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COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

DIAMOND DRILLING REPORT

REDMAC PROPERTY
GOLDEN MINING DIVISION
MCDONALD CREEK AREA
N.T.S. 82K/8 & 9

LAT: 50° 30' N

**GEOLOGICAL BRANCH
ASSESSMENT REPORT** 27' W

14,114

OWNER

V. WINSER AND V. BOSTOCK
INVERMERE, B.C.

WORK PERFORMED DURING AUGUST 1985

REPORT BY:

D.H. ADAMS
GEOLOGIST
COMINCO LTD.

UNDER THE SUPERVISION OF:

A.B. MAWER
SENIOR GEOLOGIST
COMINCO LTD.

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COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

DIAMOND DRILLING REPORT

REDMAC PROPERTY

Golden Mining Division

1.00 INTRODUCTION

1.10 General

The Redmac property, consisting of 74 claim units in twenty claim blocks, was originally staked by the present owners to cover showings of galena and sphalerite within outcrop and boulders along a ridge between Redline and McDonald Creeks (Fig. 1).

Cominco Ltd. optioned the property in 1980/81 and carried out an extensive grid soil sampling and geological mapping programme on it in 1981 (K. Carter, 1982).

The property was subsequently dropped in 1982 but was reoptioned by Cominco Ltd. in 1984. 1.6 kilometers of access road was constructed in the fall of 1984 and an additional 2.4 kilometers of access road plus some trenching and drill site construction was done in the summer of 1985.

Five NQ size diamond drill holes with a total meterage of 566.3 meters was drilled by Longyear Canada Inc. for Cominco Ltd. during the period August 13th to 27th of 1985. Only sub-economic grades and widths of mineralization were encountered in this drilling.

1.20 Ownership

The registered owners of the Redmac property are:

Val Winser
Box 366,
Invermere, B.C.
VOK 1K0

and

Verne A. Bostock
Box 282,
Invermere, B.C.
VOK 1K0

Cominco Ltd. is the current operator of the property. Their address is:

Cominco Ltd.
Western District Exploration
2300 - 200 Granville Street,
Vancouver, B.C. V6C 2R2

1.30 Location and Access

The property is located approximately thirty kilometers west of Invermere, B.C. in the Purcell Mountains (Figure 1). Access is along the Horsethief Creek logging road from Radium, B.C. (or Westside Road to Horsethief Creek road from Invermere) and up the McDonald Creek road. While these are considered all weather roads, actual access up the McDonald Creek road is limited to the period of late spring to early fall due to snow conditions. Elevations in the McDonald Creek area range from 1500 to 3500 meters with the drill holes between 1900 and 2200 meters (Figure 2).

2.00 DIAMOND DRILLING

2.10 Purpose and Procedure

The purpose of the drilling was to determine whether the Pb and Zn grades and thicknesses would improve down-dip from that observed in outcrop from the 1981 work done by Cominco Ltd. (K. Carter, 1982). Accordingly, five drill sites were constructed at intervals of approximately 200 to 250 meters apart down the strike of the mineralized outcrop and approximately 35 to 100 meters back from the outcrop (Figure 2).

A D6C Cat was used to move the Longyear 38 drill from site to site. All survey work associated with the drilling was done with a Brunton compass and a 50 meter chain. Azimuths of the individual holes (see logs attached) ranged from 48° to 55° and the dip was 60° for all holes. The first hole drilled had an acid dip test run at final total depth and proved to be right on 60° .

NQ wireline core was drilled throughout the entire programme. Core was transported to a temporary core logging facility on the property where it was both logged and split for assay samples. A diamond saw was used to split the core for assaying. Rock geochemistry samples were taken from portions of three holes (approximately one centimeter thick samples every 0.7 meters over a 6.0 meter interval). These were sent to Cominco Ltd.'s Vancouver exploration laboratory for analysis along with the assay samples. Pulps of assay samples exceeding the rock geochem calibration limit were assayed in a regular manner after the initial analyses.

The core was transported to Val Winser's shop (Winser Timber Ltd.) near Invermere, B.C., for permanent storage after logging.

2.20 Drilling Results

Mineralization was encountered in all five holes (see logs attached) within fractured and dolomitized zones in what is now thought to be a Middle Devonian carbonate unit overlying the Upper Proterozoic Horsethief Creek Group carbonaceous shales and quartz pebble conglomerates (Root, 1984). The results of the rock geochemistry of the split intervals are shown in drill logs attached.

Hole RM-85-1 encountered 9.4 meters of volcanics at the top of hole, underlain by 40.8 meters of thin to thick bedded argillites and quartzites (calcareous in part). These were in turn underlain by 14.8 meters of calcareous siltites and argillites with minor quartzitic sandstone beds. A 37.9 meter carbonate interval of interbedded limestone and dolostone, with a variable argillite and arenaceous content, underlay the calcareous argillites. This carbonate unit contains several brecciated dolostone intervals cemented by quartz, dolspar and calspar. A few of these intervals had vein fillings and disseminated concentrations of galena, sphalerite and pyrite (see logs attached), especially near the top of the carbonates. The carbonate unit was underlain by 19.8 meters of black carbonaceous and graphitic shale in turn underlain by 2.3 meters of quartz pebble to boulder conglomerate in which the hole ended.

The other four holes encountered the same sequences as hole RM-85-1 with only minor differences in thicknesses (see logs attached). Mineralization varied from only traces within portions of holes RM-85-3 and RM-85-5 to sub-economic grades of 0.2 to 1.0% Pb and 0.3 to 5.0% Zn in holes RM-85-1, RM-85-2 and RM-85-4. The highest grade mineralization was 7.0% Pb and 4.1% Zn over 0.2 meters in hole RM-85-4.

3.00 CONCLUSIONS

While mineralization was encountered in all five diamond drill holes, the grade and widths were not of economic value. Some further testing of the carbonate hosted mineralization could be done by additional drill holes to the south of the current drilling.

EXHIBIT "A"
STATEMENT OF EXPENDITURES
REDMAC PROPERTY
Golden Mining Division

Diamond Drilling - Direct

Longyear Canada Inc., 721 Aldford Avenue
Annacis Industrial Estate, New Westminster, B.C.
V3M 5P5 \$ 50,033.72

Diamond Drilling - Indirect

Salaries

D. Adams - Geologist - 18 days; core logging
and 14 days; report writing
Total = 32 days @\$207/day 6,624.00

C. Schultze - Geological Field Assistant -
geochem sampling etc. - 4 days @ \$90/day 360.00

Drill Moves and Site Preparation

Winser Timber Ltd., Box 366, Invermere, B.C. 3,075.00
VOK 1K0

Other Associated Costs:

Domicile - Trailer Rental - 1 mo. @ \$300/mo. 300.00
Daily general expenses - groceries, motel 461.00
Transportation - 1 Truck (4x4) @ \$300/month 300.00
- Fuel and oil 225.50
- 1 Truck (4x4) 4 days @ \$40/day 160.00
Equipment and Supplies 214.98
Communications 16.40

Geochemistry

62 samples x 4 element by AA method (Cominco
Ltd. Exploration Lab., Vancouver, B.C.). 600.00

Total Expenditures = \$62,370.60

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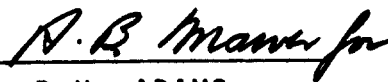
EXPLORATION

WESTERN DISTRICT

AUTHOR'S QUALIFICATIONS

I, David H. Adams, of the City of Calgary, in the Province of Alberta, hereby certify:

1. That I am a geologist residing at 271 Queensland Circle, S.E., Calgary, Alberta with a business address at #426, 10333 Southport Road, S.W., Calgary, Alberta.
2. That I graduated with a diploma in Exploration Technology from the Northern Alberta Institute of Technology in 1968.
3. That I have practiced geology with Cominco Ltd. for the past thirteen years and with Imperial Oil four years previously.



D.H. ADAMS
Geologist

STATEMENT OF QUALIFICATIONS

I, A.B. MAWER, SENIOR GEOLOGIST WITH BUSINESS ADDRESS IN VANCOUVER, BRITISH COLUMBIA AND RESIDENTIAL ADDRESS IN NORTH VANCOUVER, BRITISH COLUMBIA HEREBY CERTIFY THAT:

1. From 1944 to the present, I have been actively engaged as a prospector and geologist in mineral exploration.
2. I am a Fellow of the Geological Association of Canada.
3. I am a member of the Canadian Institute of Mining and Metallurgy.



A.B. MAWER, Senior Geologist

December 10, 1985

Report by: AB. Adams
D.H. ADAMS
Geologist

Endorsed by: A. B. Mawer
A.B. MAWER
Senior Geologist

Approved by: John Hamilton
J.M. HAMILTON
Manager
Exploration

xc: Mining Recorder (2 copies) ✓
Western District, Exploration
Kootenay Exploration

Scale
Colour Plot
& Dip

Drill Hole Record



Property	Redmac	District	Golden	Hole No.	RM85-01		
Commenced	August 16, 1985	Location	Redmac 24 claim	Tests at	Hor. Comp.		
Completed	August 18, 1985	Core Size	NQ	Corr. Dip	-60°		
Co-ordinates	50° 30'N and 116° 27'W		True Brg.	55°	Logged by	D.H. Adams	
Objective				% Recov.	98.2%	Date	August 21, 1985

Claim
T Brg.
Collar Dip
Elev. 2200.0m
Length 126.8m
Hole No.

Footage From To	Description	Sample No.	Length	Analysis			
				Pb ppm	Zn ppm	Ag ppm	Fe %
0 - 1.5m	Overburden.						
1.5 - 1.8m	Dolomitic quartzite. Orange with minor green and white. Mottled. Heavily veined with white quartz veinlets and clear calcite veinlets - some with green sericitic partings. Bedding 60° to core axis defined by minor green sericitic partings. Veining @ - 45° to core axis and displaced across sericitic partings slightly. May be boulder within overburden.						
1.8 - 11.2m	Volcanics. Medium to dark green with minor white and orange. Foliated green chloritic (?) minerals (≈ 90%), 6% white calcite - mainly as veining thru-out plus as amygdules in top 1.0m and basa. 1.2m. Orange quartz veins ≈ 4%. Some yellow fine-medium grained mineral speckled throughout much of interval. Disseminated pyrite with minor to rare pyrrhotite. Foliation ≈ 50° - 60° (58° @ 3.3m, 50° @ 9.5m) to core axis. Veining varies from ≈ 80° - 30° to core axis (0.1 - 3cm thick). Purple fluorite within calcite veining @ ≈ 6.1 and 6.8m.						
11.2 - 19.6m	Limy quartzites and limy argillites interbedded. White to orange and red brown quartzite - fine to medium grained with calcite in matrix - quartzites thin to medium bedded. Green argillites are thin bedded and have much interstitial calcite. Some deformed chert pebbles in quartzite @ ≈ 17.1 - 17.4m. Heavily oxidized (with orange/red staining) grit with common quartz cobbles @ 18.4 - 19.0m. Bedding @ 60° - 75° to core axis. Common calcite veins (0.1 - 0.5cm thick) and veinlets thru-out. Some pyrite veining @ 17.6 - 17.8m. (Bedding 60° @ 12m, 70° - 72° @ 14.2m, 70° - 75° @ 17.5m).						

211-44

Scale
Colour Plot
& Dip

Drill Hole Record



Property		District		Hole No.	RM85-01
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

Footage From To	Description	Sample No.	Length	Analysis			
				Pb ppm	Zn ppm	Ag ppm	Fe %
19.6 - 45.0m	Much as above except less limy. Component but for a few minor 0.1 - 0.3m interbeds within argillites and that the quartzites are predominantly massive bedded. Predominantly pure quartzite (98%) @ 26.5 - 31.1m and 37.2 - 42.5m. Green argillites have much silty - fine grained sandstone going to quartzite in places. Minor coarse grained sandstone to grit component in places in both quartzites and argillite. Scattered small blebs and disseminations of pyrite and rare pyrrhotite in interval (especially @ 36.8 - 37.2m). Wide calcite vein @ 35.6 - 35.8m. Minor calcite veining thru-out. Wide quartz vein @ 26.5 - 26.7m. Bedding 65° - 70° @ 24.7m, 65° @ 25.5m, 68° - 70° @ 34.3m, 62° - 65° @ 36.3m. Fine grained and banded thin bedded quartzite with common pyrite streaks from 42.6 - 45.0m. Grit with common small pebbles (quartz - angular) in bottom of interval.						
45.0 - 52.0m	Calcareous to dolomitic quartzite with minor argillite interbeds. Greenish white and green. Thin to medium bedded. Fine grained mainly with thin interbeds of green argillite. Several interbeds of angular grit to small and medium pebble conglomerate @ 45.4 - 47.5m, 49.1m, 49.5 - 49.9m. Minor quartz veining.						
52.0 - 58.9m	Calcareous siltite. Medium green to green brown @ top - reddish browns from 54.2m downwards. Silt to very fine grained (and minor fine grained) sandstone with limy matrix plus wispy argillaceous component. Somewhat lenticular texture developed in places with calcite lenses. Band of reddish brown calcareous fine - medium grained sandstone @ 54.2 - 55.1m and as minor thin interbeds from 55.1 - 58.9m.						

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Drill Hole Record



Property	District	Hole No.	RM85-01
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.
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Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
99.2 - 104.7m	Limestone. Interbedded medium grey (slightly bluish) calcite with medium green sericitic argillite ($\approx 10 - 15\%$). Calcite actually micro-crystalline dolomite from 99.2 - 99.7m then appears to be perpendicular (in relation to argillite) fibrous calcite mainly down to $\approx 104m$. From 104 - 104.7m grey calcite is dolomitic again plus interval has increasing amounts and thicknesses of black carbonaceous bands as in interval below. Common thin veins to veinlets ($< 0.2cm$ thick) of calcite and dolomite @ steep oblique angles to bedding in calcite and dolomite only thru-out interval. Minor pyrite speckles and small blebs thru-out. Contorted contact with unit below. Bedding $76^\circ - 77^\circ$ @ 99.7m and 101.6m but $52^\circ - 53^\circ$ to core axis @ 99.4m (folding).			ppm	ppm	ppm	%
104.7 - 124.5m	Carbonaceous and graphitic shale. Black and grey, laminated with dolomite and some siltstone. Graphitic thru-out much of interval from top down. Increasing siliceous content from $\approx 119.5m$ down with quartz grits to conglomerates as bands from $\approx 121.5m$ downwards. Abrupt sharp undulating basal contact marked by 0.15m of laminated pyritic siliceous material beneath quartz pebble conglomerate (pebbles 0.4 - 0.8cm). Minor small blebs and rare large bleb of pyrite thru-out. Bedding somewhat contorted (folded) @ upper contact and just above and below and within a rubbly zone (fault?) @ 115.8 - 116.6m. Bedding @ $\approx 80^\circ$ to core axis @ 105.8m, $78^\circ - 79^\circ$ @ 111.3m. Below suspected fault bedding @ $64^\circ - 65^\circ$ @ 118m, 63° @ 120.2m. Several small slips evident in core. Bands of white quartz with creamy white dolomite clasts @ 115.7m ($\approx 5cm$), 122.9 - 123.3m, 109.6 (3cm), 116.5m (5cm).						

811-9437

Drill Hole Record



Property	District	Hole No.	RM85-01
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.
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Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
124.5 - 126.8m	Quartzite - massive bedded - vague pebbles to cobbles and possibly boulders welded tight. Slight greenish cast plus has common blebs of pyrite and marcasite (?), 0.15m of pyritic siliceous material @ top.			ppm	ppm	ppm	%
	EOH @ 126.8m (416')						

811-9437

Drill Hole Record



Property	Redmac	District	Golden	Hole No.	RM85-02
Commenced	August 19, 1985	Location	Macred 5 claim block	Tests at	•
Completed	August 20, 1985	Core Size	NQ	Corr. Dip	-60°
Co-ordinates	50° 30'N and 116° 27'W		True Brg.	46°	
Objective		% Recov.	97.9%		Date
					August 22, 1985

Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
				ppm	ppm	ppm	%
0 - 5.2m	Overburden.						
5.2 - 24.5m	Interbedded limy quartzites and limy argillites. Green, white, red browns, bluish grey and oranges (oxidized zones). Quartzites thin to medium bedded with some cross bedding. Quartz grit to pebble conglomerate @ 13.7 - 13.9m, 15.5 - 16.3m. Green argillites (some oxidized portions red brown and orange) are thin bedded sericite (?) and have small - medium pebble size calcite nodules within several of the interbeds. Thin interbeds of dark and medium bluish grey argillite between 14.7 and 15.4m, 16.4m (volcanic?). Several pyrite (with pyrrhotite?) blebs and bands in interval - bands @ 9.45 (0.7cm), 10.17m (2.5cm). Minor quartz veining (0.3cm mainly) in interval plus some minor calcite veining along bedding planes. Bedding @ 70° - 71° to core axis @ 6m but otherwise is 57° - 60° in general in argillite zones.						
24.5 - 40.3m	Much as above but less argillite and only limy in a few short intervals. Quartzites medium to mainly massive bedded. Very massive quartzite bed @ 33.3 - 36.8m, 37.2 - 40.3m (with minor green argillite bands). Dissem. to blebs of pyrite in places, especially @ 30.1 - 32.5m. Wide quartz veins common in quartzites.						
40.3 - 49.0m	Cream, light green, minor orange (oxidized), interbedded quartzites, dolomitic quartzites and argillites (slightly pyritic). Grit to quartz pebble conglomerate within massive quartzite from 45.25 - 49.0m (grits and conglomerate 46.4m downwards).						

B11-447

Drill Hole Record



Property		District	Golden	Hole No.	RM85-02
Commenced		Location		Tests at	•
Completed		Core Size		Corr. Dip	
Co-ordinates		True Brg.		Logged by	
Objective		% Recov.		Date	

Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
				ppm	ppm	ppm	%
49.0 - 56.8m	Green to bluish green, minor reddish brown, calcareous siltite grading to very fine and fine grained sandstone in places. Laminated to quite lenticular with small lenses and nodules. (Sometimes resembling fossils and fossil hash in places). Reddish brown (oxidized?) @ 49.0 - 50.0m. Bedding @ ± 64° @ 49.5m, 75° @ 50.1m, 71° @ 52.0m, 76° @ 56.6m. Sericitic partings thru-out. Well developed quartzose sandstone with calcite cementing (fine - medium grained) with minor grit @ 52.7 - 53.5m.						
56.8 - 58.2m	Dolomitic to calcareous gritty sandstone. Creamy white with minor green (sericitic partings). Medium to very coarse grained subangular to angular quartz grains cemented by limy dolomite matrix. Fractured with quartz and minor calcite veins. (Quartz veins 0.2 - 2cm thick).						
58.2 - 66.2m	Calcareous argillite with minor calcareous sandstone interbeds. Medium green to bluish green. Lenticular with calcareous lenses and nodules (some resembling fossil hash). Large cream colored limy dolomite nodules gradational into unit below from 55.7m downwards. Bedding varies from ± 78° to core axis near top to 82° near base. Minor pyrite (PbS?) blebs in nodular zone @ base.						
66.2 - 67.9m	Dolostone, cream, massive, micro-crystalline dense. Heavily fractured - quartz, calspar and dolspar healed (0.2 - 2cm thick) with some FeS ₂ , (pyrite and marcasite?) with PbS and green to yellow brown ZnS as cement and associated with veining from 66.0 - 66.8m (est 0.8m @ 4.0/2.5% Pb/Zn). Minor sulphides in veining and within host rock from 66.8 - 67.9 (est 1.1m @ 0.4/1.6% Pb/Zn).						

B11-44

Scale

Colour Plot
& Dip

Drill Hole Record



Property	District	Hole No.	RM85-02		Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
Commenced	Location	Tests at	Hor. Comp.							
Completed	Core Size	Corr. Dip	Vert. Comp.							
Co-ordinates		True Brg.	Logged by							
Objective		% Recov.	Date							
Footage From To	Description	Sample No.	Length	Analysis						
				Pb	Zn	Ag	Fe			
				ppm	ppm	ppm	%			
		61019	1.5m	42	105	-	1.05			
		61020	0.8m	9370	5	2.41				
		61021	1.1m	775	411	0.5	1.76			
67.9 - 72.8m	Limestone, cream with light green tinge plus has green argillite bands within. Dense massive with some large nodular textures. Micro-crystalline. Slightly fractured from 71.2 - 71.9m with green and yellow ZnS associated with quartz, calcite dolomite veining (\approx 0.5cm thick) (est 0.7m @ 0.1/0.7% Pb/Zn). Traces PbZn(S) and FeS ₂ in interval otherwise. Green argillite seams @ 70.6 - 70.7m, 70.8 - 70.9m, 72.1 - 72.8m (several thin bands).									
		61023	0.7m							
72.8 - 74.3m	Dolostone, cream with minor orange (oxidized) zones, massive, micro-crystalline and essentially as limestone above but heavily fractured and dolomitized. Wide (2 - 4cm thick) quartz, dolspar/calspar veins. Minor FeS ₂ , PbS and ZnS in veining @ 73.4 - 73.7m (est 0.3m @ 0.4/1.1% Pb/Zn).									
		61024	0.3m							
74.3 - 75.1m	Calcareous siltstone to calcareous sandstone. Creamy white with slightly greenish tinge. Silt size sand grains in calcite matrix @ top grading to fine grained, then medium grained sandstone with depth.									

B11-447

Scale

Colour Plot
& Dip

Drill Hole Record



Property	District	Hole No.	RM85-02		Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
Commenced	Location	Tests at	Hor. Comp.							
Completed	Core Size	Corr. Dip	Vert. Comp.							
Co-ordinates		True Brg.	Logged by							
Objective		% Recov.	Date							
Footage From To	Description	Sample No.	Length	Analysis						
				Pb	Zn	Ag	Fe			
				ppm	ppm	ppm	%			
75.1 - 93.4m	Dolomitic limestone to limy dolostone. Light green, cream and some orange (oxidized zones). Overall massive to massive nodular text in purer carbonates. Several green sericitic rich argillite seams thru-out. Slightly silty (to fine grained sandy). Very silty carbonate @ 90.1 - 90.5m. Fine grained to medium grained (with trace grit) calcareous sandstone @ 91.6 - 93.4m. Several fracture veined zones thru-out; 75.2 - 75.8m (quite leached along fractures - some quartz veining), 76.3 - 77.1m (with trace pyrite and ZnS?), 78.0 - 79.1m (mainly veinlets, but interval slightly oxidized and definitely dolomitized), 83.7 - 84.7m (some wide veins mainly quartz - with minor calcite; interval limy dolomite - slightly oxidized), 85.3 - 85.8m (narrow veins as above, dolomitic limestone), 90.1 - 90.9m (wide quartz with minor calspar veining, quite oxidized and dolomitic), 91.0 - 91.1m (wide quartz veining cutting dolspar fracture veining), 92.0 - 93.0m (minor dolspar veining). Some pronounced sericitic bands @ 86.6 - 86.8m, 87.2 - 87.6m, 89.5 - 89.6m; otherwise interval is much less argillaceous than in RM85-01. Some small quartz and dolomite filled blebs with pyrite (marcasite) flooring them in a geopetal fashion @ 90.6 - 90.7m.									
93.4 - 98.4m	Dolostone. Light creamy grey with very slight purplish tinge. Dense micro-crystalline with minor sericitic laminations (essentially as above). Extensively fracture veined with apparent movements (1 - 2cm max.). Veins are quartz and white dolspar (0.2 - 5cm width). Some grit pebbles from \approx 96m downwards. Some pyrite (marcasite?) blebs associated with veining and sericitic laminations @ 96.4m, 97.0 - 97.2m, 98.3 - 98.4m.									

B11-447

Scale

Colour Plot
& Dip

Drill Hole Record



Property	District	Hole No.	RM85-03
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis			
					Pb	Zn	Ag	Fe
					ppm	ppm	ppm	%
45.3	49.0m	Dolostone, medium to light grey, micro-crystalline, texture much as above but interval is intensely fractured to mosaic brecciated with quartz, white dolospar and minor calspar veining (0.1 to 4cm thick). Very sandy with minor quartz pebbles (grit) @ 45.3 - 46.2m. Some pyrite (&/or marcasite?) along veining and extending into host partially as large blebs @ 45.95 - 46.6m and as small scattered blebs along veins from 47.1 - 48.7m. Minor scattered coarse grained to very coarse grained grit from 47.7 - 49.0m.						
49.0	51.3m	Limestone. Interbedded laminated medium grey (bluish) calcite and medium green argillite (sericite). Calcite (limestone) very fine grained to micro-crystalline, often having a fibrous texture perpendicular to bedding. Calcite is slightly dolomitic in places. Sericite (10 - 15%) is more prominent (thicker bands) near top with bedding(?) @ 60° to core axis at top, flattening to 80° - 85° @ base. Interval is transitional to unit below with in coming black carbonaceous bands from 50.7m increasing and decreasing amounts of green sericite and calcite/dolomite bands towards base. Minor pyrite (disseminated) bands within calcite bands. Fractured with white quartz, calcite and dolomite veins (0.05 - 1cm thick) throughout.						
51.3	83.8m	Carbonaceous and graphitic shale. Black laminated with minor dolomite laminae. Bedding varies widely thru-out with some small folds plus slump structures. Bands of white quartz with creamy white dolomite clasts @ 51.0m (block?), 53.0m (0.5cm lense), 53.3 - 53.4m (vein filling), 54.8m (0.5cm vein or lense), 55.5m (1.5cm vein), 59.6 - 68.5m (as a number of thin veins), 71.7 - 71.8m (veining breccia), 81.4m (veining 1 - 2cm), 83.7m (veining breccia 3cm), 83.0 - 83.2m (vein), 85.6 - 85.7m (veining). Angular dolomite, carbonaceous shale and quartz						

811-447

Scale

Colour Plot
& Dip

Drill Hole Record



Property	District	Hole No.	RM85-03
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Footage From	To	Description	Sample No.	Length	Analysis			
					Pb	Zn	Ag	Fe
					ppm	ppm	ppm	%
		pebble fragments @ 74.6 - 75.0m - debris flow? Very fine laminae and relatively undisturbed with \approx 80° bedding @ 75.8 - 81.3m. Subrounded to angular quartz pebble conglomerate with carbonaceous shale matrix @ 82.2 - 83.8m.						
83.8	87.2m	Quartz pebble conglomerate - subrounded to rounded small - medium quartz pebbles cemented by silica and minor carbonaceous material. Cut by quartz vein @ 85.6 - 85.7m underlain by soft carbonaceous gouge(?) @ 85.8 - 86.0m.						
		EOH @ 87.2m (286')						

811-447

Drill Hole Record



Property	Redmac	District	Golden	Hole No.	RM85-04
Commenced	August 21, 1985	Location	Redmac 19 claim	Tests at	Hor. Comp.
Completed	August 22, 1985	Core Size	NQ	Corr. Dip	-60°
Co-ordinates	50° 30'N and 116° 27'W		True Brg.	53°	Logged by D.H. Adams
Objective		% Recov.	99.3%	Date	August 25, 1985

Claim	T Brg.	Collar Dip	Elev.	Length
			2001.4m	135.9m

Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
0 - 5.2m	Overburden.			ppm	ppm	ppm	%
5.2 - 17.4m	Interbedded green calcareous (to dolomite) argillite and white to light green dolomitic quartzite. Mainly dolomitic argillite and quartzites down to ≈ 14.1m then prominent calcareous lenses in argillite to 15.6m, then dolomitic to base of interval in both argillites and quartzites. From ≈ 5.8 - 12.2m the argillite contains numerous lenses and clasts of greenish white dolomite (volcanic - tuffaceous detrital?) as a conglomerate. Interval is very pyritic thru-out - as disseminations (commonly as blotches) and along bedding planes and some fracture veins. Quartzites are very fine grained → fine grained mainly and thin → medium bedded. Bedding @ ≈ 72° - 74° to core axis. Minor quartz/calspar veining.						
17.4 - 48.1m	Much as above but less argillite and quartzites are medium - massive bedded and generally not dolomitic. Minor pyrite dissemination and small blebs. Thin grit bands within quartzites @ 20.45 - 20.6m, 23.0 - 23.3m, 24.45 - 24.7m, 31.5 - 31.6m, 45.2 - 45.3m, 45.55 - 46.1m, 47.0 - 48.1m (grit to cobbles). Quite massive quartzite band @ 35.7 - 43.5m (much disseminated, FeS ₂ , quite fractured and with apparent bedding of ≈ 47° to c.a. @ ≈ 39.6m) and @ 47.0 - 48.1m (grit to cobbles).						
48.1 - 53.5m	Calcareous siltite. Green with white streaks. Silty argillite with very fine → fine grained sandstone banding and streaks. Calcareous matrix - slightly dolomitic in places. Transitional with below. Bedding ≈ 75° to core axis.						

#11-043

Drill Hole Record



Property	Redmac	District	Golden	Hole No.	RM85-04
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

Footage From To	Description	Sample No.	Length	Analysis				
				Pb	Zn	Ag	Fe	
53.5 - 65.9m	Calcareous argillite much as above but less silty except as lenses of very fine - fine grained sandstone. Crackle breccia @ 54.1 - 54.3m with calcite cemented veining. Some z-folding from 53.8 → 54.1m and 54.3 - 54.8m with pyrite banding (zoning). Interval has quite distinct lenticular texture as white lenses and nodules of calcareous material in green argillaceous (sericitic?) matrix. From ≈ 57m → 64.5m are very distinct calcite lenses which cross the bedding at a slight angle (cleavage, as observed in outcrop @ upper cat trench) - angle to core axis ≈ 69° - 70° while bedding @ ≈ 74° - 75° to core axis. Large limestone nodules (as in carbonate intervals below) as transition zone @ ≈ 65.4 → 65.9m.							
65.9 - 68.4m	Limestone. Creamy white. Large lenticular lenses or nodular. Minor stylolites (sericitic). Some calspar veining with minor FeS ₂ , trace PbS and trace ZnS mineralization associated with it @ 65.9 - 67.9m (est 0.2/0.2% PbZn). Green argillite seam @ 66.7 - 66.8m.							
		est 0.2/0.2% PbZn - 65.9 - 66.9m	61013	1.0m	19	160	-4	1.4
		est 0.2/0.2% PbZn - 66.9 - 67.9m	61014	1.0m	12	203	-4	1.3
68.4 - 71.2m	Calcareous argillite (as in 53.5 - 65.9m), slightly silty and with calcite lenses to small nodules. Fine grained calcareous sandstone bands @ 69.4 - 69.6m, 70.0 - 70.35m. Trace pyrite thru-out (disseminated). Large limestone nodules in basal 0.1m.							
71.2 - 96.4m	Limestone, dolostone and limy dolostone. Creamy white, micro-crystalline, dense, large nodular (flaser bedding) in places. Slightly silty especially from 89m down grading to a fine grained sandy (quartz) dolomite @ 94.3 → 95.6m where it is a dolomitic sandstone from							

#11-

Drill Hole Record



Property	District	Hole No.	RM85-04
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
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Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
				ppm	ppm	ppm	%
	95.6 - 96.4m with common grit with minor purple hematitic pebbles in basal 0.3m. Limestone @ 71.2 - 72.7m, dolomite with minor fractured veining and varying amounts of associated PbZn(S) and FeS ₂ @ 72.7 - 78.5m, 83.2 - 86.2m. Slightly fractured to fractured with calcite/dolomite/quartz veinlets and thin veins from 89.3 - 96m and is mainly limy dolomite from 89.3m downwards (only trace pyrite apparent). Mineralization appears to be zoned out from the actual fractures. Some yellow-green ZnS along sericitic partings. Chalky limestone @ 76.5 - 76.7m. Yuggy fracture openings lined with coarse-crystalline dolomite, calcite @ 77.3 - 77.6m.						
	70.9 - 72.4m, 1.5m est @ tr/tr% PbZn	61001	1.5m	17	37	.4	1.05
	72.4 - 72.9m, 0.5m est @ 0.5/0.4 "	61002	0.5m	14	47	.4	2.04
72.9 - 75.5m	Weighted averg, 2.6 m @ 0.26% Pb, 2.88% Zn, 0.10 oz Ag	61003	0.7m	2060	4.7	3.1	3.29
	72.9 - 75.5m, 0.7m est @ 3.0/6.0 "	61004	0.9m	4250	1.5	5.1	10.72
	73.6 - 74.5m, 0.9m est @ 2.5/1.5 "	61005	1.0m	1640	2.9	1.6	1.61
72.9 - 78.0	Weighted averg, 5.1 m @ 0.23% Pb, 1.64% Zn, 0.09 oz Ag	61006	1.0m	3410	3.75	0.8	3.43
	75.5 - 76.5m, 1.0m est @ 0.7/0.2 "	61007	1.5m	890	353	0.7	1.23
	76.5 - 78.0m, 1.5m est @ tr/tr "	61008	1.0m	25	49	.4	1.12
	82.3 - 83.3m, 1.0m est @ tr/tr "	61009	0.3m	27	76	.4	3.85
	zoned vein 83.3 - 83.6m, 0.3m est @ 3.0/0.7 "	61010	1.5m	13	122	.4	1.27
	" " 83.6 - 85.1m, 1.5m est @ tr/tr "	61011	0.2m	5.88	3.9	4.7	1.34
	" " 85.1 - 85.3m, 0.2m est @ 6.0/1.5 "	61012	1.5m	78	847	0.6	1.28
	85.3 - 86.8m, 1.5m est @ tr/tr "						
96.4 - 99.7m	Dolostone, light grey to creamy-grey. Dense micro-crystalline. Fairly massive bedded, much as above but extremely fractured to mosaic brecciated with dolspar and minor quartz cemented						

Drill Hole Record



Property	REDMAC	District	Golden	Hole No.	RM85-04
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
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Footage From To	Description	Sample No.	Length	Analysis			
				Pb	Zn	Ag	Fe
				ppm	ppm	ppm	%
	veins (0.2 - 2 cm thick). Common stylolitic partings - some with sericite and some pyritized. Common bands of pyrite through-out - some along bedding, stylolites and vein linings. Trace hematitic staining. Minor grit grains in basal 0.3 m.						
99.7 - 100.5m	Limestone; interbedded, medium grey (slightly bluish) calcite with medium green sericitic argillite (≈5-10%). Calcite (limestone) appears to be fibrous and perpendicular to bedding. Bedding @ 72° to core axis. Sharp contact with above. Has steep oblique calspar veining (0.1-0.5 cm).						
100.5 - 104.2m	Interbedded black carbonaceous and graphitic shale as below (≈10-15%), green argillite as above (≈2-5%) and medium dark grey calcite (limestone) - dolomite, much as above (≈80-90%). Bedding @ 72° to core axis.						
104.2 - 136.0m	Carbonaceous and graphitic shale. Black laminated with light grey to white dolomite. Minor folding. Band of grey conglomerate - dolomites siliceous material - some oolites, possible fossils @ 104.8 - 105.1m, 113.7 - 113.95m. White quartz bands with dolomite clasts @ 116.2 - 116.35m, 117.4 - 117.95m, 119.9 - 120.3m. Clasts of very angular quartz pebble material @ 123.9 - 125.2m. Becomes very siliceous and has no dolomite banding from ≈126.6m downwards. Several quartz pebble grit beds from ≈131.4 - 133.2m then goes to extremely resistant quartzite to quartz pebble conglomerate grit from 133.2 - 135.2m. Banded black carbonaceous shale and some coarse grit bands from 135.2 - 135.94m (136m). Bedding slightly variable throughout but generally 65-75° to core axis (75° near base in very siliceous units).						
*****END OF HOLE @ 136.0 meters*****							

Scale
Colour Plot
& Dip

Drill Hole Record



Property	Redmac	District	Golden	Hole No.	RM85-05
Commenced	August 24, 1985	Location	Redmac R.	Tests at	Hor. Comp.
Completed	August 25, 1985	Core Size	NQ	Corr. Dip	-60°
Co-ordinates	50° 30' N and 116° 27' W		True Brg.	48°	Logged by
Objective			% Recov.	97.1	Date
					August 28, 1985

Claim	T Brg.	Collar Dip	Elev.	Length
			1921.7 m	102.4 m

Footage From To	Description	Sample No.	Length
0 - 4.9m	Overburden - recovered 0.9m of blocky quartzite and siltites.		
4.9 - 28.0m	Calcareous siltite to calcareous argillite. Predominantly greens to red browns, minor blue green and white. Some interbedded calcareous to dolomitic fine grained quartzose sandstone beds (4.9 - 5.1m - quartzite, heavily veined with quartz (2cm thick), several thin bands (<0.1m) @ 11.5 - 14.5m; thicker bands @12.5 - 12.8m, 15.9 - 16.0m, 19.0 - 19.5m, 26.5 - 26.8m, 27.0 - 28.0m (DLP marker?). Very white silty micro-crystalline limestone band @23.8 - 24.1m (gouge?). Interval quite brecciated @20.4 - 21.1m and 23.2 - 23.8m (shear zones?). Slightly fractured otherwise quartz veining. Quite lenticular texture to interval from 8m to 27m with prominent calcareous lenses. Somewhat bluish green texture @ 13.5 - 15.5m and 16.9 - 17.7m. Some limy nodules @26.0 - 26.4m. Bedding @ 57° - 62° to core axis thru-out, but almost vertical @ 22.5m between breccia zones for short distance.		
28.0 - 30.8m	Calcareous argillite. Green and greenish to creamy white. Lenticular to very nodular. Calcareous fine grained - medium grained sandstone bands @29.75 - 29.85m, 30.3 - 30.5m. Interval slightly silty thru-out. Bedding @ 62° - 64° to core axis.		
30.8 - 58.5m	Interbedded dolostones, limy dolostones and limestones. Cream with slightly greenish tinge in places. Generally micro-crystalline, dense, massive to massive nodular. Somewhat lenticular with minor argillite (sericitic) component in places. Minor stylolites with sericite (and pyrite in places). Limy dolomite with intense fracturing (to mosaic brecciation) @ 31.0 - 34.0m - common pyrite disseminations, vein linings and stylolite linings from 31.0 - 34.1m in		

811-041

Scale
Colour Plot
& Dip

Drill Hole Record



Property		District		Hole No.	RM85-05
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
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Footage From To	Description	Sample No.	Length
	fractured zone. Also appears to have trace ZnS within that interval. Fracture veins are quartz, calc/dol spar (0.1 - 4cm)		
	31.0 - 32.0 est 1.0m @tr/0.3% Pb/Zn	61022	1.0m
	Quite siliceous with fine grained - medium grained quartz grains plus trace grit @30.8 - 34.0m. Minor fractured veining (quartz, calc/dol 0.1 - 0.3 cm thick) from 34.8 - 36.7m and @38.9 - 39.5m. Intense fracture veining again @36.8 - 38.0m (only trace pyrite in top half, very clean overall, dolomite). Slightly limy between intense fractured zones above but still dolomite). Quite siliceous fine grained - medium grained with minor grit @35.5 - 36.2m and 38.5 - 38.9m. Somewhat argillaceous nodular limestone seam @36.2 - 36.4m.		
	Somewhat argillaceous and very nodular (large) @39.5 - 40.5m (very limy), 41.6 - 41.9m, 45.0 - 46.0 (limy), 46.5 - 46.7m (slightly limy), 48.7 - 49.2m (slightly limy), 49.8 - 50.7m, 51.1 - 54.0m (limestone from 52.4m), 55.15 - 55.35 (mainly argillite), 55.7 - 55.8 (mainly small nodules with argillite). More fracture veined zones @40.5 - 42.3m (quartz, cal/dol spar <0.5cm thick, trace pyrite along some), 43.0 - 46.0m (as in 40.5 - 42.3m, slightly limy dol), 46.7 - 47.5m (heavily fractured, veining as above), 47.7 - 54.8m (only slightly fractured plus limy dol. down to 52.4m then limestone down to 54.8m), 54.8 - 58.5m (heavily fractured in places, dol. thru-out. Varies from sandy (fine grained - medium grained mainly with minor grit) from top down to dol. sandstone (medium grained - course grained and very course grained - gritty) @ 57.4 - 58.5m. Interval is quite silty (and sandy) in places especially towards base. Large hematitic dolomite clast @54.45m plus rare small pebble size ones @57.05m. Sharp		

811-041

Drill Hole Record



Property	District	Hole No. RM85-05	
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

Footage From To	Description	Sample No.	Length	Analysis
	angular undulating contact with below (unconformity?).			
58.5 - 61.0m	Dolostone. Light creamy-grey. Micro-crystalline dense with common sand and grit components (plus rare hematitic clast) from top down to 60.0m. Much as dolostones above but intensely fractured with mosaic brecciated - calc/dol and quartz veins 0.05 - 5cm thick (large veins appear to be of same composition and texture as in carbonaceous shale). Sharp contact @ base.			
61.0 - 64.2m	Limestone; Interbedded, laminated bluish grey calcite and medium green argillite (sericitic). Calcite (limestone) very fine grained to micro-crystalline, often having a fibrous texture perpendicular to bedding. Sericite is $\approx 10 - 15\%$ thru-out with a thick bunch of laminations (up to 95% of interval) @63.7 - 64.2m interrupted by thick quartz/dolomite clast rich vein @63.9 - 64.1m. Minor thin calcite veining otherwise in interval. Conformable and transitional contact with below @64.1 - 64.2m. Bedding @ $\approx 80^\circ$ to core axis near top going to $\approx 57^\circ$ near base. Some pyrite crystals along veining and bedding @61.0 - 61.3m ($\approx 3.5\%$ Fe overall there).			
64.2 - 99.8m	Carbonaceous and graphitic shale, laminated black and white (minor). Bedding near top $65^\circ - 70^\circ$ plus with contorted folding. Dolomitic to siliceous laminae. Veins of white quartz with creamy dolomite clasts (?) @64.35 - 64.45m, 64.5m (1-2cm), 67.7 - 67.8m (2 veins - 3cm), 68.8m (4cm), 72.55 - 72.7m (breccia), 73.5 - 73.8m (breccia?), 75.8m (2cm), 77.7 - 78.8m (within extremely brecciated interval with much black carbonaceous fragmented material) - very folded 1.5m above it! 80.0m (0.5cm), 83.3m (0.5cm). Bedding from 78.8 - 89.6 is fairly flat ($75^\circ - 80^\circ$) and is mainly fine laminated from $\approx 82m$ to 89.6 except for quartz pebble			

811-043

Drill Hole Record



Property	District	Hole No. RM85-05	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

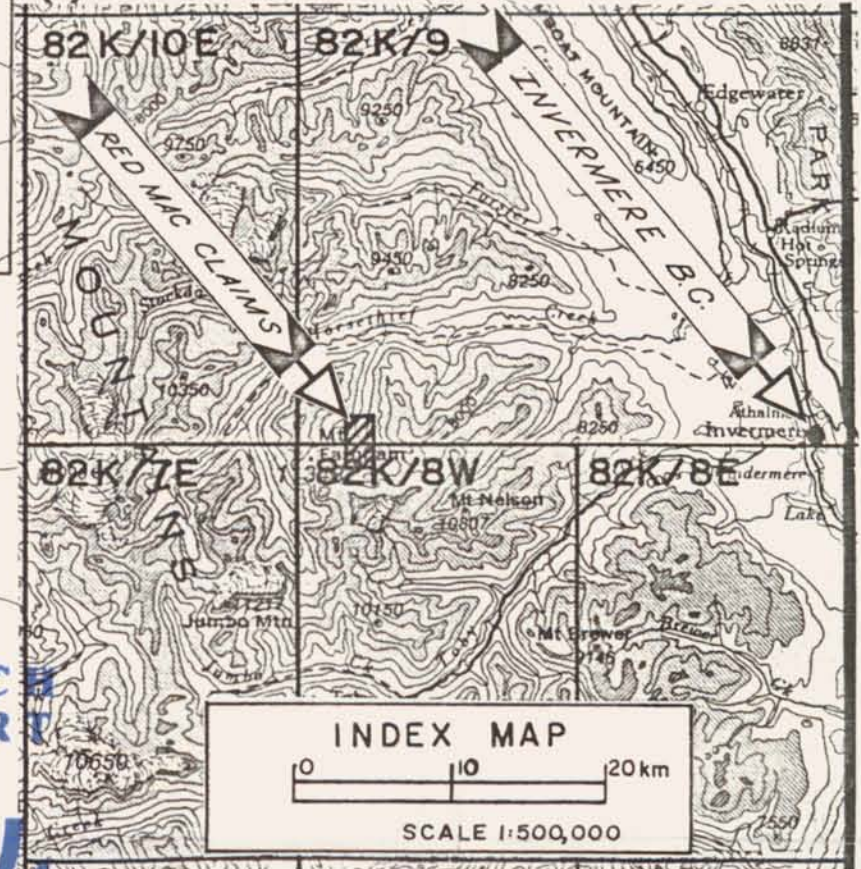
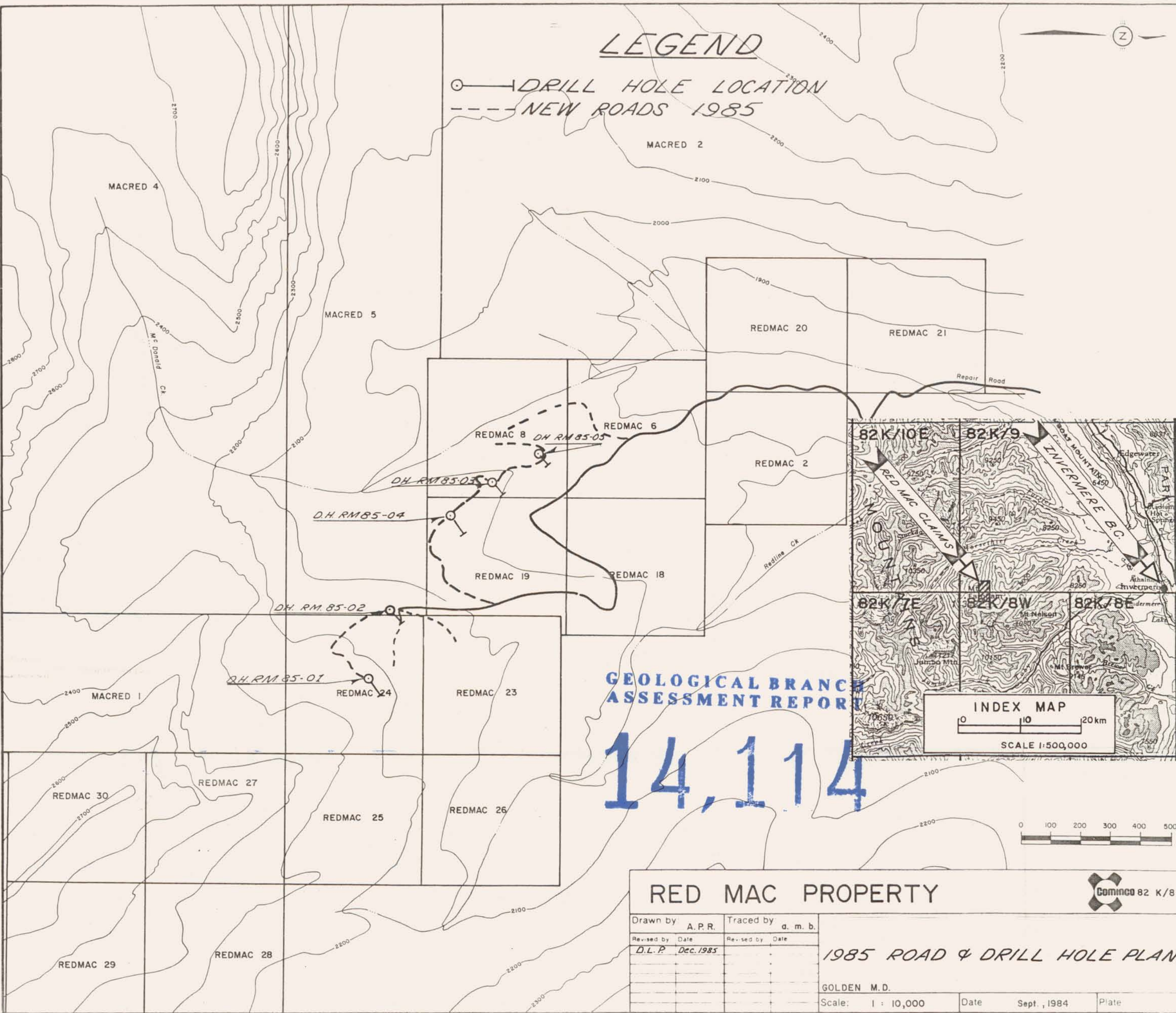
Claim
T Brg.
Collar Dip
Elev.
Length

Footage From To	Description	Sample No.	Length	Analysis
	conglomerate (carbonaceous matrix) @86.9 - 88.0m. Angular quartz and dolomite pebbles @80.7 - 81.3m (with minor pyrite blebs). Very steep bedding and contorted folding from 89.6 - 90.3m then brecciated from 90.3 - 90.6m. Quartz pebble conglomerate with carbonaceous matrix and some dolomite clasts @90.5 - 94.5m, 95.3 - 95.4m and 95.6 - 95.8m. Brecciated with large breccia clasts @92.0 - 94.0m. Fine laminated texture from 95.8 - 99.8m but with some small folds and bedding of $\approx 65^\circ - 70^\circ$ over most of interval.			
99.8 - 102.4m	Welded grit quartzite, grit to small pebble conglomerate size with silica cement. Black carbonaceous seams @100.85 - 101.2m, plus several from 101.5 - 102.4m (each < 4cm). EOH @102.4m (336').			

811-4

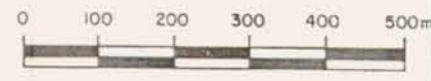
LEGEND


○ — DRILL HOLE LOCATION
 - - - NEW ROADS 1985



**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

14,114



RED MAC PROPERTY				 Cominco 82 K/8	
Drawn by	A. P. R.	Traced by	a. m. b.	1985 ROAD & DRILL HOLE PLAN	
Revised by	Date	Revised by	Date		
D. L. P.	Dec. 1985				
				GOLDEN M. D.	
Scale: 1 : 10,000		Date	Sept., 1984	Plate	