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SUJET SUBJECT: Fall '89 Drill Proposal -Lara, Mt. Sicker Projects PN 242, 205

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## Introduction

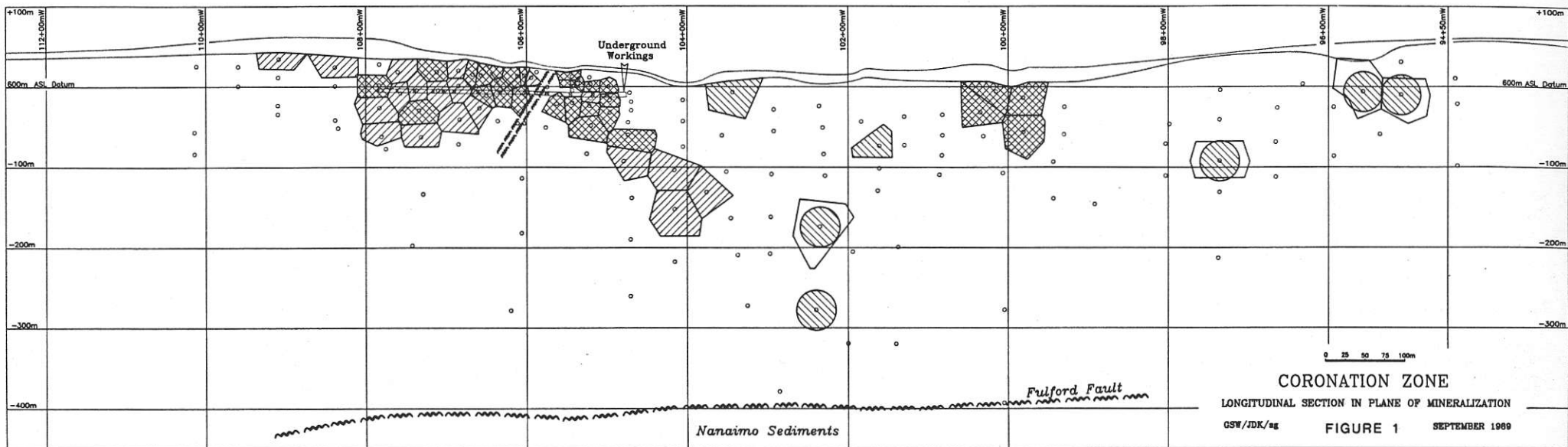
A 31 hole, 6,970 meter drill program is proposed to test volcanogenic massive sulphide targets on the Lara and Mt. Sicker properties. Sixteen holes (3665m) will be drilled on the Lara property and 15 holes (3305m) will be drilled on the Mt. Sicker property. Specific details for each area are discussed below.

## 2. Lara PN 242

### a. Introduction

The main purpose of the spring drill program on the Lara property was to define additional tonnage in and around the Coronation and Coronation Extension zones. Although several mineralized intersections were obtained, grades were not high enough to significantly alter the original mineral inventory estimate of 324,860 tonnes with a grade of 0.91% Cu, 1.26% Pb, 6.01% Zn, 111.1g/T Ag and 4.70g/T Au (NSR = \$101.67/T). The above estimate was determined using a cutoff of \$50 NSR over 2 meters. If a \$30 NSR over 2 meter cutoff is used, the estimated tonnage for detail block "A" and the Coronation Extension zone is 551,295 tonnes with a grade of 0.51% Cu, 0.62% Pb, 3.10% Zn, 68.6g/T Ag, and 2.85g/T Au (NSR = \$58.70/T) (Figure 1). Mintec Inc. is currently evaluating the open pit potential of this mineralization.

A review of the core suggests that the Coronation Zone is a stringer zone associated with a volcanogenic massive sulphide deposit. Evidence supporting this includes the stringery look to the mineralization, the irregular and spotty distribution of the high grade zones, the absence of strong footwall alteration and the lack of a distinct horizon when the zone is not present. An



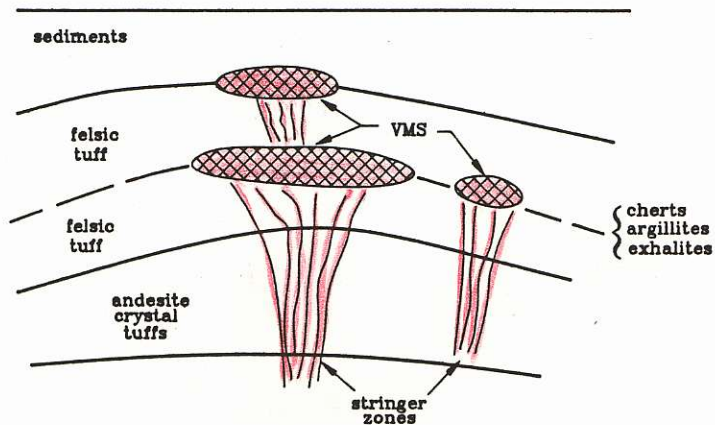
○ Drill hole intercept

	Tonnes	Cu%	Pb%	Zn%	Ag g/T	Au g/T	NSR \$	
	<b>\$50.00 NRS CUTOFF:</b>	324,861	0.91	1.26	6.01	111.07	4.70	101.67
	<b>\$30.00 NSR CUTOFF:</b>	551,295	0.51	0.62	3.10	66.60	2.85	58.70

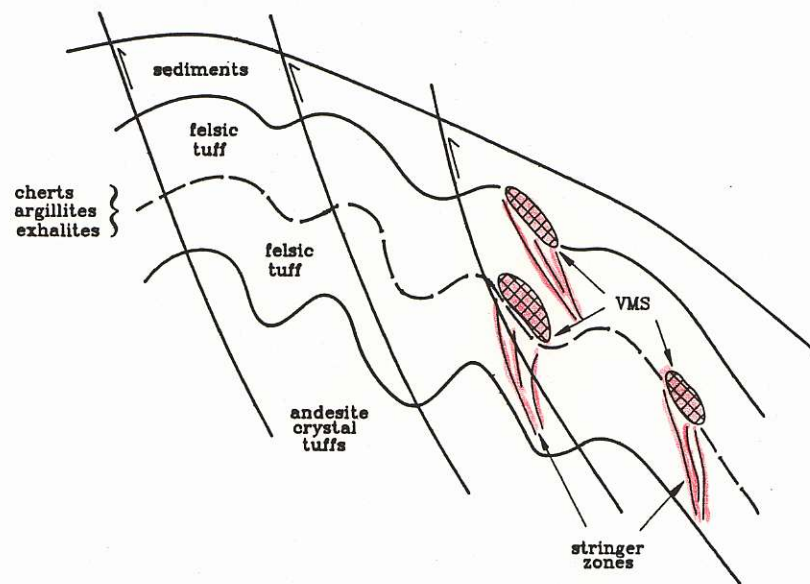
early phase I folding event resulted in an intense stretching (up to 10 to 1) and shallow easterly plunge (10 - 15 degrees) to this mineralized zone. It is also affected by a late thrust faulting event that locally repeats the mineralization (ie. Hanging Wall Zones).

The thrust fault event is a regional feature and is interpreted to have repeated the stratigraphy north of the Coronation Zone (Figure 2). The overall younging direction is to the north as the Sicker volcanics grade into a sedimentary package. The implications of this interpretation is that any one of the mineralized and cherty horizons that occur on the property may be correlative with the VMS horizon that overlies the Coronation stringer zone. To date, these horizons are largely untested as 80% of the drilling on the Lara property has been directed at evaluating the Coronation trend.

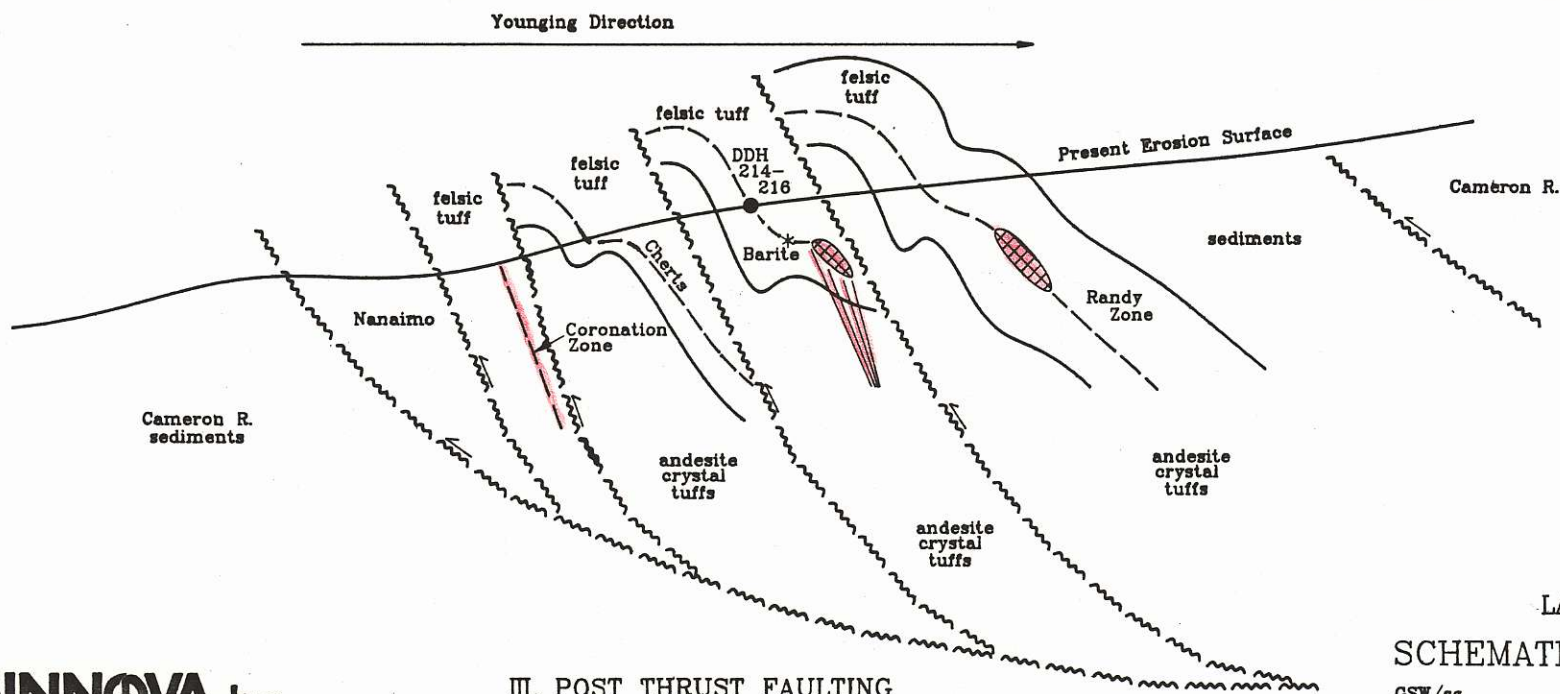
Geological, geophysical (IP, VLF, Mag) and lithogeochemical surveys were carried out along strike and to the north of the Coronation Zone to define potential horizons and any hydrothermal alteration zones that may be associated with a VMS system. Several IP and VLF anomalies were identified and some correlate with known zones of sulphide (py) mineralization. The lithogeochemical survey indicated that there is an elongate, east-west trending zone of Ba enrichment, Na<sub>2</sub>O depletion and spotty Cu and Zn enrichment that occurs stratigraphically above and to the east of the Coronation Zone (Figure 3). Cherty and sulphide-rich horizons occur within and to the north of this anomalous area. One of the best targets is the hole 214 - 216 zone where a tuffaceous unit overlying sericitic felsic tuff assayed 1.07% Zn over 1.55m (hole 214). Near the eastern end of the Lara property a barite - pyrite vein(?) was intersected near the collar of Abermin's hole 110. This mineralization also occurs within the hydrothermally altered zone and may be the strike equivalent of the 214 - 216 zone.



I. POST DEPOSITION

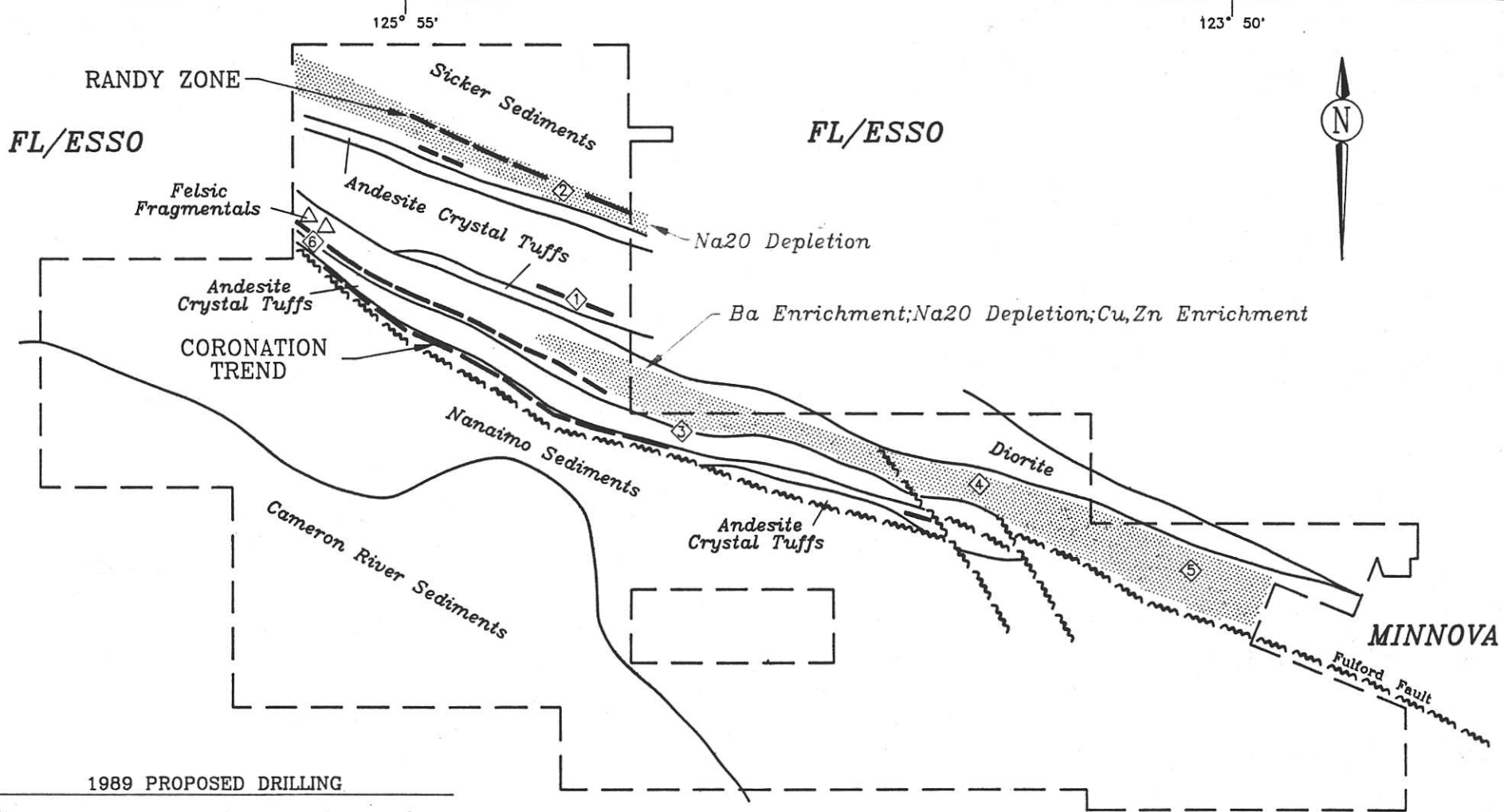


II. POST PHASE I FOLDING



III. POST THRUST FAULTING

FIGURE 2  
LARA PROJECT  
SCHEMATIC CROSS-SECTION  
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- 1989 PROPOSED DRILLING**
- ① 214-216 Horizon (5 Holes / 1135m)
  - ② Randy Zone (2 Holes / 300m)
  - ③ Coronation Extension (2 Holes / 500m)
  - ④ East Grid (2 Holes / 395m)
  - ⑤ Barite/Chert Horizons (3 Holes / 735m)
  - ⑥ West Zn Horizon (2 Holes / 600m)

Mineralized Zone  
 Fault

2 kilometres  
 FIGURE 3  
**LARA PROJECT  
 SCHEMATIC GEOLOGICAL MAP**

The other intensely altered area on the property occurs in the Randy zone near the transition between Sicker volcanics and Sicker sediments. Abermin drilled several holes at or near this contact and intersected a sequence of intensely sericitic quartz-eye crystal tuffs that locally are zinc-enriched (ie. hole 127: 2.56% Zn over 0.5m). A couple of IP and VLF targets that are located south of this transition remain untested.

b. Proposed Drilling

The fall drill program, consists of 16 holes totalling 3665 meters. The focus of this program is to evaluate specific horizons that have enriched base metal contents and/or occur within areas of anomalous geochemistry. Details of the drilling are presented in Table 1 and hole locations are given in Figure 4.

Five holes (P-1 to P-5) will test the strike and down-dip extent of a zinc-enriched tuffaceous horizon intersected previously in hole 214. The zone which assayed 1.07% Zn over 1.55m, lies on the northern edge of a well defined IP anomaly that is associated with a sulphide-rich, andesitic crystal tuffs.

Holes P6 and P7 will test an isolated VLF and IP anomaly that occurs within a sequence of altered felsic tuffs on the eastern edge of the Randy Zone.

Holes P8 and P9 will test the stratigraphy to the east of the Coronation Zone. Both holes will test IP and VLF anomalies that possibly correlate with mineralized horizons that occur to the north of the Coronation trend. Anomalous Ba, Na<sub>2</sub>O, Cu and Zn litho-geochemistry suggest that there has been hydrothermal activity in the area.

Holes P10 and P11 will evaluate a well-defined VLF anomaly in the eastern part of the property. Previous drilling by Abermin identified thin sulphide-rich tuffaceous units that are enriched in zinc (0.26% Zn over 0.6m). Altered, sulphide-rich (5-10% py) andesitic crystal tuffs underlie these horizons.

**Table 1 Proposed Drilling – Lara**

-7-

hole #	location	dip (deg)	azimuth (deg)	depth (m)	comment
<b><u>a. DDH 214 -216 Horizon</u></b>					
P1	58+25W 10+40N*	-50	208	150	100m stepout to W of 21
P2	57+76W 19+27N*	-55	208	260	test downdip of P1
P3	56+57W 17+43N*	-55	208	150	100m stepout to E of 214
P4	56+38W 18+30N*	-65	208	325	test downdip of P2
P5	62+40W 21+00N*	-55	208	250	600m stepout to W of 214
			<b>Subtotal</b>	<b>1135m</b>	
<b><u>b. Randy Zone</u></b>					
P6	56+22W 25+54N*	-50	208	100	test IP, VLF & soil geochem
P7	55+87W 25+54N*	-55	208	200	test downdip of P6
			<b>Subtotal</b>	<b>300m</b>	
<b><u>c. Coronation Zone</u></b>					
P8	47+55W 7+50N*	-65	208	275	250m east of last drill fence CEZ
P9	46+65W 8+66N*	-50	208	225	test IP and geochem anomalies in hanging wall to CEZ
			<b>Subtotal</b>	<b>500m</b>	
<b><u>d. East Grid</u></b>					
P10	25+50W 5+75N*	-70	208	220	150m downdip of Zn horizon (.26% Zn over .6m) in DDH 106
P11	24+66W 4+71N*	-65	208	175	test VLF, IP anomaly 100m east of DDH 105 106
			<b>Subtotal</b>	<b>395m</b>	
<b><u>e. Barite/Chert Horizon</u></b>					
P12	57+00W 111+87N	-50	208	230	test barite, chert horizons & VLF, IP anomalies
P13	55+00W 111+55N	-50	208	230	as above
P14	53+00W 115+20N	-50	208	275	test VLF, IP anomalies at QFP/Felsic Tuff contact
			<b>Subtotal</b>	<b>735m</b>	

**f. West Zn Horizon**

-8-

P15	123+00W 104+78N	-60	208	260	400m W of hole 255 test IP, Soil Geochem
P16	123+00W 105+54N	-65	208	340	downdip of P15
			<b>Subtotal</b>	<b>600m</b>	
			<b>Total</b>	<b>3665m</b>	<b>16 Holes</b>



Three holes (P12 to P14) will test the extent and significance of cherty horizons and a barite - pyrite vein (?) located in the far eastern part of the property. Abermin hole 110 collared in a barite vein which contains thin (0.1m) patches of semi-massive pyrite. All 3 holes will be testing VLF and IP anomalies in the vicinity of the barite occurrence.

Lastly, holes P15 and P16 will test an IP anomaly on the far western side of the property which occurs in an area of coarse felsic fragmentals. Two holes tested this laterally extensive anomaly in the spring and both intersected tuffaceous zones with enriched zinc and copper values (hole 254: 0.61% Cu, 815ppm Zn over 1.3m; hole 255: 352ppm Cu; 1836ppm Zn over 2.6m)

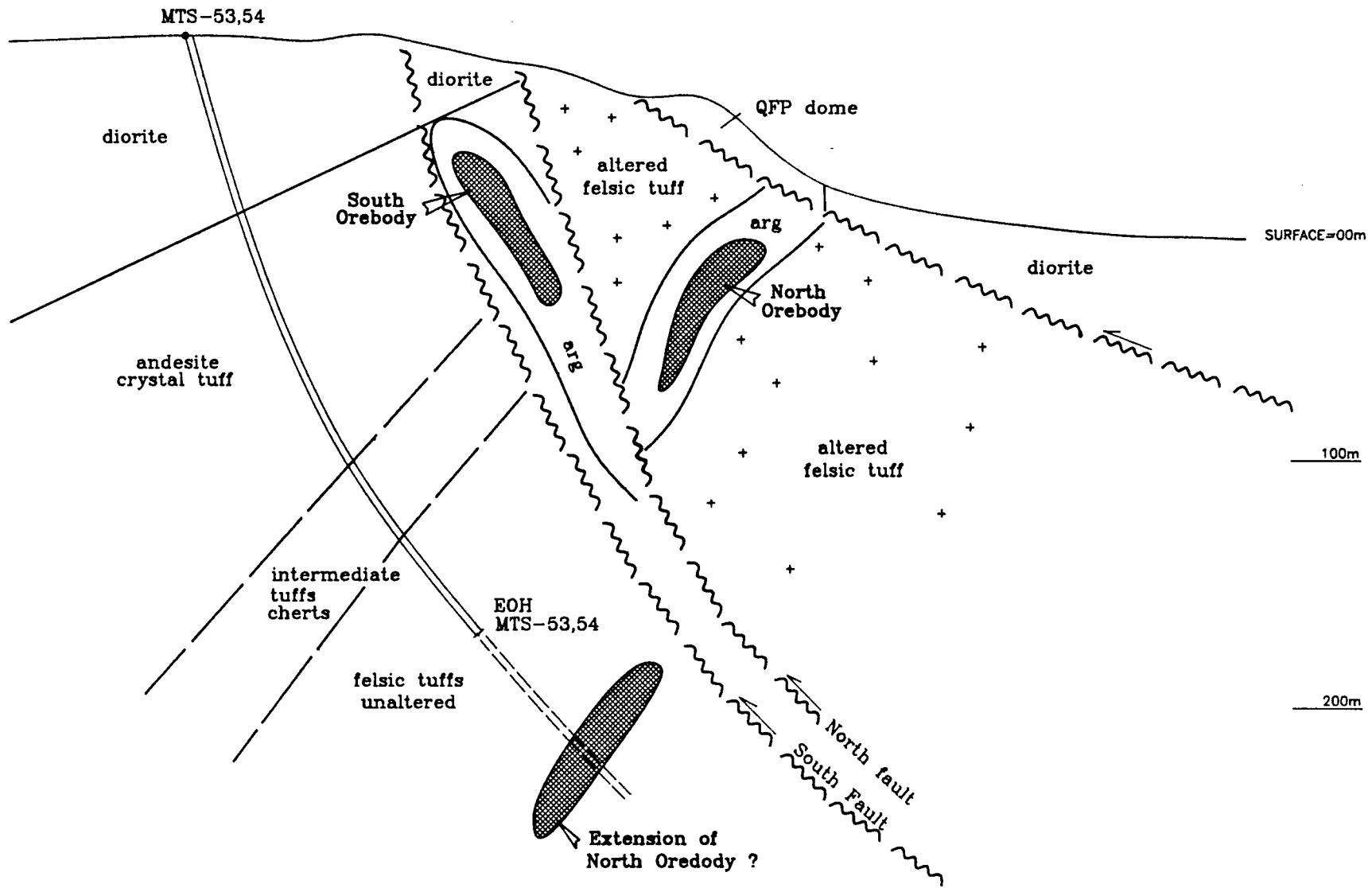
### 3. Mt. Sicker PN 205

#### a. Introduction

A structural re-interpretation and a re-examination of the geology and geophysics has enhanced the massive sulphide potential of the Lenora-Tyee area. The North orebody is a steeply southerly dipping, flat lying to shallow easterly plunging, zinc-barite-rich massive sulphide zone that is intimately associated with argillites and strongly sericitic felsic tuffs. The South orebody is a fault-bounded zone comprised mainly of quartz-chalcopyrite stringers and blocks of barite-zinc ore. The relationship of these 2 ore zones is illustrated in Figure 5. The faults that bound the South Ore Zone are interpreted as thrust faults with an overall southerly movement similar to that of the Fulford Fault. The net result of a series of these thrust faults is that the North ore horizon will be present at depth. The 1988 drill program in the Lenora - Tyee area suggested that a series of intermediate tuffs and cherts is the down-dip extension of the massive sulphide horizon. These are now interpreted as another mineralized interval that occurs stratigraphically higher in the sequence. In light of this modified interpretation, it appears that some of the eastern 1988 drill holes on the Lenora-Tyee

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NOTE: Vertical Scale Exaggerated

FIGURE 5  
 LENORA-TYEE  
 SCHEMATIC NORTH-SOUTH SECTION

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AUGUST 1989

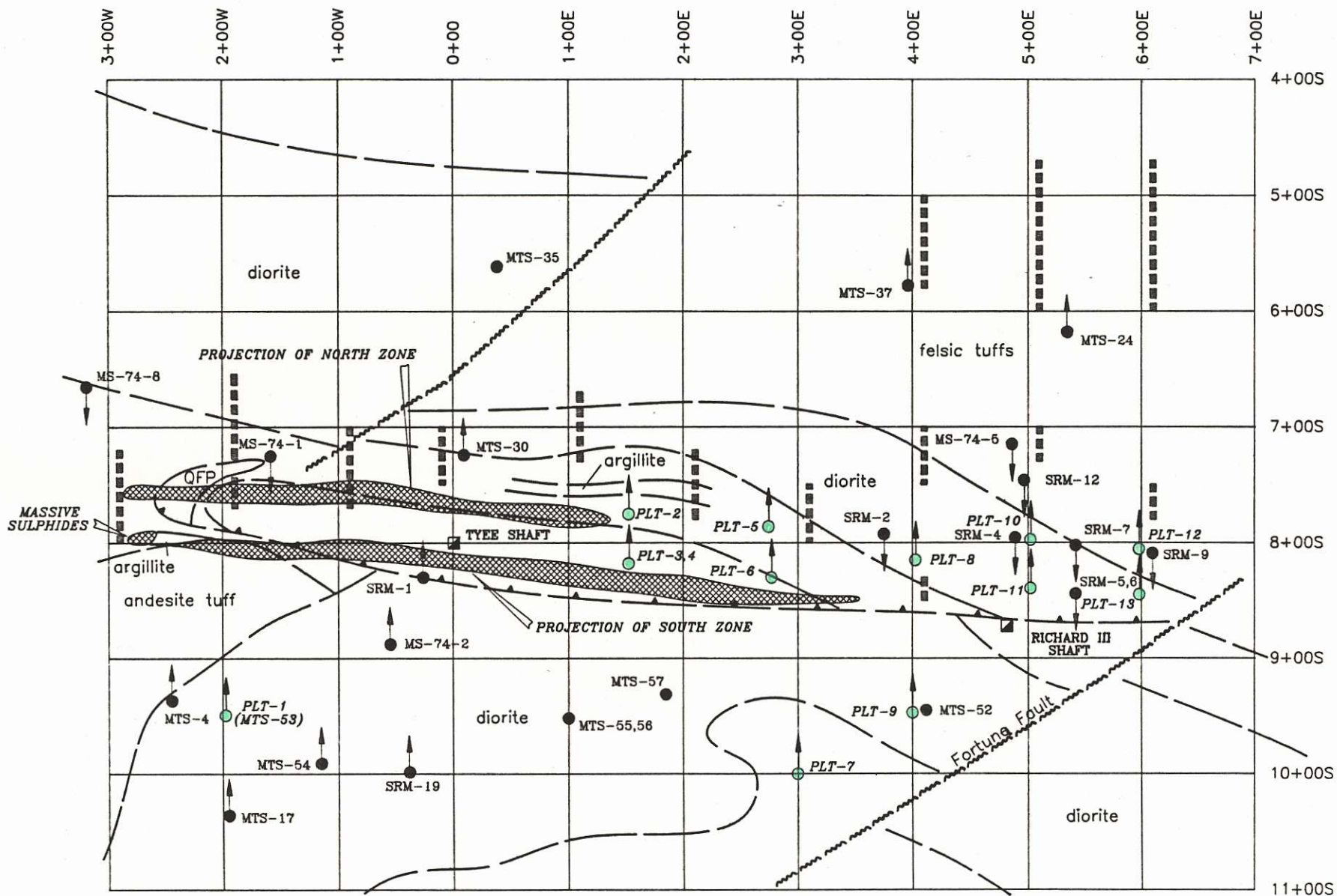
horizon stopped short of testing the down-dip equivalent of the North ore zone.

The North orebody is expressed geophysically as a moderate to strong IP chargeability anomaly (Figure 6). This anomaly occurs along a strike length of 600 meters extending from 3W to 3E. At its eastern end it is truncated by a steep, southerly dipping, west-northwesterly trending diorite dikes. This anomaly occurs to the north and east of the diorite and can be traced from 4E to 6+50E where it is cut off by the northeasterly-trending Fortuna Fault. Previous drilling in this area was carried out by Serem and Mt. Sicker Mines. However all of the drill holes were drilled to the south to test the extent of the South orebody. Consequently any southerly dipping horizons associated with the IP anomaly were not tested. Geochemistry of felsic volcanics intersected in these holes indicates that they have anomalous Ba, Zn and Na<sub>2</sub>O values similar to these values in the felsic volcanics which host the North massive sulphide zone. Part of the 1989 drill program will be testing this virgin, shallow target.

The North ore body was largely mined out in the 1940's by Wartime Metals Ltd. A review of available sections and plans indicates that their last few stopes had impressive ore widths and grades as indicated by the following values obtained from chip sampling at the eastern end of the 2-14 stope:

2.4% Cu, 14.9% Zn, 0.87% Pb, 0.20 oz/T Au, 4.30 oz/T Ag over  
3.2ft (0.98m)  
3.8% Cu, 12.0% Zn, tr Pb, 0.24 oz/T Au, 2.65 oz/T Ag over 5.1ft  
(1.55m)

Mining of the North orebody, occurred primarily along the Lenora #2 level and the outline of the North zone which was mined is shown on Figure 7, a vertical longitudinal of the North horizon. There is no indication that the zone was explored above the #2 level even though the black argillites that are intimately associated with the mineralization extend to the surface.



LEGEND

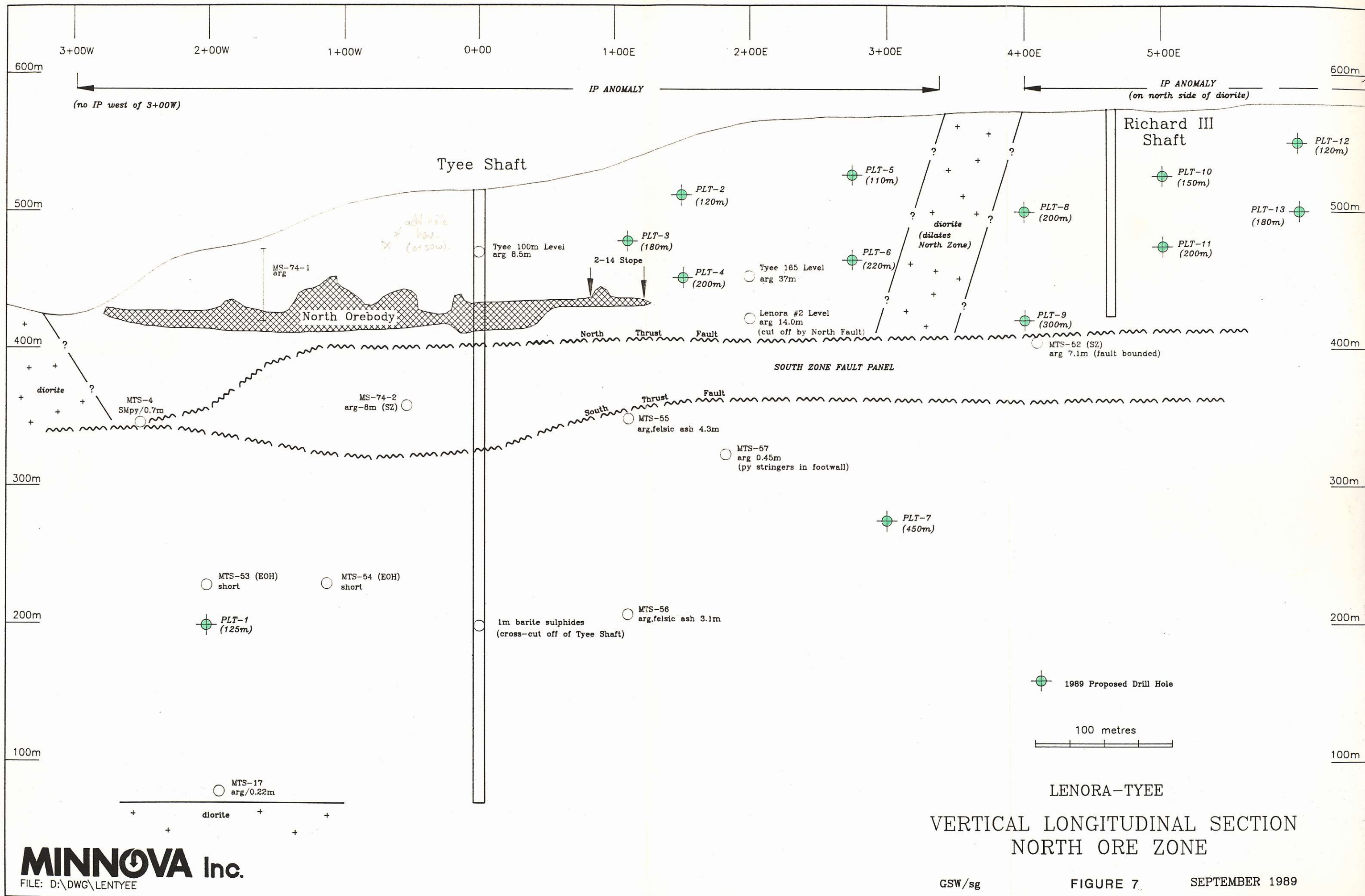
- Previous Drill Hole Location
- Proposed Drill Hole Location
- IP Anomaly

FIGURE 6  
 MT. SICKER PROPERTY  
 LENORA-TYEE-RICHARD III  
 PLAN VIEW

GSW/sg

SEPTEMBER 1989





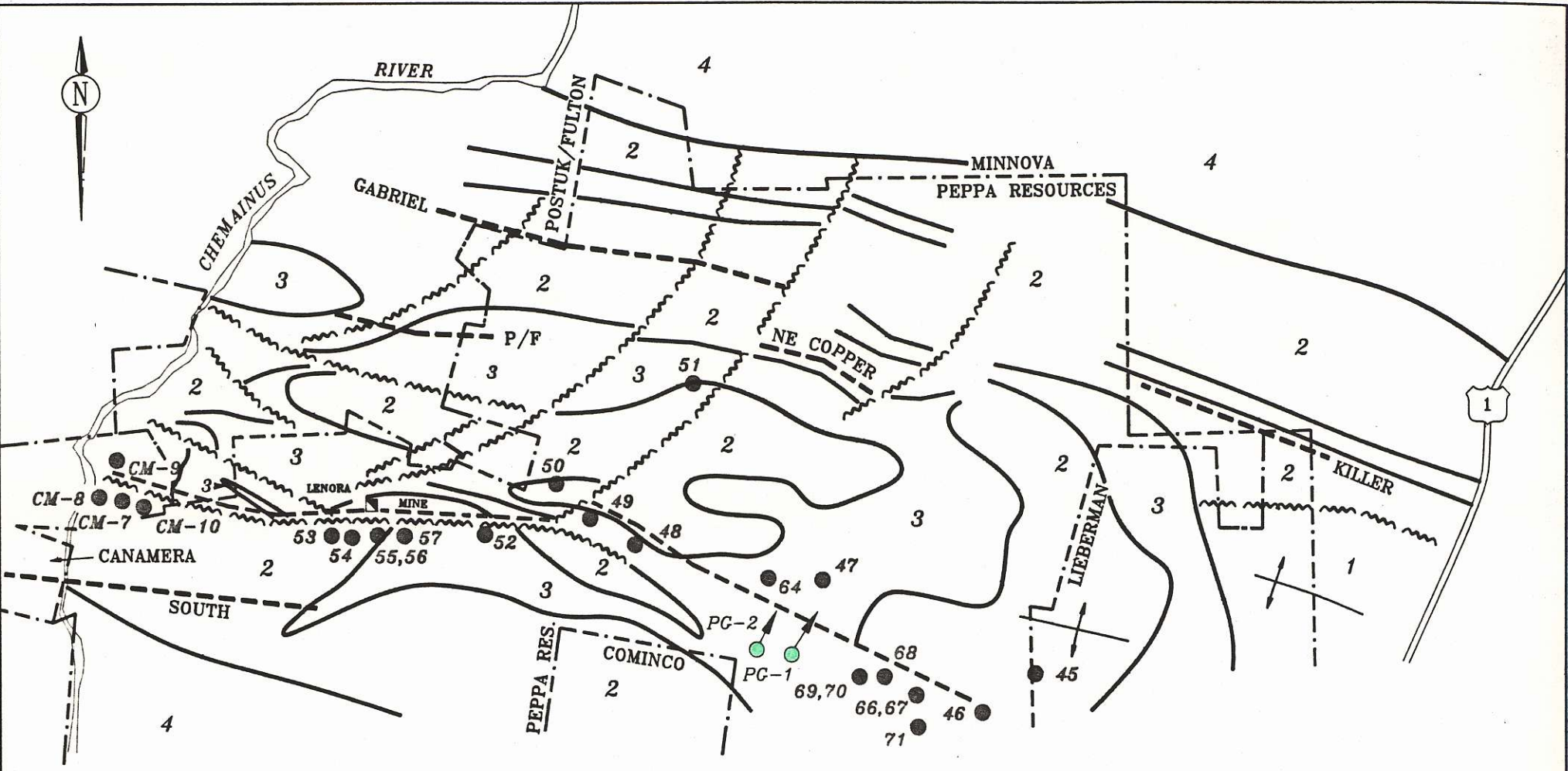
This shallow (<100 meters vertical) target will be explored during the 1989 fall drill program.

One of the other outstanding targets on the Mt. Sicker property occurs in the Gap-Mona area which has been unexplored in the past because the felsic volcanics are covered by a flat-lying mafic intrusion -the B.C. Tel diorite (Figure 8). The 1988 drill program indicated that there is abundant pyrite, chalcopyrite stringer mineralization and altered felsic volcanics in the Mona area and thick units of pyritic lithic tuffs associated with an altered quartz porphyry flow in the Gap area. The thin pyritic beds, small massive pyrite fragments, low metal values and patchy anhydrite alteration in the Gap area suggest a distal massive sulphide environment whereas the Mona area would be more proximal. Part of the 1989 drill program will test the stratigraphy between the Gap and Mona areas - a 1.5km zone where there is no information on the Sicker volcanics due to the B.C. Tel diorite cap.

#### ii. Proposed Drilling

The 1989 drill program on Mt. Sicker will focus on defining mineralization in the Lenora-Tyee-Richard III area (13 holes -2555m) and evaluating the extent and significance of py-cp stringers, pyritic tuffs and anhydrite alteration in the Mona and Gap areas (2 holes -750m). Details of the drilling are presented in Table 2 and hole locations are given in Figures 6,7 and 8.

Eleven of the holes in the Lenora-Tyee-Richard III area will evaluate the shallow level (<100m vertical) potential of the North Zone (Figures 6,7). Holes PLT-2 to PLT-6 will test the eastern extent of the ore body. In particular, holes PLT 2, 3 and 4 will test the up-dip potential of mineralization encountered in the 2-14 stope. The other six holes (PLT-8 to PLT-13) will test an IP anomaly that occurs to the north and east of a steeply dipping diorite dike and is interpreted as the extension of the North ore zone. One of these holes, PLT-9, may also intersect a zone of zinc mineralization associated with the South ore zone that



CRETACEOUS

- 4 Nanaimo group sediments
- 3 Diorite (age unknown)

PALEOZOIC

- Sicker Group
- 2 Myra formation
- 1 Nitinat formation

- Lenora-Tyee horizon
- Mineralized horizon

- 46 ● 1988 drill hole location
- PG-1 ↗ 1989 Proposed drill hole location

500 METRES

FIGURE 8  
**MT. SICKER PROPERTY**  
**- GEOLOGY -**



**Table 2: Proposed Drilling – Mt. Sicker**

hole #	location	dip (deg)	Azimuth (deg)	depth (m)	comment
<b>a. Lenora – Tyee</b>					
PLT -1	2+03W 9+47S	-60	360	125	deepening of MTS – 53
PLT-2	1+50E 7+75S	-66	360	120	OK at 2+25E - old road.
PLT-3	1+50E 8+15S	-58	320	180	up-dip of 2-14 stope
PLT-4	1+50E 8+15S	-67	360	200	
✓ PLT-5	2+75E 7+85S	-45	360	110	road at 7+75S.
? PLT-6	2+75E 8+30S	-62	360	220	- on top of cliff. old road to E - possibly 3+25E 8+00S.
PLT-7	3+00E 10+00S	-70	360	450	downplunge of alteration in MTS-57 - requires road building.
✓ PLT-8	4+00E 8+15S	-55	360	200	IP anomaly associated with N. Zone road = 8+25S.
✓ PLT-9	4+00E 9+45S	-52	360	300	will test area of Zn mineralization associated with S. Zone and IP/N. Zone OK.
✓ PLT-10	5+00E 7+95S	-45	360	150	IP anomaly associated with N. Zone OK. = SAM4 setup.
✓ PLT-11	5+00E 8+40S	-58	360	200	IP anomaly associated with N. Zone - thick bush. ok at 8+50S. 5+00E 8+50S road.
✓ PLT-12	6+00E 8+10S	-45	360	120	IP anomaly associated with N. Zone ok at 8+25S.
✓ PLT-13	6+00E 8+40S	-67	360	180	IP anomaly associated with N. Zone thick bush - move N 10-15m.
			<b>Subtotal</b>	<b>2555m</b>	



b. Gap

PG-1	16+55E 16+20S	-55	045	400	test Lenora-Tyee stratigraphy beneath B.C. Tel Diorite
PG-2	14+72E 15+15S	-55	045	350	test Lenora-Tyee stratigraphy beneath B.C. Tel Diorite
			Subtotal	750m	
			Total	3305	meters - 15 holes

yielded assays of 1.6% Cu, 14.5% Zn, 1.18% Pb, 0.18 oz/T Au, 2.88 oz/T Ag over 5.9 ft (1.8m) during underground drilling by Wartime Metals Corp..

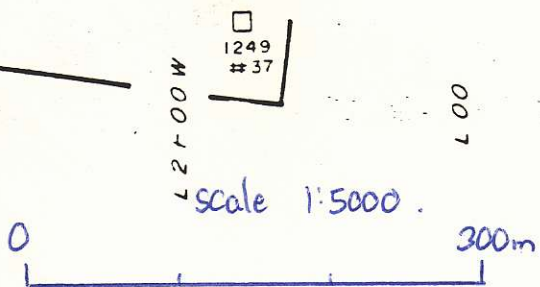
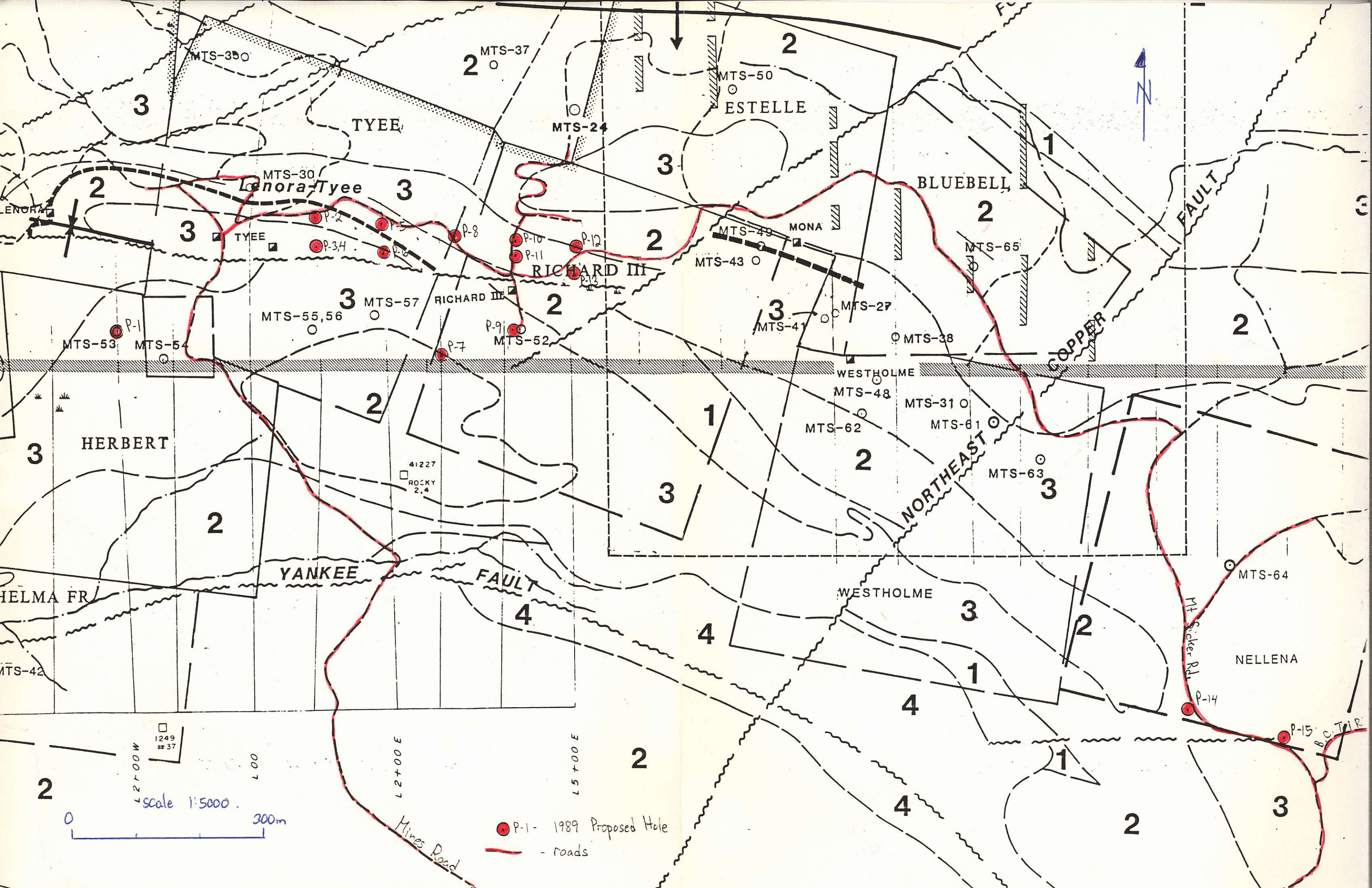
Two other holes will test the extent of the North ore horizon at depth. Hole PLT-1 involves deepening MTS-53 which is thought to have stopped short of the favourable stratigraphy. Hole PLT-7 will test for mineralization down-plunge of the pyritic stringers and sericitic felsic tuffs intersected in MTS-57.

Lastly, two holes are proposed to evaluate the Sicker stratigraphy in the area between the Mona shaft and the Gap (Figure 8).

#### 4. Conclusions

A 31 hole 6970 meter drill program is proposed to test for massive sulphide mineralization on the Lara and Mt. Sicker properties. The estimated all inclusive cost of the program is \$453,000. Drilling is scheduled to start on the Lara property during the week of September 25, subject to the weather.





● P-1 - 1989 Proposed Hole  
- roads

Mines Road