

COMINCO LTD.

EXPLORATION

NTS: 82F/10W

6247 WESTERN DISTRICT

DIAMOND DRILLING

CRAW GROUP

SLOCAN M.D., B.C.

WORK PERFORMED: APRIL, 1977

LATITUDE: 49°38'N LONGITUDE: 116°51'W

LOCATION OF DIAMOND DRILL HOLES

D.D.H. C77-1	Mineral Claim	CRAW 16
D.D.H. C77-2		CRAW 16
D.D.H. C77-3		CRAW 29
D.D.H. C77-4		CRAW 29

A.B. MAWER

<p>MINERAL RESOURCES BRANCH ASSESSMENT REPORT</p> <p>NO. _____</p>
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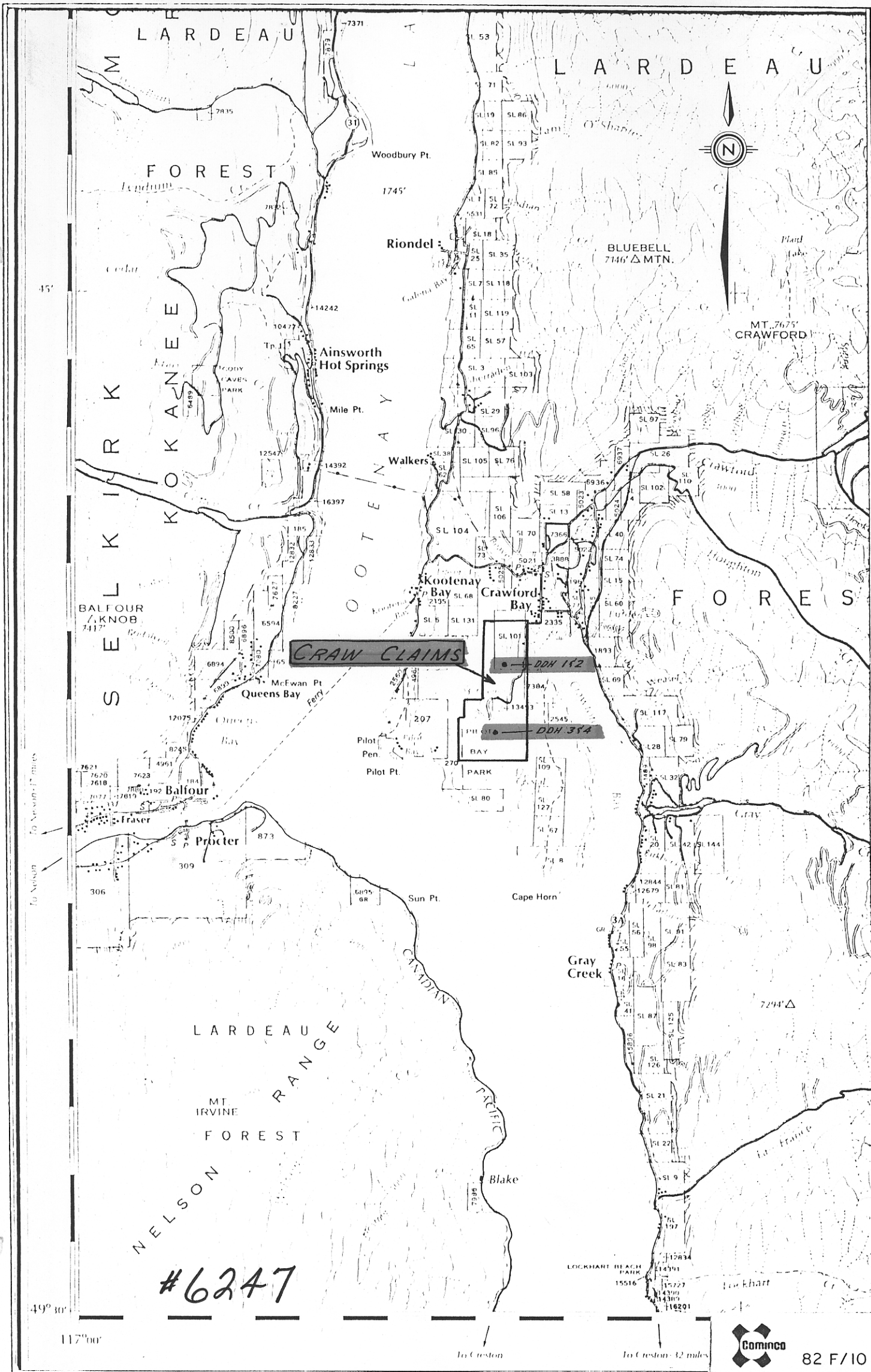
Diamond Drill Hole Map - 1"= 1,000'

Statement of Qualification

Cost Statement

Drill Core Logs - D.D.H. C77- 1-4

20 April 1977



82 F/10

Drawn by		Traced by:	
Revised by	Date	Revised by	Date

CRAW CLAIMS - LOCATION MAP

Scale: 1:125,000

Date: APRIL, 1977

Plate

49° 40'



0 1000
Feet

CRAW 6
213526 M

CRAW 4
213524 M

CRAW 2
213522 M

CRAW 5
213525 M

CRAW 3
213523 M

CRAW 1
213521 M

CRAW 8
213527 M

CRAW 10
213529 M

CRAW 12
213531 M

CRAW 7
213528 M

CRAW 9
213530 M

CRAW 11
213532 M

CRAW 18
213533 M

CRAW 16
213518 M

CRAW 14
213519 M

CRAW 19
213535 M

CRAW 17
213534 M

CRAW 15
213516 M

CRAW 13
213517 M

CRAW 20
213505 M

CRAW 21
213506 M

CRAW 29
213514 M

CRAW 30
213515 M

CRAW 22
213507 M

CRAW 23
213508 M

CRAW 27
213512 M

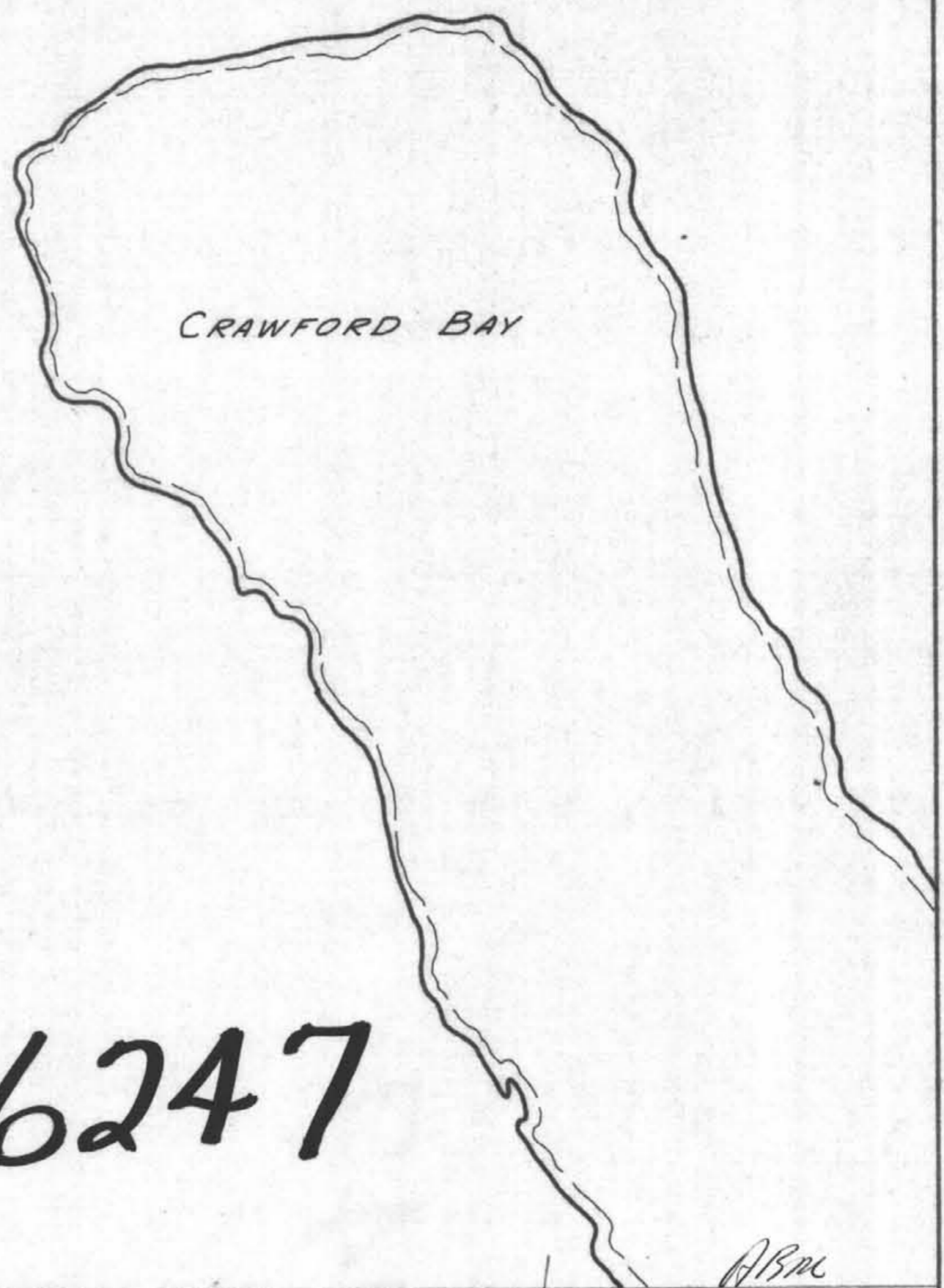
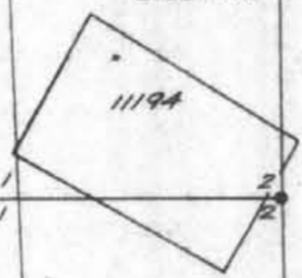
CRAW 28
213513 M

CRAW 31
213520 M

CRAW 24
213509 M

CRAW 25
213511 M

CRAW 26
213510 M



6247

ABM

CRAW GROUP



Drawn by:	Traced by: <i>f.m.d.</i>
Revised by:	Revised by:
Date:	Date:

DIAMOND DRILLING - 1977

Scale: 1" = 1000' Date: APRIL, 1977 Plate:

COMINCO LTD.

EXPLORATION

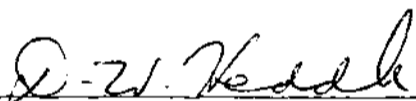
WESTERN DISTRICT
20 APRIL 1977

STATEMENT OF QUALIFICATION

I. D.W. Heddle, Assistant Manager for Cominco Ltd., Exploration, Western District, of 200 Granville Square, Vancouver, British Columbia, hereby declare that Mr. A. B. Mawer has examined the core and written the logs for diamond drill holes C77 1-4 of the Craw Property, Slocan M.D., British Columbia.

Mr. Mawer, Senior Geologist, has been working for Cominco Ltd. in mineral exploration for the past 25 years.

I consider him to be a competent geologist who is well qualified to perform work described in this assessment work report.



D. W. Heddle, P.Eng.
Assistant Manager, Exploration
Western District

ABM.

LOGAN DIAMOND DRILLING CO. LTD.

~~SENSON LAKE, FORT ARCHER, B.C.~~

BOX 10, SALMO, B.C. VOG IZO

April 18, 1977.

COMINCO EXPLORATION LTD.
200 GRANVILLE SQUARE
VANCOUVER, B.C. V6C 2R2.

RE: CRAW GROUP

FOOTAGE DRILLED APRIL 4th to APRIL 15th, 1977.

A.Q.CORE,

CRAW GROUP

<u>HOLE NO.</u>	<u>DEGREE</u>	<u>OVERBURDEN</u>	<u>FOOTAGE DRILLED</u>
1.	-45	42 feet	225 feet
2.	-45	38 "	268 "
3.	-45	7 "	250 "
4.	-45	8 "	259 "
			<u>1002 feet</u>

SUMMARY OF CHARGES

1002 feet A.Q.Core drilling @ 11.50 per.ft. = 11,523.00
 Mobilization and Demobilization = 1,000.00
 13 hours(2 extra moves) @ 36.00 per hr. = 468.00
 40 A.Q.Core boxes @ 3.50 each = 140.00
Total Charges 13,131.00

Drill Hole Record



Property	CRAW	District	Lardeau	Hole No.	C77-1
Commenced	April 4, 1977	Location	N.E. of claim C16	Tests at	Hor. Comp. 153.44'
Completed	April 7, 1977	Core Size	AQ	Corr. Dip	-47° Vert. Comp. 164.55'
Co-ordinates				True Brg.	080° Logged by A.B. Mawer
Objective	To test geochemical and coincident geophysical anomalies			% Recov.	95% Date April 12, 1977

Claim	C16
T Brg.	080°
Collar Dip	-47°
Elev.	2170'
Length	225'
Hole No.	C77-1
Sheet	

Footage From	To	Description	Sample No.	Length	Analysis
0-42		Overburden - casing			
42.0-56.0		Gneiss:(Meta Siltite and fine grained quartzite) Light to dark grey, very fine crystalline, finely laminated, in part calcareous and with calc-silicate minerals (diopside-sphene) phlogopite rich sections. Disseminated euhedral pyrite, pyrrhotite and graphite in varying amounts			
		@46.0-48.0 Very fine crystalline graphitic siltite-disseminated euhedral pyrite			
		Banding @ 080° to core axis.			
56.0-123.0		Marble: white, very coarse crystalline, phlogopite occurring in thin bands up to 1 cm in thickness these bands also contain minor disseminated pyrrhotite			
		@71.0' and @ 72.0' up to 15 cm of fine crystalline aplite with disseminated pyrrhotite			
		@80.5 - 82.0' Dolomitic section			
		@112.0' - 113.0 Fine crystalline aplite with quartz and disseminated pyrrhotite			
123.0-130.0		Siltite: Black, fine laminated, abundant graphite and disseminated pyrrhotite, pyrite with traces of chalcopyrite. Few fine quartz veinlets. Laminations @ 080° to core axis			
		@ 123.0-124.0 Slightly calcareous			
		@ 127.0' A slip marked by coarse graphite			
130.0-177.0		Gneiss:(Meta Quartzite); light green and light grey to brownish. Thin laminated, in part calcareous. Calc-silicate and phlogopite rich sections.			
		@ 155.0 - 156.0 White quartz vein with graphitic slips			
		@ 148.0 minor sphene			
177.0-185.0		Quartzite: grey medium grained, thin banded, contains disseminated pyrrhotite and graphite			

1-15/100

Scale

Colour Plot
& Dips

Drill Hole Record



Property	CRAW	District	Lardeau	Hole No.	C77-1
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.		Logged by	
Objective		% Recov.		Date	

Claim	
T Brg.	
Collar Dip	
Elev.	
Length	
Hole No.	C77-1
Sheet	

Footage		Description	Sample No.	Length	Analysis					
From	To									
185.0	224.0	Gneiss: Biotite-quartz gneiss, thin banded with quartz lenticules and thin bands								
		@189-189.5 Banded pyrrhotite with little chalcopyrite								
		@194.0-195.5 Pegmatite coarse crystalline								
		@197.0-197.5 Abundant pink garnets								
		@197.0-224.0 A scattering of pink garnets up to 4 mm diameter								
		@200.0-201.0 Pegmatite, coarse crystalline with a few small pink garnets								
224.0	225.0	Quartzite: light grey to light green, fine grained, thin banded in part containing calc-silicate (diopside)								
		END OF HOLE								

HB

Drill Hole Record



Property	CRAW	District	Lardeau	Hole No.	C77-2
Commenced	April 8, 1977	Location	N.E. area of claim C-16	Tests at	Hor. Comp. 189.50
Completed	April 10, 1977	Core Size	AQ	Corr. Dip	-45°
Co-ordinates		True Brg.	020°	Logged by	A.B. Mawer
Objective	Test geochemical and coincident geophysical anomalies			% Recov.	95%
				Date	April 1977

Claim
C16T Brg.
020°Collar Dip
-45°Elev.
2170'Length
268'Hole No. C77-2
Sheet 1

Footage From To	Description	Sample No.	Length	Analysis
0-38.0	Overburden - casing			
38.0-79.0	Gneiss: (quartzite and siltite) light grey to light green with dark grey to black sections. Thin banded to laminated, in part calcareous			
	@42.0-43.0 Siltite black, abundant graphite, disseminated pyrrhotite and pyrite			
	@48.0-49.0 Siltite - black graphitic - disseminated pyrrhotite and pyrite			
	@55.5-56.0 Aplite-fine crystalline, with disseminated pyrrhotite and traces of chalcopyrite			
	@66.0-68.0 Siltite, black graphitic			
	@68.0-68.2 Marble, light grey coarse crystalline			
	@62.0-63.0 Brown biotite rich section			Banding @ 045° to core axis
79.0-162.0	Marble: white, coarse crystalline, massive, few thin bands of disseminated pyrrhotite and pyrite			
	@109.5-110.5 Aplite: fine crystalline some disseminated pyrrhotite			
	@111.0-112.0 Brecciated marble minor development of talc			
162.0-168.0	Siltite: Black very fine grained, very graphitic, finely laminated, with disseminated pyrrhotite and pyrite			
	@162.0-163.0 Brecciated and fault gouge disseminate fine euhedral pyrite			
168.0-251.0	Gneiss: Quartz and calc-silicates (diopside-sphene) minor biotite, thin banded			
				Banded @ 040° to core axis
	@202.0-203.5 Dark brown biotite-quartz gneiss			
	@206.0-207.0 Pink garnets with alteration rims			
251.0-252.5	Quartz-Pyrrhotite: medium grained, 25-30% pyrrhotite, traces of chalcopyrite			

A.B.M.

Drill Hole Record



Property	CRAW	District	Lardeau	Hole No.	C77-3
Commenced	April 11, 1977	Location	S.E. C-29	Tests at	Hor. Comp.
Completed	April 13, 1977	Core Size	AQ	Corr. Dip	-45°
Co-ordinates		True Brg.	090°	Logged by	A.B. Mawer
Objective	To test geochemical and coincident geophysical anomalies			% Recov.	85%
				Date	April 13, 1977

Footage From To	Description	Sample No.	Length	Analysis			
				Claim	T Brg.	Collar Dip	Elev.
0-46.5	Gneiss (In part fine grained quartzite): light green to light grey, thin banded, 1-2% disseminated fine pyrrhotite, 1-4% fine graphite, 5% disseminated calc-silicates (diopside-sphene). The core is very broken and partly oxidized @ 29.0 to 31.0' Fault breccia @ 22.0 to 22.1' Bedded aplite stringer @ 26.8 to 26.9' Aplite fine crystalline-disseminated pyrrhotite @ 46.0 to 46.5' Siltite-black, abundant graphite Banding @ 080° to core axis			C29	090°	45°	2820
46.5-61.0	Marble: White coarse crystalline, well fractured, thin bands rich in disseminated pyrrhotite and graphite, random distribution of tiny euhedral pyrite, phlogopite rich bands up to 2 mm thick. @50.0-52.0 brecciated marble-fault breccia, few calcite filled vugs						
61.0-64.0	Intrusive: Feldspar-quartz porphyry, fractured and stained with limonite.						
64.0-85.0	Marble: White coarse crystalline massive (no apparent bedding)						
85.0-86.0	Aplite: Very fine crystalline, white some creamy alteration						

AB/12/1

Drill Hole Record



Property	CRAW	District	Hole No.	C77-3
Commenced		Location	Tests at	Hor. Comp.
Completed		Core Size	Corr. Dip	Vert. Comp.
Co-ordinates			True Brg.	Logged by
Objective			% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. 2
Sheet 2

Footage		Description	Sample No.	Length	Analysis					
From	To									
86.0	96.0	Gneiss: (Siltite-Quartzite) light grey with dark grey to black sections a few interbands of medium crystalline calc-silicate (diopside-sphene); 1-2% disseminated pyrrhotite, 3-4% graphite @ 87.0 to 92.0' abundant thin laminations of pyrite and graphite								
96.0	171.0	Gneiss: Quartz, calc-silicates (diopside, minor sphene) Banding @ 070° to core axis scattered fine fractures with pyrite @106.0'-106.5' Fault breccia @115.0'-116.0' Aplite light green @117.0'-118.0' Aplite light green @125.0'-126.0' Siltite graphitic-pyritic, with traces of dark brown sphalerite @132.0'-139.0' Several barren white quartz veins @142.0'-149.0' Siltite, very graphitic with fine bands of lenticular pyrite; thin quartz stringers with traces of dark brown sphalerite @150' banding @080° to core axis @157' banding @045° to core axis @171' banding @045° to core axis @157.0 and 162.0 and 163.0 5 to 10 cm white barren quartz veins								
171.0	197.0	Siltite: Black, very graphitic very fine grained, 2-3% disseminated pyrite, traces of red brown sphalerite, core is well broken								

Drill Hole Record



Property	CRAW	District	Hole No.	C77-3
Commenced		Location	Tests at	Hor. Comp.
Completed		Core Size	Corr. Dip	Vert. Comp.
Co-ordinates			True Brg.	Logged by
Objective			% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. C77-3 Sheet 3

Footage From To	Description	Sample No.	Length	Analysis					
197.0-200.0	Gneiss: Quartz-calc-silicate, light green, medium crystalline thin banded with 2-3% disseminated graphite and pyrrhotite								
200.0-201.0	Siltite: Black, very fine grained, very graphitic, disseminated pyrite traces of red brown sphalerite								
201.0-211.0	Gneiss: Quartz-calc-silicate, light green-grey in part calcareous thin banded Banding @ 050° to core axis.								
211.0-215.0	Gneiss: Biotite-quartz-calc-silicate medium crystalline, thin banded								
215.0-227.0	Gneiss: Amphibolite-quartz, very dark green, medium crystalline medium banded, scattered small pink garnets								
227.0-250.0	Intrusive: light green-grey, medium to coarse crystalline feldspar-quartz foliated porphyritic texture, few pink garnets, core is very broken								
	END OF HOLE								

ABM

Drill Hole Record



Property	CRAW	District	Lardeau	Hole No.	C77-4
Commenced	April 13, 1977	Location	S.E. area of C-29	Tests at	Hor. Comp. 183.14'
Completed		Core Size	AQ	Corr. Dip	-45° Vert. Comp. 183.14'
Co-ordinates				True Brg.	150° Logged by A.B. Mawer
Objective	To test soil geochemical and coincident geophysical anomalies			% Recov.	85% Date April 14, 1977

Claim C29

T Brg. 150°

Collar Dip -45°

Elev. 2820'

Length 259'

Hole No. Sheet

Footage From To	Description	Sample No.	Length	Analysis
0-8.0	Overburden - casing			
8.0-21.0	Siltite: Interbedded calc-silicate gneiss, all partly graphitic with disseminated pyrite. The core is broken and ground			
21.0-48.0	Gneiss: Quartz-calc-silicate, light green to light brown, bands rich in biotite are brown coloured; the calc-silicate sections are in part calcareous with a few small pink garnets 1-2 mm in diameter @27.0-27.5' white Aplite @35.5-36.0 Aplite			
48.0-49.0	Siltite: Black very graphitic, foliated to almost schistose, few thin quartz stringers, disseminated pyrite Banding @ 070° to core axis			
49.0-83.5	Marble: white very coarse crystalline, massive, a few thin bands rich in phlogopite with minor pyrrhotite			
83.5-90.0	Siltite: dark grey fine crystalline, thin laminated abundant graphite disseminated pyrite; few small sphene crystals			
90.0-113.0	Gneiss: quartz-calc-silicate light green-grey light brown biotite rich sections. Thin banded to laminated few interbands of graphitic pyritic siltite. Banding @ 080° to core axis			

ABM-

Drill Hole Record



Property CRAW District Lardeau Hole No. C77-4

Commenced Location Tests at Hor. Comp.

Completed Core Size Corr. Dip Vert. Comp.

Co-ordinates True Brg. Logged by

Objective % Recov. Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. Sheet

Footage From To	Description	Sample No.	Length	Analysis					
113.0-118.0	Siltite: Black, very fine grained, thin laminated, disseminated pyrite traces of red brown sphalerite								
118.0-129.0	Gneiss: Quartz-calc-silicate, light green in part calcareous, thin banded.								
129.0-129.5	Siltite: Black fine crystalline, graphitic and pyritic with traces of red brown sphalerite								
129.5-132.0	Gneiss: Quartz-calc-silicate: light green, thin laminated few interbands of black graphitic-pyritic siltite with traces of red brown sphalerite								
132.0-134.5	Siltite: Black, fine crystalline, graphitic and pyritic, traces of red brown sphalerite Banding @ 080° to core axis								
134.5-138.0	Gneiss: Quartz-calc-silicate, light green in part calcareous thin banded Banding @ 080° to core axis								
138.0-153.0	Siltite: Black, fine crystalline, thin laminated, graphitic and pyritic with trace of red brown sphalerite @138.5-139.5 Barren white quartz vein @144.0-153.0 Core loss @ 60% From 138.0-153.0 core loss is approximately 50%								

H.B. Mc

Drill Hole Record



Property	CRAW	District	Lardeau	Hole No.	C77-4
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. C77-4
Sheet 3

Footage From To	Description	Sample No.	Length	Analysis
153.0-179.0	Gneiss: Quartz-calc-silicate, light green with dark green laminations, fine crystalline, little disseminated euhedral pyrite. At contact there is an abrupt change in banding attitude to 045° @166' to 174' Banding is parallel to core axis			
179.0-185.5	Siltite: Black fine crystalline thin laminated, graphitic and pyritic with trace of red brown sphalerite, few white quartz stringers @ 179.0-185.5 core loss @ 40% Banding @ 070° to core axis			
185.5-221.5	Intrusive: Quartz feldspar porphyry, medium crystalline, light green-grey, a few scattered small 1-2 mm diameter pink garnets. The porphyry is well fractured with pyrite films, a few quartz veins with chlorite and pyrrhotite			
221.5-224.0	Gneiss: (Brown) Biotite-quartz fine laminated medium crystalline			
224.0-241.0	Gneiss: Interbanded, quartz-calc-silicate and brown biotite rich quartz gneiss, medium crystalline, thin banded			
241.0-259.0	Gneiss: (Brown)-Biotite-quartz, medium crystalline, few interbands of white quartz with large knots of coarse crystalline diopside, a few scattered pink garnets up to 2 mm diameter, some garnets with alteration rims; minor calcareous sections. Banding @ 050° to core axis @241-251' 40% core loss			
	END OF HOLE			

ABM