CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth
152.7m	-54°	331°

Core Size NQ
Angle of Hole -50°
Claim Logan 3
Section 1+95 E
Bearing 325°

Total Depth 154.54
% Recovery 91.5%
Elev. Collar 1375m
Latitude
Departure

Sheet No. 2 of 15
Logged by P.D. Lambert
Date Begun July 9 1986 (D)
Date Finished July 10 1986 (N)
Core Stored At Main Core Racks

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au opt	Ag opt	Zn %	As ppm	Sn ppm	Cu PPM	Pb PPM
0-2.44		casing									
2.44-5.00		white green medium grained equigranular granodiorite - much Fe-Oxide along 1mm wide fractures (1/10cm) and in disseminated grains (4% of rock and <1mm dia.) throughout the rock - the strongest orientation of the fractures is ∠20° although the fractures have many different orientations - the rock contains minor chlorite alteration and brown yellow clay alteration									
4.40-4.75		zone of more intense oxidation with friable rock									
5.00-10.00		pale green pegmatitic porphyritic granodiorite - with much Fe-Oxide along fractures and in disseminated grains - contains trace amounts of disseminated Sp - minor chloritic alteration and yellow brown clay alteration - contains 1mm limonite veins (1/10cm) with a dominant core angle of 20°									
2.44-5.44			16209	3.00		0.21	0.02	130	165	319	79
5.44-8.44			16210	3.00		0.21	0.02	350	185	327	95
8.44-11.44			16211	3.00		0.06	0.47	55	125	915	53

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 3 of 15
Logged by P. Dankerslaat
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sn PPM	Cu PPM	Pb PPM
8.20		- 1.5cm. wide vuggy quartz vein with moderate Fe-Ox and trace Py and Sp @ 40°									
8.23-9.75		- zone of more intense oxidation with friable rock									
10.00-19.65		- pale green medium grained equigranular granodiorite - minor chlorite and yellow brown clay alteration - contains a moderate amount (1 %/0cm) of 1-3mm veins with Sp, Q-limonite, Py, tetrahedrite and trace amounts of arsenopyrite - the amount of limonite in the veins ranges from 0% to 100% - Sp and Quartz are the most abundant minerals in these veins - from 10.00 - 13.00 the dominant core angle on these veins is 55° - from 13.00 - 19.65 the dominant core angle is 35° - although these are the dominant core angles the orientation of the veinlets are in several different directions - the rock contains 1-2% disseminated Sp (≤1mm dia) and trace amounts of									
11.44-14.44			16212	3.00		0.15	0.08	190	170	396	188
14.44-16.60			16213	2.16		0.09	0.47	70	135	1335	68

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-Log-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 15
Angle of Hole | % Recovery | Logged by [illegible]
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au CPT	Ag OPT	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
		Py and tetrahedrite - a moderate amount of this disseminated mineralization is oxidized - pegmatitic granodiorite.									
11.62-11.75											
16.60-17.05		- 1-3 cm wide Qz vein with 20% Sp, 4% Py, 2% tetrahedrite and 1% arsenopyrite - ∠ 15° - last 15 cm of vein contains 90% sulphides. ∠ 20°	16214	45 cm	<0.002	1.84	2.10	1.20%	0.02%	6990	200
19.00-19.35		- three 1 cm Quartz veins with 13% Sp, 1% Py and trace tetrahedrite ∠ 20°									
19.65-23.05		- pale green pegmatitic porphyritic granodiorite - minor chloritic alteration and minor carbonate along fractures in the rock - rock contains a minor amount of graphic Quartz intergrowths - rock contains a moderate amount (3/10 cm) of Quartz, Sp veinlets with minor amount of Py, tetrahedrite, Cpy and arsenopy.? - the fractures follow many different orientations but the dominant core angle for the fractures is 20° - the rock also contains 2% disseminated Sp grains (≤ 1 mm) and minor disseminated Py and tetrahedrite									
17.05-20.05			16215			0.36	1.58	180	215	1105	3.69

CORDILLERAN ENGINEERING LIM..D — DIAMOND DRILL RECORD

PROPERTY..... Logan ..... HOLE No... DDH ... 86-L2 .....

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 5 of 15

Angle of Hole ..... % Recovery..... Logged by P.D. Dankenlost

Claim..... Elev. Collar..... Date Begun.....

Section..... Latitude..... Date Finished.....

Bearing ..... Departure..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
22.18		- 5mm Qz vein with 80% Sp and 2% Cpy ∠ 45°									
22.36		- native Cu? in Qz veinlet									
23.05-35.60		- pale green medium grained equigranular granodiorite - minor chlorite and green yellow clay alteration — contains a moderate amount (1/5cm) of 1-5mm wide Qz Sp veins with minor tetrahedrite, Py, arsenopyrite, and cpy - the dominant core angle of the fractures is 20° — the rock contains 2% disseminated Sp (≤1mm dia grains) and minor disseminated Py and tetrahedrite									
20.05-23.05			16216	3.00		0.15	0.90	100	275	1430	83
23.05-24.05		5mm Sp Qz veins (1/5cm)	16217	1.00	<0.002	0.28	1.25	0.01%	0.02%	3000	218
24.05-24.65		Quartz vein with 50% Sp, 15% Py and 2% tetrahedrite ∠ 30°	16218	0.60	<0.002	3.06	8.90	0.01%	0.03%	8890	288
24.65-25.00			16219	0.35		0.22	0.76	150	120	2980	195
25.00-26.00		- Quartz vein with 40% Sp 20% tetrahedrite and 15% Py ∠ 25°	16220	1.00	<0.002	5.18	22.90	<0.01%	0.07%	2.36	150
26.00-29.57			16221	3.57		0.23	1.64	35	390	3090	373

CORDILLERAN ENGINEERING LIM. _D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. D.D.H. 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 15

Angle of Hole ..... % Recovery ..... Logged by P. Dombowsky

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sn PPM	Cu PPM	Pb PPM
29.57-30.62		- core with a high density of 1mm-2mm wide Quartz veins (2/5cm) - veins contain 30% Sp, 1% tetrahedrite, 1% Py and trace arsenopyrite - ∠ 10°	16222	1.06	<0.002	0.56	5.70	40	270	7260	91
30.63-34.25			16223	3.62	<0.002	0.09	1.06	15	300	1135	126
34.25-34.90		- 3cm quartz vein with 20% Sp, 3% tetrahedrite and 2% Py ∠ 20°	16224	0.65	<0.002	0.43	4.90	>1000	330	1965	153
35.60-36.35		- severely altered granodiorite - green clay with 30% quartz, feldspar and mica grains - possible gouge zone - ∠ 60°									
36.35-43.90		- pale green medium grained equigranular granodiorite - moderate chloritic alteration and minor brown-yellow clay alteration - contain 1mm wide Qz Sp veins (1/20cm) with minor Py and tetrahedrite - the dominant core angle of the fractures is 20°									
39.40-39.70		13cm Qz vein with 80% Sp, 1% Py and trace tetrahedrite and arsenopyrite ∠ 30°									
39.90-40.45		7cm Qz vein with 70% Sp and trace py and tetrahedrite ∠ 15°									
34.90-37.90			16225	3.00		0.11	1.23	47	215	410	55
37.90-39.40			16226	1.50		0.03	0.74	18	195	59	11

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY Lexgem HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 7 of 15
Logged by P. Dankevoot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sn PPM	Cu PPM	Pb PPM
39.40-40.45			16227	1.05	<0.002	3.99	15.45	0.01%	0.03%	580	995
43.90-50.29		- green pegmatitic porphyritic granodiorite - moderate clay and yellow green clay alteration - contains 1cm wide Quartz, Sp veinlets (1/25cm) - fractures contain several different core angle orientations - rock contains <1% disseminated Sp grains (<1mm dia)									
40.45-43.45			16228	3.00		0.06	0.88	20	185	53	34
43.45-46.45			16229	3.00		0.16	0.78	60	200	218	188
43.95-45.10		- zone of quartz flooding with 5% Sp, 2% Py and trace tetrahedrite									
45.10-47.60		- rock contains 5% pale green clay and minor sericitic alteration - rock contains 2mm fractures (1/10cm) filled with clay ~ ∠ 50°									
46.45-48.45			16230	2.00		0.09	0.95	10	205	121	52
48.50-50.29		- zone with 15% green clay - minimal sulphide mineralization in rock	19421	48.15-49.15 (1.00)		0.12	0.18	4	125	14	137
48.00-51.32			19422	49.15-50.15 (1.00)		<0.02	0.24	6	105	12	38
50.29-56.55		- pale green medium grained equigranular granodiorite - mild chloritic alteration - contains 1mm wide Sp Qz veins	19423	50.15-51.32 (0.87)		0.06	0.86	210	190	82	30

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 96-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 15
Angle of Hole | % Recovery | Logged by P. Dorland
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
		(1/20cm.) with minor Py and tetrahedrite - the dominant core angle of the fractures in the rock is 25° - rock contains ≤ 1% disseminated Sp grains (≤ 1mm dia.) and minor disseminated Py and Tetrahedrite									
51.32-51.74		- Quartz vein with 12% Sp, 5% Py, 1% Cpy and trace native Au? ∠ 30°									
51.75-53.32		- zone with 5mm-1cm. wide quartz Sp veins (1/15cm) - ~ ∠ 30°									
51.32-53.32			16231	2.00	<0.002	0.95	3.20	700	250	2500	259
53.32-56.32			16232	3.00		0.06	0.96	250	440	146	161
56.55-62.48		green medium grained porphyritic granodiorite - strong chloritic alteration (+epidote?) and green clay alteration (7% of rock) - rock contains minor 1mm Qz, Sp, Py veins (1/40cm) and trace disseminated Sp - the dominant core angle of the fractures in the rock is ∠ 50°	19424	56.32-57.32 (1.00)		0.02	0.10	4	180	43	18
			19425	57.32-59.32 (2.00)		<0.02	0.24	2	100	8	32
			19426	59.32-61.32 (2.00)		0.08	0.52	6	125	55	74
			19427	61.32-62.48 (1.16)		0.06	0.35	3	135	18	20
62.48-71.15		- Breccia Zone - Silicified zone with 40% subrounded silicified clasts (2mm-2cm dia) in a matrix of dark colored silica (Quartz and chalcedony)									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 84-12

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 9 of 15

Angle of Hole ..... % Recovery ..... Logged by .....

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
		and pale green feldspar - rock contains strong silicification and chloritic alteration along with moderate yellow brown clay alteration along fractures in the rock - the rock contains varying degrees of Py, Sp, Pyrargyrite, arsenopyrite, Gn, tetrahedrite and native Cu - the sulphides are in both the clasts and matrix but mainly in the matrix									
65.20-66.00		- interval of green fine to medium grained porphyritic granodiorite - strong chloritic alteration - core angle with breccia is 25°									
67.90-68.55		- interval of pegmatitic granodiorite - core angle with bx is 20°									
70.40-71.15		- interval of more intense chloritic alteration and silicification - most of the original texture is not recognizable									
62.48-63.48		8% Sp 1% Py, 1% arsenopyrite, trace native Cu and tetrahedrite	16233	1.00	<0.002	0.24	1.43	0.069%	0.02%	117	61
63.48-64.48		3% Sp, 1% arsenopyrite, trace Py and tetrahedrite	16234	1.00	<0.002	0.27	0.53	0.059%	0.02%	45	216
64.48-65.98		2% Sp, 1% Py, trace arsenopyrite	16235	1.50	<0.002	0.09	0.31	0.027%	<0.02%	23	21

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 10 of 15
Angle of Hole | % Recovery | Logged by
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au oz/t	Ag oz/t	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
65.98–66.98		18% Py, 2% Sp, 1% arsenopyrite	16236	1.00	<0.002	0.27	0.57	0.02%	<0.02%	44	85
66.98–68.98		4% Sp, 1% Py trace arsenopyrite, pyrrhotite and native Cu	16237	2.00	<0.002	1.44	2.30	0.01%	0.02%	177	1300
68.98–69.98		5% Py, 5% Sp, 2% pyrrhotite, trace native Cu and Cpy	16238	1.00	<0.002	0.79	2.55	0.03%	0.01%	122	2045
69.98–71.15		3% Sp, 1% arsenopyrite, trace Cpy, and pyrrhotite	16239	1.17	<0.002	0.10	1.34	0.01%	0.03%	97	235
71.15–74.80		- pale green medium grained equigranular granodiorite - with moderate chloritic alteration and minor yellow brown clay alteration - contains minor 1mm Qz Sp veinlets (1/15cm) with trace galena, arsenopyrite, tetrahedrite and pyrite - contains ≤ 2% disseminated Sp grains (≤1mm dia)									
72.20–73.20		- 2cm Quartz vein with 8% Sp ∠10°									
71.15–74.15			16240	3.00		0.09	1.40	18	240	61	69
74.80–84.05		- green pegmatitic porphyritic granodiorite - strong chloritic alteration and moderate yellow clay alteration along fractures - contains ≤ 4% Sp, Galena, Py, Cpy, tetrahedrite and native Cu along quartz filled fractures (≤ 1mm thick) (3/5cm) in rock - no preffered orientation									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 11 of 15
Logged by P. Dostaloy
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au oz/t	Ag oz/t	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
		is apparent in these fractures									
74.15-77.15			16241	3.00		0.28	1.10	13	255	116	2330
77.15-80.15			16242	3.00		0.36	0.42	23	170	32	1755
80.15-82.15			16243	2.00		0.14	0.25	20	125	18	645
82.00-84.05		- quartz sulphide veinlets are absent	19428	82.15-83.15 (1.00)		0.02	0.13	5	150	4	9
		from rock	19429	83.15-85.15 (2.00)		<.002	0.21	5	115	13	9
84.05-87.80		- green medium grained equigranular	19430	85.15-86.40 (1.25)		<0.002	0.44	2	115	15	10
		granodiorite - with strong chlorite alteration									
		and moderate brown yellow clay alteration									
86.40-87.70		3cm Quartz vein with 35% Sp,	16244	1.30	<0.002	0.45	6.80	2.01%	0.04%	615	140
		5% Py and 1% arsenopyrite - ∠ 5°									
87.80-95.45		pale green pegmatitic porphyritic									
		granodiorite - with strong chloritic and									
		brown yellow clay alteration - contains									
		a moderate amount of 1-5mm wide Sp Qz									
		veinlets (1/10 cm) - dominant core angle									
		of fractures is 20° - rock contains ≤1%									
		disseminated Sp grains									
90.20-90.45		2cm Quartz vein with 40% Sp									
		and 1% Py ∠ 10°									
87.70-90.70			16245	3.00		<0.002	1.75	900	255	83	28
91.20-92.90		- zone w/ 5mm-1cm wide Sp Qz Py veins (1/10cm)									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 12 of 15
Angle of Hole ..... % Recovery ..... Logged by P.J. Dankerslaat
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sn PPM	Cu PPM	Pb PPM
90·70–93·70			16246	3·00		0·18	2·80	500	305	168	193
93·70–95·45		- minimal amount of Qz Sp veinlets in rock	19431	93·70–94·70 (1·00)		0·02	0·26	6	49	196	26
95·45–97·35		- pale green medium grained equigranular	19432	94·70–96·70 (2·00)		0·04	0·38	2	130	26	30
		granodiorite - minor chloritic alteration	19433	96·70–98·70 (2·00)		<0·02	0·23	2	110	6	11
96·85–98·20		- zone with more intense chloritic	19434	98·70–99·40 (0·70)		0·02	0·74	3	215	33	6
		alteration and pegmatitic granodiorite									
99·85–105·60		- pale green pegmatitic granodiorite									
		- with minor chloritic and yellow brown									
		clay alteration - contains 1–5mm wide									
		Sp, Qz, Py veinlets (1/20cm) and 1%									
		disseminated Sp grains (≤1mm dia)									
99·70–99·85		- dominant core angle of fractures is ∠25°									
99·40–103·40			16247	4·00		0·29	2·42	180	295	185	82
103·40–105·60		- minimal Qz Sp veinlets in rock	19435	103·40–104·40 (1·00)		0·10	1·55	5	300	111	24
105·60–113·55		- severely altered granodiorite - greenwood	19436	104·40–105·40 (2·00)		0·02	0·32	2	74	8	93
		with 15% 5mm–2cm dia subangular	19437	106·40–108·40 (2·00)		<0·02	0·10	4	18	<1	82
		granodiorite clasts and 15% quartz	19438	108·40–109·80 (1·40)		0·02	0·42	4	96	13	90
		, feldspar and muscovite grains (1mm dia)									
109·80–110·55		Quartz vein with 3% Sp and 1% arsenopy									
110·55–113·55		- 1mm wide Qz Sp veinlets in rock (1/10cm)									
109·80–113·55			16248	3·75		<0·02	1·16	71000	145	98	57

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 13 of 15
Logged by P. Dankerloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sn PPM	Cu PPM	Pb PPM
113.55-117.90		- Quartz vein with 4% arsenopyrite, 2% Sp and 1% galena ∠ 25°									
113.55-114.55		10% arsenopyrite, 3% Sp, trace Cpy	16249	1.00	<0.002	0.24	1.16	1.42%	0.06%	113	140
114.55-115.55			16250	1.00	<0.002	0.06	0.88	0.06%	0.01%	43	43
115.55-116.55			16251	1.00	<0.002	0.58	0.25	0.11%	0.01%	52	190
116.55-117.90			16252	1.35	<0.002	0.80	0.24	0.41%	<0.01%	47	278
117.90-129.10		- pale green medium grained equigranular granodiorite - with minor chloritic alteration - contains 1-5mm wide Qz Sp veins with minor Py, arsenopyrite and native Cu?? (1 vein/5cm) - the dominant core angle of the fractures in the rock is 30°. The rock contains ≤ 1% disseminated Sp grains (≤ 1mm dia)									
117.90-120.90			16253	3.00		0.15	1.37	250	235	129	244
120.90-123.90			16254	3.00		<002	0.47	5	220	28	14
123.90-126.40			16255	3.00		0.31	1.63	300	240	231	62
126.40-126.90		rock contains 7% green mud									
126.38		- 6 cm Qz vein w 5% Sp, 3% Py and trace arsenopyrite ∠ 55°									
126.90-129.90			16256	3.00		0.04	1.14	25	215	65	9

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 91-1-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 14 of 15
Logged by P. Dankerloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au oz/T	Ag opt	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
129.70-140.55		- pale green pegmatitic porphyritic granodiorite - moderate chloritic alteration of minor brown/yellow clay alteration - contains minor 1mm wide Qz-Sp veins (1/20cm) with minor Py - contains <1% disseminated Sp grains (≤1mm dia)									
129.90-134.60			16257	4.70		0.09	1.32	70	265	121	18
134.60-136.55		- 2cm Qz vein with 12% Sp, 4% Py, 1% arsenopyrite and trace Cpy ∠ 5°	16258	1.95	<0.002	0.29	4.10	1000	5700	600	34
136.55-139.20			16259	2.65		0.02	1.65	300	640	149	7
139.20-139.70		- Quartz vein with 15% Sp and 15% Py ∠30°	16260	0.50	<0.002	0.99	5.70	0.11%	0.38%	2600	52
139.70-140.20		= many (2/5cm) 1-5mm Sp veinlets	16261	0.50	<0.002	0.06	1.85	<0.01%	0.05%	171	8
140.20-143.20		in rock-dominant core, angle is 30°	16262	3.00		<0.02	0.52	5	175	41	7
140.55-144.00		- pale green medium grained equigranular granodiorite - with minor chloritic alteration - contains minor (1/40cm) 1mm Qz-Sp veinlets	19439	143.20-145.20 (2.00)		<0.02	0.08	2	85	<1	12
			19440	145.20-147.20 (2.00)		0.07	0.39	10	71	2	119
			19441	147.20-149.20 (2.00)		0.03	0.21	4	38	<1	120
140.62-141.05		- 50% green clay in rock ∠ 70°									
142.35-142.55		- zone of green clay (gouge) ∠ 55°									
144.00-154.54		- pale green pegmatitic porphyritic granodiorite - strong chloritic alteration and much pale green clay alteration									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-2

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

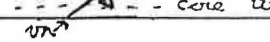
Core Size ..... Total Depth ..... Sheet No. 15 of 15

Angle of Hole ..... % Recovery ..... Logged by P. Dankerlaat

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
147.45		- 3cm gore with green gouge ∠ 30°		
148.10		- 5mm gouge gore ∠ 40°		
153.10		- 5mm gouge gore ∠ 35°		
154.54		EOH		
		*note ∠ denotes the core angle of a structure, with the core axis (core axis is 0°)		
		eg ∠ 30° 		
		*note (1/10cm) denotes one fracture per 10cm or (3/5cm) denotes three fractures per 5cm		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86 L-4

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
58.22	-52°	332°

Core Size NQ
Angle of Hole -50
Claim Logan 3
Section 1+95E
Bearing 325°

Total Depth 67.36
% Recovery 66
Elev. Collar 1356m
Latitude
Departure

Sheet No. 2 of 6
Logged by P.D. Rebuffat
Date Begun July 12 1986 (D)
Date Finished July 13 1986 (N)
Core Stored At Minister Core Racks

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sb PPM	Cu PPM	Pb PPM
0 - 4.88		casing									
4.88-14.84		-green white medium grained equigranular granodiorite - contains much green yellow clay alteration and minor epidote? along fracture - also minor Fe-Oxide and Mn-Oxide along fractures									
8.20-8.70		-minor Sp and Tetrahedrite along 1-2mm wide fractures (1/5cm) - dominant core angle of fractures - $\measuredangle$10°									
12.40-14.84		- rock contains 10% green yellow clay									
13.50-14.84		- rock is very friable									
14.84-18.80		- severely altered granodiorite - green grey mud with 15% quartz feldspar and muscovite grains ($\leq$2mm dia) - contains minor bands of darker coloured material $\measuredangle$75°	19453	12.90-13.90 (1.00)		<0.02	0.10	11	6	4	22
			19454	13.90-14.90 (1.00)		0.03	0.37	75	23	23	56
14.90-15.90		- zone w 4, 1-2cm Qz, Sp, Py, tetrahedrite veins $\measuredangle$70° and $\leq$2% disseminated Sp, Py, Tetrahedrite and arsenopyrite grains	16312	1.00		0.30	2.64	300	115	1350	410
			19455	15.90-16.90 (1.00)		0.02	0.46	37	51	50	76
			19456	16.90-17.90 (1.00)		0.03	0.40	26	38	34	80
18.80-23.00		- grey green pegmatitic porphyritic granodiorite - strong white clay alteration and moderate chloritic alteration - moderate sericitic alteration									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Rogers HOLE No. DDH 85-L-4

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 6

Angle of Hole ..... % Recovery ..... Logged by P.D. Archibald

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
23.00-36.23		- severely altered granodiorite - pale green clay to 10% 1-20cm dia subrounded granodiorite clasts and 20% quartz, feldspar and muscovite grains (≤1mm dia) - contact with granodiorite ∠ 70???						
36.23-44.00		- green pegmatitic porphyritic granodiorite - strong pale green clay alteration, strong chloritic alteration and moderate sericitic alteration						
43.00-44.00		- trace amounts of disseminated Sp grains in rock						
43.30-43.50		- 3cm Qz vein to 85% Sp and 3% Cpy ∠ 20°?						
44.00-48.50		- green medium to coarse grained porphyritic granodiorite - strong pale green clay alteration and strong chloritic alteration - minor sericitic alteration - rock contains trace amounts of disseminated Sp						
44.65		- 1cm Qz vein to 20% Sp and 4% Py ∠ 20°?						
46.30-46.55		- zone of two, 5cm green clay filled fractures ∠ 5,0°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 84-1-4

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 6
Angle of Hole | % Recovery | Logged by P. Dunbar
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au OPT	Ag OPT	Zn %	As PPM	Sn PPM	T Cu PPM	Pb PPM
46.65-46.95		- 2cm Quartz vein with 80% Sp ∠30?									
47.20-47.75		- pegmatitic zone									
48.25-48.40		- pegmatitic zone	19457	41.20-42.20 (1.00)		0.02	0.16	2	51	4	100
48.40-48.50		- shear zone ∠70°	19458	42.20-43.20 (1.00)		<0.02	0.18	3	185	4	10
43.20-43.60			16313	0.40	<0.002	1.42	12.80	11	190	3400	365
46.60-47.10			16314	0.50	<0.002	0.51	9.00	<2	150	220	229
48.50-51.45		- severely altered granodiorite - pale green	19459	43.60-41.60 (1.00)		0.03	1.12	15	255	33	120
		clay with 7% 1-3cm dia subangular	19460	44.60-46.60 (2.00)		<0.02	0.54	5	210	14	38
		granodiorite clasts and 20% quartz	19461	47.10-49.10 (2.00)		0.02	0.24	5	225	7	6
		feldspar and muscovite grains (<1mm dia)	19462	49.10-51.10 (2.00)		0.02	0.47	11	115	11	27
51.45-57.25		- pale green medium to coarse grained	19463	51.10-52.10 (1.00)		0.03	0.50	3	1100	45	80
		porphyritic granodiorite - strong yellow	19464	52.10-54.10 (2.00)		<0.02	0.24	2	130	10	15
		green clay alteration and strong chloritic	19465	54.10-56.10 (2.00)		<0.02	0.12	6	27	<1	50
		(+epidote?) alteration - moderate sericitic alteration									
57.25-57.84		- - xenolith ? - schistose muscovite									
		rich granodiorite - with 40% muscovite grains									
		aligned at ∠60° - contains minor green									
		mud along 1mm wide fractures (1/10cm) ∠60°									
		- 50% 1-3mm dia feldspar and quartz grains									
		- moderate chloritic alteration in rock									
		- sharp contact with granodiorite ∠60°									
		- possible shear ???									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L.L.-26-1-4

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 5 of 6

Angle of Hole ..... % Recovery ..... Logged by P.D. Buchanan

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au oz/t	Ag oz/t	Zn %	As PPM	Sn PPM	Cu PPM	Pb PPM
51.45-53.00		- rock contains ≤ 2% disseminated Sp grains (≤ 1mm dia)									
57.84-61.00		green medium to coarse grained porphyritic granodiorite - contains moderate chloritic and yellow brown clay alteration - minor sericitic alteration									
58.30-60.70		- rock is partially silicified and contains many 1mm - 1cm wide Qz veinlets (3/cm) - the dominant core angle of the veinlets is 65° - this zone contains minor flesh coloured feldspar along fractures									
58.85		- there is ≤ 3% Sp along these quartz veinlets									
53.50		- 2 cm Qz vein @ 40% Sp ∠ 60°									
		- 5cm Qz vein @ 15% Sp and 4% arsenopy ∠ 40°?	19466	56.10-58.30 (2.20)		<0.02	0.18	6	58	7	96
58.30-60.90			16315	2.60		0.54	0.59	1000	80	25	185
61.00-65.95		- green pegmatitic porphyritic granodiorite	19467	60.90-61.90 (1.00)		<0.02	0.18	2	135	7	16
		- strong yellow green clay alteration and minor chloritic alteration	19468	61.90-62.90 (1.00)		<0.02	0.10	2	215	5	6
61.68-61.80		- zone @ 60% green clay - core angle @ granodiorite is 60° -									
63.20-63.45		- zone @ moderate flesh coloured feldspar along fractures									

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L.L. 83-1-4

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 6

Angle of Hole ..... % Recovery ..... Logged by P.D. Dontsmith

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
65.95–67.36		- green medium grained equigranular granodiorite - contains 25% muscovite grains aligned at 50° to core axis, giving rock slightly schistose texture - rock has moderate chloritic alteration		
67.34		1cm quartz vein with 60% Sp ∠65°		
67.36		EOH		
		* ∠50° denotes a core angle of 50° - 0° is the core axis 0° ~~∠~~ 50°		
		* (2/5cm) denotes 2 fractures per 5 cm.		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth
76.20 m	-62°	138°
121.92 m	-62°	139½°

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 2 of 12
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At CORDILLERAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0 – 3.05		casing						
3.05 – 4.29		- White pegmatite consisting of feldspar with graphic quartz intergrowths and muscovite White feldspar (50%) quartz (25%) muscovite (25%)						
		- minor Fe-ox staining along fractures - trace garnet crystals (≤ 2mm dia)						
4.29 – 11.27		- Xenolith gold brown muscovite, biotite qtz, fsp schist. - mod Fe-ox. schistosity ∡ 35°						
5.55 – 6.10		- rock has a lesser degree of schistosity						
9.48 – 9.57		- 9 cm inclusion of the feldspar pegmatite contact with the schist is ∡ 65°						
10.63 – 10.69		- 5 cm pegmatite inclusion - contact angle with schist is ∡ 60°						
11.27 – 15.86		- White to light brown pegmatitic granodiorite						
		- minor yellow brown clay alteration and trace sericitic alteration, minor Fe-ox along fractures						
		- contact with the schist ∡ 50°						
		- pegmatite is mainly a graphic granite						
		- there are two inclusions of the schist at 11.81 – 12.10 m and 12.39 – 12.53 m						
15.86 – 19.48		- light grey medium grained granodiorite minor white clay alteration, trace chloritic						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 3 of 12
Angle of Hole | % Recovery | Logged by K. Muriel
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		alteration, trace Fe oxide along fractures						
		- the rock contains a few pegmatitic zones at						
		16.61-16.92 m, 17.35-17.44m, 17.59-17.67 m, and						
		18.75-18.88 m.						
19.48-24.85		- white to light brown pegmatitic granodiorite						
		- minor yellow brown clay alteration and trace						
		chloritic alteration - minor Fe-Ox and trace Mn-Ox						
		- few small calcite veinlets (1/15 cm) ≤ 1 mm wide						
		- the veinlets run at an angle ∠ 65°						
		- the amount of Mn Ox increases towards 24.85 m.						
24.85-26.22		- light brownish green medium grained granodiorite						
		- the rock contains moderate chloritic (± epidote?)						
		alteration; moderate yellow brown clay alteration.						
		- minor Mn-Ox and trace Fe Ox						
26.22-31.56		- brown pegmatic granodiorite - minor						
		yellow brown clay alteration, trace chloritic						
		alteration - contains a moderate amount of						
		Mn-oxide and minor Fe-oxide along fractures						
		- two 5 mm wide qtz veinlets at 29.76m ∠ 50° and						
		29.94 m ∠ 70°						
30.75-30.90		- zone of medium grained granodiorite						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 12
Angle of Hole | % Recovery | Logged by K. Merdal
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag opt	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
31.56-36.52		-green brown medium grained granodiorite -moderate chloritic alteration and moderate yellow brown clay alteration. -minor Mn-Ox along fractures. -rock contains coarser grained zones from 33.49-33.55 m and 34.33-34.43 m								
36.52-40.15		-green brown pegmatitic granodiorite containing moderate chloritic and yellow brown clay alteration trace Fe-Ox and Mn Ox along fractures								
38.71-39.50		-series of veinlets filled with oxidized calcite (≤1mm wide) (1/10 cm) density.								
40.15-41.76		-the rock is still the pegmatitic granodiorite but the amount of clay alteration has increased to a strong degree. -minor Fe Ox, trace Mn Ox -there is 2% Sp								
41.76-43.50		- possible fault gouge zone? Can see some remnant of the granodiorite but the surface is highly Fe oxidized. Quartz grains are prominent. Trace hematite and galena?	19490	36.75-38.75 (2.00)	<0.02	<0.01	4	8	2	9
			19491	38.75-39.75 (1.00)	<0.02	<0.01	<1	14	2	<5
			19492	39.75-40.75 (1.00)	<0.02	0.16	<1	16	2	<5
			19493	40.75-41.75 (1.00)	<0.02	0.33	<1	26	2	<5
41.75-43.75		oxidized fault gouge? low recovery zone	16513	2.00	<0.02	0.27	23	30	120	37
43.50-57.40		-green v.f. fine grained to aphanitic felsite dyke- containing minor chloritic (possible green blue tourmaline?) alteration and minor biotite								

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH-86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 12
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sb PPM
		clay alteration along fractures - throughout most of the dyke there is minor Fe-Ox along fractures								
43.50-45.40		- dyke is highly fractured (> 1/1 cm) - the dominant core angle is ∠ 80° but there is a lot of crosscutting in various orientations. the fractures are ≤ 1 mm wide and are filled with Fe-Ox and Mn Ox - the dyke appears brown because of Fe-Ox coat on the surface - there has been movement along the fractures resulting in a brecciated appearance								
45.40-50.60		beige feldspar, qtz veinlets containing traces of Py, Sp cut the dyke ∠ 70° and various others. (1/10 cm) FREQUENCY								
45.75-45.75		felsite dyke ē Py, Sp in Qtz, Fsp veinlets	16514	2.00	0.03	0.70	43	159	81	190
45.75-47.75		felsite dyke ē Py, Sp in Qtz, Fsp veinlets	16515	2.00	<0.02	0.96	36	83	38	205
47.75-49.75		" "	16516	2.00	<0.02	1.10	7	46	90	105
49.12-49.56		Fe-Ox filled fractures (> 1/1 cm) various orientations								
49.75-51.75		felsite dyke ē Py, Sp in Qtz, Fsp veinlets	16517	2.00	<0.02	1.15	45	38	38	135
50.60-52.12		- beige fsp, qtz filled fractures ≤ 1 mm dia (1/1 cm)								
52.12-54.56		- quartz flooding in felsite dyke - dyke is partially silicified - qtz, fsp veinlets cut at ∠ 70°								
51.75-52.75		quartz flooding	16518	1.00	<0.02	0.94	135	78	90	205
52.75-53.75		quartz flooding	16519	1.00	0.38	0.45	320	61	650	518
53.75-54.75		quartz flooding	16520	1.00	1.18	5.00	1720	330	>1000	1008

CORDILLERAN ENGINEERING L.[illegible]ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-4-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 12

Angle of Hole ..... % Recovery ..... Logged by K. Mendel

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
54.56-57.40		- felsite dyke contains qtz, Sp veinlets and qtz, Fsp veinlets — there is 90% Sp in the vein (1-5 mm dia) ('/1 cm) - there is a trace amount of a yellow powdery mineral.								
54.75-55.75		felsite dyke w/ Sp in Qtz veinlets	16521	1.00	0.89	2.20	1560	420	71000	350
55.75-56.75		felsite dyke w/ Sp in Qtz veinlets	16522	1.00	0.65	6.15	1270	240	500	400
56.75-57.75		felsite dyke w/ Sp in Qtz veinlets	16523	1.00	0.84	3.30	1700	148	500	875
57.40-76.95		- pale green medium to coarse grained granodiorite contains moderate chloritic alteration and moderate green clay alteration - rock contains 2% Sp.								
57.40-58.35		- rock contains moderate Fe-Ox along fractures								
58.35-58.88		- strong Fe Ox - granodiorite appears brown and crumbles on surface								
61.30-61.70		- Qtz, Sp vein 90% Sp, 3% Py, trace of yellow powdery mineral ∠30°								
62.66-62.85		Qtz, Sp vein w/ 65% Sp, 1% Py ∠25°								
63.62-63.80		Qtz, Sp vein w/ 20% Sp, 5% Py w/ trace yellow mineral along fractures								
66.00-70.71		- rock has a strong pale green clay alteration.								
70.87-70.93		2.5 cm wide Qtz, Sp, Fsp vein w/ 60% Sp, 1% Py								
71.89-73.10		- rock has a strong pale green clay alteration								
73.10-73.47		Qtz, Sp, Fsp vein w/ 50% Sp, trace Py ∠50°								

CORDILLERAN ENGINEERING L.. :D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-4-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 7 of 12
Logged by K. Meidal
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sb PPM
57.75-58.75		Fe-ox Gd	16524	1.00	0.62	2.00	1160	250	58	215
58.75-59.75		Qtz, Sp veinlets in Gd	16525	1.00	0.48	2.00	750	94	34	220
59.75-60.75		Qtz, Sp veinlets in Gd	16526	1.00	0.20	2.70	180	51	11	180
60.75-61.75		Qtz, Sp veins	16527	1.00	2.09	15.30	1200	670	90	140
61.75-62.75		Qtz, Sp veins	16528	1.00	0.16	2.20	300	41	500	210
62.75-63.75		Qtz, Sp veins	16529	1.00	3.33	12.00	3700	1020	110	120
63.75-64.75		Qtz, Sp vein	16530	1.00	3.62	6.10	3000	950	105	140
64.75-65.75		Fe-Ox Gd	16531	1.00	0.38	1.08	900	80	55	135
65.75-66.75		Fe-Ox Gd	16532	1.00	0.18	3.03	420	29	<2	135
66.75-70.75		altered Gd low recovery	16533	4.00	0.06	1.28	154	9	<2	155
70.75-71.75		"	16534	1.00	0.45	4.60	1200	164	6	130
71.75-72.75		"	16535	1.00	0.04	0.66	103	5	<2	230
72.75-73.75		Qtz, Sp, Fsp veining	16536	1.00	0.90	7.50	1540	300	30	120
73.75-74.75		Gd	16537	1.00	0.11	1.43	260	19	35	155
74.75-75.75		Gd	16538	1.00	0.18	2.38	420	28	52	200
75.75-76.75		Gd	16539	1.00	0.10	1.51	250	10	450	310
76.95-86.56		QV containing flesh-coloured feldspar, Sp, trace AsPy and trace Py - colour changes from black to white to greenish as contents of sphalerite, and chlorite and clay alterations vary. There is a greenish blue colour which may be hemimorphite.								

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 8 of 12

Angle of Hole ..... % Recovery ..... Logged by K. Mendel

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
76.75-78.92		-vein contains 80% Sp and is cross cut by many ('/1 cm) flesh-coloured qtz, Fsp veinlets with dominant ∠50°, trace Py								
78.92-81.85		vein contains ≈ 60% Sp								
81.85-86.56		-vein contains 3% Sp, minor chlorite and pale green clay alterations - Fsp, qtz veinlets ≤1 mm dia ('/5 cm)								
76.75-77.25		QV	16540	0.50	4.45	10.40	3100	710	>1000	250
77.25-77.75			16541	0.50	2.77	15.60	2700	340	>1000	130
77.75-78.25		QV	16542	0.50	1.80	14.00	2100	210	>1000	140
78.25-78.75			16543	0.50	2.65	17.20	3600	370	>1000	300
78.75-79.25		QV w/ Sp	16544	0.50	1.16	5.58	960	144	>1000	230
79.25-79.75		"	16545	0.50	3.05	1.02	1700	420	>1000	500
79.75-80.75		"	16546	1.00	0.99	6.30	900	152	>1000	300
80.75-81.75		"	16547	1.00	0.74	4.40	680	100	>1000	350
81.75-82.75		QV w/ Sp, Py, AsPy	16548	1.00	0.74	2.20	460	134	>1000	280
82.75-83.75		"	16549	1.00	0.08	0.64	85	8	>1000	335
83.75-84.75		"	16550	1.00	0.11	0.66	102	22	>1000	200
84.75-85.75		"	16551	1.00	0.05	0.33	65	6	>1000	91
85.75-86.75		"	16552	1.00	0.23	0.80	142	28	>1000	160
86.56-92.51		Breccia zone - the matrix is dark green grey aphanitic, probably of Qtz, Fsp and chalcedony. There are trace sulphides in the matrix. The clasts are subangular, 1 mm - 4 cm dia. and consist of								

CORDILLERAN ENGINEERING L.. ED — DIAMOND DRILL RECORD

PROPERTY..... LOGAN ..... HOLE No..... DDH 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 9 of 12

Angle of Hole ..... % Recovery..... Logged by K. Meidal

Claim..... Elev. Collar..... Date Begun.....

Section..... Latitude..... Date Finished.....

Bearing ..... Departure..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sb PPM
		Qtz, Fsp, chalcedony and sulphides (Py, As Py)								
86.75-87.75		Bx zone	16553	1.00	1.55	10.50	3200	660	>1000	550
87.75-88.75		Bx zone Local recovery	16554	1.00	0.23	2.80	290	68	>1000	260
88.75-89.75		Bx zone	16555	1.00	0.30	2.40	260	220	>1000	390
89.75-90.75		Bx zone	16556	1.00	0.33	3.10	250	420	900	295
90.75-91.75		Bx zone	16557	1.00	0.99	6.15	132	250	>1000	650
91.75-92.75		Bx zone	16558	1.00	0.60	5.20	250	320	>1000	800
92.51-102.45		-light to dark grey, green feldspar, quartz porphyry. The matrix is aphanitic and contains sulphides. The phenocrysts consist of feldspar, quartz and sulphides. The majority of the phenocrysts are < 2 mm wide, but a few are up to 1 cm wide. Rock is ≈ 25% phenocryst. At the start of the interval, the rock contains moderate chloritic alteration. This changes to minor after about 1 m. The clay alteration is light grey. The amount is mostly minor but in some sections is increased. There are Sp, Py veinlets, calcite veinlets and quartz, feldspar veinlets cross cutting the rock.								
92.51-93.89		zone with qtz, Sp, Py veinlets 45% Sp, 45% Py (1/4 cm) ≤ 2 mm wide @ 80°								
93.89-95.62		zone with strong clay alteration - rock contains								

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 10 of 12
Logged by K. Mendal
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	Sn PPM	As PPM
		2% Sp, 1% Py								
97.23-98.33		zone of strong clay alteration - rock is rubbly but veinlets contain 50-95% Py and there is Py along fractures ∡60°? veinlet density is unknown due to rubblyness.								
98.33-101.42		zone of ≤ 2 mm wide calcite veins ∡60°								
101.42-102.45		zone of strong clay alteration, 2% Sp								
92.75-94.75		Qtz, Sp, Py veinlets	16559	2.00	0.07	0.96	86	89	310	110
94.75-96.75		Fsp, Qtz porphyry	16560	2.00	0.03	0.18	18	26	160	6
96.75-98.75		"	16561	2.00	0.02	0.10	16	10	110	<5
98.75-100.75		"	16562	2.00	<0.02	0.01	18	11	6	<5
100.75-101.75		"	16563	1.00	0.18	3.50	430	33	140	285
101.75-102.75		"	16564	1.00	0.11	2.30	200	20	90	225
102.45-108.51		Breccia zone - grey, green breccia - The matrix is very fine grained to aphanitic chalcedony, fsp qtz and trace sulphides. The clasts are subangular. The size varies from <1 mm to 2.5 cm. The clasts are composed of qtz, chalcedony, feldspar and sulphides (notably 40% Sp, 3% Py)								
102.75-103.75		Bx zone	16565	1.00	0.93	11.00	920	400	>1000	1150
103.75-104.75		Bx zone	16566	1.00	1.30	12.10	3200	640	125	1320
104.75-105.75		Bx zone	16567	1.00	0.15	2.34	230	68	250	270

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. D.D.H. 86-L-9

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 11 of 12

Angle of Hole ..... % Recovery ..... Logged by K. Mendal

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
105.75-106.75		Bx zone	16568	1.00	0.13	1.58	200	51	>1000	405
106.75-107.75		Bx zone	16569	1.00	0.43	5.80	640	580	>1000	450
107.75-108.75		Bx zone	16570	1.00	0.20	2.00	410	113	125	150
108.51-114.30		- light green feldspar, qtz porphyry - minor chloritic alteration, moderate grey clay alteration cut by qtz, Fsp veins, some of which contain Py ± 60° (1/10 cm). Veins are up to 5mm wide								
108.75-110.75		Fsp, qtz porphyry	16571	2.00	<0.02	0.24	38	34	500	8
110.75-112.75		"	16572	2.00	<0.02	0.12	20	14	55	<5
112.75-113.75		"	16573	1.00	0.05	0.02	8	29	700	<5
113.75-114.75		"	16574	1.00	<0.02	0.03	5	9	250	<5
114.30-119.25		rubbly breccia zone with a green mud matrix, qtz, Fsp, chalcedony clasts and also chunks of altered Fsp, qtz porphyry. Some Py filled veins, 2-4 cm wide, with 70% Py (1/30 cm)								
114.75-115.75		Bx zone	16575	1.00	<0.02	0.04	12	15	>1000	<5
115.75-116.75		"	16576	1.00	0.02	0.02	24	20	1000	<5
116.75-117.75		"	16577	1.00	0.02	0.13	14	10	850	12
117.75-119.75		" low recovery	16578	2.00	<0.02	0.08	14	8	6	<5
119.25-123.44		- green grey feldspar, qtz porphyry - strongly altered so that it's rubbly and converted to mud in sections. There are no veins in this unit. Py is 1% Py								

CORDILLERAN ENGINEERING L. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-L-11

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth
60.05 m	-62°	142°
145.39 m	-62°	140°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 3
Section 3+85 E
Bearing 145°

Total Depth 145.39 m
% Recovery 63.3%
Elev. Collar 138.4 m
Latitude
Departure

Sheet No. 2 of 17
Logged by K. Medal
Date Begun AUG. 7/86 (D.)
Date Finished AUG. 9/86 (D.)
Core Stored At MEISTER CORE RACK

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag opt	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
0-1.83		Casing								
1.83-3.66		- light grey, medium grained equigranular granodiorite - rock contains minor yellow brown clay alteration - there is minor Mn-Ox on the surface and along fractures. Rock contains 2% garnet crystals 2 mm dia.								
3.66-5.97		QV - contains clasts of Sp w/ 10% disseminated Ag_2S and trace disseminated Py. The vein is 35% clasts up to 4 cm dia. Qtz veinlets crosscut vein @ 80-90° (1/3 cm) up to 1 cm wide. There is minor Fe-ox along fractures								
5.00-6.00		QV 10% recovery	16627	2.00	1.39	0.05	500	386	>1000	610
6.00-7.00		QV w/ sulphides	16628	1.00	1.24	0.12	152	318	>1000	81
7.00-8.00		QV w/ sulphides	16629	1.00	0.55	0.07	360	158	>1000	120
8.47-15.00		- pale green, medium to coarse grained equigranular granodiorite - moderate chlorite alteration, minor yellow brown clay alteration Rock contains strong Fe-Ox creating rubble								
15.24-15.85		- Rock contains Qtz veining @ 80° 1-2 cm wide (1/10 cm)								
15.85-16.00		QV w/ a 3cm Sp clast w/ 1% Py @ 50°								
16.00-16.39		QV w/ stringers of Sp (1/5 cm) 1 mm wide w/ trace								

CORDILLERAN ENGINEERING L. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH [illegible]

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 17
Angle of Hole ..... % Recovery ..... Logged by [illegible]
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
		disseminated Py ∠ 40°								
10.86–14.07		Qtz veining in gd – rock is 20% qtz. vein								
		– vein contains 40% Sp w/ 70% Py clasts								
		There is no distinguishable angle (∠ 30° ??) There								
		is only 15% recovery.								
14.50–14.56		– zone with 30% disseminated Sp in rock								
8:00–9:00		strong sericite mineralization	16630	1.00	0.39	0.12	360	167	>1000	150
9:00–10:00		"	16631	1.00	0.10	0.02	67	55	1000	205
10:00–11:00		"	16632	1.00	0.03	0.03	188	105	>1000	215
11:00–12:00		"	16633	1.00	0.44	0.08	700	425	>1000	645
12:00–14:00		" low recovery: 15%	16634	2.00	1.17	1.72	6100	118	>1000	255
14:00–15:00		"	16635	1.00	0.20	0.22	2600	60	>1000	215
15.00–[illegible].55		– pale green, medium grained, equigranular								
		granodiorite containing moderate chloritic alteration								
		and minor patchy brown clay alteration along								
		fractures. The amount of Fe ox changes from								
		minor to strong throughout the interval. The								
		mineralization also varies through the interval.								
15.00–18.51		– zone with 3% disseminated Sp throughout								
		minor Fe-ox along fractures.								
17.70–[illegible].95		QV w/ 40% Sp, 2% Py 1 cm wide ∠ 30°								
18.44–18.23		QV 2.5 cm wide w/ 60% Sp, 2%								

CORDILLERAN ENGINEERING L. ED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. [illegible] 1

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 4 of 17

Angle of Hole ..... % Recovery ..... Logged by K. Procial

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sb PPM
		disseminated Sp, 1% Py clots, 3% [illegible] minute								
		brown crystal (epidote? but non-magnetic)								
		& QS°								
18.51-25.00		- zone with moderate Fe-ox on surface and								
		in fractures								
21.20-22.05		- 2% disseminated Sp throughout rock								
24.85-25.00		- trace disseminated Sp in rock.								
25.00-27.55		- severely altered granodiorite - strong Fe-ox,								
		moderate Mn-ox. Strong yellow brown clay								
		alteration.								
15.00-16.00		stockwork mineralization	166[illegible]	1.0	0.32	0.38	2050	85	>1000	185
16.00-17.00		"	166[illegible]	1.00	0.24	0.18	2900	146	1000	275
17.00-18.00		"	167[illegible]	1.0	0.76	0.92	1350	4500	1000	300
18.00-19.00		"	1[illegible]	1.0	1.41	1.80	500	7800	>1000	445
19.00-20.00		"	1[illegible]	1.0	0.16	0.03	186	159	>1000	235
20.00-23.00		"	166[illegible]	3.0	0.27	0.23	450	230	>1000	195
23.00-24.00		"	1[illegible]	1.0	0.26	0.05	115	64	800	197
24.00-26.00		"	1[illegible]	2.00	0.03	0.11	220	136	1000	49
26.55-38.44		- pale green, pegmatitic granodiorite w/ epidote								
		- contains moderate chloritic alteration and moderate								
		white clay alteration. The Fe-ox content changes								
		from trace to strong throughout the interval.								

CORDILLERAN ENGINEERING LTD. — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 86-4-11

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 5 of 17
Angle of Hole ..... % Recovery ..... Logged by K. Heidl
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
		There is disseminated Sp in the rock but the amount								
		varies.								
27.55-31.10		- zone w/ moderate Fe Ox and trace disseminated								
		Py								
31.10-32.61		- zone w/ 2% disseminated Sp, trace disseminated								
		Py and trace disseminated garnet (≤1mm dia)								
32.61-35.46		- zone w/ strong Fe-Ox, moderate Mn-Ox								
		The rock has gouge zones from 33.40-33.59 m and								
		35.10 ± 35.40 m.								
35.46-38.44		- zone w/ 4% disseminated Sp.								
36.85-36.88		- 1.5 cm wide QV w/ 40% Sp ∠ 40°								
36.24-36.35		- severe Fe-Ox zone								
36.39-36.49		- zone w/ 1-3mm wide Qtz veins w/ 50% Sp								
		∠ 70° (1/5 cm)								
36.72-36.83		- gouge zone (white clay)								
37.85-37.94		- gouge zone, rubbly w/ minor Fe-Ox								
38.10-38.17		- Fe ox'd gouge zone								
26.00-28.00		stockwork mineralization	16644	2.00	0.06	0.06	152	56	500	8
28.00-30.00		"	16645	2.00	0.06	0.19	520	90	350	125
30.00-32.00		" low recovery	16646	2.00	0.08	0.23	154	112	>1000	135
32.00-34.00		"	16647	2.00	0.25	0.21	235	102	800	115
34.00-36.00		"	16648	2.00	0.05	1.01	210	78	500	130

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. [illegible]

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 17

Angle of Hole ..... % Recovery ..... Logged by K. Meisel

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sr PPM
36.00-37.00		[illegible] mineralization	166415	1.00	0.21	1.34	270	98	>1000	25
37.00-38.00		[illegible] mineralization	166416	1.00	0.03	0.68	87	23	250	18
38.44-38.91		- QV veining - 30% of Gd is present. It contains								
		40% Sp, 8% Py (disseminated and in xtl clusters)								
		& 40°								
38.91-40.56		- pale green, medium grained, equigranular								
		granodiorite - contains minor chloritic alteration.								
		- there is 3% disseminated Sp throughout and								
		trace disseminated Py								
39.23		- 1 cm wide QV w/ trace Sp, Py, CPy. & 35°								
39.39-40.56		- zone w/ qtz veining 1 cm wide (1/5 cm)								
		veins contain 20% Sp, trace Py clusters								
		& 10°, & 40° are both common in crosscutting								
		veins								
40.56-42.65		- green, pegmatitic granodiorite - contains								
		moderate chloritic alteration up to 41.40 m								
		and then it is strong. Contains minor green								
		clay alteration and trace sericitic alteration								
40.50-41.39		- zone with qtz veining w/ 30% Sp, 1%								
		Py clasts up to 5mm wide and trace disseminated								
		AsPy. & 05°, 40° are common (1/5 cm)								
41.50-41.52		- zone w/ 5% tetrahedrite in clumps up to 3mm wide								

CORDILLERAN ENGINEERING LTD. — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 86-L-11

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 7 of 17
Logged by K. Heidel
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sn PPM
		and 1% disseminated Py.								
41.52 - 41.83		3cm wz 2% Py infilling ≤1mm wide fractures and as clusters up to 5mm dia. There is a								
		- zone of weak silica. From 41.78 - 41.83 there is a 7cm wide QV wz 10% Sp at 20°								
41.83 - 42.19		- zone of medium grained equigranular granodiorite wz 2% disseminated Sp, trace disseminated Py and								
		trace to very weak chloritic alteration.								
38.00 - 39.00		Stockwork mineralization	16651	1.00	1.85	5.12	9800	67	250	310
39.00 - 40.00		"	16652	1.00	0.29	4.00	2050	19	1000	300
40.00 - 41.00		"	16653	1.00	0.19	2.60	600	58	>1000	270
41.00 - 42.00		"	16654	1.00	0.32	1.77	1100	21	>1000	380
42.65 - 43.07		- pale green medium grained equigranular granodiorite - moderate chloritic alteration, minor green clay alteration - contains 2% disseminated Sp								
43.07 - 43.89		QV wz 30% Sp, 4% Py (disseminated and clusters up to 1cm dia), 3% disseminated AsPy and trace CPy, tetrahedrite.								
43.89 - 46.00		- pale green medium grained equigranular granodiorite with moderate chloritic alteration, minor green clay alteration. There is minor Fe-Ox along fractures - rock contains 4% disseminated Sp								

CONSULTING ENGINEERING LOGGED - DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDM 86-L-11

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of 17
Logged by K. Maidl
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %	Cu PPM	Pb PPM	As PPM	Sb PPM
42.00-43.00		stockwork mineralization	16655	1.00	0.06	1.16	145	22	38	420
43.00-44.00		"	16656	1.00	1.90	5.65	2150	157	>1000	175
44.00-45.00		"	16657	1.00	0.09	1.28	345	85	>1000	360
45.00-46.00		"	16658	1.00	0.04	0.80	140	31	1000	265
46.00-48.14		QV wy 25% Sp, 2% Py (disseminated and along fractures), 2% AsPy (disseminated and along fractures) contact @ 25°; fractures @ 20-30° dominant								
		-vein contains clasts of green granodiorite 5% ≤ 1 cm dia.								
46.54-47.00		-green gouge zone of altered Gd.								
48.14-51.30		-green coarse grained equigranular granodiorite. rock contains moderate chloritic alteration and minor epidote clay alteration								
		- there is 1% disseminated Sp throughout								
48.26-48.37		-zone with an aphanitic olive green mineral H: 4. wy Qtz containing 20% disseminated Sp and trace disseminated AsPy and Py. @ 30° width not measureable								
48.91-49.06		-zone wy Qtz clasts (30%) ≤ 1.5 cm dia and two QV 1.0-1.25 cm wide (1/5 cm) @ 30°								
49.16-49.60		-zone wy 1% disseminated Py								
49.71-49.43		-zone wy QV's 0.25-1.25 cm wide. (1/15 cm) @ 40°								

CORDILLERAN ENGINEERING LIMI) = DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. DDH 87 L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage/h	Angle	Azimuth
13.72	-60.5°	19°
96.01	-60.5°	133°

Core Size NQ
Angle of Hole -60°
Claim Logan 2
Section 2+10W
Bearing 145°

Total Depth 100.58
% Recovery 66
Elev. Collar 1379 m
Latitude
Departure

Sheet No. 2 of 9
Logged by P. Dombrosky
Date Begun June 19 1987
Date Finished
Core Stored At Logan Core Racks

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0 - 9.75		casing		
9.75 - 15.90		QUARTZ SPHALERITE ANKERITE BRECCIA Quartz and Ankerite cement (15% Ankerite in rock) w/ 70% 5mm-2cm clast subangular clasts consisting of quartz - chalcedony and sulphides - sulphides are also found within the cements - the contains 25% Sp, 10% As Py and 1% Cpy - minor Fe-Ox, yellow brown clay and chlorite along fractures in rock - core is broken up		
15.90 - 16.80		ALTERED GRANODIORITE - pale grey green medium to coarse grained porphyritic granodiorite - strong pale green clay alteration (20% of rock) - moderate chloritic and sericitic alteration - moderate Sp, Py and yellow brown clay along fractures in rock (trace As Py) - 3% Sp in rock (disseminated and along fract) - rock is slightly sheared, grains are aligned sub-parallel along ∢ 60°		

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 3 of 9
Logged by P. Dankerslaat
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
16.80 - 20.00		ANKERITE SULPHIDE QUARTZ BRECCIA Cream coloured Ankerite cement w 60% sub-angular to subrounded 5mm-1cm dia clasts of Quartz-Chalcedony, Sulphide and altered Granodiorite - 1% Sp, 7% As Py and 4% Py in rock. Sulphides are found both in the clast and within the cement - minor Fe-Ox, yellow-brown clay and chlorite along fractures in rock - dominant core angle of fractures is 55°						
18.40 - 20.00		- oxidized zone - 20% pyrite in breccia (clasts and groundmass)						
20.00 - 21.00		SEVERELY ALTERED GRANODIORITE - pale grey green medium grained equigranular granodiorite - strong silicification, sericitic alteration, and pale green clay alteration (15% of rock) - minor chloritic alteration - 1% Sp along fractures and disseminated in rock - core is rubbly						

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 4 of 9

Angle of Hole ..... % Recovery ..... Logged by P.Dontenbat

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
21.00–33.20		QUARTZ SPHALERITE ANKERITE BRECCIA - groundmass of Quartz, Sulphide and Ankerite (20% of rock) w 50% clasts of 5mm-2cm dia quartz chalcedony, sulphide and yellow brown clay - 20% Sp, 7% As Py and 3% Py in Breccia - matrix to yellow brown clay and minor Fe-Ox along fractures - weak chlorite in rock -						
26.50–33.20		- groundmass consists mainly of pale grey green clay that contains strong chloritic and sericitic alteration - strong silicification over this interval - 12% Sp 7% Py and 3% as Py over this interval - 35% clay						
33.20–37.20		ALTERED FELDSPAR QUARTZ PORPHRY - light green green fine grained porphyritic felsic dyke - 10% 1-2mm dia feldspar phenocrysts and 2.0% 1-2mm dia quartz eye phenocrysts - moderate to chloritic and light brown green clay alteration - dyke is cut by veins (1/20cm)						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 9
Angle of Hole | % Recovery | Logged by P. Dantenloot
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		1-7mm wide Qz Sp Py veinlets - fine vein lets have no dominant core angle						
34.85-35.05		Quartz vein w. 45% 5mm - 2cm dia angular feldspar quartz porphyry, quartz - chalcedony and sulphide clasts - vein contains 7% Py, 2% Sp and 2% As Py & ?						
37.20-48.10		SEVERELY ALTERED QUARTZ FELDSPAR PORPHRY - light green brown clay w 40% 5mm - 4cm dia subangular fragments of feldspar quartz porphry - fragments have not been notated - clay alteration appears to have spread throughout fractures in the rock - 4% Sp and 3% Py in 1-5 mm grains and along fractures in rock						
44.50-46.00		- 40% 5mm - 5cm dia subangular fragments of green grey fine grained equigranular intermediate plutonic rock (35% biotite) - 60% green clay						
9.75-11.75		Quartz Sphalerite Arsenite Breccia	47604	2.00	10.28	5.00		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 6 of 9
Angle of Hole | % Recovery | Logged by P. Dantenloot
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %	
11.75-12.75		Quartz Sphalerite Arsenite Breccia	47605	1.00	1.40	7.91	✓
12.75-13.75		〃	47606	1.00	1.45	5.80	✓
13.75-15.75		〃 low recovery	47607	2.00	1.52	5.80	✓
15.75-17.00		Altered Granodiorite	47608	1.25	0.19	3.53	✓
17.00-18.00		Arsenite Sulphide Quartz Breccia	47609	1.00	3.58	5.80	✓
18.00-19.00		〃	47610	1.00	0.65	5.28	✓
19.00-20.00		〃	47611	1.00	1.73	6.06	✓
20.00-21.00		Severely altered Granodiorite	47612	1.00	0.16	3.20	✓
21.00-22.00		Quartz Sphalerite Arsenite Breccia	47613	1.00	0.22	3.81	✓
22.00-23.00		〃	47614	1.00	0.41	10.04	✓
23.00-24.00		〃	47615	1.00	0.13	2.34	✓
24.00-25.00		〃	47616	1.00	0.18	3.84	✓
25.00-26.00		〃	47617	1.00	0.23	4.50	✓
26.00-27.00		〃	47618	1.00	0.27	4.40	✓
27.00-28.00		〃	47619	1.00	0.06	1.45	✓
28.00-29.00		〃	47620	1.00	0.22	4.25	✓
29.00-30.00		〃	47621	1.00	0.12	0.68	
30.00-32.00		〃 low recovery	47622	2.00	0.10	0.73	✓
32.00-34.00		〃 〃 〃	47623	2.00	0.09	1.39	✓ x
34.00-36.00		Altered Feldspar Quartz Porphyry 〃 〃	47624	2.00	0.02	0.17	
36.00-38.00		〃 〃 〃	47625	2.00	<0.02	0.13	
38.00-40.00		Severely altered Feldspar Quartz Porphyry	47626	2.00	<0.02	0.44	✓

CORDILLERAN ENGINEERING LIM .D — DIAMOND DRILL RECORD

PROPERTY Pogam HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 7 of 9
Angle of Hole | % Recovery | Logged by P. Dontenwill
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
16.00-47.85		no core recovered		
48.10-83.92		ALTERED GRANODIORITE		
		- pale grey green porphyritic pegmatitic granodiorite - strong yellow green clay alteration (15% of rock) - moderate chloritic and sericitic alteration - ≤2% garnet grains (≤1mm dia) - ≤1% disseminated Sp in rock		
52.80-56.00		- interval w. strong chloritic alteration and 25% pale green clay		
55.06		7mm wide Qz vein w. 15% Sp and 7% Py @ 75°		
56.80-59.50		interval w. strong chloritic alteration and 25% green white clay		
60.00-62.00		- interval w. graphic quartz intergrowths within plagioclase		
66.10-67.00		- interval w. graphic quartz intergrowths within plagioclase		
67.00-80.50		- strong chloritic and sericitic (+minor epidote) alteration,		
72.43-72.70		light green clay w. 35% 1-4mm dia plagioclase, quartz and muscovite grains - contact @ 45° (fault?)		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Rogan HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 9
Angle of Hole | % Recovery | Logged by P. Dunbrooklet
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
72.70-78.70		-core is broken up		
76.50-76.70		- Quartz vein w 10% Sp and 5% Py ∠?		
78.74-79.50		-yellow green clay w 35% 1-2mm dia plagioclase quartz and muscovite grains 15% 5mm-2cm dia subrounded granodiorite fragments - contact w altered granodiorite ∠15°		
83.92-84.65		SEVERELY ALTERED GRANODIORITE -pale green clay w 35% 1-2mm dia plagioclase quartz and muscovite grains and 15% 5mm-15cm dia aplitic granodiorite fragments contact w Granodiorite ∠60°		
84.95-87.75		ALTERED GRANODIORITE -grey green medium grained equigranular granodiorite - strong chloritic and sericitic alteration - moderate pale green clay alteration - trace garnet grains (1% or less)		
85.80-86.05		pegmatitic interval		
86.76		2cm wide clay zone w 25% pale green clay ∠40°		

CORDILLERAN ENGINEERING LIM .D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-19

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 9 of 9
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
87.75-95.05		SEVERELY ALTERED GRANODIORITE - green white clay is 30% Quartz, Plagioclase and muscovite grains (≤2mm dia) and 30% 1-20cm dia subrounded Granodiorite fragments - Irregular-fractured contact ∠45°?		
95.05-100.58		ALTERED GRANODIORITE - pale grey green medium grained equigranular granodiorite - strong chloritic and pale green clay alteration (≤25% clay in rock) - moderate sericitic alteration - ≤1% garnet grains (≤2mm dia)		
96.50-97.00		- 60% green white clay - contact with granodiorite ∠15°		
99.15-99.55		- 45% green white clay - contact with granodiorite 50°		
99.70-100.58		- strong chloritic alteration		
100.58		EOH		

CORDILLERAN ENGINEERING LIMI) — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size NQ
Angle of Hole -60°
Claim LOGAN 2
Section 2+10 W
Bearing 145°

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 2 of
Logged by R. Falls
Date Begun
Date Finished
Core Stored At LOGAN CORE RACK

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0 - 9.14		casing						
9.14 - 43.59		GRANODIORITE						
		- pale grey to greenish grey						
		- medium grained with some pegmatitic patches						
		- equigranular						
		- minor grey-brown clay alteration						
		- minor chlorite + sericite alteration						
		- minor limonite staining on fractures						
		- garnet (1 - 2 mm grains) < 1 %						
11.74 - 15.35		- pegmatitic phase of granodiorite						
		- greyish-white						
		- some graphic texture						
		- minor sericite, limonite alteration						
17.30 - 20.80		- pegmatitic phase of granodiorite						
		- light brownish-grey						
		- minor clay alteration						
		- minor limonite + chlorite alteration						
		- some graphic texture						
21.25 - 21.85		- pegmatitic phase of granodiorite						
		- light brownish grey						
		- minor to moderate clay alteration						
		- minor chlorite, sericite, limonite alteration						

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 3 of
Angle of Hole | % Recovery | Logged by R. Falls
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
23.46-23.86		- pegmatitic phase of granodiorite						
		- light grey-brown						
		- minor sericite, chlorite, clay alteration						
		- minor limonite staining						
26.51-28.34		- pegmatitic phase of granodiorite						
		- light greyish white						
		- minor chlorite + limonite alteration						
28.34-28.95		- highly altered granodiorite						
		- major light grey clay alteration						
		- medium grained originally						
29.45-34.00		- pegmatitic phase of granodiorite						
		- whitish-grey						
		- approximately 30% of section shows graphic texture						
		- minor chlorite						
		- minor limonite alteration						
34.55-37.71		- pegmatitic phase of granodiorite						
		- light greenish grey to white						
		- minor to moderate grey clay alteration						
		- minor limonite alteration						
		- garnet xls < 5mm < 1%						
39.05-39.25		- pegmatitic phase of granodiorite						

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 4 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- light grey						
		- minor clay, sericite, limonite alteration						
40.64 - 43.59		- pegmatitic phase of granodiorite						
		- greenish grey						
		- minor sericite, clay, limonite, chlorite alt.						
		- garnet grains up to 10 mm < 1%						
43.59 - 51.39		SCHIST (muscovite - quartz - chlorite - biotite schist)						
		- dark greenish - grey colour ∠ 60°						
		- medium grained						
		- moderately well foliated (schistocity ∠ 15°)						
		- minor limonite alteration on foliation surfaces						
		- minor clay alteration in places						
		- some quartz + feldspar lenses up to 20cm in size						
		- garnet porphyroblasts up to 2 mm (< 1%)						
47.24 - 47.70		- altered granodiorite (∠ 40°)						
		- light greenish colour						
		- medium to coarse grained						
		- moderate chlorite, sericite alteration						
51.39 - 59.07		ALTERED GRANODIORITE (∠ 25°)						
		- light greenish grey, equigranular						
		- medium grained to pegmatitic						
		- minor to moderate sericite + clay alteration						

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 5 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- minor chlorite alteration						
51.39 - 52.06		- pegmatitic altered granodiorite						
		- light greenish grey						
		- minor chlorite, sericite alteration						
52.58 - 53.57		- pegmatitic altered granodiorite						
		- light grayish-white						
		- ~ 70 % feldspar						
		- minor limonite, sericite alteration						
55.32 - 55.93		- pegmatitic altered granodiorite						
		- core badly broken						
		- light greenish-grey colour						
		- minor chlorite, sericite alteration						
		- minor to moderate clay alteration						
56.40 - 59.07		- pegmatitic altered granodiorite						
		- greenish grey colour						
		- badly broken						
		- minor chlorite, sericite alteration						
		- minor to moderate clay alteration						
59.07 - 63.57		SCHIST (muscovite-biotite-quartz-chlorite schist)						
		- dark grey						
		- medium grained						
		- poor to well foliated (schistocity ⊗ 15°)						

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 6 of
Angle of Hole | % Recovery | Logged by R. I. Falls
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- subhedral garnet porphyroblasts up to 3mm < 1%		
		- anhedral pyrite grains up to 2mm < 1%		
63.57-96.41		ALTERED GRANODIORITE (∂ 25°)		
		- light greenish grey		
		- medium grained to pegmatitic		
		- some graphic texture		
		- minor sericitic, chloritic alteration		
		- minor limonite alteration on fractures		
		- minor to moderate clay alteration		
63.57-70.14		- pegmatitic altered granodiorite		
		- light greenish grey colour		
		- some graphic texture		
		- minor clay, sericite, chlorite alteration		
70.64-76.08		- pegmatitic altered granodiorite		
		- light brownish grey to greenish grey		
		- minor sericite + chlorite alteration		
		- minor limonite alteration		
		- minor to moderate clay alteration		
83.14-86.86		- pegmatitic altered granodiorite		
		- light grey to greenish		
		- very minor sericitic + chloritic alteration		

CORDILLERAN ENGINEERING LIM. — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 7 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- garnet xls to 1mm < 1 %						
86.86-87.96		- smoky quartz rich phase of pegmatite						
		- quartz patches up to 40cm (70% quartz)						
		- feldspar xls to 5 cm						
		- garnet to 1cm < 1 %						
		- minor sericitic alteration						
87.96-95.01		- pegmatitic altered granodiorite						
		- light greenish grey						
		- some graphic texture						
		- minor sericitic alteration						
		- minor limonitic alteration						
		- < 1% garnet						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of
Logged by R. Falls
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
96.41 - 99.13		STRONGLY ALTERED GRANODIORITE		
		- grey to rusty brown colour		
		- medium grained		
		- badly broken + soft + crumbly		
		- strong clay alteration		
		- strong epidote + sericite ± chlorite alt		
99.13 - 100.37		SULPHIDE BEARING BRECCIA (∝ 45°)		
		- medium greenish-grey colour		
		- predominantly silicified granodiorite clasts		
		- up to 2cm, angular to subrounded		
		- 30% fine grained pyrite-quartz matrix		
100.37 - 101.80		FELSITE DYKE (∝ 30°)		
		- fine grained		
		- greenish-grey		
		- minor sphalerite veins ~ 1mm thick		
		- minor carbonate veins ~ 1 - 2mm thick		

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 9 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
101.80 - 104.24		FELSITE DYKE BRECCIA (quartz flooded?)						
		- light greenish grey colour						
		- angular to subangular clasts of greenish silicified felsite in quartz cement						
		- average clasts size .5 - 1 cm						
		- minor ankerite veining (∅ 50°)						
		- minor sphalerite grains to 1mm < 1%						
		- minor pyritic veining (∅ 80°)						
104.24 - 113.69		FELSITE DYKE						
		- fine grained						
		- greenish grey						
		- minor ankerite veining, (1mm) thick veins every 5-10cm						
		- minor chlorite, sericite alteration						
109.78 - 111.64		- felsite dyke (breccia?)						
		- greenish-grey colour						
		- subrounded clasts to .5cm						
		- quartz cement						
		- ankerite veins ~ every 5 cm						
		- ~1% sphalerite grains to 3mm						
111.64 - 113.69		- dark green felsite dyke						
		- fine grained						
		- ankerite veins to 2mm thick every 10 to 20cm						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 10 of
Logged by R. Falls
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
113.69		mislatch		
113.69 - 117.14		FELDSPAR - QUARTZ - PORPHYRY (?)		
		- light greenish-white feldspar phenocrysts up to 3 mm		
		- fine grained greenish grey groundmass of quartz + sericite, chlorite		
		- stockwork mineralization consisting of		
		quartz - sphalerite veins up to 1.5 cm thick		
		some typical core angles (∂) 40-50°, 5°-15°		
		- vein density ~ 4 per 10 cm		
		- sphalerite coprises ~ 5 % of the rock		
		- light yellow-brown ankerite veins up to		
		5 mm thick, typical ∂ 40°, vein density		
		3/10 cm		
116.77 - 117.14		- ankerite, sphalerite, quartz, chalcopyrite vein		
		- ∂ 65°		
		- approx. 50% ankerite, 30% sphalerite		
		15% quartz, 5% chalcopyrite		
117.14 - 150.57		ALTERED GRANODIORITE (quartz flooded)		
		- light grey-green		
		- original grain size (pegmatitic)		
		- rock now consists of ~ 60 % quartz		
		- original granodiorite highly chloritized +		
		sericitized (light olive green)		

CORDILLERAN ENGINEERING LIM. — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 1/1 of
Logged by R. Falls
Date Begun
Date Finished
Core Stored At

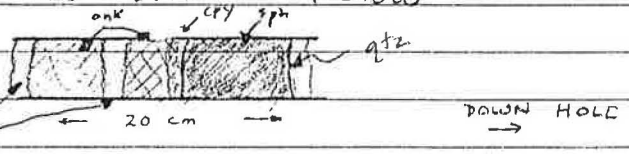
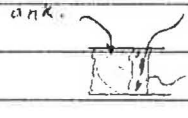
DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- ankerite veins occur approx 1 per 20 cm - typical ∂ 52° veins up to 1 cm in width		
		- small irregular sphalerite veins up to 1-5mm thick 1 every 5 to 10 cm ~ 1% of rock		
		- minor pyrite + chalcopyrite < 1%		
118.04 - 118.07		- sulphide vein within altered granodiorite ∂ 30°		
		- vein is 2cm thick		
		- consists of 80% dark brown sphalerite, 18% quartz, 2% pyrite		
118.22 - 118.24		- sulphide vein within altered granodiorite ∂ 45°		
		- vein is 1.5 cm thick and consists of 60% dark brown sphalerite, 30% quartz, 10% ankerite		
120.43 - 120.44		- irregular patch of sulphide mineralization		
		- ~ 2.5 x 30 cm		
		- mineralization consists of a mass of pyrrhotite ~ 40%, surrounded by pyrite ~ 40% surrounded by dark brown sphalerite ~ 20%		
120.05 - 120.25	-	20 cm wide suphide vein ∂ 40°		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 12 of
Angle of Hole | % Recovery | Logged by R. Falls
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- vein consists of 40% dark brown sphalerite, 25% pyrrhotite, 10% pyrite <1% chalcopyrite, <1% ankerite, 25% quartz.		
		- the vein consists of several irregular patches of sulphides, however some zoning relationships can be seen		
		- pyrrhotite occurs in irregular patches which are rimmed by pyrite, then quartz and sphalerite		
125.32-125.42		- 10 cm wide ankerite-quartz sulphide vein (∡80°)		
		- vein consists of 30% sphalerite, 5% chalcopyrite, 40% ankerite, 25% quartz		
		- zoning is shown below		
				
126.19-126.22		- ankerite-quartz-sphalerite vein ∡80°		
		- 80% ankerite		
		- 15% quartz		
		- 5% sphalerite		
				

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 13 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
126.67-126.69		small quartz-ankerite sphalerite vein						
		- 30% quartz, 30% ankerite, 40% sphalerite						
127.61-127.64		- quartz - sphalerite vein (∝45°)						
		- 60% quartz						
		- 40% sphalerite						
127.91-127.96		- sphalerite - quartz - ankerite vein (∝30°)						
		~5 cm thick						
		- 80% sphalerite, 10% quartz, 10% ankerite						
128.55-128.60		- sphalerite - quartz - ankerite vein						
		~5 cm thick						
		- 80% sphalerite 15% quartz, 5% ankerite						
129.31-129.33		- quartz - sulphide vein (∝70°)						
		- 70% quartz						
		- 20% - dark brown sphalerite						
		- 8% - pyrite						
		- 2% pyrrhotite						
129.56-129.58		quartz - sphalerite vein (∝15°)						
		15% sphalerite						
		5% ankerite						
		80% quartz						
130.53-130.55		quartz - sphalerite - ankerite vein (∝20°)						
		- 20% sphalerite, 5% ankerite, 75% quartz						

CORDILLERAN ENGINEERING LIMI D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 14 of
Angle of Hole | % Recovery | Logged by R. Falls
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
131.55 - 131.57		- sphalerite - quartz vein (∂ 60°)		
		80 % sphalerite, 20 % quartz		
		~ 2 cm thick		
132.00 - 132.02		- sphalerite - quartz - ankerite vein (∂ 60°)		
		- 60 % sphalerite		
		- 30 % quartz		
		- 10 % ankerite		
132.23 - 132.25		- quartz - pyrite, pyrrhotite vein (∂ 45°)		
		- 70 % quartz, 20 % pyrite, 10 % po.		
132.81 - 13.93		- quartz - sphalerite vein (∂ 50°)		
		- 80 % quartz - chlorite rich		
		- 20 % sphalerite		
139.20 - 139.60		- quartz - sphalerite - ankerite vein		
		~ 40 cm thick		
		- vein consists irregular patches of sphalerite in quartz		
		- 50 % quartz		
		- 40 % sphalerite		
		- 10 % ankerite		
		- tr. pyrite		
140.98 - 140.99		quartz - sphalerite vein 2 cm thick (∂ 45°)		
		60 % quartz, 40 % sphalerite		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 15 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
142.74 - 142.77		irregular quartz - sphalerite vein		
		- 60% quartz		
		- 40% sphalerite		
149.17 - 149.63		- quartz-sphalerite-ankerite vein (X10)		
		- irregular masses of sphalerite in quartz		
		- quartz 70%, sphalerite 20%, ankerite 10%		
150.57 - 152.67		FELDSPAR - QUARTZ - PORPHYRY - BRECCIA		
		- beige to brownish silicified clasts in fine grained dark greenish-grey matrix		
		- clasts are angular to subangular and average 3 to 10 mm in size		
		- matrix is aphanitic		
152.67 - 155.45		MINERALIZED - FELDSPAR - QUARTZ - PORPHYRY - BRECCIA		
		- white quartz + feldspar phenocrysts 1-3mm in size		
		- dark green-grey aphanitic groundmass		
		- phenocrysts make up 1-5% of rock		
		- rock is cut by a stockwork of fine grained pyrite veins and quartz veins giving the rock a brecciated appearance		
		- pyrite makes up ~ 10-15% of the rock		
		- rock becomes less brecciated towards the contact with the next unit		

CORDILLERAN ENGINEERING LIM. — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 16 of
Angle of Hole | % Recovery | Logged by R. Falls
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- some vuggy quartz cavities are present- containing euhedral quartz crystals up to 2mm		
155.45-164.05		FELDSPAR - QUARTZ PORPHYRY		
		- 1-2 mm quartz + feldspar phenocrysts ~10% set in a grey-green aphanitic groundmass ~90%		
		- < 1% pyrite veins		
		- occasional thin quartz veins ~1% (@ 55°) (@ 50°)		
157.26-157.68		altered granodiorite		
		- ~ 50-60% quartz		
		- original rock is light olive green, sericitized chloritized		
157.68-159.26		- quartz muscovite		
		- schist is moderate + poorly foliated		
		- appears to be highly silicified		
		- medium grey to light brownish-grey		
		- some pyritic patches < 1%		
		- moderate limonitic alteration		
159.26-159.56		- altered granodiorite		
		- light grey brown colour		
		- moderate clay, limonite, sericite alteration		

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 17 of
Logged by R. Falls
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
159.56-160.38		breccia (probably derived from feldspar-quartz-porphyry?) - medium grey colour - highly silicified - grey clasts up to 2cm in aphanitic siliceous matrix - minor pyrite		
160.38-163.45		severely altered + broken material (probably derived from feldspar-quartz-porphyry?) - dark greenish grey - strong clay alteration, chlorite alteration - core badly broken		
163.45-163.98		altered feldspar-quartz-porphyry - dark green colour - light grey quartz + feldspar phenocrysts up to 2mm ~ 15% - dark green aphanitic groundmass - appears to be highly chloritized - pyrite << 1%		
163.98-169.05		- mineralized quartz vein - badly broken core - vein is 25% disseminated sphalerite		

CORDILLERAN ENGINEERING LIMI) — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 18 of
Logged by R. Falls
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- 15% ankerite						
		- 20% chlorite						
		- 40% quartz						
164.05 - 166.12		STRONGLY ALTERED GRANODIORITE						
		- medium grey-green colour						
		- highly altered to clay						
		- soft + broken						
		- chlorite, sericite, limonite alteration						
166.12 - 180.26		ALTERED GRANODIORITE						
		- light greenish grey						
		- medium grained, equigranular						
		- moderate to strong chlorite, sericite alt.						
		- < 1% garnet x/s 1-2 mm						
166.12 - 167.59		- pegmatitic phase of altered granodiorite						
		- light greenish grey						
		- feldspar rich phases up to 20cm long						
		- garnet up to 2cm < 1%						
170.25 - 180.26		- pegmatitic altered granodiorite						
		- light greenish grey						
		- some feldspar rich phases + graphic texture						
180.26 - 183.79		STRONGLY ALTERED GRANODIORITE						
		- light greenish grey						

CORDILLERAN ENGINEERING LIMI) — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 19 of .....
Angle of Hole ..... % Recovery ..... Logged by R. Falls
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- core soft + broken						
		- major clay, chlorite, sericite alt.						
183.79		EOH						

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. ..... of .....
Angle of Hole ..... % Recovery ..... Logged by .....
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
93.0 - 95.0		ALTERED GRANODIORITE	47733	2.0	<0.02	<0.01		
95.0 - 97.0		ALTERED GRANODIORITE	47734	2.0	<0.02	0.04		
97.0 - 99.0		STRONGLY ALTERED GRANODIORITE	47735	2.0	<0.02	0.14		
99.0 - 100.0		BRECCIA, SOME PYRITE MINERALIZATION	47736	1.0	0.02	0.62		
100.0 - 101.0		FELDSPAR QUARTZ PORPHYRY? (STOCKWORK MINERALIZATION)	47737	1.0	<0.02	1.33		
101.0 - 103.0		SILICEOUS FELDSPAR - QUARTZ PORPHYRY BRECCIA?	47738	2.0	<0.02	0.52		
103.0 - 105.0		BRECCIA + FELDSPAR QUARTZ PORPHYRY	47739	2.0	<0.02	0.26		
105.0 - 107.0		FELDSPAR QUARTZ PORPHYRY	47740	2.0	<0.02	0.18		
107.0 - 109.0		FELDSPAR QUARTZ PORPHYRY	47741	2.0	0.03	0.56		
109.0 - 111.0		BRECCIA	47742	2.0	0.05	0.96		↑
111.0 - 112.0		BRECCIA	47743	1.0	0.16	1.66	X	↓
112.0 - 114.0		FELDSPAR - QUARTZ PORPHYRY (stockwork mineralization)	47744	2.0	1.90	7.95		
114.0 - 115.0		" "	47745	1.0	0.92	6.25		
115.0 - 116.0		" "	47746	1.0	0.45	5.68		
116.0 - 117.0		" "	47747	1.0	3.97	7.52		
117.0 - 118.0		ALTERED GRANODIORITE	47748	1.0	0.19	2.60		
118.0 - 119.0		" " (stockwork mineralization)	47749	1.0	0.27	3.10		
119.0 - 120.0		" " "	47750	1.0	0.09	2.10		
120.0 - 121.0		" " "	47751	1.0	0.23	1.68		
121.0 - 122.0		" " "	47752	1.0	0.98	7.03	✓	
122.0 - 123.0		" " "	47753	1.0	0.12	2.84		↑
123.0 - 124.0		ALTERED GRANODIORITE (stockwork min.)	47754	1.0	0.06	1.24		

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. ..... of .....

Angle of Hole ..... % Recovery ..... Logged by R. Falls

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
124.0 - 125.0		ALTERED GRANODIORITE (stockwork mineralization)	47755	1.0	0.12	1.44		
125.0 - 126.0		" " " "	47756	1.0	0.65	5.58		
126.0 - 127.0		" " " "	47757	1.0	0.18	2.06		
127.0 - 128.0		" " " "	47758	1.0	0.25	2.68		
128.0 - 129.0		" " " "	47759	1.0	0.20	5.78		
129.0 - 130.0		" " " "	47760	1.0	0.18	2.63		
130.0 - 131.0		" " " "	47761	1.0	0.04	0.73		
131.0 - 132.0		" " " "	47762	1.0	0.11	1.80		
132.0 - 133.0		" " " "	47763	1.0	0.19	2.70		
133.0 - 134.0		" " " "	47764	1.0	0.04	0.80		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. ..... of .....
Angle of Hole ..... % Recovery ..... Logged by R. FALLS
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
157.5 - 159.0		FOLIATED ALTERED GRANODIORITE	47727	1.50	<0.02	0.04		
159.0 - 161.0		FOOTWALL FAULT GOUGE + FELDSPAR QUARTZ PORPHYRY	47728	2.00	<0.02	0.62		
161.0 - 163.0		FOOTWALL FAULT, 10% RECOVERY, LOCALLY PYRITIC	47729	2.00	<0.02	0.78		
163.0 - 165.0		FOOTWALL FAULT, LOCAL SULPHIDE BRECCIA, ALTERED GRANODIORITE	47730	2.00	0.04	0.32		
165.0 - 167.0		ALTERED GRANODIORITE + FOOTWALL FAULT	47731	2.00	<0.02	0.02		
167.0 - 169.0		ALTERED GRANODIORITE	47732	2.00	<0.02	<0.01		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87 L-20

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. of
Angle of Hole | % Recovery | Logged by R. Falls
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
134.0 - 135.0		ALTERED GRANODIORITE (stockwork mineralization)	47705	1.00	0.05	0.71		
135.0 - 136.0		" "	47706	1.00	0.05	1.66		
136.0 - 137.0		" "	47707	1.00	0.14	1.14		
137.0 - 138.0		" "	47708	1.00	0.06	1.66		
138.0 - 139.0		" "	47709	1.00	0.08	1.67		
139.0 - 140.0		" "	47710	1.00	1.66	10.02		
140.0 - 141.0		" "	47711	1.00	0.06	1.04		
141.0 - 142.0		" "	47712	1.00	0.08	2.20		
142.0 - 143.0		" "	47713	1.00	0.18	1.32		
143.0 - 144.0		" "	47714	1.00	0.13	3.22		
144.0 - 145.0		" "	47715	1.00	0.39	1.41		
145.0 - 146.0		" "	47716	1.00	2.11	1.28		
146.0 - 148.0		ALTERED GRANODIORITE (stockwork mineralization) 50% recovery	47717	2.00	0.20	2.06		
148.0 - 149.0		ALTERED GRANODIORITE (stockwork mineralization)	47718	1.00	0.04	0.78		
149.0 - 150.5		" "	47719	1.50	0.12	2.24		
150.5 - 151.5		FELDSPAR - QUARTZ PORPHYRY BRECCIA (pyrite mineralization)	47720	1.00	0.14	1.17		
151.5 - 152.5		" " "	47721	1.00	0.22	1.59		
152.5 - 153.5		" " "	47722	1.00	0.25	0.99		↓
153.5 - 154.5		" " "	47723	1.00	0.21	0.37		
154.5 - 155.5		FELDSPAR - QUARTZ - PORPHYRY (pyrite mineralization)	47724	1.00	0.08	0.12		
155.5 - 156.5		" " "	47725 ✓	1.00	<0.02	0.02		
156.5 - 157.5		FELDSPAR - QUARTZ - PORPHYRY + ALTERED GRANODIORITE (pyrite mineralization)	47726	1.00	<0.02	0.32		

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size NQ
Angle of Hole -60
Claim Logan 2
Section 2+10W
Bearing 145°

Total Depth 241.49
% Recovery 89
Elev. Collar 1388m
Latitude
Departure

Sheet No. 2 of 15
Logged by Paul Dankesbot
Date Begun June 28 1987
Date Finished June 30 1987
Core Stored At Logan Core Racks

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0 - 12.80		casing.		
12.80 - 13.60		ALTERED GRANODIORITE - grey white porphyritic pegmatitic granodiorite - strong brown - yellow clay alteration - moderate Fe and Mn oxide along fractures -		
13.60 - 17.10		MUSCOVITE BIOTITE QUARTZ CHLORITE SCHIST - moderate Fe + Mn oxide along fractures - minor brown yellow clay - schistosity ∢ 20° - possible xenolith - irregularly shaped contact with Granodiorite		
17.10 - 38.00		GRANODIORITE - grey white pegmatitic porphyritic granodiorite w/ minor medium grained equigranular intervals - minor Fe-Ox along fractures - minor sericitic alteration - common (1/2m) 1-5mm wide Qz Py veinlets - dominant core angle of veinlets is 20°		
21.20 - 22.70		- medium grained equigranular interval		
27.00 - 28.00		- graphic quartz intergrowths within feldspar		
32.77 - 32.97		- schist xenolith - foliation ∢ 20° - contact ∢ 45°		
35.00 - 37.00		- medium grained equigranular interval		

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 3 of 15
Logged by P. Dontesloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
38.00 - 39.30		MUSCOVITE BIOTITE QUARTZ SCHIST - moderate Fe-Ox stained on rock - much yellow brown clay in rock (15% of rock) - foliation ∠ 30° - contact ∠ 45° - minor (1/10 cm) 1-5mm wide Qz Py veinlets parallel to foliation		
39.30 - 91.80		ALTERED GRANODIORITE - grey white porphyritic pegmatitic granodiorite w/ minor medium grained equigranular intervals - moderate green yellow clay alteration along fractures - minor sericitic alteration - moderate Fe-Ox along fractures		
39.30 - 41.10		- interval w/ strong green yellow clay alteration (15% of rock)		
41.90		0-5mm wide Qz Py veinlet w/ much Fe-Ox ∠ 10°		
42.60 - 43.30		- schist xenolith - foliation ∠ 25° - contact ∠?		
47.20 - 50.00		- increase in amount of green yellow clay alteration		
48.50 - 51.00		- interval w/ graphic quartz intergrowths within feldspar		
55.00 - 56.50		interval w/ graphic quartz intergrowths within feldspar		

CORDILLERAN ENGINEERING LIM .D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 15
Angle of Hole | % Recovery | Logged by P. Dontenwill
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
55.70		2mm wide Py veinlet - much Fe-Ox @ 15°		
59.70		" " " " " " " "		
58.20 - 60.00		- medium grained equigranular interval		
64.00 - 64.50		- minor garnet grains (< 1mm dia)		
65.45 - 65.95		- schist xenolith - foliation @ 15° - contact @ 65°		
69.00 - 77.00		- minor chlorite alteration - decrease in amount of clay alteration - minor Fe-Ox along fractures		
78.30 - 80.00		- interval w/ graphic quartz intergrowths		
82.80 - 84.50		- medium grained equigranular interval		
91.15 - 91.34		- schist xenolith - foliation @ 15° - irregularly shaped contact		
91.65 - 91.65		15% garnet grains in rock		
91.80 - 93.67		QUARTZ BIOTITE MUSCOVITE SCHIST		
		- rock is partially silicified - foliation @ 15° - irregularly shaped contact		
		- probable xenolith		
93.67 - 102.98		ALTERED GRANODIORITE		
		- light grey porphyritic pegmatitic granodiorite w/ minor medium grained equigranular intervals - minor chloritic and yellow brown clay alteration - minor (1/2%)		

CORDILLERAN ENGINEERING LIM .D — DIAMOND DRILL RECORD

PROPERTY Rogan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 5 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		1-5mm wide Qz-Py veinlets - the dominant core angle of these veinlets is 20°		
96.20-96.60		- interval w/ graphic intergrowths within feldspar		
98.35		- 5mm wide fracture w/ green yellow gouge ∠ 60°		
100.20-100.10		- schist xenolith - foliation ∠ 20° - contact ∠ 20°		
100.50-102.60		- medium grained equigranular interval		
102.98-107.30		MUSCOVITE BIOTITE QUARTZ SCHIST		
		- rock contains 5% green brown clay - moderate Fe-Ox stained on rock - minor (1/1m) 1-5mm wide Qz-Py veinlets parallel to foliations - foliation ∠ 20° - contact ∠ 20° - minor Mn-oxide		
105.30-105.50		- pegmatite interval		
106.00-106.25		" "		
107.30-152.12		ALTERED GRANODIORITE		
		- light green grey porphyritic pegmatitic granodiorite w/ minor medium grained equigranular intervals - minor chloritic and yellow brown clay alteration		

CORDILLERAN ENGINEERING LIM :D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 15
Angle of Hole ..... % Recovery ..... Logged by P. Donkerlaat
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
107.30 - 111.00		- minor Fe-Ox along fractures in rock - moderate chloritic and yellow brown clay alteration		
110.00 - 119.00		- interval w/ graphic texture - quartz intergrowths within feldspar		
116.50		1.5cm dia irregularly shaped blob of garnet grains		
123.20 - 125.00		- medium grained equigranular interval		
124.50		- 2mm wide py veinlet w/ much Fe-Ox ∠15°		
125.00 - 125.15		- schist xenolith - foliation ∠20° - irregularly shaped contact		
128.50 - 129.00		- ≤1% Garnet grains in rock		
133.00 - 134.00		- medium grained equigranular interval		
134.00 - 134.90		- schist xenolith - foliation ∠20° - irregularly shaped contact		
136.50 - 137.50		- interval w/ graphic quartz intergrowths		
142.00 - 143.00		- medium grained equigranular interval		
147.80 - 148.60		" " " "		
149.50 - 150.60		- interval w/ graphic quartz intergrowths		
151.00 - 152.12		- interval w/ strong chloritic (+epidote) alteration		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 7 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
152.12–158.70		SEVERELY ALTERED GRANODIORITE - pale yellow green medium to coarse grained porphyritic granodiorite - strong yellow green clay alteration (30% of rock) - strong chloritic (epidote) alteration - moderate sericitic alteration - rock is very soft due to the high clay content - possible hanging wall fault for the mineralized zone		
158.70–163.30		ALTERED GRANODIORITE - green medium grained equigranular granodiorite - rock is partially silicified and contains much quartz flooding (30% quartz in rock) - strong chloritic alteration - minor sericitic alteration - 15% Py, 8% Sp, and 3% as Py within Quartz in this rock		
163.00–163.30		- pale grey green aphinitic strongly silicified rock - siliceous dyke?		
163.30–166.50		QUARTZ SPHALERITE ANKERITE PYRITE ARSENOPYRITE VEIN Quartz vein w= 20% Sp, 12% Py and 8% As Py - vein is cut by many (1/5cm) 1mm-2cm wide cream colored Ankerite veins - the dominant core angle of the veins is 65° - contact w/ granodiorite?		

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of 15
Logged by P. Montsion
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
166.50 – 182.65		ALTERED GRANODIORITE - pale green medium grained equigranular granodiorite - strong chloritic alteration - moderate sericitic alteration - minor brown - yellow clay alteration - rock is partially silicified - degree of silicification decreases downhole - rock contains a moderate amount (1/10cm) of 1-5mm wide Quartz Sphalerite Ankerite veinlets – ≤ 2% disseminated Sp (≤1mm dia grains) - dominant core angle of veinlets is 50° - minor Py, Cpy and Au Py in veinlets		
174.65		- 4cm wide Qz vn @ 5% Sp ∠50°		
174.95		- 3cm wide Qz vn @ 8% Sp ∠50°		
176.00 – 177.60		- interval of much clay alteration (25% clay in rock)		
179.37 – 179.54		Quartz Ankerite vein @ 35% Sp and 4% Cpy		
181.30 – 182.65		- increase in silicification - zone of quartz flooding (15% Qz in rock)		

CORDILLERAN ENGINEERING LI ED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 9 of 15
Logged by P. Dankerslaat
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
182.45-185.75		SULPHIDE BEARING BRECCIA - matrix consisting of quartz, green-grey clay, sericite chlorite and sulphides in 60% 5mm-2cm dia subangular clasts of quartz and sulphide - breccia contains 10% Sp, 12% Py and 4% As Py - contact in Granodiorite @ 60°?		
185.75-203.90		ALTERED GRANODIORITE - pale green medium grained equigranular granodiorite - strong chloritic alteration - moderate brown green clay alteration - minor sericitic alteration - moderate amount (1/2 0 cm) of Qz-Sp-Ank veinlets (1mm-1cm wide) - minor Py, Cpy and As Py in veinlets		
187.05-187.15		Quartz vein in 90% Sp and 20% Py @ 70°		
187.50-189.50		increase in amount of chlorite alteration		
189.95		-6cm wide Qz vein in 60% Sp and 15% Py - @ 40°		
190.70-195.50		- interval in minor Quartz flooding and silicification		

CORDILLERAN ENGINEERING LI[illegible]ED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 10 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
157.00 - 158.00		hanging wall fault	47765	1.00	<0.02	0.05		
158.00 - 159.00		" " "	47766	1.00	<0.02	0.13		
159.00 - 160.00		stockwork mineralization	47767	1.00	0.10	1.40	↑ ✓	↑
160.00 - 161.00		" "	47768	1.00	0.33	3.28	✓	
161.00 - 162.00		" "	47769	1.00	0.26	3.95	✓	
162.00 - 163.00		" "	47770	1.00	0.48	5.16	✓	
163.00 - 164.00		Quartz Sphalerite Arsenite Pyrite Arsenopyrite vein	47771	1.00	0.67	6.08	✓	
164.00 - 165.00		" "	47772	1.00	1.92	13.79	✓	
165.00 - 166.00		" "	47773	1.00	0.83	9.20	✓	
166.00 - 167.00		stockwork mineralization	47774	1.00	0.79	10.30	✓	
167.00 - 168.00		" "	47775	1.00	0.07	1.70	✓	
168.00 - 169.00		" "	47776	1.00	0.13	1.30	✓	
169.00 - 171.00		" "	47777	2.00	0.07	1.44	↓	↑
171.00 - 173.00		" "	47778	2.00	0.03	0.36		
173.00 - 175.00		" "	47779	2.00	0.14	2.12	✓	
175.00 - 177.00		" "	47780	2.00	0.03	0.92	✓	
177.00 - 179.00		" "	47781	2.00	0.02	0.39	✓	
179.00 - 181.00		" "	47782	2.00	0.09	2.52	✓	
181.00 - 183.00		" "	47783	2.00	0.06	0.80	✓	
183.00 - 185.00		sulphide bearing breccia	47784	2.00	0.14	1.28	✓	
185.00 - 187.00		stockwork mineralization	47785	2.00	0.16	1.12	✓	
187.00 - 189.00		" "	47786	2.00	0.27	1.68	✓	

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 11 of 15
Angle of Hole | % Recovery | Logged by P. Dankevlost
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
191.00 - 196.00		- interval w strong clay alteration (15% of rock)		
199.90 - 199.96		- Quartz vein w 12% Sp and 10% Py ∠55°		
200.05 - 200.15		- Quartz vein w 25% Py ∠55°		
200.47 - 200.68		- Quartz vein w 20% Py and 15% Po ∠60°		
200.68 - 203.90		- intervals w strong pale green clay alteration and moderate silicification and quartz flooding - 15% Qz and 10% clay in rock - core is blocky. ≤2% As Py in Rock (within Quartz)		
203.90 - 209.30		SULPHIDE BEARING BRECCIA - matrix consisting of Quartz, chlorite, sericite, clay and sulphides with 60% 5mm - 2cm dia subangular clasts consisting of Quartz, sulphides and clay - Breccia contains 8% Sp, 5% Py and 5% As Py - core is broken up		
209.30 - 220.20		FELDSPAR QUARTZ PORPHRY - grey green fine grained groundmass with w 35% rectangular feldspar phenocrysts (≤ 3mm dia) and 15% quartz eye phenocrysts (≤ 2mm dia) - rock is partially silicified		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Rogan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 12 of 15

Angle of Hole ..... % Recovery ..... Logged by P. Donkersloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		and contains a moderate amount of chlorite - minor yellow brown clay along fractures - rock contains many calcite filled hairline fractures						
209.30 - 209.50		- 30% green grey clay in rock						
214.55 - 214.80		- gouge - grey clay w 10% 1-5mm dia fragments of feldspar quartz porphyry - ∠60°?						
214.80 - 219.00		- light grey interval w strong clay alteration (15% clay in rock) - core is blocky - Ca-filled fractures are absent - minor (1/30 cm) 1-5mm wide quartz veinlets - the dominant core angle of the veinlets is 55° - trace amounts of Py in veinlets						
219.00 - 220.20		- trace amounts of Sp in Ca veinlets						
220.20 - 224.90		SEVERELY ALTERED GRANODIORITE - pale grey green calcareous clay w 35% quartz, feldspar and mus. grains (≤2mm dia) and 7% 5mm - 2cm dia remnant granodiorite fragments - contact ∠55° - footwall fault?						

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 13 of 15
Angle of Hole ..... % Recovery ..... Logged by P. Dankerslaat
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
189.00-191.00		stockwork mineralization	47787	2.00	0.16	1.84	✓	
191.00-193.00		〃 〃	47788	2.00	0.10	1.84	✓	
193.00-195.00		〃 〃	47789	2.00	0.21	1.80	✓	
195.00-197.00		〃 〃	47790	2.00	0.10	1.40	✓	
197.00-199.00		〃 〃	47791	2.00	0.05	1.04	✓	↓
199.00-201.00		〃 〃	47792	2.00	0.09	0.80		
201.00-203.00		〃 〃	47793	2.00	0.08	0.40		
203.00-205.00		〃 〃	47794	2.00	0.06	0.46		
205.00-207.00		sulphide bearing breccia	47795	2.00	0.15	0.62		
207.00-209.00		〃 〃 〃	47796	2.00	<0.02	0.46		
209.00-211.00		feldspar quartz porphyry	47797	2.00	<0.02	0.18		
211.00-213.00		〃 〃 〃	47798	2.00	<0.02	0.01		
213.00-215.00		〃 〃 〃	47799	2.00	<0.02	0.02		
215.00-217.00		〃 〃 〃	47800	2.00	<0.02	0.06		
217.00-219.00		〃 〃 〃	47801	2.00	<0.02	0.12		
219.00-221.00		〃 〃 〃	47802	2.00	<0.02	0.17		
221.00-225.00		footwall fault	47803	2.00	<0.02	0.04		
223.00-225.00		〃 〃	47804	2.00	<0.02	0.10		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 14 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
224.90 - 242.10		ALTERED GRANODIORITE - pale grey green porphyritic pegmatitic granodiorite moderate chloritic alteration - minor sericitic and brown yellow clay alteration - rock is cut by minor (1/3 m) 1-5mm wide quartz calcite ankerite sphalerite veinlets - the dominant core angle of these veinlets is 55°		
224.90 - 226.30		- interval w strong green yellow clay alteration		
226.00 - 226.30		- strong chloritic alteration		
227.70 - 228.50		" " "		
228.80 - 229.10		- muscovite chlorite quartz feldspar schist - possibly foliated granodiorite - foliation ∠30° - irregularly shaped contact		
229.80 - 233.20		- strong chloritic alteration		
233.50 - 242.10		- interval w strong chloritic (epidote) alteration and increase in amount of clay alteration		
237.95		5 cm wide anhydrite vein w/ 40% Gn and 20% Sp ∠60°		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-21

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 15 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
242.40 - 247.49		MUSCOVITE CHLORITE QUARTZ SCHIST - foliation ∠20° - contact ∠20° - foliated granodiorite? or xenolith?						
247.49		EOH						

CORDILLERAN ENGINEERING LIM D — DIAMOND DRILL RECORD

PROPERTY Rogam HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 2 of 9
Angle of Hole | % Recovery | Logged by P. Donkersloot
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0 - 13.11		Overburden		
13.11 - 16.35		ALTERED GRANODIORITE - light brown grey medium grained equigranular granodiorite - much Fe-Ox stained on rock - rock is partially silicified. minor Mn Oxide along fractures - moderate sericitic and yellow brown clay alteration - core is blocky and slightly buggy (due to weathering)		
15.20 - 15.30		brown yellow clay c. 60% 1-2mm dia feldspar and quartz fragments - ∢ 40°		
16.35 - 17.75		MUSCOVITE QUARTZ FELDSPAR CHLORITIC SCHIST - pale green grey - schistosity ∢ 30° - contact ∢ 30° - trace Sp along Qz bands - foliated granodiorite		
17.75 - 24.40		ALTERED GRANODIORITE - pale grey green medium grained equigranular granodiorite - 20% tan coloured (siderite or rhodonite?) in rock - strong chlorite and epidote alteration - rock is partially silicified - moderate sericitic and light brown white clay alteration		

CORDILLERAN ENGINEERING LIM. **D — DIAMOND DRILL RECORD**

PROPERTY Logan HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 9

Angle of Hole ..... % Recovery ..... Logged by P. Dontsloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
19.95–20.40		7% 1mm–1cm dia Sp clots in rock		
24.50–24.40		- 7% 1–5mm dia Qtz clots & garnet grains in rock		
24.40–29.60		SEVERELY ALTERED GRANODIORITE		
		- tan coloured clay w 30% 1–3mm dia quartz feldspar and muscovite grains and 10% 5mm–2cm dia remnant granodiorite grains – minor 5mm–1cm wide bands of grey carbonaceous clay @ 70° – contact? – trace Py grains in clay – hanging wall fault		
29.30–29.60		50% grey carbonaceous clay		
29.60–18.10		FELSITE DYKE		
		- pale green aphanitic felsic dyke w 5% 1–2mm dia quartz eyes – rock is cut by many (2/5cm) 1–5mm wide Quartz and tan coloured (carbonate or siderite?) veinlets – veinlets have no preferred orientation – ≤ 1% Sp in rock (within veinlets) and trace Py – moderate chloritic alteration – Qz veinlets are moderately vuggy		

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Dogan HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 1 of 9

Angle of Hole ..... % Recovery ..... Logged by P. Donkersloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
32.00-33.00		15% green clay in rock						
39.95-40.00		8% Py in rock (in veins)						
48.10-50.90		SULPHIDE BEARING BRECCIA						
		- Quartz cement with 40% 5mm-3cm dia subangular clasts of Quartz-Chalcedony, felsite and sulphides - breccia contains 10% Py + Sp and 1% As Py - strong pale green clay alteration in clasts - core is blocky & ?						
50.90-56.45		FELSITE DYKE						
		- pale green aphanitic felsic dyke with 3% 1mm dia quartz eyes - rock is cut by many (1-10cm) Quartz and tan coloured (ankerite or siderite) veinlets - dominant core angle of the veinlets is 60° - ≤2% Sp in rock (within veinlets) - strong chloritic alteration - minor green clay alteration						
51.20-52.15		- 15% green clay in rock						
54.64-54.68		interval in two 5mm wide bx veins that contain 60% Py and 30% Sp & 40°						
56.45		felsite - Bx contact & 45°						

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Rogers HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 5 of 9
Logged by P. Dankewicz
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
56.45-84.30		ALTERED GRANODIORITE		
		- pale green medium to coarse grained porphyritic granodiorite - strong pale green clay alteration (~10% of rock)		
		- strong chlorite-epidote alteration		
		- minor sericitic alteration - minor (1/2%)		
		1-5mm wide Qz-carbonate veinlets in rock		
		- dominant core angle of veinlets is 50°		
		- ≤2% Sp disseminated and along fractures in rock - trace Py in rock		
56.95-57.05		- green clay w/ 40% 1mm-1cm dia granodiorite fragments - ∠70°		
58.40-58.60		- 10% green clay in rock		
61.80-62.60		- 30% green clay in rock		
62.00-64.00		- ≤5% Sp in rock		
64.30-68.00		- 35% yellow green clay in rock		
		- core is rubbly		
71.68		- 7mm wide Qz vein w/ 10% Py and 20% Sp ∠50°		
72.95		- 5mm wide Qz vein w/ 40% Sp and 20% Py ∠15°		
73.80		- 1 cm wide Qz vein w/ 50% Py and 20% Sp ∠65°		
74.33-74.38		- pale green clay w/ 40% 1-5mm dia granodiorite fragments - ∠65° (fault)		

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Morgan HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 6 of 9
Logged by P. Dankewlost
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
76.35-76.85		-muscovite quartz chlorite feldspar schist - schistosity ∠30° - irregularly shaped contact - core is rubbly		
77.85		- 7m/m wide Qz vein w 40% Sp ∠35°		
79.45		- 1cm wide Qz vein w 50% Sp and 7% Py ∠70°		
80.00-80.40		-muscovite quartz chlorite feldspar schist - foliation ∠40° - remainder		
80.30-80.70		- quartz flooded into rock w 10% Sp and 10% Py		
82.30-84.30		- 15% yellow white clay in 5m/m - 10cm wide intervals within granodiorite - core angle of clay intervals is 60°		
84.30-98.15		SEVERELY ALTERED GRANODIORITE - pale green white medium to coarse grained granodiorite w 35% pale green white clay - moderate chloritic alteration - minor sericitic alteration - contact ∠60° - footwall fault		
84.30-84.60		65% pale green white clay		
87.20-87.35		75% white clay		
91.10-91.50		65% pale green white clay		
97.69-98.15		- 60% pale green white clay and 15% grey green slightly carbonaceous clay		

CORDILLERAN ENGINEERING LIMI) — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 7 of 9
Logged by P. Dankowski
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn PCT		
42.00-44.00		felsite to stockwork mineralization	48134	2.00	<0.02	0.36		
44.00-46.00		" " "	48135	2.00	<0.02	0.73		
46.00-48.00		" " "	48136	2.00	0.02	0.76		
48.00-50.00		sulphide bearing breccia	48137	2.00	<0.02	0.22		
50.00-52.00		felsite to stockwork mineralization	48138	2.00	<0.02	0.89		
52.00-54.00		" " "	48139	2.00	<0.02	0.89		
54.00-56.00		" " "	48140	2.00	<0.02	0.69		
56.00-58.00		granodiorite to stockwork mineralization	48141	2.00	<0.02	0.35		
58.00-60.00		" " "	48142	2.00	<0.02	0.20		
60.00-62.00		" " "	48143	2.00	<0.02	0.20		
62.00-64.00		" " "	48144	2.00	0.04	0.66		
64.00-66.00		" " "	48145	2.00	0.02	0.16		
66.00-68.00		" " "	48146	2.00	<0.02	0.02		
68.00-70.00		" " "	48147	2.00	<0.02	0.06		
70.00-72.00		" " "	48148	2.00	<0.02	0.25		
72.00-74.00		" "	48149	2.00	0.17	0.92		
74.00-76.00		" "	48150	2.00	0.12	0.73		
76.00-78.00		" "	48151	2.00	0.08	0.45		
78.00-80.00		" "	48152	2.00	0.08	1.16		
80.00-81.00		" "	48153	1.00	0.83	15.41		
81.00-82.00		" "	48154	1.00	0.04	0.45		
82.00-84.00		" "	48155	2.00	<0.02	0.18		

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of 9
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
98.15-105.30		ALTERED GRANODIORITE -pale grey green medium grained equigranular granodiorite - moderate sericitic and chloritic alteration - moderate pale green white clay alteration - trace amount of 5p oldg fractures and disseminated in rock		
101.50-101.65		- 2% Py in rock (within bleached Qz filled fractures		
105.30-106.75		SEVERELY ALTERED GRANODIORITE - pale green white clay (~ 40% feldspar quartz and muscovite grains (1-2mm dia) - interval contains minor 5mm-1cm wide bands of light grey carbonaceous clay @ 60° - contact @ 60°		
106.75-138.07		ALTERED GRANODIORITE -pale grey green medium grained equigranular granodiorite with minor pegmatitic intervals - strong pale green white clay alteration (10% of rock) - moderate chloritic and sericitic alteration		

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Isogam HOLE No. L-27

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 9 of 9
Logged by P. VanKeulen
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
109.50-111.50		- minor (1/20 cm) 5mm wide clay filled fractures @ 45°						
110.80-111.40		- 20% clay along fractures in rock						
115.50-122.00		- pegmatite						
117.50-119.00		<1% Sp and Py along fractures in rock						
120.70-121.50		- 20% yellow white clay in rock						
123.30-124.60		- pegmatitic interval w/ graphic quartz intergrowths						
125.00-126.00		- pegmatitic interval						
127.75-128.70		- pegmatitic interval						
128.70-129.25		- 20% pale green white clay in rock						
129.25-129.60		- pegmatitic interval						
129.70-131.10		- <1% Sp and Py along hairline fractures in rock						
131.00-132.10		- pegmatitic interval						
132.40-133.50		- trace Py and Sp along fractures in rock						
135.00-135.10		- 2% Garnet grains in rock						
134.90-138.07		- pegmatitic interval w/ graphic quartz intergrowths						
138.07		EOH						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~(m)	Angle	Azimuth
143.87	-62.5°	136°
79.86	-62°	135°
15.85	-60.5°	144°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 2
Section 410 W
Bearing 145°

Total Depth 148.44 m
% Recovery 89 %
Elev. Collar 1422 m
Latitude
Departure

Sheet No. 2 of 11
Logged by K. MEIDAL
Date Begun JULY 11 (N.), 1987
Date Finished JULY 15 (D.) 1987
Core Stored At LOGAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0-1.83		OVERBURDEN		
1.83-5.50		GRANODIORITE -light grey, coarse grained, equigranular granodiorite - minor Mn-Ox, trace Fe-Ox -low white clay and sericitic alteration		
5.50-6.86		SCHIST - grey muscovite, biotite, qtz, feldspar schist -schistocity ∠ 20° contact ∠ ? -moderate Fe-Ox along foliation surfaces		
6.86-10.31		GRANODIORITE -light grey, coarse grained inequigranular granodiorite - minor Mn-Ox, Fe-Ox -low sericitic and white clay alteration		
10.31-14.35		SCHIST - grey-brown, muscovite-biotite-qtz-fsp schist - schistocity ∠ 25°, contact ∠ 25° - moderate Fe-Ox > Mn-Ox along foliations		
11.58-12.30		-zone of grey, coarse grained inequigranular granodiorite w/ low MnOx, trace Fe-Ox,		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 11
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- low white clay alteration						
14.35-25.29		GRANODIORITE						
		- light grey, coarse grained, inequigranular diorite						
		- minor Mn-Ox, trace Fe-Ox						
		- low sericitic and white clay alteration						
15.57-16.63		- pegmatitic texture						
18.80-19.21		- dark grey, muscovite - biotite - feldspar, qtz schist - possible xenolith						
"		- schistocity ∢ 35°, contact ∢ 40°						
20.53-21.05		- pegmatitic granodiorite						
21.44-22.83		- dark grey-brown muscovite - biotite - fsp - qtz schist with moderate Fe-Ox > Mn Ox.						
		- schistocity ∢ 30°						
		- it is interbedded with some zones of granodiorite up to 2.5 cm wide (1/15 cm) contact ∢'s 30°.						
23.36-23.74		- grey, fine-grained, equigranular granodiorite interval, contact ∢ 30°.						
23.74-25.29		- pegmatitic texture						
25.29-27.97		SCHIST						
		- grey-brown, muscovite - biotite - fsp - qtz schist						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 4 of 11
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- moderate Fe-Ox > Mn-Ox along foliated surfaces		
		- schistocity ∠ 30° contact ∠ ?		
27.97 - 33.22		GRANODIORITE		
		- grey, coarse grained, inequigranular granodiorite		
		- low Mn-Ox, low Fe-Ox; increasing slightly downhole		
		- low sericitic and yellow brown clay alteration		
27.97 - 28.89		- pegmatitic texture		
33.22 - 35.50		SCHIST		
		- rust brown, muscovite - qtz - fsp - biotite Schist - possible xenolith ?		
		- strong Fe-Ox, moderate Mn-Ox along foliations		
		- schistocity ∠ 30° contact ∠ ?		
35.50 - 38.77		GRANODIORITE		
		- light grey, pegmatitic decreasing to coarse grained, inequigranular granodiorite downhole		
		- minor Mn-Ox > Fe-Ox.		
		- low yellow brown clay alteration along fractured surfaces.		
		- low sericitic alteration		
35.66 - 37.19		- 20% recovery		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
38.77-40.92		SCHIST		
		-dark grey, quartz-fsp-muscovite-biotite schist		
		- low Fe-Ox, Mn Ox along foliations		
		-trace chloritic ± epidote alteration		
		-fsp is altered to light green clay.		
		-schistocity ∡ 25°, contact ∡ 30°		
		-degree of foliation increases from weak to strong downhole.		
40.92-76.20		GRANODIORITE		
		-light grey, pegmatitic granodiorite up to 52.00m:		
		-low Mn Ox, trace Fe-Ox		
		-moderate sericitic alteration		
		-low white clay alteration		
		-trace chloritic ± epidote alteration to negligible		
43.37-43.76		-interval w/ graphic granite texture		
51.16-51.78		-zone with minor Fe-Ox		
52.00-		-texture change to coarse grained, inequigranular intermixing with equigranular granodiorite		
64.07-64.29		-low chloritic alteration + epidote		
64.33-66.42		-low Fe-Ox ≈ Mn Ox alteration		

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 6 of 11
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
66.83-66.95		-pegmatitic zone w/ 1% disseminated red garnets, 1mm dia.		
67.17-69.19		- low Fe-Ox = Mn Ox -low chloritic + epidote alteration -low clay alteration is yellow brown to light green.		
69.61-69.75		- very fine grained, light grey granodiorite? -contact @ 10° - contact has trace red disseminated garnets <1mm dia.		
72.24-72.68		- 92% white feldspar w/ 5% grey quartz and 3% muscovite		
74.20-74.56		- granodiorite has trace pink clay alteration		
74.56-76.20		-pegmatitic granodiorite w/ trace chloritic + epidote alteration		
75.13-76.20		-rubble pieces, 10% recovery		
76.20-77.68		STRONGLY ALTERED GRANODIORITE - light green-rust, coarse grained inequigranular granodiorite -moderate Fe-Ox, trace Mn-Ox - moderate chloritic alteration		

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 7 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-up to 77.11 m, rock is altered to 75% green-rust clay		
		-after 77.11 m, moderate clay alteration		
77.68 - 121.55		GRANODIORITE		
		-grey brown, coarse grained inequigranular granodiorite		
		-colour is due to low Fe-Ox = Mn Ox which decreases downhole to trace and then no Fe-Ox at 85.74 m. where rock becomes light grey.		
		-low white clay alteration, trace epidote?		
		-moderate sericitic alteration		
80.95 - 84.12		-pegmatitic granodiorite with large zones of graphic granite texture.		
89.15 - 89.63		-zone w/ moderate white clay alteration		
89.63 - 90.94		-pegmatitic texture.		
95.22 - 95.94		-pegmatitic zone with trace disseminated red garnet ≤ 1 cm dia.		
98.63 - 100.30		-pegmatitic granodiorite w/ trace Fe-Ox, Mn Ox		
		- trace epidote ± chloritic alteration		
100.30 - 110.64		-low chloritic alteration		
		-trace Fe Ox = Mn Ox		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-4-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-rock is brown grey colour		
100.71-100.82		- fracture filled with yellow brown (Fe-Ox, Mn-Ox'd) clay @ 30° >2 cm wide		
103.78-104.51		-pegmatitic texture		
109.82-110.64		- pegmatitic texture		
111.75-112.17		- zone with low-moderate pink clay alteration.		
113.17-114.99		-pegmatitic with some graphic granite texture -trace chloritic alteration -trace Fe-Ox, Mn-Ox		
114.99-115.74		-grey brown granodiorite due to low Fe-Ox, Mn-Ox		
115.74-119.60		-pegmatitic texture -low chloritic alteration -moderately low whitish clay alteration -minor Fe-Ox, Mn-Ox. -trace disseminated red garnet <1 cm dia.		
119.60-121.55		-moderate green-white clay alteration -minor Mn-Ox		
121.55-123.00		STRONGLY ALTERED GRANODIORITE - gouge zone of 85% light brown clay		

CORDILLERAN ENGINEERING L[illegible]TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 9 of 11

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		-contact ∠ ?						
		-after 122.53 m, highly micaceous w/ foliation ∠ 45°.						
123.00 - 130.61		ALTERED GRANODIORITE						
		-grey, coarse grained, inequigranular granodiorite						
		-low chloritic alteration						
		-moderate sericitic alteration						
		-generally low green-white clay alteration to orangey white alteration.						
		-trace Mn-Ox						
124.46 - 125.12		-moderate light green clay alteration						
		-low Mn-Ox						
125.12 - 125.73		-green, strongly foliated [illegible]						
		foliated muscovite-chlorite-qtz schist						
		-schistosity ∠ 20°, contact ∠ ?						
		-possible xenolith.						
126.09 - 126.64		-dark grey, muscovite-biotite-qtz schist						
		-schistosity ∠ 50°						
		-contains minor Fe-Ox, Mn-Ox along foliated surfaces						
128.33 - 128.90		-weakly foliated, dark grey quartz-muscovite-						

CORDILLERAN ENGINEERING L[illegible]TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 10 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		feldspar-biotite schist (xenolith or granodiorite?)		
		- schistocity ∠ 50° contact ∠?		
129.25-129.84		- grey, weakly foliated qtz, fsp-muscovite-biotite schist		
		- schistocity ∠ 50° contact ∠?		
		- moderate Mn-Ox, trace Fe-Ox along fractured surfaces		
129.84-130.61		- granodiorite has minor Fe-Ox along few fractured surfaces (1/25 cm)		
130.61-134.04		SCHIST		
		- grey, weakly foliated quartz-feldspar-muscovite schist (possible xenolith)		
		- schistocity ∠ 50°		
		- minor Fe-Ox, Mn-Ox along foliated surfaces		
		- low chloritic ± epidote clay alteration		
131.71-132.44		- interval of grey, coarse grained, inequigranular granodiorite with low Mn-Ox, trace Fe-Ox and low chloritic and white clay alteration.		
134.04-148.44		ALTERED GRANODIORITE		
		- light green-grey coarse grained inequigranular granodiorite		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. D.D.H. 87-L-28

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 11 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		-moderate Mn-Ox, low Fe-Ox along fractures						
		-moderate light green and light orange clay along fractures @ 0° common.						
		-low chloritic + epidote alteration-						
135.45-136.20		-grey, weakly foliated quartz-muscovite, feldspar schist (xenolith?)						
		-schistocity @ 50°						
		- trace Fe-Ox, Mn Ox and chloritic alteration						
136.20-138.11		-pegmatitic granodiorite with some graphic granite texture						
141.16-142.07		-interval has moderate Fe-Ox						
144.53-145.54		-pegmatitic texture						
148.44		EOH						

CORDILLERAN ENGINEERING LIM .D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
192.63	-63.5°	138°
131.67	-62°	132°
70.71	-62.5°	148°
15.85	-62°	135°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 3
Section 195 E
Bearing 145°

Total Depth 197.21 m
% Recovery 68%
Elev. Collar 1384 m
Latitude
Departure

Sheet No. 2 of 32
Logged by K. MEIDAL
Date Begun JULY 15 (N.)
Date Finished JULY 19 (D.)
Core Stored At LOGAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0-9.14		casing		
9.14-12.13		MINERALIZED QUARTZ VEIN BRECCIA - dark grey, strongly silicified section of various texture and mineralogy		
9.14-9.31		- silicified light green granodiorite with low Fe-Ox, low chloritic alteration - contact @ 40°		
9.31-9.46		- dark purplish-grey sulphide? - quartz matrix with rounded qtz clasts ≤ 1mm dia. - 20% clasts - contains Fe-Ox along fractures (1/1cm) @ 60° common - contact @ 50°		
9.46-9.91		- white qtz matrix with sulphide clasts (Py + trace AsPy, Sp?) - clasts are 65% of rock, sub-angular, ≤ 3 cm wide - quartz veins @ 50°		
9.91-10.45		- dark grey sulphide - quartz matrix with sub-angular silicified felsite clasts changing to rounded white qtz clasts downhole - clasts are 50% of rock		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 3 of 32
Angle of Hole | % Recovery | Logged by K. MEIDEL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- trace Fe-Ox						
10.45-11.60		- zone is 75% quartz with sub-angular sulphide clasts — the edges blend with the quartz and are up to 3 cm dia						
		- up to 11.01 m, low recovery and moderate Fe-Ox						
		- low Fe-Ox through rest of zone along fractures (1/5 cm) ≈ ∠ 70°						
		- trace lime-green clay along fractures						
11.60-12.13		- silicified granodiorite w/ moderate Fe-Ox and 1% sulphide in quartz						
9.00-10.00		mineralized quartz vein breccia	48310	1.00	0.38	0.60		
10.00-11.00		"	48311	1.00	0.60	0.99		
11.00-12.00		"	48312	1.00	0.46	0.33		
12.13-14.02		FELSITE DYKE						
		- silicified, olive green felsite dyke with strong Fe-Ox.						
		- highly fractured (>1/1 cm) at random angles						
12.00-13.00		felsite dyke w/ Fe-Ox	48313	1.00	0.12	0.06		
13.00-14.00		"	48314	1.00	0.09	0.04		
14.02-16.28		ALTERED GRANODIORITE						
		- pale green, medium grained, equigranular granodiorite						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH-87-L-3.1

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-strong, decreasing downhole to moderate, Fe-Ox						
		-moderate sericitic, low chloritic alteration						
		-low yellow brown clay alteration						
15.10-15.24		- severe beige clay alteration, low recovery 50%						
15.24-15.34		- QV, 6 cm wide, ∠ 30° w/ 4% Sp contained along bands ∠30°.						
15.61-16.04		-interval contains quartz veinlets ('/10 cm) ≤ 3 cm wide, ∠ 35°-60°						
		-trace Sp, Py						
		- small Fe-Ox'd vugs						
14.00-15.00		altered granodiorite w/ minor stockwork min.	48315	1.00	0.10	0.01		
15.00-16.00		"	48316	1.00	0.10	0.02		
16.28-18.00		STRONGLY ALTERED GRANODIORITE						
		-rust colored, medium grained, inequigranular granodiorite altered to 75% clay						
		-strong Fe-Ox						
		-contact ∠ 40°						
		-broken with low recovery 30%						
16.00-17.00		strongly altered granodiorite w/ Fe-Ox	48317	1.00	0.11	0.02		
17.00-18.00		"	48318	1.00	0.44	0.58		
18.00-19.00		MINERALIZED QUARTZ VEIN						
		-milky white quartz vein w/ 7% Sp, trace Py,						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		trace CPy and AsPy.						
		-low Fe-Ox						
18.00-19.00		mineralized quartz vein	48319	1.00	1.27	2.07		
19.00-20.00		MINERALIZED SCHIST						
		-light green, muscovite - quartz - feldspar schist						
		-schistosity ∠35°						
		-possibly metamorphosed granodiorite or xenolith						
		-contains pyritic quartz veinlets along foliation and ∠15° common ('/3 cm avg.)						
		-most are ≤ 3mm wide although a few sections are up to 1cm wide						
		-interval is 5% Py						
19.66-19.80		- strong Fe-Ox						
19.80-20.00		QV, milky white w/ 4% Sp, trace Py contained along bands ∠50°						
19.00-20.00		pyritic schist + QV w/ Sp	48320	1.00	0.46	0.13		
20.00-34.87		ALTERED GRANODIORITE						
		-light green, medium grained, equigranular granodiorite						
		- Fe-Ox variations are noted below						
		- moderate greenish white and orangy white clay alteration						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 6 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- low sericitic alteration, low chloritic alteration		
20.00 - 21.00		- moderate Fe-Ox throughout		
		- fine fractures @ 5° and @ 50° filled w/ Fe-Ox'd clay.		
21.00 - 21.95		- strong Fe-Ox'd clay alteration, 40% recovery		
21.95 - 22.50		- moderate Fe-Ox		
22.50 - 22.71		- 2% disseminated Sp and two fractures @ 0° and @ 40° with 10% Py		
		- moderate Fe-Ox		
22.71 - 22.96		- (Sp, tetrahedrite, Py) QV - contact @ 40° contains 78% Sp, 2% Py, 2% tetrahedrite		
22.96 -		- granodiorite contains 3% disseminated Sp		
23.88 - 23.97		- (Sp, galena, tetrahedrite) QV, 5 cm wide, @ 50° w/ 50% Sp, 1% galena, trace tetrahedrite		
24.09		- (Sp) QV, < 1 cm wide @ 90° w/ 45% Sp		
24.16		- (Sp) QV, 2 cm wide @ 90° w/ 10% Sp		
24.21 - 24.32		- (Sp, CPy, AsPy, Py) QV - 5% Sp, trace CPy, AsPy, Py., 8 cm wide, @ 50°.		
24.39 - 24.66		- drusy quartz veining @ 0° - 5°, 1 mm to 2.5 cm wide		
24.66 - 25.10		(Sp, AsPy, Py, CPy) QV - milky white quartz w/ 8% Sp, 5% AsPy, trace Py, CPy		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-4-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 7 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-low Fe-Ox		
25.10 - 25.59		-low Fe-Ox, mainly along fractured surfaces.		
		-1% Py in a cluster 1cm x 2cm		
26.00 - 26.08		(Sp, Py) QV w/ 1% Sp, trace Py -- vug with		
		Qtz crystals ∠ 45°		
26.08 - 26.89		-qtz veining (1/10 cm), ≤ 2 cm wide		
		w/ up to 20% Sp, trace Asp Py ∠ 40° - 60°		
26.89 - 27.08		QV w/ trace Sp ∠ 20°		
27.52 - 27.74		-green, muscovite - quartz - feldspar schist w/		
		trace disseminated Sp		
		-schistocity ∠ 5°		
28.68 - 28.78		-strong green clay alteration — 70% clay		
29.00 - 29.40		- low recovery, severe green to white clay		
		alteration		
29.40 - 29.60		-rubble zone w/ remnant qtz, trace Sp vein		
29.83 - 30.02		(Sp, Py, CPy, tet) QV w/ 70% Sp, trace Py, CPy;		
		tetrahedrite		
30.02 - 30.56		-pegmatitic w/ 4% disseminated Sp.		
30.56 - 31.00		- milky white QV w/ trace Sp, Py along		
		fractures (1/7 cm) ∠ 60°		
31.00 - 32.84		-zone has 4% disseminated Sp		
32.84 - 33.78		(Sp, Py, AsPy) QV - milky white quartz w/		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOUAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 8 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		3% Sp., trace Py, AsPy						
		-also contains 10% granodiorite						
		-contact @ 30°						
		-minor Fe-Ox						
33.95 - 34.14		-weakly foliated quartz muscovite, feldspar schist						
		-possibly schistose granodiorite						
		- schistosity @ 50°						
34.14 - 34.87		-pegmatitic texture						
20.00 - 21.00		altered granodiorite w/ stockwork mineralization	48321	1.00	0.18	0.02		
21.00 - 22.00		"	48322	1.00	0.04	0.01		
22.00 - 23.00		stockwork mineralization + mineralized QV	48323	1.00	0.96	9.46	✓	↑
23.00 - 24.00		altered granodiorite w/ stockwork mineralization	48324	1.00	1.10	2.60	✓	
24.00 - 25.00		"	48325	1.00	0.19	1.68	✓	
25.00 - 26.00		"	48326	1.00	0.09	0.88	✓	
26.00 - 27.00		"	48327	1.00	0.49	1.67	✓	
27.00 - 28.00		"	48328	1.00	0.05	0.66	✓	
28.00 - 29.00		"	48329	1.00	0.04	0.53	✓	
29.00 - 30.00		"	48330	1.00	0.42	4.70	✓	
30.00 - 31.00		"	48331	1.00	0.16	2.60		
31.00 - 32.00		"	48332	1.00	0.11	1.01	✓	
32.00 - 33.00		"	48333	1.00	0.19	1.60	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 9 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
33.00 - 34.00		altered granodiorite w/ stockwork mineralization	48334	1.00	0.27	1.12	✓	
34.87 - 38.00		STRONGLY ALTERED GRANODIORITE						
		- green, altered to 85% clay, medium grained equigranular granodiorite						
		- low recovery, 43% between 34.75 m and 36.58.						
36.51 - 36.58		(Sp) QV, 1 cm wide ∠ 30° w/ 50% Sp						
34.00 - 36.00		stockwork min + strongly altered granodiorite (50% recovery)	48335	2.00	0.04	0.89	✓	
36.00 - 38.00		strongly altered granodiorite	48336	2.00	0.05	0.55	✓	
38.00 - 72.50		ALTERED GRANODIORITE						
		- green, medium grained, inequigranular granodiorite						
		- moderately low chloritic alteration + epidote						
		- moderate green clay alteration						
		- low sericitic alteration increasing to mod at ≈ 60.30 m						
		- contains 2% disseminated Sp						
38.18 - 38.26		- (Sp) QV 5 cm wide, ∠ 50° w/ 10% Sp						
40.88 - 41.20		- (Py, AsPy, Sp) QV - milky white quartz w/ 2% Py, 1% AsPy, trace Sp.						
		- contact ∠ 40°						
42.01 - 42.22		- (Sp, Py) QV - milky white quartz w/ 70% Sp, 1% Py and trace ankerite						
		- contact ∠ 60°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 10 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
42.52-42.57		-(Sp) QV, 4 cm wide ∠ 50° w/ 15% Sp and 40% silicified granodiorite		
45.17-45.27		- strongly silicified granodiorite with banded Py (3%), Sp (2%) ∠ 30°		
45.72-46.70		-pegmatitic granodiorite		
47.36-47.75		-zone has some ankerite veinlets (1/12 cm) ∠40°		
		-trace Py		
47.95-48.56		-(Sp, Py, AsPy) QV w/ 40% Sp, 2% Py, trace AsPy and 15% silicified granodiorite ∠ 10°		
48.63-48.77		-(Sp, Py, AsPy) QV, 3 cm wide ∠ 20° w/ 3% Sp, trace Py, AsPy		
49.75-49.84		-(Sp, Py) QV, 3 cm wide, ∠ 40° w/ 15% Sp, 1% Py.		
51.06-51.36		-(Sp, Py, CPy), ∠ 20°, width? w/ 10% Sp, 2% Py, trace CPy		
51.44-52.46		- interval has some ankerite veinlets, ≤1mm wide (1/15 cm avg) ∠ 50°		
52.46-53.37		-pegmatitic texture		
55.48-55.59		-brecciated quartz vein - grey qtz clasts ≤1 cm dia, sub angular, in a white qtz		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 11 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		matrix — clasts are 80% of rock						
		- contains 3% Sp, trace CP_y						
55.64 - 57.65		-moderately silicified granodiorite w/						
		qtz veinlets (1/7 cm) ≤ 1cm wide ∠ 30°-40°						
		-contain some Sp so that interval has						
		4% Sp						
		- minor ankerite in some veins						
58.07 - 59.10		- ankerite veinlets (1/15 cm) ≤ 1mm wide						
		∠ 40°						
60.37		-(Sp, ankerite) QV w/ 15% Sp, 10% ankerite						
		2 cm wide ∠ 35°						
60.55		-(Sp) QV, 1cm wide, ∠ 40°, w/ 5% Sp,						
		trace Py						
60.58 - 60.72		-(Sp, Py, AsPy) QV 5 cm wide ∠ 10°						
		w/ 10% Sp, 2% Py, trace AsPy.						
60.99 - 61.59		-(Sp, Py, ankerite, AsPy, CP_y) QV - milky						
		white qtz with bands ∠ 15° = contact.						
		- contains 20% Sp, 4% Py, 4% ankerite,						
		1% AsPy, trace CP_y.						
62.00		-(Sp, AsPy) QV, 1cm wide ∠ 40° w/ 40% Sp,						
		trace AsPy.						
62.20 - 64.00		- interval contains ankerite veinlets (1/10 cm)						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 12 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		∡50° common, ≤ 3mm wide						
64.59-64.66		-(Sp) QV ∡25° width varies as vein splits — 25% Sp.						
65.74-66.01		-(Sp, ankerite, Py) QV, 3.5 cm wide, ∡20° w/ 35% Sp, 3% ankerite, 1% Py						
66.41-68.98		-interval has some quartz, ankerite veinlets (1/30 cm avg) ≤ 5mm wide, ∡60° common						
68.21-68.29		-(Sp, Py) QV 4cm wide ∡40° w/ 2% Sp, 1% Py.						
68.49-68.61		-(Sp) QV 3.5 cm wide, ∡30°, w/ 50% Sp						
68.90		-clay filled fracture, 1 cm wide, ∡70°						
69.32-70.46		-low recovery of strong green clay alteration						
71.00-72.50		-pegmatitic texture						
72.17-72.26		-(Sp) QV, 2 cm wide, ∡30° w/ 20% Sp.						
38.00-40.00		altered granodiorite w/ stockwork mineralization	48337	2.00	0.08	0.49		
40.00-41.00		"	48338	1.00	0.08	0.76		
41.00-42.00		"	48339	1.00	0.05	0.66		
42.00-43.00		"	48340	1.00	0.77	7.10		
43.00-44.00		"	48341	1.00	0.02	0.22		
44.00-45.00		"	48342	1.00	<0.02	0.14		
45.00-46.00		"	48343	1.00	0.06	1.84		
46.00-47.00		"	48344	1.00	0.06	0.88		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 13 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
47.00-48.00		altered granodiorite w/ stockwork mineralization	48345	1.00	0.14	1.68	✓	
48.00-49.00		"	48346	1.00	0.75	8.20	✓	
49.00-50.00		"	48347	1.00	0.03	0.68	✓	
50.00-51.00		"	48348	1.00	0.06	0.92	✓	
51.00-52.00		"	48349	1.00	0.12	1.56	✓	
52.00-53.00		"	48350	1.00	0.05	1.12	✓	
53.00-54.00		"	48351	1.00	0.17	1.48	✓	
54.00-55.00		"	48352	1.00	0.08	0.94	✓	
55.00-56.00		"	48353	1.00	0.17	1.66	✓	
56.00-57.00		"	48354	1.00	0.10	1.38	✓	↓
57.00-58.00		"	48355	1.00	0.06	0.88	✓	
58.00-59.00		"	48356	1.00	0.04	0.52	✓	
59.00-60.00		"	48357	1.00	<0.02	0.37	✓	
60.00-61.00		"	48358	1.00	0.15	1.12	✓	
61.00-62.00		"	48359	1.00	0.47	5.30	✓	
62.00-63.00		"	48360	1.00	0.26	1.38	✓	
63.00-64.00		"	48361	1.00	0.06	0.78	✓	
64.00-65.00		"	48362	1.00	0.04	1.62	✓	
65.00-66.00		"	48363	1.00	0.17	2.98	✓	
66.00-67.00		"	48364	1.00	0.03	0.92	✓	
67.00-68.00		"	48365	1.00	0.02	0.39	✓	
68.00-69.00		"	48366	1.00	0.10	1.16	✓	

CORDILLERAN ENGINEERING L[illegible]TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 14 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
69.00 - 70.00		altered granodiorite w/ stockwork mineralization	48367	1.00	0.02	0.36	✓	
70.00 - 71.00		"	48368	1.00	0.02	0.53	-	
71.00 - 72.50		"	48369	1.50	0.11	1.52	✓	
72.50 - 74.70		MINERALIZED QUARTZ VEIN						
		-milky white quartz w/ 60% Sp, trace AsPy, Py						
		-contact @ ? ≈ 50% recovery						
72.50 - 73.50		mineralized quartz vein	48370	1.00	2.51	24.99	✓	
73.50 - 74.50		"	48371	1.00	1.25	24.33	✓	
74.70 - 75.60		ALTERED GRANODIORITE						
		-green, moderately silicified, coarse grained, inequigranular granodiorite						
		-moderate chloritic alteration						
		-moderate sericitic alteration						
		-moderately low green clay alteration.						
		-zone has 3% disseminated Sp and contained in veinlets of quartz and/or anhydrite (1/10 cm) @ 30°, 50° ≤ 1 cm wide						
74.50 - 76.00		altered granodiorite w/ stockwork mineralization	48372	1.50	0.56	4.65	✓	
75.60 - 77.00		MINERALIZED QUARTZ VEIN						
		-milky white quartz vein w/ Sp, Py, AsPy and anhydrite.						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 15 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-contains 25% Sp, 5% Py, 1% AsPy and 2% ankerite.						
76.00-77.00		mineralized quartz vein	48373	1.00	1.40	12.07	✓	
77.00-81.46		ALTERED GRANODIORITE						
		-green pegmatitic, moderately silicified granodiorite.						
		-moderate chloritic, clay, sericitic alteration.						
		-contains good stockwork mineralization w/ 5% Sp throughout						
77.10-77.68		-rock is 75% QV w/ 40% Sp, trace AsPy						
		-contact @ 5°-40°						
79.46-80.00		-(Sp, Py, CPy) QV contact @ 30° w/ 55% Sp, 4% Py, 2% CPy.						
80.24-80.51		-(Sp, Py, CPy, AsPy) QV 1-4 cm wide, ≈@ 20° w/ 40% Sp, 1% Py, trace CPy, AsPy						
80.67-80.85		-(Sp) QV, 1.5 cm wide, @ 30° w/ 60% Sp						
81.24-81.37		-(Sp) QV, contact @ 30°, w/ 65% Sp						
77.00-78.00		altered granodiorite w/ good stockwork min	48374	1.00	0.68	12.18	✓	
78.00-79.00		"	48375	1.00	0.28	3.84	✓	
79.00-80.00		"	48376	1.00	0.99	7.38	✓	
80.00-81.00		"	48377	1.00	0.35	5.50	✓	
81.46-83.22		MINERALIZED QUARTZ VEIN BRECCIA.						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 16 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		=unit is divided into intervals below:						
81.46 - 82.10		-50% recovery, rubble white-grey qtz w/ 2% Sp, trace AsPy, Py						
82.10 - 82.30		-brecciated felsite dyke - 95% clasts - angular fragments separated by qtz stringers w/ up to 60% Sp						
82.30 - 82.95		-qtz, ankerite matrix w/ subrounded Sp clasts, rock is 50% Sp. -clasts are ≤ 1cm dia.						
82.95 - 83.08		- white - grey quartz w/ 15% Sp.						
83.08 - 83.22		- ankerite, qtz matrix w/ 10% Sp clasts - subrounded clasts ≤ 1cm dia - contact @ 30°						
81.00 - 82.00		mineralized quartz vein breccia	48378	1.00	2.10	11.72	✓	
82.00 - 83.00		"	48379	1.00	1.48	12.10	✓	
83.22 - 83.94		MASSIVE SULPHIDE VEIN -90% Sp w/ 1% CPy in quartz and 2% ankerite.						
83.00 - 84.00		massive sulphide vein	48380	1.00	3.05	32.13	✓	
83.94 - 87.77		ALTERED GRANODIORITE -moderately silicified, green, medium grained equigranular granodiorite.						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-3.1

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 17 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- moderate chloritic alteration, low green clay alteration, low sericitic alteration.						
		- stockwork consists of qtz veinlets (2/5 cm) @ 10°, 30°, 60° common, ≤ 3 mm wide						
		- contain up to 30% Sp						
		- zone has avg 4% Sp.						
84.41-84.76		- massive sulphide w/ 90% Sp, 1% anhedrite 9% quartz.						
		- contact @ 40°						
84.00-85.00		stockwork mineralization w/ massive sulphide vein	48381	1.00	3.05	20.55	✓	
85.00-86.00		altered granodiorite w/ stockwork mineralization	48382	1.00	0.47	3.10	✓	
86.00-87.00		"	48383	1.00	0.22	1.57	✓	
87.00-88.00		"	48384	1.00	0.06	1.74	✓	
87.77-89.92		SCHIST						
		- green, muscovite - feldspar - qtz - chlorite schist						
		- possible altered granodiorite or xenolith						
		- schistocity @ 15° = contact						
		- much of zone is split in half in length making contact w/ green, coarse grained, inequigranular granodiorite						
		- contains some qtz, Sp veins (1/10 cm) ≤ 5 mm wide, @ 80°. such that zone has						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. K. MEIDAL

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 18 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		2% Sp						
89.40-89.49		-zone of severe white green clay alteration.						
88.00-89.00		schist w/ low stockwork mineralization	48385	1.00	0.15	1.48	✓	✓
89.00-90.00		"	48386	1.00	0.08	1.42	✓	
89.92-112.00		ALTERED GRANODIORITE						
		-green, moderately silicified, medium grained, equigranular granodiorite						
		-moderate chloritic and sericitic alterations						
		-low green clay alteration						
		-contains 2% disseminated Sp and an additional 2% Sp in quartz veinlets, (>1/5 cm) ∠ 0°, 30°, 50° [illegible] ≤5mm wide						
		-minor ankerite in few veinlets						
		-trace Py						
92.77-93.75		-(Sp, AsPy, Py) QV, milky white quartz with 3% Sp, 3% AsPy, 1% Py ∠ 10°						
		-contains 12% silicified granodiorite						
94.04-94.13		-ankerite vein with 20% Py, 15% Sp.						
		-contact ∠ 70°						
95.42-95.63		-Qtz, ankerite vein w/ 5% Sp, 1% Py						
		-contact ∠ 30°						
95.75-96.00		-(AsPy, Py, Sp) QV w/ 10% AsPy, 1% Py, trace Sp						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 19 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		-contact ∠ 30°						
96.85-96.93		-(Sp, AsPy) QV wt 4% Sp, trace AsPy						
		-contact ∠ ?						
100.24-100.65		-(Sp, AsPy, Py) QV wt 88% Sp, 1% AsPy, trace Py, also 2% ankerite						
		-contact ∠ 20°						
102.15-102.50		-pegmatitic texture						
104.18-104.59		-interval has quartz veining with much Sp such that zone is 30% Sp, trace Py, CPy						
		-contact ∠'s 40°-50°						
105.00-105.16		-quartz-ankerite vein wt 6% Sp, trace Py						
		-contact ∠ 50°						
106.52		-(Sp, CPy) QV, 1 cm wide, ∠ 60°, wt						
106.98 - NO core		75% Sp, trace CPy						
107.48-107.55		-(Sp) QV, 2 cm wide, ∠ 30° wt 60% Sp						
108.30-108.43		-(Sp) QV, 2 cm wide, ∠ 40° wt 85% Sp						
108.54-108.62		-(Sp) quartz veining - interval has 2 veins						
		so that zone has 40% Sp.						
		-contact ∠ 60°-80°						
109.04		-(Sp) QV 1 cm wide, ∠ 60° wt 50% Sp						
110.05-110.11		-(Py, Sp) QV 2.5 cm wide ∠ 45° wt						
		30% Py, 5% Sp.						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 20 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
110.41-110.55		-(Sp) QV, ∠ 50° w/ 40% Sp., 3% ankerite.						
111.42-111.51		-(Sp, Py) QV 6 cm wide ∠ 40° w/ 75% Sp, 1% Py						
90.00-91.00		altered granodiorite w/ stockwork mineralizatio	48387	1.00	0.14	2.42	~	
91.00-92.00		"	48388	1.00	0.07	1.76	~	
92.00-93.00		"	48389	1.00	0.09	1.30	~	
93.00-94.00		"	48390	1.00	0.39	1.50	~	
94.00-95.00		"	48391	1.00	0.36	1.89	~	
95.00-96.00		"	48392	1.00	0.70	2.10	~	
96.00-97.00		"	48393	1.00	0.24	1.30	~	
97.00-98.00		"	48394	1.00	0.19	2.56	~	
98.00-99.00		"	48395	1.00	0.15	2.70	~	
99.00-100.00		"	48396	1.00	0.10	1.38	~	
100.00-101.00		"	48397	1.00	1.75	12.98	~	
101.00-102.00		"	48398	1.00	0.07	1.45	~	
102.00-103.00		"	48399	1.00	0.09	0.88	~	
103.00-104.00		"	48400	1.00	0.14	1.82	~	
104.00-105.00		"	48401	1.00	10.56	14.95	~	
105.00-106.00		"	48402	1.00	0.82	2.54	~	
106.00-107.00		"	48403	1.00	1.42	3.30	~	
107.00-108.00		"	48404	1.00	1.90	2.51	~	

CORDILLERAN ENGINEERING LI. .ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 21 of 32
Logged by K. MEIDAC
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
108.00 - 109.00		altered granodiorite w/ stockwork mineralization	48405	1.00	0.90	6.62	~	
109.00 - 110.00		"	48406	1.00	0.35	1.62	~	
110.00 - 111.00		"	48407	1.00	0.31	3.70		
111.00 - 112.00		"	48408	1.00	0.31	7.62	~	
112.00 - 115.15		MINERALIZED QUARTZ VEIN - milky white, mottled quartz vein w/ Sp, Py - down to 113.62 m, vein has avg 40% Sp, 1% Py and has some ankerite veinlets - after 113.62 m, vein has 30% Py, 8% Sp, trace AsPy - fractured surfaces have minor hematite and a lime green powdery clay? mineral						
112.00 - 113.00		mineralized quartz vein	48409	1.00	2.42	15.05	~	
113.00 - 114.00		"	48410	1.00	1.60	7.80	~	
114.00 - 115.00		"	48411	1.00	0.92	3.00	~	
115.15 - 119.68		FELSITE DYKE - silicified, green felsite dyke, with qtz, Sp and ankerite stringers creating a crackle breccia texture with angular clasts ≤ 2 cm wide - minor hematite along fractured surfaces. - dyke has 2% Sp						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 22 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
117.19-117.50		-(Sp, Py, galena) QV w/ 70% Sp, 3% Py, trace galena and 2% ankerite						
		-contact @ ?						
118.25-118.30		-(Sp, galena) QV, @ 50° w/ 15% Sp, trace galena in a fracture @ 50° also						
119.28		-(Py, Sp) QV, 1 cm wide, @ 60° w/ 15% Py, 10% Sp						
115.00-116.00		felsite dyke w/ stockwork mineralization	48412	1.00	0.57	3.42	✓	
116.00-117.00		"	48413	1.00	0.53	7.36	✓	
117.00-118.00		"	48414	1.00	2.19	9.00	✓	
118.00-119.00		"	48415	1.00	0.82	3.30	✓	
119.00-120.00		"	48416	1.00	1.00	4.90	✓	
119.68-121.85		ALTERED GRANODIORITE						
		-strongly silicified, green coarse grained inequigranular granodiorite						
		-quartz flooded w/ 4% Sp, trace Po, Py						
		AsPy in quartz						
119.89-119.94		-(Sp, AsPy, CPy, Py) QV w/ 50% Sp, 2% AsPy, trace CPy, Py.						
		-contact @ 90°.						
121.61-121.67		-ankerite veinlet 5mm wide @ 30° w/ 1% galena, trace Py						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 23 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
120.00-121.00		altered granodiorite w/ stockwork mineralization	48417	1.00	0.43	1.93	~	
121.00-122.00		"	48418	1.00	0.66	3.82	~	
121.85-123.00		MINERALIZED QUARTZ VEIN						
		- dark grey quartz vein contains 35% Sp, 30% AsPy, trace CPy						
		- from 122.59 m down, vein is porphyritic with a dark purple brown sulphide matrix with 20% rounded qtz clasts ≤ 2mm dia.						
122.00-123.00		mineralized quartz vein	48419	1.00	1.95	18.05	~	
123.00-124.00		MINERALIZED ANKERITE VEIN						
		- ankerite forms a spider web like matrix with subrounded quartz and sulphide clasts ≤ 1cm wide						
		- vein contains 25% Sp						
		- contact ?						
123.00-124.00		mineralized ankerite vein	48420	1.00	0.60	3.69	✓	
124.00-127.05		ALTERED GRANODIORITE						
		- green, coarse grained, inequigranular granodiorite						
		- moderately silicified						
		- moderate chloritic alteration						
		- contains 5% ankerite						
		- low sericitic alteration						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-3.1

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 24 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- moderately - low green clay alteration						
		- contains trace disseminated Py > Sp.						
124.00-125.00		altered granodiorite w/ low stockwork mineralization	48421	1.00	0.17	1.16	✓	✓
125.00-126.00		"	48422	1.00	0.09	0.34	✓	
126.00-127.00		"	48423	1.00	0.06	0.35		
127.05-129.15		SULPHIDE BEARING BRECCIA						
		- grey quartz - sulphide (Py, AsPy) aphanitic matrix w/ subrounded light grey quartz clasts ≤ 1 cm dia (12%), subrounded andesite clasts ≤ 1 cm dia (3%), green subangular granodiorite clasts ≤ 6 cm dia (2%), yellow green, subangular, altered felsite dyke clasts. (2%)						
127.00-128.00		sulphide bearing breccia	48424	1.00	0.11	0.37	-	
128.00-129.00		"	48425	1.00	0.06	0.45	✓	
129.15-133.20		ALTERED FELSITE DYKE						
		- yellow green, silicified felsite dyke						
		- contains moderate epidote and chloritic alteration.						
		- contains 10% phenocrysts, ≤ 1 mm dia, of chlorite and epidote						
		- zone is very broken						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 25 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-white vuggy qtz veinlets, ≤ 3mm wide, occur (>1/5 cm) * ? due to breakage						
129.00-130.00		altered felsite dyke	48426	1.00	0.03	0.19		
130.00-132.00		" (low recovery 40%)	48427	2.00	0.02	0.17		
133.20-139.29		QUARTZ VEIN BRECCIA						
		-milky white quartz matrix, somewhat drusy at clast interfaces, rock is 75% quartz						
		-clasts are subangular, epidote and chloritic altered felsite dyke, ≤ 4 cm dia						
		-5% of clasts are chalcedony						
		-much of zone is rubble ≤ 3 cm dia						
		-low recovery (≈20%) throughout unit						
136.80-137.16		-low recovery (13%) rubble of remnant Sp vein w/ trace Py ?						
137.16-137.92		-low recovery (28%) zone has 1% Sp in quartz matrix						
137.92-139.29		-low recovery (8%) rubble of qtz vein w/ chlorite, trace Sp and at the end of zone, granodiorite.						
132.00-134.00		quartz vein breccia 30% recovery	48428	2.00	0.07	0.54		
134.00-135.00		" 10% "	48429	1.00	0.02	0.05		
135.00-136.00		" 50% "	48430	1.00	0.02	0.06		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 26 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %
136.00 - 138.00		quartz vein breccia 15% recovery	48431	2.00	0.47	2.55
139.29 - 145.00		STRONGLY ALTERED FELSITE DYKE				
		-green felsite dyke? altered to 98% silty clay.				
141.73 - 145.00		- 8% recovery - rubble pieces.				
		-some intermixed altered granodiorite in rubble.				
138.00 - 140.00		strongly altered felsite dyke 10% recovery	48432	2.00	0.02	1.44
140.00 - 141.00		"	48433	1.00	0.02	0.54
141.00 - 143.00		" 8% recovery	48434	2.00	0.02	0.46
143.00 - 145.00		" 8% recovery	48435	2.00	0.02	0.14
145.00 - 150.37		STRONGLY ALTERED GRANODIORITE				
		- light grey, severely altered to 80% clay, medium grained granodiorite				
		- low, increasing to moderate downhole, chloritic alteration				
148.26 - 148.53		-interval has brecciated granodiorite clasts in a Pyrite + qtz matrix				
		-clasts are 80% of rock and are angular, ≤ 6 cm dia				
		-matrix is 95% Py.				
145.00 - 146.00		strongly altered granodiorite 28% recovery	48436	1.00	0.06	1.48

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 27 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
146.00 - 148.00		strongly altered granodiorite 45% recovery	48437	2.00	0.02	0.63		
148.00 - 149.00		"	48438	1.00	0.07	0.23		
149.00 - 150.00		"	48439	1.00	<0.02	0.09		
150.37 - 152.32		SULPHIDE BEARING BRECCIA						
		- breccia composed of a Py matrix (50% of zone) with angular granodiorite clasts ≤ 6 cm dia						
		- clasts have moderate chloritic alteration and moderate clay alteration						
151.15 - 151.61		- clasts have strong green clay alteration.						
150.00 - 151.00		pyritic breccia	48440	1.00	0.10	0.14		
151.00 - 152.00		"	48441	1.00	0.11	0.13		
152.32 - 153.70		ALTERED GRANODIORITE						
		- green, coarse grained, inequigranular granodiorite						
		- contains 2% disseminated Sp down to 153.01 m Also contains trace Py						
		- moderate chloritic alteration + epidote						
		- low increasing downhole to moderate green clay alteration						
152.51 - 152.89		- interval contains ankerite veinlets (1/4 cm) ≤ 1mm wide, ∠ 60°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 28 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
152.00-153.00		altered granodiorite w/ stockwork mineralization	48442	1.00	0.06	0.46		
153.00-154.00		"	48443	1.00	<0.02	0.16		
153.70-156.31		STRONGLY ALTERED GRANODIORITE						
		-green, coarse grained, equigranular granodiorite, altered to 70% clay						
		-contains trace disseminated Py in remnant ankerite veinlets (1/25 cm) ≤3 mm wide ∡ 20°, 40°, 60°.						
		-contact ∡ ?						
154.00-155.00		strongly altered granodiorite	48444	1.00	<0.02	0.04		
155.00-156.00		"	48445	1.00	<0.02	0.10		
156.31-158.51		ALTERED GRANODIORITE						
		- green, coarse grained inequigranular granodiorite						
		- moderate chloritic alteration, moderate sericitic alteration						
		-moderately low green clay alteration						
		- contains 2% disseminated Sp, trace Py						
		-few ankerite veins (1/30 cm) ≤5 mm wide ∡ 20°-50°						
156.74-157.28		-milky white QV w/ trace disseminated Sp						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 29 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-contact ∡ 20°						
		-contains some anhedrite stringers,						
		various angles making up 4% of vein						
156.00-157.00		altered granodiorite w/ low stockwork mineralization	48446	1.00	0.02	0.56		
157.00-158.00		"	48447	1.00	0.06	0.66		
158.51-167.93		STRONGLY ALTERED GRANODIORITE						
		- green, coarse grained, inequigranular						
		granodiorite altered largely to 85% clay.						
		-some zones have less strong alteration as						
		noted below						
		- moderate chloritic and sericitic alteration						
159.85-160.29		- zone has 2% disseminated Sp.						
163.43-165.14		- interval has larger fragments of less						
		clay altered granodiorite						
		-≈ 50% of rock has severe alteration						
		-contact is ∡ 10° between severe						
		alteration and chunks of moderate clay						
		alteration						
166.86-167.45		-zone of moderate green clay alteration						
158.00-160.00		strongly altered granodiorite	48448	2.00	<0.02	0.06		
160.00-162.00		"	48449	2.00	0.02	0.09		
167.93-173.18		ALTERED GRANODIORITE						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing
Total Depth
% Recovery
Elev. Collar
Latitude
Departure
Sheet No. 30 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		-green-grey, medium grained, inequigranular granodiorite						
		- moderate green clay alteration						
		- moderately low chloritic alteration w/ trace epidote.						
		- contains remnant qtz ± anhedrite veinlets (1/15 cm) ≤ 3 mm wide, ∠ 60° common w/ some trace Py.						
168.19-168.41		- zone w/ strong green clay alteration						
169.16-169.23		- fracture, 4 cm wide, filled w/ green clay, ∠ 40°						
170.61-170.67		- rubble remnants of a white QV w/ trace Py > Sp.						
170.69-171.00		- granodiorite has 1% disseminated Sp, trace disseminated Py						
171.00-172.23		- low recovery zone w/ strong clay alteration (10% recovery)						
172.36-172.44		- White quartz vein w/ trace Py						
		- contact ∠ 50°						
172.44-173.18		- moderately silicified granodiorite						
173.18-186.36		STRONGLY ALTERED GRANODIORITE						
		- green, coarse grained inequigranular						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 31 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		granodiorite altered to 75% green clay with remnant grains		
174.96 – 175.91		-rubble remains of felsite dyke?		
		-20% recovery		
175.92		-QV, 1cm wide, ∠ 50° w/ trace disseminated Sp.		
178.00 – 178.92		-zone has moderate green clay alteration w/ 1% disseminated Sp		
		-trace Py in a 2mm wide qtz stringer ∠ 20°		
179.16 – 179.48		-zone w/ 2% Sp. angled ∠ 70° in remnant stringers?		
179.83 – 180.27		-moderate green clay alteration and low epidote		
182.24 – 182.33		-(Py, Sp) QV, 5cm wide, ∠ 50° w/ 5% Py, 2% Sp.		
182.94 – 184.42		-moderately strong green clay alteration		
186.36 – 197.21		ALTERED GRANODIORITE		
		-yellow green, coarse grained inequigranular, granodiorite		
		-moderate chloritic + sp. epidote alteration		
		-low sericitic alteration		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-31

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 32 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		-generally moderately - low yellow green clay alteration						
187.84-188.78		-15 cm moderately clay altered rock intermixed between zones of strong clay alteration						
		-45% recovery						
188.78-191.94		-pegmatitic granodiorite with strong chloritic alteration from 189.00 - 189.30 m.						
190.14-190.19		-zone with 1% disseminated red garnets ≤5 mm dia						
190.63-190.66		- clay filled fracture @ 70°						
191.80-191.94		-strong chloritic alteration						
193.04-193.55		- strong green white clay alteration zone						
194.46-197.21		-very low decreasing to no chloritic alteration						
195.00-195.59		-pegmatitic texture						
196.19-196.58		-series of white clay filled fractures (1/5 cm) @ 30°, 5 mm wide						
196.58-197.00		-pegmatitic texture						
197.21		EOH						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
230.12	-61.5°	144°
175.26	-61°	134°
120.40	-61°	144°
68.58	-60.5°	141°
16.76	-60°	140°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 3
Section 195 E
Bearing 145°

Total Depth 234.70 m
% Recovery
Elev. Collar 1392 m
Latitude
Departure

Sheet No. 2 of 32
Logged by K. MEIDAL
Date Begun JULY 19 (N), 1987
Date Finished JULY 24 (D), 1987
Core Stored At LOGAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0-9.75		Casing		
9.75-47.00		ALTERED GRANODIORITE		
		- grey, oxidized to rust coloured, pegmatitic granodiorite		
		- contains low yellow brown clay and low sericitic alteration with variations noted below		
		- trace chloritic alteration		
		- contains moderate Fe-Ox, minor Mn Ox		
10.36-10.54		- zone of strong pink clay alteration (rhodocrosite?)		
12.16-13.46		- rubble zone w/ strong yellow brown clay alteration		
		- 30% recovery		
14.24-14.43		- moderate yellow brown clay alteration		
14.93-20.73		- interval has low Fe-Ox, > Mn-Ox, most is concentrated on fractured surfaces (1/35 cm avg) @ 40°, 80° common		
18.89-19.35		- zone with strong pink clay alteration		
23.30-24.07		- zone with strong yellow brown clay alteration.		
24.07-38.24		- interval has moderate yellow brown clay		

CORDILLERAN ENGINEERING LI ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 32
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		alteration with a few rubble zones						
		of stronger alteration						
32.61-33.52		- moderate Mn-Ox, trace Fe-Ox						
33.91-34.42		- strong Mn-Ox, low Fe-Ox - rock is dark grey						
38.24-38.13		- strong yellow brown clay alteration						
		- contact @ 10°						
38.13-40.25		- coarse grained, inequigranular granodiorite						
41.07-41.23		- strong yellow brown clay alteration						
42.32-42.45		- zone of strong yellow brown clay						
		alteration						
44.56-44.80		- strong whitish brown clay alteration						
		- fairly unconsolidated rock						
47.00-54.26		STRONGLY ALTERED GRANODIORITE						
		- coarse grained to pegmatitic granodiorite						
		is altered to 70% rust coloured clay						
		- moderate Fe-Ox to 53.95 m						
		- after 53.95 m, clay is light grey with						
		no Fe-Ox						
52.43-53.95		- moderately strong clay alteration						
52.00-54.00		strongly altered granodiorite	48450	2.00	<0.02	0.04		
54.26-55.49		ALTERED GRANODIORITE						
		- pale green grey, coarse grained						

CORDILLERAN ENGINEERING LI[illegible]ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		inequigranular granodiorite - low chloritic alteration, low green clay alteration, moderately low sericitic alteration. - contains 3% disseminated Sp - contains several quartz - Py veinlets (1/7 cm avg), ≤ 5 mm wide, ∠ 55°						
54.00-55.00		altered granodiorite w/ stockwork mineralization	48451	1.00	0.03	0.61		
55.49-56.60		MINERALIZED BRECCIA - breccia is a dark-grey quartz-sulphide matrix (70% of rock) - 40% of matrix is Py - clasts are subrounded fragments of strongly silicified granodiorite, ≤ 2 cm dia						
56.20-56.34		- zone of pale green-grey, strongly silicified granodiorite w/ 3% disseminated Sp. - contact ∠ 60°						
55.00-56.00		stockwork mineralization / mineralized breccia	48452	1.00	0.33	0.71		
56.60-60.21		MINERALIZED QUARTZ VEIN - dark grey sulphide bearing quartz vein w/ Py, Sp, AsPy (quantities unknown due to mostly aphanitic texture).						
56.60-57.31		- vein is somewhat brecciated by white,						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 5 of 32
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		Vuggy quartz veinlets - various angles						
		- broken vein is in pieces 1 cm to						
		sections 6 cm long with no white qtz veinlets.						
57.11-57.22		- interval contains 20% Py.						
57.83		- fracture with moderate Fe-Ox, ∠ 40°						
58.52-59.43		- 16% recovery, rubble pieces w/ minor Fe-Ox						
59.43-59.86		- qtz is milky white with moderate						
		Fe-Ox and 2% Py, 2% Sp, trace AsPy						
59.86-60.21		- qtz is white with patches of grey						
		sulphides						
		- 15% AsPy, 5% Sp, 1% Py.						
56.00-57.00		mineralized quartz vein	48453	1.00	1.22	2.40		
57.00-58.00		"	48454	1.00	6.38	2.71		
58.00-59.00		"	48455	1.00	0.69	0.64		
59.00-60.00		"	48456	1.00	0.24	0.32		
60.21-61.03		ALTERED GRANODIORITE						
		- unit is light grey, strongly silicified						
		medium grained, inequigranular granodiorite						
		- very low chloritic alteration						
		- contains 4% disseminated Sp which is						
		in thin strands < 1 cm long following ∠ 60°						
60.80-61.03		- moderate Fe-Ox						

CORDILLERAN ENGINEERING LI. ,ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 6 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
60.00-61.00		altered granodiorite w/ stockwork mineralization	48457	1.00	0.20	2.60		
61.03-65.45		MINERALIZED QUARTZ VEIN						
		- milky white quartz vein w/ Sp, Py, AsPy						
		- zone has low recovery as noted below.						
61.03-61.26		-55% recovery - quartz contains 20% Sp, trace Py > AsPy, ∠ 50°						
		- moderate Fe-Ox along fractured surfaces						
61.26-61.41		-35% recovery - rubble pieces ≤ 4 cm dia, contain 4% ? Sp, 1% ? Py						
		- moderate Fe-Ox						
61.41-62.17		-39% recovery - solid core						
		- first 12 cm has 30% AsPy, 10% Py, trace Sp ?						
		- the rest of core in interval has moderately low Fe-Ox, trace Sp.						
62.17-62.48		- 82% recovery - vein has 5% disseminated Sp.						
62.48-63.09		-40% recovery, rubble pieces w/ moderate Fe-Ox						
		- contains 2% ? Sp, trace Py, AsPy						
63.09-64.61		-28% recovery - recovered core is						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 7 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		strongly silicified, pale grey-green, coarse grained, equigranular granodiorite w/ 4% disseminated Sp. Whether or not whole interval is granodiorite is unknown.						
		-contains a few rubble pieces of qtz vein						
		-low Fe-Ox						
64.61-65.45		-46% recovery — quartz vein has 15% Sp, 10% Py, trace AsPy						
		-trace Fe-Ox						
61.00-62.00		mineralized quartz vein	48458	1.00	1.19	1.13		
62.00-64.00		" low recovery	48459	2.00	0.20	1.97		
65.45-73.38		ALTERED GRANODIORITE						
		-strongly silicified, pale green grey, coarse grained, inequigranular granodiorite						
65.53-66.44		-15% recovery -rubble with strong white clay alteration						
		-low chloritic alteration						
66.44-67.05		-20% recovery — mod Fe-Ox on rubble pieces						
67.05-68.15		-25% recovery — pegmatitic granodiorite w/						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		1% disseminated Sp, trace Py						
		- low chloritic alteration						
		- moderate light green clay alteration						
68.15-68.27		- zone with severe white clay alteration						
68.27-69.19		- 5% recovery - rubble						
69.19-70.40		- interval has moderate chloritic alteration						
		and strong chloritic alteration along fractures						
		(avg 1/15 cm)						
		- low sericitic alteration						
		- moderately low green clay alteration						
70.40-71.11		- low chloritic alteration + epidote						
		- low light green clay alteration.						
71.11-71.22		- milky white QV w/ 1% Sp.						
		- contact @ 70°						
71.22-73.38		- moderately strong chloritic alteration						
		- low sericitic alteration, moderate green						
		clay alt.						
		- contains 1% disseminated Sp.						
73.15-73.24		(Sp) QV, 1 cm wide, @ 40° w/ 85% Sp						
64.00-66.00		MQV / altered granodiorite w/ low Stkw min	48460	2.00	0.74	3.05		
66.00-68.00		altered granodiorite w/ low stockwork 30 % rec	48461	2.00	0.10	0.82		
68.00-70.00		" 55 % recovery.	48462	2.00	0.06	0.47		

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 9 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
70.00 - 71.00		altered granodiorite w/ low stockwork mineralization	48463	1.00	0.87	1.00		
71.00 - 72.00		"	48464	1.00	0.16	1.27		
72.00 - 73.00		"	48465	1.00	0.03	0.38		
73.38 - 79.91		SCHIST						
		- green - grey, weakly foliated, quartz - chlorite - feldspar - muscovite schist						
		- every 25 to 50 cm, there is strong foliation						
		- schistocity ∠ 20°						
73.58 - 73.68		- (Sp) QV, 2 cm wide, ∠ 30° w/ 15% Sp						
75.18 - 77.63		- interval has several ankerite veinlets (1/2 cm avg), hairline thin, ∠ 50°						
77.64 - 77.70		- (ankerite, Sp) QV w/ 30% ankerite, 7% Sp.						
		- contact ∠ 55°						
77.92 - 78.00		- milky white quartz vein, ∠ 55°						
78.33 - 79.08		- zone of stronger foliation.						
79.62 - 79.76		- interval has three qtz veinlets, 4 mm wide, ∠ 55°						
		- last one contains 20% Sp, 50% ankerite						
73.00 - 74.00		schist	48466	1.00	0.04	1.25		
74.00 - 75.00		"	48467	1.00	0.03	0.48		
75.00 - 76.00		"	48468	1.00	0.03	0.15		

CORDILLERAN ENGINEERING LI. .ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 10 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %
76.00-77.00		schist	48469	1.00	0.15	0.41
77.00-78.00		"	48470	1.00	0.29	0.50
78.00-79.00		"	48471	1.00	0.04	0.26
79.00-80.00		"	48472	1.00	0.05	0.22
79.91-86.34		ALTERED GRANODIORITE - olive green grey, coarse grained, inequigranular, granodiorite - moderately silicified - moderately strong chloritic alteration - low sericitic and low green clay alterations				
80.95-81.26		- zone has few qtz veinlets (1/10 cm) with 15% Sp, ≤ 5 mm wide & 70°				
81.37-81.86		- (Sp, AsPy) QV w/ 15% silicified granodiorite. - contains 2% Sp, 1% AsPy - contact & ?				
82.15-82.88		- zone with strong chloritic alteration - moderate green clay alteration				
83.21		- (Sp) QV, 1cm wide & 80° w/ 30% Sp				
83.28-84.08		- zone with strong chloritic alteration				
84.08-84.22		- severe green clay alteration				
86.03-86.34		- milky white quartz vein with strong Fe-Ox				

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 11 of 32
Angle of Hole | % Recovery | Logged by
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %
80.00 - 81.00		altered granodiorite w/ low stockwork min	48473	1.00	<0.02	0.35
81.00 - 82.00		"	48474	1.00	1.14	0.80
82.00 - 83.00		"	48475	1.00	0.02	0.36
83.00 - 84.00		"	48476	1.00	0.04	1.01
84.00 - 85.00		"	48477	1.00	<0.02	0.38
85.00 - 86.00		"	48478	1.00	<0.02	0.38
86.34 - 87.48		MINERALIZED BRECCIA - brecciated silicified granodiorite clasts in a pyrite-rich qtz matrix - clasts are generally subrounded, ≤ 1cm dia and form 75% of rock - after 87.00 m, rock has strong green clay alteration.				
86.00 - 87.00		mineralized breccia	48479	1.00	0.02	0.11
87.48 - 90.52		ALTERED GRANODIORITE - olive green, coarse grained, inequigranular granodiorite - moderately strong chloritic alteration - moderate green clay alteration - contains trace disseminated Py, Sp.				
88.40 - 88.69		- strong green clay alteration.				

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 12 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAC
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %
87.00 - 88.00		altered granodiorite	48480	1.00	<0.02	0.25
88.00 - 89.00		"	48481	1.00	<0.02	0.22
89.00 - 90.00		"	48482	1.00	<0.02	0.44
90.00 - 91.00		"	48483	1.00	<0.02	0.08
90.52 - 91.62		STRONGLY ALTERED GRANODIORITE - olive green, coarse grained, inequigranular granodiorite altered to 75% clay. - low sericitic alteration - moderately strong chloritic alteration. strongly altered granodiorite				
91.00 - 92.00			48484	1.00	0.02	0.07
91.62 - 104.18		ALTERED GRANODIORITE - olive green, coarse grained, inequigranular granodiorite - moderate chloritic + epidote alteration. - low sericitic alteration - moderately low green clay alteration.				
93.44 - 93.50		- (Sp) QV, 5 cm wide, ∠ 55° w/ 75% Sp, trace Py.				
93.59 - 93.63		- (Sp) QV, 3 cm wide, ∠ 60° w/ 50% Sp, 1% anhedrite				
93.93		- (Sp) QV, 4mm wide ∠ 45° w/ 10% Sp				
94.01		- (Sp) QV, 1cm wide ∠ 50° w/ 5% Sp				

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 13 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
94.10 - 94.34		- zone with strong chloritic alteration.		
94.10 - 95.69		- interval contains 1% disseminated Sp		
94.58		- (Sp) QV, 1 cm wide, ∠ 40° w/ 20% Sp		
94.63 - 94.65		- (Sp, ankerite) QV, 2.5 cm wide, ∠ 60° w/ 30% Sp, 30% ankerite.		
95.26 - 95.36		- zone w/ strong chloritic alteration		
95.69 - 96.52		- zone of severe green clay alteration (85% clay)		
96.52 - 97.00		- granodiorite has 1% disseminated Sp		
97.00 - 97.31		- zone with severe green clay alteration — 75% clay		
97.31 - 98.00		- zone has 1% disseminated Sp		
97.53 - 97.61		- (Sp) QV, 2.5 cm wide, ∠ 30° w/ 8% Sp.		
98.00 - 101.72		- pegmatitic texture w/ moderate sericitic alteration		
98.19		- (Sp) QV, 1 cm wide, ∠ 60° w/ 10% Sp		
98.38 - 98.56		- zone with strong chloritic alteration and several ankerite veinlets (1/1 cm) ≤ 1 mm wide, ∠ 50°		
98.81 - 98.95		- (ankerite, P_y, Sp) QV, 10 cm wide, ∠ 40°, w/ 10% ankerite, 2% P_y, trace Sp.		
98.95 - 102.35		- zone contains 1% disseminated Sp, trace Asp_y, P_y		
99.78 - 100.05		- zone has several ankerite veinlets (1/2 cm)		

CORDILLERAN ENGINEERING L.TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 14 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		≤ 1 mm wide, ∠ 50°.						
102.31		- (Sp) QV, 2 cm wide, ∠ 50° w/ 50% Sp.						
102.37-102.46		- (Sp) QV, milky white qtz, 7 cm wide, ∠ 30° w/ 5% Sp						
103.80-104.18		- strong chloritic alteration - moderate sericitic alteration						
92.00-93.00		altered granodiorite w/ low stockwork min	48485	1.00	<0.02	0.44		
93.00-94.00		"	48486	1.00	0.51	6.30	✓	
94.00-95.00		"	48487	1.00	0.06	2.13	✓	
95.00-96.00		"	48488	1.00	0.06	1.08	✓	
96.00-97.00		"	48489	1.00	0.07	0.66	✓	
97.00-98.00		"	48490	1.00	0.12	0.80	✓	
98.00-99.00		"	48491	1.00	0.06	0.58	✓	
99.00-100.00		"	48492	1.00	0.03	0.72	✓	
100.00-101.00		"	48493	1.00	0.02	0.15	✓	
101.00-102.00		"	48494	1.00	0.12	0.32	✓	
102.00-103.00		"	48495	1.00	0.10	2.28	✓	
103.00-104.00		"	48496	1.00	0.03	0.64	✓	
104.18-107.47		STRONGLY ALTERED GRANODIORITE - green, medium grained, equigranular granodiorite - altered to 85% clay.						
105.97-106.45		- zone with moderate green clay alteration.						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 15 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAC
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
104.00-105.00		strongly altered granodiorite	48497	1.00	0.02	0.18		
105.00-106.00		"	48498	1.00	0.04	0.83	✓	
106.00-107.00		"	48499	1.00	0.12	0.45	✓	
107.47-163.35		ALTERED GRANODIORITE						
		-green, medium grained, equigranular, granodiorite						
		-moderate chloritic alteration ± epidote						
		-low green clay alteration						
		-mineralization and textural changes are noted below						
107.47		-(Sp, AsPy) QV, >2 cm wide?, ∠ 80° w/ 10% Sp, trace AsPy						
107.48-108.73		-interval has 1% disseminated Sp						
		-up to 107.75 m, contains qtz, Sp veinlets (1/10 cm), ∠ 60°, ≤ 4mm wide w/ up to 5% Sp.						
108.73-110.69		- very coarse grained, inequigranular granodiorite w/ trace disseminated Sp						
109.53-109.95		-zone w/ three Qtz, Sp veins, increasing in width downhole from 0.5 cm, 1.0 cm, to 4 cm wide, ∠ 40°						
		-veins contain respectively, 50% Sp, 25% Sp and 15% Sp						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 16 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
110.81 - 111.35		- zone of moderate green clay alteration - trace disseminated Sp		
111.56 - 111.82		- (Sp, AsPy) QV, milky white quartz w/ 2% disseminated Sp, trace AsPy.		
112.47 - 112.64		- green clay filled fracture, 5 mm wide, @ 15°		
112.64 - 116.00		- pegmatitic granodiorite w/ few irregularly spaced qtz, Sp veinlets ≤ 5 mm wide, @ 20° and 70° common, such that zone contains trace to 1% Sp.		
116.00 - 116.55		- yellowish green moderately low clay alteration		
117.13 - 117.41		- zone has 4% Sp, disseminated and contained in qtz veinlets (1/4 cm) ≤ 1 cm wide, @ 30°.		
117.41 - 117.51		- (Sp, CPy, Py) QV, 7 cm wide, @ 40°, w/ 80% Sp, trace CPy > Py.		
117.51 - 117.67		- strongly silicified granodiorite w/ 4% Sp, 3% Py + Po in qtz, @ 40°		
117.67 - 121.12		- pegmatitic granodiorite w/ trace Sp.		
118.17 - 118.26		- zone w/ severe green clay alteration - 75% clay.		

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 17 of 32
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
118.68 - 118.78		- zone w/ strong green clay alteration. - broken rock.		
119.67 - 119.78		- zone of strong green clay alteration		
121.12 - 121.80		- zone contains 1% disseminated Sp - also, down to 121.36, contains anterite - qtz veinlets (1/2 cm) ∠ 50°		
121.76 - 121.80		- qtz - anterite vein, 1.5 cm wide, ∠ 40° 60% anterite		
122.45 - 122.53		- green clay filled fracture, 2 cm wide, ∠ 40°		
123.19 - 124.58		- interval contains avg 2% disseminated Sp. - partially silicified		
124.20 - 124.24		- (anterite, Sp) QV, ∠ 40° w/ 20% anterite, 1% Sp.		
124.46		- (Sp, Py) QV, 1.5 cm wide, ∠ 45° w/ 20% Sp, trace Py.		
124.58 - 125.19		- pegmatitic zone with strong chloritic alteration of the feldspar?		
125.19 - 126.10		- coarse grained, inequigranular granodiorite w/ trace disseminated Sp		
126.10 - 126.45		- strongly silicified zone (50% white quartz) w/ 10% Sp — disseminated and contained in a 3 cm wide band (of 95% Sp) ∠ 80°		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 18 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAC

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- contains 1% Py in clusters ≤ 2 cm dia.		
126.45 - 128.05		- moderately silicified, pegmatitic zone		
		- interval contains avg 4% Sp, contained mainly in quartz		
127.20 - 127.21		- (Sp) QV, 2 cm wide, ∠ 55° w/ 80% Sp.		
128.05 - 128.62		- coarse grained, inequigranular granodiorite		
		- low yellow green clay alteration.		
		- trace disseminated Sp		
128.62 - 130.52		- pegmatite grading to coarse grained, inequigranular texture		
		- moderately strong chloritic alteration		
		- trace disseminated Sp		
130.52 - 132.25		- coarse grained, inequigranular texture		
		- contains 1% disseminated Sp.		
132.25 - 133.37		- moderately silicified, pegmatitic granodiorite		
		- contains 5% avg Sp in qtz - often in stringers or veinlets, ∠ 60° common.		
132.45 - 132.54		- zone with about 1 cm wide total of qtz veins ∠ 5° - 30° w/ 25% AsPy, 20% Py.		
133.37 - 139.29		- coarse grained, inequigranular texture		
		- interval contains 4% Sp, ∠ 50° common of thin hairline ≤ 1 cm long strands		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 19 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
136.04-136.14		-(Sp, Py_1) QV, 9 cm wide, ∠ 45° w/ 35% Sp, 1% Py_1.		
137.94-138.01		-(Sp) QV, 5 cm wide, ∠ 50° w/ 75% Sp		
139.89-140.81		-medium grained, equigranular texture -moderately silicified w/ 3% disseminated Sp.		
139.55-139.63		-(Sp, CPy_1) QV, 4 cm wide ?, ∠ 50° w/ 85% Sp, trace CPy_1.		
140.08-140.12		-(Sp, ankerite, Py_1) QV, 5 cm wide, ∠ 65° w/ 50% Sp, 10% ankerite, 2% Py_1 -contains minor hematite on fractured surface.		
140.45-140.51		-(Py_1, Sp) QV, 6 cm wide, ∠ 60° w/ 2% Py_1, trace Sp -moderate hematite on fractured surfaces		
140.81-142.34		-low recovery (30%) of pegmatitic granodiorite -1% disseminated Sp.		
141.42		-(Sp, Py_1) QV, 1 cm wide, ∠ 70°, w/ 95% Sp, 1% Py_1		
142.34-155.12		-medium grained, inequigranular texture -contains avg 6% Sp disseminated and in thin (≤ 1 cm) qtz veinlets ('/10 cm avg) ∠ 50° and 70° common		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 20 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		trace Py in some veinlets		
		-granodiorite is moderately silicified.		
142.91-142.93		-(Sp) QV, 2 cm wide ∠ 80°, w/ 85% Sp.		
144.00-144.88		- rubble pieces, most ≤ 3 cm dia		
		-20 % recovery.		
146.72-147.00		-(Sp, Py, CPy) QV, width ? due to broken rock, ∠ 40° w/ 80% Sp, trace Py, CPy		
148.76-149.10		-(Sp, Py, galena, CPy) QV, 13 cm? wide, ∠ 30°, w/ 55% Sp, 3% Py, trace galena, trace CPy		
		- 2% ankerite		
		- mineralization is somewhat banded ∠ 30°		
150.73-150.80		-(Sp) QV, 6 cm wide, ∠ 70° w/ 15% Sp.		
150.32-150.39		-(Sp, galena, AsPy, Py) QV, 3 cm wide, ∠ 40° w/ 50% Sp, trace galena, AsPy and Py		
152.04-152.23		-(Sp, Py) QV, 17 cm wide, ∠ 70° w/ 80% Sp, trace Py.		
154.85-154.90		-(Sp) QV, 4 cm wide, ∠ 50° w/ 75% Sp		
155.12-157.00		-coarse grained, inequigranular texture		
		-contains 4% disseminated Sp.		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 21 of 32

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-moderately silicified w/ qtz - Sp, Py veinlets		
		≤ 1 cm wide (1/7 cm) ∠ 40°-60°		
		- rock has 1% Py.		
155.93		-fractured surface has moderate hematite		
156.09-156.30		-(Sp, Py, CPy, AsPy) QV, ∠ 30°		
		w/ 35% Sp, 1% Py, trace CPy > AsPy		
		-contact has moderate hematite		
157.00-158.09		-moderately silicified zone w/ 3%		
		disseminated Sp, trace disseminated Py		
		-coarse grained, inequigranular texture		
157.00-157.01		-(Sp) QV, 1.5 cm wide, ∠ 50° w/ 95% Sp.		
157.17		-(Sp, anhydrite) QV, 2 cm wide, ∠ 60°		
		w/ 80% Sp, 2% anhydrite		
157.31		-(Sp) QV, 2 cm wide, ∠ 55° w/ 85% Sp		
157.36-157.45		-(Sp, Py, anhydrite) QV, 9 cm wide, ∠ 65°		
		w/ 80% Sp, trace Py, 1% anhydrite		
158.09-158.30		-zone with strong green clay alteration		
		- contains 1% disseminated Sp.		
158.30-163.35		-medium grained inequigranular texture		
		- contains 4% disseminated Sp., trace Py		
		- some qtz ± anhydrite veinlets (1/12 cm)		
		≤ 1 cm wide, ∠ 30°-70°. w/ Sp and Py		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 22 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
107.00 - 108.00		altered granodiorite w/ stockwork mineralization	48500	1.00	0.48	2.48	✓	
108.00 - 109.00		"	48501	1.00	0.02	0.37	✓	
109.00 - 110.00		"	48502	1.00	0.32	2.32	✓	
110.00 - 111.00		"	48503	1.00	0.07	0.21	✓	
111.00 - 112.00		"	48504	1.00	0.34	0.52	✓	
112.00 - 113.00		"	48505	1.00	0.07	0.44	✓	
113.00 - 114.00		"	48506	1.00	0.04	0.25	✓	
114.00 - 115.00		"	48507	1.00	0.03	0.76	✓	
115.00 - 116.00		"	48508	1.00	0.02	0.40	✓	
116.00 - 117.00		"	48509	1.00	<0.02	0.30	✓	
117.00 - 118.00		"	48510	1.00	0.47	4.31	✓	
118.00 - 119.00		"	48511	1.00	0.02	0.29	✓	
119.00 - 120.00		"	48512	1.00	<0.02	0.34	✓	
120.00 - 121.00		"	48513	1.00	<0.02	0.11		
121.00 - 122.00		"	48514	1.00	0.02	0.39	✓	
122.00 - 123.00		"	48515	1.00	<0.02	0.20	✓	
123.00 - 124.00		"	48516	1.00	0.02	0.37	✓	
124.00 - 125.00		"	48517	1.00	0.25	0.49	✓	
125.00 - 126.00		"	48518	1.00	<0.02	0.28	✓	
126.00 - 127.00		"	48519	1.00	0.33	3.91	✓	
127.00 - 128.00		"	48520	1.00	0.08	2.20	✓	
128.00 - 129.00		"	48521	1.00	0.02	0.33		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 23 of 32
Logged by K. MEIDAV
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
129.00-130.00		altered granodiorite w/ stockwork mineralization	48522	1.00	0.02	0.36		
130.00-131.00		"	48523	1.00	0.05	0.68	✓	
131.00-132.00		"	48524	1.00	0.05	0.78	✓	
132.00-133.00		"	48525	1.00	0.28	8.35	✓	
133.00-134.00		"	48526	1.00	0.05	1.80	✓	
134.00-135.00		"	48527	1.00	0.17	2.91	✓	
135.00-136.00		"	48528	1.00	0.05	1.20	✓	
136.00-137.00		"	48529	1.00	0.18	2.36	✓	
137.00-138.00		"	48530	1.00	0.26	4.35	✓	
138.00-139.00		"	48531	1.00	0.10	4.20	✓	
139.00-140.00		"	48532	1.00	0.11	3.07	✓	
140.00-141.00		"	48533	1.00	0.37	4.12	✓	
141.00-142.00		"	48534	1.00	0.16	2.96	✓	
142.00-143.00		"	48535	1.00	0.21	1.26	✓	
143.00-144.00		"	48536	1.00	0.23	3.47	✓	
144.00-145.00		"	48537	1.00	0.26	3.54	✓	
145.00-146.00		"	48538	1.00	0.27	1.69	✓	↓
146.00-147.00		"	48539	1.00	0.51	9.30	✓	
147.00-148.00		"	48540	1.00	0.16	2.51	✓	
148.00-149.00		"	48541	1.00	0.60	4.30	✓	
149.00-150.00		"	48542	1.00	0.49	3.75	✓	
150.00-151.00		"	48543	1.00	0.14	2.00	✓	↑

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 24 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
151.00-152.00		altered granodiorite w/ stockwork mineralization	48544	1.00	0.27	2.48	~	
152.00-153.00		"	48545	1.00	1.60	5.89	~	
153.00-154.00		"	48546	1.00	0.09	1.60	~	
154.00-155.00		"	48547	1.00	0.18	4.30	~	
155.00-156.00		"	48548	1.00	0.09	1.08	~	↓
156.00-157.00		"	48549	1.00	0.38	3.41	~	
157.00-158.00		"	48550	1.00	0.51	12.73	~	
158.00-159.00		"	48551	1.00	0.30	3.59	~	
159.00-160.00		"	48552	1.00	0.08	1.28	~	
160.00-161.00		"	48553	1.00	0.11	1.72	~	
161.00-162.00		"	48554	1.00	0.12	2.64	~	
162.00-163.00		"	48555	1.00	0.29	3.10	~	
163.35-164.01		MINERALIZED QUARTZ VEIN						
		- milky white quartz with 15% Sp, 10% Py, 10% ankerite, 2% AsPy, trace CPy						
		- contact @ 40°						
		- mineralization occurs as blebs up to 4 cm dia.						
163.00-164.00		stockwork min + mineralized quartz vein	48556	1.00	2.33	10.81	~	
164.01-172.59		ALTERED GRANODIORITE						
		- strongly silicified, green coarse grained						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 25 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		inequigranular granodiorite						
		-moderate chloritic alteration						
		-moderate sericitic alteration						
		-very low green clay alteration						
		-minor hematite along fractured						
		surfaces.						
		-contains several quartz veinlets						
		w/ Sp, Py and/or ankerite (1/10 cm						
		avg), ≤ 2 cm wide, ∢ 60° common						
		-unit has 3% Sp, trace Py, cPy and						
		trace AsPy, disseminated and in veinlets.						
		-additional, larger veins are noted below:						
164.31-164.45		-(Sp, Py) QV, ∢ 20° and 50° contacts						
		w/ 20% Sp, 2% Py and 25%						
		silicified granodiorite						
164.66-164.79		-QV w/ 20% Sp, 20% Py, ∢ 30°						
165.45-165.66		-QV w/ 15% Sp, 7% Py, ∢ 30°						
166.12-166.25		-QV w/ 70% Sp, 10% Py, ∢ 50°						
167.45-167.52		-QV w/ 15% Sp, 3% ankerite, 3 cm wide, ∢ 40°						
167.69-167.75		-QV w/ 50% Sp, , 3% Py, ∢ 25°						
168.67-168.89		-QV w/ 80% Sp, trace Py, cPy, ∢ 40°						
164.00-165.00		altered granodiorite w/ stockwork mineralization	48557	1.00	0.45	7.23	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 26 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
165.00-166.00		altered granodiorite w/ stockwork mineralization	48558	1.00	0.35	5.80	✓	
166.00-167.00		"	48559	1.00	0.62	5.15	✓	
167.00-168.00		"	48560	1.00	0.64	5.20	✓	
168.00-169.00		"	48561	1.00	0.59	12.07	✓	
169.00-170.00		"	48562	1.00	0.15	0.94	✓	
170.00-171.00		"	48563	1.00	0.16	3.00	✓	
171.00-172.00		"	48564	1.00	0.24	2.30	✓	
172.00-173.00		"	48565	1.00	0.21	2.32	✓	
172.59-179.53		STRONGLY ALTERED FELSITE DYKE -green, coarse grained, inequigranular remnant grains and ≤ 3 cm dia fragments of felsite dyke in 75% clay, mod. chlorite - there are mineralized gouge zones as follows, also trace disseminated Sp, Py in gouge.						
174.66-175.15		-zone has 30% Py, 20% Sp, minor hematite (?) & ?						
175.59-175.70		-zone has 25% Sp, 10% Py & 40° (?)						
176.48-177.00		-remnant QV w/ anterite, 30% Sp, 1% AsPy, trace Py (?)						
177.93-178.04		- zone with 30% Py with an olive green tarnish and clay alteration, and 20% Sp (?).						

CORDILLERAN ENGINEERING LI[illegible] ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 27 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
173.00-174.00		strongly altered felsite dyke w/ stockwork	48566	1.00	0.74	3.30	✓	
174.00-175.00		"	48567	1.00	0.80	9.64	✓	
175.00-176.00		"	48568	1.00	1.15	7.94	✓	
176.00-177.00		"	48569	1.00	1.88	10.48	✓	
177.00-178.00		"	48570	1.00	0.46	6.05	✓	
178.00-180.00		" low recovery	48571	2.00	0.28	2.89	✓	
179.53-184.10		ALTERED GRANODIORITE - strongly silicified, rubble remnants of coarse grained granodiorite - moderate chloritic alteration - although siliceous, strong green clay alteration, possibly along fractures - rock is broken into pieces < 6 cm long - 80% of rock is rubble < 3 cm dia. - zone contains 2-4% Sp, trace - 1% Py in remnant qtz veins - minor andesite - low sericitic alteration - < 50% recovery						
180.00-181.00		altered granodiorite w/ stockwork mineralization	48572	1.00	0.28	3.28	✓	
181.00-183.00		" 50% low recovery	48573	2.00	0.28	2.32	✓	
183.00-184.00		"	48574	1.00	0.47	2.96	✓	

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 28 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
184.10-188.37		MINERALIZED BRECCIA						
		-breccia has a chlorite-pyrite matrix with quartz-ankerite clasts to 185.50 m.						
		-matrix is 15% Py						
		-clasts are 75% of rock and are subangular fragments ranging in size from <1mm to 4 cm dia.						
		-zone contains ≈3% Sp						
185.50-187.15		-zone is rubble pieces < 2cm dia						
		-contains some clay						
		-appears to be continuation of the breccia						
187.15-188.37		-matrix is ankerite, lt brownish white clay and chlorite w/ trace Py.						
		-qtz-ankerite clasts are ≤ 1cm dia and are 60% of rock. -subangular.						
184.00-185.00		mineralized breccia	48575	1.00	0.84	2.71		
185.00-186.00		"	48576	1.00	1.46	3.78		
186.00-187.00		"	48577	1.00	0.64	5.06		
187.00-188.00		"	48578	1.00	0.74	2.60		
188.37-195.00		FELSITE DYKE						
		-medium green, fine grained felsite dyke with 2% white fsp ? phenocrysts ≤ 1mm dia.						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 29 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-much of zone is angular rubble fragments < 2 cm dia. -low recovery						
		-generally low blue green clay alteration						
189.52 - 190.50		-zone with strong clay alteration						
		-rock is highly fractured (>1/1 cm) & 40° - 80° crosscut and are clay filled so that rock is in fragments ≤ 1 cm dia						
192.00 - 192.12		-zone of strong blue green clay alt.						
192.63 - 195.00		-dyke contains some hairline thin anhedrite and anhedrite - Sp veinlets (1/5 cm) & 40° common, such that zone contains 1% Sp.						
188.00 - 189.00		felsite dyke	48579	1.00	0.25	1.16	✓	
189.00 - 190.00		"	48580	1.00	0.05	0.86	✓	
190.00 - 191.00		"	48581	1.00	0.02	0.36	✓	
191.00 - 193.00		" low recovery	48582	2.00	0.03	1.22	✓	
193.00 - 195.00		" "	48583	2.00	0.04	1.66	✓	↓
195.00 - 197.82		STRONGLY ALTERED GRANODIORITE						
		-light green, coarse grained remnants and fragments ≤ 4 cm dia, of granodiorite altered to 80% clay						
		-low chloritic alteration						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 30 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- contact & ?						
195.00 - 197.00		strongly altered granodiorite	48584	2.00	< 0.02	0.38		
197.00 - 199.00		strongly altered and altered granodiorite	48585	2.00	0.02	0.02		
197.82 - 211.00		ALTERED GRANODIORITE						
		- green grey, coarse grained, inequigranular granodiorite						
		- low chloritic alteration						
		- moderate sericitic alteration						
		- low white clay alteration						
198.13 - 198.38		- zone of severe green brown clay alteration w/ 20 % remnant granodiorite grains						
211.00 - 215.49		STRONGLY ALTERED GRANODIORITE						
		- severe yellow green clay alteration to 212.45 m, white clay alt. to 214.60 m, and green clay alt to 215.49 m of coarse grained granodiorite. Rock is 80% clay.						
		- contact & ?						
		- colour is due to variations in chlorite and epidote alterations.						
215.49 - 227.49		ALTERED GRANODIORITE						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 31 of 32
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-light greenish grey, coarse grained, inequigranular granodiorite		
		-low chloritic and yellowish clay alteration		
		-low sericitic alteration		
		-contains trace disseminated, red garnets, ≤ 5 mm dia.		
218.67-224.22		-pegmatitic interval		
226.27-227.49		-pegmatitic interval		
227.49-232.57		SCHIST		
		-dark grey, strongly foliated muscovite-biotite schist		
		-schistosity ∠ 10° contact ∠'s 60° uphole and 20° down hole.		
		-minor chlorite		
		-schist has some grey quartz veins 1 cm - 2 cm wide, ∠ 10° ranging in density from (1/5 cm) between 227.80 - 228.06 m, to (1/1 m) in rest of unit.		
		-quartz is fractured		
232.57-234.70		ALTERED GRANODIORITE		
		-light, yellow-green grey, coarse grained,		

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-32

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 32 of 32
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		inequigranular granodiorite		
		-moderate chloritic + epidote, decreasing down hole to low, alteration.		
		-low sericitic and yellow white clay alteration		
232.69 - 233.13		-pegmatitic zone of 75% white feldspar		
234.24 - 234.35		-zone with 2 green clay filled fractures, 1cm wide, @ 50° and 20°.		
234.80 - 235.04		-zone with several 3mm wide, light green clay filled fractures (1/5 cm) @ 60°-70°		
234.70		EOH		

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
127.41	-60°	136°
66.45	-58°	137°
16.15	-58°	127°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 3
Section 195 E
Bearing 145°

Total Depth 131.98 m
% Recovery 77%
Elev. Collar 1377 m
Latitude
Departure

Sheet No. 2 of 20
Logged by K. MEIDAM
Date Begun JULY 24 (N.), 1987
Date Finished JULY 27 (N.), 1987
Core Stored At LOGAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-9.75		casing						
9.75-30.02		ALTERED GRANODIORITE						
		- light greenish-grey, medium grained, equigranular granodiorite.						
		- contains low chloritic and sericitic alt.						
		- moderate yellow brown clay w/ Fe-Ox, Mn-Ox along fractures (avg 1/20 cm), ∠ 40° and 80° common, although variations occur						
		- contains 1-3% disseminated Sp., trace Py						
		- Sp, Py-bearing qtz veinlets occur (avg 1/30 cm) ∠ 40° and 80° common < 5 mm wide.						
		- Fe-Ox, Mn-Ox is confined to fractures except in zones noted below.						
9.75-14.59		- moderate Fe-Ox throughout						
15.80-21.95		- moderate Fe-Ox, low Mn-Ox throughout						
		- rock is broken						
24.89-25.13		QV w/ 10% Sp, 7% Py, ∠ 30°						
25.51-26.10		QV w/ 10% Py, 5% Sp, 2% tetrahedrite						
		- quartz is vuggy, Py is in bands ∠ 50°						
		- contact is gradual with silicified granodiorite						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 20

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
26.10 - 30.02		- granodiorite is coarse grained, inequigranular texture.						
27.12 - 27.25		- QV w/ 5% Sp, 3% Py, 1% tetrahedrite. - contact ?						
9.75 - 11.00		altered granodiorite w/ stockwork mineralization	48605	1.25	0.17	0.03		
11.00 - 12.00		"	48606	1.00	0.33	0.01		
12.00 - 13.00		"	48607	1.00	0.79	0.14		
13.00 - 14.00		"	48608	1.00	0.17	0.21		
14.00 - 15.00		"	48609	1.00	0.16	0.10		
15.00 - 16.00		"	48610	1.00	0.27	0.09		
16.00 - 17.00		"	48611	1.00	0.11	0.03		
17.00 - 18.00		"	48612	1.00	0.34	0.08		
18.00 - 20.00		" 36% low recovery	48613	2.00	0.25	0.02		
20.00 - 21.00		"	48614	1.00	0.21	0.02		
21.00 - 22.00		"	48615	1.00	0.14	0.02		↓
22.00 - 23.00		"	48616	1.00	0.82	0.54	✓	
23.00 - 24.00		"	48617	1.00	0.22	0.12		
24.00 - 25.00		"	48618	1.00	0.67	1.09	✓	↑
25.00 - 26.00		"	48619	1.00	1.57	2.55	✓	
26.00 - 27.00		"	48620	1.00	0.86	2.21	✓	
27.00 - 28.00		"	48621	1.00	0.92	2.80	✓	
28.00 - 29.00		"	48622	1.00	0.17	1.15	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAC
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
29.00-30.00		altered granodiorite w/ stockwork mineralization	48623	1.00	0.39	1.86	~	
30.02-31.10		MASSIVE SULPHIDE VEIN						
		-vein has 75% Sp, 3% Py, 2% tetrahedrite (?), trace CPy, AsPy.						
		-mineralization occurs in blebs ≤ 2 cm dia., except for massive Sp.						
30.00-31.00		massive sulphide vein	48624	1.00	6.66	26.57	~	
31.10-43.05		ALTERED GRANODIORITE						
		-pale green-grey, course grained, inequigranular granodiorite						
		- contains low sericitic and chloritic alteration						
31.10-33.83		-strongly silicified zone - quartz flooded with direction of veining ± 40°-60° common	32.3 Vein w/ Sl. (euhedral Xls) w/ Qz surrounding and Py also appears blk Sph in vugs. Az+Ml also occur.					
		-zone contains, overall, 5% Sp, trace Py, tetrahedrite, AsPy, CPy.	34.0 Back to Grdi					
		-mode of mineralization is disseminated and in blebs ≤ 1 cm dia. in veins 1mm to 15 cm wide						
33.83-43.05		-interval has 3% Sp, trace Py, disseminated and contained in qtz veinlets (1/4 cm avg) although random spacing and orientation,						
		-most are ≤ 1cm wide, few up to 4 cm wide.						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 20
Angle of Hole | % Recovery | Logged by K. MCIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-few contain AsPy, CPy and tetrahedrite						
33.83-35.90		-interval contains moderate to strong Fe-Ox along fractures (1/5 cm decreasing to 1/15 cm down hole) @ 15° and 50° common.						
			40.0 Qz-Sl vein in offset and cross cut by late Qz-Py-Cp veinlets at right angles (2cm wide) striking infill in parallel veinlets (5mm wide)					
40.84-40.93		-QV w/ 20% Sp, 10% anterite, 2% AsPy, 1% Py, 1% CPy, @ 60°						
31.00-32.00		altered granodiorite w/ good stockwork min	48625	1.00	4.91	14.75	-	
32.00-33.00		"	48626	1.00	1.77	6.51	-	✓
33.00-34.00		"	48627	1.00	1.06	5.26	-	✓
34.00-35.00		"	48628	1.00	0.21	1.10	-	
35.00-36.00		"	48629	1.00	0.26	1.28	-	
36.00-37.00		"	48630	1.00	0.16	1.20	-	
37.00-38.00		"	48631	1.00	0.33	2.30	-	
38.00-39.00		"	48632	1.00	0.31	2.10	-	
39.00-40.00		"	48633	1.00	0.74	2.76	-	
40.00-41.00		"	48634	1.00	1.55	12.00	-	
41.00-42.00		"	48635	1.00	1.06	4.60	-	
42.00-43.00		"	48636	1.00	2.27	11.80	-	✓
43.05-44.17		MINERALIZED QUARTZ VEIN						
		-milky white quartz vein w/ 10% Sp, 4% AsPy, 2% Py, trace CPy						
		-also contains a 30 cm zone of						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 6 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		strongly silicified granodiorite w/ ankerite veinlets (1/10 cm) ≤ 5 mm wide, @ 50°	Ankerite is white-tan					
43.00-44.00		mineralized quartz veins	48637	1.00	1:29	7.80		
44.17-46.04		FELSITE DYKE						(44-47m)
		-green, fine grained, partially silicified, felsite dyke	Dyke rock is brown to green in colour, aphanitic					
		-contains several qtz-Sp veinlets (avg 1/1 cm), crosscutting at various angles ≤ 2 mm wide. - 4% Sp in unit.	Cl'n fracture breccia zone from 45.0 to 46m. Mostly clast supported, 25% matrix which is brown, soft (Sericite) fine grained. Clasts are dyke material, silicified, have been rotated. Crosscut by Sp-Qz veinlets (conformable) Med-grained Py.					
		-contains trace disseminated Py and AsPy						
		-ankerite veinlets occur (1/20 cm), @ 60° ≤ 3 mm wide.						
45.25-45.35		-broken pieces of ankerite vein w/ ≈3% Sp, trace Py.						
45.46-46.76		-QV w/ 5% Sp, trace Py, CPy, & ?						
46.76-46.90		-breccia with a Pyrite-rich qtz matrix with 60% subrounded felsite clasts ≤ 5 mm dia.						
44.00-45.00		felsite dyke w/ stockwork mineralization	48638	1.00	1.04	6.28		
45.00-46.00		"	48639	1.00	2.18	11.67		
46.04-63.04		ALTERED GRANODIORITE (47m)						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 7 of 20
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAC
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- green grey, coarse grained, inequigranular granodiorite						
		- moderately silicified and has quartz veinlets (≈ 1/10 cm) ∢ 40°-60° common, most are ≤ 2 cm but go up to 5 cm wide						
		- unit contains 4% Sp - disseminated and in veinlets.						
		- trace Py, AsPy and ankerite contained in quartz veinlets.						
		- unit contains moderate chloritic and low sericitic alteration.						
		- low green clay alteration along fractures.						
50.76-50.87		- QV w/ 5% Sp, trace Py, 15% ankerite						
		- mineralization banded ∢ 50°						
51.71-52.06		- QV w/ 15% Sp, 3% ankerite, 1% Py and 20% strongly silicified granodiorite						
53.00-53.03		- QV w/ 95% Sp, ∢ 50°						
60.90-63.04		- granodiorite is strongly silicified.						
46.00-47.00		altered granodiorite w/ good stockwork mineralization	48640	1.00	0.82	4.78	✓	
47.00-48.00		"	48641	1.00	1.18	9.20	✓	
48.00-49.00		"	48642	1.00	1.13	7.82	✓	
49.00-50.00		"	48643	1.00	0.53	4.15	✓	

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 20
Angle of Hole | % Recovery | Logged by K. MEIRAZ
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
50.00-51.00		altered granodiorite w/ good stockwork mineralization	48644	1.00	0.85	3.08	✓	
51.00-52.00		"	48645	1.00	1.64	7.50	✓	
52.00-53.00		"	48646	1.00	1.67	5.10	✓	
53.00-54.00		"	48647	1.00	0.73	3.81		
54.00-55.00		"	48648	1.00	0.19	2.17	✓	
55.00-56.00		"	48649	1.00	0.14	2.01	✓	
56.00-57.00		"	48650	1.00	0.31	3.20		
57.00-58.00		"	48651	1.00	0.75	1.48	✓	
58.00-59.00		"	48652	1.00	0.20	0.76	✓	
59.00-60.00		"	48653	1.00	0.42	1.69	✓	
60.00-61.00		"	48654	1.00	1.29	3.61	✓	
61.00-62.00		"	48655	1.00	0.56	3.73	✓	
62.00-63.00		"	48656	1.00	0.85	6.10	✓	
63.04-64.73		MINERALIZED QUARTZ VEIN	63-64	Qtz-Sl-Asp-Py veins, lots ankerite				
		-milky white to grey quartz vein						
		w/ 15% Sp, 10% AsPy, 1% Py, trace CPy						
		-vein has mottled texture						
63.39-63.54		-interval contains 70% ankerite						
		-contact @ 70°						
63.00-64.00		mineralized quartz vein	48657	1.00	2.84	9.40	✓	
64.00-65.00		"	48658	1.00	1.71	16.80	✓	
64.73-66.42		MINERALIZED ANKERITE VEIN						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 9 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- cream coloured ankerite w/ Sp, Py and quartz						
		- vein is zoned into highly fractured zones containing Py and zones of massive Sp						
		- fractured zones have fracture density (avg 1/1 cm), hairline thin, random orientations 70% of unit is composed of this						
		- Sp occurs in bands 4-10 cm wide which are broken by veins of ankerite and qtz giving spider-web texture.						
		- contact ∠'s 20°, 40°, 60° common.						
		- unit contains 15% Sp, 2% Py						
65.00-66.00		mineralized ankerite vein	48659	1.00	1.51	9.36	✓	
66.42-69.52		MINERALIZED QUARTZ VEIN						
		- milky white, quartz with ≈ 20% strongly silicified granodiorite						
		- very low chloritic alteration.						
		- vein has mottled appearance, containing avg 8% Sp, quantity increases downhole; trace Py, CPy						
		- contains pyritic - ankerite zones as						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY... LOGAN ..... HOLE No... DDH 87-L-33 ....

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 10 of 20

Angle of Hole..... % Recovery..... Logged by K. MEIDAL

Claim..... Elev. Collar..... Date Begun.....

Section..... Latitude..... Date Finished.....

Bearing..... Departure..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		63-71m Coarse stringer, massive						
		noted below.						
		-mineralization tends to occur ∢ 40°						
67.68-67.83		-ankerite vein w/ 2% Py, contact ∢ 75°						
68.20-68.38		-ankerite vein w/ 12% Py, contact ∢ 75°						
68.60-68.76		-zone with 50% angular fragments of felsite separated by ≤ 1mm wide qtz-Sp veinlets						
68.99-69.30		- ankerite veins, (1/15 cm) ≤ 2cm wide ∢ 80°						
66.00-67.00		mineralized quartz vein	48660	1.00	4.89	16.58	✓	
67.00-68.00		"	48661	1.00	1.29	4.51	✓	
68.00-69.00		"	48662	1.00	1.14	12.17	✓	
69.52-70.65		MINERALIZED ANKERITE VEIN						
		-cream colored ankerite vein contains 20% Sp						
		-high fracture density (qtz, ankerite filled) gives unit a spider webbed texture.						
		-contains trace Py						
		-fractures crosscut Sp. at random angles.						
69.00-70.00		mineralized quartz vein / ankerite vein	48663	1.00	1.10	10.29	✓	
70.00-71.00		mineralized ankerite vein	48664	1.00	2.00	20.25	✓	V
70.65-72.00		MINERALIZED BRECCIA						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 11 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-siliceous breccia with grey-brown, aphanitic chalcedony(?) matrix — down to 71.20 m, matrix contains minor hematite — also contains 1% Py., trace (almost negligible) Sp - clasts are 80% of rock and are sub-rounded qtz and chalcedony ≤ 1 cm dia, 90% are < 5 mm dia. - much of zone is angular fragments ≤ 5 cm dia.	Several stages of brecciation noted. Clasts appear to be both material and earlier breccias. Breccia matrix appears to have abundant Sl. late Qz-Py veinlets are banded.					
71.00-72.00		mineralized breccia	48665	1.00	0.58	3.50	✓ V	↓
72.00-73.67		ALTERED GRANODIORITE - light green grey, partially silicified, coarse grained, inequigranular granodiorite - contains moderate chlorite + epidote alteration - low, increasing downhole to moderate, yellow green clay alteration - contains trace Py. in few qtz veinlets (1/40 cm) ∡ 50°, ≤ 2 mm wide						
71.31-73.67		- strongly silicified						
72.00-73.00		altered granodiorite	48666	1.00	0.04	0.33	✓	
73.00-74.00		"	48667	1.00	0.17	0.13	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 12 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
73.67-77.90		MINERALIZED BRECCIA						
		- different stages of brecciation have occurred resulting in zones of brecciation being differentiated below:						
73.67-74.18		- interval is composed of a grey chalcedony matrix containing 80% Py.	Dark grey chalcedony (or chalcedony?) w To-Py-Sl matrix, Qz crosscut by wide to clean banded chlky veinlets and stockwork		Likely transitional Tourmaline breccia fine grained frags of sub-rounded			
		- clasts are 30% of interval and are rounded white quartz and felsite(?) fragments ≤ 5mm dia.						
		- zone is cut by a few white, vuggy quartz veinlets (≈1/10 cm) @ 50°	74.1-75M Qz breccia vuggy Chalcedony matrix w/id frags replacing Qz breccia and Hive minerals clasts					
74.18-74.67		- severe white, vuggy quartz veining has resulted in quartz matrix with angular clasts 1cm to 7cm dia of the above unit.						
		- these clasts 50% of zone						
74.67-74.75		- small section of first unit. Matrix is grey chalcedony, possibly sulphide bearing.						
74.75-75.30		- matrix is white quartz and grey chalcedony and is 50% of interval						
		- clasts are rebrecciated Pyrite-bearing, and						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 13 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		qtz and felsite?. -subangular and generally ≤ 1 cm dia						
75.30-76.50		- mixed zone of strongly silicified granodiorite, 10 cm of original breccia w) possible sulphides in chalcedony matrix, and >25 cm of 85% green clay alteration of granodiorite	77.7M Grey qtz vein (cd) and cd breccia, grey to multi'd variable frags.					
76.50-77.90		- matrix is grey chalcedony, Py and other sulphide bearing w) 20% subrounded qtz, chalcedony, some Py and some felsite clasts.						
74.00-75.00		mineralized breccia	48668	1.00	0.12	0.29	✓	
75.00-76.00		"	48669	1.00	0.07	0.19	✓	
76.00-77.00		"	48670	1.00	0.03	0.12	✓	
77.00-78.00		"	48671	1.00	0.04	0.22	✓	
77.90-78.58		ALTERED GRANODIORITE						
		-green, partially silicified, coarse grained, inequigranular granodiorite						
		- moderate chloritic + epidote alteration						
		- moderate green clay alteration						
		- low sericitic alteration						
		- contains 2% Py in blebs ≤ 1.5 cm wide						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 14 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		- 1% disseminated Sp.						
78.58-79.75		FELSITE DYKE	cut by Py stringers					
		- green, fine grained, felsite dyke						
		- unit is in angular fragments ≤ 5 cm dia						
		- contains few ankerite veinlets w/ trace Sp, frequency ?, ≤ 1 mm wide, & ?						
		- contains 2% disseminated Py						
78.58-78.90		- interval is silicified such that felsite is brecciated into angular fragments ≤ 3 cm dia. 75% clasts.						
78.00-79.00		altered granodiorite / felsite dyke	48672	1.00	0.08	0.77	V ✓	
79.00-80.00		felsite dyke	48673	1.00	0.11	0.64	✓	
79.75-84.59		STRONGLY ALTERED GRANODIORITE						
		- 85% green clay w/ remnant granodiorite grains						
		- 25% recovery from 82.60-83.31 m.						
79.75-81.00		- zone of mixed intervals of severely altered granodiorite and medium grained, equigranular granodiorite w/ moderate chloritic and epidote alteration						
		- contains 2% Py and trace Sp.						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 15 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
80.00-82.00		strongly altered granodiorite	48674	2.00	0.09	0.53	✓	
82.00-84.00		"	48675	2.00	0.02	0.28	✓	
84.59-86.60		ALTERED GRANODIORITE						
		-green, coarse grained equigranular granodiorite						
		- contains 3% disseminated Sp						
		-moderate chloritic alteration						
		- low sericitic and green clay alteration						
85.79-85.97		-QV w/ 70% Sp, 5% ankerite						
84.00-86.00		altered granodiorite w/ stockwork mineralization	48676	2.00	0.45	14.24	✓	
86.60-90.00		SCHIST						
		-green grey, weakly foliated muscovite - quartz - feldspar schist w/ trace disseminated Sp						
		- possibly metamorphosed granodiorite or xenolith.	Probably a					
		-moderate chloritic alteration	(51,52)					
		-schistosity ∠ 40°						
89.09-89.51		-interval of pegmatitic granodiorite						
		-contact ∠ 60°						
86.00-88.00		schist	48677	2.00	0.02	0.57	✓	
88.00-90.00		"	48678	2.00	0.04	0.30	✓	

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 16 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
90.00-94.28		ALTERED GRANODIORITE						
		-green, medium grained, inequigranular granodiorite	chlorite altered					
		- contains moderate chloritic and epidote alteration						
		-low sericitic alteration						
		-low, increasing to moderate downhole, green clay alteration.						
		- contains trace disseminated Sp						
		- some ankerite veinlets (1/7 cm) up to 3cm wide, ∠ 60°-80°						
90.00-92.00		altered granodiorite	48679	2.00	<0.02	0.22	✓	
92.00-94.00		"	48680	2.00	<0.02	0.16	✓	
94.28-95.40		STRONGLY ALTERED GRANODIORITE						
		- rock is 75% green clay with remnant granodiorite grains						
		-contact ∠ ?						
94.00-96.00		strongly altered granodiorite	48681	2.00	<0.02	0.19	✓	
95.40-131.98		ALTERED GRANODIORITE						
		-green, medium grained, equigranular granodiorite						
		- moderate chloritic alteration + epidote						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 17 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		-moderate green clay alteration along fractures (1/30 cm avg) ∢ 60°, to 110.00m	Fe-O stains clay altered feldspars (goethite) is orange to black-brown; some feldspars (?) veins (green gypsum?) up to 15cm wide [amount of Fe-O is impressive]					
		-contains trace disseminated Sp to 120.00m						
		-low sericitic alt.						
		-contains anhydrite veinlets (1/20 cm avg) ≤ 3 cm wide, ∢ 40° and 80° common, to 100.95m						
97.31-97.38		-QV, 2cm wide, ∢ 50° w/ 10% Sp, 10% anhydrite						
97.68-98.00		-broken remnant pieces of a quartz-anhydrite-Sp vein w/ 20% ? Sp ∢ ?						
98.77-100.64		-pegmatitic texture						
100.64-101.44		-coarse grained, inequigranular texture						
101.44-103.50		-interval contains some qtz-Sp veinlets (1/15 cm), ∢ 10°, 60° common ≤ 1cm wide						
		-zone has 2% Sp, trace Py						
102.82-103.02		-Anhydrite vein w/ trace disseminated Sp > Py.						
103.50-113.35		-coarse grained, equigranular texture w/ moderate yellow green clay alteration alternating w/ small sections of low clay alteration						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 18 of 20
Angle of Hole | % Recovery | Logged by K. MEDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
109.80 - 110.03		- zone of severe green clay alteration (80%)		
110.03 - 111.25		- 0% recovery, redrilled rubble		
111.25 - 111.30		- zone of severe green clay alteration (80%)		
113.35 - 116.35		- coarse grained, inequigranular texture		
115.28 - 115.33		- QV w/ trace Sp, 1% anhedrite @ 80°		
116.35 - 116.70		- pegmatitic texture		
116.70 - 118.26		- interval contains some qtz - Sp veinlets (1/10 cm) < 1 mm wide, @ 20°		
		- zone contains 2% Sp, disseminated and contained in veinlets		
118.26 - 119.17		- zone is silicified and has anhedrite veinlets such that granodiorite is somewhat brecciated.		
		- anhedrite is 15% of rock, quartz is 50%.		
		- contains 3% Sp in blebs, ≤ 1cm long		
119.47 - 119.50		- green clay filled fracture, @ 75°		
120.19 - 121.41		- coarse grained, inequigranular texture		
		- moderate yellow green clay alteration		
121.64 - 121.89		- qtz veinlets (1/10 cm) @ 40°, < 3mm wide w/ trace Py.		
122.00 - 123.19		- pegmatitic texture w/ moderate green clay alt.		

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 19 of 20
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
124.17-124.21		-zone has 1% disseminated Sp						
124.51-124.64		-zone of 75% light green clay alteration @ 40°						
124.77-126.44		-moderate yellow-green clay alteration						
126.44-126.59		-zone of strong green clay alteration.						
126.79-126.88		-zone w/ 2% disseminated Sp.						
127.07-129.68		-zone w/ moderate yellow white clay alteration						
129.68-130.38		-zone of strong pale green white clay alteration						
130.38-131.68		-pegmatitic texture						
131.44		-quartz veinlet, 2 mm wide, @ 50° w/ 2% Sp.						
131.84-131.98		-broken zone w/ strong pale green white clay alteration						
96.00-98.00		altered granodiorite	48682	2.00	0.29	2.71	✓	
98.00-100.00		"	48683	2.00	<0.02	0.42		
100.00-102.00		"	48684	2.00	<0.02	0.57		
102.00-104.00		"	48685	2.00	0.06	0.92		
104.00-106.00		"	48686	2.00	0.02	0.45		
106.00-108.00		"	48687	2.00	<0.02	0.12		
108.00-110.00		"	48688	2.00	<0.02	0.12		

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 20 of 20
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
110.00-112.00		altered granodiorite	48689	2.00	0.02	0.20		
112.00-114.00		"	48690	2.00	<0.02	0.30		
114.00-116.00		"	48691	2.00	0.03	0.73		
116.00-118.00		"	48692	2.00	<0.02	0.53		
118.00-120.00		"	48693	2.00	<0.02	0.17		
120.00-122.00		"	48694	2.00	<0.02	0.06		
131.98		EOH						

CORDILLERAN ENGINEERING LI ,ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
74.98	-63°	135°
17.07	-61.5°	142°

Core Size | Total Depth | Sheet No. 2 of 9
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oPT	Zn %		
0 - 6.71		casing						
6.71 - 11.28		ALTERED GRANODIORITE						
		-green grey, pegmatitic granodiorite, grading to fine-grained, equigranular granodiorite at 9.45 m						
		- contains moderate chloritic alt, low sericitic alt and low yellow brown clay alt.						
		- contains moderate Fe-Ox, mostly on fractured surfaces and minor Mn-Ox.						
11.28 - 18.59		FELSITE DYKE						
		-green, very fine grained, equigranular felsite dyke.						
11.28 - 15.39		- 19 % recovery						
		- dyke has strong Fe-Ox along fractures.						
		-various angles of fractures has separated rock into clasts ≤ 5 cm dia.						
15.39 - 18.59		- rock contains several quartz - Sp - Py veinlets (1/2 cm) ≤ 1 cm wide - random angles						
		- interval contains 4 % Sp, 1 % Py						
8.00 - 11.00		altered granodiorite	48966	3.00	0.17	0.02		

CORDILLERAN ENGINEERING LI ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 3 of 9
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
11.00-14.00		felsite dykes w/ stockwork mineralization	48967	3.00	0.96	0.14		
14.00-15.00		"	48968	1.00	0.42	0.13		
15.00-16.00		"	48969	1.00	0.51	1.22	✓	↑
16.00-17.00		"	48970	1.00	0.79	2.22	✓	
18.59-21.03		ALTERED GRANODIORITE -unit has 0% recovery from 18.59-19.51 m, 19.96-20.73 m. -from 19.51-19.96 m, there is 13% recovery, consisting of rubble ≤ 2 cm dia, light green, medium grained granodiorite -moderate chloritic alteration -rubble is partially silicified and contains minor Sp in veinlets. -from 20.73-21.03 m, 40% recovery, of the same rock as above but half of it has severe green clay alteration -rock contains trace - 2% Sp.						
17.00-20.00		altered granodiorite w/ stockwork mineralization	48971	3.00	0.38	1.79	✓	
21.03-22.95		PORPHYRY ? -unit has 67% recovery. -to 22.00 m, unit is cream colored clayey andesite? grading to a dark purplish grey						

CORDILLERAN ENGINEERING LI. ;ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 4 of 9
Angle of Hole | % Recovery | Logged by K.MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
		siliceous rock w/ trace Py, possibly bears sulphide						
		- rock contains 4% quartz and chloritized feldspar? subrounded phenocrysts, ≤ 3mm dia.						
		- rock has moderately strong clay alteration of matrix						
		- strong chlorite alteration along fractures, increasing density from (1/5 cm to 1/2 cm) in the intercite to darker unit						
22.46-22.54		- QV, 25 cm wide, ∠ 30° w/ long, triangular clasts of host rock and dark green chlorite						
20.00-22.00		altered granodiorite / porphyry	48972	2.00	1.32	4.60	✓	
22.00-23.00		porphyry	48973	1.00	0.65	2.46	✓	↓
22.95-25.30		ALTERED GRANODIORITE						
		- yellowish green, partially silicified, coarse grained, inequigranular granodiorite						
		- 54% recovery.						
		- moderate chloritic alteration						
		- low yellowish clay alt.						
		- quartz has some Py ± other sulphides in dark grey zones.						
		- quartz has caused minor brecciation in a 10 cm zone						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 9
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
		-clasts are granodiorite and quartz and are 60% of zone. ≤ 1 cm dia, sub angular.						
23.00-24.00		altered granodiorite	48974	1.00	0.08	0.14		
25.30-31.09		FELSITE DYKE						
		-green, very fine grained, partially silicified felsite dyke. 32% recovery						
		-contains many ± Py-bearing anhedrite veinlets (avg. 1/1 cm) random angles						
		-moderate chloritic alteration along fractures						
		-part of unit (15 cm of core) has weak quartz flooding, giving rock a brecciated appearance, clasts ≤ 2 cm dia.						
26.00-26.30		-zone of silicified, medium grained, equigranular granodiorite w/ mod chloritic alt, mod yellowish clay alt.						
		-contact ± ?						
26.52-31.09		-dyke has few drusy quartz veinlets, trace with chlorite infills in vugs.						
24.00-26.00		altered granodiorite / felsite dyke	48975	2.00	0.03	0.14		
26.00-28.00		felsite dyke "	48976	2.00	0.04	0.41		
28.00-31.00			48977	3.00	0.07	0.18		

CORDILLERAN ENGINEERING LI. ,ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 9
Angle of Hole ..... % Recovery ..... Logged by K MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
31.09-32.61		ALTERED GRANODIORITE						
		-green, medium grained, equigranular granodiorite, 63% recovery						
		-moderate chloritic alt						
		-moderately low green clay alt.						
		-contains trace disseminated Sp.						
		-unit has some drusy quartz veinlets with vugs. Some vugs are chlorite filled. and may have trace Py.						
		-rock is 4% qtz veinlets -random angles ≤ 3 mm wide.						
31.00-33.00		altred granodiorite w/ low stockwork mineralization	48978	2.00	0.04	0.37		
32.61-37.19		FELSITE DYKE						
		-green, very fine grained felsite dyke						
		-8.5% recovery						
		-contains some drusy quartz veinlets w/ trace Py >> Sp						
		-minor hematite in rubble zone.						
		-contains few hairline thin anhedrite veinlets in rubble						
33.00-36.00		felsite dyke	48979	3.00	0.18	0.40		
37.19-45.11		BRECCIA						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 7 of 9
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
		-18 % recovery, much rubble						
		- dark grey, siliceous matrix, possibly sulphide bearing						
		- clasts are subrounded to subangular, quartz, chalcedony and feldspar. ≤ 4mm dia, 20% of rock						
		-yellowish clay alteration of 25% of clasts.						
140.23-141.76'		- zone with strong light greenish white clay alteration with 30% remnant fragments of breccia						
43.24-43.28		-zone of dark grey gouge						
43.28-44.20		- 0% recovery						
36.00-39.00		felsite dyke / breccia	48980	3.00	0.11	0.22		
39.00-42.00		breccia	48981	3.00	0.16	0.24		
42.00-45.00		"	48982	3.00	0.11	0.17		
45.11-55.17		ALTERED GRANODIORITE						
		- green, coarse grained, inequigranular, granodiorite						
		- moderate chloritic alteration + epidote						
		-low white clay alteration to 51.97 m.						
		After 51.97 m, clay alteration is moderate						

CORDILLERAN ENGINEERING LI..ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 9
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
		and is peach coloured.						
		- unit contains trace disseminated Sp.						
46.33-47.24		- 11 % recovery of rubble						
		- 40% of rubble is remnant white						
		quartz vein w/ trace Sp.						
49.38-49.69		- 13 % recovery, rubble contains						
		remnant white quartz vein w/ trace						
		Py (± Sp ?)						
51.97-53.00		- zone contains few qtz - Py veinlets						
		≤ 1 cm wide, (1/20 cm), ∠ 10° and ≈ 50°.						
54.10-54.80		- zone of severe peach clay alteration						
		w/ 20% remnant granodiorite grains						
54.80-55.17		- pegmatitic texture.						
45.00-48.00		altered granodiorite w/ low stockwork mineralization	48983	3.00	0.13	0.17		
48.00-51.00		"	48984	3.00	<0.02	0.20		
51.00-53.00		"	48985	2.00	<0.02	0.13		
53.00-55.00		"	48986	2.00	<0.02	0.04		
55.17-82.60		STRONGLY ALTERED GRANODIORITE						
		- most of unit is 85% clay with						
		remnant granodiorite grains						
		- clay is olive green with a peach						
		tinge						

CORDILLERAN ENGINEERING LI[illegible]ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-37

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 9 of 9
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag OPT	Zn %		
55.17-57.00		-clay is peach colored (no green)						
59.74-64.62		-unit is 97% clay						
		-fractured surface is slickensided - broke at ∠ 50°						
		-appears very weakly foliated in the few muscovite grains						
		-contains trace disseminated Py.						
64.62-69.49		-zone of pale green white clay alteration.						
75.29-76.81		-zone of 95% clay alteration.						
81.08-82.60		-zone of 98% green clay alteration, trace Py.						
81.93		-fracture shows interior of core of dark brown powdered Sp?						
		-does not seem extensive along length of core.						
55.00-57.00		Strongly altered granodiorite	48987	2.00	<0.02	0.06		
57.00-59.00		"	48988	2.00	<0.02	0.50		
82.60		EOH						

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY Rogan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 2 of 17
Angle of Hole | % Recovery | Logged by P. Donkersloot
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0-6.71		OVERBURDEN		
6.71-44.85		ALTERED GRANODIORITE		
		-pale green grey medium grained equigranular granodiorite w/ minor pegmatitic intervals		
		- moderate sericitic alteration - minor chloritic alteration		
		- minor light brown yellow clay alteration		
		- minor Fe and Mn Oxide along fractures in rock		
6.71-9.00		- moderate Fe and Mn oxide along fractures in rock - moderate brown yellow clay alteration		
8.00-9.00		- minor pink clay in rock (rhodonite? rhodochrosite?)		
7.00-9.00		- pegmatitic interval		
13.10-13.95		- pegmatitic interval w/ graphic qz intergrowths		
15.00-17.00		- pegmatitic interval		
17.50-24.00		- much Fe-Ox along fractures and stained on rock - moderate yellow brown clay alteration (≤8% of rock)		
20.70-21.30		- 3cm wide fracture w/ light brown clay ∠15°		
23.85-23.90		- interval w/ 70% yellow-brown clay ∠15°		
17.00-44.85		strong sericitic alteration		
36.90		- 3mm wide fracture w/ pink clay (rhodonite? rhodochrosite?) coated w/ clay ∠15°		

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Rogan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 17
Angle of Hole ..... % Recovery ..... Logged by P. Dankulat
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
43.00-44.85		- much Fe-Ox along fractures and stained on rock - much light brown clay (≤10% of rock)						
44.85-48.45		QUARTZ SPHALERITE VEIN						
		Qz vein 20% Sp and 8% AsPy - minor Fe-Ox along fractures - 25% 1-2mm muscovite chlorite and feldspar grains (from granodiorite?) in vein - contact @ 45°						
48.85-46.00		- much Fe-Ox along fractures 40% Sp in vein						
47.00-48.45		- minor brown yellow clay along fractures						
48.45-74.70		ALTERED GRANODIORITE						
		- pale grey green medium to coarse grained porphyritic granodiorite - strong chloritic alteration - minor pale green clay alteration - moderate sericitic alteration - minor (1%) 1-5mm Qz Sp Py veinlets - dominant core angle of veinlets is 45° - ≤2% disseminated Sp and Py in rock						
48.45-54.50		- strong pale grey clay alteration (15% pale green clay in rock) - minor Qz flooding (8% Qz in rock)						
48.45-49.50		- moderate Fe-Ox along fractures						
51.48-51.70		- 75% pale green clay @ 75°						

CORDILLERAN ENGINEERING LIM .D — DIAMOND DRILL RECORD

PROPERTY Rogers HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 4 of 17
Angle of Hole ..... % Recovery ..... Logged by P. Dorken/Lost
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
52.75-52.85		80% pale green clay in rock @ 70°						
64.50-64.70		Qz vn @ 75°						
65.23-65.40		- Qz vn wi 15% Py, 7% AsPy and 4% Sp @ 55°						
60.50-65.00		- minor Fe-Ox along fractures						
69.20		- 5cm wide Qz ln wi 10% Sp, 15% Py, and 5% AsPy @ 115°						
71.63-71.90		- Qz vn wi 15% Sp, 10% AsPy and 5% Py @ 40°						
74.70-77.00		QUARTZ SPHALERITE ARSENOPYRITE VEIN						
		- Qz vn wi 15% Sp, 12% AsPy and 5% Py						
		- 15% muscovite and chlorite in vein						
		- minor fuchsite along fractures - contact @ 20°						
77.00-86.20		ALTERED GRANODIORITE						
		- pale grey green medium to coarse grained porphyritic granodiorite - strong chloritic alteration - moderate pale green clay alteration - minor sericitic alteration						
		- ≤ 1% disseminated Sp in rock						
77.00-80.00		- ≤ 1% Sp fracture and along fractures in rock						
79.50-82.60		- strong clay alteration (20% clay in rock)						
82.30-82.60		- interval of 75% pale green clay @ 30°						

CORDILLERAN ENGINEERING L[illegible]TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 5 of 17
Logged by P. Dankevlaat
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
43.00-44.00		granodiorite	48989	1.00	<0.02	0.25		
44.00-45.00		"	48990	1.00	<0.02	0.09		
45.00-46.00		quartz sphalerite vein	48991	1.00	0.08	0.06		
46.00-47.00		" " "	48992	1.00	0.11	1.67		
47.00-48.00		" " "	48993	1.00	<0.02	0.23		
48.00-49.00		" " "	48994	1.00	<0.02	0.43		
49.00-50.00		Granodiorite w stockwork mineralization	48995	1.00	<0.02	0.47		
50.00-51.00		" " "	48996	1.00	0.03	0.36		
51.00-52.00		" " "	48997	1.00	<0.02	0.58		
52.00-53.00		" " "	48998	1.00	0.06	0.66		
53.00-54.00		" " "	48999	1.00	0.06	0.36		
54.00-55.00		" " "	49000	1.00	0.11	0.96		
55.00-57.00		" " "	49001	2.00	0.02	0.51		
57.00-59.00		" " "	49002	2.00	0.02	0.45		
59.00-61.00		" " "	49003	2.00	0.02	0.74		
61.00-63.00		" " "	49004	2.00	0.02	0.23		
63.00-64.00		" " "	49005	1.00	0.14	0.29		
64.00-65.00		" " "	49006	1.00	0.15	1.01	✓	↑
65.00-66.00		" " "	49007	1.00	0.63	1.38	✓	
66.00-67.00		" " "	49008	1.00	0.19	0.59	✓	
67.00-68.00		" " "	49009	1.00	0.10	0.69	✓	
68.00-69.00		" " "	49010	1.00	0.41	3.97	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Morgan HOLE No. L-138

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 6 of 17
Logged by P Dantourlot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
86.20-87.50		MUSCOVITE CHLORITE QUARTZ SCHIST		
		- green coloured - schistosity ∠25° - contact ∠?		
		- possible metamorphosed granodiorite		
87.50-110.70		ALTERED GRANODIORITE		
		- pale grey green porphyritic granodiorite to occ. medium grained equigranular interval - strong chlorite and epidote alteration - minor sericitic alteration		
		- minor pale green clay alteration		
		- base disseminated Py in rock		
96.00 - 110.70		- minor (1-5 cm) lmn-lcm wide Qz Py veinlets in rock - subparallel core angle of veinlets is 50° - ≤ 1% Py ≤ 2% Py in rock (disseminated and in veins)		
99.20		- 5cm wide Qz vein w 20% Py and 5% Sp ∠40°		
99.92		- 2 cm wide Qz vein w 5% Sp ∠50°		
100.90		- 3 cm wide Qz vein w 75% Sp and 1% Py ∠50°		
99.50-103.50		- interval w medium grained equigranular granodiorite		
101.35-101.40		- Qz vein w 15% Sp and 5% Py ∠50°		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Kaspar HOLE No. L-338

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 7 of 17

Angle of Hole ..... % Recovery ..... Logged by F. Dontenwill

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
101.80–103.20		- minor Qz flooding (15% Qz in rock) - 10% Sp, 5% AsPy and 3% Py in rock (within Qz)						
102.60–102.70		- Qz vn wt 20% AsPy, 8% Sp and 3% Py ∠60°						
103.35		- 2cm wide Qz vn wt 5% Sp ∠50°						
104.50–110.00		- medium grained equigranular granodiorite						
105.85		- 2cm wide Qz vn wt 10% Sp ∠50°						
106.24–106.44		- Qz vn wt 70% Sp, 10% Py, and 5% AsPy ∠60°						
107.70		- 3cm wide Qz vn wt 70% Py and 5% Sp ∠50°						
108.00–108.15		- Qz vn wt 80% Sp and 5% Py ∠65°						
109.69–109.82		- Qz vn wt 80% Sp 5% Py and 5% AsPy ∠55°						
110.70–112.75		QUARTZ SPHALERITE ARSENOPYRITE VEIN Qz vn wt 20% Sp, 20% AsPy and 5% Py - vein contains 15% muscovite and chlorite grains - contact ∠35°?						
112.75–125.75		ALTERED GRANODIORITE - pale grey green medium to coarse grained porphyritic granodiorite - minor Qz flooding (≤15% Qz in rock) - strong chloritic alteration - minor sericitic alteration - minor pale green clay alteration						

CORDILLERAN ENGINEERING L. TED — DIAMOND DRILL RECORD

PROPERTY Dagger HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of 17
Logged by P. Dankerslaat
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
69.00-70.00		Granodiorite w stockwork mineralization	49011	1.00	0.42	4.63	✓	
70.00-71.00		" " "	49012	1.00	0.05	0.68	✓	
71.00-72.00		" " "	49013	1.00	0.45	2.70	✓	
72.00-73.00		" " "	49014	1.00	0.11	1.34	✓	
73.00-74.00		" " "	49015	1.00	0.10	1.09	✓	
74.00-75.00		" " "	49016	1.00	0.27	1.81	✓	
75.00-76.00		Quartz Sphalerite Arsenopyrite vein	49017	1.00	0.74	5.10	✓	
76.00-77.00		" " " " "	49018	1.00	0.44	2.50		
77.00-78.00		Granodiorite w stockwork mineralization	49019	1.00	0.09	1.14	✓	
78.00-79.00		" " "	49020	1.00	0.05	0.77		
79.00-80.00		" " "	49021	1.00	<0.02	0.32		
80.00-82.00		" " "	49022	2.00	<0.02	0.31	✓	
82.00-84.00		" " "	49023	2.00	0.03	0.40	✓	30.80 1.71
84.00-95.00		no sample						
95.00-97.00		granodiorite w stockwork mineralization	49024	2.00	0.06	0.50	✓	
97.00-99.00		" " "	49025	2.00	0.04	0.59		
99.00-101.00		" " "	49026	1.00	0.11	0.53	✓	
101.00-102.00		" " "	49027	1.00	0.12	1.85	✓	
102.00-103.00		" " "	49028	1.00	0.13	1.31	✓	
103.00-104.00		" " "	49029	1.00	0.21	1.55	✓	
104.00-105.00		" " "	49030	1.00	0.10	1.65	✓	
105.00-106.00		" " "	49031	1.00	0.27	2.20	✓	11.39 0.98

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Regan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 9 of 17
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- minor (1-50cm) barren Qz-Sp-Py veinlets in non-dominant core angle of veinlets is 40°- ≤4% Sp and Py in rock (within Qz and along fractures		
112.75–113.50		- rock is slightly foliated - foliation ∠ 30°		
119.00–125.00		- more barren Qz along fractures		
123.00–125.75		- Qz flooding at footwall - rock is slightly foliated - foliation ∠ 35°		
		- ≤ 3% Sp in rock (disseminated in veins)		
125.75–134.70		FELSITE DYKE		
		- light grey green fine grained equigranular felsic dyke - many (2-5cm) barren Qz Sp filled fractures in rock (no preferred orientation - moderate chloritic alteration - contact ∠ 50°?		
		- ≤ 8% Sp and ≤ 2% Py along fracture in rock		
125.75–127.20		- minor Qz flooding (15% Qz in rock)		
		- 15% Sp and 10% Py in rock (within Qz)		
126.80–127.00		- Qz vein ≈ 20% Sp / 10% Sp Py and 8% Py ∠ 40° - vein is cut by two 7mm wide cream coloured carbonate veins		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 10 of 17
Angle of Hole ..... % Recovery ..... Logged by P Dontenbroot
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
129.00-134.70		-5% 1-2mm dia Qz eyes in rock		
		- ≤ 4% Sp along fractures in rock		
134.65		-2 cm wide Qz vein w 40% Py and 30% Sp ∠ 60°		
134.70		contact ∠ 50°		
134.70-186.90		ALTERED GRANODIORITE		
		-pale grey green pegmatitic granodiorite		
		- strong chloritic alteration - rock is pale green clay alteration - moderate sericitic alteration - ≤4% Sp in rock (disseminated and along fractures in rock		
136.80-142.00		- rock is slightly foliated - foliation ∠ 35°		
144.10-144.22		- Qz vein w 50% Py and 7% AsPy ∠ 50°		
144.00-144.50		- 20% pale green clay in rock		
151.00-154.00		- rock is slightly foliated - foliation ∠ 30°		
156.00-162.00		- rock is slightly foliated - foliation ∠ 30°		
157.05-157.10		- Qz vein w 5% Sp ∠ 35°		
157.82-157.92		- ankerite vein w 60% Sp ∠ 40°		
158.90-159.00		- qz vein w 5% Sp ∠ ?		
162.65		-2cm wide ankerite vein w 30% Sp ∠ 15°		
163.20		-7mm wide Sp vein ∠ 30°		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Bergan HOLE No. L-30

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 11 of 17
Logged by P. Monteleone
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
105.00-106.00		granodiorite w/ stockwork mineralization	49032	1.00	0.17	3.00	✓	
106.00-107.00		" " "	49033	1.00	0.50	7.00	✓	
107.00-108.00		" " "	49034	1.00	0.29	1.41	✓	
108.00-109.00		" " "	49035	1.00	0.78	7.85	✓	
109.00-110.00		" " "	49036	1.00	0.67	4.09	✓	
110.00-111.00		" " "	49037	1.00	0.89	4.00	✓	
111.00-112.00		quartz aplastic microaplitic vein	49038	1.00	2.07	5.12	✓	
112.00-113.00		" " " "	49039	1.00	0.94	9.97	✓	
113.00-114.00		granodiorite w/ stockwork mineralization	49040	1.00	0.13	1.91	✓	↑
114.00-115.00		" " "	49041	1.00	0.06	1.12	✓	
115.00-116.00		" " "	49042	1.00	0.02	1.32	✓	
116.00-118.00		" " "	49043	2.00	0.09	1.58	✓	
118.00-120.00		" " "	49044	2.00	0.16	1.76	✓	
120.00-122.00		" " "	49045	2.00	0.12	1.79	✓	
122.00-124.00		" " "	49046	2.00	0.16	1.18	✓	
124.00-125.00		" " "	49047	1.00	0.04	0.64	✓	
125.00-126.00		" " "	49048	1.00	0.06	1.01	✓	
126.00-127.00		feldspar dyke w/ stockwork mineralization	49049	1.00	1.97	11.67	✓	
127.00-128.00		" " " "	49050	1.00	0.19	2.98	✓	
128.00-129.00		" " " "	49051	1.00	0.05	1.45	✓	
129.00-130.00		" " " "	49052	1.00	<0.02	0.90	✓	
130.00-132.00		" " " "	49053	2.00	<0.02	0.64	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 12 of 17
Angle of Hole ..... % Recovery ..... Logged by P. Dankestad
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
163.00–186.90		- medium grained equigranular granodiorite		
169.80		- 2 cm wide Qz vn w 70% Sp ∠?		
172.70–172.75		- Qz anhedral vn w 50% Sp ∠50°		
172.00–177.00		- core is blocky - moderate clay alteration (10% clay in rock) - interval contains moderate amount (15%) of 5mm - 3 cm wide Qz Sp anhedral veins - dominant core angle of veins is 50° - ≤8% Sp in rock (disseminated in veins		
177.00–186.90		- rock is partially silicified - moderate Qz flooding (15% Qz in rock) - many (1/5cm) 5mm - 2cm wide Qz Sp anhedral veins - dominant core angle of veins is 50° ≤12% Sp in rock (within Qz)		
180.30–180.50		- Qz vn w 35% Sp ∠50°		
183.96–184.05		- Qz vn w 50% Sp and 15% chlorite and muscovite grains ∠30°		
186.90–191.70		QUARTZ SULPHIDE BRECCIA Qz cement w 60% 5mm - 2cm dia subangular clasts of quartz granodiorite and sulphide - 20% Py and 8% Sp in brx (in both cement and clasts) - 5% sulphides in cement - core is blocky - contact ∠?		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 13 of 17

Angle of Hole ..... % Recovery ..... Logged by P. Donkersloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
132.00-134.00		felsite clyke w stockwork mineralization	49054	2.00	0.07	1.05	✓	
134.00-136.00		granodiorite w stockwork mineralization	49055	2.00	0.05	0.61	✓	
136.00-138.00		" "	49056	2.00	0.04	0.51	✓	
138.00-140.00		" "	49057	2.00	0.04	0.43	✓	
140.00-142.00		" "	49058	2.00	0.09	0.71	✓	
142.00-144.00		" "	49059	2.00	0.02	0.32		
144.00-146.00		" "	49060	2.00	<0.02	0.14		
146.00-148.00		" "	49061	2.00	<0.02	0.26		
148.00-150.00		" "	49062	2.00	0.02	0.30	✓	
150.00-152.00		" "	49063	2.00	<0.02	0.28	✓	
152.00-154.00		" "	49064	2.00	<0.02	0.32	✓	
154.00-156.00		" "	49065	2.00	0.04	0.67	✓	
156.00-158.00		" "	49066	2.00	0.68	2.01	✓	
158.00-160.00		" "	49067	2.00	0.30	1.13	✓	
160.00-162.00		" "	49068	2.00	0.86	6.80	✓	
162.00-164.00		" "	49069	2.00	0.14	1.10	✓	
164.00-166.00		" "	49070	2.00	0.09	0.30		
166.00-168.00		" "	49071	2.00	0.41	0.93	✓	
168.00-170.00		" "	49072	2.00	0.08	0.68	✓	
170.00-172.00		" "	49073	2.00	0.05	0.53	✓	
172.00-174.00		" "	49074	2.00	0.07	1.23	✓	
174.00-176.00		" "	49075	2.00	0.13	1.32	✓	

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 14 of 17
Angle of Hole | % Recovery | Logged by P. Dankevlot
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
186.90-187.20		- cement is brown - mixture of qz and ankerite?		
191.70-192.30		SEVERELY ALTERED GRANODIORITE - pale green clay ± 30% 1-2mm dia qz muscovite and feldspar grains and 20% 5mm-2cm dia subrounded remnant granodiorite fragments - trace amounts of Sp along fractures in rock		
192.70-193.80		QUARTZ VEIN Qz ± ≤1% Sp and 15% chlorite and muscovite grains - contact ⊀? - core is fractured up		
193.80-199.60		SEVERELY ALTERED GRANODIORITE - pale green clay ± 30% 1-2mm dia qz muscovite and feldspar grains and 20% 5mm-2cm dia subrounded remnant granodiorite fragments - trace amounts of Sp along fractures - contact ⊀ 55°		
197.00-199.60		- 10% 5mm-2cm dia felsite fragments and 5% granodiorite fragments		
193.75-198.70		- felsite interval ⊀?		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 15 of 17

Angle of Hole ..... % Recovery ..... Logged by P. Donkersloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	ACT Zn		
176.00-177.00		granodiorite to stockwork + replacement	49076	1.00	0.03	0.37		
177.00-178.00		" " "	49077	1.00	0.02	0.50	✓	
178.00-179.00		" " "	49078	1.00	0.53	2.15	✓	
179.00-180.00		" " "	49079	1.00	0.48	1.09	✓	
180.00-181.00		" " "	49080	1.00	0.22	2.28	✓	
181.00-182.00		" " "	49081	1.00	0.08	1.15	✓	
182.00-183.00		" " "	49082	1.00	0.10	1.54	✓	
183.00-184.00		" " "	49083	1.00	0.73	2.40	✓	
184.00-185.00		" " "	49084	1.00	0.67	4.70	✓	
185.00-186.00		" " "	49085	1.00	0.45	2.81	✓	
186.00-187.00		" " "	49086	1.00	0.97	4.03	✓	
187.00-188.00		quartz sulphide "	49087	1.00	0.40	2.00	✓	105' ↓ 1454
188.00-189.00		" " "	49088	1.00	0.02	0.09		
189.00-190.00		" " "	49089	1.00	0.13	0.06		
190.00-191.00		" " "	49090	1.00	0.10	0.26		
191.00-192.00		" " "	49091	1.00	<0.02	0.45		
192.00-194.00		" " "	49092	2.00	<0.02	0.10		
194.00-196.00		fractured fault "	49093	2.00	<0.02	0.22		
196.00-198.00		" "	49094	2.00	<0.02	0.12		
198.00-200.00		" "	49095	2.00	<0.02	0.44		
200.00-202.00		felsic dyke	49096	2.00	<0.02	0.88		
202.00-204.00		" "	49097	2.00	<0.02	0.02		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Kayan HOLE No. L-38

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 16 of 17

Angle of Hole ..... % Recovery ..... Logged by P. Donkersloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
199.60-206.90		FELSITE DYKE - green fine grained equigranular felsic dyke w/ 5% 1-2mm dia qz eyes - moderate amount (1%-2cm) of bull qz filled fractures (no dominant orientation) - <2% Sp along fractures in rock - strong chloritic alteration - contact @ 55°		
206.90-223.42		ALTERED GRANODIORITE - pale grey green medium to coarse grained porphyritic granodiorite - moderate chloritic alteration - minor green white clay alteration - minor sericitic alteration		
206.90-209.00		- <2% Sp along fractures in rock		
		- dominant core angle of fractures is 40°		
220.85-221.10		- interval w/ 50% green white clay @ 50°		
223.42		EOH		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 17 of 17
Logged by P. Dombrowski
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
204.00-206.00		feldspar porphyritic dyke	49098	2.00	<0.02	0.07		
206.00-208.00		granodiorite with stockwork mineralization	49099	2.00	<0.02	0.67		
208.00-210.00		" " "	49100	2.00	<0.02	0.18		
210.00-212.00		hornblende granodiorite	49101	2.00	<0.02	0.01		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-4-39

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
119.48	-62.5°	138°
15.85	-62°	134°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 3
Section 385 E
Bearing 145°

Total Depth 124.05 m
% Recovery 93%
Elev. Collar 1364 m
Latitude
Departure

Sheet No. 2 of 11
Logged by K. MEIDAN
Date Begun AUG.4 (N.), 1987
Date Finished AUG.6 (N.), 1987
Core Stored At LOGAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0-6.71		casing		
6.71-36.46		ALTERED GRANODIORITE - green grey, generally coarse grained equigranular granodiorite - low white clay alteration, low chloritic alteration, low sericitic alteration - variations in textures, oxidation and clay alterations noted below		
6.71-9.01		- zone of low Fe-Ox > Mn-Ox throughout, but moderate Fe-Ox = Mn-Ox along fractures (1/20 cm avg), @ 25° and 80° common. - fractured surfaces have moderate rust clay alteration - from 8.00 m down, rock has pegmatitic texture		
9.01-10.91		- zone is pegmatitic, but largely unconsolidated due to strong white clay alteration - rock contains mod. Mn-Ox; moderately low Fe-Ox to 9.55 m.		
10.91-12.43		- rock contains pinkish white clay filled fracture (1/10 cm avg) @ 10°, 40° and 70° common, ≤ 2 mm clay		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 11

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- trace disseminated red garnets ≤ 1mm dia						
12.43 - 13.00		- rock has moderately strong white clay alteration, moderate Mn-Ox, trace Fe-Ox						
		- fractures ∠ 70°.						
13.00 - 13.80		- strong Mn-Ox along fractures ('/15 cm) ∠ decreases downhole from 80° - 0°						
		- minor Fe-Ox						
13.80 - 14.71		- moderate Fe-Ox, minor Mn Ox						
14.50 - 14.55		- QV w/ moderate Mn-Ox, Fe-Ox, ∠ 50°						
14.55 - 15.01		- strong clay alteration - colour changes from rust to green.						
		- ∠ 30°						
15.17 - 16.70		- moderate Fe-Ox, minor Mn-Ox						
		- moderate whitish clay alt.						
16.70 - 18.26		- fractures occur ('/20 cm), ∠ 0°, 25°, 50°						
		- strong green clay alteration, up to 2 cm wide in fractures.						
18.26 - 18.86		- minor Mn-Ox > Fe-Ox						
		- moderately low whitish clay alteration						
18.63 - 18.65		- QV w/ minor Mn-Ox, ∠ 50°						
18.86 - 26.32		- zone has trace disseminated red garnets ≤ 5 mm dia clusters.						

CORDILLERAN ENGINEERING LI. .ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 4 of 11
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAM
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-moderate sericitic alt		
		- fractured surfaces contain moderate Mn-Ox, mod white clay alt (1/20 cm avg), angles vary		
		-after 23.41m, rock has sparse calcite veinlets (1/1 m), ∡ 65°, ≤ 2mm wide		
26.32-29.21		-pegmatitic texture w/ minor Mn-Ox		
		- contains fractures w/ moderate clay (1/10 cm) ∡ 60°-80°		
26.57-27.00		- few calcite veinlets (1/20 cm avg) ∡ 30°, ≤ 1mm wide.		
29.21-31.20		- moderate chloritic alteration.		
32.70-32.83		-strong green clay alteration, ∡ ?		
32.92-33.95		- several greenish-white clay filled fractures, ∡ 60° dominant, ≤ 1cm wide (1/7 cm avg).		
34.75-34.88		-moderate green clay alteration		
35.05-36.46		- light green clay filled fractures (1/10 cm avg), various angles, ≤ 3 cm wide		
36.46-37.74		STRONGLY ALTERED GRANODIORITE		
		- rock is altered to 95% clay		
		- form of granodiorite grains is still		

CORDILLERAN ENGINEERING LI ;ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 5 of 11
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		-low chloritic alteration						
		-rock is pale greenish white						
37.74-41.26		ALTERED GRANODIORITE						
		-green grey, coarse grained inequigranular granodiorite						
		-moderate chloritic alt, moderately low green clay alt, low sericitic alt.						
38.71-38.88		-zone of severe greenish white clay alt.						
39.95-41.26		-moderately strong chloritic alt altered granodiorite						
40.00-41.00			49102	1.00	<0.02	0.18		
41.26-42.06		STRONGLY ALTERED GRANODIORITE						
		-rock is altered to 80% green clay with remnant granodiorite grains						
		-contact ± ?						
41.00-42.00		strongly altered granodiorite	49103	1.00	0.18	1.24	✓	
42.06-42.50		MINERALIZED QUARTZ VEIN						
		-grey white quartz is mottled by 35% Sp, 10% AsPy, 10% ankerite, 2% Py						
		-mineralization is somewhat banded, ∠ 30°						
42.00 - 42.50		mineralized quartz vein	49104	0.50	2.71	16.27	✓	

CORDILLERAN ENGINEERING LI. .ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 6 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAN
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
42.50-57.26		ALTERED GRANODIORITE		
		- green grey, coarse grained equigranular granodiorite		
		- moderate chloritic, low greenish white clay, low sericitic alt.		
42.63-43.28		- moderately strong green clay alt.		
44.90-46.64		- contains some quartz and ankerite veinlets (1/30 cm), ≤ 2 mm wide, ∡ 40° and 70° dominant.		
47.36-47.55		- clay filled fractures (1/10 cm) ∡ 50°		
47.76-47.84		- trace disseminated red garnets, ≤ 5 mm dia.		
48.46-52.87		- zone with clay filled fractures (avg 1/5 cm) ∡ 40° dominant, up to 3 cm wide.		
50.11		- QV w/ 20% Sp, 15% ankerite, 1 cm wide, ∡ 50°		
50.78-51.37		- moderate greenish white clay alteration in granodiorite		
53.32-53.67		- pegmatitic granodiorite w/ trace disseminated red garnets, ≤ 5 mm dia.		
53.67-54.51		- strong green clay alteration.		
55.00-56.09		- moderately strong green clay alteration		
56.37-56.92		- moderately strong chloritic alteration.		
		- zone grades to pegmatitic granodiorite w/		

CORDILLERAN ENGINEERING LI ;ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 7 of 11
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Ag oz/t	Zn %		
		trace disseminated garnet, ≤ 5 mm dia						
56.92-57.26		- moderately strong greenish white clay alteration.						
42.50-43.50		altered granodiorite	49105	1.00	0.11	0.84		
43.50-44.50		"	49106	1.00	<0.02	0.06		
57.26-64.92		STRONGLY ALTERED GRANODIORITE						
		- alternating zones of strongly altered granodiorite w/ green, coarse grained, equigranular granodiorite.						
		- 80% of the zone is severely altered to 85% green clay w/ remnant granodiorite grains.						
		- the other 20% is zones up to 60 cm long of granodiorite w/ moderately low green clay alteration.						
64.92-124.05		ALTERED GRANODIORITE						
		- light green-grey, coarse grained, inequigranular granodiorite						
		- moderate chloritic alteration down to 66.60 m.; below 66.60 m, chloritic alteration is low.						
		- low greenish white clay and sericitic alt.						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
66.01-66.40		- zone is medium grained, equigranular, and contains 2% disseminated Sp.						
66.12-66.17		- broken rock containing a chloritized quartz vein w/ ≈ 10% Sp, trace Py, 10% ankerite & ?						
68.76-69.50		- zone with moderately clay filled fractures (1/10 cm) & 60°						
72.57-73.03		- unconsolidated zone of granodiorite grains and strong light brownish green clay alteration						
75.83-79.10		- zone w/ none to trace chloritic alt.						
75.78-79.21		- zone w/ white clay filled fractures density (≈ 1/50 cm) & 50° ≤5mm wide.						
77.77-78.30		- pegmatitic texture w/ minor graphic granite texture.						
79.51-80.08		- zone w/ moderately strong green clay alteration and moderate chloritic alteration						
		- contains a calcite veinlet, 1mm wide, & 25°.						
80.11		- QV'let w/ 5% Sp, 5mm wide, & 60°						
80.63-81.40		- zone w/ moderate light brown clay alteration						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 9 of 11
Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- some fractures ∢ 20°						
81.85-82.24		- zone of moderately strong green clay alteration.						
		- contains a quartz-anhcrite veinlet 5 mm wide, ∢ 60°.						
82.51-83.30		- pegmatitic texture						
83.30-87.18		- interval has moderate chloritic alt.						
83.30-83.63		- medium grained, equigranular texture						
		- low, yellow brown clay alteration of feldspars.						
84.24		- quartz veinlet w/ 2% Py, 2% anhcrite						
		- 2 mm wide, ∢ 50°						
85.85-86.64		- interval has 1% disseminated Sp.						
86.64-87.48		- pegmatitic interval						
88.39-89.92		- zone w/ beige clay filled fractures (1/7 cm) ∢ 40°, ≤ 1 cm wide						
		- clay is calcareous						
90.34-93.27		- zone w/ beige calcareous clay filled fractures (1/10 cm) ≤ 5 mm wide, ∢ 60° dominant.						
95.53-97.74		- zone of alternating fine grained granodiorite w/ 1% disseminated red garnets ≤ 1 mm dia.						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 10 of 11

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAN

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		and pegmatitic granodiorite						
		-zones are ≈ 60 cm each.						
		-contains some calcite veinlets (1/15 cm)						
		∤ 60° dominant.						
97.74 - 101.25		-texture is coarse grained, equigranular						
		-contains very few calcite veinlets						
		∤ 60°						
101.43 - 106.38		- moderate greenish white clay alteration						
		-strong along few fractures						
107.82 - 108.19		- moderately strong beige clay alteration						
110.69 - 111.11		-zone has three beige clay filled						
		fractures, ≤ 2cm wide, ∤ 40° and 70°						
113.72 - 113.90		- fracture, ∤ 5°, 5 mm wide, filled						
		w/ beige, calcareous clay.						
114.38 - 115.24		- fractures, ∤ 0-10°, 1.5 cm wide zone,						
		with calcareous beige clay						
116.45 - 116.54		- fracture, 5 mm wide, ∤ 30°, filled						
		w/ calcareous clay.						
118.77 - 122.92		- zone is medium to coarse grained,						
		equigranular						
		- moderate chloritic alteration						
119.77		-quartz-calcite veinlet, 4 mm wide,						

CORDILLERAN ENGINEERING LI. ED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-39

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 11 of 11
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		∢ 40°		
120.87		-calcite veinlet, 3 mm wide, ∢ 50°		
121.40-122.10		-zone has some quartz-ankerite veinlets		
		-density ranges from (1/20 cm) to (1/2 cm) near end of interval.		
		≤ 2 mm wide, ∢ 40°		
122.64-122.71		-zone contains two quartz-ankerite veinlets, ≤ 2 mm wide, ∢ 50°, w/ trace Sp		
		-trace disseminated Sp between veinlets and for 5 cm on either side		
122.92-124.05		-zone has none to trace chloritic alteration		
		-down to 123.72 m, rock is medium grained, equigranular granodiorite		
		-zone has very low white clay alteration		
124.05		EOH		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
~~Footage~~ m	Angle	Azimuth
145.39	-63°	140°
81.38	-62°	140°
14.33	-60.5°	135°

Core Size NQ
Angle of Hole -60°
Claim LOGAN 5
Section 790 E
Bearing 145°

Total Depth 149.96 m
% Recovery 85 %
Elev. Collar 1383 m
Latitude
Departure

Sheet No. 2 of 22
Logged by K. MEDAU
Date Begun AUG. 13 (D), 1987
Date Finished AUG. 16 (N), 1987
Core Stored At LOGAN CORE RACKS

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0-6.71		Casing		
6.71-7.62		2% recovery of redrilled overburden		
7.62-9.66		ALTERED GRANODIORITE -green and rust colored, coarse grained, inequigranular granodiorite -moderate rust colored clay alt. -moderate Fe-Ox, low chloritic alt -31% recovery		
9.66-11.58		STRONGLY ALTERED GRANODIORITE -pale greenish white severe clay alteration w/ 20 % remnant granodiorite grains and pegmatitic fragments ≤ 4 cm dia -trace Fe-Ox, low chloritic alt.		
11.58-33.07		ALTERED GRANODIORITE -green, coarse grained, inequigranular granodiorite -moderate chloritic alt + minor epidote in zones. -low green and yellow brown clay alt, low sericitic alt.		
11.65-11.75		-brown, biotite-quartz-muscovite schist xenolith ?, schistocity @ 30°		

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 3 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAC
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
12.00 - 12.40		- severe green clay alteration, half of zone has moderate Fe-Ox						
14.90 - 14.94		- severe yellowish green clay alteration						
15.13 - 15.36		- QV, w/ 20% AsPy, 7% Py, trace Sp @ 20°						
15.36 - 20.47		- interval contains 1% disseminated Sp. Sp is lighter red brown - possibly oxidized.						
18.91 - 19.26		- severe green clay alteration @ 30°						
20.66 - 22.05		- green brown, biotite - quartz - muscovite - feldspar schist - possible xenolith - moderate chloritic alteration - from 21.88 m - 21.92 m, there are 5% red garnets, possibly altered skarn - schistocity @ 30°, contact @ 30°						
22.05 - 23.53		- zone contains 1% disseminated Sp > Py						
22.70 - 22.78		- QV, 2.5 cm wide, @ 30° w/ 15% Sp, trace Py						
30.33 - 32.31		- zone contains ≈ 2% average disseminated Sp, trace Py.						
32.31 - 32.48		- QV w/ 15% AsPy, 1% Py, trace Sp @ 30°						
12.00 - 14.00		altered granodiorite w/ low stockwork mineralization	49392	2.00	<0.02	0.22		
14.00 - 16.00		"	49393	2.00	0.08	0.44		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 4 of 22
Logged by K. MEIDAN
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
16.00 - 18.00		altered granodiorite w/ low stockwork mineralization	49394	2.00	<0.02	0.26		
18.00 - 20.00		"	49395	2.00	<0.02	0.34		
20.00 - 22.00		"	49396	2.00	<0.02	0.56		
22.00 - 24.00		"	49397	2.00	<0.02	0.54		
24.00 - 26.00		"	49398	2.00	<0.02	0.58		
26.00 - 28.00		"	49399	2.00	<0.02	0.46		
28.00 - 30.00		"	49400	2.00	<0.02	0.36		
30.00 - 32.00		"	49401	2.00	<0.02	0.50		
33.07 - 38.00		SCHIST - green grey, muscovite - quartz - feldspar - biotite schist - moderate chloritic alteration + trace epidote - possible xenolith - schistosity ∠ 20°, contact ∠ 20° - unit is intermixed with zones of pegmatitic granodiorite w/ moderate chloritic alteration, low yellow-brown and green clay alteration. - granodiorite units are 30-45 cm long, some contain trace disseminated Sp and occur between schist zones 40 cm - 1.55 m long. - schist is crosscut by quartz and/or calcite veinlets (up to 1/2 cm) ∠ 20°-60°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		≤ 5 mm wide.						
32.00-34.00		altered granodiorite / schist	49402	2.00	<0.02	0.56		
34.00-36.00		schist	49403	2.00	<0.02	0.22		
36.00-38.00		"	49404	2.00	<0.02	0.38		
38.00-64.62		ALTERED GRANODIORITE						
		- green, coarse grained inequigranular intermixing with pegmatitic granodiorite						
		- moderate chloritic alteration ± epidote.						
		- low yellow-brown and green clay alteration, low sericitic alteration.						
38.80		- greenish white, clay filled fracture, 8 mm wide, ∠ 50°						
38.94-39.27		- green, muscovite - chlorite - quartz schist very strong foliation ∠ 20° = contact ∠						
		- possible xenolith.						
39.73-40.91		- zone w/ 1% disseminated Sp						
39.93-40.05		- QV, 1.5 cm wide ∠ 25° w/ 10% Sp, 2% Py, 10% ankerite						
40.91-44.15		- rock is 80% graphic granite texture						
41.27-41.54		- zone has many quartz ± ankerite veinlets with up to 20% Sp, (1/5 cm), ≤ 1 cm wide, ∠ 40° dominant						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 6 of 22

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
41.54 - 41.60		- QV w/ 45% Sp, 15% Py, 5% ankerite ∠ 60°						
41.67 - 41.73		- ankerite vein ∠ 40°						
46.03 - 46.19		- two parallel QV's ; 1 cm wide, ∠ 30° w/ 60° Sp, 2% Py						
46.19 - 46.49		- QV w/ 25% AsPy, 10% ankerite, 1% Sp						
48.02		- dark green clay filled fracture, 1 cm wide, ∠ 50°.						
48.46 - 49.63		- interval contains 2% Sp - disseminated and in few quartz - ankerite veinlets (1/10 cm) ∠ 50° and 5°, ≤ 5 cm wide.						
51.00 - 51.25		- half of core lengthwise is strong yellow green clay alteration, other half has strong chloritic alteration.						
51.96 - 52.45		- sericite green clay alteration, ∠ 70°						
53.50 - 53.58		- QV, 2 cm wide, ∠ 40°, w/ 15% Sp, trace AsPy						
53.60 - 53.64		- QV, 1 cm wide, ∠ 20°, w/ 20% Sp, 2% ankerite						
53.68 - 54.00		- QV, w/ 5% Sp, 2% AsPy, 3% ankerite ∠ ?						
54.68 - 64.31		- average 1% disseminated Sp.						
55.90 - 56.00		- QV, w/ 5% AsPy, trace Sp ∠ 50°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 7 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
56.25-56.32		-QV w/ 5% Sp, 8% ankerite, ∠ ?						
57.15		-QV w/ 50% Sp, 1 cm wide, ∠ 50°						
57.64-67.67		-QV w/ 15% Sp, trace Py ∠ 50°						
58.03-58.22		-QV, 3.5 cm wide, ∠ 20° w/ 50% Sp 1% ankerite						
58.25-58.35		- severe green clay alteration ∠ 25°.						
58.85-58.90		-QV, 2 cm wide, ∠ 40° w/ 45% Sp, 2% Py						
59.00-59.06		-quartz flooded granodiorite						
59.06-59.10		-green clay filled fracture ∠ 70°						
59.44-59.51		-series of fine quartz veinlets, ≤ 1 cm wide, ∠ 50° w/ 30% Sp, 3% Py, 3% ankerite						
60.04-60.07		-QV, w/ 30% AsPy, ∠ 40°.						
60.08-60.15		- series of fine quartz veinlets ≤ 5 mm wide, ∠ 70°.						
60.27-60.30		- green clay filled fracture, ∠ 60°						
60.61-60.66		-QV, mottled appearance, w/ 40% AsPy, 5% Sp ?, 1% Py. ∠ ?						
62.66-62.76		-QV w/ trace AsPy ∠ 60°						
62.89-63.04		-QV w/ trace AsPy ∠ 20°						
63.23-63.28		-QV w/ trace Sp ∠ 50°						
63.95-64.31		-strong green clay alteration.						

CORDILLERAN ENGINEERING LTD. — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 8 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAN
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn
64.31-64.62		- QV w/ 15% Sp, 15% AsPy, trace Py, 2% ankerite. ∠ 50°				
		- bounded on both sides by 1 to 2 cm of				
		severe green clay alteration.				
38.00-40.00		altered granodiorite w/ stockwork mineralization	49405	2.00	<0.02	0.55
40.00-42.00		"	49406	2.00	0.28	1.40
42.00-44.00		"	49407	2.00	<0.02	0.33
44.00-46.00		"	49408	2.00	<0.02	0.41
46.00-48.00		"	49409	2.00	0.08	1.03
48.00-50.00		"	49410	2.00	0.06	0.48
50.00-52.00		"	49411	2.00	<0.02	0.50
52.00-54.00		"	49412	2.00	0.10	0.64
54.00-56.00		"	49413	2.00	<0.02	0.26
56.00-58.00		"	49414	2.00	0.02	0.76
58.00-60.00		"	49415	2.00	0.19	2.58
60.00-62.00		"	49416	2.00	<0.02	0.27
62.00-63.00		"	49417	1.00	0.03	0.10
63.00-64.00		"	49418	1.00	<0.02	0.28
64.00-65.00		altered granodiorite / MQV / felsite dyke	49419	1.00	0.96	3.02
64.62-68.68		FELSITE DYKE				
		- green, very fine grained felsite dyke				
		w/ 4% green chlorite phenocrysts ≤ 2mm dia.				

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 9 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		-low yellowish clay alteration						
		-contains many anhydrite veinlets (1/1 cm avg) ≤ 2 mm wide, ∠ 60°-70° dominant but some crosscutting occurs.						
		-down to 66.14 m, unit contains trace Sp in the anhydrite veinlets						
		felsite dyke						
65.00-66.00		"	49420	1.00	0.13	0.66		
66.00-67.00		"	49421	1.00	0.02	0.56		
67.00-68.00		"	49422	1.00	<0.02	0.46		
68.00-69.00		"	49423	1.00	<0.02	0.45		
68.68-82.98		ALTERED GRANODIORITE						
		-green, coarse grained, inequigranular granodiorite						
		- moderate chloritic alteration + trace epidote						
		-low green and yellow brown clay alteration						
		-low sericitic alteration.						
		- contains 2% disseminated reddish brown Sp — possibly oxidized.						
69.20-70.00		- interval is slightly schistose, schistosity ∠ 25°						
		-foliated surfaces occur (1/5 cm) and are ≤ 1 cm wide.						
71.46-71.67		-interval has strong chloritic alteration.						

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 10 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
70.64-76.93		- interval contains some quartz-ankerite veinlets (avg 1/5 cm but some zones have 1/5 cm others 0/50 cm.), ≤ 1 cm wide, ∠ 40°-60° dominant						
76.10-76.19		- severe green clay alteration ∠ ?						
77.14-77.25		- QV w/ trace Sp, 1% ankerite, ∠ 30°						
77.27-77.33		- QV w/ 10% Py, trace Sp, ∠ 30°.						
79.09-79.65		- pegmatitic texture w/ 50% graphic granite texture.						
79.65-82.64		- interval contains 4% Sp, trace AsPy and trace Py - occurrence is disseminated and in many quartz ± ankerite veinlets (1/5 cm avg) ≤ 3 cm wide, ∠ 50° dominant						
82.64-82.91		- quartz flooded zone w/ 10% Sp, 4% Py						
69.00-70.00		altered granodiorite w/ stockwork mineralization	49424	1.00	<0.02	0.23		
70.00-72.00		"	49425	2.00	0.04	0.24		
72.00-74.00		"	49426	2.00	<0.02	0.36		
74.00-76.00		"	49427	2.00	<0.02	0.33		
76.00-78.00		"	49428	2.00	<0.02	0.38		
78.00-79.00		"	49429	1.00	<0.02	0.38		
79.00-80.00		"	49430	1.00	<0.02	0.20		

CORDILLERAN ENGINEERING LTD — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 11 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
80.00 - 81.00		altered granodiorite w/ stockwork mineralization	49431	1.00	0.11	1.28	✓	
81.00 - 82.00		"	49432	1.00	0.06	1.36	✓	
82.00 - 83.00		"	49433	1.00	0.70	3.69	✓	
82.98 - 84.01		MINERALIZED QUARTZ VEIN						
		- grey quartz w/ very fine grained Sp, Asp Py - quantity unknown due to fine grained nature ≈ 45%.? —, 1% Py						
		- quartz is mottled.						
83.00 - 84.00		mineralized quartz vein	49434	1.00	0.88	1.12	✓	
84.01 - 102.19		FELSITE DYKE						
		- green, very fine grained felsite dyke						
		- dyke is crackle brecciated by 90% Sp-bearing ankerite and ankerite veinlets (3/1 cm avg density) - most veinlets are ≤ 1 mm wide at random angles, movement along some fractures						
		* unit contains ≈ 5% Sp, trace Py, trace AsPy						
		- contains trace bright yellow green clay alteration along some fractured surfaces.						
88.12 - 88.87		- interval contains 15% ankerite and 1% Py. ∤40°						
89.00 - 89.19		- interval has 25% Sp., 10% Py						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 12 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
90.09-90.16		- QV w/ 75% Sp, 20% Py ∠ 40°						
89.09-102.19		- interval has many quartz + ankerite veinlets over the dense stockwork						
		- (1/7 cm), ≤ 1 cm wide, ∠ 50° dominant						
		- contain Sp, Py.						
92.45-92.49		- ankerite vein ∠ 40°						
92.88-97.89		- ankerite vein ∠ 25°						
93.11-93.19		- ankerite - quartz vein ∠ 40°						
93.81-93.87		- zone has 40% ankerite ∠ 50°						
94.27-94.30		- ankerite vein ∠ 50°						
96.12-96.19		- ankerite - quartz vein ∠ 40°						
96.69-97.40		- interval has 15% Sp w/ some massive texture, 3% Py in blebs ≤ 1 cm dia.						
101.12-101.65		- 41% recovery of a QV w/ 65% Sp, 20% AsPy, 3% Py						
84.00-85.00		felsite dyke w/ stockwork mineralization	49435	1.00	0.64	6.47	✓	
85.00-86.00		"	49436	1.00	0.39	4.00	✓	
86.00-87.00		"	49437	1.00	0.43	5.22	✓	
87.00-88.00		"	49438	1.00	0.36	3.28	✓	
88.00-89.00		"	49439	1.00	4.20	5.80		
89.00-90.00		"	49440	1.00	0.88	7.20	✓	
90.00-91.00		"	49441	1.00	0.72	6.60	✓	

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-4-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 13 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
91.00-92.00		felsite dyke w/ stockwork mineralization	49442	1.00	0.23	5.00	✓	
92.00-93.00		"	49443	1.00	0.24	3.14	✓	
93.00-94.00		"	49444	1.00	0.28	3.42	✓	
94.00-95.00		"	49445	1.00	0.56	5.00	✓	
95.00-96.00		"	49446	1.00	0.38	3.80	✓	
96.00-97.00		"	49447	1.00	0.83	5.27	✓	
97.00-98.00		"	49448	1.00	1.56	8.51	✓	
98.00-99.00		"	49449	1.00	0.42	5.80	✓	
99.00-100.00		"	49450	1.00	0.39	4.90	✓	
100.00-101.00		"	49451	1.00	0.27	2.90	✓	
101.00-102.00		"	49452	1.00	0.68	3.45	✓	
102.19-103.68		MASSIVE SULPHIDE VEIN -vein with 77% massive Sp, 3% Py, trace AsPy, trace CPy -contains some ankerite veins (1/5 cm) ≤ 2 cm wide, ∠40° dominant, 5% -contains 15% melted grey quartz -contact ∠ 80°						
102.00-103.00		massive sulphide vein	49453	1.00	1.81	9.60	✓	
103.68-107.05		FELSITE DYKE -green, very fine grained felsite dyke -moderate chloritic alteration, especially						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 14 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		along fractured surfaces						
103.68 - 104.45		- interval contains dense stockwork of 90% Sp - bearing quartz - ankerite veinlets (3/1 cm avg)						
		- dyke is crackle brecciated.						
		- interval has ≈ 5% Sp, trace Py contained in the veinlets.						
104.45 - 106.05		- zone contains many ankerite veinlets (1/3 cm) @ 50° dominant but cross cutting occurs, movement along some fractures cutting veinlets.						
		- trace Sp > Py in veinlets						
106.05 - 107.05		- interval contains 20% Sp w/in hairline thin ankerite veinelts (1/cm) various angles						
		- trace Py.						
103.00 - 104.00		massive sulphide vein / felsite dyke w/ stockwork ...	49454	1.00	1.64	10.00	✓	
104.00 - 105.00		felsite dyke w/ stockwork mineralization	49455	1.00	0.39	3.37	✓	↑
105.00 - 106.00		"	49456	1.00	0.14	1.26	✓	
106.00 - 107.00		"	49457	1.00	0.25	2.16	✓	
107.05 - 108.10		ALTERED GRANODIORITE						
		- strongly silicified granodiorite						
		- granodiorite texture is remnant						
		- green grey colour						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 15 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		-moderate chloritic alteration						
		-unit contains 4% disseminated Sp, trace Py., 2% ankerite						
		-contact w/ unit above, ∠ 30°						
107.68-108.10		-interval contains 7% silicified felsite dyke clasts — angular, ≤ 2 cm dia.						
107.00-108.00		altered granodiorite w/ stockwork mineralization	49458	1.00	0.11	0.96	✓	↓
108.10-108.70		MINERALIZED QUARTZ BRECCIA						
		-breccia has a dark grey, sulphide bearing matrix (Sp ± AsPy?)						
		-clasts compose 35% of rock and are subrounded, white quartz clasts, (60%), ≤ 1.5 cm dia, and 40% subangular felsite clasts, ≤ 1 cm dia						
		-moderate mustard coloured clay along some fractured surfaces.						
		-contact ∠ 50°						
108.00-109.00		mineralized quartz breccia	49459	1.00	0.09	0.27		
108.70-117.14		FELSITE DYKE						
		-green, very fine grained felsite dyke						
		- contains many ankerite ± quartz ± Sp > Py veinlets (1/3 cm) ≤ 3mm wide						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 16 of 22

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAL

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		∓60° common, however, many other angles						
		-minor bright mustard coloured clay						
		along some fractured surfaces, to 110.00 m						
		-unit has 1% Sp, trace Py						
		contained within the veinlets.						
108.70-109.12		-strongly silicified green granodiorite						
		with 2% disseminated Sp, trace Py						
		-strong remnant granodiorite texture						
		in quartz						
109.12-109.20		-breccia with a very fine grained,						
		dark grey matrix - possibly sulphide						
		rich quartz with clasts of green						
		felsite ≤ 2 mm dia, and grey quartz						
		clasts ≤ 2 cm dia						
		-clasts compose 60% of rock						
		-quartz is vuggy.						
109.20-109.30		-severe green clay alteration of felsite						
		dyke with 25% angular fragments of						
		felsite						
113.08-114.91		-10m turquoise blue clay alteration						
		along some fractured surfaces						
114.73-114.85		-strong green clay alteration with 50%						

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 17 of 32
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		angular felsite dyke fragments						
115.50 - 117.14		- no ankerite in quartz - Sp veinlets						
		- density as above for unit						
116.15 - 116.26		- fractures (1/1 cm) @ 50° with strong green clay alteration.						
109.00 - 110.00		felsite dyke w stockwork mineralization	49460	1.00	<0.02	0.36		
110.00 - 111.00		"	49461	1.00	<0.02	0.76		
111.00 - 112.00		"	49462	1.00	0.02	0.96		
112.00 - 114.00		"	49463	2.00	<0.02	0.82		
114.00 - 116.00		"	49464	2.00	<0.02	0.16		
117.14 - 127.65		GOUGE AND MUD						
		- green to grey, severe clay alteration with 10% remnant granodiorite grains and fragments ≤ 2.5 cm dia.						
117.14 - 117.45		- appears to be altered felsite dyke						
		- contact @ 40°						
117.45 - 117.82		- no chloritic alteration, clay is pale yellowish white						
119.90 - 121.52		- 1% or sulphide bearing quartz clasts						
120.70 - 121.00		- rubble remains of a greenish grey quartz vein - possibly Py bearing but very fine grained, Sp ?						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 13 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn
122.00 - 124.00		- interval contains 60% solid, medium grained, equigranular granodiorite clasts ≤ 10 cm long separated by clay filled fractures - moderate chloritic alteration - contain quartz veinlets w/ trace Sp, Py in some fragments (density ?)				
124.89 - 127.40		trace Py > Sp contained in some quartz clasts				
116.00 - 118.00		felsite dyke w/ stockwork mineralization / gouge	49465	2.00	<0.02	0.20
118.00 - 120.00		gouge	49466	2.00	<0.02	0.40
120.00 - 122.00		"	49467	2.00	0.02	0.24
122.00 - 124.00		"	49468	2.00	<0.02	0.12
124.00 - 126.00		"	49469	2.00	0.02	0.22
126.00 - 128.00		"	49470	2.00	<0.02	0.23
127.65 - 130.25		ALTERED GRANODIORITE - green, medium grained, equigranular granodiorite - moderate chloritic alteration - low green clay alteration but fractures ≈ ± 0° give contact with severe pale greenish alteration				

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 19 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		- unit has ≈ 1% Py in what appears to be quartz flooded zones						
		- much rubble in unit., broken rock.						
128.00-130.00		altered granodiorite	49471	2.00	<0.02	0.22		
130.25-137.48		STRONGLY ALTERED GRANODIORITE						
		- green to greenish white severe clay alteration.						
		- contains 15% remnant granodiorite grains						
132.28-132.63		- yellowish grey, coarse grained, inequigranular granodiorite w/ low chloritic alt, moderate yellowish white clay alteration, low sericitic alt. - contains 20% Py in a 1cm section at 132.56 - 132.57 m.						
132.81-132.95		- strong chloritic alteration, strong green clay alteration						
133.04-133.30		- pegmatitic granodiorite w/ low clay alteration, low chloritic alteration						
		- minor graphic granite texture						
133.85-134.40		- green, medium grained, equigranular granodiorite						
		- contact @ 40°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 20 of 22

Angle of Hole ..... % Recovery ..... Logged by K. MEIDAN

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		-contains trace disseminated Sp						
		-from 133.99 - 134.07, there is a quartz - ankerite veinlet with 20% galena, 5 mm wide, ∠ 30°						
135.66-136.03		-pegmatitic granodiorite w/ low chloritic alt, moderate green clay alt, mod sericitic alt.						
130.00-132.00		strongly altered granodiorite	49472	2.00	0.04	0.20		
132.00-134.00		"	49473	2.00	<0.02	0.25		
134.00-136.00		"	49474	2.00	0.02	0.17		
136.00-138.00		"	49475	2.00	0.02	0.07		
137.48-149.96		ALTERED GRANODIORITE						
		-green, medium grained, inequigranular granodiorite						
		-low chloritic alt, moderately low greenish white and yellow brown clay alteration						
137.48-138.05		-pegmatitic texture						
138.25-138.45		-trace disseminated Sp						
		-moderately silicified.						
138.45-138.81		-QV, first 20 cm is light grey quartz with 5% Py, trace Sp,						
		-rest of vein has 40% Sp (very fine grained), quartz is dark grey, and 5% AsPy						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 21 of 22
Angle of Hole | % Recovery | Logged by K. MEIDAL
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
		and 1% Py, ∠ 40°						
		- unit is mottled						
138.87-138.89		-QV w/ 30% Py, trace Sp, ∠ 30°						
139.43-139.97		- zone of strong greenish white clay alteration.						
141.86-142.21		- QV w/ 30% Py in 2 main bands, one 5 cm wide, one 2 cm wide, ∠ 30°						
		-quartz is white with drusy vugs						
142.72-143.38		- strong greenish white clay alteration						
143.38-144.50		- pegmatitic texture						
144.82-147.38		- moderately strong chloritic alteration						
146.24-146.69		- pegmatitic texture						
147.51-148.32		- moderately strong green clay alteration						
148.38-148.86		- pegmatitic texture w/ trace disseminated red garnets, ≤ 3 mm.						
148.87-149.28		- strong green clay alteration						
149.28-149.96		- pegmatitic texture						
138.00-139.00		altered granodiorite w/ mineralized quartz vein	49476	1.00	0.12	0.52		
139.00-140.00		altered granodiorite	49477	1.00	<0.02	0.15		
140.00-142.00		"	49478	2.00	0.06	0.17		
142.00-144.00		"	49479	2.00	0.02	0.10		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY LOGAN HOLE No. DDH 87-L-45

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 22 of 22
Logged by K. MEIDAL
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	OPT Ag	PCT Zn		
144.00-146.00		altered granodiorite	49480	2.00	<0.02	0.03		
149.96		EOH						

CORDILLERAN ENGINEERING

DIAMOND DRILL RECORD

PROPERTY: LOGAN D.D.H.: 87 -L- 54 PAGE: 1 OF: 4

AREA: MAIN ZONE
CLAIM: LOGAN 47
SECTION: 10 W
CORE SIZE: NQ
CORE RECOVERY: 89 %

DIP: -60 ° AZIMUTH (t): 145 ° (Grid Az)
NORTHING: 580
EASTING: -10
ELEVATION: 1429.3 m
CORE STORED AT: LOGAN PROP.

DEPTH: 609.91m
DATE STARTED: AUGUST 26D 1987
DATE FINISHED: SEPTEMBER 11D 1987
CONTRACTOR: ARCTIC DIAMOND DRILLING LTD
LOGGED BY: K.M. & P.D.

COMMENTS: HOLE L-54 WAS DRILLED TO TEST FOR DOWNDIP AND NORTHWARD EXTENSION OF MINERALIZATION INTERSECTED IN HOLES L-5,15,16 AND 18 (SECTION 10W). THIS IS THE DEEPEST HOLE THAT WAS DRILLED ON THE PROPERTY. ROUGHLY 89m (434-523m) OF STOCKWORK MINERALIZATION WAS INTERSECTED. THE HOLE WAS TERMINATED AFTER DRILLING PAST THE TARGETED DEPTH AND DRILLING 80m OF SPARSELY MINERALIZED CORE.

NOTE: All azimuths are set relative to grid north - 325° TN

SURVEY DATA			GEOLOGY AND ASSAY RECORD ; VALUES BELOW IN PPM UNLESS NOTED ;														
Depth	Dip	Az (t)	From (m)	To (m)	Int. (m)	T.W.(m)	Geology	Sample No.	Rec. %	S.G.	Zn %	Ag oz/t	Sn	Cu	Pb	As	Au oz/t
0.00	-60.00°	145.00°	0.00	12.80	12.80		OB										
72.54	-59.50°	145.00°	12.80	14.71	1.91		SAGD										
124.97	-59.00°	145.00°	14.71	88.60	73.89		AGD										
194.46	-60.00°	144.00°	88.60	90.88	2.28		SAGD										
258.47	-60.50°	147.00°	90.88	118.89	28.01		GD										
332.84	-61.50°	145.00°	118.89	121.62	2.73		SCH										
399.90	-61.50°	148.00°	121.62	130.55	8.93		GD										
475.18	-61.50°	145.00°	130.55	132.69	2.14		SCH										
531.88	-61.80°	140.00°	132.69	176.92	44.23		AGD										
605.33	-62.00°	140.00°	176.92	181.87	4.95		SCH										
			181.87	185.98	4.11		GD										
			185.98	188.22	2.24		SCH										
			188.22	201.45	13.23		GD										
			201.45	204.17	2.72		SCH										
			204.17	212.74	8.57		GD										
			212.74	223.49	10.75		SCH										
			223.49	244.53	21.04		GD										
			244.53	247.35	2.82		SCH										
			247.35	272.31	24.96		GD										
			272.31	275.01	2.70		SCH										
			275.01	306.10	31.09		GD										
			306.10	419.40	113.30		AGD										
			419.40	423.25	3.85		FD										
	-60		423.25	430.80	7.55		AGD										
	091		430.80	433.50	2.70		SAGD										
	982		433.50	441.00	7.50		AGD										
			441.00	444.70	3.70		SAGD										
			444.70	455.20	10.50		AGD										
			455.20	457.60	2.40		SAGD										
			457.60	524.25	66.65		AGD										
								CONTINUED									

MINING RECORDER
KAMLOOPS
RECEIVED

CORDILLERAN ENGINEERING

DIAMOND DRILL RECORD

PROPERTY LOGAN D.D.H. L 87 - 54 PAGE 2 OF 4

AREA: DIP: AZIMUTH (t): DEPTH:

CLAIM: NORTHING: DATE STARTED:

SECTION: EASTING: DATE FINISHED:

CORE SIZE: ELEVATION: CONTRACTOR:

CORE RECOVERY: CORE STORED AT: LOGGED BY:

COMMENTS:

SURVEY DATA			GEOLOGY AND ASSAY RECORD									VALUES BELOW IN PPM UNLESS NOTED				
Depth	Dip	Az (t)	From (m)	To (m)	Int. (m)	T.W.(m)	Geology	Sample No.	Rec. %	S.G.	Zn %	Ag oz/t	Sn	Cu	Pb	As	Au oz/t
			524.25	530.65	6.40		SAGD										
			530.65	534.05	3.40		AGD										
			534.05	545.45	11.40		SAGD										
			545.45	549.40	3.95		AGD										
			549.40	551.91	2.51		QV										
			551.91	553.82	1.91		NR										
			553.82	593.00	39.18		AGD										
			593.00	595.05	2.05		SAGD										
			595.05	609.91	14.86		AGD										
								ASSAYS AND ANALYSES									
			422.00	424.00	2.00		FD	50310			0.03	0.02					
			424.00	426.00	2.00		AGD	50311			0.01	0.02					
			426.00	428.00	2.00		AGD	50312			0.14	0.02					
			428.00	430.00	2.00		AGD	50313			0.48	0.20					
			430.00	432.00	2.00		SAGD	50314			0.59	0.05					
			432.00	434.00	2.00		SAGD	50315			0.40	0.02					
			434.00	436.00	2.00		AGD	50316			0.24	0.02					
			436.00	438.00	2.00		AGD	50317			0.10	0.02					
			438.00	440.00	2.00		AGD	50318			0.20	0.02					
			440.00	442.00	2.00		AGD	50319			0.52	0.04					
			442.00	444.00	2.00		AGD	50320			0.64	0.08					
			444.00	446.00	2.00		AGD	50321			0.58	0.02					
			446.00	448.00	2.00		AGD	50322			0.14	0.02					
			448.00	450.00	2.00		AGD	50323			0.41	< 0.02					
			450.00	452.00	2.00		AGD	50324			0.72	0.19					
			452.00	454.00	2.00		AGD	50325			1.00	0.07					
			454.00	456.00	2.00		AGD	50326			1.42	0.09					
			456.00	458.00	2.00		AGD	50327			0.90	0.08					
								CONTINUED									

2361 60

CORDILLERAN ENGINEERING

DIAMOND DRILL RECORD

PROPERTY LOGAN D.D.H. L 87 - 54 PAGE 3 OF 4

AREA: DIP: AZIMUTH (t): DEPTH:

CLAIM: NORTHING: DATE STARTED:

SECTION: EASTING: DATE FINISHED:

CORE SIZE: ELEVATION: CONTRACTOR:

CORE RECOVERY: CORE STORED AT: LOGGED BY:

COMMENTS:

SURVEY DATA			GEOLOGY AND ASSAY RECORD ; VALUES BELOW IN PPM UNLESS NOTED ;													
Depth	Dip	Az (t)	From (m)	To (m)	Int. (m)	T.W.(m)	Geology	Sample No.	Rec. %	S.G.	Zn %	Ag oz/t	Sn	Cu	Pb	As	Au oz/t
			458.00	460.00	2.00		AGD	50328			0.56	0.11					< 0.002
			460.00	462.00	2.00		AGD	50329			0.93	0.07					< 0.002
			462.00	464.00	2.00		AGD	50330			2.00	1.08					< 0.002
			464.00	466.00	2.00		AGD	50331			1.00	0.40					< 0.002
			466.00	468.00	2.00		AGD	50332			1.52	0.08					< 0.002
			468.00	470.00	2.00		AGD	50333			2.40	0.19					< 0.002
			470.00	472.00	2.00		AGD	50334			0.40	0.15					< 0.002
			472.00	474.00	2.00		AGD	50335			0.39	0.03					< 0.002
			474.00	476.00	2.00		AGD	50336			1.01	0.09					< 0.002
			476.00	478.00	2.00		AGD	50337			0.74	0.02					0.003
			478.00	480.00	2.00		AGD	50338			0.54	0.07					< 0.002
			480.00	482.00	2.00		AGD	50339			0.66	< 0.02					0.014
			482.00	483.00	1.00		AGD	50340			2.32	3.41					< 0.002
			483.00	485.00	2.00		AGD	50341			0.27	0.07					< 0.002
			485.00	487.00	2.00		AGD	50342			0.56	0.09					< 0.002
			487.00	489.00	2.00		AGD	50343			0.70	0.13					< 0.002
			489.00	491.00	2.00		AGD	50344			1.00	0.08					< 0.002
			491.00	493.00	2.00		AGD	50345			0.72	0.08					< 0.002
			493.00	495.00	2.00		AGD	50346			0.92	0.04					< 0.002
			495.00	497.00	2.00		AGD	50347			0.29	0.02					< 0.002
			497.00	499.00	2.00		AGD	50348			0.14	0.05					
			499.00	501.00	2.00		AGD	50349			0.34	0.11					
			501.00	503.00	2.00		AGD	50350			0.13	0.03					
			503.00	505.00	2.00		AGD	50351			0.50	0.17					
			505.00	507.00	2.00		AGD	50352			0.08	0.03					
			507.00	509.00	2.00		AGD	50353			0.14	0.02					
			509.00	511.00	2.00		AGD	50354			0.04	0.02					
			511.00	513.00	2.00		AGD	50355			0.48	0.04					
			513.00	515.00	2.00		AGD	50356			0.50	0.08					
			515.00	517.00	2.00		AGD	50357			0.14	0.02					
			517.00	519.00	2.00		AGD	50358			0.16	0.13					
								CONTINUED									

09 1982

DDR-85-IU

CORDILLERAN ENGINEERING

DIAMOND DRILL RECORD

PROPERTY LOGAN D.D.H. L 87 - 54 PAGE 4 OF 4

AREA: DIP: AZIMUTH (t): DEPTH:

CLAIM: NORTHING: DATE STARTED:

SECTION: EASTING: DATE FINISHED:

CORE SIZE: ELEVATION: CONTRACTOR:

CORE RECOVERY: CORE STORED AT: LOGGED BY:

COMMENTS:

SURVEY DATA			GEOLOGY AND ASSAY RECORD									VALUES BELOW IN PPM UNLESS NOTED				
Depth	Dip	Az (t)	From (m)	To (m)	Int. (m)	T.W.(m)	Geology	Sample No.	Rec. %	S.G.	Zn %	Ag oz/t	Sn	Cu	Pb	As	Au oz/t
			519.00	521.00	2.00		AGD	50359			0.70	0.08					
			521.00	523.00	2.00		AGD	50360			0.41	0.25					
			523.00	525.00	2.00		SAGD	50361			0.31	0.08					
			525.00	527.00	2.00		SAGD	50362			0.66	0.02					
			527.00	529.00	2.00		SAGD	50363			0.94	0.02					
			545.00	547.00	2.00		AGD	50364			0.03	< 0.02					
			547.00	549.00	2.00		AGD	50365			0.01	< 0.02					0.002
			549.00	551.00	2.00		QV	50366			< 0.01	< 0.02					0.006
			551.00	553.00	2.00		QV	50367			< 0.01	< 0.02					0.006
			553.00	555.00	2.00		AGD	50368			0.03	< 0.02					< 0.002
			555.00	557.00	2.00		AGD	50369			0.01	0.02					0.003
			557.00	559.00	2.00		AGD	50370			0.02	< 0.02					

09 1982 160

DDR - 85 - IU

KEY TO LOGAN PROPERTY 1986 DDH LOG
GEOLOGY ABBREVIATIONS

NR	-	No core recovered
OB	-	Overburden
QV	-	Quartz vein
MQV	-	Mineralized quartz vein
MS	-	Sulphide vein
OXBX	-	Oxidized breccia
BX	-	Breccia
MBX	-	Sulphide bearing breccia
DIBX	-	Diatreme(?) breccia
FDBX	-	Felsite dyke breccia
FQPBX	-	Feldspar quartz porphyry breccia
GM	-	Gouge and mud
LON	-	Mylonite
SCH	-	Schist
AFD	-	Altered felsite dyke
FD	-	Felsite dyke
FQP	-	Feldspar quartz porphyry
SAGD	-	Strongly altered granodiorite
AGD	-	Moderately altered granodiorite
GD	-	Granodiorite

Where sample intervals have overlapped a contact of two lithological units, a combination of the above abbreviations may appear in the geology column of the assays and analyses section of the log (eg FDGD Felsite dyke - Granodiorite).

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 2 of 15
Logged by P. Dontenwill
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
0 - 6.71		OVERBURDEN		
6.71 - 43.85		ALTERED GRANODIORITE		
		- light grey green porphyritic granodiorite		
		- moderate sericitic alteration - minor chloritic alteration - minor Fe and Mn oxide along fractures of rock - minor graphic gg / intergrowths		
20.75-20.42		- muscovite biotite quartz schist - foliation ∠ 35° - contact ∠ 35° - sericitic		
23.10-26.50		- minor pale green clay alteration - trace amounts of pink clay (rhodochrosite clay) in rock		
26.00-27.00		- moderate Fe-Ox stained on rock		
26.60-27.00		- trace amounts of garnet grains in rock		
32.20-32.60		- rock is slightly foliated - foliation ∠ 40°		
37.19-		- moderate Mn / Oxide along fractures of rock - trace amounts of pink clay (rhodochrosite? + clay) along fractures of rock		
43.85-47.80		SEVERELY ALTERED GRANODIORITE		
		- green white clay ~ 35% 1-2mm dia qtz, feldspar and muscovite grains		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 3 of 15

Angle of Hole ..... % Recovery ..... Logged by P. Dankesbeat

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		- 20% 5mm - 5cm dia subrounded remnant granodiorite fragments						
		- contact ±						
44.65-44.80		- qtz interval						
47.80-70.20		ALTERED GRANODIORITE						
		- pale grey green pegmatitic granodiorite - moderate to strong chlorite epidote alteration - moderate sericitic alteration - moderate yellow green clay alteration - minor graphitic fractures						
47.90-50.50		- moderate Fe-Ox stained on rock - 20% brown yellow clay in rock						
50.50-51.30		- minor Fe-Ox along fractures						
67.60-68.30		- core is rubbly - 40% green clay in rock						
69.50-70.20		- 20% green clay in rock						
70.20-75.00		CHLORITE QUARTZ / MUSCOVITE SCHIST						
		- grey green colour - foliation ±35° - contact ±35° - foliated granodiorite						
71.00-72.40		- rock is only slightly foliated						

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 4 of 15
Angle of Hole ..... % Recovery ..... Logged by P. Dankenbaat
Claim ..... Elev. Collar ..... Date Begun .....
Section ..... Latitude ..... Date Finished .....
Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
75.00-97.15		ALTERED GRANODIORITE - pale grey green pegmatitic granodiorite / - moderate chloritic alteration - minor sericitic and/ green clay alteration - minor graphic Qz intergrowths in rock + trace amounts of garnet grains in rock		
87.00-92.00		- 30% green clay in rock		
97.00-97.15				
97.15-98.15		QUARTZ SPHALERITE VEIN Qz - chalcedony vn it- 15% Sp 5% As Py and/ 2% Py - 15% muscovite, chlorite and feldspar fragments in vn ∠35°		
98.15-105.90		MUSCOVITE CHLORITE QUART SCHIST grey green colour - foliation ∠30° - contact ∠30° - minor convolutions along ∠60° fold axis - rock contains minor (1%/0cm) 1-5mm wide anastomosing Qz Sp bands (∠30°) - ≤3% Sp in rock - rock is cut by minor (1%/0cm) 1-5mm wide anastomosing veins (∠70°		

CORDILLERAN ENGINEERING LIM. ED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size | Total Depth | Sheet No. 5 of 15
Angle of Hole | % Recovery | Logged by P. Dankoff
Claim | Elev. Collar | Date Begun
Section | Latitude | Date Finished
Bearing | Departure | Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		- unit is a foliated granodiorite		
98.15-99.55		- rock is only slightly foliated		
99.55-99.75		- qd interval		
102.00-102.07		- Qz carbonate vn w/ 40% Sp ∠75°		
103.48-103.53		Qz carbonate vn w/ 15% Sp ∠70°		
105.40-109.20		ALTERED GRANODIORITE		
		- grey green pegmatitic granodiorite		
		- strong chloritic alteration - minor sericitic and green clay alteration - ≤ 2% Sp in rock (disseminated and along fractures) - rock is partially silicified		
108.05-108.10		Qz vn w/ 5% Sp ; 1% Py and 1% Cpy ∠75°		
109.20-116.15		MUSCOVITE CHLORITE QUARTZ SCHIST		
		- grey green colour - schistosity ∠30°		
		- contact ∠° - 1% disseminated Sp in rock		
		- minor green clay along partings in rock - possible foliated granodiorite		
109.85-110.10		- qd interval		
111.85-112.25		- qd interval - strong chlorite epidote alteration - contact ∠30°		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Snegaro HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 6 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
113.70-114.60		- 40% green clay in rock						
116.15-117.70		SEVERELY ALTERED GRANODIORITE						
		pale green clay w 45% 1-2mm dia muscovite gg anhd feldspar grains and 5% 5mm-2cm dia subrounded remnant granodiorite fragments						
117.70-135.60		ALTERED GRANODIORITE						
		- light grey green medium grained equigranular granodiorite - moderate sericitic chloritic and pale green clay alteration - minor (1/40cm) 1-7mm wide Qz anhedrite sp veinlets in rock - dominant core angle of veinlets is 50° - <5% Sp and <2% Py in rock (disseminated and in veinlets) - rock is partially silicified - rock is slightly foliated - foliation <30°						
126.25-126.50		- Qz vn w 10% Sp 8% AsPy and 5% Py <60°						
129.30		1cm wide Qz Carbonate vein w 35% Sp <40°;						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 7 of 15

Angle of Hole ..... % Recovery ..... Logged by P. Donkersloot

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
135.60-137.70		FELSITE DYKE						
		- fine grained equigranular felsic dyke - moderate chloritic alteration - rock is partially silicified - rock is cut by many (2/5cm) 1-5mm wide Qz ± Sp ankerite veinlets - dominant core angle of veinlets is 55° - 7% Sp in rock (within veinlets) - contact ∠60°? - minor Fe-Ox along fractures						
137.70-170.20		ALTERED GRANODIORITE						
		- pale grey green medium to coarse grained porphyritic granodiorite - moderate chloritic alteration - minor sericitic and pale green clay alteration - minor (1/m) 1mm-1cm wide Qz Sp ankerite veinlets - dominant core angle of veinlets is 50° - ≤4% Sp in rock (disseminated and in veinlets)						
137.70-144.00		- minor Qz flooding (25% Qz in rock) - ≤10% Sp and ≤4% Py in rock (within Qz)						
139.95-140.00		- Qz vn w/ 30% Py and 10% Sp ∠60°						

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 8 of 15
Logged by P. VanPeursem
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
140.95-141.10		- qz vn @ 60°						
141.10-142.65		- Qz vn w 30% Sp, 10% Py and 5% Asly @ 40°						
143.00-144.00		- 20% green clay in rock						
164.00-168.00		- 20% green clay in rock						
168.00-170.20		- 40% green clay in rock - core is rubbly - poor recovery						
170.20-182.00		FELSITE DYKE - green aphanitic felsic dyke w 3% 1-2mm dia Qz eyes - rock is partially silicified - moderate chlorite alteration - rock is cut by many (2-5cm) hairline Qz anhedral Sp filled fractures (no preferred orientation) - ≤ 5% Sp along fractures in rock - moderate Qz flooding - 15% Sp in rock within Qz - core is rubbly - poor recovery						
182.00-184.70		QUARTZ FELSITE SPHALERITE BRECCIA - qz chalcedony cement w 65% 2mm - 7cm dia subangular felsite clasts - 15% Sp within cement - rock is cut by						

CORDILLERAN ENGINEERING LIM. D — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size ..... Total Depth ..... Sheet No. 9 of 15

Angle of Hole ..... % Recovery ..... Logged by P. Dankowski

Claim ..... Elev. Collar ..... Date Begun .....

Section ..... Latitude ..... Date Finished .....

Bearing ..... Departure ..... Core Stored At .....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		a minor amount of later stage chlorite filled fractures - contact ∠ 15°?		
184.10-188.90		FELSITE DYKE		
		- light green aphanitic felsic dyke - moderate chloritic alteration - minor green clay alteration - rock is cut by many (1/5cm) Qz. Sp filled fractures - ≤ 4% Sp in rock (in fractures)		
187.80-188.90		35% green clay in rock		
188.90-196.85		GOUGE		
		- green white clay ~ 15% 5mm - 5cm wide bands of grey clay ∠ 60° - 20% 1-2mm sub rounded quartz and feldspar grains and 7% 5mm - 5cm sub rounded granodiorite fragments - gouge felsite contact ∠ 50° minor Sp in Gd fragment - gouge - Gd contact ∠ 60°		
196.85-198.05		ALTERED GRANODIORITE		
		- pale grey green medium to coarse grained porphyritic granodiorite		

CORDILLERAN ENGINEERING LIM. .D — DIAMOND DRILL RECORD

PROPERTY Regan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 10 of 15
Logged by P. Dontenwill
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
		-moderate green clay alteration - moderate chloritic alteration - minor sericitic alteration - ≤3% disseminated Sp in rock		
197.70-197.75		Qz ankerite vn @ 40% Sp ∠70°?		
198.00-200.40		SEVERELY ALTERED GRANODIORITE -green clay @ 35% 1-2mm dia qtz feldspar and muscovite grains and 15% 5mm-5cm dia subrounded remnant granodiorite fragments		
199.85-200.00		- qd fragment @ 7 cm incls Qz @ 50% Sp ∠70°		
200.90-214.88		ALTERED GRANODIORITE -pale grey green medium to coarse grained porphyritic granodiorite - moderate chloritic and pale green clay alteration - min sericitic alteration - trace amounts of disseminated Sp in rock		
206.85-206.93		- ankerite qz vn @ 15% Py and 5% Sp ∠40°		
209.00-208.00		- min banding Py Sp filled fractures in rock		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Rogan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 11 of 15
Logged by P. Dombowsky
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
207.65-207.90		- interval w 30% disseminated Py						
211.25		- 2cm wide Qz vn w 30% Py @ 40°						
213.30-214.00		- 30% green clay in rock						
214.88		EOH						

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 12 of 15
Logged by P. Donkersloot
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	SILVER OPT	Zn %		
95:00-96:00		granodiorite	50371	1:00	<0.02	0.43		
96:00-97:00		"	50372	1:00	0.47	1.26		
97:00-98:00		quartz aplasite vein	50373	1:00	0.85	0.16		
98:00-100:00		schist w stockwork mineralization	50374	2:00	0.11	0.26		
100:00-102:00		" " "	50375	2:00	0.20	1.39		
102:00-104:00		" " "	50376	2:00	0.06	0.69		
104:00-106:00		" " "	50377	2:00	0.02	0.43		
106:00-108:00		gd w stockwork mineralization	50378	2:00	0.02	0.49		
108:00-110:00		" " "	50379	2:00	0.04	0.38		
110:00-112:00		" " "	50380	2:00	0.02	0.46		
112:00-114:00		schist w stockwork mineralization	50381	2:00	<0.02	0.48		
114:00-116:00		" " "	50382	2:00	0.02	0.32		
116:00-118:00		granodiorite w stockwork mineralization	50383	2:00	0.02	0.48		
118:00-120:00		" " "	50384	2:00	0.16	1.46		
120:00-122:00		" " "	50385	2:00	0.02	0.25		
122:00-124:00		" " "	50386	2:00	<0.02	0.19		
124:00-126:00		" " "	50387	2:00	0.04	0.32		
126:00-127:00		" " "	50388	1:00	1.16	0.70		
127:00-128:00		" " "	50389	1:00	0.07	0.64		
128:00-129:00		" " "	50390	1:00	0.03	0.64		
129:00-130:00		" " "	50391	1:00	0.12	0.88		
130:00-131:00		" " "	50392	1:00	0.04	0.70		

CORDILLERAN ENGINEERING L[illegible]TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 13 of 15
Logged by P. Dankowski
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	SILVER oPT	Zn %		
131.00-132.00		granodiorite w stockwork mineralization	50393	1.00	0.06	0.85		
132.00-133.00		" " "	50394	1.00	0.04	1.40	-	↑
133.00-134.00		" " "	50395	1.00	0.04	0.67	-	
134.00-135.00		" " "	50396	1.00	0.04	0.57	-	
135.00-136.00		" " "	50397	1.00	0.13	1.64	-	
136.00-137.00		felsite w stockwork mineralization	50398	1.00	0.66	6.41	-	
137.00-138.00		" " "	50399	1.00	0.17	2.91	-	
138.00-139.00		granodiorite w stockwork mineralization	50100	1.00	0.22	3.06	-	
139.00-140.00		" " "	50401	1.00	0.31	0.70	-	
140.00-141.00		" " "	50402	1.00	0.40	1.34	-	
141.00-142.00		" " "	50403	1.00	0.17	1.43	-	
142.00-143.00		" " "	50404	1.00	0.93	3.20	-	
143.00-144.00		" " "	50405	1.00	0.28	1.56	-	↓
144.00-145.00		" " "	50406	1.00	0.04	0.69	-	
145.00-146.00		" " "	50407	1.00	0.04	0.96	-	
146.00-147.00		" " "	50408	1.00	<0.02	0.29	-	
147.00-148.00		" " "	50409	1.00	0.02	0.47	-	
148.00-149.00		" " "	50410	1.00	0.24	1.82	-	
149.00-150.00		" " "	50411	1.00	0.03	0.80		
150.00-151.00		" " "	50412	1.00	0.02	0.45		
151.00-152.00		" " "	50413	1.00	0.03	0.32		
152.00-153.00		" " "	50414	1.00	0.02	0.23		

CORDILLERAN ENGINEERING L TED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 14 of 15
Logged by P. Lambert
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	SILVER OPT	% Zn		
153.00-154.00		granodiorite w stockwork mineralization	50415	1.00	0.03	0.22		
154.00-155.00		" " "	50416	1.00	0.02	0.28		
155.00-157.00		" " "	50417	2.00	0.10	0.56		
157.00-159.00		" " "	50418	2.00	0.03	0.28		
159.00-161.00		" " "	50419	2.00	<0.02	0.66		
161.00-163.00		" " "	50420	2.00	0.03	0.35		
163.00-165.00		" " "	50421	2.00	0.23	0.52		
165.00-167.00		" " "	50422	2.00	0.02	0.81		
167.00-169.00		" " "	50423	2.00	0.06	0.84		
169.00-171.00		" " "	50424	2.00	0.05	0.89		
171.00-173.00		felsite w stockwork mineralization	50425	2.00	0.20	1.58		
173.00-175.00		" " "	50426	2.00	0.04	0.57		
175.00-177.00		" " "	50427	2.00	<0.02	0.14		
177.00-179.00		" " "	50428	2.00	0.05	0.20		
179.00-181.00		" " "	50429	2.00	0.03	0.22		
181.00-182.00		" " "	50430	1.00	<0.02	0.13		
182.00-183.00		quartz felsite aphanite breccia	50431	1.00	0.03	0.31		
183.00-184.00		" " " "	50432	1.00	<0.02	0.38		
184.00-186.00		felsite w stockwork mineralization	50433	2.00	<0.02	0.05		
186.00-188.00		" "	50434	2.00	<0.02	0.17		
188.00-190.00		footwall fault	50435	2.00	<0.02	0.12		
190.00-192.00		" "	50436	2.00	<0.02	0.08		

CORDILLERAN ENGINEERING LIMITED — DIAMOND DRILL RECORD

PROPERTY Logan HOLE No. L-58

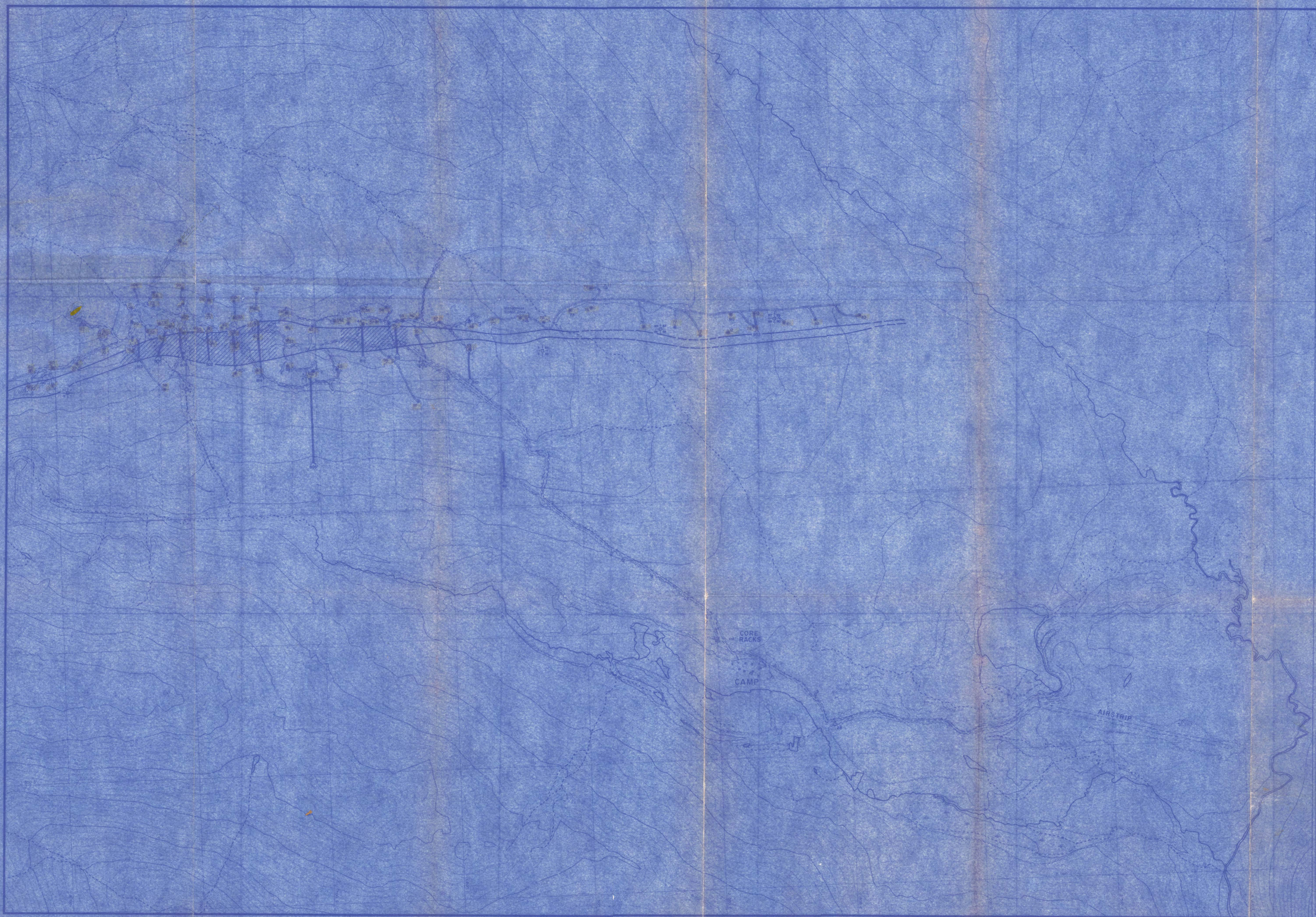
DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

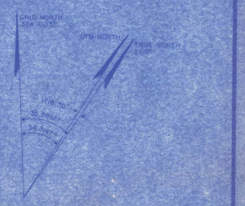
Core Size
Angle of Hole
Claim
Section
Bearing

Total Depth
% Recovery
Elev. Collar
Latitude
Departure

Sheet No. 5 of 15
Logged by P. Dankevlost
Date Begun
Date Finished
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	SILVER OPT	%Zn		
192.00-194.00		footwall fault	50137	2.00	<0.02	0.37		
194.00-196.00		" "	50138	2.00	<0.02	0.30		
196.00-198.00		" "	50139	2.00	0.05	0.80		
198.00-200.00		granodiorite w trace sp	50140	2.00	0.06	1.28		
200.00-202.00		granodiorite	50141	2.00	<0.02	0.27		





LEGEND

SURVEY CONTROL POINTS

AIRPHOTO TARGETS (GRID LINE COORDINATES)

SYMBOLS

CUT LINE

ROAD

DIAMOND DRILL HOLE COLLAR WITH NUMBER

TRENCH WITH NUMBER

SURFACE TRACE OF MINERALIZED STRUCTURE(S)

PROJECTED OUTCROP EXTENT OF MINERALIZATION

CLAIM POST (CORNER POST WITH CLAIM NUMBERS)

CLAIM POST (NOT SURVEYED) WITH CLAIM NUMBERS

FAIRFIELD MINERALS LTD.
TOTAL ENERGOLD CORPORATION

LOGAN PROJECT
WATSON LAKE MINING DISTRICT, YUKON TERRITORY

MAIN AND EAST ZONE PLAN

Scale 1 : 1 000

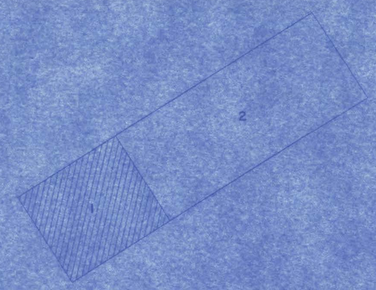
CORDILLERAN ENGINEERING LTD.
1900-1055 W. HASTINGS STREET,
VANCOUVER, B.C. V6E 2E9

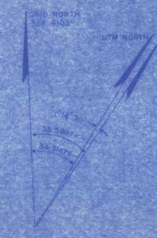
OCTOBER 1986

PLATE 1

NORTH WEST GEOGRAPHIC SERVICES LTD.

KEY MAP





EXPLANATION

- CUT LINE
- ROAD
- 808 TRENCH WITH NUMBER
- DIAMOND DRILL HOLE COLLAR WITH NUMBER
- SURFACE TRACE OF MINERALIZED ZONE
- SURFACE TRACE OF WEST ZONE FAULT

SURVEYING

- AIR PHOTO TARGET "MT. TINDLE" 87-012
- AIR PHOTO TARGET BL 300 N, 300 W, 87-008
- SURVEY CONTROL POINT "ZIPPER" 87-001
- SURVEY CONTROL POINT 86-03
- AIR PHOTO TARGET POST 1 16N, 17O
- AIR PHOTO TARGET POST 1 19S/19A
- AIR PHOTO TARGET ESKER NEAR PASS LAKE
- AIR PHOTO TARGET BL 500 S, 200 W

FAIRFIELD MINERALS LTD.
TOTAL ENERGOLD CORPORATION

LOGAN PROJECT
WATSON LAKE MINING DISTRICT, YUKON TERRITORY

WEST ZONE PLAN
(INCLUDING WESTERN MAIN ZONE)

SCALE 1:5000
0 50 100 150 200 METRES
CONTOUR INTERVAL 5 METRES

CORDILLERAN ENGINEERING LTD.
#810-1050 W. PENDER STREET
VANCOUVER, B.C. V6E 3S7

OCTOBER 1988

PLATE 10

APPROXIMATE CLAIM BOUNDARY

APPROXIMATE CLAIM BOUNDARY

806

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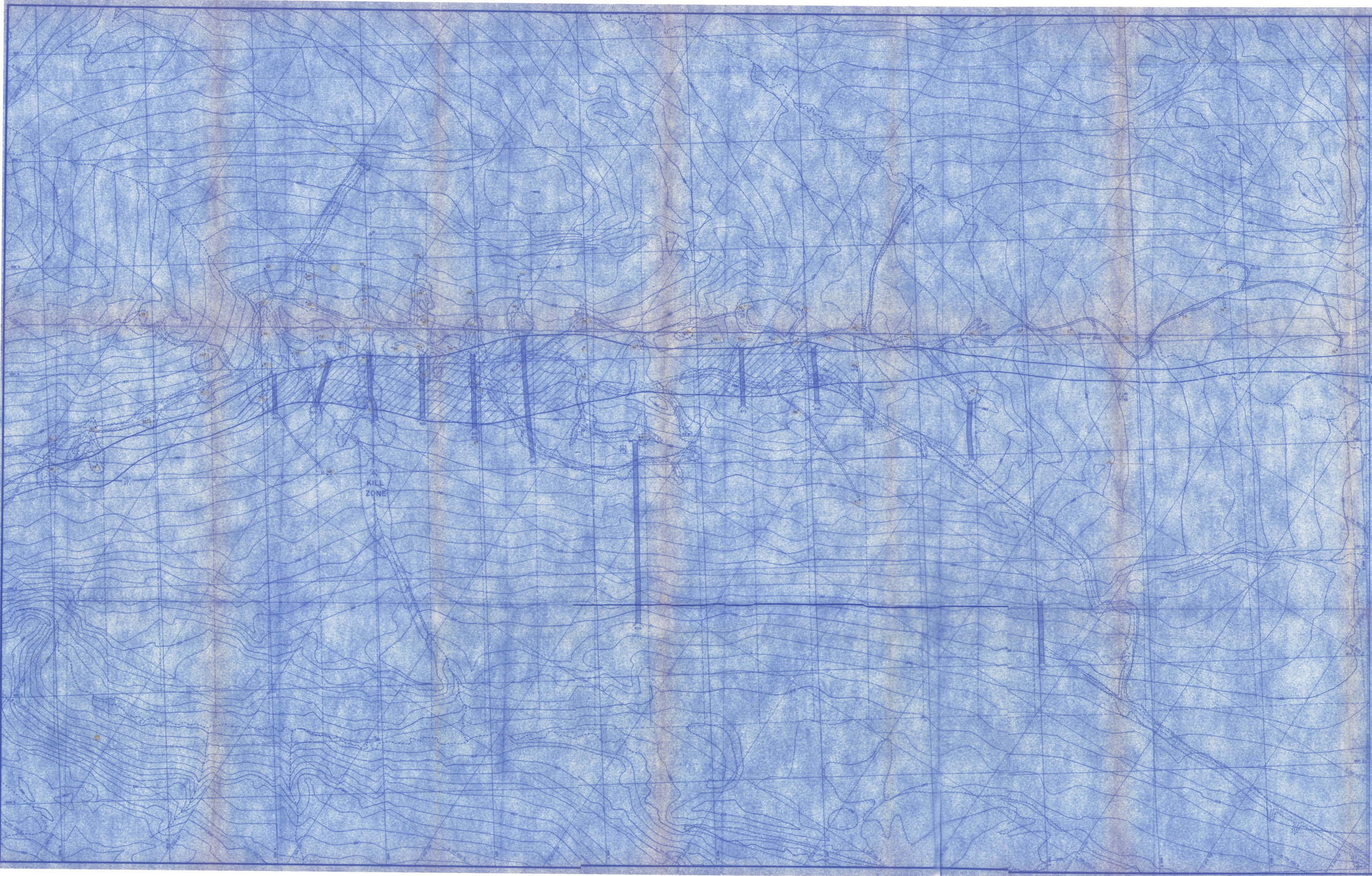
808V

808W

808X

808Y

808Z



NORTH-WEST GEOGRAPHIC SERVICES LTD.

KEY MAP

AREA OF 15000 MAPPING

LEGEND

- DRILL HOLE WITH HOLE NUMBER (DIP, HORIZONTAL DEPTH, AZIMUTH WHERE INDICATED)
- SURVEY POINT 600 N 400 E (GRID CONTROL POINT)
- SURVEY POINT 87-008
- SURVEY POINT 87-009
- SURVEY POINT 88-01
- SURVEY POINT 88-04
- 450 N, 000 E (CUT LINE)
- 500 N, 000 E (CUT LINE)
- 450 N, 000 E (CUT LINE)
- 500 N, 000 E (CUT LINE)
- SURFACE TRACE OF MINERALIZED ZONE
- PRESENTLY DEFINED ZINC - SILVER MINERALIZATION
- CUT LINE
- SURVEYED CLAIM POST WITH CLAIM NUMBERS
- CLAIM POST (NOT SURVEYED) WITH CLAIM NUMBERS

FAIRFIELD MINERALS LTD.
TOTAL ENERGOLD CORPORATION

LOGAN PROJECT
WATSON LAKE MINING DISTRICT, YUKON TERRITORY

MAIN ZONE PLAN

SCALE 1:2000

CONTOUR INTERVAL - 5 METRE

CORDILLERAN ENGINEERING LTD.
1640-625 W. HASTINGS STREET
VANCOUVER, B.C. V6B 1S5

OCTOBER 1988

PLATE 2