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REPORT ON  
HIGH GRADE MOLYBDENITE POTENTIAL  
OF THE LAKE ZONE

CARMI MOLYBDENUM PROPERTY

Greenwood Mining Division  
British Columbia

for  
VESTOR EXPLORATIONS LTD.  
and DYNAMIC OIL LTD.

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## SUMMARY AND CONCLUSIONS

The Carmi Molybdenum Property, located near Beaverdell, British Columbia, is jointly held by Vestor Exploration Ltd. and Dynamic Oil Limited of Vancouver, British Columbia.

The property has received a substantial amount of surface exploration and drilling, which work has outlined a drill indicated open pitable reserve of 22.8 million tons grading .106% molybdenite in a series of flat lying tabular breccia bodies (E Zone) and in a separate steep dipping tabular breccia body (Lake Zone). There is potential for increasing this reserve upwards to 40,000,000 tons.

High grade molybdenite sheets, the primary subject of this evaluation report, have been intersected in numerous drill holes in the Lake Zone--particularly within its footwall and hanging wall portions. Drill intercepts in the Lake Zone indicate an average true thickness of 27.8 feet for these sheets with an average grade of 0.33% molybdenite. A potential for five million tons of high grade molybdenite mineralized breccia is estimated for the Lake Zone. Potentially better grades may occur in deeper untested portions of the Lake Zone based on the inferred deposit model of formation. These high grade sheets are considered potential underground mining targets.

The above molybdenum reserves are uneconomic at current molybdenum prices. However, the property covers a substantial molybdenum resource for the future which should be re-evaluated in terms of underground and/or open pit mining whenever the price of molybdenum substantially strengthens.

## INTRODUCTION

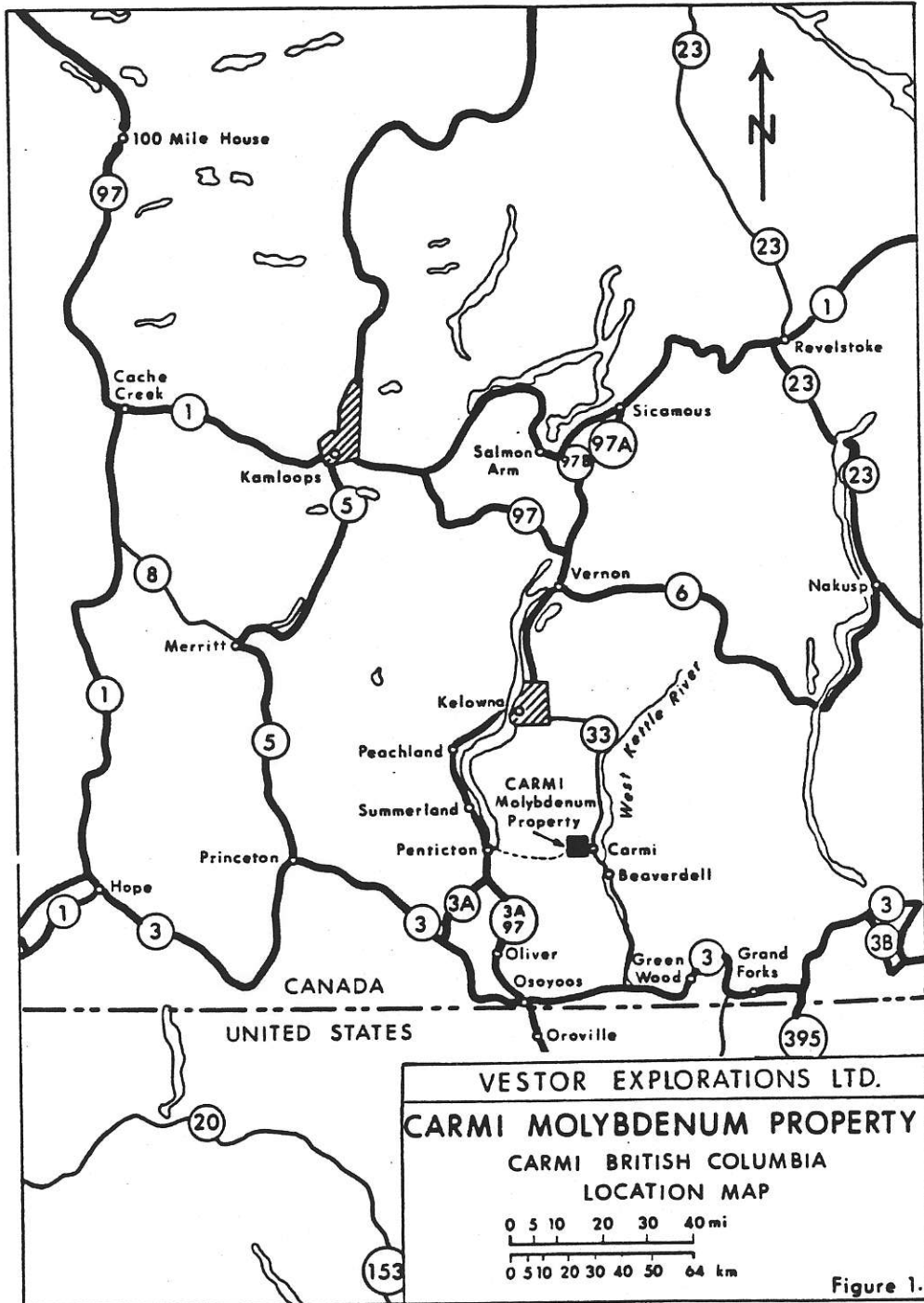
Vestor Explorations Ltd. and Dynamic Oil Limited own a 100% interest, subject to certain royalties to property vendors, in the Carmi Molybdenum Property, located near Carmi, British Columbia.

In December, 1986, Mr. John A. Greig, President of Vestor Explorations Ltd. and Mr. Wayne J. Babcock, President of Dynamic Oil Limited, both of Vancouver, British Columbia, commissioned the writer to prepare an evaluation report documenting the high grade molybdenite potential of the Lake Zone on the Carmi Molybdenum Property. Accordingly, this report embodies the results of an evaluation which is based on a review of all drilling and surface data pertaining to the Lake Zone and on the writer's personal experience with the property.

## LOCATION, TOPOGRAPHY AND ACCESS

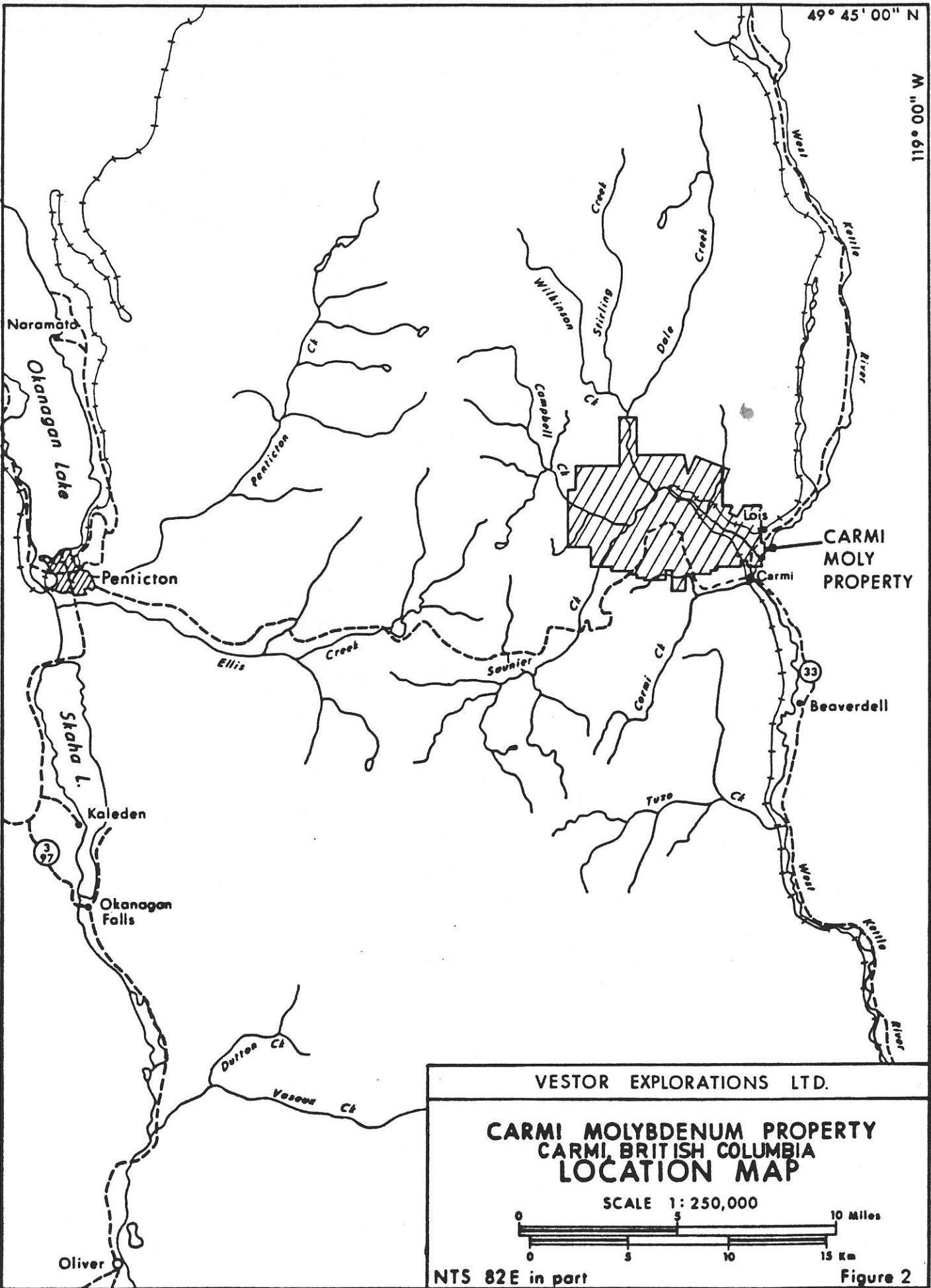
The Carmi Molybdenum Property is located within the Okanagan Highlands at Carmi, British Columbia. Carmi is situated approximately 54 km (33.5 miles) south-southeast of Kelowna, 38 km (23.6 miles) east of Penticton and 8 km (5.0 miles) north-northwest of Beaverdell (Figures 1 and 2). The property is situated within the Greenwood Mining Division of British Columbia and is centered at approximately 49° 31' N latitude and 119° 09' W longitude.

Topography within the property area varies from gently rolling in the central and southern parts to steep and rugged in the north, east and west. The central part of the property has a maximum elevation of approximately 1,370 meters (4,494 feet) which is roughly 450 to 500 meters (1,476 to 1,640 feet) above the valley floor.



49° 45' 00" N

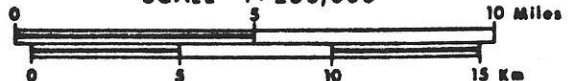
119° 00' W



VESTOR EXPLORATIONS LTD.

**CARMI MOLYBDENUM PROPERTY  
CARMI, BRITISH COLUMBIA  
LOCATION MAP**

SCALE 1:250,000



NTS 82E in part

Figure 2

Access to the property is good and is made directly by bush road leading off Highway 33 at Carmi to the east, or alternatively, but less readily, from Penticton to the west.

The Lake Zone is accessible by road, and is situated on a moderately steep west facing slope.

#### EXPLORATION HISTORY

Initial work in the Carmi property area was conducted by Kennco Exploration Limited in 1961 following the identification, in 1960, of anomalous molybdenum in the Beaverdell area during a reconnaissance stream water and sediment survey. Between 1961 and 1980 extensive exploration, including detailed geological mapping and prospecting; soil, water and silt geochemistry; bulldozer trenching and chip sampling; detailed shallow and deep penetrating induced polarization/resistivity and magnetometer geophysical surveys; and percussion and diamond drilling, was carried out by a number of independent exploration companies including International Minerals and Chemicals Limited (IMC), Husky Oil Limited and G. V. Lloyd Exploration Ltd., Granby Mining Corporation, Craigmont Mines Limited, Union Oil Company of Canada Limited and Vestor Explorations Ltd. In 1985, Vestor Explorations Ltd. and Dynamic Oil Limited carried out a limited percussion drilling program.

To date a total of 69,626 feet of drilling has been carried out on the property in 140 percussion drill holes and 45 diamond drill holes. The majority of this drilling has been completed in the area of the E and Lake Zones. Specifically on the Lake Zone, some 13,385 feet of drilling have been completed to date in 21 shallow percussion holes, 7 shallow diamond drill holes and in one deep diamond drill hole.



## GEOLOGY

The geology of the property has been thoroughly documented in Company reports as per the Bibliography hereto, and is summarized in a paper presented at the May, 1981 CIM Symposium in Calgary, Alberta by George M. Leary and Robert M. Falls. The latter paper is included with this report as Appendix II, to which the reader is referred in reference to this section. For further details, the reader is referred to Appendices I and III of the 1979 Final Report, Carmi Molybdenum Property by R. M. Falls and G. M. Leary, December, 1980.

The following summary description of the geology and reserves of the Carmi Molybdenum Property is quoted from Appendix II herein.

The Carmi Molybdenum Deposit..., occurs within an apparent north-south belt of Tertiary (i.e. 50 million years) Valhalla granitic stocks and dykes and acid to basic volcanic extrusives superimposed on Jura-Cretaceous Nelson plutonic rocks of regional extent.

Within the vicinity of the deposit, Nelson rocks have been structurally disturbed, altered and intruded by a series of structurally controlled Valhalla rocks and associated molybdenite-bearing breccia and greisen systems, and by post mineral dyke swarms.

Structural control of the Carmi deposit and its related intrusive elements is manifest by a rhomb-shaped fault pattern resulting from the intersection of a regional major east-west trending fault and a northeast trending multiple fault system.

Molybdenite occurs disseminated in a series of shallow breccia zones (Stage I Molybdenite) in Nelson country rocks, and in local greisen zones (Stage II Molybdenite) in an extensive underlying partially unroofed stock of Valhalla leucocratic quartz monzonite. These zones are spatially and genetically associated respectively with a series of locally occurring Valhalla quartz monzonite and granodiorite sills, masses and dykes and with the underlying stock.

Stage I Molybdenite bearing breccias occur in two zones (i.e. E and Lake Zones). The E Zone is characterized by a series of flat lying to gently dipping tabular breccia bodies aligned along a northwest-southeast trend over a length of at least 6,000 feet and a width of up to 1,600 feet. The Lake Zone is a separate steeply north-dipping breccia zone located west of the E Zone. It is 2,150 feet long and up to 500 feet wide on surface, and extends to depths of up to at least 1,300 feet. Breccias are characterized by angular Nelson fragments in a matrix comprised of intergradational bull quartz, aplite-pegmatite, quartz monzonite and granodiorite pseudo-breccia (i.e. characterized by exsolved quartz-biotite-pyrite-molybdenite clots). Widespread secondary sericite  $\pm$  biotite with associated pyrite (1 to 10%), molybdenite, fluorite, magnetite and amethyst occur throughout the breccias. Fracture controlled K-Feldspar, epidote and chlorite alteration with minor pyrite occurs peripheral to breccias and centered within the structurally disturbed region. Quartz-sericite-pyrite greisen veins and zones and aplite-pegmatite dykes occur widespread in the vicinity of breccia zones, but are concentrated in certain proximal zones at depth. Breccias are locally cut by apophyses of the underlying stock and both the Lake and E Zones appear locally truncated by the stock.

Stage II greisen-type fracture controlled molybdenite-pyrite zones have been encountered in the upper 400 feet of the underlying stock, particularly beneath mineralized breccias in the E Zone area. The host stock is alaskitic. It is characterized by quartz eyes set in a granular fine to medium grained matrix, and by widespread microfracturing, sericite alteration and by minor disseminated pyrite, magnetite, fluorite, amethyst and molybdenite.

Of eleven elements (Mo, Cu, Ag, Pb, Zn, U, W, Co, Mn, Fe and Ni) analyzed from soil samples collected from the B horizon on a grid basis, only molybdenum occurs in consistently anomalous amounts. Molybdenum anomalies ( $\geq 10$  ppm Mo) correlate spatially with all known molybdenite zones and indicate limited southerly directed glacial smearing (i.e. Lake Zone). Small drainages to the northeast and south of the E Zone carry anomalous molybdenum and sporadic anomalous zinc and uranium values in silts and waters.

Shallow penetrating frequency domain induced polarization surveys have identified numerous weak anomalous (PFE  $\geq 2.8\%$ ) zones. The stronger anomalies reflect known molybdenite

zones and the pyrite zone extending south from the E Zone. Weaker anomalies reflect sheared and fractured zones (i.e. structural discontinuities) and widespread weak pyritization (i.e. northwest of Lake Zone).

Magnetometer surveying has identified magnetic lows that reflect the leucocratic quartz monzonite stock and zones of structural discontinuity.

A deposit model is presented that is clearly atypical of porphyry or breccia molybdenum environments. The model involves a system of explosive vapor venting of the stock with breccia formation in structurally controlled sites in cap rocks; simultaneous emplacement of magmatic and magmatic-pneumatolytic phases with molybdenite and associated mineral phases into breccia voids and emplacement of magmatic phases into flat lying vapor release dilation zones. These phases were derived from the underlying stock. Subsequent development of fracture controlled pneumatolytic greisen and molybdenite mineralization occurred in root differentiate zones in the underlying stock.

Extensive percussion and diamond drilling to date have indicated a possible open pit reserve of 20 to 30 million tons grading 0.10% MoS<sub>2</sub> at a cutoff grade of 0.05% MoS<sub>2</sub>.





The Lake Zone, the subject of this report (see Figures 2 to 6 inclusive), is characterized by a 65° to 80° north dipping tabular breccia body localized along the above mentioned regional east-west fault at its intersection with a gently southeasterly dipping fault. Valhalla quartz monzonite is emplaced as a sill-like body along the latter fault near the base of the Lake Zone subconcordantly with the top of the underlying leucocratic quartz monzonite stock, and forms the breccia matrix at its intersection with the Lake Zone breccia. The Lake Zone breccia and quartz monzonite sill are truncated by the underlying stock, and are localized above the flank of a saddle in a ridge-like east-west trending cupola coincident the Lake Zone at depth. The Lake Zone is widest (i.e. up to 600 feet) immediately above the quartz monzonite sill, pinches out to the east on surface approximately 1,200 feet above the sill, narrows beneath the quartz monzonite sill to the west and at depth, and appears to have a

TABLE 1

**LEGEND** (To Accompany Figures 3 to 7 inclusive)

**LITHOLOGY**



**NIPPLE MOUNTAIN VOLCANICS AND FEEDERS**

-  Lamprophyre Dykes
-  Volcanic Flows (a) Trachyte  
(b) Basalt  
(c) Dacite
-  Dacite Dykes
-  Flows' Tufts, Fragmentals (a) Felsic (b) Intermediate-Mafic







**VALHALLA INTRUSIONS**  
PHASE III

-  Feldspar Porphyry Dykes




PHASE II

-  Quartz Porphyry Dykes
-  Leucocratic Quartz Monzonite (Alaskite)  
(a) Fine-grained (b) Medium-grained

PHASE I

-  Fine-grained Speckled Granodiorite Dykes  
(a) Low Mafic (b) High Mafic
-  Biotite Quartz Monzonite
-  Speckled Biotite Granodiorite Pseudo Breccia
-  Breccia Zones
-  Aplite Pegmatite Dykes
-  Bull Quartz Vein

**NELSON INTRUSIONS**

-  Massive Diorite (a) Fine-grained (b) Medium-grained
-  Massive Hornblende - Biotite Granodiorite
-  Foliated (a) Hornblende - Biotite Diorite to Quartz Diorite  
(b) Biotite Granodiorite  
(c) Gabbro

**ANARCHIST GROUP**









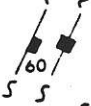


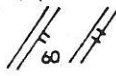
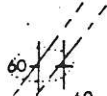










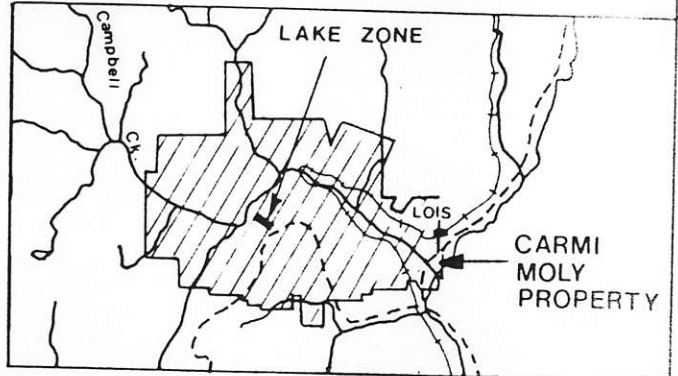
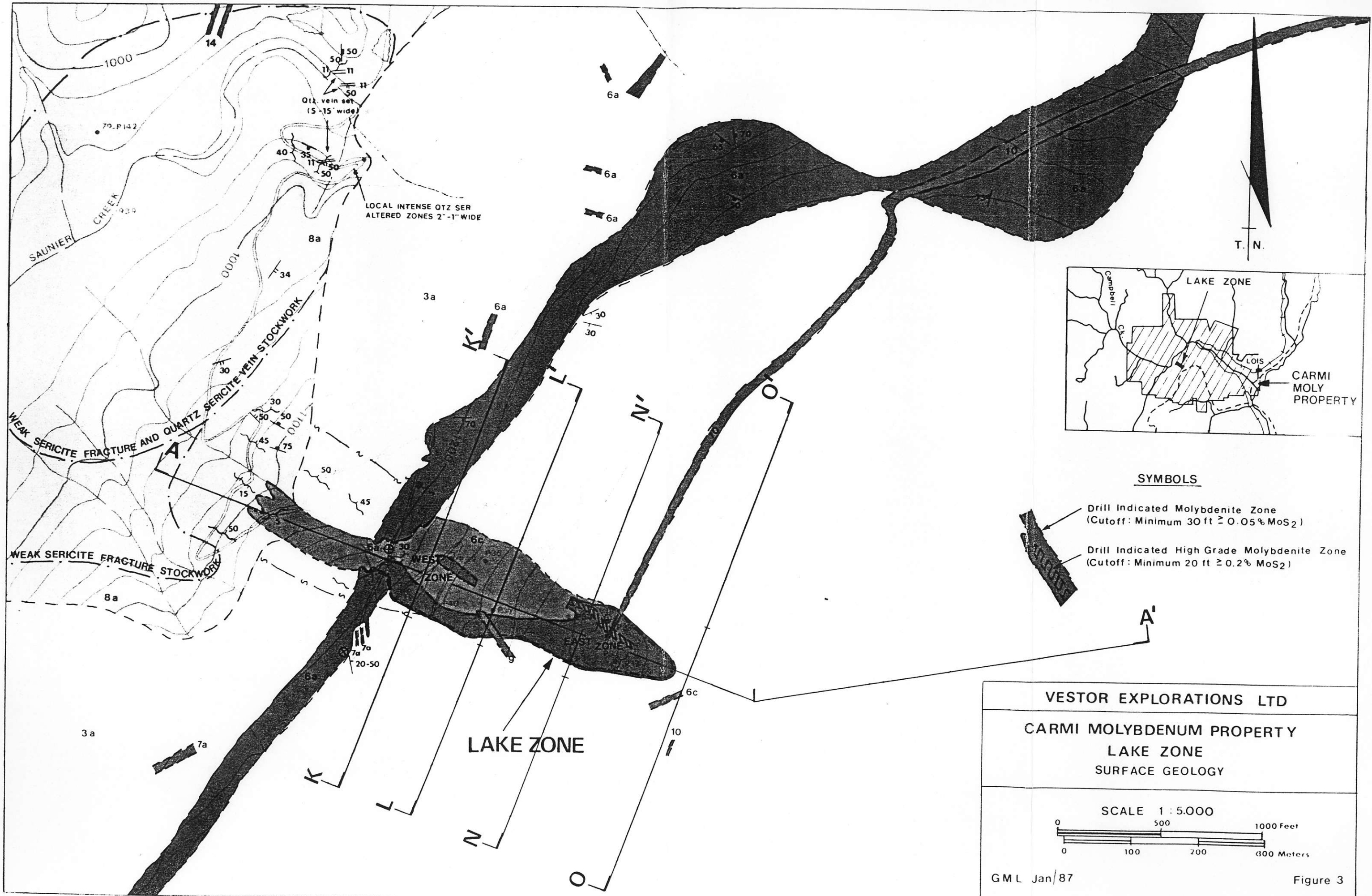
-  Metasediments (a) Banded sulphidic, tuffaceous (?) quartzite, chert, greywacke, calc - silicate unit; minor marble and gneiss
-  Metavolcanics - Amphibolite, hornblende gneiss

TABLE 2

SYMBOLS (To Accompany Figures 3 to 7 inclusive)

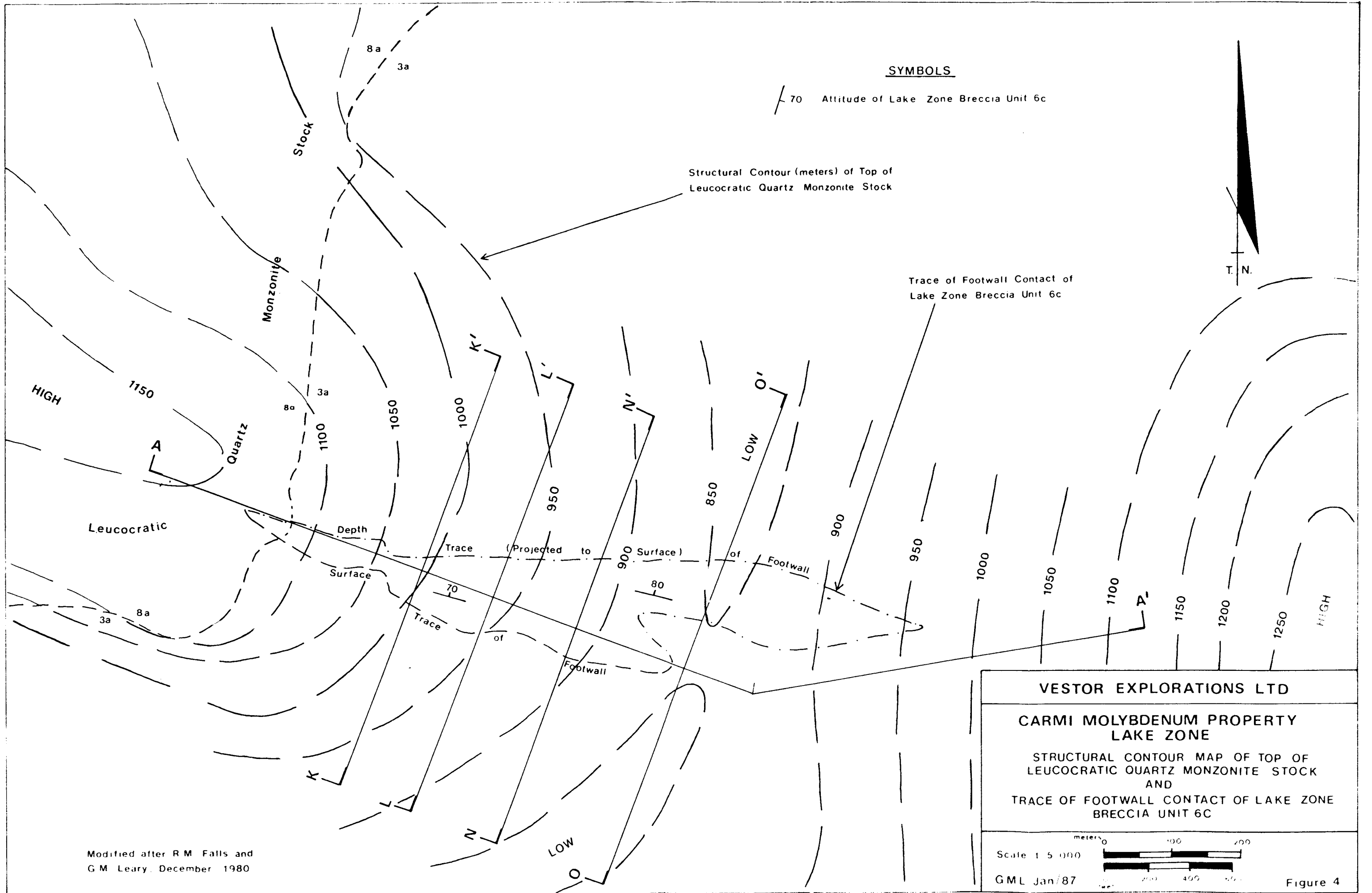
	Outcrop Area		
x	Angular Rubble Float or Very Minor Outcrop		
3a, 12	Principal Rock Phase, Minor Rock Phase		
	Geologic Contact (Defined, Approximate)		
	Bedding (Inclined With Dip, Vertical)		
	Foliation (Inclined With Dip, Vertical)		
	Fracture Set (Inclined With Dip, Vertical)		
	Jointing (Inclined With Dip, Vertical)		
	Shear Jointing (Inclined With Dip, Vertical)		
	Inferred or Projected Fault		
	Inferred Outlined of Major Shear Zone		
	Bull Quartz Vein or Vein Set (Inclined With Dip, Vertical)		
	Dyke Attitude (Inclined With Dip, Vertical)		
	Fold With Plunge		
	Site of Magmatic Matrix Within Breccia Zones (ia. Unit 6a or 6b)		
	Surface Projection of Speckled Biotite Granodiorite Pseudo Breccia (Unit 6b)		
	Drill Indicated Shallow Molybdenite Zones (cutoff: Minimum 30 Feet Grading $\geq 0.05\%$ MoS <sub>2</sub> )		
	Trench		
bx	Breccia		MAIN ACCESS ROAD
Mo	Molybdenite		SECONDARY DRILL OR LOGGING ACCESS ROAD
Py	Pyrite		RAILWAY RIGHT OF WAY
Po	Pyrrhotite		OPEN AREA
Mag.	Magnetite		SWAMP
A-A'	Geologic Section	○ K1	DIAMOND DRILL HOLE WITH IDENTIFICATION NUMBER
		● 75-P-74 P-42	PERCUSSION DRILL HOLE
		○ 81DDH-1	PROPOSED 1981 DIAMOND DRILL HOLE




**SYMBOLS**

- Drill Indicated Molybdenite Zone  
(Cutoff: Minimum 30 ft  $\geq$  0.05% MoS<sub>2</sub>)
- Drill Indicated High Grade Molybdenite Zone  
(Cutoff: Minimum 20 ft  $\geq$  0.2% MoS<sub>2</sub>)

<b>VESTOR EXPLORATIONS LTD</b>	
<b>CARMI MOLYBDENUM PROPERTY</b>	
<b>LAKE ZONE</b>	
<b>SURFACE GEOLOGY</b>	
SCALE 1:5,000	
GML Jan/87	Figure 3



**SYMBOLS**

 70 Attitude of Lake Zone Breccia Unit 6c

Structural Contour (meters) of Top of Leucocratic Quartz Monzonite Stock

Trace of Footwall Contact of Lake Zone Breccia Unit 6c

T. N.

Leucocratic

Quartz

Monzonite

Stock

Depth

Surface

Trace (Projected to 900 Surface) of Footwall

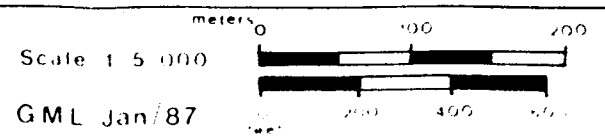
Trace of Footwall

Footwall

**VESTOR EXPLORATIONS LTD**

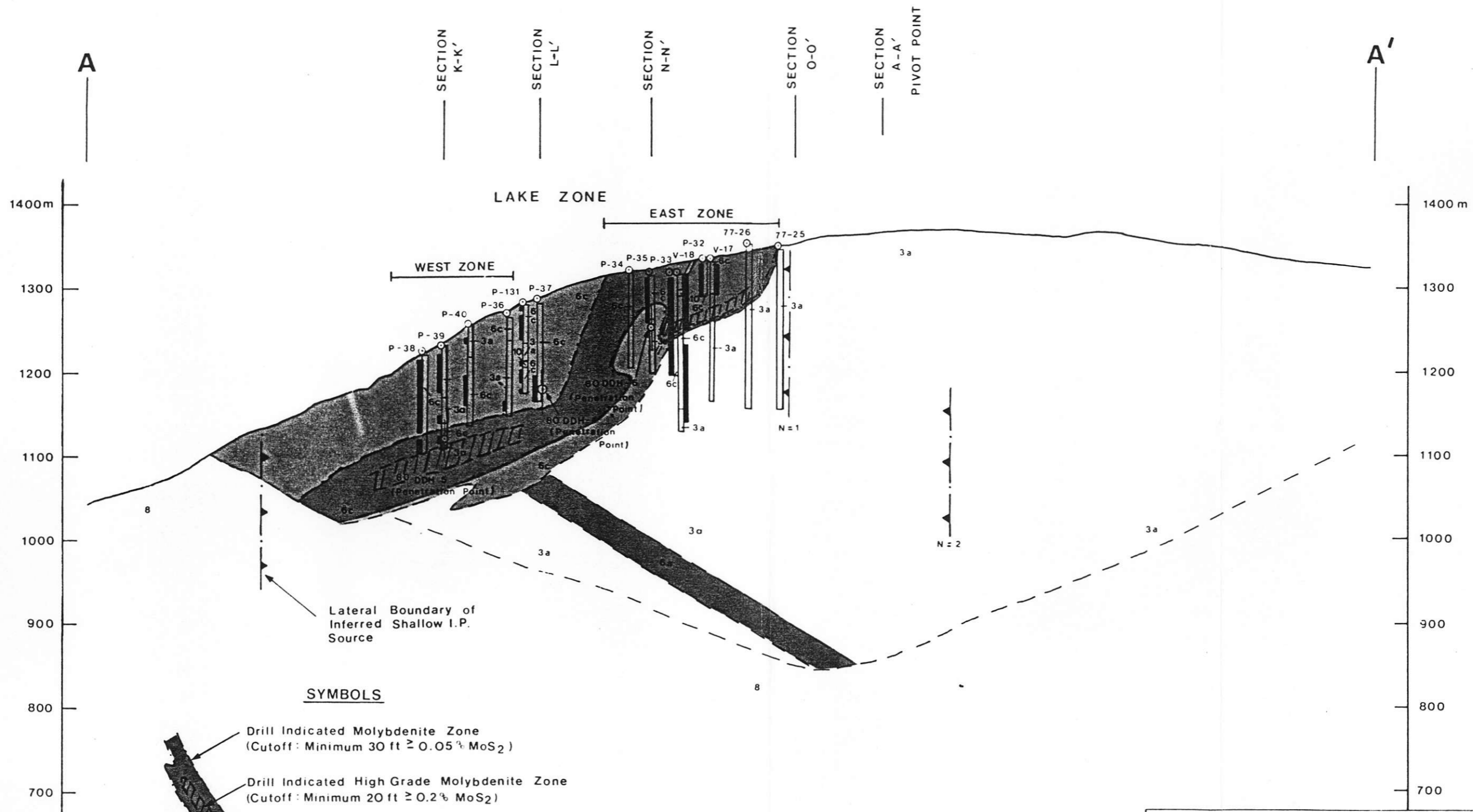
**CARMI MOLYBDENUM PROPERTY  
LAKE ZONE**

STRUCTURAL CONTOUR MAP OF TOP OF  
LEUCOCRATIC QUARTZ MONZONITE STOCK  
AND  
TRACE OF FOOTWALL CONTACT OF LAKE ZONE  
BRECCIA UNIT 6C







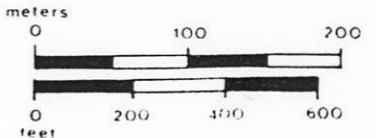
Modified after R.M. Falls and  
G.M. Leary, December 1980

Figure 4



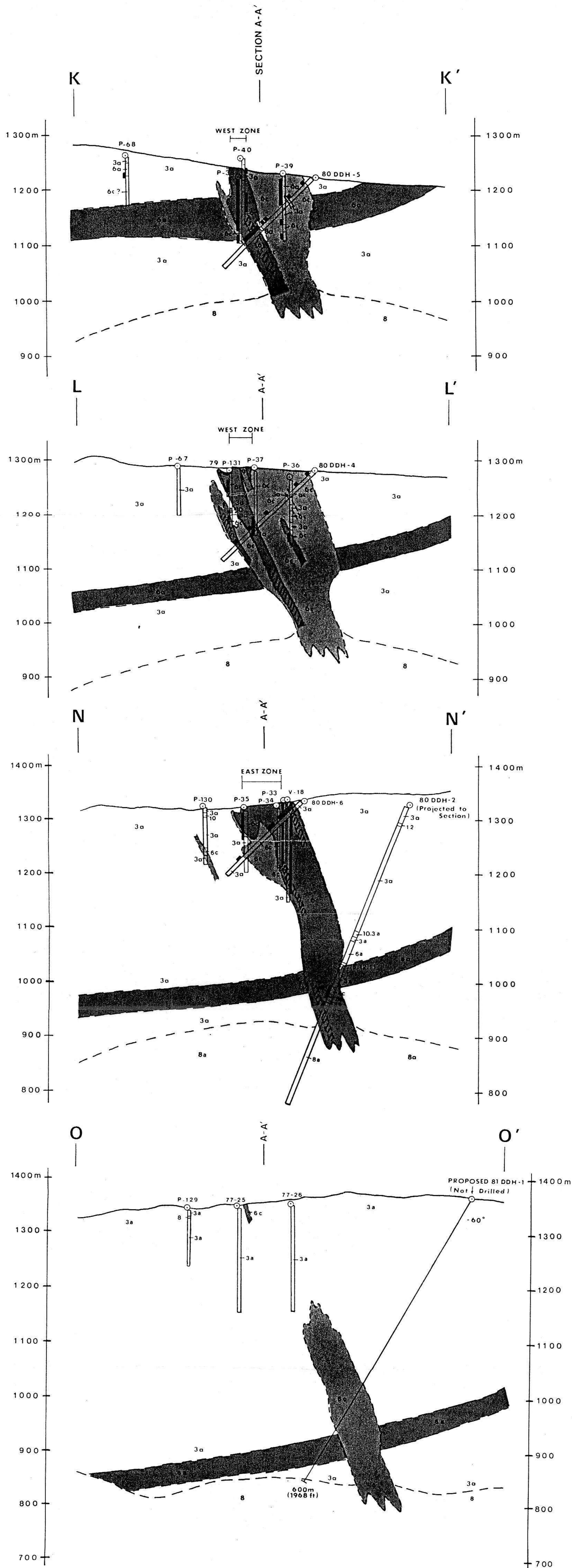
**SYMBOLS**

-  Drill Indicated Molybdenite Zone  
(Cutoff: Minimum 30 ft  $\geq$  0.05% MoS<sub>2</sub>)
-  Drill Indicated High Grade Molybdenite Zone  
(Cutoff: Minimum 20 ft  $\geq$  0.2% MoS<sub>2</sub>)
-  Drill Hole (P- Percussion Drill Hole;  
All Others Diamond Drill Holes)
-  Molybdenite Zone  
(Minimum 10 ft  $\geq$  0.05% MoS<sub>2</sub>)

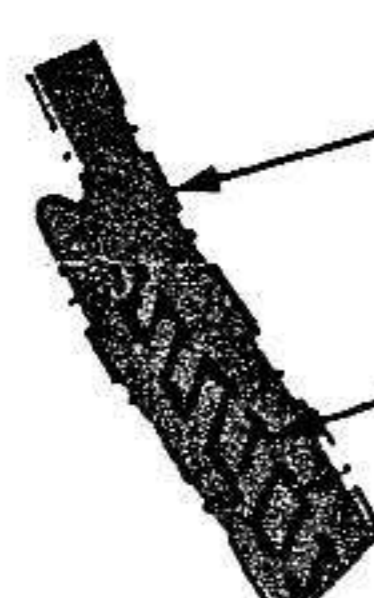


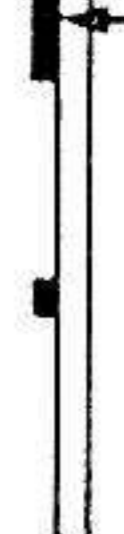
<b>VESTOR EXPLORATIONS LTD</b>	
<b>CARMI MOLYBDENUM PROPERTY LAKE ZONE</b>	
GEOLOGICAL LONGITUDINAL SECTION A-A' LOOKING NORTH	
Scale 1:5,000	
GML Jan/87	Figure 5

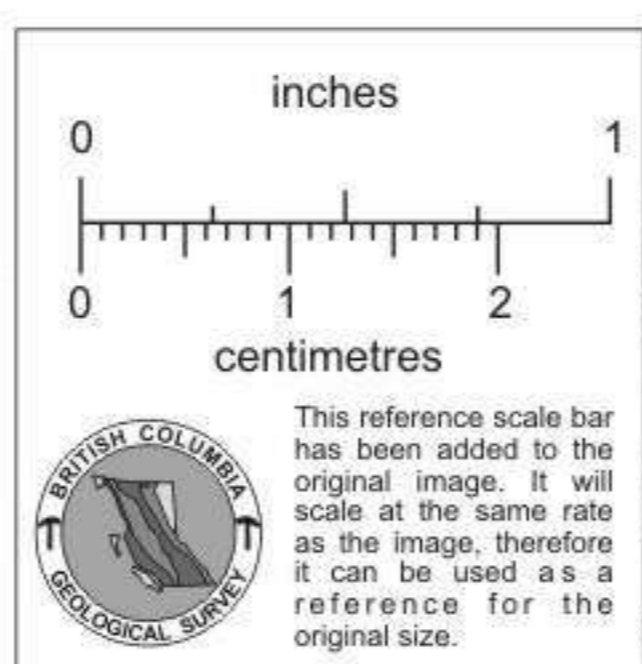
Section Modified After  
R.M. Falls, January, 1981





**SYMBOLS**

-  Drill Indicated Molybdenite Zone  
(Cutoff: Minimum 30 ft  $\geq$  0.05% MoS<sub>2</sub>)
-  Drill Indicated High Grade Molybdenite Zone  
(Cutoff: Minimum 20 ft  $\geq$  0.2% MoS<sub>2</sub>)
-  Drill Hole (P - Percussion Drill Hole;  
All Others Diamond Drill Holes)
-  Molybdenite Zone  
(Minimum 10 ft  $\geq$  0.05% MoS<sub>2</sub>)



Sections Modified After  
R.M. Falls, January, 1981

**VESTOR EXPLORATIONS LTD**

**CARMI MOLYBDENUM PROPERTY  
LAKE ZONE**

**GEOLOGICAL CROSS SECTIONS  
K-K', L-L', N-N', AND O-O'  
LOOKING WEST**

Scale 1: 5,000

G.M.L. Jan/87

Figure 6

feather-truncation contact with the underlying stock to the west and at depth. Both the footwall and hanging wall contacts of the zone appear to marginally undulate.

The Lake Zone has been previously described by the writer (i.e. Appendix III of 1979 Final Report as above) as follows:

The Lake Zone is characterized by abundant 6" to 3' wide bull quartz and lesser granitic aplite-pegmatite fillings healing brecciated (i.e. fragments 2" to 1' wide) weak to intensely sericitized (i.e. 10% to greater than 80% medium grained sericite flakes and books) Nelson rocks. On the average up to 60% of the Lake Zone breccia is composed of intensely sericitized material. No secondary biotite or chlorite such as in the E Zone was noted. Five to fifteen percent pyrite occurs throughout the zone as grains and clots disseminated within breccia material. Molybdenite flakes and rosettes with associated amethyst, pyrite and fluorite occur disseminated within intensely sericitized zones. Minor molybdenite occurs disseminated within quartz fillings.

Widespread epidote and minor pyrite occur along fractures peripheral to the Lake Zone. More intense pervasive and fracture controlled epidote and associated pink K-Feldspar occur as an apparent sleeve along the zone pinching out to the west and upwards at the east end of the Lake Zone. This area has associated common pegmatite-aplite dykes and sericite-quartz pyrite greisen veins and altered zones at depth.

Molybdenite distribution within the Lake Zone appears somewhat erratic based on mode of occurrence, grade variance and distribution of mineralized intercepts. However, drilling to date has indicated a low grade (i.e. minimum 30 feet grading  $\geq 0.05\% \text{ MoS}_2$ ) continuous sheet-like footwall zone 50 to 150 feet wide and discontinuous hanging wall zones up to 50 feet wide which coalesce with the footwall zone to the east and form a thick mineralized zone (East Zone) averaging about 200 feet thick. Within these hanging wall and footwall low grade zones, high grade molybdenite occurs in apparent sheet-like zones. Drill intercepts in

high grade molybdenite are summarized on Table 3. These high grade zones range from approximately 17 to 43 feet in true thickness and from 0.241% to 0.570% MoS<sub>2</sub> in grade. The zones average 27.8 feet in true thickness and have a weighted average grade of 0.329% MoS<sub>2</sub>.

TABLE 3

LAKE ZONE HIGH GRADE MOLYBDENITE DRILL HOLE INTERCEPTS  
(Cutoff: Minimum 20 feet  $\geq$  0.2% MoS<sub>2</sub>)

<u>DRILL HOLE</u>	<u>INTERCEPT FOOTAGE</u>	<u>INTERCEPT LENGTH (FEET)</u>	<u>TRUE INTERCEPT LENGTH (FEET)</u>	<u>INTERCEPT WITHIN HANGING WALL (HW) OR FOOTWALL (FW) SIDE OF UNIT</u>	<u>6c BRECCIA</u>	<u>% MoS<sub>2</sub></u>
80 DDH 5	457.6- 500.6	43.0	40.0	FW		0.280
P 131	* 320 - 350 (open)	30	13	FW		0.314
80 DDH 2	* 1298.5-1328.2 (open)	29.7	16.0	HW		0.280
80 DDH 6	84.0- 114.0	30.0	28.0	HW		0.570
P 33	100 - 200	100	43.0	HW		0.326
V-18	100 - 140	40	17.2	HW		0.305
V-18	460 - 500	40	17.2	FW		0.362
P-32	80 - 150 (open)	70	30.0	FW		0.241
V-17	85 - 130	45	19.4	FW		0.218
			Avg. 27.8			Wtd. Avg. 0.329

\* Intercepts not used in calculating average true intercept length.

OPEN PITTABLE RESERVES AND POTENTIAL

Although open pitable reserve calculations for the E and Lake Zone have been reported in the aforementioned reports, a revised estimate is included herein as Appendix III which incorporates the results of drilling in 1980 and 1985.

An estimate of drill indicated open pitable reserves on the Carmi Molybdenum Property, given in Appendix III hereto, is summarized as follows:

E Zone	:	18.7 million tons grading 0.105% MoS <sub>2</sub>
Lake Zone:		4.1 million tons grading 0.110% MoS <sub>2</sub>
Total	:	22.8 million tons grading 0.106% MoS <sub>2</sub>

These reserves occur in a larger geologic reserve or mineral inventory previously estimated by the writer (see Appendix I of 1979 Final Report by R. M. Falls and G. M. Leary, December, 1980) as follows:

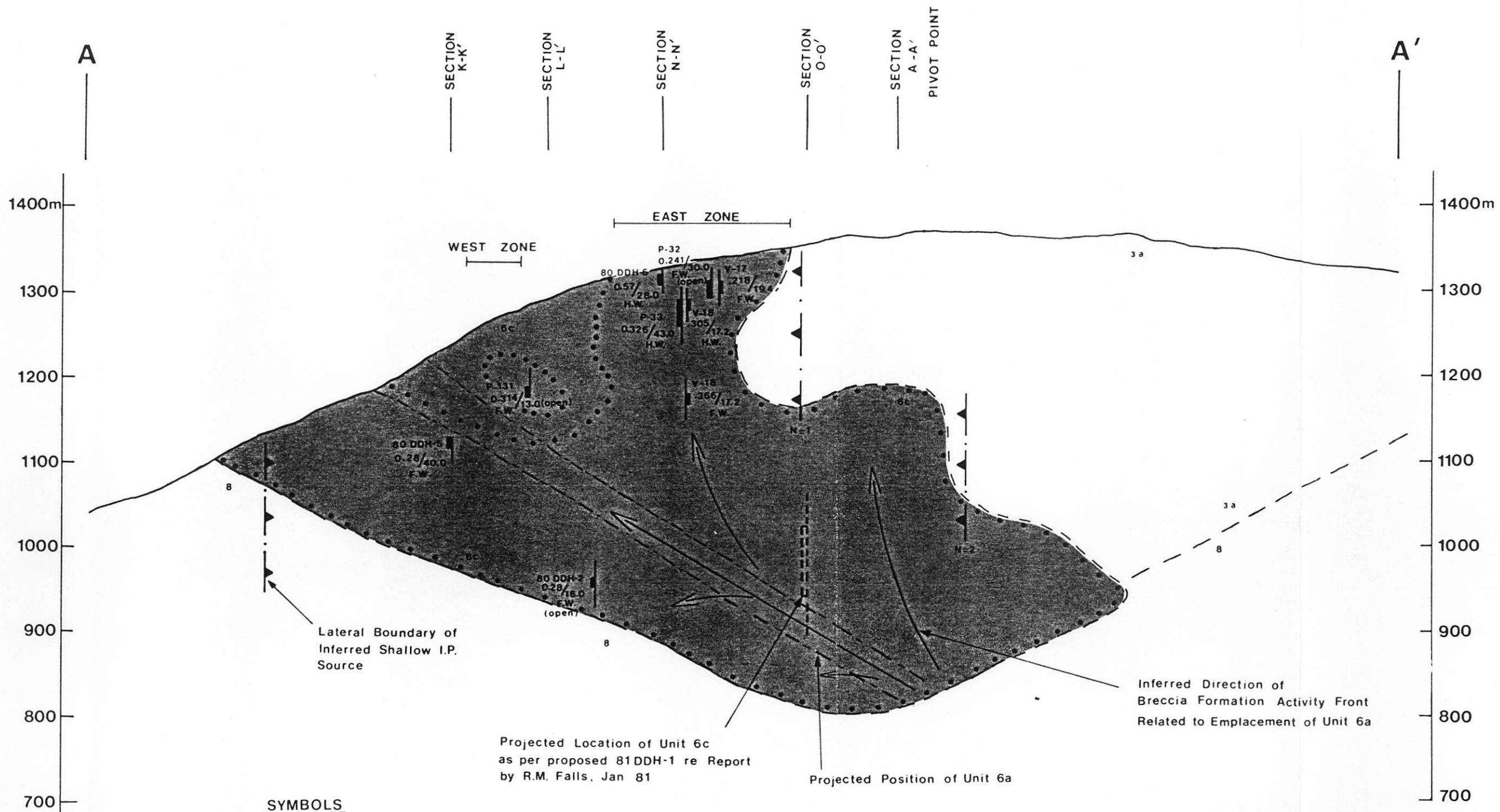
E Zone	:	30 million tons grading .05 to .10% MoS <sub>2</sub>
Lake Zone:		15 million tons grading .05 to .10% MoS <sub>2</sub>
Total	:	45 million tons grading .05 to .10% MoS <sub>2</sub>

Total drill indicated, inferred and potential open pitable reserves for the property at a grade of .10% MoS<sub>2</sub> are estimated to be limited to a maximum of about 30 to 40 million tons. There is a high probability that reserves could be increased to about 30 million tons with further drilling, particularly in the E Zone area. Previous deep penetrating induced polarization surveying and diamond drilling have effectively eliminated the possibilities for i) a significant porphyry or greisen stockwork type deposit at depth in the leucocratic quartz monzonite stock or for ii) significant E and Lake Zone type mineralized breccias at depth in favourable structural sites.

## HIGH GRADE UNDERGROUND POTENTIAL OF THE LAKE ZONE

The high grade underground potential of the Lake Zone has been assessed in terms of known drill intercepts, geologic character of the Lake Zone and deposit model as aforementioned and as given on Figure 17 of Appendix II hereto. The potential distribution of the high grade molybdenite zone or zones in the Lake Zone is illustrated on Figure 7 in longitudinal section. The basis for the current evaluation is as follows:

1. Continuity of high grade zones at depth is indicated by the good continuity of the low grade footwall zone and the number and distribution of high grade drill hole intercepts.
2. Except for 80 DDH-4, all diamond drill holes penetrating the Lake Zone (i.e. 6 holes) have intersected at least one high grade zone in either the footwall or hanging wall section of the Lake Zone.
3. The deposit model developed for formation and mineralization of the breccia bodies involves, in the case of the Lake Zone,
  - i) Emplacement of the quartz monzonite sill in a vapor release dilation zone along a previous gently dipping fault structure above the cooling and crystallizing underlying leucocratic quartz monzonite stock with simultaneous formation of the breccia zone by vapor venting of the quartz monzonite sheet along a previously existing steep fault; and
  - ii) Magmatic-pneumatolytic products (i.e. quartz monzonite, aplite-pegmatite and quartz) which heal the breccia and emanate from the quartz monzonite magma sheet during its emplacement.



**SYMBOLS**

- Outline of Drill Indicated and Inferred High Grade Molybdenite Zone
- 80 DDH-5  
0.28/40.0  
F.W. High Grade MoS<sub>2</sub> Drill Hole Intercept (Minimum 20 ft ≥ 0.2% MoS<sub>2</sub> % MoS<sub>2</sub> / True length of Intercept (ft))
- F.W. - Zone on Footwall Side of 6c Breccia Zone
- H.W. - Zone on Hanging Wall Side of 6c Breccia Zone
- (open) - Intercept Open at Depth

<b>VESTOR EXPLORATIONS LTD</b>	
<b>CARMI MOLYBDENUM PROPERTY LAKE ZONE</b>	
POTENTIAL HIGH GRADE MOLYBDENITE ZONE LONGITUDINAL SECTION IN PLANE OF LAKE ZONE PROJECTED TO VERTICAL SECTION A-A' LOOKING NORTH	
Scale 1:5,000	
G.M.L. Jan/87	Figure 7

As per the foregoing, the distribution of breccia formation and molybdenite mineralization at depth should conform to the dip of the quartz monzonite sheet.

4. Granodioritic pseudobreccia with associated higher grade molybdenite mineralization, similar to that developed in the basal central portion of the E Zone, is potentially present at depth down dip the quartz monzonite sheet near the contact with the underlying stock. This phase is expected to occur in association with the deeper portions of the Lake Zone system. A few granodioritic dykes (i.e. Unit 7a), which occur on surface immediately south of the Lake Zone spatially associated with the quartz monzonite sheet, suggested the presence of a potential mineralized phase at depth.

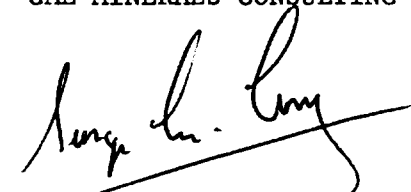
On the basis of the foregoing, the potential of the Lake Zone is considered excellent for hosting hanging wall and/or footwall high grade panels or sheets of molybdenite mineralized breccia. As aforesaid and based on the "outline of drill indicated and inferred high grade molybdenite zone" as per Figure 7 and on the average drill hole true intercept length and molybdenite grade, the high grade underground reserve potential of the Lake Zone is estimated to be 5 million tons grading  $\geq 0.33\%$  MoS<sub>2</sub>. By virtue of the indicated average widths of high grade panels (i.e. 27.8 feet) and their steep dips, low cost mechanized underground mining methods would apply.

ECONOMICS

With current depressed molybdenum prices, neither the low grade open pittable reserves nor the potential high grade underground reserves are currently economic. Substantially higher molybdenum prices than the current level of under \$3.00 U.S. per pound of contained molybdenum in molybdenite concentration will be required in order to consider the economics of the project. As such, the Carmi Molybdenum Property covers a substantial molybdenum resource for the future. It is estimated that a price of at least \$10.00 U.S. per pound contained molybdenum would be necessary at current operating cost levels before the project could become potentially economically feasible.

Any economic evaluation of the potential underground high grade reserves in the future should also assess the rhenium, gold, silver and uranium contents of the mineralized zones.

Respectfully submitted,  
GML MINERALS CONSULTING LTD.



George M. Leary, M.Sc., P.Eng.  
President



CERTIFICATE OF QUALIFICATION

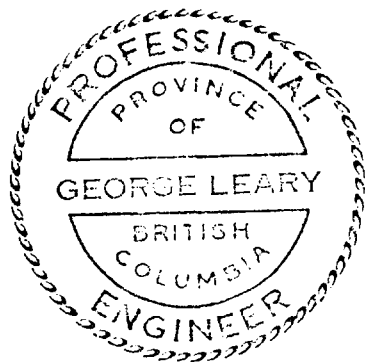
I, George M. Leary, hereby certify that:

1. I am a professional geologist, having received a B.Sc. degree in honours geology in 1967 and a M.Sc. degree in geology in 1969 from the University of British Columbia.
2. I have been a registered member of the Association of Professional Engineers of the Province of British Columbia since 1973, and have been registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1984.
3. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
4. I have been engaged in mineral exploration and property development work throughout Canada and the United States since 1964.
5. I have been involved in a wide variety of specialty (i.e. Mo, W, Nb, Ta), precious (Au, Ag) and base metal (Pb, Zn, Cu) projects throughout North America.
6. I have practiced my profession continuously since 1964 and have previously held responsible positions with Amax Exploration Inc. in Vancouver and Union Oil Company of Canada Limited in Calgary.
7. I am the author of this report, which is based on a review and an analysis of data pertaining to the Carmi Molybdenum Property generated in part as a result of work carried out

and/or supervised directly by the writer during 1979, 1980 and 1985.

8. I have no personal interest, directly or indirectly, in the property or in the securities of Vestor Explorations Ltd. and Dynamic Oil Limited.

Certificate signed under my professional seal this 23rd day of January, 1987.



George M. Leary, M.Sc., P.Eng.  
President  
GML Minerals Consulting Ltd.  
Suite A17, Block A  
6120-2nd Street SE  
Calgary, Alberta  
T2H 2L8  
(403) 258-1395

APPENDIX I: BIBLIOGRAPHY

1. Falls, R. M. and Leary, G. M., 1979 Final Report, Carmi Molybdenum Property for Union Oil Company of Canada Ltd., December, 1980.
2. Falls, R. M., 1980 Final Report, Carmi Molybdenum Property for Union Oil Company of Canada Ltd., January, 1981.
3. Leary, G. M., Report on Percussion Drill Program on the CA 3 and 5 Claims, Carmi Molybdenum Property for Vester Explorations Ltd. and Dynamic Oil Ltd., August 21, 1985.

APPENDIX IISUMMARY

Carmi Molybdenum Deposit, Southern British Columbia

by

George M. Leary: Mining Department, Union Oil Company  
of Canada Limited, Calgary, Alberta  
(Currently GML Minerals Consulting Ltd.)

Robert M. Falls: Geological Department, Texaco Canada  
Resources Ltd., Calgary, Alberta

The Carmi Molybdenum Deposit, 54 km southeast of Kelowna and 8 km northwest of Beaverdell, occurs within an apparent north-south belt of Tertiary (ie. 50 million years) Valhalla granitic stocks and dykes and acid to basic volcanic extrusives superimposed on Jura-Cretaceous Nelson plutonic rocks of regional extent.

Within the vicinity of the deposit, Nelson rocks have been structurally disturbed, altered and intruded by a series of structurally controlled Valhalla rocks and associated molybdenite-bearing breccia and greisen systems, and by post mineral dyke swarms.

Structural control of the Carmi deposit and its related intrusive elements is manifest by a rhomb-shaped fault pattern resulting from the intersection of a regional major east-west trending fault and a northeast trending multiple fault system.

Molybdenite occurs disseminated in a series of shallow breccia zones (Stage I Molybdenite) in Nelson country rocks, and in local greisen zones (Stage II Molybdenite) in an extensive underlying partially unroofed stock of Valhalla leucocratic quartz monzonite. These zones are spatially and genetically associated respectively with a series of locally occurring Valhalla quartz monzonite and granodiorite sills, masses and dykes and with the underlying stock.

Stage I Molybdenite bearing breccias occur in two zones (ie. E and Lake Zones). The E Zone is characterized by a series of flat lying to gently dipping tabular breccia bodies aligned along a northwest - southeast trend over a length of at least 6000 feet and a width of up to 1600 feet. The Lake Zone is a separate steeply north dipping breccia zone located west of the E Zone. It is 2150 feet long, up to 500 feet wide, and extends to depths of up to at least 1300 feet. Breccias are characterized by angular Nelson fragments in a matrix comprised of intergradational bull quartz, aplite-pegmatite, quartz monzonite and granodiorite pseudo-breccia (ie. characterized by exsolved quartz-biotite-pyrite-molybdenite clots). Widespread secondary sericite + biotite with associated pyrite (1 to 10%), molybdenite, fluorite, magnetite and amethyst occur throughout the breccias. Fracture controlled K-Feldspar, epidote and chlorite alteration with minor pyrite occurs peripheral to breccias and centred within the structurally disturbed region. Quartz-sericite-pyrite greisen veins and zones and aplite-pegmatite dykes occur widespread in the vicinity of breccia zones, but are concentrated in certain proximal zones at depth. Breccias are locally cut by apophyses of the underlying stock and both the Lake and E Zones appear locally truncated by the stock.

Stage II greisen-type fracture controlled molybdenite-pyrite zones have been encountered in the upper 400 feet of the underlying stock, particularly beneath mineralized breccias in the E Zone area. The host stock is alaskitic. It is characterized by quartz eyes set in a granular fine to medium grained matrix, and by widespread microfracturing, sericite alteration and by minor disseminated pyrite, magnetite, fluorite, amethyst and molybdenite.

Of eleven elements (Mo, Cu, Ag, Pb, Zn, U, W, Co, Mn, Fe, Ni) analyzed from soil samples collected from the B horizon on a grid basis, only molybdenum occurs in consistently anomalous amounts. Molybdenum anomalies ( $\geq 10$  ppm Mo) correlate spatially with all known molybdenite zones and indicate limited southerly directed glacial smearing (ie. Lake Zone). Small drainages to the northeast and south of the E Zone carry anomalous molybdenum and sporadic anomalous zinc and uranium values in silts and waters.

Shallow penetrating frequency domain induced polarization surveys have identified numerous weak anomalous (PFE  $\geq 2.8\%$ ) zones. The stronger anomalies reflect known molybdenite zones and the pyrite zone extending south from the E Zone. Weaker anomalies reflect sheared and fractured zones (ie. structural discontinuities) and widespread weak pyritization (ie. northwest of Lake Zone).

Magnetometer surveying has identified magnetic lows that reflect the leucocratic quartz monzonite stock and zones of structural discontinuity.

A deposit model is presented that is clearly atypical of porphyry or breccia molybdenum environments. The model involves a system of explosive vapor venting of the stock with breccia formation in structurally controlled sites in cap rocks; simultaneous emplacement of magmatic and magmatic-pneumatolytic phases with molybdenite and associated mineral phases into breccia voids and emplacement of magmatic phases into flat lying vapor release dilation zones. These phases were derived from the underlying stock. Subsequent development of fracture controlled pneumatolytic greisen and molybdenite mineralization occurred in root differentiate zones in the underlying stock.

Extensive percussion and diamond drilling to date have indicated a possible open pit reserve of 20 to 30 million tons grading 0.10%  $\text{MoS}_2$  at a cutoff grade of .05%  $\text{MoS}_2$ .

Attachments: Figures 1 to 17

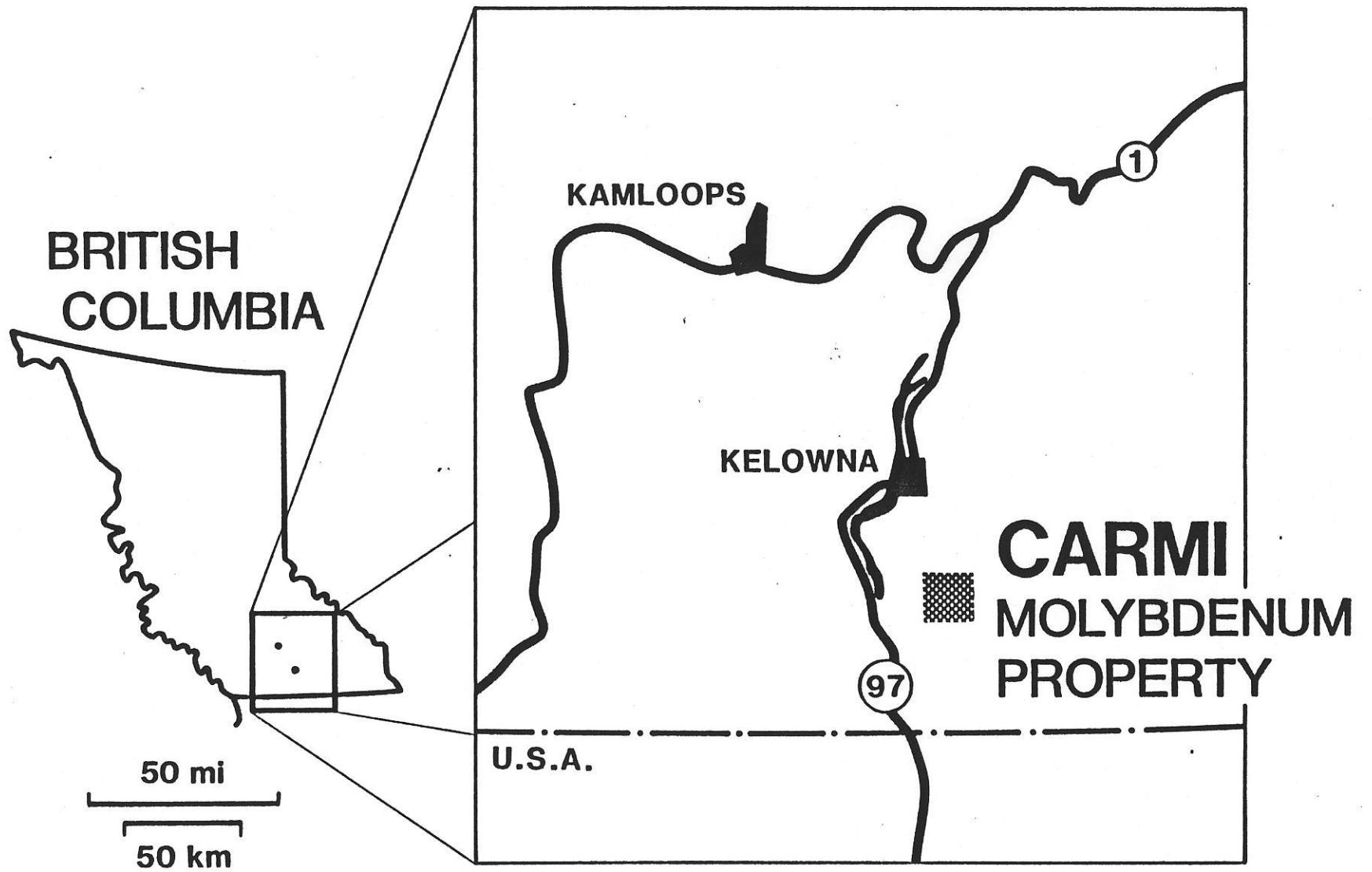


FIGURE 1

# GEOLOGICAL LEGEND

## NIPPLE MOUNTAIN SERIES

-  DACITE DYKES
-  FELSIC - MAFIC FLOWS AND FRAGMENTALS

## VALHALLA INTRUSIONS




— PHASE III —

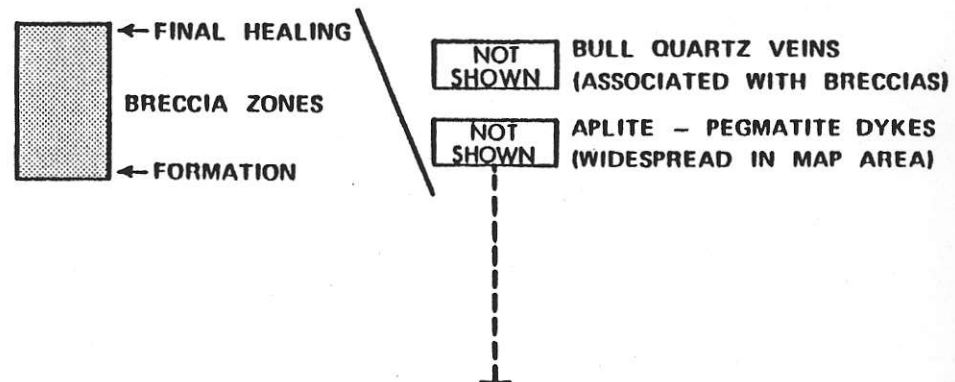
-  FELDSPAR PORPHYRY DYKES

— PHASE II —


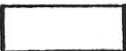
-  QUARTZ PORPHYRY DYKES
-  LEUCOCRATIC QUARTZ MONZONITE (ALASKITE) STOCK

— PHASE I —

-  BIOTITE QUARTZ MONZONITE
-  SPECKLED GRANODIORITE DYKES
-  SPECKLED BIOTITE GRANODIORITE PSEUDOBRÉCCIA



## NELSON INTRUSIONS

-  MASSIVE GRANODIORITE - DIORITE (KING SOLOMON MTN. AND KETTLE RIVER VALLEY)
-  FOLIATED GRANODIORITE - DIORITE

## ANARCHIST GROUP

-  METASEDIMENTS
  -  METAVOLCANICS
- } LOCAL ROOF PENDANTS TO SOUTH OF MAP AREA

FIGURE 2

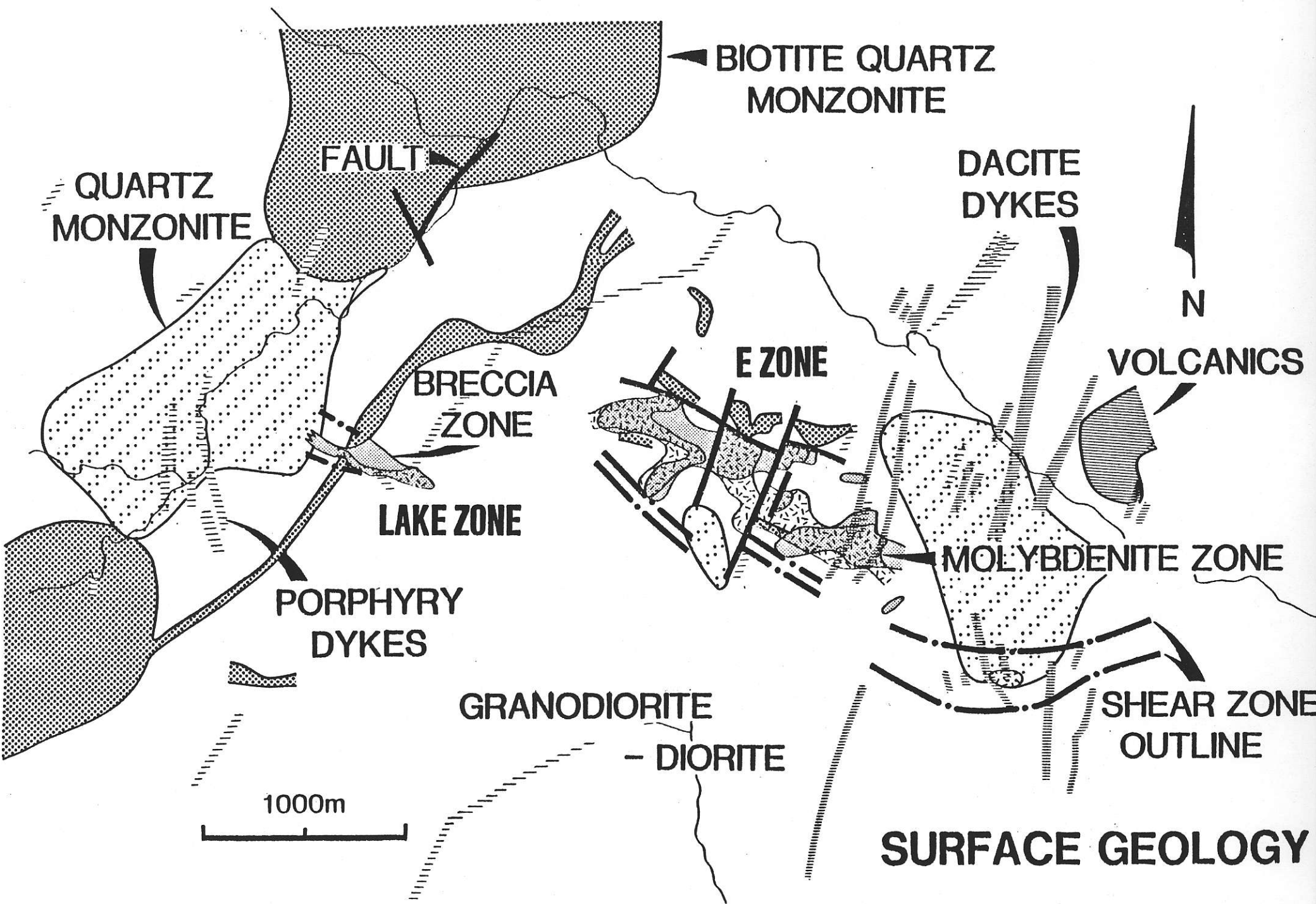


FIGURE 3



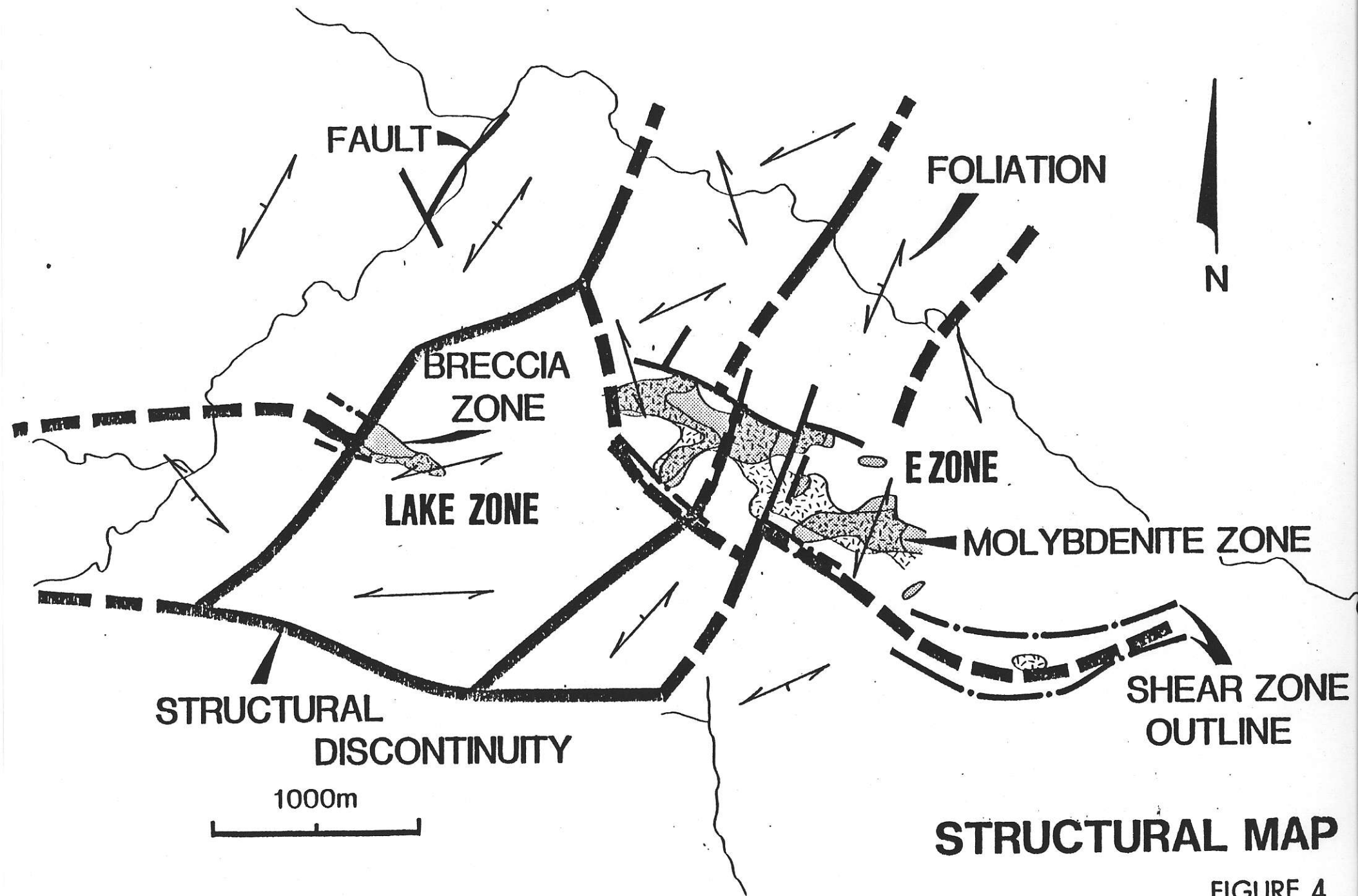


FIGURE 4

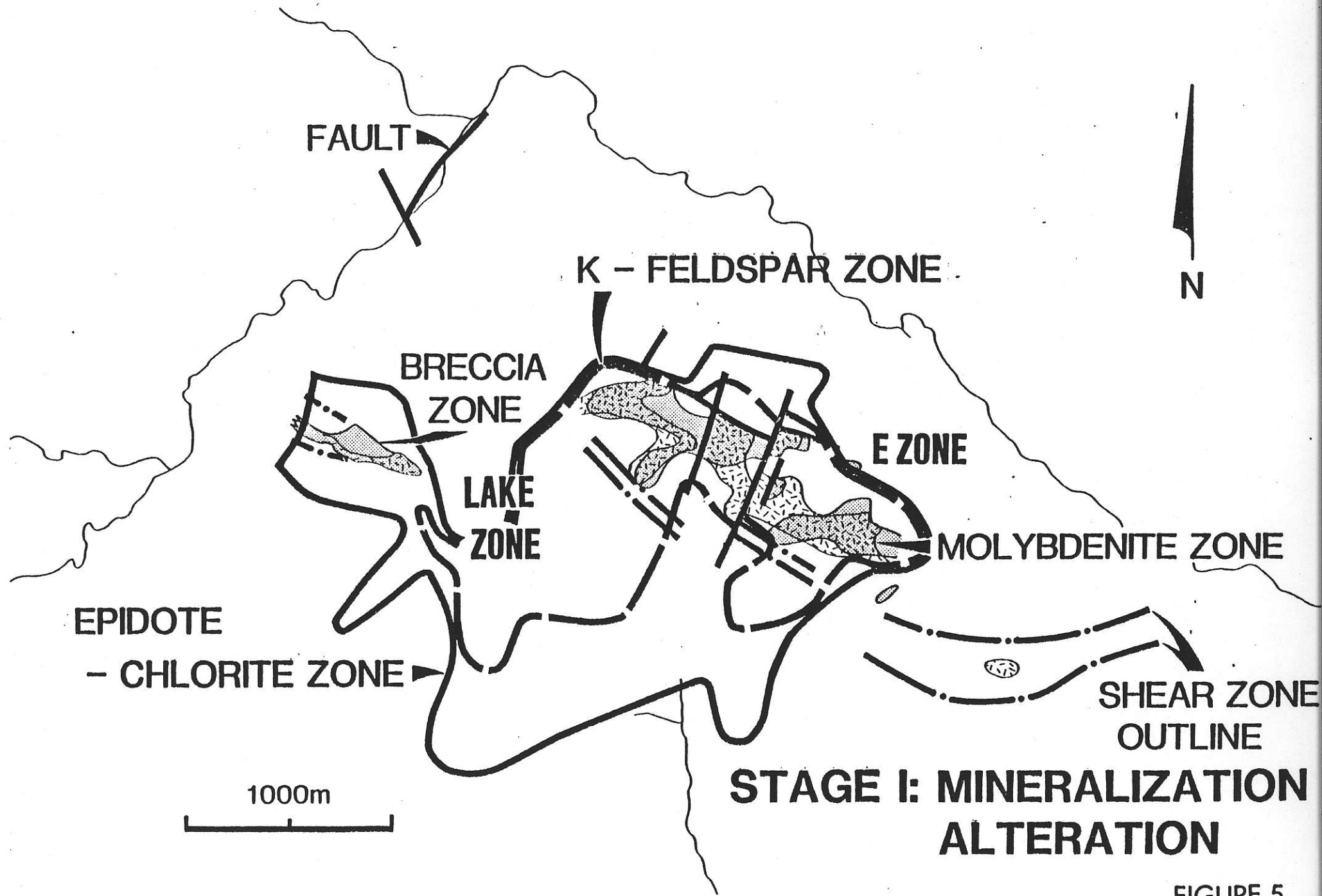


FIGURE 5

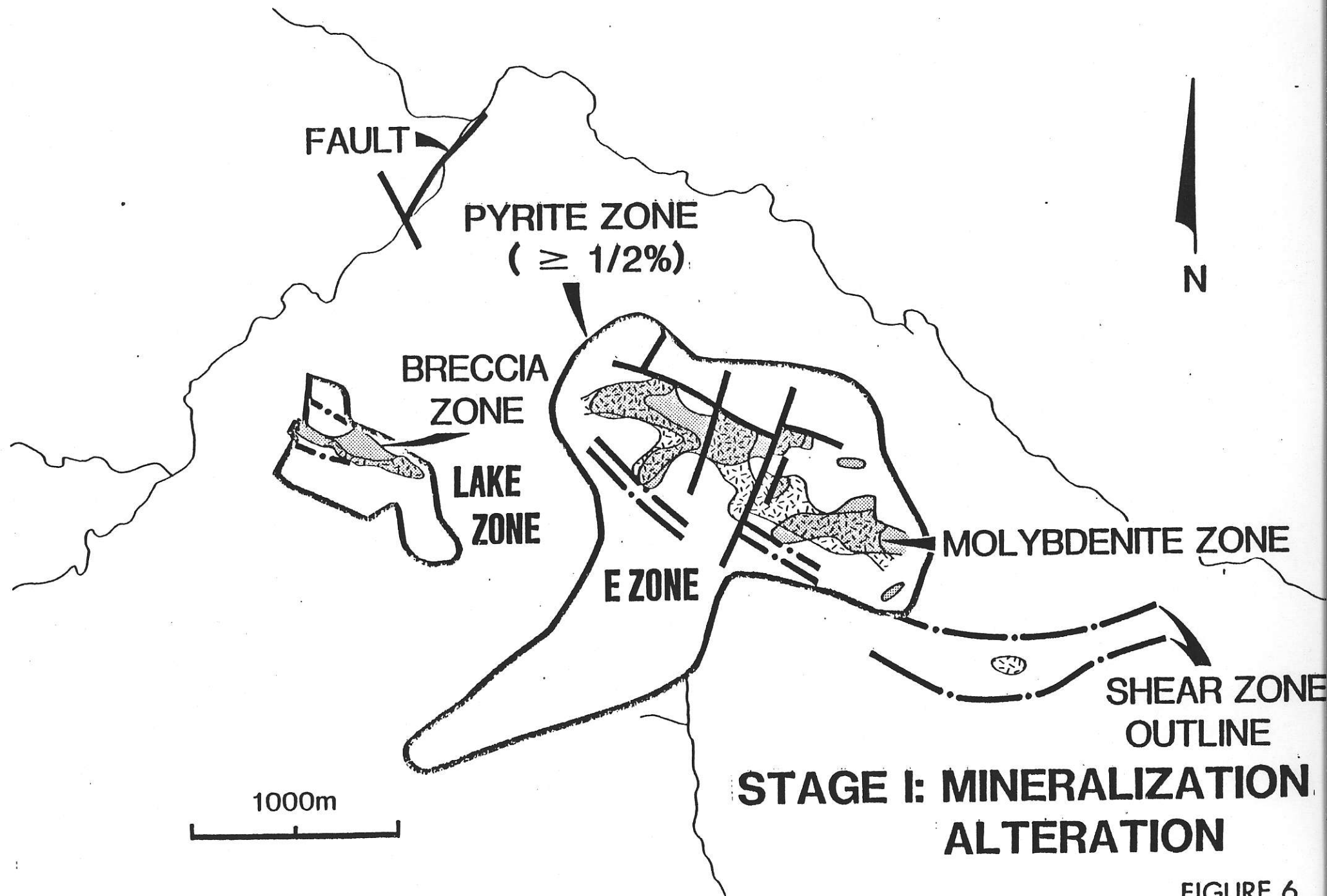


FIGURE 6

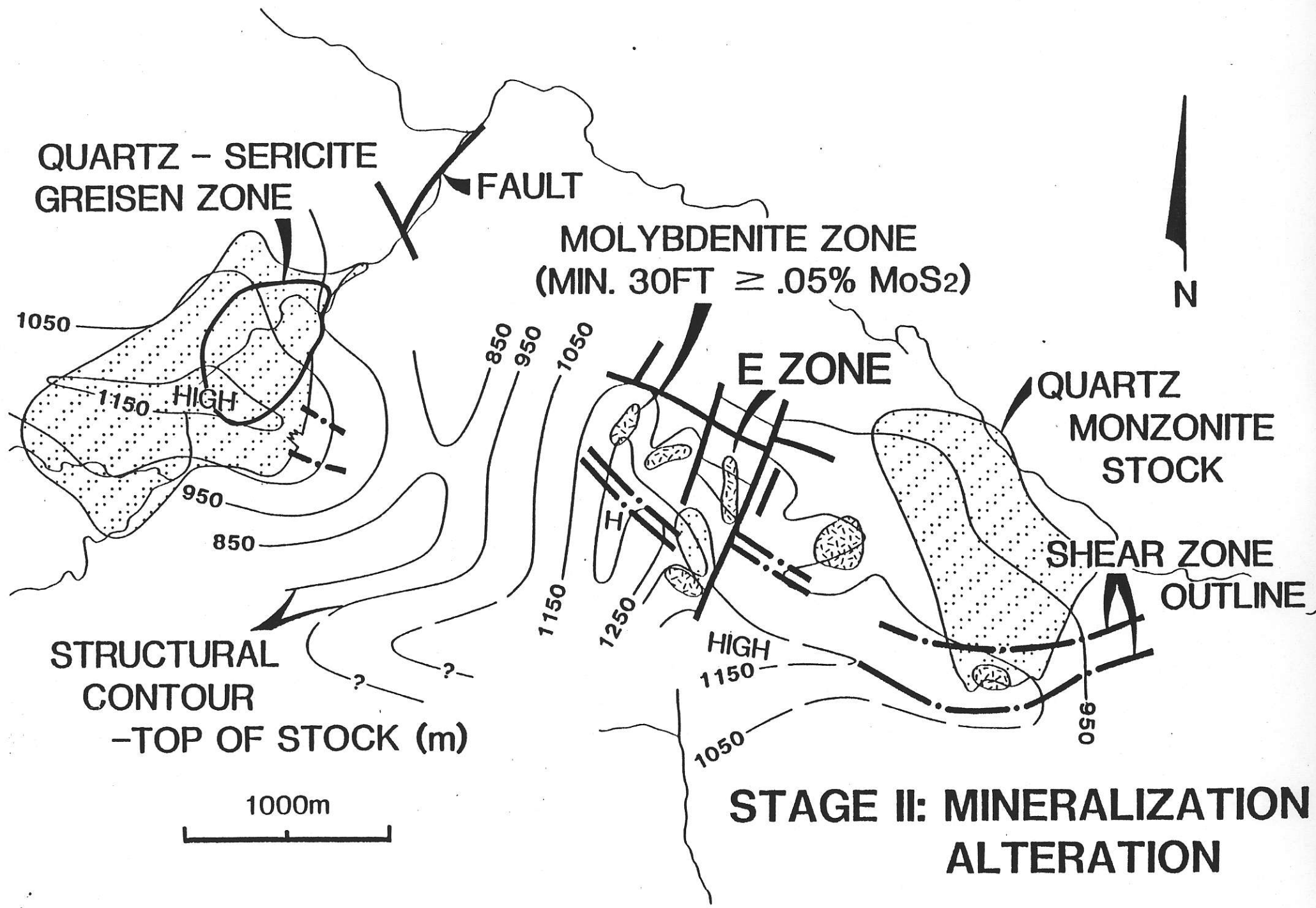
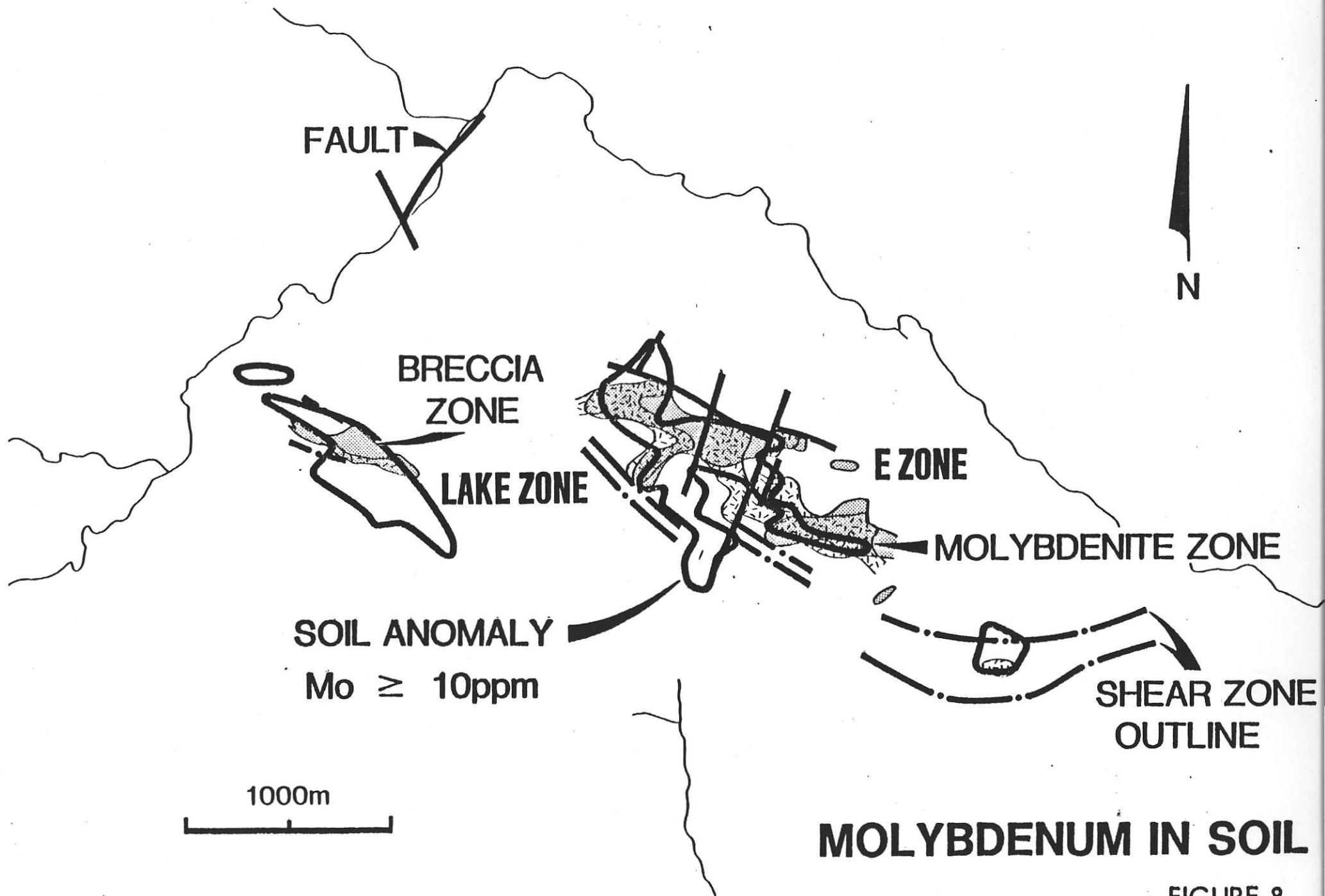


FIGURE 7



## MOLYBDENUM IN SOIL

FIGURE 8

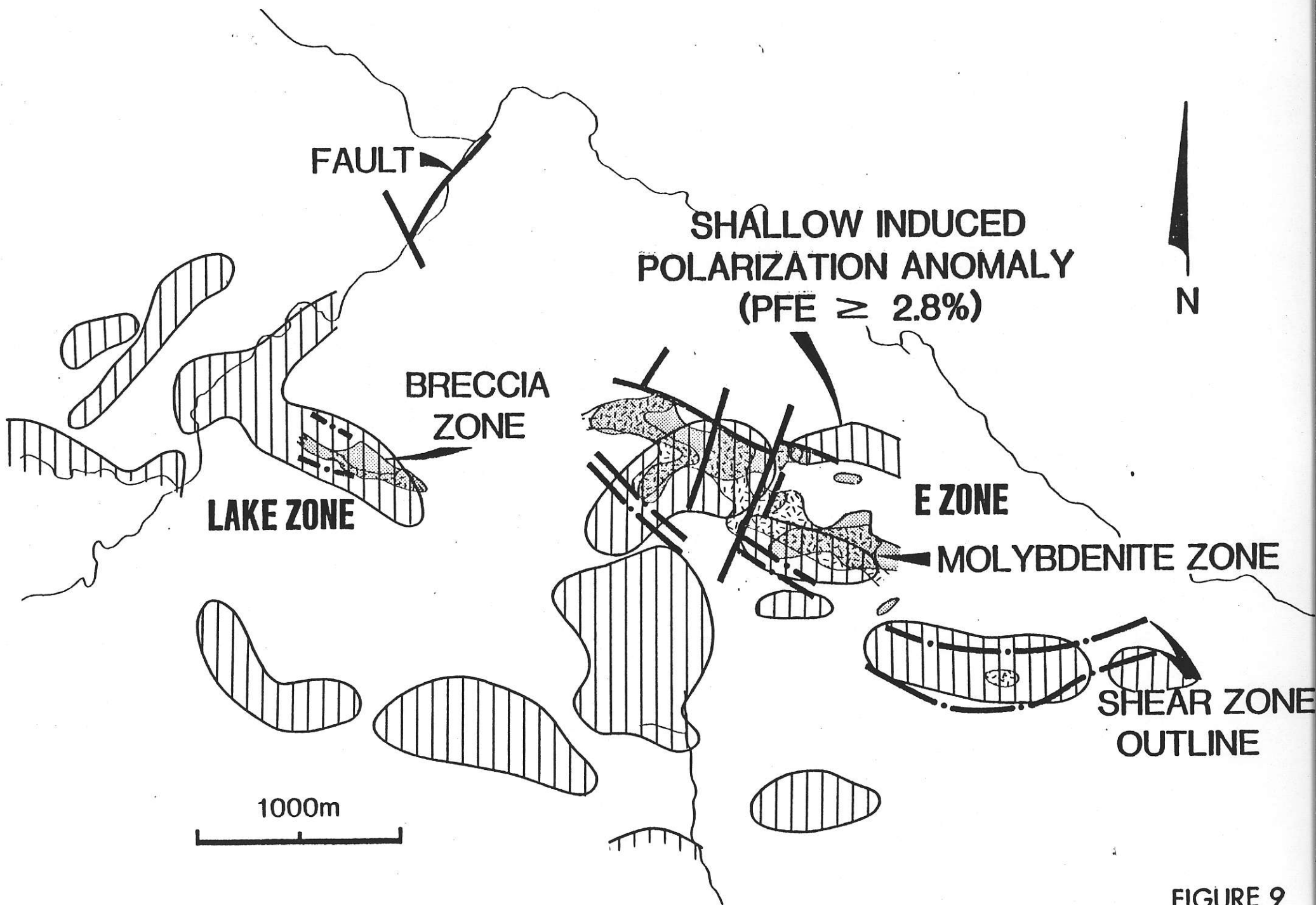
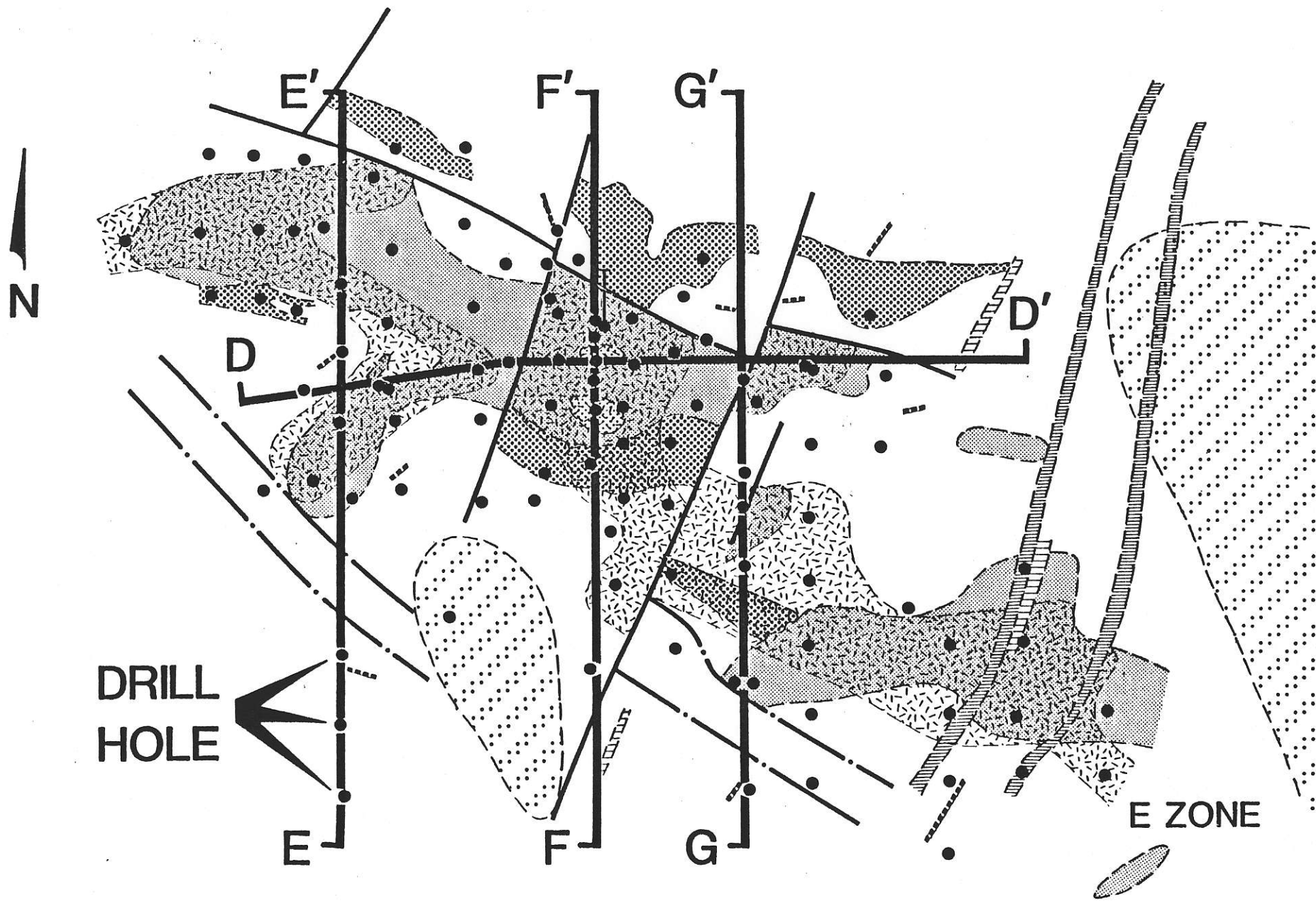


FIGURE 9



**SURFACE GEOLOGY**

FIGURE 10

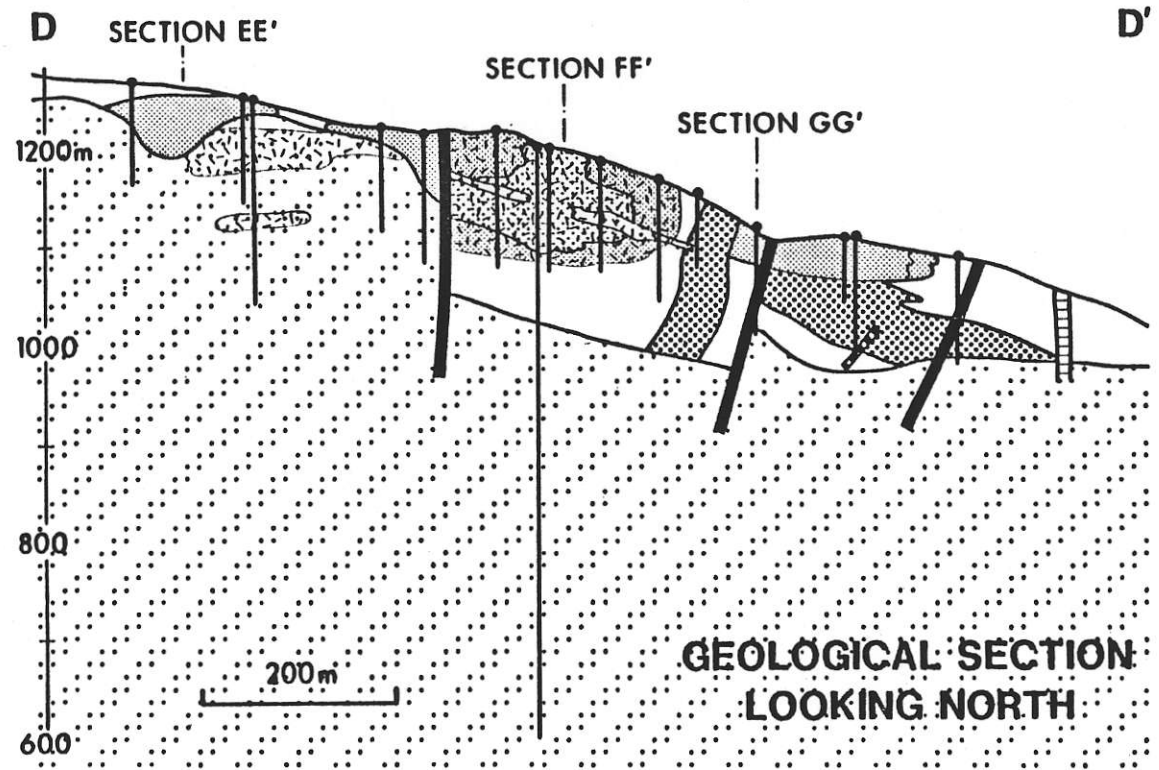


FIGURE 11



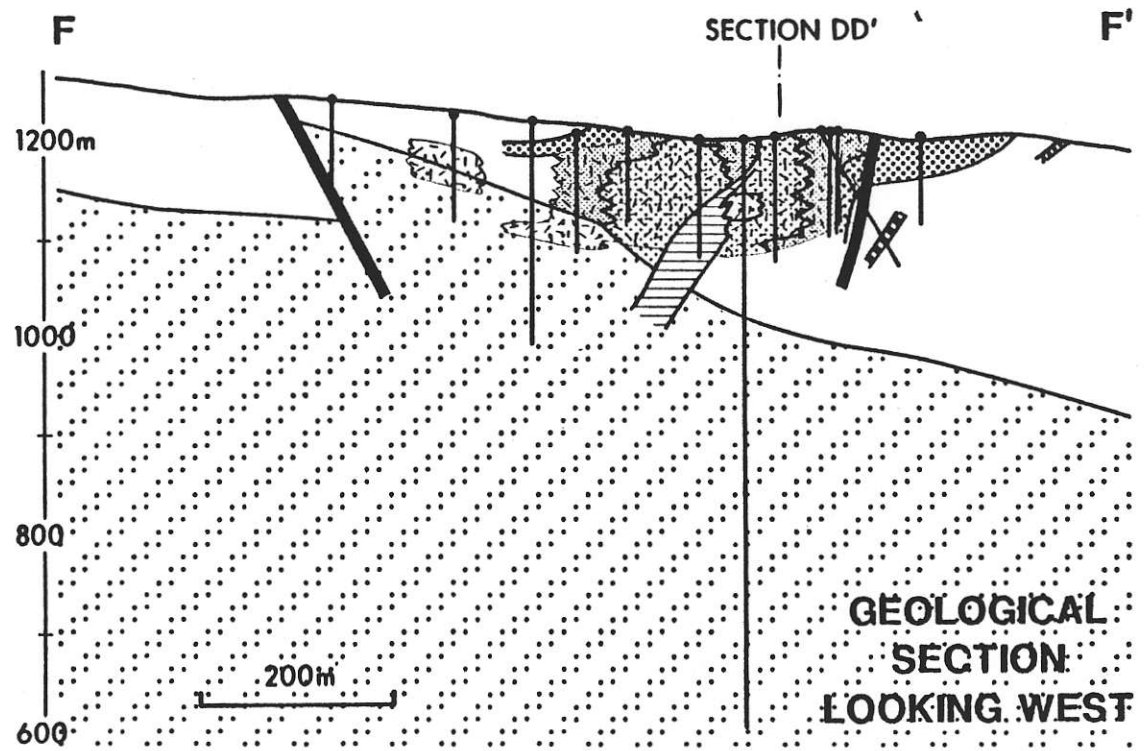


FIGURE 12

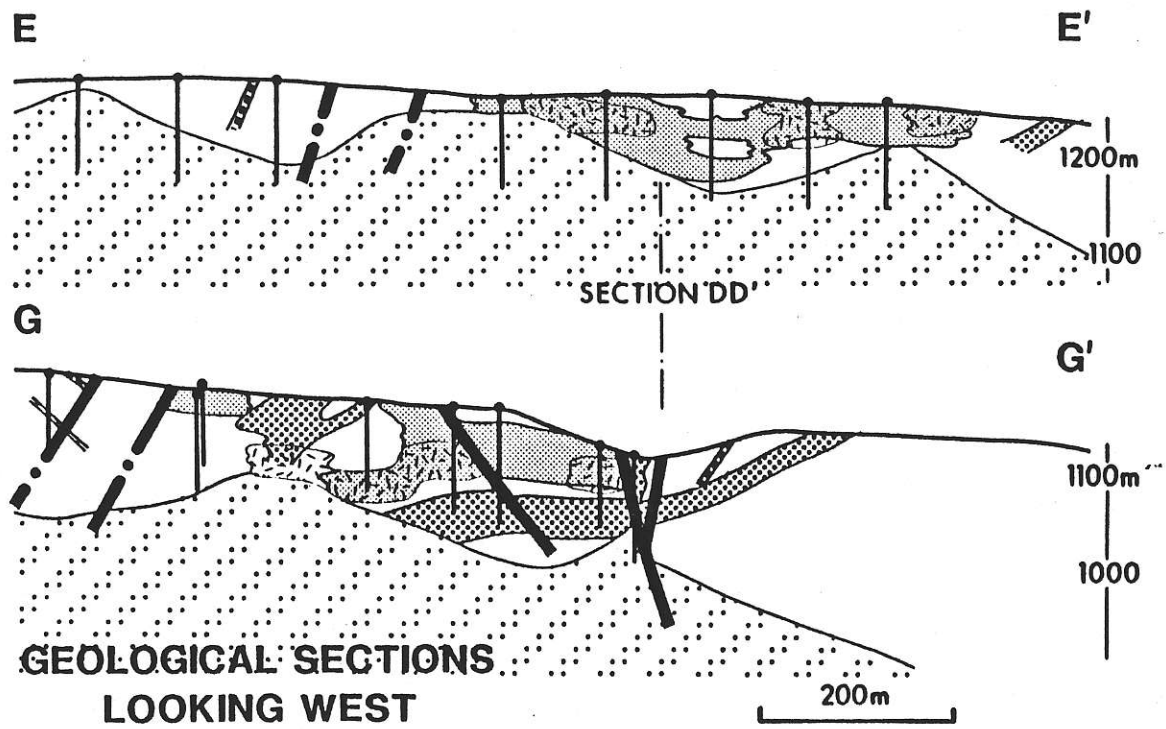
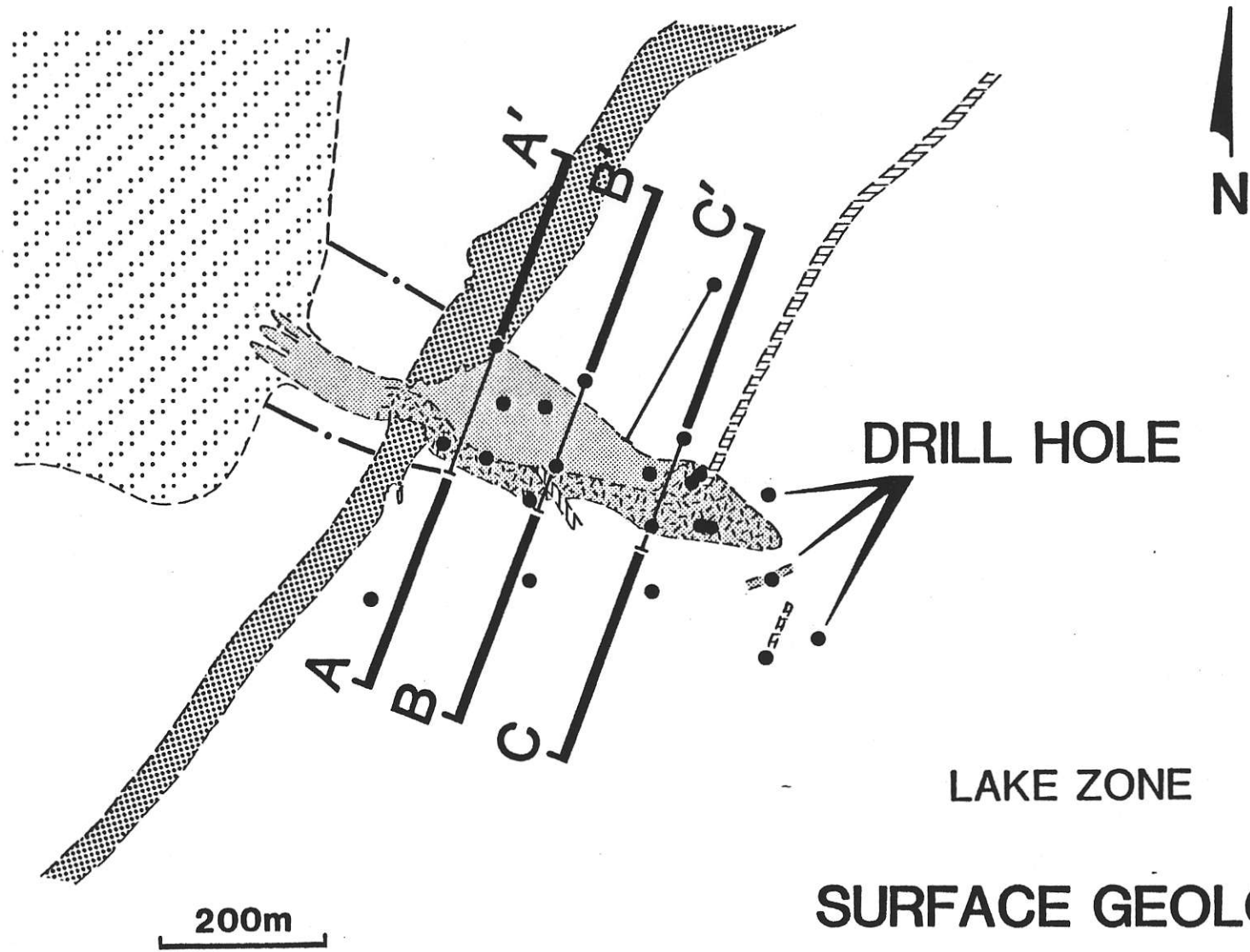


FIGURE 13



**SURFACE GEOLOGY**

FIGURE 14

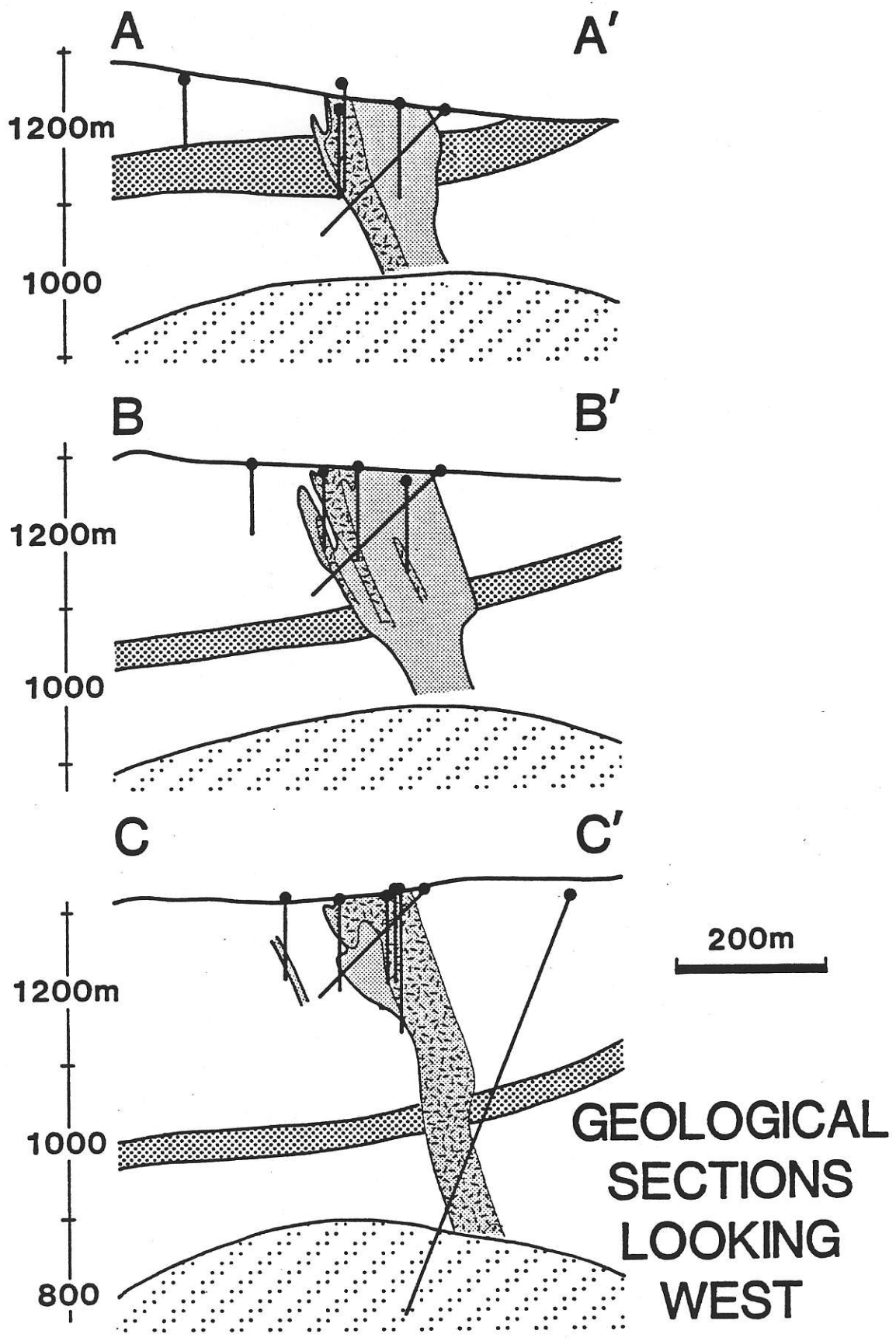


FIGURE 15

# VALHALLA SEQUENCE OF EVENTS

FELDSPAR PORPHYRY DYKES - PHASE III

LEUCOCRATIC QUARTZ MONZONITE STOCK - PHASE II

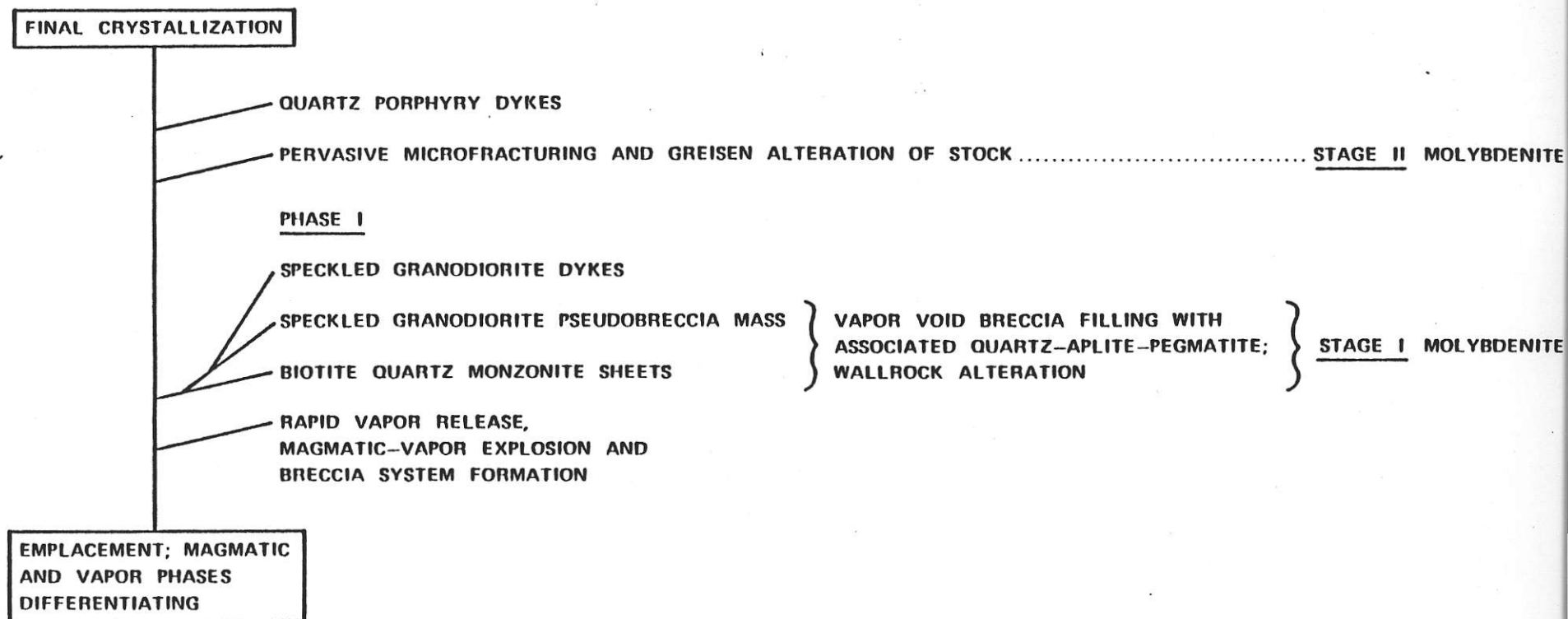


FIGURE 16

BRECCIA AND QUARTZ - APLITE - PEGMATITE  
(MAGMATIC - PNEUMATOLYTIC) FRONT

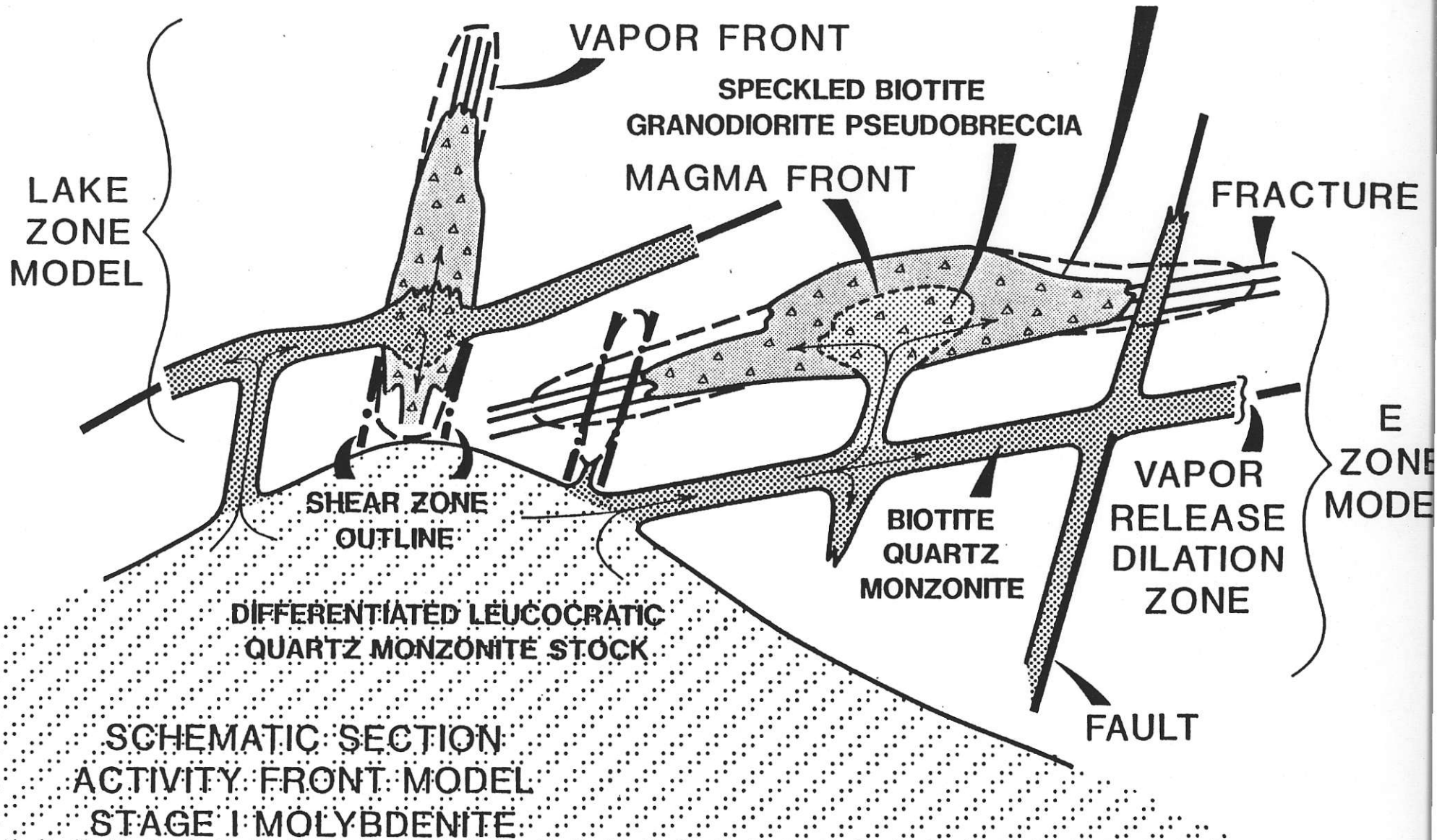


FIGURE 17

### APPENDIX III

#### DRILL INDICATED OPEN PITTABLE RESERVES Carmi Molybdenum Property

(see Appendix IIb in Report by R. M. Falls and  
G. M. Leary, December, 1980)

The calculation of the Drill Indicated Open Pittable Reserves as outlined herein is based on the following assumptions and methods:

1. All holes are weighted equally in terms of surface area except for situations where percussion and diamond drill holes were collared immediately adjacent to one another, in which case an average grade and thickness is usually determined.
2. Below cutoff material is not included in the reserve calculation even though it would be mined and probably milled in a normal pit operation.
3. A tonnage factor of 12 is utilized.
4. Geologic and drill indicated boundaries determine surface area of mineralized zones.
5. Definition of Open Pittable Zones within the Shallow Molybdenite Zones is arbitrarily based on grade, thickness and depth of intercepts.

The reserve calculations are given in Table 1 and a summary of mineralized drill hole intercepts is given in Table 2 below. Figures 2, 3, 10 and 14 illustrate the Shallow Molybdenite Zones and Open Pittable Molybdenite Zones in plan.

TABLE 1

Drill Indicated Open Pittable Reserves Calculation  
(Modified after G. M. Leary, April 21, 1980)

<u>Zone</u>	<u>Area (sq. ft.)</u>	<u>Average Mineable Vertical Thickness or Height (feet)</u>	<u>Million Metric Tonnes (Tons X .90909)</u>	<u>Average Grade (% MoS<sub>2</sub>)</u>
<u>E ZONE</u>				
Central Zone	550 X 550	253	5.8	.131
Central Zone, Southeast Extension	1500 X 300	165	5.6	.082
Northwest Zone	800 X 175 } 400 X 150 }	92	1.4	.082
West Zone	1050 X 350	64	1.8	.107
East Zone	300 X 400	77	0.7	.138
Southeast Zone	500 X 500 (P72 & P83 area only)	89	1.7	.095
			17.0	.105
			18.7 (tons)	
<u>LAKE ZONE</u>				
East Zone	600 X 175	300	2.4	.118
West Zone	600 X 100	250	1.3	.095
			3.7	.110
			4.1 (tons)	
			20.7 (tonnes)	.106
			22.8 (tons)	

Note: Tonnage Calculation Formula

Length(ft) X Width(ft) X Avg Vertical Thickness or Height(ft) X .90909 = Tonnes



TABLE 2

Summary of Mineralized Intercepts within  
Drill Indicated Open Pittable Molybdenite Zones  
(Modified after G. M. Leary, April 21, 1980)

Cutoff: Minimum 30 feet equal to or greater than .05% MoS<sub>2</sub>;  
Top of intercept equal to or less than 100 feet  
from surface with exceptions shown by an asterisk (\*)

<u>Zone</u>	<u>Drill Hole</u>	<u>Cumulative Intercept Length (feet)</u>	<u>% MoS<sub>2</sub></u>
<u>E ZONE</u>			
Central Zone	V 12	375	.189
	V 9	219	.085
	V 7	315	.149
	V 6	300	.112
	I-1	110	.124
	I-12	138	.123
	V 10	224	.154
	V 11	198	.145
	V 8	195	.165
	P 13	370	.144
	80 DDH-3	271	.084
	85 P-163	<u>317</u>	<u>.080</u>
		Avg. 253	Wtd. Avg. .131
Central Zone Southeast Extension	I-2	145	.061
	P 9	250	.069
	P 43	260	.074
	P 41	200	.082
	P 18	320	.064
	79 P 106	20	.147
	P 44	140	.064
	79 P 105	240	.086
	*79 P 102	<u>110</u>	<u>.064</u>
		Avg. 165	Wtd. Avg. .082
Northwest Zone	K-2, P-1	43	.169
	*P 29	190	.074
	79 P 119	70	.056
	79 P 117	<u>65</u>	<u>.077</u>
		Avg. 92	Wtd. Avg. .082

TABLE 2, continued

<u>Zone</u>	<u>Drill Hole</u>	<u>Cumulative Intercept Length (feet)</u>	<u>% MoS<sub>2</sub></u>	
West Zone	79 P 110	30	.073	
	P 22	60	.051	
	P 23, V 19	155	.155	
	79 P 112	20	.136	
	79 P 115	90	.084	
	V 13	<u>30</u>	<u>.061</u>	
		Avg. 64	Wtd. Avg. .107	
East Zone	V 15, I-13	89	.187	
	77 - 22	<u>65.6</u>	<u>.071</u>	
		Avg. 77.3	Wtd. Avg. .138	
Southeast Zone	P 72	128	.080	
	79 P 83	<u>50</u>	<u>.135</u>	
		Avg. 89	Wtd. Avg. .095	
	*P 97	40	.081	
	P 96	60	.058	
	P 90	30	.059	
	P 89	30	.061	
	P 80	<u>30</u>	<u>.089</u>	
		Avg. 53	Wtd. Avg. .084	
	<u>LAKE ZONE</u>			
	East Zone	<sup>+</sup> P 33, V 18	570	.116
<sup>+</sup> P 32, V 17		115	.137	
P 35		170	.092	
80 DDH-6		<u>200</u>	<u>.136</u>	
		Avg. 264	Wtd. Avg. .118	
West Zone	P 38	290	.091	
	P 39	150	.080	
	*P 40	120	.062	
	79 P 131	90	.096	
	80 DDH-4	49.9	.070	
	80 DDH-5	<u>103</u>	<u>.178</u>	
	Avg. 134	Wtd. Avg. .095		

<sup>+</sup>Did not use assay data from percussion holes to determine average intercept grade.

# GEOLOGICAL LEGEND

(Modified after G. M. Leary and R. M. Falls, May, 1981)

## NIPPLE MOUNTAIN SERIES



-  DACITE DYKES
-  FELSIC - MAFIC FLOWS AND FRAGMENTALS

## VALHALLA INTRUSIONS



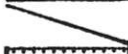
— PHASE III —

-  FELDSPAR PORPHYRY DYKES

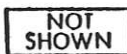
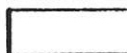
— PHASE II —

-  QUARTZ PORPHYRY DYKES
-  LEUCOCRATIC QUARTZ MONZONITE (ALASKITE) STOCK

— PHASE I —

-  BIOTITE QUARTZ MONZONITE
-  SPECKLED GRANODIORITE DYKES
-  SPECKLED BIOTITE GRANODIORITE PSEUDOBBRECCIA

## NELSON INTRUSIONS

-  MASSIVE GRANODIORITE - DIORITE (KING SOLOMON MTN. AND KETTLE RIVER VALLEY)
-  FOLIATED GRANODIORITE - DIORITE

## ANARCHIST GROUP

-  METASEDIMENTS
  -  METAVOLCANICS
- } LOCAL ROOF  
PENDANTS TO SOUTH  
OF MAP AREA

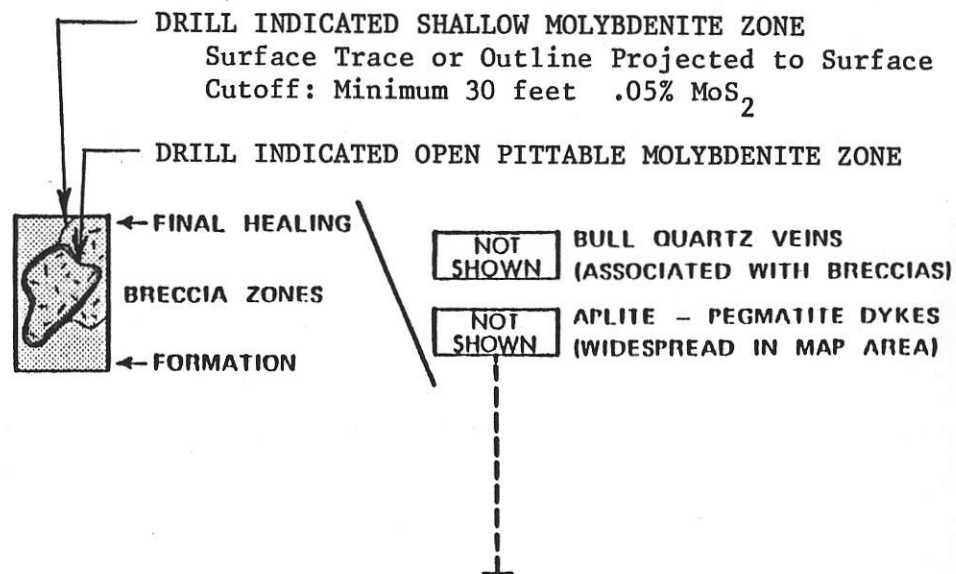
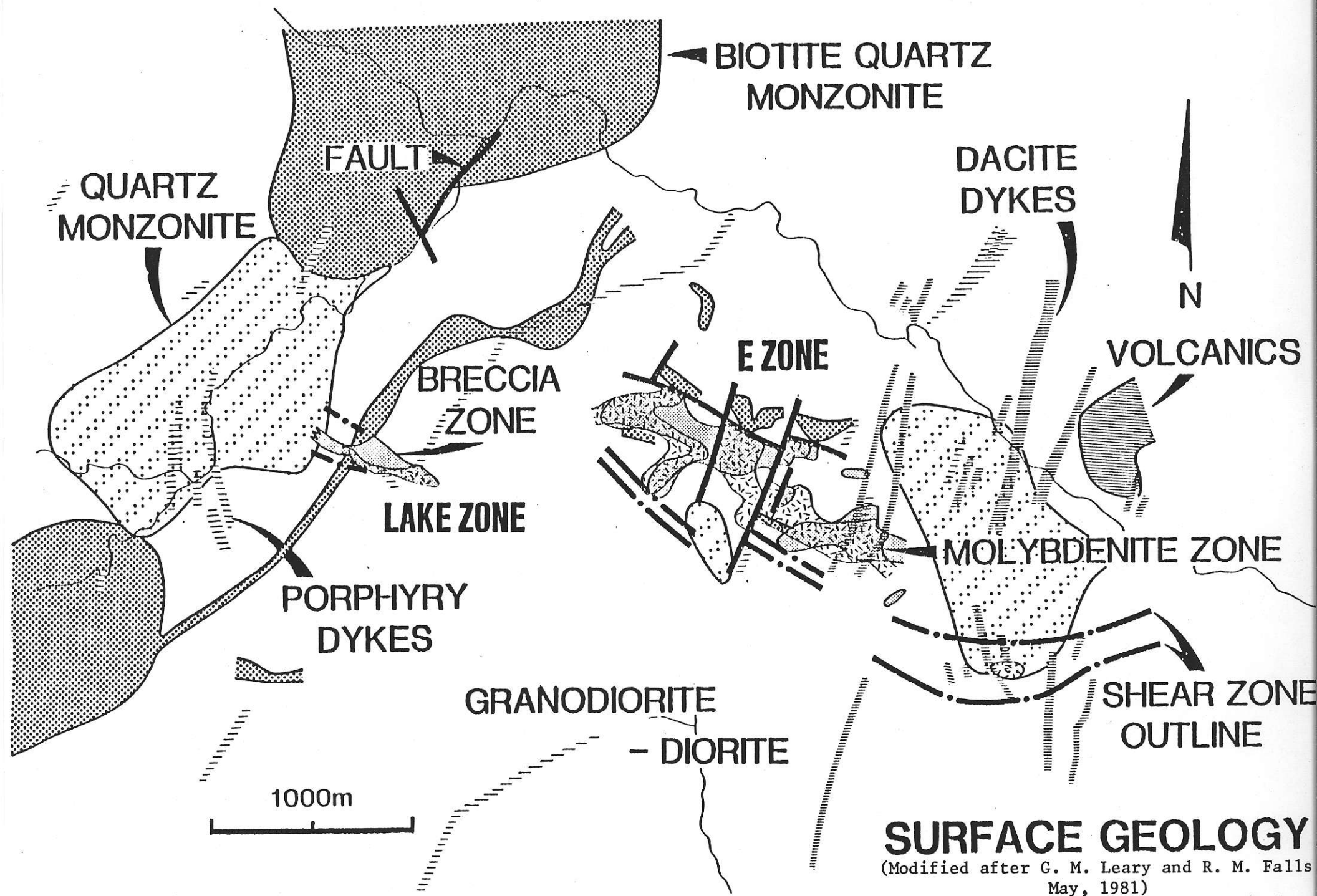


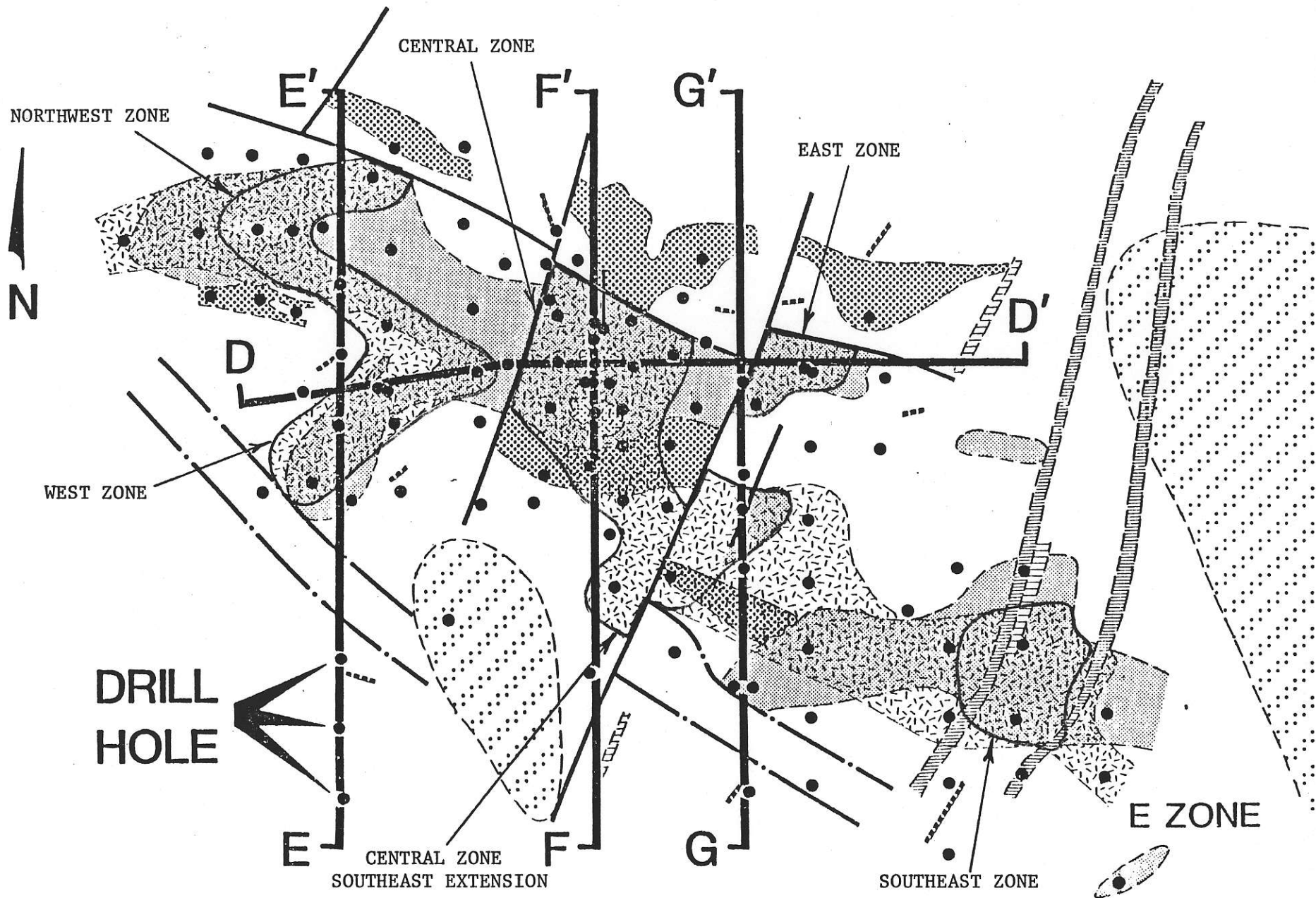
FIGURE 2



**SURFACE GEOLOGY**

(Modified after G. M. Leary and R. M. Falls  
May, 1981)

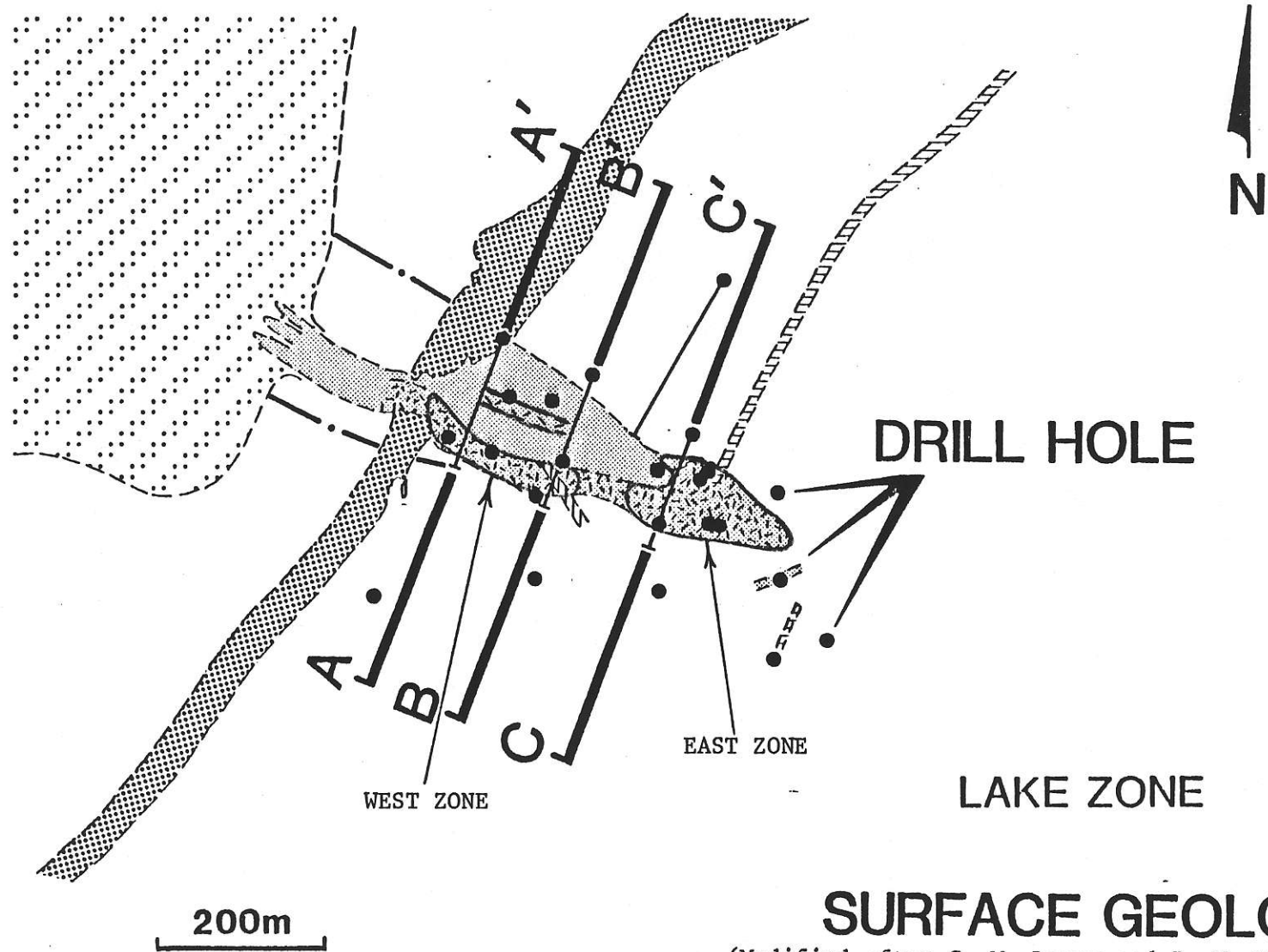
FIGURE 3



# SURFACE GEOLOGY

(Modified after G. M. Leary and R. M. Falls, May, 1981)

FIGURE 10



**SURFACE GEOLOGY**  
 (Modified after G. M. Leary and R. M. Falls, May, 1981)

**FIGURE 14**