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GEOLOGY

The Lornex porphyry copper-molybdenum deposit is situated within the concentrically zoned Upper Triassic Guichon Creek Batholith. The batholith is approximately 30 kilometers wide and 65 kilometers long and is one of a series of plutons which form the northwest trending Cordilleran Intermontane Belt which extends from southern B.C. to southwestern Yukon. The batholith is dated at 202 ± 8 million years (W. J. McMillan, B. C. Dept. of Mines, 1980) and is comprised of four intrusive phases ranging in composition from diorite or quartz diorite to quartz monzonite.

The Lornex orebody is approximately 2100 meters long and 700 meters wide. It has a maximum elevation (A.S.L.) of 1640 meters in the south end and plunges northwesterly at approximately 20° to a minimum elevation of below 700 meters in the north end. The ore body is still open at depth. An overburden layer varying between 2 and 75 meters covers the deposit and an oxide zone averages 3 to 30 meters in thickness.

The Lornex deposit occurs in the Skeena Quartz Diorite, an intermediate variety between the Bethlehem and Bethsaida phases of the batholith. This slightly porphyritic, medium to coarse grained rock consists of approximately 20% quartz, 50% plagioclase, 10% orthoclase, 5-10% biotite and 5-10% hornblende with accessory minerals such as sphene, apatite, zircon and magnetite.

The major structural features at Lornex include the Lornex Fault, the west wall fault zones in the Bethsaida Granodiorite, the geometry of the pre-mineral quartz porphyry dyke and the intense fracturing and faulting and vein systems of the Skeena Quartz Diorite ore host rock.

The Lornex Fault strikes northerly and dips 45° to 65° west in the south and 85° west in the north. This fault cuts off the ore and it juxtaposes Bethsaida Granodiorite on top of Skeena Quartz Diorite. Apparent movement is right lateral and reverse. An incompetent zone of intensely faulted rock, and intensely hydrothermally altered but barren rock near the Lornex Fault, ranging from 50 to 90 meters in width follows the Lornex Fault from the north to the south, in Bethsaida Granodiorite.

The structural grain within the Bethsaida Granodiorite in the pit west wall is N20°E to N30°E, truncated by the Lornex Fault. Swarms of major faults with ½ to 3 meters of gouge strike within this trend and dip mainly at 60° to the northwest. They alternate with zones of fresh, mildly fractured Bethsaida Granodiorite.

The Quartz Porphyry Dyke cuts the Skeena Quartz Diorite in the south-eastern corner of the pit. It's width appears to reach 300 meters in that area including some large zenoliths of partly digested Skeena Quartz Diorite. It ramifies into two arms as it enters the south central pit area. These arms vary in width from 45 to 150 meters.

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The western arm disappears in intensely argillic skeena quartz diorite near the Lornex Fault and the eastern arm extends further north. The overall dyke trends N45°W. It appears that the dyke is better mineralized (ore grade) along the arms than in the main body to the southeast.

The Skeena Quartz Diorite itself is intensely jointed and faulted and the higher ore grades occur in the more intensely jointed, veined and faulted rock. Mapping has shown that ore zones usually trend along pervasive joint/stringer trends or as halos along major quartz veins. One quartz-chalcopyrite-molybdenite vein in the south central pit area has been followed for 365 meters along strike and 48 meters vertically and is possibly correlatable to diamond drill holes to another 95 meters in depth. It strikes about N05°W to N10°W and dips westerly at 40°, sympathetic to and within 60 meters of the Lornex Fault. Ore zones straddle it for most of it's length consistently from bench to bench. A footwall halo along this veing is well altered and mineralized.

Four types of hydrothermal alteration associated with sulphide mineral ization have been recognized. These are potassic, phyllic, argillic and propylitic. Potassic alteration exists erratically as 5 millimeter veins of K-feldspar. Phyllic alteration consists of quartz-sericite envelopes typically a few millimeters in width. These frequently occur with sulphide minerals. Argillic alteration is pervasive throughout the orebody in varying intensities and is characterized by the presence of quartz, sericite, kaolinite, montmorillonite and chlorite. Kaolinite and sericite are the dominant alteration minerals and tend to give the quartz diorite a cream-coloured or green tint respectively. Propylitic alteration occurs principally as epidote, chlorite and carbonates along the margins of the orebody. The quartz porphyry dyke is affected by these alteration types to a much lesser degree than the Skeena Quartz Diorite.

Sulphide mineralization occurs primarily as fracture fillings with quartz. The principal hypogene sulphide minerals in order of abundance are chalcopyrite, bornite, molybdenite and pyrite which occur with minor amounts of sphalerite, galena, tetrahedrite and pyrrhotite. Only about 5% of the copper minerals occur as disseminations. Molybdenite normally occurs as thin laminae in banded quartz veins. Copper minerals in the oxide zone alter predominantly to malachite but azurite, cuprite, chalcocite, covellite and native copper also occur.

The copper mineralization has been subdivided into five zones which together represent an anticlinal-like structure which trends N23°W very continuously throughout the length of the orebody. The most westerly zones are cut off by the northerly trending Lornex Fault. Concentric zoning of the sulphide minerals has been recorded with bornite in the center flanked by chalcopyrite with molybdenite zone overlapping both of the copper sulphide zones.

Ore boundaries in the pit are determined through the use of rotary blast hole assays. Ore is outlined with the use of ribboned lines and numbered signs corresponding to maps issued daily to the foremen. Ore hardness (alteration, structure, etc.) is checked at each shovel face daily and contour maps showing the grinding rates (in the semi-autogenous mills)

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in tons per hour are compiled for forecasting purposes. Shovels are scheduled daily to produce a blend of ore with the desired copper and molybdenum grades and a uniform hardness which enables the mill personnel to maintain efficient operation of the semi-autogenous mills and good control of the grinding circuit.

A rock quality control mapping program has been implemented to help in the design of blast patterns and to provide rock mechanics data. For optimum blasting, hard and soft zones are delineated by a combination of mapping, contouring toe elevations and observing shovel performance. These zones are projected down dip one bench height (40 feet) and then drilled and blasted according to their rock quality by varying the pattern spacing, sub-grade, powder factor and type of powder to achieve better fragmentation and toe control. Favourable results include less wear and tear on the shovels, less re-drilling and more economical use of explosives and drills.

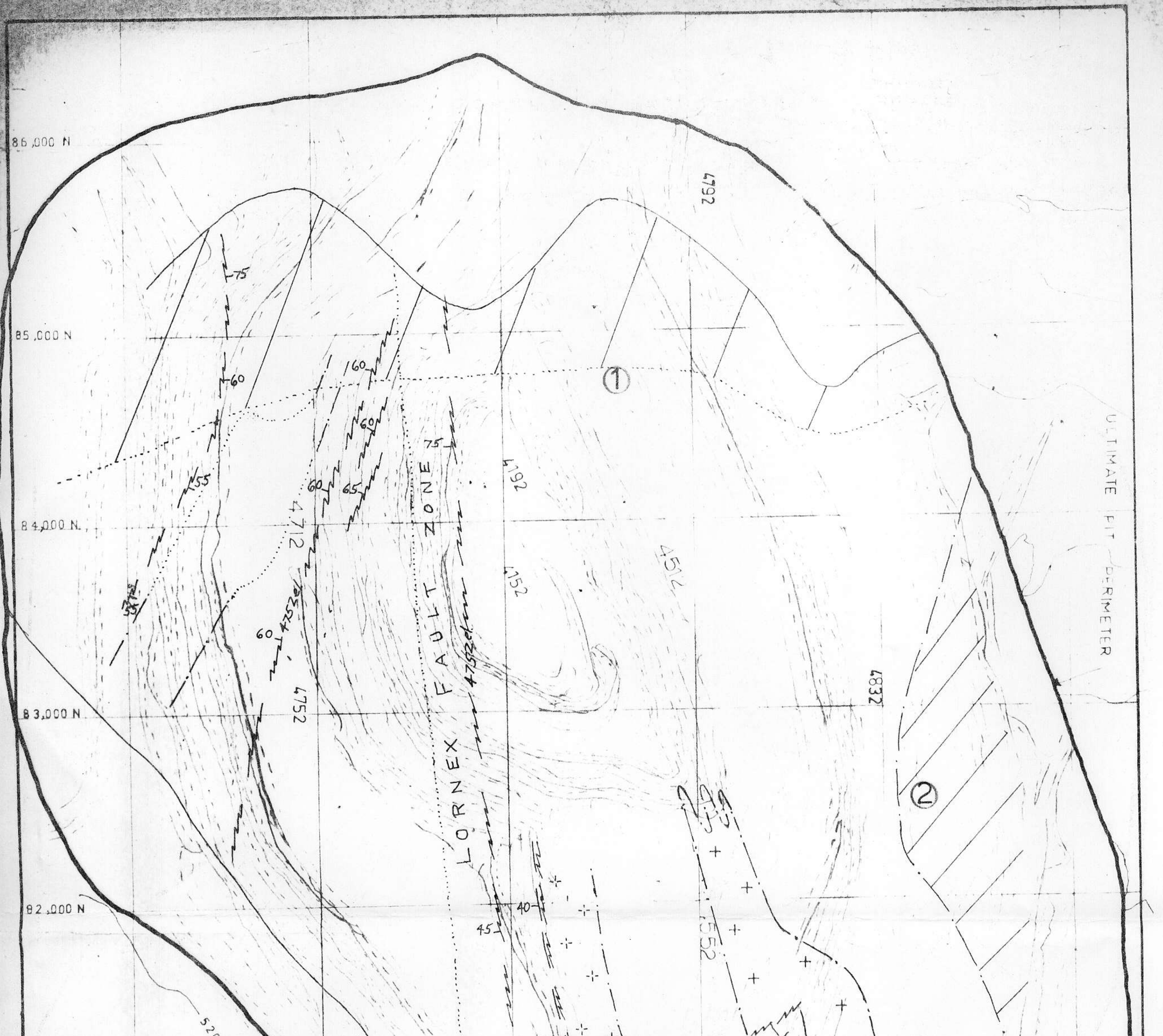
Geological mapping done on active faces and on temporary and final walls, together with diamond drilling information enables the geologist to develop a three dimensional picture of the geology of the Lornex ore body. This knowledge is used to optimize the slopes of the pit design and to ensure the stability of the walls.

All diamond drill hole data including rock types, degree and type of alteration and assay values are stored in a computerized geological model. The property is divided into blocks each 100' square and 40' deep (bench height). Each block is assigned a value for copper, molybdenum and a hardness rating.

The metal content is calculated by "searching" by computer for 40' diamond drill hole assays up to 450' in strike and dip directions and up to 180' in the direction perpendicular to the strike-dip plane (or an appropriate intermediate distance). Assays that are located within this disk-shaped search volume are then weighted by a factor defined as the inverse of it's distance from the block to the sixth power. Assays located near the block are weighted much more than those located further away. In addition to the distance weighting, these assays encountered during the computer "search" which are in preferred directions (along strike or dip) are weighted up to six times more than assays encountered in other directions. The combined biases of direction and distance make up a weighting matrix. The Lornex orebody has been subdived into four areas each with different preferred directions and therefore each with a unique weighting matrix.

Hardness values assigned to each block in the geological model are assigned manually. Generalized hardness trends are compiled from the hardness countour maps drawn by the geologist and from the alteration descriptions in drill hole logs. Each trend is assigned a hardness value representing the grinding rate in a semi-autogenous mill, expressed in tons per hour. The hardness trends plotted on bench plans are then coded for the computer model using row, column and bench designations. Computer programs accessing this data can then calculate mill throughput for future blends of ore.

The geological model is updated from time to time as new information becomes available through mining or through diamond drilling. The model is routinely accessed by mine engineering personnel to determine future grades, milling rates and ore reserves.



GEOLOGY LEGEND:

+ + Quartz & Quartz Feld. Porphyry Dyke

+ + Porphyritic Skeena Quartz Diorite

Propylitic Zone

40 Faulted Quartz Vein, Mineralized

Over burden Contact

Oxide Zone

Major Fault Zone with observed, interpreted contacts

1.....4 Stops of interest

LORNEX MINING CORPORATION LTD

PROGRESS PLAN

MONTH OF APR. 1983

SCALE: 1" = 600'

HIGHMONT WEST PIT

Stop #1

High Moly, low Copper zone at West end of pit. Copper grade $<$.05% Cu.

Dominant joint set 60/120 or N30E with Moly mineralization ranging from smears along joint surfaces to Quartz – Moly smears several inches wide.

Rocks are very fresh. Some greenish serecite/clays/carbonate alteration of Feldspars.

Fracture controlled chloritic alteration quite visible.

Stop #2

6 foot wide Quartz Moly vein with some chalcopyrite.

Relatively competent in centre of vein , but gougy borders (selvage of sercite/clays or just black mud).

Wall rock alteration for $\pm$ 2' then fresh Quartz diorite.

Stop #3

6 inch wide Quartz Moly shear with intense argillic alteration zone 6" wide.

Small scale fractures $\pm$ 5' east with sercite, chalcopyrite.

Stop #4

Watch your step along the berm.

Pink aplite zone

Medium grained Quartz and K-spar

Diamond drill core indicates aplite predates hydrothermal alteration and Sulphide deposition.

Stop #5

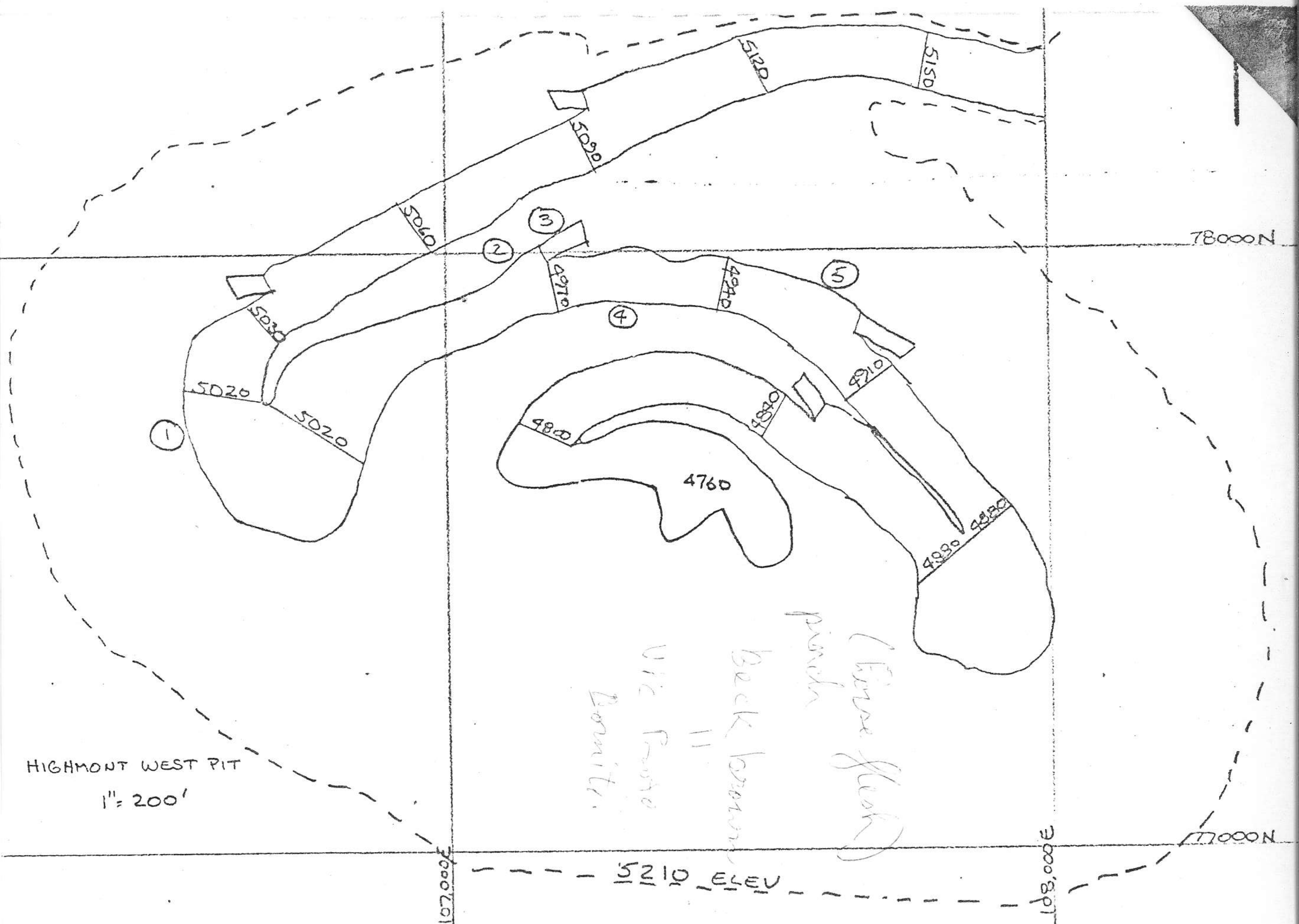
Just before run off ramp.

Note chlorite fracture alteration, especially noticable where ground is more fractured.

Small, 1 foot wide near vertical aplite dyke also.

Overview of Pit from Southwall

Notice strong N30E trend and how alterations generally parallel the structural trend.



HIGHMONT WEST PIT
1" = 200'

HIGHMONT EAST PIT

STOP 1 - OVERVIEW OF EAST PIT

Porphyry dyke to south west, generally more oxidized area.

Skeena quartz diorite on south wall. Note overall lack of alteration except along dominant structures.

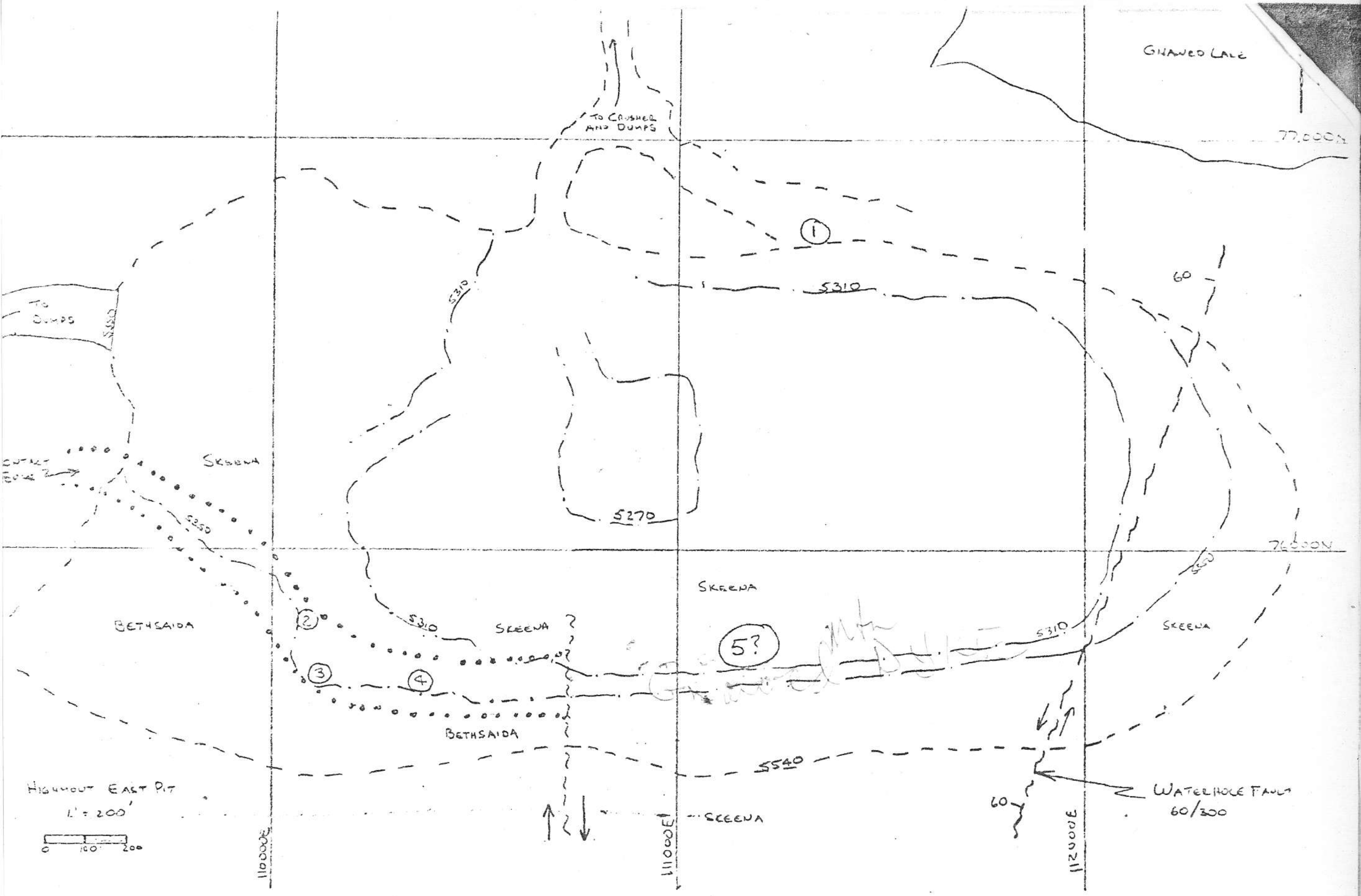
Waterhole Fault - zone of general weakness near south east corner (covered with sloughing overburden). Skeena, intensely altered with montmorillonite, chlorite, serecite and minor calcite.

STOP 2 - Contact zone between Skeena and Bethsaida quartz porphyry. Interfingers of both rock types plus true Bethsaida.

STOP 3 - North easterly trending dark green chloritic dyke, probably feeder to Tertiary flows. Note tourmalinized quartz porphyry breccia in this area. [illegible] Beth. or dyke rock

STOP 4 - Interfingered Skeena and quartz porphyry. Quartz porphyry characterized by epidote, chlorite and calcite alterations with later quartz, hematite and calcite veinlets. Skeena characterized by montmorillonite, chlorite, epidote and biotite alterations, with K-spar and minor calcite veinings. Some magnetite along fractures.

STOP 5 - Somewhere within Pit. Note the fresh, unaltered nature of most of Skeena rocks, and sparse disseminations of mineralization along fracture surfaces. Outwardly, rock may appear to be altered, but this is predominately a surface effect. On broken surface rock will appear fresh.


GNAWED LAKE
77,000N
TO CRUSHER AND DUMPS
TO DUMPS
5350
1
5310
60
SKEENA
5270
5250
76,000N
BETHSAIDA
2
3
4
5?
SKEENA
SKEENA
SKEENA
5310
5350
BETHSAIDA
5540
WATERHOLE FAULT
60/300
60
HIGHMONT EAST PIT
1" = 200'
0
100
200
110000E
111000E
112000E
SKEENA