81-#524.

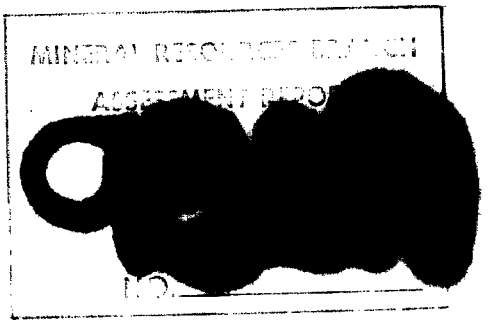
NEWMONT EXPLORATION OF CANADA LIMITED

DRILLING REPORT

STERLING CLAIMS

N.T.S. 82 M/8 W

REVELSTOKE MINING DIVISION



By

Dennis M. Bohme

July 10, 1981

LOCATION:	50 km north of Revelstoke, B. C. Latitude 51° 23' Longitude 81° 25'
CLAIMS OWNED BY:	CJC Exploration Limited
WORK DONE BY:	Newmont Exploration of Canada Limited
WORK DONE BETWEEN:	April 20 - June 19, 1981

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INTRODUCTION

The purpose of this assessment report is to present the data and the geological interpretation of the surface diamond drill program on the Sterling claims located within the Revelstoke Mining Division of southeastern British Columbia. The claims are owned by CJC Exploration Limited and were explored by a joint venture between Esso Resources Limited and Newmont Exploration of Canada Limited. Newmont was the operator. The property was explored for its molybdenum potential.

Seven BQ diameter drill holes totalling 656.2 m were drilled between April 22 and May 12, 1981. In addition, three NQ diameter drill holes totalling 771.1 m were drilled between May 20 and June 16, 1981. Overall, ten diamond drill holes are being reported on, totalling 1427.3 m (see Fig. 2, page 5).

The first seven holes were drilled with water only and no major drilling difficulties were encountered. The remaining three holes were drilled either entirely or partially with mud additives. Some drilling difficulties, associated with wide graphite-rich fault zones, were encountered.

Drill hole collars were surveyed by transit and stadia tied into a Dept. of Highways bench mark located near the legal corner post of Sterling 1, 2, 3, 4. Coordinate points of drill hole collars, as seen on the front page of log sheets for each hole, refer to legal corner post as origin. Elevations are in metres above sea level.

The core is stored at the residence of John and Lee Campbell in Revelstoke, B.C. Most of the core was split and analyses were performed by Acme Labs in Vancouver.

In the lab, all samples were subjected to digestion by aqua regia, with determination for Cu, Mo, Pb, Zn, Ag and tungsten by inductively coupled argon plasma (ICP). A few gold analyses were determined by atomic absorption spectrophotometer. Some well mineralized samples were run as assays rather than geochemical analyses.

PROPERTY DESCRIPTION

The claims covered by this report are recorded in the Revelstoke Mining Division. Details follow:

Claim	No. of Units	Record Date	Record No.
Sterling No. 1	18	August 15/80	1016
Sterling No. 2	12	August 15/80	1017
Sterling No. 3	6	August 15/80	1018
Sterling No. 4	16	August 15/80	1019
Sterling No. 5	2	August 15/80	1020
Sterling No. 6	6	August 15/80	1021

LOCATION AND ACCESS

The Sterling claims are located along Highway 23 on the east side of the Columbia River, 50 km north of Revelstoke in southeastern British Columbia (see Fig. 1, page 3). Logging roads make all areas of the property quite accessible.

TOPOGRAPHY

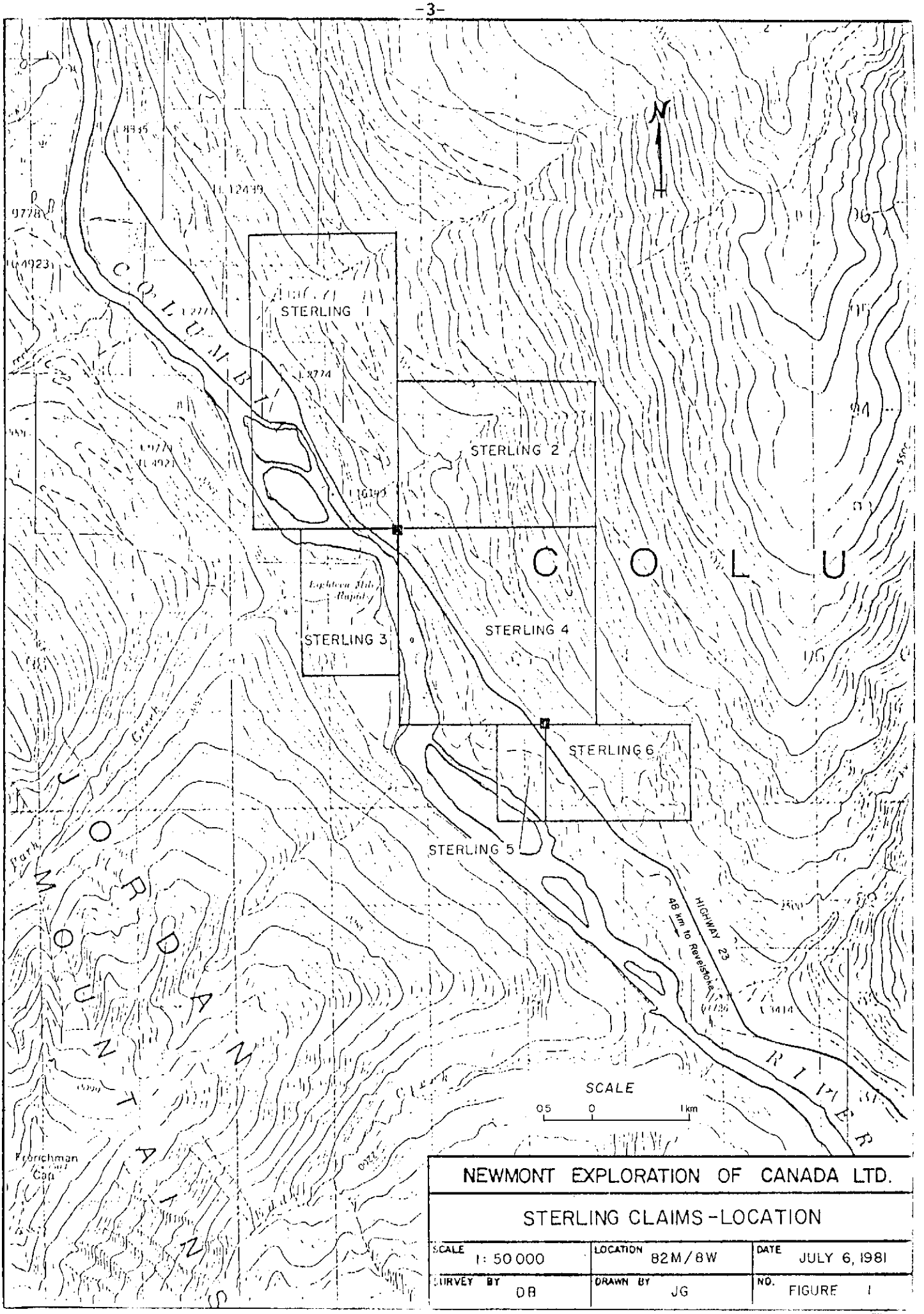
Most of the area was logged off about 10 years ago and is now overgrown by fireweed. The topography slopes moderately to the west and is well drained. Elevations vary from 480 m (1575') at the river to 1128 m (3700') on the east property boundary. Two creeks, about 800 m apart are known locally as "Galena" and "Cabin" creeks.

Overburden thickness varies from 2 m to 20 m and is composed of glacial till, sandy silt and alluvium.

The Revelstoke Dam Project will cause flooding of the Columbia River Valley to the 573 metres level. For this reason Highway 23 is currently being reconstructed at the 610 metres level. Construction of the new highway on the Sterling claims has provided some excellent new rock exposure.

HISTORY

The property goes back to the late 1800's when it was known as the "Sterling" and "Hardpan". In the early 1900's, two open cuts and three short adits were driven along several lead-silver showings but also revealed some interesting molybdenite values. A detailed description of the workings can be found in the B.C. Department of Mines, Bulletin No. 9, "Molybdenum Deposits of B.C." by J. A. Stevenson, 1940. Since 1960 the property has been explored by several companies, primarily for its molybdenum potential.



NEWMONT EXPLORATION OF CANADA LTD.

STERLING CLAIMS - LOCATION

SCALE 1 : 50 000	LOCATION 82M/8W	DATE JULY 6, 1981
SURVEY BY DB	DRAWN BY JG	NO. FIGURE 1

Scurry-Rainbow Oil Company carried out magnetic and electro-magnetic surveys in 1966. Some anomalies were discovered and an attempt was made to test these by diamond drilling. Of the three holes drilled, none reached their depth objective due to drilling difficulties.

The property was optioned in 1967 by Nisson Mining and Development Limited who carried out a soil sampling program, bulldozed trenching and a magnetic survey. Five or six diamond drill holes, totalling 612.3 m (2009'), were drilled in 1971 but their locations and logs are not available to us. It was reported that "visibly encouraging intersections of molybdenite were encountered."

Twenty-six 2-post claims, known as the "34 Mile" group, were staked in June, 1979 by Cajac Exploration. Later that year, Brenda Mines carried out a soil geochemical survey. These claims were abandoned and restaked as the Sterling No. 1-6 in 1980.

GENERAL GEOLOGY

The Sterling claims are underlain by Lardeau Group metasediments (Cambrian to Devonian) which, as defined by J.O. Wheeler (G.S.C. Paper 64-32, 1965) consist of phyllitic siltstones, quartzite, siliceous phyllonite, quartz muscovite-chlorite-plagioclase schist, limestone, chlorite schist and greenstone. A major fault zone runs along the Columbia River valley, separating the Lardeau rocks from the Shuswap Metamorphic Complex on the west side of the valley.

The Lardeau rocks in the claim area, as defined by diamond drilling and outcrop, consist mainly of quartz-chlorite-calcite and/or muscovite schists, biotite-sericite schists, graphite schists, silicified-sericite-feldspar-fuchsite schists and chlorite schists bearing magnetite octahedrals. Minor crystalline limestone, calcareous quartzite, albite rich pegmatite and siliceous-chlorite metavolcanic units were also noted. In general the siliceous meta-sediments often contain disseminated pyrite and pyrrhotite. Accessory minerals include magnetite, ankerite, dolomite, allanite, rutile, fuchsite and albite. Only the latter three minerals are associated with molybdenite mineralization. Allanite was confirmed by X-ray diffraction, G. White of the Dept. of Mines.

A sulphide-barren calcareous meta-diorite intrusive unit was intersected by two drill holes. Feldspars were commonly saussuritized (altered to epidote, sericite and chlorite). The metavolcanic units were also generally sulphide free.

N

STERLING No. 2

STERLING No. 1

STERLING No. 4

STERLING No. 3

Galena Creek

Cabin Creek

Nisson logging road

Keystone logging road

New highway

Highway 23

Highway 23
48 km (30 mi) to Revelstoke

COLUMBIA RIVER

LCP

81-1
81-2
81-3
81-4
81-5
81-6
81-7
81-8
81-9
81-10

A
A'
B
B'
C
C'
D
D'
E
E'

LEGEND

Diamond drill hole with horizontal projection

Logging road (abandoned)

SCALE

0 50 100 200 m

NEWMONT EXPLORATION OF CANADA LTD.		
STERLING PROJECT – DDH LOCATION		
SCALE 1:5000	LOCATION 82 M / 8 W	DATE JULY 6, 1981
SURVEY BY D. B.	DRAWN BY D.B., J.G.	NO. FIG. 2

NCI 242 – N.E.C.

DRILLING DATA AND GEOLOGICAL INTERPRETATION

The purpose of the surface diamond drill program was to test the Sterling property for a deep seated molybdenum deposit. Detailed descriptions of the drill core and corresponding assay results are contained on the drill log sheets (see Appendix 1). The ten drill sites are plotted on five sections (see Fig.'s 3-7). It should be noted that diamond drill hole 81-10 started off as a vertical hole but had deflected more than 13° by the time it was finished. It is believed to have wandered against the dominantly west-northwesterly dip and is therefore plotted with a horizontal projection in the east direction. Below is a tabulated drill record of each hole:

Hole No.	Length (metres)	Dip	Azimuth	Latitude (N-S)	Departure (E-W)	Elevation (metres)	Core Size
81-1	106.7	-60°	east	373 S	590 W	533	BQ
81-2	106.7	-61°	east	342 N	300 W	603	BQ
81-3	106.7	-65°	north	303 S	70 E	577	BQ
81-4	106.7	-60°	north	42 S	251 W	551	BQ
81-5	106.7	-60°	east	835 S	570 W	609.5	BQ
81-6	61.0	-50°	north	468 S	110 E	555	BQ
81-7	61.9	-70°	east	370 N	470 E	731	BQ
81-8	258.5	-75°	east	206 N	302 W	604	NQ
81-9	235.9	-75°	east	205 N	602 W	531.5	NQ
81-10	276.7	-90°	--	562 N	855 W	496	NQ

On section AA', two hydrothermally altered molybdenite-bearing zones have been interpreted near surface (see Fig. 7, in pocket). Well silicified-sericite-feldspar-fuchsite altered schists, containing some molybdenite, define the first zone at surface located along the new highway. Diamond drill holes 81-2 and 81-8, drilled down-dip from this outcrop, confirmed the molybdenite-bearing zone to depth of about 40 metres. In drill hole 81-8, an intersection of 4.67% MoS_2 over 2 m was made at the 9.0 m mark. Ten centimetres of massive molybdenite, within a 0.5 m wide feldspar (albite) replaced section in the sericite schist unit, is responsible for this high grade assay. Another intersection of 0.385% MoS_2 over 2.40 m was made at the 15.0 m mark in drill hole 81-2 while all other results were less than 850 ppm Mo (0.14% MoS_2) and generally in the range of 3 to 25 ppm.

Molybdenite mineralization in the core usually occurs as fine to medium-grained rosettes commonly disseminated along feldspar, quartz and dolomite replaced margins of quartz veins and pegmatites in a silicified sericite-fuchsite schist. Individual core samples were usually 2-3 m long, with Mo content averaged over lengths of 15-20 m to show on drill sections.

The surface outcrop consistently exhibits a dip between 25° and 35° west-northwest, and this dip is conformable with the interpreted contact of the molybdenite-bearing zone from the two drill holes. With the exception of two slightly anomalous molybdenite values near the 150 m mark of hole 81-8, geochemical values drop off quite abruptly with depth after this contact. In general for all drill holes, geochemical assay values for molybdenum, and hydrothermal alteration of the metasediments (eg. silicification, sericitization), decrease as depth increases.

A relatively unaltered meta-diorite intrusive was intersected at the 192 m mark of hole 81-8. The highest molybdenum value obtained in this unit was only 11 ppm. A fine-grained derivative of this calcareous intrusive was also intersected in drill hole 81-6 (see Fig. 3, page 8), but it is not entirely certain if it is a sill or pluton-like intrusive unit.

The second molybdenite-bearing quartz-feldspar-sericite altered zone is exposed at surface along Galena Creek, but holes 81-1 and 81-9 drilled in the immediate area failed to define any extension of this altered zone at depth.

On section BB' an intermixed, partially silicified sericite and chlorite schist zone, as defined by drill hole 81-3, has been projected up to the surface galena-molybdenite showings in Cabin Creek. No lithological correlations can be made with drill hole 81-6, which is also on the section.

Drill hole 81-5 was drilled perpendicular to the dip of a galena-molybdenite quartz-dolomite-feldspar vein 0.5 m wide (see Fig. 6, page 11). Only minor lithological correlations can be made. Drill hole 81-7 was drilled on a magnetometer anomaly while 81-4 was drilled in an area of heavy overburden cover, with little or no geological information (see Fig. 4 and Fig. 5, pages 9 and 10).

The drill sites of holes 81-9 and 81-10 were selected with the assumption of intersecting a molybdenite-bearing zone down-dip from the showing exposed along the new highway. Hole 81-10 was also intended to get closer to the major Columbia River fault system to possibly find a structurally controlled molybdenite-bearing zone.

NORTH

SOUTH

elevation above sea level

600 m

500 m

400m

600m

500m

400m

CABIN CREEK

'CAT' ROAD

c/d

81-3

NS

7

19

187

2

62

2

14

1

81-3
EOH 106.7m

81-6

NS

2

1

2

81-6
EOH 61m

LEGEND

a	Fine-grained partially foliated Meta-Diorite -altered by sericite, chlorite and calcite - epidote veinlets.
b	Graphite - pyrite schist; occasionally siliceous.
c	Calcareous quartz-muscovite-chlorite schist - includes chloritic quartzite and minor biotite / sericite schist.
d	Silicified sericite shist - altered by fuchsite, calcite (dolomite), pyrite, pyrrhotite, feldspar and minor quartz veining.
e	Siliceous - chloritic meta-volcanics.
	Overburden

GEOCHEM NOTES

sample type : drill core (rock)

digestion : aqua regia (HCl, HNO_3)

analytical method : atomic absorption

results : plotted in ppm Mo
NS indicates an unsampled width

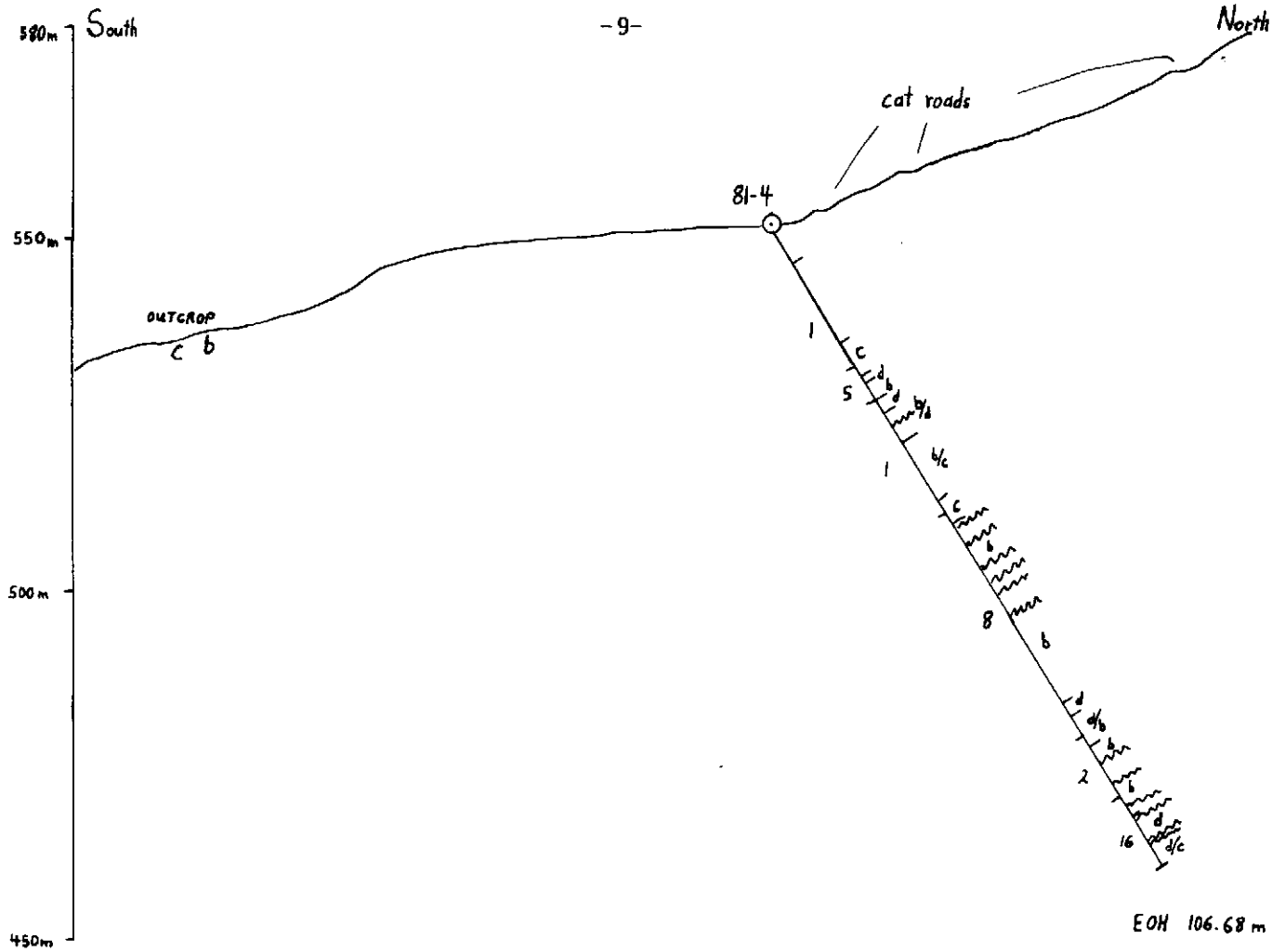
SCALES

30m
15m
5m
0
10
25
50m

93-29
NO.

NCI 242 — N.E.C.

NEWMONT EXPLORATION OF CANADA LTD.		
STERLING PROJECT - SECTION BB'		
SCALE 1:1000	LOCATION 82K/8W	DATE JULY 6, 1981
SURVEY BY D.B.	DRAWN BY J. GOH	NO. FIG. 3



LEGEND

C Quartz - chlorite - muscovite - calcite schist

d Silicified sericite schist with minor calcite, feldspar, fuchsite and chlorite

b Graphite schist, occasionally siliceous

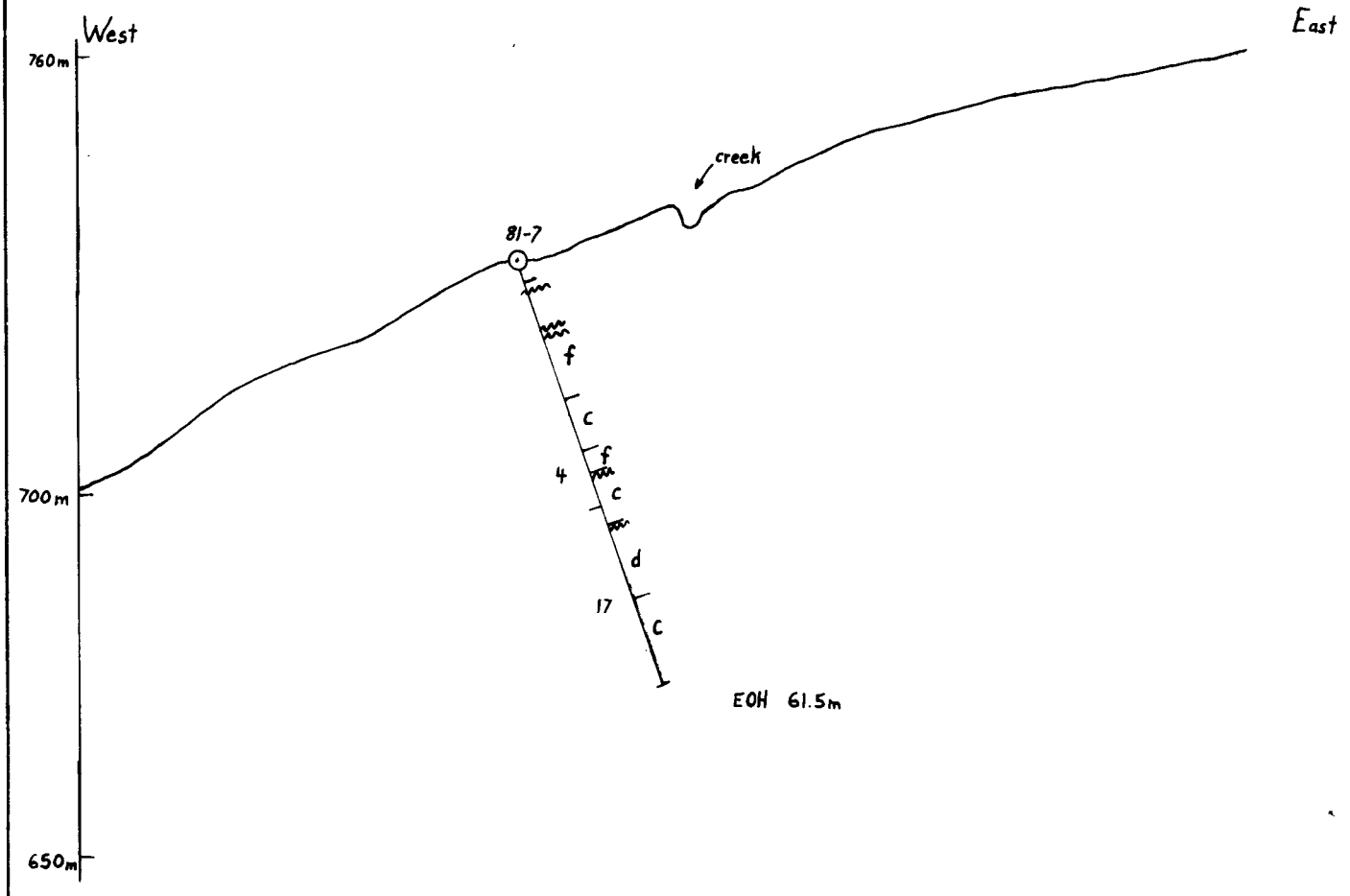
geochemical values in ppm Mo

NEWMONT EXPLORATION OF CANADA LTD.

STERLING PROJECT - SECTION CC'

SCALE	LOCATION	DATE
1:1000	82 M/8W	June, 81
SURVEY BY D.B	DRAWN BY D.B.	NO. FIG. 4

NCI 241 — N.E.C.



LEGEND

f calcareous chlorite - biotite schist with disseminated magnetite octahedrals

c calcareous chlorite and/or sericite schist

d silicified sericite - calcite schist with minor feldspar, fuchsite alteration

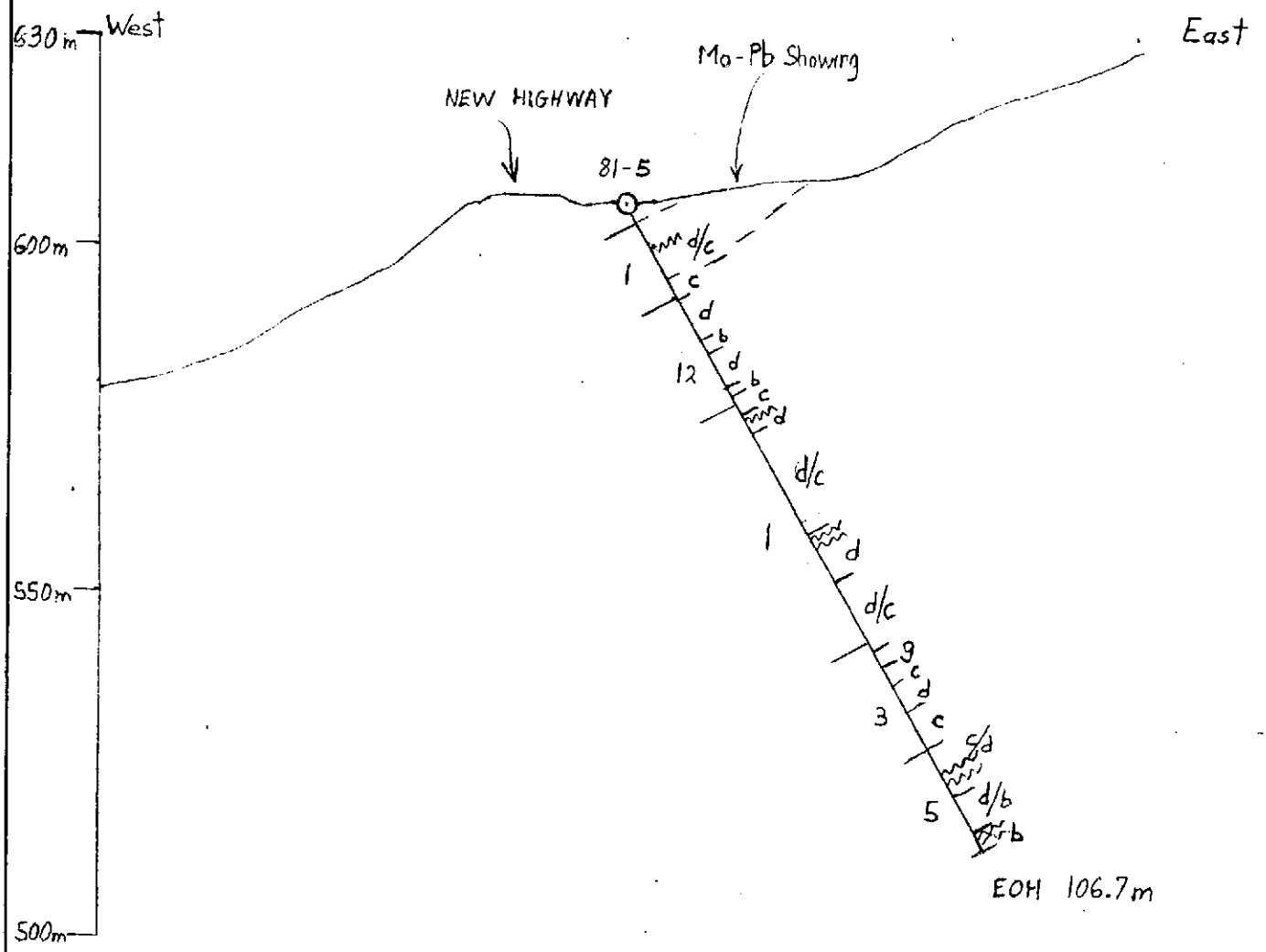
geochemical values in ppm Mo

NEWMONT EXPLORATION OF CANADA LTD.

STERLING PROJECT - SECTION EE'

SCALE	LOCATION	DATE
1:1000	82 M/8W	June, 81
SURVEY BY	DRAWN BY	NO.
D. B.	D. B.	FIG. 5

NCI 241 — N.E.C.



LEGEND

b Siliceous graphite schist

c Calcareous quartz-chlorite muscovite schist - minor biotite and sericite

d Silicified sericite-fuchsite schist - altered by calcite(dolomite), feldspar and biotite

g Crystalline - pyrite limestone

Geochemical values in ppm Mo

NEWMONT EXPLORATION OF CANADA LTD.

STERLING PROJECT - SECTION DD'

SCALE	LOCATION	DATE
1:1000	82 M/8W	June, 81
SURVEY BY D.B.	DRAWN BY D.E.	NO. FIG. 6

NCI 241 – N.E.C.

Anomalous molybdenum samples often contained correspondingly high background values in Pb, Zn, Ag and sometimes copper. For example a 2.60 m wide sample in drill hole 81-2 ran 0.129% MoS_2, 1.02% Pb, 0.43 oz/ton Ag, 135 ppm Zn and 578 ppm copper. A high of 1.08% Pb and 5.26 oz/ton Ag was obtained in hole 81-5 over 2 m. Generally Pb, Zn and Ag values range from 10 to 1738 ppm, 10 to 2677 ppm and 0.2 to 16.9 ppm respectively. A high of 713 ppm Cu was obtained in hole 81-8 over 3 m but most values were in the 50 to 300 ppm range. These moderate to high base metal background values are associated with fine-grained galena, sphalerite and chalcopyrite within the silicified, calcareous matrix of the schists and to a lesser extent, narrow quartz-calcite (dolomite) and/or feldspar veins.

A high of 7 ppm tungsten was obtained in hole 81-10 with the majority of analyses being only 1 or 2 ppm. Gold analyses, usually taken in areas rich in iron sulphides, ranged from 0.005 ppm to 0.020 ppm.

Overall, the Lardeau series schists on the Sterling property contain erratic grades of molybdenite mineralization with moderate to high background values in Pb, Zn, Ag and Cu. Quartz-calcite (dolomite) and quartz-sericite-feldspar-fuchsite veins occur usually along foliation planes and are generally less than 20 cm wide. Core angles of the schistosity show metasedimentary sequence generally to be striking northerly and dipping between 20°-40° to the west-northwest.

Numerous fault zones, often associated with a crenulated graphite-rich schist, are seen throughout the drill core but proper dips could not be obtained for correlation with other drill holes. Because of the intermixed nature of the siliceous, calcareous, chloritic and graphitic schists, distinct marker units that could be correlated from hole to hole were not identified.

CONCLUSIONS

This drill program was unsuccessful in finding a significant molybdenum deposit. Molybdenite mineralization and associated alteration present near surface did not persist to depth. No intrusive source or quartz vein stockwork system was found.

Dennis Bohme

D. M. Bohme

Vancouver, B.C
July 10, 1981

STATEMENT OF COSTS

		COSTS
Drilling		
Herb Allen Diamond Drilling Ltd., Merritt, B.C. 10 holes totalling 1427.4 m (4683') April 22 - June 16, 1981		$ 119,106.00
Core boxes - 215 boxes @ $4.25/box		913.75
Assaying		
448 samples for Cu,Mo,Pb,Zn,Ag,W @ $4.50/sample =	$2016.00	
74 samples for Au @ $3.25/sample =	240.50	
448 sample preparations @ $2.25/sample =	1008.00	
7 miscellaneous assays @ $9.00/sample =	63.00	
Total		3,327.50
Shipping =		232.11
Personnel		
D. Bohme, geological technician April 22-July 8, 1981 67 days @ $77.87/day		5,217.29
P. Bohme, coresplitter and survey assistant April 22-June 19, 1981 57 days @ $53.75/day		3,063.75
Groceries and Meals		
2 men, 57 days @ $12.00 each per day		1,368.00
Accommodation		
2 men, 57 days @ $23.00/day		1,311.00
4-Wheel-Drive Vehicle + Fuel		
57 days @ $40.00/day		2,280.00
Report Typing, Printing Costs, etc.		200.00
Total		$ 137,018.40

STATEMENT OF QUALIFICATIONS

I, Dennis M. Bohme, do hereby certify that:

1. I am a geological technician presently employed by Newmont Exploration of Canada Limited.
2. I am a graduate of the British Columbia Institute of Technology, 1980.
3. I carried out the drill core logging and surveying described in this report.

Dennis Bohme

D. M. Bohme

I, Terrence N. Macauley, do hereby certify that the work described in this report was done under my direction.

T N Macauley

T. N. Macauley, P.Eng.

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 1750 ft (533m)
HOLE NO.: 81-1	BEARING: DUE EAST
LOCATION: STERLING NO.1	DIP: -60°
COORDINATES FROM L.C.P. 590m West 373m South	TOTAL LENGTH: 350 ft (106.71m)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 55m
DATE: APRIL 25, 1981	VERTICAL PROJECT: 94m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: BQ	
DATE STARTED: APRIL 22, 1981	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: APRIL 26, 1981	
DIP TESTS: AT 163 ft (49.69 m) 58°; AT 350 ft (106.71m) 63°	LEGEND
COMMENTS	

R. O. PENHALL LTD., MADE IN VANCOUVER, CANADA
DUKSBAK WATERPROOF

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PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION
				0.0 - 2.13 OVERBURDEN - CASING
				2.13 - 2.55 BIOTITE SCHIST with numerous calcite veinlets + fine gr pyrite and magnetite octahedrals
5				2.55 - 19.00 Complexly interlayered coarse qtz - muscovite - (chloritic) schist, bleached calcite - feldspar altered sericite schist and moderate quartz veinlets (< 3cm) with calcite, ankerite, feldspar and minor fuchsite alteration occurring with the foliation (generally ⊥ to core axis)
10				
				10.85 - 11.0 fault zone marked by fault gouge and broken up muscovite schist
15				11.90 - 12.05 porphyritic feldspar phenos in a sericite schist (minor fuchsite and calcite also) considerably less chlorite
				15.50 - 15.95 porphyritic feldspar phenos in a sericite schist
20				15.40 - 15.45 Shear zone marked gauged schist
				15.65 - 17.37 FAULT ZONE marked broken up friable core
				19.00 - 22.10 GRAPHITIC - SERICITIC SCHIST intermixed by qtz segregations and qtz - calcite - feldspar segregations with moderate sericite altered margins
25				
				22.10 - 29.40 Bleached muscovite to sericite schist with numerous qtz - ankerite veinlets along foliation planes and fractures
30				27.3 - 27.65 Qtz - ANKERITE - py - fuchsite vein with foliation
				29.40 - 30.0 PYRITIC GRAPHITIC SCHIST
				30.0 - 35.70 silicified sericite - feldspar - ankerite - py - fuchsite sch, Qtz - py veinlets < 2cm generally with foliation. Ankerite veinlets filling x-cutting fractures.
35				
				35.70 - 48.0 MAJOR FAULT ZONE - broken friable core, fault gauge and qtz, sericite, feldspar, pyrite and fuchsite fault breccia. Graphitic schist fragments also present. FRAGMENTAL Qtz veins and coarse feldspars seen indicating shattering of altered rock
40				
45				

ALTERATION A BIO	B SER	C SIL	D Chlor	E	FRACTURE INTENSITY	% VEIN QTZ.
						10
						20
						20
						20
						10
						10
						0
						10
						0
						20
						20
						10
						20
						10
						20
						10
						0
						0
						0

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS (ppm) Mo	W	Pb	Zn	Cu	Ag	Au
		2.13	5.0	2.87	101	1	1	29	71	25	.5	-
generally f.gr pyrite seen throughout muscovite schist ocurring as disseminations and fracture coatings. Minor pyrrhotite		5.0	8.0	3	102	1	1	27	62	25	.3	-
Qtz veinlets generally barren of py, po		8.0	11.0	3	103	1	1	8	67	30	.1	-
increase pyrite content in graphitic schist and adjacent qtz-sericite schist		11.0	14.0	3	104	1	1	11	60	31	.1	-
		14.0	18.0	4	105	2	1	9	57	30	.1	-
		18.0	23.0	5	106	2	1	8	58	33	.2	-
		23.0	26.0	3	107	2	1	4	47	36	.1	-
26.25-26.45 qtz-ankerite vein (< 1cm wide) X-cutting foliation of bleached sericite sch contains massive f.gr pyrite and minor f.gr molybdenite along vein margins. Est gr 0.05% MoS_2		26.0	29.0	3	108	3	1	162	391	73	2.2	.005
27.3-27.65 f.gr to med gr pyrite pods throughout qtz vein		29	32	3	109	1	1	9	38	66	.2	.005
32.10-32.40 f.gr sph-galena noted in pyrite rich-feldspar altered qtz-sericite sch; minor po		32	35	3	110	3	1	40	35	18	.2	.005
35.20-48.0 FAULT pods and stringers of py occur throughout fault breccia		35	43	8	111	5	1	53	106	22	.3	-
		43	48	5	112	12	2	156	175	33	1.0	-

PAGE 2 OF 3 | PROJECT: STERLING (Y) | HOLE NO. 81-1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION
				35.70-48.0 FAULT ZONE
				48.0-49.0 bleached qtz-sericite-fuchsite sch with numerous qtz-feldspar veinlets <2cm wide, 5°-20° to C/A
50				49.0-55.60 complex interlayering of graphitic sch + sericite schist with inistial calcite veinlets throughout the foliation. Qtz veins <3cm consist of feldspar and calcite margins. Foliation 0-20° ⊥ to C/A crenulations present throughout
55				55.60-55.80 qtz vein altered by bleached sericite, feldspar, calcite and po, py margins
				55.80-65.2 chloritic muscovite sch (calcite rich) with sections of chlor → bio alteration. calcite veins <3cm along foliation - minor feldspar + ankerite also - foliation ⊥ to C/A
60				65.2-65.30 FAULT/SHEAR ZONE marked by gouge + fragments
65				65.30-71.30 silicified sericite (minor fuchsite) sch with numerous qtz-ankerite and qtz-feldspar-calcite veinlets (<0.05cm) - some vuggy qtz veinlets also
70				67.20-67.90 FAULT ZONE - gouged friable sch
				70.60-75.60 MAJOR FAULT ZONE contains graphite-qtz breccia fragments, graphitic gouge and sericite sch pieces
75				75.60-82.80 Mostly muscovite sch with narrow (<5cm) bleached zones of qtz-sericite-feldspar-py fuchsite sch and occasional thin bands of graphitic sch. foliation between 0-20° ⊥ to C/A - qtz veins (<2cm) with sericite altered margins, minor ankerite, all with sch foliation
80				
				82.80-106.68 Crenulated pyritic-graphitic schist X-cut by regular and irregular qtz calcite and qtz-calcite-feldspar veinlets less than 0.05 cm. Frequent shear zones seen, marked by polished graphitic surface. 84.30-84.43 Bleached qtz-sericite-feldspar-py sch included into graphitic sch. (slight drag fold seen)
85				
90				

ALTERATION: A BIO | B SER | C SIL | D CHLOR | E

FRACTURE INTENSITY

% VEIN QTZ.: 0, 10, 10, 20, 30, 40, 10, 0, 0, 0, 10, 10, 10, 0, 0, 0, 0, 30, 20, 10, 10, 20, 0, 10

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS (ppm) Mo	W	Pb	Zn	Cu	Ag	A
med - coarse py cubes present within foliation of schist but not related to qtz-feldspar veinlets		48	51	3	113	3	1	6	59	44	.2	-
Fine-gr py generally found along margins of sericite-graphite sch contact		51	54	3	114	4	2	9	85	71	.3	-
49.0 - 55.60 coarse gr blobs of po and minor f.gr py along vein margins		54	57	3	115	3	1	13	59	107	.2	-
55.80 - 59.0 coarse-gr py cubes within calcareous musc sch, up to 5mm wide		57	60	3	116	1	1	10	58	50	.1	-
59.0 - 65.30 sparse f.gr py		60	63	3	117	1	1	9	42	124	.1	-
65.30 - 71.30 fine to coarse gr py throughout schist foliation and generally not associated with veinlets		63	66	3	118	1	1	7	72	52	.2	-
		66	71.3	5.3	119	1	1	1	55	85	.3	.005
70.60 - 75.60 massive py associated with qtz breccia inclusions in graphitic unit		71.30	76.0	4.7	120	2	1	8	26	47	.2	-
75.60 - 82.80 med → coarse gr pyrite as X-cutting fracture fillings and along veinlet margins of sericite altered qtz veinlets and segregations		76	79	3	121	2	1	10	45	74	.1	-
		79	82	3	122	3	2	9	42	54	.1	-
82.80 - 106.68 clots and stringers of massive pyrite along fracture planes and qtz-calcite inclusions. Minor f.gr. po also noted.		82	85	3	123	7	1	11	30	123	.1	-

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 91-1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				92.80 - 106.68							
				QTZ - PYRITIC, GRAPHITIC SCHIST							
				92.20 - 92.25 qtz-py vein at 10° to C/A							0
				94.10 - 94.80 two qtz veins, 6cm wide,							10
95				in bleached musc. to sericite - py schist							20
				- minor feldspar + calcite							0
				99.50 - 102.50 FAULT ZONE - marked by							10
100				qtz-graphite sch + py breccia + gouge							
				and fragmental graphitic schist							10
				102.50 - 106.68 qtz veinlets + qtz-calcite veinlets							10
				throughout crenulated graphitic sch.							10
105				106.68 EOH							10
110											

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS (ppm) Mo	W	Pb	Zn	Cu	Ag	Au
94.10-94.80 galena?, sphalerite + py along ser altered veinlet margins of altered sch. Pods of med. gr py along fractures		91	94	3	124	2	1	13	42	89	.1	-
		94	97	3	125	7	2	349	495	92	1.4	-
94.80-106.68 massive clots of pyrite along qtz fragment margins and qtz veinlets												

N1 NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 1978 ft (603 m)
HOLE NO.: 81-2	BEARING: DUE EAST
LOCATION: STERLING NO. 1 COORDINATES FROM L.C.P. 300 West, 342 North	DIP: -61°
	TOTAL LENGTH: 106.71 (350 ft)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 49m
DATE: APRIL 30, 1981	VERTICAL PROJECT: 92m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: BQ	
DATE STARTED: APRIL 26	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: APRIL 30	
DIP TESTS: 50 ft -60°; 150 ft -63°; 350 ft -67°	
COMMENTS	LEGEND

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DURABAK WATERPROOF

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PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-2

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLO	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 12.82 CASING							
				12.82 - 14.60 crenulated pyritic-graphitic sch							
				14.60 - 15.20 qtz-musc → qtz-sericite sch @ 30° to c/a							
				15.20 - 19.75 schist becomes highly altered by silicification, feldspar (fine to coarse), sericite, fuchsite, po, py and minor rutile and calcite							
				18.28 - 18.60 qtz-po vein with sericite-feldspar altered margins							
				18.70 - 19.10 FAULT/SHEAR ZONE marked by broken friable core + missing core							
				19.75 - 19.90 Biotite → ser altered sch							
				19.90 - 20.50 silicified ser sch							
				20.50 - 22.50 intermixed silicified brown bio → ser, or bio → chlor alteration. qtz-feldspar, minor calcite veinlets throughout (< 1cm)							
				22.50 - 28.0 qtz-muscovite (chloritic)-py sch with narrow qtz (<1cm) py-feldspar veinlets with foliation 0-20° of c/A							
				24.10 - 24.30 FAULT ZONE - friable - gouged - broken core							
				28.0 - 36.50 qtz-muscovite (chloritic) sch with qtz-calcite, minor feldspar veinlets throughout. Occasional bleached musc → ser altered section and minor biotite alteration							
				35.0 - 35.05 qtz vein with calcite margins							
				36.50 - 39.62 bleached silicified ser schist							
				38.60 - 39.20 broken up qtz-feldspar-py-fuchsite vein in silicified ser sch.							
				39.20 - 39.62 FAULT ZONE - broken + missing core							
				39.62 - 41.30 pyritic-graphitic sch with qtz veinlets throughout							
				41.30 - 59.0 quartz, sericite, feldspar, fuchsite, calcite bleached ser sch; broken up, friable and sheared in several places. minor biotite							
				430 - 44.20 FAULT ZONE - broken + missing core							

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS (ppm) Mo	W	Pb	Zn	Cu	Ag	Au
14.60 - 15.20 f.gr py along foliation												
15.20 - 19.75												
15.20 - 16.0 f.gr py, po, minor Mo in feldspar - ser altered qtz vein		15	17.37	2.37	126	2400 (0.385% MoS_2)	1	94	428	165	2.6	-
16.0 - 16.3 qtz vein containing massive py 1cm wide, 3.5 cm thick along fracture												
16.31 - 18.28 f.gr py, po throughout silicified sch; possible sph (coarse gr) seen		17.37	20.0	2.63	127	21	1	41	55	187	1.6	-
17.__ - 17.10 qtz-vein containing massive molybdenite (coarse) along feldspar - ser altered margins. 18.28 - 18.60 massive coarse gr. po injected along fracture. Est gr. 15.20 - 19.75 0.03 - 0.08		20.0	23.0	3	128	6	1	58	74	58	0.3	-
18.60 - 20.50 f.gr py throughout												
20.50 - 22.50 pods of f.gr py throughout		23.0	27.0	4	129	45	1	6	48	51	0.2	-
22.50 - 28.0 med. to f.gr py within veinlets + foliation planes		27.0	30.0	3	130	2	1	5	49	32	0.2	-
28 - 36.50 sparse f.gr py within fractures		30	33	3	131	2	1	5	43	24	0.2	-
		33	36.5	3.5	132	2	1	8	45	27	0.2	-
		36.5	39.62	3.12	133	3	1	7	41	21	0.1	-
41.30 - fine to coarse py as fracture coatings + disseminations; minor po		39.62	41.30	1.68	134	2	1	4	52	73	0.2	-
42.06 - 42.6 qtz-vein with galena + sphalerite included along fracture planes; pyrite also		41.30	45.0	3.7	135	31	1	900	300	67	5.5	
49.68 - 49.80 qtz-py-sericite-fuchsite vein with coarse gr molybdenite in fractures Est gr 45-50 0.04 MoS_2		45	50	5	136	850 (0.142% MoS_2)	1	273	1412	156	2.8	-

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-2

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				46.32-47.54 broken friable core + missing (FAULT)							40
				47.90-48.30 missing + broken up core (FAULT)							30
50				50.30-52.73 silicified bleached calcite ser-fuchsite-py-po altered sch. Fine-gr feldspar throughout							50
				50.80 X-cutting qtz-feldspar-calcite veinlet at 70° to C/A (2-3mm wide)							70
				52.73-52.85 Feldspar-fuchsite rich vein							40
55				53.0-53.5 brown bio included in sil sch							20
				53.0-59.0 silicification of ser sch decreases along with feldspar matrix. Calcite increases quite significantly, with veinlets throughout							40
60				57.90-58.50 several qtz-feldspar-calcite fuchsite veins (< 3cm) at 10° ∠ to C/A							30
				58.60-59.0 FAULT/SHEAR ZONE; marked by broken friable core							10
				59.50-59.70 SHEAR/FAULT ZONE - broken/sheared core							0
65				59.0-71.0 qtz-muscovite-calcite (slightly chloritic) schist, CALCITE veins + segregations throughout matrix. minor qtz-feldspar veinlets. Foliation 0-20° to C/A.							0
				69.0-69.30 several qtz-calcite-feldspar veinlets < 2cm wide							10
70				71.0-72.54 interbanded qtz graphitic sch, qtz-feldspar veinlets and sericite sch; inclusions calcite 71.90 coarse qtz-feldspar segregation							20
				72.54-73.0 bright green fuchsite rich calcareous qtz sericite sch with numerous vugs + cavities with qtz crystal growth							70
75				73.0-78.0 qtz-muscovite-calcite sch with intermixed bleached, silicified sections of sericite-py-fuchsite sch.							0
				78.0-78.20 Altered qtz-feldspar-ser-fuchsite-py vein							10
				78.20-79.0 FAULT ZONE - marked by broken + missing core							70
80				79.0-80.80 Alternating calcareous graphite unit + qtz sericite-calcite banding. 80.40 qtz-feldspar vein < 3cm wide with ser altered margins							20
				80.80-89.0 narrow intermixed bands of chloritic musc sch, calcite-qtz (minor ankerite) veinlets and fuchsite ser bleached sections. Very calcareous. Veinlets with foliation at 0-10° of C/A							10
85				89.40-89.60 creamy qtz-calcite rich veinlets (< 3cm)							0
				87.5-87.6 qtz-calcite rich vein							10
90											10

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag	Au
50.30-52.73 f.gr py, minor po in blebs along poorly developed foliation - minor Mo?		50	53	3	137	.168	1	306	808	.137	2.6	-
52.73-52.85 py throughout f.gr molybdenite seen also												
		53	56.08	3.08	138	4	1	32	86	114	1.0	-
56.7 f.gr rossette of moly along coarse-gr bleb of pyrrhotite												
		56.08	59.0	2.92	139	3	1	8	93	93	0.5	-
57.90-58.50 blobs of fine gr py, minor po												
59-71.0 sparse py throughout calcareous musc sch.		59	62	3	140	3	1	4	73	57	0.4	-
71.0-72.54 pyrite filled fractures and in qtz veinlets												
72.54-73.0 strings of py along margins of qtz calcite veinlet		69	72	3	141	4	1	6	75	83	0.1	-
73.0-78.0 coarse gr py along fractures; fine gr in matrix		72	75	3	142	3	1	3	121	95	0.3	-
78.0-80.80 f.gr py disseminated throughout		75	78	3	143	3	1	7	81	121	0.4	-
80.80-89.0 py content drops off. A few minor clots of po visible. Qtz-calcite rich veinlets are barren of any sulfides		78	82	4	144	4	1	2	77	65	0.3	-
		82	85	3	145	3	2	7	79	73	0.3	-

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PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-2

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				89.0-95.30 slightly more ser-fuchsite altered. Qtz veinlets increase while calcite veinlets decrease. 89.65-89.80 qtz-feldspar-po segregation in fuchsite-ser-chlor schist							40 20
95				90.70-95.30 highly bleached qtz-feldspar-fuchsite vein X-cutting poor foliation of ser sch at 80° to c/A							40
				95.30-95.60 qtz vein with islands of coarse gr feldspar + fuchsite. Ser altered margins							50
100				95.60-97.40 bleached ser altered sch with numerous qtz-feldspar-fuchsite veins 3-10cm wide							40
				97.40-97.90 Qtz veinlets in graphitic schist							10
				97.90-99.36 bleached ser sch. 98.90-99.0 qtz-feldspar vein							
				99.36-104.10 qtz veinlets in pyritic-graphitic sch							20
105				100.40-104.10 FAULT ZONE—broken up missing core							
				104.10-106.68 bleached ser-fuchsite siliceous sch f.gr feldspar in qtz veinlets							
				105.50-106.68 FAULT ZONE badly broken up fragments							
110				106.68 EOH							

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag	Au
88.0-95.30 f.gr py + minor po with qtz veinlets		85	88	3	146	2	1	9	97	58	0.5	—
89.65-89.80 coarse-gr po pods along fracture filled qtz segregations												
90.70-91.30 med gr py throughout fldspar altered qtz vein. Possible f.gr Mo?		88	91.30	3.3	147	4	1	32	171	128	1.3	—
95.30-95.60 small fractures filled with po. Possible f.gr Mo?												
95.60-97.40 med gr pods of po in altered qtz veins; minor py		91.30	94.0	2.7	148	13	1	10	150	108	0.5	—
97.40-97.90 py thr'out qtz veinlets												
97.90-99.36 f.gr py pods along qtz veinlets; possible f.gr Mo?		94.0	99.40	3.4	149	13	1	32	124	61	0.7	—
98.90-99.0 f.gr ribbony streak of Mo		97.40	99.40	2.0	150	26	1	6	99	75	0.2	—
99.36-106.68 f.gr py disseminated in graphitic sch. Minor f.gr py in ser altered sch.		99.40	104.10	4.7	151	72	1	33	172	42	0.2	—
		104.10	106.68	2.58	152	19	1	37	104	53	0.6	—

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 1893 ft. (577m)
HOLE NO.: 81-3	BEARING: DUE NORTH
LOCATION: COORDINATES FROM L.C.P. 303m South 70m East STERLING NO. 4	DIP: -65°
	TOTAL LENGTH: 106.68m (350 ft)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 59 m
DATE: MAY 2, 1981	VERTICAL PROJECT: 90m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: MAY 1, 1981	
DATE COMPLETED: MAY 4, 1981	TOTAL SULPHIDE SCALE
DIP TESTS: 175 ft (53.34) 63°; 350 ft. (106.68) 60°	
COMMENTS	LEGEND

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA
DUKSBAK WATERPROOF

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-3

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				CASING 4.57							
				4.57 - 5.18 qtz vein with fractures filled with pyrite, feldspar + calcite.							70
5				5.18 - 16.25 Silicified muscovite sch with alternating bleached bands of qtz-ser sch with coarse feldspar, massive f.gr pyrite and calcite. foliation between 0-20° of C/A							50
				7.9 - 8.2 qtz - feldspar - ser - fuchsite vein							40
10				10.80 - 13.0 highly silicified ser sch with pods of coarse gr feldspar (<1cm)							40
				13.80 - 15.0 silicified ser sch with qtz feldspar veinlets and segregations with bleached foliation							30
15				16.25 - 26.70 GRAPHITIC SCH with qtz veinlets (<1cm) with minor ser alteration throughout; minor calcite							20
				17.06 - 21.70 FAULT ZONE - marked by large amounts of missing core and fragmental graphitic sch. Crenulated							0
20				25.05 - 25.25 FAULT/SHEAR ZONE - marked by crumbly fragments of graphite sch							0
				24.0 - 26 less qtz veinlets, more graphite							10
				26.70 - 28.70 silicified ser sch, 27.10 - 27.70 qtz-sericite-feldspar-calcite veins, largest 10cm wide							20
25				at 10° to C/A. 22.55 - 22.70 Vugs + cavities in qtz							10
				28.70 - 29.40 qtz - graphite - ser - py schist							60
				29.40 - 41.30 silicified musc and ser schist. Schistosity poorly developed. Minor fuchsite in sections with calcite and qtz-calcite veinlets							10
30				throughout (<1cm)							20
				31.30 - 31.60 qtz-py rich vein							10
				31.69 - 34.60 FAULT ZONE - marked by shattered and missing core; massive py fragments							30
35				34.70 - 34.90 fragmental qtz-feldspar-py-calcite - minor fuchsite vein							50
				36.70 - 37.0 ser altered qtz-py-fuchsite vein							40
				37.0 - 40.0 totally bleached out fabric of silicified sch by ser, feldspars, py and po minor fuchsite							30
40				40.50 - 41.0 X-cutting qtz veinlets <1cm							0
				41.30 - 44.40 FAULT/SHEAR ZONES fine fragmental core and sections of missing graphitic sch mark fault							0
				41.80 - 42.20 section of silicified ser-py schist							
45											

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-3

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
5.18-16.25 clots of massive py throughout		4.57	8.23	3.66	153	8	1	22	28	65	0.2
5.18-6.5 intensly silicified ser sch with several qtz veins (<2cm) containing massive py and fine gr ribbony streaks of moly? 11.27-11.30 massive f.gr. clot of po 10.80-13.0 f.gr py pods throughout.		8.23	11.0	2.77	154	2	1	185	363	80	4.3
Possible f.gr ribbons of moly in fractures?		11.0	14.0	3	155	2	1	11	18	42	0.2
13.80-15.0 f.gr streaks of py associated with qtz-feldspar veinlets + segregations, minor pods of po		14.0	16.15	2.15	156	4	1	11	15	57	0.1
16.25-26.70 med to coarse gr pods of py throughout qtz veinlets 26.70-28.70 f.gr py thr out 27.10-27.70 f.gr pyrite, galena and sphalerite along calcite-sericite altered vein margins; about 1% Pb, 0.5% Zn possible rutile? and moly? also seen		16.15	23.0	6.85	157	2	1	8	36	109	0.1
27.10-27.70 f.gr pyrite		23.0	26.70	3.70	158	3	1	12	32	62	0.2
30.17-31.0 f.gr ribbony streaks of moly?? 29.40-41.30 f.gr pods + fracture fillings of py and po; perhaps py→po alteration; seen throughout; no moly seen		26.70	29.0	2.3	159	48	1	465	147	62	1.7
sections of fracture filled massive po f.gr galena in matrix with po??		29	31.69	2.69	160	6	1	45	11	30	0.4
		31.69	38.0	6.31	161	3	1	7	33	67	0.1
		38.0	41.0	3	162	308	1	0.17%	69	99	0.67 oz/ton
41.30-44.40 varying amounts of f.gr py and massive clots of py along fractures		41.0	46.0	5	163	66	2	149	40	98	1.3

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-3

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				44.40-48.0 intermixed bands of siliceous graphite sch, bleached ser sch and qtz-calcite veinlets of < 3cm wide. Some veinlets are "S" shaped within crenulated graphite sch						10 30
50				48.0-57.40 Very siliceous bleached musc to ser-po sch 50.50-50.70 qtz-feldspar-py-calcite vein 51.55-51.80 Coarse-gr feldspars up to 3cm wide in qtz vein; fractures filled with py, po and calcite -schistosity texture of ser is totally bleached out in sections 54.80-55.0 qtz-calcite-py vein ⊥ to C/A 55.90-56.10 qtz-calcite-po vein at 30° to C/A						60 40 30
55				57.40-58.21 FAULT/SHEAR ZONE marked by shattered, friable qtz-musc fragments							20 10
60				58.21-59.0 siliceous pyritic-graphitic sch. 59.0-59.10 FAULT/SHEAR ZONE friable sch 59.10-65.80 intermixed qtz-musc (chloritic) and qtz-sericite sch. Sections of bleached out foliation but generally 10°-30° ⊥ to C/A							20
65				62.20-62.30 fractured qtz-feldspar-po-calcite vein 65.80-67.90 siliceous crenulated graphite sch with numerous qtz-py and qtz-po veinlets < 3cm with ser-calcite altered margins							10 20 40
70				67.90-74.10 intermixed coarse crenulated musc to fine ser siliceous sch with qtz-veinlets < 5cm 69.40-69.50 graphitic shear zone with fractured barren qtz-vein. 69.55-69.65 fractured included qtz-segregations in musc sch 71.35 qtz feldspar-po-py veinlet 2cm wide							30 40 10
75				74.10-76.85 intermixed siliceous graphite + bleached ser sch bands, several small shears + crenulations 75.30-75.45 ser-calcite rich segment							40 40
80				76.85-106.68 highly silicified bleached ser sch with numerous qtz-feldspar-calcite po-py veinlets < 10cm							50
85				77.50-77.80 FAULT/SHEAR ZONE marred by qtz-ser sch fragments and heavy fracturing 79.0-79.20 qtz-py vein with feldspar-ser-calcite altered margins at 50° to C/A 80.80-80.90 Band of siliceous graphite 81.70-82.0 series of qtz veinlets and segregations with ser-feldspar-calcite altered margins (minor fuchsite)							30 10 50 40
90											

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-3

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
44.40-48.0 clots of py and po within qtz veinlets of graphitic sch. f.gr py throut ser sch: 45.20 qtz-py-calcite veinlet with f.gr galena?		46	49	3	164	.4	1	13	36	84	0.1
48.0 - 57.40 tiny fractures filled with py, po 50.50-50.70 f.gr sphalerite + galena seen with py in fractures		49	52	3	165	.1	1	112	161	47	0.2
54.50 - 52.40 po content increases as coarse stringers of fracture fillings		52	55	3	166	1	1	97	640	32	0.4
57.40-59.10 massive f.gr pods of pyrite throughout graphitic unit. pyrrhotite pods in ser sch.		55	58.21	3.21	167	2	1	11	38	90	0.1
59.10-65.80 f.gr cubes of pyrite and massive pods and fracture fillings of pyrrhotite throughout		58.21	61.0	2.79	168	2	1	15	69	73	0.1
62.20-62.30 fractures filled with po and py		61	64	3	169	1	1	8	56	94	0.1
65.80-67.90 coarse gr py along qtz veinlets and segregations											
67.90-74.10 massive po and lesser py along margins of qtz veinlets		64	67	3	170	1	1	10	48	68	0.1
69.55-69.65 massive po + py as fracture coatings											
74.10-76.85 pyrite + po within qtz veinlets of graphitic sch		67	70	3	171	8	1	14	82	61	0.1
73.30-75.45 massive f.gr py and po qtz-calcite veinlet with f.gr galena		70	73	3	172	115	1	16	39	81	0.1
76.85- f.gr pods of py and po throughout silicified sch		73	76	3	173	2	1	85	210	81	0.7
		76	79	3	174	3	1	10	42	45	0.1
80.80-80.90 fractures filled with po and py		79	82	3	175	12	1	11	19	224	0.1
81.70-82.0 massive fracture fillings of po and lesser py		82	85	3	176	11	1	10	52	250	0.1
88.50-89.40 several qtz-calcite fuchsite veinlets. + f.gr spec of moly seen with py cube		85	88	3	177	10	1	16	40	257	0.1

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-3

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				90.20 qtz vein with feldspar-calcite altered margins (5cm wide)							40
				90.55-90.70 feldspathic qtz-calcite-po vein							60
				92.80-92.96 FAULT/SHEAR ZONE marked by broken up core							70
95				92.96-94.0 intensly silicified zone with f.gr feldspar + calcite throughout							80
				94.0-97.0 totally bleached ser sch with numerous qtz segregations and qtz breccia fractures filled with calcite							80
100				98.05-98.25 SHEAR marked by qtz-calcite breccia							80
				101.90-102.20 FAULT/SHEAR marked by broken up core							60
				98.25-106.68 relatively barren qtz veinlets + segregations <5cm with minor feldspar, py, calcite throughout fine-gr fuchsite and increasing chloritic content of bleached musc → ser schist							30
105											
110				106.68 EOH							

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-3

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
91.20 f.gr pods of py and po in fracture		88	91	3	178	17	1	11	61	326	0.2
90.55 - 91.20 massive clots and fracture fillings of po		91	94	3	179	23	1	14	48	195	0.1
92.96 - 94.0 minor pods of py with f.gr sphalerite + galena + futile											
94.0 - 97.0 f.gr py and po		94	97	3	180	9	1	9	30	123	0.2
97.0 - 106.68 only f.gr pyrite and minor po in numerous qtz veinlets + segregations		97	100	3	181	1	1	4	24	118	0.1
		100	103	3	182	1	1	9	56	35	0.1
		103	106.68	3.68	183	1	1	9	31	39	0.1

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
					A	B	C	D	E			

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 551m (1808 ft)
HOLE NO.: 81-4	BEARING: DUE NORTH
LOCATION: COORDINATES FROM LEGAL CORNER POST 251m West, 42m South } STERLING NO. 3	DIP: -60°
	TOTAL LENGTH: 106.68 m (350 ft.)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 56m
DATE: MAY 5, 1981	VERTICAL PROJECT: 91m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: BQ	
DATE STARTED: MAY 4, 1981	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: MAY 6, 1981	
DIP TESTS: 48m (157.5 ft) 57.5°; 106.68 m (350 ft) 59°	
COMMENTS: GENERALLY POOR DRILLING CONDITIONS - hole cave in and squeezing	LEGEND

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DUKSBAK WATERPROOF

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-4

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 6.1 CASING							
				6.1 - 19.40 intermixed qtz-musc-chlorite sch, siliceous ser-sch and calcite ± qtz feldspar veins ≤ 10cm wide -foliation at 35° to C/A in broken up core - 8.10 - 8.25 qtz-ser-feldspar vein with X-cutting calcite vein 10.0 - 11.0 mixing of qtz-ser sch and sil graphite 11.0 - 11.40: FAULT/SHEAR ZONE marked by qtz vein and ser sch fragments 13.30 - 19.40 silicification of musc → ser sch increases 15.25 - five cm. wide feldspar rich qtz vein at ⊥ to C/A (minor fuchsite) 16.70 - 17.10 FAULT/SHEAR ZONE marked by qtz-feldspar vein fragments + missing core 17.00 - 19.40' relatively unaltered qtz veinlets							20 40 20 20 30 20 20
				19.40 - 25.10 narrow calcite veinlets throughout qtz-musc-chlorite schist (very calcareous) -foliation 0-20° to C/A; minor barren qtz veinlets. 21.45 - 21.60 SHEAR ZONE with broken sch fragments 24.68 - 25.00 brown crenulated biotite-chlor-calcite sch with pyrite and massive magnetite							20 10 10
				25.10 - 26.40 bleached ser sch altered by several qtz-calcite feldspar veinlets between 0-20° ⊥ to C/A							80
				26.40 - 27.43 siliceous graphitic sch with minor qtz-feldspar or qtz-calcite veinlets at 0-20° ⊥ to C/A							20
				27.43 - 29.20 wavy-crenulated bands of siliceous graphite sch and light colored ser altered sch with qtz-calcite veinlets							20
				29.20 - 31.30 bleached musc → ser sections with qtz-calcite-feldspar-py veinlets < 5cm wide; minor chlorite alteration							20
				31.30 - 36.80 wavy bands of siliceous graphite sch and musc → ser sch -qtz-calcite -minor feldspar veinlets with foliation							40
				32.0 - 33.0 FAULT/SHEAR ZONE marked by missing and broken up core							10
				34.7 - 35.30 SHEAR ZONE marked by broken fragmental core							30
				36.80 - 45.70 intermixed crenulated bands of siliceous musc-chlorite sch, light colored ser sch and numerous qtz-calcite and/or chlorite altered veinlets + segregations; foliation 20°-40° ⊥ to C/A 38.40 - 38.50 X-cutting qtz-calcite feldspar veinlets (< 5cm. wide) cutting foliation at 40° to C/A 42.06 - 42.15 fgr biotite? and pyrrhotite							40 20 30

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-4

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
6.1 - 19.40 Overall qtz veinlets quite barren. Occasional py or po clot along qtz veinlet margins 8.10 - 8.25 sparse clots of py along feldspar phenos		6.1	10	3.9	184	1	1	8	168	32	0.1
		10	14	4	185	1	1	7	59	24	0.1
15.25 med gr clot of py within qtz - feldspar matrix											
		14	17.67	3.67	186	1	1	7	39	37	0.1
16.70 - 17.10 specs of py associated with tiny fractures											
		17.67	21.0	3.33	187	1	1	10	56	46	0.1
19.40 - 25.10 minor py with qtz - calcite veinlets + segregations 24.68 - 25.10 massive cubes of pyrite in qtz - calcite rich vein <2cm wide		21.0	23.5	2.5	188	1	1	9	44	51	0.1
25.10 - 26.40 sparse f.gr cubes of py within bleached out matrix of siliceous sch											
26.40 - 27.43 f.gr pyrite in places		23.5	26.4	2.9	189	10	1	37	75	56	0.5
27.43 - 29.20 fine to med gr blobs of po in ser altered sections		26.4	29.0	2.6	190	3	1	6	53	57	0.1
29.20 - 31.30 f.gr clots of py in qtz veinlets											
31.30 - 36.80 minor f.gr py in qtz and qtz - calcite veinlets 32.0 ; 5cm wide displaced qtz - calcite - feldspar - py vein		29	33	4	191	2	1	8	33	38	0.1
		33	36	3	192	1	1	3	38	40	0.1
36.80 - 45.70 minor pods of py and/or po usually along qtz segregations rather than veinlets; tiny fractures usually filled with calcite or ankerite		36	39	3	193	1	1	5	37	38	0.1
		39	42	3	194	1	1	8	27	51	0.1
		42	45	3	195	1	1	5	25	29	0.1

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-4

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				45.70 - 46.40 mostly siliceous graphite sch with narrow bands of ser sch + narrow qtz-chlorite veinlets < 2cm wide							30
				46.40 - 49.40 chloritic musc-sch with narrow bands of ser sch with X-cutting calcite veinlets; Qtz-chlorite-calcite veinlets < 6cm wide with foliation at 40° to c/a							30
50											0
				49.40 - 53.30 FAULT ZONE - marked by qtz-graphite, qtz-musc sch fragments; graphitic (black) fault gouge and qtz breccia fragments							0
				53.30 - 56.50 siliceous graphitic sch with a few qtz-calcite + calcite veinlets (< 2cm) at 30°-40° ⊥ to c/a							0
55											0
				56.50 - 61.30 FAULT ZONE marked by missing core, black graphitic gouge and graphite fragments							0
											0
60				61.30 - 64.61 black siliceous graphitic sch							0
				62.30 - 62.50 FAULT/SHEAR ZONE - broken fragments							
				63.50 - 64.00 FAULT/SHEAR ZONE - soft sheared fragments							
				64.61 - 77.0 Massive fault zone marred by large segments of missing core, black fault gouge and highly broken up qtz and graphitic fragments							10
65											0
				66.40 - 66.48 qtz-calcite-py vein (broken up)							0
				69.25 narrow qtz vein (2cm) with X-cutting calcite-py veinlets in tiny fractures							10
70											
											20
				71.93 - 72.0 heavily fractured qtz-calcite-feldspar-py vein							20
				74.90 - 74.98 fractured qtz-feldspar-py-calcite vein							10
75											
				77.0 - 79.30 siliceous black graphitic sch							10
				79.30 - 82.0 highly silicified ser sch with grey graphitic bands; fine gr fuchsite in sections							20
				80.83 - 81.0 qtz-chlor-py vein; minor calcite							
80				81.5 - 81.65 qtzite with f.gr py, po and fuchsite							50
				82.0 - 87.30 wavy, creamy textured well silicified sch. Alternating bands of grey to black graphitic sch, the lighter grey due to sericite mixture. White crenulated qtz-calcite-chlor veinlets (< 3cm wide) + segregations, foliation appears to be between 0-10° ⊥ to c/a							30
											20
85											
				87.30 - 87.70 FAULT/SHEAR ZONE marked by broken fragments and missing core							10
				87.70 - 89.75 Crenulated very siliceous graphitic sch with qtz-chlor-calcite veinlets							10
90											

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-4

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
45.70-46.40 minor fgr po+py		45	48	3	196	1	1	7	51	51	
46.48-49.40 minor f.gr py in qtz-chlorite veinlets											0.1
49.40-53.30 some sections of med.gr pyrite in qtz-graphite sch fragments otherwise quite barren		48	54	6	197	3	1	18	81	58	0.1
53.30-56.50 coarse-gr. pyrite clots within siliceous graphite -											
56.50-61.30 a few clots of py											
61.30-64.61 sections of massive f.gr clots of py											
64.61-77.0 pods of massive f.gr pyrite occuring in faulted sections of graphitic unit. Also areas of fracture filling											
		69.18	79.30	10.12	198	2	1	34	43	109	0.1
71.93-74.98 heavily fractured qtz veins filled by massive f.gr pyrite, usually with calcite also											
77.0-79.30 py stringers along tiny qtz crenulations											
79.30-82.0 altered sections of f.gr po and/or py											
82.0-87.30 f.gr po and/or pyrite within siliceous matrix of graphitic sch; qtz-calcite veinlets are quite barren		79.3	82.0	2.7	199	22	1	8	28	102	0.1
87.30-89.75 sparse sections of clots of py. Qtz-chlor veinlets contain only minor amounts f.gr py		82	85	3.0	200	4	1	6	43	43	0.2
		85	88	3.0	201	1	1	8	45	30	0.1
		88	91	3.0	202	3	1	14	48	73	0.1

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PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-4

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				89.75-90.3 qtz-coarse gr feldspar calcite vein/moderate chlorite alteration							20
				90.3-92.75 grey/black siliceous graphite/musc sch							10
				92.75-94.0 FAULT ZONE-finely broken + missing graphitic sch							40
95				94.0-96.31 light grey calcareous ser-graphitic sch and sil black graphite with narrow qtz-calcite veinlets between 10°-30° ∠ to c/a. 95.0-95.2 qtz-calcite-chlorite vein							10
				96.31-98.75 FAULT ZONE marked by finely broken pieces and missing core; minor graphitic fault gouge							0
100				98.75-102.71 chlorite-ser quartzite with finely bleached ser along x-cutting ankerite veinlets. Some fine to coarse elongated and angular qtz phenos give a porphyritic texture							0
				100.0-100.88 FAULT/SHEAR ZONE-missing, broken core							10
105				102.71-103.63 FAULT ZONE-broken + missing qtz-py vein and qtzite fragments. 105.46-105.76 Shear zone							10
				103.63-106.68 Well silicified, bleached sections of ser-chlor sch Well fractured + broken up due to narrow faults + shears							10
110				106.68 EOH							

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-4

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mn	W	Pb	Zn	Cu	Ag
89.75-90.30 fractures filled with py+calcite		91	95	4	203	1	1	7	66	34	0.1
90.30-92.75 minor f.gr pyrite											
92.65-92.75 qtz-calcite-chlor vein with pyrite + f.gr moly?? in fractures											
92.75-96.31 f.gr pyrite within fractures											
95.0-95.2 f.gr py with chlorite along tiny fractures		95	101	6	204	28	1	20	54	74	0.1
96.31-98.75 py clots in a shattered qtz-calcite vein											
98.75-102.71 fine gr py cubes disseminated throughout qtzite											
102.71-103.63 broken up qtz vein with coarse gr py as fracture filling											
103.63-106.68 irregular occuring sections of med gr pyrite as clots and fracture fillings		101	106.68	5.68	205	4	1	12	53	92	0.1

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 609.5m (2000 ft.)
HOLE NO.: 81-5	BEARING: DUE EAST
LOCATION: STERLING NO.1 COORDINATES FROM L.C.P 835m South 570m West	DIP: -60°
	TOTAL LENGTH: 106.7m (350 ft)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 51m
DATE: MAY 7, 1981	VERTICAL PROJECT: 94m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: BQ	
DATE STARTED: MAY 7, 1981	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: MAY 8, 1981	
DIP TESTS: 48.7m (160 ft) 61.5° 106.7m (350 ft) 63°	
COMMENTS: - good drilling	LEGEND

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA
DUKSBAK WATERPROOF

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PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-5

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				00.0 - 2.74 CASING							
				2.74 - 7.01 intermixed bands of tan to light grey calcareous qtz - bio - ser sch, calcareous qtz - chlor - bio sch (broken fragments) and sil - ser - fuchsite sch. 4.0 - 4.15 qtz - feldspar vein. tiny X-cutting calcite veinlets; foliation ⊥ to C/A							0
				7.01 - 7.80 FAULT/SHEAR finely broken fragments							10
				7.80 - 9.30 tan/bleached qtz - ser - bio sch with calcite veinlets							10
				9.30 - 10.40 qtz - chlor - ser sch with numerous tiny calcite veinlets with foliation ⊥ to C/A; minor bleached bio							40
				10.40 - 11.20 milky white qtz - ser - minor calcite vein							20
				11.20 - 12.0 tan to light brown qtz - ser - bio altered sch							0
				12.0 - 15.50 numerous tiny calcite veinlets (< 1cm wide) throughout a Chlorite - musc sch with a few sections of bleached chlor → bio → ser alteration							0
				15.50 - 16.15 tan colored, bio - ser - fuchsite altered sch							0
				16.15 - 22.0 Very siliceous fuchsite - ser qtzite; f.gr, hard, black mineral dotted irregularly throughout qtzite - not rutile sphalerite??							10
				- CORE BADLY broken up in places + sections missing due to drilling difficulties (small shears??) 19.20 - 22.0 Siliceous graphite encountered							0
				22.0 - 24.40 Siliceous - crenulated graphite sch							10
				24.40 - 30.0 Abrupt contact into bleached silicified fuchsite - ser - calcareous qtzite. Extremely broken up + shattered due to small shear zones and calcite break down. 27.50 - 28.0 siliceous graphite sch							10
				30.0 - 31.30 Siliceous - calcareous graphitic sch							0
				31.30 - 34.30 mixture of calcareous qtz - chlorite - musc sch, bleached sections of calcareous ser - fuchsite sch and calcareous ser - bio - chlor altered sch; calcite veinlets (< 1cm) throughout foliation 0 - 10° ⊥ to C/A							0
				34.30 - 35.0 qtz - py - calcite - feldspar vein X-cutting foliation at 70° ⊥ to C/A (3cm wide)							0
				35.0 - 35.70 broken up, friable tan bio - ser - fuchsite sch							0
				35.70 - 36.70 FAULT/SHEAR ZONE shattered pieces of qtz - bleached sch + missing core							0
				36.70 - 39.30 broken up qtz - feldspar - ser - fuchsite - calcite vein 38.60 5cm wide qtz - feldspar - py vein with rutile							10
				37.30 - 51.80 bleached white to light green color dominantly chlor rich sch with complexly intermixed wavy bands fine to coarse Ser. Quartz calcite and/or minor feldspar veinlets (< 1cm wide) + segregations generally throughout. A few X-cutting calcite veinlets							10
											20
											10
											0

PAGE 1 OF 3 | PROJECT: STERLING | HOLE NO. 81-5

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	ASSAYS Ag	ASSAYS Pb	ASSAYS Zn	Cu	Au
4.0-4.15 possible? rusty streak of pyty 2.74-7.01 some f.gr pyrite in the fuchsite bearing sch		2.74	7.01	4.27	206	2	1	15	93	65	0.1
7.01-10.40 some f.gr cubes of py in tan colored bleached bio-ser sch; f.gr sphalerite in tiny qtz vein. Minor f.gr cubes of py in calcareous chlor sch		7.01	11.5	4.49	207	1	1	11	67	69	0.2
10.40-11.20 minor med gr py along ser altered margins; tiny f.gr black spots in qtz probably rutile? 11.20-12.0 a few py cubes		11.5	15.0	3.5	208	1	1	12	80	95	
12.0-15.50 occasional pod of f.gr pyrite along X-cutting calcite veinlet 15.50-16.15 minor f.gr py		15.0	22	7	209	12	1	18	114	58	0.2
16.15-22.0 f.gr py disseminated throughout bleached qtzite - minor py in siliceous graphite sch 22.0-24.40 f.gr pyrite along tiny qtz veinlets		22	25	3	210	7	1	22	228	39	0.1
24.40-30.0 sections of qtzite with f.gr pyrite		25	30.0	5	211	26	1	100	865	30	0.5
30-31.30 a few clots of med gr py		30.0	33.0	3	212	4	1	7	81	77	0.3
31.30-34.30 f.gr py along foliation planes of bio-altered sch. Also within qtz calcite margins 34.30-35.00 coarse-gr py throughout		33	38	5	213	1	1	7	48	33	0.2
35.0-35.70 minor f.gr py 35.70-36.70 minor f.gr py 36.70-37.30 minor coarse gr clots of py in broken up qtz vein; Possible f.gr mdy???		38	41	3	214	1	1	5	71	38	0.2
37.30-45.0 f.gr py along fracture planes of qtz veinlets greater than 1cm wide. Minor po seen		41	44	3	215	1	1	11	88	26	0.1

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 81-5

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (BIO)	B (SER)	C (SIL)	D (CHLOR)	E	FRACTURE INTENSITY	% VEIN QTZ.
				39.10-39.20 qtz-feldspar-calcite vein with inclusions of fine rutile							10
				41.80-41.85 qtz-calcite vein with fracture filled py							20
				45.60-45.65 qtz-calcite+feldspar-py vein along foliation which is dominantly 0-10° L to C/A							
50				46.0-48.15 increase in qtz veinlets							0
				48.15-48.80 fine black mineral, probably rutile, occuring in hair-line fractures of chlor-ser sch							10
				49.68-49.80 qtz-minor calcite vein with fine rutile							1
				51.80-52.73 totally bleached silicified ser sch with fine hair-like strings of rutile? in X-cutting fractures; minor feldspar, calcite							20
55				52.73-54.25 partially silicified tan colored bio→ser altered sch with intermixed chlorite; foliation 0-15° L to C/A							10
				54.25-57.60 FAULT ZONE-missing core + broken qtz-ser sch pieces							10
				57.60-61.50 partially silicified ser sch with banded brown bio alteration + minor chlorite between 0-10° L to C/A							10
60				61.50-62.60 Qtz-feldspar-ser-ankerite-fuchsite vein; with hairline fractures filled with rutile							90
				62.60-73.76 bleached white ser sch with occasional tiny bands of chlorite and biotite. Tiny fractures throughout sch contain fgr. calcite and rutile. Small qtz-feldspar and/or, calcite (silicic oxide) veinlets throughout							50
65				Poorly developed schistosity between 0-10° L to C/A							60
				67.2-67.70 silicified ser-sch x-cut by many tiny fractures filled with fine-gr. rutile and calcite. 69.50-71.40 ser sch becomes							70
70				slightly chloritic and less siliceous							30
				71.40-71.50 FAULT/SHEAR marked by soft gouge + fine fragments							50
				71.50-73.0 Well silicified sections with fine rutile and calcite veinlets							
75				73.0-73.76 SHEAR ZONE marked broken, friable pieces of ser sch							10
				73.76-76.0 f.gr crystalline limestone gradually grading into a calcareous-siliceous-ser-py-fuchsite sch							20
				76.0-79.0 chlorite musc sch with calcite (minor qtz) veinlets throughout. Crenulated in places giving a wavy texture							0
80				77.11-77.20 qtz-calcite-chlor vein							
				79.0-83.50 bleached white ser sch with a few well silicified sections; minor fuchsite+biotite alteration; a few qtz+qtz-calcite veinlets; foliation between 0-15° L to C/A							0
				83.50-89.75 calcite-qtz veinlets throughout a interlayered chlorite-biotite-occasional ser banded schist							10
85				-sections of wavy crenulations but foliation between 0-10° L to C/A							0
				88.20-88.25 qtz-ankerite rich-chlor veinlet							0
				Minor rutile seen in ser altered sections							0
90				89.75-91.0 ALTERED Qtz vein cutting foliation at 45° to C/A							

PAGE 2 OF 3 | PROJECT: STERLING | HOLE NO. 21-5

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
46.0 - 48.0 narrow qtz veinlets contain py and/or po clots		44	47	3	216	1	1	4	79	37	0.1
46.0 - 48.15 coarse-gr py along margins											
49.68 - 49.80 f.gr clots of po along irregular vein margins		47	51	4	217	1	1	7	61	44	0.1
51.80 - 52.73 f.gr clots of py and po usually with feldspar											
		51	54.25	3.25	218	1	1	5	58	16	0.1
52.73 - 54.25 sparse pyrite; barren qtz-chlor veinlets											
54.25 - 57.60 sparse f.gr py		54.25	60.0	5.75	219	1	1	5	44	20	0.1
57.60 - 61.50 finely disseminated py in sections of silicification											
61.50 - 62.60 fine fractures filled with rutile and clots + stringers of pyrite + po. Possible very f.gr moly?		60	63	3	220	1	1	42	134	38	0.8
62.60 - 75.50 f.gr py and occasional pod of po usually within fractured qtz veinlets and fractured ser sch											
63.50 narrow, <1cm wide, crosscutting qtz-feldspar-calcite py-po-moly-galena veinlet; f.gr galena and minor moly along ser-feldspar-py-po altered vein margins.		63	66	3	221	1	1	255	40	27	3.2
67.2 - 67.70 f.gr pyrite pods		66	69	3	222	1	1	12	49	34	0.2
73.76 - 76.0 med gr specs of py dissem throughout crystalline limestone, but becomes less + f.gr towards calcareous sch.		69	72	3	223	1	1	4	40	25	0.2
76.0 - 79.0 minor amounts of f.gr pyrite		72	76	4	224	2	1	11	32	17	.005 0.1
		76	79	3	225	1	1	11	74	40	0.1
79.0 - 83.50 f.gr py disseminated throughout		79	83	4	226	8	1	20	117	21	0.1
83.50 - 89.75 only minor f.gr py occasionally disseminated in calcareous bio → chlor sch		83	86	3	227	1	2	8	61	90	0.1
88.20 - 88.25 f.gr py along ankerite margins		86	89.5	3.5	228	2	1	9	90	74	0.2

PAGE 3 OF 3 | PROJECT: STERLING | HOLE NO. 81-5

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				89.75-91.0 broken up qtz-feldspar-calcite-rutile vein							90
				91.0-91.5 silicified ser-calcite sch; minor feldspar veinlets							10
				91.5-93.5 Very calcareous brown biotite-minor ser sch							0
95				Calcite veinlets (<2cm wide) along foliation at 0-5° to CA							
				93.5-96.70 FAULT ZONE marked by siliceous graphite fragments, missing core and qtz-ser-calcite breccia							0
				96.70-101.90 Very calcareous chlorite, minor biotite and ser sections, schist. Calcite veinlets + segregations throughout.							0
				97.65-97.80 shear/FAULT marked by greenish gouge							0
100				101.90-103.50 ser + qtz content of sch increases with numerous calcite veinlets throughout							10
				102.35-102.45 SHEAR ZONE marked by graphitic sch							0
				102.50 qtz-feldspar-calcite-fuchsite veinlet, 3cm wide along foliation between 10°-20° to CA							
105				103.50-106.68 FAULT ZONE marked by gouged + fragmental graphitic sch, friable qtz-ser breccia and missing core							0
											0
110				106.68 EOH							

PAGE 3 OF 3	PROJECT: STERLING	HOLE NO. 81-5

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag
89.75-91.0 pods of 20, py massive f.gr molybdenite along feldspar altered qtz margins		89.5	91.5	2	229	.001 %	1	1.08 %	174	84	5.26
Est.gr 0.3 % MoS_2; Possible galena also?						MoS_2					oz/TON
91.0-93.5 sparse f.gr py		91.5	98.0	6.5	230	3	1	12	90	66	0.2
93.5-96.7 f.gr py laminated within siliceous graphitic unit		98	101	3	231	2	1	10	71	65	0.2
96.7-101.9 sparse f.gr py		101	106.68	5.68	232	5	1	7	86	84	0.3
101.9-103.5 f.gr py along qtz-feldspar calcite margins											
103.5-106.68 A few clots of py within fault breccia											

N2/E2

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
					A	B	C	D	E			

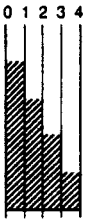
N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 555m (1821 ft.)
HOLE NO.: 81-6	BEARING: DUE NORTH
LOCATION: COORDINATES FROM L.C.P 468m South, 110m East } STERLING NO.4	DIP: -50°
	TOTAL LENGTH: 60.96 m (200 ft)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 41 m
DATE: MAY 10, 1981	VERTICAL PROJECT: 47m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: MAY 9, 1981	
DATE COMPLETED: MAY 10, 1981	TOTAL SULPHIDE SCALE
DIP TESTS: 115 ft (35m) 53°; 200 ft (60.69m) 53°	
COMMENTS: 60-68m DRILLING DIFFICULTIES - HOLE CAVE IN WITH SAND BLOCKAGE	LEGEND

absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

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PAGE 1 OF 2 | PROJECT: STERLING | HOLE NO. 81-6

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 3.65 CASING							
				3.65 - 5.20 Badly broken up and poor core recovery; very siliceous metasediments							
5				5.20 - 11.20 Quartzite bands and completely silicified/bleached possible ser ± chlor sch?? Elongated chlorite inclusions and calcite fracture fillings throughout silicified core. Chlorite inclusions seen X-cutting calcite veinlets (< 2cm wide) and within calcite veinlets							0
10				10.20 - 11.2 fine strings of chlorite + calcite enclose margins of brecciated qtz fragments							0
				11.20 - 12.00 FAULT - marked by broken and missing core							0
				12.0 - 29.20 Fine to med gr porphyritic, melanocratic META-DIORITE INTRUSIVE -							0
15				It is rich in phenocrysts of potash feldspar amphibole? biotite, calcite and qtz. - narrow qtz-calcite veinlets (< 2cm wide) occur throughout and commonly contain epidote (or clinozoisite), chlorite, ser and fgr pyrite; these altered zones are typically colored light green							0
											10
20											0
				19.0 - 20.75 FAULT/SHEAR ZONE marked by rusty colored broken up fragments and missing core							10
											0
25				23.60 - 24.30 FAULT/SHEAR ZONE marked by finely broken up core							0
				Overall, Meta-diorite dyke or sill? is very calcareous							0
											0
30				29.20 - 29.90 FAULT/SHEAR ZONE marked by broken up core							
				29.90 - 39.0 greyish white sericitic qtzite to light green chloritic qtzite bands throughout. A few qtz-chlorite-calcite veins < 10cm wide. Minor biotite alteration							0
											10
35											0
				34.0 - 35.0 several shear zones							
				35.80 - 35.90 Pods of med gr feldspars							
				37.50 - 37.80 qtz vein with numerous tiny calcite veins and possible f.gr rutile?							20
											0
40				39.0 - 40.0 FAULT ZONE marked finely broken up qtzite fragments							
				40.0 - 52.70 slight schistose texture developed; qtz-musc-chlor sch, silicified chlor-ser sch and qtzite foliation, wavy at times, between 40-60° ⊥ to c/a; A few tiny calcite veinlets							10
											10
45											

PAGE 1 OF 2 | PROJECT: STERLING | HOLE NO. 81-6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
6.20-11.20 - fine-gr clots of py generally associated with chlorite stringer inclusions		5.20	8.53	3.33	233	1	1	35	20	13		0.6
10.20-11.20 fine to med gr pods of py along margins of chlorite inclusions and qtz breccia fragments												
		8.53	12.00	3.47	234	2	1	10	30	42		0.1
12.0-29.20 only occasional f.gr. pods of pyrite associated with narrow qtz-calcite-epidote veinlets												
		12.0	15.0	3	235	1	1	8	104	36		0.1
		15.0	18.0	3	236	1	1	11	110	51	.010	0.1
29.90-39.0 f.gr clots of py throughout siliceous matrix												
		28	31	3	237	4	1	10	45	119		0.2
35.50-35.90 massive pods of py		35.5	39.0	3.5	238	1	1	35	62	34	.005	0.2
37.50-37.80 patches of f.gr pyrite along fractures in qtz												
		40	43	3	239	1	1	7	52	23	.005	0.1
40.0-45.0 py content increases slightly occuring as f.gr stringers along poorly developed foliation. Also along qtz-calcite veinlet margins												
		43	46	3	240	1	1	7	40	28		0.1

PAGE 2 OF 2 | PROJECT: STERLING | HOLE NO. 81-6

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				49.5 - 52.0 qtzite texture becomes more pronounced. Core is frequently broken-up and sheared							10
											0
50											0
				52.70 - 54.0 Bleached, white sericitic qtzite with tiny clots of chlorite and moderate amounts of inistial calcite							
				54.0 - 57.80 Well silicified ser - chlor sch with numerous tiny calcite veinlets all running parallel at 40° through poorly developed foliation							0
55											0
				57.80 - 60.96 complexly interlayered of silicified calcareous tan colored, fibrous Wollastonite and/or pyroxene? - chlorite altered metavolcanic							0
				59.98 - 60.0 qtz - calcite rich - chlorite vein							20
60				60.25 - 60.5 qtz - calcite rich - chlorite - epidote vein at 50° ⊥ to C/A							40
				- EOH 60.96							
65											

PAGE 2 OF 2 | PROJECT: STERLING | HOLE NO. 81-6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
45.0 - 52.70 A few py clusters along tiny qtz-calcite veinlets. Sparse py within siliceous matrix and along shear zones		53	56	3	241	1	1	15	35	6		0.1
52.70 - 54.0 very tiny specs of pyrite throughout		57	59	2	242	3	1	20	1157	60	.005	0.2
54.0 - 57.80 sparse f.gr pyrite throughout		59	60.96	1.96	243	1	1	19	90	2	.005	0.1
57.80 - 60.96 Calcareous chlorite - pyroxene metavolcanic contains f.gr massive clots of py; 58.30 possible clot of sph in qtz-calcite chlorite - verdet; Epidote - chlor - altered metavolcanic with f.gr, at times massive, py throughout - Qtz - calcite veins barren of py												

PAGE	OF	PROJECT:	HOLE NO.

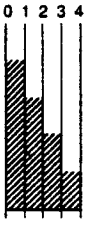
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
					A	B	C	D	E			

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 731m (2398m)
HOLE NO.: 81-7	BEARING: DUE EAST
LOCATION: COORDINATES FROM LEGAL CORNER POST 470m East, 370m North STERLING NO. 4	DIP: -70°
	TOTAL LENGTH: 203 ft (61.87m)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 23 m
DATE: MAY 12, 1981	VERTICAL PROJECT: 62.0m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: MAY 11, 1981	
DATE COMPLETED: MAY 12, 1981	TOTAL SULPHIDE SCALE
DIP TESTS: 30m (98.43 ft) 70.5° 60m (196.86 ft) 70.25°	
COMMENTS: 45.0 - 45.0 m slow drilling with a few difficulties due badly fractured (FAULT) in Silicified schist	LEGEND



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PAGE 1 OF 2 | PROJECT: STERLING | HOLE NO. 81-7

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0-2.43 CASING							
				2.43-9.10 Very calcareous chlorite sch with very f.gr magnetite octahedrals throughout; Calcite veinlets throughout; foliation between 0-10° ⊥ to ℄A							0
5				3.0-4.4 FAULT ZONE marked broken, friable sch							
				6.10-9.0 minor qtz segregations and minor f.gr biotite							5
				9.10-11.50 FAULT ZONE marked by rusty, calcareous limonite, missing core and clastic calcite-qtz fragments							0
10											5
				11.50-20.10 Mostly very calcareous chlorite - f.gr magnetite schist with a few sections rich in biotite and calcite. 12.60-12.80 Shear zone - oxidized. Calcite occurring as veinlets and as tiny "phenos"							2
15				16.65-16.77 Calcite-minor qtz vein with tiny magnetite octahedrals - chlorite-py altered margins							0
				16.50-18.0 A few x-cutting calcite veinlets							0
				18.90-18.98 Qtz vein filled with massive, coarse feldspar with tiny fractures filled with calcite, placed in calcareous bio sch							10
20											
				20.10-28.25 interbanded calcareous white colored ser sch, calcareous chlor sch and rusty, iron oxidized sch. Calcite veinlets throughout with occasional qtz segregation with foliation between 0-10° to ℄A							0
											0
25											0
				26.90-27.20 broken up qtz-chlor-feldspar-calcite vein							10
				28.25-31.20 chlorite sch with fine to med gr magnetite octahedrals throughout; minor tiny calcite veinlets throughout							0
30											
				29.75-29.80 qtz-calcite-chlor-feldspar vein							0
				31.20-33.0 FAULT marked by broken up, rusty, limonite							
				33.0-38.40 intermixed tanned colored ser-bio altered sch with minor fuchsite, chlorite-bio sch and crenulated bio sch. Qtz-calcite and calcite veinlets throughout <1cm wide; Also numerous x-cutting calcite veinlets, somewhat crenulated							0
35											10
											0
				38.40-40.10 FAULT ZONE marked by somewhat siliceous-calcareous graphite sch and missing core							
				40.10-49.37 silicified ser schist with sections of bleached f.gr feldspar-calcite alteration. Core is badly broken up due to several sheers							10
40											
				43.10-44.60 FAULT ZONE - iron oxide staining along several sheers, badly broken up core. Poorly developed foliation is ⊥ to ℄A							10
											10
45											

PAGE 1 OF 2 | PROJECT: STERLING | HOLE NO. 81-7

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
2.43 - 11.50 Very sparse f.gr py												
11.50 - 20.10 very sparse f.gr py												
16.65 - 16.77 f.gr py along chlor - calc altered margins												
15.90 - 15.75 coarse-gr massive py along chlor-calc altered margins		16	19	3	244	2	1	12	86	74		0.1
20.10 - 25.25 Occasional sections w/ fine to med gr clots of py		19	22	3	245	3	1	9	61	36		0.1
25.79 - 27.20 med-gr py occurring in fractures and along chlor-calcite altered margins		25	28	3	246	5	1	7	97	73		0.1
28.25 - 31.20 a few clots of py usually along qtz-calcite veinlets less than 0.05 cm wide												
29.75 - 29.80 minor f.gr py along margins		28	31	3	247	5	1	2	75	75		0.1
31.20 - 33.0 rusty appearance due to oxidized magnetite and py		33	36	3	248	4	1	8	83	39		0.1
33.0 - 38.40 minor f.gr pyrite seen in tan colored sch												
Bio sch contains med-gr py		36	40.23	4.23	249	6	1	5	69	104		0.2
38.40 - 40.10 fine to med gr py throughout siliceous graphite sch												
40.10 - 49.37 med gr pods of pyrite throughout silicified ser sch		40.23	45.0	4.77	250	32	1	61	390	15		0.3
Fine-gr reddish colored sph and galena seen with py + initial calcite												

PAGE 2 OF 2 | PROJECT: STERLING | HOLE NO. 81-7

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	ALTERATION B SER	ALTERATION C SIL	ALTERATION D CHLOR	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				40.10-49.37. thin layers of fuchsite are occasionally visible. A few x-cutting calcite veinlets							10
				45.72 - 48.55 FAULT ZONE - brit, broken up and missing core; Well bleached and silicified fragmental core with fgr friable feldspar							10
50				49.37-49.60 calcareous biotite sch							0
				49.60 - 61.51 very calcareous chlorite, minor biotite sch Calcite veinlets, <1cm wide, throughout Crenulated in a few sections but foliation consistently between 0-10° ⊥ to C/A							0
55											0
											0
				EOH 61.87							0
60											
65											

PAGE 2 OF 2 | PROJECT: STERLING | HOLE NO. 81-7

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
40.10-49.37 fgr py and fgr galena + sphalerite generally associated with fgr layers of friable feldspar and small amounts of calcite. Possible fgr rutile also?		45	49.37	4.37	251	27	1	115	186	60	.010	0.8
		49.37	52.73	3.36	252	3	1	7	58	123		0.2
49.37-61.51 Very sparse fine to med gr dots of py												

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.	

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 1950 ft. (604m)
HOLE NO.: 81-8	BEARING: DUE EAST
LOCATION: COORDINATES FROM LEGAL CORNER POST 302 m West, 206m North STERLING NO. 1	DIP: -75°
	TOTAL LENGTH: 848 ft. (258.47m)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 71 m
DATE: MAY 22, 1981	VERTICAL PROJECT: 252 m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: NQ	
DATE STARTED: MAY 20th 1981	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: MAY 26, 1981	
DIP TESTS: 568 ft. (173.11 m) -73.5°	LEGEND

COMMENTS

MAY 24 DDH caved in ≈ 160 ft after 1 hr (bit change)

MAY 26 - DDH caved in while drilling.
- mud washed away into rock
- rods became stuck at 848 ft.

Only last half of hole drilled with mud

* Rods broken off (blasted) around 800 ft. mark

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PAGE 1 OF 6 | PROJECT: STERLING | HOLE NO: 81-8

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHL-CB	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 5.48 CASING							
5				5.48 - 6.80 Banded - calcareous bio - chlor - ser schist							
				6.80 - 7.30 siliceous graphite - ser schist							
				7.30 - 22.55 Silicified, bleached sericite sch highly altered in places by feldspar, calcite, rutile, pyrite, pyrrhotite, fuchsite and minor biotite. Qtz veinlets <1cm wide with ser - py altered margins seen throughout giving banded appearance. A few minor crenulations with foliation generally between 0-10° ⊥ to c/a; minor rutile 11.0-12.50 tiny fractures throughout sil-ser sch filled with fgr. py and rutile. 12.50 - 12.70 FAULT/ SHEAR marked broken up qtz - ser sch fragments 12.70 - 12.90 X-cutting qtz - feldspar - ser fuchsite vein 2-3cm wide. 12.90 - 13.70 Intensely sil-ser sch with fgr rutile. 13.90 - 14.50 Coarse feldspar throughout qtz - fuchsite - calcite - ser - rutile vein (broken up) 15.0 - 15.90 increased chlor-bio-calcite content 17.40 - 17.70 FAULT ZONE marked by friable - broken sch 17.40 - 22.55 ser sch becomes slightly less silicified 22.25 - 22.55 X-cutting qtz - feldspar rich - calcite veins with island remnants of ser sch							
25				22.55 - 26.0 core becomes slightly more chloritic and coarser foliation; less qtz; with tiny calcite veinlets							
				26.0 - 26.4 FAULT ZONE - marked by fine fragments + gouge							
				26.40 - 27.10 Silicified ser sch with tiny qtz - calcite veinlets							
30				27.10 - 27.50 fractured, broken up qtz vein with ser - fuchsite margins							
				27.50 - 27.60 Shear zone - vein sheared off; soft gouge present							
				27.60 - 30.0 Siliceous graphite sch with occasional bleached sections of ser sch; tiny calcite veinlets							
				30.0 - 43.80 Badly broken up (faulted) bleached, silicified ser sch with moderate calcareous, fuchsite, pyrite banding							
35				31.50 - 32.70 FAULT; friable, broken + missing core							
				32.90 - 37.60 FAULT ZONE; badly broken and sheared sil sch; poor core recovery. Sections of white - feldspar bleached sil sch; foliation ⊥ to c/a							
40				38.80 qtz vein, 6cm wide, with irregular ser - fuchsite - feldspar - py altered margins; ⊥ to c/a							
				39.0 - 39.4 med. gr feldspar rich sil ser - fuchsite sch							
				39.4 - 41.60 FAULT ZONE - highly sheared and fractured sil sch							
				42.0 - 42.60 FAULT ZONE - broken + missing core							
45				42.60 - 43.40 Fuchsite content increases of sil sch							
				43.40 - 43.80 FAULT/SHEAR ZONE - missing + friable core							

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
5.48-6.80 - minor f.gr py												
6.80-7.30 tiny f.gr stringers of py along and x-cutting foliation		7	9	2	253	38	1	9	96	73	.005	0.2
7.30-12.0 f.gr py, moderate pods of po, generally occurring throughout as x-cutting fractures, shears and along qtz veinlets + segregations		9	11	2	254	4.67 % MoS_2	1	3	23	362	.005	0.3
9.40-9.70 massive molybdenite rich vein with py, po inclusions with coarse feldspar, py ser and calcite vugs altered margins; minor fuchsite. Est. gr between 9-11j 1.0% MoS_2		11	13	2	255	57	1	5	19	96	.005	0.2
		13	15	2	256	198	1	9	37	65	.005	0.3
13.0-14.0 Possible f.gr galena and sphalerite with rutile; minor py, po; minor specs of moly												
17.0-22.55 pyrite-po content of sil sch decr's off occurring within tiny fractures foliation planes of ser sch		15	18	3	257	8	1	13	59	48	.005	0.3
22.25-22.55 Fracture filled pods of po, and/or py → po alteration and f.gr rutile		18	20	2	258	6	1	9	44	27	.005	0.2
22.55-26.0 f.gr py along foliation planes of coarser ser-chlor sch		20	22.6	2.6	259	4	1	20	23	100	.005	0.4
26.0-27.10 fine gr py disseminated throughout		22.6	25.0	2.4	260	4	1	12	36	30	.005	0.2
27.10-27.50 fine to coarse pyrite → po alteration within numerous fractures - possible f.gr sph-galena seen in vein		25.0	28.0	3.0	261	7	1	278	71	45	.005	1.5
27.50-30.0 f.gr py within silicified matrix												
30.0-43.80 fine to med gr py throughout the siliceous matrix and as small fracture fillings		28.0	31.0	3.0	262	20	2	233	125	64	.005	0.4
35.40-37.60 f.gr pods of moly + galena seen within faulted fragments of white-feldspar ser altered sch and within sil-ser-fuchsite-py sch		31.0	35.40	4.40	263	91	2	933	227	6	.005	0.8
Est. gr 35.40-38.0 0.15% MoS_2		35.40	38.0	2.60	264	0.129 % MoS_2		1.02 %	135	578	.005	0.43
38.0-39.40 highly feldspar altered zone with sections of massive py pods within sil matrix and as fracture fillings within												
feldspar-calcite matrix. Fine gr moly associated with fractured filled py, along qtz-ser-feldspar-fuchsite margins. Est. gr 38-40 0.02% MoS_2		38.0	40.0	2.0	265	73	2	425	155	104	.005	1.9
40-43.80 f.gr py throughout matrix with occasional coarse-gr pod in fracture		40.0	43.0	3.0	266	13	2	67	208	88	.005	0.5
		43.0	45.0	2.0	267	5	1	10	67	96	.005	0.4

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				43.80-58.0 Wavy-crenulated intermixed bands of calcite veinlets (< 1cm wide), chlorite sch with occasional biotite alteration and graphite layerets. 46.0-46.50 FAULT/SHEAR ZONE; friable sch 50.60-50.65 qtz-calcite vein with chlorite altered margins. Crenulations disappear, foliation 0-10° ⊥ to c/a 50.70-51.0 FAULT ZONE marked by soft gouge + friable sch Overall, chlorite sch is very calcareous with the occasional narrow qtz segregation. 53.0-54.0 chlor sch becomes quite crenulated. 54.0-58.0, increase in ser and sil content noted with calcite decreasing somewhat in sections						10 10 10 0 10 10 0
60				58.0-60.80 Calcareous qtz-ser-chlor-fuchsite sch 58.80-59.10 several qtz-feldspar-calcite segregations							20
				60.80-61.20 Siliceous graphite sch							
				61.20-68.80 Bands of sil-ser-cal sch, qtz-ser-ankerite-fuchsite-bio sch and white-feldspar+ser altered sch. Quite wavy in sections with poor foliation between 20°-30° ⊥ to c/a. 63.10-63.50 badly fractured + sheared qtz-feldspar-calcite-ser-fuchsite-rutile vein 63.60-64.0 FAULT with highly fractured qtz-feldspar-calcite-fuchsite remnants. 65.50-66.30 FAULT 68.40-68.80 FAULT; friable altered sch fragments							10 30 30 30 60
70				68.80-69.60 Qtz vein with minor feldspar + calcite cutting foliation at 50° to c/a							
				69.60-71.50 Qtz-ser-calcite-fine gr fuchsite sch with foliation 0-10° to c/a 70.60 1cm wide qtz-feldspar vein X-cutting foliation at 60° to c/a							80 20
75				71.50-72.50 Qtz-ser-feldspar-calcite vein X-cutting at 80° ⊥ to c/a							0
				72.50-75.20 Qtz-ser-calcite-fine gr fuchsite sch with foliation 0-10° ⊥ to c/a; 75.10 X-cutting qtz-calcite vein 5mm wide at 70° ⊥ to c/a. Thin bands of sil graphite also present							10 ±
80				75.20-76.20 highly bleached sil ser ± fuchsite sch							10
				76.20-86.90 Calcareous qtz-chlor-ser schist foliation ⊥ to c/a 79.20-79.29 Calcite, minor qtz segregation with several fine-gr, black, breccia islands of unknown mineral? (allanite) 81.90-82.90 qtz vein running along c/a with islands of feldspar, calcite, ser + minor fuchsite							20 10
85				82.90-86.90 several small calcite + qtz calcite segregations. More ser + sil in sections							10
				86.90-93.80 Siliceous graphitic sch with minor bleached qtz-ser bands, qtz veinlets + calcite veinlets. Crenulated foliation between 0-20° ⊥ to c/a							10
90											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
43.80 - 58.0 minor f.gr pyrite and/or pyrrhotite occasionally seen in tiny fractures with calcite												
50.60 - 50.65 massive f.gr pyrrhotite and lesser pyrite along chlorite - calcite altered vein margins		50	52.5	2.5	268	4	1	8	67	86		0.3
58.80 - 60.80 f.gr py in qtz - feldspar calcite segregations 60.80 - 61.20 mod. f.gr py 61.20 - 68.80 fine to med gr pods of pyrrhotite generally throughout altered matrix. Fine gr py also seen, occasional py → po alteration		58.0	60.35	2.35	269	3	2	9	108	204		0.4
63.10 - 63.50 massive f.gr po, minor py along qtz - feldspar - calcite altered margins		60.35	62.5	2.15	270	5	2	62	143	225	.005	2.1
63.50 - 65.0 Possible for ribbony streaks of moly, particularly in feldspar rich fault fragments. Some coarse-gr, weathered (in calcite veinlets) rutile appears to be present?		62.5	64.5	2.0	271	6	3	80	159	453	.010	3.2
65 - 68.80 pyrite content increases with po		64.5	67.0	2.5	272	4	2	402	193	253	.010	11.7
68.80 - 69.60 fractured margins contains massive po + minor py, calcite + feldspar alteration		67.0	70.0	3.0	273	4	1	452	161	173	.015	16.9
69.60 - 71.50 fine-gr po + py disseminated in tiny fractures		70	72.54	2.54	274	8	4	169	2677	240	.005	4.7
71.50 - 72.50 massive po + sph in small fractures												
72.50 - 75.20 fine gr pyrite generally throughout, minor po		72.54	75.0	2.46	275	5	1	12	128	122	.005	0.6
75.20 - 76.20 f.gr pods of pyrite generally throughout		75.0	77.0	2.0	276	4	2	276	80	84	.005	2.1
76.20 - 86.90 f.gr py associated with narrow qtz calcite segregations and veinlets. 79.20 - 79.25 f.gr py along calcite margins. 81.90 - 82.90 fine to med gr clots of po along qtz - ser margins and tiny fractures. Minor py		79.0	81.0	2.0	277	4	2	20	141	142	.005	0.7
		81.0	83.0	2.0	278	4	2	30	67	109	.005	1.3
82.90 - 86.90 sparse f.gr pyrite		83	85	2.0	279	4	2	6	87	112	.010	0.4
86.90 - 93.80 f.gr pods of py within siliceous graphitic matrix		86.5	89.0	2.5	280	11	1	57	142	46		2.3

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				90.50 - 90.65 bleached ser altered band with narrow qtz - feldspar calcite veinlet							0
				92.0 - 93.80 FAULT ZONE; finely ground sil graphite fragments, missing core and qtz - ser pieces							20
95				93.80 - 98.20 Well silicified, bleached ser sch with intermixed tan colored, bio altered sil sch, thin bands of fuchsite + ankerite + a few qtz-calcite and/or feldspar veins < 5cm wide with the foliation @ 0-10° ⊥ to C/A. Minor rutile in tiny fractures also							20
											30
100				98.20 - 105.60 ser sch becomes slightly coarser-gr and less silicified. Calcite, chlor content increases somewhat along with wavy crenulations. A few narrow qtz - calcite - feldspar veins seen along foliation							20
											10
				105.60 - 106.0 fractured ser - feldspar - bio - fuchsite altered qtz vein at 60° to C/A							20
105											30
				106.0 - 106.70 sil ser sch, broken up pieces							
				106.70 - 107.30 FAULT GOUGE with broken/sheared fragments							
				107.30 - 114.0 mod to well silicified ser to musc with some bio sch. Slightly chloritic bands of qtzite also intermixed. Small segregations of calcite also							10
110											0
				present throughout; minor fuchsite							
				110.25 - 110.60 FAULT/SHEAR ZONE - broken friable sch. Overall crenulated foliation between 0-30° to C/A							0
											10
115				114.0 - 118.50 Well silicified, calcareous, bleached ser sch with a few feldspar - calcite - py - fuchsite altered sections. 116.0 - 116.50 several tiny qtz - feldspar veinlets 2-5 mm wide X-cutting sil ser foliation at 70° ⊥ to C/A. Foliation of sil ser sch between 0-20° ⊥ to C/A							30
											30
120											10
				118.50 - 127.40 moderately siliceous graphite sch with numerous qtz - calcite veinlets and segregations							20
				119.0 - 120.0 FAULT ZONE - broken + missing core							
				121.20 - 122.0 FAULT - ground up + missing core (very calcareous)							20
125				126.50 - 126.90 sil ser sch with qtz calcite segregations. Foliation between 0-10° ⊥ to C/A							
				127.40 - 131.50 moderately siliceous ser to musc schist. Wavy crenulations throughout with qtz calcite veinlets + segregations throughout							20
											30
130				130.45 - 130.60 qtz vein with feldspar - ser - py - calcite altered margins at 10° ⊥ to C/A							20
				131.50 - 137.90 Graphitic sch with frequent qtz - calcite veinlets							
				132.30 - 133.50 FAULT/SHEAR ZONE marked finely ground graphitic sch							20
				134.60 - 135.50 FAULT ZONE - friable sch; 134.40 - 134.55							
135				several qtz - calcite - ddomite? veinlets with possible fine-gr feldspars in crenulated graphite sch							20

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
90.50 - 90.65 f.gr py in qtz veinlet												
92.0 - 93.80 some coarse py in qtz - ser ± graphitic fragments		89	91	2	281	9	1	20	248	56		0.5
93.80 - 98.20 fine to coarse py pods seen in more bleached feldspar altered sections - occasional f.gr po ± qtz veins quite bare		92	95.0	3	282	6	1	30	138	78		0.5
		95	97.0	2	283	3	1	3	63	25		0.1
98.20 - 105.60 occasional py along small shears. A few po pods are seen along ser-calcite altered vein margins. Minor po ± py seen within recrystallized sch matrix		97.0	99.0	2	284	10	1	4	79	39		0.2
		99	101	2	285	4	1	3	54	52		0.2
		101	103	2	286	3	1	4	58	35		0.1
105.60 - 106.0 small fractures filled with po and/or pyrite		103	105	2	287	4	2	21	153	62		0.2
106.0 - 106.70 a few po pods		105	108	3	288	3	1	252	122	116		1.5
107.20 - 114.0 fine-gr py throughout po developed foliation with the occasional massive clot, minor po		108	111	3	289	5	1	15	125	231		0.3
		111	113	2	290	3	1	9	36	304		0.4
114.0 - 118.50 f.gr usually massive stringers ± pods of pyrite throughout		113	115	2	291	6	1	17	23	36		0.1
114.70 - 114.82 Massive f.gr py vein in siliceous - calcareous ser sch matrix		115	117	2	292	8	2	40	51	9	.005	0.3
115.90 - 116.20 possible f.gr ribbony streaks of py ± massive f.gr stringers of py in bleached silicified section		117	119	2	293	16	2	37	17	26		0.4
116.50 - 127.40 some py → po alteration noted at contact of graphite + sil ser sch. Fine-gr po ± py throughout graphite unit		119	123	4	294	3	2	16	44	46		0.5
126.55 - 126.90 f.gr po ± py seen throughout. Qtz - calcite veinlets generally quite barren												
127.40 - 131.50 f.gr po, minor py disseminated throughout along foliation bands		123	126	3	295	5	1	12	74	64	.005	0.4
130.45 - 130.60 fine to med gr py ± po within fractures along vein margins		126	128	2	296	7	1	6	66	59		0.5
131.50 - 132.90 f.gr py throughout with occasional massive clump up to 1cm wide		128	130	2	297	2	1	6	49	39		0.1
132.40 - 134.55 massive pods of py near vein margins		130	132	2	298	2	1	4	23	91		0.1
		132	134.55	2.55	299	1	1	15	32	66		0.3

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				136.95 - 137.10 Bleached silicified section with 5cm wide qtz - ser - feldspar vein ⊥ to C/A							10
				137.90 - 143.55 qtz - ser to qtz - musc sch with a few bleached silicified sections. A few quite unaltered qtz - calcite veins < 8cm wide							30
140											20
				139.60 - 139.70 SHEAR ZONE							
				141.10 - 141.25 Small Shear / fault zone							10
				143.55 - 145.44 Quite siliceous graphitic sch with occasional bleached ser - chlor band intermixed							
145				145.44 - 148.0 Silicified ser - fuchsite schist with a few bands of intense qtz - feldspar - fuchsite - calcite alteration < 7cm wide.							10
				147.70 - 148.0 FAULT / SHEAR ZONE - friable sch							30
				148.0 - 164.40 Somewhat siliceous, broken up graphite rich schist.							20
150				150.80 - 150.95 Bleached silicified ser - fine fuchsite - calcite sch ⊥ to C/A							10
				151.80 - 155.0 FAULT GOUGE - friable graphitic sch, fault gouge and missing core							10
				156.40 - 156.70 FAULT, badly broken up core							
155				157.40 - 157.52 Qtz vein (minor calcite) with irregular margins and remnant graphitic sch pieces							10
				158.25 - 158.90 Silicified ser sch with a dark green color to it probably due to fuchsite - calcite content							0
											20
160				159.0 - 159.35 FAULT - missing + ground up core							
				159.35 - 159.50 Bleached sil - ser sch band							0
				159.90 - 160.32 FAULT - gouge + finely ground up core							10
				162.0 - 164.30 FAULT ZONE - badly sheared, broken core							
				164.40 - 166.90 complex intermixing of sil graphite sch, ser and/or chlor sch and qtz veins < 6cm wide							10
165				166.0 - 166.90 FAULT ZONE; badly sheared, broken core							
				166.90 - 168.0 Partially bleached silicified zone with calcite with minor feldspar							30
				168.0 - 171.0 siliceous graphite with interbanded qtz - ser, qtz and/or qtz calcite veinlets < 5cm wide and tiny x-cutting calcite veinlets							20
170											10
				171.0 - 175.0 FAULT ZONE - marred by graphitic fault gouge, broken graphite sch fragments and shattered qtz - ser - calcite fragments							0
											0
175				175.0 - 189.10 Siliceous ser sch with numerous qtz veins and chlorite clots. Core broken up badly in places							
				176.80 - 176.95 Qtz vein with ser - feldspar - calcite - fuchsite altered margins; minor rutile							10
				175.50 - 176.70 FAULT / SHEAR - shattered broken up qtz - ser sch pieces							10
180											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Ag	Au
136.35 - 137.10 f.gr po and py along silicified ser altered vein margins		134.55	137.50	2.95	300	3	1	9	41	55	0.2	
137.90 - 143.55 Very sparse py or po seen. Very f.gr po in a couple of qtz-calcite veinlets		137.5	140.2	2.7	301	1	1	7	57	25	0.2	
		140.2	143	2.8	302	4	1	12	46	58	0.2	
143.55 - 145.44 sparse f.gr clots of py												
145.44 - 148.0 fine gr py throughout		143	145.70	2.70	303	3	1	6	53	45	0.2	
146.10 - 146.50 three highly altered qtz feldspar - py - po altered bands (veins) ≤ 7cm wide. Some fine to med gr ribbony streaks of moly within qtz - felospar - py - po fractures Est. gr 145.70 - 147.0 0.05% MoS_2		145.70	147.0	1.30	304	293	1	10	37	134	0.3	
		147	150	3	305	3	1	9	51	152	0.4	
145.0 - 164.40 fine to med gr clots of py within small fractures of graphite sch												
150.50 - 150.95 fine gr py present		150	155	5	306	6	1	12	49	106	0.3	
157.40 - 157.52 f.gr pod of po in qtz vein		155	158	3	307	2	1	10	31	103	0.2	
158.25 - 158.90 fine to coarse gr py throughout s/l ser schist with a few po pods (py → po alteration) visible sph + galena		158	160	2	308	520	3	753	374	125	4.5	
159.35 - 159.50 py rich s/l sch with a fine-gr ribbony streak of moly		160	165	5	309	3	1	11	100	74	0.3	
164.40 - 166.90 sparse to mod f.gr py in qtz veinlets												
166.90 - 168.0 massive clots of py in qtz - calcite - ser matrix. Possible f.gr moly?		165	168	3	310	3	1	17	86	67	0.3	
168.0 - 171.0 A few massive clots of py but mostly f.gr throughout		168.0	170	2	311	1	1	5	115	50	0.4	
171.0 - 175.0 f.gr stringers of py, with occasional massive clot		170	172.50	2.5	312	1	1	20	62	103	0.4	
175.0 - 181.0 occasional coarse gr py cube in the broken up - friable core		172.50	176.0	3.5	313	3	1	13	25	190	0.3	

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				175.0 - 189.10 Sil ser - chlor sch; minor fuchsite							30
				179.0 - 181.35 FAULT; friable badly sheared sch							50
				181.35 - 188.36 increase in qtz veinlets and silicification of ser sch. Moderate feldspar and calcite alteration							40
185				veinlets which are with the poorly developed foliation, generally 0-20° ⊥ to c/a							50
				188.36 - 189.10 Well sil sch with calcite - ser - bio alteration; minor chlorite + feldspar							40
190				189.10 - 191.10 FAULT Bleached sil ser → bio sch with feldspar - calcite breakdown gouge							20
				191.10 - 192.0 tan colored feldspar rich, saussueritized epidote, qtz - ser altered INTRUSIVE; minor calcite							0
				192.0 - 215.0 META OR MELANO - DIORITE (calcareous)							
195				192.0 - 196.0 sections of qtz - calcite veinlets and segregations up to 10cm wide with chlorite and/or epidote, sericite and f.gr reddish brown mineral (weathered hematite) along altered margins							0
				195.0 - 197.10 Badly broken up core due to shears and small fault zones throughout. 197.10 - 197.5							0
200				Section of chlor - bio - calcite sch.							0
				197.5 - 206.85 Biotite - calcite rich meta-diorite with < 10% qtz "eyes" and minor ser, chlor, epidote, hematite and dolomite veinlets. X-cutting dolomite veinlets with bleached ser altered margins							10
				203.0 - 206.0 FAULT - sheared calcite - hematite veinlets; broken + missing core. 206.85 - 209.0 sharp increase in epidote content and decrease in biotite due to saussueritization of feldspars; 60% epidote, 30% bio and 10% feldspar, calcite + qtz.							0
205											10
											0
											0
210				209.0 - 211.0 Epidote content drops off to almost nil. Core is badly sheared with hematite "streaks" + calcite throughout							0
				211.0 - 215.0 Slight increase in epidote - calcite + biotite rich with the occasional qtz - calcite rich veinlet							10
				215.0 - 218.30 FAULT ZONE - offsetting meta-diorite and altered, bleached, dolomitized ser - rich, f.gr fuchsite, qtz - calc schist (very poor foliation). Fault gouge also; fine qtz - calcite veinlets also seen							0
215											0
											10
				218.30 - 221.0 slightly more siliceous with calcite increasing with biotite content							10
220				220.30 - 221.40 FAULT - Badly broken + sheared bleached sch							0
				221.40 - 223.6 calcareous meta-diorite with included remnant bands of bio + chlor - calcite schist							10
				223.5 - 223.57 qtz - calcite - chlor - bio vein							
225				223.6 - 224.0 FAULT sheared + fractured meta-diorite							

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
181.0 - 188.36 fine to med gr py, occasionally massive pods, along narrow qtz veinlets; often associated with calcite		178	182	4	314	3	1	6	32	104		0.1
		182	184.5	2.5	315	6	1	9	14	123		0.1
185.85 - 186.0 massive section of pyrite altered to fgr magnetite within siliceous matrix of sch		184.5	186.0	1.5	316	126	1	4	7	391		0.2
188.36 - 189.10 med gr pods of py associated with calcite		186.0	189.0	3.0	317	22	1	8	36	713		0.7
189.10 - 191.10 fgr py stringers in fractures												
191.10 - 192.0 med gr py along small qtz veinlets		189.0	192.4	3.4	318	20	1	12	55	315		0.4
192.0 - 197.10 Very sparse py		192.4	196.0	3.6	319	1	1	5	48	20		0.2
197.10 - 197.5 some fgr pods of py within calcite vein												
		196.2	200.60	4.4	320	7	1	15	52	88		0.4
197.10 - 206.85 Very fine-gr, sparse py within bleached ser altered zones within meta-diorite		202	206	4.0	321	1	1	20	68	37		0.4
206.85 - 215.0 no sulphides visible												
		210	212	2.0	322	1	1	5	46	34		0.2
215.0 - 218.30 fine-gr py in small clots generally throughout. Possible fgr galena + sphalerite also??		215	218.5	3.5	323	10	1	12	53	28		0.3
218.30 - 221 py content drops off		218.5	221.3	2.8	324	7	1	10	52	64		0.3
221.0 - 223.6 Very minor fgr py in qtz - calcite - chlor - bio vein		221.3	223.7	2.4	325	8	1	7	75	79		0.3

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				224.0 - 230.6 Calcareous biotite - meta - diorite with a feldspar - epidote - qtz matrix, minor chlor. Frequent calcite - epidote veinlets seen. 226.4 - 226.60 qtz - calcite segregation, 2.05cm wide, X-cutting calcite - epidote veinlet							10 / 0 / 0
230				229.0 - 229.75 FAULT/SHEAR ZONE - badly fragmented. 230.6 - 230.9 FAULT - hematite rich shears + broken core. 230.9 - 245.0 Very calcareous bio meta - diorite with a slight to moderate, chlor - ser matrix. Epidote only occasionally seen in							10
235				a few short sections with ser - calcite bleaching. Some qtz veinlets, < 1cm wide, seen with chilled, unaltered margins. 239.95 - 240.0 calcite - qtz vein with epidote rich margins							10 / 0 / 10
240				241.0 - 245.0 qtz "eyes" more apparent with calcite. 242.35 - 242.55 Bleached qtz - ser - calcite rich zone.							0 / 0
245				245.0 - 246.70 Pelitic schist with qtz "eyes". Slight shistose texture developed with bio + chlor. Calcite throughout. Two qtz - calcite veins < 10cm wide seen with ser - chlor - bio margins.							20 / 0
				246.70 - 248.05 Very siliceous, minor calcite, chlor - bio - ser schist; poor foliation developed.							0
250				248.05 - 248.14 qtz - calcite vein with chlor - ser margins. 248.14 - 249.32 intermixed qtz - pelitic - bio sch and qtz - calcite - chlor - bio - ser sch. 249.32 - 250.0 FAULT/SHEAR ZONE - broken core fragments. 249.50 - 258.47 Meta - diorite - moderately rich in							20 / 0 / 10
255				epidote + feldspar + calcite; minor qtz; small shears with hematite coatings. A few small qtz vein ⊥ to c/a with chlor - epidote - calcite altered margins. 258.47 EOH							10 / 0
260											
265											
270											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
224.0 - 242.35 NO PYRITE SEEN												
		230	232	2	326	5	1	8	72	36		0.2
		238	240	2	327	1	1	6	39	62		0.2
		240	242	2	328	1	1	6	31	62		0.1
242.35 - 242.55 f.gr py pods with calcite in small fractures		242	244	2	329	1	1	4	22	27		0.1
244.95 - 246.70 fine-gr py seen in qtz-calcite veinlets and in small foliated fractures		244	246	2	330	1	1	5	45	40		0.2
246.70 - 248.05 f.gr py disseminated throughout siliceous matrix		246	248	2	331	11	1	12	28	40		0.3
248.05 - 249.32 minor f.gr pods of py												
249.32 - 258.47 NO PYRITE SEEN		248.0	250.0	2	332	6	1	5	57	294	.005	0.3
		250	252	2	333	1	1	6	50	186		0.3
		253.55	256	2.45	334	2	1	7	53	26		0.2

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
					A	B	C	D	E			

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 531.5m (1744 ft)
HOLE NO.: 81-9	BEARING: DUE EAST
LOCATION: COORDINATES FROM LEGAL CORNER POST 205m North } STERLING NO. 1 602m West }	DIP: -75°
	TOTAL LENGTH: 774 ft (235.90)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 73m
DATE: JUNE 1, 1981	VERTICAL PROJECT: 224m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: NQ	
DATE STARTED: MAY 31, 1981	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: JUNE 8, 1981	
DIP TESTS: 250 ft. (76.2m) -73° 500 ft (152.39m) -70° 747 ft. (227.67m) -70°	LEGEND

COMMENTS: ENTIRE HOLE DRILLED WITH MUD

– SLOW DRILLING + SQUEEZING at 350 ft (106.6m) due to major fault

-SLOW DRILLING, CAVE IN + SQUEEZING AT 750 ft (228.6m) due to major fault zone

* 21.94m of casing put down at -65° (wrong angle set by Driller). Six feet of core was drilled (27.77m) before mistake was corrected.

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA
DUKSBAK WATERPROOF

PAGE 1 OF 6 | PROJECT: STERLING | HOLE NO. 81-9

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 to 21.03 CASING							
				21.03 - 25.90 Partially to well silicified chlorite sch, bleached ser sch and tan colored bio → ser silicified schist. Tiny calcite veinlets, associated with chlor sch throughout; qtz - calcite - py veinlets throughout							10
				21.8 - 22.35 FAULT ZONE: friable, broken up schist							20
				25.90 - 28.10 Mostly siliceous graphite sch with a few narrow silicified ser sch sections. A few tiny calcite veinlets							10
				27.35 - 28.70 FAULT ZONE - badly broken up + missing sil graphite - sericite sch Foliation between 0 - 20° ⊥ to c/a							30
				28.70 - 41.50 highly silicified sericitized bleached sch with calcite laminations. Core generally broken up with numerous skears and fractures; minor fuchsite							50
				31.70 - 32.80 FAULT ZONE; badly broken + missing core							7
				34.0 - 34.60 FAULT - missing + badly fractured, sheared core							40
				35.40 - 38.10 FAULT - missing + badly broken fragmented core							20
				39.0 - 39.70 FAULT - sheared, broken + missing core 39.70 - 40.35 Several fractured qtz - calcite segregations and one X-cutting veinlet, 1cm wide at 50° ⊥ to c/a							20
				40.70 - 41.50 FAULT - gouge, friable sch + missing core							30
				41.50 - 42.45 Fuchsite - calcite rich chlor - bio schist							30
				42.45 - 50.25 Well bleached + silicified ser sch with thin laminations of fuchsite, calcite + feldspar - siliceous foliation between 0 - 5° ⊥ to c/a							10
											10

PAGE 1 OF 6 | PROJECT: STERLING | HOLE NO. 81-9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
21.03 - 25.90 f.gr py throughout usually along tiny qtz - calcite veinlets		21.40	23.70	2.30	335	2	1	7	41	33		0.2
25.90 - 28.70 f.gr to med gr pods throughout silicified matrix. Possible f.gr galena in sil ser sch sections		23.70	26.0	2.30	336	8	1	98	55	37		1.0
		26.0	27.43	1.43	337	5	1	321	97	42		4.2
28.70 - 41.50 fine to med. gr pyrite throughout silicified. A few bleached sections contain f.gr pods of galena.		27.43	30.0	2.57	338	3	1	75	267	59		1.1
Occasionally seen within tiny calcite - qtz - py veinlets		30.0	33.0	3	339	68	1	309	111	39	.005	0.2
34.60 - 35.10 Some med-gr galena with fine to coarse py cubes along several sheared calcite rich qtz veinlets		33.0	38.10	5.10	340	137	1	1738	148	4	.005	0.7
39.70-40.3 fine gr clusters of galena + sphalerite along small qtz - calcite - py fuchsite segregations, fractures + veinlets		38.10	41.0	2.9	341	40	1	603	583	2		0.2
41.50 - 42.45 A few fine-gr py clots												
42.45 - 45.0 sections of fine-gr py laminated with siliceous matrix. Fine-gr blue/grey spots commonly seen; probably galena and/or sphalerite; minor rutile?		41.0	43.0	2.0	342	17	1	69	80	32	.005	0.3
		43.0	45.70	2.7	343	16	1	24	156	3	.005	0.1

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				42.45 - 50.25 Intensly silicified ser sch							30
				49.35 - 50.25 slight mixture of chlor + graphite bands							40
50				50.0 - 50.25 feldspar - calcite - qtz veinlet, 5cm wide, with x-cutting tiny qtz calcite veinlets							
				50.25 - 51.0 FAULT ZONE - rich in friable, gouged graphite sch							20
				51.0 - 51.55 siliceous graphite sch with minor ser bands							50
				51.55 - 53.40 FAULT/SHEAR ZONES containing 3 heavily fractured qtz - calcite veins with islands of ser - fuchsite - calcite sch; lots of missing core							
55											10
				53.40 - 62.20 Very calcareous chlorite schist with some biotite, graphite + qtz - calcite veinlets intermixed							0
				Calcite veinlets throughout; foliation 0 - 40° ⊥ to C/A							0
				57.0 - 60.80 slight increase in bio content with a few calcite - qtz veinlets ≤ 5cm wide							
60											
				60.80 - 61.0 Crenulated ser - chlor - calcite - qtz section							20
				61.40 - 61.52 Qtz vein with calcite - chlor margins							30
				62.20 - 63.0 FAULT - graphitic sch + chlor - ser sch fragments							
				63.0 - 63.90 Siliceous chlor - bio sch with tiny calcite veinlets							
65				63.90 - 64.61 FAULT - missing core + broken graphite + ser fragments							20
				64.61 - 65.25 Siliceous ser sch with streaks of calcite, feldspar + fuchsite							
				65.25 - 66.20 FAULT; Badly broken + missing sil ser sch pieces							20
				66.20 - 69.20 tan colored bio to ser altered sch with qtz - feldspar - calcite veinlets							
				67.0 - 68.3 FAULT; missing core + fragmented ser - bio - calcite pieces							0
70				68.88 - 69.20 FAULT; fragmented + broken up ser + calcite pieces							10
				69.20 - 70.70 Coarse - gr sericite to musc - chlor sch with qtz - segregations							
				70.70 - 81.60 Small qtz veinlets + segregations throughout fine to coarse gr sericite sch with a few silicified, bleached, replaced zones. Minor thin bands of calcite, chlor, fuchsite + bio							40
				73.0 - 73.30 bleached, silicified zone with calcite + ser							40
75											
				74.30 - 74.50 Silicified zone with fine - gr feldspar - calcite + fuchsite; ser altered margins							50
				78.0 - 79.30 Partially silicified zone of ser rich qtz - calcite - fuchsite sch with foliation 10° - 30° ⊥ to C/A							30
80				78.25 - 78.70 FAULT/SHEAR ZONE; broken core							
				78.70 - 81.60 Partially silicified, crenulated, fine to coarse gr. sericite sch with fine gr calcite.							30
				81.60 - 82.0 FAULT ZONE; friable, broken schist							0
				82.0 - 85.0 Calcite - graphite sch with a few narrow bands silicified - ser - calcite sch and qtz veinlets < 5cm wide							10
85											
				85.0 - 86.60 FAULT ZONE - graphitic gouge + shattered qtz veinlets							10
				86.60 - 87.50 Very calcareous, qtz ± ser sch; broken up core							0
				87.50 - 82.90 FAULT; graphite sch fragments							
				87.50 - 94.65 GRAPHITE SCHIST							
				88.5 - 89.0 FAULT - graphitic gouge							0
90				89.6 - 90.30 FAULT - sheared + broken graphite							

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
45.0 - 50.25 slight increase in disseminated pyrite, decrease in probable galena pods		45.70	48.0	2.30	344	19	1	30	245	3	.005	0.1
49.3 Massive f.gr py - calcite veinlet, up to 1cm wide		48	50.25	2.25	345	15	2	44	81	47		0.6
50.0 - 50.25 med. pods of py with feldspar - calcite matrix		50.25	54.0	3.75	346	5	1	16	125	30		0.3
50.25 - 51.55 some fine to med gr py												
51.55 - 53.40 med gr clots of py in qtz veins		54.0	56.40	2.4	347	3	1	12	79	81		0.9
53.40 - 60.50 minor f.gr py throughout with some coarse py within graphitic bands		56.40	59.0	2.6	348	5	2	16	79	52		0.8
60.50 - 62.20 Some med gr pyrite in small calcite - qtz veinlets. Med to coarse - gr pods of pyrrhotite within small fractures of calcite - chlor vein margins		59.0	61.0	2.0	349	6	1	18	97	88		1.2
62.20 - 63.0 f.gr py throughout fault zone		61.0	63.4	2.4	350	5	1	8	105	45		0.3
63.0 - 64.61 minor f.gr pyrite												
64.61 - 65.25 stringers of f.gr. py along qtz veinlet fractures; possible f.gr streaks of moly?		63.4	67.4	4.0	351	10	2	65	170	53	.005	0.8
65.25 - 69.20 f.gr to med gr pods of py with small qtz - feldspar - calcite veinlets												
69.20 - 70.70 sparse f.gr pyrite		67.4	70.65	3.25	352	3	1	11	78	35		0.2
70.70 - 81.60 fine to med gr py usually associated with bleached, silicified zones and a few qtz veinlets + segregations		70.65	73.0	2.35	353	4	1	11	62	35		0.2
73.0 - 73.30 med. gr stringers of py in fractures Possible f.gr moly or galena		73.0	75.0	2.0	354	3	1	11	57	34		0.1
74.30 - 74.50 f.gr py throughout calcite fractures		75.0	77.0	2.0	355	3	1	14	87	66		0.1
78.0 - 79.30 fine to med gr, occasionally massive stringers of py. Small section of massive py → po alteration. 78.70 - 81.60 med gr pods of py + po within crenulated fractures		77.0	79.0	2.0	356	9	2	18	81	324		0.6
81.60 - 82.0 med. gr py pods throughout		79.0	81.6	2.6	357	10	1	44	55	133		0.3
82.0 - 85.0 sparse f.gr pyrite												
85.0 - 86.60 A few med gr py pods in calcite		81.6	84.0	2.4	358	2	1	27	46	52		0.4
86.60 - 91.70 med gr pods of py associated with narrow crenulated qtz - calcite veinlets		84	87.80	3.8	359	3	1	9	46	40		0.2

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				87.50 - 94.65 Graphite schist often crenulated with segregated calcite + qtz - calcite veinlets							10
				91.70 - 92.0 partially bleached qtz - ser - calcite band with narrow qtz - calcite - fuchsite veinlet							0
95				94.65 - 98.10 Partially to well silicified sections of fine to coarse sericite - calcite with minor graphitic bands - minor chlor + fuchsite, often crenulated							20
				96.80 - 97.0 silicified ser - sch with calcite pods; minor fuchsite							30
				98.10 - 105.80 Muscovite (chloritic) to sericite sch with some thin biotite band and qtz - calcite - chlor + qtz							10
100				calcite - ser - feldspar veinlets < 15cm wide							30
				Crenulated foliation between 0 - 20° ∠ to C/A							
				101.05 - 101.20 irregular qtz - ser - calcite - feldspar vein.							20
				103.0 - 103.40 Bleached zone; qtz - calcite - feldspar							
105				veinlet with ser - bio - chlor altered margins							30
				104.30 - 105.80 some thin, intermixed siliceous graphite							
				105.80 - 108.0 Siliceous graphite sch with qtz veinlets + segregation and							20
				thin bleached ser altered bands; badly crenulated							
				108.0 - 119.17 MAJOR FAULT ZONE							0
110				- FAULT GOUGE, SHATTERED QTZ - PY FRAGMENTS,							
				FRIABLE SER SCH PIECES + POOR CORE							0
				RECOVERY; sheared, broken up + graphitic							
				fault gouge							0
				113.99 - 116.0 No core recovered							
115											
				116.0 - 119.20 friable graphitic sch							0
				recovered with py + qtz segregations							0
				- fault gouge also.							
				119.17 - 120.20 Silicified, bleached ser - fuchsite - minor rutile sch with irregular							20
120				segregated qtz - calcite - minor feldspar veinlets < 7cm wide							
				120.20 - 124.20 Complex intermixing of qtz veinlets + segregations							20
				< 5cm wide usually with ser altered margins and							
				siliceous graphite sch; foliation between 0 - 10° ∠ to C/A							30
				124.20 - 126.75 GRAPHITIC SCHIST with tiny calcite - qtz veinlets throut							
				125.0 - 126.75 FAULT ZONE - gouge + missing + broken core							
125				126.75 - 128.50 intermixed ser - musc bands + sil graphite sch							0
				127.90 - 128.50 FAULT ZONE - missing + broken core.							10
				127.70 - 127.90 small qtz - feldspar - calcite veinlet < 5cm wide in							
				siliceous graphite sch, X - cutting foliation at 70° to C/A							0
130				128.50 - 145.80 fine to coarse gr ser to chloritic - musc sch with qtz -							
				calcite - chlor veinlets + segregations < 10 cm wide throughout							10
				Core generally quite friable with numerous shears + faults							
				129.80 - 130.90 FAULT ZONE - friable ser sch + gouge + missing core							
				131.75 - 132.50 FAULT - friable ser - musc. sch, missing core + gouge							10
135				134.11 - 134.25 fractured qtz - calcite - ser vein with							30
				sheared, friable ser to musc margins							

PAGE 3 OF 6 | PROJECT: STERLING | HOLE NO. 81-9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	ASSAYS W	ASSAYS Pb	ASSAYS Zn	Cu	Au	Ag
91.70 - 92.0 massive f.gr py stringers along veinlet margins and within small fractures		91	93.0	2	360	32	1	110	96	105		1.2
94.65 - 98.10 massive f.gr py stringers in fractures tends to be associated with partially sil, ser altered zones; minor po		93.0	95.0	2	361	6	1	394	48	128		2.9
		95	97	2	362	7	1	16	38	97		0.4
98.10 - 105.20 f.gr py, occasionally massive, limited to qtz-calcite-chlor and qtz-ser-calcite-feldspar veinlets and segregations		97	99	2	363	2	1	10	57	52		0.2
101.05 - 103.40 pyrite + po as massive calcite replacement in fractures		99	101	2	364	2	1	9	55	55		0.3
103.0 - 103.40 f.gr pods of py along calcite-chlor altered margins		101	103	2	365	3	1	11	55	66		1.4
104.30 - 105.80 thin fine-gr py in sil graphite bands		103	105	2	366	6	1	15	59	68		0.3
105.80 - 108.0 f.gr usually massive pods + stringers of py throughout		105	107	2	367	8	1	17	43	136		0.3
108.0 - 119.17 f.gr py, occasionally massive, throughout graphitic material												
119.17 - 120.20 f.gr stringer islands of fracture filled py, lesser po within qtz veinlets and ser-fuchsite altered margins; f.gr galena + sphalerite seen with py		119.17	121.0	1.83	368	8	1	22	262	100		0.4
120.20 - 124.20 minor f.gr py in qtz veinlets												
124.20 - 126.75 f.gr, occasionally massive stringers of py throughout graphitic sch		121	124	3	369	3	1	12	117	45		0.3
126.75 - 128.50 f.gr pods of py, occasionally massive		126	129	3	370	4	1	12	29	116		0.3
127.90 - 128.50 f.gr py in tiny fractures												
128.50 - 145.80 f.gr py specs generally throughout the somewhat siliceous matrix. Only fine to med gr py pods seen in qtz veinlets + segregations		129	133	4	371	2	1	5	36	73		0.2
134.11 - 134.25 minor f.gr py in fractures												

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				128.50-145.80 136.25-137.3 FAULT - missing + friable core 137.80-138.40 FAULT - gouged, friable musc sch qtz-calcite with chlor-ser altered margins are often crenulated; foliation between 0-20° L to C/A. 139.0-144.0 chloritic sch is badly sheared in places with crumbly, friable pieces throughout. 143.40-145.70 FAULT/SHEAR ZONE - missing, friable, broken up core + fine fault gouge							20 10 10 10 10
140											
145				145.80-160.20 Meta-Volcanic perhaps originally andesitic in composition Inistial calcite throughout ser-chlor-epidote-biotite-qtz matrix. Varying amounts of qtz occur primarily as fine-gr qtz "eyes" with calcite Tiny qtz-calcite or calcite veinlets < 2cm wide often occur in X-cutting "stockwork" pattern 147.50-148.80 slight schistose texture developed with calcite-chlor-bio-ser matrix 152.75-153.0 Qtz-calcite vein with calcite-ser-chlor altered margins @ 15° L to C/A							0 0 0 10 0
150											
155				154.75-155.35 FAULT - gouge present + sheared, broken chloritic core 157.20-158.10 FAULT - badly broken up rock + missing core 158.10-160.20 qtz, minor calcite, segregations + veinlets < 2cm wide throughout with chlor-ser matrix 160.20-160.62 FAULT - broken up + missing core							10 40 30
160				160.62-165.80 Complex intermixing calcareous chlor-ser sch, siliceous graphite, narrow chloritic qtzite bands and numerous qtz segregations with chlor margins < 3cm wide 164.80-165.20 FAULT - Broken + missing blocky fragments							10 10
165				165.20-168.10 Quartzite - whitish qtzite with numerous tiny fractures filled with chlorite, sericite and qtz segregations, minor calcite 167.70-168.30 FAULT - BLOCKY, Broken core + missing core 168.10-173.0 Complex intermixing of calcareous chlor sch, sil graphite bands chloritic qtzite bands and meta-volcanic (greenstone) bands with chlorite inclusions, also calcareous. Tiny calcite veinlets throughout							10 0 10
170				173.0-173.25 FAULT/SHEAR ZONE - broken sch + missing core 173.25-177.30 intermixing of qtz-segregated chlor-calcite-ser sch, calcareous-chloritic qtzite bands and thin crenulated bands of sil graphite sch 175.0-177.30 numerous calcite veinlets < 3cm wide foliation between 0-40° L to C/A							0 10
175				177.30-179.50 FAULT - graphitic-qtz fragment breccia, missing core + calcareous qtzite fragments							0 0 0
180											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
135.0 - 145.80 generally sparse f.gr py throughout with a few med gr pods along qtz - calcite ± chlor veinlets		133	136	3	372	1	1	5	33	70		0.1
		136	140.0	4	373	2	1	5	56	42		0.1
		140.0	145.5	5.5	374	4	1	14	34	175		0.2
145.80 - 160.20 Very fine-gr pyrite throughout matrix. No pyrite in calcite or qtz - calcite veinlets		145.5	148.0	2.5	375	18	1	14	58	181	.005	0.3
147.50 - 148.80 slight increase in disseminated f.gr pyrite		148.0	150.0	2.0	376	5	1	17	57	144		0.3
149.60 med.gr chalcopyrite in calcite-qtz veinlet		150.0	152.0	2.0	377	15	1	14	55	257		0.4
152.75 - 153.0 No pyrite in qtz vein; minor f.gr py along calcite margins		152.0	155.0	3.0	378	5	1	12	81	63		0.2
153.0 - 160.62 Very fine to fine gr pyrite throughout qtz rich matrix		155.0	157.0	2.0	379	4	1	16	63	57		0.3
		157.0	160.0	3.0	380	3	1	7	43	37		0.2
160.62 - 165.80 A few f.gr pods along margins of qtz - chlor segregations. Med gr py cubes in siliceous graphite		160	163.0	3.0	381	2	1	28	95	79		0.4
165.20 - 168.10 fine gr py usually within chlor filled fractures		163.0	166	3.0	382	2	1	15	87	90		0.4
168.10 - 173.0 fine-gr py cubes associated with graphitic bands and within chloritic matrix of sch. Some py within chlorite inclusions with metavolcanic.		166	170	4.0	383	2	1	10	53	38		0.2
		170	172	2.0	384	2	1	15	80	30		0.3
173.0 - 177.30 f.gr py usually associated with qtz - calcite segregated margins f.gr py cubes in thin sil graphite sch		172	175	3.0	385	1	1	14	80	24		0.3
		175	177.40	2.4	386	1	1	19	64	13		0.3
177.30 - 179.50 f.gr py cubes throughout		177.40	181.0	3.6	387	1	1	16	69	14		0.2

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				179.50-180.10 Calcareous ser-chlor sch with qtz-chlor-calcite veinlets							0
				180.10 - 180.60 FAULT - Badly broken + missing core							
				180.60 - 183.85 whitish bands of qtzite + sil chlor-ser calcite sch							10
				183.85 - 184.0 FAULT - marked by black graphitic gouge							
185				184.0 - 184.20 Qtz vein with calcite - chlor-ser altered margins							
				184.20 - 186.20 Ser - chlor - calcite Quartzite + minor chlor sch							10
				186.20 - 186.55 FAULT - finely broken up fragments, missing core							0
				186.55 - 194.70 Badly broken up (sheared) intermixing of calcareous qtz-chlor bio sch, chlor qtzite bands, chlor-graphite bands and calcareous chlor metavolcanic with bio remnants							10
190				188.55 - 188.80 qtz vein with chlor-calcite fractures							0
				192.0 - 192.30 FAULT - gouge present + broken, missing core							
				192.45 - 193.25 several qtz veinlets + segregations < 10cm wide with chlor - ser calcite altered margins							20
195				194.70 - 194.90 FAULT/SHEAR ZONE - badly broken core							0
				194.70 - 201.0 Mostly chlor - ser - calcite qtzite with narrow bands of calcareous bio-chlor metavolcanic/rhyolite? calcareous chlor-ser sch and calcareous chlor sch							0
				A few qtz veinlets + segregations < 5cm wide							
200				A few X-cutting calcite veinlets also noted							10
				Poorly developed foliation between 0-30° to c/a							
				201.0 - 202.0 FAULT ZONE - Badly broken core + missing core							0
				202.0 - 209.10 badly broken up chloritic metavolcanic (calcareous) with chlorite - ser qtzite bands							10
205				203.30 - 203.45 barren qtz-chlor calcite veinlet							
				204.10 - 207.0 FAULT ZONE - missing + badly broken up core							0
				208.0 - 208.25 Dark - black to green Meta-Volcanic, basalt? (calcareous) greenstone?							0
				209.10 - 210.60 Quartz vein with numerous fractures filled with chlorite, minor calcite							70
210				210.60 - 212.25 several qtz veinlets with chlor filled fractures in a chlor - ser schist (calcareous)							40
				212.25 - 212.75 FAULT ZONE - gouge, friable core							
				212.75 - 218.10 META - VOLCANIC ; RHYOLITE? Very calcareous in places with numerous qtz + qtz - calcite segregations throughout							0
215				213.80 - 214.80 FAULT/SHEAR ZONE							0
				Core is badly sheared and broken up in several places							0
220				218.10 - 231.63 MAJOR FAULT ZONE							0
				GRAPHITIC FAULT GOUGE; SLICKENSIDES, SHEAR, POLISHED graphite sch, Qtz-graphite breccia - minor qtz, qtz-calcite, calcareous meta volcanic remnants							0
											0
225											0

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	ASSAYS W	ASSAYS Pb	ASSAYS Zn	Cu	Au	Ag
179.50 - 180.60 f.gr py cubes throughout												
180.60 - 184.0 fine to med. gr py cubes within somewhat siliceous matrix of ser-chlor		181.0	183.0	2	388	2	1	15	84	17		0.3
184.0 - 184.20 massive f.gr pyrite along qtz - graphitic margins		183	185.6	2.6	389	2	1	15	60	47		0.2
184.20 - 186.55 sparse f.gr pyrite												
186.55 - 194.70 f.gr py disseminated throughout. 188.55 - 188.80 No py in qtz vein		185.6	188.0	2.4	390	2	1	11	56	73		0.3
		188	190	2.0	391	1	1	10	57	23		0.2
192.45 - 193.25 f.gr pods of pyrrhotite in qtz segregations. Fine-gr py along qtz margins		190	193	3.0	392	1	1	14	87	33		0.2
		193.0	196	3.0	393	2	1	15	98	33	.010	0.3
194.70 - 201.0 Very sparse f.gr py		196	198	2.0	394	1	1	9	61	13		0.1
		198	200.5	2.5	395	1	1	13	70	24	.005	0.2
201.0 - 209.10 sparse fine gr py												
223.30 - 20345 A few fine-gr pods of pyrite in qtz-chlor fractures												
209.10 - 210.60 A few fine-gr pods of py within chlor-calcite fractures		209	211.5	2.5	396	1	3	10	48	71	.005	0.2
210.60 - 212.25 sparse f.gr py												
210.60 - 218.10 Very sparse f.gr py in Meta Volcanic unit, usually seen along shears												
218.10 - 231.63 f.gr py, occasionally massive, along qtz breccia fragments in graphitic breccia												

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				218.10 - 231.63 MAJOR FAULT ZONE graphitic gouge with qtz-fragments -qtz "phenos" in greenish metavolcanic breccia with sheared graphite sch.							0 / 0
230				231.63 - 232.86 somewhat siliceous graphite sch with 15cm wide qtz-dolomite-ser-py vein							0 / 10
				232.86 - 235.90 Narrow bands of intermixed sil graphite sch, chlor-ser sch and qtz-calcite veinlets							
235				235.0 - 235.30 qtz calcite vein with chlor-ser margins along foliation planes @ 30° ⊥ to CA							20
				EOH 235.90							
240											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
218.10 - 231.63 f.gr py in narrow stringers generally throughout faulted and shattered graphitic core									
231.63 - 232.86 fine to med grained py cubes along fractures and margins of qtz-dolomite vein 232.86 - 235.90 A few fine-gr py stringers in fractures									
235.0 - 235.30 NO SULPHIDES IN QTZ VEIN									

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.	

N1

NEWMONT EXPLORATION OF CANADA LIMITED

DRILL LOG

PROJECT: STERLING	GROUND ELEV.: 496m (1627 ft)
HOLE NO.: 81-10	BEARING:
LOCATION: COORDINATES FROM LEGAL CORNER POST 855 West, 562 North } STERLING NO. 1	DIP: -90°
	TOTAL LENGTH: 908 ft, (276.74m)
LOGGED BY: D. BOHME Dennis Bohme	HORIZONTAL PROJECT: 32m
DATE: JUNE 11/1981	VERTICAL PROJECT: 274m
CONTRACTOR: HERB ALLEN	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: NQ	
DATE STARTED: JUNE 10, 1981	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: JUNE 16, 1981	
DIP TESTS: 250 ft (76.20m) 84.5°; 500 ft (152.39m) 83.25°; 740 ft (226.54m) 77.0°	
COMMENTS: Entire hole drilled with mud, No major problems encountered.	LEGEND

R. D. PENHALL LTD., MADE IN VANCOUVER, CANADA
DUKSBAK WATERPROOF

PAGE 1 OF 6 | PROJECT: STERLING | HOLE NO. 81-10

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0 - 8.83 CASING							
				8.83 - 11.70 Siliceous graphite sch (crenulated) with small calcite veinlets throughout. 9.2 - 9.55 Ser, Sil bleach zone. foliation between 0-40° ∠ to C/A							0
				11.70 - 17.00 bleached, silicified ser-calcite sch with thin bands of brown bio, chlorite + fuchsite; minor sil bands of graphite sch. Qtz-calcite veinlets < 5cm. Tiny X-cutting calcite veinlets throughout							0
				15.30 - 15.80 Blocky, broken, sheared sil ser sch bleached foliation between 0 - 10° ∠ to C/A							0
				17.0 - 18.60 FAULT - badly broken, sheared ser sch and graphitic sch. Missing core also							20
				18.60 - 19.10 band of bleached sil ser-calcite-fuchsite sch							20
				19.10 - 21.90 Sil graphite sch with calcite veinlets throughout							0
				20.10 - 21.10 FAULT; broken + missing core							0
				21.90 - 23.77 Qtz-chlor-calcite-ser sch with a few qtz-calcite veinlets							0
				23.0 - 23.77 FAULT - fine fragments + missing core							10
				23.77 - 41.10 intermixed bands of calcareous-chlor-ser sch, partially sil ser-calcite sch and musc sch. A few qtz-calcite ser + calcite veinlets < 5cm wide							0
				25.0 - 25.50 bleached ser, siliceous sch. Foliation, slightly crenulated in places, between 0 - 30° ∠ to C/A							10
											0
											10
				32.30 - 32.40 Qtz-calcite-chlor-ser ± veinlet along foliation planes							10
				33.50 - 34.50 Ser bleaching increases with several qtz-ser-calcite-fuchsite veinlets < 5cm wide							10
				34.50 - 35.0 FAULT - friable, sheared sch.							0
				36.90 - 38.20 FAULT - missing, very friable ser-calcite schist. 39.10 - 39.60 Shear zone with some graphite sch							10
				39.60 - 41.0 Graphitic-ser sch (crenulated) bands in musc sch							0
				40.50 - 40.90 FAULT - broken, friable + missing core							50
				41.10 - 43.80 Siliceous graphite sch with numerous tiny crenulated qtz + qtz-calcite veinlets < 3cm							40
				42.50 - 42.70 FAULT with graphitic gouge present							
				43.80 - 44.15 Siliceous ser sch							
				44.15 - 48.50 Qtz Vein cutting foliation @ 60°							

PAGE 1 OF 6 | PROJECT: STERLING | HOLE NO. 81-10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mn	W	Pb	Zn	Cu	Au	Ag
8.83-11.70 fine-gr py throughout, associated with crenulated calcite veinlets		9	11.60	2.60	397	2	1	10	104	39		0.2
11.70-12.0 f.gr py throughout sil matrix of schist Qtz-calcite veinlets are barren 11.80-12.40 f.gr galena + sph in sil matrix		11.60	14.0	2.40	398	7	1	165	207	28		0.2
15.80-16.90 f.gr pods of galena + sph associated with f.gr py with ser-calcite 12.0-18.60 f.gr py along shear planes: 18.60-19.10 f.gr galena, sph, + pyrite in sil ser-calcite schist		14.0	17.0	3.0	399	25	1	295	378	15		0.3
19.10-21.90 f.gr py throughout 21.90-23.77 Massive f.gr py, minor galena along qtz-calcite veinlet margins		17.0	21.40	4.40	400	9	1	41	218	41		0.2
23.77-44.0 sparse f.gr py generally throughout		21.40	24.0	2.60	501	3	1	33	74	50		0.7
Occasional massive py pods with ser altered bands. 25.0-25.50 massive f.gr py pods + possible f.gr galena Some massive py associated with small shears - minor f.gr po also noted		24.0	26.0	2.0	502	1	1	14	54	24		0.3
		30.5	33.0	2.5	503	2	1	13	83	27		0.3
32.30-32.40 minor f.gr py 33.50-34.50 massive f.gr py in small fractures of qtz-calcite-ser veinlet. Possible f.gr galena also		33.0	35.5	2.5	504	1	1	24	64	50		0.5
		35.5	39.0	3.5	505	1	1	9	61	33		0.2
		39.0	42	3.0	506	1	1	13	73	35		0.3
41.10-43.80 f.gr stringers of py usually along qtz veinlet margins 43.80-44.15 fine-gr py in tiny fractures												

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				44.15 - 48.50 Qtz Vein - highly fractured, sheared + broken up qtz vein; missing core also. A few fractures with calcite and/or sericite							10
				48.50 - 49.30 FAULT - friable ser sch, sheared margins of a qtz vein + missing core.							70
50				49.30 - 53.90 fine to coarse-gr siliceous ser sch with numerous qtz-calcite veinlets + segregations <10cm wide, minor chlor + calcite veinlets							40
				52.70 - 53.20 FAULT/SHEAR ZONE - broken friable sch							10
55				53.90 - 54.30 Calcareous chlor sch with sheared margins							0
				54.30 - 62.10 Siliceous coarse ser to musc sch with finely elongated intermixed black mineral: rutile? A few X-cutting qtz-calcite-po veinlets <1cm wide							20
				Foliation between 30-40° ⊥ to c/A							10
60				59.20 - 62.10 Well silicified ser sch with numerous qtz-calcite-minor fuchsite + calcite veinlets + segregations < 10cm wide							30
				62.10 - 66.40 Siliceous graphite sch with a few x-cutting calcite veinlets <1cm wide and ser. sch bands							0
65				64.0 - 65.50 FAULT broken up graphite + missing core							0
				66.40 - 69.90 Well silicified, bleached ser-calcite(dolomite)-fuchsite sch with narrow bands of brown bio + siliceous graphite							20
				67.30 - 68.30 FAULT - Blocky ser sch fragments + missing core							10
				Foliation between 0-10° ⊥ to c/A							
70				69.90 - 88.80 Very calcareous chlor-bio, minor ser sch							40
				Tiny, often crenulated, calcite veinlets (<1cm wide) throughout wavy foliated chlor-biotite sch.							30
				71.90 - 72.80 several qtz-calcite veinlets + segregations < 7cm wide							
75				74.48 - 74.60 Qtz vein with calcite ser-altered margins along foliation @ 30° ⊥ to c/A							20
				Overall, crenulated foliation between 0-40° ⊥ to c/A							0
				77.0 - 79.0 Several qtz-calcite veinlets with chlor-ser-calcite altered margins along foliation							20
80											10
				82.30 - 82.37 Qtz-calcite veinlets with ser-chlor filled fractures							
				84.40 - 85.50 Several qtz-calcite-fuchsite veinlets, < 3cm wide, with partially bleached siliceous ser altered margins							10
85											30
				85.50 - 88.80 Slight increase in qtz-ser content with a few crosscutting calcite veinlets							0
				88.80 - 92.10 Siliceous, minor calcite, ser-chlor-bio sch with a few crenulated bands of sil graphite sch							0
				89.70 - 90.10 FAULT/SHEAR ZONE; friable core + some missing							10
90				90.35 - 91.20 FAULT ZONE - badly broken + missing core							

PAGE 2 OF 6 | PROJECT: STERLING | HOLE NO. 81-10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
44.15 - 48.50 A few broken up qtz pieces with massive py and/or massive po alteration. Pods of mostly sph + galena also; occasional massive sph in fracture		44.0	49.0	5	507	1	1	713	1726	74	.015	9.9
48.50 - 53.90 massive py + po along qtz calcite margins; fine-gr py within sil matrix of sch		49.0	51.20	2.20	508	2	1	28	45	59		0.5
53.90 - 54.30 minor f.gr py		51.20	54.25	3.05	509	1	1	20	59	39		0.5
54.30 - 62.10 fine-gr py and po in qtz-calcite veinlets and in tiny fractures throughout sil sch		54.25	56.0	1.75	510	1	1	10	26	58		0.3
62.10 - 66.40 minor f.gr py in siliceous graphitic matrix		58.0	60.0	2.0	511	1	1	13	55	25		0.3
		60.0	62.0	2.0	512	4	1	35	41	53		0.6
66.40 - 69.90 f.gr py disseminated throughout siliceous matrix; minor po + possible f.gr galena + sph also		62.0	65.0	3.0	513	6	1	94	107	61		0.8
		65.0	68.0	3.0	514	25	1	58	373	87		0.4
69.90 - 82.80 Very sparse f.gr py in calcite - chlor matrix		68.0	70.40	2.40	515	10	1	58	231	43	.005	0.8
71.90 - 72.80 fine-gr pods of po and/or py in fractures along qtz-calcite margins		70.40	72.0	1.60	516	3	2	11	68	66		1.3
74.48 - 74.60 fine-gr pods of mostly po and py and minor specs of moly along calcite-ser-qtz vein margins.		72.0	74.0	2.0	517	5	1	15	93	101		1.1
77.0 - 79.0 A few of the qtz veinlets contain f.gr po and/or py		74.0	76.0	2.0	518	7	1	40	144	58		1.3
		77.0	79.0	2.0	519	6	2	10	107	87		1.5
82.30 - 82.37 fine-gr pods of po, less py in ser-chlor-calcite filled fractures		82.0	84.0	2.0	520	3	2	19	96	74		1.3
84.40 - 85.50 qtz-calcite veinlets contain fractured filled calcite replaced f.gr py and po, associated with fine fuchsite		84.0	86.0	2.0	521	9	7	21	181	167		1.6
88.80 - 92.10 generally f.gr py, minor po throughout crenulated sch.		88.0	90.0	2.0	522	5	1	11	105	89		1.2

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (BIO)	B (SER)	C (SIL)	D (CHLOR)	E	FRACTURE INTENSITY	% VEIN QTZ.
				90.52 - 91.0 Badly broken up (due to fault) siliceous ser - calcite - fuchsite - feldspar? sch							10
				92.10 - 99.20 Calcareous qtz - ser - chlor minor bio sch							40
				93.55 - 93.95 qtz - calcite rich vein with ser altered margins; @ 30° ⊥ to C/A; minor feldspar?							20
95				95.80 - 96.50 Qtz - dolomite - calcite rich vein, minor feldspar? cutting foliation at 80° ⊥ to C/A with ser + fuchsite							
				97.90 - 98.35 Several wavy qtz - dolomite - calcite - ser veinlets - minor feldspar + fuchsite; cutting @ ∠ 30° ⊥ to C/A							40
				99.20 - 102.50 Very calcareous chlor - ser sch with narrow bands of biotite, graphite and x-cutting calcite veinlets							20
100				102.50 - 106.07 fine to coarse siliceous ser - calcite (dolomite) minor fuchsite sch @ 40°-50° ⊥ to C/A							0
				104.25 - 105.15 qtz - calcite (dolomite) - feldspar? vein with ser sch remnants x-cutting foliation at 80 - 85° ⊥ to C/A							20
105				106.07 - 107.4 FAULT - Badly broken up ser + qtz pieces + missing core							70
				107.4 - 108.0 siliceous ser sch with some qtz - calcite veinlets							20
				108.0 - 108.40 Siliceous graphite sch with tiny calcite veinlets							20
110				108.40 - 111.40 FAULT ZONE - badly broken up sil graphite sch and a few qtz - ser fragments							
				111.40 - 114.40 Intermixed bands of siliceous graphite sch and qtz - bleached ser, minor calcite sch. Core is badly broken up by numerous shears + fractures							10
				114.40 - 115.40 FAULT - graphitic gouge + friable ser sch pieces							0
115				115.40 - 132.40 Silicified ser sch with calcite laminations; minor fuchsite Core is badly broken up + sheared + fractured Foliation between 20°-40° ⊥ to C/A							10
				119.20 - 119.90 FAULT - Broken up ser sch with missing core							40
120				120.0 - 123.0 Several qtz - calcite veinlets + segregations < 8cm wide along foliation planes							10
				124.85 - 126.75 Several qtz - dolomite (calcite) - py veinlets + segregations < 3cm wide noted; foliation between 0-20° ⊥ to C/A							20
125				126.75 - 132.60 Several qtz - dolomite (calcite), minor fuchsite veinlets + segregations, < 8cm wide, (about 2 per metre) within well bleach sil ser sch; - minor bands of brown sil biotite							20
											40
130				132.40 - 134.55 FAULT ZONE friable sil ser sch abruptly grades into finely broken up, sheared, graphite rich sch. Missing core also Foliation 0-20° ⊥ to C/A							10
											30
											40
											0
135											0

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
91.52 - 91.0 massive f.gr po and py occurring in fractures of ser-calcite scr		90	92	2	523	11	2	10	72	145		.1
92.10 - 99.20 sparse f.gr py within sch matrix		92	94	2	524	7	1	499	115	163		14.4
93.55 - 93.95 Mostly massive po, minor f.gr py + galena within fractures of qtz-calcite		94	96	2	525	7	1	24	124	87		1.5
95.50 - 96.50 Qtz vein with fine-gr pods of po, minor py along calcite-ser-fuchsite margins		96	98	2	526	6	1	19	115	70		1.3
97.90 - 98.35 A few fine gr pods of po along wavy ser-calcite-qtz margins		98	100	2	527	4	1	7	54	59		0.4
99.22 - 102.50 minor f.gr py												
102.50 - 106.07 A few sections with massive py and minor po in calcite replaced fractures. 104.25 - 105.15 numerous small fractures in qtz and along qtz-calcite-ser margins filled with py, f.gr molybdenite and a few po pods		102	104	2	528	6	1	175	164	215	.005	4.9
104 - 106.07 Est. gr 0.02% MoS_2		104	106.07	2.07	529	7	1	395	187	177	.015	7.1
106.07 - 107.4 minor med gr py												
107.4 - 108.0 some massive f.gr pods of py + po within qtz-calcite fractures		106.07	108.50	2.43	530	12	1	79	41	144		1.8
108.0 - 111.40 sparse fine-gr py												
111.40 - 115.40 minor f.gr py throughout												
		114.6	117.80	3.2	531	4	1	56	35	101	.005	0.6
115.40 - 132.40 fine to med gr pods of py within silicified matrix, usually with calcite Possible f.gr moly seen along some py margins		117.80	120.0	2.2	532	4	1	18	13	154	.020	0.4
120 - 123.0 sparse f.gr py seen in qtz veinlets + segregations. Most of fine py, occasionally massive, with sil ser-calcite sch matrix. 123.60 - 124.0 Very fine-gr moly visible in several narrow calcite-py-qtz veinlets < 1cm wide		120.0	122.0	2.0	533	3	1	24	34	135	.005	0.4
		122.0	125.0	3.0	534	7	1	214	139	13		0.9
126.75 - 132.60 fine to med gr py within veinlets with the occasional f.gr moly along py margins 131.75 Irregular qtz-dolomite veinlet with f.gr py and moly along ser margins.		125	127.0	2.0	535	4	1	7	37	35		0.2
Massive f.gr py seen in several places in calcite-qtz veinlets up to 5cm wide; Minor po also noted		127.0	129.0	2.0	536	6	1	4	12	8		0.2
Overall est. gr. 127.0 - 132.0 0.02% MoS_2		129.0	131.0	2.0	537	7	1	234	44	28	.005	0.8
132.40 - 134.55 fine to med gr py pods + stringers throughout		131.0	132.90	1.9	538	28	2	120	64	32	.005	1.3

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				134.55 - 140.75 Siliceous graphite sch with small qtz + qtz-calcite segregations + veinlets throughout							0
				136.70 - 137.75 FAULT ZONE marked by badly broken up graphite sch + missing core							10
140				138.5 - 138.95 grey ser-graphite bleached sch							10
				140.75 - 147.40 Sericite - Chlorite Quartzite light grey to light green quartzite with very poorly developed foliation. Tiny x-cutting calcite veinlets throughout with a few qtz-chlor-ser-calcite veinlets + segregations							
											0
145											10
				147.40 - 148.0 FAULT ZONE - missing core, friable, broken qtzite							30
				148.0 - 151.05 Very siliceous, bleached, ser-py rich sch Faded out foliation between 0-30° ⊥ to c/A Numerous tiny x-cutting calcite veinlets. A few qtz segregations							10
150											
				151.05 - 158.75 Siliceous graphite schist							10
				153.25 - 153.90 FAULT/SHEAR - Broken up, friable							0
				154.70 - 154.95 FAULT/SHEAR - friable + missing core							
155											0
				Small qtz and qtz-calcite veinlets + segregations < 1cm wide throughout							10
				158.75 - 162.10 Silicified ser sch with numerous tiny x-cutting calcite veinlets; 161.10 - 162.10 totally bleached foliation by qtz-ck segregations; qtz-dolomite-fuchsite 1cm wide, x-cutting @ 45° ⊥ to c/A							20
160											20
				162.10 - 166.45 Crenulated siliceous graphite sch Tiny qtz + qtz-calcite veinlets throughout							0
				164.10 5cm wide qtz-calcite segregation with po Foliation between 0-10° ⊥ to c/A							10
165											
				166.45 - 171.90 Silicified calcareous ser to musc sch with a few qtz segregations < 5cm wide; minor fuchsite + feldspar?							0
				168.55 - 169.0 FAULT - missing core, friable, broken sch pieces							10
170				169.80 - 170.45 Siliceous graphite sch							10
				171.0 - 171.5 Well silicified section with minor brownish feldspar?, fuchsite and fine-gr rutile							
				171.90 - 210.0 Siliceous crenulated graphite sch; badly broken in places due to shearing + faulting - foliation generally between 0-30° ⊥ to c/A							20
175											0
				175.16 - 175.26 Qtz-calcite ser vein remnant							
				175.40 - 180.80 FAULT ZONE - graphitic fault gouge, missing + badly fractured + sheared core A few qtz segregations + calcite veinlets							0
											0
180											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
134.55 - 140.75 med to coarse gr massive py throughout associated with small calcite-qtz +qtz veinlets + segregations		138	140.35	2.35	539	4	1	12	40	170		0.4
140.75 - 147.40 Very sparse fgr. py within quartzite matrix; fine gr py and/or po associated with qtz-chlor-ser-calcite veinlets + segregations		140.35	142.65	2.30	540	3	1	12	50	62		0.2
		145	147.0	2	541	1	1	14	52	438		0.3
148.0 - 151.05 Massive fine to coarse-gr py pod throughout sil matrix; some cp seen also		147.0	149.5	2.5	542	6	2	16	40	161		0.4
151.05 - 158.75 fine to coarse gr masses of py throughout in qtz and qtz-calcite segregations; minor po		149.5	151.80	2.3	543	26	7	50	20	25	.005	1.6
158.75 - 162.10 fine to coarse py in narrow calcite-qtz veinlets as replacement		158.0	160.0	2.0	544	11	1	10	13	135	.005	0.3
Minor fgr galena, associated with py, can be occasionally seen. 161.10 - 162.10 fine to med gr py + po with fgr moly along po margins in several qtz-calcite-ser-minor fucsite segregations		160	162.3	2.3	545	52	2	311	328	144		1.5
162.10 - 166.45 fine to med gr py and po occurring mostly as calcite replacement stringers												
166.45 - 171.90 fine to coarse massive py throughout as replacement in calcite veinlets and tiny fractures; minor po		166	168	2	546	23	2	62	56	136		0.7
171.0 - 171.5 Massive fgr py, 2-3cm wide calcite replaced veinlets with minor fgr sphalerite + galena		168	170.4	2.4	547	9	2	17	27	336		0.5
171.90 - 210.0 fine gr, occasionally massive, py as irregular strings + pods in calcite replaced fractures + segregations		170.4	172.6	2.2	548	10	3	260	191	51	.005	1.0
		173.5	176.5	3.0	549	3	1	12	58	108		0.1
175.16 - 175.26 some fgr py along qtz-calcite - sericite margins												

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				171.90-210.0 Generally siliceous graphite schist 180.80-182.30 Several qtz-calcite veinlets ≤ 3cm wide							20
				182.20-182.90 FAULT - friable, sheared up graphite sch							10
185				186.0-190.80 Thin bands of silica + ser, within the graphite sch, give a lighter grey appearance and grey/black bands are formed. Slight increase in calcite content							0
				190.80-192.3 FAULT/SHEAR ZONE - gouge, missing core + friable sch. Several badly fractured qtz-calcite ser remnant veins within broken core							0
190				192.30-196.0 Broken sch with a few qtz veinlets with minor ser + py							20
											20
195				196.0-197.20 FAULT ZONE - RICH in graphitic fault gouge, missing + friable core							0
				197.20-199.0 Shattered, badly fractured qtz-ser-minor fuchsite vein							0
				199.0-206.5 MAJOR FAULT ZONE							50
200				Shattered qtz-ser-py vein fragments, rich in graphitic gouge, qtz "phenos" in graphite forming breccia + missing, broken core							10
											5
205											0
				206.5-210.0 Calcareous grey to black graphite sch with some ser-qtz-graphite bands. Calcite + qtz-calcite segregations throughout. Crenulated fractured foliation between 0-20° to c/a							20
											20
210				210-210.20 FAULT/SHEAR ZONE friable, broken core							40
				210.20-216.30 Wavy, crenulated, musc.-chlorite-ser sch with numerous wavy qtz + qtz-calcite segregations ≤ 3cm wide. Core is sheared + broken up in several places							30
215				216.30-216.60 FAULT/Shear - broken + missing core							10
				216.60-218.35 Very calcareous, friable, tan bio + ser, minor chlor sch. 217.70-217.85 Several irregular qtz segregations with calcite-chlor-ser margins							10
220				218.35-219.50 FAULT - missing core + finely ground pieces							10
				219.50-231.0 finely intermixed grey calcareous ser-chlor sch and black graphite sch. A few small qtz-calcite veinlets + segregations ≤ 7cm wide. A few tiny calcite veinlets x-cutting qtz-calcite segregations. Foliation between 0-30° to c/a							10
											20
225											

PAGE 5 OF 6 | PROJECT: STERLING | HOLE NO. 81-10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	Y	Pb	Zn	Cu	Au	Ag
188.55 - 196.20 fine-gr pods of py along qtz-calcite margins												
186.0 - 199.80 Quite sparse fgr py												
190.20 - 192.3 Some massive coarse py veins calcite fractures of qtz fragments 192.30 - 196.0 minor amounts of py tpo in qtz veinlets		188	192.3	4.4	550	2	1	4	56	62		0.1
196.0 - 198.20 sparse fgr py												
195.20 - 199.0 Massive coarse py + fgr po as calcite veinlets in qtz vein are replaced by py up to 10cm wide		197.5	200	2.5	551	35	3	13	38	279	.005	0.1
199.0 - 206.5 sparse py in fault												
206.5 - 210.0 A few fgr py pods associated with calcite replacement												
210.0 - 216.60 Sparse fgr py associated with qtz segregations. Occasional coarse-gr cubes along tiny calcite fractures in qtz segregations												
	2	216	218.35	2.35	552	6	1	12	81	54		0.1
216.60 - 218.35 Minor fgr py 217.70 - 217.85 fgr py, minor po, in tiny calcite fractures												
218.35 - 231.0 A few fine-gr pods of py with tiny calcite veinlets, usually along margins. Minor py along sheared planes												
		224.0	226.4	2.4	553	2	1	8	73	35		0.1

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A BIO	B SER	C SIL	D CHLOR	E	FRACTURE INTENSITY	% VEIN QTZ.
				225.0 - 231.0 Core becomes slightly more chloritic with minor biotite. Slight increase in barren qtz - chlor - calcite ser veinlets + segregations							30
				228.20 - 229.0 FAULT / SHEAR finely broken up core fragments							30
230											20
				231.0 - 241.20 Core becomes slightly lighter in color due to ser content increasing. Some thin intermixing of argillite + chlor - ser sch. Qtz - calcite + qtz - calcite - chlor veinlets + segregations throughout generally along foliation planes							20
235											20
											10
											20
240											10
				241.20 - 242.70 FAULT - badly broken up sch + sheared + missing core							0
				242.70 - 251.50 Badly sheared + broken up graphitic - ser sch with calcite segregations throughout, < 1cm wide. Wavy foliation @ 80° ⊥ to C/A							0
245											10
				244.0 - 245.10 FAULT - Badly sheared + missing, broken core							0
250				249.20 - 251.50 FAULT ZONE - rich in graphitic gouge + friable sch + missing core							0
				251.50 - 258.0 Calcareous ser - chlor sch, argillaceous + graphite sch. Badly broken up in places. A few narrow qtz - calcite + calcite veinlets. Minor bio also noted							10
255											0
				254.50 - 255.70 FAULT ZONE - friable sch + missing core Foliation between 0 - 20° ⊥ to C/A							0
											0
				258.0 - 268.52 MAJOR FAULT ZONE - Very rich in graphitic gouge + sheared, friable schist. A few pieces of calcareous chloritic qtzite core were recovered in a few places within the friable, badly broken graphitic sch.							0
260											0
											0
265				265.0 - 267.0 graphitic, friable sch with a few qtz - segregations							0
				268.52 - 276.74 Argillaceous - ser - chlor schist with qtz - calcite veinlets along foliation and tiny calcite, qtz - veinlets x-cutting the foliation. Wavy foliation between 0 - 25° ⊥ to C/A							20
270											30
				EOH 276.74							

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Mo	W	Pb	Zn	Cu	Au	Ag
225.0 - 231.0 fine-gr pods of py along tiny calcite fractures in qtz-veinlets Minor po also noted		226.4	228.5	2.1	554	1	1	8	60	29		0.1
231.0 - 241.20 fine-gr py pods + stringers associated with calcite replacement in small qtz segregations + veinlets. Minor po also noted		236	238.35	2.35	555	3	1	40	78	53		0.1
242.70 - 251.50 Very sparse py in tiny calcite or qtz-calcite veinlets		246.5	249.4	2.9	556	5	1	11	62	65		0.1
251.50 - 258.0 A few small sections with med.gr py with calcite but mostly fine-gr py with qtz-calcite veinlets		254.0	258.0	4.0	557	6	1	11	104	79		0.1
258.0 - 268.52 Very minor amounts of med-gr py												
268.52 - 276.74 Some fine to med gr py seen within tiny x-cutting calcite veinlets, Also some py, associated with calcite, in qtz veinlets + segregations		268.5	271.5	3.0	558	2	1	12	348	60		0.1
		271.5	273.7	2.2	559	4	1	16	110	65		0.1

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.	

LEGEND

- a — Calcareous, medium-grained, biotite rich Meta-Diorite – altered by epidote, dolomite and chlorite.
- b — Graphite-pyrite schist; occasionally siliceous.
- c — Calcareous quartz-muscovite-chlorite schist –includes chloritic quartzite and minor biotite schist.
- d — Silicified sericite schist – altered by fuchsite, calcite (dolomite), pyrite, pyrrhotite, feldspar and minor quartz veining.
- e — Chloritic meta-volcanic; siliceous meta-?rhyolite.

NOTES

1. Diamond drill holes 81-2, 81-8, 81-9 and 81-10 are projected onto section.

GEOCHEMISTRY NOTES

sample type :	drill core (rock)
digestion :	aqua regia (HCl, HNO_3)
analytical method :	ICP
results :	plotted in ppm Mo NS indicates an unsampled width

SCALE

50m
25
10
10 25 50 75m

Dennis Bolme

NEWMONT EXPLORATION OF CANADA LTD.

STERLING PROJECT
SECTION AA'

SCALE	LOCATION	DATE
1 : 1000	82 M/8W	JULY 6, 1981
SURVEY BY	DRAWN BY	NO.
D. B.	J. GOH	FIG. 7