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INTRODUCTION

to the

McMASTER CLAIMS

LADNER AND SIWASH CREEK AREA

COQUIHALLA GOLD BELT

Southwestern British Columbia

Owned by

A.E. ANGUS, S.E. ANGUS and J.T. SHEARER

(formerly owned by Carolin Mines Ltd.)

N.T.S. 92H/6, 92H/11, 49°30', 121°30'

(covering the Idaho Gold Deposit, McMaster gold occurrence and the former producers Pipestem and Emancipation Mines)

Prepared by

J.T. SHEARER, M.Sc., P.Geo.
NEW GLOBAL RESOURCES LTD.
548 Beatty Street
Vancouver, B.C. V6B 2L3

November 1993

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SUMMARY

The large number of major and minor gold occurrences along and adjacent to the East Hozameen Fault are collectively referred to as the Coquihalla Gold Belt. The most important gold occurrence in the Belt, known to date, is the Idaho orebody, which was in production between 1982 and 1984 by Carolin Mines Ltd. The McMaster Claims cover the continuation of the Carolin Mines ore zones and numerous important gold showing to the north. This is an unique opportunity to participate in an operation which has been kept on care and maintenance since 1984 and could be put back in production relatively quickly. Mill permits are still in good standing with large exploration potential. The central part of the Coquihalla Gold Belt formerly owned by Carolin Mines has recently changed hands and is available for option. The entire mine-mill complex installed in the early 1980s at a cost of over $40 million is still intact.

Recent advances in the understanding of the general geology of the entire 55 km length of the Coquihalla Gold Belt are outlined and evaluated in regard to the potential to host economic gold mineralization and in particular disseminated, bulk tonnage ore similar to the Idaho Zone.

The Idaho-McMaster segment where the Carolin Mine produced approximately one million tons of ore averaging 0.128 oz./tonne between early 1982 and mid-1984 also contains the down-plunge continuation of the Idaho Zone to the north. The McMaster Zone is correctly viewed as an actual continuation of the Idaho orebodies since the stratigraphy, alteration, mineralogy and structure are identical. The exact relationship of the continuity between the Idaho and McMaster is presently unknown. Detail reports documenting a $733,000 work program of underground drifting and drilling on the North Idaho and a $353,500 program of surface trenching and drilling on the McMaster Zone are available to seriously interested parties. Estimates of geological potential for the Idaho-McMaster segment are in the order of five to six million tons of mineralization.

This current assessment of exploration potential suggests that a relatively poorly explored segment centred around Roddick Creek-Spider Peak has excellent prospects of hosting Idaho-type mineralization. The potential of this segment is at least as large as the Idaho-McMaster segment; that is, in the order of seven to eight million tons of mineralization.

The Pipestem segment contains important exploration targets, including the Pipestem Mine which produced a minor amount of gold in the 1920s and 1930s. The overall geological environment and mineralized systems is similar to the Idaho-McMaster segment.

INTRODUCTION

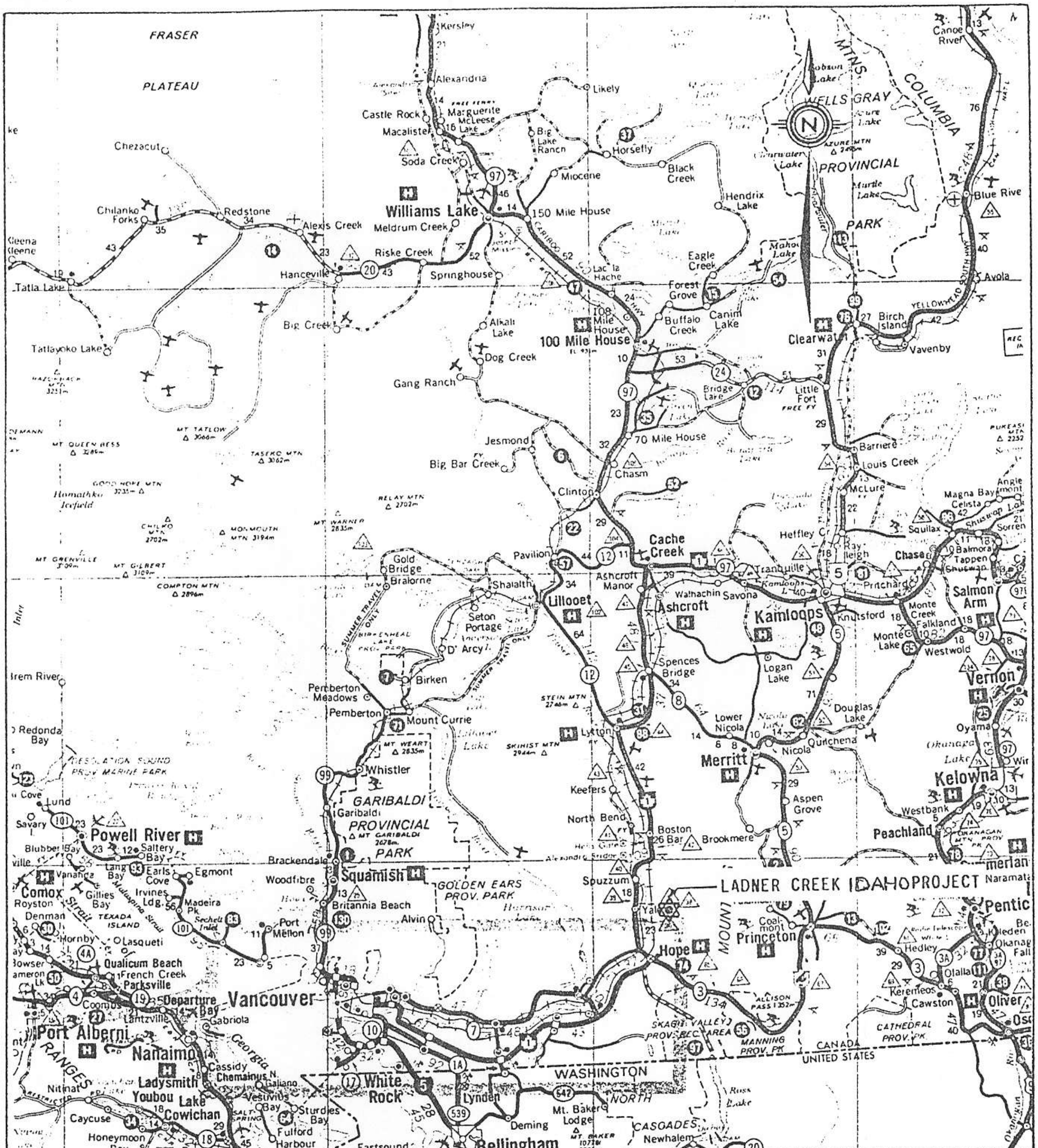
A unique opportunity is present in the McMaster Claims to participate in the Coquihalla Gold Belt, 20 miles northeast of Hope, B.C. on which over $40 million was spent in the late 1970s and early 1980s putting the unsuccessful Carolin Mine into production in conjunction with some exploration to the north and south. Claims covering the continuation of the Idaho orebody, the McMaster Zone, Pipestem and Emancipation Mines and virgin country north of Spider Peak are now available for option. The intact Carolin Mill and portal area to the old trackless underground workings are in the hands of Active Bailiffs.

This report is a brief overview and update of geological concepts concerning the exploration potential of the entire Coquihalla Gold Belt. Previous general reports addressing the larger notion of regional exploration are Cochrane (1975, 9 pages), Cochrane (1980, 38 pages), Clark (1979, 27 pages) and the pioneering work of Cairnes (1924 and 1930).

These past ideas can now be modified by the results of systematic, detailed mapping by Ray between 1981 and 1984 and the data gathered by J. Shearer and others during the mining of the Idaho Zone, 1981 to 1984 (Shearer, 1981 to 1990). Ray's work is available as progress reports (1982 to 1986) and was published as Bulletin 79.

Future work can be roughly divided into two basic scenarios (depending on the exploration outlook of the Optioner):

(1) Exploration on 3 Zone and immediately north of 1 Zone in the Idaho Mine with near-term production in the modified Carolin Mill using a carbon in leach system under the existing production permits. Identification of long-term ore reserves would be done as mining proceeds.



CAROLIN MINES LIMITED

LADNER CREEK IDAHO PROJECT

LOCATION MAP

Scale = 1:2,400,000 Drawn by: J.S.
NTS : 92H/11W April 30, 1982

FIGURE 1

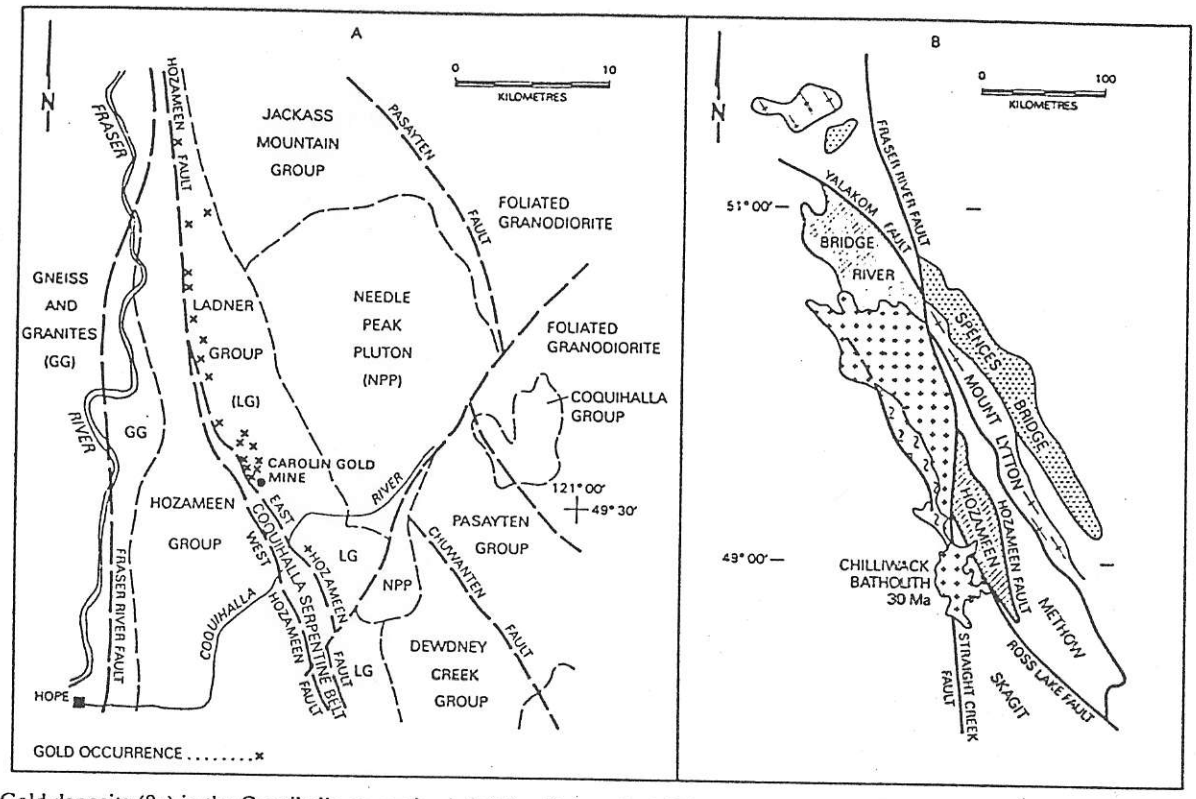


Fig. 2 Gold deposits (8a) in the Coquihalla serpentine belt (after Ray et al., 1983) and inferred relationships (8b) between the Bridge River and Hozameen Groups (after Monger, 1984). LOCATION MAP.

(2) Grass-roots exploration on the McMaster Zone, north of Spider Peak and Pipestem areas as well as underground on the Idaho North to define a large amount of reserves before a production decision is made.

LOCATION AND ACCESS

The Coquihalla Gold Belt is located in southwestern British Columbia, Figure 1. It consists of a relatively linear zone of gold occurrences extending from about 20 km east of the community of Hope, north to the town of Boston Bar.

Access to the southern portion is via the Coquihalla Highway. Logging roads extend south along Sowaqua and Dewdney Creeks. To the immediate north, the Carolin Mine road and secondary logging roads give access to the Emancipation Idaho-McMaster and Pipestem areas. The Pipestem road now connects with upper Siwash road system.

On the north end of the Belt, access is via the Trans-Canada Highway to either the Qualark, Siwash or Anderson River logging roads. Cattermole Timber maintains a camp in the middle Siwash area.

CLAIM STATUS

The claims owned by the optionees are the McMaster 1-112 as shown on Figure 3. The Aurum Crown grants are presently in the hands of Active Bailiffs acting on a court judgment given to Revenue Canada.

GENERAL GEOLOGY

Structurally, the area is dominated by the northerly trending Hozameen Fault which is associated with both the Serpentine-ultramafic complex and Coquihalla Gold Belt, Figure 3. The Hozameen Fault separates two distinct crustal units and was the possible locus of a Tertiary-age plate boundary. East of the fault are altered volcanics of the Early Triassic Spider Peak Formation which forms a basement to Jurassic and Cretaceous turbidite and successor basin deposits of the Pasayten Trough. The Lower to Upper Jurassic Ladner Group unconformably

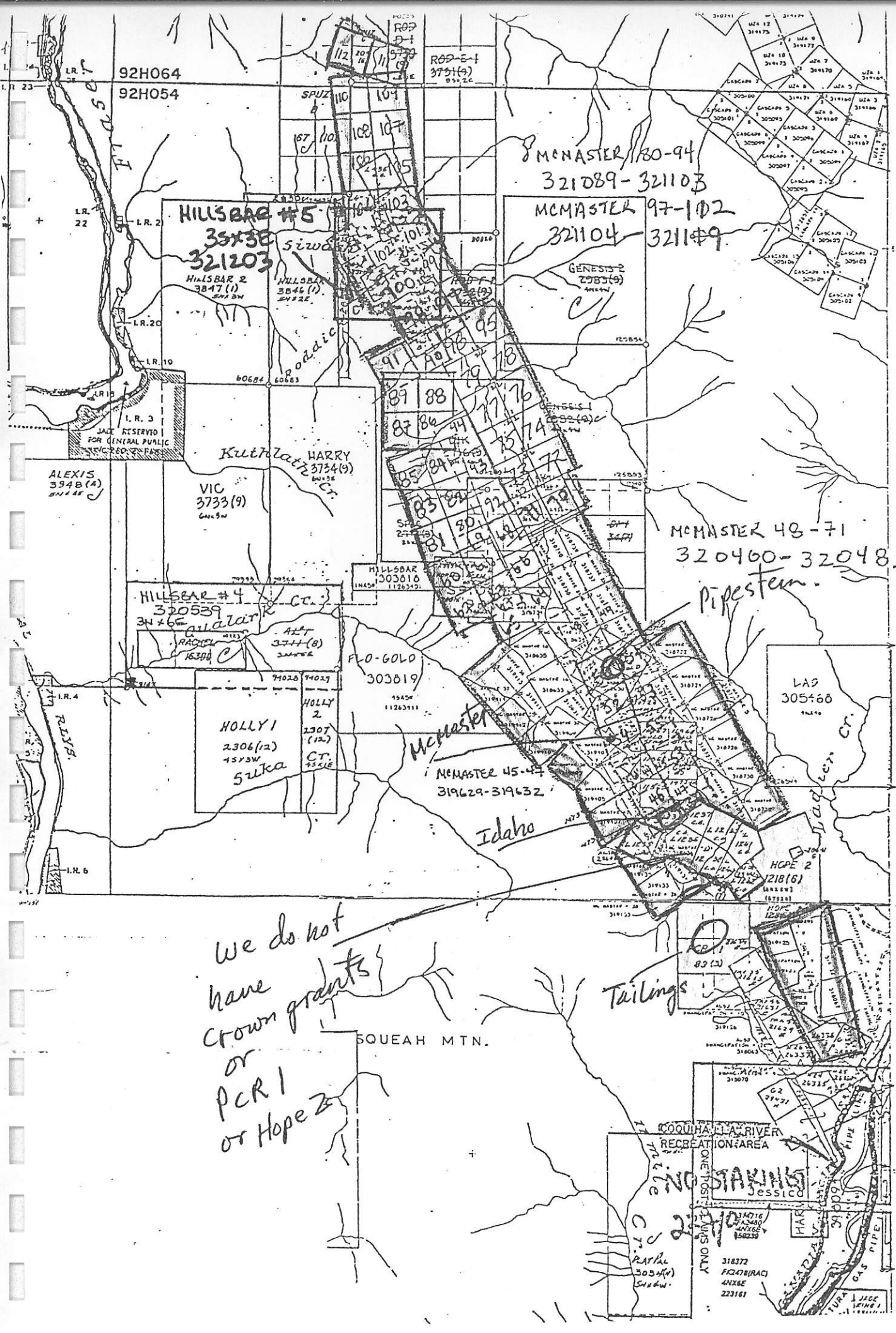
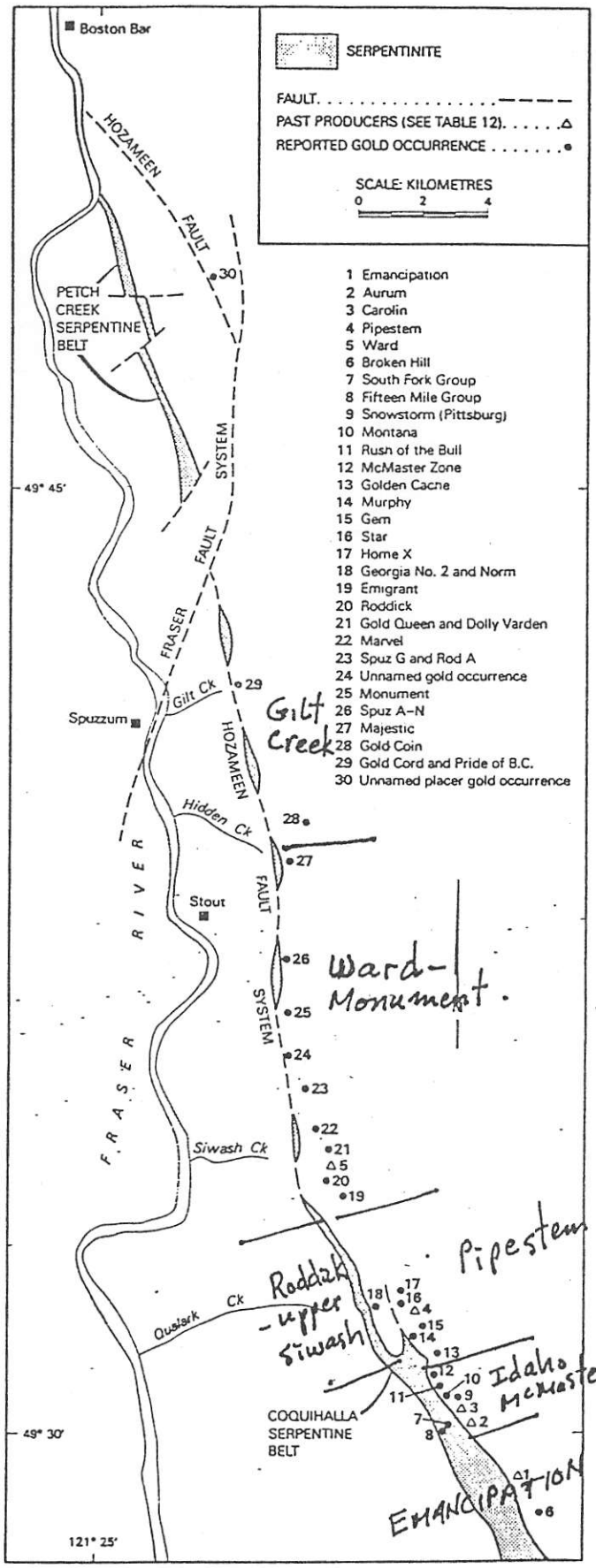


Fig. 3

MINERAL TI
CLAIM STATU
MAP C



MAIN GOLD SHOWINGS
Coquihalla Gold Belt

FIGURE 4

overlies the Spider Peak Formation and contains a locally thick basal unit that forms the host rock of many of the mineral occurrences in the Coquihalla Gold Belt. West of the Hozameen Fault, the Permian to Jurassic Hozameen Group is a highly deformed, dismembered ophiolitic sequence including the Petch Creek serpentinite, volcanic chlorite schist, chert and minor limestone.

Three main forms of epigenetic, mesothermal gold-bearing mineralization have been recognized as follows:

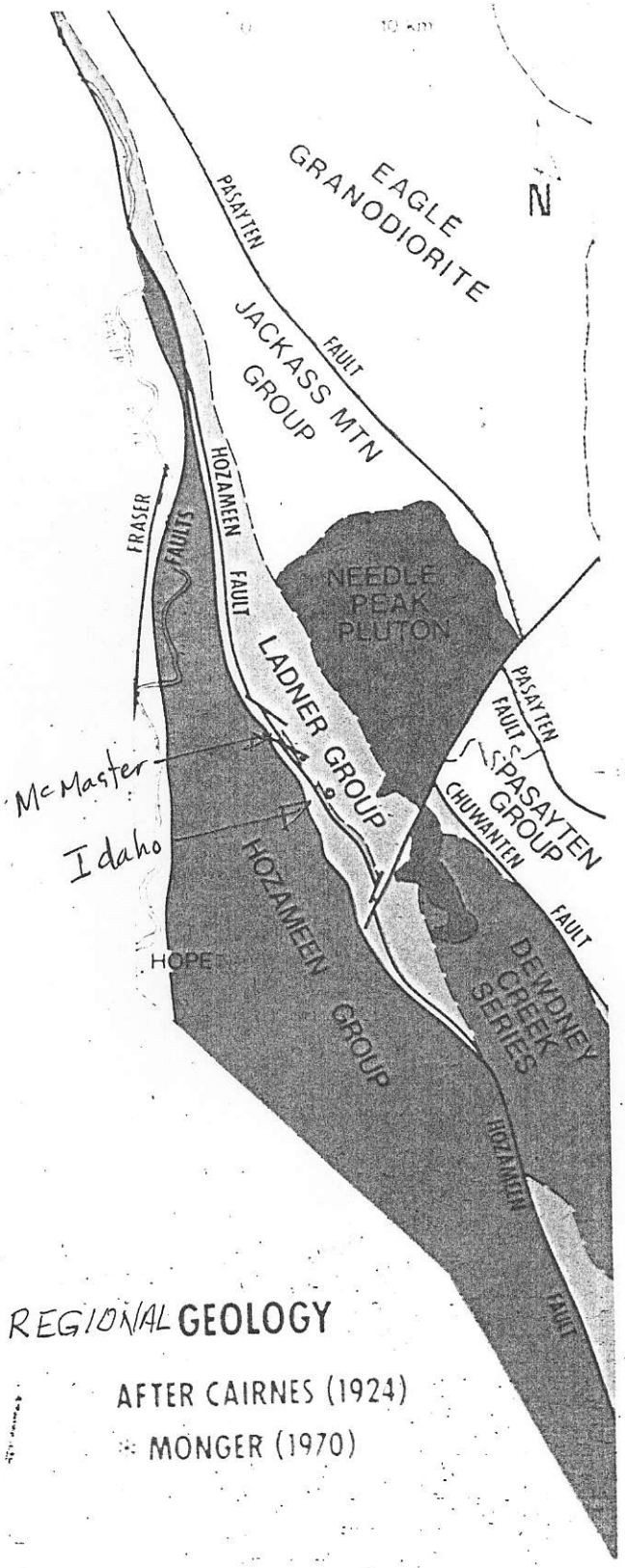
(1) Pyrite-pyrrhotite-arsenopyrite (chalcopyrite, sphalerite, gold) associated with pervasive albite-quartz-carbonate alteration within folded basal greywacke/siltstones of the Ladner Group. The Idaho-McMaster zones are representative of this type.

(2) Fracture-controlled, quartz-carbonate vein and breccia systems. These include the bulk of the minor gold occurrences as well as the Emancipation and Pipestem vein-breccia systems.

(3) Native gold-arsenopyrite hosted in talcose shear zones adjacent to and within the East Hozameen Fault. The Aurum Mine is the best example of this type.

The original source and age of the gold mineralization in the Belt is presently unknown. However, the East Hozameen Fault appears to have been an important conduit for ore-forming fluids. Spatially, most mineralization is close to the East Hozameen Fault (less than 200 m) and the basal Ladner Group unconformity. The main controls of gold mineralization are summarized by Ray (1989):

> "(1) The presence of competent rocks that favour the development of fracture-induced permeability. Consequently, the area between Emancipation Mine and Spider Peak, where the lower, wacke-rich, coarse clastic unit of the Ladner Group is both best developed and exposed, contains most of the sediment-hosted occurrences, including the Carolin deposit.
>
> "(2) Close proximity (less than 200 m) to the Spider Peak Formation/Ladner Group contact. In many places the unconformity is marked by shearing, brittle fracturing and fault-



REGIONAL GEOLOGY

AFTER CAIRNES (1924)

MONGER (1970)

FIGURE 5

Figure 6

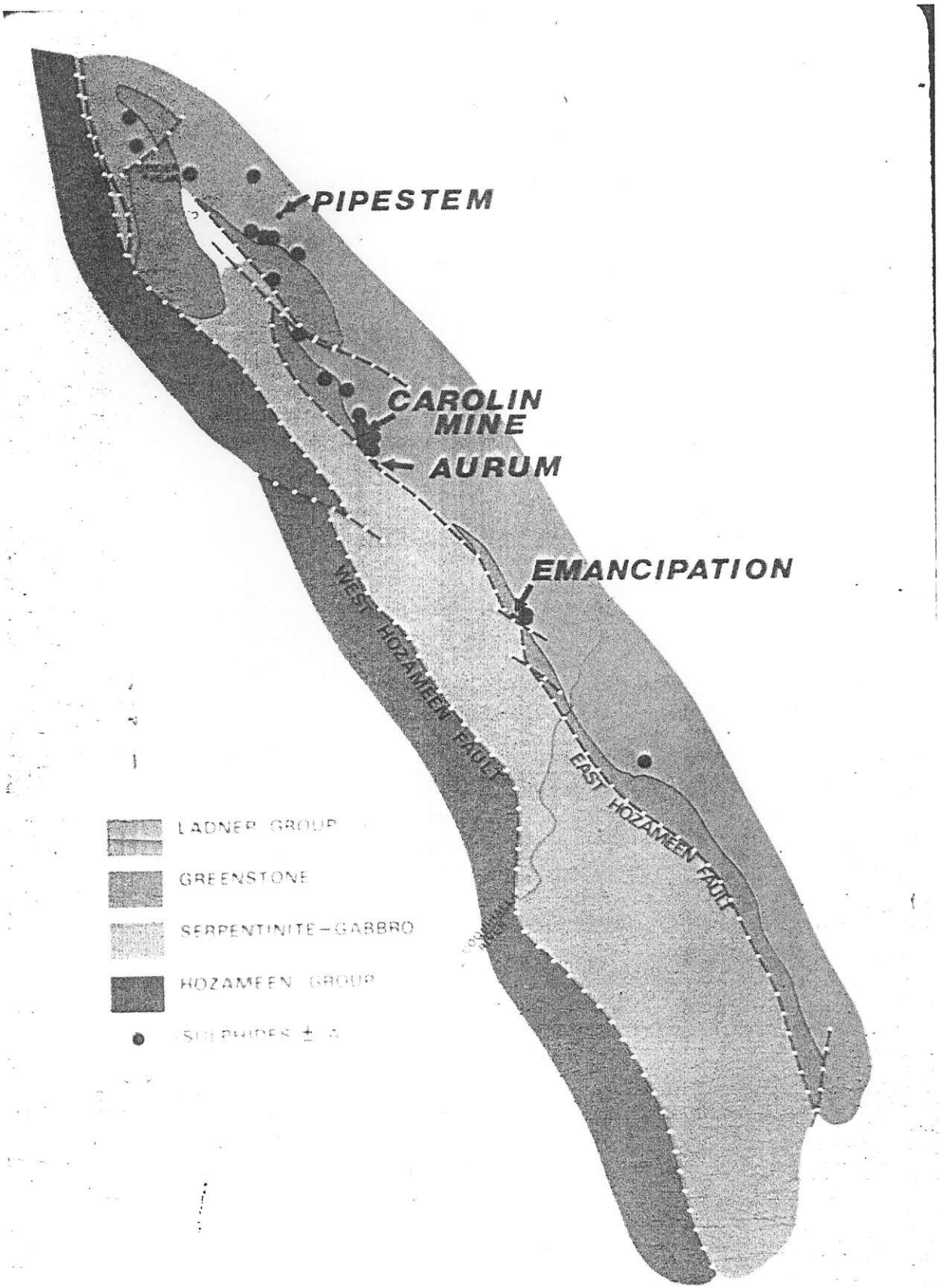
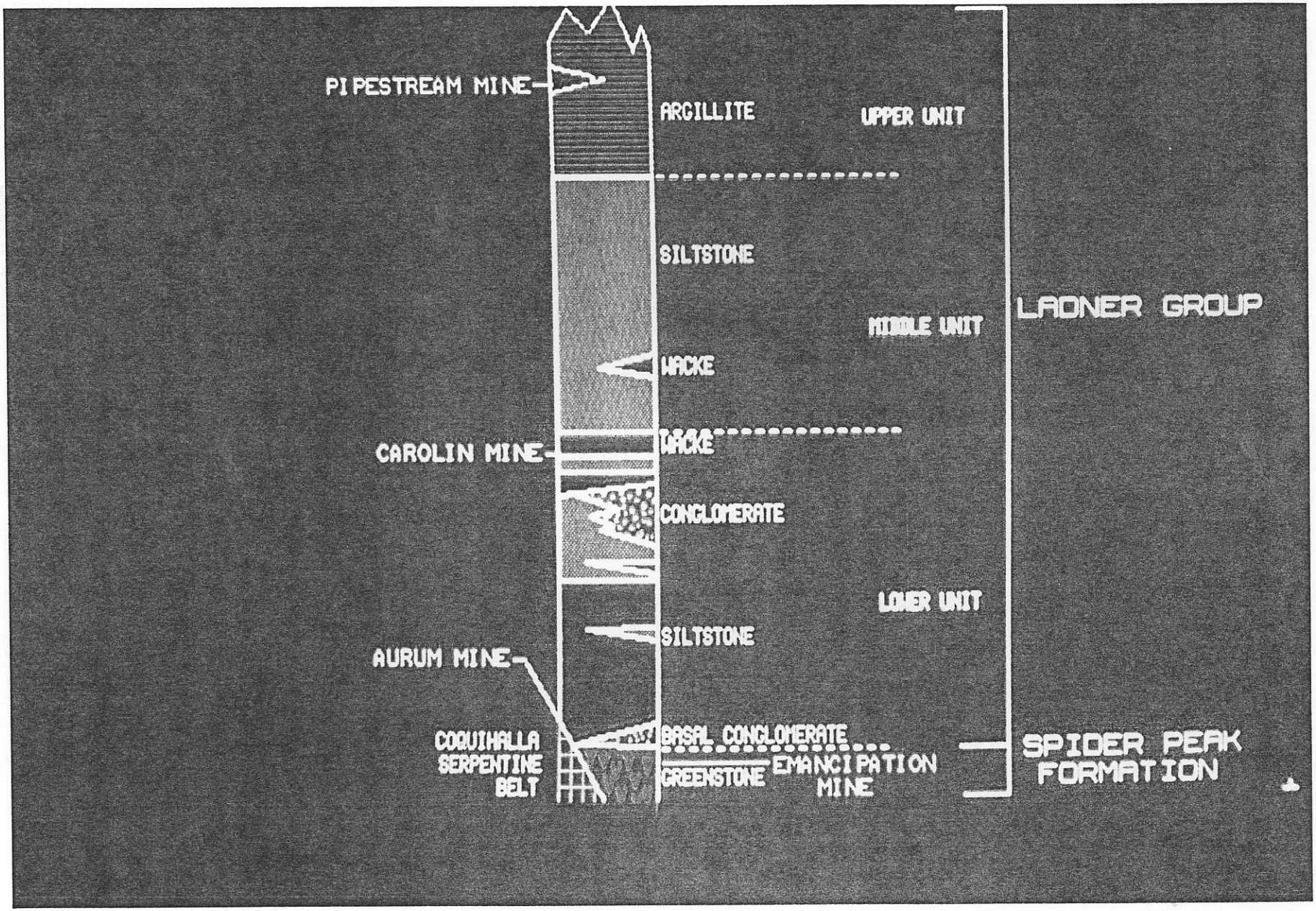

PIPESTEM
CAROLIN MINE
AURUM
EMANCIPATION
WEST HOZAMEEN FAULT
EAST HOZAMEEN FAULT
LADNER GROUP
GREENSTONE
SERPENTINITE-GABBRO
HOZAMEEN GROUP

Figure 7



STRATIGRAPHY

Figure 8

associated quartz veining, due to competency differences between the greenstones and sedimentary rocks. This is well illustrated at Emancipation Mine and the Snowstorm (Pittsburg) occurrences.

"(3) Close proximity (less than 200 m) to the East Hozameen Fault and serpentine belt margin. Over 99 per cent of gold production has come from deposits situated less than 200 m from both the fault and the basal Ladner Group unconformity.

"(4) The Carolin (Idaho) mineralization is also partly controlled by the presence of large-scale D_2 antiformal folds having disrupted, fractured limbs and hinges that provided local permeability for the gold-bearing hydrothermal solutions."

Note: an indication of "ore"-related folding is the infolding of Spider Peak Formation within the Ladner sequence.

Fluid inclusion and isotopic studies (Murowchick et al, 1986) suggest that the mineralizing solutions were derived from a deep source of meteoric waters percolating downward to a decollement at the brittle/ductile transition (ca. 350-400°C at 5-10 km depth), exchanging oxygen and leaching gold from the country rocks. Accent along fractures adjacent to the East Hozameen Fault focused the fluids leading to gold deposition via episodic effervescence and/or cooling. The presence of quartz breccias, ribbon quartz veins, intense slickensiding and strong local structural controls to the ore indicate that mineralization was intimately associated with recurrent tectonic movements.

GEOCHEMISTRY AND GEOPHYSICS

In the early 1970s, the belt between the Emancipation Mine and the forks of Siwash Creek was covered by ground magnetometer and soil sample surveys.

The magnetics clearly show a marked contrast between the highly magnetic serpentinite and less magnetic Spider Peak volcanics and Ladner Group sediments. However, numerous anomalous magnetic patterns are discernible along the Hozameen Fault and the area immediately to the east, suggesting that a modern sensitive magnetometer survey interpreted by a knowledgable geophysicist would be very helpful in outlining the structure.

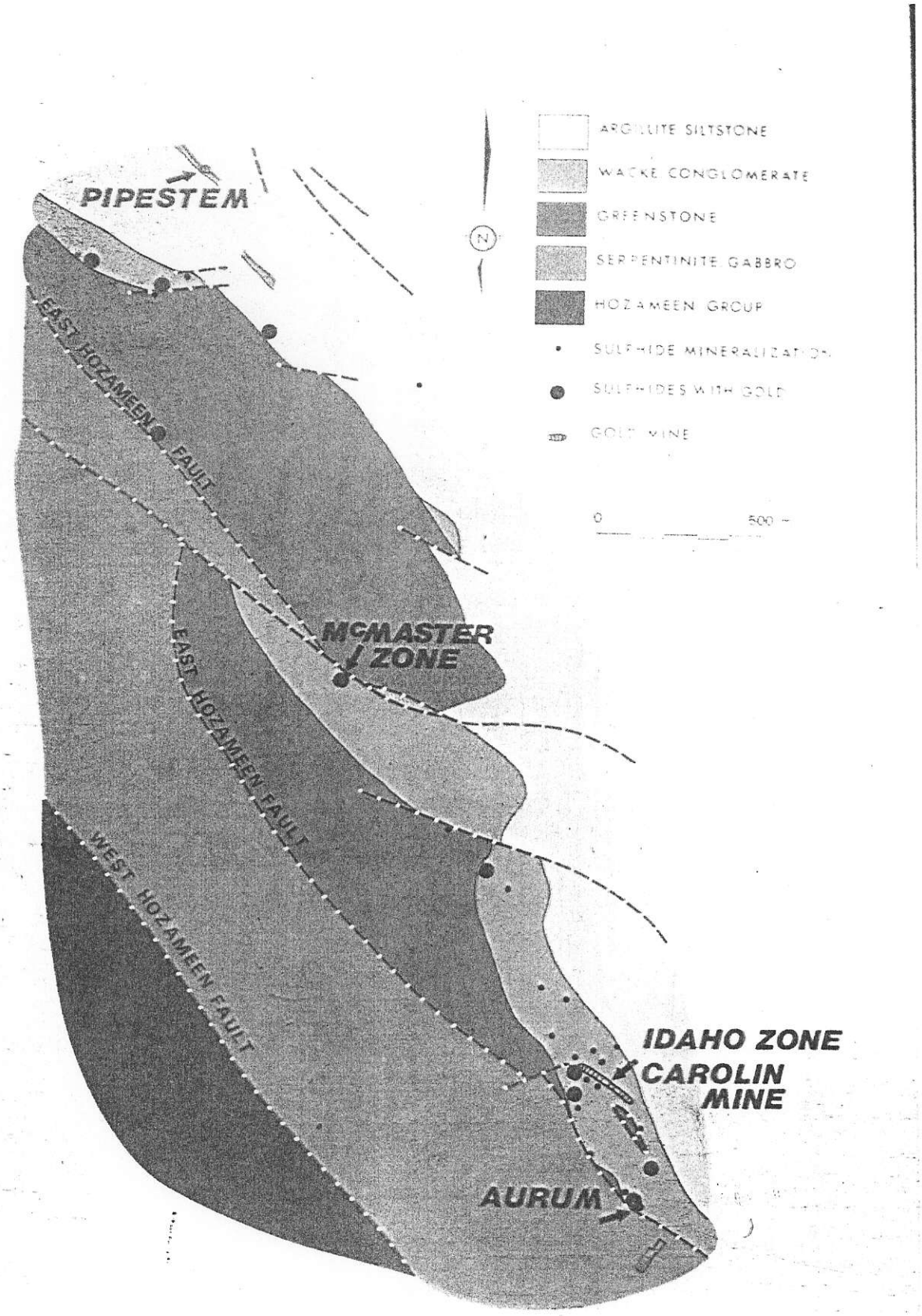


FIGURE 9

Detail Geology.

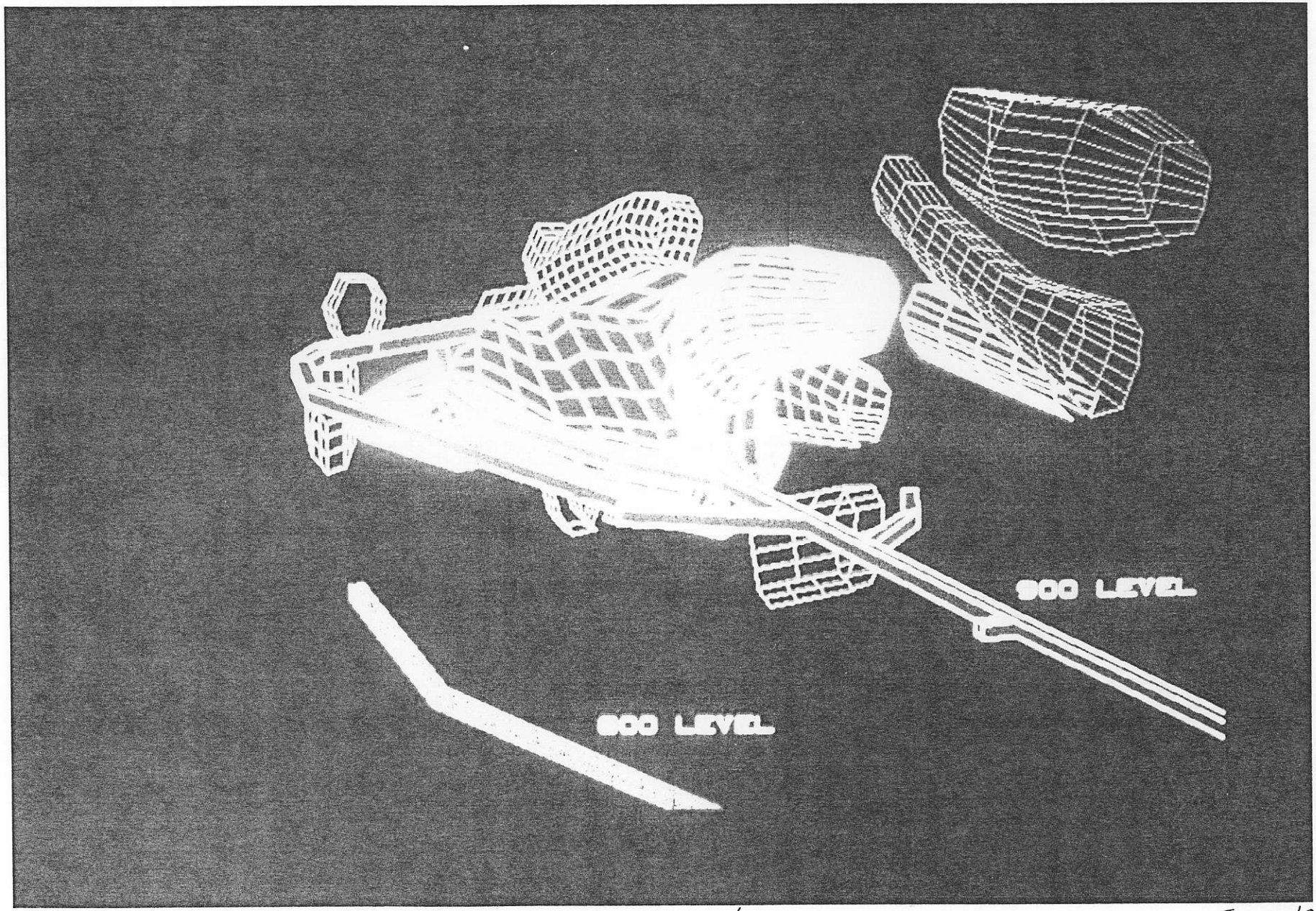
Soil geochemistry results show large areas of highly anomalous gold values between the outcrop of the Idaho #2 Zone and the north end of McMaster North ridge west of the Pipestem Mine. Although some drilling was completed on McMaster North ridge in 1982, many anomalies remain to be followed up, especially since much of the drilling was done prior to comprehensive geological mapping.

POTENTIAL

To reiterate, Geological Potential is a widely recognized and useful concept in mining exploration by which a sophisticated geological model is used to extrapolate from a well documented database into nearby lesser explored areas of similar character in order to assess the approximate likelihood of the lesser known area to host mineralization. Clearly, geological potential is a qualitative concept and the numbers generated from a potential is a powerful and practical tool which is as reliable as the geological model on which it is based. The present geological model of the Idaho Zone, based on current government-sponsored regional mapping, recent detailed diamond-drilling and three years of underground mining development, is in my opinion relatively sophisticated and accurate.

> Early on, myself and others (Clarke 1981, Griffith 1980, Cochrane 1980) have documented the geological probability that much more mineralized rock occurs in the area between McMaster Pond and 966N in the Idaho Mine. These 'early' geological opinions are substantiated by recent data and academic studies which further refine the model.

In light of the extensive trenching program that was completed in the McMaster area in September 1990, the gross size of the North Idaho-McMaster segment appears to be at least 1,200 m in length and is consistent in the nature of the important ore-controlling geological parameters. This segment when compared to the size of the area containing the ronghly two million tons of mineable ore grading 0.128 oz./ton Au (at a 0.05 oz./ton Au cut-off) snggests, in my opinion, that a reasonable and conservative geological potential of the North Idaho-McMaster segment is around five to six million tons of mineralized gold-hearing roek. I would also expect the average grade to be similar in character to the known Idaho Zone in light of the preliminary results at McMaster. It is my opinion that a higher cut-off grade may be advisable in future possible mining operations. Previous studies suggest that a 0.08 oz./ton Au cut-off



Isometric
Showing Idaho mineralized zones.
Looking North

Figure 10

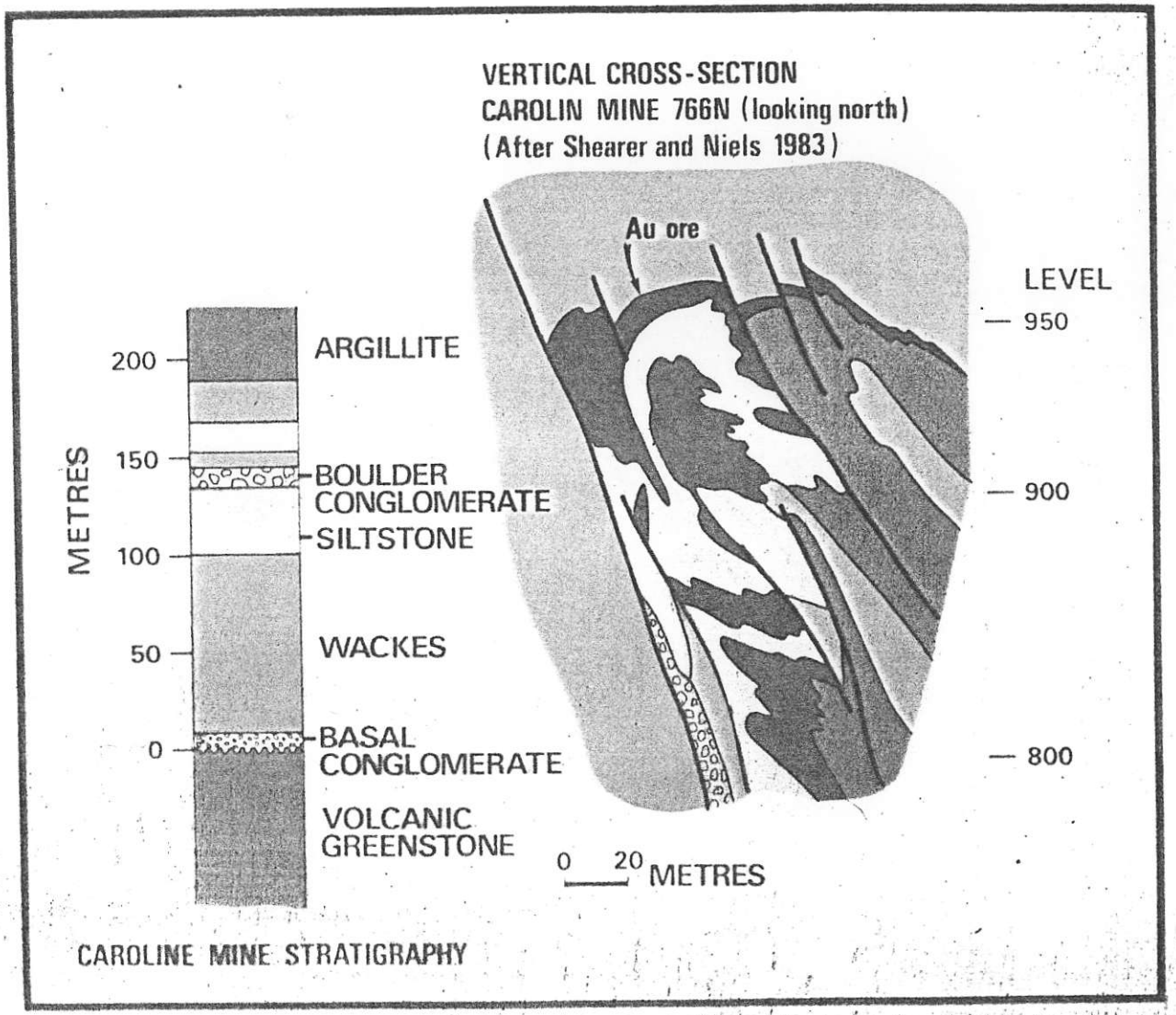
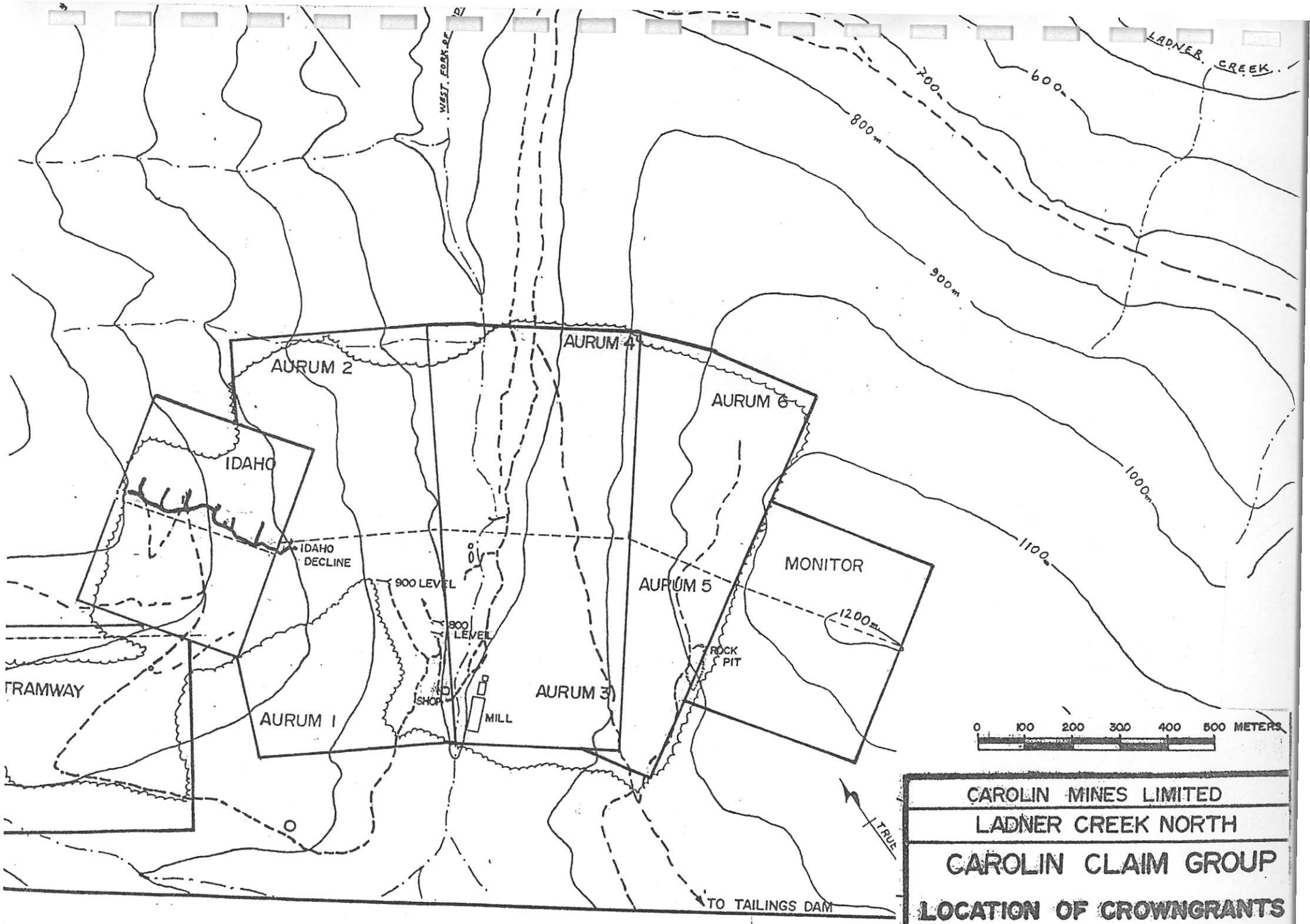

VERTICAL CROSS-SECTION
CAROLIN MINE 766N (looking north)
(After Shearer and Niels 1983)
Au ore
LEVEL
950
900
800
METRES
200
150
100
50
0
ARGILLITE
BOULDER CONGLOMERATE
SILTSTONE
WACKES
BASAL CONGLOMERATE
VOLCANIC GREENSTONE
0 20 METRES
CAROLINE MINE STRATIGRAPHY

FIGURE 11



CAROLIN MINES LIMITED

LADNER CREEK NORTH

CAROLIN CLAIM GROUP

LOCATION OF CROWNGRANTS

SCALE 1:10,000	NTS 92 H/11W	DRAWING NUMBER C101-01 12
DATE / REVISIONS: FEBRUARY 3 1982	DRAWN BY: JS. RKB	WORK BY: JS. RKB

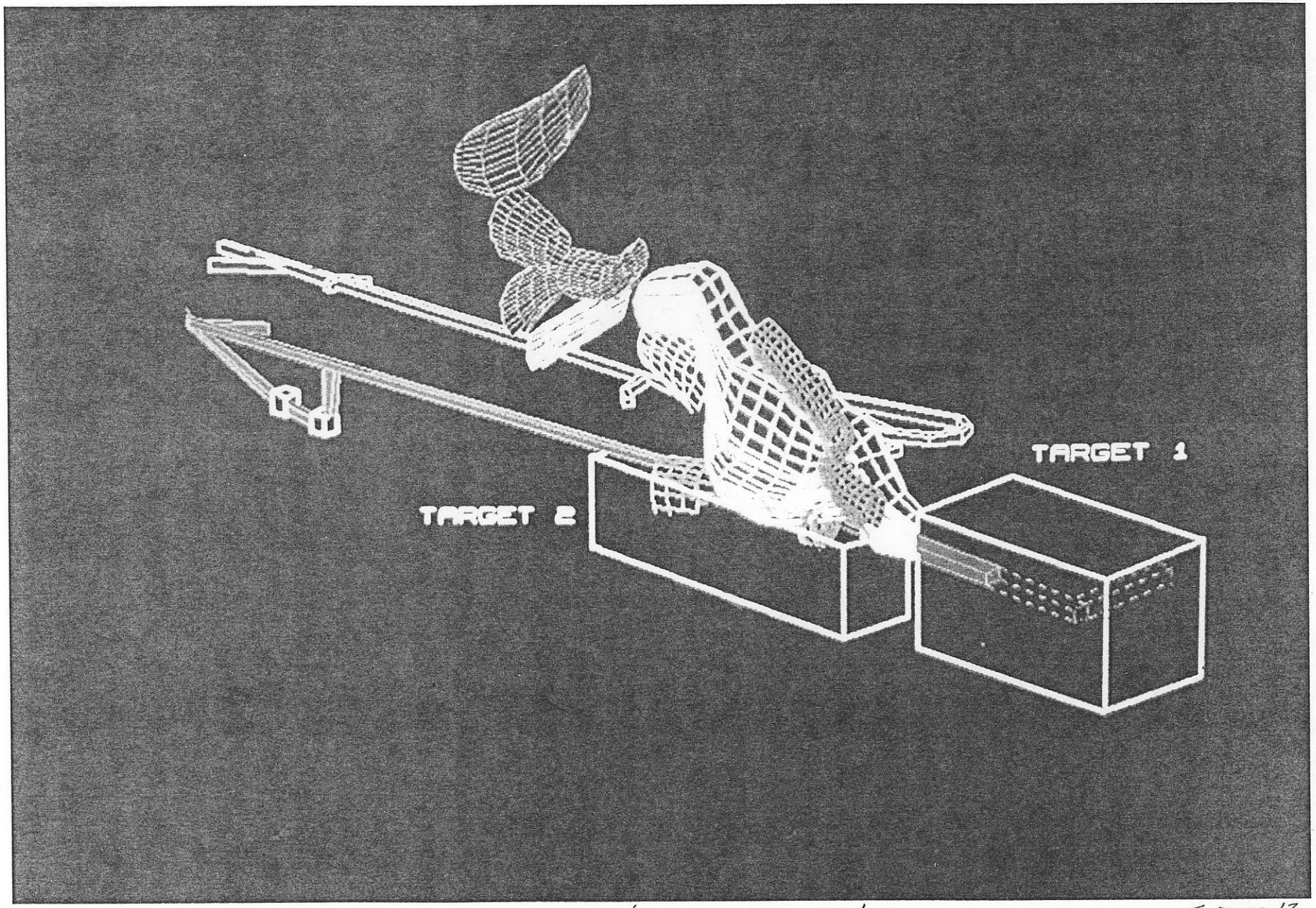


Figure 13

Isometric showing Idaho Zones
looking west
showing North Exploration Targets

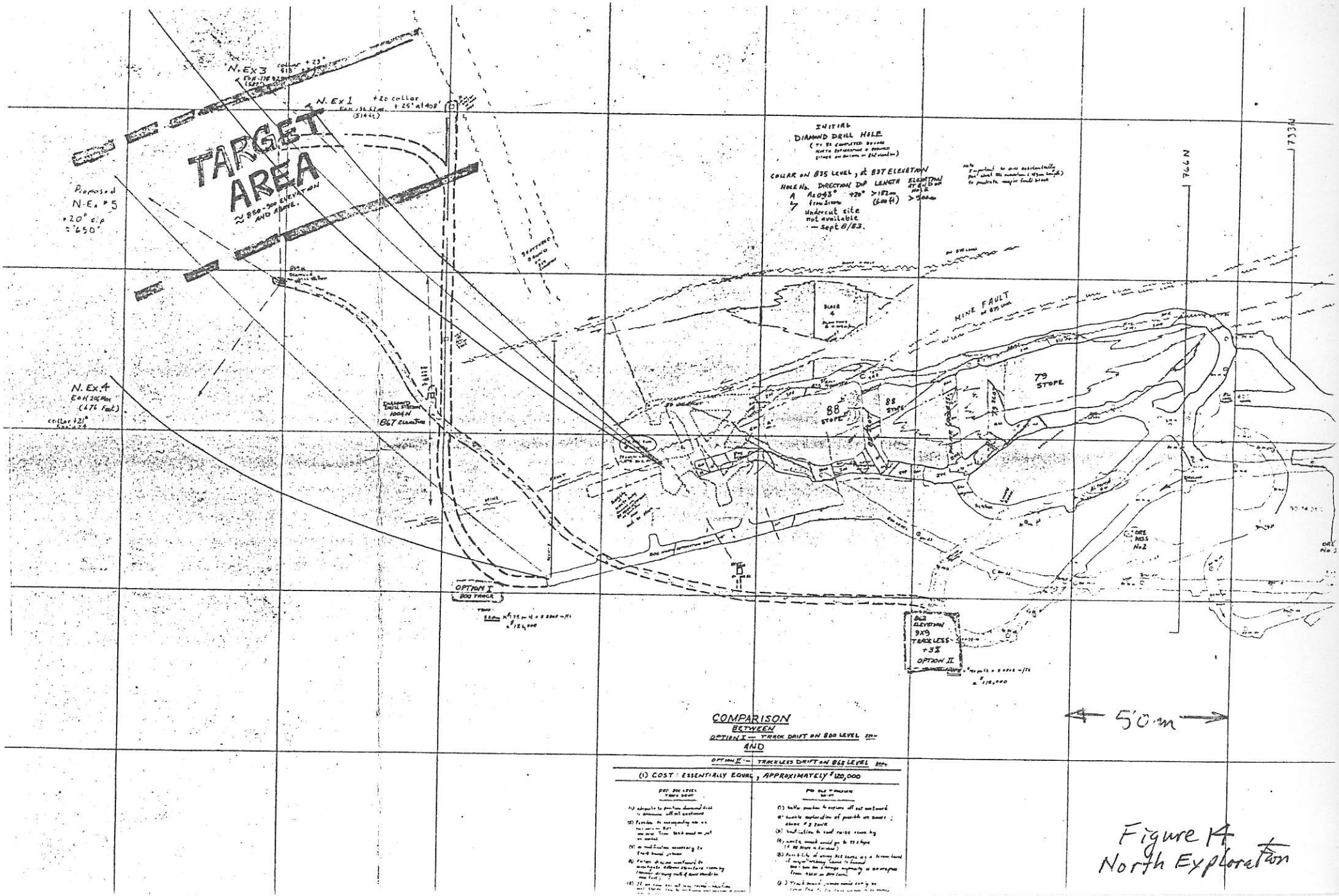
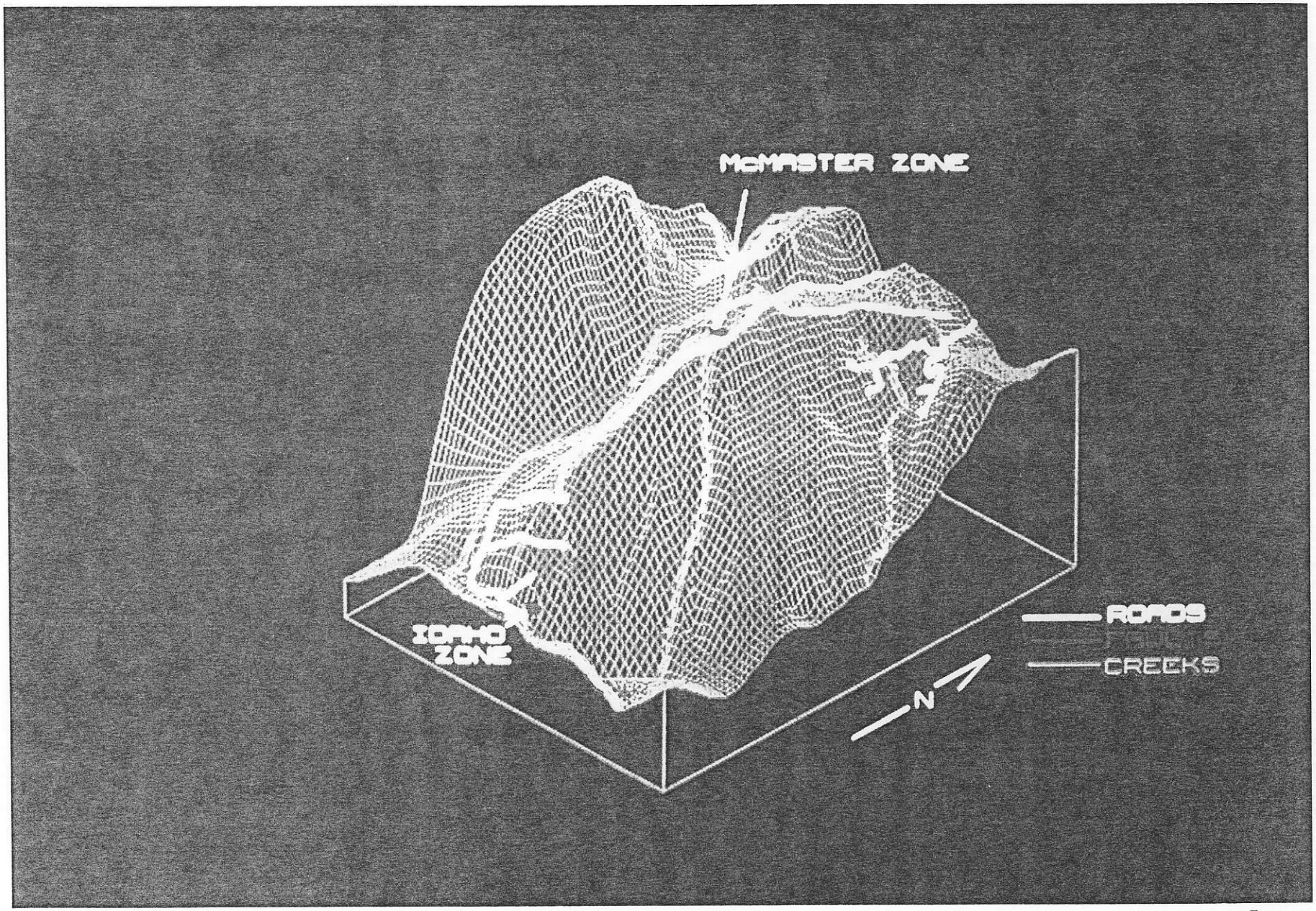
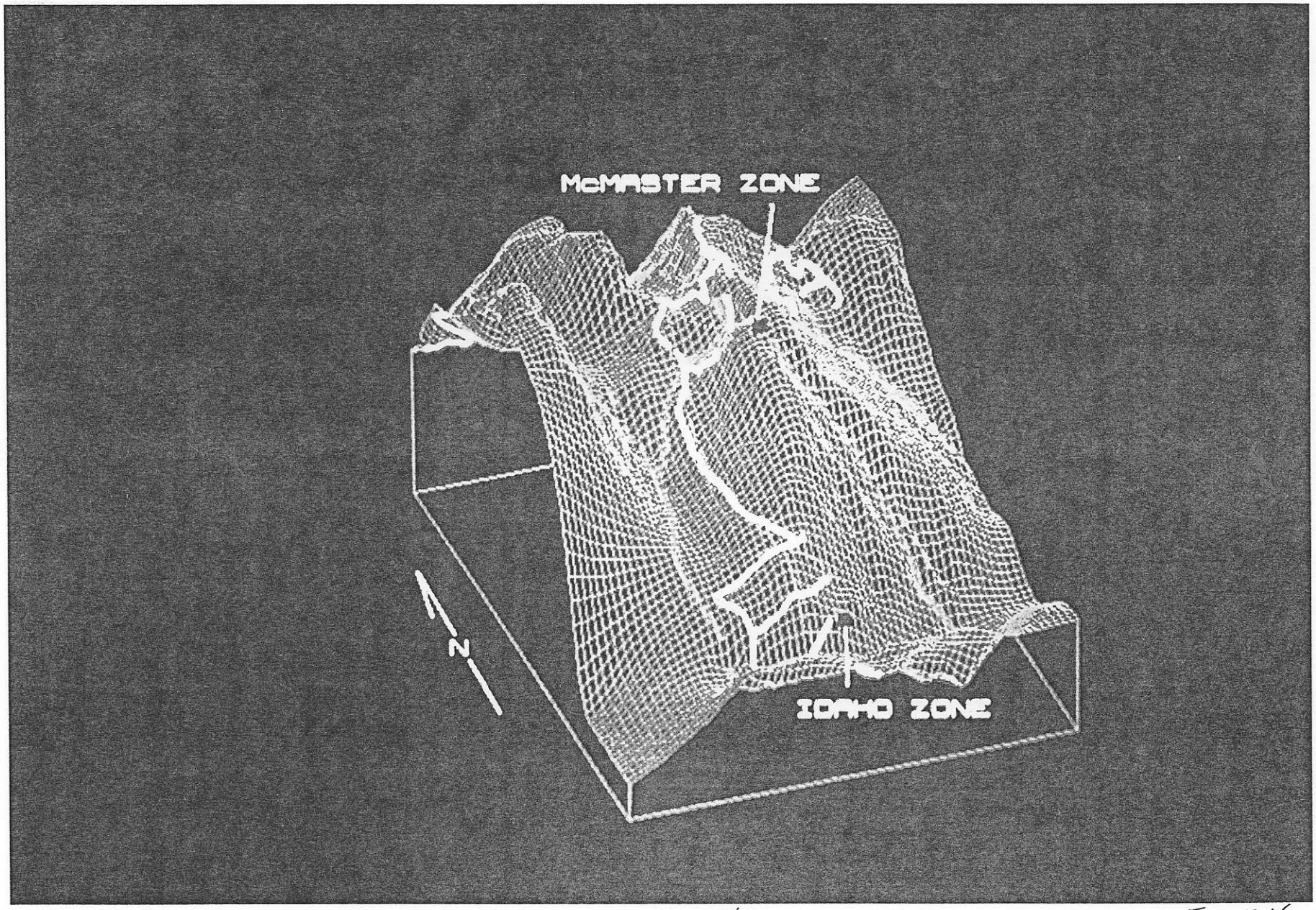


Figure 14
North Exploration



Topo.

Figure 15



Isometric, topography

Figure 16

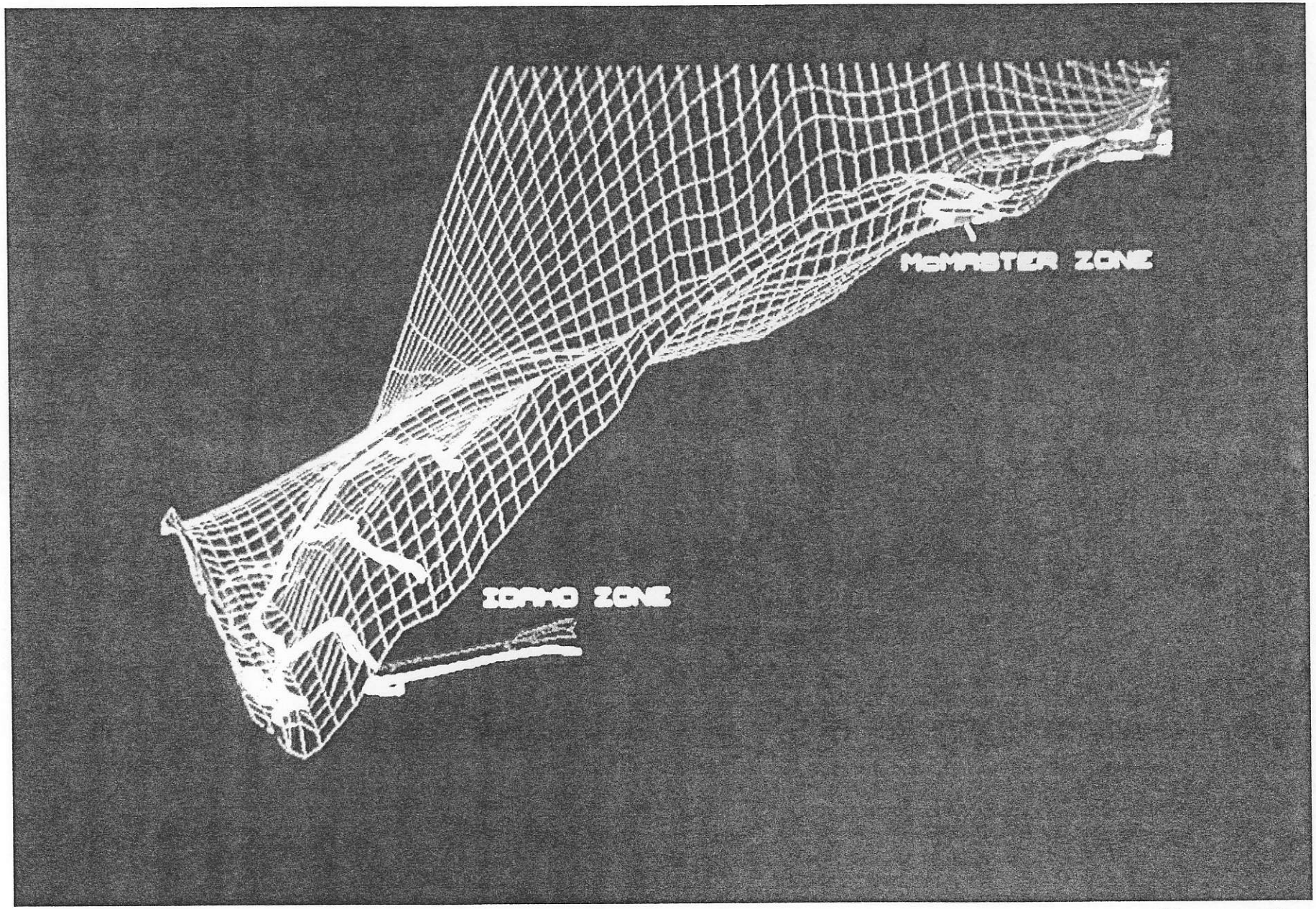


Figure 17

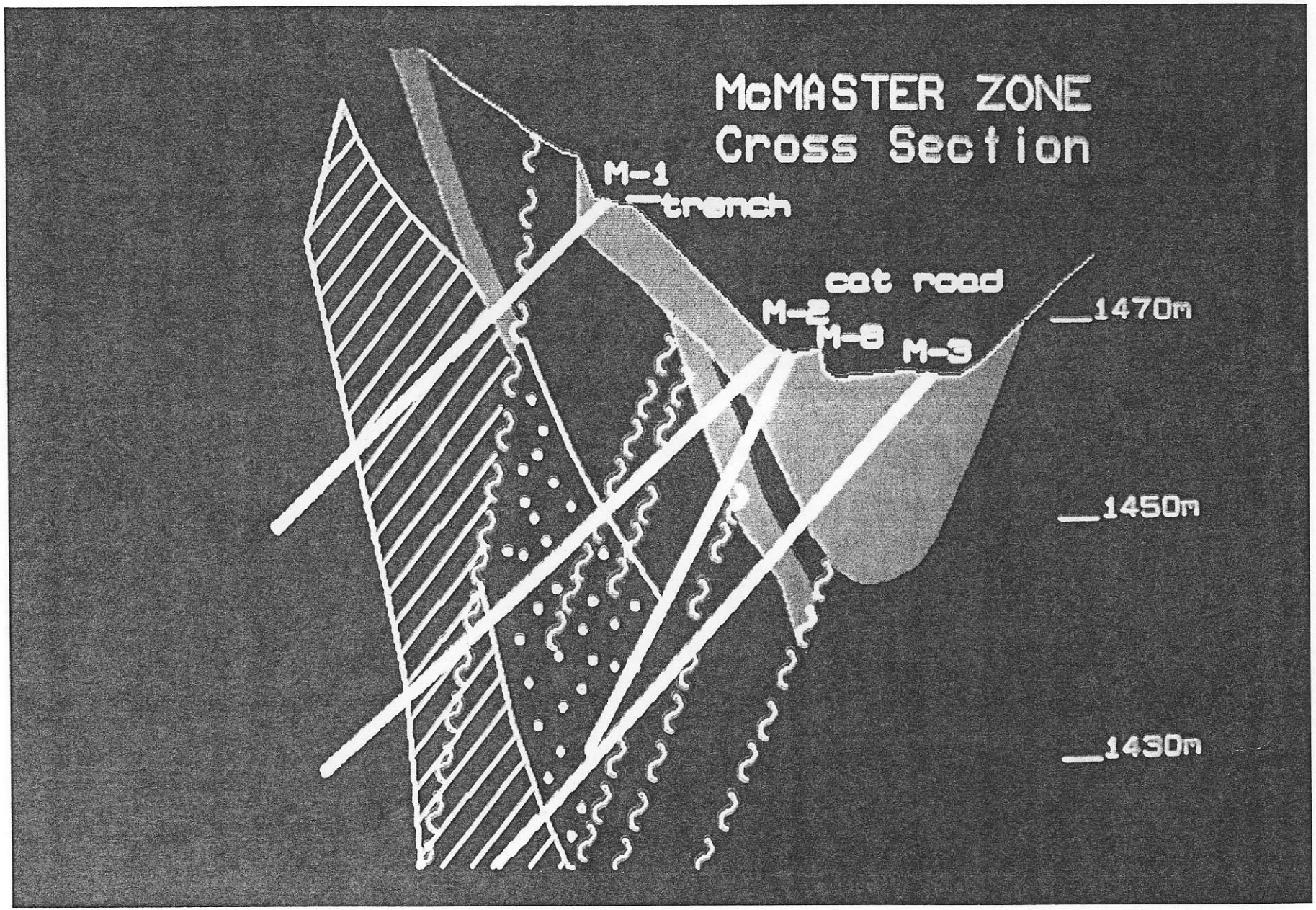

McMASTER ZONE
Cross Section
M-1
trench
cat road
M-2
M-B
M-3
1470m
1450m
1430m

Figure 18

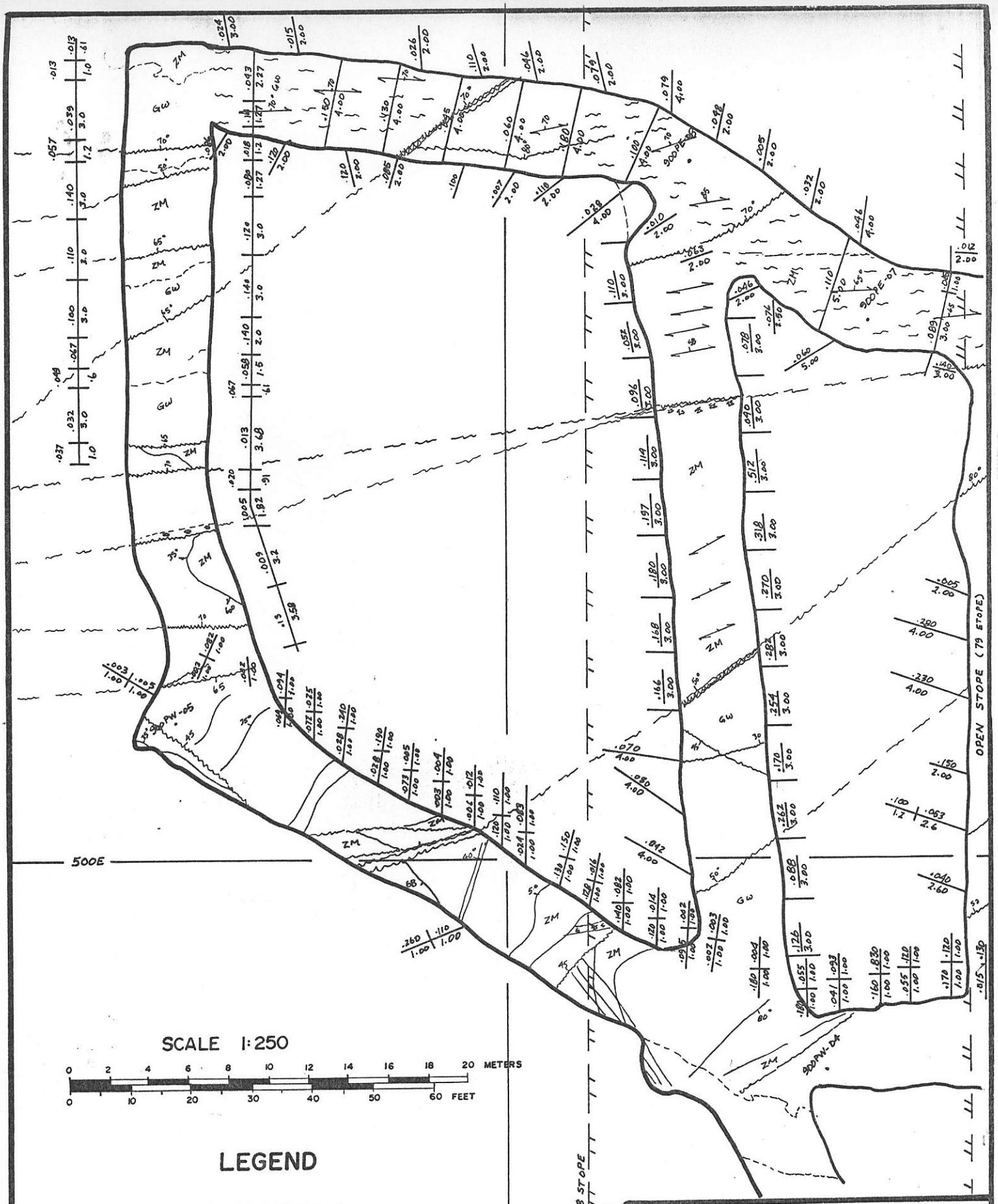

ZM
GW
OPEN STOPE (79 STOPE)
900PE-07
900PW-05
900PW-04
500E
850N
FUTURE 88 STOPE
88 PILLAR
SCALE 1:250
0 2 4 6 8 10 12 14 16 18 20 METERS
0 10 20 30 40 50 60 FEET
LEGEND
ZM - ZONE MATERIAL (ORE : quartz-albite-calcite with > 8% sulfides)
GW - GREYWACKE (less altered)
FAULT
CAROLIN MINES LIMITED
IDAHO MINE
GEOLOGY AND ASSAYS
88 STOPE ACCESS, 900 LEVEL, 88 PILLAR-SLOT
JS.

FIGURE 19

could raise the grade to greater than 0.14 oz./ton Au while still preserving the overall integrity of the mineable blocks.

The Spider Peak-Roddick Creek segment, in my opinion, contains at least as much potential, seven to eight million tons, of mineralized material as the Idaho-McMaster segment.

In conclusion, the exploration potential of the North Idaho-McMaster segment coupled with the existing infrastructure of hydroelectric power, access, stable and skilled local workforce and milling facilities, in my opinion, from a geological perspective, make the project one of the most attractive gold targets in Western North America. Of course, management expertise and metallurgical fine-tuning will also be critical to the profitable success of any future mining operation.

Respectfully submitted,

J.T. Shearer, M.Sc., P.Geo.

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