PRELIMINARY GEOLOGY

on the

MR 1-11 MINERAL CLAIMS

FORT ST. JAMES AREA

OMINECA MINING DIVISION

by

MURRAY MORRISON, B.Sc.

Claims:	MR 1-11 (52 units)
Location:	The MR property is situated on Murray Ridge, 10 km northeast of Fort St. James, B.C. Lat. 54° 32' Long. 124° 12' N.T.S. 93-K-9E
Owner:	Murray Morrison
Operator:	Murray Morrison
Date Started:	August 12, 1987
Date Completed:	July 22, 1987

Kelowna, B.C.

October 20, 1987

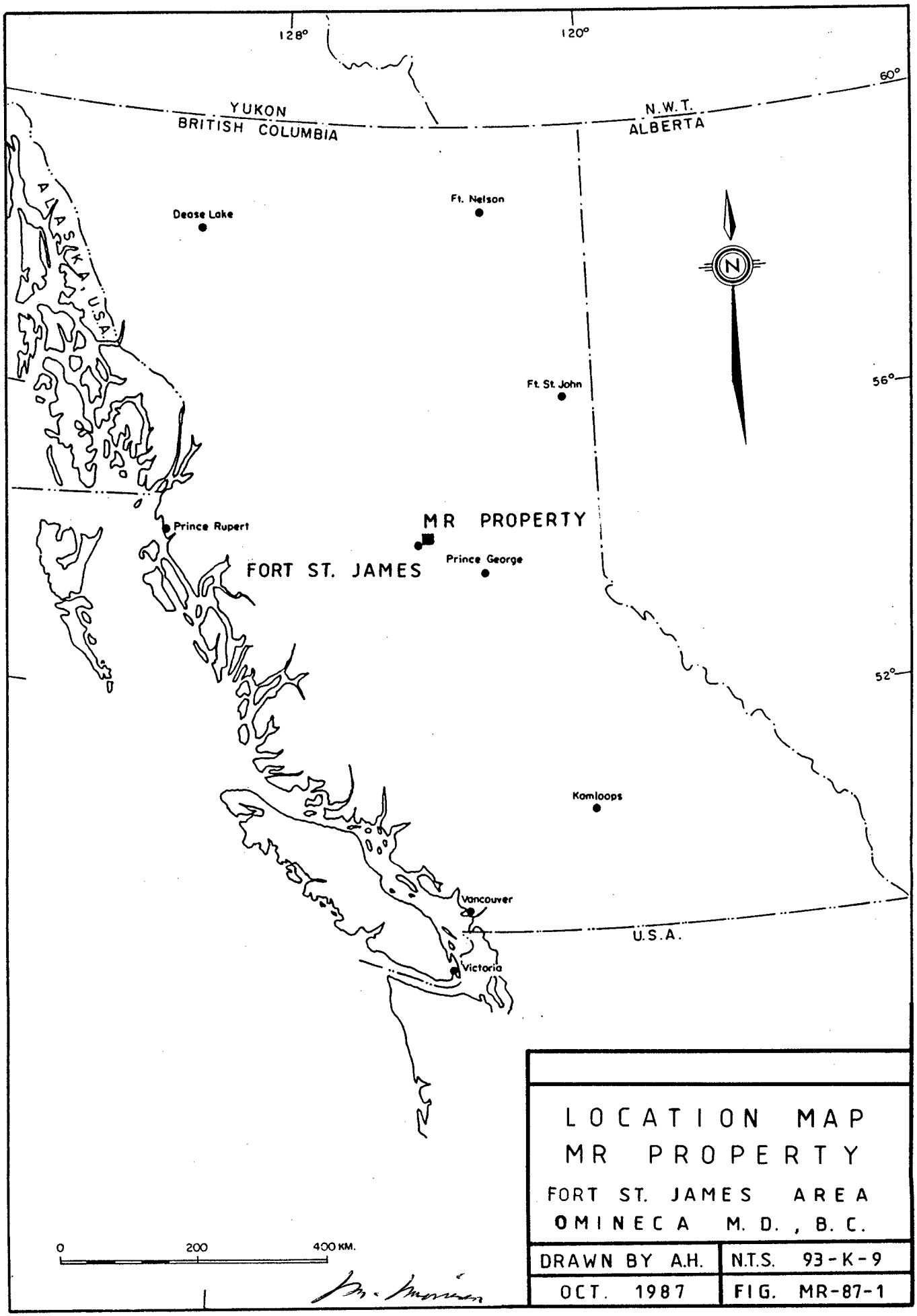
TABLE OF CONTENTS

ILLUSTRATIONS

SUMMARY

The MR property situated on Murray Ridge, 10 km northeast of Fort St. James, B.C., covers a portion of a layered ultrabasic body of the Trembleur Intrusions of Post-Middle Permian(?) age. The body was known to have chromiferous dunite layers, and it was staked for its possible platinum potential. It is known that chromititic zones within the Bushveld and Stillwater Intrusive Complexes of South Africa and North America, respectively, contain world-class platinum group element concentrations. It is hoped that a similar situation might occur on Murray Ridge.

Recent mapping and sampling (1986-87) has shown that the numerous dunite layers of the Murray Ridge ultrabasic body contain only low concentrations of chromium oxide and platinum group elements. However, it is recognized that the lowermost (southern) dunite zones of the layered intrusive have not yet been identified on the Murray Ridge property, and that on a world scale it is the lowermost chromitites of ultrabasic intrusions that have yielded the best platinum group element values. Further prospecting and sampling is recommended on the lower southern slopes of Murray Ridge.



LOCATION MAP
MR PROPERTY
FORT ST. JAMES AREA
OMINECA M. D., B. C.

DRAWN BY A.H.	N.T.S. 93-K-9
OCT. 1987	FIG. MR-87-1

INTRODUCTION

The MR property comprised of eight, 2-post mineral claims and three, 4-post mineral claims (totalling 44 units) is situated on Murray Ridge, 10 km northeast of Fort St. James, B.C. (Lat. 54°32'; Long. 124°12'; N.T.S. 93-K-9). The claims were staked by the writer during the summer of 1986 to cover a portion of a layered ultrabasic intrusive belonging to the Trembleur Intrusions of Post Mid-Permian age. Previous workers (Whittaker, Watkinson, 1981) had identified chromiferous zones associated with dunite horizons within the layered intrusive, and the writer believed, at the time of staking, that these chromiferous zones should be further investigated for possible platinum group element concentrations.

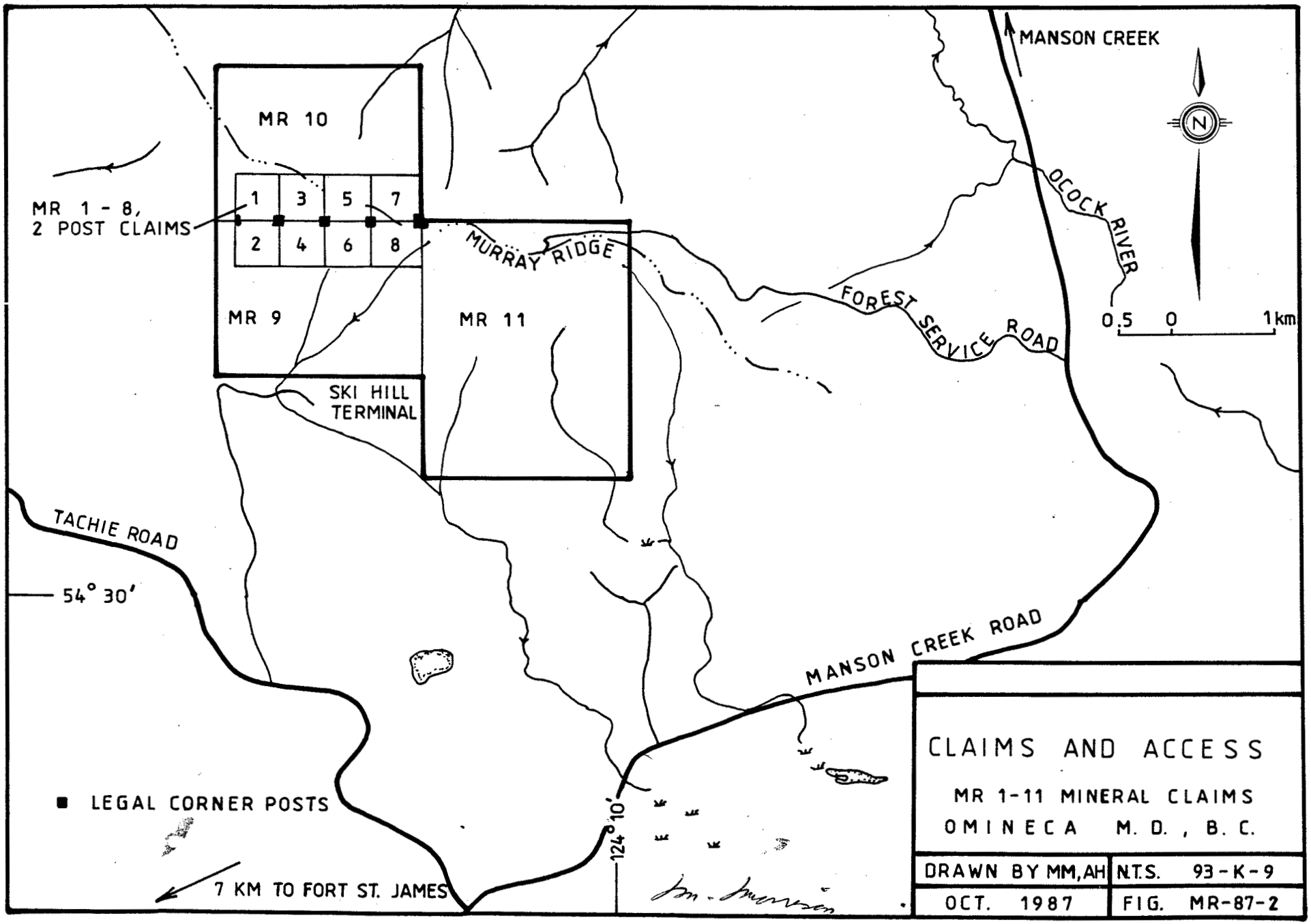
A preliminary geological mapping and sampling program was conducted on the MR property during 1986 and 1987 to determine: (a) the overall extent of the dunite layering within the ultrabasic intrusive, and (b) the amount of platinum group elements associated with the dunite layering.

A discussion of the results of the mapping and sampling program is presented within this report, while the grology is illustrated along with sample sites and values, on Maps MR-87-1&2 accompanying this report.

LOCATION AND ACCESS

Figure MR-87-2 on the following page, shows the location of the MR 1-11 mineral claims on Murray Ridge, 10 km northeast of Fort St. James, B.C. Access to the Fire Lookout on top of Murray Ridge is via a 4-wheel-drive Forest Service summer road which climbs the northeastern slope of the ridge for a distance of 6.2 km from the Manson Creek road. The turn-off on the Manson Cr road is 16.8 km northeast of Fort St. James.

Continued . . .


MANSON CREEK
MR 10
MR 1 - 8,
2 POST CLAIMS
1
3
5
7
2
4
6
8
MURRAY RIDGE
OCOCK RIVER
FOREST SERVICE ROAD
MR 9
MR 11
SKI HILL
TERMINAL
0.5 0 1km
TACHIE ROAD
54° 30'
MANSON CREEK ROAD
LEGAL CORNER POSTS
124° 10'
7 KM TO FORT ST. JAMES
CLAIMS AND ACCESS
MR 1-11 MINERAL CLAIMS
OMINECA M. D., B. C.
DRAWN BY MM, AH
N.T.S. 93-K-9
OCT. 1987
FIG. MR-87-2

LOCATION AND ACCESS - Continued

The Murray Ridge ski facilities at the base of Murray Ridge are accessible from Fort St. James via the Manson Creek road (7 km), the Tachie road (3.6 km), and finally the ski road (3.5 km) which branches north from the Tachie road.

Although road construction across the crest of Murray Ridge would be an easy matter at present much of the ridge is inaccessible by vehicle, and the work carried out on the MR property in 1986 and 1987 was conducted by traversing from either the Lookout or ski roads.

PHYSICAL FEATURES AND CLIMATE

Murray Ridge, a remnant of the Nechako Plateau, forms a prominent geographic feature lying southeast of Pinchi Lake, or northeast of the Village of Fort St. James. The ridge rises 640 metres above the drift covered Nechako Plain (760 metres above sea level). The southern face of Murray Ridge slopes steeply (20 degrees) to the valley bottom and has been developed into a popular ski hill. Rock exposures are abundant on the steep upper southern slope and the forest cover, made up of Douglas fir and juniper, is generally light. The northern slope of Murray Ridge is less steep (15 degrees on average) and the forest and underbrush is more dense. Pine, balsam, Douglas fir and spruce are the most common forest species, while buckbrush and tag alder make up the underbrush.

Recorded precipitation at Fort St. James is 40 cm annually and half comes in the form of winter snow. Snow begins to accumulate in early November and can reach depths of 2 to 3 metres on Murray Ridge. The snow usually melts from the ridge by early May.

The Fort St. James climate is moderate with summer temperatures in the 20's°C, and winter temperatures seldom dropping below -30° C.

CLAIM STATUS

The MR property is made up of the MR 1-8, 2-post mineral claims and the MR 9-11, 4-post mineral claims, all staked by the writer, M. Morrison, of Kelowna, B.C. during July and August 1986. The claims, recorded in the Omineca Mining Division, are 100% owned by the writer. The MR 1-8 claims are entirely overstaked by the MR 9-10 mineral claims as shown on Figure MR-87-2. The entire property therefore covers only 11 square kilometres.

The mineral claims making up the property are listed as follows:

CLAIM NAME	UNITS	DATE OF RECORDING	RECORD NO.	MINING DIVISION	EXPIRY DATE *
MR 1	1	Aug. 1/86	7727	Omineca	Aug. 1/88
MR 2	1	Aug. 1/86	7728	"	Aug. 1/88
MR 3	1	Aug. 1/86	7729	"	Aug. 1/88
MR 4	1	Aug. 1/86	7730	"	Aug. 1/88
MR 5	1	Aug. 1/86	7731	"	Aug. 1/88
MR 6	1	Aug. 1/86	7732	"	Aug. 1/88
MR 7	1	Aug. 1/86	7733	"	Aug. 1/88
MR 8	1	Aug. 1/86	7734	"	Aug. 1/88
MR 9	12	Aug.18/86	7793	"	Aug.18/88
MR 10	12	Aug.18/86	7794	"	Aug.18/88
MR 11	20	Aug.18/86	7795	"	Aug.18/88

* This Expiry Date is based on the acceptance of this report for Assessment Work Credits.

HISTORY

Murray Ridge was blanket-staked by numerous claims during the late 1960's and early 1970's due to a rise in the price of mercury and renewed interest in the Pinchi Lake Mercury Mine and Pinchi Lake Fault. Although exploration was carried out in Cache Creek Group rocks immediately to the south of the ridge on the old Calex property (Sutherland Brown, 1965) no work appears to have ever been done on ground now covered by the MR mineral claims.

REGIONAL GEOLOGY

The well-known Pinchi Fault extending several hundred kilometres through Central British Columbia, lies immediately southwest of Murray Ridge. The fault separates Pennsylvanian (?) and Permian Cache Creek Group metasediments and limestones on the southwest from Upper Triassic Takla Group volcanics and metasediments on the northeast. Post-Middle Permian Trembleur Intrusions of ultrabasic composition underlie both Pinchi Mountain and Murray Ridge on the northeast side of the Pinchi Fault. The Murray Ridge intrusive is layered and believed to be an "alpine-type" ultrabasic body.

The world-class Pinchi Lake Mercury Mine (now closed) lies 20 km to the northwest of Murray Ridge, while the Calex mercury prospect (Sutherland Brown, 1965) lies immediately south of the ridge.

GEOLOGICAL MAPPING AND SAMPLING PROGRAM

The topographic maps used for the purpose of mapping the preliminary geology on Murray Ridge were produced by enlarging government 1:50,000 scale maps by a factor of ten. Some distortion has no doubt resulted, but it is not considered serious for preliminary mapping at 1:5000 scale. The contour interval on the original government maps was 100 feet, and no attempt has been made to convert the contours to metric measure.

Geological mapping was done with the aid of a Thommen altimeter. Elevations of rock exposures were matched with the contours on field sheets. The method is believed to have worked well on the steep upper southern slope of Murray Ridge where ridges and gullies form distinct features.

However, due to the relatively featureless topography on the northern and lower southern slopes of Murray Ridge the plotting of rock exposures (on Maps MR-87-1&2) in these areas is subject to more error.

Continued . . .

GEOLOGICAL MAPPING AND SAMPLING PROGRAM - Continued

In these areas every opportunity to tie traverses into known points such as claim boundaries or creek junctions was used.

The Mapping Program, requiring 15 man days to complete, consisted of a series of traverses over ridges and knolls known to have near-continuous rock exposure. The program was designed: first, to identify and map dunite layering within the large ultrabasic intrusion making up Murray Ridge; second, to determine the chromite content within the ultrabasic intrusion, and particularly that associated with the dunite layers; and third, to collect samples of chromite-rich rock to have analyzed for possible platinum group elements.

The rock exposures outlined in dotted pattern on Maps MR-87-1&2 accompanying this report are those that have been prospected in detail. The total area of outcrop on the property is approximately four times greater, but the rock studied is expected to be representative of the whole ridge.

Chromite is ubiquitous throughout the ultrabasic intrusion and an attempt was made to note the concentration at each rock exposure examined. The chromite content is given for each outcrop on the maps accompanying this report.

A total of 30 rock chip samples weighing an average of 3 kg each were selected from chromite-rich zones (usually dunite layers) on the property during 1986 (24 samples) and 1987 (6 samples). The samples were shipped to Acme Laboratories in Vancouver for Fire Assay and ICP-MS (mass spectometer) analysis. The content of chrome oxide, platinum, palladium, rhodium and iridium was determined for each sample and listed in Appendix "B" along with the laboratory procedures of analysis.

The sample locations are shown on Maps MR-87-1&2, while a brief description of samples is given in Appendix "A".

GEOLOGY

General

As mentioned earlier, an ultrabasic intrusion of Post-Middle Permian (?) age makes up Murray Ridge and underlies the entire MR property. The ultrabasic is composed of massive harzburgite with less than 3% dunite, and 1% orthopyroxenite layering. The layered intrusive dips steeply to the northeast (80 to 85 degrees) and strikes at an average 295 degrees. The intrusive is at least 4000 metres in thickness and varies little from top to bottom. Dunite layering occurs throughout the intrusive.

Harzburgite

Harzburgite makes up more than 97% of the rock underlying the MR property. It is exposed on the crest of Murray Ridge, on the back ridges to the north, and on the steep southern face. It is massive to blocky and weathers dark brown. Very thick layers (up to 100 m) of harzburgite are separated by much thinner (10 cm to 10 m) dunite layers on the ridge. Usually, the wider the harzburgite layer, the wider the interlayered dunite. Thin orthopyroxenite zones are also interlayed with harzburgite. In places, such as near the crest of Murray Ridge, dunite forms several thin 10 to 100 cm layers between relatively thin (3 to 30 m) harzburgite layers. On the north side and lower south slopes of Murray Ridge the harzburgite forms layers up to 100 m thick separated by dunite layers of up to 10 m thick.

The harzburgite varies little from one side of the property to the other. It is a black rock made up of medium to coarse grained (2-5 mm) olivine (70%) and orthopyroxene (30%). Both the orthopyroxene and olivine are well serpentinized with the formation of lizardite common. Chromite occurs as a ubiquitous accessory mineral disseminated through the rock as 0.5 to 2 mm crystals in amounts equalling 0.1 to 0.5%.

Continued . . .

GEOLOGY - Continued

Dunite

As noted under the previous title, dunite forms thin layers between large layers of harzburgite throughout the entire ultrabasic intrusive underlying Murray Ridge. The dunite layers range from 10 cm to 25 m. The layers lense-out over short (10 to 30 m) distances, but 'zones of layers' appear to cross the southern face of Murray Ridge with some consistency. On some portions of the property (near the ridge top in particular) the dunite cross-cuts the harzburgite as dykes, and possibly represents olivine segregations in a semi-cooled magma. In other regions, late tectonic movement may be responsible for the irregular form of the dunite layers. In other words, with the widespread serpentinization on Murray Ridge the rock is possibly "moulded" more than it is fractured during tectonic movement.

The dunite is made up of dense, fine grained olivine crystals with 0.1 to 2% disseminated chromite. Locally the chromite forms streaks of up to 1 cm wide by 1 m long. The dunite is black on a fresh surface but weathers a characteristic buff-brown colour in outcrop. It fractures more easily than harzburgite and often lies on the surface as scree. Like the harzburgite the dunite is most serpentinized in faulted regions.

Orthopyroxenite

Orthopyroxenite layers and dykes (segregations?) make up less than 1% of the rock of the Murray Ridge ultrabasic body. The rock made up of 90% orthopyroxene crystals of 2 to 5 mm weathers white. The layers are narrow (2 to 15 cm) and usually occur in areas where the dunite also forms several narrow layers within the harzburgite. Some of the cross-cutting dykes (segregations?) are enriched with chromite (1 to 5%), a feature that is interesting, but not completely understood.

Continued . . .

GEOLOGY - Continued

Structural Geology and Faulting

Fracturing and faulting is noteable at several locations across the property. Moderate to strong serpentinization always accompanies the fracturing and faulting and allows for the "plastic" deformation of the ultrabasic rocks. The rocks are subtly moulded rendering the measuring of displacements difficult. At the present stage of preliminary mapping nothing definite can be said about fault displacement, but the fact that faulting is present, can be seen in the degree to which the dunite layer at sample site PR 6 is deformed and thickened.

The dunite of Murray Ridge behaves more brittlely than the harzburgite during deformation.

Alteration

Serpentinization of the ultrabasic rock is widespread on the MR property. It ranges from moderate to strong and invariably increases with an increase in fracturing and faulting. Late solutions have invaded fractures in the rock converting olivine and pyroxene to waxy green amorphous minerals. The development of lizardite is common.

Mineralization

Chromite occurs within the three rock types of the Murray Ridge ultrabasic body: harzburgite, dunite, and orthopyroxenite. It is usually in the form of disseminated crystals of 0.5 to 2 mm in size. It is ubiquitous throughout the harzburgite usually equalling 0.1 to 0.3% and occasionally equalling up to 0.7%. Within the dunite the chromite occurs in disseminated form, and as thin (5 to 10 mm) streaks that seldom extend more than 1 metre in length. Single samples of 2 to 3% chromite may be collected

Continued . . .

GEOLOGY - Continued

Mineralization - Continued

from dunite, but the overall chromite content is less than 1%. Many of the orthopyroxenite layers are barren of chromite, but locally clusters of coarse grained (1 cm) crystals occur with the orthopyroxenite in amounts up to 5%. Some of the better (but localized) mineralized zones on the property occur with orthopyroxenite segregations.

The Cr/Fe ratio in harzburgite associated chromite is 2.56 while that in dunite associated chromite is 3.06 (Whittaker, Watkinson, 1981).

The main purpose of the current sampling program was to determine the platinum group element content associated with chromite in samples. In this regard platinum, palladium, rhodium and iridium were all found to be in very low concentrations in the samples collected.

The best platinum, palladium and iridium values obtained out of 30 samples were 38, 13 and 13 parts per million respectively. All of the values obtained from the sampling program are listed in Appendix "B".

DISCUSSION

The Murray Ridge ultrabasic body was first staked because it was believed to have some features in common with some of the great platinum-bearing ultrabasic intrusions of the world, namely, the Bushveld Complex of South Africa and the Stillwater Complex of Montana, U.S.A.. The Bushveld Complex is a layered intrusive 7 to 9 km thick, while the Stillwater Complex is a 7.4 km thick. Although platinum group elements (PGE) are associated with copper and nickel sulphides in economic concentrations at both Complexes it is the PGE associated with chromititic zones that is of most interest to those studying the Murray Ridge ultrabasic.

Continued . . .

DISCUSSION - Continued

Both the Bushveld and Stillwater Complexes host very important PGE-bearing chromitites.

At the Bushveld Complex it is one of the lowest chromitite layers, the UG2 zone, which contains 8.20 parts per million (ppm) PGE and gold, including approximately 3 ppm platinum and palladium. Although the UG2 chromitite layer is only 1 metre thick and occupies a small proportion of the 7000 to 9000 metre thick Complex it represents the largest single concentration of PGE in the Bushveld Complex and in the world (Cabri, et al, 1981).

The well-known Merensky Reef, also part of the Bushveld Complex, contains 6 to 8 ppm PGE within thin chromitite layers and represents another large PGE reserve in the world.

At the Stillwater Complex it is the lowermost of 13 successive chromititic zones (the "A" Zone) in the lower ultramafic portion of the Complex, which contains the most PGE. The "A" zone contains 3.1 g/T PGE.

It is clear that the lowermost chromititic zones of layered ultrabasic complexes deserve the most attention while exploring for platinum group elements.

Two seasons of preliminary work on Murray Ridge have proven the chromite zones to be weak with respect to both chromium oxide and platinum group elements. The lowermost dunite zones have not as yet been identified on the property. In view of the discussion given above prospecting for the lowermost dunite zones should be of top priority.

CONCLUSIONS AND RECOMMENDATIONS

The chromititic zones within dunite layers of the Murray Ridge ultrabasic body have, so far, proven to be of minor extent. Chromium oxide seldom exceeds 2% in selected samples and the platinum group elements are also present in sub-economic concentrations. The potential for the property lies in the belief that the lowermost dunite zone of the intrusive body has not yet been identified, and that it may be the best mineralized with respect to chromite and platinum group elements.

The importance of finding the lowermost chromititic zones within layered complexes has already been outlined under the previous section of this report. Further prospecting should be conducted along the lower southern slope of Murray Ridge. Chromiferous float from the piedmont area at the base of the ridge should be analyzed for platinum group elements.

If there is any increase in platinum group element content in samples from the piedmont area then a drill hole might be considered to test for further chromititic horizons below the southern base of Murray Ridge.

October 20, 1987
Kelowna, B.C.

Murray Morrison

Murray Morrison, B.Sc.

REFERENCES

Armstrong, J.E.
1949: Fort St. James Map-Area, Cassiar and Coast Districts, British Columbia, Geol. Surv. Canada, Memoir 252.

Cabri, L.J. et al.
1981: Platinum-Group Elements: Mineralogy, Geology, Recovery; CIM Special Vol. 23, The Canadian Institute of Mining and Metallurgy.

Sutherland Brown, A.
1965: Calex Property, Sunshine Property, B. C. Dept. of Mines and Petroleum Resources, Lode Metals in British Columbia, 1965, pp. 112-113.

Whittaker, P.J. and Watkinson, D.H.
1981: Chromite in Some Ultramafic Rocks of the Cache Creek Group, British Columbia, Geol. Surv. Canada, Paper 81-1A, pp. 349-355.

APPENDIX "A"
SAMPLE DESCRIPTIONS

The sample locations are plotted on Maps MR-87-1&2 accompanying this report. All samples were made up of approximately 3 kg of rock chips that were selected from chromite-rich rock exposures. The purpose of sampling was to try to determine the amount of platinum group elements that might be associated with chromite mineralization.

Sample No.	Description			
MR-1	3 m	dunite layer	270/70?N	diss. chromite
MR-2		harzburgite		" "
MR-3	1 m	dunite layer	325/60NE	" "
MR-4	3 m	" "	296/85NE	wispy layers of chromite
MR-5	½ m	" "	irregular	wispy layers of chromite
MR-6	25 cm	" "	310/80NE	diss. chromite
MR-7	15 cm-½m	" "	irregular	wispy layers of chromite
MR-8	2 m	" "	030/60NW	wispy layers of chromite
MR-9	1 m	" "	318/80NE	wispy layers of chromite
MR-10	1.2 m	" "	290/74NE	diss. chromite
MR-11	½-2 mx40m	" "	290/85NE	scattered, patchy, chromite
MR-12	5 m wide	dunite layered zone	320/75NE	fine grained diss. chromite
MR-13	1x8 m	dunite layer	310/60NE	fine grained diss. chromite
MR-14	2x10 m	" "	345/?	diss. chromite
MR-15	1-4 mx40m	dunite lense	300/80NE	" "
MR-16	three, 4mx25-30m	dunite lenses	300-320/75-80NE	diss. chromite
MR-17	dunite float on steep sidehill			coarse grained chromite
MR-18	½x18 m and 2x10 m	dunite layer " "	324/85S	fine grained to medium grained chromite

APPENDIX "A" - Continued

SAMPLE DESCRIPTIONS - Continued

MR-23		dunite talus	patchy and diss. chromite
MR-24		serpentinized dunite	patchy (and massive) chromite
MR-25	float, layered orthopyroxenite and dunite with up to 5% patchy chromite		
MR-26	2x75 m	discontinuous dunite layer	diss. chromite
PR-1	1x30 m	dunite layer, irregular, 350/vertical	diss. chromite
PR-2	15 to 200 cm dunite layers equalling 30% over 25m thickness in harzburgite	285/85NE	diss. chromite
PR-3	2m wide, well fractured dunite layer, 260/?		diss. & streaky chromite
PR-4	10x40 m dunite layer, 280/80NE, sample collected from downhill edge of layer where chromite equals up to 2%		
PR-5	40-100 cm dunite layer	280/85NE	diss. chromite
PR-6	large dunite layer on Map MR-87-2 highly fractured and moderately serpentinized		diss. chromite

APPENDIX "B"

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS, VANCOUVER B.C.
PH:(604)253-3158 COMPUTER LINE:251-1011

DATE RECEIVED AUG 7 1986

DATE REPORTS MAILED Aug 15/86

GEOCHEMICAL ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.
Au**, Pd, Pt - 10 GM FIRE ASSAY CONCENTRATION, HNO3 LEACHED,
AQUA REGIA DIGESTION, GRAPHITE FURNACE AA ANALYSIS.

ASSAYER _____ DEAN TOYE , CERTIFIED B.C. ASSAYER

M.MORRISON FILE# 86-1911 PAGE# 1

SAMPLE	Cr %	Au** ppb	Pt** ppb	Pd** ppb
MR 1	.40	19	2	2
MR 2	.16	4	7	6
MR 3	.40	1	2	2

APPENDIX "B" - Continued

ACME ANALYTICAL LABORATORIES
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: AUG 26 1986
DATE REPORT MAILED: Sept. 4/86..

GEOCHEMICAL FIRE ASSAY ICP-MS ANALYSIS

10 GRAM SAMPLE FIRE ASSAY AND ANALYSIS BY ICP MASS SPECTROMETER.
Cr_2O_3 - Whole Rock Assay.
- SAMPLE TYPE: ROCK

ASSAYER: D. Toye.. DEAN TOYE, CERTIFIED B.C. ASSAYER

File # 86-2274A Page 1

SAMPLE#	Au PPB	Pt PPB	Pd PPB	Rh PPB	Ir PPB	Cr203 %
MR-4	5	2	2	2	3	.90
MR-5	1	2	2	2	2	.36
MR-6	1	37	8	2	2	.53
MR-7	1	2	2	2	2	.66
MR-8	1	2	3	2	2	.65
MR-9	1	2	2	2	2	.38
MR-10	5	2	2	2	2	.11
MR-11	1	21	2	2	2	1.34
MR-12	1	2	2	2	2	.48
MR-13	1	2	2	2	2	1.02
MR-14	1	5	2	2	13	.36
MR-15	1	7	2	2	2	.41
MR-16	1	7	2	2	2	.52
MR-17	1	2	13	2	2	1.05
MR-18	1	2	2	2	2	.52
MR-19	1	8	13	2	2	.39
MR-20	1	4	2	2	2	.40
MR-21	1	7	4	2	3	.45
MR-22	1	5	2	2	2	1.11
MR-23	1	2	2	2	6	.47
MR-24	1	38	2	2	3	2.13 ✓
MR-25	1	5	2	2	2	1.54
MR-26	1	2	2	2	2	.42
MR-27	1	12	11	2	4	.51
MR-28	1	5	7	2	3	.47
MR-29	1	8	3	2	3	.48
MR-30	1	3	5	2	2	1.69
DETECTION LIMIT	1	2	2	2	2	.01

ACME ANALYTICAL LABORATORIES 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

WHOLE ROCK ICP ANALYSIS

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 50 MLS 5% HNO3. PT** PD** RH** BY FA-MS.
- SAMPLE TYPE: Rock Chips

DATE RECEIVED: JUL 29 1987 DATE REPORT MAILED: Aug 11/87 ASSAYER. D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER

M.S. MORRISON File # 87-2836

SAMPLE#	SIO2 %	AL2O3 %	FE2O3 %	MGO %	CAO %	NA2O %	K2O %	TIO2 %	P2O5 %	MNO %	CR2O3 %	BA PPM	LOI %	PT** PPB	PD** PPB	RH** PPB	SUM %
PR-1	37.31	.01	6.78	39.09	.09	.19	.12	.01	.04	.08	.43	5	15.6	2	2	4	99.75
PR-2	35.52	.01	6.52	40.88	.08	.38	.05	.01	.05	.08	.24	5	16.0	2	2	2	99.82
PR-3	37.58	.36	7.22	36.60	.05	.44	.17	.01	.04	.08	1.48	5	15.7	2	2	2	99.73
PR-4	37.54	.01	7.12	40.39	.05	.56	.39	.01	.06	.08	.44	5	13.1	2	2	2	99.75
PR-5	36.90	.01	7.19	39.88	.05	.51	.05	.01	.06	.08	.63	5	14.4	2	2	2	99.77
PR-6	36.06	.01	5.83	40.02	.03	.51	.21	.01	.05	.07	.35	26	16.7	2	2	2	99.85
STD SO-4	68.05	10.20	3.35	.93	1.57	1.31	2.13	.54	.21	.07	.01	762	11.4	-	-	-	99.90

APPENDIX "C"

STATEMENT OF QUALIFICATIONS

I, Murray Morrison, of the City of Kelowna, in the Province of British Columbia, do hereby state that:

1. I graduated from the University of British Columbia in 1969 with a B.Sc. Degree in Geology.

2. I have been working in all phases of mining exploration in Canada for the past seventeen years.

3. During the past seventeen years, I have intermittently held responsible positions as a geologist with various mineral exploration companies in Canada.

4. I have examined many mineral properties in British Columbia during the past seventeen years.

5. I personally carried out or supervised the Geological Mapping and Sampling Program outlined in this report.

6. I own a 100% interest in the MR 1-11 mineral claims at the time of writing this report.

October 20, 1987
Kelowna, B.C.

Murray Morrison

Murray Morrison, B.Sc.

APPENDIX "D"

STATEMENT OF EXPENDITURES - ON THE MR GROUP OF MINERAL CLAIMS

Statement of Expenditures in connection with the Geological Mapping and Sampling Program carried out on the MR 1-11 Mineral Claims, located on Murray Ridge near Fort St. James, British Columbia, (N.T.S. 93-K-9) for the year 1987.

FIELD WORK - GEOLOGICAL MAPPING AND SAMPLING

AUGUST 1986

B. Callaghan, geologist	7 days @ $150./day	$ 1050.
Meals and lodging	7 days @ $ 40./day	280.
Truck (4x4, incl. gasoline)	7 days @ $ 60./day	420.

JULY 1987

M. Morrison, geologist	8 days @ $200./day	$ 1600.
Meals and lodging	8 days @ $ 50./day	400.
Truck (4x4, incl. gasoline)	8 days @ $ 60./day	480.
	Sub-total:	$ 4230.

LABORATORY AND SAMPLE SHIPPING COSTS

1986 -	24 samples analyzed for Au, Pt, Pd, Rh, Ir and Cr_2O_3 (Fire Assay and ICP-MS) @ $ 15.50/each	$ 372.
1987 -	6 samples analyzed for Pt, Pd, Rh and Cr_2O_3 (Fire Assay and ICP-MS) @ $22.83/each	$ 137.
bus express samples to laboratory		$ 13.
	Sub-total:	$ 522.

REPORT PREPARATION COSTS

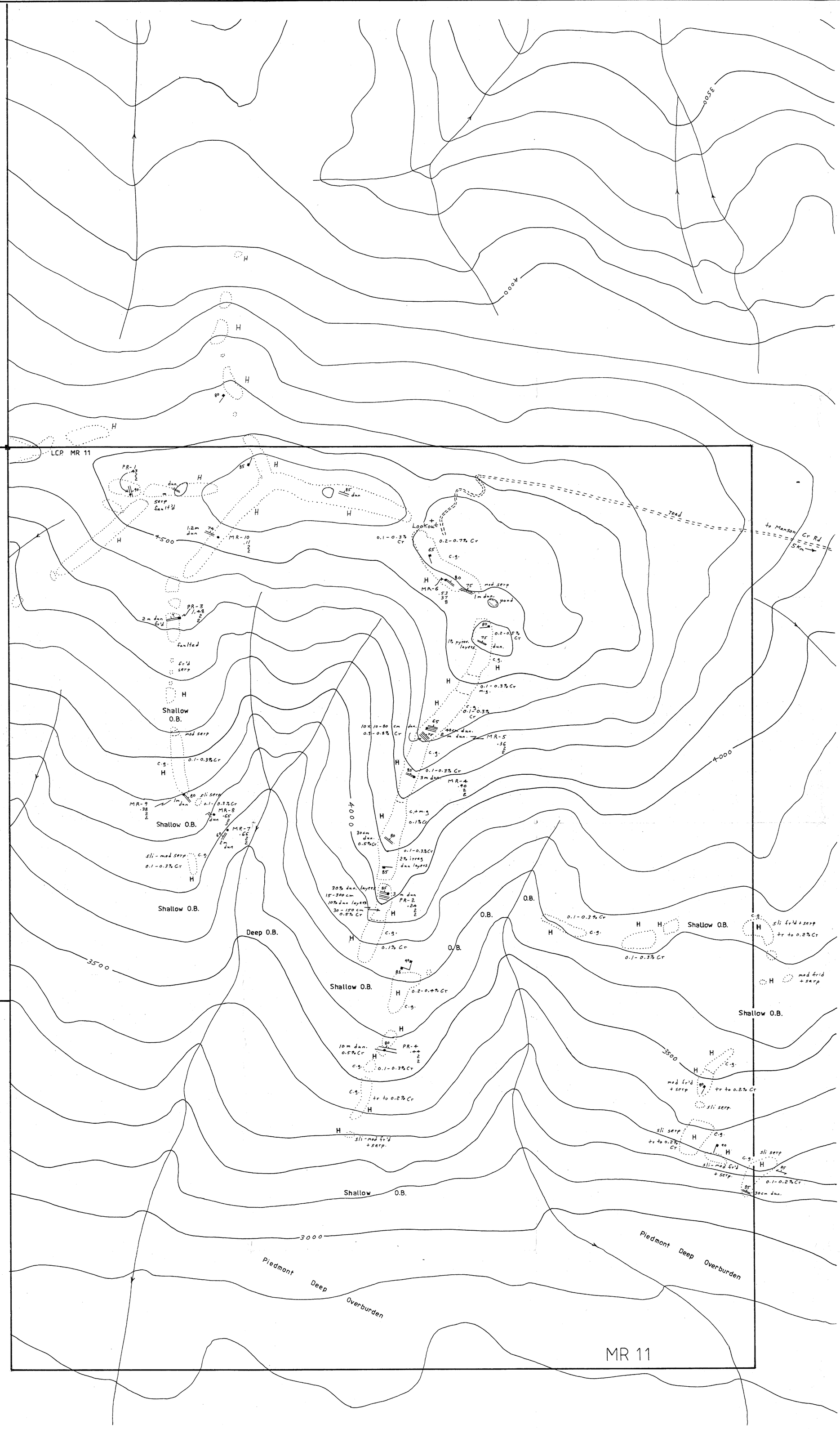
M. Morrison, geologist	2 days @ $200./day	$ 400.
Base maps enlargement		70.
Drafting		20.
Typing		50.
Copying		$ 20.
	Sub-total:	$ 560.
	GRAND TOTAL:	$5,312.

I hereby certify that the preceding statement is a true statement of monies expended in connection with the Geological Mapping and Sampling Program carried out August 12-18, 1986 and July 15-22, 1987.

October 20, 1987

Murray Morrison

Murray Morrison - Geologist



MAGNETIC DECLINATION - 26°

- GEOLOGY -

POST-MIDDLE PERMIAN ?

TREMBLEUR INTRUSIONS

H HARZBURGITE

- LEGEND -

- OUTLINE OF STUDIED OUTCROP
- LAYERING, JOINTS, FOLIATION
- LINEAMENTS (FAULTS ?)
- • SAMPLE SITE
- .53 Cr2 03
- 37 Pt ppm
- 8 Pd ppm

c.g.	COARSE GRAINED
Cr	CHROMITE
dun	DUNITE
fr'd	FRACTURED
mod	MODERATE
O.B.	OVERBURDEN
seg	SEGREGATION
serp	SERPENTINIZATION
sli	SLIGHT
tr	TRACE

0 50 100 200 400 metres

CONTOURS IN FEET

TO ACCOMPANY A GEOLOGICAL REPORT BY M. MORRISON

MURRAY RIDGE PROPERTY

FORT ST. JAMES AREA, OMINECA M. D., B. C.

PRELIMINARY GEOLOGY

MR 11 MINERAL CLAIM

GEOLOGY BY MM/BC	OCTOBER 1987	N.T.S. 93-K-9
DRAWN BY MM/AH	SCALE 1:5000	MAP MR-87-1

ADJOINS MAP MR-87-2

LEGAL CORNER POSTS TIED-IN WITH COMPASS AND BELT CHAIN

MAGNETIC DECLINATION - 26°

MR 10

MR 9

Shallow O.B.

Shallow Overburden

Scattered Outcrop of Harzburgite

Piedmont O.B.

O.B.

MR 1 / MR 2 | MR 3 | MR 4 | MR 5 | MR 6 | MR 7 | MR 8

ADJOINS MAP MR-87-1

L.C.P.'s MR 9,10,11

Ski Tow Terminal

road

FOR GEOLOGY AND LEGEND
SEE MAP MR - 87 - 1

0 50 100 200 400 metres

CONTOURS IN FEET

TO ACCOMPANY A GEOLOGICAL REPORT BY M. MORRISON

LEGAL CORNER POSTS. TIED-IN WITH COMPASS AND BELT CHAIN

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,532

MURRAY RIDGE PROPERTY

FORT ST. JAMES AREA, OMINECA M. D., B.C.

PRELIMINARY GEOLOGY

MR 1 - 10 MINERAL CLAIMS

GEOLOGY BY MM/BC	OCTOBER 1987	N.T.S. 93-K-9
DRAWN BY MM/AH	SCALE 1:5000	MAP MR-87-2