericitic schist contact.

PROPOSED EXPLORATION

Little of the information on the district has been compiled and reviewed for application of modern mineral exploration techniques. What is required at this time is an extensive information gathering program. This program should include:

Literature search
Land search and acquisition
Surveying
Aerial mapping
Geological mapping and modeling
Geophysical exploration
Sampling and assaying
Engineering and interpretation

If viable targets can be identified, the above would be followed by extensive drilling, analysis, property acquisition.

This work has been started. The literature search has identified the articles and publications listed in the references.

King Solomon's Mines has acquired properties in the surrounding area as shown on the attached map.

H. MASON COGGIN - SENIOR VICE PRESIDENT
Coe & Van Loo Consulting Engineers, Inc.

Education & Special Training:

University of Arizona, B.S. 1961
Special Studies in Statistics & Explosives
Honors - Recipient of 1961 first place student paper
Award Arizona Section AIME
First Aid Certificate - New Mexico State Mine Inspection
First Aid Certificate - U.S. Bureau of Mines
Mine Rescue & Self Contained Breathing Apparatus 1959
Mine Rescue Training - Phelps Dodge Corporation 1964

Registration:

Professional Engineer - Arizona, New Mexico, Nevada, Kansas, Washington, Colorado
Land Surveyor - Arizona, New Mexico, Kansas

Professional Affiliations:

Member - American Institute of Mining, Metallurgical and Petroleum Engineers
Member and Past Chairman, Maricopa Section AIME - 500 members
Past President, Arizona Small Mine Operators Assoc. - 3,500 members
Past Program Chairman, Southwestern New Mexico Section AIME
Former Vice Chairman, Secretary-Treasurer & Membership Chairman, Bisbee Douglas Subsection AIME
Frequent speaker to social groups on Arizona's Mining Industry

Professional Experience:

Mr. Coggin has been responsible for land work including the preparation of property maps, title inspection and negotiations in buying, selling and leasing properties. The total value of lands handled is in the millions of dollars and extends across the United States.

His design of several open pit mines includes term production plans, analysis of assay problems and comparison of various methods of defining reserves.

Mr. Coggin conducts feasibility studies of mining ventures from prospect through drilling, pilot plant, mine and plant design and the evaluation of existing operations. Special techniques developed for economic evaluation include optimization of the rate of return and modified wealth growth techniques and probabalistic risk evaluation using Monte Carlo techniques on the G.E. Data Systems.

His design and analysis of mining, milling and processing plants for several operations includes two successful copper leaching operations.

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX 7, ARIZONA

March 19, 1962

RESUME' OF VULTURE MINE

The famous Vulture Mine was one of the early day bonanza gold producers of the West. It was discovered in late 1863 and produced substantially during the periods 1866-1868 and 1908-1917. Some desultory leaser output was made between those periods and then to 1927 in which year production was resumed at a fairly substantial rate until Government Regulation L-208 (issued in 1942) forced the closing of gold mines as a war measure. Total value of production has been estimated at around $15,000,000. Although there has been continuing interest in the possibilities of the property since the closing in 1942 no serious work has been done.

The last operator was the East Vulture Mining Co., ownership of which rests in the estates of Ernest Dickie and John C. Lincoln. The company address is Bagdad, Arizona c/o Geo. Colville. The property is now leased to an Arizona group with option to purchase.

The veins of the Vulture mine occur in a broad fault zone in a country rock which is principally a complex of granite and schist cut by numerous dikes. Intricate pre-mineral and post-mineral faulting has presented frequent development problems and the ore was "lost" and found a number of times. It is believed in some quarters that geologic study followed by interpretive exploration offers a good change for finding more ore bodies as in the past.

The mine contains some 25,000 ft. of workings reaching to a maximum slope depth of 1550 ft. although most of the past production came from above the 1050 ft. level.

The property comprises 11 patented and a large number of unpatented claims (some of which are said to be in process of patenting). Beside its mining possibilities the colorful old camp with many early-day structures still intact seems to offer attractive real estate possibilities as a "dude" ranch or for desert homesites, etc.

The mine is described in some detail in Arizona Bureau of Mines Bulletin No. 137, Arizona Lode Gold Mines & Mining (1934). Unfortunately this publication is out of print, but a copy may be consulted in most large libraries in the west.

Travis P. Lane, Field Engineer

(1) Hutchinson, W. Spencer, "The Vulture Mine," Engineering & Mining Journal, VIII, No. 7, pp. 298-302.

(2) Hirsch, Bob, "In the Shadow of the Vulture," Outdoor Arizona, April 1974, p. 23 - popular literature.

(3) Smith, Duane A., "The Vulture Mine: Arizona's Golden Mirage," Arizona and the West, Autumn 1972, pp. 231-252.

(4) Schleff, Dr. Eric, Vulture Bonanza, a report dated May 27, 1960.

(5) Geologic Map of Maricopa County, Arizona Bureau of Mines, University of Arizona, Tucson.

(6) Kirwan, Gerald L., Report on the Vulture, May 20, 1976.

(7) Koschmann, A.H. and M.H. Bergendahl, Principal Gold-Producing Districts of the United States, U.S. Geological Survey Professional Paper 610, 1968, p. 40.

(8) Vulture Mine File, Arizona Department of Mineral Resources, Phoenix, Arizona.

Professional Experience: (continued)

Mr. Coggin is designing small dams from preliminary investigations to plans and contract specifications. The total value of current projects is near $4 MM.

He has prepared bids for a general contractor, including mining and general earthwork. The total projects grossed at over $10 MM. This work also included organizing cost accounting systems.

Mr. Coggin was the Principal Investigator in the inspection of two dams to Corps of Engineers Guidelines, and on a major study to develop a possible new mining method for the U.S. Bureau of Mines.

He is a member of Coe and Van Loo's design team for land development. Work in this area includes design of sewage treatment systems, water supply and distribution systems, roadways and cost estimates.

Mr. Coggin has conducted the analysis and design of a large number of hydraulic structures including a complicated valving problem on the world's tallest fountain, fire pump installations, and several irrigation projects. One irrigation project consisted of a five mile 60" diameter pipeline and a pumping system estimated at over $1 MM. Another consisted of a 750,000 gpm pumping plant with over 10 miles of transmission pipeline. Total cost of this project will be well over $100 MM.

Prior to joining the firm:
Phelps Dodge Corporation Copper Queen Branch, Bisbee, Arizona, Stope Engineer, 1961 to 1965. This position required providing technical advice to mine management including mine surveying, mapping, sampling, reserve estimating, development planning, production scheduling, ventilation, dust control and fire protection.

Westec Corporation, 1966, Phoenix, Arizona. This position involved the evaluation of exploration projects in Arizona and Idaho.

Phelps Dodge Corporation, Tyrone Branch, Tyrone, New Mexico, 1966 - 1968. Mr. Coggin was involved for one year in engineering and the balance in operations. Engineering responsibilities included the preparation of periodic production reports on operations, surveying, construction of a property map, design of a rail haulage system and plant planning. His duties in operations included supervising a work force of from 18 to 30 equipment operators utilizing 85 ton trucks, 10 yard electric shovels, 12" diameter rotary drills, track and rubber-tired dozers. This organization was responsible for breaking Phelps Dodge productivity records and setting all time lows for production costs.

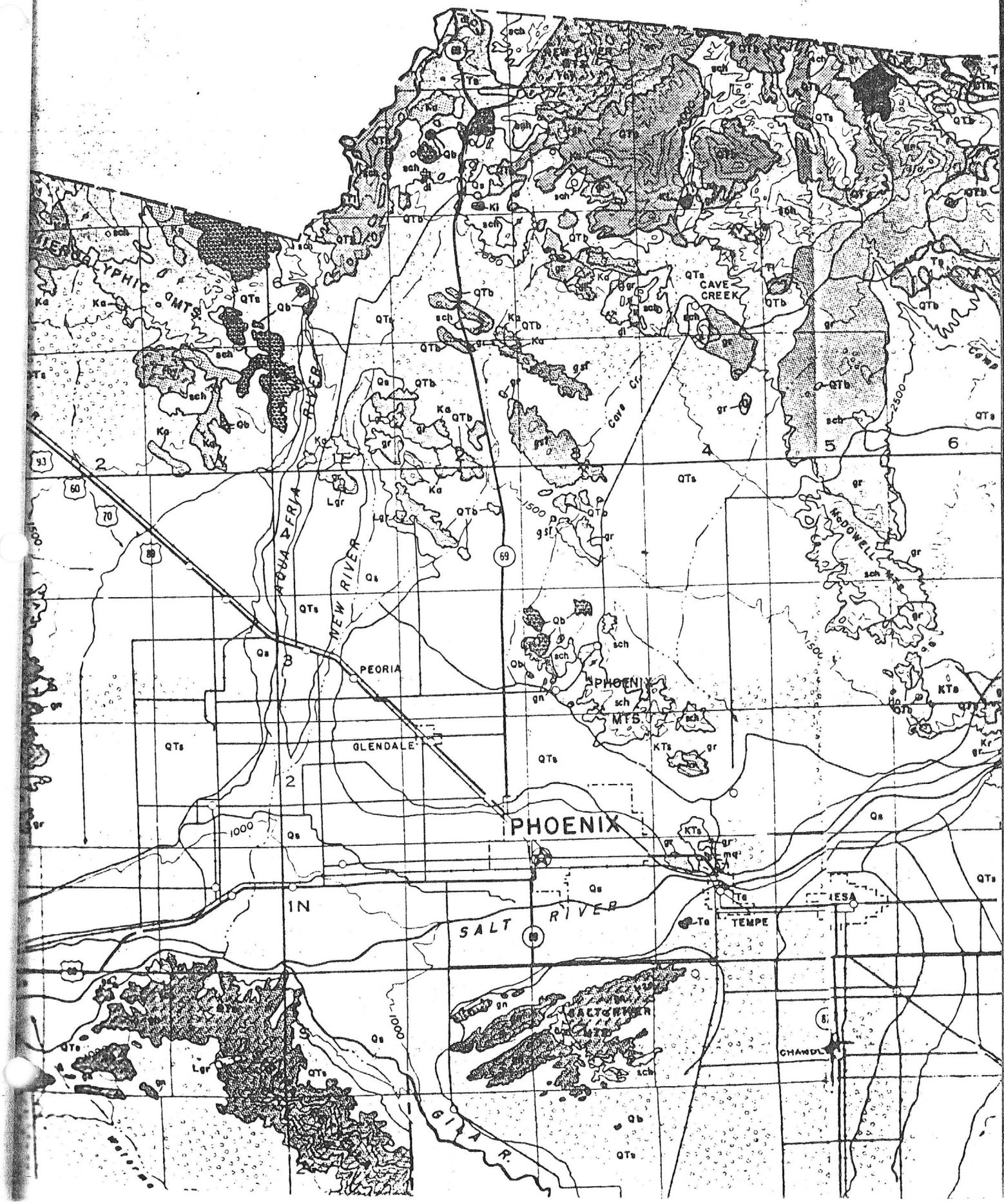
Professional Experience: (continued)

Phelps Dodge Corporation, Safford Project, Safford, Arizona. Assistant Engineer in Charge of Operations - 1969. His duties included design of the pilot plant operation, selection of equipment, writing of specifications, comparison of bids, the administration of contracts, exploration and development of aggregate sources and development of water resources.

Prior to graduation from the University of Arizona in 1961, Mr. Coggin worked as a miner for the Copper Queen Branch of the Phelps Dodge Company and the San Manual Division of Magma Copper Company.

Publications:

Conceptual Design and Engineering Economics and Environmental Analysis of Surface Pit Slope Caving Mining Systems, 1977, U.S. Bureau of Mines OFP 1977 & NITS 1978.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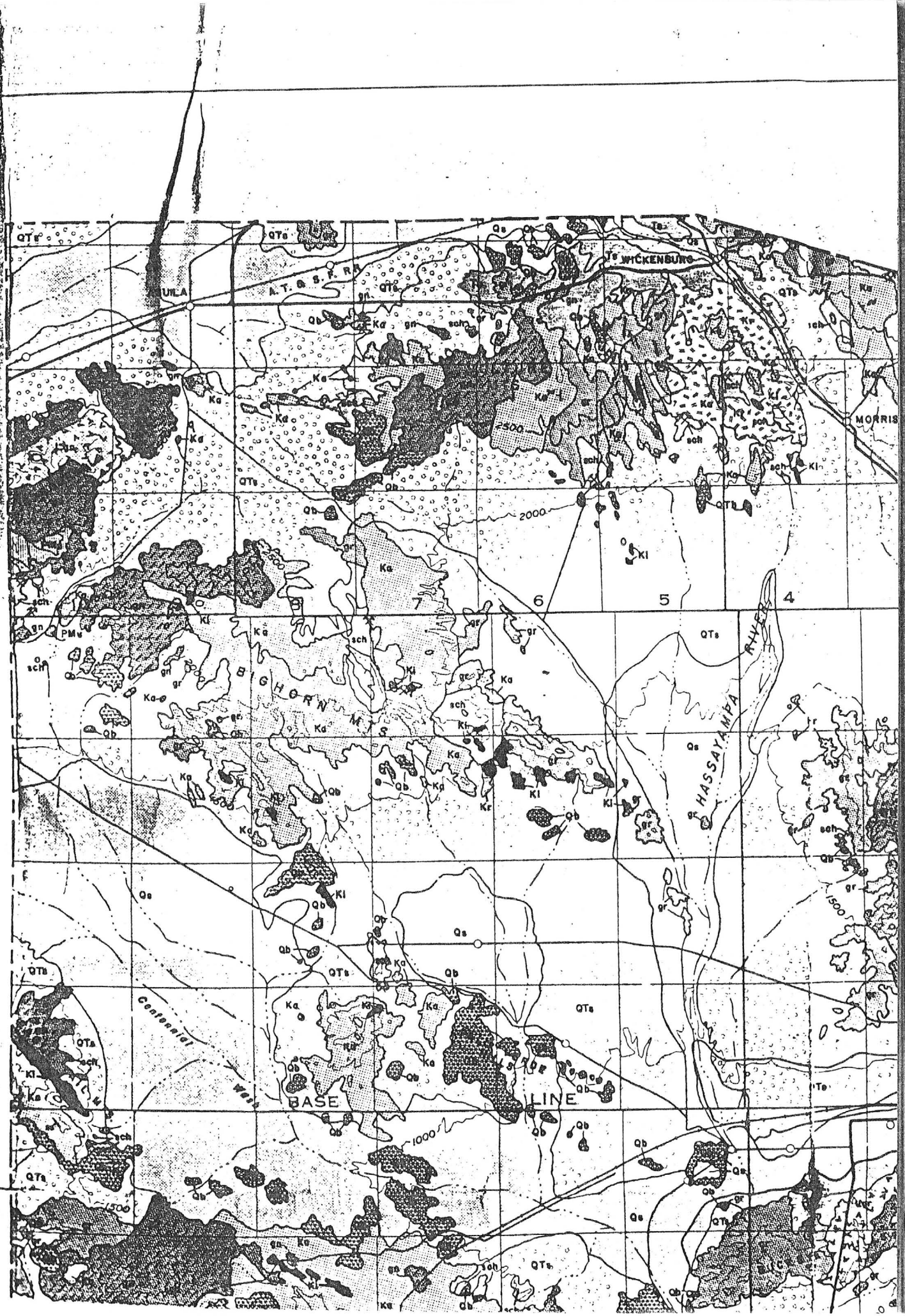
GLENDALE
TEMPE
MESA
CHANDLER
SALTRIVER
CAVE CREEK
McDOWELL MTS.
NEW RIVER
AGUA FRIA RIVER
SALT RIVER
GILA R.
Cave Cr.
PHOENIX MTS.
1500
1000
2500


WICKENBURG
A. T. & S. F. R.
MORRIS
BIGHORN MTS
HASSAYAMPA RIVER
Centennial
BASE LINE
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2000
1500
1000
500
7
6
5
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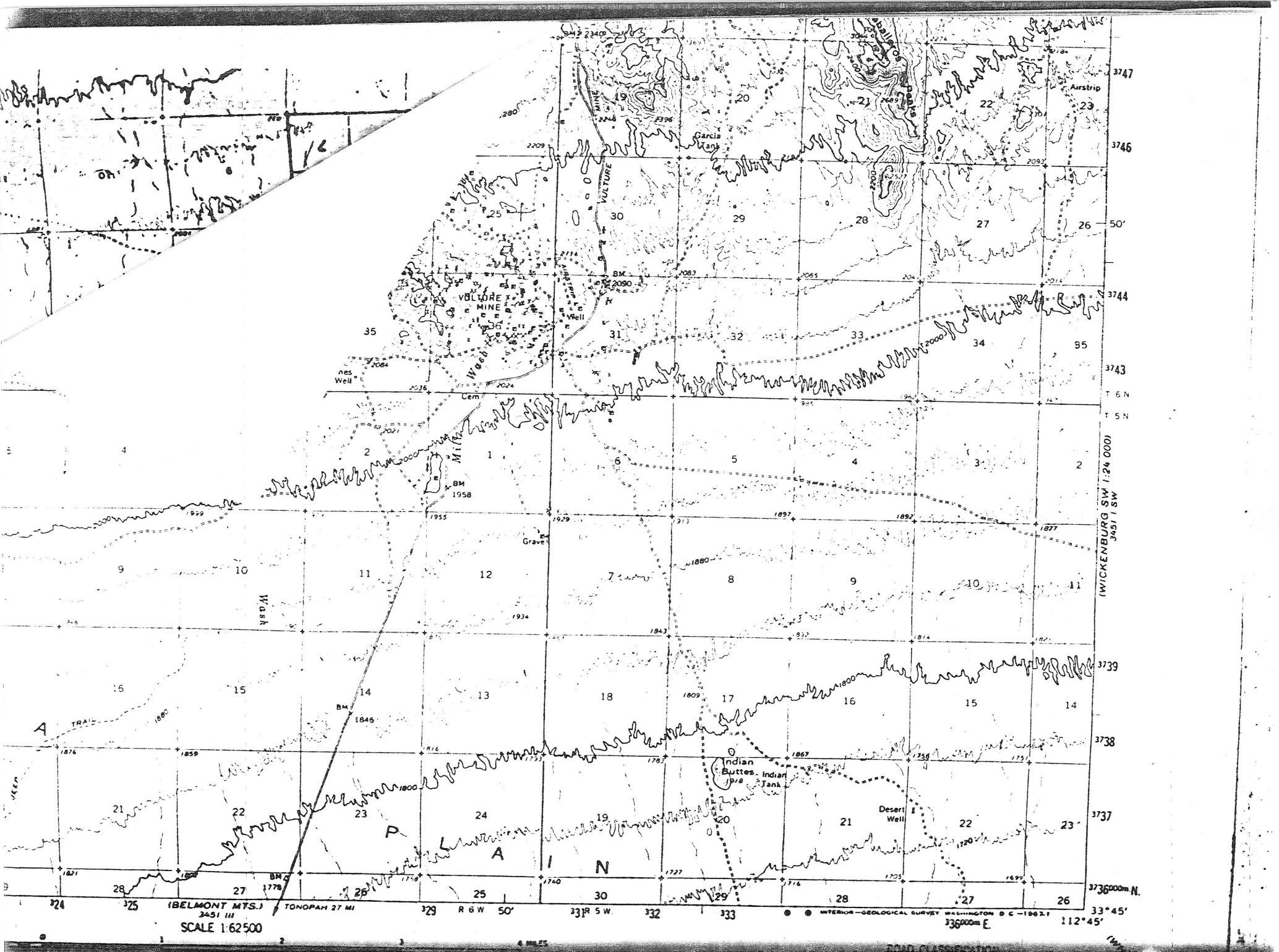
VULTURE MINE
Well
Garcia Tank
Airstrip
Cem
Gravel Pit
Indian Buttes
Indian Tank
Desert Well
BM 2090
BM 1958
BM 1846
BM 1778
(BELMONT MTS.) 3451 III
TONOPAH 27 MI
SCALE 1:62500
(WICKENBURG SW 1:24 000) 3451 I SW
T 6 N
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50'
33°45'
112°45'
3736000m N.
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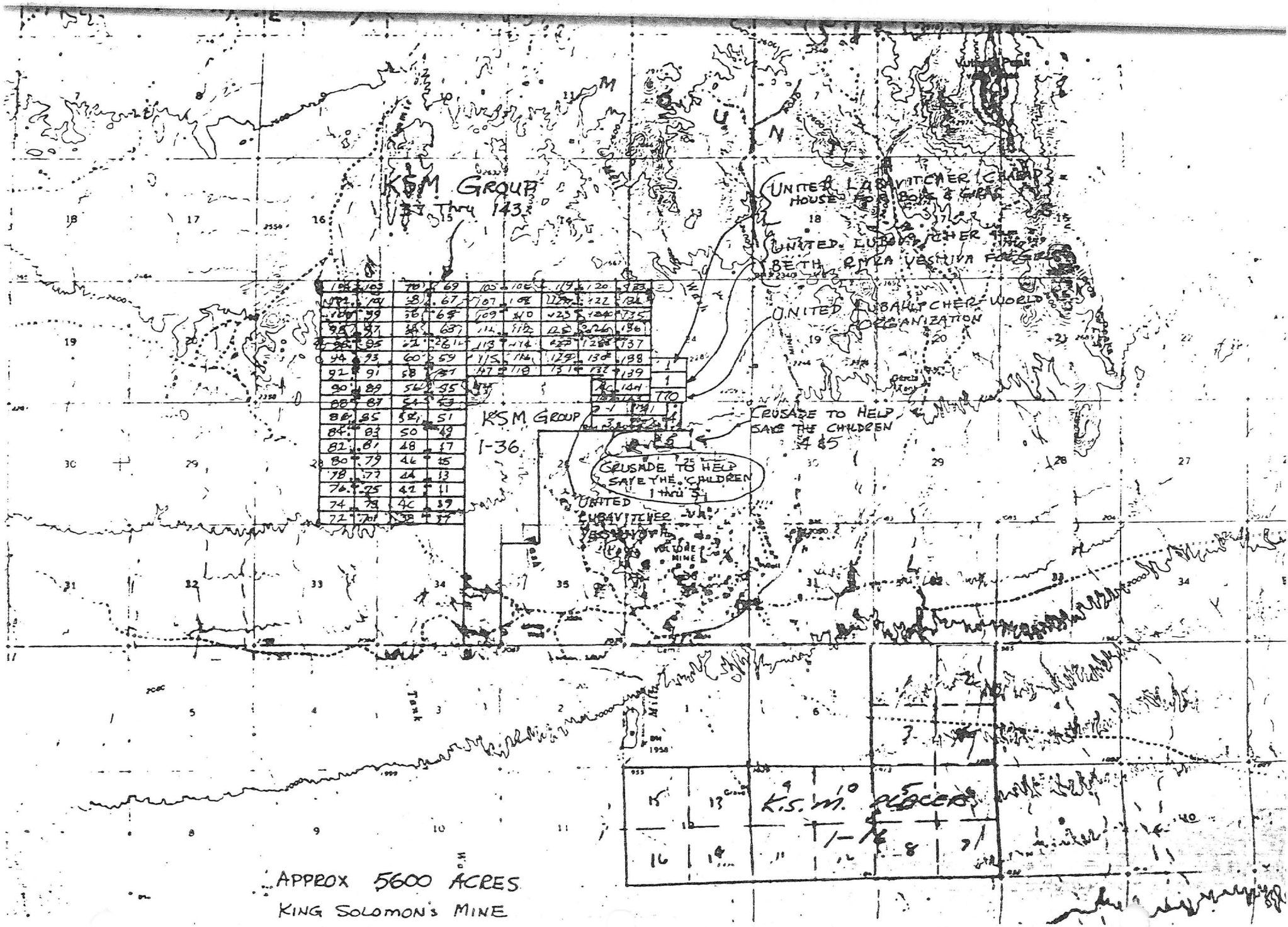
INTERIOR—GEOLOGICAL SURVEY WASHINGTON D C—1962


KSM GROUP
1 THRU 143
KSM GROUP
1-36
UNITED LUBAVITCHER CHARITY HOUSE
UNITED LUBAVITCHER
BETH RIVKA YESHIVA FOR GIRLS
UNITED LUBAVITCHER WORLD ORGANIZATION
CRUSADE TO HELP SAVE THE CHILDREN
1 THRU 5
CRUSADE TO HELP SAVE THE CHILDREN
4 & 5
UNITED LUBAVITCHER
K.S.M. 10 PLACERS
APPROX 5600 ACRES
KING SOLOMON'S MINE

GERALD L. KIRWAN, B.Sc., P.Eng.

CONSULTING GEOLOGICAL ENGINEER

611 W. Gibraltar Ln.
Phoenix, Arizona 85023
(602) 993-1852

CONSULTING EXPLORATION ENGINEERING

RESUME OF G.L. KIRWAN:

1. BORN JANUARY 14, 1930, OTTAWA, ONTARIO, CANADA, SON OF A MINING ENGINEER WHO DID AN EXCELLENT JOB OF INITIATING HIS SON INTO THE VARIED AND TECHNICAL ASPECTS OF GEOLOGY AND MINING ENGINEERING.

2. RECEIVED BACHELOR OF SCIENCE DEGREE, 1957, CARLETON UNIVERSITY, OTTAWA, CANADA, AND TAUGHT BOTH CLASSROOM AND LABORATORY FOR 3 YEARS. WHILE ATTENDING UNIVERSITY, RECEIVED PROFESSIONAL EXPERIENCE AND KNOWLEDGE WITH UNITED STATES STEEL CORPORATION, NEWMONT MINING CORPORATION, BRITISH PETROLEUM CORPORATION, AND NORANDA MINES LTD. IN THE FIELDS OF GEOLOGY, ENGINEERING, GEOPHYSICS, AND GEOCHEMISTRY. PERFORMED SOME POST GRADUATE WORK ALONG WITH INSTRUCTING AT UNIVERSITY OF MISSOURI.

3. 1960, BECAME CANADA'S YOUNGEST RECOGNIZED INDEPENDANT GEOLOGICAL ENGINEERING CONSULTANT. SIMULTANEOUSLY OWNED AND CONTROLLED LARGEST VOLUMEWISE CONTRACT ENGINEERING FIRM OF ITS KIND IN CANADA WITH COAST TO COAST OPERATIONS ESSENTIALLY PERFORMING TECHNICAL PROGRAMS ASSESSING POTENTIAL OREBODIES UNDER A VARIETY OF CONDITIONS. UNDERGROUND EXPERIENCE WITH KERR ADDISON GOLD MINES.

4. I AM REGISTERED WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF THE PROVINCE OF ONTARIO AS A PROFESSIONAL ENGINEER. I AM A FELLOW OF THE GEOLOGICAL ASSOCIATION OF CANADA, AND A MEMBER OF THE CANADIAN INSTITUTE OF MINING AND METALLURGY.

5. WITH INTEREST FOCUSSED ON REBELLIOUS TYPE ORES, I BECAME ACTIVELY ENGAGED IN THIS CHALLANGE IN 1968 AND HAVE STUDIED UNIQUE EXTRACTIVE PROCESSES THROUGHOUT THE WORLD APPLICABLE TO ORES THAT HERETOFORE WERE NON ECONOMIC.

6. OVER PAST 6 YEARS, HAVE FOCUSSED ON SOUTHWEST AREA OF UNITED STATES PARTICULARLY ON NON ASSAYABLE ORES PECULIAR TO THIS REGION CURRENTLY BRINGING INTO PRODUCTION FOUR EXTREMELY LARGE HIGH GRADE PRECIOUS METALS OREZONES

G.L. KIRWAN

C E R T I F I C A T E

THE UNDERSIGNED CERTIFIES AS FOLLOWS:

1. THAT I AM A CONSULTING GEOLOGICAL ENGINEER MAINTAINING OFFICES AT 2901-95 THORNCLIFFE PARK DRIVE, TORONTO, AND 611 WEST GIBRALTAR LANE, PHOENIX, ARIZONA

2. THAT I HAVE BEEN GRADUATED FROM CARLETON UNIVERSITY, B.Sc., 1957, AND THAT I HAVE PRACTISED MY PROFESSION CONTINUOUSLY ALONG WITH MINOR AMOUNTS OF STUDYING-TEACHING IN 1958, UNIVERSITY OF MISSOURI.

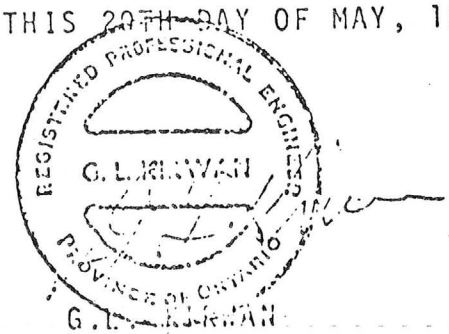
3. THAT I RECEIVED PROFESSIONAL EXPERIENCE AND KNOWLEDGE WITH UNITED STATES STEEL CORP., NEWMONT MINING CORP., BRITISH PETROLEUM CORP., AND NORANDA MINES LTD., ALL ALONG WITH 16 YEARS AS AN INDEPENDANT EXPLORATION-DEVELOPMENT-MINING CONSULTANT.

4. THAT I AM REGISTERED WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF THE PROVINCE OF ONTARIO AS A PROFESSIONAL ENGINEER, I AM A FELLOW OF THE GEOLOGICAL ASSOCIATION OF CANADA, AND A MEMBER OF THE CANADIAN INSTITUTE OF MINING AND METALLURGY.

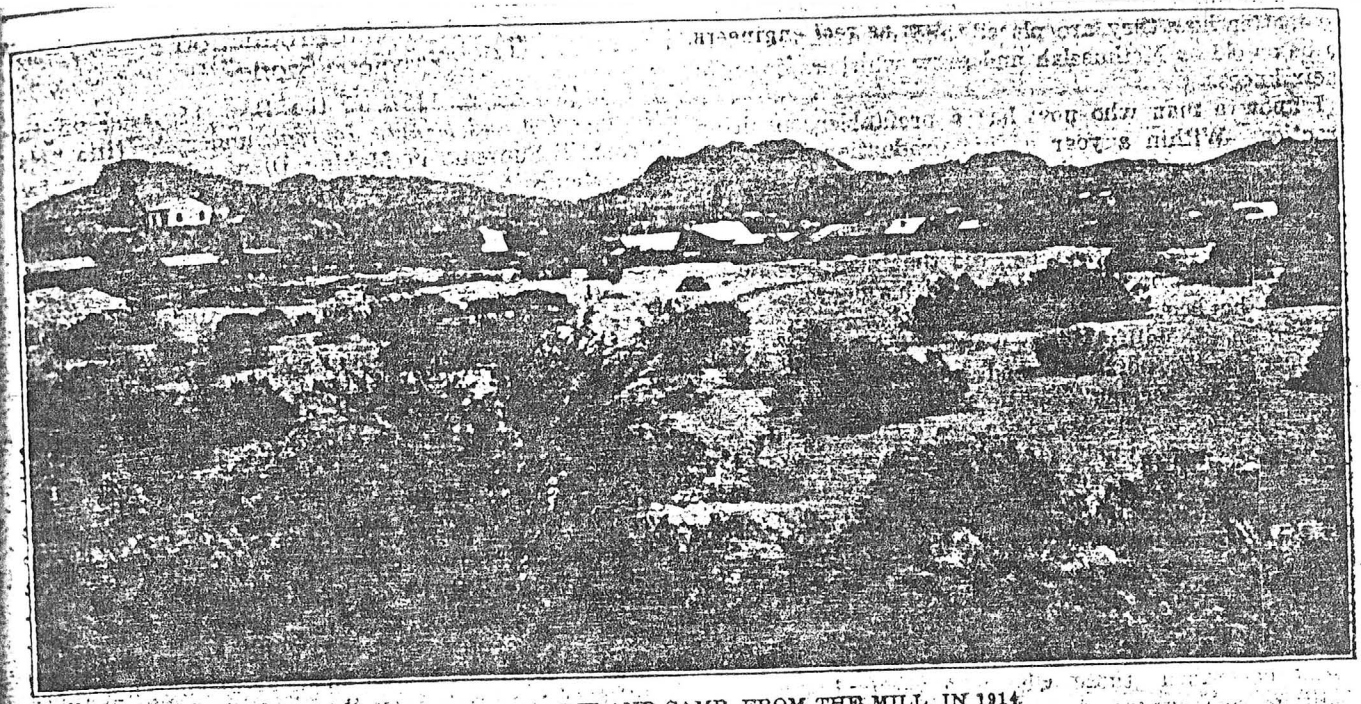
5. THAT REPORT HEREIN IS BASED UPON INTENSIVE STUDY OF ALL AVAILABLE DATA RELATIVE TO THE VAST AMOUNTS OF DETRITAL SAND MATERIAL CONTAINING PRECIOUS METALS IN THE SUBJECT CLAIM AREA, AND THAT I HAVE ASCERTAINED PROFESSIONALLY AND TO THE BEST OF MY ABILITY THAT SILVER-GOLD EXISTS IN THE ORE AS STATED HEREIN AND IS LEACHABLE BY CHLORIDE METHODS.

6. THAT REPORT HEREIN IS A PRIVATE REPORT PREPARED FOR SEA-TEC CONSTRUCTION, INC., AS A NORMAL SEQUENCE TO A MINING OPERATION, AND THIS REPORT IS RESTRICTED SO AS NOT TO BE EMPLOYED OR MISCONSTRUED AS A PUBLIC APPEAL FOR FUNDING.

DATED AT PHOENIX, ARIZONA, THIS 20TH DAY OF MAY, 1976.



G. L. KIRKHAM



THE VULTURE MINE AND CAMP, FROM THE MILL, IN 1914.

The Vulture Mine

An Excellent Example of the Effect of Faulting Upon the Development Of a Southwestern Gold Deposit—Discovered in the Sixties, the Property Had a Good Record of Production Until 1917, When It Was Closed Down

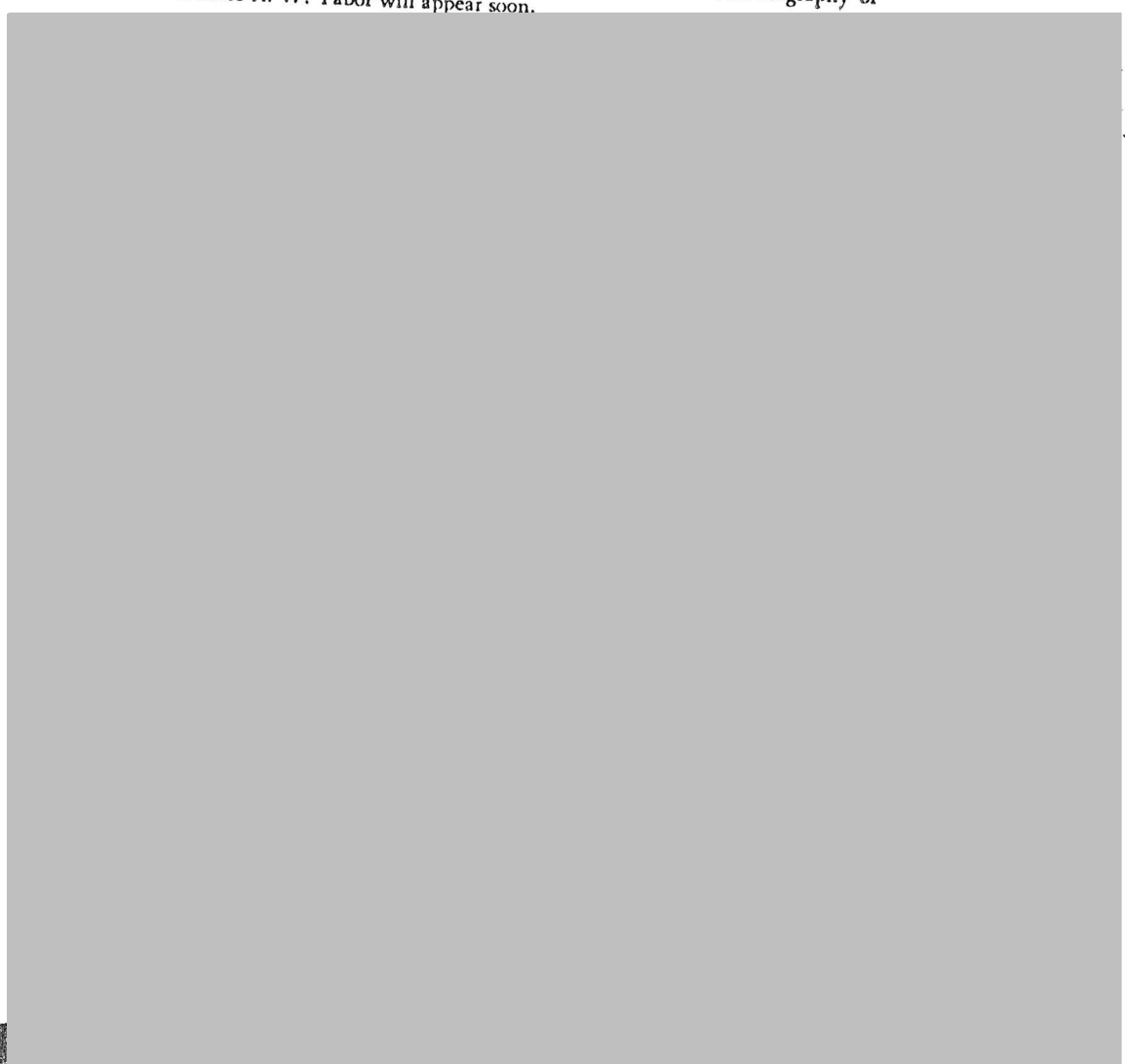
By W. Spencer Hutchinson
Written for *Engineering and Mining Journal*

THE VULTURE MINE: ARIZONA'S GOLDEN MIRAGE

by

DUANE A. SMITH

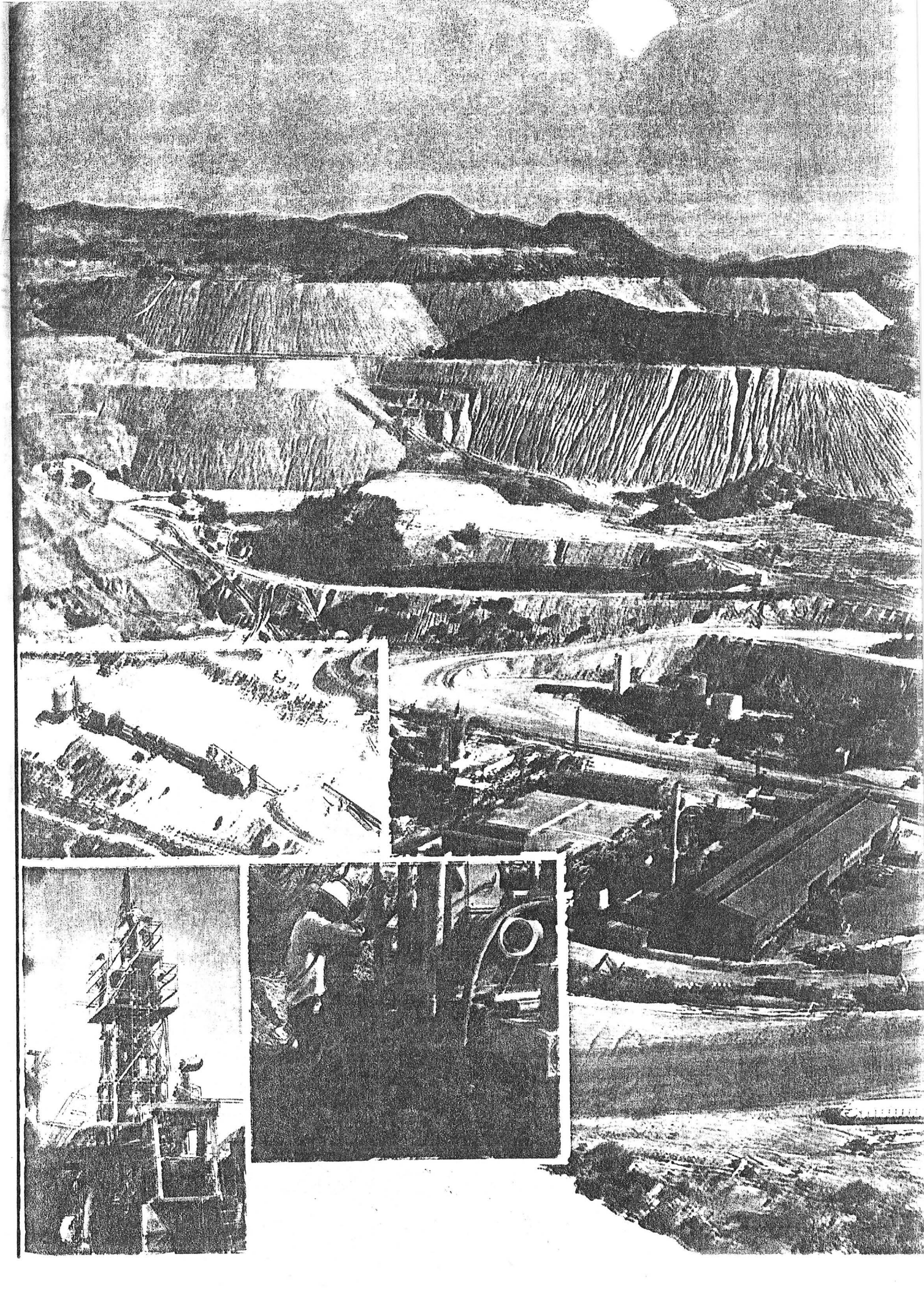
The author, a history professor at Fort Lewis College, Durango, Colorado, has written extensively on the Rocky Mountain West. His biography of Horace A. W. Tabor will appear soon.



Clients

Following is a partial list of clients for whom the Firm has provided, or is currently providing, professional services.

- Allied Construction Company (Transamerica Corp.)
- American Builders, Inc.
- Anderson Development Corporation
- Angel Fire Services Corporation
- Arizona-Colorado Land and Cattle Company
- Arizona Public Service Company
- Arlas Community Builders
- AVCO Community Developers
- The Baca Grande Angel Fire Corporation
- The Baca Grande Corporation
- Baca Grande Water and Sanitation District
- Balboa Pacific Development Company
- Big Sky of Montana, Inc.
- Blue Mesa Inc.
- Bristol Myers Corporation
- Brunson Instrument Company
- Capitol Engraving Company
- Caterpillar Tractor Company
- Cities of:
  - Glendale, Arizona
  - Phoenix, Arizona
  - Scottsdale, Arizona
  - Tempe, Arizona
- Cocopah Construction Company
- D & B Construction Company
- Deauville Corporation
- Dell Trailor Construction Company
- Del Webb Corporation
- Diversified Properties, Inc. (El Paso Natural Gas Co.)
- Dynasty Corporation
- Eaton International Corporation
- Emblem Tape & Label Company
- Farmers Investment Company
- Flatiron Industries
- Gary Nelson Associates-Architects
- General Motors Corporation
- Gosnell Development Corporation
- Granada Construction Company
- Gunther-Shirley Company
- Hallcraft of Denver, Inc.
- Hallcraft Homes Inc.
- Haver Nunn & Nelson—Architects
- I.D.M. Corporation
- I.D.S. Mortgage Corporation
- ITT Community Development Corporation
- Kitchell Contractors, Inc.
- King Resources
- Lake Havasu Irrigation & Drainage District
- Lamcoa Inc.
- LandTec Corporation
- Madison Kipp Corporation
- Mardian Construction Company
- Marriott Corporation
- McAlester Fuel Company
- McCulloch Properties
- McKellips Land Corporation
- Mine Management Corporation
- Mission Viejo Company
- Pagosa Water & Sanitation District
- Ranchers Exploration and Development Corporation
- Republic of Mexico
- Salt River Project
- Santa Fe Land Improvement Company
- San Sebastian Mines
- Scurr-Messenger Investment Company
- Silver Pick Del Ecuador
- Southwest Properties, Inc.
- Sparkletts Drinking Water Corporation
- Sperry-Rand Corporation
- Fred C. Sproul Homes Inc.
- State of Arizona
  - Department of Mental Retardation
  - Game & Fish Department
  - Highway Department
  - Interstate Stream Commission
- TransAmerica Development Corporation
- Triad American Capital Corporation
- Unit B Irrigation and Drainage District (Yuma, Ariz.)
- U.S. Natural Resources
- U.S. Navy Department
- U.S. Park Service
- U.S. Postal Service
- Varney Sexton Sydnor Associates-Architects
- Wellton-Mohawk Irrigation and Drainage District
- Westcor Inc.
- Western Farm Management Company
- Yuma Mesa Irrigation and Drainage District



Mining Engineering

Range of Services Offered:

- Crushing & Screening Plants
- Dredging
- Drilling
- Extraction Processes
  - Flotation
  - Cyanidation
  - Gravity
  - Magnetic
  - Leaching
  - Retorting
  - Solvent Extraction
- Feasibility Studies
- Geology
- Open Pit and Underground Mine Design
- Pilot Plants
- Placer Deposits
- Plant Design
- Property Evaluation
- Pumping and Materials Handling Systems
- Tailing Ponds and Dams

Coe & Van Loo uniquely offers a complete range of services to the mining industry—everything from mineral exploration to product marketing. Through the combined talents of our own civil, structural, land planning and surveying expertise and the supportive services provided by affiliated engineering groups, we have the technical capability to locate, explore, develop and mine metal and non-metallic products virtually anywhere in the world.

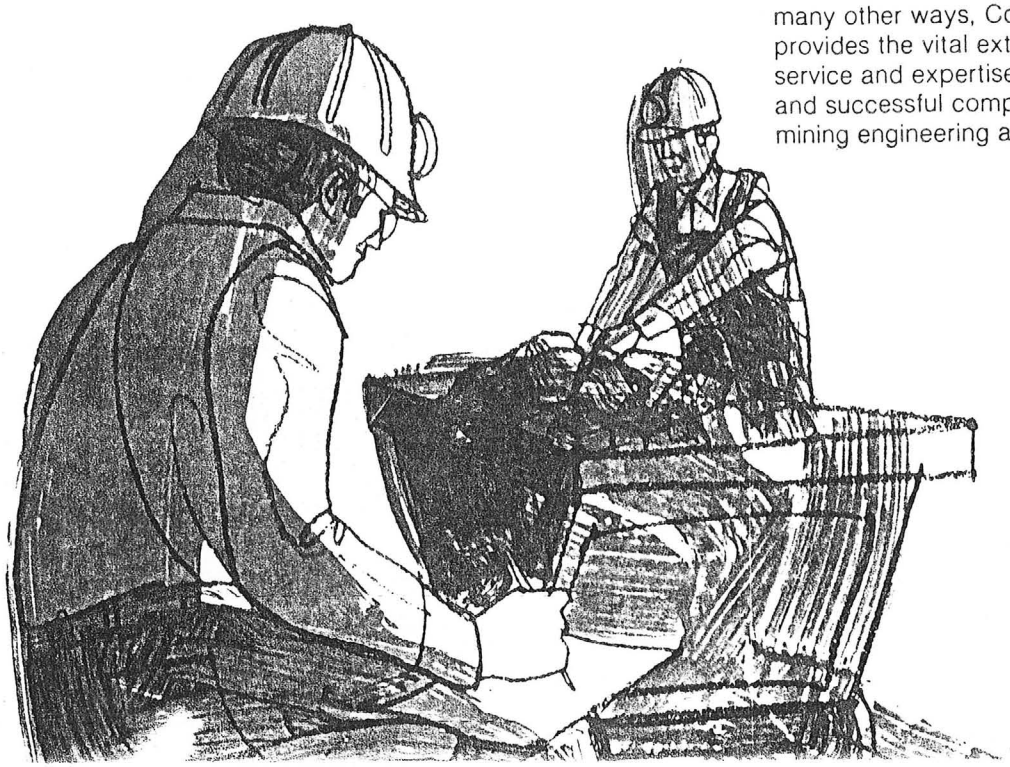
Members of our staff possess a thorough understanding of the mining industry based on educational and technical training and valuable practical field experience gained on locations throughout the Western Hemisphere. Our growing involvement has resulted in the development of superior "cost conscious" philosophies and techniques as related to mining activities.

The services we offer cover all principal phases of mining and metallurgical engineering. These encompass such initial stages as geologic reconnaissance, land status and acquisition reports and preliminary feasibility studies for both metallic and non-metallic mining ventures.

In support of advanced mine investigation and development activities, we provide all engineering services necessary to layout, plan and interpret comprehensive drilling and exploration programs, conduct boundary and topographic surveys and compute ore reserves and grades. We are also fully qualified to provide mine plant design as well as plan and design such ancillary facilities as water and power supplies, maintenance shops, assay plants, townsites, office buildings, roads, railroads, material handling and storage equipment and waste disposal and sanitation systems for remote locations under adverse conditions.

Other aspects of mine development within the Firm's capabilities include preparing plans for open pit and underground mines and dredging operations and designing concentrating and milling plants for both metallic and non-metallic minerals. Worthy of special note, we are able to prepare such designs by utilizing the most current techniques available in the fields of hydrometallurgy; gravity; magnetic and air separation; flotation; solvent extraction; and electrowinning and refining.

Additionally, and importantly, we can assist clients in preparing construction specifications, negotiating contracts and supervising and inspecting all construction activities. In these and many other ways, Coe & Van Loo provides the vital extra measures of service and expertise to insure the timely and successful completion of most any mining engineering assignment.



The Company

Coe & Van Loo Consulting Engineers, Inc., was founded as a partnership in 1958. Originally, the two principals emphasized the detailed development of irrigation and agricultural projects in the arid region of Southwestern Arizona. After developing relationships with new and larger clients, we were able to expand our business capabilities to include subdivision development and mining engineering.

In 1969, the Firm was acquired by the Arizona-Colorado Land and Cattle Company, listed as AZL on the American Stock Exchange. Now as part of AZL's growing Natural Resources Services Division, Coe & Van Loo has gained experience related to integrated agri-business and land and natural resources holding and development.

We extended our sphere of involvement into Colorado in 1972 by acquiring the established firm of Jaschke Engineering Company, headquartered in the Denver suburb of Lakewood, and thereby expanded our overall capabilities to meet the challenges of today and tomorrow.

As a result of this sensitive and thoughtful growth plan, we can now offer our clients a full range of integrated services and acknowledged expertise in the fields of Civil Engineering, Irrigation Engineering, Land Planning, Mining Engineering, Structural Engineering and Surveying.

The true concept of "full service," as it pertains to the professional disciplines offered by Coe & Van Loo, requires a well-structured and dynamic organization. To us, this means more than skilled personnel. We believe it must also include competent management, an efficient physical plant, superior technology and individual job control on a personalized and intimate basis with each client.

Our main office in Phoenix, Arizona occupies over 14,000 square feet of building area which we custom-designed to accommodate our working patterns and flow.

A qualified staff member acts as Project Coordinator on each client assignment from the preliminary concept stage through final completion. In general, he monitors and controls all aspects of the job to insure complete compliance with the tasked requirements and objectives. Specifically, he assumes total responsibility to develop a close working relationship with the client, ferret out answers to questions, represent Coe & Van Loo at all project meetings and efficiently coordinate the necessary interactions among all disciplines involved in the project.

Through the professional registration of key personnel, we are fully qualified to perform engineering and surveying services in the states of Arizona, Arkansas, California, Colorado, Florida, Kansas, Kentucky, Montana, Nevada, New Mexico, Ohio, Oklahoma, Texas, Utah, Washington and Wyoming. Significantly, we possess proven capabilities to conduct projects ranging in scope from small site surveys to large design projects that require all of our exceptional professional services on behalf of all types and sizes of clients.

Staff members are quite accustomed to working in close harmony with architects, planners, hydrologists, geotechnical engineers and other civil engineers. The client will occasionally employ these associated professionals directly but more frequently we bring them together to assist us when specialized challenges occur.

Coe & Van Loo is part of a substantial corporate network of engineering, architectural, planning and soils firms which maintain subsidiary operations in various major cities throughout the Southwest. Supported by this extensive integrated system and the unquestioned expertise of its more than 150 employees, we can draw upon a wealth of professional design services as the need arises. This offers obvious and distinct advantages to our clients because we can effectively serve as the central coordinating agency to monitor and control all the diverse disciplines required for the orderly, efficient completion of any project.

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1990 South Garrison Street
Lakewood, Colorado 80227
Phone (303) 986-5501