675487

Ken Dawson
regards

TILLICUM GOLD PROPERTY

by: Wayne J. Roberts
John McClintock

ESPERANZA EXPLORATIONS LTD.

Interest in the Tillicum Gold Camp, located 8 miles east of Burton in southeastern British Columbia, generated by the exploration results of the Esperanza-La Teko joint venture, saw the involvement of at least 55 exploration companies during the 1983 field season.

Esperanza Explorations Ltd. and La Teko Resources Ltd. have successfully expanded the gold-silver potential of the Tillicum Property during 1983.

A major precious metals exploration program has now defined twelve mineralized gold zones, four of which have been partially drill tested; one has also been the subject of preliminary underground investigation. More recently, four additional gold anomalies have been discovered as well as a spectacular, intense silver geochemical anomaly adjacent to the former Silver Queen Mine.

Gold mineralization occurs in upper Paleozoic-age rocks of the Milford Group. On the property, the Milford Group is divisible into a series of basaltic andesite flows and agglomerates that are gradational into a series of andesitic tuff, tuffaceous siltstones and volcano-sedimentary wackestones, and occasional andesitic flows. Intrusive into the Milford Group are sills and dykes of diorite porphyry, that are possibly related to andesitic flows higher in the sequence. The Milford Group and diorite porphyry have been intruded and metamorphosed to lower greenschist facies by quartz-diorites of the Cretaceous-age Goat Canyon and Halifax Creek stocks. Subsequent to emplacement of the quartz-diorite stocks, lamprophyre dyke swarms intruded the Milford Group.

LEGEND: TILLICUM DISTRICT

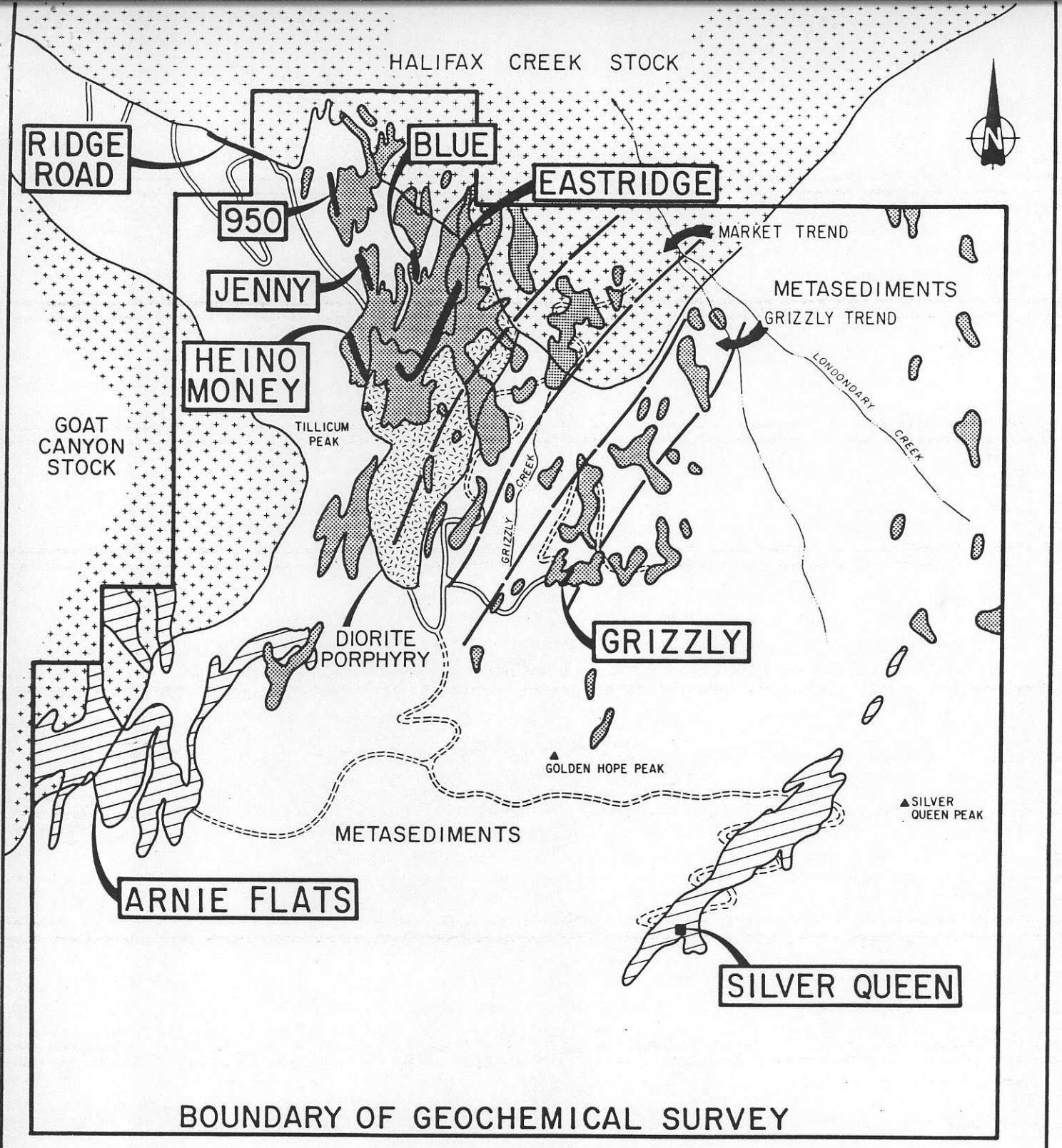
AGE	UNIT	DESCRIPTION	METAMORPHIC OVERPRINT: CALC-SILICATE SKARN	METAMORPHIC OVERPRINT: HORNFELS
		LAMPROPHYRE DYKES		
UNKNOWN	LMP	DARK GREEN CARBONATE ALTERED, AUGITE-EPIDOTE BEARING LAMPROPHYRE		
"	LGR	LEUCOGRANITE DYKES		
		GOAT CANYON - HALIFAX CREEK STOCKS		
CRET-JURASSIC	Kgmb	HORNBLENDE-BIOTITE QUARTZ MONZONITE ; minor QUARTZ DIORITE, GRANODIORITE.		
		SKARN IMPREGNATIONS — GOLD MINERALIZATION	DIOPSIDE-TREMOLITE QUARTZ SKARN + GOLD. QUARTZ SKARN + GOLD + PYRITE TREMOLITE-GROSSULARITE. K-FELD QUARTZ SKARN + PYRITE + GALENA + SPHALERITE + GOLD DIOPSIDE-TREMOLITE-CLINOZOISITE QUARTZ SKARN + PYRITE + GOLD TREMOLITE-EPIDOTE-CARBONATE-CHLORITE GARNET-K-FELDSPAR SKARN CLINOZOISITE-GARNET-DIOPSIDE-K-FELDSPAR QUARTZ SKARN + PYRITE + GOLD	
UNKNOWN	DP	MASSIVE TO FOLIATED, GREY DIORITE PORPHYRY WITH SUBROUNDED PLAGIOCLASE PHENOCRYSTS IN MOTTLED APHANITIC GROUNDMASS WITH SPARSE ANHEDRAL GARNETS		
	DH	HYBRID DIORITE-HIGHLY DIORITIZED METASEDIMENTS		
		MILFORD GROUP [INCLUDES META-SEDS./META VOLC ASSEMBLAGES ORIGINALLY MAPPED AS MILFORD/KASLO GROUPS]		
MISSISSIPIAN & YOUNGER	SH	DARK-GREY-BLACK INDISTINTLY LAMINATED SHALE, LOCAL DEVELOPMENT OF SILTSTONE LAMINATIONS	CALC-SILICATED-HORNFELSED SHALE	BIOTITE-ACTINOLITE-CHLORITE SCHIST
	TS	BEIGE-TAN-DARK GREY, LAMINATED TUFFACEOUS SHALE	LAMINATED CALC-SILICATE BIOTITE-PLAGIOCLASE-CHLORITE-GARNET SCHIST	BIOTITE-CHLORITE-HORNBLENDE SCHIST
	TV	BEIGE, PALE GREEN TUFFACEOUS ANDESITE	QUARTZ-TREMOLITE-CLINOZOISITE INPREGNATED TUFFACEOUS ANDESITE	BIOTITE-ACTINOLITE-CHLORITE SCHIST
	MA	DARK GREEN, FINE GRAINED META ANDESITE TO META-BASALTIC ANDESITE (BRECCIA, TUFFS, FLOWS)	ZEBRA ANDESITE. DIOPSIDE-TREMOLITE-ACTINOLITE-BIOTITE GARNETIFEROUS HORNFELS	PLAGIOCLASE-HORNBLENDE-AUGITE EPIDOTE AMPHIBOLITE BIOTITE-HORNBLENDE-PLAGIOCLASE-CARBONATE HORNFELS
	HC	PINK-BEIGE, FINE GRAINED, SUGARY TEXTURED, ALTERED CLASTICS INCLUDING QUARTZITE, ARKOSE AND SILTSTONE.	BIOTITE-MUSCOVITE-GARNETIFEROUS SKARN	QUARTZ-K-FELDSPAR-BIOTITE-CHLORITE SCHIST
	HQ	YELLOW-BROWN, SUGARY TEXTURED, FINE GRAINED, ALTERED QUARTZITE	QUARTZ-TREMOLITE-SULPHIDE INPREGNATED META QUARTZITE	MUSCOVITE-ORTHOCLASE-QUARTZ SCHIST
	SS	WHITE TO YELLOW, QUARTZ-SERICITE SCHIST (POSSIBLY CAUSED BY SHEARING AND ALTERATION OF DH)		

MODIFERS

- f — FAULTED, SHEARED
- t — TUFFACEOUS
- py — PYRITIC
- l — LAMINATED
- m — MASSIVE
- q — QUARTZ VEINING
- v.g — VISIBLE GOLD
- Po — PYRRHOTITE
- ms — MASSIVE SULPHIDE
- Pb — GALENA
- Zn — SPHALERITE
- i — INTERMITTANT
- w — WEAK

ALTERATION TYPES

- A — ALTERED, NOT DEFINED
- H — HORNFELS
- K — CALC-SILICATE
- C — CARBONITIZATION
- S — SILICIFICATION
- N — SKARN
- R — ARGILLIC ALTERATION (KAOLINITE, MONTMORILLONITE, PYROPHYLLITE)



SCALE

0 200 400 600 800 metres

0 500 1000 2000 feet

LEGEND:

- GOLD ZONES
- GOLD GEOCHEMICAL ANOMALY (+50 p.p.b.)
- SILVER " " (+3 p.p.m.)
- EXISTING ROADS
- PROPOSED ROADS

TILLICUM GOLD PROPERTY

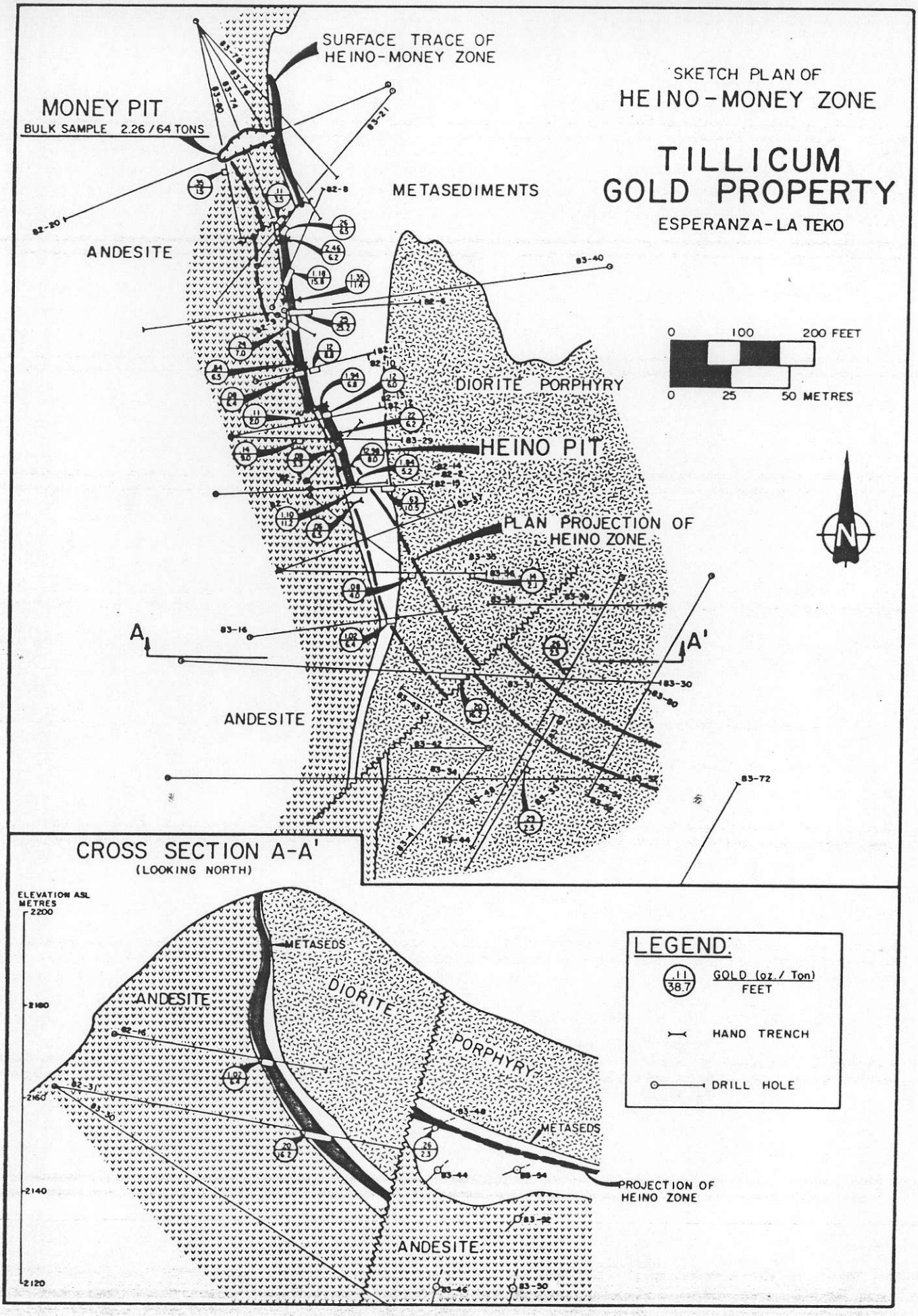
ESPERANZA-LA TEKO

Gold, in the Tillicum Camp, occurs in calc-silicate-quartz skarns that have been developed in tuffaceous andesite and sedimentary Milford Group rocks, adjacent to diorite porphyry sills. Skarn assemblages consist of quartz, plagioclase, tremolite-actinolite, clinozoisite, garnet, biotite and microcline. Within the skarn, free gold occurs as fine to coarse disseminated grains and fracture fillings within and along the walls of quartz impregnations and is often associated with minor pyrrhotite, galena, pyrite and sphalerite. Gold has been remobilized and re-concentrated during both metamorphism and intrusion of lamprophyre dyke swarms.

Several distinct auriferous skarn zones have been discovered of which the five most prominent are: Heino-Money, East Ridge, Jenny, 950 and Grizzly zones. To date, total cumulative exploration expenditures of 1.5 million dollars have been directed to delineation of gold reserves in the Heino-Money and East Ridge zones as well as comprehensive gold-silver geochemical soil coverage of the key claims. The proposed 1984 budget of 1 million dollars will be directed to continued evaluation and delineation of gold-silver reserves within the Silver Queen, Heino-Money, East Ridge and Jenny zones.

Heino-Money Zone

Diamond drilling to date on the Heino-Money Zone has outlined the mineralized zone for a strike length of 500 feet, a depth of up to 200 feet and thicknesses varying from 3.5 to 23 feet. This zone has a drill-indicated tonnage of 40,000 tons grading 0.6 ounces per ton gold (gold assays cut to 2 ounces) with an overall zone of geologically inferred potential of 100,000 tons. The stratabound mineralized zone, averaging 8 feet thick, occurs within altered tuffaceous shales and contains spectacular high grade zones of coarse visible gold. Underground sampling and drilling is proposed for 1984 in order to expand reserves, initiate mining tests, and carry out bulk sampling. Preliminary feasibility studies could then follow in late 1984.


SURFACE TRACE OF HEINO-MONEY ZONE
SKETCH PLAN OF
HEINO-MONEY ZONE
MONEY PIT
BULK SAMPLE 2.26 / 64 TONS
TILLICUM
GOLD PROPERTY
ESPERANZA-LA TEKO
METASEDIMENTS
ANDESITE
DIORITE PORPHYRY
HEINO PIT
PLAN PROJECTION OF HEINO ZONE
0 100 200 FEET
0 25 50 METRES
N
A
A'
ANDESITE
CROSS SECTION A-A'
(LOOKING NORTH)
ELEVATION ASL METRES
2200
2180
2160
2140
2120
METASEDS
ANDESITE
DIORITE PORPHYRY
METASEDS
PROJECTION OF HEINO ZONE
ANDESITE
LEGEND:
GOLD (oz./ Ton)
FEET
HAND TRENCH
DRILL HOLE

East Ridge Zone

The East Ridge Zone occurs at the contact between a diorite porphyry sill and volcano-sedimentary wackestone. Intrusion of the diorite has altered a 50 to 100 foot thick section of the adjacent clastic sedimentary rocks to skarn. Gold in the skarn is erratically distributed, characterized by short, higher-grade sections separated by lower-grade material. On the basis of 18 drill holes, the East Ridge is emerging as a thick (up to 100 feet) mineralized gold zone with a strike length in excess of 1650 feet. The favourable porphyry-metasedimentary contact persists for a further 1400 feet beyond the most northwesterly drill holes, and soil sampling highlights this contact as anomalous for gold. The potential strike length of the zone is, therefore, 3,000 feet. Drilling has only tested the initial 100 feet of the zone below surface and with the zone remaining open to depth, this deposit has excellent potential for a large gold reserve amenable to open pit mining.

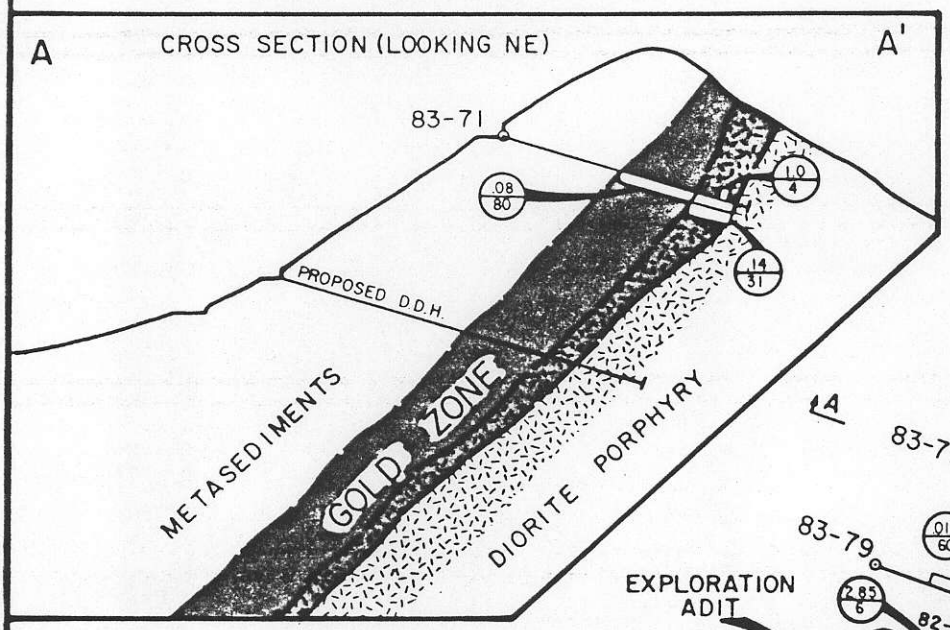
In the East Ridge Zone, gold occurs in randomly distributed higher-grade 'pockets' up to 2.85 oz/ton gold over 6 feet, separated by areas of lower grade material. Grades vary up to 0.11 oz/t Au over 39 feet, with longer intervals grading 0.08 oz/ton gold over 80 feet.

To determine if the high-grade areas in the East Ridge were in discrete structures or rock-type amenable to selective underground mining, and to corroborate drill results, a 200 foot (61 m) underground cross-cut was driven into the East Ridge. The underground work confirmed the erratic nature of the gold and showed drill, muck and channel sample results to be comparable when averaged over intervals greater then 20 feet (6 m). Further drilling is proposed for 1984 to delineate down-dip and strike extensions of this potentially large deposit.

EAST RIDGE ZONE

TILLICUM GOLD PROPERTY

ESPERANZA – LA TEKO



SOIL GEOCHEMICAL ANOMALIES

A soil sampling program has identified several areas of the Tillicum property that are highly anomalous in silver and gold. Most spectacular of these is a large silver anomaly situated in the vicinity of the former Silver Queen mine workings. A second, large region of strongly anomalous silver was discovered on Arnie Flats. In addition to the silver anomalies, three gold-anomalous areas, named the Market, Grizzly and Golden Hope Trends were identified. Gold soil geochemistry with follow-up by prospecting is the most effective exploration technique in the camp. Gold content in excess of 1,000 ppb in soils has been demonstrated to usually lead to showings of visible gold in bedrock.

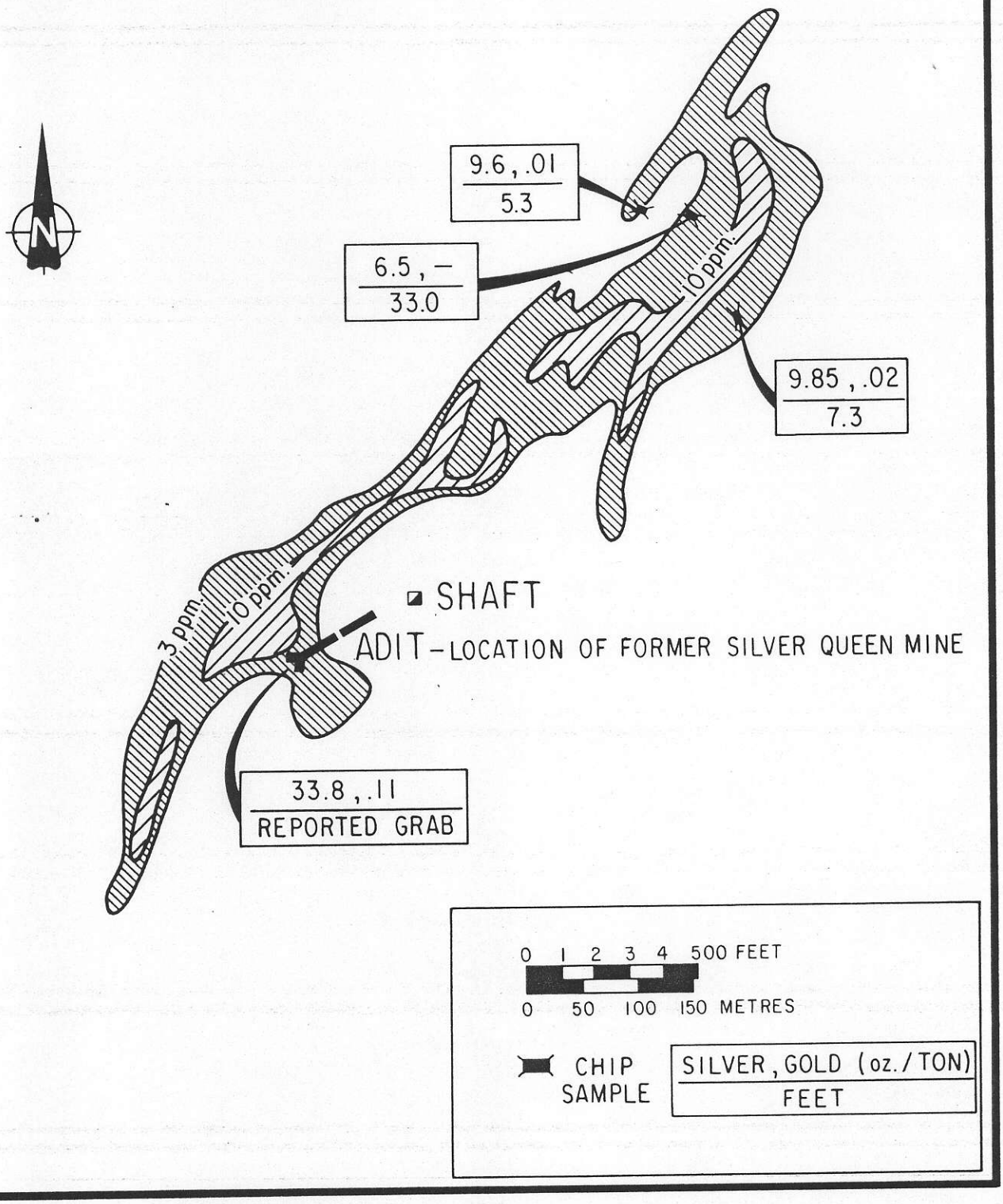
Silver Queen

A 3,000 foot long by 150 foot wide zone of highly anomalous silver geochemistry contoured at 3 ppm silver was outlined in the southeastern portion of the property. Values in soils range up to 256 ppm or 7.5 oz/ton silver. Preliminary prospecting has led to the discovery of silver mineralization within the anomalous zone with grab samples assaying up to 22 ounces per ton silver. Chip samples taken along outcrops of meta arkose and siltstone sparsely mineralized with pyrite and an unidentified grey mineral at the northern end of the anomaly, yielded 6.5 oz/t Ag over 33 feet. The Silver Queen anomaly is adjacent to the former Silver Queen mine workings which received limited activity in the mid 1930's. The adit and open cuts were developed along pod-like bodies of pyrite-sphalerite- and galena-bearing marble within meta arkose, siltstone, shale and greenstone.

The above geochemical anomaiy will be evaluated in 1984 by trenching, sampling and mapping, followed by diamond drilling.

In summary, introduction of gold and associated local skarnification of Milford units is related to intrusion of diorite porphyry bodies in the central portion of the property. Silver-rich mineralization, occurring

SILVER QUEEN ZONE



peripheral to the gold zones, may be related to the same mineralizing system. The Esperanza-La Teko joint venture is continuing with an evaluation and delineation program to develop gold-silver reserves from which an optimum mining scheme can be determined.