

ARIS SUMMARY SHEET

District Geologist, Prince George

Off Confidential: 91.10.24

ASSESSMENT REPORT 20541

MINING DIVISION: Omineca

PROPERTY: Mt. Sidney Williams  
LOCATION: LAT 54 54 00 LONG 125 24 00  
UTM 10 6086085 346103  
NTS 093K14W  
CLAIM(S): Klone 1, One-Eye 1  
OPERATOR(S): Viceroy Res.  
AUTHOR(S): Mowat, U.  
REPORT YEAR: 1990, 94 Pages  
COMMODITIES  
SEARCHED FOR: Gold  
KEYWORDS: Cache Creek Group, Trembleur Intrusives, Argillites, Ultramafics  
Serpentinites, Peridotites, Dunites, Norites, Listwanite

WORK

DONE: Geological, Drilling, Geochemical  
DIAD 305.3 m 7 hole(s); BDBG  
Map(s) - 7; Scale(s) - 1:100  
GEOL 200.0 ha  
Map(s) - 8; Scale(s) - 1:1000, 1:2500  
PETR 3 sample(s)  
ROCK 8 sample(s) ; ME  
Map(s) - 2; Scale(s) - 1:20 000  
SAMP 343 sample(s) ; ME  
SILT 6 sample(s) ; ME  
SOIL 2 sample(s) ; ME

RELATED

REPORTS: 17173, 18089  
MINFILE: 093K 043, 093K 072

LOG NO: 11-23	RD.
ACTION:	
FILE NO:	

MAPPING AND  
DRILLING PROGRAM

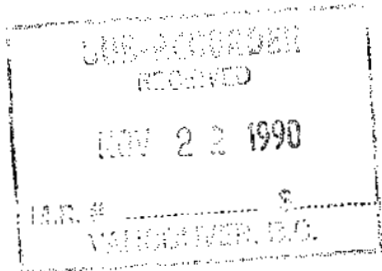
on the  
MOUNT SIDNEY WILLIAMS PROPERTY  
OMINECA M.D.

N.T.S. 93-K-14W

Lat.: 54° 54'N Long.: 125° 24'N

by

U. Mowat, B.Sc.



for

VICEROY RESOURCE CORPORATION  
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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

September, 1990

**20,541**

TABLE OF CONTENTS

1.0 INTRODUCTION . . . . . 1

2.0 LOCATION AND ACCESS . . . . . 1

3.0 CLAIM DATA . . . . . 3

4.0 HISTORY . . . . . 3

5.0 REGIONAL GEOLOGY . . . . . 4

6.0 PROPERTY GEOLOGY . . . . . 6

7.0 MINERALIZATION . . . . . 11

8.0 ALTERATION . . . . . 12

    8.1 LISTWANITE . . . . . 12

    8.2 SILICIFICATION . . . . . 16

    8.3 FELDSPATHIZATION . . . . . 16

    8.4 TALC/SERPENTINE/JADE . . . . . 16

    8.5 OTHER . . . . . 17

    8.6 ALTERATION - MID CLAIM . . . . . 17

9.0 STRUCTURE . . . . . 18

10.0 WORK PERFORMED . . . . . 20

    10.1 MAPPING . . . . . 20

    10.2 DRILLING . . . . . 21

    10.3 SLUDGE SAMPLING . . . . . 24

11.0 CONCLUSIONS . . . . . 25

12.0 RECOMMENDATIONS . . . . . 26

13.0 REFERENCES . . . . . 28

STATEMENT OF QUALIFICATIONS

STATEMENT OF COSTS

APPENDIX I  
    RECONNAISSANCE SAMPLING  
    THIN SECTION DESCRIPTIONS

APPENDIX II  
    DRILL LOGS

APPENDIX III  
    GEOCHEMICAL ANALYSES RESULTS

## MAPS

FIGURE 1	PROJECT LOCATION MAP	2
FIGURE 2	CLAIM MAP	IN POCKET
FIGURE 3	RECCE SAMPLE LOCATION MAP	IN POCKET
MAP A	GRID MAP AND LISTWANITE ZONES	IN FOLDER
MAP B	GRID MAP AND LISTWANITE ZONES	IN FOLDER
MAP 1	GEOLOGY	IN FOLDER
MAP 2	GEOLOGY	IN FOLDER
MAP 3	GEOLOGY	IN FOLDER
MAP 4	GEOLOGY	IN FOLDER
MAP 5	GEOLOGY	IN FOLDER
MAP 6	GEOLOGY	IN FOLDER
DRILL SECTION	HOLE #1	IN FOLDER
DRILL SECTION	HOLE #2	IN FOLDER
DRILL SECTION	HOLE #3	IN FOLDER
DRILL SECTION	HOLE #4	IN FOLDER
DRILL SECTION	HOLE #5	IN FOLDER
DRILL SECTION	HOLE #6	IN FOLDER
DRILL SECTION	HOLE #7	IN FOLDER

## 1.0 INTRODUCTION

A program consisting of mapping and drilling was conducted on the Mount Sidney Williams property from July 1 to August 31, 1990. Mapping was concentrated in the areas of known listwanite occurrences in an effort to determine the extent and orientation of the listwanite. Twenty-five thousand four hundred twenty-five metres of grid line, plus 25,425 metres of in-between grid mapping were done at a scale of 1:1,000. In addition, 1,950 metres of creek traverses were also completed. Two hundred hectares were covered by the mapping program which was concentrated on the Klone 1 and One-Eye 1 claims.

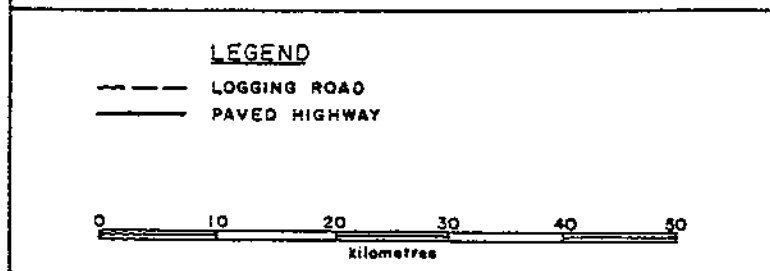
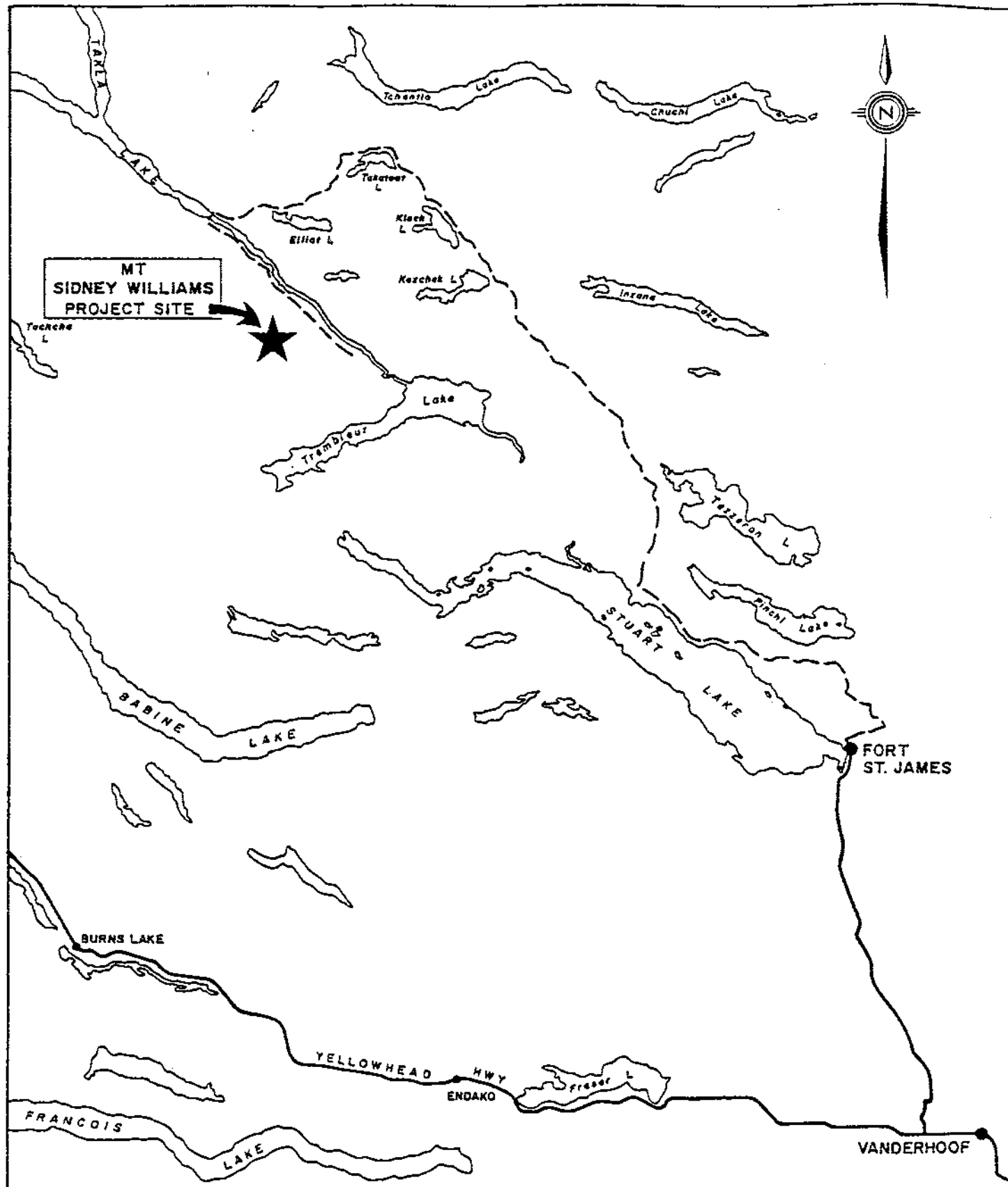
Six silts, 2 soils and 8 rocks were collected during property traverses. All samples were analyzed for 30 elements by ICP and Au by atomic absorption.

During August, 305.3 metres (1,001 feet) of BDBGM drilling was completed. All core was split and analyzed for 30 elements by ICP and Au by atomic absorption. In addition, 3 sections of core were analyzed for platinum group elements. Sludges were collected where possible and analyzed for 30 elements by ICP and Au by atomic absorption.

## 2.0 LOCATION AND ACCESS

Mount Sidney Williams lies 87 kilometres due northwest of the town of Fort St. James and is located at co-ordinate 54° 54' N/125° 24' W on map sheet NTS 93-K-14W.

Access to the property is at present by helicopter.



PROJECT LOCATION MAP  
FIGURE 1

3.0 CLAIM DATA

The Mount Sidney Williams property consists of the following claims:

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>
Mid	8108	20	Dec. 22/86
Van 1	8127	20	Jan. 15/87
Van 2	8128	20	Jan. 9/87
Klone 1	8593	9	Jul. 28/87
Klone 2	8977	9	Sep. 16/87
Klone 3	9181	20	Nov. 13/87
Klone 4	9182	20	Nov. 13/87
Klone 5	9183	20	Nov. 13/87
Klone 6	9184	20	Nov. 13/87
Klone 7	9185	20	Nov. 13/87
Klone 8	9186	20	Nov. 13/87
One-Eye 1	9070	18	Oct. 30/87
Terannoursus	9642	3	Aug. 9/88
Money	12177	4	Jul. 1/90

The property is presently held under option by Channel Resources Ltd. from U. Mowat. Viceroy Resource Corporation, which is acting as operator on the project, is sharing exploration expenditures in order to earn an interest in the property.

4.0 HISTORY

The first known geologic record of the Mount Sidney Williams area was made in 1937 following a brief reconnaissance of the Fort St. James area by J.E. Armstrong of the

Geological Survey of Canada. In 1942, nine chromite deposits were located in the Middle River Range by the G.S.C., plus several asbestos showings of varying quality in the area of Mount Sidney Williams.

Prospectors working in the region reported gold values in carbonate-quartz-mariposite and carbonate-talc rocks in shear zones in altered Trembleur Intrusions (Armstrong, J.E., Fort St. James Map Area, Cassiar and Coast Districts, B.C., G.S.C. Memoir 252, p. 181). One sample of carbonate-quartz-mariposite rock high in quartz (75%) taken on Baptiste Creek contained 0.036 oz/t Au, 0.07 oz/t Ag.

During the late 1930s a small placer operation was located on Van Decar Creek for a brief period. The operation was located below serpentinized peridotite and nuggets valued at \$.50 to \$2.00 were found (1935 prices).

Old flagging and numerous camp sites would indicate that Mount Sidney Williams has been examined in the past for its chrome, nickel and asbestos potential. No mention is made of any exploration, however, until 1962 (MMAR) when the main asbestos showing is described. Blasting caps found at this location indicate an attempt to trench the showing.

Since 1975, various groups have examined the Mount Sidney Williams area for chrome, platinum and gold.

## 5.0 REGIONAL GEOLOGY

The area of Mount Sidney Williams is underlain by a 15 km. wide belt of northwesterly-trending Pennsylvanian and Permian Cache Creek Group rocks consisting of ribbon chert,



argillaceous quartzite, argillite, slate, greenstones, limestone with minor conglomerate and greywacke. The Cache Creek Group has been intruded by Upper Jurassic or Lower Cretaceous Omineca Intrusions consisting of granodiorite, quartz diorite, diorite with minor granite, syenite, gabbro and pyroxenite. As well, Post-Middle Permian, Pre-Upper Triassic (?) Trembleur Intrusions consisting of peridotite, dunite, minor pyroxenite and gabbro with serpentized and steatized equivalents intrude the Cache Creek Belt.

The northwesterly-trending belt of Cache Creek rocks is bordered on the east by the Pinchi Fault and Upper Triassic and later Takla Group andesites, basaltic flows, tuffs, breccias and agglomerates with interbedded conglomerate, shale, greywacke and limestone. On the west, the belt is bounded by the Takla Fault, an east-dipping zone, up to 5 km. wide, containing a melange of serpentine and greenstone. The melange is adjacent to Triassic metamorphosed pyroclastic rocks, basalt, rhyolite, greywacke and argillite of the Sitlika Assemblage.

Between the Pinchi Fault and the Takla Fault, the predominant units of the Cache Creek Group of chert, phyllite, carbonaceous phyllite and argillite with minor greywacke and limestone, are highly deformed. Three deformational periods have been recognized in the Cache Creek Group which has been metamorphosed to lower greenschist facies with local glaucophane. The oldest structures are a prominent foliation that parallels compositional layering and trends east-west, marking the axial planes of isoclinal folds. A later structure consists of chevron folds which trend north-south with axial planes dipping moderately westwards. The youngest

structures are warps and kinks, probably related to late faulting.

#### 6.0 PROPERTY GEOLOGY

The Mount Sidney Williams property is divided into two different geological domains by Van Decar Creek, a fault zone with a postulated 1,000 metre horizontal displacement. On the west side of Van Decar Creek, the rock types consist dominantly of Cache Creek Group dark green andesitic volcanics and black argillites which have been intruded by rootless pods of olivine harzburgite and gabbroic to pyroxenitic rock. One small dyke of feldspathic nature was also seen intruding the argillite.

A volcanic cone-like feature also intrudes the dark green andesitic-argillite package. In addition, dark black, fresh-looking, basaltic flow material has been seen in Van Decar Creek covering the argillite. The source of the basaltic material is postulated to be the volcanic cone-like feature.

From reconnaissance prospecting it would appear that the black argillite is overlain by the dark green andesitic volcanics which appear to be, at least in part, thrust over the argillite.

The largest ultramafic seen on the west side of Van Decar Creek is a nodular olivine harzburgite measuring approximately 1,300 x 800 metres.

On the east side of Van Decar Creek, the dominant rock type is harzburgite with lesser amounts of dunite, nodular olivine harzburgite and altered equivalents of the

harzburgite. A minor amount of schist has been seen at the contacts of the ultramafic massif. A small, glassy, vuggy volcanic and several small bodies of norite have been found intruding the harzburgite. Also, a small outcrop of monzonite has been located on the Van 2 claim.

A description of what is believed to be the youngest to the oldest lithologies on the properties follows.

- (1) Felsic dyke: Possibly the youngest unit on the property. The dyke is light grey with fine-grained, dark green chloritized mafic dots. The dyke does not appear to have a chill zone and trends  $280^{\circ}/90$ . The dyke intrudes a listwanite zone in steeply-dipping argillites.
- (2) Andesitic dykes: Several small outcrops of dyke material have been found on the east side of Van Decar Creek. The rocks have a dark grey matrix and contain pyroxene phenocrysts up to 1 cm. in length. The dykes do not show any preferred orientation and are relatively unaltered.
- (3) Black basalt flow: This rock is a very fine-grained rock with minor ragged feldspar occasionally visible. The only outcrops found to date have been in Van Decar Creek. It appears to be relatively flat-lying and in one outcrop was seen to cover black argillite. The source of this flow is postulated to be the volcanic cone-like feature on the west side of the property.
- (4) Glassy volcanic: A small plug of glassy, vuggy volcanic intrudes harzburgite in only one location, near Tear Drop Lake.

- (5) Volcanic cone: On the postulated cone itself, the lithology consists of a pale green matrix with fine-grained to medium-grained feldspar laths visible. Within the volcanic unit are rounded fragments with the same lithology as the matrix (i.e. feldspar lath volcanic). However, the feldspar laths within the rounded fragments are coarse-grained. The cone is cut by black basaltic dykes and vuggy dykes which appear to be vertically oriented.

On the flanks of the postulated cone, a pale green aphanitic to tuffaceous-appearing volcanic has been found. This material resembles the matrix of the feldspar lath volcanic.

No sulphides were seen in any of the rocks examined. There is, however, an immense amount of quartz veining within the flank material of this unit.

- (6) Norite: Norite outcrops were located during the 1990 mapping and have been found in two places to date - the crest of Mount Sidney Williams and in Jade Valley located at the upper head waters of Van Decar Creek. The norite is fine-grained, dark grey, strongly magnetic and consists of 80% mafics and 20% feldspar. Occasionally 1% disseminated pyrite can be seen. The norite appears fresh and intrudes the harzburgite (Unit #10). Contacts appear to be sharp, fault-controlled except on occasion where they are vague and serpentized and grade into serpentized harzburgite. The norite does not appear to be a dyke (except on the ridge of Mount Sidney Williams) but rather an amorphous body. It is postulated that the

observed outcrops are tongues of a major intrusive body of norite.

- (7) Monzonite (?): A small outcrop was located near the 4 North corner post of the Van 2 Claim. The rock is white, sheared and sericitized.
- (8) Nodular olivine harzburgite: This rock unit which weathers a distinctive light green consists of 1-3 cm. wide ovoids of dunite/peridotite in a harzburgite matrix. The unit generally forms pod-like bodies within or intruding the harzburgite (Unit 10). An exception is the nodular olivine harzburgite located on the west side of Van Decar Creek which is by far the largest showing of this lithology.
- (9) Olivine harzburgite: This rock type, which also weathers a distinctive light green, is black, dense on fresh surface. This unit forms a roughly "east-west" trending series of pods within the harzburgite (Unit 10). Although these pods are considered to be dunite and they are dominantly monomineralic (olivine), the harzburgite texture (i.e. the orthopyroxenes) can be seen gradually being obliterated towards the core of the pod. It is believed that these pods represent areas of later olivine-enrichment and/or replacement (?) of the harzburgite (Unit 10).
- (10) Harzburgite: This rock type is the most predominant lithology on the east side of Van Decar Creek. It is composed of 50-60% olivine and 40-50% orthopyroxene. The harzburgite weathers a distinctive orange-brown with the

resistant orthopyroxene, which reaches up to 1 cm., forming a rough surface. Within the generally massive harzburgite are layers of dunite and minor randomly-oriented orthopyroxenite veinlets up to 10 cm. wide.

- (11) Dark green, andesitic volcanics: This unit appears to overlay the argillite of Unit 12, as a flow or as a thrust. A gossanous sheared contact was found in only one outcrop. The andesite is dark green to almost black, massive with vague feldspar laths occasionally visible. Occasionally it is highly magnetic. The andesite has been altered by chloritization with minor epidote and possible fine-grained laths of actinolite. Minor chalcopyrite and pyrite were noted in the andesite.
- (12) Argillite: Argillite is the dominant lithology on the west side of Van Decar Creek. It is black, fairly carbonaceous with minor pyrite. Occasionally the argillite is cut by numerous quartz veins. In one location near a thrust, the argillite has been intensely sheared and also serpentized. The argillite would appear to trend  $300^{\circ}$  and dip  $65^{\circ}$  to the southwest.
- (13) Limestone: Only one fairly small outcrop of this lithology was discovered to date. The rock is light grey, buff, black (argillaceous) or light green (micaceous?). It is cut by white carbonate veinlets, and is poorly altered by listwanite zones with mariposite. Minor pyrite has been noted in the limestone.
- (14) Schist: This unit is light grey with minor pyrite. It is believed to be altered argillite. Alteration includes

areas of intense sericite and talc. The schist has been found along the contact of the harzburgite on the east side of Van Decar Creek and in close proximity to shear zones such as Van Decar Creek.

From a brief reconnaissance of Baptiste Creek which cuts through the Mid Claim it would appear that the Mid Claim is underlain by harzburgite which has been weakly to severely altered by serpentinization. The harzburgite was seen to be bounded by either listwanite or talc zones, both of which contain numerous quartz veins. Baptiste Creek, which appears to be a major shear zone, also contains zones of intense silicification as well as coarsely crystalline ankeritic alteration.

In one location on a cliff face a zone of vuggy quartz, chalcedonic quartz and carbonate was discovered. It is believed that the vuggy material was formed by more "recent" hot spring activity. Soil samples taken above the suspected hot spring vent were of chalcedonic sinter.

#### 7.0 MINERALIZATION

The Mount Sidney Williams ultramafic massif is an extremely sulphide-poor system. Only trace amounts of a very fine-grained yellowish sulphide were noted in a few locations within the ultramafic rocks.

Chromite has been found throughout the harzburgite and in some of the dunites and olivine harzburgites. The chromite has been altered to a high Mg-Al spinel and occurs as small massive chromite pods, fine-grained clots and as veinlets which occasionally form a stockwork within the harzburgite.

Asbestos, both long-fibre and tremolite, has been found scattered throughout the property, closely spatially related to the olivine harzburgite.

A small outcrop containing coarse-grained stibnite was located in a vertically-dipping, brecciated listwanite zone near the west boundary of the Klone 1 Claim.

Minor chalcopyrite has been seen in the dark green andesitic volcanics, along with minor pyrite.

Sulphide mineralization of economic importance consists of very fine-grained arsenopyrite and pyrite located within listwanite zones. It is believed that the arsenopyrite is the source of the gold values in the listwanite. Drill core has shown that the sulphide mineralization within the listwanite is erratically distributed in intensely silicified areas and also along fault zones. The distribution of sulphides and silicification is directly related to the norite intrusives forming an alteration-mineralization halo at the contact of the norite.

The only sulphide noted on the Mid Claim was pyrite, and possibly minor chalcopyrite, in some of the listwanites and shear zones.

## 8.0 ALTERATION

### 8.1 LISTWANITE

Listwanite alteration forms a vivid red-orange rock composed of variable amounts of carbonate, quartz, mariposite and occasionally sulphides (pyrite and/or arsenopyrite).



Carbonate forms the major component of the alteration zones and is probably ankerite or ferro-dolomite. Quartz occurs as white quartz veinlets, virtually always vertical, and as a pervasive alteration of the carbonate alteration. Mariposite is seen in both the carbonate and the pervasively silicified sections and is generally very fine-grained imparting a pale green hue to both rock types.

The major listwanite outcrops have been named as follows:

- (1) Camp Zone      Listwanite outcrop is exposed over a length of 50 metres. The listwanite is unique in that some material has an epithermal appearance. Vuggy quartz forms the matrix to carbonated brecciated ultramafic fragments.
- (2) Upper Zone      Listwanite is exposed by trenches, pits and outcrop over a length of 85 metres. A fault zone 2 metres wide assayed as high as 1.290 oz/t Au.
- (3) Middle Zone      Listwanite is poorly exposed over a distance of 70 metres.
- (4) Lower Zone      Listwanite occurs as isolated outcrops near the junction of Van Decar and Teardrop Creeks. This zone may be a dislocated section of the Oro Zone.
- (5) Oro Zone      Listwanite is exposed over a distance of 300 metres, trending  $\approx 290^\circ$ . It is by

far the most continuously exposed zone and consists of dominantly carbonate and carbonated harzburgite. Minor pervasive silicification and quartz veining are present.

- (6) Stibnite Zone The Stibnite Zone is an area of alteration (listwanite, serpentine and talc) that extends for a distance of  $\approx$  200 metres. The actual listwanite can be traced for  $\approx$ 90 metres and appears to have a width of  $\approx$  35 metres.
- (7) RJS Zone The RJS zone consists of a 10 metre wide carbonate listwanite. The zone is a complex mixture of serpentine, norite and altered harzburgite/listwanite.

In addition, there are several other large outcrops and numerous sporadic small outcrops which have not been named at present.

Originally it was believed that listwanite zones were strictly structurally controlled. It would appear from drilling plus the mapping of the RJS zone that listwanites form a contact alteration halo around norite intrusives. There are a minor number of listwanites of dominantly carbonate alteration that occur as blind lenses along major fault zones. Sampling of these lenses has indicated that they are non-auriferous.

Listwanites in the major outcrops appear to be zoned both horizontally and vertically. The zonation would appear to be as follows:

- (1) Norite.
- (2) Bleached, highly pyritic (10-20% pyrite) sericitic contact.
- (3) Pervasively silicified zone - sulphides are predominantly arsenopyrite (5-10% sulphides).
- (4) Carbonate zone - 0-5% sulphides with pyrite predominant.
- (5) Talc - serpentine zone - 0.-1% pyrite.

Drill core and thin sections have shown that there are multiple phases of alteration within the listwanites. It would appear that the earliest phase of alteration of the harzburgites was the introduction of carbonate, followed by the intrusion of norite and hence the pervasive silicification. A second but weaker stage of pervasive carbonate alteration was then introduced. The last stages of alteration include pervasive chalcedonic quartz replacement and carbonate, carbonate-quartz, quartz and chalcedony veinlets.

The mineralization in the listwanites was introduced with the pervasive silicification and concentrated by shearing and the late-stage carbonate, carbonate - quartz veinlets.

Argillites and limestone have also been seen to be altered to listwanite.

## 8.2 SILICIFICATION

In addition to the pervasive silicification and the chalcedonic quartz in the listwanites, quartz occurs as veins and as replacement bodies along major structures.

Quartz veins are usually white bull quartz which have been shattered into cleavage quartz. Veins have been seen up to 3 metres wide and traceable for approximately 1000 metres.

Along major structures, located on the west side of Van Decar Creek, pods of silicified material have been seen and appear to be either replaced argillite or replaced volcanic of unit #5. In one case the silicified material was cut by an erratic magnetite veinlet.

## 8.3 FELDSPATHIZATION

Plagioclase of undetermined composition has been seen in thin sections to selectively replace the groundmass of harzburgites (particularly in the Stibnite Zone). The source of the plagioclase is believed to be the norite.

## 8.4 TALC/SERPENTINE/JADE

Massive talc alteration consisting of a distinctive reddish matrix with 1 cm dark grey ovoids has several geologic settings. The main occurrence of talc alteration is at the outer most periphery of the listwanite zones. Numerous bodies of talc have been located along fault zones and appear to be isolated occurrences with no relationship to the listwanites.

In addition, pervasive talc alteration along major structural breaks has affected the volcanics and argillites of units 11 and 12 as well as recent basaltic volcanic plugs. The volcanics are pale green with the talc being coarse grained. The argillites are greasy and highly sheared. The recent basalts while still retaining a macroscopic fresh appearance are also replaced by coarse grained talc.

Dark green serpentine and jade are located on the outer periphery of listwanite zones and are formed under structurally controlled situations.

#### 8.5 OTHER

The volcanics on the west side of Van Decar Creek (unit 11) have been altered by varying intensities of chlorite, epidote, tremolite and jasperoid material. This alteration reflects the contact metamorphic effects produced by pyroxenite intrusives.

#### 8.6 ALTERATION - MID CLAIM

Alteration on the Mid Claim consists of zones of reddish-grey talc, cut by numerous .3 metre wide, vertical white bull quartz veins immediately adjacent to serpentized harzburgite.

High-carbonate, buff listwanites with minor quartz veinlets have been cut by intensely silicified zones which appear glassy and have a distinctive greenish hue.

Coarsely crystalline carbonate (listwanite?) with occasionally intense mariposite and up to 5% pyrite locally have also been seen. The coarsely crystalline carbonate has

been found as a matrix to brecciated dark grey, carbonated ultramafic.

In addition, in the vicinity of the hot-spring like area, kaolinization has been found along fractures and shears. The rock has also been intensely altered by chalcedonic quartz and carbonate.

#### 9.0 STRUCTURE

Although it has been postulated that the listwanites are structurally controlled zones that generally run east-west (except for the Oro zone), neither mapping nor previous soil geochemistry show this to be the case. The Oro Zone is the only listwanite body that shows any discernible orientation trending approximately  $290^{\circ}$ .

The predominant trend for major faults, the strike of the argillites and the Oro Zone is  $290-310^{\circ}$ . This orientation is particularly predominant on the west side of Van Decar Creek. A weaker subsidiary orientation of  $N20^{\circ}E$  to  $N40^{\circ}E$  is also prevalent and is called the Van Decar influence as this orientation roughly parallels that of Van Decar Creek. Quartz veining, possibly the orientation of the Stibnite Zone and creek drainages which appear to be structural breaks are affected by the Van Decar influence.

On the east side of Van Decar Creek preferred orientations are subtle, generally east-west, and have affected the norite dykes on the ridge of Mt. Sidney Williams, and possibly the Camp Zone listwanite. Quartz veinlets in some listwanites also have a preference for an east-west trend.

The role of structures appears to be less important in the formation of the listwanites than the geologic setting. From drill core it is apparent that the occurrence of the norite is the critical factor for the formation and mineralization of the norite. Whether the norites are structurally controlled has not yet been determined.

The only economic structurally significant feature that was revealed by drill core is that shear zones are most definite conduits for auriferous fluids.

Van Decar Creek is a major dislocation zone with a postulated horizontal displacement of approximately 1000 metres. Blocks of tectonic breccia have been located in the upper portion of Jade Valley. It is not known whether the displacement occurred prior to the listwanite formation. It is suspected by the apparent lack of continuity of talc zones and also carbonate listwanites that movement is post-listwanite formation.

Blocks of tectonic breccias and mylonites have been located in several areas on the west side of Van Decar Creek suggesting that major faulting is present.

On line 6+00W/5+25S, an ultramafic plug located near Coy Lake appears to be folded. The fold trends  $\approx 290^\circ$  and has been up-ended into a vertical position. Layering in the ultramafic is also vertical.

## 10.0 WORK PERFORMED

### 10.1 MAPPING

During July, 1990, the author and an assistant mapped an area of 200 hectares concentrating the work in an area of known listwanite occurrences. Mapping was done at a scale of 1:1,000 and was concentrated on the Klone 1 and One-Eye 1 claims. In all, 25,425 metres of flagged line, 25,425 metres of between-line, and 1,950 metres of creek traverses were mapped.

Mapping did not reveal any new listwanite zones, nor any orientation of the known zones. However, numerous listwanite debris trails were discovered indicating the presence of extensive covered zones.

Of major importance was the discovery of several small norite bodies in the upper reaches of Jade Valley. The norite was seen to intrude harzburgite producing an alteration halo of serpentine/jade and listwanite. Orientation and contact features were not clear. Some contacts appeared to be faults while others showed a gradational serpentinization of both norite and harzburgite. It is believed that the norite bodies are probably tongues of a major intrusive body and not dykes.

A major structure extends from line 10+00W/6+50S north-westerly to 18+00W/0+00BL. The structure consists of black, phyllitic, vertical argillites, phyllitic volcanics, silicified pods of argillite, recent serpentinized basaltic volcanics, talc and asbestiform alteration, minor pyroxenite, and a zone of silicification-quartz veining paralleling the struc-



ture. The zone trends 290-310° and shows that alteration by serpentization was continuing until probably Tertiary time.

## 10.2 DRILLING

Seven holes, totalling 305.3 metres (1,001 feet) of BDBGM core, were drilled. The core is stored at an unmarked location on the property. The following is a summary of the purpose and results of the seven holes.

### Hole 1

Purpose: Hole #1 was drilled to test a possible westerly extension of the Camp Zone and to test for the source of two anomalous gold values in soil on Line 2+00W/4+25S and Line 2+00W/4+50S.

Bearing: 192°

Angle: -45°

Depth: 61.0 metres (200 feet)

Results: Drilling did not intersect the listwanite of the Camp Zone. However, red sludge samples and a piece of listwanite in boulders cored while casing the hole indicate that the zone may still exist.

The hole did intersect both norite and minor listwanite showing the geologic relationship between the two rock types. Also the potential of shear/fault zones to carry gold values was indicated.

The best values in hole #1 were found at 48.8-49.7 metres (160-163 feet) in a shear zone which ran 1321 ppb Au (0.039 oz/t).

Hole 2

Purpose: Hole #2 was drilled to test the vertical extent of gold values in the Stibnite Zone (samples 60511-60513).

Bearing: 038°

Angle: -65°

Depth: 61.0 metres (200 feet)

Results: Drilling intersected both norite and listwanite. The best values were obtained in the contact zone of the norite at 47.9-49.0 metres (157-160.5) feet which returned values of 2690 ppb Au (.078 oz/t). Minor gold values were found in the norite itself (270 ppb).

Hole 3

Purpose: Hole #3 was drilled to test the depth of the Camp Zone and to test for the source of a 19,900 ppb Au value in soil.

Bearing: 320°

Angle: -80°

Depth: 30.5 metres (100 feet)

Results: A fault zone was intersected from 0-8.2 metres (0-27 feet). The fault zone (which at the time of drilling was believed to be overburden) contained cobbles of silicified listwanite. These were collected while the hole was being cased. From 0-9.2 metres returned an average grade of .115 oz/ton Au.

In addition a felsite dyke was encountered which also gave weak gold values. Fault gouge located at the bottom contact 23.2-23.5 metres (76-77 feet) returned a value of 5040 ppb Au (.147 oz/t Au).

Hole 4

Purpose: Hole #4 was drilled on the same setup as Hole #3 and was drilled to locate bedrock listwanite of the Camp Zone.

Bearing: 274°

Angle: -80°

Depth: 29.3 metres (96 feet)

Results: Hole #4 encountered the listwanite of the camp zone which was silicified and broken by faulting. From 3.7-5.8 metres (12-19 feet) the core averaged 0.151 oz/t Au.

Hole 5

Purpose: Hole #5 was drilled to test the depth of a fault zone with values of up to 1.290 oz/ton Au which was exposed in Trench #1.

Bearing: 300°

Angle: -65°

Depth: 45.8 metres (150 feet)

Results: Hole #5 did not intersect the shear although return was lost and core recovery was low at the corresponding depth. Extensive listwanite was encountered in the hole. In addition, the contact phase of the norite intrusives was also seen. Surprisingly, talcose harzburgite at 16.2-19.2 metres (53-63 feet) assayed 1500 ppb with no discernible sulphide mineralization.

Hole 6

Purpose: Hole #6 was drilled on the same setup as Hole #5 and was to test for the extension of the 1.29 oz/t Au zone in Trench #1. The hole was also intended to test

for the source of a 615 ppb Au value in soil and to possibly determine if the exposed listwanite outcrops of the Upper Zone are continuous.

Bearing: 030°

Angle: -65°

Depth: 30.5 metres (100 feet)

Results: Hole #6 immediately encountered a norite with subsequent contact zone and listwanite. The best value obtained was from a bleached section of the norite with 20% pyrite at 6.9-7.3 metres (22.5-24 feet). This section assayed 5830 ppb Au (.170 oz/t Au).

#### Hole 7

Purpose: Hole #7 was drilled to test the depth of listwanite exposed in Pit #11 which gave a value of 3825 ppb Au over 1.5 metres.

Bearing: -

Angle: -90°

Depth: 47.3 metres (155 feet)

Results: The hole encountered intense silicification including total replacement of fault gouge by chalcedonic quartz. Several small zones with gold values were encountered.

No dip tests were done on any of the holes.

### 10.3 SLUDGE SAMPLING

Sludge samples were collected every 10 metres where possible. In general gold and arsenic values correspond reasonably well to values obtained in core for the corresponding footage. However, in at least 2 instances high silver values were obtained in the sludge samples with no corresponding silver values in the core.

Since silver values have not been previously reported in rock samples from the property and soil geochemistry does not indicate the presence of silver, it was assumed that the silver values of 20.4 ppm and 36.9 ppm were from somewhere in the drill string. However, no high-silver matrix bits were used on the job site. The source of the silver values remains problematic.

#### 11.0 CONCLUSIONS

Drilling has shown that the norite is the ultimate generator of mineralizing fluids although some of the younger volcanics (unit #4) may have had some influence.

The norite has generated multiphased alteration consisting of carbonate and silicification, with the accompanying sulphide mineralization. Gold values usually are accompanied by high arsenic values from arsenopyrite. However, gold values have been found with very low arsenic values. The gold-low arsenic relationship suggests that gold may be present as native gold. Furthermore in the gold-low arsenic sections there is little to no sulphides. In addition there are several sections of gold-low arsenic values with a substantial amount of pyrite. It would appear that pyrite may be auriferous.

Shear zones have acted as conduits for gold-bearing solutions and gold values are enhanced in sheared silicified zones.

In addition to the silicified zones, shear zones and listwanite, some serpentized sections of the ultramafic have also been found to carry gold.

## 12.0 RECOMMENDATIONS

Any further exploration work should be focused on locating norite intrusives with its alteration-mineralization halo and also shear zones. The norite, although encountered in drill holes, has only been seen on surface in one location. It is postulated that the norite is buried under an ultramafic layer.

It is suggested that geophysics in conjunction with geology be used to attempt to locate the norite/listwanite and shear zones. In particular, a detailed ground magnetometer and VLF-EM survey is suggested with readings at 12.5 metres since the norite target may have narrow dimensions. Approximately 35 km of line need to be surveyed. This would cover the grid mapped in 1990 plus some additional proposed grid particularly near the norite showings.

Depending on the success of a magnetometer and VLF-EM survey, some experimental IP may be useful. Ideally, and without knowing how successful an IP survey will be, the 1990 mapped grid plus any new grid should be surveyed. However, a minimum of 25 km of IP is required to cover the known listwanite occurrences and anomalous arsenic and/or gold values.

In addition, 8.7 km of new grid is required and should be soil sampled and mapped. At the present 25 meter spacing this would be approximately 2175 soil samples.

In conjunction with the IP survey all grid will have to be cut to geophysical standards.

In summary the proposed future work involves:

New grid:	8.7 km
Mag survey:	35 km
VLF survey:	35 km
IP survey:	25 km
Soil samples:	2175
Cut grid:	35 km

13.0 REFERENCES

Paper 37-13, West Half of the Fort Fraser Map - Area, B.C., by J.E. Armstrong, 1937.

Paper 38-10, Northwest Quarter of the Fort Fraser Map - Area, B.C., by J.E. Armstrong, 1938.

Paper 78-19, Jade in Canada, by S.F. Leaming.

Paper 74-1, Part B, Geology of the Cache Creek Group and Mesozoic Rocks at the Northern End of the Stuart Lake Belt, Central B.C., by Ian A. Paterson, 1975.

Memoir 252, Fort St. James Map - Area, Cassiar and Coast Districts, B.C., by J.E. Armstrong, 1949.

Assessment Report 5648, Rock Sampling and Prospecting on the Pauline Claims, by D. Stelling, 1975.

Assessment Report 8135, Prospecting Report on the CR Claims, by V. Guinet, 1980.

Assessment Report 10286, Geophysical Report on the CR 1-6 Claims, by T. Pizzot, 1982.

Assessment Report 11879, Geochemical Survey on the BAP Claims, by R.R. Culbert, 1984.



STATEMENT OF QUALIFICATIONS

1. I am a graduate of the University of British Columbia having graduated in 1969 with a Bachelor of Science in Geology.
2. I have practised my profession since 1969 in mineral exploration, oil and gas exploration and coal exploration.
3. I have a direct interest in the Mount Sidney Williams property.

Ursula G. Mowat  
Ursula G. Mowat

DATED THIS 14<sup>th</sup> DAY OF November, 1990 AT VANCOUVER, B.C.

09-24-01  
UM/SB

STATEMENT OF COSTS FOR JULY 1 - AUGUST 9, 1990

Labour

1	man for 40 days at \$333.33/day	\$ 13,333.20
1	man for 37 days at \$144.00/day	5,328.00

Analysis

6	silt samples analysed for 30 elements by ICP & Au by AA at \$7.75/sample	46.50
2	soil samples analysed for 30 elements by ICP & Au by AA at \$7.75/sample	15.50
8	rock samples analysed for 30 elements by ICP & Au by at \$7.75/sample	62.00
6	silt prep charges at \$0.85/sample	5.10
2	soil prep charges at \$0.85/sample	1.70
8	rock prep charges at \$3.00/sample	24.00
		<hr/>
		154.80

Helicopter

5.0 hrs. at \$635/hr	3,175.00
16.8 hrs. at \$595/hr.	9,996.00
45 gal. at \$2.10/gal.	94.50
247.5 gal. at \$3.45/gal.	853.88
252.5 gal. at \$4.36/gal.	1,100.90
Oil - 1.8 hrs. at \$2.00/hr	3.60
	<hr/>
	15,223.88

Drilling Costs

130 feet (39.65 metres) at \$38/ft.	4,940.00
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Fuel

Gas	219.61
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Meals

525.88

Groceries

1,354.91

Camp Rental

\$40.00/day for 40 days	1,600.00
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(Statement of Costs for July)  
(Page 2)

SBX Rental

\$250/mo. for 40 days 333.33

Truck Rental

\$300/mo. for 40 days 400.00

Auto Rental

3 days at \$42.95/day	\$128.85	
704 km at \$0.19/km	133.76	
Extra hours	17.00	
Less 15% discount	(41.94)	
Insurance - 3 days at \$12/day	13.39	
6% tax	30.00	
Fuel	<u>30.00</u>	
		316.55

Airfare

394.50

Expediting

1.75 hrs. at \$30/hr. 52.50

Accommodation

2 men @ \$41.04/man/day for 5 days	410.40
1 man @ \$41.04/man/day for 1 day	41.04
1 man @ \$37.80/man/day for 1 day	37.80
2 men @ \$55/man/day for 4 days	<u>440.00</u>
	933.24

Telephone

150.26

Consulting Fees

3 days at \$500.00/day 1,500.00

Maps

22.80

Reproduction

113.42

(Statement of Costs for July)  
(Page 3)

Thin Sections

3 polished thin sections @ \$20.00/section	60.00
3 reports @ \$65.00/report	195.00
3 reflected light examinations	20.00
Shipping	<u>16.00</u>
	291.00

Airphotos

95 photos @ \$8/photo + 6% tax	815.60
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Courier

97.40

Radio Licence

41.00

Field Equipment

943.35

B.C. Tel Equipment/Generator

1,925.93

Postage

1.17

Drafting

25 hours at \$25.00/hr.	500.00
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Typing

20 hours at \$20.00/hr.	<u>400.00</u>
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**TOTAL**

**\$ 51,290.24**

STATEMENT OF COSTS FOR AUGUST 10-31, 1990

Labour

1	man for 20 days at \$333.33/day	6,666.80
1	man for 21 days at \$144/day	3,024.00

Analyses

290	rock/core samples analysed for 30 elements by ICP & Au by AA at \$7.75/sample	1,860.00
179	rock prep charges at \$3.00/sample	537.00
18	sludge prep charges at \$1.50/sample	27.00
35	sludge prep charges at \$4.50/sample	157.50
3	rock samples analysed for Au, Pt, Pd by FA & AA at \$7.50/sample	22.50
2	rock samples analysed for Au, Ag by FA at \$12.00/sample	24.00
	Shipping charges	319.90
	Surcharge	5.00
		<u>2,952.90</u>

Helicopter

14.4 hrs.	at \$635/hr.	9,144.00
4.7 hrs.	at \$595/hr.	2,796.50
45 gal.	fuel at \$3.45/gal.	155.25
25 gal.	fuel at \$2.00/gal	50.00
115 gal.	fuel at \$3.25/gal.	373.75
Oil 14.4 hrs.	at \$3.00/hr	43.20
		<u>12,562.70</u>

Drilling Costs

870 feet (265.35 metres)	at \$38/ft.	33,050.00
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Fuel

Jet B - 12 barrels	at \$176.00/barrel	2,112.00
Gas		313.17

Meals

227.75

Groceries

187.83

(Statement of Costs for August 1990)  
(Page 2)

Camp Rental

\$40.00/day for 20 days 800.00

SBX Rental

\$250/mo. for 20 days 166.67

Truck Rental

\$300/mo. for 20 days 200.00

Airfare

428.60

Parking

7.43

Accommodation

2	men at \$41.04/man/day for 4 days	328.32
2	men at \$51/man/day for 1 day	102.00
1	man at \$52/man/day for 1 day	52.00
2	men at \$55/man/day for 3 days	330.00
1	man at \$55/man/day for 1 day	55.00
		<hr/>
		867.32

Telephone

658.29

Reproduction

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185.28

**TOTAL**

**\$ 64,420.74**

RECONNAISSANCE SAMPLING

SAMPLE NO.	SAMPLE DESCRIPTION	Au (ppb)	As (ppm)
11432	silt	2	7
11433	silt	2	8
11434	silt	2	5
11435	silt	1	7
11436	silt	1	11
11437	rusty, quartzose float; pervasively silicified mat- erial with pale green areas.	3070	492
11438	red hematitic material	240	23
11439	green, heavily epidotized volcanic	8	2
11440	silt	2	6
11441	tectonic breccia composed of buff, silicified? matrix with some cobbles of listwanite	2	4
11442	intensely silicified schist with 1 cm wide magnetite veinlet	25	2
11443	white silicified material in a shear zone	1	3
11444	reddish soil from Jade Valley	2	51
11445	white silicified volcanic? quartzite? sucrosic texture; minor oxidized pyrite.	2	2



# Vancouver Petrographics Ltd.

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## PETROGRAPHIC STUDY OF THREE SPECIMENS

Report for: Ursula Mowat  
 1405-1933 Robson Street  
 Vancouver, B.C.  
 V6G 1E7.

Invoice 56

May 10, 1990

### Sample #1: CHLORITE-CARBONATE-QUARTZ ALTERED ULTRAMAFIC

Pale green, highly altered rock containing coarse (up to 7 mm) dark green blotches that may have been phenocrysts; they contain minor sulfides. The rock is cut by thin cream coloured veinlets up to 1 mm wide. There is no reaction to cold dilute HCl, but the rock is strongly magnetic and rusty weathering. In thin section, the mineralogy is:

Chlorite	40%
Carbonate (ankerite or magnesite)	30%
Quartz (secondary)	10%
Sericite (muscovite)	10%
Magnetite (trace hematite)	5%
Relict plagioclase (?)	2%
Sulfide (pyrite)	1%
Limonite (goethite)	<1%

The bulk of this rock is apparently composed of chlorite and carbonate, with minor quartz. Chlorite forms flaky masses up to 0.5 mm diameter, as well as interstitial grains of 0.05 mm that are difficult to distinguish from quartz. It shows no anomalous interference colours and no colour or pleochroism, indicating a chlorite rich in Mg and poor in Fe. The chlorite is coarsest in patches that are up to 1 cm across (which are also rich in skeletal magnetite); these probably were former mafic phenocrysts (?olivine or pyroxene).

Carbonate forms anhedral interlocking grains of 0.1 to 0.2 mm diameter, and is obviously a hydrothermal replacement mineral: it is most abundant in and along the margins of carbonate-quartz veins, although it also partially replaces the former phenocryst? sites. There are two generations of carbonate, the earlier being semi-transparent and the later as clear thin veinlets, occasionally with subhedral quartz grains up to 0.2 mm long. Both carbonates must be ankerite (ferroan dolomite) or magnesite since there is no reaction to HCl even after powdering the mineral.

The principle opaque mineral is magnetite, which forms anhedral to skeletal grains up to 1 mm across in aggregate, although individual grains are generally less than 0.1 mm in diameter. There is minor alteration to hematite.



Sulfides occur in two main forms: as minute rounded blebs (1-20 microns) disseminated in quartz-carbonate veins, and as elongated anhedral blebs up to 0.8 mm long confined to thin quartz-carbonate veinlets. The latter occasionally have fine-grained sulfide replacements of magnetite adjacent to the largest blebs. The sulfide appears to be entirely pyrite; it is replaced along fractures by minor goethite.

In summary, both the composition (abundant magnetite plus chlorite and carbonate, which are probably both magnesian) and the colour and texture suggest that this sample probably represents a highly carbonate altered ultramafic rock ("listwanite"). Minor sulfides are hydrothermal additions during carbonate veining and alteration. Much of the rusty weathering is due to oxidation of the iron in the carbonate, typical of listwanites.

2: CARBONATE-QUARTZ-?FUCHSITE-PYRITE ALTERED ULTRAMAFIC

Very light emerald green (fuchsite, or chrome mica colour) highly altered rock containing large white to brown blotches up to 1 cm diameter that may be similar to the ?phenocrysts seen in sample 1. Rusty spots are due to oxidation of pyrite, but the main rusty weathering is probably due to weathering of Fe-carbonate. The rock does not react to cold dilute HCl, even after powdering, and is not magnetic. In thin section, the mineralogy is:

Carbonate (ankerite or magnesite)	65%
Quartz	10%
Pyrite	10%
Limonite (goethite)	5%
Sericite (?fuchsite)	5%
Chlorite	3%
Chromite (?)	2%

This rock is composed almost entirely of carbonate as interlocking anhedral grains of 0.1 mm or less average diameter, which from their rusty weathering, high relief in thin section and resistance to HCl, must be ankerite or possibly partly magnesite. As in sample 1, there are two distinct generations of carbonate, with the former being cloudy and pervasive, whereas the latter is clear and confined to thin veins.

The coarse blotches in the rock are also principally carbonate, which is even cloudier than that forming the groundmass of the rock. In places, a relic lamellar texture can be seen in the patches that is suggestive of former orthopyroxene (enstatite) phenocrysts.

Minor mica forms fine-grained (0.03 mm diameter or less) flaky masses interstitial to the carbonate; the bright green colour in hand specimen suggests it may be a chrome variety such as fuchsite.

Occasional patches up to 0.5 mm across are composed principally of chlorite, as fine anhedral flakes up to 0.05 mm diameter. These are most common in the groundmass between the ?phenocrysts, and are accompanied by minor quartz as anhedral grains up to 0.1 mm diameter.

In reflected light, the principle opaque is pyrite, which forms anhedral grains up to 1 mm across that are mildly to moderately replaced along grain margins and fractures by supergene limonite (mainly goethite). The sulfides are disseminated throughout the rock, although there is a tendency for preferred distribution in phenocryst sites. In addition, there is abundant intergranular films of limonite throughout the rock, due to weathering of the carbonate. Scattered coarse (up to 2 mm) opaques with low reflectance, also altering to limonite at their rims, are probably chromite. They may be relics of a primary ultramafic rock that contained coarse orthopyroxene phenocrysts and chromite grains, and has been subjected to more intense quartz-carbonate-fuchsite (listwanite) alteration than sample 1.

3: SERPENTINIZED ULTRAMAFIC CUT BY CHRYSOTILE VEINS

Black rock containing a fibrous mineral up to 1 cm long as cross-fibres in a vein. The rock is strongly magnetic, and does not react to cold dilute HCl even after powdering. In thin section, the mineralogy is as follows:

Serpentine (antigorite)	55%
Chrysotile	20%
Magnetite	10%
Chlorite	10%
Muscovite	5%

As in samples 1 and 2, this rock is made up of remnant phenocrysts, in this case set in a monomineralic matrix. The phenocrysts are composed of relatively fine-grained (0.1 mm or less on average) clear, colourless, anomalous blue birefringent chlorite or zoisite with lesser muscovite (higher birefringence), and minor green chlorite. Relict lamellar textures suggest these may be pseudomorphs after orthopyroxene crystals that were 2 to 4 mm in diameter.

The matrix consists of unusually large (up to 1 cm) anhedral interlocking grains of antigorite (serpentine) that have an appearance suggestive of replacement of coarse olivine. Normal antigorite is very finely flakey, but this is coarse enough to see a biaxial positive interference figure with a small (30 degree) axial angle. The birefringence is weak, up to 0.010, and the colour is pale yellowish green. In places this is cut by thin veinlets of cross-fibre serpentine (chrysotile) with slightly higher birefringence and sub-parallel extinction.

The coarsely fibrous ("prismatic") mineral is also chrysotile, occurring as finely layered and sheared monomineralic veins up to 1.5 cm thick.

The principal opaque in this sample is magnetite, as very coarse anhedral to subhedral grains up to 6 mm across as well as along fractures and grain boundaries, and as skeletal aggregates where the individual grains are as fine as 0.05 mm. There are no sulfides present.

In summary, this rock probably represents a strongly serpentized ultramafic that may have originally consisted of roughly 20% orthopyroxene phenocrysts and 10% opaques in a matrix of coarse olivine, i.e. a peridotite (variety harzburgite?). It has not been hydrothermally altered as have samples 1 and 2.



Craig H.B. Leitch, Ph.D, P.Eng.

(604) 921-8780

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY Sidney WilliamsHOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 1 Lat. 2+00W/4+35S  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_  
 Date Begun Aug. 9/90 Bearing 192°  
 Date Finished Aug. 10/90 Elev. Collar \_\_\_\_\_  
 Date Logged Aug. 9-10/90 Angle - 45°

Total Depth 200' (61.0 M)  
 Logged By U. Mowat  
 Claim Klone 1  
 Core Size BDBGM

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
0	15		Overburden - piece of white calcite with orange								
(0	4.6)		carbonate listwanite fragments at 15' (4.6m)								
15	20.5		Serpentinized harzburgite - dark green grey,	11446	4.6	6.3		3	6		
(4.6	6.3)		generally f.g. with .75 cm black phenocrysts of pyroxene altered to magnetite; minor rust on fractures								
20.5	35		Harzburgite -c.g. phenocrysts of pyroxene altered	11447	6.3	10.7		3	56		
(6.3	10.7)		to orange (limonitic talc - carbonate - magnetite) in a light grey talc matrix; minor orange carbonate veinlets; trace of disseminated pyrite								
35	44.5		Fault zone? above rock (20.5-35) cut by myriads	11448	10.7	13.6		2	60		
(10.7	13.6)		of dark green talc - chlorite - magnetite veinlets and white c.g. talc veinlets up to 1cm wide; at 36' (11m) patch of silvery metallic dots; trace of disseminated pyrite; veinlets vary from 30 to 45° to core axis								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	AS		
							ppb	ppm		
44.5 (13.6	53 16.2)	Harzburgite - c.g. orange talc - carbonate pyroxene phenocrysts in a medium grey c.g. talc matrix; texture appears brecciated by areas of black magnetite - talc - chlorite (?) with trace of pyrite - f.g. disseminated; cut by buff stringers of talc; occasional pyrite in fractures	11449	13.6	16.2		3	41		
53 (16.2	57.5 17.5)	Serpentinized harzburgite - greenish grey talc matrix with light grey talc semi-ovoid pyroxene shapes; disseminated silver grey metallic flakes throughout; cut by occasional thin veinlets of black green talc - chlorite at 30° to core axis	11450	16.2	17.5		2	24		
57.5 (17.5	64 19.5)	Breccia? pale green serpentinized areas and up to 1 cm patches and ovoids of orange carbonate - talc in a dark green black matrix of chlorite - talc - magnetite; minor disseminated pyrite? at 62.5 (19.1), 10 cm shear zone of pale to dark green chlorite at 50° to core axis; minor white carbonate veinlets	11451	17.5	19.5		1	53		
64 (19.5	68 20.7)	Shear zone - dark green c.g. talc cut by myriads of irregular thin 1-2 mm orange carbonate - talc	11452	19.5	20.7		2	18		

(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			veinlets and magnetite veinlets								
68	71.5		As 57.5-69 (17.5-19.5); upper contact gradational	11453	20.7	21.8		1	38		
(20.7	21.8)		with 64-68 (19.5-20.7) dominantly dark green textureless; minor disseminated silvery flakes and pyrite								
71.5	85.5		Shear zone? dark green talc with patches of pale green (talc altered pyroxene?), minor white carbonate veinlets (1-2 mm wide); trace disseminated pyrite? pyrrhotite? minor areas of orange talc carbonate patches (altered pyroxene)	11454	21.8	24.9		5	36		
(21.8	26.1)			11455	24.9	26.1		2	55		
85.5	96		Harzburgite - 1 cm patches of orange talc - magnetite altered pyroxene in dark green matrix of c.g. talc - chlorite (?) - magnetite; minor patches of pale green talc pyroxene plus matrix; minor 1-2 mm veinlets of white talc and/or carbonate and orange talc; trace disseminated pyrite	11456	26.1	29.3		1	39		
(26.1	29.3)										
96	102.5		Bleached zone - white to pale olive green talc carbonate? with occasional relict pyroxene still visible; magnetite clots with rare disseminated f.g. pyrite?; zone is shattered, mariposite throughout; at 100' (30.5) white quartz - talc - carbonate	11457	29.3	31.3		4	266		
(29.3	31.3)										

(MARKS IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
(cont'd)			veinlet, 1 cm wide at 15° to core axis								
102.5	106.5		Shear zone - variably bleached zone and variably	11458	31.3	32.5		5	85		
(31.3	32.5)		shattered; ranges from 1) pale green talcose rock								
			cut by myriads of white talc - filled tension								
			fractures and talc veinlets up to 2 cm at 20° to								
			core axis. 2) orange talc-carbonate - mariposite								
			shattered material; 3) remanant orange pyroxene								
			clots in a black talc matrix (altered harzburgite)								
			shear contacts appear to be at 65° to core axis								
106.5	109		Silicified zone - light grey with minor patches	11459	32.5	33.2		10	207		
(32.5	33.2)		of green mariposite and dark grey to green black								
			chlorite - talc patches; white carbonate veinlets								
			at 25° to core axis.								
109	112		Shear zone - gougey, dark grey zones in pale green	11460	33.2	34.2		1	17		
(33.2	34.2)		bleached areas cut by myriads of 1 mm hairline								
			talc veinlets								
112	114.5		Shear zone - dark greenish black chlorite - talc	11461	34.2	34.9		2	104		
(34.2	34.9)		magnetite, sheared and cut by myriads of hairline								
			orange talc - carbonate veinlets								
114.5	117		Medium grey, competent talcose zone with minor	11462	34.9	35.7		6	14		
(34.9	35.7)		hairline talc veinlets								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 5 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
117	120.5		Listwanite - pale grey, erratically silicified with	11463	35.7	36.8		14	934		
(35.7	36.8)		mariposite, 1% pyrite and a trace of arsenopyrite;								
			cut by 4 cm white carbonate veinlet (30° to core								
			axis) and a 1.5 cm pale green talc veinlet; patches								
			of orange carbonate								
120.5	138		Norite, m.g., dark grey with ≈ 30% white feld-	11464	36.8	39.8		3	2		
(36.8	42.1)		spar laths visible; trace of disseminated pyrite;	11465	39.8	42.1		1	6		
			slightly magnetic; cut by strong set of white								
			carbonate, carbonate-talc and quartz veinlets								
			predominantly at 35° to core axis								
138	139		Fault zone - norite altered by c.g. talc altera-	11466	42.1	42.4		114	51		
(42.1	42.4)		tion; cut by rusty zones and limonitic talc;								
			minor white bleached areas of talc								
139	144		Norite - c.g., dark grey with 65% biotite (?)	11467	42.4	43.9		2	2		
(42.4	43.9)		and 35% white feldspar; cut by occasional								
			white carbonate veinlet and dark green talc -								
			chlorite (?) veinlet; trace to 1% disseminated								
			pyrite (?) pyrrhotite (?)								
144	148.5		Bleached zone - light grey to pale green, tal-	11468	43.9	45.3		3	56		
(43.9	45.3)		cosa, with patches and veinlets of silica/quartz,								
			pyrite in silicified areas; minor limonite on								



(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 6 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	AS ppm		
(cont'd)			fractures; intensely sheared at 148.5 (45.3), remnants of feldspar and veinlets parallel to core axis								
148.5 (45.3)	160 (48.8)		Intermixed m.g. norite and pale grey bleached talcose zones with stringers of pyrite; norite has a trace of disseminated pyrite and pyrrhotite at 152 (46.4), talcose bleached zone, 12" (30cm) long with 5% pyrite disseminated and on fractures; minor 2 cm wide white carbonate veinlets	11469	45.3	48.8		4	180		
160 (48.8)	163 (49.7)		Bleached shear zone, light grey, talcose with minor mariposite and 5% disseminated pyrite; cut by white carbonate veinlets 1-2 cm wide at 35° to core axis	11470	48.8	49.7		1321	1722		
163 (49.7)	169 (51.6)		Bleached norite - pale grey, talcose with 1-3% disseminated pyrite; trace of arsenopyrite? minor small green mariposite patches; 1 cm wide white carbonate veinlets at 50° to core axis	11471	49.7	51.6		261	460		
169 (51.6)	183 (55.8)		C.g. norite - 60% c.g. biotite (?) 40% white feldspar; cut by minor 1 cm white carbonate veinlets; minor zones of pale grey, talcose bleached areas occasionally with disseminated pyrite	11472	51.6	55.8		17	6		

(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 7 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	As	Ag	
							ppb	ppm	ppm	
183 190 (55.8 58.0)		F.g. norite - dark grey with 70% biotite and 30% white feldspar; bleached pale grey talcose to dark green chlorite - talc along fractures, occasionally with pyrite; white carbonate veinlet from 184-187.5 (56.1-57.2) parallel to core axis; shear zone at 190 (58.0) at 50° to core axis	11473	55.8	58.0		1	13		
190 200 (58.0 61.0)		Altered harzburgite - pale green, generally talcose with light grey silicified patches; rare light grey pyroxene (talc replaced) remnants; minor mariposite; cut by myriads of 1-2 cm white carbonate veinlets; up to 3% pyrite disseminated throughout sporadically	11474	58.0	61.0		2	31		
0 10	(Hole 1A)	Sludges					28	106	20.4	
10 20							15	82	3.7	
0 10	(Hole 1)						19	131		
10 20							20	82	6.9	
20 30							17	40	3.4	
30 40							20	95	1.2	
60 70							39	61	2.0	

(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY Sidney Williams

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 1  
 Section \_\_\_\_\_  
 Date Begun Aug. 12/90  
 Date Finished Aug. 13/90  
 Date Logged Aug. 12-13/90

Lat. 5+00W/3+50S  
 Dep. \_\_\_\_\_  
 Bearing 038°  
 Elev. Collar \_\_\_\_\_  
 Angle -65°

Total Depth 200' (61.0 M)  
 Logged By U. Mowat  
 Claim Klone -1  
 Core Size BDBGM

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
0	10	(3.1)	Overburden								
10	27		Altered harzburgite - talcose; ovoids up to 1.5	11475	3.1	6.1		2	4		
(3.1	8.2)		cm in dark green talc - chlorite matrix, pale	11476	6.1	8.2		1	8		
			green talc matrix and black magnetite - talc -								
			chlorite? matrix; ovoids are white to dark red								
			(hematitic) and are probably either nodules of								
			replaced peridotite or c.g. pyroxene or both;								
			cut by white veinlets of talc and/or carbonate								
			at 55° and 25° to core axis								
27	55		Altered harzburgite - dominantly greenish grey	11477	8.2	11.3		1	2		
(8.2	16.8)		matrix with occasional 1 cm dark green talc	11478	11.3	14.3		2	2		
			replaced remnants of pyroxene crystals; black	11479	14.3	16.8		1	2		
			ovoids of magnetite - also replaced pyroxene?								
			minor amount of sulphides - nil to trace of								
			pyrite? (very fine grained); rare speck of								
			silver, platy metallic; white carbonate - talc								
			veinlets throughout; at 41.5 (12.7) core has								
			appearance of layering and may <sup>be</sup> a dunite replaced								
			by talc with magnetite bands; from 48-55								
			(14.6-16.8) zones of intense pale green <sup>to dark green</sup> talc -								
			textures obliterated veinlets of dark red								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
(cont'd)			hematitic talc; minor remaining pyroxene? dark red also								
55	69.5		Altered dunite - pale green with black dots of magnetite disseminated throughout; completely replaced by talc/carbonate; minor white carbonate veinlets	11480	16.8	19.8		1	29		
(16.8	21.2)		- 57.5-59.5 (17.5-18.2) dark grey with fragments? of c.g. granitic intrusive; magnetite in this section blood red hematitic; intrusive appears to be a c.g. diorite	11481	19.8	21.2		1	3		
			- 61.5-64.5 (18.8-19.7) pale green and pale pink carbonated zone of dunite								
			- 65.5-69.5 (20.0-21.2) as 61.5-64.5 (18.8-19.7)								
69.5	84		Altered harzburgite? c.g. granitic? dark grey matrix with irregular 5-75 cm white semi-rectangular outlines; cut by anastomosing white to pale green talc - carb veinlets; whole rock altered to talc; strongest veinlets running at 0°-10° to core axis	11482	21.2	24.3		1	2		
(21.2	25.6)			11483	24.3	25.6		1	4		
84	89		Altered dunite? pale green with disseminated magnetite; occasionally dark grey mottled from	11484	25.6	27.2		8	293		
(25.6	27.2)										

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
(cont'd)			concentrated magnetite; cut by minor white carbonate - talc veinlets								
89	95		Listwanite - orange to buff, silicified carbonate?	11485	27.2	27.9		1	197		
(27.2	29.0)		with mariposite, 3-5% disseminated pyrite (partially altered to limonite) and trace arsenopyrite; sulphides also on edges of c.g. magnetite crystals; minor fragments of dark grey norite	11486	27.9	29.0		50	462		
95	107		Norite - dark grey, f.g., 80% mafies; cut by bleached zones of silicified carbonate? containing 5-10% disseminated pyrite; bleaching may be related to vuggy carbonate veinlets with peripheral pyrite; veinlets at 0° and 35° to core axis; heavy limonite on fractures - norite becoming chloritic from 104-107 (31.7-32.6) - at 104 (31.7) patch of c.g. pinkish semi-euhedral K-spar?	11487	29.0	32.1		65	361		
(29.0	32.6)			11488	32.1	32.6		3	22		
107	110		Altered harzburgite and dunite - pale green with disseminated magnetite and occasional c.g. clots of magnetite (replaced pyroxene?); cut by numerous irregular white to orange carbonate veinlets	11489	32.6	33.6		2	16		
(32.6	33.6)										

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			mariposite bands								
110	117		Listwanite - pale grey, silicified with moderate	11490	33.6	35.7		20	814		
(33.6	35.7)		intense mariposite, 3-5% disseminated pyrite and trace arsenopyrite in silicified areas; cut by vertical white carbonate - silica veinlets; limonite on fractures								
			- 115.5 (35.2) - gypsum? in carbonate veinlet								
117	134		Altered harzburgite - dark green to pale green	11491	35.7	38.8		1	12		
(35.7	40.9)		talc replaced; pyroxene altered to black chlorite - talc - magnetite; occasional red hematitic patches; cut by myriads of white hairline talc-carbonate veinlets and minor dark green talc - veinlets; minor mariposite at base; trace disseminated pyrite	11492	38.8	40.9		1	2		
			Listwanite - pale grey, silicified with intense	11493	40.9	42.1		25	1317		
134	157		mariposite and minor buff carbonate; cut by	11494	42.1	44.2		240	1363		
(40.9	47.9)		myriads of white talc - carbonate, carbonate and	11495	44.2	45.1		55	271		
			carbonate-silica veinlets with no preferred	11496	45.1	45.8		20	309		
			orientation; strongest veinlets vertical; occasional	11497	45.8	47.4		260	1553		
			vague outlines of pyroxene replaced by pyrite	11498	47.4	47.9		31	1246		
			with coarser pyrite - arsenopyrite on rims;								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 5 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			1-3% pyrite; trace arsenopyrite throughout								
157	160.5		Contact zone - pinkish grey, dense carbonate	11499	47.9	49.0		2690	2694		
(47.9	49.0)		with 15% pyrite in veinlets running 10°-30° to core axis; trace arsenopyrite in carbonate veinlets								
160.5	161.5		Norite - dark grey, f.g., 70% biotite; trace chalcopyrite in talc veinlet	11500	49.0	49.3		270	126		
(49	49.3)										
161.5	166.5		Interbanded contact zone as at 157-160.5 (47.9-49.0), dark green to pale grey listwanite - altered harzburgite (chlorite - talc - mariposite) and minor norite as at 160.5-161.5 (49.0-49.3) cut by strong carbonate veining at 40°-45° to core axis; 1-3% disseminated pyrite, trace arsenopyrite except in contact zones - pyrite 10% as veinlets; norite contacts limonitic	11501	49.3	50.2		35	95		
(49.3	50.8)			11502	50.2	50.8		6	107		
166.5	170		Very altered harzburgite - dark green chlorite talc altered; pyroxene replaced by magnetite, chlorite and/or pyrite; myriads of hairline talc carbonate veinlets	- 11503	50.8	51.9		1	54		
(50.8	51.9)										
170	173		Listwanite - pale grey, silicified carbonate and bright green intense mariposite; cut by white	11504	51.9	52.8		15	655		
(51.9	52.8)										

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 6 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			carbonate-talc veinlets at 35°-40° to core axis								
			mariposite replacing pyroxene phenocrysts; 1-3%								
			disseminated pyrite; trace arsenopyrite; pyroxene								
			phenocrysts also replaced by pyrite								
173	200		Altered harzburgite - dark green, chlorite - talc	11505	52.8	53.9		4	18		
(52.8	61.0)		altered, very magnetic; pyroxene replaced by	11506	55.9	58.9		2	6		
			white talc, black magnetite and red hematite;	11507	58.9	61.0		4	15		
			hairline carbonate veining - white with dark green								
			talc selvages occasionally; trace pyrite								
0	10		Sludges					14	22		
10	20							11	18		
20	30							16	17		
30	40							11	18		
40	50							1	23		
50	60							1	21		
60	70							2	22		
70	80							11	12		
80	90							7	68		
90	100							2	130		
190	200							38	51		



(METERS IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY Sidney WilliamsHOLE No. 3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 1Lat. 3+60E/4+72STotal Depth 100' (30.5M)

Section \_\_\_\_\_

Dep. \_\_\_\_\_

Logged By U. MowatDate Begun Aug. 14/90Bearing 320°Claim Klone 1Date Finished Aug. 15/90

Elev. Collar \_\_\_\_\_

Core Size BDBGMDate Logged Aug. 14-15/90Angle -80°

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	As		
								ppb	ppm		
0	25		OB and apparent fault zone containing frags of	11508	0	7.6		2960	6270		
(0	7.6)		listwanite with pale grey silicified patches and								
			mariposite, arsenopyrite disseminated throughout;								
			one minor cobble of f.g. norite								
25	27		Cobbles of listwanite with pale grey silicified	11509	7.6	8.2		240	1284		
(7.6	8.2)		patches with arsenopyrite and mariposite;								
27	30		Listwanite - pale grey irregular silicified patches	11510	8.2	9.2		14860	12218		
(8.2	9.2)		with irregular pale green to bright green talc -								
			mariposite patches; cut by anastomising white to								
			grey carbonate - quartz veining; 3-5% vfq. arseno-								
			pyrite and 1% disseminated pyrite concentrated in								
			the silicified areas								
30	32		Listwanite - less altered; similar to above except	11511	9.2	9.8		32	589		
(9.2	9.8)		less silicified and more talcose; also remnant								
			pyroxene? texture (white irregular talc replaced								
			phenocrysts); intense anastomising white hairline								
			talc veinlets								
32	34.5		Altered harzburgite - white irregular patches	11512	9.8	10.5		29	93		
(9.8	10.5)		of talc (replaced pyroxene) in a dark grey mag-								
			netite talc matrix; cut by zones of pale to dark								
			green talc and anastomising white hairline talc								

(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
(cont'd)			veinlets; trace pyrite, arsenopyrite								
34.5	36		Listwanite - pale grey, silicified patches contain-	11513	10.5	11.0		220	562		
(10.5)	(11.0)		ing up to 10% vfg pyrite, 1% arsenopyrite, and								
			pale green talc - mariposite; anastomising white								
			hairline talc veinlets; 1 cm wide carbonate - qtz								
			vnlt at 45° to core axis; vague harzburgite text-								
			ure occasionally as at 32.-34.5 (9.8-10.5)								
36	41		Altered harzburgite - w hite remnant clots of	11514	11.0	12.5		4	8		
(11.0)	(12.5)		talc in dark grey talc - magnetite matrix; cut by								
			dark green talc zones and anastomising white								
			hairline talc veinlets								
41	42		Shear zone - dark green talc, magnetic; upper	11515	12.5	12.8		9	16		
(12.5)	(12.8)		contact 70° to core axis - bottom contact 30° to								
			core axis; anastomising white hairline talc veinlets								
42	69		Altered harzburgite - same as 32-34.5 (9.8-10.5)	11516	12.8	15.9		2	6		
(12.8)	(21.0)		more white carbonate veining; trace pyrite and	11517	15.9	19.0		3	5		
			arsenopyrite; pyroxene crystals occasionally re-	11518	19.0	21.0		2	12		
			placed by red hematite - talc; section very								
			broken with gougey patches virtually at 0° to								
			core axis								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	As ppb	As ppm		
69	70		Fault gouge - grey clay with minor streaks of	11519	21.0	21.4		18	49		
(21.0	21.4)		mariposite and 1% vfg disseminated pyrite								
70	76		Felsite?- vfg, pale to medium grey with 80%	11520	21.4	23.2		97	591		
(21.4	23.2)		white feldspar crystals; fractures extremely rusty, 1% disseminated vfg pyrite; rare patch of m.g. feldspar laths								
76	77		Fault gouge - same as 69-70 (21.0-21.4); 1%	11521	23.2	23.5		5040	4718		
(23.2	23.5)		pyrite and trace of arsenopyrite								
77	78		Listwaite - pale grey, silicified with minor	11522	23.5	23.8		780	2830		
(23.5	23.8)		bright green mariposite with carbonate veinlets; 2% pyrite and trace arsenopyrite								
78	90		Altered harzburgite - varies from 1cm white talc	11523	23.8	26.9		8	3		
(23.8	27.5)		replaced pyroxene crystals in pale green talc mat	11524	26.9	27.5		8	13		
			rix to a dark green matrix; anastomising white talc hairline veinlets; strong set of veinlets run- ning at 10° to core axis								
90	95		Black chloritic - talc aphanitic rock (probably	11525	27.5	29.0		3	72		
(27.5	29.0)		extremely altered harzburgite) cut by anastomis- ing orange talc veinlets; minor orange talc pyrox- ene? outlines; trace pyrite								

(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm	Ag ppm
FROM	TO									
95	100		Altered harzburgite - black magnetite replaced	11526	29.0	30.5		2	49	
(29.0)	(30.5)		pyroxene remnants and minor orange talc replaced							
			pyroxene remnants in a dark greenish grey matrix;							
			minor white and orange talc veining							
0	10		Sludges					2210	2231	
10	20							10340	6849	
20	30							1640	1086	
30	40							5860	3717	36.9
40	50							600	918	6.9
50	60							112	106	
60	70							168	215	
70	80							860	1089	
80	90							380	317	
90	100							530	521	

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY Sidney WilliamsHOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 1  
 Section \_\_\_\_\_  
 Date Begun Aug. 15/90  
 Date Finished Aug. 15/90  
 Date Logged Aug. 15-16/90

Lat. 3+60E/4+72S  
 Dep. \_\_\_\_\_  
 Bearing 274°  
 Elev. Collar \_\_\_\_\_  
 Angle -80°

Total Depth 96' (29.3 M)  
 Logged By U. Mowat  
 Claim Klone 1  
 Core Size BDBGM

DEPTH FROM TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
0 10		Overburden								
(0 3.1)										
10 12		Listwanite - carbonate predominantly with minor	11527	3.1	3.7		300	1160		
(3.1 3.7)		light grey patches of silicified material; carbonate								
		stained orange to buff by limonite; mariposite and								
		myriads of carbonate veinlets throughout; ~ 5%								
		disseminated pyrite and arsenopyrite in equal								
		portions; sulphides concentrated in silicified								
		areas and occasionally along selvages of carbonate								
		veinlets; mariposite throughout								
12 16		Breccia - pale grey listwanite, brecciated in	11528	3.7	4.9		2330	3427		
(3.7 4.9)		part by vuggy quartz veinlets; 15% sulphides pre-								
		dominantly arsenopyrite as dark grey selvages on								
		quartz veinlets at 50° to core axis and concen-								
		trated in pale grey silicified areas; limonite on								
		fractures; mariposite throughout - at 12 (3.7)								
		15 cm quartz veinlet at 50° to core axis with vfg								
		sulphides along selvages								
16 17		Breccia/Fracture Zone - very broken listwanite as	11529	4.9	5.2		19100	12493		
(4.9 5.2)		at 10-12 (3.1-3.7); silicified areas black with								
		vfg pyrite and arsenopyrite; 30% sulphides overall,								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	As	As		
							ppb	ppm		
(cont'd)		dominantly pyrite								
17 18 (5.2 5.5)		Fault Zone - dominantly black sulphide - rich gouge; 60% sulphide, mainly pyrite, 1% arsenopyrite; streaks of mariposite	11530	5.2	5.5		6430	6542		
18 19 (5.5 5.8)		Annealed Breccia - fragments of listwanite as at 10-12 (3.1-3.7) and quartz vein material in black silicified matrix with vfg sulphide; 40% sulphide overall, pyrite and arsenopyrite; contacts at 55° to 40° to core axis	11531	5.5	5.8		2360	4039		
19 22.5 (5.8 6.9)		Altered harzburgite and/or nodular harzburgite - mottled pale grey to pale green, talcose with white talc replaced pyroxene? remnants, rare pale grey ovoid silicified nodules? up to 4cm and black magnetite - talc patches of pyroxene? mariposite throughout; white carbonate veining 1% disseminated pyrite, arsenopyrite	11532	5.8	6.9		55	564		
22.5 23 (6.9 7.0)		Orange carbonated harzburgite with tension hair-line carbonate veinlets	11533	6.9	7.0		58	271		
23 29 (7.0 8.9)		Poorly developed listwanite consisting of areas of irregular white talc outlines (pyroxene?) in dark grey talc matrix; pale grey silicified areas	11534	7.0	8.9		18	260		

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	As		
							ppb	ppm		
(cont'd)		with 10% pyrite and minor arsenopyrite and pale green talc - mariposite areas; cut by myriads of white talc veinlets and occasional irregular white carbonate - quartz veinlet; average sulphide content 1% for this section								
29 (8.9)	32 (9.8)	Silicified Zone - pale grey with streaks of bright green mariposite and 10% disseminated pyrite and arsenopyrite (dominantly arsenopyrite.); at 30' (9.2) rusty vug with quartz crystals; pink hematitic patches (replaced nodules?) occasionally	11535	8.9	9.8		5170	6809		
32 (9.8)	46.5 (14.2)	Listwanite - pale grey, silicified areas with 5-10% pyrite and minor arsenopyrite, pale green talc - mariposite patches and areas of partially altered harzburgite (white talc outline in dark grey magnetite - talc matrix); average sulphide 1% disseminated pyrite	11536 11537	9.8 12.9	12.9 14.2		250 610	1120 1591		
46.5 (14.2)	52 (15.9)	Altered harzburgite and listwanite - white talc replaced pyroxene? remnants in dark grey matrix of magnetite - talc; cut by zones of pale green listwanite consisting of carbonate - silica - mariposite and pyrite and/or arsenopyrite;	11538	14.2	15.9		45	302		

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			average sulphide content overall 1% sulphides concentrated on black fragments? and in pale grey silicified zones; all rock types cut by white hair-line talc veinlets								
			-50-52 (15.3-15.9) pale bluish opaline quartz veinlets								
52	53		Altered harzburgite - white talc remnants of pyroxene in dark grey magnetite - talc matrix; cut by zones of medium green talc and white carbonate quartz veins, and white anastomising hair-line talc veinlets; trace disseminated pyrite and arsenopyrite	11539	15.9	16.2		32	100		
(15.9)	(16.2)										
53	54		Sheared harzburgite - as above but sheared and limonitic; extremely talcose; contacts at 50° and 55° to core axis	11540	16.2	16.5		4	50		
(16.2)	(16.5)										
54	81		Nodular harzburgite - white semi-ovals of talc in dark green talc matrix; ovoids have remnant magnetite disseminated in the white talc; occasionally ovoids which average 2 cm across have red hematite core	11541	16.5	19.6		8	11		
(16.5)	(24.7)			11542	19.6	22.7		4	7		
				11543	22.7	24.7		2	12		



(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 5 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm	Ag ppm
FROM	TO									
81	85		Fractured Nodular harzburgite; same as above 54-	11544	24.7	25.9		1	7	
(24.7	25.9)		81 (16.5-24.7) but cut by intense irregular white carbonate veinlets							
85	88		Shear Zone - Nodular harzburgite; same as above	11545	25.9	26.8		3	6	
(25.9	26.8)		but sheared to gouge							
88	90		Talc Zone - dominantly pale grey talc with white	11546	26.8	27.5		2	5	
(26.8	27.5)		talc remnant pyroxene?; cut by intense medium green talc zones							
90	95		Carbonated Zone - orange hairline talc - carbonate	11547	27.5	29.0		3	144	
(27.5	29.0)		hairline veinlets with preferred orientation due to shearing?; rock dark green talc							
95	96		Felsite - medium grey, vfg, 70% feldspar laths	11548	29.0	29.3		4	173	
(29.0	29.3)		visible; upper contact at 90° to core axis							
			Sludges							
0	10							9840	4716	8.2
10	20							13660	8439	
20	30							2430	2152	
30	40							3630	3712	
40	50							1350	1611	
50	60							1080	1785	

# DIAMOND DRILL RECORD

(METRES IN BRACKETS)

PROPERTY \_\_\_\_\_

HOLE No. 4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 6 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	As		
FROM	TO							ppb	ppm		
(cont'd)			Sludges					280	454		
60	70							450	633		
70	80							250	181		
80	90							210	161		

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY Sidney WilliamsHOLE No. 5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 1Lat. 1+53E/2+07STotal Depth 150' (45.8 M)

Section \_\_\_\_\_

Dep. \_\_\_\_\_

Logged By U. MowatDate Begun Aug. 16/90Bearing 300°Claim Klone 1Date Finished Aug. 17/90Elev. Collar 0Core Size BDBGMDate Logged Aug. 17-19/90Angle -65°

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(0	1.8)		Overburden								
0	6										
6	18		Listwanite, pale grey, silicified with remnant	11549	3.1	5.5		1	37		
(1.8	5.5)		pyroxene? texture of semi-ovals of carbonate, magnetite and brown felty material; cut by white carbonate, carbonate-quartz and rarely bluish chalcedonic quartz veinlets; sulphides average 3-5% pyrite and arsenopyrite forming rims on black magnetite?; replacing pyroxene remnants, concentrated in intensely silicified areas and rarely as fracture fillings; very minor mariposite; limonite stain on fractures								
18	24		Listwanite - very rusty, dominantly carbonate, fractured, minor carbonate veinlets, minor mariposite; virtually devoid of texture except for a few patches of remnant harzburgite texture; sulphides as at 6-18 (1.8-5.5)	11550	5.5	7.3		53	1030		
(5.5	7.3)										
24	31.5		Listwanite - pale grey, silicified with very	11551	7.3	9.6		200	367		
(7.3	9.6)		minor mariposite; 1-3% sulphides locally concentrated in very silicified areas consisting of pyrite and minor arsenopyrite; intense carbonate - quartz								

(METRES IN BRAKETS)

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			veining; limonite on fractures								
31.5	42		Listwanite - very rusty, dominantly carbonate as	11552	9.6	12.8		97	316		
(9.6	12.8)		at 18-24 (5.5-7.3); very shattered; 2% sulphide								
			- oxidized, disseminated; minor carbonate-								
			quartz veining; mariposite minor and bleached out								
42	47		Silicified harzburgite - pale grey, very silicified	11553	12.8	13.9		280	526		
(12.8	14.3)		with areas of dark greenish grey (talcose);	11554	13.9	14.3		49	186		
			pyroxene remnants of black magnetite and orange								
			carbonate; white quartz- carbonate veining at								
			10° to core axis; 1% disseminated pyrite								
47	50.5		Altered harzburgite - dark greenish grey, tal-	11555	14.3	15.4		42	255		
(14.3	15.4)		cose with white to orange pyroxene remnants; cut								
			by pale green talc zones and white talc veinlets								
50.5	53		Silicified harzburgite, medium grey with vague	11556	15.4	16.2		5	71		
(15.4	16.2)		white spots of remnant pyroxene? minor mariposite								
			buff to orange zones of carbonate; 2% disseminated								
			pyrite								
53	78		Altered harzburgite - talcose; white remnant talc	11557	16.2	19.3		1500	1584		
(16.2	23.8)		replaced pyroxene in dark green talc matrix;	11558	19.3	22.4		24	90		
			occasional red hematite - replaced cores	11559	22.4	23.8		1	22		

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
			61.5-62.5 (18.8-19.1) limonitic orange talc pyroxenes? sheared								
			63-75 (22.1-22.9) remnant pyroxene entirely red (hematitic) in pale green talc matrix, trace disseminated sulphide (pyrite and arsenopyrite); some white carbonate veining up to 2.5 cm wide								
78	79		Silicified harzburgite - green from mariposite to pale grey (silicified); dominantly carbonate; minor red hematite blotches; quartz and carbonate; veinlets; 1% disseminated pyrite - arsenopyrite	11560	23.8	24.1		1	22		
(23.8	24.1)										
79	81		Altered harzburgite - talc varying from dark green to dense whitish green (carbonated?); red hematite blotches	11561	24.1	24.7		13	27		
(24.1	24.7)										
81	86.5		Silicified harzburgite - generally pale grey with remnant pyroxene replaced by mariposite and occasionally red hematite; 20% pyrite as dissemi- nations, replacing pyroxene lamellae, as rims on magnetite and minor hairline veinlets; carbonate and quartz veinlets - no preferred orientation	11562	24.7	26.4		4	66		
(24.7	26.4)										

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
86.5	88		Altered harzburgite - pyroxene remnants as ovoids	11563	26.4	26.8		19	550		
26.4	26.8		of red hematite, black magnetite in pale green to dark green talc matrix; very rusty								
88	90.5		Carbonate Zone - intensely altered harzburgite - remnant pyroxene texture almost obliterated;	11564	26.8	27.6		14	364		
26.8	27.6		mariposite replacing pyroxenes								
90.5	99		Silicified harzburgite - pale grey silicified matrix with 5-20% vfg pyrite, irregular white carbonate and bright green mariposite blotches;	11565	27.6	28.5		67	559		
27.6	30.2		chalcedony, quartz and carbonate veinlets generally at 25° to core axis; minor red hematite ovoids	11566	28.5	29.4		71	617		
				11567	29.4	30.2		1130	2087		
99	101.5		Altered harzburgite - dominantly carbonated with minor patches of silicification; generally pale grey with irregular white carbonate patches and green mariposite patches - replacing pyroxene; 5% pyrite concentrated in silicified areas; trace of arsenopyrite; anastomising white carbonate veinlets	11568	30.2	31.0		42	551		
30.2	31.0										
101.5	108		Silicified harzburgite - pale grey, occasionally mottled with white carbonate pyroxene remnants and rarely reddish hematitic ovoids; mariposite dark green, crystalline and replacing pyroxene;	11569	31.0	31.7		14	351		
31.0	32.9			11570	31.7	32.9		360	1242		

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 5 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
	(cont'd)		quartz and carbonate veining at variable angles; 10% disseminated pyrite and arsenopyrite								
108	111.5		Breccia - fragments of rock at 101.5-108 (31.0-	11571	32.9	34.0		1290	1284		
32.9	34)		32.9) in white carbonate matrix; zone parallel to core axis; no sulphides in breccia zone; 10% pyrite in unbrecciated material								
111.5	114		Altered harzburgite - carbonated with limonitic	11572	34.0	34.8		32	183		
34	34.8)		fractures; pale green matrix with black pyroxene, red hematite spots and minor mariposite								
114	123		Silicified nodular harzburgite - pale grey with	11573	34.8	36.6		760	1786		
34.8	37.5)		whitish grey ovoids and bright green mariposite replaced ovoids; occasional red hematite ovoid; 10% sulphides (pyrite, arsenopyrite 50:50) disseminated in pale grey silicified matrix and as rims and in lamellae of black fragments - from 119.5-123 (36.5-37.5) core cut by vertical carbonate breccia veinlet with angular fragments of silicified nodular harzburgite	-11574	36.6	37.5		1850	2581		
123	140		Carbonated shatter zone - rusty, buff to orange	11575	37.5	40.6		1260	1104		
(37.5	42.7)		dense, mottled with mariposite and white car- bonate veinlets around shatter fragments; 5-10%	11576	40.6	42.7		39	380		

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 6 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	As	Cu	Ag
FROM	TO							ppb	ppm	ppm	ppm
(cont'd)			sulphides (pyrite, arsenopyrite) disseminated, as hairline fracture fillings and on black magnetite remnants; several minor sections and fragments of pale grey silicified rock								
140	141		Contact zone - typical zone encountered at norite contacts although no norite is present in this hole; beige, dense with black areas of soft nonmagnetic mineral; 3% pyrite concentrated in black areas	11577	42.7	43		6	47	746	1.9
(42.7	43)										
141	145		Highly altered nodular harzburgite - generally mottled pale grey (silicified) and bright green (mariposite); nodular texture appears towards base; upper contact contains speckled appearance (intrusive?) with white semi-angular (av. 0.5 cm) areas in greenish grey matrix; cut by minor carbonate veining; 3% pyrite predominantly dis- seminated in pale grey silicified areas	11578	43.0	44.2		4	59		
(43	44.2)										
145	150		Nodular harzburgite - talcose with orange 1 cm ovoids of talc - carbonate in a black matrix; minor hairline talc veinlets	11579	44.2	45.8		4	78		
(44.2	45.8)										



# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 5

DIP TEST		
	Angle	
Footage	Reading	Corrected

Hole No. 5 Sheet No. 7 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au	As		
FROM	TO							ppb	ppm		
0	10		Sludges				75	435			
10	20						280	982			
20	30						380	1193			
30	40						480	933			

(METRES IN BRACKETS)

# DIAMOND DRILL RECORD

PROPERTY Sidney Williams

HOLE No. 6

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 6 Sheet No. 1 Lat. 1+53E/2+07S  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_  
 Date Begun Aug. 17/90 Bearing 030°  
 Date Finished Aug. 17/90 Elev. Collar \_\_\_\_\_  
 Date Logged Aug. 27/90 Angle -65°

Total Depth 100' (30.5M)  
 Logged By U. Mowat  
 Claim Klone 1  
 Core Size BDBGM

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
0	6.		Overburden								
0	1.8)										
6	35		Norite, c.g., appears relatively fresh; 70% mafics	11580	1.8	6.9		5	55		
1.8	10.7)		(biotite?); white feldspar predominantly as sub-	11581	6.9	7.3		5830	9480		
			ehedral laths; limonite on fractures	11582	7.3	10.1		6	68		
			- from 22.5-24 (6.9-7.3) norite bleached to white	11583	10.1	10.7		1	81		
			carbonated? with 20% pyrite as 2-5mm clots;								
			minor mariposite								
			- from 33-35 (10.1-10.5) norite is shattered with								
			light grey bleached shear zones at 90° to core								
			axis, fractures very limonitic								
35	36		Contact Zone - beige, dense with minor mariposite;	11584	10.7	11.0		770	1364		
(10.7	11.0)		20% sulphides (pyrite: arsenopyrite 50:50) as								
			disseminated clots and hair line fractures and								
			concentrated along the periphery of a 1cm wide								
			white vertical carbonate veinlet								
36	37.5		Listwanite - orange to buff, carbonated, dense,	11585	11.0	11.4		23	389		
(11	11.4)		minor mariposite; rare patch of pale grey silici-								
			fied rock - aphanitic; 5% pyrite - disseminated;								
			minor carbonate veinlets								

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 6

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 6 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
37.5	42.5		Silicified nodular harzburgite - pale grey silici-	11586	11.4	13.0		23	852		
(11.4	13)		fied nodules in dark grey sulphide-rich matrix; 20% pyrite (minor arsenopyrite); mariposite through-								
			out; cut by veinlets of crystalline quartz with occasional speck of arsenopyrite								
42.5	47.5		Nodular harzburgite - dominantly red hematite	11587	13.0	14.5		1	44		
(13	14.5)		ovoids 1 cm wide in a black to green talc - magnetite matrix; trace pyrite, white hairline carbonate veinlets								
47.5	49		Shear Zone - green, talcose cut by myriads of	11588	14.5	14.9		1	58		
(14.5	14.9)		white talc - carbonate anastomising hairline veinlets - at 48 (14.6) orange carbonated gouge at 35° to core axis - at 49 (14.9) greenish grey gouge at 40° to core axis								
49	73.5		Harzburgite - very altered by talc, dark green	11589	14.9	18.0		1	7		
(14.9	22.4)		with black magnetite - chlorite - talc patches of	11590	18.0	21.1		2	21		
			remnant pyroxene	11591	21.1	22.4		2	14		
			- at 53 (16.3) black aphanitic dyke with buff speckles of incipient feldspar? contacts at 55°								

(METRES INBRACKETS)

## DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 6

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 6 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
(cont'd)			to core axis								
			- from 57-73.5 (17.4-22.4) harzburgite with less talc alteration; appears to be fresh								
			- entire section cut by carbonate veinlets with no preferred orientation; trace to 1% disseminated vfg pyrite (?); pyrite more noticeable in talcose sections								
73.5 (22.4)	74.5 (22.7)		Gouge - greenish; upper contact 75° to core axis; lower contact at 45°	11592	22.4	22.7		5	13		
74.5 (22.7)	100 (30.5)		Harzburgite - fresh - looking with bronze - coloured pyroxene still visible in black to dark grey matrix; c.g. pyrite occasionally in pyroxene; cut by myriads of white carbonate - talc veinlets; sulphides trace to 1% disseminated throughout	11593 11594 11595	22.7 25.8 28.9	25.8 28.9 30.5		1 1 1	5 20 21		
			Sludges								
0	10							320	1122		
10	20							270	734		
20	30							250	726		
30	40							137	503		
40	50							127	795		

(METRES IN BRACKETS)

DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 6

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 6 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	Ag ppm		
(cont'd)											
50	60							142	509		
60	70							131	450		
70	80							104	303		
80	90							85	316		
90	100							46	141		

(METRES IN BRACKETS)

## DIAMOND DRILL RECORD

PROPERTY Sidney WilliamsHOLE No. 7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 1 Lat. 1+02E/2+13S  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_  
 Date Begun Aug. 18/90 Bearing \_\_\_\_\_  
 Date Finished Aug. 19/90 Elev. Collar \_\_\_\_\_  
 Date Logged Aug. 28/90 Angle -90°

Total Depth 155' (47.3 M)  
 Logged By U. Mowat  
 Claim Klone 1  
 Core Size BDBGM

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
0	8		Overburden								
(0	2.4)										
8	11		Breccia - buff, silicified carbonate with breccia	11596	2.4	3.4		280	266		
(2.4	3.4)		fragments in chalcedonic matrix; chalcedony vein-								
			lets at 15° to core axis; trace pyrite; minor								
			mariposite								
11	16		Harzburgite - listwanite - pale grey silicified with	11597	3.4	4.9		390	467		
(3.4	4.9)		brownish remnant pyroxene and occasionally white								
			carbonate and dark green talc - chlorite; 1% pyrite								
			and arsenopyrite; minor mariposite; gouge zones								
			2 cm wide at 30° to core axis; chalcedony vein-								
			lets at 30° to core axis								
16	18		Carbonate Zone - fractured, orange vague remnant	11598	4.9	5.5		5067	806		
(4.9	5.5)		outlines of nodules; minor mariposite								
18	32		Nodular harzburgite - variably altered ranging	11599	5.5	8.6		128	324		
(5.5	9.8)		from pale grey, silicified to pale greenish from	11600	8.6	9.8		4	53		
			mariposite with silicified patches and also dark								
			green talcose areas with nodules up to 4 cm across								
			of orange talc and red hematite; cut by anastomising								
			white hairline talc veinlets								

# DIAMOND DRILL RECORD

PROPERTY Sidney Williams

HOLE No. 7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH FROM	DEPTH TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	As ppb	As ppm		
32	33.5		Shear zone - limonitic, very fractured talcose	11601	9.8	10.2		4	299		
(9.8	10.2)		harzburgite with vague orange talc patches (nodules? pyroxene?)								
33.5	34.5		Altered nodular harzburgite? orange talc - carb-	11602	10.2	10.5		918	219		
(10.2	10.5)		onate patches in dark greenish grey magnetite - talc matrix, minor patches of red hematite								
34.5	35		Silicified zone - silicified carbonate, dense with	11603	10.5	10.7		17	213		
(10.5	10.7)		occasional nodule of orange carbonate (replaced by silica); minor mariposite; trace pyrite								
35	37		Silicified zone - poorly developed with numerous	11604	10.7	11.3		14	78		
(10.7	11.3)		areas of altered harzburgite; silicified areas are pale grey with 1-5% sulphide, mainly pyrite, trace arsenopyrite, occurring as lamellae fillings in replaced pyroxene, on rims of black fragments; altered harzburgite talcose with white replaced pyroxene outlines in a dark green talc-magnetite matrix; section cut by numerous quartz and carbonate veinlets with no preferred orientation								
37	40		Altered harzburgite - talcose - white remnant	11605	11.3	12.2		2	174		
(11.3	12.2)		carbonated pyroxene in dark green talc magnetite matrix								

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 3 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Coliar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH	FROM	TO	RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm
cont'd)				- at 39-39.5 (11.9-12.1) rock completely replaced by buff carbonate						
40	51.5			Silicified nodular harzburgite - white irregular	11606	12.2	13.7		261	432
(12.2	15.7)			semi-ovoid shapes in pale grey matrix - totally silicified; mariposite throughout; 2 mm black fragments throughout; 2% sulphide throughout mainly pyrite, trace arsenopyrite	11607	13.7	15.0		441	862
				- from 49-51.5 (15.0-15.7) arsenopyrite predominates sulphide in lamellae and on black fragments; zone cut by limonitic carbonate alteration along fractures - very late stage alteration; minor zones of dark green talc; numerous carbonate and quartz veinlets which may be in part silicified carbonate veinlets	11608	15.0	15.7		3204	3333
51.5	57			Breccia - totally silicified with crypto crystalline quartz; angular fragments of white to pale green from mariposite in a buff to pale grey matrix; minor limonitic fractures; trace - 1% sulphide - mostly pyrite	11609	15.7	17.4		1278	522
(15.7	17.4)									
57	61			Breccia - orange to dark brown, dominantly carbonate; minor orange to dark green talcose	11610	17.4	18.6		432	510
(17.4	18.6)									



# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 4 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			zones; trace pyrite								
61	65		Silicified zone - porcellanous, dense, pale green	11611	18.6	19.8		57	854		
(18.6	19.8)		from mariposite; 10% black fragments throughout; 5% sulphides virtually all on rims of black fragments - mainly pyrite - trace arsenopyrite								
65	67		Altered nodular harzburgite - vague whitish	11612	19.8	20.4		10	48		
(19.8	20.4)		.5-.75 cm patches in pale greenish grey matrix of silica in part, carbonate in part and talc; speckled with 10% black magnetite remnants; minor mariposite; trace pyrite and arsenopyrite								
67	71.5		Talcose nodular harzburgite - whitish patches	11613	20.4	21.8		2	7		
(20.4	21.8)		(replaced nodules) in dark greyish green talc matrix; cut by white talc- carbonate veinlets of no preferred orientation								
71.5	84		Nodular harzburgite - orange nodules (av. 1cm)	11614	21.8	24.9		5	28		
(21.8	25.6)		in orange - stained black matrix; very talcose; cut by minor orange and occasionally white talc veinlets; occasional zone of greyish nodules in dark green talcose matrix	11615	24.9	25.6		3	6		
84	95		Nodular harzburgite - pale grey nodules in dark	11616	25.6	27.2		1	10		
(25.6	29.0)		green talc matrix; cut by minor talc and carbonate	11617	27.2	29.0		1	2		

# DIAMOND DRILL RECORD

PROPERTY \_\_\_\_\_

HOLE No. 7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 5 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE	Au ppb	As ppm		
FROM	TO										
(cont'd)			veining; minor orange staining along fractures								
95	99.5		Intensely carbonated nodular harzburgite - orange	11618	29.0	30.4		1	2		
(29.0	30.4)		talc - carbonate zone, virtually textureless save for occasional pale orange nodular shape; cut by intense white carbonate veining which appear to be in fillings between fragments								
99.5	104		Shear - nodular harzburgite as at 95-99.5 (29.0	11619	30.4	31.7		1	3		
(30.4	31.7)		-30.4) but cut by myriads of orange anastomising talc veinlets and a strong white carbonate veinlets and a strong white carbonate veinlet at 30° to core axis								
104	155		Nodular harzburgite - whitish to greenish grey	11620	31.7	34.8		1	2		
(31.7	47.3)		nodules up to 3 cm across (av. $\approx$ .5 cm) in dark green talc matrix; zones of orange staining	11621	34.8	37.9		1	2		
			- from 127 (38.7) residual olivine present	11622	37.9	41.0		1	2		
			- minor white hairline talc veinlets	11623	41.0	43.1		1	6		
				11624	43.1	47.3		1	5		
20	30		Sludges					290	215		

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: SEP 25 1990

DATE REPORT MAILED:

*Oct 1/90.*

### ASSAY CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS FILE # 90-3769R

SAMPLE#	AG** oz/t	AU** oz/t
HOLD 3 30-40	1.45	.103

AG\*\* & AU\*\* BY FIRE ASSAY FROM 1 A.T.  
- SAMPLE TYPE: Sludge Pulp

SIGNED BY.....*C. Leong* D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: SEP 25 1990

DATE REPORT MAILED: *Oct. 1/90.*

### ASSAY CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS FILE # 90-3591R

SAMPLE#	AG** oz/t	AU** oz/t
HOLD 1A 0-10	.21	.001

AG\*\* & AU\*\* BY FIRE ASSAY FROM 1 A.T.

-SAMPLE TYPE: Sludge Pulp

SIGNED BY... *Chung* D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: SEP 21 1990

DATE REPORT MAILED:

*Sept. 26/90*

### GEOCHEMICAL ANALYSIS CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS FILE # 90-3435R

880 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	AU** ppb	PT** ppb	PD** ppb
C 11448	1	2	2
C 11450	8	2	2
C 11453	1	2	2

- SAMPLE TYPE: ROCK PULP AU\*\* PT\*\* PD\*\* BY FIRE ASSAY & ANALYSIS BY ICP.

SIGNED BY *C. Leung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

GEOCHEMICAL ANALYSIS CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS File # 90-3435 Page 1

880 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	
C 11192	1	15	5	6	.1	1303	60	787	4.82	266	5	ND	1	23	1.6	21	5	21	1.34	.009	2	669	18.87	10	.01	12	.32	.01	.01		1	230
C 11437	5	5	5	6	.2	351	15	300	1.63	492	5	3	1	3	.3	2	3	7	.13	.006	2	140	5.98	7	.01	3	.03	.01	.01		1	3070
C 11438	2	76	5	62	.1	39	23	294	7.60	23	5	ND	1	73	1.4	2	2	85	1.48	.009	2	33	1.02	10	.69	5	1.39	.01	.13		1	240
C 11439	2	191	4	65	.1	89	32	838	4.40	2	5	ND	1	14	1.4	2	2	72	1.92	.031	2	183	3.19	3	.29	3	2.79	.01	.02		1	8
C 11441	1	69	2	55	.1	159	30	1321	4.80	4	5	ND	1	108	1.8	4	5	43	6.69	.095	3	237	3.13	102	.09	8	1.74	.01	.18		1	2
C 11442	3	24	2	54	.2	57	17	304	13.01	2	8	ND	1	14	1.7	2	2	60	.08	.017	11	22	.38	496	.03	6	.51	.01	.11		1	25
C 11443	10	8	3	6	.1	9	1	63	.75	3	5	ND	1	2	.2	2	2	7	.02	.018	2	35	.03	14	.03	4	.06	.01	.02		1	1
C 11445	3	9	2	5	.1	6	2	73	.37	2	5	ND	1	19	.2	2	2	4	.02	.007	3	8	.05	2200	.01	4	.13	.01	.04		1	2
C 11446	1	21	2	19	.1	1663	61	988	4.98	6	5	ND	1	8	1.2	2	2	24	.39	.007	2	1121	13.72	26	.01	20	.41	.01	.01		1	3
C 11447	1	31	9	15	.2	1425	62	626	5.00	56	5	ND	1	11	1.4	2	5	28	.64	.007	2	1119	15.73	16	.01	21	.63	.01	.01		1	3
C 11448	1	13	8	10	.1	1364	66	932	5.67	60	5	ND	1	13	2.2	2	8	28	1.17	.007	2	1252	16.98	17	.01	24	.58	.01	.01		1	2
C 11449	1	12	3	22	.1	1636	70	822	5.37	41	5	ND	1	5	2.1	2	7	28	.77	.008	2	1204	20.61	14	.01	39	.61	.01	.01		1	3
C 11450	1	12	3	18	.1	1654	71	1110	5.14	24	5	ND	1	4	1.3	2	3	24	.62	.007	2	985	19.65	7	.01	40	.45	.01	.01		1	2
C 11451	1	13	9	18	.1	1875	70	479	5.34	53	5	ND	1	3	2.0	2	2	32	.28	.007	2	1343	22.34	5	.01	33	.70	.01	.01		1	1
C 11452	1	13	12	15	.1	1762	77	735	4.90	18	5	ND	1	4	1.5	2	2	27	.62	.006	2	1201	21.83	6	.01	41	.59	.01	.01		1	2
C 11453	1	14	4	13	.1	1801	70	544	5.13	38	5	ND	1	5	1.1	2	3	32	.37	.007	2	1342	22.22	5	.01	33	.71	.01	.01		1	1
C 11454	1	13	6	12	.1	1645	70	640	4.98	36	5	ND	1	11	1.2	2	2	29	.93	.007	2	1234	20.65	9	.01	38	.60	.01	.01		1	5
C 11455	1	11	5	12	.1	1590	70	615	5.19	55	5	ND	1	17	1.6	2	2	29	1.10	.006	2	1236	19.80	11	.01	31	.61	.01	.01		1	2
C 11456	1	14	9	18	.2	1419	70	928	5.31	39	5	ND	1	5	1.9	2	2	31	.37	.007	2	1257	18.45	11	.01	26	.61	.01	.01		1	1
C 11457	1	12	10	8	.1	1424	62	644	4.49	266	5	ND	1	50	1.0	2	2	22	1.21	.006	2	756	21.75	4	.01	22	.34	.01	.02		1	4
C 11458	1	7	7	10	.1	1265	58	560	4.38	85	5	ND	1	19	.7	2	2	23	.69	.006	2	959	18.25	8	.01	13	.42	.01	.01		1	5
C 11459	1	10	5	6	.1	1412	63	667	4.95	207	5	ND	1	7	1.3	2	2	21	.38	.007	2	870	17.73	1	.01	9	.33	.01	.01		1	10
C 11460	1	9	2	12	.1	1660	67	495	4.50	17	5	ND	1	6	.8	2	4	28	.36	.007	2	1180	15.34	1	.01	11	.64	.01	.01		1	1
C 11461	1	30	7	12	.2	1296	56	399	4.64	104	5	ND	1	4	.9	2	2	28	.12	.007	2	1160	13.46	25	.01	12	.60	.01	.01		1	2
STANDARD C/AU-R	19	63	37	132	7.6	73	32	1054	3.98	37	17	6	36	53	18.4	15	22	56	.52	.094	37	61	.86	180	.08	35	1.89	.06	.14		11	540

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 Rock P2 Silt/Soil AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE

DATE RECEIVED: AUG 14 1990 DATE REPORT MAILED: Aug 20/90 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
C 11432	2	18	2	67	.2	585	37	826	4.92	7	5	ND	1	16	.4	2	2	51	.39	.035	6	637	4.90	51	.14	7	1.46	.02	.04	1	2
C 11433	3	25	4	82	.2	856	37	684	4.74	8	5	ND	1	27	.2	2	2	48	.63	.050	7	757	6.28	72	.07	8	1.36	.02	.06	1	2
C 11434	2	26	2	66	.1	618	39	824	4.85	5	5	ND	1	18	.5	2	3	52	.45	.029	5	610	5.79	55	.14	9	1.52	.02	.04	1	2
C 11435	2	23	2	65	.2	515	35	787	4.57	7	5	ND	1	20	.4	2	2	53	.39	.035	6	488	4.41	64	.10	10	1.38	.02	.04	1	1
C 11436	2	14	2	55	.1	538	31	571	4.05	.11	5	ND	1	17	.2	2	2	45	.34	.027	5	541	5.65	52	.10	9	1.28	.02	.04	1	1
C 11440	2	15	2	56	.2	579	35	764	4.27	.6	5	ND	1	16	.2	2	2	46	.35	.024	4	559	5.89	55	.11	6	1.28	.02	.04	1	2
C 11444	3	30	7	68	.2	906	72	1348	8.19	51	5	ND	1	8	.2	2	2	56	.08	.076	5	1043	2.49	77	.05	6	1.91	.01	.02	1	2
Z+DOW 4+50S	2	16	2	72	.3	727	76	1567	5.10	474	5	ND	1	14	.2	8	2	44	.39	.086	5	821	4.94	76	.05	8	1.23	.01	.06	1	61
STANDARD C	19	57	39	131	6.8	68	31	1050	3.92	.38	18	6	37	53	18.4	15	20	55	.51	.091	37	57	.89	181	.07	34	1.90	.06	.14	11	-

RECE

## GEOCHEMICAL ANALYSIS CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS File # 90-3591 Page 1

880 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
C 11462	1	56	2	14	.3	1107	42	435	3.69	14	5	ND	1	4	.2	2	2	22	.31	.003	2	935	9.77	10	.01	5	.37	.01	.02	1	6
C 11463	1	35	2	17	.3	811	38	710	3.09	934	5	ND	1	106	.2	33	2	23	5.37	.030	2	352	8.52	12	.01	13	.33	.01	.06	1	14
C 11464	1	51	2	31	.2	28	13	406	2.81	2	5	ND	1	23	.2	3	2	81	2.32	.039	2	42	1.55	18	.16	3	1.33	.22	.07	1	3
C 11465	1	52	2	29	.1	28	12	355	2.66	6	5	ND	1	23	.2	3	2	79	2.10	.030	2	45	1.43	25	.19	3	1.49	.24	.17	1	1
C 11466	1	34	2	52	.1	42	22	552	4.56	51	5	ND	1	20	.2	5	2	103	2.69	.011	2	70	2.19	76	.10	8	2.01	.17	.46	1	114
C 11467	1	48	3	33	.1	33	13	358	3.01	2	5	ND	1	18	.2	2	2	91	1.51	.041	2	46	1.42	19	.19	3	1.58	.24	.17	1	2
C 11468	1	45	2	44	.2	33	17	807	3.95	56	5	ND	1	34	.2	3	2	76	4.21	.067	2	44	2.51	40	.03	6	1.17	.06	.26	1	3
C 11469	1	53	2	56	.1	40	22	635	5.22	180	5	ND	1	30	.2	5	2	113	2.34	.042	2	52	2.68	45	.07	6	2.11	.12	.20	1	4
C 11470	1	41	2	52	.2	52	22	1022	5.29	1722	5	ND	1	84	.4	9	2	40	5.77	.012	2	24	3.58	23	.01	6	.45	.01	.15	1	1321
C 11471	1	41	2	61	.2	50	25	935	5.56	460	5	ND	1	48	.2	4	2	77	4.35	.034	2	51	3.04	57	.01	5	1.12	.02	.16	1	261
C 11472	1	57	4	42	.1	42	17	534	3.94	6	5	ND	1	24	.2	3	2	102	1.99	.040	2	64	2.05	37	.13	4	1.82	.14	.11	1	17
C 11473	1	59	2	38	.1	29	16	510	3.47	13	5	ND	1	36	.2	4	2	90	2.99	.029	2	50	2.21	40	.06	7	1.36	.12	.09	1	1
C 11474	1	11	2	17	.2	814	51	610	4.14	31	5	ND	1	9	.2	2	2	38	1.02	.007	2	766	11.26	8	.03	6	.95	.01	.04	1	2
STANDARD C/AU-R	19	57	40	131	7.1	73	31	1047	3.96	41	24	7	40	52	18.9	16	20	59	.52	.096	40	60	.89	183	.09	35	1.89	.06	.13	13	490

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: P1 CORE P2 SLUDGE

DATE RECEIVED: AUG 17 1990 DATE REPORT MAILED: Aug 23/90. SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	M ppm	Au* ppb
HOLE 1A 0-10	4	54	13	76	20.4	861	44	605	4.70	106	5	ND	1	7	10.3	2	2	50	.43	.026	2	711	10.37	28	.02	15	1.12	.03	.05	14	28
HOLE 1A 0-20	6	87	14	91	3.7	1152	55	631	5.35	82	5	ND	1	7	2.9	2	2	51	.62	.019	2	972	12.94	25	.03	17	1.14	.05	.05	31	15
HOLE 1 0-10	6	48	25	52	.7	1513	66	578	5.70	131	5	ND	1	18	.5	7	2	31	.54	.011	2	1240	17.96	238	.01	27	.63	.01	.01	10	19
HOLE 1 10-20	36	126	99	138	6.9	930	47	523	5.19	82	6	ND	1	18	1.0	2	2	46	.76	.025	2	918	9.83	199	.04	9	1.09	.03	.04	38	20
HOLE 1 20-30	14	74	56	101	3.4	1191	51	582	4.65	40	5	ND	1	13	2.1	2	2	31	.55	.009	2	1184	14.95	52	.01	15	.75	.01	.01	13	17
HOLE 1 30-40	6	39	34	52	1.2	1144	48	564	4.52	95	6	ND	1	37	1.1	4	3	27	1.26	.009	2	1117	16.95	135	.01	19	.71	.01	.01	5	20
HOLE 1 60-70	13	179	65	701	2.0	1480	90	734	5.50	61	6	ND	1	24	2.2	2	3	31	.60	.039	2	1285	18.64	480	.01	26	.72	.01	.01	1	39
HOLE 2 0-10	3	55	10	74	3.6	758	44	632	4.56	22	5	ND	1	7	1.7	2	2	43	.22	.031	3	827	8.05	44	.07	29	1.31	.01	.03	24	14
HOLE 2 10-20	4	18	3	27	.3	796	45	460	3.69	18	5	ND	1	2	.2	2	2	23	.51	.008	2	1045	14.65	14	.01	35	.61	.01	.01	6	11
HOLE 2 20-30	5	27	20	23	.4	786	47	559	4.86	17	6	ND	1	3	.4	2	2	23	.74	.006	2	1152	14.60	27	.01	27	.62	.01	.01	4	16
HOLE 2 30-40	4	23	15	20	.6	854	49	490	4.35	18	5	ND	1	2	.3	2	2	26	.69	.006	2	1285	15.82	12	.01	32	.69	.01	.01	1	11
HOLE 2 40-50	4	18	6	19	.1	983	52	451	4.38	23	5	ND	1	1	1.1	2	2	26	.58	.006	2	1280	16.49	4	.01	37	.67	.01	.01	1	1
HOLE 2 50-60	6	24	14	23	.2	1275	58	515	5.20	21	5	ND	1	2	.2	2	2	24	.63	.006	2	1229	16.33	8	.01	43	.61	.01	.01	1	1
HOLE 2 60-70	9	51	3	43	.4	934	56	662	5.91	22	5	ND	1	3	.5	3	2	17	.74	.009	2	915	14.94	13	.01	27	.41	.01	.01	7	2
HOLE 2 70-80	9	83	2	63	.3	860	53	697	6.56	12	5	ND	1	2	.2	2	2	25	.75	.008	2	1237	14.96	9	.01	21	.51	.01	.01	24	11
HOLE 2 80-90	9	51	8	33	.4	1055	58	720	7.20	68	5	ND	1	2	.2	5	2	21	.52	.007	2	1107	15.51	6	.01	24	.46	.01	.01	5	7
HOLE 2 90-100	12	85	17	53	.9	878	49	802	7.17	130	5	ND	1	19	.2	3	7	17	1.90	.011	2	729	13.14	7	.01	13	.41	.01	.03	32	2
HOLE 2 190-200	34	252	23	244	1.3	1237	68	1450	14.60	51	5	ND	1	6	.2	14	14	24	.78	.015	2	1669	13.60	36	.01	41	.53	.01	.01	36	38
STANDARD C/AU-R	21	62	40	133	7.4	73	32	1056	3.98	43	16	8	38	52	18.5	15	22	59	.52	.096	39	60	.91	182	.08	38	1.89	.06	.14	13	490

GEOCHEMICAL ANALYSIS CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS File # 90-3724 Page 1

880 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
C 11475	2	7	2	8	.1	590	41	681	3.83	4	5	ND	1	1	1.4	2	2	19	.81	.007	2	944	15.00	2	.01	31	.36	.01	.01	2	2
C 11476	2	4	2	8	.1	659	41	639	3.95	8	5	ND	1	1	.8	2	2	21	.91	.007	2	857	16.23	2	.01	33	.44	.01	.01	1	1
C 11477	1	8	2	14	.1	379	34	748	3.19	2	5	ND	1	1	1.3	2	2	17	.46	.006	2	1051	12.65	1	.01	11	.43	.01	.01	1	1
C 11478	2	4	2	11	.1	431	35	681	3.36	2	5	ND	1	1	.9	2	2	23	1.19	.005	2	1178	12.31	1	.01	14	.49	.01	.01	1	2
C 11479	2	6	2	10	.1	609	36	563	3.27	2	5	ND	1	1	.5	2	2	12	.16	.004	2	657	12.17	1	.01	20	.21	.01	.01	1	1
C 11480	6	16	5	10	.1	1656	54	461	3.46	29	6	ND	1	1	.5	2	3	3	.05	.007	2	151	14.16	1	.01	79	.04	.01	.01	1	1
C 11481	2	12	2	6	.1	541	37	377	3.04	3	6	ND	1	1	.7	2	3	4	.07	.005	2	139	14.98	2	.01	64	.09	.01	.01	1	1
C 11482	2	5	2	10	.1	627	38	552	3.16	2	5	ND	1	1	.4	2	2	21	.26	.006	2	876	15.86	3	.01	8	.44	.01	.01	1	1
C 11483	3	3	2	6	.1	707	41	556	3.12	4	5	ND	1	1	.9	2	2	11	.10	.006	2	560	16.54	2	.01	6	.20	.01	.01	1	1
C 11484	4	6	2	11	.2	1061	52	579	3.81	293	5	ND	1	2	1.0	3	2	6	.10	.008	2	365	18.46	8	.01	5	.08	.01	.01	1	8
C 11485	4	12	2	5	.1	1311	56	485	3.75	197	5	ND	1	1	.8	2	2	4	.06	.006	2	257	19.03	2	.01	3	.03	.01	.01	1	1
C 11486	7	9	2	13	.3	1556	67	637	3.98	462	5	ND	1	4	1.1	27	2	5	.22	.007	2	221	19.94	6	.01	8	.07	.01	.01	1	50
C 11487	1	42	2	83	.3	156	31	1144	8.49	361	5	ND	1	60	.8	27	2	90	5.09	.051	2	28	3.99	30	.04	13	1.08	.07	.19	1	65
C 11488	1	87	2	85	.5	324	42	982	9.46	22	5	ND	1	26	.8	4	2	153	3.20	.024	2	329	6.78	36	.17	6	3.03	.07	.25	1	3
C 11489	4	12	2	14	.1	1193	66	604	4.47	16	5	ND	1	2	1.0	2	2	25	.25	.006	2	1171	15.75	2	.01	9	.48	.01	.01	1	2
C 11490	6	20	2	8	.6	1360	59	554	4.20	814	5	ND	1	6	1.1	25	2	18	.42	.006	2	609	18.65	8	.01	7	.19	.01	.02	1	20
C 11491	3	7	2	13	.1	798	53	761	4.35	12	5	ND	1	2	.6	2	2	25	.21	.006	2	1082	14.17	5	.01	18	.46	.01	.01	1	1
C 11492	2	6	2	11	.1	653	43	681	3.88	2	5	ND	1	2	.8	2	2	21	.29	.006	2	915	13.55	4	.01	12	.43	.01	.01	1	1
C 11493	5	8	2	7	.3	1330	58	683	4.25	1317	5	ND	1	4	.8	31	2	18	.35	.007	2	550	17.67	5	.01	9	.18	.01	.01	1	25
C 11494	6	9	2	7	.4	1373	59	604	4.15	1363	5	ND	1	2	.6	42	2	17	.23	.005	2	437	17.69	4	.01	8	.10	.01	.01	1	240
C 11495	5	5	4	30	.2	1254	52	589	4.21	271	5	ND	1	2	1.0	40	2	11	.06	.006	2	331	18.85	13	.01	4	.12	.01	.01	1	55
C 11496	4	9	2	6	.3	1263	58	677	4.72	309	5	ND	1	1	.5	13	2	21	.06	.006	2	795	19.42	4	.01	9	.30	.01	.01	1	20
C 11497	5	23	2	9	.9	1382	59	623	4.48	1553	5	ND	1	2	1.1	47	2	16	.12	.006	2	356	18.72	3	.01	6	.07	.01	.01	1	260
C 11498	6	15	2	16	.6	1471	61	683	4.99	1246	5	ND	1	19	1.0	35	2	19	1.26	.005	2	393	18.53	4	.01	8	.16	.01	.03	1	31
C 11499	1	96	2	66	1.0	92	37	1336	12.54	2694	5	ND	1	73	.7	53	2	93	5.88	.110	2	39	4.63	29	.01	8	1.33	.01	.16	1	2690
C 11500	1	82	5	68	.1	49	28	982	8.05	126	5	ND	1	83	1.1	16	2	149	5.66	.136	2	32	3.75	48	.12	13	2.10	.09	.09	1	270
C 11501	3	9	2	18	.1	952	50	548	4.54	95	5	ND	1	30	1.0	2	2	36	2.92	.019	2	455	12.37	14	.02	7	.74	.01	.05	1	35
C 11502	1	72	2	63	.1	34	23	951	6.85	107	5	ND	1	48	1.3	33	2	130	4.96	.123	2	27	4.08	39	.09	9	2.61	.07	.11	1	6
C 11503	4	18	2	19	.1	1082	50	506	3.88	54	5	ND	1	12	.9	2	2	28	1.34	.004	2	892	14.74	4	.01	5	.75	.01	.01	1	9
C 11504	4	51	2	11	.4	1186	54	448	4.10	655	5	ND	1	9	.8	27	2	19	.55	.006	2	516	17.26	4	.01	4	.24	.01	.02	1	15
C 11505	3	15	2	7	.1	1089	56	521	4.25	18	5	ND	1	2	.7	2	2	28	.43	.004	2	1092	13.42	2	.01	30	.60	.01	.01	1	4
C 11506	5	9	2	11	.1	1306	68	708	5.07	6	5	ND	1	2	.8	2	4	26	.63	.005	2	1101	16.25	2	.01	62	.58	.01	.01	1	2
C 11507	5	12	2	9	.1	1462	65	741	4.44	15	5	ND	1	2	.7	2	2	24	.95	.005	2	1090	18.03	1	.01	73	.53	.01	.01	1	4
C 11508	5	9	2	8	.4	1423	63	671	5.19	6270	5	2	1	5	.2	43	2	20	.27	.005	2	651	18.86	7	.01	7	.17	.01	.01	1	2960
C 11509	5	8	2	10	.2	1212	55	685	4.83	1284	5	ND	1	8	1.2	15	2	22	.53	.006	2	836	18.60	8	.01	7	.27	.01	.01	1	240
C 11510	6	10	2	5	.7	1512	67	603	4.18	12218	5	17	1	3	.9	71	2	15	.16	.005	2	396	16.28	7	.01	5	.09	.01	.02	1	14860
C 11511	5	26	2	17	.4	1331	54	540	4.40	589	5	ND	1	9	.5	52	2	21	1.29	.005	2	665	19.24	12	.01	10	.20	.01	.01	1	32
STANDARD C/AU-R	19	63	40	133	7.3	73	31	1056	3.98	37	18	7	36	52	18.5	16	20	57	.52	.096	38	61	.90	180	.07	38	1.89	.06	.14	12	540

HOLE 2

HOLE 3

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR HG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1-P2 Core P3 Sludge AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: AUG 21 1990 DATE REPORT MAILED: Aug 25/90. SIGNED BY: D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
C 11512	3	11	6	6	.1	805	50	579	4.23	93	5	ND	1	8	.6	6	2	23	.42	.004	2	1010	15.15	12	.01	5	.45	.01	.01	1	29
C 11513	4	9	6	7	.1	1231	61	555	4.04	562	5	ND	1	10	.8	24	3	20	.72	.005	2	690	18.39	9	.01	9	.24	.01	.01	1	220
C 11514	2	10	2	6	.1	692	51	566	5.08	8	5	ND	1	7	.8	2	2	24	.40	.005	2	1067	16.99	9	.01	11	.50	.01	.01	1	4
C 11515	2	9	9	2	.1	581	44	468	4.56	16	5	ND	1	12	.7	2	2	25	.56	.005	2	1172	16.99	11	.01	12	.54	.01	.01	1	9
C 11516	1	5	2	10	.1	462	42	673	4.53	6	5	ND	1	15	.2	2	2	27	.81	.004	2	1106	14.79	9	.01	10	.49	.01	.01	1	2
C 11517	2	11	2	8	.1	496	45	735	4.32	5	5	ND	1	15	.6	2	5	25	1.05	.004	2	1054	16.48	6	.01	17	.45	.01	.01	1	3
C 11518	2	8	3	8	.1	527	40	754	4.10	12	5	ND	1	50	.5	2	2	23	2.16	.004	2	931	13.26	7	.01	11	.42	.01	.01	1	2
C 11519	3	61	9	69	.1	141	27	497	5.03	49	5	ND	1	105	.6	10	2	54	2.53	.460	43	46	6.85	52	.01	19	1.02	.01	.19	1	18
C 11520	1	72	15	65	.1	47	25	711	5.65	591	5	ND	1	170	.2	48	4	103	3.51	.521	33	32	3.76	164	.03	15	2.26	.05	.20	1	97
C 11521	1	62	8	20	3.0	122	28	440	4.77	4718	5	5	1	47	.7	43	2	42	1.01	.312	9	34	3.58	43	.01	16	.94	.01	.16	1	5040
C 11522	5	35	9	14	1.5	1389	59	660	4.31	2830	5	ND	1	11	.2	59	3	15	.48	.008	2	375	16.13	9	.01	8	.13	.01	.02	1	780
C 11523	1	16	3	9	.1	508	41	618	4.47	3	5	ND	1	8	.6	2	2	26	.70	.006	2	1028	14.05	7	.01	8	.52	.01	.01	1	8
C 11524	1	13	2	10	.1	559	47	642	4.02	13	5	ND	1	11	.5	2	2	29	.91	.005	2	1103	16.50	7	.01	17	.61	.01	.01	1	8
C 11525	2	13	3	8	.1	548	53	594	4.19	72	5	ND	1	9	.6	2	2	23	1.19	.005	2	877	15.41	16	.01	12	.52	.01	.01	2	3
C 11526	2	18	4	9	.1	777	54	609	3.77	48	5	ND	1	6	.2	2	4	23	.77	.005	2	882	14.05	14	.01	18	.53	.01	.01	1	2
C 11527	6	18	4	8	.2	1461	59	493	4.05	1160	5	ND	1	1	.6	34	3	15	.11	.005	2	474	18.61	5	.01	5	.06	.01	.02	1	300
C 11528	3	12	4	1	.6	804	35	368	2.31	3427	5	3	1	1	.3	26	2	9	.05	.004	2	195	7.25	2	.01	3	.05	.01	.01	1	2330
C 11529	8	19	2	11	.7	1531	64	378	4.42	12493	5	20	1	1	.6	55	6	12	.08	.005	2	350	8.70	4	.01	6	.09	.01	.02	1	18100
C 11530	5	14	2	4	.3	955	42	259	3.40	6542	5	7	1	2	.5	57	2	9	.12	.005	2	245	6.04	4	.01	3	.09	.01	.01	1	6430
C 11531	6	19	2	4	.4	1059	48	437	2.01	4039	5	3	1	1	.5	32	2	7	.05	.005	2	192	6.53	3	.01	3	.07	.01	.02	1	2360
C 11532	5	27	2	6	.1	1442	57	522	3.81	564	5	ND	1	3	.2	72	2	17	.33	.005	2	651	19.71	11	.01	8	.20	.01	.01	1	55
C 11533	5	15	5	3	.1	1260	59	502	3.58	271	5	ND	1	3	.4	20	2	20	.25	.004	2	752	19.49	12	.01	7	.35	.01	.01	1	58
C 11534	4	19	3	8	.1	1037	57	521	4.13	260	5	ND	1	6	.2	10	6	18	1.11	.005	2	639	17.93	12	.01	10	.22	.01	.01	1	18
C 11535	4	15	2	5	.3	1324	62	666	4.36	6809	5	6	1	5	.4	52	5	16	.37	.005	2	478	16.12	7	.01	8	.15	.01	.01	1	5170
C 11536	4	13	5	7	.1	1194	54	661	4.08	1120	5	ND	1	6	.2	82	5	19	.79	.005	2	620	17.82	12	.01	9	.22	.01	.01	1	250
C 11537	4	17	8	3	.1	1223	54	518	4.43	1591	5	ND	1	8	.2	39	2	17	1.41	.004	2	498	17.49	8	.01	4	.14	.01	.01	1	610
C 11538	5	11	2	2	.1	1217	56	503	4.58	382	5	ND	1	9	.2	17	2	20	.66	.005	2	745	17.03	10	.01	7	.30	.01	.01	1	45
C 11539	2	9	4	10	.1	641	39	595	3.80	100	5	ND	1	45	.3	2	2	23	2.01	.004	2	808	14.07	5	.01	5	.41	.01	.01	2	32
C 11540	2	15	2	12	.1	472	40	671	4.11	50	5	ND	1	9	.2	6	2	23	.63	.004	2	875	12.64	8	.01	7	.36	.01	.01	1	4
C 11541	2	5	5	9	.1	408	41	694	3.75	11	5	ND	1	14	.5	2	2	22	.73	.004	2	915	14.87	7	.01	12	.42	.01	.01	1	8
C 11542	2	11	2	11	.1	616	51	646	4.18	7	5	ND	1	11	.2	2	4	24	.66	.005	2	1025	18.50	11	.01	21	.47	.01	.01	1	4
C 11543	2	5	2	9	.1	624	47	635	4.54	12	5	ND	1	12	.2	2	2	26	.82	.004	2	1044	17.70	7	.01	20	.52	.01	.01	1	2
C 11544	1	3	2	5	.1	433	38	808	3.65	7	5	ND	1	106	.4	2	4	23	3.53	.004	2	932	11.73	9	.01	7	.46	.01	.01	1	1
C 11545	1	4	2	6	.1	396	39	827	3.24	6	5	ND	1	74	.2	2	2	19	2.45	.004	2	796	10.72	7	.01	4	.35	.01	.01	2	3
C 11546	2	18	2	10	.1	726	50	516	4.53	5	5	ND	1	9	.2	2	2	26	.37	.005	2	1102	14.79	9	.01	6	.48	.01	.01	2	2
C 11547	2	11	8	1	.1	709	46	564	4.09	144	5	ND	1	73	.2	2	3	21	2.23	.005	2	845	12.20	22	.01	3	.41	.01	.01	1	3
C 11548	1	71	7	81	.1	86	25	578	6.75	173	6	ND	1	131	.4	12	2	111	2.90	.528	45	60	6.48	183	.01	13	4.05	.01	.14	1	4
STANDARD C/AU-R	19	63	40	133	7.3	72	32	1056	3.98	40	17	7	37	53	18.4	15	19	57	.52	.095	37	59	.91	180	.07	37	1.89	.06	.14	12	510

HOLE 3

HOLE 4

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	U	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppb	
HOLE-3 0-10	1	72	2	50	.7	1493	72	581	4.25	2231	5	2	1	2	.2	27	2	21	.07	.007	2	732	8.75	11	.01	5	.17	.01	.02	150	2210
HOLE-3 10-20	1	76	2	54	.8	1236	46	413	3.09	6849	5	9	1	5	.2	199	2	14	.21	.004	2	381	9.12	9	.01	5	.09	.01	.01	145	10340
HOLE-3 20-30	1	40	2	40	.3	1088	54	581	3.81	1086	5	2	1	8	.2	9	2	22	.47	.004	2	888	11.79	13	.01	5	.29	.01	.01	31	1640
HOLE-3 80-90	7	68	2	51	1.6	520	42	756	6.04	317	5	ND	1	81	.9	2	3	39	1.95	.100	12	989	9.08	42	.01	10	.78	.01	.09	1	380
HOLE-3 90-100	9	78	31	64	.5	721	50	738	7.51	521	5	ND	2	41	.5	6	2	41	1.35	.065	7	1413	11.18	43	.01	11	.79	.01	.08	2	530
HOLE-4 10-20	4	283	14	22	.7	1295	109	395	4.04	8439	5	12	1	1	.2	58	2	9	.01	.001	2	369	7.65	8	.01	5	.10	.01	.01	50	13660
HOLE-4 20-30	7	202	2	52	1.5	1350	115	709	6.73	2152	5	2	1	1	.2	34	2	16	.44	.001	2	818	12.01	14	.01	3	.17	.01	.02	132	2430
HOLE-4 30-40	12	116	2	22	1.3	1313	76	1040	7.20	3712	5	4	1	6	.7	68	2	16	.37	.006	2	576	10.94	18	.01	5	.16	.01	.02	14	3630
HOLE-4 40-50	28	255	5	50	.6	1389	108	1357	12.69	1611	5	ND	1	3	1.3	31	2	15	.39	.001	2	1015	10.67	10	.01	2	.16	.01	.02	63	1350
HOLE-4 50-60	23	164	2	83	.5	1189	69	1110	10.01	1785	5	ND	2	7	1.0	28	3	17	.33	.008	2	908	9.66	17	.01	2	.15	.01	.03	81	1080
HOLE-4 60-70	32	205	10	113	.3	966	60	1336	12.31	454	5	ND	1	10	1.2	6	2	20	.40	.010	2	1026	10.04	19	.01	4	.30	.01	.02	21	280
HOLE-4 70-80	22	159	24	102	.3	1102	69	1086	10.44	633	5	ND	1	11	.8	10	2	26	.54	.009	2	1264	11.11	22	.01	5	.36	.01	.03	11	450
STANDARD C/AU-R	20	62	41	133	7.4	72	32	1047	3.97	43	18	7	40	53	18.4	15	21	60	.52	.095	39	61	.89	184	.09	39	1.90	.07	.13	11	540

GEOCHEMICAL ANALYSIS CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS File # 90-3769 Page 1

880 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
C 11549	1	2	4	12	.1	619	41	844	3.09	37	6	ND	1	1	3	3	4	13	.12	.001	2	733	14.39	6	.01	3	.27	.01	.01	1	1
C 11550	3	4	2	6	.2	1468	57	680	3.78	1038	5	ND	1	5	3	56	8	16	.50	.001	2	444	17.78	5	.01	4	.09	.01	.01	1	53
C 11551	2	11	2	8	.3	1167	48	641	3.39	367	5	ND	1	17	.2	32	4	22	1.94	.001	2	603	14.32	2	.01	2	.28	.01	.01	1	200
C 11552	2	5	2	8	.2	997	43	556	2.98	316	5	ND	1	85	.3	11	2	17	2.60	.001	2	502	15.03	4	.01	2	.15	.01	.01	1	97
C 11553	2	5	2	8	.1	1252	51	546	3.56	526	5	ND	1	32	.4	18	2	18	1.89	.001	2	567	14.62	6	.01	4	.24	.01	.01	1	280
C 11554	2	8	2	8	.1	993	45	418	3.90	186	5	ND	1	7	.2	5	3	21	.79	.001	2	767	12.81	6	.01	3	.29	.01	.01	1	49
C 11555	2	15	2	9	.1	1052	46	409	3.08	255	5	ND	1	46	.2	9	2	18	1.07	.001	2	676	13.33	3	.01	6	.22	.01	.01	1	42
C 11556	1	7	2	8	.1	688	42	620	3.27	71	5	ND	1	1	.2	5	5	15	.12	.001	2	701	13.77	6	.01	2	.28	.01	.01	1	5
C 11557	2	14	2	8	.2	1207	56	773	4.16	1584	5	ND	1	4	.2	26	2	15	.16	.001	2	491	16.99	9	.01	6	.12	.01	.01	1	1500
C 11558	1	6	2	7	.1	545	38	706	2.96	90	5	ND	1	1	.2	5	2	13	.29	.001	2	666	14.27	2	.01	2	.26	.01	.01	1	24
C 11559	1	4	2	8	.1	419	34	883	2.83	22	5	ND	1	1	.5	2	8	12	.42	.001	2	684	13.19	3	.01	3	.22	.01	.01	1	1
C 11560	1	2	2	10	.1	558	37	799	2.84	22	5	ND	1	3	.4	2	2	15	1.02	.001	2	705	14.26	7	.01	3	.23	.01	.01	1	1
C 11561	2	4	2	9	.1	1170	49	675	3.47	27	5	ND	1	8	.4	61	2	20	2.27	.001	2	525	15.10	10	.01	6	.12	.01	.01	1	13
C 11562	2	4	5	10	.2	864	49	883	3.70	66	5	ND	1	4	.5	3	2	20	.92	.001	2	838	15.54	6	.01	8	.22	.01	.01	1	4
STANDARD C/AU-R	19	60	37	130	7.0	72	32	1049	3.96	40	19	7	39	53	18.6	15	21	56	.51	.098	38	57	.92	182	.07	34	1.90	.06	.14	11	530

HOLE 5

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 Core P2 Sludge AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: AUG 23 1990 DATE REPORT MAILED: Aug 28/90 SIGNED BY: *Chung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
HOLE 3 30-40	205	355	27	124	36.9	1068	60	884	8.35	3717	5	3	1	11	.8	36	2	18	.38	.004	2	816	11.38	47	.01	6	.29	.01	.01	151	5860
HOLE 3 40-50	44	111	197	100	6.9	847	52	793	6.70	918	5	ND	1	12	1.1	14	13	24	.43	.001	2	1143	11.55	32	.01	7	.48	.01	.01	22	600
HOLE 3 50-60	13	52	12	37	1.5	594	48	688	5.18	106	5	ND	1	20	.2	4	10	31	.92	.001	2	1457	14.85	15	.01	12	.68	.01	.01	11	112
HOLE 3 70-80	13	96	28	74	2.7	398	53	786	5.71	1089	5	ND	1	116	.6	35	3	64	2.29	.227	21	455	7.60	142	.02	13	1.46	.03	.12	13	860
HOLE 4 80-90	9	72	6	33	1.0	566	44	884	4.81	181	5	ND	1	80	.2	7	2	20	2.76	.003	2	964	10.26	14	.01	2	.37	.01	.01	4	250
HOLE 4 90-100	5	106	6	37	.4	534	42	717	4.36	161	5	ND	1	74	.2	9	10	36	2.03	.077	8	835	9.35	59	.01	5	1.08	.01	.05	2	210
HOLE 5 30-40	11	130	7	46	.9	1585	132	905	6.33	933	5	ND	1	34	.3	77	2	19	1.12	.003	2	592	11.39	16	.01	3	.23	.01	.01	15	480
STANDARD C	19	58	41	130	7.4	73	32	1051	3.95	40	21	7	39	53	18.6	16	22	56	.51	.095	38	57	.89	182	.07	34	1.88	.06	.14	11	-

/ ASSAY RECOMMENDED

## GEOCHEMICAL ANALYSIS CERTIFICATE

Viceroy Resources PROJECT SIDNEY WILLIAMS File # 90-4197 Page 1

880 - 999 W. Hastings St., Vancouver BC V6C 2W2

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
C 11563	2	9	2	9	.2	1274	56	729	3.81	550	5	ND	1	7	.2	18	2	16	.71	.003	2	565	17.53	3	.01	8	.11	.01	.02	1	19
C 11564	1	8	2	10	.1	1098	52	739	3.76	364	5	ND	1	3	.2	11	2	18	.47	.002	2	637	17.69	4	.01	6	.13	.01	.02	1	14
C 11565	2	1	2	7	.1	1419	54	425	3.51	559	5	ND	1	2	.2	20	2	19	.38	.002	2	602	18.54	4	.01	5	.14	.01	.02	1	67
C 11566	1	7	2	9	.1	1284	58	582	3.77	617	5	ND	1	6	.2	13	2	17	.42	.003	2	654	17.97	3	.01	5	.15	.01	.03	1	71
C 11567	2	8	2	7	.2	1357	57	528	3.50	2087	5	ND	1	3	.2	32	2	13	.31	.003	2	413	17.36	2	.01	4	.06	.01	.02	1	1130
C 11568	1	3	3	7	.1	1159	54	643	3.84	551	5	ND	1	4	.2	13	2	18	.39	.003	2	751	17.34	4	.01	3	.20	.01	.02	1	42
C 11569	1	4	2	9	.2	1288	56	513	3.91	351	5	ND	1	2	.2	15	2	21	.21	.003	2	769	18.22	4	.01	5	.20	.01	.02	1	14
C 11570	2	11	4	8	.3	1437	61	558	3.26	1242	5	ND	1	7	.2	33	2	17	.40	.003	2	526	17.84	3	.01	5	.08	.01	.02	1	360
C 11571	1	11	3	8	.5	914	37	619	3.36	1284	5	ND	1	112	.2	34	2	19	2.26	.003	2	401	15.67	3	.01	3	.05	.01	.03	1	1290
C 11572	1	7	2	9	.1	1255	52	722	3.72	183	5	ND	1	7	.2	29	2	20	.49	.003	2	717	17.37	4	.01	6	.15	.01	.02	1	32
C 11573	2	9	4	7	.5	1195	53	675	3.38	1786	5	ND	1	52	.2	34	2	16	1.30	.003	2	419	16.40	2	.01	3	.04	.01	.02	1	760
C 11574	1	7	2	8	.3	1135	49	624	3.42	2581	5	ND	1	74	.2	32	2	18	1.86	.003	2	454	16.27	2	.01	3	.04	.01	.02	1	1850
C 11575	1	12	2	7	.4	1087	40	460	3.97	1104	5	ND	1	88	.2	24	2	17	2.45	.002	2	428	15.43	7	.01	3	.07	.01	.02	1	1260
C 11576	1	57	2	7	.2	1346	57	446	4.66	380	5	ND	1	12	.2	33	2	39	.56	.005	2	568	17.51	6	.01	6	.23	.01	.03	1	39
C 11577	1	746	3	13	1.9	521	76	751	6.64	47	5	ND	1	46	3.0	31	2	119	2.70	.037	2	331	10.14	6	.01	3	.57	.01	.01	1	6
C 11578	1	7	2	9	.1	906	52	640	3.92	59	5	ND	1	8	.2	2	2	24	.93	.003	2	783	16.00	2	.01	4	.34	.01	.01	1	4
C 11579	1	5	2	11	.1	662	46	978	4.39	78	5	ND	1	8	.2	2	2	19	1.04	.002	2	965	15.78	6	.01	5	.33	.01	.01	1	4
C 11580	1	72	2	27	.1	44	13	290	2.61	55	5	ND	1	15	.3	4	2	86	1.48	.034	2	56	1.50	9	.18	2	1.65	.33	.05	1	5
C 11581	1	51	2	37	.4	37	17	922	5.03	9480	5	4	1	156	.2	25	2	43	7.66	.020	2	27	4.54	28	.01	6	.71	.04	.13	1	5830
C 11582	1	73	4	32	.1	35	14	389	2.98	68	5	ND	1	16	.2	5	2	86	2.22	.023	2	46	1.84	14	.17	5	1.72	.21	.06	2	6
C 11583	1	66	3	36	.1	36	17	441	3.21	81	5	ND	1	26	.2	7	2	93	2.48	.024	2	47	1.85	21	.08	7	1.62	.23	.07	2	1
C 11584	1	24	68	26	.3	339	29	873	4.70	1364	5	ND	1	113	.2	11	2	55	5.47	.025	2	195	8.46	25	.01	8	.75	.04	.11	1	770
C 11585	2	5	2	9	.1	1392	47	481	3.43	389	5	ND	1	10	.2	13	2	23	.71	.003	2	609	16.97	6	.01	8	.22	.01	.04	1	23
C 11586	2	7	3	7	.2	1367	60	561	3.99	852	5	ND	1	6	.2	44	2	18	.38	.004	2	616	17.65	4	.01	7	.13	.01	.02	1	30
C 11587	1	10	2	11	.1	539	40	847	3.62	44	5	ND	1	3	.2	2	2	21	.66	.002	2	933	14.70	2	.01	5	.34	.01	.01	1	1
C 11588	1	5	2	11	.1	494	48	596	4.09	58	5	ND	1	3	.2	2	3	22	.70	.002	2	1112	13.26	1	.01	3	.46	.01	.01	1	1
C 11589	1	26	2	12	.1	922	49	687	3.72	7	5	ND	1	3	.2	2	2	30	1.20	.005	2	911	14.08	1	.01	13	.49	.01	.01	1	1
C 11590	1	5	2	17	.1	1430	58	769	3.77	21	5	ND	1	4	.2	2	2	21	1.41	.003	2	944	16.87	1	.01	51	.39	.01	.01	1	2
C 11591	2	16	2	17	.1	1481	61	769	3.98	14	5	ND	1	6	.2	2	2	23	1.76	.003	2	913	15.94	1	.01	23	.45	.01	.01	1	2
C 11592	2	8	2	24	.1	1703	76	722	5.26	13	5	ND	1	10	.2	2	2	27	1.37	.003	2	1236	14.40	2	.01	8	.63	.01	.01	1	5
C 11593	1	9	2	15	.1	978	57	799	3.99	5	5	ND	1	13	.2	2	2	20	1.15	.002	2	968	15.27	1	.01	17	.36	.01	.01	1	1
C 11594	1	7	2	14	.1	1439	60	642	4.10	20	5	ND	1	2	.2	2	2	22	.42	.003	2	1014	15.94	1	.01	25	.43	.01	.01	1	1
C 11595	2	12	2	15	.1	1650	61	582	3.86	21	5	ND	1	2	.2	2	2	26	.72	.004	2	924	15.71	1	.01	40	.42	.01	.01	1	1
C 11596	1	4	2	13	.1	1085	53	655	3.97	266	5	ND	1	5	.2	7	2	19	.24	.002	2	910	15.78	4	.01	7	.28	.01	.01	1	280
C 11597 HOLE 7	2	2	2	8	.1	1399	53	561	3.58	467	5	ND	1	6	.2	43	2	15	.46	.003	2	465	15.75	3	.01	6	.07	.01	.01	1	390
STANDARD C/AU-R	19	58	42	133	7.2	73	31	1047	3.96	38	21	7	40	53	19.0	16	18	60	.52	.094	41	60	.89	188	.09	37	1.89	.06	.13	12	530

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: P1 TO P2 CORE P3 SLUDGE AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 7 1990

DATE REPORT MAILED: Sept 11/90

SIGNED BY: C. Leong, D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	U ppm	Au* ppb
C 11598	3	6	2	11	.3	1786	65	490	4.38	806	5	5	1	6	.2	49	2	18	.24	.003	2	673	18.45	13	.01	8	.13	.01	.03	1	5067
C 11599	2	9	2	14	.1	1266	56	585	3.68	324	5	ND	1	11	.2	14	2	21	.58	.006	2	807	17.24	36	.01	7	.25	.01	.02	1	128
C 11600	1	7	2	11	.1	725	43	578	3.62	53	5	ND	1	2	.2	2	4	19	.57	.002	2	991	14.67	4	.01	10	.34	.01	.01	1	4
C 11601	1	13	41	22	.3	810	46	652	4.42	299	5	ND	1	2	.2	9	3	20	.49	.003	2	1317	10.26	11	.01	11	.46	.01	.02	1	4
C 11602	1	6	2	9	.1	917	46	525	3.83	219	5	ND	1	3	.2	13	3	19	.43	.002	2	1087	14.78	6	.01	11	.33	.01	.01	1	918
C 11603	2	10	2	11	.1	1404	57	423	3.09	213	5	ND	1	4	.2	6	2	18	.24	.003	2	639	17.98	7	.01	9	.17	.01	.02	1	17
C 11604	1	5	2	11	.1	1056	52	493	4.27	78	5	ND	1	4	.2	2	2	20	.51	.003	2	841	15.72	6	.01	9	.25	.01	.02	1	14
C 11605	1	10	8	14	.1	972	48	522	4.17	174	5	ND	1	6	.2	7	2	21	.49	.003	2	1022	15.28	5	.01	9	.35	.01	.01	1	2
C 11606	2	5	2	8	.1	1352	56	603	3.66	432	5	ND	1	10	.2	19	2	18	.72	.003	2	619	17.15	4	.01	8	.11	.01	.02	1	261
C 11607	2	5	2	9	.3	1429	54	497	3.62	862	5	ND	1	14	.2	31	2	18	1.16	.003	2	556	15.70	5	.01	7	.09	.01	.03	1	441
C 11608	2	5	2	8	.4	1301	55	437	3.91	3333	5	3	1	6	.2	33	2	18	.77	.003	2	494	16.03	4	.01	6	.08	.01	.02	1	3204
C 11609	3	6	7	8	.4	901	36	277	2.51	522	5	ND	1	6	.2	12	2	11	.45	.003	2	278	10.27	2	.01	4	.05	.01	.02	1	1278
C 11610	1	7	2	6	.5	1100	40	290	2.67	510	6	ND	1	45	.2	27	2	11	6.39	.002	2	301	8.65	10	.01	26	.06	.01	.03	1	432
C 11611	2	6	2	9	.2	1387	57	409	3.90	854	5	ND	1	7	.2	38	2	15	.55	.003	2	530	15.81	4	.01	5	.09	.01	.02	1	57
C 11612	2	6	2	10	.1	1260	56	529	3.45	48	5	ND	1	7	.2	26	2	15	.43	.003	2	771	15.62	4	.01	9	.25	.01	.02	1	10
C 11613	1	8	2	12	.1	644	47	706	3.65	7	5	ND	1	7	.2	2	2	16	.55	.002	2	932	11.88	1	.01	8	.33	.01	.02	1	2
C 11614	1	8	2	13	.1	1076	53	700	3.54	28	5	ND	1	18	.2	2	3	16	1.43	.003	2	920	12.80	3	.01	38	.34	.01	.01	1	5
C 11615	1	10	2	15	.1	1367	55	551	3.46	6	5	ND	1	17	.2	2	2	17	1.12	.003	2	924	14.57	4	.01	43	.37	.01	.02	1	3
C 11616	1	7	2	15	.1	1187	54	705	3.78	10	5	ND	1	23	.2	2	2	22	1.75	.002	2	1245	15.75	4	.01	45	.43	.01	.01	1	1
C 11617	1	4	2	15	.1	859	47	897	3.58	2	5	ND	1	5	.2	2	2	22	1.02	.003	2	1136	14.51	2	.01	36	.38	.01	.01	1	1
C 11618	1	12	2	9	.1	389	28	580	3.21	2	5	ND	1	32	.2	2	2	21	3.38	.003	2	1004	10.55	2	.01	17	.37	.01	.01	1	1
C 11619	1	9	2	10	.1	434	34	570	3.44	3	5	ND	1	9	.2	2	2	22	1.65	.002	2	1158	12.29	2	.01	18	.41	.01	.01	1	1
C 11620	1	9	2	12	.1	1076	50	633	3.15	2	5	ND	1	8	.2	2	3	20	.74	.003	2	1076	15.67	1	.01	38	.37	.01	.01	1	1
C 11621	2	10	2	12	.1	1325	58	692	3.39	2	5	ND	1	3	.2	2	2	20	.28	.003	2	976	16.35	1	.01	39	.36	.01	.01	1	1
C 11622	1	7	2	11	.1	1230	54	553	3.31	2	5	ND	1	3	.2	2	2	20	.51	.004	2	914	15.80	1	.01	41	.40	.01	.01	1	1
C 11623	2	11	2	12	.1	1504	56	462	2.95	6	5	ND	1	15	.2	2	2	17	.76	.003	2	850	14.98	1	.01	48	.36	.01	.01	1	1
C 11624	2	8	2	13	.1	1293	59	719	3.35	5	5	ND	1	3	.2	2	2	19	.62	.003	2	954	15.60	1	.01	50	.36	.01	.01	1	1
STANDARD C/AU-R	19	59	40	133	7.3	73	32	1047	3.96	39	20	7	39	53	19.8	17	21	60	.52	.100	41	60	.89	187	.09	37	1.89	.06	.13	12	510

HOLE 7



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
HOLE #3 60-70	12	57	13	24	2.7	531	43	741	4.99	215	5	ND	1	65	.5	2	3	33	2.06	.056	7	1041	11.22	28	.01	11	.71	.01	.06	.12	168
HOLE #4 0-10	40	95	2	14	8.2	1149	93	578	6.66	4716	5	8	2	3	.2	65	2	17	.06	.010	2	438	3.12	24	.01	3	.16	.01	.03	104	9840
HOLE #5 0-10	3	46	6	16	.4	1258	89	1102	5.87	435	5	ND	1	12	.2	25	2	28	.40	.011	2	947	8.53	21	.01	5	.51	.01	.02	25	75
HOLE #5 10-20	3	142	2	1	.4	1312	93	592	4.95	982	5	ND	1	11	.2	56	2	16	.54	.004	2	478	13.36	13	.01	5	.13	.01	.02	13	280
HOLE #5 20-30	7	79	2	25	1.1	1810	86	827	6.35	1193	5	ND	1	18	.7	100	2	21	1.02	.006	2	571	11.78	17	.01	5	.20	.01	.03	48	380
HOLE #6 0-10	7	114	3	45	2.4	189	56	1114	6.66	1122	5	ND	1	10	.5	15	2	93	.44	.019	2	163	1.14	47	.01	6	1.97	.08	.11	.25	320
HOLE #6 10-20	35	143	6	51	5.5	141	36	1051	5.67	934	5	ND	1	11	.4	14	2	87	.75	.028	2	108	1.23	38	.04	6	1.90	.14	.11	.30	270
HOLE #6 20-30	19	159	8	85	5.1	114	33	785	4.81	726	5	ND	1	14	1.1	10	2	86	1.15	.025	2	95	1.43	32	.08	7	1.77	.17	.09	126	250
HOLE #6 30-40	14	99	10	61	2.9	184	25	688	4.35	503	5	ND	1	27	.8	10	2	87	2.17	.028	2	128	2.83	30	.12	5	1.79	.21	.08	35	137
HOLE #6 40-50	12	77	2	31	2.3	590	42	847	4.96	795	5	ND	1	11	.2	13	2	59	.75	.019	2	416	7.47	27	.02	5	1.20	.06	.07	14	127
HOLE #6 50-60	11	76	2	30	2.8	502	45	826	5.01	509	5	ND	1	7	.6	4	2	55	.80	.016	2	673	7.88	22	.02	6	1.14	.05	.07	14	142
HOLE #6 60-70	9	63	2	31	2.0	859	51	857	4.97	450	5	ND	1	7	.2	2	2	52	.91	.015	2	814	11.00	21	.02	15	1.09	.05	.06	10	131
HOLE #6 70-80	5	57	2	34	.7	975	51	800	4.77	303	5	ND	1	6	.3	2	2	47	1.04	.014	2	858	11.81	30	.03	16	.99	.05	.06	2	104
HOLE #6 80-90	7	61	5	32	1.7	703	48	827	4.74	316	5	ND	1	9	.2	2	2	48	1.10	.016	2	774	10.05	47	.04	10	1.04	.06	.06	5	85
HOLE #6 90-100	5	37	2	20	.8	1195	57	664	4.50	141	5	ND	1	5	.3	2	2	35	.75	.010	2	1084	14.90	31	.02	16	.72	.03	.03	1	46
HOLE #7 20-30	44	343	72	227	2.2	1182	56	1240	11.34	215	5	ND	1	5	2.9	18	2	18	.75	.008	2	986	11.99	44	.01	7	.32	.01	.02	136	290
STANDARD C/AU-R	18	59	40	130	7.1	72	31	1048	3.97	40	21	7	40	53	20.0	15	20	57	.51	.095	39	60	.90	181	.09	34	1.90	.06	.14	13	520