DIAMOND DRILLING REPORT

ON THE CL CLAIMS

CASSIAR DISTRICT
LIARD MINING DIVISION

Owner:	D.Busat and C.Berube
Operator:	C.Berube
Work Done On:	CL Claim
Work Performed:	July 29 - October 7 1990.
Located:	NTS 104 P6/W

By:	Lesley C. Mortimer BSc.
Date:	October 1990.

21,576

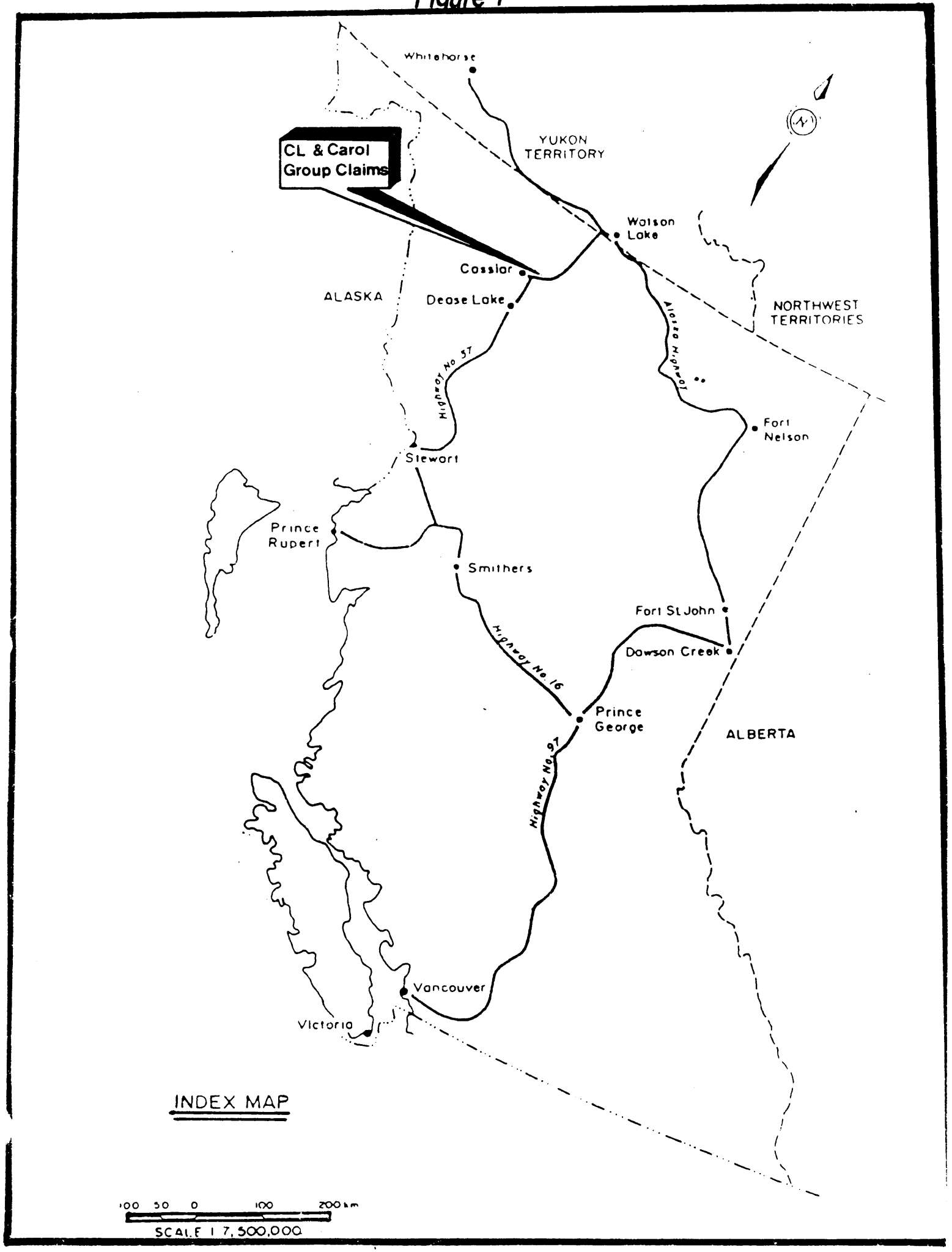
TABLE OF CONTENTS

LIST OF FIGURES, MAPS AND TABLES

1.0 CLAIM RECORD

CLAIM NAME	RECORD NO.	RECORD DATE EXPIRY DATE	OWNER	FMC #
CL	6215	Aug 18/89 Aug 18/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLB	7291	May 28/90 May 22/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLD	7292	May 28/90 May 14/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLP	7717	Aug 21/90 Aug 16/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLM	7716	Aug 21/90 Aug 15/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLE	7886	Sept 14/90 Sept 14/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLA	7884	Sept 14/90 Sept 14/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLF	7883	Sept 14/90 Sept 14/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLH	7885	Sept 14/90 Sept 14/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLO	7887	Sept 27/90 Sept 27/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLR	7888	Sept 27/90 Sept 27/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLT	7890	Sept 27/90 Sept 27/91	BUSAT/ BERUBE	DBUS270695/ CBER270868
CLY	7889	Sept 27/90 Sept 27/91	BUSAT/ BERUBE	DBUS270695/ CBER270868

Figure 1


Whitehorse
YUKON TERRITORY
CL & Carol Group Claims
Watson Lake
Cassiar
ALASKA
Dease Lake
NORTHWEST TERRITORIES
Alaska Highway
Highway No 37
Fort Nelson
Stewart
Prince Rupert
Smithers
Fort St John
Dawson Creek
Highway No. 16
Prince George
ALBERTA
Highway No. 97
Vancouver
Victoria
INDEX MAP
100 50 0 100 200 km
SCALE 1:7,500,000

2.0 INTRODUCTION

During 1990, nine BQ diamond drill holes totalling 636.8 meters were drilled on the CL claim by Camille Berube. The objective of this drill program was to explore at depth, a mineralized quartz vein showing known as the Lucille Vein. Limited surface mapping and surface sampling of the Lucille Vein and host rocks was carried out.

Geological maps, diamond drill collar location maps and a surface sample location map are all located in the back pocket of this report. The diamond drill hole numbers and relevant data are summarized in Table I, page 6.

The core was logged by Lesley Mortimer BSc., and is stored at the residence of Camille Berube. Copies of drill logs are found in Appendix A, and copies of assay results in Appendix B.

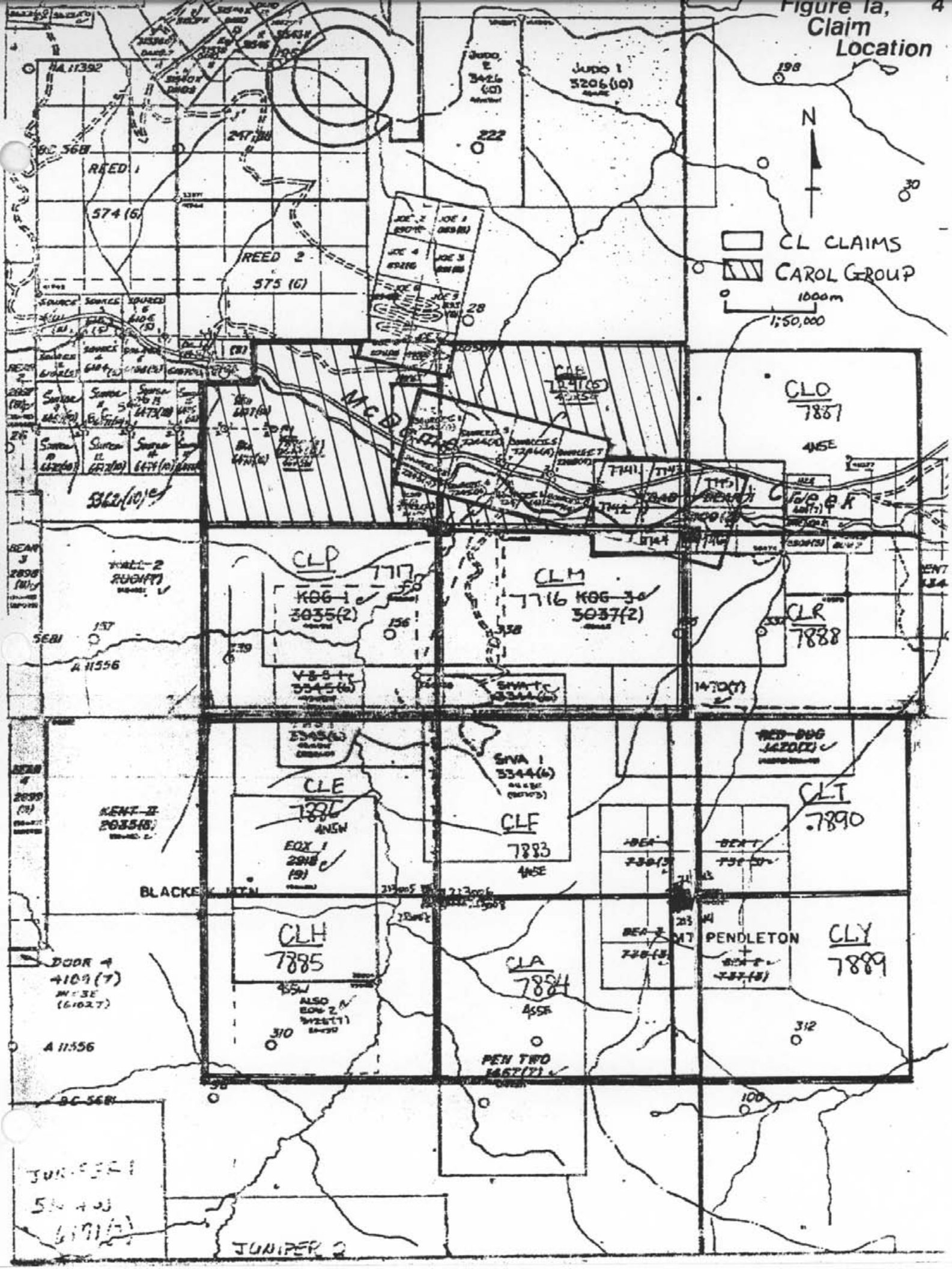
3.0 Location and Access

The Cl and Carol Group claims cover an area on the north flanks of Mt. Pendelton and Black Fox Mountain in northwestern British Columbia. The claims are accessed by travelling 17 kilometers north from the Cassiar Junction on Highway #37, or 120 kilometers south from Watson Lake, Yukon Territories on Highway #37 to the Centreville area. (See Figure 1). The diamond drilling was carried out directly adjacent to the highway.

An unmaintained dirt road starts from the north side of Highway #37 just east of the 2nd North Fork Creek, which provides good access to the area north west of the Lucille Vein. An old cat road provides reasonable access to the north flank of Mt. Pendelton.

Relief is moderate in the direct vicinity of McDame Creek but further south is the rugged mountainous relief of Mt. Pendelton and Black Fox Mountain.

Figure 1a,
Claim
Location



4.0 HISTORY

There has been no recorded exploration on this property prior to 1990.

McDame Creek, famous for much successful placer gold mining, flows parallel to the Lucille Vein, approximately 150 meters to the southeast. Proximal to the north of the Lucille Vein is Mt. Haskins and Mt. Reed, an area which hosts skarn and numerous associated mineralized veins and stockworks.

5.0 PURPOSE

Diamond drilling on the CL claim was undertaken to further explore the Lucille vein at depth and to test for other mineralized zones in the direct vicinity of the Lucille Vein.

6.0 WORK DONE

Nine BQ diamond drill holes totalling 636.8 meters were completed on the CL claim. Limited geological mapping and prospecting was completed mostly in the direct vicinity of the Lucille Vein. A total of 87 drill core samples and 69 surface chip and grab samples were assayed for gold and analyzed for Ag, Cu, Pb, Zn, Ni, As, Mo and Sb. Assay results are found in Appendix B.

A helicopter reconnaissance traverse revealed several areas of interest. Few grab samples were taken. Sample locations and results are reported in Figure 5, page 16.

Due to difficulties in coarse gold effects on fire assay results, fifty rock samples were selected from drill core and surface mapping and sent to Barringer Laboratories in Kirkland Lake, Ontario, where cyanide leaching fire assay testing was done. Results are located in Appendix B, Section II.

TABLE I

Hole #	Collar Elev. (m)	Collar Loc.	Azimuth	Dip	Length (m)	Intersections	Grade Oz/tAu
CL1	850.0	70971.4N 75305.9E	080	-42.0	64.9	12.2-12.6, 0.4m	0.098
CL2	870.0	71242.0N 75067.9E	042	-19.5	89.9	9.4-10.0, 0.6m 11.5-11.6, 0.1m 37.6-37.9, 0.3m 49.5-50.6, 1.1m 63.5-64.6, 1.1m	0.094 0.305 0.091 0.15 0.004
CL3	Abandonded due to overburden						
CL4	848.0	70880.0N 75496.8E	038	-45.0	113.4	15.0-18.2, 3.2m	0.013
CL5	856.0	71429.9N 74805.5E	360	-22.0	79.3	43.1-45.9, 2.8m	Tr
CL6	867.0	71321.2N 74981.6E	042	-22.0	125.3	40.7-41.1, 0.4m 41.6-42.5, 0.9m 42.5-43.0, 0.5m 61.4-62.7, 1.3m	0.109 0.007 0.399 0.145
CL7	868.0	71471.5N 74803.7E	105	-38.0	44.4	14.2-15.0, 0.8m	Tr
CL8	868.0	71473.9N 74803.0E	037	-20.0	55.6	26.7-28.5, 1.8m 39.8-40.4, 0.6m	0.003 Tr
CL9	868.0	71479.8N 74765.7E	056	-06.0	64.0	27.0-28.2, 1.2m	Tr

7.0 REGIONAL GEOLOGY

Within the McDame map area, stratified consolidated rocks of marine origin range in age from Proterozoic to Mississippian. The rocks have been faulted, folded and intruded by Mesozoic granitic rocks. Tertiary sediments and basalts occur locally.

In the northeast corner of the claim boundary are the Good Hope and Atan Group rocks. These are a thick conformable sequence of Precambrian and Cambrian limestone, dolomite, quartzite and shales.

The Kechika Group, in which the drilling was carried out, are highly contorted, thinly bedded limestones and slates of Cambrian-Ordovician age which lie conformably on the Atan Group. The Kechika Group rocks lie in a northwest trending belt in the north west corner of the claim group.

Disconformably overlying the Kechika group is the Sandpile Group of rocks. These are well bedded carbonates and sandstones of Ordovician and Silurian age. Dykes and sills of greenstone emplaced in Devonian-Mississippian time are common in the Kechika and Sandpile Group.

The McDame Group, of late Devonian age lies disconformably on both the Kechika and Sandpile Groups. McDame group rocks are essentially dolomites and limestones.

Almost the whole southeastern half of the claim group is comprised of the Sylvester Group rocks, a thick assemblage of volcanic and sedimentary rocks of late devonian and early Mississippian age. Small bodies of serpentinite outcrop throughout the Sylvester group and are believed to have been emplaced in early Mississippian time.

The regional structural trend is northwesterly and the rocks are cut by numerous northerly and northeasterly trending faults.For a geological map and legend of the claim area, see Figures 2 and 3.

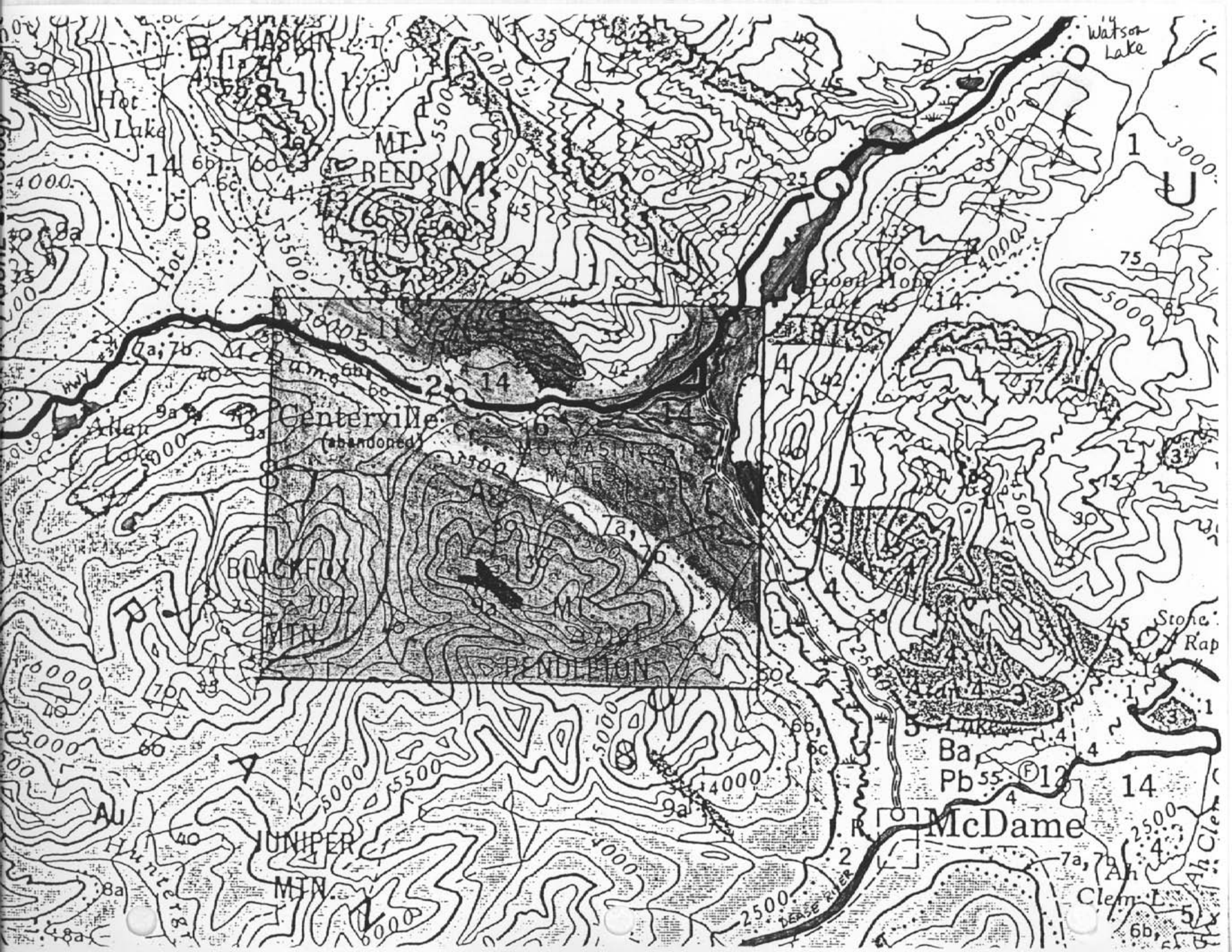

Watson Lake
Hot Lake
MT. BEDA
Hot Ck.
Centerville Ck.
(abandoned)
Allen
BLACK FOX MTN.
PENDLETON
JUNIPER MTN.
Hunter Ck.
Good Iron
Stone Rap
Lake
McDame
Clem L.
DEASE RIVER

FIGURE 3

LEGEND

PLEISTOCENE
Glacial and glacio-fluvial deposits, stream deposits, felsenmeer, talus, soil

LOWER MISSISSIPPIAN
Serpentinite

UPPER DEVONIAN, LOWER MISSISSIPPIAN
SYLVESTER GROUP
Greenstone, chert, argillite, quartzite, greywacke, limestone, conglomerate

MIDDLE and UPPER DEVONIAN
McDAME GROUP
7a black fetid dolomite, dolomite breccia, limestone, 7b platy limestone,

ORDOVICIAN, SILURIAN AND ? DEVONIAN
SANDPILE GROUP
6a Dolomite, cherty dolomite, dolomite, siltstone, minor dolomite breccia
6b sandstone, quartzite, sandy dolomite, dolomite, siltstone, minor dolomite breccia
6c laminated dolomite

MID-UPPER CAMBRIAN, LOWER and MID ORDOVICIAN
KECHIKA GROUP
limestone, calcareous slate, phyllitic limestone, calcareous phyllite, pyritic carbonaceous slate and shale, conglomerate, greenstone

LOWER CAMBRIAN
ATAN GROUP
limestone, dolomite, minor shale

quartzite, shale, slate, argillite, pebble conglomerate, siltstone

GOOD HOPE GROUP
limestone, dolomite, slate, argillite, sandy limestone, red and green slate, shale, limestone, minor quartzite, siltstone, phyllite, chlorite schist

Figure 4


CASSIAR
access road
CL8
CL7
CL6
McCABE CREEK
HWY #37
To GOOD HOPE LK

8.0 GELOLGY

The Lucille Vein is located within the Kechika Group rocks, a highly folded and cleaved assemblage of thinly bedded shales, slates, calcareous phyllite, limestone and limestone conglomerates.

The local host rocks to the Lucille vein are thinly laminated calcareous slates and siltstones. Two main units of sedimentary rocks are defined. A graphitic, calcareous slate (GRS1), and an interbedded unit of graphitic slates and calcareous siltstones (IMS). A few small beds of calcareous siltstone and quartzite are delineated.

Graphite, Dolomite, Hematite and Clay alteration predominate and are most often seen associated with increased mineralized quartz veining and stockworking.

The metasediments in the direct vicinity of the Lucille Vein generally strike 100° dipping steeply south to 70° south. Local dipping of 46° is noted. Numerous northerly, northeasterly and northwesterly trending faults cut the strata. The average width of the faults is 0.1 meters. These faults are marked by intense rusty weathering, clay alteration and sometimes massive pyrrhotite mineralization up to 5 centimeters wide. Some of these faults carry gold values up to 0.214 oz/ton.

The metasediments below the Lucille Vein host numerous crosscutting mineralized quartz-carbonate veins and vein stockworks. The average width of the veins is 0.3 meters and the width of the stringers in the stockworks averages 0.1 meters. There are two types of veins noted. The first type of vein is comprised of 50% white quartz/minor carbonate on fracture planes and 50% sulphides. The sulphides are generally 35-40% pyrrhotite, 3-5% bornite, 5-10% pyrite, 3-5% chalcopyrite, ±tetrahedrite. The second type of vein is predominantly white quartz/grey carbonate (50/50), with few disseminated sulphides, usually pyrrhotite and pyrite 5-10%. Graphitic stylolites are often noted, up to 10%. Type one veins carry gold values up to 0.399 oz/ton. Type two veins do not usually carry gold.

The Lucille Vein is a distinct type one vein due to the occurance of a dark brown metallic, relatively soft, non-magnetic mineral with a black streak, which has been named pyrrhotite for this report. A polished thin section has been ordered for analysis. The Lucille Vein is the only occurance of this non-magnetic pyrrhotite, it is not seen in the quartz veins at depth.

8.0 GEOLOGY (cont'd)

The Lucille Vein is comprised of 30-40% white, clay altered quartz, brecciated by 40% massive pyrrhotite, pyrite, bornite and chalcopyrite with 20-30% intense chlorite/clay/-graphite alteration in large clots throughout. Tremolite is often seen up to 10% in large radiating acicular aggregates up to 1 centimeter in width.

Several large samples of the Lucille Vein were crushed to approximately 75 mesh and put on the jig table. Numerous small flakes and nuggets of gold were panned out. However, surface sample assay results reflect little to no gold content.

9.0 RESULTS

This was a grass-roots exploration program which was started without the aid of a geologist and subsequently no mapping was completed prior to drilling. However, the results have excellent potential for further exploration.

Geological interpretation of these rocks and coorelation of drill hole results at this stage of exploration is extremely difficult to achieve accurately. Contacts are gradational, all rocks are of sedimentary origin except perhaps the possible dyke rocks or altered greenstone sills. These may not be dykes but rather just intensely altered sediments as no clear contacts are noted. A thin section has been sent out for analysis.

There are numerous mineralized veins and stockworks and thus correlation of stringer zones and veins with limited horizon drilling is difficult. This phase of exploration has delineated that gold mineralization is present at the drilled horizon and indicates further drilling is necessary to test the mineralized structure at depth.

Due to the inability of a small drill to overcome the problems of deep overburden, extensively faulted and blocky ground and water return, a more powerful drill is needed to explore deeper ground and areas with deeper overburden.

The following is a summary of the results of the exploration program;

1) Two main zones of mineralization at depth were outlined by diamond drilling. For CL2 and CL6 these zones are seen at approximately the 40 meters and 60 meters areas, see crossections located in the back pocket of this report for details. These zones are metasediment hosted quartz-carbonate veins and stockworks. Two types of veins are found. Type one veins are quartz/minor carbonate with sulphides comprising up to 50% of the vein. Sulphides include pyrrhotite, pyrite, bornite, chalcopyrite, ±tetrahedrite. Tremolite is sometimes present. Gold values of up to 0.399 oz/ton are seen. Type two veins are mainly quartz-carbonate veins with less than 5% sulphides, usually pyrrhotite and pyrite and a few graphitic stylolites present. Type two veins are not known to carry gold.
Further drilling is needed for detailed geological correlation of structures. These small stockworks and veins could quite possibly be feeder zones or splays to a larger vein structure above or below the drilled horizon.

9.0 RESULTS (cont'd)

2) The Lucille Vein is seen on surface from 0+00E to 1+50E at approximately 0+08N, striking 128 , dipping vertically to steeply south. The average width of the vein is 0.5 meters. The vein is cut by several northeasterly and easterly trending faults throughout its length, with little to no offset noted. The Lucille Vein is an intensely altered, brecciated quartz-massive pyrrhotite vein. The metasediments hosting the Lucille vein are intensely altered graphitic, sericitic, limonitic schists which carry minor gold values. The Lucille Vein was only intersected once in drill core very near surface in DDH# CL7. Assay results from the Lucille Vein surface samples are as high as 0.424 oz/ton gold.

3) Surface prospecting revealed numerous large angular boulders of massive pyrite/pyrrhotite skarn adjacent to the highway. See location map on page 16 for location. These boulders are not far removed from their source judging by the angularity and abundance of the boulders.
No skarn outcrop was revealed but further exploration would easily delineate the skarn body. Assay results revealed up to 0.583 oz/t gold. A thin section of this rock type has been sent to Ottawa for detailed analysis and description.

4) A large number of listwanite boulders were discovered on a helicopter reconnaissance traverse. See Figure 5, page 16 for location. Listwanite is an intensely altered ultramafic rock. This listwanite has pervasive quartz-mariposite-carbonate alteration. At the Erickson Gold mine, only a few kilometers away, the bulk of the ore was discovered in a quartz vein located at the contact between the mariposite/quartz listwanite and the underlying volcanics.
Time did not permit detailed geological mapping to delineate the outcrop of this unit, however the angularity, the location, on top of a ridge and the abundance of boulders indicates a close proximity of outcrop.

5) A silica/carbonate sealed glacial till unit is seen in outcrop at 0+68E, 0+09N. A sample of this rock was crushed to approximately 75 mesh and put on a jig table. Numerous gold flakes and small nuggets were panned out. The gold pieces are quite angular indicating minimal displacement from their origin. An approximate gold content of 2.4 oz/ton was calculated from the amount of rock crushed, assuming the gold distribution is uniform.

9.0 RESULTS (cont'd)

5)cont'd
Many boulders of ferricrete, which resemble the above indurated glacial till unit are seen along the ditch beside the highway. One boulder in particular contained the contact between the Lucille vein and the ferricrete. However no outcrop of this contact is seen.

For unknown reasons, fire assay and metallic assay results reveal no gold content of this indurated glacial till unit. Three separate samples of the glacial till unit were crushed, each weighing well over 9 kilograms and every time numerous gold flakes and nuggets were panned out.

6) Two samples; CL009 and 28103, were sent out for analysis of Bismuth, Tellurium and Selenium. Results were
CL009: Bi - 8,961.4ppm, Te - 34.7ppm, Se - 30.7ppm
28103: Bi - 25ppm, Te - 3.8ppm, Se - 1.5ppm.

7) With regards to assay results, the coarse gold or nugget effect has hampered our efforts to recieve consistent assay results. Visible gold is present in many of the samples from the Lucille Vein and other local samples, however, fire assay, metallic assay, and cyanide leach fire assay results reveal little or no gold content.
A few reasons could be: Many of the samples showed both very high and very low recoveries which suggests both free milling and refractory gold. The low recovery values suggest that only minor amounts of gold are present and quite often it may be in fact refractory ie. that the gold is tied up in crystalline structure - in siliceous or sulphide grains that are isolated from the cyanide leach solution. Also, many of the drill core samples were only 0.2-0.3 meters wide. The cyanide leach fire assay method is an analytical attempt to capture the gold content of all the nuggets in the sample. However when the sample becomes smaller, the nugget effect becomes even more extreme.

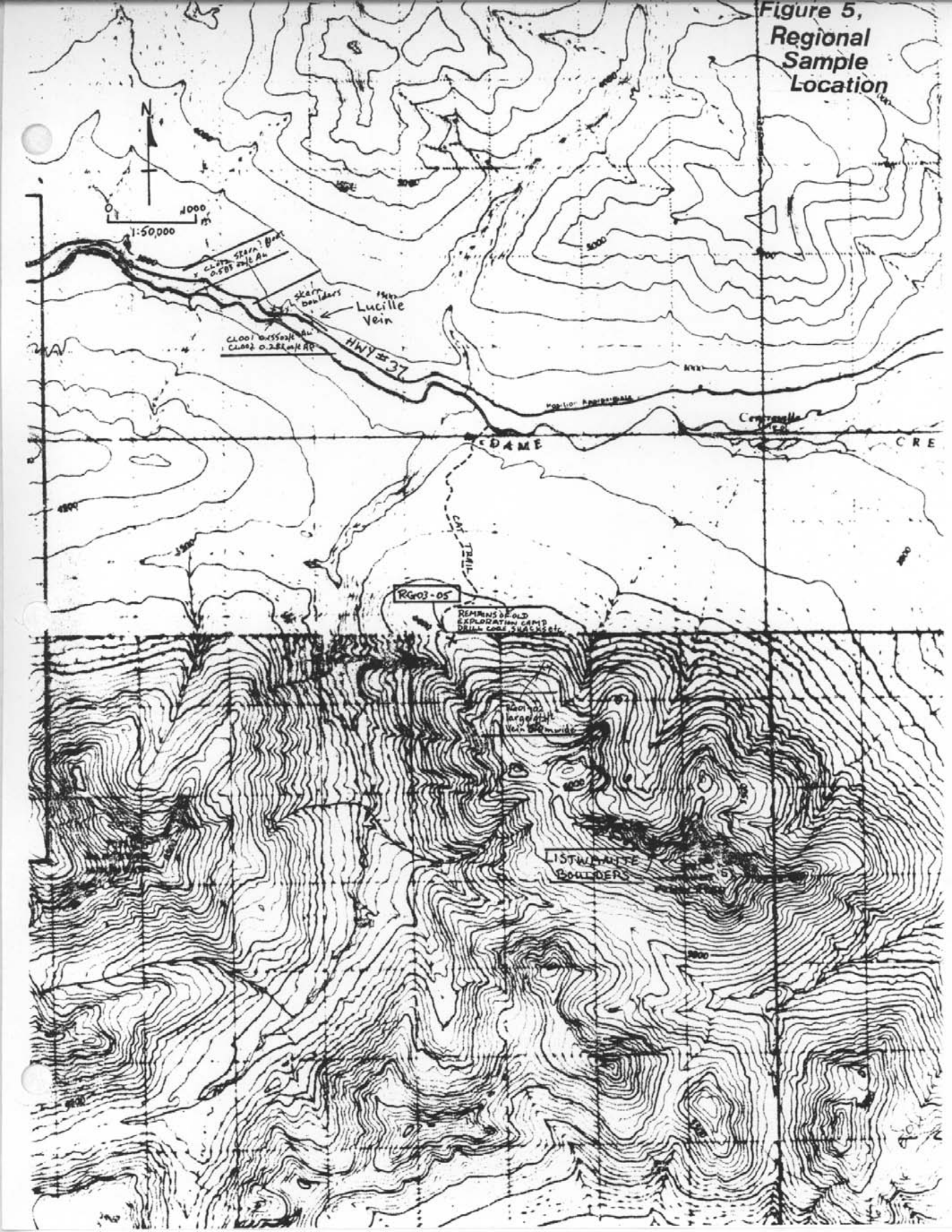


Figure 5,
Regional
Sample
Location
N
0
1000
1:50,000
Lucille
Vein
HWY #37
DAME
CAT TRAIL
RG03-05
REMAINS OF OLD
EXPLORATION CAMP
DRILL CORE SHACK ETC.
LISTWANITE
BOULDERS

10.0 RECOMMENDATIONS

This property has very good potential for extensive mineralization. The drilling and sampling completed this year has only begun to delineate the strucures and their gold content. There is no doubt that further exploration is needed to delineate the entire picture of the gold mineralization!

The following are recommended:

1) Further diamond drilling is required to delineate the vein and stockwork structures above and below as well as eastern and western extensions of both the Lucille Vein and mineralized veins and stockwork zones to the north.

2) A detailed geological mapping program, (scale 1:1,000) is recommended over the entire CL claim.

3) A total magnetometer geophysical survey was flown over the area of the Lucille Vein within the last few years. The pyrrhotite/pyrite skarn would be readily detected from the results of this survey. The company involved in this survey is unknown to date.

4) In the vicinity of the listwanite boulders, detailed geological mapping followed by a few diamond drill holes would be recommended to explore the lower contact with the underlying volcanics.

5) Trenching is recommended to the north of the Luville Vein and directly north of the contact zone between the Sandpile and Kechika group rocks, just north of the skarn boulders on the north side of the highway. See Figure 5, page 16.

11.0 DRILLING COST STATEMENT

Nine BQ diamond drill holes were drilled on the CL claim during the period of July 29 - October 7 1990. A total of 636.8 meters were drilled. A hydra core diamond drill was used with two diamond drillers.

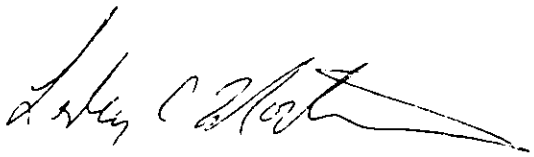
Hole #	Total Length (m)	Drilling Cost @$17.10/ft
CL1	64.9	$ 1,109.79
CL2	89.9	1,537.29
CL3	abandoned due to overburden	
CL4	113.4	1,939.14
CL5	79.3	1,356.03
CL6	125.3	2,142.63
CL7	44.4	759.24
CL8	55.6	950.76
CL9	64.0	1,094.40
Subtotal	636.8	10,889.28
Suplies, pump rental		3,000.00
Geologist		6,100.00
	Total	19,989.28

12.0 STATEMENT OF QUALIFICATIONS

I, Lesley C. Mortimer of 670 Brown Street, Cassiar, British Columbia, do hereby certify that:

I hold a BSc degree in Geology obtaind at Lakehead University in Thunder Bay, Ontario. I have practised my profession for six years.

I am the author of this report, which is based upon work conducted under the supervision of both myself and Camille Berube, prospector, Centreville, British Columbia, during the 1990 field season on the Carol Group and CL claims, near Cassiar, British Columbia.



Lesley C. Mortimer BSc.

APPENDIX A

SECTION I - DIAMOND DRILL LOGS

&

SECTION II - SURFACE SAMPLE NOTES

APPENDIX A

SECTION I - DIAMOND DRILL LOGS

DIAMOND DRILL LOG LEGEND

GrSl	Graphitic Slates/Shales
IMS	Interbedded Metasediments
CSs	Calcareous Siltstone
qtzte	Quartzite

qcvn, QCvn	Quartz/Carbonate Vein	>0.3m
qcstr	Quartz/Carbonate Stringer	5.0cm-0.3m
qcvnlt	Quartz/Carbonate Veinlet	<5.0cm

Alteration Codes

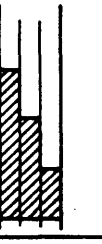
iD	intense Dolomite
mH	moderate Hematite
wG	weak Graphite
wK	weak Clay (Kaolinite)

mCarb	minor carbonate, usually on fracture planes
mpyrr	massive pyrrhotite
tetr	tetrahedrite
pyrr	pyrrhotite
py	pyrite
①	Type 1 veins
②	Type 2 veins

MINERALS SECTION

DRILL LOG

PROJECT: DITCH DISCOVERY	GROUND ELEV.: 850.0 m
HOLE No.: CL1	BEARING: 080°
LOCATION	DIP: -42°
	TOTAL LENGTH: 64.9 m
LOGGED BY: L. MORTIMER	HORIZONTAL PROJECT
DATE: Sept/5/90	VERTICAL PROJECT
CONTRACTOR: Camille Beruhe	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED	
DATE COMPLETED	TOTAL SULPHIDE SCALE
DIP TESTS none.	
COMMENTS	LEGEND

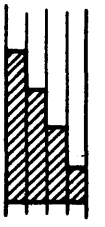


absent

slight

moderate

intense



traces only

< 1%

1% – 3%

3% – 10%

> 10%

PROJECT: DITCH DISCOVERY

HOLE No. CL1

(MCS)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
	60%			0 - 12.2 Graphitic Slates Black, aphanitic, calcareous weak foliation generally 80° to C.A locally chaotic, Qtz/carb veins ave 2mm wide, Xcut fol. w/out specific orient., Very fn. gr. py often seen on fol. pl. w/ white clay min. = chlorite < 5%						
	50%			few qtz/carb veins w/ pyrr + py up to 2mm wide.						
	45%			12.2 - 12.6 Qtz/Carbonate Vein White Qtz 50% Carbonate 30% Gr. Slates fragments 15%. pyrr. 3%, py 1%						
				12.6 - 27.3 Graphitic Slate As above						
				15.1 - 15.2 Qtz/carb Stringer graph slates incl 15%, pyrr, py, sph?						
				v. fn gr. py replac. silty + qtz carb clots + veinlets						
				16.4 - 16.9 Siltstone Fragment? lt. grey, fn. gr., graphitic fr. pl. + fn. gr. py/pyrr <1% finely diss. throughout.						
				16.9 - 27.3 Gr. Slates						
				27.3 - 32.5 SILTSTONE. Lt. grey, fn. gr., graphitic veinlets (<1mm wide) & Qtz/carb veinlets (<2mm wide) throout. Fn. gr. py + pyrr diss. throout. Siltst. is very calcareous, massive.						

PAGE 3 OF 7 | PROJECT: DITCH DISCOVERY | HOLE No. CL1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
										Mo/Sil.
12.2-12.6 Qtz/Carb Vein w graph. incl., pyrr, py. 10%.			0.4	28130	.098					
15.1-15.2 Qtz/Carb Str. w graph mdst. incl, pyrr, py 3%			0.1	28131	Tr					

PROJECT: DITCH DISCOVERY

HOLE No. CL1

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				SILTSTONES (cont'd)						
				27.4-28.1 Qtz/carb stockwork w/in Graphitic/Clay alt. 5.1 Hairline Qtz/Carb 80%, metaseds 20%. Pyrr, py, tr tt. fn. gr. diss ~clusters of coarser gr..						
				28.1-31.3 Moderate Qtz/carb Veining up to 1cm wide, <1% sulphides. fn. gr. diss.						
				31.3-31.5 Qtz/carb Stringer w graphitic stylolites + minor py, pyrr bn, tt., some clay/graphitic alt silty Cragg up to 2cm. <15%.						
				32.5-39.0 GR. SLATES dk. grey-black calcareous, graphitic, slight fol. loc. int. cactic fol. qtz/carb veinlets loc int., foliation avg. 20-30° to C.A.						
				32.7-33.0 qtz/carb stkwk w/in gr. metst. qtz/carb 50%, metst 50%, fn gr. pyrr. py tt? <2%						
				35.0-35.1 Int qtz/carb stkwk w cly. (ser?) 5%., fn. gr. py, pyrr, tt, bn <1% diss throughout white clay alt.°						
25%				36.6-39.0 25% recovery! 36.7-? 0.3m of rock. Qtz/carb sericite? clinsite, stockwork, dk graphitic ISM., Qtz/carb 60%, metaseds 35%, clay/ser 5%. Within Stkwk, pyrr, py, tt						

 PROJECT: DITCH DISCOVERY HOLE No. CL 1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
27.4 - 28.1 Qtz/carb stkwk fn. gr. py. pyrr + tt? (silvery grey mineral). <3% cpy?			0.7	28132	Tr					
31.3 - 31.5 Qtz/carb Stringer w graph. styl. + m. py. pyrr + bn, tt <2%			0.2	28133	Tr					
32.7 - 33.0 qtz/carb stkw w graph. mdst., pyrr, py, tt, sph? as fn gr. clusters + diss. throughout.			0.3	28134	Tr					
35.0 - 35.1 Qtz/carb stkwk. w gr. mdst., fn. gr. pyrr, py, bn. tt - <1% . clay (ser?)			0.1	28135	Tr					
36.7 - 37.0? note 25% recovery Qtz/carb stkwk. w pyrr, py, tt, clay + ser veins. sulphides <2%.			0.3	28136	Tr					

PAGE 6 OF 7 | PROJECT: DITCH DISCOVERY | HOLE No. CL1

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
40				39.0 - 64.9 ISM						
				Siltst./Mdst - 30/70. Many silty beds are ± continuous, and form a boudinage (mdst / $CaCO_3$ silty material) graphite/carbonate/qtz/sulphide form veinlets < 1mm wide (fr. pl. sets). The foliation is generally at 30° to C.A.						
				- fn. gr. pyrr ± py ± cpy on fr. pl. < 2%						
45				- lt. grey/st blue clay alt. of silty up to 1cm @ 20° to C.A., clay min comprise 50% of rock.						
				- yellow carb (ankerite) replaces some silty clots in an pisolitic (texture) w graphitic rims (graphite, yellow carbonate)						
				- intense graphite w some chl. w depth.						
	11%			- some incipient pyrr. repl. qtz/carb clots ± veinlets.						
50										
				@ 47.0 m. clay alt. decreases to moderate silty beds are silica/carbonate altered and appear as barren wkt bands, wins. ≈ 30°. Mineralization increases mostly: pyrr ± py are seen usually on fr. pl. and in qtz/carb clots ± qtz/carb alt° sides in) silty beds						
	20%									
	46%									
	46%									
	33%			55.9 - 57.9.						
				local chaotic foliation w increased alt° i.e.) dol. alt° of clots, qtz/carb alt° of silty beds ± many qtz/carb veinlets 2mm wide, few gn of sulphides pyrr ± py noted. Chl is abundant						
60										
		64.9 EOH		Dolomitic / ironrose became more abundant near EOH						
				Calcareous, argillaceous, rel. siliceous						

PAGE 7 OF 7 | PROJECT: DITCH DISCOVERY | HOLE No. CL1

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
39.8-40.3 ISM w intens Boudinage text. (Sygmoidal) of calcareous silty beds, @ 30° to c.a. w pyrr.py. ± cpy on ft planes.			0.5	28137	Tr					

PAGE / OF / | PROJECT: | HOLE No. CL1

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

NOTES CL1:
4 samples taken 28130-37
This hole is much less a/fracture than CL2. Most of the hole consists of graphitic calcareous slates and some siltstone beds, which are weakly to moderately foliated @ 80° to C.A.
Qtz/carbonate veinlets avg 0.5cm up to 3cm wide crosscut the metseds chaotically often networking + stockworking. White clay + minor dolomite is seen especially on the fr. pl. throughout the meta seds.
Dolomitic alt" of metaseds is seen esp. near stkwks + veins

MINERALIZATION:
Few small mineralized zones exist usually as qtz/carb stockworks + a vein 0.4m wide. The stkwks average 60% qtz/carb stringers 40% metaseds. The mineraliz. is mostly w/in the stringers but fn. gr. pyrr. + py is diss. throughout metaseds. Average comp. of sulphides is again pyrr c.s. 80%, py 15%, ± sph. 2% cpy 2%, ± tt <1%, ± bn up to 3%. The single stringer + veins have graphitic stgl. & ± chlorite in fn gr. masses up to 2cm white clay alt" + dolomitic alt" of seds + vein material is common. Sericite? alt" is occasional.

MINERALS SECTION

DRILL LOG

PROJECT	GROUND ELEV. 870.0m
HOLE No. CL 2	BEARING 042
LOCATION	DIP -19.5
	TOTAL LENGTH 295ft (89.9m)
LOGGED BY L MORTIMER	HORIZONTAL PROJECT
DATE Sept 13/90	VERTICAL PROJECT
CONTRACTOR Comilk Drilling	ALTERATION SCALE
CORE SIZE BQ	absent slight moderate intense
DATE STARTED	TOTAL SULPHIDE SCALE
DATE COMPLETED	traces only < 1% 1% – 3% 3% – 10% > 10%
DIP TESTS none	
COMMENTS	LEGEND

PAGE 2 OF 13 | PROJECT: HWY 37 DISCOVERY | HOLE No. CL2

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (C)	B (G)	C (Si)	D (K)	E	FRACT INTENSITY
				0-3.0 OVERBURDEN						
				3.0-11.1 Graphitic Slates Dk. grey-blck. gtz calcite vnlts < 2cm wide throughout. Intense carb. alt. i graph alt., Weak-Mod. Fol 60-80° to c.A						
				7.2-7.8						
	60%			Mudstone w massive pyrr, trpy. cpy in veinlets (netw.) rusty gtz/carb clots + vnlts						
	42%			8.8-9.5 46% rec.						
				9.4-10.0 Mudst. w chaotic vn H. netw. gtz/carb in graph sty. mass. pyrr + py c.g. cpy						
				11.1-11.5 SILTSTONE H. grey fn. gr. w limonitic + graphitic silt on fr. pl. gtz/carb. vnlts < 2cm & clots throout						
				11.5-58.3 GRAPHITIC MUDSTONE. blk massive to slight fol 70-80° to c.A, iG. Tr py v. fn. gr. throughout. Qtz/carb vnlts. m pyrr py cpy 80% of vnlts. avg 2cm wide.						
				21.0-21.2 vuggy gtz/carb vnlt. pyrr 3%.						
				31.4 MUDSTONE graphitic iSi alt. gtz/c. vnlts w pyrr py 80% of vnlts. are chaotically oriented throout						

PAGE 3 OF 13 | PROJECT: Hwy 37 Discovery | HOLE No. CL2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag oz/t	%			COMPOSITE ASSAYS
7.3-7.8 gr. shale/sd. w nass c.g. pyrr + tr. py, + cpy. v.s? fn. gr., 25% sulph.			0.5	28101	0.003					
9.4-10.0 metased w. 25% nass. c.g. pyrr + py c.g., cpy <1% w in qtz/carb vnlt. netw.			0.6	28102	0.094					
								Rest		
11.5-11.6 Gr Metased w qtz/carb vnlts. pyrr, py. cpy 10%			0.1	28103	0.305			.400		
12.35-12.8 Gr. Metased. massive tr <1% v Fn. gr. py			0.45	28104	.035					
31.4-31.5 qtz/c. vn lt. w in mud/sand nass pyrr. 10% c.A 1.0 cm wide. pyrr: 90% qtz 20-10%			0.1	28105	.027					

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION C A	G B	Si C	K D	E	FRACT INTENSITY
				MUDSTONE (cont'd)						
				31.7-32.0 mudstone, i Si, m K, qtz/carb stkwk.						
				33.1-33.9 qtz carb stkwk (30%) i Si, i G, pyrr, py. tr cpy						
				34.0-34.6 intense qtz/carb stkwk vuggy, m K, i G, i Si, pyrr 10% py 3%, cpy 1%						
				36.65-37.15 vuggy qtz/carb stkwk 30%, pyrr, sphal?, py, cpy						
	38.4			37.6-37.9 qtz/carb stkw (50%) i Si, i K, i G, sulphides. pyrr, py. cpy						
	44%			38.4-41.7 Massive Sulphide Bx. i G frag. sub tr. qtz/carb. stkwk 60% i K alt, i G alt. mudst 40%. In stkwk: pyrr 30%, sphal 10% py 7%, cpy 2%, visible gold < 1%. qtz/carb 50%.						
	42.7			42.1-42.8 Qtz/carb Massive Sulph stkwk; Mudst 50% stkwk 50%.						
				Zone: 38.4-45.3m = 6.9m 29% recovery						

PAGE 5 OF 13 | PROJECT: HWY 37 DISCOVERY | HOLE No. CL2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au	% Ag	% Ni	Zn		COMPOSITE ASSAYS
31.7-32.0 qtz/carb stkwk w pyrr, py, apy 20% tt <1%			0.3	28106	.01					
33.1-33.9 qtz/carb stkwk. w pyrr 10% py 10% cpy <1% c.g. & fn. diss. tt <1%			0.8	28107	.003					
34.0-34.6 qtz carb stkwk w c.g. pyrr 10% fn. gr. py 3%, fn gr. cpy <1%			0.6	28108	Tr					
36.65-37.15 qtz/carb stkwk. 30% Sulphides: 20%; pyrr 12% sphal 3% py 2% cpy <1%.			0.5	28109	.002					
37.6-37.9 qtz/carb 50% iSi, iK, pyrr 20%, py, 10% cpy <2%			0.3	28110	.091					
38.4-41.7 massive sulphide Breccia: Mudst. 30%, qtz carb 30%, pyrr. c.g. 20%, marcasite 7% py 7%, tetrahedrite 3%, cpy <1% visible Au <1%			3.3	28111	.004					Note: 40% recovery.
42.1-42.8 Qtz/Carb Stkwk. pyrr. 30%, marcasite 7%, tt 3% py 5%, cpy <1%, v.g.			0.7	28112	.013					

OH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				MUDSTONE (cont'd)						
				45.3 - 45.9 Footwall Stkwk						
				Massive Mdstone w qtz/carb						
				vn lt. avg. 3mm wide (1/cm).						
				So int. @ 70° to C.A.						
				pyrr, py, sph. 15%						
				45.9-49.5 Gr. Mudstones. fn. lam So						
				70° to C.A Qtz/carb vnlts avg.						
				3mm wide w in So, w fn. sg. diss pyrr						
				py. Silty beds occasionally						
				1/m. avg. 2-3mm. Local chaotic						
				vn lt. networking of Qtz/carb. w						
				tr. sulphides.						
				49.5 - 49.97 Gr. Mudstones w						
				qtz/carb Stkwk; Mdst. 60%						
				Qtz/carb 20%, pyrr 10%, py 5%						
				marcasite 3%, cpy <1% vg?						
				49.97 - 50.57 as above w less						
				stockwork + with less sulphides						
				+ more: chaotic vein networking						
				52.6 - 52.85 Qtz/Carb Stkwk						
				Mudst. 30%, Qtz/Carb 40%, pyrr 20%						
				py 5% marc. 3% cpy 1%						
				52.85 - 58.3 Graphitic Mudstones						
				w interbedded siltstones. Mst/Sst						
				80/20 Sst beds 2-3cm - 3/m						
				Qtz/carb vnlts avg 3mm.						
				local stkwk. 5cm w c.g. pyrr						
				+ py. Flow vnlts. avg 1cm w						
				c.g. pyrr. py						

PAGE 7 OF 13 | PROJECT: DITCH DISCOVERY | HOLE No. CL2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au	% Ag	% Ni	Zn		COMPOSITE ASSAYS
45.3 - 45.9 Mudst. Finely bedded @ 70° to C.A. pyrr, 5%, py 4% sp2 1% fn. gr. diss throughout. Sulphides in qtz/carb vnlts wi S_o < 3mm wide	11		0.6	28113	.014					
49.5 - 49.97 Gr. Mudstones w Qtz/Carb Stwk. sulphides pyrr. 10% Sp2 3%, py 5% cpy 1% vg? Pyrr. is C.S.			0.47	28114	0.10					1.07m @ 0.15
49.97 - 50.57 as above w less mineraliz.			0.6	28115	.19					
52.6 - 52.85 Qtz/Carb Stwk. pyrr 20%, py 5%, cpy 1% sph 3%			0.25	28116	.005					

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (C)	B (G)	C (Si)	D (K)	E (CH)	FRACT INTENSITY
				MUDSTONE (cont'd) Siltstone beds increase in width & intensity w depth						
				58.3-77.7 INTERBEDDED SILTST/MUDSTONE (ISM), bedding @ 70° to c.A some beds are discontinuous; avg. 2mm wide, local qtz/carb stkwk w chl + clay alt pyrr > py on fr. pl is common as fn. gr. diss. <2% Locally c.g. pyrr + fn gr. py is w/in qtz/carb vnlts & stkwk.						
				61.1-61.2 gypsum filled cavity 8cm x 1cm, single rhombic Klk 3mm long w arrowheads						
				61.8-62.0 qtz/carb vnlt w mass pyrr, py // to c.A. 2cm wide.						
				62.7-62.73 m-i Fault @ 45° c.A. iK, iG, qtz > pyrr py						
				63.5-64.4 MASSIVE SULPHIDE ZONE ISM w qtz/carb vnlts/mass pyrr. m.py, bn, cpy, v.g., iG seds/sulphides 50/50						
				66.0-66.3 ISM, iK, iG, clastic foliation, brecciation of massive pyrr. by qtz carb vnlts iD alt'd silty beds, iG alt of mdst.						

 PROJECT: DITCH DISCOVERY HOLE No. CL2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au	% Ag	% Ni	Zn	Cu	COMPOSITE ASSAYS
61.8-62.0 Qtz/carb vnlt w mass. pyrr + tr py.			0.2	28117	.066					
63.5-64.6 Mass. Sulph. Zone qtz/carb vnlts w mass pyrr. 85% bn 5% py 5%, cpy 3%, sg?			1.1	28118	.004					
64.6-65.1 Footwall to MSZ.			0.5	28121	.044					
66.0-66.3 massive pyrr. 90% m.py 2%, H <1%, marcas. 2%, cpy <1%.			0.3	28119	.018					

PROJECT: DITCH DISCOVERY

HOLE No. CL2

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION C A	G B	Si C	K D	CH E	FRACT INTENSITY
				ISM cont'd.						
				70.1 - 70.8 ISM w valts of qtz/carb mass pyrr. m py. tr. cpy.						
				71.2 - 71.6 Qtz/carb stkwk w/ chaotic interbedded siltst. & mdst. i K alt, i G clots, vuggy pyrr. py. sph. tr? cpy.						
				72.6 - 73.2 local qtz/carb stkwk w sulphides w/in K alt sects. dk. red brown alt. min. w/in S, discont. 20% rock are those weathered out sulphides?, vuggy, i K, i G.						
				73.2 - ISM. contorted bedding & slumping, few qtz/carb valts X cut. S_0 "S"						
				76.2 - 77.1 LOCAL QTZ/CARB STKWK w pyrr, py sph? cpy. local limonite some brecciation of sulphides by qtz local i K & i G alt?						
				77.3 - 77.7 Qtz-Carb / Sulph Breccia v. f'gr mass. sulphide frag. ave 3 mm up to 7mm wide. comprise 30% of vein. Hanging wall rock is heavily mineralized. 20° to C.A.						

 PROJECT: Ditch Discovery HOLE No. CL2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
70.1 - 70.8 Qtz/carb vnlts w mass pyrr. m.py. tr. cpy. spl?			0.7	28120	.027					
71.2 - 71.5 qtz/carb. stkwk w mass pyrr. m.py.			0.3	28122	.003					
72.6 - 73.2 lox Qtz/carb stkwk. w pyrr, m.py. tr?			0.6	28123	Tr					
76.2 - 77.1 Qtz/carb stkwk: w pyrr., py. cpy. 2% sulph.			0.9	28124	.003					
77.3 - 77.7 Qtz/carb Sulph. Bx. pyrr. 30%, py 5%. spl? cpy <2%.			0.4	28125	.005					

PROJECT: DITCH DISCOVERY

HOLE No. CL2

DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (C)	B (G)	C (Si)	D (K)	E (cl)	FRACT INTENSITY
77.7-83.0				MUDSTONE Black, ↑ Graph aH. ω local silty beds. ~ local qtz/carb stkwk ~ veins aug 1cm.						
				Small qtz/carb veinlet 2cm. 20° to c.A. mass pyrr., py, cpy v.s?						
83.0-83.35				QUARTZ VEIN ≈⊥ to c.A. hanging wall Qtz/carb Stkw ω int mineraliz.						
83.35-89.9				MUDSTONE, Graphitic, calcareous, intbd. ω siltst., local q/c. stkwk. ω i.K.						
EOH				83.65-84.35 Qtz/carb Stkwk 40% of rock, pyrr, py, tr sph, cpy mK mG						
				84.9-85.6 Qtz Carb Stkwk ω pyrr, py, sph cpy, tt mK mG						
				EOH 89.9m						

PAGE 13 OF 13 | PROJECT: DITCH DISCOVERY | HOLE No. CL2

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
80.5 - 80.6 5m. Qtz/carb int. mass pyrr., m. py. cpy. bn, vg? tt<2%.			0.1	28126	.058					
83.0 - 83.35 Qtz Vein, Mass pyrr, 80%, py 10%, cpy<2%			0.35	28127	.038					
83.65 - 84.35 Qtz/carb Stwk. w pyrr, py, sph? cpy<1%.			0.7	28128	.012					
84.9 - 85.6 Qtz/carb Stwk. w pyrr mpy<2%, cpy 1% tt 1%			0.7	28129	.002					

PROJECT: DITCH DISCOVERY

HOLE No. CL2

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

NOTES CL2:

29 samples taken 28101-29

The host rocks are meta sediments ranging from graphitic mudstones to interbedded mudst + siltstones. The mudstones are black intensely graphitically altered w foliation @ 70-80° to C.A., Qtz (wht. + clear) / carb (calcite) veinlets avg. 2mm up to 1cm crosscut fol. as single veinlets + often network + stockwork. These veinlets are often mineralized w mostly pyrr. + py; pyrr being coarse gr. + more abund. and py is finer gr often seen as tiny euhedral Xtls <1mm wide diss. along fr. pl. and veinlet selvages. Pyll. is seen throughout the veinlets. The ISM unit may not be a separate unit but rather a gradational change of ?

The Siltstones are light grey to buff and very often dolomite altered. Clay (calcite) alt° increases seem to the mineralized zones. Chlorite is seen as masses of fn. gr. up to 3mm + usually ass. w mineralization. The silty beds are not always continuous, and again qtz/carb veinlets w mineral. Xcut often. Mineral. is not confined to qtz/carb veinlets + seen throughout ISM esp. a frac planes. So generally 70-90° to CA (osc. 30°) Beds are generally v. thin avg. 3mm but up to 2cm.

Meta Seds are very calcareous.

PAGE 2 OF 2 | PROJECT: | HOLE No. C22

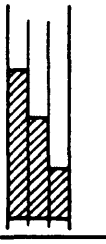
(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				The Mineralized Zones						
				Zone A ≈ 31.4 - 50.5 m						
				Zone B ≈ 61.8 - 78.0 m						
				Qtz/Carb Veins, Stringers + Bx Zones host most of the mineralization in Stringer Zones or Stockwork Zones						
				Average 0.5 m up to 1.3 m are 40 - 50 % qtz/carb w mineralization and 50 - 60 % meta sediments.						
				Sulphides are not restricted to qtz/carb. and are often diss. throughout meta sects.						
				In the Vein structures the sulphides usually occur in the same % 's; Mass Coarse grained pyrr. 70 - 80 %, v. fn. gr ' euhedral py 10 - 20 %, ± bn 3 - 5 %, ± Marc. 3 - 7 %, cpy 1 - 2 %						
				v.g.? is seen in some veins usually associated w cpy. Tetrahedrite is seen occasionally as fn. gr. masses in the other sulph.						
				The Vein Structures have no specific orientation as of yet, no good contacts are noted., Few good solid veins (ie) over 0.3 m are noted and some vein bx. are w clay alt° are seen. Graphitic alt° usually increases w vein structures, and graphitic stylolites are often ass. w vein struct.						
				Very little chlorite is seen as small masses up to 6 - 7 mm						

Au
Ag
Pb
Zn
Cu
As
Sb

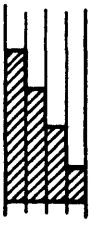
MINERALS SECTION

DRILL LOG

PROJECT: Lucielle Vein	GROUND ELEV.: 848.0 m
HOLE No.: CL4	BEARING: 038
LOCATION:	DIP: -45°
	TOTAL LENGTH: 113.4 m.
LOGGED BY: L. MORTIMER	HORIZONTAL PROJECT:
DATE: SEPT 9/90	VERTICAL PROJECT:
CONTRACTOR: CAMILLE BERUBE	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED:	
DATE COMPLETED:	TOTAL SULPHIDE SCALE
DIP TESTS: none	
COMMENTS	LEGEND



absent
slight
moderate
intense



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

 PROJECT: HOLE No. CL4

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A	B	C	D	E	FRACT INTENSITY
	31%			0 - 15.0	GRAPHITIC SLATES. black calcareous extr. fractured, 31% core recovery mod to i fol. @ 80° to C.A. local qtz/carb veinlets @ various ∠'s to C.A.						
	46%			15.0 - 18.2	SILICIFIED METASEDS, lt. grey moderately silicified, mod. clay alt on f.p.l. tr. pyrr, py + cpy ± sph? as f.n.gr. Xtls + masses up to 2mm, diss throughout						
				18.2 - 37.3	SLATES - Med grey, graphitic, calc. moderately foliated @ 75-⊥ to C.A. less graphitic alt^n than above, Dolomitic alt^n is now moderate. local drusy qtz, qtz/carb veinlet + local networking throughout. lckt. clay/ /graphitic/chloritic/ ± pyrr + py on f.p.l. incipient repl. of qtz/carb clots + veinlets by fn.gr. pyrr. throughout Foliation intensity incr. w depth to locally intense still @ 75-⊥ to C.A. →local qtz flooding w graphite/chlorite + clay alt^n @ 36.25-36.30 + 36.7-36.85						
				37.3 - 49.3	IMS Interbedded Slates + Siltstones Black graphitic slates + lt. grey more siliceous + calcareous siltstones avg. thickness of beds 1cm. w gr slates being thicker (avg. 2cm). So @ ≈ 40-60° to C.A. local qtz/carb veinlets w incipient pyrr, py alt^n <2% are common						

PAGE 3 OF 9 | PROJECT: | HOLE No. C-14

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag	%			COMPOSITE ASSAYS
15.0-18.2 Silicified Metaseds. fg. gr. pyr. py. cpy sph.? diss throughout		40% vlc.	3.2	28138	0.013					

PROJECT:

HOLE No. CL4

(INCHES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				49.3-85.1 GRAPHITIC SLATES. Black moderately foliated @ 30-45° to CA few qtz/carb veinlets w/ Sx aug 5mm wide. Some beds of more calcareous + siliceous material to 2/m, up to 4cm exist. Local alt^ of either material to pyr v. fn gr. up to 1cm + fr. pl. pyr - py common, Qtz/carb veinlets host pyr + py mineraliz.						
				@ 58.7m. increase in silty beds + qtz/carb flooding w/ sulphides become more common.						
				60.9-61.5 Gr. Slates host numerous small zones 3-4cm wide of silica/carb./sulphide mineraliz. Zones consist of veinlet networking + stock. sulphides in zones 5-10% pyr+py.						
				64.9-65.0 Mass. Sulphides w/ Bx Qtz + few Gr. Sl. frags. Relatively no alt^ on hang + footwall; few qtz carb stringers w/ no mineraliz. + no incr. in intensity.						
				67.4 → Foliation begins to be chaotic + undulating. mod. int.						
				68.0-68.2 ↑K alt. w/ mod. qtz/carb veinlet networking. some bx^ of qtz veinlets.						

PAGE 5 OF 9 | PROJECT: | HOLE No. CL4

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag	%			COMPOSITE ASSAYS
60.9-61.5 Gr. slates w/ loc qtz/carb/sulphides flooding. pyrr + py fn.gr. 5-10% in qtz.			0.6	28139	Tr					
64.9-65.0 Massive Sulphides w/ fine qtz/gr. slates frags. Pyrr. 80%, qtz frag rd. rounded + fine gr. slates frags total 10%. py + fn.gr. 7%. cpy <1%.			0.1	28140	Tr					

PROJECT:

HOLE No. CL4

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				GRAPHITIC SLATES cont'd						
				68.2 - 79.0 Intense qtz/carb veinlet networking, boudinage sigmoidal stress parts qtz/carb fg. gr. pyrr + py throughout.						
				71.4 - 72.2 Mod. Fault. Int. qtz carb networking, ik alt^n. Dalt of Gr. Slates. Fg. gr. py diss <2%						
				72.2 - 74.1 Int. Fol + Banding of gr. sl + more silty material @ 80-1 to C.A.						
				74.1 - 79.0 local clastic fol + veinlet netw. of qtz. maj. gr. slates few local silt bds + zones.						
				84.9 - 85.1 Drusy gypsym + int qtz/carb veinlet networking gypsym cavity 0.1m x 2cm, ik in G.						
				85.1 - 91.1 INTERBEDDED METASEDS Graphitic Slates 75%, Calcareous Siltstones 25%, both units ↑ Calc. Mod. - loc. int. qtz veinlet netw. relatively little mineraliz. Foliation 75 - 80° to C.A.						
				90.4 - 91.1 ik alt + int qtz vnlt. netw. py + pyrr. v. fn. gr. diss <2% (incr. from above)						
				91.1 - 109.6 Graphitic/Calcareous Slates w-m. qtz/carb vnlt. netw red little sulph.						
				101.0 - 101.2 Int qtz/carb flood w cl + ser? fg. pl, graph. styl. sulphide clots (pyrr.) @ margins.						

PAGE 7 OF 9 | PROJECT: | HOLE No. CL4

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS

PROJECT:

HOLE No. CL4

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
100				Graph/Calc. Slates Cont'd.						
				102.43-103.2 Local intense q/z/c flooding w/ d.l + ser? fp.pl + graphitic sh/ Pycc + py local incipiently repl. silty + q/z/carb veinlets. + on fp.pl.						
110				109.6-113.4 INTERBEDDED METASEDS. Black, graph. calc. slates 70% calcareous med. grey siltstones 30% both w/ q/c. veinlet loc. networking throughout. Pycc + py, fn.gr + fp.gr clusters to 2mm throughout <2%.						
		113.4 EOH								
				113.2-113.3 Drusy q/z/carb sealed fault breccia. +/- Gr. Slate frags to 1.5 cm avg. 3mm 50% wht q/z + carbonate (drusy) no noted sulphides. m K alt., least. @ 30° to C.A.						

 PROJECT: HOLE No. CL4

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
102.40 - 103.2 Local int. qtz/carb flooding w chl. ser, graph sh/l. + sulphides pyrr + py <5% all within Cor. Slates.			0.8	28141	Tr					

PAGE 1 OF 1 | PROJECT: | HOLE No. CL4

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

NOTES: CL4 4 samples 28138-41

This DDH consists mainly of graphitic/calcareous slates + interbedded meta seds (slates + siltstones) The siltstones are much less graphitic + much more calcareous. Locally + esp near sulphidic zones, the slates are dolomitically altered.

Locally qtz/carb stockworks are more sulphidized, generally the meta seds host fa. gr. diss. pyrr + py <1%, esp. on fol. pl. Average S_0 - S_1 for gr. slates is 75-85° to CA with interbed. siltst the S_1 seems to ∆ to 40-60° to C.A. Drusy qtz + gypsum (84.9-85.1) seen in oppla gr. cavities up to 2cm wide x 10cm long is this the same as CL2 61.1-61.2m?

Much boudinage of qtz/c. veinlets is seen.

MINERALIZATION

2 zones: weak mod

① 15.0-15.2 - 40% mod. silicified, sulphidized meta seds. Pyrr again most common w py cpy + sph? diss throughout.

② 102.4-103.2 Slates w loc. q/c stringers + diss. sulphides.

1 mass sulphide stringer (pyrr w Dx q/c vein + few qtz. ∆ frags 0.1m wide.

→ Chl. + ser. alt. accompanies q/c + diss sulphides.

MINERALS SECTION

DRILL LOG

PROJECT: LUCIELLE VEIN	GROUND ELEV.: 856.0m
HOLE No.: CL5	BEARING: 360°
LOCATION:	DIP: -20°
	TOTAL LENGTH: 79.3 m.
LOGGED BY: L. MORTIMER	HORIZONTAL PROJECT:
DATE: SEPT 15/90.	VERTICAL PROJECT:
CONTRACTOR: CAMILLE BERUBE	ALTERATION SCALE
CORE SIZE: BQ	absent slight moderate intense
DATE STARTED:	TOTAL SULPHIDE SCALE
DATE COMPLETED: Sept 15/90.	traces only < 1% 1% – 3% 3% – 10% > 10%
DIP TESTS: none!	
COMMENTS	LEGEND

PAGE 2 OF 8 | PROJECT: LUCIELLE VEIN | HOLE No. CL5

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				0-4.6 OVERBURDEN						
				4.6-41.2 Meta Seds. Dk. grey Thinly Lam. Graphitic / Dolomitic / Calcareous Foliation @ 85-90° to c.A. (Gr^mi + Dol^mi lam.) Numerous Qtz/carb veinlets avg 3mm wide Xcut lam. Many of the thicker veinlets 5 mm have diss pyrr + py. Local replacement pyrr in blebs up to 1.3 cm. irregularly scattered.						
				13.6-14.3 Gr. metaseds w mod. q/c veinlets + pyrr. blebs. up to 15%.						
				Localized qtz/carb stkwk w pyrr + py. common. Some silty beds + chaotic silty patches are common.						
				25.3-25.6 Intense qtz/carb flooding w 25% subhedral int Dol. alt° of metaseds Sericite + graphitic alt° on qtz walls						
				27.8-28.2 Q/C stkwk (35-40%) w pyrr + py. cpy.						
				32.0-32.4 QC stkwk 20-30% w in gr. metaseds, w lox. int pyrr in q/c. up to 50% locally						

PAGE 3 OF 8 | PROJECT: LUCIELLE VEIN | HOLE No. CL5

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
13.6-14.3 Gr. Metaseds w 25% (total) q/c valts + fn. gr. pyrr. m. Py			0.7	28142	Tr					
25.3-25.6 Qtz/carb Stkwk. w i Dalt metaseds Pyrr 25%. cg. diss throughout, m.py. 3%			0.3	28143	Tr					
27.8-28.2 Q/C stkwk. w pyrr 15%, py + cpy ~3%			0.4	28144	.016					
31.0-32.4 QC stkwk. w/ metaseds, w loc. pyrr. in q/c up to 50% locally.			0.4	28145	.008					

FROM (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				Graphitic Mudstones cont'd						
				32.9-39.7 Thinly laminated, dk.-lt. grey S$_0$ @ 85-90° to C.A. laminae 0.05mm to 2mm, local qtz/c. stkwk + vnlt. networking commonly w pyrr + py up to 40% w/ qtz/c. 2 stages of qtz veinlets now noted @ 36.4m. both are grey qtz. both have mineralization @ 37.8 Dolomite alt^n of metaseds begins, mostly in siltier beds but weakly in graphitic slates. Few qtz/c veinlets avg. 2mm wide						
				39.7-40.5 Moderate to Intense qtz graph. stkwk. veinlet networking w sulphides						
			41.2-43.1	IMS Interbedded Meta Sediments Cx Dol Slates + Siltier Silica Flooded beds are v. finely laminated w more dolomite alt^n + more graphitic alt^n varying color. Few qtz/carb veinlets Xcut S$_0$ Refer to Matt for more						
			43.1-45.9	Qtz/Carbonate Stringer Zone. Meta Seds are intensely altered Dolomitically + Graphitically + Kell and chaotically foliated. Large qtz/c. stringers up to 0.2m avg. 75-80° to C.A. w graphitic stkwk and Kell alt. metased fragm. Patches of fine grained dolerite up to 3mm w/ qtz/c is common.						

PAGE 5 OF 8 | PROJECT: Lucille Vein | HOLE No. CL5

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag oz/t	%			COMPOSITE ASSAYS
39.7-40.5 M-i QC-graph sty/ veinlet netw. w pyrr + py up to 5%.			0.8	28146	Tr					
43.1-44.5 Q/C. stringer zone w/in gn. metasds, Qtz 50%, Carb 20%, all 5%, gn. styl. 7% pyrr. 10%. py 5% as fn + c.g. resp. patches			1.4	28147	Tr					
44.5-45.1 Qtz/carb stkwk. w/in chaotic foliated metaseds Q/C. 20%, w pyrr + py <5% few graph. styl.			0.6	28148	Tr					

FROM (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				Quartz/Carb Stringer Zone (cont'd) pyrr. + py occurs as patches of coarse gn + fn. gn respectively pyrr. more often. Chl + Clay alt^ seen as pale grey green in meta-seds.						
				45.9-50.9 Graphitic Meta Seds. Weakly Dol. alt., massive to weakly foliated @ 75-⊥ to C.A. Few v. tiny qtz carb stringers @ in S.						
				49.8-50.06 Qtz/carb Stringer. Qtz white, 80%, Carb 20%, pyrr 3% py ~1%. Stringer is split into two by int. alt. metaseds 3cm.						
				50.9-77.6 IMS ⊻ thinbedded Alternants (Striped Rock) Grey / Dol. alt Shales + Calcareous Siltstones. Nodular interbd. of Silstones avg. 0.75cm. wide. Local intense foliation @ 80-⊥ to C.A. stretches nodules to gentle flat. local vnlt. networking of qtz + calph. is common.						
				54.6-56.0 Qtz/Carb + Clay alt vnlt netw. in IMS. local mass. pyrr.						
				1 vnlt. avg. 0.5cm + int alt. // C.A + pyrr + py. Intense vnlt. netw. throughout. Bx. at bottom of zone by QC vnlt. + m-i alt. noted.						
				56.0-77.6 Generally IMS + local areas of thicker grey shales mod. fol. and local chaotic foliation usually associated with more intense qtz vnlt. netw.						

PAGE 7 OF 8 | PROJECT: Lucille Vein | HOLE No. CL5

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
45.1-45.9 Qtz Carb Stringer zone QC 75% (multi) meta seds 25%			0.8	28149	.004					
w/in Q/C; Qtz 50%, Carb wkly 30% graph. sltly. 5%, pyrr. 7-10% py 2-3%, chl + clay alt. 3%										
49.8-50.06 Qtz/Carb Stringer w/ pyrr. 3%, py <1% w/ int alt. meta seds str. dir.			0.26	28150	.053					
54.6-56.0 Q/C w/ clay valt. networking w/ mass pyrr, tr py <1% sulph.			1.4	23654	.003					

PROJECT: Lucille Vein

HOLE No. CL5

"H" (RES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				IMS cont'd. local nodular beds of silty seds. and local dolomitization of gr. slates Pyrr + py (80/20) usually seen as fr. pl. q/c vnlt networking. Local quartzite beds @ 66.5m usually < 0.1m wide. grey w/ graph specks + <1% pyrr + py in diss					
				72.8-72.9 Incipient Dolomitization of Quartzite - pink dolomite						
				77.6-79.3 Foliation increases + irratic intense q/c vnlt. net. w/ in Sa Seds become reddish brown int. Fol. Dolomit alt. These rocks are not calcareous. and are much harder (not siliceous though). Different rock type?					
				Broken bit :. Drillers shut down hole.						

PAGE OF | PROJECT: | HOLE No.

(M-S)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

NOTES: CLS 10 Samples 28142-50
23654

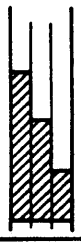
The metaseds are usually graphitic calcareous slates or interbedded gr. calc. sl + calcareous siltstones. Few smaller beds of quartzite are seen.
The slates are black to dk. grey, moderately foliated avg. 70-⊥ to C.A., The IMS units grade in and out of gr. calc. sl.. The IMS unit is brightly stained with the gr. sl usually dolomitically altered to a brownish rust color. Some gr. alt. only beds exist. and the silty beds are lt. grey + more calcareous. avg. S_0 ∠ 80°-⊥ to C.A. and locally nodular bedding of silty material (ripple fm.) is very obvious Some bouldinaging of silty beds is seen. Avg thickness of IMS S_0 is 1mm (<1mm to 1cm)
Thin quartzite beds are seen avg. <0.5m wide w/ S_0 lt. grey med grained w/ pyr + py diss <1% fresh. Post deposition q/c. vnlt. flooding is locally intense, + irratically oriented Incipient pyritic + pyritic alt of all metaseds + esp. q/c vnlt. veins is commonly seen. Avg 3% of seds.
At the end of the hole, a non-calcareous red brown dolomitically altered int. bx. rock is noted. Is this a different rock type?

Mineralization: Most of the mineralization occurs between 25.3-40.1m. Q/C. stockworks + veinlet networking, host pyrr., py+cpy usually, e.g. pyrr. - lt gr py + cpy.

MINERALS SECTION

DRILL LOG

PROJECT: LUCIELLE VEIN	GROUND ELEV.: 867.0 m
HOLE No.: CL6	BEARING: 042°
LOCATION:	DIP: -22°
	TOTAL LENGTH: 105.3 m
LOGGED BY: L. MORTIMER	HORIZONTAL PROJECT:
DATE: SEPT 21/90	VERTICAL PROJECT:
CONTRACTOR: CAMILLE BERUBE	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: Sept 15/90	
DATE COMPLETED: Sept 21/90	TOTAL SULPHIDE SCALE
DIP TESTS: None!	
COMMENTS	LEGEND

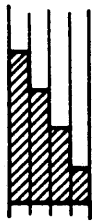


absent

slight

moderate

intense



traces only

< 1%

1% – 3%

3% – 10%

> 10%

DF (M) (S)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				0 - 0.6 OVERBURDEN						
				0.6 - 41.6 Slates - Graphitic / calcareous weakly to mod. foliated ⊥ to C.A. Few qtz / carb veins avg 2cm. Xcut fol often w/ pyrr ± py. Local qtz/carb flooding often w/ weak dolomite alt" of metasids. Often qtz is recrystall. Some chl ± clay is associated w/ fr. pl.						
				25.5-25.8 Qtz/Carb Stringer Qtz 75%, Carb-Tremolite 15%, Graphitic Calc. slate frags. 5%, pyrr. py 3%.						
				27.7-28.0 Q/C. Stkwk. w/ minimal selvedges. Tremolite clusters some recrystall. of qtz. few graph. styl. pyrr c.s. esp. veinlet selvages ± fn.gr. pyrite ≤ 5%. locally, intense greenish grey clay alt. w/ specks of gn. mica						
				28.0-38.0: Stkwking is more common, Dolomite alteration is weak to locally moderate esp. when stkw. int. incr. Few recrystall qtzite lens avg. 2-4cm wide. K alt. is seen locally.						
				38.0-38.9 QX Stk.wk. Zone w/ weakly altered metasedis. graph. calcareous w. dol. Chaotic orientation of fol ± q/c veinlets. hematite alt" is seen in veinlets, pyrr - py in veinlets < 3%.						

PAGE 3 OF 13 | PROJECT: Lucille Vein | HOLE No. CL6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
25.5-25.8 Qfc Stringer Wht qtz ± small clots of carb + tremolite, pyr, c.g. clots to 3mm ± some fn. gr. diss. py. Tot. Sulf Less <1% few gn. styl.			0.3	23667	Tr					
38.0-38.9 QC Stkwk Zone Qtz/Carb Veinlets 35% of Zone ± Qtz 50%, Carb 35%, hematite 1. Klay alt° 3-5% Trem°/Cl° 2%, graph. styl. 3-5% Pyrr 2% p/<1%			0.9	23668	.003					

PROJECT: Lucielle Vein

HOLE No. CL6

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				Meta Seds (Cont'd)						
				39.5-39.9 Qtz/Carb Stkwk w/in fol. gn. metasediles. C.g. calcite dom. stkwk. w 15% tremolite wkalt. Mostly stkwk. qtz. near lower cont. fn gr. pyrr + py. <2% diss throughout. talc-alt @ 39.9.						
				39.9-40.7 Intensely alt. + strongly folding of metaseds. grey blue khly alt'n, dol. alt + wkt qtz/c. vnlts alternating w/ graphitic slates						
				40.7-41.1 Qtz/Carb Mass Pyrr Stkwk Clay altered Unlts. 40% Qtz 20% Carb 25% pyrr. 3% Bn 3% py <2% cpy.						
				41.1-41.6 IMS. Dol. blk, fn qtz/carb vnlts generally w/in 5° (⊥ to C.A.) local boudinage Pyrr + py. fn. gr. diss w/in Metased + q/c vnlts. <3%. m-c D; w-m K, wG alt.						
				41.6-44.7 Maroon Dyke Rock, fn. gr. m D, m K, non calcareous, With Q/C stkwk. w mass pyrr. Are these altered gnst. Send for thin section						
		*		43.5-44.7 Same as above but w dk. green color. + actinolite 15% Q/C stringers w mass pyrr, py cpy + actinolite						

 PROJECT: Lucille Vein HOLE No. CL6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
39.5-39.9 QC stkwk w tremolite, pyrr + py fn. diss throughout <2%.			0.4	23655	.015					
40.7-41.1 QC stkwk. w/in kalt. m Dark metasods. pyrr. Dn. py + cpy			0.4	23656	0.109					
41.6-42.5 Int. alt. metasods maroon. (qmst?) w q/c stkwk. mass. pyrr. c.g 25% in q/c. py 5%, cpy 3%.			0.9	23657	.007					
42.5-43.0 as above			0.5	23658	0.399					
43.5-44.0 qmst? Metasods? q/c vnlts w pyrr 15% py 3% cpy 2%, actinolite 7%.			0.5	23659	.046					

PAGE 6 OF 13 | PROJECT: Lucille Vein | HOLE No. CL6

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				44.7-50.3 IMS. Interbedded Gr. Sl + Calc. siltstones w/ fine quartzite beds. (Ironwide). Gr. slates are weakly Dolt. Many qtz/calc units X-cut fol. which is generally ⊥ to C.A. V. fn. gr. pyrr + py diss. throughout <2%.							
				50.3-52.0 Graph. bc Slates., Calcareous weakly foliated ⊥ to C.A. local X bedding noted Som. qtz/c. units., fn. gr. pyrr <1%.							
				51.5-51.7 Mass pyrrhotite Stringer 10° to C.A. 3cm wide w/ py + cpy. qtz/c. selvages.							
				52.0-70.0 IMS Thinly laminated gr. slates + calc. siltstones - quartzites, w/ minor M-i Dol. all of gr. slates. Int. fol ⊥ to C.A. Local int. pyrr m. py flooding w/in q/c units esp. width. 2cm Local plymatic folding of IMS. sm. scale., many X bedding noted. Local sm. scale lenticular bedding/faults. + q/c. units are boudinaged. 54.6-54.8 Small Stk.wk. Zone. q/c. units 40%, w/ mass pyrr; py + cpy 25%. IMS host many q/c stkwk. w/ mass pyrr; py + cpy some bn ft? noted							

PAGE 7 OF 13 | PROJECT: Lucille Vein | HOLE No. CL6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
54.6-54.8 q/c stkwk. w mass gyrr., py, cpy w/ in gp. sl.			0.2	23660	.063					1000 ppm Ti
56.3-57.0 Fn. IMS. m-i Dalt. w. q/c stkwk w mass. pyrr; py, cpy. 25%.			0.7	23661	.006					1581 ppm Ti
57.0-57.7 As above.			0.7	23662	.010					1960 ppm Ti

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				IMS (cont'd.)						
				61.4-62.7 IMS w g/c stringers & stkwk. hosting mass pyrr, py cpy. Note Siltstone beds have incipient pyrr cpy alt.						
				IMS hosts many sulphidic q/c vnlts. avg. width 2cm.						
				generally c.g pyrr is 85% of sulphides w fn.gr. py 10%, cpy 5% ± bn, tt. The sulphides comprise 50-60% of the q/c vnlts. Intensity of vnlts 1-2/m. usually w/in Sa Few int Kalt. vnlts. (w.lt.).						
				68.1-68.7 Q/C. stkwk. w mass. pyrr. py, cpy (10%) (Kalt of						
				g/c vnlts. Seds are iDalt. + mKalt.						
				70.0-87.5 Meta Slates. Maroon colored intense Dolomite alt. m-i Kalt., with 70.0-71.2 Intense stkwk. Zone Qtz 30% Carbonate (grey cc?) 45% pyrr 15%, py 5%, cpy 5% stkwk comprises 60% of sample seds are intensely Dalt + m-i Kalt.						
				Much of the Q/C stkwk. is Kalt. Tremolite 5% lt. green to grey (grey-green Kalt.) Silver, lt. mineral 2% cpy?						
				blue-grey siliceous (not calcareous) veinlets avg. width 3mm X cut w/in Sa (⊥ to C.A.) This area has much Alt. — pervasive + g/c vnlts. + stkwks Pyrr + py + cpy is seen throughout 3-5%						

PAGE 9 OF 13 | PROJECT: Lucille Vein | HOLE No. CL6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
61.4-62.1 IMS host numerous q/c. str. + stkwk. which host mass. pyrr, py, cpy T.S. 25% both IMS + QS Str are mineral. 62.1-62.7 as above			0.7	23665	0.128					1100 ppm Ti 400 ppm W
						1.3m @ 0.145 oz/t Au				
			0.6	23666	0.165					980 ppm Ti
(1) 68.1-68.7 Q/C. stkwk. w/in dol. alt. metased Q/C. comprise 40% of sample w mass pyrr 50%, py 7%. cpy 10%.			0.6	23663	Tr					Ti 2420 ppm
(2) 70.0-71.2 QC stkwk w/ mass pyrr, py + cpy. Int alt. qspy? ikalt.			1.2	23664	0.016					Ti 1760 pp.

PROJECT: Lucille Veir

HOLE No. CL6

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				Meta Seds cont'd						
				73.9-77.3 Alteration of slates is greatly reduced in black color returns, but q/c stockworking doesn't. Sulphide content decreases to <1% diss. Local increase of Dalt to m. ass. w/ q/c units + stkwk.						
				76.3-76.6 Q/c vein w/ Qtz(wall) 50%, grey carb (ank?) 40%, graphitic slates 7%, pyr + py fn. gr. diss 2%						
				77.3-87.5 Very little q/c units + stkwk. Sulphides <2% usually incipiently replacing Q/c units + clots.						
			87.5-88.	Q/c Stringer Zone w/n mod-int. altered graphitic slates. Q/c comprises 50% of sample in stringer Qtz 50%, grey carb 30%, alt seds as patches + units to 0.75 cm, 15%, Pyr + fn. gr. py in patches to 3 cm 5%. Cl/clay? patches 5%. Lt. brown sericite + clay alt. of seds						
			88.6-125.3	88.6-93.6 IMS, graphitic slates + calc. siltstones avg. 5 cm width 1.5 cm silty, lam graphitic. Sulf to c.A. ref. no sulphides						

PAGE 11 OF 13 | PROJECT: Lucille Vein | HOLE No. CL6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
76.3-76.6 Q/c vein <3% sulphides w/ fine gn. sl. frag + stgr.			0.3	23669	Tr					
87.5-88.6 QC Stringer Zone w/ m-i alt. metaseds. pyrr + py. fn. gr. in Q/C. ≤5%			1.1	23673	Tr					

PROJECT: Lucille Vein

HOLE No. CL6

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				93.6 - 100.3 IMS with local moderate dol. alt° & chaotic fol & sulphide flooding. Some by of gy. slates by q/c; mClay alt° of q/c. veinlets. Local qtz/carb vnlts 2cm wide w 40% c.g. pyrr & fg q/c. py, ±cpy						
				100.3 - 101.3 Qtz/carb Stringer Zone Wht. qtz/grey carb comprise 65% of sample w mod. Dol. alt gy. slates 35%. In Stringers Qtz/carb 50/50 comprise 80%, wht-green sericite 5-7%, graph. sty/ & idol. alt sooty sty/. & fem. alt qtz 3%, pyrr & fg py diss throughout 5%.						
				101.4 - 125.3 Graphitic Calc. Slates Blk, fg gy moderately siliceous Qtz/carb Vnlts & Stkwk, average 10-15% of rock is q/c. Some local K alt. q/c vnlts. Some pyrr+py ±cpy alt of q/c vnlts. no specific orient. of mineralized structures. local a-i Dalt. rock is brownish-maroon. & fol. is chaotic usually associated w incr. stockworking.						
				117.7 - 122.2 Fault X bedding 045° to C.A is noted sm. scale. Fol. lies 0 to 45 to C.A.						
				EOH 125.3m						

PAGE 13 OF 13 | PROJECT: Lucille Vein | HOLE No. CL6

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
100.3 - 101.3 Q/C. STRINGER ZONE 65% q/c vnlts + stock wk Dol alt. metasiltes sericite, graph, pyr + py diss 5-7%.			1.0	23674	Tr					

PAGE OF | PROJECT: | HOLE No. CL6

FROM (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

Notes CL6 Again the rocks are graphitic, calcareous meta slats with interbedded units of interbedded slats and metasiltstone with some small quartzite beds. The foliation is usually m-i. locally weak but always ⊥ to c.a. Local dolomite alt° renders the rock buff to brown in color usually w increased kalt + g/c stockworking is associated.

Local ptygmatic folding of IMS ass. w incr. g/c stock + blue gray clay veins up to 2cm or so are common.

Some Xbedding @ 45° to c.a is noted.

Pyke rock. (41.6-44.7)

17 Samples Taken: 23655-69
23673-74

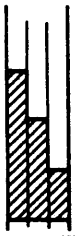
Mineralization: Appar Two Zones are apparent: a) 38.0-44.0 b) 56.3-71.2 where pyrr, py + cpy ± bn mineraliz. is abundant. These zones are IMS which host g/c stringers + stockworking. Sulphides usually comprise 25% of the g/c. structures, locally up to 50%. Pyrr is most common. c.g. masses (60%) usually is fn. gr. in masses + fn. g/l (10%) cpy is c.g. in clusters usually @ vn.lt selvages up to 2mm. (3-7%) Bn. sometimes present, usually 3-5% (cpy?) mixed w pyrr. The g/c structures have no specific orient°. Avg. width of stringer is 0.2m. vn lt 2cm

→

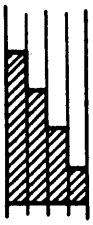
MINERALS SECTION

DRILL LOG

PROJECT: Lucille Vein	GROUND ELEV.: 868.0m
HOLE No.: CL7	BEARING: 105°
LOCATION	DIP: -38°
	TOTAL LENGTH: 44.4m
LOGGED BY: L. MORTIMER	HORIZONTAL PROJECT
DATE: Sept/24/90	VERTICAL PROJECT
CONTRACTOR: CAMILLE BERUBE	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: Sept/21/90	TOTAL SULPHIDE SCALE
DATE COMPLETED: Sept/23/90	
DIP TESTS: none!	



absent
slight
moderate
intense



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

COMMENTS

LEGEND

 PROJECT: Lucille Vein HOLE No. CL7

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A	B	C	D	E	FRACT INTENSITY
				0 - 2.7	OVERBURDEN						
				2.7 - 3.2	MASS MARCASITE - QUARTZ VEIN L. CNTC. @ 25° to C.A. Wht qtz 25%, Xtalline, marcasite 50%, incipient drusy py 15%, v.fn.gr around all spl. clusters, cpy 5% Tremolite radiating fibrous clusters 5%, local limonite. moderate Kalt. (white)						
				3.2 - 4.5	Intensely Alt. Schists V.fn.gr. qtz/sericite (chl?) sugary texture. Gypsum (selenite) on fr pl. Int. lim. alt.						
				4.5 - 4.8	Mass Pyrr/Qtz-Carb Vein upper + lower cntc. @ 30° to C.A Mass pyrr upper 0.1m, pure qtz/carb w <1% fn.gr. sulphides diss. lower 0.2m						
				4.8 - 15.0	Mod. to local Int. Dol. Alt IMS. Finely laminated gn. sl + cal siltstones are thinly bedded avg. S_0 is 30° to C.A. local chaotic foliation. Few qtz/carb vnlts avg 1cm Xcut S_0 + rarely have pyrr/py/cpy mineralization						
					9.1-10.1 Int. alt. chl/ser/dol qtz/K. alt. fol. chaotic fault? no slickensides. Drusy fn gr qtz on fr planes						

PAGE 3 OF 7 | PROJECT: Lucille Vein | HOLE No. CL 7

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
①	2.7-3.2 Mass. Pyrr./Qtz Vein (LV) see geol. descrip.			05	23670	0.003					
	3.2-3.5 Int. Alt. Schists gn. sericite schists + gypsum hangingwall seds.			0.3	23671	Tr					
①	4.5-4.8 Mass Pyrr./qtz Carb Vn. Mass Pyrr. first 0.1m. Snow wht. qtz w 30% wht carb. w/ <1% pyrr+py fn. diss throughout Mass pyrr w 3-5% cpy and 10-15% qtz w m. carb. (upper 0.1m)			0.3	23672	Tr					

 PROJECT: Lucielle Vein HOLE No. CL7

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
					Altered IMS (cont'd.)						
					14.2-15.0 Qtz/Carb Vein						
					Wht Qtz 40%, grey carb 45%,						
					chl./ser? 5% <1% sulphides sph?						
				15.0-25.8	GRAPHITIC CALCAREOUS SLATES						
					Massive to loc. mod. foliated						
					@ 30° to C.A. Very few tiny						
					qtz/carb vnlts avg 2mm, much						
					boudinaging, local K alt of q/c vnlts						
					19.4-19.45 pyrr + py. flooding						
					of q/c vnlt networking Relatively						
					unaltered						
				25.8-44.4	Altered IMS						
					moderate D alt. gr slates interb.						
					ō cal siltstones int. Fol @ 30-// to C.A.						
					25.8-26.0 Qtz/Carb Stringer						
					H.W. @ 30° to C.A. m-i D ō qtz/carb						
					flooding graphitic/chloritic/pyrr[illegible] sty[illegible]						
					5% grey carb 40%, qtz (wht.) 40%						
					chl. + clay alt^n 10%						
					FW. cntc @ 30° to C.A.						
					27.9-29.7 Qtz/Carb Stringer Zone						
					cntc. avg 25° to C.A. Qtz/Carb 50/50						
					D alt G alt meta sed frags w/in						
					stringers 10%. Avg. width of stringer						
					5-7cm one larger vein @ 29.1-29.7						
					sulphides < 2%. pyrr + fn. gr. py						
					diss. throughout, in clusters + stringer						
					selvages.						
					Seds are iD, iK, mH, wG alt.						
					ō chaotic fol. Sulphides incr. ō						
					alt.						

PAGE 5 OF 7 | PROJECT: Lucille Vein | HOLE No. CL7

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au	% Ag	% Ni	Zn	Cu	COMPOSITE ASSAYS
(2) 14.2-15.0 Qtz/Carb Vein w/lt gtz/grey carb, dk. ser. <1% sph?, m. Kalt.			0.8	23675	Tr					
27.9-29.1 Q/c Str. Zone w/in (3) in Dalt IMS. Hematitic alt on fr. pl. + throughout 5-7% grey green dk/clay alt. (m) pyrr/py 5-7% 2% cpy Gtz/Carb Str. comprise 50% of zone. sericite alt. in IMS.			1.2	23676	Tr					

PROJECT: Lucille Vein

HOLE No. CL7

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				Alt. IMS cont'd 29.7-31.5 relatively unaltered w-m fol. 20-// to C.A. v.few qtz/c vnlts w D alt. 31.5-31.7 Small q/c vnlt. w 20% pyrr. py, cpy 20° to C.A avg width 2cm. 31.7-32.8 wD rel. unaltered w fol few q/c vnlts 32.8-33.0 Qtz/Carb Stringer HW + FW. cntc. @ 30° to C.A. dol/hem/qz. styl. w w.ch ~~throughout~~. grey carbonate/qtz white 50/50 pyrr +py ±cpy around selvages. 33.0-37.0 W-M Alt IMS banding of silty beds + q/c vnlt is common few pyrr.tre/py vnlts < 1cm. 37.0-37.05 intense K alt. vuggy q/vein bx. in gypsum few alt seds fragments. @ 45° to C.A no noted sulphide 37.05-44.4 Weak Dol Alt. graphitic slates. few bds of silty material, q/c en echelon structures. w. hem. loc w k alt. Fol 20°-// to C.A. enechelon 70-⊥ to C.A. dip 30-40° down core.						

EOH (44.4m)

PAGE 7 OF 7 | PROJECT: Lucille Vein | HOLE No. CL7

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag oz/t	% Ni	Zn	Cu	COMPOSITE ASSAYS
29.1-29.7 Q/C Vein Qtz/Carb 50/50, grey carb + wht. qtz, HW cntc 28° to C.A FW cntc. 30° to C.A. Fair iD, ik alt. IMS fragments in it. in. Sulphides. pyrr + py <5% cpy <1%			0.6	23677	Tr					
31.5-31.7 Small. Qtz/carb. vn lt. w 20% pyrr. py <2% cpy.			0.2	23678	Tr					
32.8-33.0 Qtz/carb Stringer grey carb/Qtz wht. 50/50 w jc/dd/Lam/sulphidic shyl. 5-7% pyrr, py + cpy @ stringer selv. Sulph. <5%			0.2	23679	Tr					

PAGE OF PROJECT: HOLE No. CL 7

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

Notes CL 7 5 Samples Taken
23670-72
23675-76

Most of the seds are mod to int. alt. IMS. finely laminated dol. alt gr. slates + calc. siltst. Fol is avg. 30° to C.A. Hematite alt is pronounced. Generally these don't have mineraliz. Q/C. vnlts + networking is locally extreme, ω boudinaging. Mineraliz. incr. ω q/c vnlt. netw.
Alt. is intense (D, H, G, K.
K alt is grey/blue vnlt.

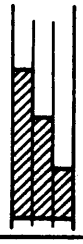
Intersections: ① Lucille Vein @ 2.7-3.2 approx true width 0.25 m
Mass ~~pyrrhotite~~ ω chassy py. + qtz (25%) cpy 5%. Tetrahedrite
Footwall schists are v. fn. gr. qtz/ ser/chl ω sugary texture, gypsum (selenite) + leminophite

27.9-29.1 Q/C. Str. Zone in talc

MINERALS SECTION

DRILL LOG

PROJECT: LUCIELLE VEIN	GROUND ELEV.: 868.0 m
HOLE No.: CL8	BEARING: 037
LOCATION:	DIP: -20°
	TOTAL LENGTH: 55.6 m
LOGGED BY: L. MORTIMER	HORIZONTAL PROJECT:
DATE: Sept 27/90	VERTICAL PROJECT:
CONTRACTOR: CAMILLE BERUBE	ALTERATION SCALE
CORE SIZE: BQ	
DATE STARTED: Sept 23/90	TOTAL SULPHIDE SCALE
DATE COMPLETED: Sept 26/90	
DIP TESTS: none!	
COMMENTS:	LEGEND



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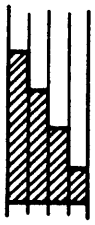

traces only
< 1%
1% – 3%
3% – 10%
> 10%

PROJECT: Lucille Vein

HOLE No. CL8

DEPTH (M)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				0 - 0.9 OVERBURDEN						
				0.9 - 10.4 GRAPHITIC SLATES weakly foliated, few interbedded silty beds w- loc m dot a 1% Foliation ⊥ to C.A. few qtz carb. <1% pyrr + py -V fn. gr diss throughout.						
				10.4 - 26.7 IMS. thinly laminated w/dk. gy. clay + silty beds. Avg. wdth 2mm up to 2cm. Avg. fol. 80 - ⊥ to C.A. Mod. Q/C. vnlt. netw. often w/ pyrr py ± cpy mineral <3% Vnlts often m-i chl. ± fr. gd. Locally foliation Δ to // to C.A. only for 0.3m. then immediately back to ⊥. X bedding @ 45° to C.A. Few recrystallized quartzite beds avg 3cm wide ⊥ to C.A. Alt. wD, mG, loc m K, loc w H. Lower cntc. zone. incr. q/c stkwk netw. wD						
				26.7 - 28.5 QUARTZ CARBONATE VEIN White Qtz / Grey Carb. 50/50. HW cntc. 30° to C.A, FW cntc. 45° to C.A Few frags. of calc. IMS, D, m G m K i H., Local vuggy, Qtz/Carb 70%, IMS frags 5%, Sericite 15%, graphitic sty/ 5%, mass pyrr networks + blebbles 7% (locally 50% pyrr) py 5%, cpy 2%						
				28.5 - 29.2 Altered IMS. m-i D, w-m K, m-i G, m H. Q/C vnlt. netw. moderate.						

PAGE 3 OF 6 | PROJECT: Lucille Vein | HOLE No. CL8

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
② 26.7-27.6 Q/C. VEIN Q:C 50/50. fg. frags IMS: alt. sulphides Total 12-15% pyrr., py., cpy fg. diss + blebs up to 4cm.			0.9	23682	.004					
27.6-28.5 as above.			0.9	23683	0.002					

PAGE 4 OF 6 | PROJECT: Lucille Vein | HOLE No. CL8

DEPTH (M)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				29.2 - 35.7 Graphitic Calc. Slates Black, Massive to w. Foliated few Q/C. vnlts avg 1cm wide w <2% pyrr+py, ⊥ to c.A.						
				35.7 - 43.5 Altered IMS m.D. ↓G, local m-↓H. Fol ⊥ Qtz/C vnlts + networking w-m. As lower Calc. w Vein approaches, alt. incr. to ↓D. ↓H. ↓QC. w in sulphides (pyrr, py, cpy)						
				39.8 - 40.3. QC Stkwk w-in ↓IMS. Q/C 50% of sample. w-in QC Stkwk. white Qtz 45%, wht. carb 45%, pyrr 5-7%, py <3% cpy <2%						
				40.3 - 40.4 Q/C. Stringer w mass pyrr + <3% cpy						
				40.4 - 43.5 Intensely altered IMS foliation is chaotic, but averages 80° to c.A. Q/C veinlets + blebs is intense, many veinlets avg. 5cm wide. these are type ② vnlts. w grey carbonate. Local ↓↓ alt. pervasive ↓D + ↓H. Pyrr, py ± cpy avg. 7% locally 15-20%						
				43.5 - 45.5 IMS Thinly laminated interbedded gr. sl + calc. siltstones Fol 80-⊥ to c.A. local K alt. of q/c vnlts. (w-m) Flow extnl quartzite beds. Some pyrr + py <3% usually in q/c vnlts.						

PAGE 5 OF 6 | PROJECT: Lucille Vein | HOLE No. CL8

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
39.8-40.3 Q/C stkwk in i IMS Q/C stkw 50% of sample w c.g. pyrr. 7% fa. gr. py 2%. fn gr. blebby cpy <2%			0.5	23680	Tr					
40.3-40.4 QC Stringer w massive pyrr 50%. cpy 3%			0.1	23681	?	lost @ lab				
41.8-42.4 i IMS w i QC stkwk: pyrr, py ± cpy avg. 12% 7% <5% <2%			0.6	23684	Tr					
42.9-43.5 as above			0.6	23685	Tr					

 PROJECT: Lucille Vein HOLE No. CL8

% Core Recy	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
			45.5-50.25	QUARTZ/CARB STRINGER ZONE w/ i alt. IMS. mod. chaotic fol. IMS bed width varies from few mm to few cm. Alteration is m-i D, m K, m H. Q/C vnlts + stringers 45.5-45.73; 45.96-46.06; 46.26-46.41 All type ② Vn.; 49.07-49.24 grey carb/wht qtz.; 49.34-49.66 v. little mineraliz.; 49.86-50.25. K alt. is grey blue, usually siltier beds are affected. Some incipient pyrr + py alt of Q/C vnlts is seen. <2%						
			50.25-55.6	Mod. alt. Gr. Calc. Slates few intbd silty beds Moderate Q/C vnlts + vnlt. networking pyrr + py repl. of Q/C vnlt. Few ② type stringers avg. 5cm wide. Fol. 70 - ⊥ to C.A. Alt is m-i D, w-m K, m H. near EOH. alt is reduced to strictly graphitic slates w few v. small K alt Q/C vnlts.						

MINERALS SECTION

DRILL LOG

PROJECT: Lucielle Vein	GROUND ELEV.: 868.0 m
HOLE No.: CL 9	BEARING: 056°
LOCATION:	DIP: − 06°
	TOTAL LENGTH: 64.0 m
LOGGED BY: L Mortimer	HORIZONTAL PROJECT:
DATE: Oct/10/90	VERTICAL PROJECT:
CONTRACTOR: Camille Beaudet	ALTERATION SCALE
CORE SIZE: BQ	absent slight moderate intense
DATE STARTED: Sept 27/90 (bad weather)	TOTAL SULPHIDE SCALE
DATE COMPLETED: Oct/7/90	traces only < 1% 1% – 3% 3% – 10% > 10%
DIP TESTS: none	
COMMENTS:	LEGEND

PAGE 2 OF 9 | PROJECT: Lucielle Ven | HOLE No. CL9

(METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				0 - 15.6 ISM. Weak to Moderately altered interbedded graphitic calc. slates + calc. siltstones w/ Disseminated graphitic qtz/c veins are common, X cutting // Sa. Sa is avg 75-80° to C.A. 1.4-1.6 Siltstone bx. w tiny flecks of graphite throughout matrix, graphitic slatey material X bedding @ 45° to C.A is noted. Average Sa Th. of Silty material 0.5 cm, graphitic slates are finely laminated w more graphitic + more dolomitic alt. appearance as laminations. Few recrystallized quartzite beds avg. 2-3 cm w/ in Sa. Majority are finely laminated graphitic w/ Calc. slates.						
				15.6 - 17.3 Int. altered graphitic slates. Fol. becomes chaotic w/ Disseminated matrix Qtz/carb Vnlt + stkwk. is 50% of sample. Py as + Py alt of both slates + qtz. vnlts is common. Cpy is present. Few recrystallized qtzite beds.						
				17.3 - 27.0 IMS. rel. unaltered. Few local int qtz. stkwk. but sulphides are rare ie < 3%. Few recryst'l quartzite beds, local int lim. st. & qtz.						

PAGE 3 OF 9 | PROJECT: Lucille Vein | HOLE No. CL 9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
15.6 – 16.5 Int. Alt. Bn. Stringers m-i D. m# Qtz/C. vnlts + stkw comprise 50% of sample. Pyrr + py. v.fg. gn. alt. is seen in both seds + q/c. Total Sulphides 20%. Pyrr 80% py/15-17% cpy <3% Alt. sulphides are esp. seen in fg. pl. + vnlt. selvages			0.9	23686	.003					
16.5 – 17.3 as above.			0.8	23687	Tr					

PAGE 4 OF 9 | PROJECT: Lucille Vein | HOLE No. CL9

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				24.5-24.8 Int. Alt gr. slates w int g/c vnlts. + networking m H. m-i D pyrr + py <5% usually vnlt selvages.						
				24.8-25.05 Q/C. @ Stringer. Wht. Qtz, grey carbonate 50/50 minor sericite <3% sulphides pyrr + py. on Stringer selvages						
				27.0-27.7 Mass Pyrr Flooded Gr. slates Small qtz/Carb vnlt w u. cut. @ 70° to C.A. Pyrr 60% qtz/c 30%, py. 10% cpy 5% Body of Zone is pyrr 50% in mottled worm like texture, some qtz/carb 30% py. v. fn gr. 10% cpy 5% Lower third of sample is m-c D m H. g/c vnlt (boudinage) ≈20%						
				27.7-28.2 Moderately Alt. IMS m D. m H (sty/s). g/c. boudinage 20% of sample Pyrrhotite/pyrite veinlets. + fn. gl coating, often vnlt. selvages.						
				28.2-31.5 Gr. slates, weak dist. alt. g/c veinlets + networking, boudin. Hematite stn. w in larger vnlts. + pyrr. Silty beds up to 2cm w grada. basal cots. Local m. oss pyrr. repl of g/c vnlts + cpy						
				31.5-33.4 Q/c stkwk w/in m D alt gr. sl. Hematite vnlts throughout g/c vnlts + stkwk. Pyrr + py finely diss throughout.						

PAGE 5 OF 9 | PROJECT: Lucille Vein | HOLE No. CL9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
27.0-27.7 Mass pyrr. flooded qz.sl. pyrr 50%. q/c 20% qz.sl. 20% py 5% cpy <2% some local clay alt'n.			0.7	23688	Tr					
27.7-28.2 Int. alt. seds footwall to above i/D. i/H. boudins of q/c. w 10-20% pyrr + py. local clay alt'n.			0.5	23689	Tr					
31.5-32.4 Q/c stock w/in malt qz sl. pyrr + py throughout both seds + q/c. 7-10%			0.9	23690	.002					
32.4-33.4 as above			1.0	23691	Tr					

PAGE 6 OF 9 | PROJECT: Lucille Vein | HOLE No. CL9

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				33.4 - 64.0 IMS. Dk. grey, local m D. mtl. + int q/c stkwk Fol @ 70° to C.A. sulphides rare.						
				36.6-37.3 Q/C. stkwk + stringer w pyrr + py, cpy total 15-20% seds are incl with altered w fg pyrr + py <5% diss throughout local chlorite in fg. gp blebs/clots						
				37.8-38.9 Q/C stkwk w/in m-i alt gp sd. Q/C 40% of sample actinolite? in radiating acicular masses of v/f/k light green to colourless pgM + py 5-10% in both q/c + seds, preferred selvages of q/c w/ lits + stkwking						
				38.9- IMS dk grey gp. calc. sd interbedded w calc siltstones w moderate q/c w/lets networking locally: int q/c networking + local clay alt. episodically fractured q/c w/lts. Foliation averages 45-60° to C.A. Avg. S. thickness of calc sst. 0.75 cm often v thin laminations in gp sl. Type ② Stringers are common. 40.55-40.15, 46.9-46.96						
				49.6-50.4 Type ② Q/C Vein wht qtz/grey carb 50/50 w local gp sltst + gp. sl fragments enclosed. Upper + lower calc zones are brecciated gp sl fragments w ID, i/H, alt groundmass. +q/c matrix.						

PAGE 7 OF 9 | PROJECT: Lucille Vein | HOLE No. CL9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
36.6-37.3 QC stwk in m.a.lt meta seds. pyrr + py 15-20% in both seds + q/c stwk. cpy <3%			0.7	23692	Tr					
37.8-38.9 as above			1.0	23693	0.002					

PAGE 8 OF 9 | PROJECT: Lucille Vein | HOLE No. CL9

DEPTH (M_S)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY
				Qtz/Carb ② Vein (cont'd) Some siltst fragments w/ more rounded edges occur. Tr sulphides pyrr? (v fn gr.) Middle section of Vein is more like stkwk.						
				50.4-56.4 v/ unaltered IMS						
				56.4-56.7 ② Typ Q/C Stringer						
				Stkwk. w/in int. Dalt mtd. to G alt metased. c.g. pyrr + fn. gr. py + cpy Total sulphides 10-15%, mostly confined to Q/C, local clay alt						
				56.9-57.2 Int. bxud. dk Gy beds.						
				56.7-64.0 Unaltered IMS w/ q/c vnlts + wkstkwk. Sulphides 0<5% incipiently rpl Q/C vnlts. Fol. 70-80° to c.a.						
				64.0m EOH						

PAGE 4 OF 4 | PROJECT: | HOLE No. CL9

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACT INTENSITY

Notes: CL9

8 Samples Taken: 23686-93

Mostly IMS, foliation Δ's from 80° to 45-60° in middle of hole. Some Qtzite beds w no minerals.

Two main Zones of Mineraly.

15.6-17.3 Mass pyr, py, cpy w 50% of sample being QTC stwk alt gneiss? dyke rock? or int alt IMS. (D.H.

27.0-33.4 Mass sulphides ass w small vein 0.1m, rest of sample are 50% mass sulphides 50% alt gn. sl. Lower portion of zone. 31.5-33.4 is gneiss stwk. QTC gn sl altered moderately, sulphides ≈ 10%

APPENDIX A

SECTION II - SURFACE SAMPLE NOTES

PAGE 1 OF 11 | PROJECT: DITCH DISCOVERY (Lucielle Vein) | HOLE No. SURFACE SAMPLING

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag oz/t	%		Metallic Assay oz/t	COMPOSITE ASSAYS
CL001 – Contact Zone between Sandpile & Kechika Group graphitic cherty limestone (quartzite), local mass. pyrite - up to 30%, aspy?			0.2	001	0.155	0.01				
CL002 – as for CL001, 2.0m higher on outcrop.			0.2	002	0.282	0.03			0.357	
CL003 Barry Vein w/in Flt. qtz, graph, w/py tt?, graph sty)			gr	003	0.037	Tr				
CL004 Cabbage Vein #1 30/76S felsic felsic vol. w/ gypsum & oxides, m py. <1%.	not mapped		gr	004	0.013	0.04				
CL005 Cabbage Vein #2 fault gouge			gr	005	0.047	Tr				
CL006 Cabbage Vein 2 int Fault gouge w/in silicified volc.			gr	006	0.071	0.11				
CL007 LUCIELLE VEIN (?) Qtz wht-clr, mass pyrr, tt py			0.5	007	0.006	0.01				
CL008 Fault ^ 6000 + CLH #13	not mapped		0.2	008	0.032	Tr				
CL009 LUCIELL Vn. 137/76°S qtz bx, m pyrr, py, tt, aspy? lots of dol alt.			0.5	009	0.424	0.17		Possb. .440	.349	
CL010 Fault off LUCIELLE Vn 128/65 S massive pyrr. (py, aspy < 10%)			0.2	010	0.106	0.02				

PAGE 2 OF 11 | PROJECT: DITCH DISCOVERY | HOLE No. SURFACE SAMPLING

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag	%		Metallic Assay (oz/t)	COMPOSITE ASSAYS
CL011 LUCIELLE VEIN wht gtz, clots of Dol, ↑ K-alt tr py. aspy ?tt?			0.5	011	0.082					
CL012 SKARN? (see pg 13) mass py. ± limonite. min gtz. aspy			gr	012	0.583					
CL013 LUCIELLE VEIN			0.4	013	0.047					
CL014 - DDH# CL4 (85.4 - 91.1 m) Bit cuttings.			gr	014	0.202				.317	
CL015a Qtz Carb vein 098/77S wht qtz/carb, 60/40, tr pyrr <2% py <2% qtz is recrystallized, c-grain, locally mod. limon. stained.			0.3	015a	.007					
CL015 b. Mass pyrr/Qtz Bx pyrr/Qtz 80/20, pyrr. ±, py sh tr cpy <1%, bn? 2%, mod. ox? w clay alt.			0.3	015b	Tr					
CL016 Qtz/carb Vein Q/C: 70/30 Recryst. qtz, loc. lim. st. tr pyrr <2%, tr py graphite? tt? 115/75 S			0.5	016	lab	lost				

PAGE 3 OF 11 | PROJECT: DITCH DISCOVERY | HOLE No. Surface Sampling

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag ppm	%			COMPOSITE ASSAYS
CL017-a ② Qtz/Carb Vein int altered. iK (white) i limonite. drusy qtz. graphitic clots + veinlets (fn. pl), gypsum as multiplaned xtls up to 0.5 cm long. tr py + bn?			0.4	017a	.05					
CL017b Alteration Zone. Bx i gypsum (fn. blue xtls.) i limonite brecciated gr. slate frags. avg. 3mm mod. rounded, brecciated qtz. frag. up to 1cm mod. rounded i limonite stained. This zone is up to 0.75m wide. or more.			0.5	017b	Tr					
CL018a ② Qtz/carb Vein wht qtz. 70%, Carb (cc.) 20%, graphitic clots + styl. 6%, pyrr. 4-5% mod. limonite., loc. vuggy			0.4	018a	.009					
CL018b ① Mass Pyrr. w local Qtz heavily limonite st., py 3% cpy ?<1% bn. 3-7%			0.5	018b	Tr					
CL018c Fault gouge; br. orange, w qtz bx frag. throughout			0.4	018c	Tr					
L019 Sericite Schist. footwall to Qc Vein 020 diss pyr? < 2%, int. bright orange limonite			0.6	019	.06					

PAGE 4 OF 11 | PROJECT: DITCH DISCOVERY | HOLE No. Surface Sampling

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag ppm	%			COMPOSITE ASSAYS
CL020 Qtz/carb Vein ① Wht/grey bull qtz. cc. & fr. pl. & clots., locally vuggy, mod. lim. st. tr. py <1%, tr pyrr? <1%. gr. slate frag. local <5%. sulphides finely diss. throughout esp. fr. pl. 115/90			0.4	020	.01					
CL021 Mass. pyrr. Qtz Bx ① Wht. Qtz/carb vein mass pyrrhotite w int. rusty lim. staining. Dk. blue-green particles chlorite? alt. pyrr-40% Qtz 50%, py 5% cpy? <1%., gysyn <1%			0.7	021	0.199					
CL022 Qtz/carb Vein, c.g. ② Wht/grey qtz: 50% cc. 22% pyrr. <15%, py <2%, local gr. clots <5%, clay 5-10%			0.4	022	Tr					
CL023 Qtz/carb Vein ② int. alt. Qtz 40% carb 40% w clots of int clay/graphite alt. sulphides: pyrr. 5%, py 3%			1.0	023	lab lost					
CL024 Gr/Gr/Schist-Qtz-Bx intensely altered, clay graphite sericite alt. Seds frags. v. little sulphides. pyrr. <2%			0.6	024	Tr					

PAGE 5 OF 11 | PROJECT: DITCH DISCOVERY | HOLE No. SURFACE MAPPING

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH (m)	ASSAY NUMBER	% Au oz/t	% Ag ppm	%			COMPOSITE ASSAYS
CL025 ② Qtz/carb Vein ⊥ to Lucielle 020/76° W, Coarse gr. Bull wht. qtz, w. pink carb 50%, m Kalt py small. Rusted out specs <2%.			1.2	025	Tr					
CL026 Int. alt. Qtz/carb vein wht qtz/carb. w m Kalt & lim. alt., pyrrhotite locally up to 10%, ± bn <2%, graph. stky & clots.			0.4	026	.06					
CL027 Quartz/carbonate Vn ② o/c vein wht w few gr. sl. frag. sulphides (rusted out spots, few py cubes noted) 3%			0.4	027	Tr					
CL028 Mass pyrr. w/m Flt. int lim. + i Kalt ser alt mod. gr. sht schists, Bornite 3-5%			0.2	028	0.214					
CL029 Flt. gouge + adjacent gr ser schist. i lim, i K, marc, & py			0.1	029	.01					
CL030a) Ser/Gr. schists adjacent to L Vn. i lim. i flt gouge.			0.8	030a	Tr					
CL030b L Vn., QC Vn wht. c.g. w large masses of fn. gr. ser. up to 2cm. wide, loc. few sulph specs. · greyish silver ft., loc py up to 3%.			0.8	030b	Tr					

 PROJECT: DITCH ~~DISCOLE~~ (LOCKETTE... Vein) HOLE No. Surface Mapping

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	% Au oz/t	% Ag oz/t	%			COMPOSITE ASSAYS
CL031 Loosely Cemented Glacial Till. (Ferricrete?) Pebbles + Fragments, 2mm to 10cm, average size 1cm. Extremely variable comp. volc. intr. schist, metaseds, 5mm + 4" as most quite rounded. Cement is int limonitic alt majority rusty qtz + graphitic seds.			0.7	CL031	Tr?		(panned 2.5 oz/t approx)			
CL031a rusty fault gouge w/ CL031			0.5	CL031a	Tr					
CL032. Qtz/Carb Vein ⊥ to L.V. Int. lim alt lrge. pink calcite euhedral patches, int. fract. w lim on fr. pl. pyrrhotite <2% diss throughout			1.1	CL032	.005					
CL033 Qtz Vein, rusty + white qtz many euhedral drusy rusty colored qtz. Xts up to 1cm long graph. styl. 10%, pyrrhotite <2%, local wht. kalt". Graph. clay alt" patches c fn. gr. py.			0.5	CL033	.01					
CL034 Intense Altered Schists int Gr-K alt. Mod. Ser. alt" Wht. clay units (qtz repl?) Int. lim			0.4	CL034	.017					
CL035 Int. Gr. Clay alt. gouge. * Ran 1.4 oz/t Au @ Calif. Mass py + graphite, vg? Mass. limonite			0.5	CL035	.012		← This same sample location was tested @ Reed Engineering in California - Results 1.4 oz/t Au.			

PAGE 7 OF 11 | PROJECT: Lucielle Vein | HOLE No. Surface Sampling.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
CL036 Clay alt Qtz Vn. (2) = int qp./ser alt + int lim beside 1.4 oz/t qp./K alt.			0.4	CL036	Tr					
CL037 Sericite/Graphite Schist int lim alt.			0.5	CL037	Tr					
CL038 Q/C vein w some ser. alt., qp. d. frag.ments + qp. shf., pyrrhotite <2% tiny flakes + clusters of flakes upto 1cm or fr pl. Mod to int K alt.			0.8	CL038	.008					
CL039 as above.			0.9	CL039	Tr					

PAGE 8 OF 11 | PROJECT: Lucielle Vein | HOLE No. Surface Sample

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
CL040 ② Int. alt. qV Bx ω in qr/ser alt schists. Local clots of qr/K alt". QV int K alt (dry" brittle) local boxwork, all int. lim st. ± fault gouge enclosed.			0.4	CL040	.01					
CL041 Int clay alt., gypsum alt. limonite alt. (powder) qV' small frag. of qV left. ω int ser alt schists			0.4	CL041	Tr					
CL042 ② Qtz Carb Vein, 50/50 wlt. ω creamy calcite cg. rhombic vlts. local qr. slate frags + qr. styl., pyrrhotite as bl-br. ω rusty halos specks diss. throughout < 1%.			0.4	CL042	Tr					
CL043 ② Qtz Carb Dolomite Vn. wlt qtz 50% Carb (fr. pl. wlt.) 20% Dolomite (recrystal. creamy) 20% qr. alt. slate frags. lim. st. fr. pl weak-mod., pyrrhotite < 1%, tiny rusty flakes. diss. throughout. Chl/ser? in small fr. qr. clusters.			0.5	CL043	Tr					
CL044 ② Qtz/Carb vein. ω maj. carb. Hw qr. ± frags + qr. styl. pyrrhotite < 2% diss in single flakes + clusters on fr. pl. in Kalt			1.0	CL044	.008					
CL045 "Arsenic Vein" Bedrock. massive py, cpy Vein int ser alt. schist,			gr.	CL045						

PAGE 9 OF 11 | PROJECT: Lucielle Vein | HOLE No. Surface Sampling

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
CL046 ① Qtz) m. carb vein (LV) Massive pyrrhotite in clots up to 3cm wide, int. lim staining Fibrous (fuzzy) gypsum or tremolite or limonite py < 2%, cpy 2% Some clay alt., bn 2-3%.			0.9	CL046	Tr					
CL047 ② Qtz/carb. Vein (not as above) Qtz 40% Carb 40% both white. Int. lim on fr. pl., Pyrr. "specks" 35% - some larger fg. gr. masses. Vuggy, Local i Kalk. Massive lim (bl. molten appearance) local boxwork.			0.9	CL047	Tr					
CL048 ① Qtz/m. carb Vein (LV) Mass pyrr/py. 50% rock; 50% wht. qtz, m. wht carb on fract. Massive limonite (fuzzy "fibrous") [Massive pyrrhotite 75%, py fn gr. diss ± massive fn. gr. 15% bn 5% cpy 5%.] v. dk. teal-grey (cll + clay?) alt: v. soft. is mixed within the sulphides.			0.7	CL048	Tr					
CL048a Int. grey-green clay-sericite (cll?) - graphite ± qtz int lim alt. (mushy). some qtz Va. L.V within v.g?			0.7	CL048a	Tr					
CL049 Mass. Pyrrhotite in Fault some py. cpy + metasediments (qtz 10%, wht. int lim alt.			0.1	CL049	Tr					

PAGE 10 OF 11 | PROJECT: Lucille Vein | HOLE No. Surface Samples

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
CL050 'Other Vein' ② Q/C. w trondite & pyritic blebs <2%. Lim. st. fr. pl. some sericite			0.4	CL050	Tr					
CL051 ① L.V. Q/m. carb Vein Wht. qtz w m. carb & fr. pl., Sulph: Mass. pyrrhotite - c.g., 70%, py c.g. & fn. gr. masses 15%, cpy c.g. in clots to 2.3mm 5%, ba. 7%.			0.7	CL051	.603					
CL054 qtz/m. Carb Vn (L.V) ① white grey qtz 20%. Fine subhedral XT/s calcite inclusions. 7% XT/s to 3mm int lim. alt., green sericite as fr. gr. masses. 10%, Mass. pyrrhotite 50%, ba 10% (bright blue) chalcopyrite 3%			0.5	CL054	Tr					

 PROJECT: Lucelle Vein HOLE No. Surface Sampling

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%	Ba?		COMPOSITE ASSAYS
CL055 Int. fr. + lim alt L.V. Qtz rusty white, brittle, carb fr. pl. only, int massive lim psilomelane?, Mass. Pyrrhotite 40%, pyrite 10%, cpy < 3%, bn. 5-7%			0.5	CL055	Tr					
CL056 Int Alt. LV. Wht qtz some recryst. 15%, Mass Pyrr. 70%, chl + clay? sericite? (green mush) fr. gr masses 15-25%, int lim, graphite clots 5%			0.6	CL056	Tr					
CL057 Int. Alt FW. + HW Schist graphitic, sericitic, limonitic			gr	CL057	.002					
CL058 Mass Pyrr float in creek w. of camper, silicic cong. 85%, grey qtz frags avg 3mm rounded 10% cpy 5%, int lim. on fr. pl.			gr	CL058	Tr		See page 13 Regional Samples for Location			
CL059 Ferrocrete float iron sealed glacial till, mostly qtz frags + volcanic pebbles size range from < 2mm (very angular) to 4cm (very rounded)			gr	CL059	Tr					
CL060 Skarn Mass Py. lt. greenish to dk grn. Mass py 40-50% cpy 3-5%, int lim alt (* Cnct w Ferrocrete) loc. bn. 10%			gr	CL060	Tr					
CL061 gr. Schists (regional)			gr.	CL061	Tr					

Sept 14/90.

PAGE 1 OF 2 | PROJECT: Regional Geology | HOLE No.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
See Page # 13 for location.										
RG01 Lrge Q/C vein up to 2 m wide, target of old drill set up? Snow wht c.g. gtz. w creamy fn. gr. dolomite? (carb. fracture) 20% thruout.. Lrge. dk. brown limonite patches, locally calcite Xtls on fr. pl's as qtz ss. filling. local gr. clots + fr. pl. + stylolites throughout Limonite st. on all fr. pl. No sulph.				RG01	.003					
RG02 Smaller qtz vn. W of RG01 wht gtz. minor carb. (fr. pl) w lim. clots throughout, wht lacy clots <3% up to 3mm wide; Pyrite + spl 3% fn. diss throughout. grey silver min <2% diss throughout. Zinc Carbonate? if so dk. brown 20%.			0.5	RG02	.010					Metallic <.002
RG03 DRILL CORE : VEIN MATERIAL wht gtz. + carb. (wht) w. v. fn. gr. pyrite + c.g. euhedral Xtls to 1cm. approx. 5%. locally massive v. fn. gr. w/ gtz/ loaded graphitically alt. pyritized volcanics. Tr. cpy., graphitic pyritic stylolites throughout <7%			grab	RG03	.012					

Sept/14/90

PAGE 2 OF 2 | PROJECT: Regional Geology | HOLE No.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	INTERVAL	WIDTH	ASSAY NUMBER	%	%	%			COMPOSITE ASSAYS
See Page #13 for Location										
RG04 Graphitic Arg. Silic Bx SiO_2 flooded frag. subang., within graphitic pyritic matrix some clay alt., lenses/veins all patches of cpy.			grab	RG04	.007					
RG05 Silica Flooded Volc lt-dk grey, graph. styl. gtz/c flooded w fg. diss py ± cpy cubes to 1mm throughout. Lim st. loc. int.			grab	RG05	.018					

APPENDIX B

ASSAY RESULTS

SECTION I
Fire and Metallic Assay

SUMMARY OF ASSAY RESULTS

Sample #	Width (m)	Au oz/t	Au Metallic +100/-100=Total	Au Cyanide Leach Total Au = Leachates+Residue	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Sb ppm	Mo ppm	As ppm
28101	0.5	0.003			1.2	543	14	27		112		869
28102	0.6	0.094		0.071+0.017=0.088	0.8	264	7	29		101		345
28103	0.1	0.305		Rossbacher/0.40	0.5	304	9	14		94		1260
28104	0.5	0.035		0.031+0.014=0.045	0.4	30	6	29		78		143
28105	0.1	0.027			1.8	892	4	8		99		1210
28106	0.3	0.010			0.4	328	3	20		89		8730
28107	0.8	0.003			Tr	24	1	13		44		142
28108	0.6	Tr			Tr	44	1	9		38		161
28109	0.5	0.002		0.007+0.002=0.009	0.6	104	4	21		76		908
28110	0.3	0.091			1.2	245	1	12		81		475
28111	3.3	0.004		Tr	1.0	341	2	8		87		1660
28112	0.7	0.013		0.01+0.007=0.017	0.7	23	1	7		53		471
28113	0.6	0.014		0.028+0.013=0.041	0.8	42	1	26		68		214
28114	0.5	0.100		0.053+0.007=0.060	1.1	81	2	24		83		209
28115	0.6	0.190			1.2	60	1	19		61		159
28116	0.3	0.005			0.8	288	2	12		94		166
28117	0.2	0.066			0.7	155	1	21		73		913
28118	1.1	0.004		0.058+0.002=0.060	0.8	600	1	22		95		532
28119	0.3	0.018		0.066+0.002=0.066	1.1	599	1	20		97		377
28120	0.7	0.027			0.6	350	1	19		88		578
28121	0.5	0.044			0.1	38	4	29		67		116
28122	0.3	0.003			0.9	191	1	22		82		475
28123	0.6	Tr			0.8	89	1	29		60		134
28124	0.9	0.003		0.004+0.003=0.007	1.0	171	1	17		69		441
28125	0.4	0.005			1.2	478	2	16		87		433
28126	0.1	0.058			0.8	653	1	18		103		1010
28127	0.4	0.038		0.027+0.003=0.030	0.5	235	1	16		64		149
28128	0.7	0.012			1.1	18	1	25		51		170
28129	0.7	0.002			0.4	360	1	20		29		4890
28130	0.4	0.098			0.1	29	30	16		61		368
28131	0.1	Tr			Tr	15	19	17	26		1	90
28132	0.7	Tr			Tr	33	4	1	2		1	52
28133	0.2	Tr			0.2	6	6	1	2		1	26
28134	0.3	Tr			Tr	56	23	91	23		4	205
28135	0.1	Tr			Tr	7	16	46	24		2	107
28136	0.3	Tr			0.1	33	13	58	35		1	212
28137	0.5	Tr			Tr	8	23	75	33		1	104
28138	3.2	0.013		Tr	Tr	8	24	17	33		1	87
28139	0.6	Tr			Tr	9	8	23	40		1	110
28140	0.1	0.002			0.1	679	6	7	28		1	3740
28141	0.8	Tr			Tr	3	8	13	37		1	93
28142	0.7	Tr		Tr	Tr	104	3	8	53		1	174
28143	0.3	Tr			0.5	72	1	9	62		2	153
28144	0.4	0.016			0.7	51	4	7	60		2	173
28145	0.4	0.008			0.3	73	3	23	79		1	184
28146	0.8	Tr			0.2	26	5	25	61		1	226
28147	1.4	0.002		Tr	0.1	23	4	8	48		1	160
28148	0.6	Tr			0.4	25	4	23	57		1	185
28149	0.8	0.004		Tr	0.3	31	4	13	49		1	167
28150	0.3	0.053			Tr	11	4	1	33		2	135

SUMMARY OF ASSAY RESULTS

Sample #	Width (m)	Au oz/t	Au Metallic +100/-100=Total	Au Cyanide Leach Total Au = Leachates+Residue	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Sb ppm	Mo ppm	As ppm
23653		0.010			0.1	5	1	1	16		1	60
23654	1.4	0.003		Tr	0.1	99	22	10	30		1	144
23655	0.4	0.015			0.1	22	17	4	35		1	146
23656	0.4	0.109		0.035+0.002=0.037	0.1	282	18	27	20		1	155
23657	0.9	0.007		Tr	0.1	58	16	16	24		1	199
23658	0.5	0.399			0.1	256	21	42	32		1	183
23659	0.5	0.046		Tr	0.1	41	6	2	26		1	158
23660	0.2	0.063			0.1	438	14	4	10		1	346
23661	0.7	0.006			0.1	278	17	15	13		1	152
23662	0.7	0.010			0.1	159	15	1	14		1	147
23663	0.6	Tr			4.7	316	1	17	65		1	156
23664	1.2	0.016			4.2	30	1	15	37		1	135
23665	0.7	0.128		Tr	14.3	410	1	12	35		1	171
23666	0.6	0.165			17.2	461	2	11	35		1	221
23667	0.3	Tr			Tr	76	4	20	39		7	89
23668	0.9	0.003		Tr	Tr	26	3	8	37		4	129
23669	0.3	Tr			Tr	2	3	9	15		7	72
23670	0.5	0.003		Tr+0.054=0.054	Tr	995	5	18	48		5	151
23671	0.3	Tr		Tr	Tr	29	4	27	28		5	154
23672	0.3	Tr			Tr	261	2	9	27		7	129
23673	1.1	Tr		Tr	0.2	25		36				114
23674	1.0	Tr		Tr	Tr	30		21				123
23675	0.8	Tr		Tr	Tr	1		6				69
23676	1.2	Tr		Tr	Tr	40		16				96
23677	0.6	Tr			Tr	6		10				51
23678	0.2	Tr			0.1	193		38				132
23679	0.2	Tr			0.1	11		5				69
23680	0.5	Tr		0.006+Tr=0.006	Tr	85		18				108
23682	0.9	0.004		0.007+Tr=0.007	Tr	20		5				98
23683	0.9	0.002		Tr	Tr	4		4				49
23684	0.6	Tr		Tr	Tr	39		19				94
23685	0.6	Tr		0.0060.003=0.009	Tr	30		21				119
23686	0.9	0.003		Tr	Tr	34		23				124
23687	0.8	Tr		Tr	Tr	31		32				127
23688	0.7	Tr		Tr	Tr	556		17				153
23689	0.5	Tr		Tr	Tr	28		22				71
23690	0.9	0.002		Tr	Tr	27		20				88
23691	1.0	Tr		Tr	Tr	53		28				132
23692	0.7	Tr		Tr	Tr	72		14				105
23693	1.0	0.002		Tr	Tr	27		18				82
CL001	0.2	0.155			0.4	46	2	49	4		1	432
CL002	0.2	0.282	0.021/0.336=0.357		0.9	64	21	31	1		1	868
CL003	grab	0.037			Tr	31	4	1	7		1	36
CL004	grab	0.013			1.4	30	16	6	4		1	121
CL005	grab	0.047			Tr	51	29	17	1		6	158
CL006	grab	0.071			3.7	880	33	16	1		1	166
CL007	0.5	0.006			0.5	799	5	13	13		7	156
CL008	0.2	0.032			Tr	780	4	9	25		2	148
CL009	0.5	0.424	0.038/0.326=0.357	Ross/0.44	5.9	1200	4	8	54		6	164
CL010	0.2	0.106			0.7	757	7	12	15		4	154

SUMMARY OF ASSAY RESULTS

Sample #	Width (m)	Au oz/t	Au Metallic +100/-100=Total	Au Cyanide Leach Total Au = Leachates+Residue	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Sb ppm	Mo ppm	As ppm
CL011	0.5	0.083			0.4	37	6	3	1		7	110
CL012	grab	0.583	0.048/0.316=0.340		3.3	751	43	9	1		6	178
CL013	0.4	0.047			0.5	804	4	6	1		25	168
CL014	grab	0.202	0.023/0.349=0.317		1.2	63	18	95	35		9	174
CL015a	0.3	0.007			Tr	3	1	1	14		1	57
CL015b	0.3	Tr			Tr	652	1	1	42		2	143
CL017a	0.4	0.053			Tr	122	1	1	25		1	89
CL017b	0.5	Tr			Tr	687	12	16	25		1	132
CL018a	0.4	0.009			Tr	213	1	1	20		1	47
CL018b	0.5	Tr			Tr	392	6	1	50		1	167
CL018c	0.4	Tr			0.1	69	1	1	27		1	68
CL019	0.6	0.058			Tr	207	1	8	7		1	89
CL020	0.4	0.010			Tr	30	1	16	22		1	118
CL021	0.7	0.199			Tr	387	1	23	35		1	127
CL022	0.4	Tr			Tr	216	1	4	21		1	43
CL024	0.6	0.002			Tr	109	1	10	28		1	143
CL025	1.2	Tr			Tr	14	1	1	26		1	79
CL026	0.4	0.056			Tr	90	1	5	30		1	70
CL027	0.4	Tr			0.1	27	125	1	21		3	124
CL028	0.1	0.214			0.7	569	1	4	56		1	159
CL029	0.1	0.010			Tr	284	13	2	20		5	198
CL030a	0.8	Tr			0.9	81	1	15	28		4	76
CL030b	0.8	0.002			Tr	19	1	1	14		1	35
CL031	0.7	0.002		Tr	Tr	299	41	26	40		1	95
CL031a	0.4	Tr			1.0	275	22	72	30		11	627
CL032	1.1	0.005			Tr	36	3	1	16		1	90
CL033	0.5	0.010			Tr	38	1	1	5		2	209
CL034	0.4	0.017		Tr	0.2	45	5	1	7		3	678
CL035	0.5	0.012		Tr	2.3	1760	21	1	34		2	561
CL036	0.4	Tr			Tr	75	9	1	27		2	133
CL037	0.5	0.053			Tr	115	7	1	9		1	203
CL038	0.8	0.008			Tr	15	16	1	7		3	61
CL039	0.9	Tr			Tr	10	5	1	2		7	27
CL040	0.4	0.010			Tr	210	1	6	13		1	107
CL041	0.4	Tr			Tr	88	5	1	10		1	126
CL042	0.4	Tr			Tr	5	7	1	18		1	83
CL043	0.5	Tr		Tr	Tr	55	6	1	21		1	106
CL044	1.0	0.008			0.3	6	27	1	11		1	56
CL045	grab	Tr			Tr	517	33	4	4		3	85
CL046	0.9	Tr		Tr	Tr	100	3	13	1		6	89
CL047	0.9	Tr			Tr	83	3	4	7		3	117
CL048	0.7	Tr		Tr	0.9	671	6	7	52		6	95
CL048a	0.7	Tr			1.0	700	4	33	65		14	335
CL049	0.1	Tr			0.1	701	2	17	77		5	120
CL050	0.4	Tr			Tr	23	1	5	20		3	95
CL051	0.7	0.003			Tr	507	4	6	35		5	100
CL054	0.5	Tr	Tr/Tr=Tr		Tr	846		16				112
CL055	0.5	Tr	Tr/Tr=Tr		Tr	302		44				82
CL056	0.6	Tr	0.005/0.007=0.012	Tr	0.4	633		17				118
CL057	grab	Tr			Tr	356		202				357

SUMMARY OF ASSAY RESULTS

Sample #	Width (m)	Au oz/t	Au Metallic +100/-100=Total	Au Cyanide Leach Total Au = Leachates+Residue	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Sb ppm	Mo ppm	As ppm
CL058	grab	Tr		Tr	Tr	1250		40				122
CL059	grab	Tr		Tr	Tr	82		358				111
CL060	grab	Tr	0.013/Tr=0.013	Tr	Tr	814		28				174
CL061	grab	Tr		Tr								
RG01	grab	0.003			0.4	163	1	17	3		1	35
RG02	grab	0.010			Tr	13	3	55	16		5	67
RG03	grab	0.012			Tr	41	1	67	14		1	169
RG04	grab	0.007			Tr	89	9	163	40		1	458
RG05	grab	0.018			0.2	96	4	95	38		1	325

Northern Analytical Laboratories ltd.

September 10,1990

Work Order # 08362

Camille Beruke
Box 611
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	oz/t Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Sb
28101	0.003	1.2	543	14	27	869	112
28102	0.094	0.8	264	7	29	345	101
28103	0.305	0.5	304	9	14	1260	94
28104	0.035	0.4	30	6	29	143	78
28105	0.027	1.8	892	4	8	1210	99
28106	0.010	0.4	328	3	20	8730	89
28107	0.003	<0.1	24	<1	13	142	44
28108	<0.002	<0.1	44	<1	9	161	38
28109	0.002	0.6	104	4	21	908	76
28110	0.091	1.2	245	<1	12	475	81
28111	0.004	1.0	341	2	8	1660	87
28112	0.013	0.7	23	<1	7	471	53
28113	0.014	0.8	42	<1	26	214	68
28114	0.100	1.1	81	2	24	209	83
28115	0.190	1.2	60	1	19	159	61
28116	0.005	0.8	288	2	12	166	94
28117	0.066	0.7	155	1	21	913	73
28118	0.004	0.8	600	1	22	532	95
28119	0.018	1.1	599	<1	20	377	97
28120	0.027	0.6	350	<1	19	578	88
28121	0.044	0.1	38	4	29	116	67
28122	0.003	0.9	191	<1	22	475	82
28123	<0.002	0.8	89	<1	29	134	60
28124	0.003	1.0	171	<1	17	441	69
28125	0.005	1.2	478	2	16	433	87
28126	0.058	0.8	653	1	18	1010	103
28127	0.038	0.5	235	<1	16	149	64
28128	0.012	1.1	18	<1	25	170	51
28129	0.002	0.4	360	1	20	4890	29
28130	0.098	0.1	29	30	16	368	61

Au -- 1AT Fire Assay/Grav
Metals -- Aqua Regia Digestion/AAS Geochem

Association of Professional Engineers, Geologists and Geophysicists of British Columbia
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October 2,1990

Work Order # 08413

File # 08413f

Camille Berube
Box 661
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V0C 1E0

Assay Certificate For Samples Provided

Sample	oz/t Au
28137	<0.002
28138	0.013
28139	<0.002
28140	0.002
28141	<0.002
28142	<0.002
28143	<0.002
28144	0.016
28145	0.008
28146	<0.002
28147	0.002
28148	<0.002
28149	0.004
28150	0.053

Au -- 1AT Fire Assay/Grav

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October 2, 1990

Work Order # 08413

File # 08413c

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Box 661
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Mo	ppm Ni
28137	<0.1	8	23	75	104	1	33
28138	<0.1	8	24	17	87	1	33
28139	<0.1	9	8	23	110	<1	40
28140	0.1	679	6	7	3740	<1	28
28141	<0.1	3	8	13	93	1	37
28142	<0.1	104	3	8	174	1	53
28143	0.5	72	<1	9	153	2	62
28144	0.7	51	4	7	173	2	60
28145	0.3	73	3	23	184	1	79
28146	0.2	26	5	25	226	1	61
28147	0.1	23	4	8	160	1	48
28148	0.4	25	4	23	185	<1	57
28149	0.3	31	4	13	167	1	49
28150	<0.1	11	4	<1	135	2	33

Metals - Aqua Regia Digestion/AAS Geochem
Note: Mo may not be completely soluble in aqua regia

Association of Professional Engineers, Geologists and Applied Science Technologists of British Columbia
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Work Order # 08413

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

File # 08413e

Assay Certificate For Samples Provided

Sample	oz/t Au
CLO 36	<0.002
CLO 37	<0.002
CLO 38	0.008
CLO 39	<0.002
CLO 40	0.010
CLO 41	<0.002
CLO 42	<0.002
CLO 43	<0.002
CLO 44	0.008
CLO 45	<0.002
23653	0.010
23654	0.003
23655	0.015
23656	0.109
23657	0.007
23658	0.399
23659	0.046
23660	0.063
23661	0.006
23662	0.010
23663	<0.002
23664	0.005
23665	<0.002
23666	<0.002
28131	<0.002
28132	<0.002
28133	<0.002
28134	<0.002
28135	<0.002
28136	<0.002

Au -- 1AT Fire Assay/Grav.

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Work Order # 08413

File # 08413b

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Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Mo	ppm Ni
CLO 36	<0.1	75	9	<1	133	2	27
CLO 37	<0.1	115	7	<1	203	<1	9
CLO 38	<0.1	15	16	<1	61	3	7
CLO 39	<0.1	10	5	<1	27	7	2
CLO 40	<0.1	210	1	6	107	<1	13
CLO 41	<0.1	88	5	<1	126	<1	10
CLO 42	<0.1	5	7	<1	83	<1	18
CLO 43	<0.1	55	6	<1	106	<1	21
CLO 44	0.3	6	27	<1	56	1	11
CLO 45	<0.1	517	33	4	85	3	4
23653	<0.1	5	<1	<1	60	<1	16
23654	<0.1	99	22	10	144	<1	30
23655	<0.1	22	17	4	146	1	35
23656	<0.1	282	18	27	155	<1	20
23657	0.1	58	16	16	199	1	24
23658	<0.1	256	21	42	183	<1	32
23659	<0.1	41	6	2	158	1	26
23660	<0.1	438	14	4	346	1	10
23661	<0.1	278	17	15	152	<1	13
23662	<0.1	159	15	<1	147	<1	14
23663	<0.1	316	<1	17	156	<1	65
23664	<0.1	30	<1	15	135	<1	37
23665	<0.1	410	<1	12	171	<1	35
23666	<0.1	461	2	11	221	1	35
28131	<0.1	15	19	17	90	1	26
28132	<0.1	33	4	<1	52	<1	2
28133	0.2	6	6	<1	26	<1	2
28134	<0.1	56	23	91	205	4	23
28135	<0.1	7	16	46	107	2	24
28136	0.1	33	13	58	212	1	36

Metals -- Aqua Regia Digestion/AAS Geochem
Note: Mo may not be completely soluble in aqua regia

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October 2,1990

Work Order # 08421

File # 08421a

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	oz/t Au
CLO 46	<0.002
CLO 47	<0.002
CLO 48a	<0.002
CLO 48	<0.002
CLO 49	<0.002
CLO 50	<0.002
CLO 51	0.003
23667	<0.002
23668	0.003
23669	<0.002
23670	<0.002
23671	<0.002
23672	<0.002

Au -- 1AT Fire Assay/Grav

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Work Order # 08421

File # 08421b

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Mo	ppm Ni
CLO 46	<0.1	100	3	13	89	6	1
CLO 47	<0.1	83	3	4	117	3	7
CLO 48a	1.0	700	4	33	335	14	65
CLO 48	0.9	671	6	7	95	6	52
CLO 49	0.1	701	2	17	120	5	77
CLO 50	<0.1	23	1	5	95	3	20
CLO 51	<0.1	507	4	6	100	5	35
23667	<0.1	76	4	20	89	7	39
23668	<0.1	26	3	8	129	4	37
23669	<0.1	2	3	9	72	7	15
23670	<0.1	995	5	18	151	5	48
23671	<0.1	29	4	27	154	5	28
23672	<0.1	261	2	9	129	7	27

Metals -- Aqua Regia Digestion/AAS Geochem
Note: Mo may not be completely soluble in aqua regia

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October 15,1990

Work Order # 08465

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

File # 08465a

Assay Certificate For Samples Provided

Sample	oz/t Au	ppm Ag	ppm Cu	ppm Zn	ppm As
23673	<0.002	0.2	25	36	114
23674	<0.002	<0.1	30	21	123
23675	<0.002	<0.1	<1	6	69
23676	<0.002	<0.1	40	16	96
23677	<0.002	<0.1	6	10	51
23678	<0.002	0.1	193	38	132
23679	<0.002	0.1	11	5	69
23680	<0.002	<0.1	85	18	108
23682	0.003	<0.1	20	5	98
23683	0.002	<0.1	4	4	49
23684	<0.002	<0.1	39	19	94
23685	<0.002	<0.1	30	21	119
23686	0.003	<0.1	34	23	124
23687	<0.002	<0.1	31	32	127
23688	<0.002	<0.1	556	17	153
23689	<0.002	<0.1	28	22	71
23690	0.002	<0.1	27	20	88
23691	<0.002	<0.1	53	28	132
23692	<0.002	<0.1	72	14	105
23693	0.002	<0.1	27	18	82
CLO 54		<0.1	846	16	112
CLO 55		<0.1	302	44	82
CLO 56		0.4	633	17	118
CLO 57	<0.002	<0.1	356	202	357
CLO 58	<0.002	<0.1	1250	40	122
CLO 59	<0.002	<0.1	82	358	111
CLO 60		<0.1	814	28	174

Au -- 1AT Fire Assay/Grav
Metals -- Aqua Regia Digestion/AAS Geochem

Applied Science Technologists and Technicians of B.C.
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Northern Analytical Laboratories ltd.

October 2,1990

Work Order # 08413

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

File # 08413a

Assay Certificate For Samples Provided

Sample	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Mo	ppm Ni
RG01	0.4	163	<1	17	35	<1	3
RG02	<0.1	13	3	55	67	5	16
RG03	<0.1	41	<1	67	169	<1	14
RG04	<0.1	89	9	163	458	1	40
RG05	0.2	96	4	95	325	<1	38
CLO 15a	<0.1	3	<1	<1	57	<1	14
CLO 15b	<0.1	652	<1	<1	143	2	42
CLO 17a	<0.1	122	<1	<1	89	<1	25
CLO 17b	<0.1	687	12	16	132	<1	25
CLO 18a	<0.1	213	<1	<1	47	<1	20
CLO 18b	<0.1	392	6	<1	167	1	50
CLO 18c	0.1	69	<1	<1	68	<1	27
CLO 19	<0.1	207	<1	8	89	<1	7
CLO 20	<0.1	30	<1	16	118	<1	22
CLO 21	<0.1	387	<1	23	127	1	35
CLO 22	<0.1	216	<1	4	43	<1	21
CLO 24	<0.1	109	1	10	143	<1	28
CLO 25	<0.1	14	1	<1	79	<1	26
CLO 26	<0.1	90	<1	5	70	<1	30
CLO 27	0.1	27	25	<1	124	3	21
CLO 28	0.7	569	<1	4	159	1	56
CLO 29	<0.1	284	13	2	198	5	20
CLO 30a	0.9	81	<1	15	76	4	28
CLO 30b	<0.1	19	<1	<1	35	<1	14
CLO 31a	1.0	275	22	72	627	11	30
CLO 31	<0.1	299	41	26	95	<1	40
CLO 32	<0.1	36	3	<1	90	<1	16
CLO 33	<0.1	38	<1	1	209	2	5
CLO 34	0.2	45	5	<1	678	3	7
CLO 35	2.3	1760	21	<1	561	2	34

Metals -- Aqua Regia Digestion/AAS Geochem
Note: Mo may not be completely soluble in aqua regia

Applied Science Technologists and Technicians of British Columbia
6992
GERALD F. HAYES
A.Sc.T.

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

September 7,1990

Work Order # 08361

Camille Beruke
Box 611
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	oz/t Au
CL 001	0.155
CL 002	0.282
CL 003	0.037
CL 004	0.013
CL 005	0.047
CL 006	0.071
CL 007	0.006
CL 008	0.032
CL 009	0.424
CL 010	0.106
CL 011	0.082
CL 012	0.583
CL 013	0.047
CL 014	0.202

Au -- 1AT Fire Assay/Grav

Applied Science Technologists and Technicians of B.C.
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GERALD F. HAYES
A.Sc.T.

Northern Analytical Laboratories ltd.

October 2,1990

Work Order # 08413

File # 08413d

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	oz/t Au
RG01	0.003
RG02	0.010
RG03	0.012
RG04	0.007
RG05	0.018
CLO 15a	0.007
CLO 15b	<0.002
CLO 17a	0.053
CLO 17b	<0.002
CLO 18a	0.009
CLO 18b	<0.002
CLO 18c	<0.002
CLO 19	0.058
CLO 20	0.010
CLO 21	0.199
CLO 22	<0.002
CLO 24	0.002
CLO 25	<0.002
CLO 26	0.056
CLO 27	<0.002
CLO 28	0.214
CLO 29	0.010
CLO 30a	<0.002
CLO 30b	0.002
CLO 31a	<0.002
CLO 31	0.002
CLO 32	0.005
CLO 33	0.010
CLO 34	0.017
CLO 35	0.012

Au -- 1AT Fire Assay/Grav

Applied Science Technologists and Technicians of British Columbia
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GERALD F. HAYES
A.Sc.T.

Northern Analytical Laboratories ltd.

September 7,1990

Work Order # 08361

Camille Beruke
Box 611
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Mo	ppm Ni
CL 001	0.4	46	2	49	432	<1	4
CL 002	0.9	64	21	31	868	<1	<1
CL 003	<0.1	31	4	1	36	<1	7
CL 004	1.4	30	16	6	121	<1	4
CL 005	<0.1	51	29	17	158	6	<1
CL 006	3.7	880	33	16	166	<1	<1
CL 007	0.5	799	5	13	156	7	13
CL 008	<0.1	780	4	9	148	2	25
CL 009	5.9	1200	4	8	164	6	54
CL 010	0.7	757	7	12	154	4	15
CL 011	0.4	37	6	3	110	7	<1
CL 012	3.3	751	43	9	178	6	<1
CL 013	0.5	804	4	6	168	25	1
CL 014	1.2	63	18	95	174	9	35

Metals -- Aqua Regia Digestion/AAS Geochem

Note: Mo may not be completely soluble in aqua regia.

Applied Science Technologists and Technicians of British Columbia
6992
GERALD F. HAYES
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105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

October 10,1990

Camille Berube
Box 661
Cassiar, B.C.
V0C 1E0

Assay Certificate For Samples Provided

Sample	+100 oz/t Au	-100 oz/t Au	oz/t Au
CLO 021			0.023
23658			<0.002
RG02			<0.002
CLO 002	0.021	0.336	0.357
CLO 009	0.038	0.326	0.349
CLO 012	0.048	0.316	0.340
CLO 014	0.023	0.349	0.317
28103	0.008	0.177	0.183
28130	<0.002	0.031	0.031
28115	<0.002	0.027	0.021

REED ENGINEERING
Assayers and Refiners

2166 College Avenue
Costa Mesa, California 92627

CERTIFICATE OF ANALYSIS

Date: 10/4/90
Sample Origin: Taken and submitted by client
Test Method: Fire assay
Oz/Ton: Troy oz per 2,000 lbs of sample

Camille Berube

Sample Number	Gold Oz/Ton	PPM Gold	Silver Oz/Ton	PPM Silver
#CL6 23663	0.000	0.0	.138	4.7
#CL6 23664	.016	.5	.122	4.2
#CL6 23665	.128	4.4	.418	14.3
#CL6 23666	.165	5.7	.502	17.2

Assayer:
P. Reed

Caveat Emptor: This report is provided to the named client for informational purposes only and does not guarantee where the sample came from, or whether it was altered before receiving it, or whether the property it came from has any value. Amounts reported exclude mining costs and losses

REED ENGINEERING
Assayers and Refiners

2166 College Avenue
Costa Mesa, California 92627

CERTIFICATE OF ANALYSIS

Date: 12/14/89
Sample Origin: Taken and submitted by client
Test Method: Fire assay
Oz/Ton: Troy oz. per 2,000 lbs of sample

Camille Berube

Sample Number	Gold Oz/Ton	PPM Gold	Silver Oz/Ton	PPM Silver
HW 1-4	1.425	48.9	1.925	66.0

Assayer:
P. Reed

Caveat Emptor: This report is provided to the named client for informational purposes only and does not guarantee where the sample came from, or whether it was altered before receiving it, or whether the property it came from has any value. Amounts reported exclude mining costs and losses

REED ENGINEERING
Assayers and Refiners

2166 COLLEGE AVENUE
COSTA MESA, CALIFORNIA 92627

Client: Camille Berube

Date: 10/4/90

FAX 604-778-7373

PLATINUM GROUP ASSAY REPORT

Sample No.	Test Wt.	Total PGM Oz/Ton	Pt. Oz/Ton	Pd. Oz/Ton	Ir. Oz/Ton	Rh. Oz/Ton	Ru. Oz/Ton	Os. Oz/Ton
#CL6 23663	1.0 AT	0.000	----------none----------					
#CL6 23664	1.0 AT	0.000	----------none----------					
#CL6 23665	1.0 AT	0.000	----------none----------					
#CL6 23666	1.0 AT	0.000	----------none----------					

OTHER DATA

Test Method: High temperature fire assay, wet separations, spectro-analysis.

Symbols: PGM.= Platinum Group Metals; Pt.= Platinum; Pd.= Palladium; Ir.= Iridium; Rh.= Rhodium; Ru.= Ruthenium; Os.= Osmium; Oz/Ton = Troy Oz per 2,000 Lbs.; AT.= Assay Ton or 29.166 Grams.

Occurrence: Group metals are typically found in ores of Au., Ag., Pb., Ni., Cu., Zn., Cr., Fe., Sb., As., Bi., Te., and in minerals and sulfides thereof. In alkalic (alkaline) minerals of Al., Mg., Ca., Na., Ba., group metals are usually absent.

Scarcity: Total of all PGM available from U.S. sources, from 100% produced: Pt.: 20%; Pd.: 78%; Ir.: below 1%; Rh.: 1%; Ru.: below 1%; Os.: Trace. (Based on assays of test flotation concentrates)

Prices: Typical prices for high purity ingots during the week of the date of this report: Pt.: $ n/a /Oz.; Pd.: $ n/a /Oz.; other group metal prices not available.

P. Reed

P. Reed, Assayer.

Northern Analytical Laboratories ltd.

FAX TRANSMISSION

TO: Lesley

FAX: _____

ATTN: _____

FROM: Gerald

DATE: _____

PAGES: _____ (NOT INCLUDING THIS PAGE)

Pete Rossbacher assayed the following

28103 0.400 oz/T

28130 0.008 oz/T (0.098 NAL)

~~28~~CL 009 0.440 oz/T 368 As ppm.

He is rechecking one more.

SH

APPENDIX B

ASSAY RESULTS

SECTION II
Cyanide Leach Fire Assay

ACCURASSAY LABORATORIES LTD.

P.O. BOX 426
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1
TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

Date: October 31 19 90

37025

Attn: Lesley C. Mortimer
Camille Berube
Box # 661
Casiar, British Columbia
V0C 1E0

Work Order # 900763
Project:

Cyanide Leach Assays

Cyanide Leach Fire Assay

Sample Numbers: Accurassay	Customer	Wt. of pulp(g	Gold Oz/T	Residue Oz/T	Total Assay Oz/T	% Rec.
228482	28102	309	0.071	0.0173	0.088	81
228483	28104	547	0.031	0.0141	0.045	69
228484	28109	536	0.007	0.0019	0.009	78
228485	28111	926	<0.004	0.0022	<0.004	--
228486	28112	178	0.010	0.0072	0.017	59
228487	28113	583	0.028	0.0132	0.041	68
228488	28114	375	0.053	0.0068	0.060	88
228489	28118A	390	0.058	0.0022	0.060	97
228490	28119	357	0.066	0.0021	0.068	97
228491	28124A	1073	0.004	0.0028	0.007	57
228492	28127A	945	0.027	0.0026	0.030	90
228493	28138	346	<0.004	0.0006	<0.004	--
228494	28142	392	<0.004	0.0006	<0.004	--
228495	28147A	809	<0.004	0.0005	<0.004	--
228495B	28147A	1191	<0.004	<0.0002	<0.004	--
228496	28149	1096	<0.004	0.0003	<0.004	--
228497	23654	1334	<0.004	0.0004	<0.004	--
228498	23656	545	0.035	0.0019	0.037	95
228499	23657A	1090	<0.004	0.0012	<0.004	--
228500	23659	679	<0.004	0.0004	<0.004	--
228501	23665A	438	<0.004	0.0004	<0.004	--
228502	23668	758	<0.004	0.0006	<0.004	--
228503	23670	372	<0.004	0.0541	0.054	--

CHARTERED CHEMICAL PROFESSION OF ONTARIO
G. Duncan
CHEMIST

Per: G. Duncan

ACCURASSAY LABORATORIES LTD.

P.O. BOX 426
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1
TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

Date: October 31 , 19 90

37026

Attn: Lesley C. Mortimer
Cammille Berube
Box # 661
Casiar, British Columbia
V0C 1E0

Work Order # 900763
Project:

Cyanide Leach Assays

Cyanide Leach Fire Assay

Sample Numbers: Accurassay	Customer	Wt. of pulp(g	Gold Oz/T	Residue Oz/T	Total Assay Oz/T	% Rec.
228504	23671	172	<0.004	0.0007	<0.004	--
228505	23673	128	<0.004	0.0005	<0.004	--
228506	23674	121	<0.004	0.0035	<0.004	--
228507	23675	134	<0.004	0.0007	<0.004	--
228508	23676	274	<0.004	0.0007	<0.004	--
228509	23680A	250	0.006	<0.0002	0.006	100
228510	23682	274	0.007	0.0007	0.008	88
228511	23683	246	<0.004	0.0005	<0.004	--
228512	23686	228	<0.004	0.0007	<0.004	--
228513	23687	226	<0.004	0.0004	<0.004	--
228514	23688	145	<0.004	0.0007	<0.004	--
228515	23689	244	<0.004	0.0006	<0.004	--
228516	23690	250	<0.004	0.0007	<0.004	--
228517	23691	297	<0.004	0.0008	<0.004	--
228518	23692	327	<0.004	0.0008	<0.004	--
228519	23693	139	<0.004	0.0008	<0.004	--
228520	CL031	246	<0.004	0.0011	<0.004	--
228521	CL034	233	<0.004	0.0085	<0.004	--
228522	CL035	181	<0.004	0.0009	<0.004	--
228523	CL043	692	<0.004	<0.0002	<0.004	--
228524	CL046	238	<0.004	<0.0002	<0.004	--
228525	CL048	526	<0.004	0.0369	0.037	--
228526	CL056	272	<0.004	0.0015	<0.004	--

CAL PROFESSION OF ONTARIO
RTERED
G. Duncan
CHEMIST

Per: G Duncan

ORIGINAL

ACCURASSAY LABORATORIES LTD.

P.O. BOX 426
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1
TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

Date: October 31 19 90

37027

Attn: Lesley C. Mortimer
Camille Berube
Box # 661
Casiar, British Columbia
V0C 1E0

Work Order # 900763
Project:

Cyanide Leach Assays

Cyanide Leach Fire Assay

Sample Numbers: Accurassay	Customer	Wt. of pulp(g	Gold Oz/T	Residue Oz/T	Total Assay Oz/T	% Rec.
228527	CL058	434	<0.004	<0.0002	<0.004	--
228528	CL058A	1572	<0.004	0.0006	<0.004	--
228528B	CL058A	1390	<0.004	0.0016	<0.004	--
228529	CL059	253	<0.004	0.0003	<0.004	--
228530	CL060	166	<0.004	0.0039	0.004	--
228531	CL061	1223	<0.004	0.0003	<0.004	--
228532	23684	334	<0.004	<0.0002	<0.004	--
228533	23685	366	0.006	0.0026	0.009	67
QCS		3511ug	3405ug	<0.0002	---	97

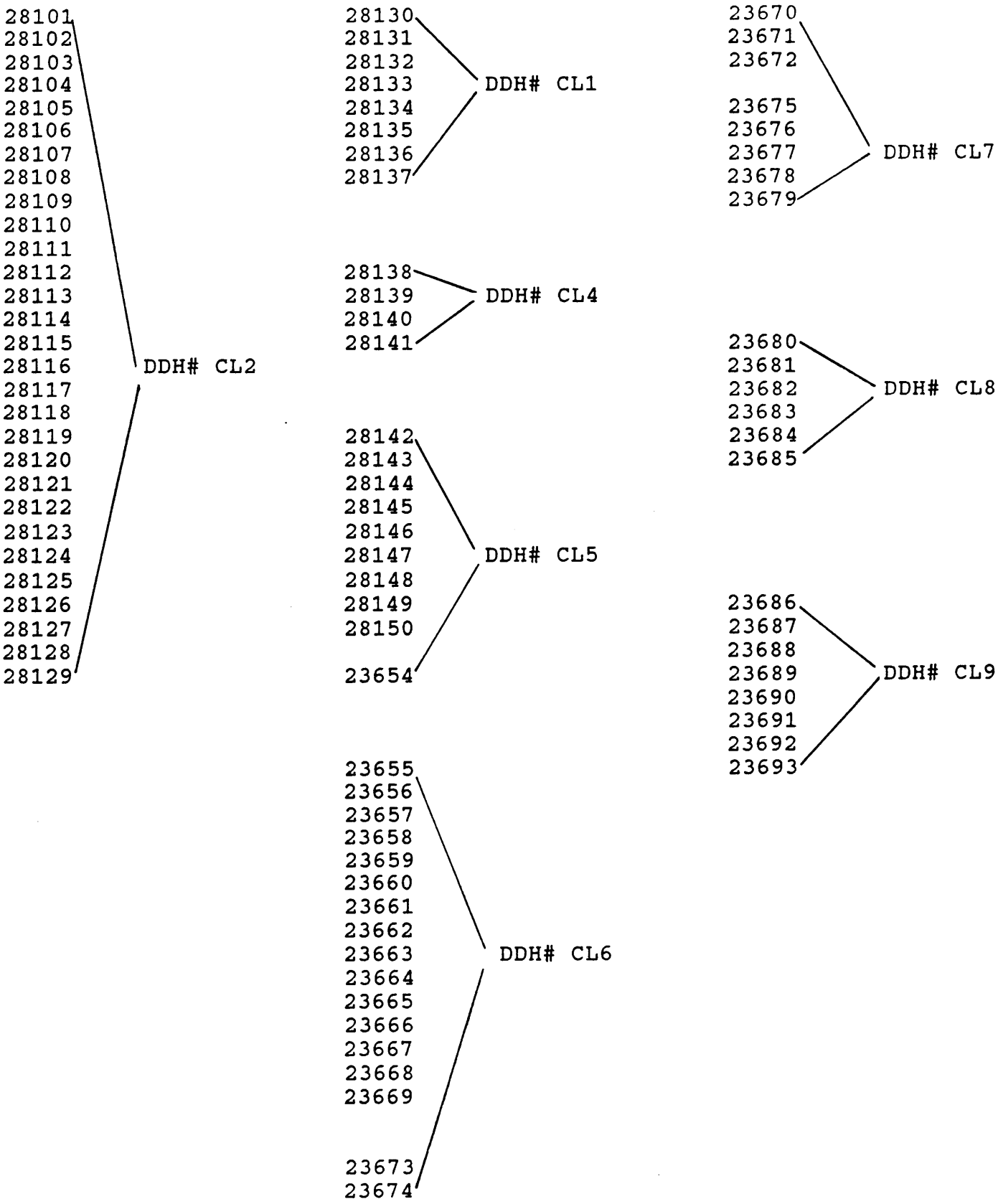
NOTE: Many of the samples appeared to be very rich in heavy metal concentrates which do not leach well in cyanide.
This would explain why a few of the residues are higher than the cyanide leaches, resulting in poor percent recoveries.

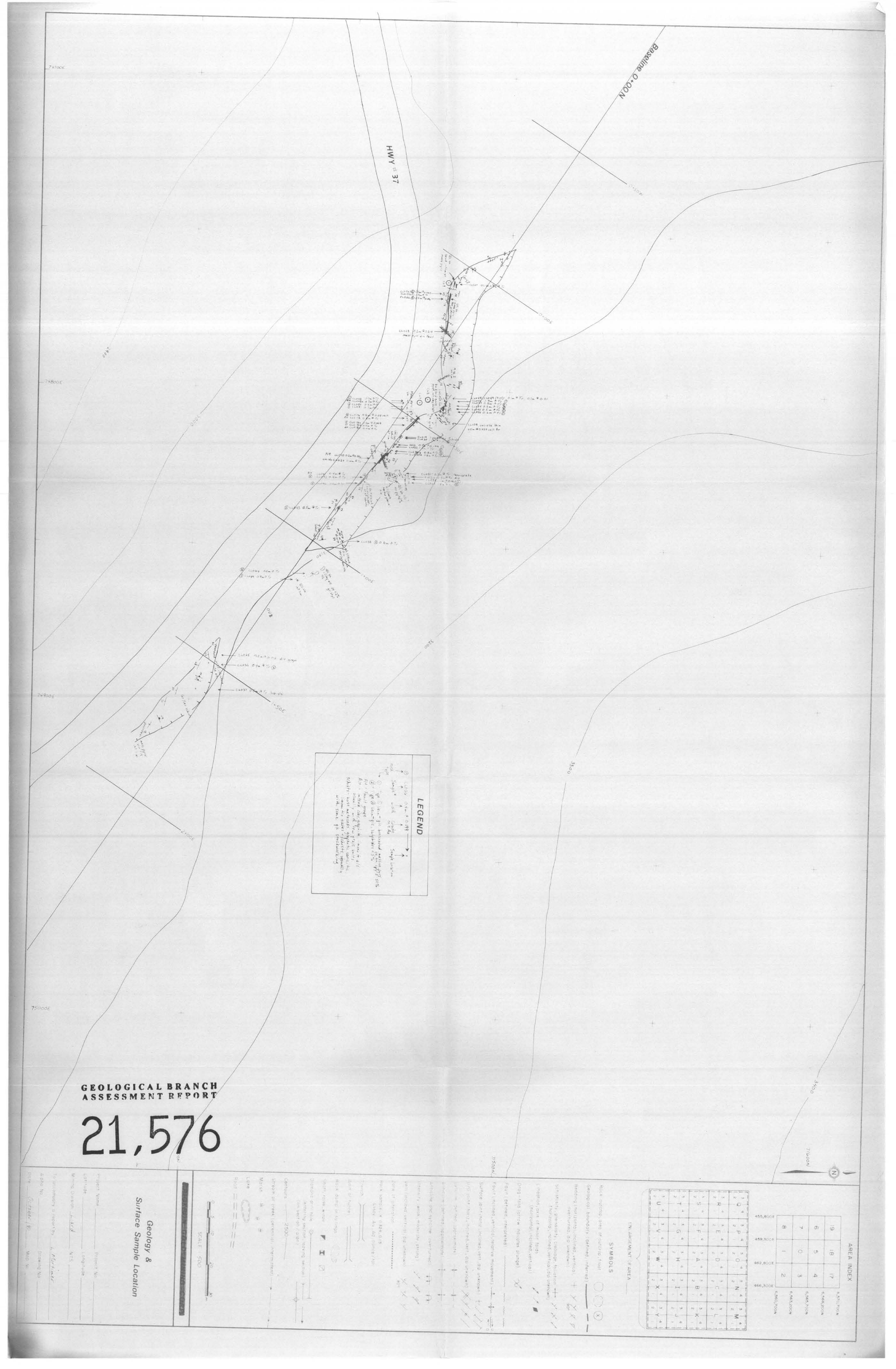
ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Dr. G. Duncan
CHEMIST

Per: G. Duncan

APPENDIX C

Numerical Sample List and Location




HWY 37
Bassline 0-00N
LEGEND
SCALE 1:500
AREA INDEX
GEOLOGICAL BRANCH
ASSESSMENT REPORT
21,576
Geology &
Surface Sample Location

AREA INDEX
SYMBOLS
ENLARGEMENT OF AREA
Flagged Post
HWY 37
BASELINE 0+00N
McDAME
RIVER
7+00E
7+50E
8+00E
8+50E
9+00E
9+50E
3000
2900
2800
2700
71000N
70900N
70800
70700N
GEOLOGICAL BRANCH
ASSESSMENT REPORT
21,576
SCALE 1:1000
[redacted]
Diamond Drill Collar
Location
Project Name
Project No
Latitude
Longitude
Mining Division Liard
NTS
To accompany a report by L.C. MORTIMER
Alpha No
Drawing No
Date OCTOBER/90
Map No


AREA INDEX
SYMBOLS
BASELINE 0+00N
STEWART CASSIAR HWY 37
McDAME CREEK
87C 354
3400
3300
3200
3100
3000
2900
2800
GEOLOGICAL BRANCH
ASSESSMENT REPORT
21,576
[redacted]
DIAMOND DRILL COLLAR
LOCATION
Mining Division Liard
To accompany a report by L. Mortimer
SCALE 1:1,000