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LORNEX MINING CORPORATION LTD.

MINE GEOLOGY

The Lornex copper-molybdenum deposit is situated in the Highland Valley of British Columbia adjoining Bethlehem Copper, Valley Copper and Highmont.

The deposit occurs within the composite, concentrically zoned, Upper Triassic, Guichon Creek Batholith. The Batholith which is approximately 40 miles long and 16 miles wide, trends in a north-northwesterly direction. It consists of several phases which are compositionally and texturally distinguishable. In general the peripheral, dioritic phases are older than the central, more coarse-grained, monzonitic phases.

The Lornex porphyry orebody occurs in Skeena Quartz Diorite, a variety of the Bethlehem, an intermediate phase of the Batholith. A pre-mineral quartz porphyry dyke trends northwesterly through the Highmont property and into the Lornex orebody. Contacts of the dyke are indistinct because of silicification and sericitization of adjoining quartz diorite.

The ore deposit is approximately 6200 feet long, 1600 feet wide and plunges northwesterly to a depth in excess of 2400 feet. Drill indicated reserves, within a single open pit, as of December 31, 1974 were estimated at 432 million tons of proven ore grading 0.411% copper and 0.014% molybdenum, at a 0.26% copper cut-off grade. The ore deposit is mantled by 10 to 250 feet of overburden. It reaches its maximum depth in Award Creek Valley which is the surface expression of the Lornex fault. This regional fault forms the contact between Bethsaida and Bethlehem phases in the vicinity of the orebody and truncates mineralization in the northwest portion of the ore zone. Cumulative movement on this west dipping fault is apparently right lateral and reverse.

The predominant hypogene sulphide minerals in order of abundance are chalcopyrite, bornite, molybdenite and pyrite. Minor amounts of sphalerite, galena, tetrahedrite and pyrrhotite also occur. An oxide zone up to 200 feet thick caps the orebody and it comprised mainly of malachite with minor tenorite, chalcocite, covellite, azurite, cuprite and native copper.

Four types of hydrothermal alteration which are related to quartz sulphide mineralization have been recognized in the open pit. Potassic alteration occurs primarily as veins which are erratically distributed at the levels explored in the orebody. Phyllic alteration is comprised of quartz-sericite envelopes which commonly form borders on quartz-sulphide veins within the argillic alteration zone. Argillic alteration which is pervasive throughout the ore zone is characterized by the presence of sericite, kaolinite, with minor monmorillonite and chlorite. The typical propylitic alteration assemblage consists of epidote, chlorite, carbonates and minor sericite and hematite.

Concentric horizontal and vertical zonal distributions of principal sulphides and major hydrothermal alteration phases have been determined. Generally, propylitic alteration is associated with sub-economic copper grades and the pyrite zone. Within the ore zone, intensity of argillic alteration increases towards the core. The principal sulphides form a concentric pattern with bornite in the centre, chalcopyrite outside bornite and a molybdenite zone overlapping portions of the bornite and chalcopyrite zones. Pyrite forms a "halo" around the ore zone.

Mineralization at Lornex is controlled by fracture density and distribution. Mineralized and post-mineral fractures were formed during at least three periods of deformation. Copper - molybdenum veins which strike 022°/55° SE are common in the northern zone of the orebody, whereas veins whose attitudes are 090°/58°S are concentrated in the south and southeast zones. In the central and western zones there is an overlap of veins exhibiting three major attitudes; 022°/55°SE, 064°/57°SE and 090°/58°S. This concentration results in higher copper grades.

Two post-mineral fracture systems have been recognized. One system of faults and fractures trend 093°/52°SW and 026°/50°SE. A younger system of faults trend 115°/62°SW and 172°/66°SW; intermediate fractures trend 136°/66°SW.

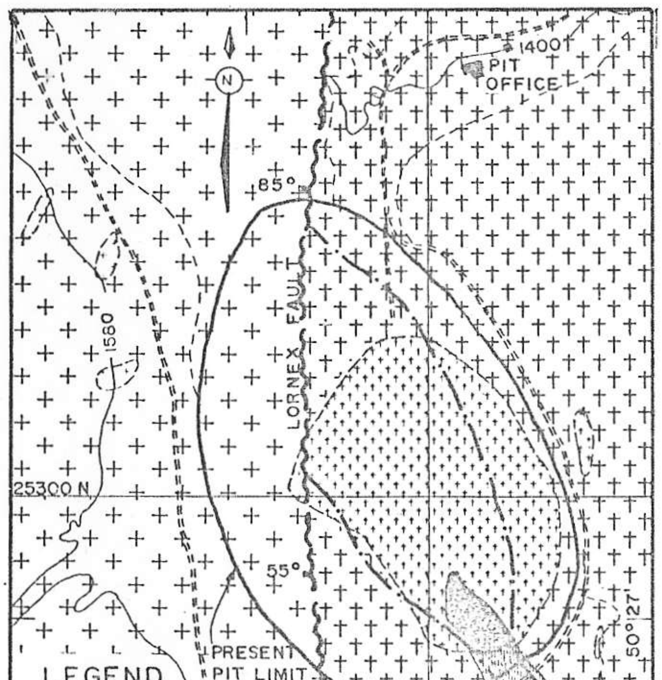
The proposed genetic model of the orebody is described below and illustrated on the appended schematic diagram.

Pre-mineral tectonic stresses are thought to have formed a conjugate shear system at the intersection of the Lornex fault and the quartz-porphyry dyke. Maximum principal stresses from the east-northeast and west-southwest produced the fracture pattern illustrated on the schematic drawing. These shear fractures strike 022° and 090° and extension fractures strike 064° . Assuming that the maximum principle stresses were vertical, fractures developed at this time would also be vertical.

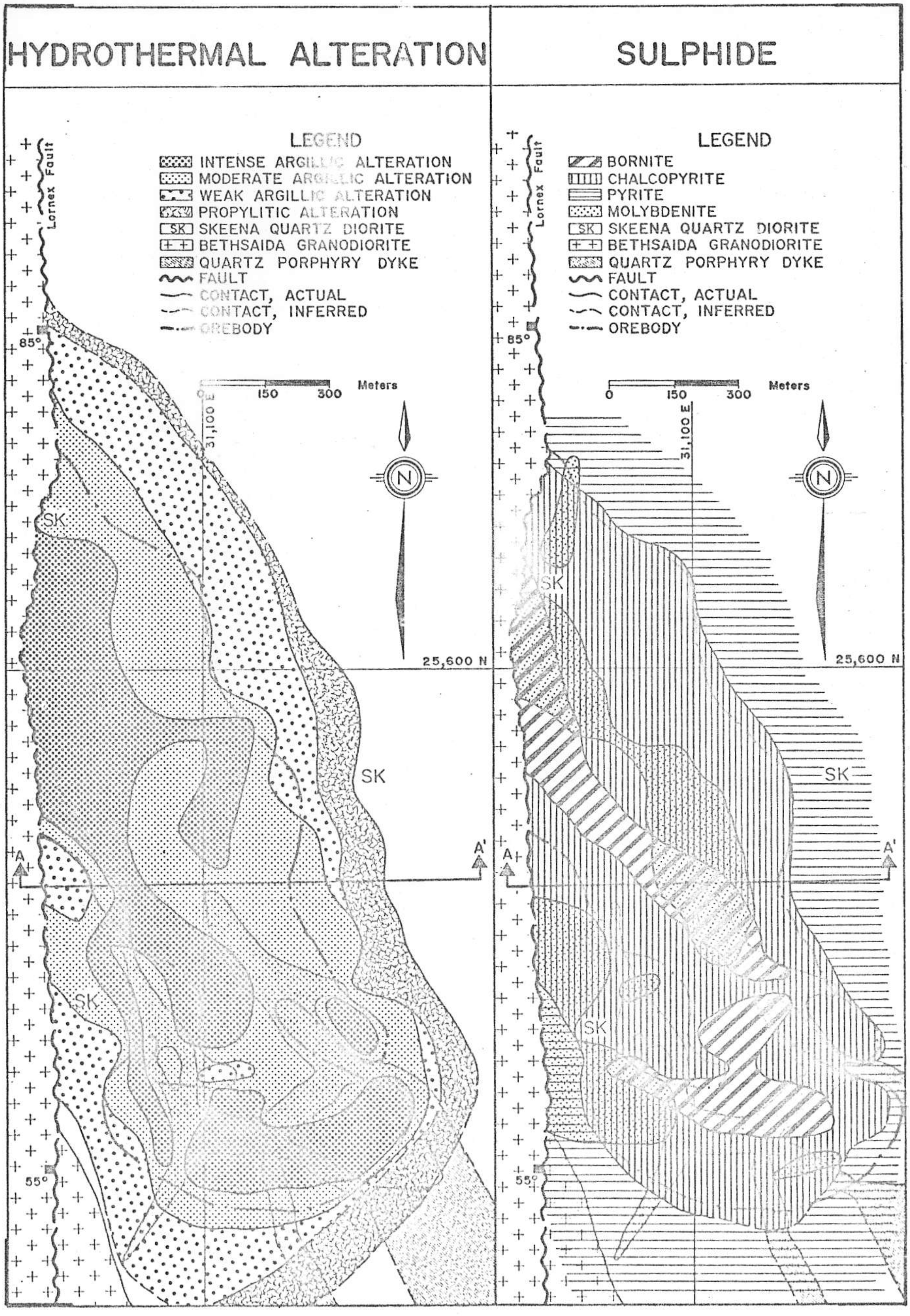
Ore bearing, hydrothermal fluids, which may have developed as a late stage fractionation of the magma which formed the batholith migrated along the fractures. The result was an epithermal ore deposit with a concentric zonal distribution of sulphide minerals and hydrothermal alteration. A zone of high total sulphide content developed in the zone of most intense fracturing.

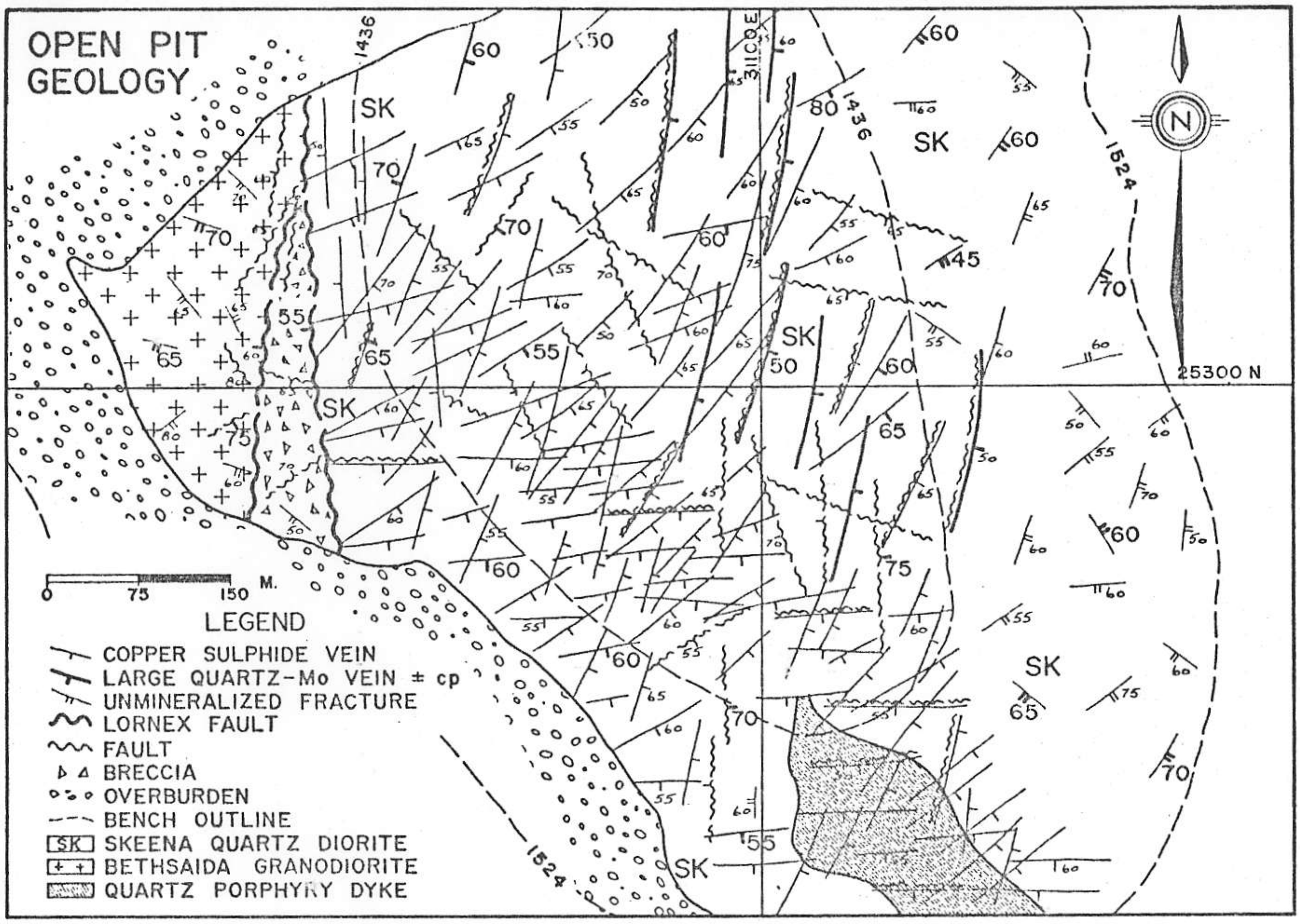
Following mineralization it is thought that regional stresses, with maximum principle stresses from the east-northeast and west-southwest produced further shearing sub-parallel to and along 022° and 090° striking veins. It is probable that during this period of deformation apparent right lateral displacement took place on the Lornex fault. Apparently the Lornex orebody (portion east of fault) was tilted down in the north and relatively up in the south at this time. This 30° to 40° tilt is invoked to explain why mineralized fractures now dip in a southerly direction and why sulphide and alteration zones plunge northwesterly.

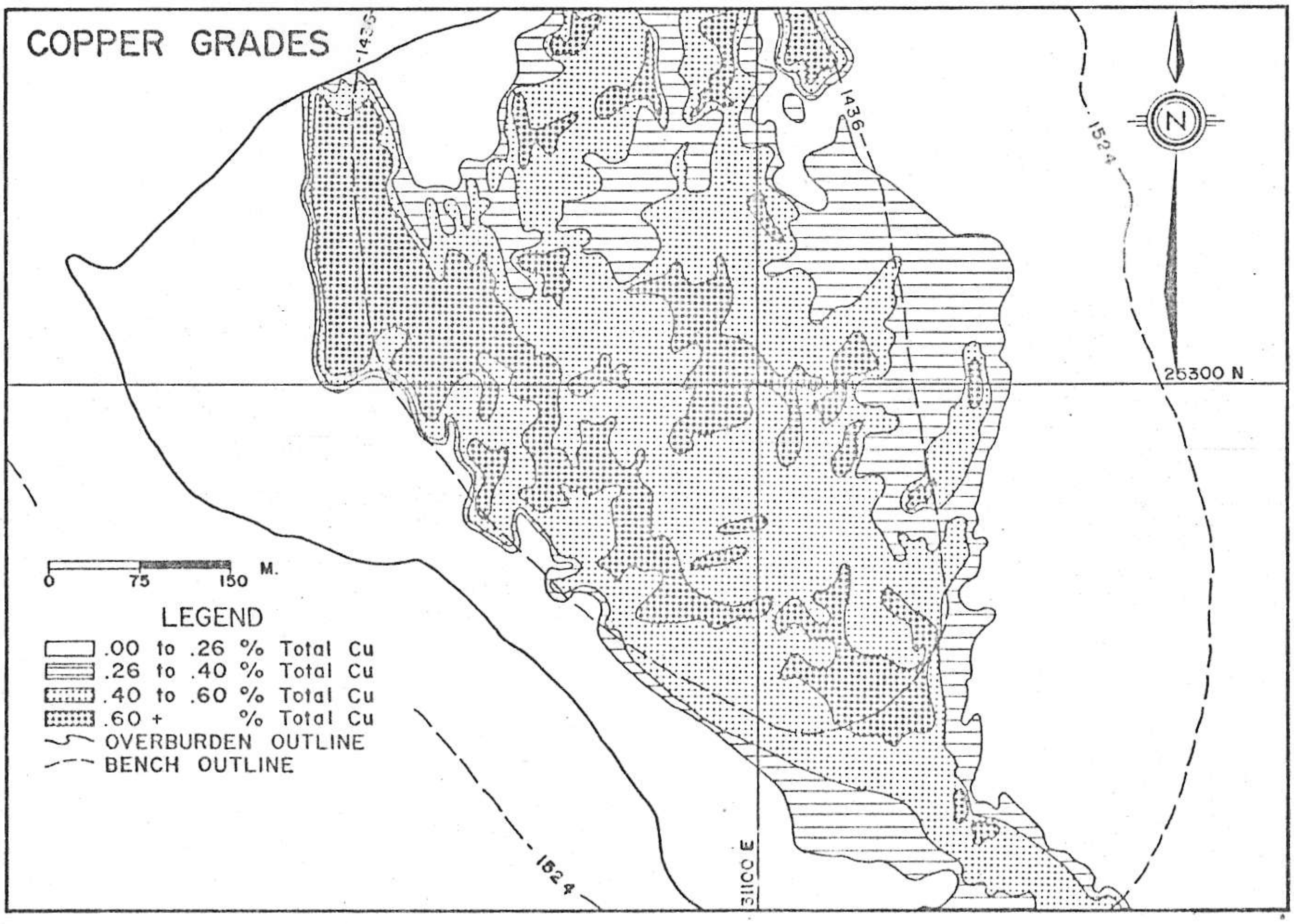
A late stage deformation produced by maximum principal stresses oriented from the northwest and southeast, developed a conjugate shear set. Conjugate shears are oriented 115° and 172° and extension fractures strike 136° . Displacements related to this period of deformation are generally minor.



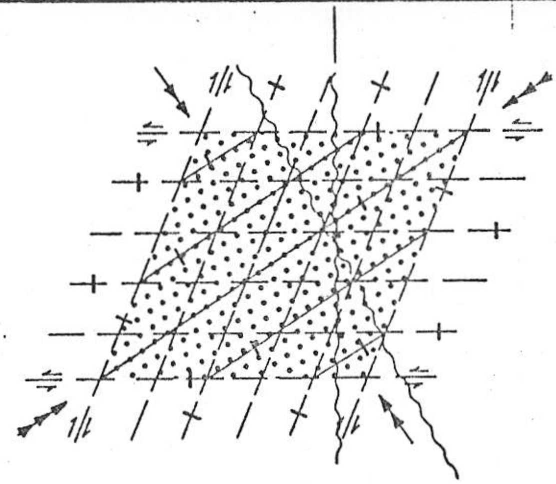
N
1400
PIT OFFICE
85°
LORNEX FAULT
1580
25300 N
55°
PRESENT PIT LIMIT
50°27'
LEGEND
SKEENA Q.D.
BETHSAIDA
Q.P. DYKE
ORE OUTLINE
CONTACT
OUTCROP
DUMP OUTLINE
0 150 300 Meters
121°02'
31100E
1650


HYDROTHERMAL ALTERATION
LEGEND
INTENSE ARGILLIC ALTERATION
MODERATE ARGILLIC ALTERATION
WEAK ARGILLIC ALTERATION
PROPYLITIC ALTERATION
SK SKEENA QUARTZ DIORITE
BETHSAIDA GRANODIORITE
QUARTZ PORPHYRY DYKE
FAULT
CONTACT, ACTUAL
CONTACT, INFERRED
OREBODY
Lornex Fault
0 150 300 Meters
31,100 E
N
25,600 N
85°
55°
SK
A
A'
SULPHIDE
LEGEND
BORNITE
CHALCOPYRITE
PYRITE
MOLYBDENITE
SK SKEENA QUARTZ DIORITE
BETHSAIDA GRANODIORITE
QUARTZ PORPHYRY DYKE
FAULT
CONTACT, ACTUAL
CONTACT, INFERRED
OREBODY
Lornex Fault
0 150 300 Meters
31,100 E
N
25,600 N
85°
55°
SK
A
A'

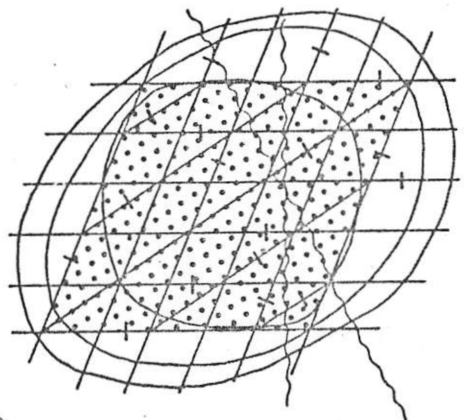

OPEN PIT GEOLOGY
SK
1436
1524
3110C E
25300 N
N
0 75 150 M.
LEGEND
COPPER SULPHIDE VEIN
LARGE QUARTZ-Mo VEIN ± cp
UNMINERALIZED FRACTURE
LORNEX FAULT
FAULT
BRECCIA
OVERBURDEN
BENCH OUTLINE
SK SKEENA QUARTZ DIORITE
BETHSAIDA GRANODIORITE
QUARTZ PORPHYRY DYKE


COPPER GRADES
1436
1524
3110C E
25300 N
N
0 75 150 M.
LEGEND
.00 to .26 % Total Cu
.26 to .40 % Total Cu
.40 to .60 % Total Cu
.60 + % Total Cu
OVERBURDEN OUTLINE
BENCH OUTLINE

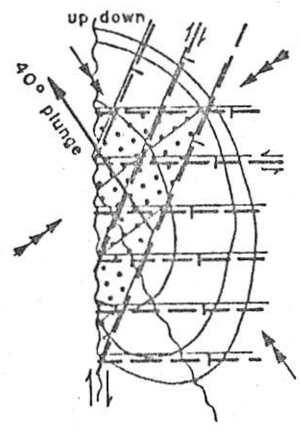
1. Tectonic stresses (maximum principal stress from NE and SW) develop vertical conjugate shears and related extension fractures at the intersection of the north striking Lornex fault and the northwest trending quartz porphyry dyke. (Stippled area is region of most intense fracturing).



2. Hydrothermal fluids migrate along the shears and fractures. The result is a vein type ore deposit with a concentric, zonal distribution of sulphide mineralization and hydrothermal alteration.



3. Tectonic stresses (maximum principal stress from NE and SW) produce conjugate shears along the veins which strike N22 E and N90 E. The stresses cause apparent right lateral, reverse displacement of portions of the ore deposit along the west dipping Lornex fault, and cause tilting of the Lornex orebody. The result is a 30 to 40 NW plunging orebody in which the veins dip southerly.



4. Local stresses (maximum principal stress from NW and SE) develop minor conjugate shears and related extension fractures in the vicinity of the Lornex orebody.