87-9-15516

NEWMONT EXPLORATION OF CANADA LIMITED

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

on the

GRASSHOPPER CLAIMS

SIMILKAMEEN MINING DIVISION,
BRITISH COLUMBIA

92H/10W

By
Dennis M. Bohme
January 8, 1987

LOCATION:	26 km northwest of Princeton, B.C. Latitude 49°~~33~~' 32.5', Longitude 120°~~54~~' 53.8'
OWNER OF RECORD:	Leslie O. Allen
WORK DONE BY:	Newmont Exploration of Canada Limited
WORK DONE BETWEEN:	June 24 - November 1, 1986
DATE SUBMITTED:	January 9, 1987

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SUMMARY

This report presents the results of geological mapping, lithogeochemical sampling, and a magnetic survey carried out between June 24 and November 1, 1986, as Newmont's UM Project. The property is located 26 km northwest of Princeton, B.C., along the north side of the Tulameen River. It is held under option from a group led by Monica Resources Ltd.

Almost the entire property is underlain by intrusive rocks of the Tulameen Ultramafic Complex, a crudely zoned "Alaskan-type" dunite-clinopyroxenite-gabbro complex. The platinum group elements in the Tulameen Complex are distributed roughly according to the degree of the differentiation, with the highest content spatially related to the dunite core. Highly anomalous concentrations of platinum are associated with erratically distributed lenses, pods, and disseminations of chromite.

The lithogeochemical survey has defined two types of chromite occurrences: (1) platinum-enhanced chromite segregations, and (2) platinum deficient chromite segregations. An anomalous area measuring 800m by 300m has been outlined, which includes a 250 by 150m zone containing several platinum-bearing chromite occurrences containing up to 16000 ppb Pt (0.47 oz/ton) over 1.0m. Three of these occurrences have been extensively chip sampled, with platinum content averaging 1350 to 2915 ppb (0.04 to 0.09 oz/ton) over 6 x 6m areas. The irregularly shaped pods and lenses of chromite, up to a metre long, show no preferred attitudes and no systematic distribution in the dunite mass.

Recommendations include mineralogical and metallurgical test work, further detailed mapping and rock sampling, blasted trenching and, contingent on these, provision for diamond drilling.

INTRODUCTION

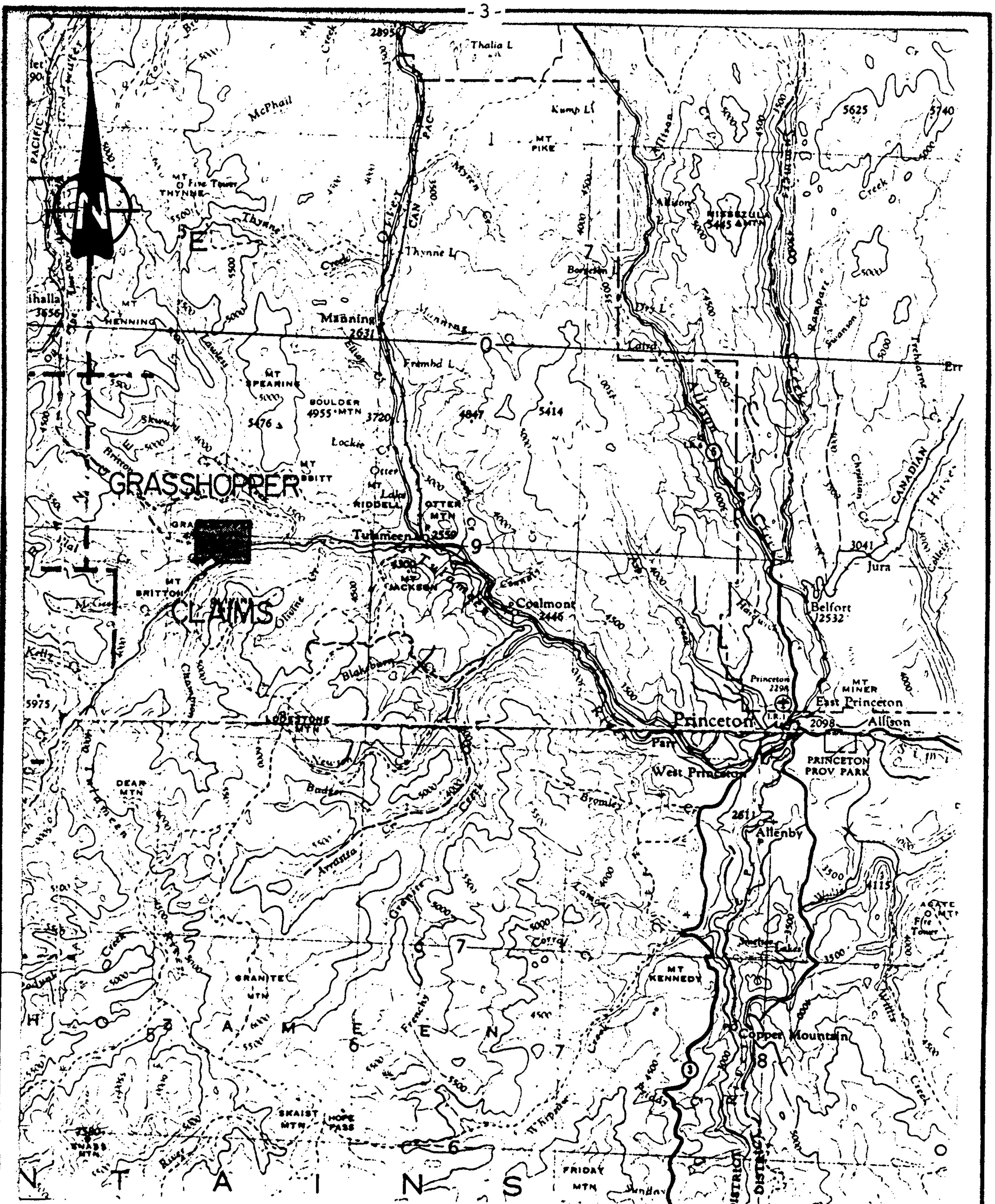
Location, Access and Topography

The **Grasshopper 1** and **2** claims are located in the Cascade Mountains of southwestern B.C., about 26 km northwest of Princeton, B.C. (see Figure 1). The claims are situated along the north side of the Tulameen River valley.

Access to the property is via a 24 km paved road from Princeton to Tulameen and then branching off onto either the Tulameen River or Lawless Creek forestry access logging roads. The north side of the property is accessible by driving 35 km from Tulameen along the winding Lawless Creek road or by driving 17 km east from the Coquihalla Highway on the same road. After driving 9 km west of Tulameen along the Tulameen River road, access to the southern portion of claims is gained by hiking an old pack trail that climbs 900 ft (275m) in elevation from the road. Both routes are good all-weather roads and a 4 WD vehicle is usually not necessary except during winter conditions.

The property covers the moderately to steeply dipping slopes of Grasshopper Mountain. Elevations range from 2825 ft (860m) in the Tulameen River valley to 4877 ft (1487m) at the summit of Grasshopper Mountain. Intermittent creeks and spring seeps occur in the broadly to very steeply incised gullies.

The northern and western portions of the claims are quite heavily treed by spruce, pine, fir and cedar with locally thick underbrush occurring in narrow gullies. Some clear-cut logging has recently taken place at the north edge of the property. The south facing slopes are more sparsely forested with some clearings. Outcrop exposure is generally quite good although some areas lower down are covered by residual overburden and extensive talus slopes.



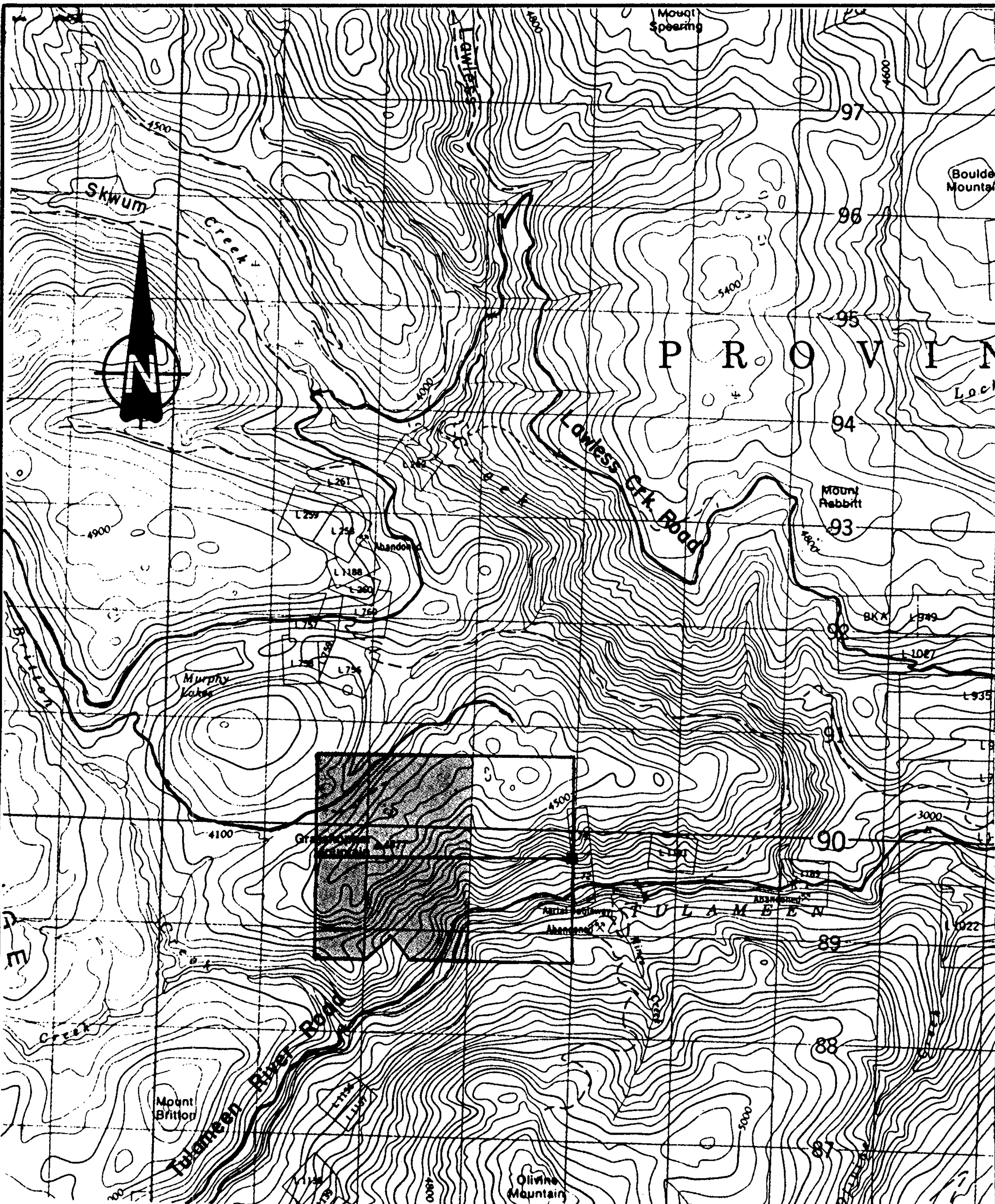
SCALE

0 5 10 kilometres

NEWMONT EXPLORATION OF CANADA LTD.

LOCATION MAP
TULAMEEN RIVER AREA

SCALE 1:250000	LOCATION 92 H	DATE DEC.1,1986
SURVEY BY D. B.	DRAWN BY J. T.	NO. Fig. 1



LEGEND

Optioned from Monica Resources Ltd.

SCALE

500 0 1000 meters

NEWMONT EXPLORATION OF CANADA LTD.

CLAIM MAP
TULAMEEN RIVER AREA

SCALE 1:50000	LOCATION 92H 10w	DATE DEC. 1, 1986
SURVEY BY D.B.	DRAWN BY D.B.	NO. Fig. 2

Property Definition

The purpose of this report is to document the results of an exploration program designed to systematically explore a portion of the Tulameen Ultramafic Complex for lode platinum deposits. Newmont's name is the **UM Project.**

The property is defined as the westernmost 12 claim units of Grasshopper 1 and 2 mineral claims (see Figure 2). It measures 2000 m north-south by 1500 m east-west. The two claims each consist of 10 units. They were recorded in the Similkameen Mining Division on January 10/83, record numbers 1803 and 1804. They are owned by R. Bilquist and L.O. Allen; Allen is the owner of record. They are held under option by Monica Resources Ltd., who has optioned a portion of its equity to Mt. Grant Mines Ltd., Twin Eagle Resources Inc. and 297706 B.C. Ltd. In July 1986, Newmont Mines Limited executed an option from the Monica group on the 12 unit block described above. Newmont Exploration of Canada Limited is the operator. Newmont's wholly owned MUR claim of 20 units adjoins this property to the west.

Between June 24 to August 12, September 20 to October 8, and October 21 to November 1, 1986, the following field work was carried out by a 2 to 5 man crew led by D. Bohme: chain and compass grid surveying, silt sampling, rock-chip sampling, prospecting, geological mapping, and a ground magnetic survey. Some of the geological mapping and lithogeochemical sampling was done by geologists B. Downing and H. Klatt. The magnetic survey was carried out by P. Walker and P. Wong. A total of 254 man days was utilized in field work; a further 60 in office compilation and report preparation.

History

Placer gold and platinum were first discovered in the Tulameen District in the 1860s and are still being exploited today. Placer production to date is estimated in excess of 20,000 ounces of platinum group elements. The platinum metals were derived by erosion of the ultamafic rocks of the Tulameen complex, especially in the vicinity of Olivine and Grasshopper Mountains (Cabri, 1976).

A great deal has been written on platinum lode occurrences, and probably one of the most detailed investigations of platinum distribution in the Tulameen ultramafic complex is described by Findlay (1963). The mineralogical, geochemical, and petrological associations of the distribution of platinum-group elements in the complex has recently been documented by St. Louis (1984, 1986). In addition to these reports, various other publications by the Geological Survey of Canada; British Columbia Ministry of Energy, Mines, and Petroleum Resources; Department of Mines and Technical Surveys Canada; and other monthly bulletins and journals contain detailed studies pertinent to the Tulameen Ultramafic Complex.

The Grasshopper 1 and 2 claim groups were originally staked by prospector R. Bilquist in November, 1978. Geochemical and prospecting reports were submitted by him for assessment in 1979 and in 1982. A total of 163 rock samples were analysed for Pt - Pd in composite group selections in order to lower analytical costs and locate general areas of interest. One of the best assays was a composite of 2 rock samples running 720 ppb Pt and greater than 2.0% Cr located about 600m west of Grasshopper Mountain.

The claims lapsed and were later restaked by L.O. Allen using the same claim names in December, 1982. They were optioned by Monica Resources Ltd. in Janaury 1984. Forty-six rock samples and 179 soil samples were collected and analyzed for Cu, Co, Ni, Cr, Ag, and Au. Six samples analyzed for platinum and palladium ranged from 2 to 94 ppb Pt and from 3 to 111 ppb Pd.

Work Summary

A total of 32 km of grid lines oriented N70^{0}E were laid out on the 12 western-most claim units of the Grasshopper 1 and 2 claims for the geological mapping and sampling program, and the magnetic survey. Lines were spaced either 100 or 50m apart and stations were marked at 25m intervals with 1m high, orange spray-painted, lath pickets. All lines were compassed surveyed and slope-corrected using a clinometer and chain. Most of the lines are askew from their original bearing due to the strong magnetic affects of the host rock. As the boundaries of Grasshopper 1 and 2 claims had never been marked out on the ground at time of staking, it was also necessary to survey with a transit a line from the legal corner post, and establish a N-S line separating the portion of the claims under option to Newmont from the portion that is not. That line forms the east boundary of the grid.

A total of 250 rock chip samples were collected for the lithogeochemical survey. All rock chip sample results together with a brief geological description, are included in Appendix 2. Four silt samples were also collected. No soil samples were taken on the property. All samples were analyzed for Pt and Cr; selected ones were also done for Pd and Au. In addition, an orientation line of rock samples across the intrusive was selected for whole rock analysis of major and some minor elements.

Geological mapping at 1:2000 scale over an area of 300 hectares was concentrated in the immediate area around the grid lines; in addition, outcrops along the logging roads on the north side of the property were also mapped and sampled. Prospecting for platinum was done by carefully examining outcrops for chromite occurrences and then chip sampling the area over specific widths to determine its platinum content. Significant chromite occurrences were sketch-mapped in more detail.

The ground magnetic survey covered 25 km of grid line. Instrument readings were taken at 12.5m intervals.

REGIONAL GEOLOGY

Almost the entire property is underlain by intrusive rocks of the Tulameen Ultramafic Complex (see Figure 3). The Tulameen intrusion, measuring approximately 6 x 17 km (57 km^2), is a distinctive "Alaskan - type" or "Uralian - type" zoned ultramafic-gabbro complex that was emplaced in metavolcanic and metasedimentary rocks of the Upper Triassic Nicola Group, probably during a late Triassic deformation period that folded Nicola rocks about generally north to northwest-trending axes (Findlay, 1969). Two K-Ar age determinations have been done: 174 Ma and 186 Ma (Rublee, 1986). The Copper Mountain Intrusions 30 km to the southeast have a similar late Triassic age.

The complex displays an imperfect concentric zonal structure with its central part (core) consisting of dunite and lesser peridotite, and peripheral phases consisting of olivine clinopyroxenite, hornblende clinopyroxenite, syenogabbro, and syenodiorite. Pyroxenite, clinopyroxenite, and hornbldendite are subordinate units. Dunite forms about one-tenth of the total area of the complex. It is not layered intrusion of the Merensky or Stillwater type.

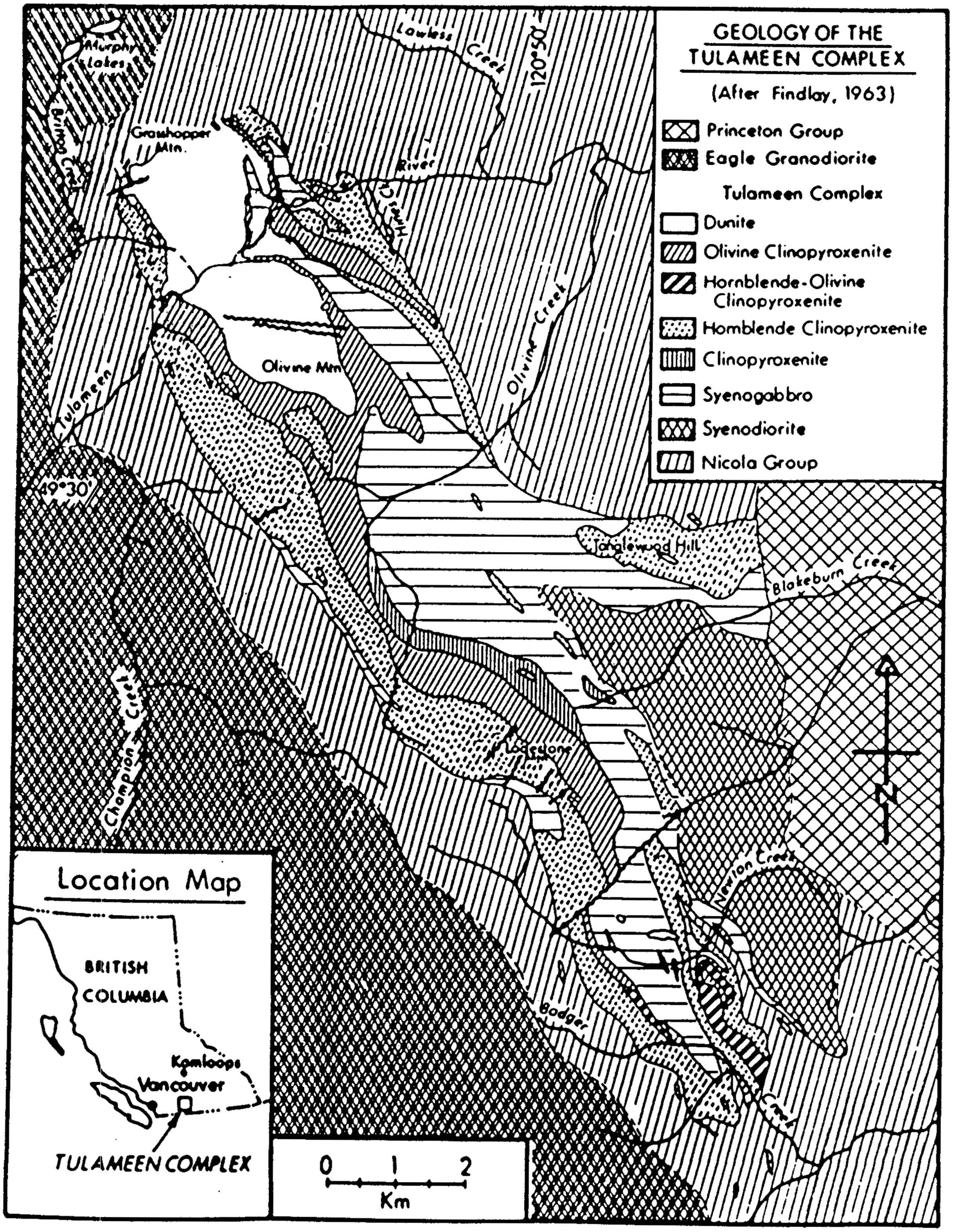


FIG. 3 Location and local geology (after Rice, 1947; and Findlay, 1963, 1969).

Fig. 3

The Eagle granodiorite is a Coast Intrusion batholith lying west of the Tulameen Complex and is considered late Jurassic in age.

Platinum-group metal occurrences are numerous and widely distributed in similar zoned ultramafic bodies of the Ural Mountains, U. S. S. R. and of southern Alaska. Past and present producers in those areas have mined deposits where platinum is associated with oxide (chromite) or sulfide rich phases of the complexes.

PROPERTY GEOLOGY

Lithology

Principal rock types on the claims, in order of abundance, include dunite, hornblende clinopyroxenite, syenogabbro, olivine clinopyroxenite, serpentinite, feldspar porphyry (felsic) dykes, and Nicola metavolcanics (see Map 1). Some ultamafic pegmatite specimens were found in float. It should be noted that the contacts between the various ultramafic units are usually gradational and intermixing, whereas the contacts between the ultramafic and felsic rocks are intrusive and typically well defined (St. Louis, 1986). The contact between the dunite core and the outlying ultramafic rocks is quite sharp.

The dunite body outcrops throughout the property as a fine to medium-grained, homogenous, nondescript rock both on weathered and fresh surfaces. Fresh dunite may be buff to yellowish-brown to light grey weathering, and is composed of olivine, fine magnetite, accessory chromite, and generally less than 40% serpentine. In a few places, thin layers of irregularly-shaped clusters of pyroxenes (diopside?) were observed which give the dunite a distinct mottled weathered surface.

Serpentinization is the only alteration process in the dunite. Highly serpentinized dunite weathers various shades of orange, brown, and grey. On the fresh surface, the serpentinite is a dark green to greenish black fine grained rock. On Grasshopper Mountain, the dunite is generally more intensely serpentinized carrying over 80% serpentine in places (Findlay, 1963). The erratic distribution of the serpentinite is generally associated with narrow fracture zones and variously oriented fissures. In places, secondary serpentine and magnetite banding form as radiating to sub-parallel veinlet networks. In general, the degree of serpentinization of the dunite is quite variable and there is no clear pattern of the serpentinite fracture zones.

Chromite is the principal accessory mineral in dunite and normally occurs as erratically distributed disseminations, clots, isolated pods (less than 1.0m), and stringers. The more important characteristics of the Tulameen chromites are summarized by Findlay (1963) below:

1. No systematic variations in chromite composition have been recognized in Tulameen rocks

2. As a group, Tulameen chromites are characterized by high Fe content, particularly Fe^{3+}(range is about 15 to 25% Fe_2O_3). This is reflected by the moderate to strongly magnetic properties of many samples.

The variable quantities of chromite in the dunite generally range from 1 to 25% volume percent. The chromite lenses, pods, and veinlets show no preferred attitudes and no systematic distribution in the dunite mass. Chromite is fairly ubiquitous in dunite but no concentrations of economic interest were observed (Findlay, 1963).

The olivine clinopyroxenite forms a thin envelope around the north and eastern margins of the dunite. It consists mostly of diopside and textures are typically medium to coarsely granular. Minor amounts of olivine, serpentinized olivine, and fine accessory magnetite are common.

The hornblende clinopyroxenite is the most abundant ultramafic rock type in the outer zone. Textures are typically medium to coarse granular to poikilitic with tabular hornblende crystals up to 3 cm long. This dark green to black rock type varies from 30 to 75% diopside, 5 to 70% hornblende, and locally constitutes 15 to 25% magnetite. Fine-grained disseminated pyrite was also noted in one locality. Accessory biotite flakes and apatite are fairly common.

Gabbroic rocks form a prominent mass along the southeastern portion of the property. The syenogabbro is composed mostly of diopside, plagioclase, K-feldspar and minor biotite, chlorite and fine magnetite. The syenogabbro has been partially saussuritized, particularly along marginal areas. Discontinuous quartz segregations, up to 1m wide, are sometimes noted within these gabbroic intrusive bodies.

Acid feldspar porphyry dykes and plugs, up to 60m wide, were observed in several places intruding the hornblende clinopyroxenite probably along younger north - south structures. They are undoubtedly related to the Coast intrusions and tend to weather a rusty tan to light grey color. The groundmass is generally fine grained with occasional quartz and carbonate.

A narrow wedge of hornfelsed, quartz-carbonate altered Nicola metavolcanics was mapped on the northeastern edge of the property within the hornblende pyroxenite. The rocks are quite sheared and bleached with fine disseminations of pyrite throughout. The metavolcanics are probably highly altered amphibolites derived from remnant andesitic to basaltic flows.

Structure

The Tulameen complex is largely conformable with the regional northwest-trending structural grain. The Nicola metavolcanics and felsic dykes also follow this north - northwest trend and appear to dip steeply to the west. Schistose textures are not common in marginal gabbroic and ultramafic lithologies.

In the Tulameen Complex the ultramafic units form an elongate body that dips steeply to the west and plunges to the southeast (Findlay, 1963). This suggests that the original feeder zone lies towards the northern (upper) end of the complex, perhaps near Grasshopper Mountain.

Along the road cut on the north side of the property, the ultramafic and gabbroic units exhibit very sheared and highly serpentinized textures. The rocks are very bleached and friable suggesting a major northeast - southwest structural break nearby cutting off the Tulameen complex to the northwest.

An attempt was made to map the more prominent serpentinite fracture zones. There appears to be a weakly developed pattern in some localized areas, but no systematic orientation in the dunite body as a whole. The irregular serpentinite zones generally trend 010 - 030° Az and are usually not more than 2m wide.

A structural break within the dunite is suggested from the magnetic contoured data in the area of L3S + 100W. No geological evidence has been found to support this interpreted structure though the area is mostly covered with residual overburden and talus slopes.

Mineralization

Findlay (1963) studied the distribution of platinum in 100 samples representing all the major rock types of the complex as well as in 26 magnetite and chromite bulk concentrate samples. He found the highest concentrations of platinum in the dunite with the background content of the mass being 80 to 90 ppb platinum. The two highest values reported were 225 ppb Pt north of Olivine Mountain and 180 ppb Pt just south of Grasshopper Mountain. St. Louis (1984) demonstrated the distribution of platinum-group elements to be a function of the degree of differentiation (zoning) within the ultramafic intrusive, with the highest contents in the dunitic rocks and the lowest in felsic rocks.

Chromite segregations within the dunite on Grasshopper Mountain gave the highest Pt content recorded by Findlay (1963) of 8090 ppb, with Pt enriched in the magnetic fraction relative to the nonmagnetic fraction (St. Louis, 1986). Samples of chromite-rich dunite may, on the other hand, carry little or no platinum. St. Louis (1986) reports that the mean value of platinum in chromite-rich samples is 3410 ppb ± 2220 ppb (the standard error of the mean) for 12 samples. Rocks containing massive lenses (typically less than 1.0m), pods, or schlieren chromite contain the greatest concentrations of platinum, iridium, osmium and rhodium with the exception of palladium. Exploration for a bulk tonnage platinum deposit within the dunite core therefore hinges on locating platinum-bearing chromite segregations over a widespread area.

Mineralogical study by (St. Louis) of massive chromite from dunite shows that platinum-group elements occur in two distinct modes. The first, the most commonly observed in Tulameen chromites, is present mainly as Pt - Fe alloy inclusions within the chromite grains. This occurrence is thought to represent platinum-group element-rich droplets and/or particles that have been trapped during the primary crystallization of the chromite. The second type of occurrence consists mainly of sperrylite ($PtAs_2$) interstitial to chromite grains. Platinum-group elements of this type are often associated with serpentine and Fe - Ni sulfides, especially pendlandite.

St. Louis (1984) found that palladium appears to be strongly partitioned into the marginal phases (hornblende pyroxenite and gabbroic rocks) or later stage differentiates of the complex. The significance of temperature control on the distribution of the platinum group elements in the Tulameen complex is suggested by the association of Pt, Ir, Rh, and Os with high temperature chromite (early differentiates) and the partitioning of Pd into the lower temperature (less refractory) phases (Rublee, 1986).

There are scattered occurrences of microscopically visible sulfides (mostly pendlandite and violarite), chalcopyrite, pyrrhotite, and pyrite in hornblende pyroxenite and felsic rocks (St. Louis, 1986). None of the known sulfide occurrences in the Tulameen Complex contain economic concentrations of base or precious metals (Findlay, 1963). Disseminated magnetite is very common in serpentinite zones, occurring as an alteration product of the serpentinization process. No significant concentrations of sulfides were observed on the Grasshopper property.

The results of the Newmont work dealing with mineralization are present in a following section under Lithogeochemical Survey with accompanying figures and maps.

GEOCHEMISTRY

The majority of the 250 rock samples and all 4 silt samples were prepared and analyzed for Pt and Cr by Acme Labs of Vancouver, B.C., using inductively coupled plasma (ICP) analysis. Only 6 samples were geochemically analyzed for Pt and Cr by Chemex Labs and 3 by Bondar-Clegg Labs.

A total of 77 samples were geochemically analyzed for palladium and 35 samples for gold. No other platinum group elements were requested. Only 6 samples were assayed for platinum and 57 samples were assayed for chromium (as distinct from geochemical analysis).

To investigate the occurrence of trace or pathfinder elements, 25 samples were collected for whole rock ICP analysis. The silt samples were also run for 30-element ICP geochemical analysis.

Field Procedure

Most of the rock chip samples were taken over measured widths or areas up to 5 x 5m and their location marked with orange flagging. In most cases a chisel was used in the sampling procedure. More detailed sampling over 3 metres or less, was done in areas displaying significant chromite concentrations and sampled widths were marked by two lines spray-painted perpendicular to the sample line. Sample weights were about 1 to 2 kg.

Sediment samples were taken from the stream or spring seep with a trowel and placed into a 9 by 15 cm Kraft paper envelope.

Laboratory Procedure

All rock samples were crushed, dried, and pulverized to -100 mesh and analyzed by Pt and Cr. For platinum geochemical analysis, 10 gm samples were subjected to lead fire assay preconcentration techniques (fusion) to produce a silver bead. The bead was then dissolved by aqua regia and the platinum content in the solution determined by mass spectrographic analysis to a detection limit of 1 ppb. Geochemical analysis at Chemex Labs and Bondar-Clegg Labs were fire-assay preconcentrated and finished by atomic absorption to a detection limit of 50 ppb.

Palladium and gold analysis were also subjected to the same lead fire assay preconcentration and finished by mass spectrographic analysis to a detection limit of 1 ppb. For platinum assays, 1/2 assay ton samples (14.6 gm) were subjected to regular fire assay techniques and finished by the atomic absorption method.

For chromium geochemical analysis, a 0.1 gm sample was fused with Na_2O_2 and the melt is leached with nitric acid or aqua regia and finished by inductively coupled plasma (ICP) method. Chromium assays were done by regular fire assay techniques and finished by ICP analyses to a maximum detection limit of 10,000 ppm. Geochemical analysis at Chemex Labs and Bondar-Clegg for Cr were finished by the atomic absorption method to a maximum detection limit of 20,000 ppm.

For geochemical whole rock assay analysis by ICP, a 0.10 gm sample is fused with 0.60 gm of $LiBO_2$ and is dissolved in 50 ml of 5% HNO_3. Silt samples are dried at $60^{o}C$ and sieved to -80 mesh. A 0.5 gm sample is digested with 3 mls aqua regia and diluted to 10 ml with water. The leach is partial for Cr, Mn, Fe and several other elements in the 30-element ICP geochemical analysis.

Lithogeochemical Survey - Results and Interpretation

At the outset of the program, an orientation survey employing whole rock analysis was carried out covering the various lithologies of the Tulameen Complex along Line 0. Results for the 25 samples are given in Appendix 1, their locations and descriptions are included in Appendix 2, and their locations are shown on Maps 2 and 3 by solid circles. Platinum did not correlate with any other elements except for a generally inconsistent association with chromium. Therefore it was decided not to routinely analyze for any major or trace elements other than Pt and Cr. Previous work on palladium, confirmed by selected analyses presented in this report, showed that Pd values in the Tulameen Complex are very low compared to Pt, and within the dunite portion are almost negligible.

For all the rock chip samples taken within the dunite mass (205 out of a total 250) the platinum content ranged from 2 to 16,000 ppb, with the majority being in the 2 to 135 ppb range (see Maps 2 and 3). The average Pt content of the dunite, where visible chromite was not noted in the sample, was calculated at 71 ppb Pt. Chromium values for these samples were typically in the 0.1 to 0.5% range. Palladium values were consistently in the 2 to 12 ppb range for fresh dunite samples. Gold analyses of the various lithologies ranged between 1 and 66 ppb, with one selected grab sample of quartz vein material running 190 ppb Au. Gold content of the dunite was between 1 and 12 ppb Au.

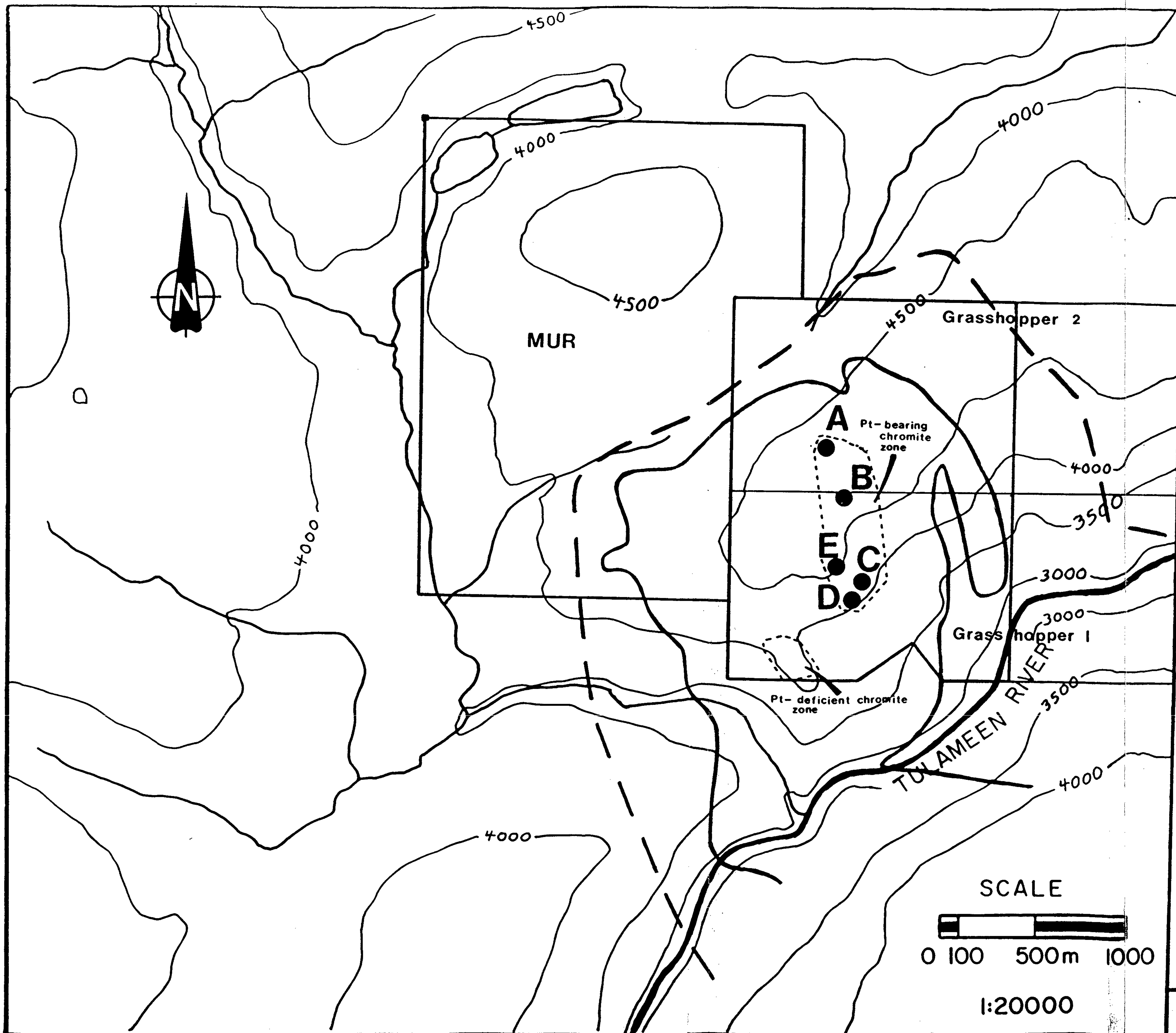
No statistics were calculated for the lithogeochemical data because of the generally biased sampling method employed while prospecting. It was evident from the orientation survey results, and from geochemical data published by St. Louis, that enhanced platinum values are usually associated with anomalous concentrations of chromium. Therefore, lithological sampling within the dunite was biased towards specific areas displaying visible occurrences of chromite rather than sampling the entire property at a uniform density according to grid station locations. As a result, most of the sampling is clustered around discrete zones displaying visible chromite, although some effort was also made to sample all areas of the property in a systematic manner. It is expected that following the next program of rock sampling, coverage will be sufficient to permit statistical treatment of areas with the greatest economic protential.

Rock samples taken where visible concentrations of chromite were noted appear to suggest that 2 types of erratically distributed chromite occurrences exist on the property. They are: (1) platinum-enhanced chromite segregations, and (2) platinum-deficient chromite segregations (see Figure 4). Platinum-bearing chromite concentrations, where at least 3 or more samples were collected in different locations of each zone, are recognized near the following grid stations:

Zone	Area	Cr (average)	Pt (average)	Grid Location Station
A	4 x 1	1.200%	1150 ppb	L6N + 10E
B	4 x 1	1.144%	2210 ppb	L5N + 10W
C	6 x 6	17.427%	2915 ppb	L1S + 60W
D	6 x 5	4.712%	2340 ppb	L1S + 100W
E	5 x 7	0.883%	1355 ppb	L0 + 140W

As indicated in the table above and on the property as a whole, anomalous concentrations of platinum are associated with highly variable amounts of chromium. Platinum-group minerals are most often concentrated in chrome-spinels (Razin, 1968).

Prospecting over a very steep area near the central portion of the Grasshopper claims has confirmed 3 zones containing platinum enhanced chromite segregations over significant widths (Zones C, D and E). A sketch map and assay plan is included for Cliff Showing #1 and Cliff Showing #2, zones D and C respectively (see Figures 5 and 6).



LEGEND

OUTLINE OF DUNITE CORE

A 4x1m of 1150ppb Pt

B 4x1m of 2210 ppb Pt

C 6x6m of 2915ppb Pt

D 6x5m of 2340ppb Pt

E 5x7m of 1350ppb Pt

OUTLINE OF ULTRAMAFIC

Figure 4

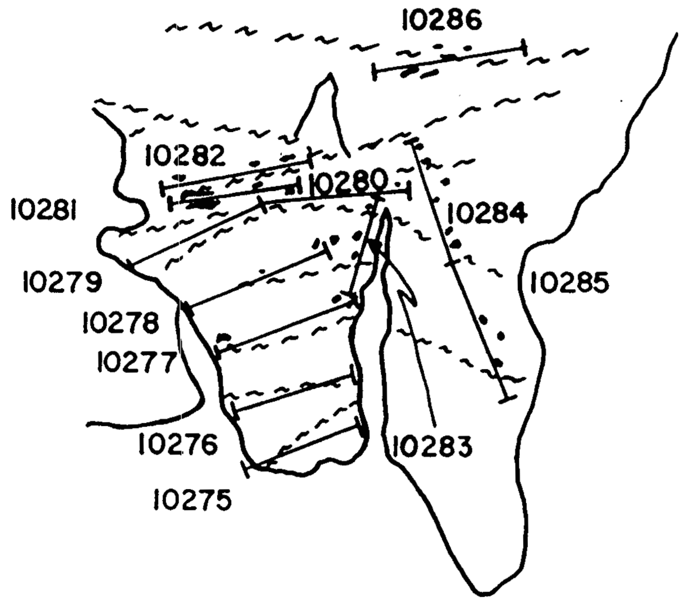
ASSAY RESULTS

CLIFF SHOWING #1

ASSAY RESULTS

Sample No.	Length(m)	Pt(ppb)	Cr(%)	Pd(ppb)
10275	1.6	1352	2.427	-
10276	1.7	119	0.204	-
10277	2.0	841	1.436	-
10278	2.0	553	0.929	-
10279	2.0	3206	2.732	-
10280	2.0	1139	3.560	-
10281	1.8	15000	5.55	31
10282	2.0	150	4.77	3
10283	2.0	2381	12.12	15
10284	1.7	396	8.76	4
10285	1.9	1273	6.87	4
10286	2.0	2066	6.92	4

6 x 5 metre area of 2340 ppb Pt
Note: calculated by length x assay weighted average



Plan view on a 45° sloping rock face

LEGEND

zone D

Fracture zone

Chromite-rich zones

10289 Rock chip sample and number

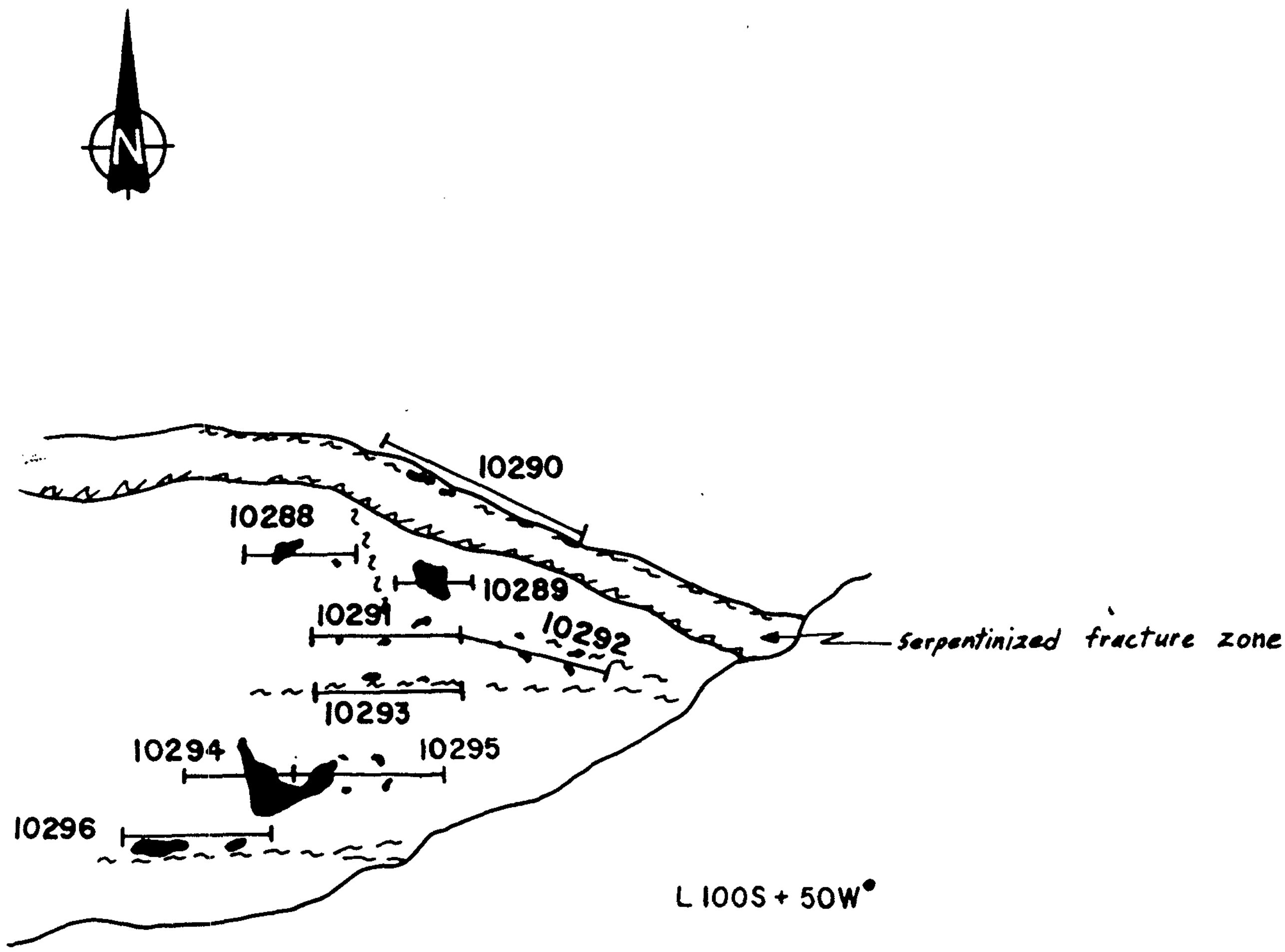
SCALE

0 1 2 3 metres

NEWMONT EXPLORATION OF CANADA LTD.

CLIFF SHOWING #1

SCALE 1:100	LOCATION 92H/10W	DATE Dec. 1986
SURVEY BY DB	DRAWN BY DB	NO. Fig. 5



Plan view on a 45° sloping rock face

ASSAY RESULTS

CLIFF SHOWING #2

ASSAY RESULTS

Sample No.	Length(m)	Pt	Cr(%)	Pd(ppb)
10288	1.5	944 ppb	8.67	4
10289	1.0	.026 oz/ton	24.97	-
10290	3.0	860 ppb	11.27	5
10291	2.0	980 ppb	19.94	5
10292	2.0	1973 ppb	19.84	6
10293	2.0	2307	17.56	7
x10294	1.5	.141 oz/ton	22.46	-
x10295	2.0	.327 oz/ton	22.31	-
10296	2.0	.064 oz/ton	15.74	-

x combined weighted average of 3.5 m of 0.25 oz/ton Pt

6 x 6 metre area of 2915 ppb Pt
Note: calculated by length x assay weighted average

LEGEND

zone C

- ~~~ Fracture zone
- Chromite-rich zones
- 10289 Rock chip sample and number

SCALE

0 1 2 3 metres

NEWMONT EXPLORATION OF CANADA LTD.		
CLIFF SHOWING #2		
SCALE 1:100	LOCATION 92H/10W	DATE Dec. 1986
SURVEY BY DB	DRAWN BY DB	NO. Fig. 6

The best sample in Zone D ran 15,000 ppb Pt (0.44 oz/ton), 5.55% Cr, and 31 ppb Pd over 1.8m. Other samples were in the 119 to 3206 ppb Pt range. Chromite occurs as spotty disseminated grains and fractured lensoidal pods up to 0.50m long.

An assay of 0.25 oz/ton Pt over 3.5m was obtained in Zone C, which includes 2.0m of 0.327 oz/ton Pt. These samples were taken over an irregularly-shaped massive chromite pod measuring 1.0 by 0.5m, the largest seen on the property to date. Several other podiform chromite segregations were sampled, returning results in the 860 to 2,307 ppb range. Chromite assays were very high in this zone, ranging from 8.67% to 24.97% Cr. A fracture-controlled serpentinite zone with sporadic, schlieren-type chromite ran 860 ppb Pt, 11.27% Cr, and 5 ppb Pd.

In Zone E, several spotty outcrops of dunite consistently yield anomalous values in the 1166 to 2110 ppb Pt range and 0.328 to 1.777% Cr range. A selected grab sample of a 0.3 x 0.3m chromite-bearing dunite boulder ran 11,100 ppb Pt (0.33 oz/ton) and 1.288% Cr. Chromite seems to occur as spotty to semi-massive disseminated grains over a fairly large area.

Overall, erratically distributed podiform and coarsely disseminated chromite zones have been observed roughly over a 250m by 150m area in which Zones C, D and E are within. Several other spotty but significant assays are noted elsewhere in this area with samples running between 194 and 2110 ppb Pt. The highest platinum value obtained on the property was a 1.0m chip sample taken over an isolated, irregularly-shaped, chromite segregation which assayed 16,000 ppb Pt (0.47 oz/ton), 80 ppb Pd, and 20% Cr. This sample occurs in the vicinity of Zones C and D near line 70 S at 120 W. No structual or geological controls are evident in this platinum enriched area, but more detailed work is required to support this.

The platinum content of Zones A and B, both located near the summit of Grasshopper Mountain, ranged from 598 to 4329 ppb Pt and 473 to 3975 ppb Pt, respectively. Chromium values were usually in the 1% range. The majority of the chromite occurs as coarsely disseminated grains and wispy lenses. Two chip samples taken of another isolated zone near Grasshopper Mountain (grid location L4N + 200W) ran 2160 and 1387 ppb Pt and 7.1 and 3.9% Cr respectively.

An interesting 1 - 2 cm wide chromite veinlet occurs near station L350 N + 125 W. It follows a narrow fracture zone over a 3m strike length and appears to cut several serpentinite-magnetite veinlets. One specimen exhibited a tiny veinlet of bleached dunite? cutting the chromite veinlet. A 3m chip sample along strike assayed 0.120 oz/ton Pt and 8.47% Cr. A sample taken perpendicular to the veinlet ran 962 ppb Pt over 1.0m.

Based on the crudely aligned locations of Zones A, B, C, D and E and several other more isolated anomalous platinum values obtained in the general vicinity, a broad, northwest trending area roughly measuring 300 by 800m can be cited as containing platinum-bearing chromite occurrences. In general, rock sampling in zones displaying visible chromite to the northeast and southwest of the outlined anomalous area are consistently quite low in platinum. This is best exemplified in the vicinity of station L4S + 600W where 12 samples ranged from 0.59% to 20.0% Cr and only 5 to 834 ppb Pt respectively. Most of the samples within this 250 by 125m area were taken of podiform to semi-massive chromite segregations and the majority of the rock samples ran 50 ppb Pt or less.

On the north side of the property along the road cut, platinum values ranged from 45 to 743 ppb within the highly serpentinized dunite. A few grains of visible chromite were noted in one locality only.

A special test area was selected to check Pt-Cr content where the dunite was highly serpentinized but had no obvious chromite concentrations. Just west of the peak of Grasshopper Mountain on Line 4 + 50N, 85m of outcrop immediately west of the base line were continuously chip sampled in 5m lengths The following analyses, averaging 86 ppb Pt and 0.29% Cr, confirmed that the serpentinized dunite contained only background levels of Pt.:

ppb Pt	% Cr	ppb Pt	% Cr
84	.30	95	.23
58	.30	115	.28
116	.27	86	.21
79	.41	77	.26
90	.32	77	.25
82	.39	95	.35
70	.29	103	.26
135	.21	80	.26
		12	.28

Platinum, palladium, and gold values in the surrounding ultramafic and gabbroic units were consistently very low. A chip sample of hornblende clinopyroxenite, containing up to 5% fine-grained pyrite, ran 42 ppb Pt, 100 ppb Pd and 13 ppb Au. This was the highest palladium value obtained on the property. The highest gold value was from a trenched quartz vein near L7 N + 1100 E which ran 190 ppb. A sample of the altered Nicola rocks ran 6 ppb Pt, 2 ppb Pd and 4 ppb Au. Pyroxene-enriched dunite layers only ran 87 ppb Pt and 0.22% Cr.

A high of 122 ppm Cr and 15 ppb Pt was obtained from one silt sample on the eastern margin of the property. Other elements were neglible.

GEOPHYSICS

The purpose of the magnetic survey was to investigate the possiblity of any distinct magnetic variations within the dunite mass and to see if any correlations could be made with chromite or platinum-bearing chromite occurrences. The survey was conducted over 25 km of grid line with a Geometrics G-816 proton precession magnetometer instrument.

Base station readings were initially established along Baseline 0, and then magnetic readings in gammas were taken at 12.5m intervals along grid lines 100m apart (see Maps 4 and 5). All readings were manually corrected for diurnal variation each day according to the established base station readings. The magnetic values represent total field intensity.

With the aid of Newmont's IBM-AT microcomputer system and Calcomp plotter, two geophysical maps were produced at 1:2500 scale. One map shows the grid locations of the raw field data and the other displays a contoured plot of the corresponding data. The computer plotted all the grid lines straight rather than askew as most of the lines actually are in the field. On both maps, grid south and grid west coordinates are plotted as N- and E- respectively.

A high magnetic background is recognized for the Tulameen Complex. Readings are typically in the 56,000 to 61,000 gamma range within the dunite mass and in the 55,000 to 62,000 gamma range over the marginal lithologies of the complex towards the eastern portion of the property. Prominent magnetic highs are noted along the margins of the dunite mass near stations L3S + 500E and L7N + 500E. The pyroxenite areas peripheral to the dunite are known to contain the highest magnetite concentrations.

A distinct east-west magnetic low through station BL3S + 00 suggests a break in the dunite. This break seems to crudely separate the platinum deficient chromite area near L4S + 600W (marked by a magnetic high) and the platinum-bearing chromite zones near L1S + 100W near the northern edge of the outlined magnetic low. It should be noted, however, that this broad magnetic low roughly follows the bench-like topography where talus slopes and generally thin but extensive overburden covers most of the area. The magnetic readings may have been affected by the lack of dunite outcrop exposures in the area, but a structural break within the dunite mass cannot be ruled out. Overall, there apprears to be no clear magnetic signatures for the known chromite occurrences and structures of the dunite core.

CONCLUSIONS

The Tulameen complex is a crudely zoned Alaskan-type ultramafic intrusion with platinum-group elements spatially and genetically related to the dunite core. Economic concentrations of platinum-group minerals in chromite segregations are known to occur in similar zoned ultramafic bodies, particularly in the Ural Mountains of the U.S.S.R. These segregational chromespinel occurrences are thought to be mainly derivatives of residual or late magmatic ore melts (Razin, 1968).

The following conclusions are suggested by the results of the lithogeochemical survey carried out on the property:

1. Significantly higher concentrations of platinum, up to 16,000 ppb Pt (0.47 oz/ton) over one metre, occur locally in segregated lenses, pods, veinlets, and disseminations of chromite. Most of these occurrences are roughly aligned within a 800 x 300m area near the central portion of the dunite core.

2. Within this anomalous 800 by 300m broad area, a 250 by 150m zone contains several sporadic chromite occurrences which contain accumulations of platinum averaging 1350 to 2915 ppb (0.04 to 0.09 oz/ton) over 6 x 6m areas.

3. A platinum-deficient, chromite-rich zone occurs in the southwestern corner of the property based on several samples assaying up to 20.0% Cr and less than 50 ppb Pt.

4. Gold, platinum, and palladium values are very low in the pyroxenite and gabbro units peripheral to the dunite core.

The irregularly shaped pods and lenses of chromite, up to a metre long, show no preferred attitudes and no systematic distribution in the dunite mass. Preliminary systematic lithogeochemical sampling on the property has defined a sizable area with anomalous platinum concentrations. This target area warrants additional follow-up work.

RECOMMENDATIONS

The following exploration work is recommended in chronological order for the western 12 claim units of the Grasshopper 1 and 2 claims:

1. Beneficiation tests should be performed on composites of crushed sample reject material in order to determine whether simple magnetic and gravity separations may be used to concentrate platinim-group metals.

2. A petrographic study utilizing polished and thin sections should be done to identify the platinum minerals and their occurrence in the various chromite-rich zones on the property. The platinum-deficient chromite should also be examined.

3. Some analyses should be done for palladium, iridium, osmium, and rhodium elements, particularly in chromite-rich specimens. Assays should be done for highly anomalous, geochemically analyzed, rock chip samples. Check analyses on pulps from a suite of samples over the full grade range should be carried out at a different lab.

4. Field work should include more detailed mapping and rock chip sampling and determining the dimensions, structural controls, grade continuity, visible mineralogy and alteration of the platinum-bearing chromite occurrences generally within the anomalous 300 by 800m area of the dunite.

5. Additional systematic and more detailed lithogeochemical sampling and prospecting is recommended over the entire property to find new target areas and to re-examine known isolated platinum-bearing zones.

6. Some blasting and/or mechanized trenching is warranted on platinum showings to establish drill targets to bulk sample and to more accurately determine the dimensions, grade and continuity, of the best mineralization.

7. Dependent upon favorable results of the preceding work, a provision for diamond drilling is recommended.

Vancouver, B.C.
January 8, 1987

Dennis M. Bohme

Terrence N. Macauley, P.Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
T. N. MACAULEY

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STATEMENT OF COSTS

1. PERSONNEL

Project Geologist	June 24 - July 14 July 21 - July 23 Sep. 10 - Oct. 5 Oct. 15 - Nov. 1 Nov. 3 - Jan. 8 = 103 days @ $121.38	$12,502.14
Project Geologist	July 24 - Aug. 1 Sep .24 - Oct. 3 Dec. 15 - Dec. 17 = 22 days @ $167.79	3,691.38
Senior Assistant	July 2 - Aug. 12 Sep. 30 - Oct. 8 = 51 days @ $94.69	4,829.19
Senior Assistant	June 24 - July 1 Oct. 20 - Nov. 1 = 21 days @ $94.69	1,988.49
Field Assistant	July 7 - Aug. 4 = 28 days @ $64.79	1,814.12
Field Assistant	June 25 - July 27 = 32 days @ $64.79	2,073.28
Field Assistant	July 2 - Aug. 11 = 40 days @ $82.24	3,289.60
Field Assistant	June 24 - July 1 = 8 days @ $82.24	657.92
Field Assistant	June 24 - July 1 = 8 days @ $74.76	598.08
	SUBTOTAL	**$31,444.20**

2. TRANSPORTATION

Van Rental	8 vehicle days @ $60/day	480.00
4 x 4 pick-up	40 vehicle days @ $53.38/day	2,135.20
4 x 4 surburban	49 vehicle days @ $88.20/day	4,321.80
	SUBTOTAL	**$ 6,937.00**

3. MEALS AND GROCERIES

Groceries		$ 3,293.60
Meals		362.04
	SUBTOTAL	**$ 3,655.64**

4. ACCOMMODATION

Cabin Rental	**$ 1,490.00**

5. FUEL

Gasoline for vehicles	**$ 847.35**

6. FIELD COSTS

Communications		$ 290.00
Lumber, hardware, etc.		324.43
	SUBTOTAL	**$ 614.43**

7. ASSAY AND GEOCHEMICAL CHARGES

250 rock samples		$ 4,575.00
4 silt samples		27.00
	SUBTOTAL	**$ 4,602.00**

8. INSTRUMENT COSTS

Proton Magnetometer	32 days @ $19.20/day	$	614.40
Alpha Transit	10 days @ $1.25/day		12.50
	SUBTOTAL	**$**	**626.90**

9. FIELD SUPPLIES

Flagging, bags, spray-paint, etc.	**$**	**300.00**

10. REPORT PREPARATION

Reproductions, map blow-up, airphotos	$	450.00
Computer and plotting time		500.00
Typing, copy, etc.		250.00
SUBTOTAL	**$**	**1,200.00**

TOTAL	$51,717.52

STATEMENT OF QUALIFICATIONS

I, Dennis Martin Bohme, of the city of Vancouver, in the Province of British Columbia, do hereby certify that:

1. I am a graduate of the British Columbia Institute of Technology with a Diploma in Mining Technology, 1980.

2. I am a graduate of the Montana College of Mineral Science and Technology, in Butte, Montana, with the degree of Bachelor of Science in Geological Engineering, 1985.

3. I have been employed in mining exploration as a technician and a geological engineer with Newmont Exploration of Canada Limited since 1980, except for 18 months when I was attending university.

4. I personally carried out and supervised much of the work described in this report.

Dennis M. Bohme

I, T. N. Macauley, do hereby certify that the work described in this report was carried out under my direction.

PROFESSIONAL
PROVINCE OF
T. N. MACAULEY
BRITISH COLUMBIA
ENGINEER

Terrence N. Macauley, P. Eng.

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

WHOLE ROCK ICP ANALYSIS

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 50 MLS 5% HNO3.
- SAMPLE TYPE: ROCK CHIPS   Au** Pt** Pd** by FA+AA.
P3-SILTS

DATE RECEIVED: AUG 9 1986 DATE REPORT MAILED: Aug 21/86   ASSAYER.. D.Toye. .DEAN TOYE. CERTIFIED B.C. ASSAYER.

NEWMONT EXPLORATION PROJECT - 030-307 FILE # 86-1949   PAGE 1

	SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Ni PPM	Loi %	Au** PPB	Pt** PPB	Sum
s	9726	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	-
d	9727	36.31	1.44	11.41	36.75	4.11	.10	.05	.15	.08	.21	.31	71	580	9.0	-	9	100.01
d	9728	33.16	.27	8.82	42.40	.62	.05	.05	.02	.08	.14	.30	12	679	14.1	-	8	100.10
d	9729	32.62	.19	8.45	41.12	.21	.05	.05	.01	.07	.14	.49	9	1194	16.5	-	3	100.05
d	9730	34.02	.27	9.78	42.08	.20	.05	.05	.02	.07	.17	.54	5	792	12.7	-	10	100.05
d	9731	34.47	.17	10.01	44.74	.10	.05	.05	.01	.07	.16	.61	8	891	9.5	-	57	100.05
d	9732	33.08	.18	9.93	43.22	.16	.05	.05	.02	.06	.16	1.03	5	739	12.0	-	1166	100.03
d	9733	33.10	.18	7.27	44.15	.13	.05	.05	.01	.07	.11	.68	5	1105	14.1	-	53	100.04
d	9734	33.28	.18	8.78	45.00	.19	.05	.05	.01	.07	.13	.76	5	1054	11.4	-	7	100.03
d	9735	33.81	.09	8.56	45.29	.43	.05	.05	.01	.07	.13	.42	14	1104	11.0	-	5	100.05
d	9736	35.75	.18	7.87	46.91	.55	.05	.05	.01	.06	.12	.51	5	1141	7.8	-	14	100.01
d	9737	35.12	.09	7.80	47.55	.27	.05	.05	.01	.07	.13	.40	5	1102	8.4	-	2	100.08
d	9738	34.33	.15	7.98	45.61	.18	.05	.05	.01	.06	.12	.60	5	1140	10.9	-	3	100.19
d	9739	32.20	.17	7.98	43.87	.20	.05	.05	.01	.07	.12	.62	7	1076	14.6	-	19	100.08
d	9740	33.95	.09	10.44	41.11	.05	.05	.10	.01	.07	.15	.47	6	1024	13.3	-	125	99.92
	STD SO-4	67.65	10.38	3.45	.99	1.60	1.35	2.15	.55	.20	.07	.01	785	18	11.3	-	-	99.85

d dunite

s syenogabbro

NEWMONT EXPLORATION PROJECT - 030-307 FILE # 86-1949

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Ni PPM	Loi %	Pt** PPB	Pd** PPB	Sum
p 1337	46.17	10.11	11.96	6.97	13.29	1.95	2.05	.85	.38	.18	.04	854	96	5.4	9	14	99.53
p 1338	42.80	8.68	16.88	10.34	16.44	1.20	.80	.95	.67	.24	.06	401	83	.7	12	32	99.85
d 1339	39.10	.27	11.32	37.83	.17	.05	.05	.02	.06	.15	.51	11	711	10.6	100	12	100.22
d 1340	36.39	.18	10.74	37.91	.18	.05	.05	.02	.07	.15	.91	16	831	13.3	325	7	100.06
p 1341	53.32	1.87	8.24	15.43	17.90	.20	.10	.21	.08	.14	.07	33	291	1.8	33	90	99.40
p 9716	50.97	5.07	9.77	13.57	17.76	.65	.25	.44	.05	.14	.09	72	104	.8	56	17	99.59
p 9717	53.76	3.73	8.15	15.02	16.60	.35	.05	.32	.05	.14	.15	42	123	1.4	37	14	99.74
s 9718	63.89	17.10	3.14	2.08	4.05	5.20	2.75	.29	.14	.05	.01	2701	21	.7	2	8	99.93
p 9719	54.77	15.80	6.79	4.03	7.13	3.20	2.50	.79	.37	.06	.02	885	81	4.0	2	10	99.64
p 9720	52.49	16.13	8.15	6.26	4.43	4.40	1.95	1.36	.41	.09	.02	429	54	4.0	2	6	99.78
p 9721	42.04	3.28	17.15	11.38	18.02	.20	.30	.67	.05	.13	.08	34	105	6.0	6	2	99.32
p 9722	49.91	11.34	10.42	7.54	8.67	2.05	3.05	.84	.19	.12	.04	498	79	5.2	43	6	99.48
d 9723	35.37	.18	10.28	40.52	.05	.05	.05	.02	.07	.16	.18	18	726	13.0	79	2	100.03
d 9724	34.12	.10	9.48	41.99	.01	.05	.05	.01	.06	.15	.27	5	864	13.6	129	3	100.00
s 9725	49.44	14.71	10.77	5.33	9.00	2.70	4.50	.67	.61	.17	.01	1557	30	1.6	3	17	99.81
STD SO-4	67.51	10.39	3.46	.99	1.68	1.40	2.15	.54	.21	.07	.01	787	22	11.4	-	-	99.96

d dunite

p pyroxenite

s syenogabbro

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GEOCHEMICAL ICP ANALYSIS

.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.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SILTS -80 MESH

DATE RECEIVED: AUG 9 1986 DATE REPORT MAILED: Aug 21/86   ASSAYER. D.Toye...DEAN TOYE. CERTIFIED B.C. ASSAYER.

NEWMONT EXPLORATION PROJECT - 030-307 FILE # 86-1949   PAGE 3

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	Pt** PPB
101	1	103	8	60	.2	76	26	955	6.41	17	5	ND	2	69	1	2	2	199	3.35	.072	8	122	2.07	163	.08	10	1.59	.09	.09	1	15
102	1	100	9	73	.3	72	24	869	5.44	38	5	ND	2	64	1	5	2	172	1.67	.141	8	115	1.73	125	.08	8	1.55	.09	.09	1	9
103	1	64	2	28	.3	52	9	302	2.24	3	5	ND	2	186	1	2	4	65	23.17	.057	3	44	.88	139	.03	8	.59	.11	.04	1	4
104	1	90	3	60	.2	59	21	706	5.21	8	5	ND	2	99	1	2	2	159	1.29	.295	5	121	2.14	100	.12	7	1.29	.06	.37	1	9

APPENDIX II

Rock Chip Sample Descriptions and Results

Abbreviations

olv	olivine	chr	chromite
serp	serpentinized	vnlt	veinlet
pyrox	pyroxenite	mag	magnetite
volc	volcanic	dissm	disseminated
hb	hornblende	py	pyrite
qtz	quartz	bio	biotite
carb	carbonate	f.gr.	fine-grained
calc	calcite	med.gr.	medium grained
		alt'd	altered

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

* Denotes orientation survey sample

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
4143	L550N + 200E	grey/black dunite with f.gr. chr. and mag.	0.2 grab	<50	—	—	750
4144	L5N + 0	black dunite with podiform chr.	0.2 grab	1000	—	—	7300
4145	L450N+110W	greenish serp. dunite (old trench)	1.0 m	<50	—	—	750
4146	L470N + 125W	brownish dunite with podiform chr.	0.5 m	125	—	—	2100
4147	L430N+500W	brownish dunite with chr. pods	1.0m	<50	—	—	1000
4148	L410N + 500W	brownish dunite with chr. pods	3x2m	<50	—	—	980
7642	L510S +510W	segr. chr. pods in brownish dunite	0.2 grab	100	<5	—	>20000
7643	L4S + 580W	chr. pods in dunite	0.2 grab	<50	<5	—	5900
7644	L4S + 580W	chr. pods + stringers in trench	0.2 grab	<50	<5	—	>20000
1337	along road cut	minor py, mag in greenish pyrox	1X2m	9	14	—	274
1338	along road cut	dark green/black hornblende pyrox	1X2m	12	32	—	411
1339	along road cut	friable dunite with fine magnetite	5m	100	12	—	3491
1340	along road cut	minor chr. in light grey dunite	5m	325	7	—	6229
1341	along road cut	sheared olv pyrox with py, malachite	float?	33	90	—	479
* 9716	L0 + 890E	black hornblende pyrox; magnetite	1.0m	56	17	—	616
* 9717	L0 + 865E	hornblende pyrox; minor mag., calc.	1.0m	37	14	—	1027
* 9718	L0 + 860E	syeno-gabbro dyke; minor calc, mag., hb	1.0m	2	8	—	68
* 9719	L0 + 840E	grey olivine pyrox with mag.	1.5m	2	10	—	137
* 9720	L0 + 832E	schistose olv. pyrox with calc., mag.	1.5m	2	6	—	137
* 9721	L0 + 825E	schistose olv. pyrox with calc., mag.	2.0m	6	2	—	548
* 9722	L0 + 745E	olivene pyrox. with calc. vnlets, mag.	1X4m	43	6	—	274
* 9723	L0 +650E	grey/black dunite with mag. thr'out	1X5m	79	2	—	1232
* 9724	L0 +625E	grey dunite with mag. thr'out	1X4m	129	3	—	1848
* 9725	L0 +500E	dark green syeno gabbro; minor mag.	1X3m	3	17	—	68
* 9726	L0 + 545E	qtz- limonite vein with malachite	1.0m	2	—	5	—
* 9727	L0 + 301E	dunite with fine mag.	2x3m	9	—	—	2122
* 9728	L0 + 250E	dunite with fine mag.	2x5m	8	—	—	2053
* 9729	L0 + 35E	dunite with mag. stringers	1x1	3	—	—	3354
* 9730	BL0+00	dunite with fine mag.	2x3	10	—	—	3696
* 9731	L0 + 80W	grey/black dunite	2x3	57	—	—	4175
* 9732	L0 + 140W	dunite with fine chr. pods + mag.	5x5	1166	—	—	7050

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt(PPB)	Pd(PPB)	Au(PPB)	Cr(PPM)
* 9733	L0 +200W	dunite with minor chr. pods	5x5m	53	–	–	4654
* 9734	L0+385W	dunite with chr. pods + mag.	3x2m	7	–	–	5202
* 9735	L0+445W	dunite with fine chr. + mag.	1X5m	5	–	–	2875
* 9736	L0 +480W	dunite with fine chr. + mag.	3x4m	14	–	–	3491
* 9737	L0 + 560W	disseminated chr. specs in dunite	2x3m	2	–	–	2738
* 9738	L0 +570W	disseminated chr. specs in dunite	2x2m	3	–	–	4107
* 9739	L240N+600W	rubble pile of trench; chr. in dunite	grab	19	–	–	4244
* 9740	L250N +640W	old trench; bleached dunite with mag.	1x5m	125	–	–	3217
6789	L5N +265W	dunite with fine mag.	0.5m	2	–	–	6100
6790	L575N+435W	5 cm wide chr. vnlet in dunite	0.5m	1328	–	–	3200
6792	L150N+350W	dunite with pyrox. clusters	0.5m	3	–	–	3400
6793	L150N+350W	grey dunite	1.0m	7	–	–	3700
6794	L450N+125W	old trench in greenish serp. dunite	1.0m	2	–	–	3400
6795	L450N +125W	old trench; banded serp. dunite	2.0m	70	–	–	3200
6796	L450N+125W	old trench; greenish serp. dunite	1.0m	6	–	–	2800
6797	L440N+120W	old trench; " " "	2.5m	44	–	–	3600
6798	L440N +120W	old trench; greenish serp. dunite	1.0m	44	–	–	2600
6799	L350N+125W	across 1cm wide chr. vnlet in dunite	1.0m	962	–	–	17300
6800	L350N + 125W	mag. vnlts. in dunite	2.0m	21	–	–	2900
15203	L450N+ 5W	dunite	5.0m	84	–	–	3000
15204	L450N +10W	"	5.0m	58	–	–	3000
15205	" + 15W	"	5.0m	116	–	–	2700
15206	" +20W	"	5.0m	79	–	–	4100
15207	" +25W	"	5.0m	90	–	–	3200
15208	" +30W	"	5.0m	82	–	–	3900
15209	" +35W	"	5.0m	70	–	–	2900
15210	" +40W	"	5.0m	135	–	–	2100
15211	" +45W	"	5.0m	95	–	–	2300
15212	" + 50W	"	5.0m	115	–	–	2800
15213	" + 55W	"	5.0m	86	–	–	2100
15214	L450N+ 60W	dunite	5.0m	77	–	–	2600

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
15215	L450N + 65W	dunite	5.0m	77	-	-	2500
15216	" + 70W	"	5.0m	95	-	-	3500
15217	" + 75W	"	5.0m	103	-	-	2600
15218	" + 80W	"	5.0m	80	-	-	2600
15219	L450N + 85W	dunite	5.0m	12	-	-	2800
15220	L350N + 125W	mag. veinlets in dunite	2.0m	31	-	-	2400
15221	L350N + 125W	" " " "	1.5m	2	-	-	2200
15222	L350N + 125W	" " " "	2.5m	2	-	-	4600
15223	L350N + 125W	mag. veinlets in dunite	3.0m	55	-	-	2800
15224	L400N + 115W	dunite with serp. vnlts	1.5m	87	-	-	2500
15225	" "	" " " "	1.5m	58	-	-	2900
15226	" "	" " " "	2.0m	59	-	-	2800
15227	" "	" " " "	4.5m	68	-	-	2400
15228	L400N + 115W	dunite with serp. vnlts	3.0m	195	-	-	2900
15229	L350N + 125W	serpentinized dunite	1.0m	2	-	-	4625
15230	L350N + 125W	along strike of 1 cm wide chr. vnlet	3.0m	0.120 oz/ton	-	-	8.47%
15231	L575N + 375W	disseminated chr. in dunite	2 x 4m	2	-	-	10622
15232	L575N + 435W	pyrox. clusters in dunite	2.0m	10	-	-	2358
15236	L485S + 580W	chr.-rich zone in dunite	1.0 x 0.2	204	-	-	30221
15239	L800N + 350W	chr. in dunite float (talus)	0.3m	56	-	-	12259
15240	L350N + 50E	dunite	3 x 2m	131	-	-	3668
15241	L330N + 135E	serp vnlts. in dunite	1.5m	178	-	-	2889
15242	L275N + 355E	strong serp. vnlts in dunite	2.2m	15	-	-	2717
15246	L0 + 120S	strong serp. vnlts in dunite	1.0m	4	2	-	4135
15247	L100S + 100W	serp. vnlts in dunite	0.3m	161	-	-	2105
15248	L50S + 300W	podiform chr. in dunite	1 x 1m	293	-	-	21,562
15249	L50S + 300W	chr. + serp in dunite	grab	1093	-	-	77,708
15250	L5S + 620W	chr. vnlet, podiform chr. in dunite	1 x 1m	5	-	-	8663
10201	L570N + 805E	feldspar porphyry dyke, calcareous	1.0m	2	-	3	54
10202	L400N + 975E	med. gr. hb pyroxenite	0.5m	10	-	-	1958
10203	L4N + 775E	fine py in f.gr. greenish meta-volc.	grab	2	-	3	1

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
10204	L410N+505E	dunite with diss'm chr. pods	0.5m	342	–	–	19315
10205	L250N+200E	dunite with 1x10cm chr. pod (float?)	0.5m	1398	–	–	35517
10206	L200N+800E	mag. rich hornblende pyrox.	0.5m	11	–	1	694
10207	L200N+898E	calcareous qtz vnlt in sheared volc (float?)	1.0m	8	–	2	3437
10208	L150S+75W	disseminated chr. in dunite	1.0m	92	–	–	2823
10209	L410S+40E	serp vnlts thr'out dunite	3x5m	229	–	–	5137
10210	L410S+40E	podiform chr. + fine mag. in dunite	2x3	135	4	–	3861
10211	L410S+40E	streaks + pods of chr. in dunite	0.1x0.3	648	4	4	15771
10212	L410S+40E	siliceous pyritic volc Nicola? (float)	0.2x0.3	2	2	7	1
10213	L4S+56E	fine pods of chr. in dunite	1x3m	211	2	–	4056
10214	L360S+150E	calcite, qtz altered volc. Nicola? (float)	0.5m	2	2	1	51
10215	L385S+190E	mag. rich dunite; minor chr.	1x2m	12	2	–	3869
10216	L360S+150E	pegmatitic, mag. rich hb pyroxenite	0.1x0.2	5	2	1	1247
10217	L5S+310E	old trench; qtz vein and syenogabbro	2.0m	2	5	11	22
10218	L415S+285E	fine py in hornfelsed olv. pyrox; calc	1.0m	3	2	4	21
10219	L390S+500E	qtz-calcite vnlts in syeno-gabbro	1x2m	2	–	10	255
10220	L365S+550E	light grey conglomerate - dunite	1x5m	13	–	2	3626
10221	L360S+585E	chr. vnlet in dunite float boulder	0.5m	147	2	–	5315
10222	L310S+560E	tiny serp, mag vnlts in grey dunite	2x3m	195	–	–	3128
10223	L365S+725E	schistose olv pyrox and syenogabbro	1.5m	6	4	1	166
10224	L360S+702E	serp vnlts in dunite	2x3m	165	2	–	1100
10225	L308S+665E	serp dunite zone; fine mag. thr'out	2x2m	91	2	–	2430
10226	L3S+720E	hematitic dunite, fine chr	1x2m	79	–	–	2057
10227	L3S+720E	serp. fracture with chr. in dunite; mag.	0.3x0.3	140	–	–	3863
10228	L280S+750E	disseminated chr. in dunite; mag.	1.0m	179	–	–	5654
10229	L280S+740E	podiform clots of chr in dunite	1.0m	25	–	–	4963
10230	L120S+500E	feldspathic syeno-gabbro	0.2m	2	11	10	177
10231	L215S+300E	minor serp in dunite	3x2m	23	–	–	3350
10232	L760N+125E	serp dunite	1.5m	215	–	–	2317
10233	L760N+130E	rusty serp dunite; minor chr.	0.3m	43	–	–	3488
10234	L8N+220E	mag. rich dunite	5x5m	54	–	–	2475

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
10235	L8N +500E	syenogabbro ; mag. rich	2.0	21	17	12	102
10236	L790N+615E	schistose Nicola volc; fine py, calcite	2x2m	6	2	4	111
10237	L710N+970E	hb clinopyroxenite with py cubes	2x3m	33	33	–	86
10238	L715N+675E	qtz-carbonate altered volcanic; minor py	1x1m	2	–	4	90
10239	L715N+50E	podiform chr. in dunite	1.0m	1275	12	–	6904
10240	L10N+600E	friable hb pyroxenite; b/o flakes (float)	0.5m	33	85	–	1775
10241	L10N+825E	qtz-carb alt'n + malachite staining	5x2m	10	2	10	960
10242	L10N+820E	rusty, pyritic, qtz-carb alt'd zone	5x5m	32	14	66	820
10243	L960N+900E	mag.-rich hb pyrox; minor py	3x3m	6	11	4	397
10244	L980N+890E	fine py + calcite in fine-gr volc (Nicola?)	2x2m	2	2	3	21
10245	L10N+983E	brecciated qtz-carb (float?)	0.2m	32	12	3	780
10246	L10N+798E	mag. rich hb pyrox	2x2	2	7	1	424
10247	L980N+700E	5-8% pyrite in hb pyrox	4x4	42	100	13	519
10248	L930N+360E	dunite; fine mag, serp.	1x3m	38	–	–	1975
10249	L10N+625E	qtz-carb alt'd hb pyrox.	5m	4	2	1	612
10250	L10N+650E	gneissic gabbro; feldspathic	5m	2	4	1	95
10251	along road cut	mag.-rich dunite	5x5m	45	–	–	1676
10252	along road cut	schistose, friable olv. clinopyroxenite	6x1m	8	2	–	384
10253	" " "	schistose, friably olv. clinopyroxenite	6x1m	3	2	–	224
10254	" " "	highly serp. dunite	6x1m	48	4	–	2032
10255	" " "	highly serp., bleached dunite	5x1m	243	–	–	1823
10256	" " "	sheared, highly serp dunite	6x1m	109	–	–	1964
10257	" " "	bleached, serp dunite	7x1m	69	2	–	1918
10258	" " "	friable, sheared gabbro	7x1m	37	8	4	618
10259	" " "	mag. rich, friable dunite	2x2m	55	–	–	2165
10260	" " "	mag. rich, serp dunite	2x2m	327	–	–	2640
10261	along road cut	mag. rich dunite, serp, minor chr.	1x5m	743	6	–	4273
10262	L950N+175E	fresh grey/black dunite	2x3m	70	–	–	2330
10263	along road cut	serpentinized, bleached hb pyrox	3x3m	13	7	–	1531
10264	L165S+35E	podiform chr. in dunite (talus?)	2x2m	2	2	–	6856
10265	L165S+30E	diss'm + chr vnlet in dunite (float?)	0.3m	414	3	–	16737

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
10266	L165S+40E	podiform chr in serp dunite	2x2m	24	–	–	14065
10267	L95S+55E	minor diss'm chr. in black dunite	2x2m	81	–	–	3314
10268	L1N+65E	x-cutting serp. vnlts in dunite	5x1m	96	–	–	3185
10269	L1N+198E	chr. stringers in dunite	1x1m	97	–	–	2972
10270	L112N+200E	mag. stringers in dunite	1x3m	87	–	–	2766
10271	L145N+390E	tiny serp., mag. vnlts in dunite	5x5m	33	–	–	3496
10272	L145N+400E	talus boulders, diss'm chr in dunite	0.4x0.2	115	–	–	2441
10273	L105N+680E	fresh dunite	5x5m	56	–	–	1966
10274	L1N+175E	a few chr. stringers in dunite	2x5m	34	2	–	4537
10275	cliff showing #1	podiform chr clots in dunite	1.6m	1352	–	–	24269
10276	cliff showing #1	fractured dunite	1.7m	119	–	–	2040
10277	" " "	podiform chr. diss'm in dunite	2.0m	841	–	–	14361
10278	" " "	" " " " "	2.0m	553	–	–	9285
10279	" " "	" " " " "	2.0m	3206	–	–	27316
10280	" " "	" " " " "	2.0m	1139	7	–	35596
10281	" " "	high grade chr. segr. in dunite	1.8m	15000	31	–	5.55%
10282	" " "	" " " " " "	2.0m	150	3	–	4.77%
10283	" " "	" " " " " "	2.0m	2381	15	–	12.12%
10284	" " "	" " " " " "	1.7m	396	4	–	8.76%
10285	" " "	" " " " " "	1.9m	1273	4	–	6.87%
10286	cliff showing #1	minor chr. in dunite	2.0m	2066	4	–	6.92%
10287	L85S+50W	tiny vnlts of chr. in dunite	0.3m	167	–	–	1711
10288	cliff showing #2	several lenses of chr. in dunite	1.5m	944	4	–	8.67%
10289	cliff showing #2	" " " " " "	1.0m	0.026 oz/ton	–	–	24.97%
10290	" " "	rusty serp zone with chr. segr.	3.0m	860	5	–	11.27%
10291	" " "	podiform chr. diss'm in dunite	2.0m	980	5	–	19.94%
10292	" " "	" " " " "	2.0m	1973	6	–	19.84%
10293	" " "	fractured zone with diss'm chr.	2.0m	2307	7	–	17.56%
10294	" " "	massive chr. 1.0x0.5m lense in dunite	1.5m	0.141 oz/ton	–	–	22.46%
10295	" " "	" " " " " " "	2.0m	0.327 oz/ton	–	–	22.31%
10296	cliff showing #2	fractured chr. vnlet zone in dunite	2.0m	0.064 oz/ton	–	–	15.74%

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
10301	L305N+520W	pyroxene clumps in dunite (diopside?)	2x4m	27	5	2	3763
10302	L265N+500W	trench; pyroxene rich layer in dunite	1x0.5m	37	–	–	1574
10303	L270N+500W	trench; pyroxene enriched layer in dunite	0.3x1.0m	87	–	–	2189
10304	L3N+200W	rusty serpentinized dunite	1x5m	37	–	–	3216
10305	L350N+125W	chr. vnlet 1cm. wide; magnetic	1.0m	2434	16	7	29284
10306	L260N+210E	tiny vnlets of mag. in dunite	5x5m	84	–	–	2668
10307	L250N+215E	tiny diss'm chr. grains in dunite	4x2m	2062	–	–	11358
10308	L260N+220E	tiny vnlts of mag in dunite	4x2m	46	–	–	2874
10309	L185S+35E	diss'm pods of chr in brownish dunite	5x1m	48	–	–	24768
10310	L550N+200E	chr. rich lense in dunite	1.0m	0.063oz/ton	–	–	7.12%
10311	L550N+200E	minor chr. diss'm in dunite	5x5m	77	–	–	3626
10312	L5N+0	several chr. disseminations in dunite	2x1m	3975	–	–	16284
10313	L5N+0	several chr. disseminations in dunite	2x1m	473	–	–	7731
10314	L6N+25E	wispy lenses of chr in dunite	2.0m	1705	–	–	10674
10315	L6N+25E	podiform chr + vnlet in dunite	2.0m	858	–	–	8210
10316	L6N+30E	wispy vnlts of segr. chr. in dunite	0.5x0.6m	4329	20	–	4.15%
10317	L6N+29E	several chr segregations in dunite	0.3x0.3	3197	–	–	11837
10318	L0+140W	disseminated chr. pods in dunite	2x2m	1917	10	–	11289
10319	L0+145W	podiform + segr. chr in dunite	0.5x0.3	2110	–	–	3284
10320	L70S+120W	segregated chr vnlet in dunite	1.0m	16000	80	–	20.01%
10321	L70S+125W	pyroxene clusters in dunite layer	1.0m	42	1	–	2600
10322	along road cut	sheared, friable hb pyroxenite	7.0m	40	6	–	2326
10323	" " "	sheared olivene clinopyroxenite	5.0m	20	4	6	205
10324	along road cut	friable grey dunite; fine mag.	7.0m	84	–	–	2600
11261	L7N+460W	serpentinized dunite	2.0m	28	–	–	3844
11263	L0+625N	serp. vnlets in dunite	1x3m	122	–	–	2532
11264	L605N+10E	numerous serp vnlets; mag. rich; chr.	1x1m	598	–	–	8206
11265	L6N+285E	grey dunite; fine magnetite thr'out	1x0.5	18	–	–	2240
11266	L6N+770E	calcareous hb pyroxenite	0.5m	19	–	2	138
11267	L6N+910E	old trench; qtz vn + hb clinopyroxenite	0.5m	13	–	7	46
11268	L7N+335W	serp vnlets + mag. in black dunite	1.0m	2	–	–	2751

ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt(PPB)	Pd(PPB)	Au(PPB)	Cr(PPM)
11269	L7N+265W	fine chr. segregations in dunite	0.5m	13	–	–	12776
11270	L7N+266W	fine vnlets of mag. thr'out dunite	1.0m	2	–	–	2226
11271	L7N+210W	fine chr. pods in grey dunite	1.0m	895	–	–	8432
11272	L550N+175E	chr.-rich zone; lensy; in grey dunite	1.0m	1387	–	–	39216
11273	L760N+420E	mag. rich serp dunite	1.5m	115	–	–	2720
11274	L8N+400E	carbonate–pyroxene alt'd layer in dunite	3.0m	14	–	3	354
11275	L8N+380E	tiny serp. vnlets in dunite	2x4m	49	–	–	3358
11276	L810N+410E	serpentinized dunite	2.0m	68	–	–	884
11277	L808N+410E	pyroxenite-(diopside) rich layer in dunite	4.0m	15	–	1	1155
11278	L4N+175E	tiny serp vnlets in dunite	2x4m	39	–	–	2472
11279	L0+135W	fine chr. pods in serp dunite	2x2m	1744	–	–	17770
11280	L0+135W	chr. thr'out dunite boulder in place	Grab,3m	11100	–	–	12884
11281	along road cut	rusty serp dunite; mag. rich	5.0m	264	–	–	2985
11282	BL+170S	thin chr. vnlet + serp vnlets in dunite	2x2m	29	–	–	4679
11283	BL+143S	irregular chr pod in black dunite	0.5m	461	–	–	28275
11284	L1S+185W	several chr. pods in black dunite	1x1m	161	–	–	21625
11285	L1S+170W	chr. segr. and vnlets in black dunite	grab 0.5m	1208	–	–	19092
11286	L80S+230W	tiny chr. vnlets in dunite	grab 0.5m	603	–	–	19333
11287	L70S+260W	tiny chr. vnlets in dunite	0.5m	194	–	–	1530
11288	L70S+285W	irregular chr. pods in serp. dunite	1x1m	54	–	–	11332
11289	L70S+300W	large chr. segr. in bleached dunite	grab 1.0m	121	–	–	17.0%
11290	L450S+600W	brownish dunite with chr. segr.	1x2m	14	–	–	10671
11291	L425S+600W	podiform chr. in brownish dunite	grab 0.5m	5	–	–	99999
11292	L425S+600W	disseminated chr. in brownish dunite	5.0m	5	–	–	30623
11293	L375S+620W	mag.-rich chr. pods in brownish dunite	1.0m	10	–	–	13.0%
11294	L350S+610W	chr.-rich pods in brownish dunite	grab 0.5m	5	–	–	73375
11295	L500S+525W	high grade chr. in old trench	grab 1.0m	834	–	–	20.0%
11296	L500S+165W	mag. rich dunite; minor serp.	5x5m	4	–	–	3843
11297	L515S+365W	minor serp. vnlets in dunite	3x3m	3	–	–	5074
11298	L290S+230W	several chr. veinlts in dunite talus	grab 0.5m	2823	–	–	26.0%
11299	L315S+700W	a few segregated lenses of chr. in dunite	1x0.5m	15	–	–	36738

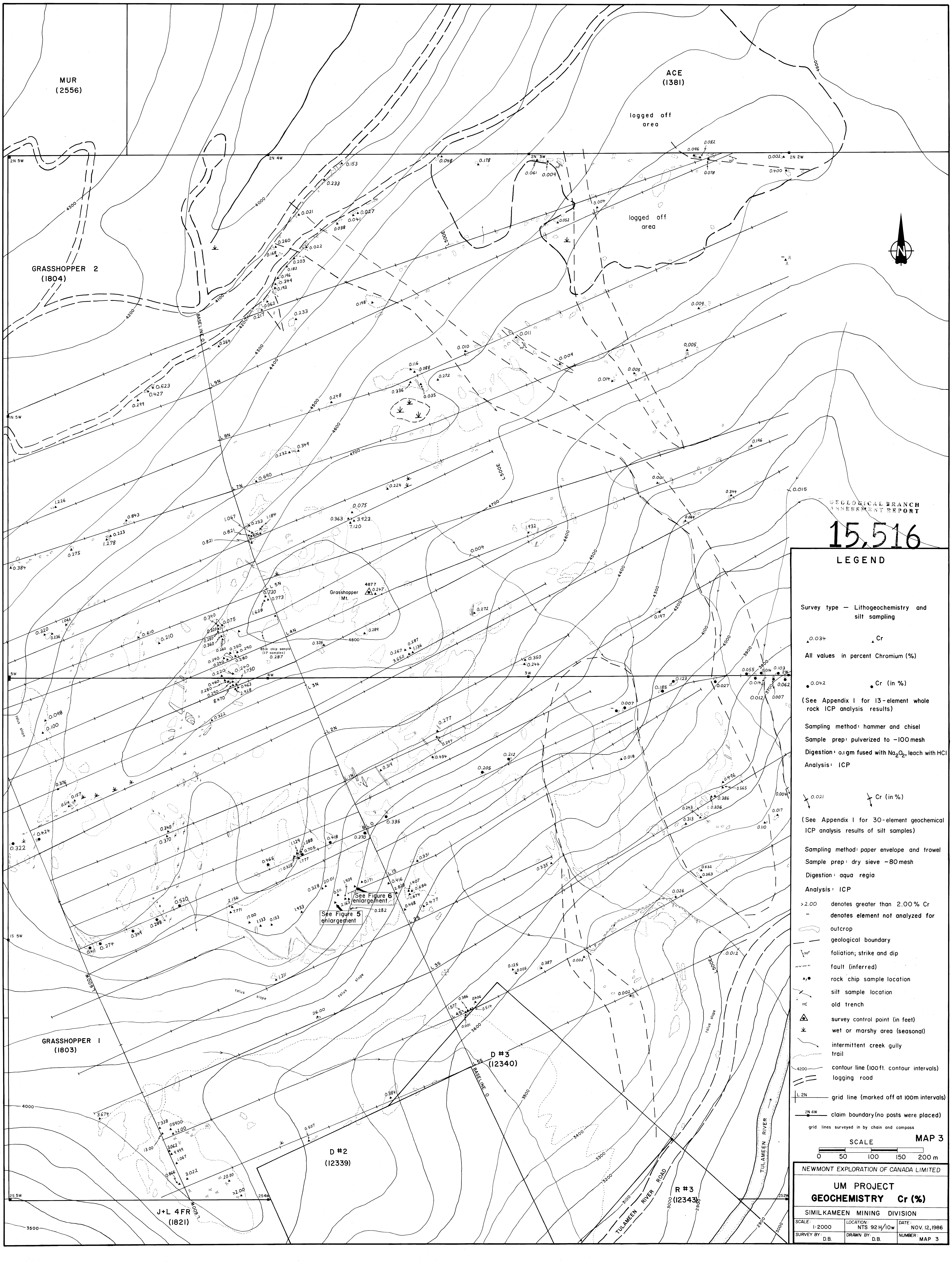
ROCK CHIP SAMPLE DESCRIPTIONS AND RESULTS

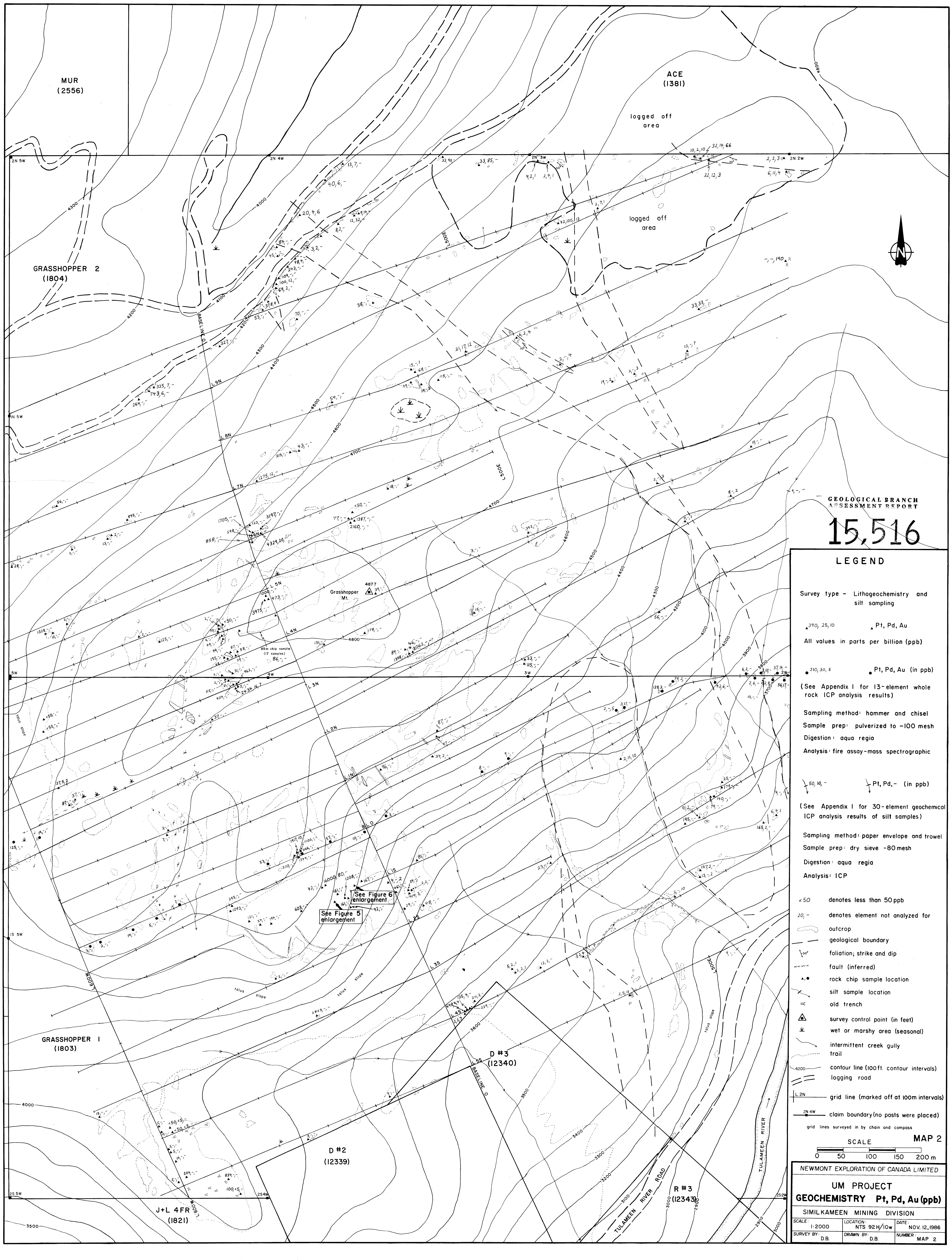
Grasshopper 1 and 2 Claims

SAMPLE NO.	GRID LOCATION	GEOLOGICAL DESCRIPTION	(metres) WIDTH	Pt (PPB)	Pd (PPB)	Au (PPB)	Cr (PPM)
11300	L200S+275W	diss'm chr + serp vnlets in dunite	1.0m	2	–	–	12106
4142	L720N+1050E	qtz-vein material from old trench	grab	–	–	190	–

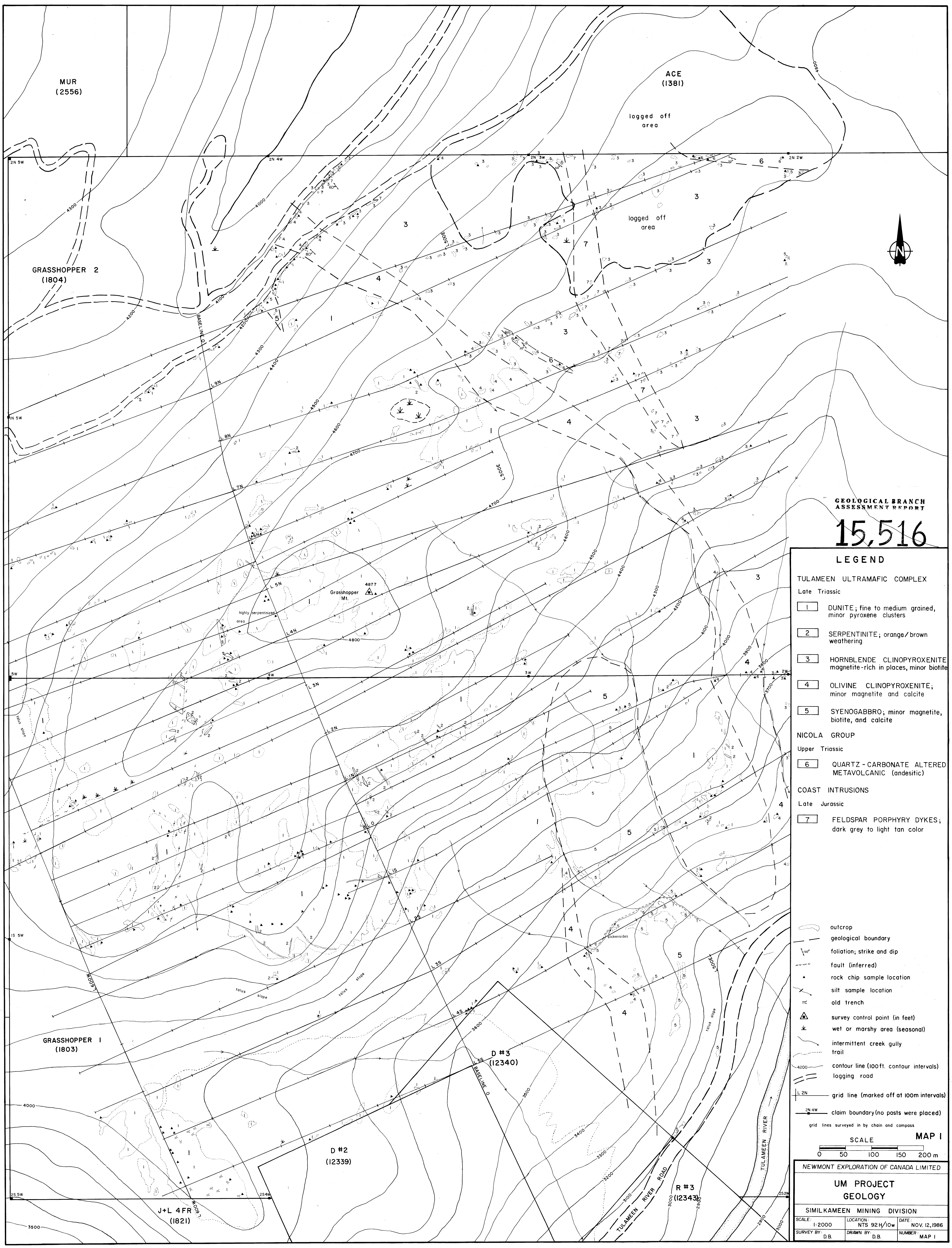

GRASSHOPPER 2
GRASSHOPPER I
E-1200
E-1000
E-800
E-600
E-400
E-200
E0
E200
E400
E600
E800
E1000
N600
N400
N200
0
N-200
W
S
IN 5W
5W
4W
3W
2W
IS 5W
2S 5W
2S 4W
SCALE
0
100
200
300
GEOLOGICAL BRANCH
ASSESSMENT REPORT
15,516
+ 53479 Total field MAGNETIC readings
Gammas
MAP 4
NEWMONT EXPLORATION OF CANADA LIMITED
UM PROJECT
MAGNETIC SURVEY
GEOMETRICS
TOTAL FIELD
SIMILKAMEEN MINING DIVISION
SCALE: 1:2500
LOCATION: 92 H 10W
DATE: DEC.16,1986
SURVEY BY: P.W.
DRAWN BY: Computer
NUMBER: Map 4


GRASSHOPPER 2
GRASSHOPPER I
SCALE metres
0 100 200 300
GEOLOGICAL BRANCH
ASSESSMENT REPORT
15,516
MAP 5
61000
Total field MAGNETIC readings
Contoured 200 Gammas
NEWMONT EXPLORATION OF CANADA LIMITED
UM PROJECT
MAGNETIC SURVEY
GEOMETRICS
TOTAL FIELD
SIMILKAMEEN MINING DIVISION
SCALE: 1:2500
LOCATION: 92H 10W
DATE: DEC.16,1986
SURVEY BY: P.W.
DRAWN BY: Computer
NUMBER: Map 5


MUR (2556)
ACE (1381)
logged off area
logged off area
GRASSHOPPER 2 (1804)
Grasshopper Mt.
GRASSHOPPER 1 (1803)
D #3 (12340)
D #2 (12339)
J+L 4FR (1821)
R #3 (12343)
TULAMEEN RIVER ROAD
TULAMEEN RIVER
See Figure 6 enlargement
See Figure 5 enlargement
80m chip sample (17 samples)
talus slope
BASELINE 0
GEOLOGICAL BRANCH ASSESSMENT REPORT
15,516
LEGEND
Survey type — Lithogeochemistry and silt sampling
0.034 Cr
All values in percent Chromium (%)
0.042 Cr (in %)
(See Appendix I for 13-element whole rock ICP analysis results)
Sampling method: hammer and chisel
Sample prep: pulverized to -100 mesh
Digestion: 0.1 gm fused with Na2O2, leach with HCl
Analysis: ICP
0.021 Cr (in %)
(See Appendix I for 30-element geochemical ICP analysis results of silt samples)
Sampling method: paper envelope and trowel
Sample prep: dry sieve -80 mesh
Digestion: aqua regia
Analysis: ICP
>2.00 denotes greater than 2.00% Cr
– denotes element not analyzed for
outcrop
geological boundary
foliation; strike and dip
fault (inferred)
rock chip sample location
silt sample location
old trench
survey control point (in feet)
wet or marshy area (seasonal)
intermittent creek gully
trail
contour line (100 ft. contour intervals)
logging road
grid line (marked off at 100m intervals)
claim boundary (no posts were placed)
grid lines surveyed in by chain and compass
MAP 3
SCALE
0 50 100 150 200 m
NEWMONT EXPLORATION OF CANADA LIMITED
UM PROJECT
GEOCHEMISTRY Cr (%)
SIMILKAMEEN MINING DIVISION
SCALE: 1:2000
LOCATION: NTS 92H/10W
DATE: NOV. 12, 1986
SURVEY BY: D.B.
DRAWN BY: D.B.
NUMBER: MAP 3



MUR
(2556)
ACE
(1381)
logged off area
logged off area
GRASSHOPPER 2
(1804)
Grasshopper Mt.
GRASSHOPPER I
(1803)
D #3
(12340)
D #2
(12339)
R #3
(12343)
J+L 4FR
(1821)
TULAMEEN RIVER
TULAMEEN RIVER ROAD
See Figure 6 enlargement
See Figure 5 enlargement
GEOLOGICAL BRANCH
ASSESSMENT REPORT
15,516
LEGEND
Survey type - Lithogeochemistry and silt sampling
390, 25, 10 Pt, Pd, Au
All values in parts per billion (ppb)
210, 30, 5 Pt, Pd, Au (in ppb)
(See Appendix I for 13-element whole rock ICP analysis results)
Sampling method: hammer and chisel
Sample prep: pulverized to -100 mesh
Digestion: aqua regia
Analysis: fire assay-mass spectrographic
50, 10, - Pt, Pd, - (in ppb)
(See Appendix I for 30-element geochemical ICP analysis results of silt samples)
Sampling method: paper envelope and trowel
Sample prep: dry sieve -80 mesh
Digestion: aqua regia
Analysis: ICP
<50 denotes less than 50 ppb
20,- denotes element not analyzed for
outcrop
geological boundary
foliation; strike and dip
fault (inferred)
rock chip sample location
silt sample location
old trench
survey control point (in feet)
wet or marshy area (seasonal)
intermittent creek gully
trail
contour line (100 ft. contour intervals)
logging road
grid line (marked off at 100m intervals)
claim boundary (no posts were placed)
grid lines surveyed in by chain and compass
MAP 2
SCALE
0 50 100 150 200 m
NEWMONT EXPLORATION OF CANADA LIMITED
UM PROJECT
GEOCHEMISTRY Pt, Pd, Au (ppb)
SIMILKAMEEN MINING DIVISION
SCALE: 1:2000
LOCATION: NTS 92H/10w
DATE: NOV. 12, 1986
SURVEY BY: D.B.
DRAWN BY: D.B.
NUMBER: MAP 2


GEOLOGICAL BRANCH
ASSESSMENT REPORT
15,516
LEGEND
TULAMEEN ULTRAMAFIC COMPLEX
Late Triassic
1 DUNITE; fine to medium grained, minor pyroxene clusters
2 SERPENTINITE; orange/brown weathering
3 HORNBLENDE CLINOPYROXENITE; magnetite-rich in places, minor biotite
4 OLIVINE CLINOPYROXENITE; minor magnetite and calcite
5 SYENOGABBRO; minor magnetite, biotite, and calcite
NICOLA GROUP
Upper Triassic
6 QUARTZ-CARBONATE ALTERED METAVOLCANIC (andesitic)
COAST INTRUSIONS
Late Jurassic
7 FELDSPAR PORPHYRY DYKES; dark grey to light tan color
outcrop
geological boundary
foliation; strike and dip
fault (inferred)
rock chip sample location
silt sample location
old trench
survey control point (in feet)
wet or marshy area (seasonal)
intermittent creek gully
trail
contour line (100 ft. contour intervals)
logging road
grid line (marked off at 100m intervals)
claim boundary (no posts were placed)
grid lines surveyed in by chain and compass
SCALE
0 50 100 150 200 m
MAP 1
NEWMONT EXPLORATION OF CANADA LIMITED
UM PROJECT
GEOLOGY
SIMILKAMEEN MINING DIVISION
SCALE: 1:2000
LOCATION: NTS 92H/10w
DATE: NOV. 12, 1986
SURVEY BY: D.B.
DRAWN BY: D.B.
NUMBER: MAP 1
MUR
(2556)
ACE
(1381)
logged off
area
GRASSHOPPER 2
(1804)
Grasshopper
Mt.
4877
highly serpentinized
area
GRASSHOPPER 1
(1803)
D #3
(12340)
D #2
(12339)
J+L 4FR
(1821)
R #3
(12343)
TULAMEEN RIVER ROAD
TULAMEEN RIVER
BASELINE 0
talus slope
slickensides