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CPG-11185

**OBJECTIVE:** Contract or permanent position in the exploration for or production of precious metal, base metal or strategic metal deposits.

**EDUCATION:** M. S. Geology, University of Utah, 1984. Thesis Title: "Geochemical Factors Controlling Ore Deposition in the Trixie Mine, East Tintic District, Utah".  
B. S. Mining Engineering, Colorado School of Mines, 1979.

**EMPLOYMENT:** VERGENCE GEO SERVICES, INC. February 2011 to Present.  
Principal Geologist – Reno, NV. Providing contract geological work and project management.  
Clients to date:  
Alexco Resource Corp. – Contracted to provide experienced geological support on two seasons (2016-2017) of drilling, delineating a high grade silver oreshoot at Keno Hill, Yukon. Over 25,000 meters of core drilling completed. Instructed junior geological staff in underground mapping and surveying of a decline driven for underground drilling. Oversaw sonic drilling in deep valley gravels targeting geophysical anomalies.  
Millrock Resources, Inc. – Managed deep drilling project for covered porphyry copper deposits in southeastern Arizona. Five holes completed (20,000 feet total) targeting primarily geophysical features. Completed several soil, geobotanical and water sampling programs to augment targeting (2012-2014). Generated base metal and industrial mineral deposit targets and assembled property positions in Nevada (2015).  
Wellgreen Platinum Ltd. – Exploration site manager for infill drilling program on an ultra-mafic hosted Cu-Ni-PGE deposit in western Yukon Territory (2015). Oversaw parts of camp expansion.  
American Vanadium, Inc. – Explored satellite vanadium deposits near the Gibellini vanadium project in central Nevada. Performed surface mapping, sampling and data compilation on several known occurrences, resulting in drill targets. Intensive review of the nature of mineralization at Gibellini (supergene marine phosphorite). Assisted in production of a positive feasibility study for the Gibellini project which included a NI 43-101 resource (2011).

ALEXCO RESOURCE CORP. April, 2006 to January, 2011.  
Senior Geologist - Vancouver, BC. Assigned to exploration program in the Keno Hill district, Yukon. Review of historical data associated with United Keno Hill Mines, Ltd. followed by district wide target generation and management of diamond drill programs totaling over 60,000 meters. A 43-101 resource and positive feasibility study resulted in underground development of a structurally complex high-grade Ag-Pb-Zn vein deposit. Supervised junior geologic staff and contractors. Experimented with several different geophysical, geochemical, statistical and drilling techniques to prioritize exploration drilling targets. Evaluated historical mill tailings using a sonic drilling rig.

PINNACLE QUARRY & DEVELOPMENT CO. November, 1993 to April, 2006.  
President – Fort Collins, Colorado. Formed company to develop a new building stone quarry in western Colorado and supply material for new construction. Became involved in the restoration of historic stone and masonry buildings, making use of geological techniques including polarizing light microscopy to identify original sources of historic building stones, composition of historic mortars and causes of stone deterioration. Re-opened long abandoned quarries. Also performed contract geologic work. Clients:  
J. F. T. Agapito & Associates – Geologic structures expected along line of access tunnels, High Level Nuclear Waste Repository, Yucca Mountain, Nevada. Core logging pilot hole for proposed new shaft to exploit a trona deposit near Green River, Wyoming.  
Homestake Mining Co. – Core logging McLaughlin Mine, California.  
TVX Gold – Jardine, Montana. Core logging and mapping Archean gold deposits.  
Norwest Mining Consultants – Rig geologist deep coal core drilling program, Hayden, Colorado.

GWALIA U.S.A. LTD. March, 1990 to November, 1993.  
Senior Project Geologist – Denver, Colorado. Detailed evaluation of several advanced prospects/mines in Nevada and California covering both base and precious metals. All phases of deposit investigation from initial data review of submittals through fieldwork and conformation drilling of resources to

## **Richard Lippoth, continued**

sample collection for metallurgical test work. Assisted in resource calculations. Designed and supervised surface and underground geologic mapping/sampling programs along with RC and core drilling campaigns totaling 80,000 feet.

AMAX GOLD, INC. April, 1989 to February, 1990

Contract Geologist – Ouray, Colorado. Contracted for detailed exploration project focusing on skarn hosted gold mineralization adjacent to a Larimide porphyry copper system. Much time directed towards unraveling the lithologic, geochemical and structural controls of mineralization within the district. An extensive database was compiled using past and present information collected both at the surface and from a complicated system of old underground workings. A surface core drilling program of 5,000 feet was completed.

SUNNYSIDE GOLD CORP. (ECHO BAY MINES et al) June, 1986 to April, 1989.

Staff Geologist – Silverton, Colorado. Assigned to program of extensive underground and surface exploration for polymetallic epithermal veins hosted by Tertiary volcanics. Concurrently a dormant underground mine was brought back into operation (750 tons per day). Duties included planning, budgeting and supervising over 100,000 feet of underground and surface core drilling and more than 10,000 feet of exploratory drifting. Oversaw contract aerial photography, topographic mapping, geophysical surveying and geochemical sampling. Performed quarterly ore reserve calculations. Evaluated several submittal properties in the Western US.

FREEPORT-MCMORAN GOLD CORP. April, 1986 to June, 1986.

Contract Geologist - Contracted to perform detailed surface geologic mapping of altered Paleozoic sedimentary rocks in the House Range of Western Utah and at Pioche, Nevada.

WESTERN STATES MINERALS CORP. September, to December, 1985

Contract Geologist – Elko, Nevada. Contracted to supervise close-spaced developmental drilling of the Tecoma disseminated Au-Ag deposit in northeastern Nevada; a joint venture with Noranda Exploration. Approximately 15,000 feet of RC and air rotary drilling was completed. Considerable time spent in detailed surface mapping and correlation of drill hole data to unravel the complex structure of the deposit. Assisted in resource calculations.

VITAL MINERALS EXPLORATION June, 1984 to August, 1985

Consulting Geologist – Performed “grassroots” exploration in Nevada, Utah, Colorado and Wyoming. Duties included reconnaissance and detailed soil and rock surface sampling, stream sediment sampling and prospect evaluation.

BEAR CREEK MINING COMPANY April, 1980 to January, 1983.

Staff Geologist – Eureka, Utah. Assigned to project exploring precious metal potential of Kennecott’s large lease holdings in the Tintic and East Tintic Districts, Utah. Experience in planning and implementing exploration drifting in the Trixie Mine with all attendant sampling and mapping. Coordinated and supervised underground diamond drilling program. Worked closely with production personnel in development of high sulphidation vein and carbonate replacement deposits adjacent to a porphyry copper system. Participated in surface drilling of several structurally complex precious and base metal targets within the district.

SUNSHINE MINING COMPANY May, 1979 to April, 1980.

Mine Geologist – Kellogg, Idaho. Extensive experience in underground sampling and mapping of mesothermal veins; grade control and planning of overhand and underhand cut-and-fill stoping. Experience in ore reserve calculations and in re-evaluation of old workings, planning and logging of underground core and percussion drilling.

**PUBLICATIONS:** “Application of Detailed Geology to Production, Planning and Ore Search; Trixie Mine, East Tintic District, Utah” in Applied Mining Geology. A. J. Erickson, Jr. Editor: Soc. of Mining Engineers, AIME, New York, 1984.

“Structure and Ore Deposits of the Sunnyside Mine, Silverton, Colo.” in SEG/GSA Guide-book, Annual Meeting, Denver, Colorado, 1988.