

675483

*Ken Dawson*  
Tillicum  
82K/4

**A World of Opportunity**



---

# **Abstract Booklet**

**Northwest Mining Association 93rd Annual Convention  
December 3-5, 1987 ■ Sheraton Hotel ■ Spokane, Washington**

**Gold Bearing Skarns Associated with Porphyry Systems/Esperanza  
Gold Property, Southern B.C.**

Wayne J. Roberts, Exploration Manager, Esperanza Explorations Ltd.  
r/va`R

High-grade gold mineralization was first discovered in 1981 in the Meino-Money gold zone. Exploration to date has defined 11 additional gold-silver zones associated with two northeast trending belts of porphyry sills and stocks. Six of the gold targets have been preliminary drill tested and two are being explored from underground.

The property is underlain by a sequence of Upper Paleozoic Milford Group volcano-sedimentary wackestones overlain by Triassic Rosland Group andesitic flows and tuffaceous siltstones. Intrusive into the above succession are stocks and sills of syenite to diorite porphyry. All units have been metamorphosed to lower greenschist facies and intruded by Cretaceous-age granodiorite of the Goat Canyon and Halifax Creek batholiths. Late Lamprophyre dyke swarms intrude Jurassic and older assemblages.

Gold occurs in calc-silicate-quartz skarns developed in massive andesite, andesitic tuffs and tuffaceous sedimentary rocks. The skarns are spatially related to the syeno-diorite porphyry sills and stocks. Within the skarns, free gold forms fine to coarse disseminated grains and fracture fillings in and along the walls of the quartz impregnations. Gold is contemporaneous with pyrrhotite, pyrite, sphalerite and galena mineralization. High grade Bonanza gold ore shoots are hosted within quartz-actinolite-chlorite facies.

At the Meino-Money deposit, gold mineralization has been defined in a near vertical skarn structure within adessite over a strike length of 2000 feet and vertical extent of 800 feet. Underground exploration along a 600 foot section has outlined a proven reserve of 60,000 ozs. gold within a drill indicated reserve of 200,000 tons grading 0.6 oz/ton gold. Production is planned in 1988. The East Ridge gold deposit occurs at the contact of a diorite

porphyry sill and volcano-sedimentary wackestones. Intrusion of the diorite has altered a 100 foot thick section of clastic sediments to calc-silicate skarn. Gold mineralization has been outlined for a 2000 ft. strike length and 200 ft. down dip and remains open in all directions. From 25 holes drilled, 3 million tons averaging 0.05 oz/ton gold are indicated.

Recent targeting on the adjacent Strebe property has outlined a calcareous calc-silicate skarn averaging 30 ft. thick. Gold values from recent drill programs range to 0.3 oz/ton gold over 30 feet.

It is postulated that the introduction of gold and associated skarn development is related to intrusion of syeno-diorite porphyry sills.

**Geology and Mineralization of the McCoy Skarn, Lander County,  
Nevada**

Margaret L. Lane, Mine Geologist, Echo Bay Minerals Co.

The McCoy gold deposit is a proximal calcic skarn developed within rocks of the Triassic Augusta sequence adjacent to a Tertiary granodioritic stock and dike system. Skarn occurs as stratiform bodies along clastic - limestone contacts, as steeply plunging "contact skarn" along the intrusive - sediment contact, and as xenoliths or pendants within the dike system. Gold is associated with disseminated pyrite and oxidized pyrite in calcic exoskarn and endoskarn, and along fractures and shear zones within the stock and clastic member of the Augusta Mountain Formation. Mineralization is best developed in areas where retrograde alteration and late stage oxidation were most intense. January 1987 mineable reserves were 9.6 million tons of .052 opt Au.

**Silver-Rich Base Metal Skarn and Replacement Deposits of the  
Northern Canadian Cordillera and Mexico**

Kenneth M. Dawson, Research Geologist, Geological Survey of Canada

Characteristics of silver-rich skarn deposits are presented for typical large and small deposits in the Northern Canadian