



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the Grover Heinrichs Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

a v o

TO P. W. O'Malley LOCATION Fort Wayne
 FROM Howard Lanier LOCATION Fort Wayne
 SUBJ. SAN JUAN STATUS REPORT DATE January 3, 1974

C
O
P
Y
T
O

The analysis of our position of Tract 37 is not complete without an appraisal of the San Juan. The accompanying report was compiled to summarize our status and information at year-end.

Our plan for the San Juan property is as follows:

1. Win the current litigation to confirm the termination of PMC.
2. Drill to define the known oxide reserves.
3. Conduct a thorough metallurgical and engineering study to define the mine plans, processing flow-sheet, and facilities design to insure a viable mining venture.

If this program confirms our present observations, we would proceed with mining the currently known ore body. This would give us an opportunity to not only produce copper for Essex at a profit, but would enable consolidation of our Safford position for a 10 to 20 year period if it is necessary to out-wait Phelps-Dodge.

The value of the San Juan is evident without consideration of its own sulfide ore potential. However, exploration for sulfide ore is a prime reason for controlling the property.


Howard Lanier

HL:cb

Attachment

a v o

TO	Howard Lanier	LOCATION	Ft. Wayne, Ind.
FROM	Paul Eimon	LOCATION	Tucson, Ariz.
SUBJ.	Status Report on San Juan Project at Safford	DATE	Dec. 28, 1973

C
O
P
Y
T
OProperty

Essex now has 7-3/4% basic ownership of the 84 claims that comprise the San Juan property and has a 4% royalty lease on the remaining 92 1/4% ownership, said lease to be effective if and when current litigation is settled. In addition, Essex has options on adjacent ground surrounding the San Juan Mine as shown on the attached map.

Status of Litigation

The owners of the San Juan property, including Essex, have filed an action in Graham County Superior Court against Producer Minerals Corporation et al, seeking a court determination that the lease agreement has been terminated, and for damages to be assessed against PMC to the extent of \$4,500,000 because of the unminerlike operations of PMC. Supplemental pleadings have been submitted asking for an additional \$2,000,000 damages because of the continuing actions of PMC since the filing of the original complaint.

PMC has entered a counterclaim for damages of \$5,000,000 against Essex and the other owners for conspiring to deprive them of their rights under the lease agreement.

The trial has been to start Feb. 26, 1974 in Safford, Arizona. The owners' case against PMC is based on the following facts:

1. Scruggs (PMC predecessor as lessee) allowed a lien to be placed on the property in the amount of \$298,000 and because of this the lessees were given official notice of termination of the lease by Guy Anderson on June 1, 1971 after a 60-day period was allowed to remove the lien. This took place before Essex became involved in the San Juan property.
2. The taxes on the mining property for the year 1971 were not paid by PMC and the property was sold by the county at a tax sale to a third party. Under the tax laws, the owners were able to redeem the property by payment of the back taxes to the county, which reimbursed the third party.

3. PMC did not properly account the net profit of its operations to the owners as is required by the lease agreement.
4. The spent oil refinery acid with its content of hydrocarbon compounds is not effective as a leaching agent to dissolve copper sulfides or cuprite present in the San Juan ore. Moreover, since June 1972 the raw spent acid has simply been dumped on the property in amounts dictated by the necessity of disposing of the entire spent acid output of the Chevron Oil refinery at El Paso.
5. Other unminerlike practices of PMC are; (a) failure to protect and maintain drill core as required under the lease agreement; (b) numerous judgments and liens against PMC; and (c) no ore has been broken since June 1971 and the whole project has deteriorated into an acid dumping operation.

Evidence has been assembled for all the foregoing points and, based upon our present knowledge, we expect the owners to prevail.

PMC has entered a further suit in federal court against Essex and the other owners, charging violation of anti-trust legislation. In the opinion of the legal advisors of both Essex and the other owners, the PMC allegation will not stand up in court. First hearing of this action is scheduled for Jan. 7, 1974.

Ore Potential

Logging and analysis of San Juan core in the possession of Essex has indicated that there is a good chance of developing at least 20 million tons of near surface oxide ore at a grade of greater than .4% copper. A drilling program will be necessary to confirm this ore reserve. Essex' geological staff has created base maps and cross sections, and accomplished planning for a drilling program to explore the San Juan property.

In addition to the 20 million ton oxide copper ore potential, exploration is planned to expand this oxide ore reserve and to search for deeper sulfide orebodies.

If and when the San Juan property is available to Essex, the initial drilling program will cost \$537,000 and last 4 to 6 months. This drilling is expected to define the open pit oxide ore and indicate the validity of deeper sulfide exploration potential. At the close of this drilling program

it is anticipated that sufficient data will be compiled to generate cash flow and feasibility studies to evaluate a mining operation from the oxide ores.

An economic analysis of a hypothetical orebody of 18 million tons at .5% Cu by Lyall Lichty of Essex has indicated that it should be commercial at 65 cent copper and would give a copper production of 14,440,000 pounds per year with an investment of \$18.4 million and a D.C.F. return on the investment of 16.12%.

If the initial drill program shows a commercial orebody, further exploration of the sulfide potential can be made a part of the on-going mine exploration program.

The attached maps show the location of the San Juan property and the planned Essex drill program.

A handwritten signature in cursive script, appearing to read "Paul Emmer".

PIE:td
attachments

ESSEX EXPLORATION GROUP

The Essex Exploration Group grew out of the corporation need for assured, long-range supplies of copper. The Group's role is to develop mining exploration targets, consider mineral property submittals, examine joint venture proposals, and investigate mine acquisition possibilities.

The Group consists of eight people with varied technical backgrounds in the search for and development of commercial mineral deposits. Personnel selection was guided by the stipulations that members of the Group be capable of independent action; able and willing to communicate; and well-founded in practical pragmatic exploration methods.

Staff

Exploration Manager	Paul Eimon
Chief Geologist	Kenneth Jones
Assistant Exploration Manager	Grover Heinrichs
Metallurgist and Development Engineer	Lyall Lichty
Senior Geologist	Dennis Temple
Geologist	Bob Helming
Geologist	John Wilson
Exploration Technician	William Brown

Resumes of the members of the Group follow.

PAUL I. EIMON - - - - - EXPLORATION MANAGER

SUMMARY: Twenty-two years of technical and managerial experience in mine geology, mineral exploration, geological research, and mineral economics. Multinational and multiminerall mineral assignments have led to several new mineral discoveries and active or proposed mine development projects (copper, molybdenum, lead, zinc, gold and silver in Arizona, Nicaragua, Argentina, Honduras, Sardinia and Mexico; titanium in New Jersey; lead in Missouri; asbestos in Canada).

EXPERIENCE:

Exploration Manager, Essex International, Inc.

Directs exploration effort in United States and throughout the world, principally for copper. Investigates joint venture and investment possibilities in the mineral resource area.

Exploration Manager - Special Projects, Union Oil Corporation.

Conducted reconnaissance study of Mexico for copper-silver deposits, investigated other special exploration and investment opportunities in mining.

Senior Research Geologist, Kennecott Copper Corporation.

Directed two year research study of the Metallogenic Provinces of the world and coordinated computer application studies of exploration data handling.

Technical Expert in Exploration Geology, United Nations, Argentina.

Advised Argentine Government and advised and directed Argentine geologists in exploration program in the Argentine Andes.

Exploration and Mine Geologist, American Smelting & Refining Company.

Various assignments throughout the world in exploration, mining and exploration management. Mine geologist, Exploration Geologist, Assistant Exploration Supervisor - Eastern USA, Chief Geologist - Neptune Gold Mining Company, Regional Geologist for Central America.

EDUCATION: B.S. Mining Geology and Geophysics, Univ. of California, Berkeley; M.S. Business Administration and Mining Geology, Stanford; Special Graduate Studies in Mining Exploration at University of Tennessee and Mining Photogeology at Delft, the Netherlands. Scholarships - ASARCO (U. of Calif.); John Van Steen Fellow at Stanford.

PROFESSIONAL COMMITTEES AND POSITIONS:

- . First President - Mining Club of the Southwest.
- . Member - Working Group for the Study of Economic Elements in Earth's Crust (1969-1971).
- . Program Chairman - Data Storage and Retrieval - 1969 Int. Symposium on Computer Applications and Operations Research in the Mineral Ind.
- . Member - 10-member National Academy of Sciences Task Force to advise the Secretary of the Interior on Minerals Policy (1973-74).

E. GROVER HEINRICHS - - - - - ASST. MGR. EXPLORATION

SUMMARY: Twenty-five years experience in the mining and petroleum exploration and related businesses. Background includes former partial ownership of a small successful contract exploration and geophysical instrument manufacturing company. Assisted in the exploration concept that resulted in the discovery of several major mineral deposits and an oil field. Activities have been worldwide.

EXPERIENCE:

Assistant Manager of Exploration, Essex International, Inc.

Supervises the contractual work in an exploration program. Assists the Manager of Exploration and Chief Geologist in development of an exploration program and budget. Office coordinator for drafting and typing, purchasing. Assists in supervising and approving expenditures. Supervises the surveying and assists in negotiating possible property and company acquisitions. Conducts mineral title research and property maintenance. Coordinates exploration activities with legal counsel.

Vice President & Director, Heinrichs Geoexploration Company.

Responsible for all phases of operation, including financing, personnel hiring, advertising. Organized, planned and executed mining and petroleum exploration projects and exploration instrumentation evaluation for clients including many major corporations.

Owner, Heinrichs Exploration Company.

Operated small mining exploration and underground mining business in western U.S.

Office Manager, Computer, Midwestern Geophysical Laboratory Corp.

Assisted Party Chief in operation of contract seismic surveys for Sun Oil Co., The California Company; resulted in discovery of two major oil fields.

Party Chief, U.S. Geological Survey.

Conducted all phases of topographic mapping from planetable operation to operating a stereo multiplex (photogrammetric map compilation machine). Assisted in evaluation of new map-making concepts and techniques and instrumentation.

Trammer Boss, N'Changa Consolidated Copper Company.

Responsible for movement of ore to the mill and waste to the dump.

EDUCATION: High school, Cambridge matriculation, Plumtree, Rhodesia, Africa.

MEMBERSHIP: American Institute of Mining, Metallurgical and Petroleum Engineers, American Society of Photogrammetrists, Arizona Geological Society, Southwestern Mining Expl. Assoc., Mining Club of the Southwest.

LYALL J. LICHTY - - - - METALLURGICAL DEVELOPMENT ENGINEER

SUMMARY: Forty years experience in metallurgical projects from copper tank house clerk to managing director of profitable producing gold mine. Twenty-five years of this career in close association with Thayer Lindsley in the development of Ventures Limited from which evolved Falconbridge Nickel.

EXPERIENCE:

Essex International, Inc. - Metallurgical testing of ores being explored; development of pollution-free, low-cost process to recover cathode copper, gold and silver from copper sulfide concentrates; feasibility studies of new projects.

T. Lindsley - Northfield Mines, Inc. - Managing Director of 175,000 TPY gold mine in France with recovery of gold-silver-copper matte, arsenious oxide, bismuth metal and sulfuric acid. Metallurgical consultant for French and North African mining ventures.

T. Lindsley - Ventures Ltd. - General Manager of Metallurgical Research and Development Group in field of ore dressing, smelting, metal refining and mine development; General Superintendent 300,000 TPY lead-zinc mine and concentrator; Mill Superintendent 300,000 TPY gold concentrator and cyanide plant.

General - Mill Superintendent, three base metal and gold concentrators; Assistant Mill Superintendent and pilot plant operator copper-zinc concentrator; Chief Chemist copper mine; Chief Assayer gold mine; foreman silver refinery; copper tank house clerk.

EDUCATION: B.A.Sc. Chemical Engineering, University of Toronto; Business Management I.C. Schools.

MEMBERSHIP:

American Institute Mining and Metallurgical Engineers.
Canadian Institute Mining and Metallurgy.
Solar Energy Society.
Mineralogical Association of Canada.

DENNIS C. TEMPLE - - - - - SENIOR GEOLOGIST

SUMMARY: Ten years experience in mining geology and mineral exploration including study of skarn and porphyry copper deposits, lead-zinc-silver deposits, beryllium mineralization, and uranium mines.

EXPERIENCE:

Senior Geologist, Essex International, Inc.

Responsible for exploration concept development, regional studies, and project management. Conducts geological evaluation, reconnaissance, and preliminary property negotiations.

Resident Geologist, Essex International, Inc.

Developed and conducted program to confirm and expand oxide ore reserves and explore for sulfide ore at operating copper mine.

Mine Geologist, The Anaconda Company.

Responsible for mine geologic mapping, exploration, ore reserve development, and daily production program at a large underground silver-lead-zinc mine. Conducted geologic studies related to ore development and mining method studies at a large newly discovered beryllium deposit.

Exploration Geologist, The Anaconda Company.

Conducted geologic examinations and evaluation of copper, molybdenum, gold, silver, lead, zinc, uranium, and beryllium deposits in western U.S. Managed assessment work drilling on base metal and beryllium properties. Conducted surface mapping and drill core studies at an operating porphyry copper deposit and during exploration phase of a major skarn-type copper deposit.

EDUCATION: B.S. Business Management, University of Utah; M.S. Mineralogy, University of Utah.

MEMBERSHIP: American Institute of Mining, Metallurgical and Petroleum Engineers.

BOB H. HELMING - - - - - EXPLORATION GEOLOGIST

SUMMARY: Seven years experience in mining geology including geologic mapping at an operating underground lead-zinc-silver mine in Utah; reconnaissance exploration for copper in Central America; and project management of porphyry copper drilling exploration in Arizona.

EXPERIENCE:

Project Geologist, Essex International, Inc.

Conducts geologic mapping and supervises a large exploration drilling program in a newly developing porphyry copper district in Arizona. Also conducts other exploration studies and mineral property examination.

Geologist, Kennecott Copper Corporation.

Conducted reconnaissance exploration for copper in Costa Rica utilizing geologic mapping and geochemical sampling. Mine geologist at an underground lead-zinc-silver mine in Utah with responsibility for geologic mapping, sampling, ore grade control, direction of exploration drilling and development, and district exploration.

EDUCATION: B.A. Geology, University of Colorado; M.S. Geology, University of Oregon.

MEMBERSHIP: Arizona Geological Society, American Institute of Mining and Metallurgical Engineers, Mining Club of the Southwest.

JOHN R. WILSON - - - - - EXPLORATION GEOLOGIST

SUMMARY: Three years experience in mining geology and mineral exploration, including geologic and engineering responsibility at an operating copper mine and reconnaissance exploration for copper-nickel and porphyry copper deposits.

EXPERIENCE:

Resident Geologist, Milford Mine, Essex International, Inc.

Conducts geologic mapping, directs exploration drilling program, and assists with engineering at 1,000 ton per day open pit copper mine in Utah. Responsible for mineral property examinations in Utah and Nevada. Project Manager for drilling program and evaluation studies on a skarn-type copper deposit in Arizona.

Assistant Geologist, Humble Oil and Refining Company .

Conducted geologic mapping, geochemical sampling, and drill core logging as part of a reconnaissance exploration program for copper-nickel deposits in the Lake Superior region.

EDUCATION: B.S. Geology, University of Minnesota; M.S. Thesis in progress, University of Arizona.

MEMBERSHIP: Utah Geological Society, American Institute of Mining and Metallurgical Engineers.

WILLIAM G. BROWN - - - - - EXPLORATION TECHNICIAN

SUMMARY: Six years experience as a technician in mineral exploration including positions conducting or assisting with sampling, surveying, drilling, geophysical surveying, and geochemistry.

EXPERIENCE:

Exploration Technician, Essex International, Inc.

Assists exploration staff in execution of exploration program, conducts geochemical sampling programs, executes magnetometer surveys, supervises sampling procedures on major drilling projects, participates in mining claim staking and surveying, coordinates field aspects of exploration work.

Austral Oil Company

Assistant to consulting geologist in conducting exploration drilling and geophysical surveys in the southwestern United States.

De Niza Mining Company

Performed geophysical surveys, staked mining claims, and sampled drill core.

EDUCATION: Business courses Wayne State University.

EUGENE J. DEMETER - - - - - EXPLORATION GEOLOGIST

SUMMARY: Seven years experience in mineral exploration including mineral deposit research, development of international exploration data bases, commodity information compilations, and regional area evaluations.

EXPERIENCE:

Minerals Staff Geologist, Getty Oil Company.

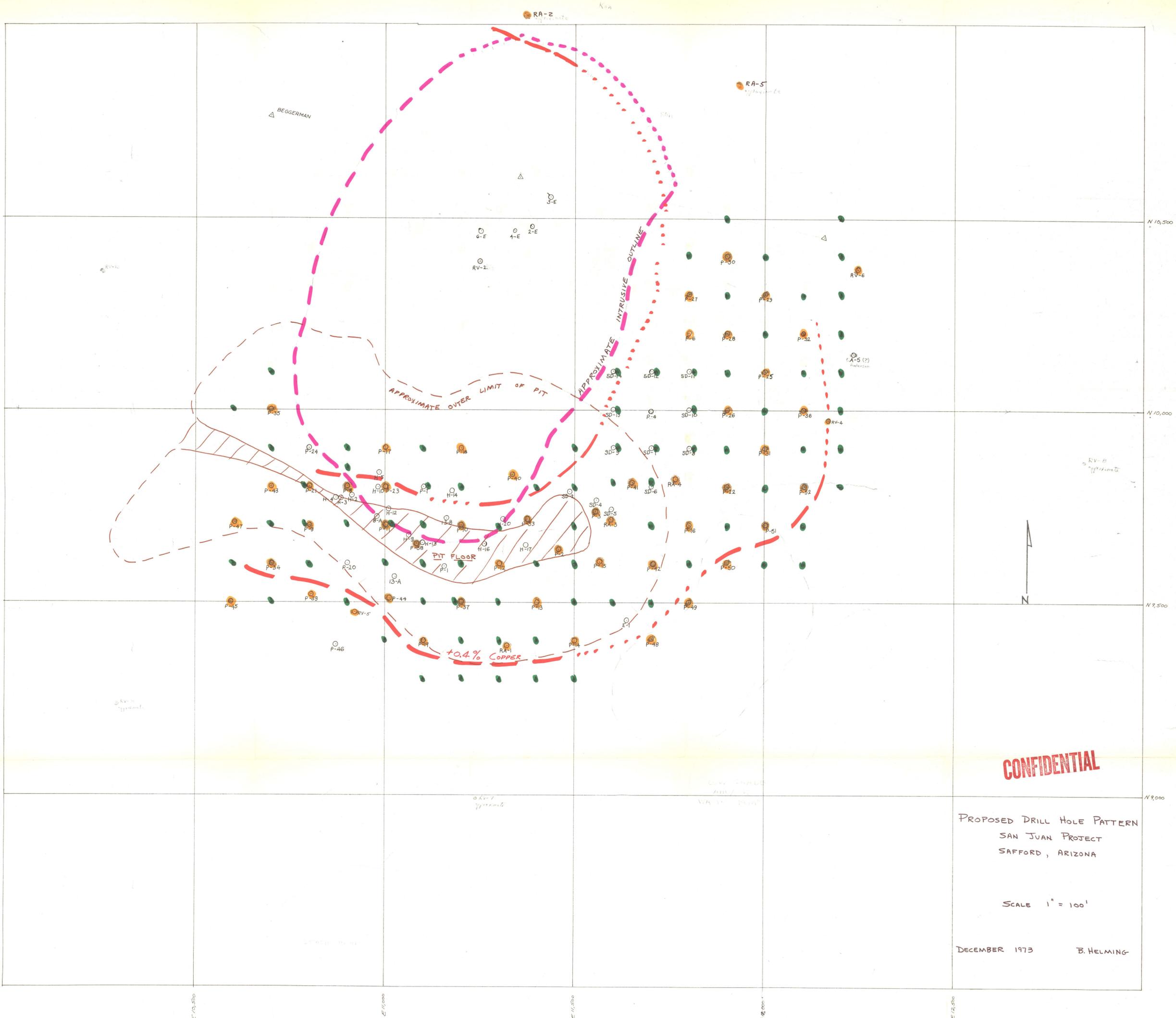
Evaluated mineral submittals, joint venture possibilities and corporate acquisition. Performed special area studies. Investigated new exploration techniques for use in specific exploration projects. Organized current summaries for exploration project control. Completed world porphyry copper information compilation including location of occurrences and abstracts of technical reports on mineral deposits.

Research Geologist, Kennecott Copper Corporation.

Responsible for regional area evaluations, geologic and exploration data development. Compiled mineral occurrence and geologic maps for exploration target selection and project analysis. Specialized in topical information search by review of company records, personal interviews and public data. Developed computer oriented data storage and retrieval systems for mineral exploration.

EDUCATION: B.S. Geology, M.S. Geology, Brigham Young University, Provo, Utah.

MEMBERSHIPS: American Institute of Mining and Metallurgical Engineers, Canadian Institute of Mining and Metallurgical Engineers, Geoscience Information Society, Colorado Mining Association, Wyoming Mining Association.



CONFIDENTIAL

PROPOSED DRILL HOLE PATTERN
 SAN JUAN PROJECT
 SAFFORD, ARIZONA

SCALE 1" = 100'

DECEMBER 1973 B. HELMING

-  P-# hole already assigned, solid floor tag indicates ± 0.4% Cu structure at 20' max surface, partial grain size intercepts at depth
-  proposed drill holes to fill in gaps, check holes with original assays, and extend known ore zone
-  conditional drill holes dependent upon other assay results