

DATE:

July 4, 1990

À TO:

A. J. Davidson

COPIES À

I. D. Pirie, D. H. Watkins

DE FROM: G. S. Wells

SWET SUBJECT: Progress Report - Vancouver Island Projects - June 1990

#### 1. Lara Project PN 242

#### **Highlights:**

90-296: 0.35% Zn over 3.92 m includes 1.31% Zn over 0.89 m (CZ Felsics)

0.73% Zn over 4.29 m includes 2.0% Zn over 1.19 m (CZ Felsics)

Trench 4:

1.34% Cu, 6.4 ppm Ag over 1.7 m - semimassive sulphides

1.41% Cu, 7.1 ppm Ag over 2.7 m includes 3.79% Cu, 15.8 ppm Ag, 286 ppb Au over 0.6 m

The Lara spring drill program was completed in June. Seven holes were drilled for a monthly total of 1324.0 m and YTD total of 5423.3 m (26 holes). Assays from previous drilling and a summary of the details and highlights of June's drilling are included in the attached tables.

Hole 90-290 tested the 262 Felsic sequence 200 meters east of the 276 massive sulphide intersection (1.44% Cu over 1.68 m). The hole intersected altered felsic ashes and minor chert. However, no significant sulphides are present.

The remainder of the June drilling tested the felsic rocks in the Far Eastern part of the Lara property where outcrop exposure is very poor. No significant mineralization was encountered in holes 90-291, 293 and 294. Holes 295 and 296 intersected sulphide zones associated with the CZ felsic sequences.

The mineralization in 296 is particularly zinc-enriched with two samples yielding 1.31% Zn over 0.89 m and 2.0% Zn over 1.19 m respectively. Further work is warranted in the vicinity of hole 296.

Hole 90-292 tested a well-defined IP chargeability anomaly with a coincident Cu, Zn soil anomaly. The IP response is due to pyrite-chalcopyrite stringers that have anomalous copper contents (0.16% Cu over 2.3 m)

Chip sampling of the sulphide zones exposed in the Trench 4 area has been completed and several highly anomalous copper zones have been identified. The best assay of semi-massive sulphides that occur in Trench 4 is 1.34% Cu, 6.4 ppm Ag over 1.7 m. Semi-massive sulphides and pyritic felsics from a trench located approximately 40 meters to the east of Trench 4 yielded 1.41% Cu, 7.1 ppm Ag over 2.7 m. This zone includes a 0.6 m wide zone of massive sulphides that assayed 3.79% Cu, 15.8 ppm Ag and 286 ppb Au.

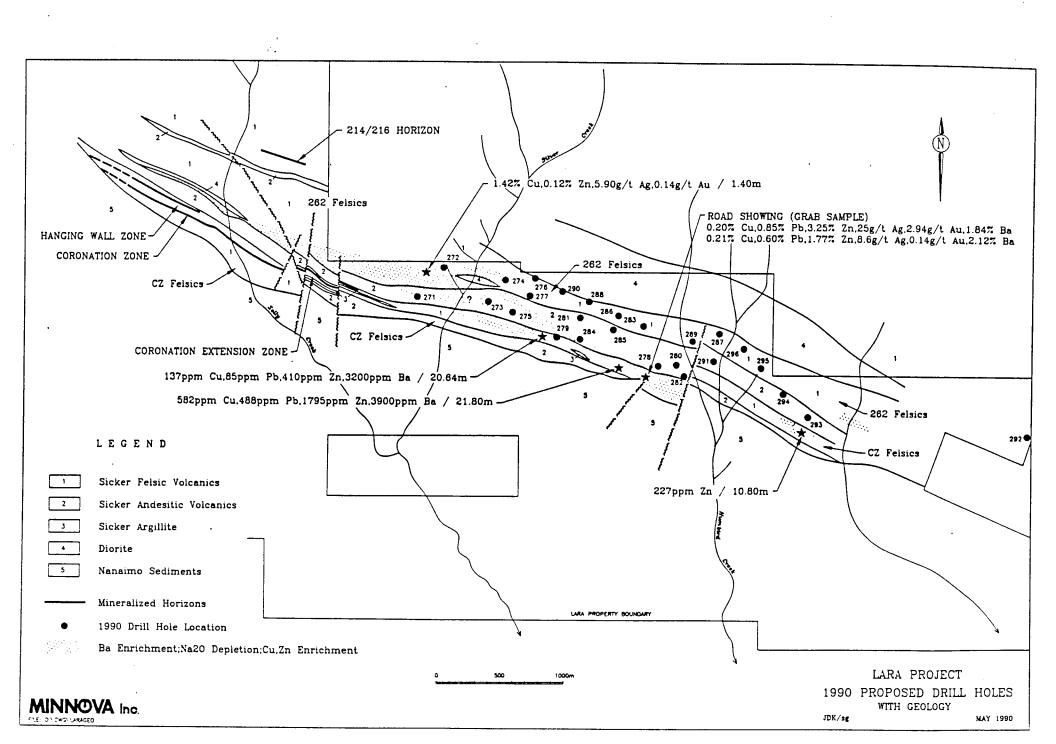
The geochemical data from holes which tested the 262 Felsic package is presently being evaluated. To date, it appears that Ba enrichment and Na<sub>2</sub>O depletion zones occur immediately north of the best parts of the Coronation zone, Coronation Extension Zone and Hanging wall zones. Copper and zinc humus anomalies and IP/VLF anomalies are also associated with these altered zones. Further humus sampling is being done to define specific targets in the 262 Felsic package. In addition, the data to the east of Silver Creek is being evaluated in preparation for the fall drill program.

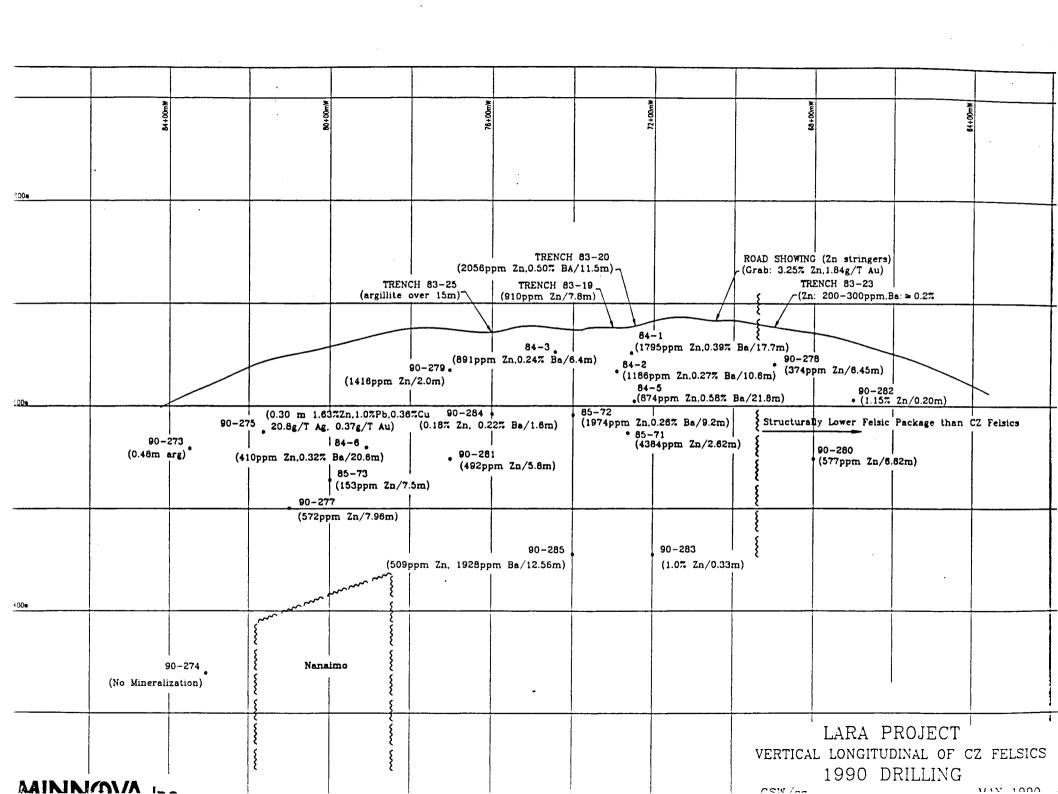
### **LARA DRILLING – JUNE 1990**

		Collar		Final			
Hole #	Location	Elev.	Azimuth	Dip	Depth	Significant Resu	lts
90-290	78+36W; 110+01N	739 m	208	-75	179.2 m	130.4–135.2	minor chert - no signficant assays (262 Felsics)
90-291	65+62W; 110+55N	667 m	208	-60	148.4 m		no significant mineralization (CZ Felsics)
90-292	39+48W; 123+11N	188 m	208	-43	212.1 m	101.15–102.65	0.11% Cu over 1.5 m – py-cp stringer
						112.2-114.5	0.16% Cu over 2.3 m - py-cp stringer
						155.95–161.70	F Tuff, 7-10% py - no signficant assays
90-293	57+67W; 111+00N	705 m	208	-53	145.4 m		no significant mineralization - collared in Nanaimo
90-294	59+60W; 111+90N	720 m	208	-50	76.2 m		no significant mineralization - collared in Nanaimo
90-295	62+00W; 113+00N	715 m	208	-50	212.4 m	48.63–50.93	0.18% Cu, 260 ppm Zn over 2.3 m = F Ash, Cht (262 Felsics)
		 				180.41–185.01	277 ppm Zn over 4.6 m – 1–2% diss. py (CZ Felsics)
90-296	64+41W; 113+19N	731 m	208	-73	350.2 m	293.28-297.2	553 ppm Cu, 0.35% Zn, 739 ppm Pb, 4.7 ppm Ag, 70 ppb Au over 3.92 m – diss. sulphides (CZ Felsics) includes: 295.8–296.69: 1.31% Zn over 0.89 m
						299.2–303.49	522 ppm Cu, 0.73% Zn, 331 ppm Pb, 2.8 ppm Ag, 41 ppb Au over 4.29 m – diss. sulphides (CZ Felsics) includes 300.0–301.19: 2.0% Zn over 1.19 m
			monthly tota	al:	1324.0 m	7 holes	
			YTD tota	<b>!</b>	5423.3 m	26 holes	

# <u>Lara Drilling</u> <u>Significant Results from May Drilling</u>

Hole #	Location	Interval	Mineralization
90-279	800 m west of Road showing	94.4-96.4	1091 ppm Cu, 1416 ppm Zn, 418 ppm Pb, 5.2 ppm Ag, 159 ppb Au over 2.0 m (CZ Felsics)
90–282	east of Road showing	74.75–74.95	1.15% Zn, 0.19% Pb, 5.5 g/T Ag over 0.2 m = siliceous zone (CZ Felsics)
90-283	down dip of Road showing	304.32-304.65	1.0% Zn, 9.7 g/T Ag over 0.33 m = diss. sph, py in CZ Felsics
		324.5–327.4	303 ppm Zn, 0.95 g/t Ag over 2.9 m = mineralized fragments in CZ Felsics
90–284	500 m west of Road showing	114.90–116.50	0.18% Zn, 2.36 g/T Ag, 0.22% Ba over 1.6 m = diss. py, sph in CZ Felsics
90–285	300 m west of Road Showing	272.0–284.56	509 ppm Zn; 1928 ppm Ba, 43 ppb Au over 12.56 m = diss. py, sph in CZ Felsics
90-287	immediately west of Humbird Creek		no significant assays – 262 Felsics
90-288	500 m east of 90–276 intersection	117.9–125.2	330 ppm Zn, 880 ppm Cu over 7.3 m = py ashes, chts (262 Felsics)
		147.6–151.85	144 ppm Zn, 205 ppm Cu over 4.25 m = py ashes, chts (262 Felsics)





#### **MEMORANDUM**

# MINNOVA

DATE:

June 1, 1990

TO:

A. J. Davidson

COPIES A COPIES TO:

I. D. Pirie, D. H. Watkins

DE FROM:

G. S. Wells

SWET SUBJECT:

Progress Report - Vancouver Island/Coast Projects - May, 1990

### 2. Lara Project PN 242

#### Highlights:

#### 262 Intersections:

90-272: 2.37% Cu over 0.71 m = semi-massive

pyritic/cherts

90-276: 1.45% Cu over 1.68 m = semi-massive

pyrite/pyritic ash

90-286: pyritic cherts, ashes (10% py, tr cp) over 8.3

m

90-288: pyritic cherts, ashes (10% py, tr cp) over

16.3 m.

Drilling on the Lara property continued in May with two machines. Seventeen (17) holes were completed for a monthly total of 3732.4 m (YTD: 4099.3, 19 holes). Drilling details and results are summarized in the attached table and figures.

The bulk of the drilling concentrated on evaluating the CZ felsic package in the vicinity of the Road showing. Eleven widely spaced holes tested the felsic sequence and most of them intersected zones of weak zinc mineralization. Assays are still awaited for most of the drilling but the best result to date is associated with a thin sphalerite zone that occurs at the contact between QFP tuffs and sericitic felsic ashes in hole 90-275. This mineralization assayed 0.36% Cu, 1.0% Pb, 1.63% Zn, 20.8 g/T Ag and 0.37 g/T Au over 0.3 m.

Holes 90-278, 280 and 282 intersected weak zinc mineralization that is thought to occur in a structurally lower felsic sequence than the CZ felsics. This would imply a north-northeasterly trending fault to the east of the Road showing which would have left lateral movement. The significance of this new mineralized zone will be evaluated by drilling planned to the east of Humbird Creek.

The remaining six holes drilled in May tested the 262 felsic sequence. All holes intersected an intensely altered felsic ash, crystal and lapilli tuff package. A zone of semi-massive pyrite, pyritic chert and ash was intersected in hole 90-276. It assayed 1.45% Cu over 1.68 m. In addition, holes 90-286 and 90-288 intersected wide zones of cherty and pyritic ash. The pyrite in these zones is very fine grained and well layered both of which are characteristic of distal exhalites. The presence of good hydrothermal alteration, pyritic exhalites and three massive sulphide intersections with anomalous copper values (262: 1.4% Cu over 1.14 m; 272: 2.37% Cu over 0.7 m; 276: 1.45% Cu over 1.68 m) suggests that the 262 felsics could host a VMS deposit. Additional drilling will test this sequence this spring and again during our fall program.

A soil survey is being carried out over well-defined IP anomalies (chargeability: 30-40 msec) located at the eastern end of the Lara property and immediately north of our Canamera option. Preliminary results indicate an superb Cu-Zn anomaly (300 - 500 ppm) which is coincident with the IP anomaly. This excellent target will be drilled early in June.

### Lara and Mt. Sicker Drilling

## Results from April Drilling

<u>Hole</u>	Location	Mineralization				
1. <u>Lara</u>						
90-272	160 m east of 89-262	57.0-59.05:	0.92% Cu, 2.99 ppm Ag over 2.05 m = 262 Zone			
		includes:	2.37% Cu, 158 ppm Zn, 6.4 ppm Ag, 170 ppb Au over 0.71 m = semi-massive py-			

#### LARA DRILLING - MAY 1990

			Collar		Final		
Hole #	Location	Elev.	Azimuth	Dip	Depth	Significant Resu	lts
90-273 (P-18)	83+50W; 106+54N	648 m	208	-50	197.2 m	95.8–96.3	Argillite = CZ horizon
90-274 (P-17)	83+00W; 108+80N	675 m	208	<b>-</b> 70	425.8 m	36.9-95.4	pyritic (2-5%) Felsic Ash and Chert (262 Felsics) no significant assays
90-275 (P-16)	81+60W; 106+84N	660 m	208	-60	175.9 m	101.40–101.70	0.36% Cu, 1.0% Pb, 1.63% Zn, 20.8 g/T Ag; 0.37 g/T Au over 0.3 m = sphalerite zone at contact between QFP Tuff and sericite F Ash (CZ Felsics)
						101.7–109.66	906 ppm Zn over 7.96 m
						139.1–140.65	730 ppm Zn, 1400 ppb Au over 1.55 m (sph stringers in sheared FP Tuffs)
90-276 (P-15)	81+00W; 109+30W	722 m	208	<b>-</b> 75	193.5 m	69.0-71.06	556 ppm Zn over 2.06 m: stringers in Felsic Lapilli Tuff
					·	87.0–100.0	404 ppm Cu, 118 ppm Zn over 13.0 m: stringers in Felsic Lapilli Tuff
						130.2–136.1	424 ppm Cu, 98 ppm Zn over 5.95 m: stringers in Felsic Ash Tuff
						140.66–142.34	1.44% Cu, 373 ppm Pb, 378 ppm Zn, 4.28 ppm Ag, 141 ppb Au over 1.68 m = semi-massive py associated with pyritic ash (262 Zone)

			Collar		Final		
Hole #	Location	Elev.	Azimuth	Dip	Depth Significant Resul		lts
90-277 (P-15)	81+00W; 108+30N	690 m	208	-55	252.1 m	107.24-110.64	0.23% Cu, 131 ppm Zn over 3.41 m = stringers in Andesite Tuff
	·				, .	227.69-235.65	572 ppm Zn over 7.96 m: tr. cp, sph in fragments in Felsic Lapilli Tuff (CZ felsics)
90-278 (P-9)	69+00W; 108+67N	684 m	208	<b>-</b> 45	163.7 m	54.85-61.3	374 ppm Zn over 6.45 m: 2-3% py, tr. sph in Felsic Ash
90-279 (P-14)	77+45W; 107+40N	695 m	208	-52	178.9 m	94.4-96.4	5-7% py, tr1% sph, cp, tr. galena in fragmented / felsic lower contact = diorite (CZ Felsics)
90-280 (P-8)	68+00W; 109+27N	675 m	208	<b>-</b> 55	148.4 m	86.75–93.57	239 ppm Cu, 577 ppm Zn 53 ppb Au over 6.82 m: 2–3% py, tr. sph in Felsic Tuff includes 93.37–93.57: .19% Cu, .12% Pb, .62% Zn, 273 ppb Au over 0.20 m = contact zone between Felsic Tuff and Intermediate Tuff
90-281 (P-13)	77+00W; 108+50N	720 m	208	<del>-</del> 62	291.7 m	188.57-189.20	245 ppm Cu, 620 ppb Pb, 0.54% Zn over 0.63 m; 2-3% py, 1% sph in QP Tuff
						218.90-224.70	104 ppm Pb, 492 ppm Zn, 60 ppb Au over 5.80 m: 1-3% py, tr1% sph in Felsic Lap Tuff: (CZ Felsics)
						246.0-257.3	F. Lithic Tuff with local abundant arsenopyrite? stibnite?
90-282 (P-7)	67+00W; 109+10N	661 m	208	<b>-</b> 45	93.6 m	74.75–74.95	3-4% sph, 2-3% py, tr. cp in siliceous zone at contact with I Tuff (CZ Felsics?)
						84.6–84.7	3-4% sph in narrow siliceous zone in F Tuff

			Collar		Final		
Hole #	Location	Elev.	Azimuth	Dip	Depth	Significant Resu	ults
90-283	72+00W; 110+90N	716 m	208	-61	348.4 m	304.32-304.65	1-2% sph, tr. cp, Felsic Lapilli Tuff
		÷				324.5-327.4	mineralized fragments tr. sph in Felsic Lap Tuffs (CZ Felsics)
90-284 (P-12)	76+00W; 107+59N	699 m	208	-70	212.5 m	114.9–116.5	2-3% py, tr1% sph, tr. cp, galena (CZ Felsics)
90-285 (P-11)	74+00W; 109+46N	716 m	208	-70	335.6 m	272.0-284.56	tr. sph, cp, galena over 12.56 m (CZ Felsics)
90-286 (P-23)	74+00W; 111+11N	730 m	208	-75	175.6 m	39.7 <b>–</b> 43.2  56.9 <b>–</b> 61.85	chert, silicified felsic ash
						94.3-102.6	pyritic cherts, ashes 5-10% py, tr. cp (262 Felsics) -
90-287 (P-6)	66+33W; 113+46N	711 m	208	-55	172.5 m	117.5–128.9	1-5% py stringers, tr, cp in felsic tuff (262 Felsics)
90-288	76+00W; 110+74N	739 m	208	<b>-</b> 75	191.1 m	108.9-125.2	pyritic ash, chert (10% v.f.g py, tr. cp)
(P-22)						147.65-151.85	pyritic ash, chert (3-7% py) (262 Felsics)
90-289 (P-25)	67+00W; 110+24N	668 m	208	-60	175.9 m		no significant mineralization (CZ felsics)
			Monthly To	tal:	3732.4 m	17 holes	
			YTD Total:		4099.3 m	19 holes	-

# **MINNOVA**

DATE:

May 2, 1990

A TO:

A. J. Davidson

COPIES A

I. D. Pirie, D. H. Watkins

DE FROM:

G. S. Wells

SWET SUBJECT:

Progress Report - Vancouver Island Projects - April 1990

#### 2. Lara PN 242

#### Highlights:

1. <u>262 Zone</u> Hole 90-272 <u>0.71 m</u> - 55% py with an <u>estimated 2% Cu</u>.

2. Trench 4 semi-massive py-cpy as stringers and at contact between folded QP Tuffs and chloritic andesites - hosted in 262 Felsics, 2.0 km west of 262 intersection.

Drilling commenced on the Lara property in late April with one machine. Two drill holes have been completed for a monthly and YTD total of 366.9 meters. Hole 271 tested a strong VLF anomaly along strike from the Coronation Extension Zone. The anomaly is due to the fault between the green volcaniclastic sequence and the CZ felsics. Hole 272 tested the 262 felsics, 160 meters east of the 262 intersection. A 0.71 meter thick zone of semi-massive sulphides (55% sulphides) with an estimated 2.0% Cu is hosted in pyritic felsic tuffs. This mineralization is correlated with the 262 intersection and implies some degree of folding in the 262 felsics.

Trench 4 is located 2.0 km west of the 262 intersection. Semi-massive pyrite-chalcopyrite occurs as stringers and as bands at the contact between felsic tuffs and altered andesitic ashes. The felsic tuffs are folded with fold axes plunging at a shallow angle (15°) to the east. The one diamond drill hole under trench 4 would not have intersected the mineralization due to this folding. This surface exposure of the 262 felsics also lends some credibility to the interpretation in the hole 262-272 area. Mapping in the trench 4 is in progress and the zone is being developed as a drill target for our fall drill program.

Drilling is continuing on the Lara property in the vicinity of the Road showing.

Lines spaced at 400 meters were cut south of the existing Mine and exploration grids. IP surveying is currently underway on

these lines to try and identify slivers of Sicker volcanics that might occur south of the Coronation Zone. To date, a well defined chargeability anomaly has been identified on three of these lines. Humus sampling is planned in the vicinity of these anomalies to try and define areas of high metal content.

## LARA DRILLING - APRIL 1990

			Collar		Final	
Hole #	Location	Elev.	Azimuth	Dip	Depth	Significant Results
1. Coronatio	n Extension					
90-271	90+02W; 104+14N	658 m	208	<b>-</b> 55	206.3 m	no signficant sulphides  VLF anomaly = fault between andesites + CZ felsics
2. 262 Zone						
90-272	88+00W; 107+40N	648 m	208	<b>-70</b>		58.34-59.05 - semi-massive sulphides 10% cp, 45% py over 0.71 m = <u>262 Zone</u> 52.9-63.4 - host felsic tuff; 3-5% py-cpy stringers
		<b>.</b>	Monthly To	tal	366.9 m	