

MT. MILLIGAN  
LIFE AFTER PORPHYRY COPPERS

016375

The Mt. Milligan MBX porphyry gold-copper deposit, 90 miles northwest of Prince George, B.C., has a drill inferred geological inventory in the order of 100 million tons. Grades range from 0.015 oz. to 0.09 oz. gold per ton and 0.2% to 1.0% copper.

The MBX deposit is currently being drilled to assess its size and grade. The deposit, as presently identified, is 1,000 feet wide 2,100 feet long and is open along strike and to depth.

The project is a joint venture between Continental Gold Corp., with a 70% interest, and BP Resources Canada Limited, with a 30% interest. The joint venture holds a large contiguous block of claims covering 42 square miles of the mineral belt, accessible by an all weather, heavy-duty gravel logging road from Mackenzie, 40 miles to the east.

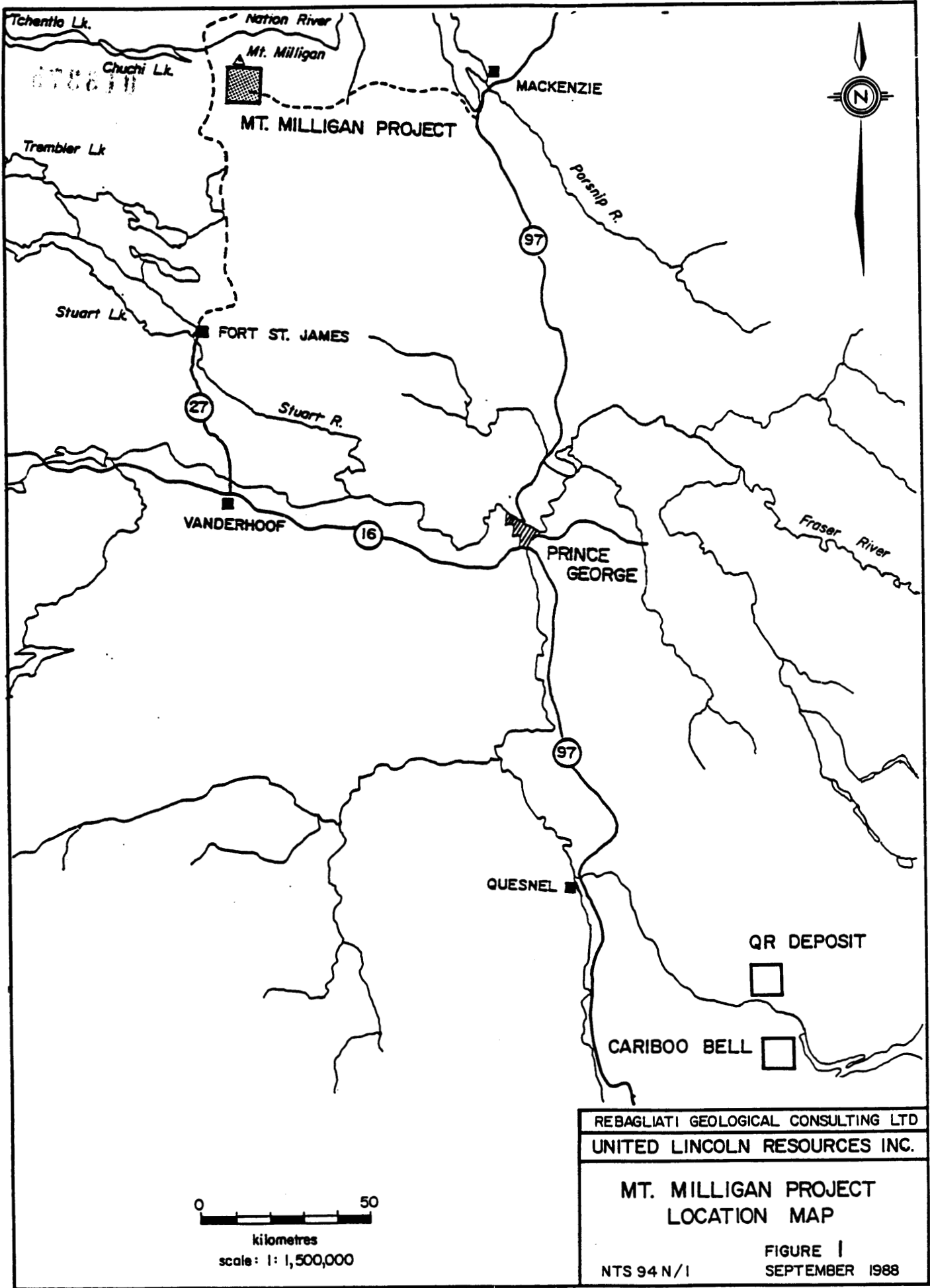
In 1983 and 1984 BP acquired the property by staking and acquisition and identified a gold-copper soil geochemical anomaly approximately 3 square miles in extent. In 1985 after IP and magnetic surveys over the geochemical anomaly BP exposed gold mineralization in trenches on the Creek and Esker Zones.

United Lincoln Resources Inc., (a Continental Gold Corp., subsidiary) optioned the property from BP in 1986. Lincoln having undertaken extensive trenching within the soil geochemical anomaly and additional magnetic surveys, commenced diamond drilling on the Creek and Esker Zones and discovered the MBX deposit in 1987.

Regionally the property lies within the northwest trending central volcanic core of the Upper Triassic-Lower Jurassic Takla Group of the Quesnel Belt. Takla volcanics are dominated by subaqueous alkalic pyroxene porphyritic andesite and basalt flows and pyroclastics with subordinate intercalated tuffs and argillites. Intruding the volcanic stratigraphy are comagmatic alkaline syenite-monzonite-diorite stocks.

The MBX porphyry gold deposit is situated on the eastern side of a 3,000 foot diameter porphyritic monzonite stock. Mineralization is hosted by easterly dipping pyroxene porphyritic andesite to latite flows and pyroclastics, and lesser interbedded trachytic tuffs and a 30 foot to 150 foot thick porphyritic monzonite dyke. Mineralization persists into the margin of the monzonite stock but with decreasing grades. The mineralized porphyritic monzonite dyke is considered to be a fine-grained equivalent of the stock.

The monzonite stock is fine to medium grained with 20% plagioclase laths in an aphanitic potassium feldspar matrix. This is one of three alkaline plutons on the property that form a north-northeast alignment, suggesting a structurally controlled emplacement. The porphyritic character of the intrusive units and the number of dykes is indicative of a hypabyssal subvolcanic environment.



REBAGLIATI GEOLOGICAL CONSULTING LTD  
 UNITED LINCOLN RESOURCES INC.

**MT. MILLIGAN PROJECT  
 LOCATION MAP**

NTS 94 N/1  
 FIGURE 1  
 SEPTEMBER 1988

0 50  
 kilometres  
 scale: 1: 1,500,000

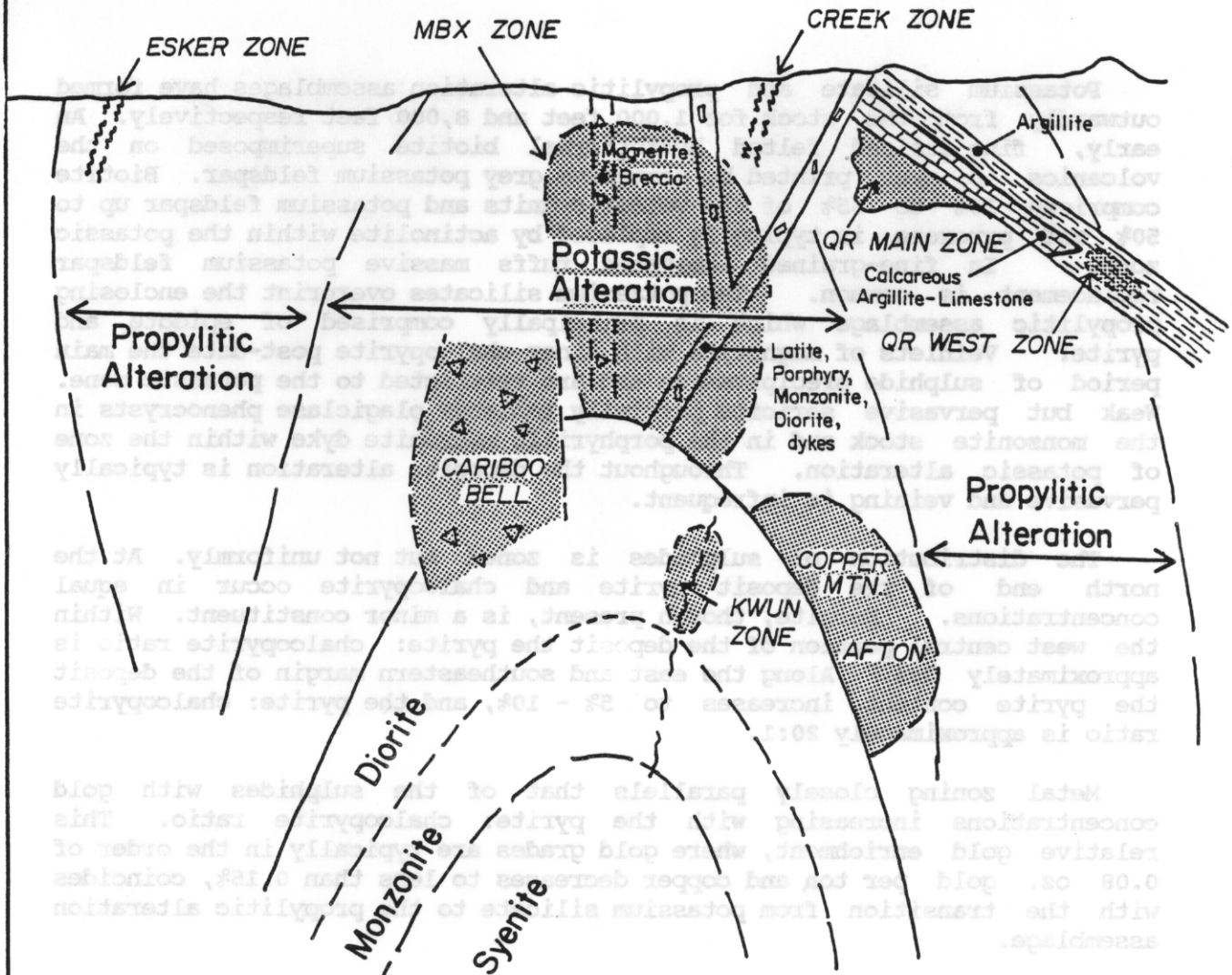
Potassium silicate and propylitic alteration assemblages have formed outwardly from the stock for 1,000 feet and 8,000 feet respectively. An early, fine-grained felted hydrothermal biotite superimposed on the volcanics is overprinted by pervasive grey potassium feldspar. Biotite comprises 10% to 35% of the volcanic units and potassium feldspar up to 50% and pyroxene is typically replaced by actinolite within the potassic zone. In fine-grained laminated tuffs massive potassium feldspar replacement is common. The potassium silicates overprint the enclosing propylitic assemblage which is principally comprised of epidote and pyrite. Veinlets of magnetite with minor chalcopyrite post-date the main period of sulphide precipitation and are restricted to the potassic zone. Weak but pervasive sericite partially replaces plagioclase phenocrysts in the monzonite stock and in the porphyritic monzonite dyke within the zone of potassic alteration. Throughout the deposit, alteration is typically pervasive and veining is infrequent.

The distribution of sulphides is zoned but not uniformly. At the north end of the deposit pyrite and chalcopyrite occur in equal concentrations. Bornite, though present, is a minor constituent. Within the west central portion of the deposit the pyrite: chalcopyrite ratio is approximately 3:1. Along the east and southeastern margin of the deposit the pyrite content increases to 5% - 10%, and the pyrite: chalcopyrite ratio is approximately 20:1.

Metal zoning closely parallels that of the sulphides with gold concentrations increasing with the pyrite: chalcopyrite ratio. This relative gold enrichment, where gold grades are typically in the order of 0.08 oz. gold per ton and copper decreases to less than 0.15%, coincides with the transition from potassium silicate to the propylitic alteration assemblage.

Disseminated anhedral grains and coalescing grain aggregates of chalcopyrite and pyrite comprise approximately 65% of the total sulphide content. Fracture controlled pyrite-chalcopyrite mixed veinlets are less abundant. Chalcopyrite and pyrite-bearing K-feldspar-carbonate veinlets are relatively rare. Quartz veining is notably absent.

Both chalcopyrite and pyrite are auriferous and occur as separate grains. Intergrown sulphides are rare, an important positive metallurgical feature. Gold associated with pyrite occurs as small particles on grain margins.



REBAGLIATI GEOLOGICAL CONSULTING LTD.  
UNITED LINCOLN RESOURCES INC.

GENERALIZED MODEL FOR  
ALKALINE INTRUSIVE RELATED  
GOLD DEPOSITS

SEPTEMBER 1988

The Creek and Esker Zones are located within propylitized hornblende-pyroxene porphyritic andesites approximately 1,000 feet southwest and 1,500 feet west, respectively of the MBX porphyry deposit. These zones are northeast-striking, steeply northwest-dipping, tabular bodies of semimassive to massive sulphides occupying fracture systems radial to the monzonite stock. Each of the deposits comprises three to five subparallel, sulphide-rich bodies, spaced across 200 feet to 300 feet. Individual structures range from 1 foot to 10 feet in thickness and grade from 0.10 oz. to 2.89 oz. gold per ton and 0.2% to 10% copper. Each zone is open along strike and down dip. The propylitic altered andesites between the individual sulphide bodies carry 30 to 350 ppb gold and 200 to 2,500 ppm copper. Silver, arsenic and antimony are present at background concentrations.

Pronounced metal zonation is related to the proximity to the monzonite stock. The MBX porphyry deposit adjacent to the stock, contains less than 10 ppm combined arsenic and antimony. At the Creek and Esker Zones, combined concentrations increase to 300 ppm and to 2,000 ppm respectively. Silver shows a similar relationship with concentrations ranging from 1.5 ppm in the MBX zone, to 10 ppm - 40 ppm in the Creek Zone and 60 ppm - 200 ppm in the Esker Zone.

The current program of delineation diamond drilling and metallurgical testing will provide the data base required for a feasibility study.

Mark Rebagliati, P.Eng. and David Copeland, P.Eng., are Vancouver-based consulting geological engineers.

