

DATE: April 3, 1989
A TO: A. J. Davidson
COPIES TO: D. H. Watkins, I. D. Pirie
DE FROM: J. D. Kapusta, P. Baxter, G. S. Wells
SUJET SUBJECT: 1989 Spring Drill Proposal - Lara, Canamera Projects, PN 242, 236

827440
92B/13

Introduction

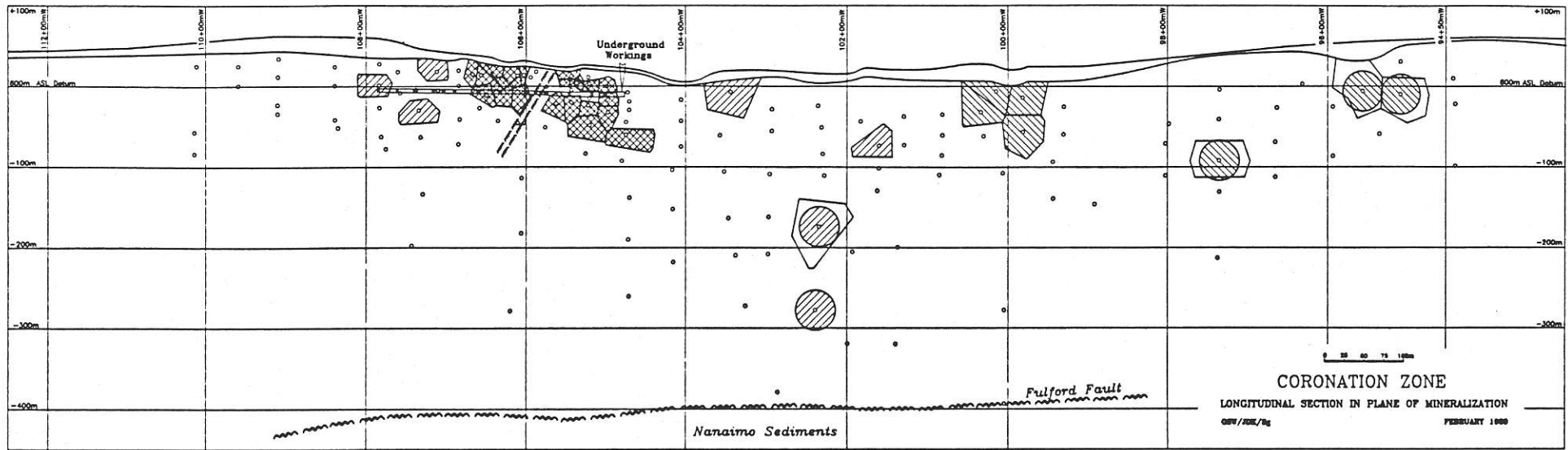
The spring drill program which consists of 42 holes totalling 9320 meters will focus on expanding the Coronation Zone ore reserves and testing geological and geophysical targets on the Canamera property .

1. Lara




After acquiring the Lara property in late 1988, Minnova has concentrated its effort on generating a set of drill sections using a Mine Grid co-ordinate system; re-interpreting these sections in light of the faulting recognized in the 1988 underground program and determining a revised mineral inventory for the Coronation Zone.

The Coronation and Coronation Extension zones are polymetallic horizons which are hosted in felsic tuffs and crystal tuffs of the Sicker volcanic group. The mineralization has been traced by drilling over a strike length of 2 km and to depths of 440 meters below the surface (Figure 1). The revised mineral inventory for the zone is 324,860 tonnes at a grade of 0.91% Cu, 1.26% Pb, 6.01% Zn, 111.1 g/T Ag and 4.70 g/t Au. Only 37.5% of this inventory is defined with a drill spacing of 25 meters or less. The remaining portion (62.5%) is contained in isolated intersections of the Coronation and Coronation Extension zones.

Re-interpretation of the drill sections and observations from the underground program suggest that there are at least three sets of faults which have offset the mineralized zone. Shallow,



○ Drill hole intercept

	Tonnes	Cu%	Pb%	Zn%	Ag g/T	Au g/T	NSR \$
 DETAIL BLOCK "A"	121,720	0.84	1.05	6.00	117.24	4.90	103.51
 CORONATION ZONE-ISOLATED BLOCKS	92,868	1.21	1.21	6.28	83.99	4.22	97.57
 CORONATION EXTENSION ZONE	110,273	0.74	1.51	5.79	127.18	4.83	103.11
TOTAL MINERAL INVENTORY:	324,861	0.91	1.26	6.01	111.07	4.70	101.67

MINNOVA Inc.

Figure 1

southerly dipping faults, which appear as flat-lying lines on the longitudinal section, offset the zone in a north-south sense. In parts of two of these fault blocks, the mineralized zone has been moved far enough to the north to be cut off by a later, northerly dipping fault zone which separates the hanging wall andesite and felsic tuffs.

A second set of faults is defined by steeply dipping structures which strike at a shallow angle to the mineralized zone. During the underground program, one of these faults was recognized and it had approximately 15 meters of sinistral sense movement along it. This resulted in a no-grade fault window on the inclined longitudinal section.

The third set of faults consists of steep, northeasterly striking normal faults which have offset the zone in a vertical sense. One of these structures was located at the east end of the underground workings. These faults are hard to define by drilling, as they are sub-parallel to the drill sections.

In spite of the structural complications, several zones of high grade mineralization have been discovered (Figure 1). There is a direct correlation between the presence of black massive sulphide occurrences within an intersection and high NSR values. The NSR values have been contoured on the inclined longitudinal and there appears to be four narrow high grade zones which are spaced at regular, 50 to 60 meter intervals (Figure 2). These zones have a 25° easterly plunge in the eastern part of the Coronation Zone but are relatively flat-lying to shallow westerly plunging in the western part of the zone. This change in the plunge directions is due to rotation of individual fault blocks and/or folding.

2. Proposed Drilling - Lara Project

The 37 hole, 8320 meter spring drill program will focus on defining additional ore reserves in the Coronation Zone. All holes have been plotted on the inclined longitudinal (Figure 2) and specific details for each hole are presented in Table 1. This program is aimed at establishing the continuity and extending the

TABLE 1: PROPOSED HOLES; LARA

Hole Number	Location	Azimuth	Dip	Depth	Comments
✓PL-1	111+50W; 101+65N	208	-50	140.00 m	Exploration hole to test the westerly extent of mineralized package F; and test near surface open pit potential
✓PL-2	111+50W; 101+65N	208	-69	150.00 m	25 m downdip test of PL 1
✓PL-3	111+50W; 102+43.50N	208	-60	215.00 m	50 m downdip test of PL 2
✓PL-4	110+50W; 101+33.25N	208	-55	110.00 m	Exploration hole to test the westerly extent of mineralized package F; and test near surface open pit potential
✓PL-5	110+50W; 101+59N	208	-60	140.00 m	25 m downdip test of PL 4
✓PL-6	109+50W; 102+50N	208	-65	250.00 m	100 m downdip test of DDH 176 to test the westerly plunge of mineralized package F
✓PL-7	108+75W; 101+ 62.50 ^{98.00W} 50N	208	-70 ⁻⁵²	110.00 m ¹⁸⁵	Exploration hole to test the westerly extent of mineralized package F; and test near surface open pit potential
✓PL-8	108+75W; 102+19N	208	-67 ⁻⁶⁸	180.00 m ²²⁰	50 m downdip test of PL 7
✓PL-9	108+75W; 103+01N	208	-65 ⁻⁶⁸	290.00 m ^{1585 m}	Exploration hole testing the zone 100 m downdip of PL 8, and also the possibility of a subparallel ore shoot to package F
✓PL-10	106+75W; 103+53.50N	208	-65	320.00 m	Exploration hole testing the zone 128 m downdip of DDH 21, and also the possibility of a subparallel ore shoot to package F
✓PL-11	106+00W; 102+35.50N	208	-60	220.00 m	Exploration hole testing the zone between DDH 14 and 171
✓PL-12	106+00W; 102+77N	208	-70	270.00 m	Exploration hole testing the zone between DDH 171 and 172, and also the possibility of a subparallel ore shoot to package E
✓PL-13	105+50W; 103+37.50N	208	-50	270.00 m	Exploration hole testing the zone below package E, and the possibility of a subparallel ore shoot
✓PL-14	105+50W; 103+37.50N	208	-75	400.00 m	Exploration hole testing the zone 175 m below PL 13, and defining the stratigraphic package to better access if holes 91, and 189 were drilled short of the zone
✓PL-15	105+00W; 102+ 70.50 ^{49.50 N}	208	-60	250.00 m	Exploration hole testing the zone below package E, and the possibility of a subparallel ore shoot
✓PL-16	105+00W; 103+36N	208	-65	300.00 m	Exploration hole 100 m downdip test of hole PL 15
✓PL-17	103+75W; 101+54N	208	-50	150.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 203 and 199, and test near surface open pit potential
✓PL-18	103+75W; 102+53N	208	-70	260.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 62, 67, 182

	✓ PL-19	101+78.75 103+25W; 101+68N	208	570 165	100.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 203 and 199, and test near surface open pit potential
234	✓ PL-20	45.50N 100+50W; 103+47.50N	208	-74	400.00 m	Exploration hole to test the easterly extent of a high grade ore shoot intersected by DDH 182
241	✓ PL-21	102+75W; 102+77.25N	208	-65	290.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 62, 67, 182
	PL-22	102+50W; 103+68N	208	65	460.00 m	Exploration hole testing the zone 45 m downdip from DDH 184
	✓ PL-23	move 102+00W; 101+48N	208	-55	100.00 m	Exploration hole testing the near surface potential of the zone
231	✓ PL-24	102+00W; 102+03.50N	208	-65	150.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 203 and 199
240	✓ PL-25	101+75W; 101+68N	208	-60	150.00 m	Exploration hole testing the near surface potential of the zone, 28 m updip from DDH 206
244	✓ PL-26	101+75W; 103+37N	208	-60	360.00 m	Exploration hole testing the extent of a high grade massive sulphide trend intersected by DDH's 62, 67, 182
	PL-27	101+75W; 104+02N	208	65	420.00 m	Exploration hole testing the zone 105 m downdip of hole PL 26, and the extent of high grade mineralization intersected in holes 182, 184
		why move 101+00W; 104+04.50m	208	-75	470.00m	
238	✓ PL-28	101+25W; 101+80N	208	-50	150.00 m	Exploration hole testing the zone 25 m updip from DDH 51, that intersected high grade massive sulphides; and test near surface open pit potential
237	✓ PL-29	101+25W; 102+56.50N	208	-55	200.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 203, 199
	✓ PL-30	100+50W; 101+54.25N	208	-60	90.00 m	Definition hole to better delineate high grade massive sulphide mineralization intersected by DDH's 44, 77
	✓ PL-31	100+50W; 103+47.50N 45.50N	208	-69	350.00 m	Exploration hole testing the extent of a high grade massive sulphide trend intersected by DDH's 62, 67, 182
	PL-32	99+00W; *1	208		150.00 m	Exploration hole to test the easterly extent of high grade mineralization in package A, and test near surface open open pit potential, this hole will also define the stratigraphic package to better access if holes 45, 46 were drilled short of the zone
	PL-33	99+00W; *1	208		200.00 m	92 m downdip test of hole PL 32
	✓ PL-34	103+25W; 101+51N	208	-55	80.00 m	Definition hole to better delineate an indicated high grade massive sulphide trend intersected by DDH's 203, 199 and test near surface open pit potential
	✓ PL-35	99+75W; 103+23N	208	-60	365.00 m	Exploration hole to test the easterly extent of a high grade ore shoot intersected by DDH's 203, 199
	PL-36	99+00W; *1	208		120.00 m	25 m downdip test of PL 32
	PL-37	99+00W; *1	208		150.00 m	35 m downdip test of PL 36
	Total Number of Holes: 37		Total Meterage:		8320 m	

*1 awaiting grid topographic survey

*2 approximate

length of the existing high-grade zones, looking for other parallel high-grade shoots at depth, and exploring the western extent of the zone where data is presently quite limited. Numerous other targets are present within the Coronation Zone but the proposed holes are considered to be the best bet for defining additional tonnage. Work in the eastern part of the Coronation Extension Zone has been deferred until the fall so that a geophysical (mag, VLF and IP) and geological database can be compiled for the area.

3. Canamera

The six claim Canamera option is strategically locally between Minnova's Mt. Sicker and Lara properties. Recent re-interpretation of existing data suggests that both the Lenora-Tyee and Coronation horizons may be present on the property. A five hole, 1000 meter drill program will test the VLF and IP anomalies which are thought to correlate with these horizons. Drill hole locations are plotted in plan on Figure 3. The specific details for each drill hole are presented in Table 2.

4. Conclusions

A 42 hole, 9320 meter diamond drill program will test targets on the Lara and Canamera properties. The estimated, all-inclusive cost of this work is \$699,000 (9320 m @ \$75/m). Drilling is scheduled to start on the Canamera property in early April and on the Lara property by mid-April.

TABLE 2: PROPOSED HOLES: CANAMERA

Hole Number	Location	Azimuth	Dip	Depth	Comments
PC-1	12+00W; 0+20N	010	-45	200.00 m	To test an IP anomaly associated with a QFP/Andesite contact and Ba-enriched and Na-depleted zone.
PC-2	8+70W; 1+75N	030	-45	200.00 m	To test a weak VLF-mag anomaly which may correlate with the L-T stratigraphy and a stronger IP anomaly lower in the sequence.
PC-3	1+85W; 2+92N	030	-45	250.00 m	To test 2 parallel VLF anomalies associated with the Cu Canyon mineralization. The southern-most anomaly may correlate with the L-T stratigraphy.
PC-4	4+00W, 0+18N	240	-60	200.00 m	To test the Coronation stratigraphy down-dip of Zn stringers in hole 85-3 and a 14 m thick argillite zone in CM-5.
PC-5	1+00W, 0+30S	210	-45	150.00 m	To test the Coronation stratigraphy 300 m east of Zn stringers intersected in hole 85-3.