



BC Geological Survey
Assessment Report
38376



Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geochemical, Geological

TOTAL COST: \$3,467.22

AUTHOR(S): Andris Kikauka

SIGNATURE(S):

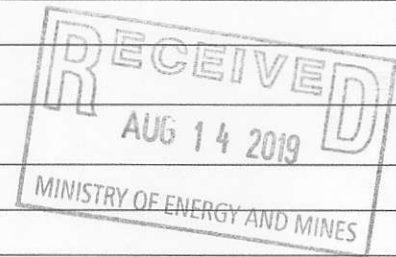
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2019

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5740491

PROPERTY NAME: DD

CLAIM NAME(S) (on which the work was done): DD PGM 1 ID # 1068181



COMMODITIES SOUGHT: PGE, Cu, Ni, Co, V, Cr, Au, Ag

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 093J 031

MINING DIVISION: Cariboo

NTS/BCGS: 093J.094

LATITUDE: 54 ° 56 '60 " LONGITUDE: 123 ° 14 '84 " (at centre of work)

OWNER(S):

- 1) Andris Kikauka
- 2) John Bakus

MAILING ADDRESS:

4199 Highway 101, Powell R, BC V8A 0C7

3-1572 Lorne St, Kamloops, BC V2C 1X6

OPERATOR(S) [who paid for the work]:

- 1) same
- 2) same

MAILING ADDRESS:

same

same

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

NW trending belt of weakly metamorphosed Mid-Upper Triassic Takla Grp clastic and volcanoclastic rocks are intruded by NW trending lenses of pyroxenite, hornblende pyroxenite, hornblendite, and lesser diorite. Disseminated chalcopyrite & nickeliferous pyrrhotite has elevated Pt-Pd-Rh-Co-Cr-V values with magnetite bearing ultramafic rocks, along steep dipping, E-W trends. Drill hole DDH2005-2 at depth 55.1-57.74 m intercept of 2.63 m of 0.06% Cu, 0.13% Ni, 90 ppb Pt, 98 ppb Pd host in ultramafic rock

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 26461, 27501, 28319

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	1:5,000 5 hectares	1068181	1,289.50
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	8 samples PGM-ICP23, ME-ICP41 multi-element	1068181	2,177.72
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	3,467.22

Lat. 54 56' 60" N
Long. 123 14' 84" W
NTS 093 J/14 E
BCGS 093J.094
UTM 484,200 E, 6,089,400 N (NAD 83)

**GEOCHEMICAL, GEOLOGICAL REPORT
ON DD PGM 1-3
MINERAL CLAIMS (1068179, 1068180, 1068181)
PGE-Cu-Ni-Co-Cr-V BEARING MINERALIZATION
WORK PRFORMED ON DD PGM 1 (1068181)**

**McLEOD RIVER,
McLEOD LAKE, BC
CARIBOO MINING DIVISION**

**Submitted by:
Andris Kikauka, P.Geo.
4199 Highway 101,
Powell R, BC V8A 0C7**

38,376
1

June 20, 2019

Mineral Titles Online Viewer

Exploration and Development Work / Expiry Date Change Event Detail

Event Number ID	5740491
Recorded Date	2019/may/06
Work Type	Technical Work (T)
Technical Items	Geological (G), Geochemical (C), PAC Withdrawal (up to 30% of technical work required) (W3)
Work Start Date	2019/may/02
Work Stop Date	2019/may/05
Total Value of Work	\$ 3467.22
Mine Permit Number	

Summary of the work value:

Title Numbers	1068179
Claim Name/Property	DD PGM 2
Issue Date	2019/apr/27
Work Performed Index	N
Old Good To Date	2020/apr/27
New Good To Date	2023/oct/03
Numbers of Days Forward	1254
Area in Ha	18.58
Applied Work Value	\$ 452.19
Submission Fee	\$ 0.00
Title Numbers	1068180
Claim Name/Property	DD PGM 3
Issue Date	2019/apr/27
Work Performed Index	N
Old Good To Date	2020/apr/27
New Good To Date	2023/oct/03
Numbers of Days Forward	1254
Area in Ha	74.31
Applied Work Value	\$ 1809.11
Submission Fee	\$ 0.00
Title Numbers	1068181
Claim Name/Property	DD PGM 1
Issue Date	2019/apr/27
Work Performed Index	Y
Old Good To Date	2019/may/25
New Good To Date	2023/oct/03

Numbers of Days Forward	1592
Area in Ha	74.30
Applied Work Value	\$ 2684.88
Submission Fee	\$ 0.00

Financial Summary:

Total Applied Work Value:	\$ 4946.18
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PAC name	John Nick Bakus
Debited PAC amount	\$ 1478.96
Credited PAC amount	\$

Total Submission Fees	\$ 0.00
Total Paid	\$ 0.00

Related Summary:

- Existing Work Program Event Numbers

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Click [here](#) to go back to the titles search page.

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1.0 SUMMARY

The DD property consists of 3 mineral claims located in the Cariboo Mining Division, approximately 150 km north-northwest of Prince George, British Columbia. The 3 adjoining mineral claims cover approximately 167.19 hectares, or 412.96 acres (MTO tenure numbers 1068179, 1068180, & 1068181). The property lies within Late Triassic-Early Jurassic age Takla Group clastic and volcanoclastic rocks, that include 0.5 to 1.5 km long by 50-500 m wide ultramafic lenses (likely originated as sheeted dykes). The ultramafic rocks consist of alternating lithologies of hornblende pyroxenite, pyroxenite (black), and hornblendite with rare diorite, that intrude hornfels Takla Group clastics and volcanoclastics. This report describes results of a geochemical rock chip sampling, and geological mapping conducted on the central portion of the DD Property in May, 2019. The objective of the fieldwork was to identify zones of PGE-Cu-Cr-Ni-Co-V enrichment, and relate geochemistry to lithology, alteration and structure in order to identify targets of economic interest.

The DD property has a history of previous work including mining companies in the 1930's looking for placer gold and platinum (Minister of Mines 1933). After the federal government released a regional geochemical survey in 1986, various companies and prospectors have attempted to find the sources of the multi-element geochemical anomalies. Large mineral properties were staked and later allowed to lapse in the early 1990's. Ezekiel Explorations Ltd completed airborne magnetometer and electromagnetic survey over the mineral claims and they defined two belts which could possibly host ultramafic intrusions (de Cule, 1987). The DD property showings were discovered by David Bridge in 2000 after logging roads exposed mineralized ultramafic bedrock. A trench across exposed bedrock returned geochemical analysis results of 0.246 % Cu, 0.248 % Ni, 113 ppm Co, 423 ppb Pd, 12 ppb Rh over a sampled length of 6 meters.

In 2004, Almo Capital Corp performed 6 line-kilometers of magnetometer and IP ground geophysics carried out by Geotronics Ltd (Mark, 2004). The IP, resistivity, and magnetic surveys identified magnetometer and IP anomalies that are interpreted to represent mineralization along a minimum strike length of 600 meters and perhaps as much as 700 meters. The known mineralization consists of tholeiitic nickel copper-platinum-palladium rhodium bearing mineralization that is hosted in hornblende pyroxenite, pyroxenite (black), and hornblendite ultramafic rocks. The geophysical response to this zone consists of an IP high correlating with a resistivity high and a magnetic high. This indicates sulphide mineralization possibly occurring within an intrusive dyke or with silicification and/or calcification. The magnetic high indicates the dyke contains magnetite or magnetite and/or pyrrhotite occurs with the mineralization. Width of the mineral zone appears to be about 10 meters and as much as 20 meters. The depth extent is probably at least 90 meters (Mark, 2004). The ultramafic are extensive and may be over 500 meters wide, but the Pt-Pd mineralized sections identified to date, occur as multiple narrower intervals. It is postulated that a widening of the

In 2005, Almo Capital Corp performed A total of 27 hand dug trenches (238 m total) were dug on the Snow #1 to Snow #4 and Moose #3 mineral claims. Ultramafic rocks were intersected in all of the trenches. A total of 5 diamond drill holes from 3 locations totalling 629.27 meters depth, were collared to intercept mineralized ultramafic rocks. All holes drilled in 2005, intersected mainly ultramafic rocks (hornblende pyroxenite, hornblendite and pyroxenite) with minor intervals of hornfels Takla Grp clastic and volcanoclastic rocks. Highlights of platinum-palladium geochemical analysis results are listed as follows:

2005 Alamo Capital DDH Significant Pt-Pd intercepts

DDH #	From (m)	To (m)	Length (m)	Cu ppm	Ni ppm	Co ppm	V2O5 ppm	Au ppb	Pt ppb	Pd ppb
2005-1	37.5	61.0	23.5	377	837	71	72	10	48	54
2005-1	109.15	131.56	22.41	43	445	59	83	3	34	41
2005-2	55.1	57.74	2.63	588	1293	61	75	9	90	98

Fieldwork in 2019 includes geochemical analysis of 8 rock chip samples and geological mapping (1:5,000 scale) covering 5 hectares located in the south-central portion of mineral claim named DD PGM 1 (1068181). Eight rock chip sample descriptions from 2019 fieldwork (on MTO claim 1068181) as listed as follows:

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology					
19DD-1	Main Dyke	484118	6089198		871 float	Hornblende pyroxenite					
19DD-2	Main Dyke	484133	6089184		868 outcrop	Hornblende pyroxenite					
19DD-3	Main Dyke	484133	6089183		868 outcrop	Hornblende pyroxenite					
19DD-4	Main Dyke	484133	6089180		868 outcrop	Hornblende pyroxenite					
19DD-5	Au-Ag Fault	484066	6089145		855 outcrop angular	Hornblende pyroxenite					
19DD-6	Main Dyke	484096	6089183		868 float	Hornblende pyroxenite					
19DD-7	Au-Ag Fault	484147	6089118		847 outcrop angular	Hornblende pyroxenite					
19DD-8	Main Dyke	484203	6089175		884 float	Hornblende pyroxenite					
Sample ID	Alteration	Mineralization									
19DD-1	quartz-carbonate-chlorite veining, stockwork	0.8% diss pyrrhotite, tr chalcopyrite, malachite, magnetite, 0.1% limonite									
19DD-2	quartz-carbonate veins, breccia texture, angular clasts	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite									
19DD-3	quartz-carbonate veins, 3% limonite, bands 1-3 cm wide	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 3% limonite									
19DD-4	quartz-carbonate veining, stockwork	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite									
19DD-5	quartz-carbonate veins, breccia texture, angular clasts	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite									
19DD-6	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite									
19DD-7	quartz-carbonate veining and banded texture	0.2% diss pyrrhotite, tr chalcopyrite, 0.1% lim. tr As-Sb bearing minerals									
19DD-8	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite									
Sample ID	Vein Strike	Vein Dip	Width (cm)	Cu ppm	Au ppm	Pt ppm	Pd ppm	As ppm	Co ppm	Cr ppm	Ni ppm
19DD-1		85	float	534	0.007	0.13	0.147	2	76	708	1465
19DD-2	105	N	109	823	0.01	0.343	0.448	2	87	650	1610
19DD-3			100	652	0.007	0.268	0.354	2	81	713	1255
19DD-4	102	N	200	1310	0.018	0.342	0.4	4	78	486	1660
19DD-5			50	38	0.025	<0.005	0.002	346	7	21	26
19DD-6			float	756	0.029	0.119	0.124	100	39	290	429
19DD-7			25	216	0.457	<0.005	0.001	4100	1	10	11
19DD-8			float	1720	0.034	0.333	0.328	18	77	371	1600

Sample ID	V ppm	Fe %	Mn ppm	Ag ppm	Ca %	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Zn ppm	
19DD-1	74	7.01	1205		0.2	13.8	20	2	0.13	4	1440	28
19DD-2	78	6.38	993		0.5	10	100	2	0.2	4	1505	43
19DD-3	82	6.8	1120		0.2	11	110	2	0.29	2	1705	50
19DD-4	77	5.62	811		1	13.9	30	2	0.16	6	2100	40
19DD-5	35	4.26	1210		0.2	14.6	440	4	0.07	13	765	43
19DD-6	96	4.75	990		0.8	3.28	880	3	0.26	14	461	63
19DD-7	7	1.84	651		5	0.9	1070	86	0.19	146	84	68
19DD-8	48	5.94	856		1.4	15.1	30	2	0.22	9	2140	26

Geological mapping identified altered (carbonate-silica-ankerite-fuchsite bearing) ultramafic rocks throughout most of the 5-hectare area surveyed, with minor amounts of hornfels clastic and volcanoclastic occurring as 'screens' or 'pendants' within the ultramafic rocks. The altered and mineralized ultramafic rocks contain elevated PGE-Cu-Ni-Co-V-Cr and are prospective for Alaskan-type PGE, as well as Tholeiitic intrusion-hosted Ni-Cu deposit types. Rock chip sampling in 2019 identified a 4 m sample interval (19DD-2, 3, & 4) that returned geochemical analysis results averaging 0.09 % Cu, 0.32 g/t Pt, 0.4 g/t Pd, 0.06 % Cr, 0.15 % Ni. These 2019 rock chip geochemical analysis values are similar to drill intercept values obtained in 2-25 meter Interval lengths of DDH 2005-1, & 2.

Late-stage quartz fissure veining is associated with elevated Au-Ag-As values (e.g. rock sample 19DD-7 that returned geochemical analysis values of 0.457 g/t Au, 5.0 g/t Ag, and 4,100 ppm As). Elevated Au-Ag-As-Sb values may be related to mesothermal, intrusion-related gold deposit types, similar to those that occur several kilometers south and east of the DD property on McLeod River.

Zones of disseminated magnetite and pyrrhotite are associated with PGE-Cu-Ni-Co-V-Cr bearing mineralization that is present on the DD property. The DD claims are prospective for Alaskan type Pt-Pd-Os-Rh-Ir deposit types as well as Tholeiitic intrusion hosted Ni-Cu deposit types. Detailed geological mapping, trenching and gravity survey are recommended follow-up work with core drilling recommended contingent on results of initial phase of fieldwork. Follow-up exploration should include the area where magnetite enriched ultramafic rocks and magnetometer geophysical positive anomalies are located.

2.0 INTRODUCTION

This report describes geochemical sampling and geological mapping performed during May 2-5, 2019 on the DD claim (MTO ID number 1068181). The writer has prepared this report to comply with standards for the purpose of assessment reports. The intent of the geochemical sampling and mapping was to identify Pt-Pd bearing mineralization and understand variation and/or zoning geochemical associations in relation to lithology, alteration and structure.

3.0 LOCATION, ACCESS, PHYSIOGRAPHY, INFRASTRUCTURE, CLAIM DATA

Work carried out on property is centered at 54 56' 60" north latitude and 123 14' 84" west longitude on NTS map sheet 93J 14/E. Access to the property is obtained from McLeod Lake, via well-maintained logging access roads that are maintained by Canfor. The DD property elevations range from 780-940

meters above sea level. In general, topography is gently rolling to moderate. Outcrop is rare but is exposed along portions of roadcuts, and deeply incised creek gullies.

The DD property is located along the northern limit of the Nechako Plateau in north-central British Columbia. The area has been extensively glaciated resulting in low lying areas having a rolling and hummocky topography due to the development of drumlins and kettles, with distinct northeast trending linear physiography features. The mineral property covers low, lying hills and swampy areas around the shores of Snowshoe Lake. The lake's elevation is approximately 900 meters with roughly 50 meters of relief in the surrounding hills. Portions of the property has been logged. Tree species consist of white spruce, fir and lodgepole pine with relatively little understory. The climate is typical of the northern interior of British Columbia with long cold winters and warm summers. The snow begins to accumulate in November and melts in May during a typical fall to spring cycle. Mining infrastructure can be supported by local communities and Prince George located 150 kilometers south-southeast of the DD mineral claims.

Mineral Claim data from MTO website is listed as follows:

Title Number	Claim Name	Owner	Title Type	Map Number	Issue Date	Good To Date	Area (ha)
1068179	DD PGM 2	114051 (50%)	Mineral	093J	2019/APR/27	2023/OCT/03	18.5749
1068180	DD PGM 3	114051 (50%)	Mineral	093J	2019/APR/27	2023/OCT/03	74.3135
1068181	DD PGM 1	114051 (50%)	Mineral	093J	2019/APR/27	2023/OCT/03	74.3036

The registered owners of the DD PGM 1-3 mineral titles are 50% by Andris Kikauka and 50% John Bakus.

4.0 AREA & PROPERTY HISTORY

The DD property has a history of previous work including mining companies in the 1930's looking for placer gold and platinum (Minister of Mines 1933). After the federal government released a regional geochemical survey in 1986, various companies and prospectors have attempted to find the sources of the multi-element geochemical anomalies. Large mineral properties were staked and later allowed to lapse in the early 1990's. Ezekiel Explorations Ltd completed airborne magnetometer and electromagnetic survey over the mineral claims and they defined two belts which could possibly host ultramafic intrusions (de Cule, 1987). The DD property showings were discovered by David Bridge in 2000 after logging roads exposed mineralized ultramafic bedrock. A trench across exposed bedrock returned geochemical analysis results of 0.246 % Cu, 0.248 % Ni, 113 ppm Co, 423 ppb Pd, 12 ppb Rh over a sampled length of 6 meters.

In 2004, Almo Capital Corp performed 6 line-kilometers of magnetometer and IP ground geophysics carried out by Geotronics Ltd (Mark, 2004). The IP, resistivity, and magnetic surveys identified magnetometer and IP anomalies that are interpreted to represent mineralization along a minimum strike length of 600 meters and perhaps as much as 700 meters. The known mineralization consists of tholeiitic nickel copper-platinum-palladium rhodium bearing mineralization that is hosted in hornblende pyroxenite, pyroxenite (black), and hornblendite ultramafic rocks. The geophysical response to this zone consists of an IP high correlating with a resistivity high and a magnetic high. This indicates sulphide mineralization possibly occurring within an intrusive dyke or with silicification and/or calcification. The magnetic high indicates the dyke contains magnetite or magnetite and/or pyrrhotite occurs with the

mineralization. Width of the mineral zone appears to be about 10 meters and as much as 20 meters. The depth extent is probably at least 90 meters (Mark, 2004). The ultramafic rocks are extensive in the area of the main showings, and may several hundred meters wide, but the Pt-Pd mineralized sections identified to date, occur as multiple narrower intervals. It is postulated that a widening of the ultramafics represents a target that is prospective for mafic cumulate (layered type) deposit types.

In 2005, Almo Capital Corp performed A total of 27 hand dug trenches (238 m total) were dug on the Snow #1 to Snow #4 and Moose #3 mineral claims. Ultramafic rocks were intersected in all of the trenches. A total of 5 diamond drill holes from 3 locations totalling 629.27 meters depth, were collared to intercept mineralized ultramafic rocks. All holes drilled in 2005, intersected mainly ultramafic rocks (hornblende pyroxenite, hornblendite and pyroxenite) with minor intervals of hornfels Takla Grp clastic and volcanoclastic rocks. Highlights of platinum-palladium geochemical analysis results are listed as follows:

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DDH #	From (m)	To (m)	Length (m)	Cu ppm	Ni ppm	Co ppm	V2O5 ppm	Au ppb	Pt ppb	Pd ppb
2005-1	37.5	61.0	23.5	377	837	71	72	10	48	54
2005-1	109.15	131.56	22.41	43	445	59	83	3	34	41
2005-2	55.1	57.74	2.63	588	1293	61	75	9	90	98

5.0 GENERAL GEOLOGY

Most of the property is underlain by weakly metamorphosed Middle to Upper Triassic Takla Group argillite / shale, marble and siltstone which we cut by four northwesterly trending belts of mineralized ultramafic rocks. The ultramafic rocks are composed of black pyroxenite, hornblende pyroxenite and hornblendite - lesser diorite and granodiorite occurs as later phases - possible Jurassic or younger age. The location of the ultramafic rocks can be identified from the airborne magnetic maps because of the high concentration of magnetite in pyroxenite.

Triassic Takla Group sediments. These sediments are the base of the Quesnel Terrane and they comprise a package of "slate, argillite, phyllite, fine-grained and minor coarse - grained greywacke and lesser amounts of tuff, tuffaceous siltstone and argillite, limestone and limy greywacke" (Sitruik, 1994). These sediments are stratigraphically overlain by the Takla Group mafic volcanics. Feeding these volcanics are ultramafic dykes which are thought to trend northwesterly in two belts through the Snow property and immediately to the north. The Quesnel Terrane has been thrust onto the Slide Mountain Terrane which consists of Carboniferous and Permian mafic volcanics and metamorphosed sediments. Distinction between this package of rocks and metamorphosed Quesnel Terrane is problematic. The region is cut by prominent northwesterly and lesser north easterly faults which relate to crustal extension of the Wolverine metamorphic ore complex in the Carp Lake area 20 km south of the DD property.

6.0 PROPERTY GEOLOGY

Most of the outcrops which have been examined on the DD property are located along and around the logging road which bisects the property. This area is dominated by a pyroxenite and hornblendite intrusion which has hornfels the host rocks. The hornfels consists of pale purple biotite hornfelsing of possible sedimentary Takla Group. The ultramafic intrusion is well exposed in road cuts as a complex

intrusion consists of phases of grey-green pyroxenite, dark green, rusty weathering hornblendite and hornblendite: with phenocrysts of pyroxene. The exposed northwestern margin of the ultramafic intrusion exhibits ankerite-carbonate-fuchsite alteration. Small shears with quartz slickensides cut the altered intrusive rocks. Mineralization consists of chalcopyrite and nickeliferous pyrrhotite a gangue of ankerite carbonate. Highly mineralized pieces have a black rind on the outside with malachite. Fresh, unweathered carbonate has a greenish tint to the cream coloured rock which is also locally mottled pale blue.

7.0 GEOCHEMICAL, GEOLOGICAL FIELDWORK 2019

7.1 METHODS & PROCEDURES

A total of 8 rock samples taken in the south-central portion of the DD PGM 1 claim (ID 1068181), were location surveyed using Garmin 60Cx GPS receiver with 3 meter accuracy (Fig 5A). Using rock hammer, 0.48-1.3 kilograms of acorn sized rock chips were placed in a plastic ploy ore sample bag along with a numbered sample tag. The rock sample was taken across an outcrop of 25-200 cm sample length intervals, Sample bags were labelled with black felt markers, and flagged. Samples were securely shipped to ALS Minerals Ltd, N Vancouver for PGM-ICP23, Pt-Pd-Au assay, and ME-ICP41 multi-element analysis, ICP-AES finish (analysis details, methods & procedures are described in Appendix B: Geochemical Analysis). Geochemical analysis sample preparation and descriptions were carried out by ALS Minerals (Appendix A).

Geological mapping at 1:5,000 scale, was carried out in the same area as rock chip sampling and covered an area of about 5 hectares. Lithology, alteration, minerals, outcrop and faults were recognized and compiled on topographic maps (Fig 5B).

7.2 GEOLOGICAL MAPPING (PROPERTY GEOLOGY)

Geological mapping identified altered (carbonate-silica-ankerite-fuchsite bearing) ultramafic rocks throughout most of the 5-hectare area surveyed, with minor amounts of hornfels clastic and volcanoclastic occurring as 'screens' or 'pendants' within the ultramafic rocks. The altered and mineralized ultramafic rocks contain elevated PGE-Cu-Ni-Co-V-Cr and are prospective for Alaskan-type PGE, as well as Tholeiitic intrusion-hosted Ni-Cu deposit types. Late-stage quartz fissure veining is associated with elevated Au-Ag-As values (e.g. rock sample 19DD-7 that returned geochemical analysis values of 0.457 g/t Au, 5.0 g/t Ag, and 4,100 ppm As). Elevated Au-Ag-As-Sb values may be related to mesothermal, intrusion-related gold deposit types, similar to those that occur several kilometers south and east of the DD property on McLeod River.

7.3 2019 ROCK CHIP SAMPLE GEOCHEMISTRY

Fieldwork in 2019 includes geochemical analysis of 8 rock chip samples and geological mapping (1:5,000 scale) covering 5 hectares located in the south-central portion of mineral claim named DD PGM 1 (1068181). Eight rock chip sample descriptions from 2019 fieldwork (on MTO claim 1068181) as listed as follows:

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology
19DD-1	Main Dyke	484118	6089198		871 float	Hornblende pyroxenite
19DD-2	Main Dyke	484133	6089184		868 outcrop	Hornblende pyroxenite
19DD-3	Main Dyke	484133	6089183		868 outcrop	Hornblende pyroxenite
19DD-4	Main Dyke	484133	6089180		868 outcrop	Hornblende pyroxenite
19DD-5	Au-Ag Fault	484066	6089145		855 outcrop angular	Hornblende pyroxenite
19DD-6	Main Dyke	484096	6089183		868 float	Hornblende pyroxenite
19DD-7	Au-Ag Fault	484147	6089118		847 outcrop angular	Hornblende pyroxenite
19DD-8	Main Dyke	484203	6089175		884 float	Hornblende pyroxenite

Sample ID	Alteration	Mineralization
19DD-1	quartz-carbonate-chlorite veining, stockwork	0.8% diss pyrrhotite, tr chalcopyrite, malachite, magnetite, 0.1% limonite
19DD-2	quartz-carbonate veins, breccia texture, angular clasts	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-3	quartz-carbonate veins, 3% limonite, bands 1-3 cm wide	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 3% limonite
19DD-4	quartz-carbonate veining, stockwork	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-5	quartz-carbonate veins, breccia texture, angular clasts	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-6	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-7	quartz-carbonate veining and banded texture	0.2% diss pyrrhotite, tr chalcopyrite, 0.1% lim. tr As-Sb bearing minerals
19DD-8	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite

Sample ID	Vein Strike	Vein Dip	Width (cm)	Cu ppm	Au ppm	Pt ppm	Pd ppm	As ppm	Co ppm	Cr ppm	Ni ppm
19DD-1			float	534	0.007	0.13	0.147	2	76	708	1465
19DD-2	105	85 N	100	823	0.01	0.343	0.448	2	87	650	1610
19DD-3			100	652	0.007	0.268	0.354	2	81	713	1255
19DD-4	102	85 N	200	1310	0.018	0.342	0.4	4	78	486	1660
19DD-5			50	38	0.025	<0.005	0.002	346	7	21	26
19DD-6			float	756	0.029	0.119	0.124	100	39	290	429
19DD-7			25	216	0.457	<0.005	0.001	4100	1	10	11
19DD-8			float	1720	0.034	0.333	0.328	18	77	371	1600

Sample ID	V ppm	Fe %	Mn ppm	Ag ppm	Ca %	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Zn ppm
19DD-1	74	7.01	1205		0.2	13.8	20	2	0.13	4	1440
19DD-2	78	6.38	993		0.5	10	100	2	0.2	4	1505
19DD-3	82	6.8	1120		0.2	11	110	2	0.29	2	1705
19DD-4	77	5.62	811		1	13.9	30	2	0.16	6	2100
19DD-5	35	4.26	1210		0.2	14.6	440	4	0.07	13	765
19DD-6	96	4.75	990		0.8	3.28	880	3	0.26	14	461
19DD-7	7	1.84	651		5	0.9	1070	86	0.19	146	84
19DD-8	48	5.94	856		1.4	15.1	30	2	0.22	9	2140

8.0 CONCLUSIONS AND RECOMMENDATIONS

Zones of disseminated magnetite and pyrrhotite hosted in ultramafic rocks are associated with PGE-Cu-Ni-Co-V-Cr bearing mineralization present on the DD property. Rock chip sampling in 2019 identified a 4 m sample interval (19DD-2, 3, & 4) that returned geochemical analysis results of 0.09 % Cu, 0.32 g/t Pt, 0.4 g/t Pd, 0.06 % Cr, 0.15 % Ni. The DD claims are prospective for Alaskan type Pt-Pd-Os-Rh-Ir deposit types as well as Tholeiitic intrusion hosted Ni-Cu deposit types (coincident positive magnetometer anomalies). Potential also exists for Au-Ag bearing quartz fissure vein deposit types (coincident negative magnetometer anomalies).

Detailed geological mapping, trenching and magnetometer geophysics are recommended follow-up work with core drilling recommended contingent on results of initial phase of fieldwork. Follow-up exploration should include the area where magnetite enriched ultramafic rocks and magnetometer geophysical positive anomalies are located. It is likely that further diamond drilling in the area of DDH 2005-1, 2, & 3 would intersect sections of mineralized ultramafic rock. Finding the widest section and deepest portion of the ultramafic may result in improved grades (e.g. > 2 g/t Pt+Pd, similar to Merensky Reef in the Bushveld Complex, S Africa, or Great Dyke in Zimbabwe). Detailed exploration of the known magnetometer anomalies may lead to discovery of wider (layered) ultramafics that contain higher Pt-Pd grades that supports economic mining.

9.0 REFERENCES

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Nixon, G.T., (1987): *Geology Platinum Group-Element Mineralization of Alaska-Type Ultramafic Complexes in British Columbia*. *British Columbia Ministry of Employment, Investment, Energy and Minerals Division*, Geological Survey Branch, Bulletin 93.

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CERTIFICATE AND DATE

I, Andris Kikauka, of 4199 Highway, Powell River, BC am a self-employed professional geoscientist. I hereby certify that:

1. I am a graduate of Brock University, St. Catharines, Ont., with an Honours Bachelor of Science Degree in Geological Sciences, 1980.
2. I am a Fellow in good standing with the Geological Association of Canada.
3. I am registered in the Province of British Columbia as a Professional Geoscientist.
4. I have practiced my profession for thirty five years in precious and base metal exploration in the Cordillera of Western Canada, U.S.A., Mexico, Central America, and South America, as well as for three years in uranium exploration in the Canadian Shield.
5. The information, opinions, and recommendations in this report are based on fieldwork carried out in my presence on the subject property during which time a technical evaluation consisting of geochemical sampling, and geological surveying carried during May 2-5, 2019
6. I have a direct interest in the DD PGM 1-3 Property. The recommendations in this report are intended to serve as a guideline, and cannot be used for the purpose of public financing.
7. I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. This technical work report supports requirements of BCEMPR for Exploration and Development Work/Expiry Date Change.

Andris Kikauka, P. Geo.,

A. Kikauka



June 20, 2019

ITEMIZED COST STATEMENT-

DD PROJECT- MTO tenure numbers 1068179, 1068180, & 1068181
GEOLOGICAL, GEOCHEMICAL FIELDWORK

Dates worked: May 2-5, 2019

BCGS 093J.094, NTS 093 J/14 E, CARIBOO MINING DIVISION

Work carried out on

MTO tenure name: DD PGM 1,

ID number: 1068181

FIELD PERSONNEL:

A. Kikauka (Geologist) 4 days \$ 1,980.00

FIELD COST:

Preparation, Mob and Demob	\$ 292.26
Equipment (bags, flags, tags), Supplies, Generator	26.98
Geochemical ME-ICP41 analysis 8 rock chip (PGM-ICP23), (& shipping to ALS Global Labs for Mineral Geochemistry)	405.98
Meals	203.44
Fuel	112.00
Accommodation	159.78
Communication (cell phone, Sat phone, VHF radios)	40.50

Report 600.00

Total amount= ~~\$ 3,467.22~~
3,820.94



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Page: 1
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 Plus Appendix Pages
 Finalized Date: 30-MAY-2019
 Account: KIKAND

A- Geochemical Analysis Certificate

CERTIFICATE VA19120696

This report is for 8 Rock samples submitted to our lab in Vancouver, BC, Canada on 17-MAY-2019.

The following have access to data associated with this certificate:

ANDRIS KIKAUKA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	ICP-AES
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:


 Colin Ramshaw, Vancouver Laboratory Manager



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CERTIFICATE OF ANALYSIS VA19120696

Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
		Recvd Wt. kg	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
		0.02	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	0.01	10	
19DD-01		0.90	0.2	0.60	2	<10	140	<0.5	<2	13.8	0.5	76	708	534	7.01	10
19DD-02		0.64	0.5	1.04	<2	<10	220	<0.5	3	10.0	0.5	87	650	823	6.38	<10
19DD-03		0.50	0.2	1.12	<2	<10	220	<0.5	2	11.0	<0.5	81	713	652	6.80	10
19DD-04		0.54	1.0	0.95	4	<10	190	0.5	3	13.9	0.8	78	486	1310	5.62	<10
19DD-05		0.70	<0.2	0.33	346	<10	170	<0.5	.2	14.6	<0.5	7	21	38	4.26	<10
19DD-06		0.90	0.8	1.29	100	<10	150	<0.5	<2	3.28	<0.5	39	290	756	4.75	10
19DD-07		1.30	5.0	0.17	4100	<10	40	<0.5	<2	0.90	<0.5	<1	10	216	1.84	<10
19DD-08		0.48	1.4	0.39	18	<10	160	<0.5	2	15.1	0.6	77	371	1720	5.94	<10

**** See Appendix Page for comments regarding this certificate ****



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 Total # Pages: 2 (A - C)
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CERTIFICATE OF ANALYSIS VA19120696

Sample Description	Method Analyte Units LOD	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
		Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	NI ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm
		1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1	1	20
19DD-01		<1	0.01	<10	7.66	1205	1	0.01	1465	20	2	0.13	4	31	1440	<20
19DD-02		1	0.01	<10	6.90	993	1	0.01	1610	100	<2	0.20	4	29	1505	<20
19DD-03		<1	<0.01	<10	8.96	1120	<1	0.01	1255	110	2	0.29	<2	29	1705	<20
19DD-04		<1	0.01	<10	7.61	811	1	0.01	1660	30	<2	0.16	6	27	2100	<20
19DD-05		<1	0.12	10	4.72	1210	1	0.01	26	440	4	0.07	13	5	765	<20
19DD-06		<1	0.14	<10	2.10	990	<1	0.03	429	880	3	0.26	14	18	461	<20
19DD-07		<1	0.03	<10	0.15	651	<1	0.01	11	1070	86	0.19	146	1	84	<20
19DD-08		<1	0.01	<10	7.76	856	<1	0.01	1600	30	2	0.22	9	19	2140	<20

***** See Appendix Page for comments regarding this certificate *****



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CERTIFICATE OF ANALYSIS VA19120696

Sample Description	Method Analyte Units LOD	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	PGM-ICP23	PGM-ICP23	PGM-ICP23
		Ti %	Ti ppm	U ppm	V ppm	W ppm	Zn ppm	Au ppm	Pt ppm	Pd ppm
		0.01	10	10	1	10	2	0.001	0.005	0.001
19DD-01		<0.01	<10	<10	74	<10	28	0.007	0.130	0.147
19DD-02		<0.01	<10	<10	78	<10	43	0.010	0.343	0.448
19DD-03		0.01	<10	<10	82	<10	50	0.007	0.268	0.354
19DD-04		<0.01	<10	<10	77	<10	40	0.018	0.342	0.400
19DD-05		<0.01	<10	<10	35	<10	43	0.025	<0.005	0.002
19DD-06		0.09	<10	<10	96	<10	63	0.029	0.119	0.124
19DD-07		<0.01	<10	<10	7	<10	68	0.457	<0.005	0.001
19DD-08		<0.01	<10	<10	48	<10	26	0.034	0.333	0.328

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Total # Appendix Pages: 1
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CERTIFICATE OF ANALYSIS VA19120696

	CERTIFICATE COMMENTS												
Applies to Method:	<p style="text-align: center;">LABORATORY ADDRESSES</p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table><tbody><tr><td>CRU-31</td><td>CRU-QC</td><td>LOG-22</td><td>ME-ICP41</td></tr><tr><td>PGM-ICP23</td><td>PUL-31</td><td>PUL-QC</td><td>SPL-21</td></tr><tr><td>WEI-21</td><td></td><td></td><td></td></tr></tbody></table>	CRU-31	CRU-QC	LOG-22	ME-ICP41	PGM-ICP23	PUL-31	PUL-QC	SPL-21	WEI-21			
CRU-31	CRU-QC	LOG-22	ME-ICP41										
PGM-ICP23	PUL-31	PUL-QC	SPL-21										
WEI-21													



Sample Preparation Package

Appendix B- Geochemical Analysis Methods and Procedures

PREP-31

Standard Sample Preparation: Dry, Crush, Split and Pulverize

Sample preparation is the most critical step in the entire laboratory operation. The purpose of preparation is to produce a homogeneous analytical sub-sample that is fully representative of the material submitted to the laboratory.

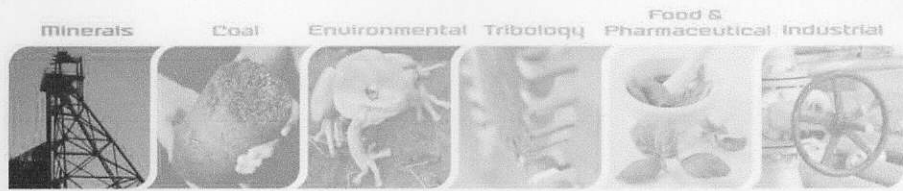
The sample is logged in the tracking system, weighed, dried and finely crushed to better than 70 % passing a 2 mm (Tyler 9 mesh, US Std. No.10) screen. A split of up to 250 g is taken and pulverized to better than 85 % passing a 75 micron (Tyler 200 mesh, US Std. No. 200) screen. This method is appropriate for rock chip or drill samples.

Method Code	Description
LOG-22	Sample is logged in tracking system and a bar code label is attached.
CRU-31	Fine crushing of rock chip and drill samples to better than 70 % of the sample passing 2 mm.
SPL-21	Split sample using riffle splitter.
PUL-31	A sample split of up to 250 g is pulverized to better than 85 % of the sample passing 75 microns.

Revision 03.03
March 29, 2012

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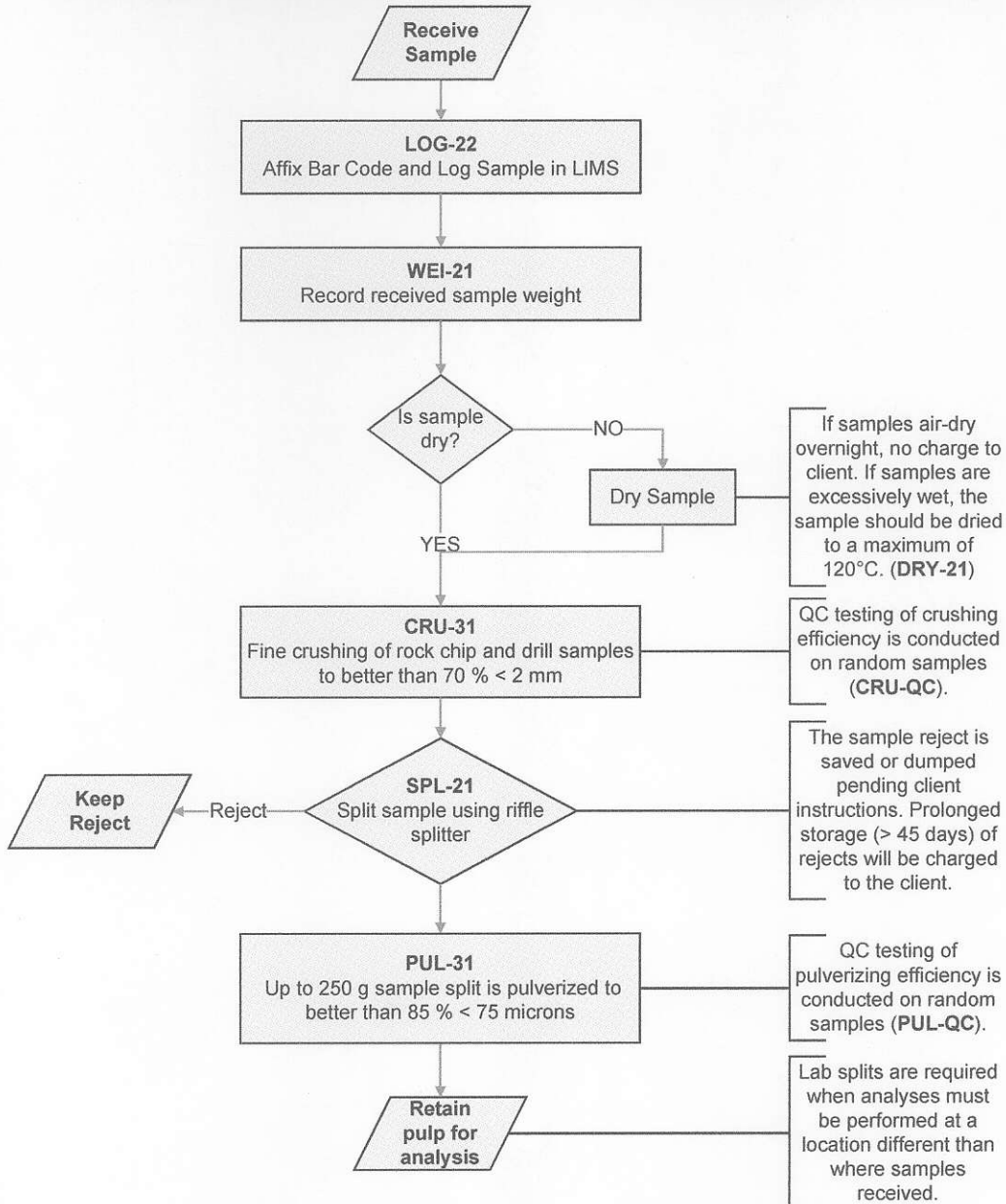
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Sample Preparation Package

Flow Chart -

Sample Preparation Package - PREP-31 Standard Sample Preparation: Dry, Crush, Split and Pulverize



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March 29, 2012

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Fire Assay Procedure

PGM-ICP27 Ore Grade Precious Metals Analysis Method

Sample Decomposition:

Fire Assay Fusion (FA-FUSPG3)

Analytical Method:

Inductively Coupled Plasma - Atomic Emission Spectrometry (ICP-AES)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax and silica, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested for 2 minutes at high power by microwave in dilute nitric acid. The solution is cooled and hydrochloric acid is added. The solution is digested for an additional 2 minutes at half power by microwave. The digested solution is then cooled, diluted to 4 mL with 2 % hydrochloric acid, homogenized and then analyzed for gold, platinum and palladium by inductively coupled plasma - atomic emission spectrometry.

Method Code	Element	Symbol	Units	Sample Weight	Lower Limit	Upper Limit	Default Overlimit Method
Au-ICP27	Gold	Au	ppm	30 g	0.01	100	Au-GRA21
Pt-ICP27	Platinum	Pt	ppm	30 g	0.01	100	Pt-AA23
Pd-ICP27	Palladium	Pd	ppm	30 g	0.01	100	Pd-AA23

Revision 02.00
5-Apr-2018

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ME-ICP41 - Trace Level Methods Using Conventional ICP-AES Analysis

Sample Decomposition:

HNO₃- HCl Aqua Regia Digestion (GEO-AR01)

Analytical Method:

Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES)

A prepared sample (0.50 g) is digested with aqua regia for 45 minutes in a graphite heating block. After cooling, the resulting solution is diluted to 12.5 mL with deionized water, mixed and analyzed by inductively coupled plasma-atomic emission spectrometry. The analytical results are corrected for inter element spectral interferences.

NOTE: In the majority of geological matrices, data reported from an aqua regia leach should be considered as representing only the leachable portion of the particular analyte.

List of Reportable Analytes:

Analyte	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Silver	Ag	ppm	0.2	100	Ag-OG46
Aluminum	Al	%	0.01	25	
Arsenic	As	ppm	2	10000	
Boron	B	ppm	10	10000	
Barium	Ba	ppm	10	10000	
Beryllium	Be	ppm	0.5	1000	
Bismuth	Bi	ppm	2	10000	
Calcium	Ca	%	0.01	25	
Cadmium	Cd	ppm	0.5	1000	
Cobalt	Co	ppm	1	10000	
Chromium	Cr	ppm	1	10000	
Copper	Cu	ppm	1	10000	Cu-OG46
Iron	Fe	%	0.01	50	
Gallium	Ga	ppm	10	10000	
Mercury	Hg	ppm	1	10000	
Potassium	K	%	0.01	10	
Lanthanum	La	ppm	10	10000	
Magnesium	Mg	%	0.01	25	
Manganese	Mn	ppm	5	50000	
Molybdenum	Mo	ppm	1	10000	
Sodium	Na	%	0.01	10	
Nickel	Ni	ppm	1	10000	
Phosphorus	P	ppm	10	10000	
Lead	Pb	ppm	2	10000	Pb-OG46
Sulfur	S	%	0.01	10	
Antimony	Sb	ppm	2	10000	
Scandium	Sc	ppm	1	10000	
Strontium	Sr	ppm	1	10000	
Thorium	Th	ppm	20	10000	
Titanium	Ti	%	0.01	10	

Analyte	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Thallium	Tl	ppm	10	10000	
Uranium	U	ppm	10	10000	
Vanadium	V	ppm	1	10000	
Tungsten	W	ppm	10	10000	
Zinc	Zn	ppm	2	10000	Zn-OG46

Elements Listed below are available upon request:

Analyte	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Cerium	Ce	ppm	10	10000	
Hafnium	Hf	ppm	10	10000	
Indium	In	ppm	10	10000	
Lithium	Li	ppm	10	10000	
Niobium	Nb	ppm	10	10000	
Rubidium	Rb	ppm	10	10000	
Selenium	Se	ppm	10	10000	
Silicon	Si	ppm	10	10000	
Tin	Sn	ppm	10	10000	
Tantalum	Ta	ppm	10	10000	
Tellurium	Te	ppm	10	10000	
Yttrium	Y	ppm	10	10000	
Zirconium	Zr	ppm	5	10000	

APPENDIX C- ROCK CHIP SAMPLE DESCRIPTIONS (DD Project, 2019)

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology
19DD-1	Main Dyke	484118	6089198		871 float	Hornblende pyroxenite
19DD-2	Main Dyke	484133	6089184		868 outcrop	Hornblende pyroxenite
19DD-3	Main Dyke	484133	6089183		868 outcrop	Hornblende pyroxenite
19DD-4	Main Dyke	484133	6089180		868 outcrop	Hornblende pyroxenite
19DD-5	Au-Ag Fault	484066	6089145		855 outcrop angular	Hornblende pyroxenite
19DD-6	Main Dyke	484096	6089183		868 float	Hornblende pyroxenite
19DD-7	Au-Ag Fault	484147	6089118		847 outcrop angular	Hornblende pyroxenite
19DD-8	Main Dyke	484203	6089175		884 float	Hornblende pyroxenite

Sample ID	Alteration	Mineralization
19DD-1	quartz-carbonate-chlorite veining, stockwork	0.8% diss pyrrhotite, tr chalcopyrite, malachite, magnetite, 0.1% limonite
19DD-2	quartz-carbonate veins, breccia texture, angular clasts	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-3	quartz-carbonate veins, 3% limonite, bands 1-3 cm wide	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 3% limonite
19DD-4	quartz-carbonate veining, stockwork	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-5	quartz-carbonate veins, breccia texture, angular clasts	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-6	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-7	quartz-carbonate veining and banded texture	0.2% diss pyrrhotite, tr chalcopyrite, 0.1% lim. tr As-Sb bearing minerals
19DD-8	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite

Sample ID	Vein Strike	Vein Dip	Width (cm)	Cu ppm	Au ppm	Pt ppm	Pd ppm	As ppm	Co ppm	Cr ppm	Ni ppm
19DD-1		85	float	534	0.007	0.13	0.147	2	76	708	1465
19DD-2	105	N	100	823	0.01	0.343	0.448	2	87	650	1610
19DD-3		85	100	652	0.007	0.268	0.354	2	81	713	1255
19DD-4	102	N	200	1310	0.018	0.342	0.4	4	78	486	1660
19DD-5			50	38	0.025	<0.005	0.002	346	7	21	26
19DD-6			float	756	0.029	0.119	0.124	100	39	290	429
19DD-7			25	216	0.457	<0.005	0.001	4100	1	10	11
19DD-8			float	1720	0.034	0.333	0.328	18	77	371	1600

Sample ID	V ppm	Fe %	Mn ppm	Ag ppm	Ca %	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Zn ppm
19DD-1	74	7.01	1205	0.2	13.8	20	2	0.13	4	1440	28
19DD-2	78	6.38	993	0.5	10	100	2	0.2	4	1505	43
19DD-3	82	6.8	1120	0.2	11	110	2	0.29	2	1705	50
19DD-4	77	5.62	811	1	13.9	30	2	0.16	6	2100	40
19DD-5	35	4.26	1210	0.2	14.6	440	4	0.07	13	765	43
19DD-6	96	4.75	990	0.8	3.28	880	3	0.26	14	461	63
19DD-7	7	1.84	651	5	0.9	1070	86	0.19	146	84	68
19DD-8	48	5.94	856	1.4	15.1	30	2	0.22	9	2140	26

Appendix D- Minfile Description

[MINFILE Home page](#) | [ARIS Home page](#) | [MINFILE Search page](#) | [Property File Search](#)
MINFILE Record Summary
MINFILE No 093J 031
[XML Extract / Inventory Report](#)
 PDF

 File Created: 03-Sep-2009 by Garry J. Payie (GJP)
 Last Edit: 03-Nov-2009 by Garry J. Payie (GJP)

SUMMARY [Summary Help](#) 

Name	DD, SNOW	NMI Mining Division	Cariboo
Status	Showing	BCGS Map	093J094
Latitude	<u>054° 56' 60"</u>	NTS Map	093J14E
Longitude	<u>123° 14' 48"</u>	UTM	10 (NAD 83)
Commodities	Copper, Nickel, Platinum, Palladium	Northing	6089250
Tectonic Belt	Omineca	Easting	484200
		Deposit Types	M05 : Alaskan-type Pt+/-Os+/-Rh+/-Ir M02 : Tholeiitic intrusion-hosted Ni-Cu
		Terrane	Quesnel, Plutonic Rocks

Capsule Geology

The DD area is mainly underlain by weakly metamorphosed Middle to Upper Triassic Takla Group argillite/shale, marble and siltstone which are cut by four northwesterly trending belts of Late Triassic to Early Jurassic ultramafic rocks consisting of black pyroxenite, hornblende pyroxenite and hornblende. Lesser diorite and granodiorite occurs as later phases - possible Cretaceous in age.

Disseminated chalcopyrite and nickeliferous pyrrhotite was intersected in two drill holes on the DD property. Minor platinum and palladium mineralization was also found in all three drill holes which were assayed. The mineralization is hosted by an ultramafic dike which strikes east-west with a vertical dip. Later dioritic intrusive phases with pyrrhotite and chalcopyrite have been intersected in the drilling.

From 1974 until 1999 regional and local geochemistry surveys along with airborne magnetic and EM surveys were carried out in the area with much of the work covering the DD claim group. EM conductors, described as formational, were discovered on the property. See McDougall River (093J 007) for history and references with respect to Ezekiel Explorations work on its GN property.

David Bridge, P.Geol., staked the property and started work on it in 2000. He discovered tholeiitic mineralization on the Snow #4 Claim and carried out hand trenching which exposed variably ankerite and silicified altered ultramafic rock containing disseminated chalcopyrite and pyrrhotite with assayed values in copper, nickel, cobalt, platinum, palladium and rhodium.

In the years 2001 and 2002, further work consisted of trenching, grid establishment and soil sampling. The trenching revealed significant mineralization in the form of 0.246% copper, 0.248% nickel; 113 ppm cobalt, 423 ppb palladium, and 12 ppb rhodium across 6 meters (as reported in Assessment Report 27501, page 4).

In 2004, 34.5 metres in 7 trenches were excavated by Almo Capital on the DD claim group. A 5.6 km IP and ground magnetics survey was completed over the Target 1 claim which occurs within the Snow Claims, which is part of the DD claim group.

In 2006, Almo Capital excavated by hand 27 trenches totaling 238 meters and the drilled 5 NQ diamond-drill holes totalling 629.27 metres. All of the trenches were chip-channel sampled at one meter intervals and assayed. Ultramafic rocks were intersected in all of the trenches.

Bibliography

EMPR ASS RPT [26461](#), [27501](#), [28319](#)
 EMPR FIELDWORK 2001, pp. 303-312
 EMPR GF 2000-2; 2000-5
 GSC MAP 1424A

Fig 1 DD Claims General Location

Brown Lines=Contours 100 m Red Lines=Roads

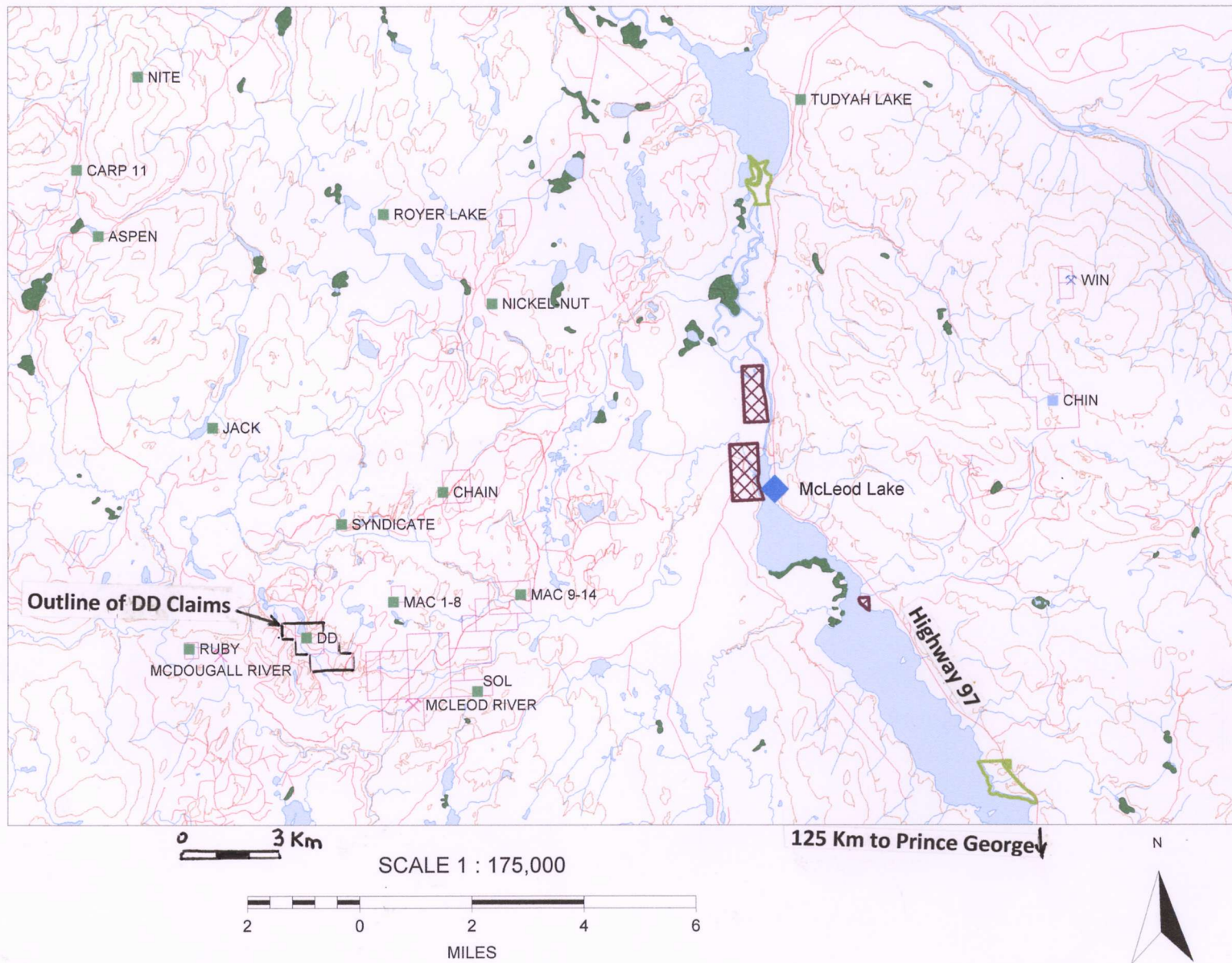


Fig 2 MTO DD Claims



Legend

Mineral Titles (MTO)

MTO Grid

Title (current)
 LEASE
 CLAIM

Reserves
 No Registration
 Conditional
 Heritage/Historic Site

Crown Land Layers (Tantalis)

Land Act Survey Parcels - Tantalis - Legal Descriptions

Label Text
 Land Act Survey Parcels - Tantalis - Outlined

Administrative Boundaries

Federal Transfer Lands - Outlined

 Federal Transfer Lands - Colour Filled

 National Parks - Outlined

 National Park

 National Parks - Colour Filled

 Conservancy Areas - Tantalis - Colour Filled

 Conservancy Areas

 Ecological Reserves - Tantalis - Colour Filled

 Ecological Reserves

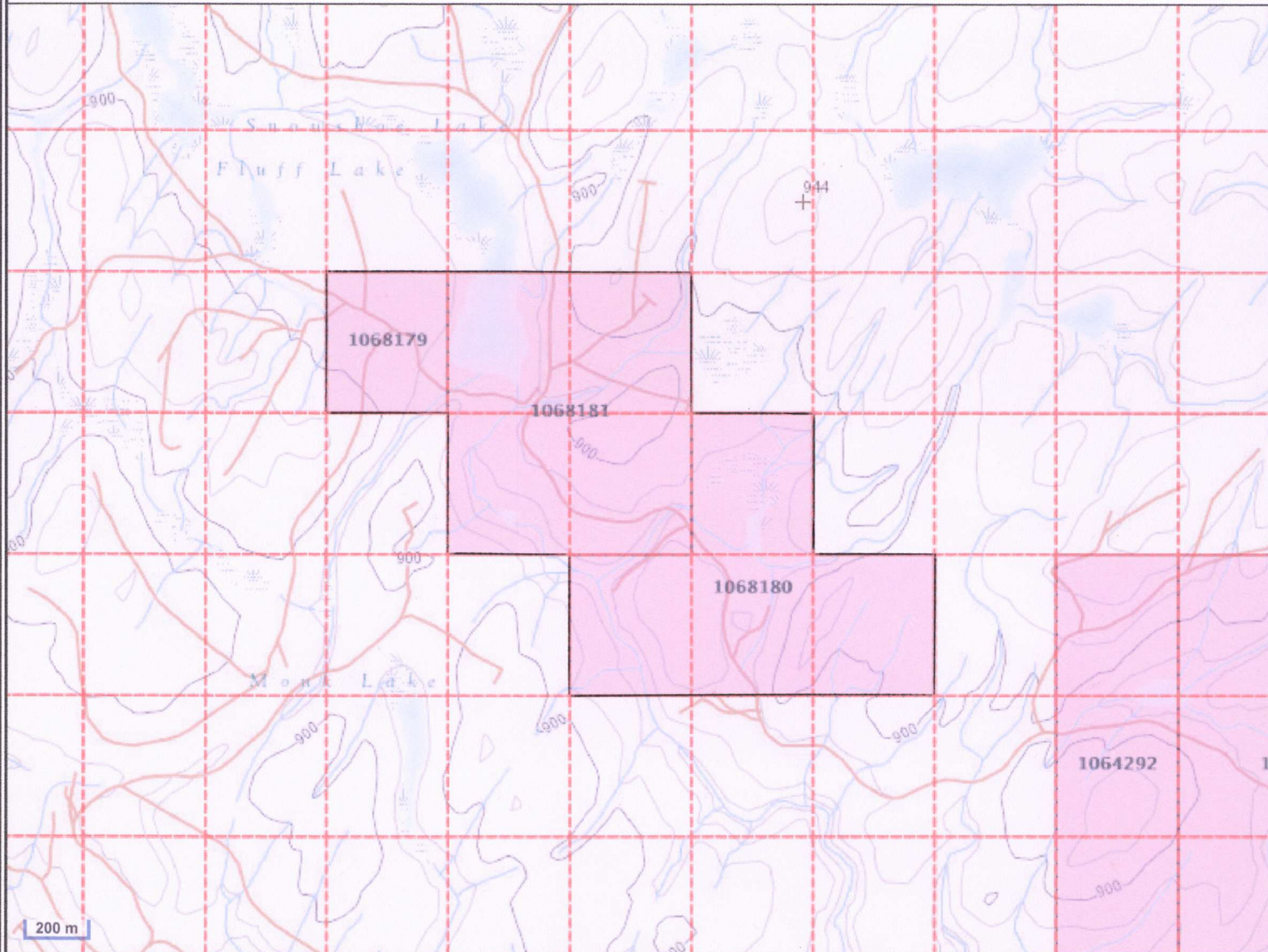
 Protected Areas - Tantalis - Colour Filled

 Protected Areas

 Provincial Parks - Tantalis - Colour Filled

 Provincial Parks

 Recreation Areas - Tantalis - Colour Filled



200 m

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Printed using the Mineral Titles Online (MTO) application. NTS 093J 14E, BCGS 093J.094
 Omnes M.D.
Cariboo

Center: 54°56'53", -123°14'30"
Scale: 1 : 33855
SRS: EPSG:3857
UTM Zone: 10

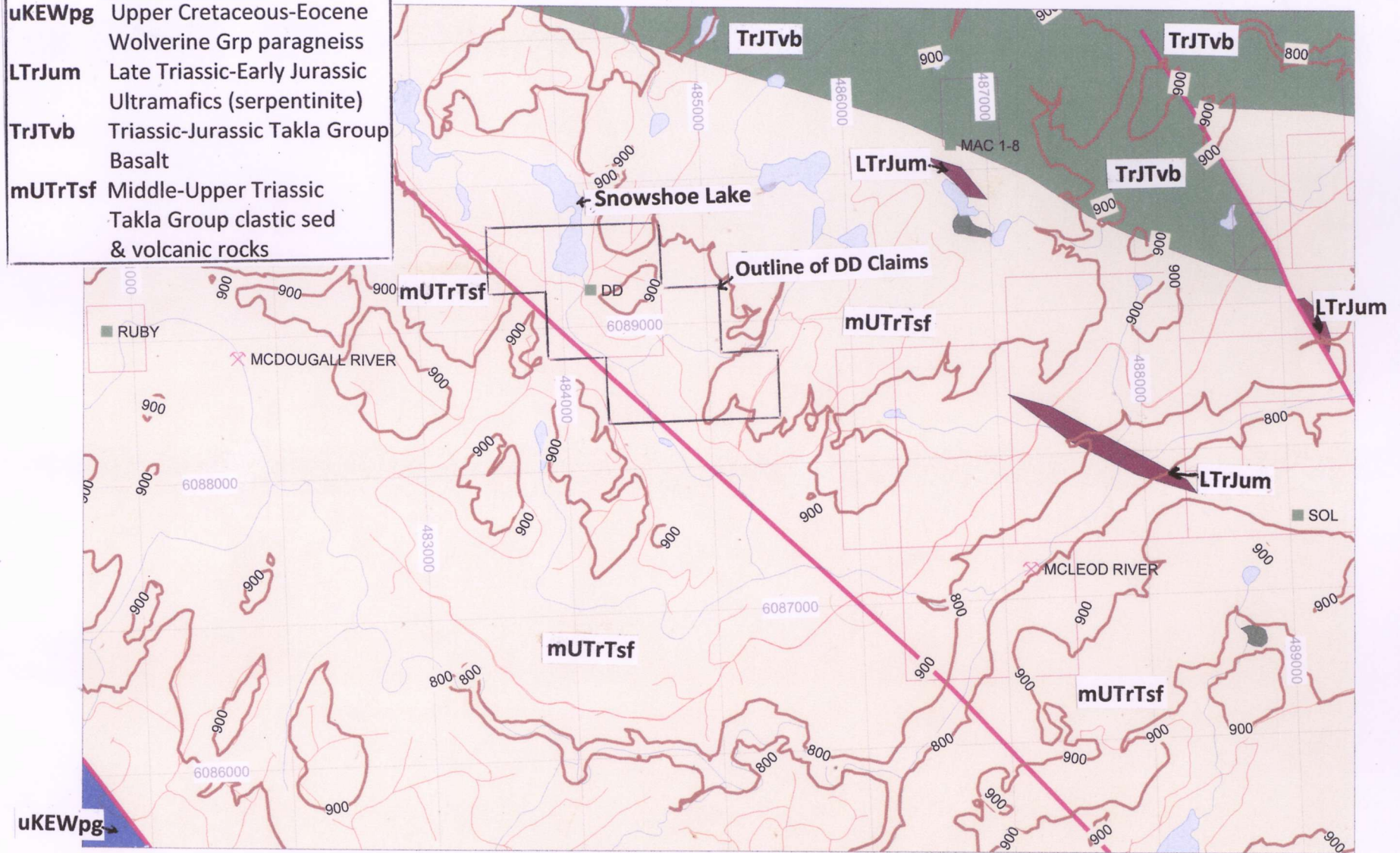


Fig 3 DD Claims General Geology

NTS 093J 14/E, BCGS 093J.094, Cariboo Mining Division

Lithology Legend	
uKEWpg	Upper Cretaceous-Eocene Wolverine Grp paragneiss
LTrJum	Late Triassic-Early Jurassic Ultramafics (serpentinite)
TrJTvb	Triassic-Jurassic Takla Group Basalt
mUTrTsf	Middle-Upper Triassic Takla Group clastic sed & volcanic rocks

1000m



Regional-Scale Fault

Wetland


SCALE 1 : 40,000



Fig 4 Rock Chip Samples

DD Claim MTO ID 1068181, BCGS 93J.094

Legend

 Rock Sample

Sample ID	Zone name	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology
19DD-1	Main Dyke	484118	6089198		float	Hornblende pyroxenite
19DD-2	Main Dyke	484133	6089184		outcrop	Hornblende pyroxenite
19DD-3	Main Dyke	484133	6089183		outcrop	Hornblende pyroxenite
19DD-4	Main Dyke	484133	6089180		outcrop	Hornblende pyroxenite
19DD-5	Au-Ag Fault	484066	6089145		outcrop angular	Hornblende pyroxenite
19DD-6	Main Dyke	484096	6089183		float	Hornblende pyroxenite
19DD-7	Au-Ag Fault	484147	6089118		outcrop angular	Hornblende pyroxenite
19DD-8	Main Dyke	484203	6089175		float	Hornblende pyroxenite

Sample ID	Alteration	Mineralization
19DD-1	quartz-carbonate-chlorite veining, stockwork	0.8% diss pyrrhotite, tr chalcopyrite, malachite, magnetite, 0.1% limonite
19DD-2	quartz-carbonate veins, breccia texture, angular clasts	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-3	quartz-carbonate veins, 3% limonite, bands 1-3 cm wide	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 3% limonite
19DD-4	quartz-carbonate veining, stockwork	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-5	quartz-carbonate veins, breccia texture, angular clasts	0.8% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-6	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite
19DD-7	quartz-carbonate veining and banded texture	0.2% diss pyrrhotite, tr chalcopyrite, 0.1% lim. tr As-Sb bearing minerals
19DD-8	quartz-carbonate-chlorite veining, stockwork	0.6% disseminated pyrrhotite, tr chalcopyrite, magnetite, 0.1% limonite



Google Earth

Image © 2019 Province of British Columbia

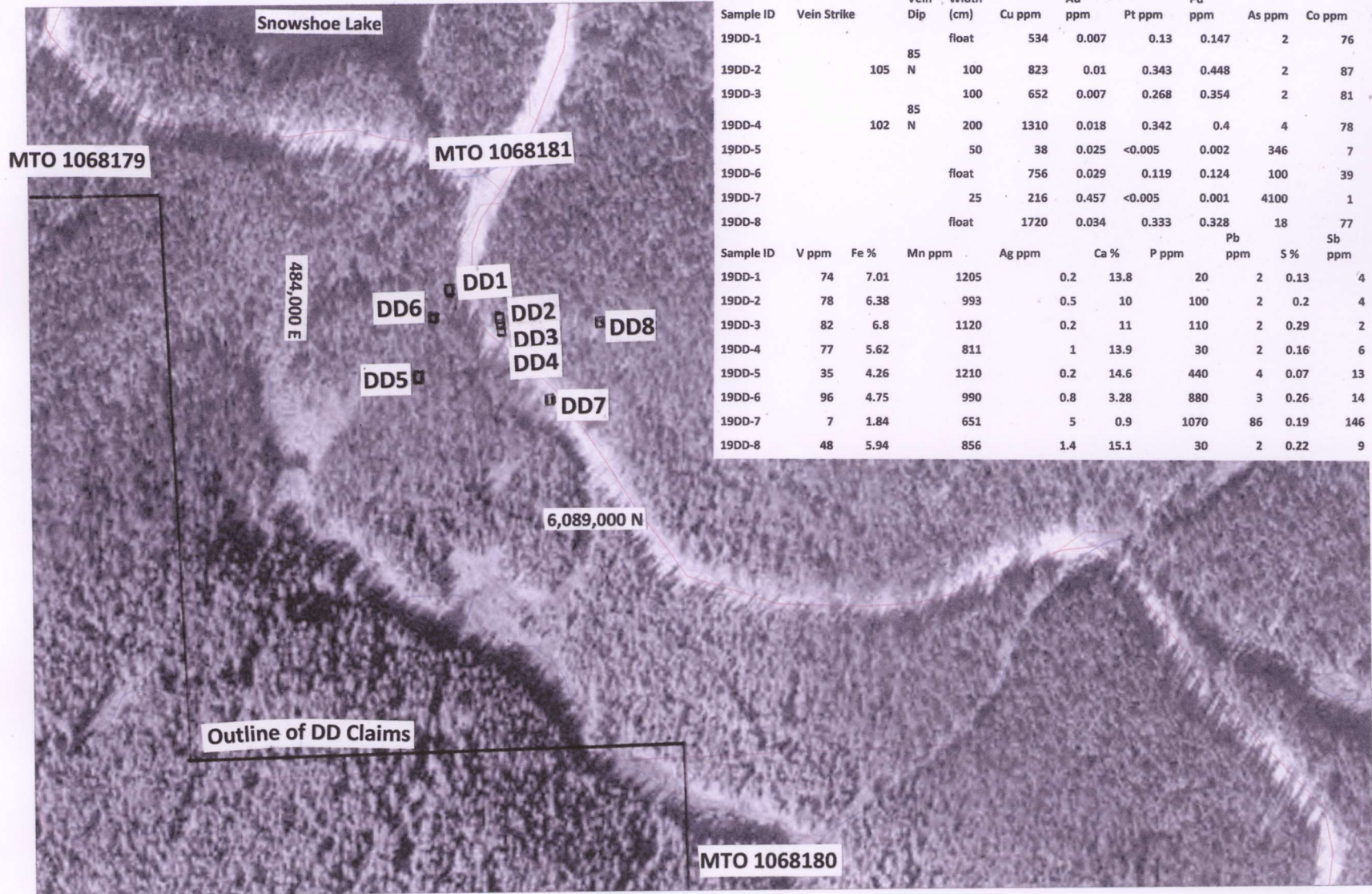
6,089,000 N

100 m



Fig 5A DD Claims Rock Chip Samples (2019)

NTS 093J 14/E, BCGS 093J.094, Cariboo Mining Division



Sample ID	Vein Strike	Vein Dip	Width (cm)	Cu ppm	Au ppm	Pt ppm	Pd ppm	As ppm	Co ppm	Cr ppm	Ni ppm
19DD-1		85	float	534	0.007	0.13	0.147	2	76	708	1465
19DD-2	105	N	100	823	0.01	0.343	0.448	2	87	650	1610
19DD-3		85	100	652	0.007	0.268	0.354	2	81	713	1255
19DD-4	102	N	200	1310	0.018	0.342	0.4	4	78	486	1660
19DD-5			50	38	0.025	<0.005	0.002	346	7	21	26
19DD-6			float	756	0.029	0.119	0.124	100	39	290	429
19DD-7			25	216	0.457	<0.005	0.001	4100	1	10	11
19DD-8			float	1720	0.034	0.333	0.328	18	77	371	1600
Sample ID	V ppm	Fe %	Mn ppm	Ag ppm	Ca %	P ppm	Pb ppm	S %	Sb ppm	Sr ppm	Zn ppm
19DD-1	74	7.01	1205		0.2	13.8	20	2	0.13	4	1440
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19DD-3	82	6.8	1120		0.2	11	110	2	0.29	2	1705
19DD-4	77	5.62	811		1	13.9	30	2	0.16	6	2100
19DD-5	35	4.26	1210		0.2	14.6	440	4	0.07	13	765
19DD-6	96	4.75	990		0.8	3.28	880	3	0.26	14	461
19DD-7	7	1.84	651		5	0.9	1070	86	0.19	146	84
19DD-8	48	5.94	856		1.4	15.1	30	2	0.22	9	2140

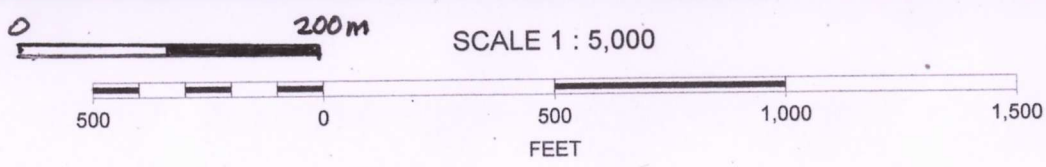
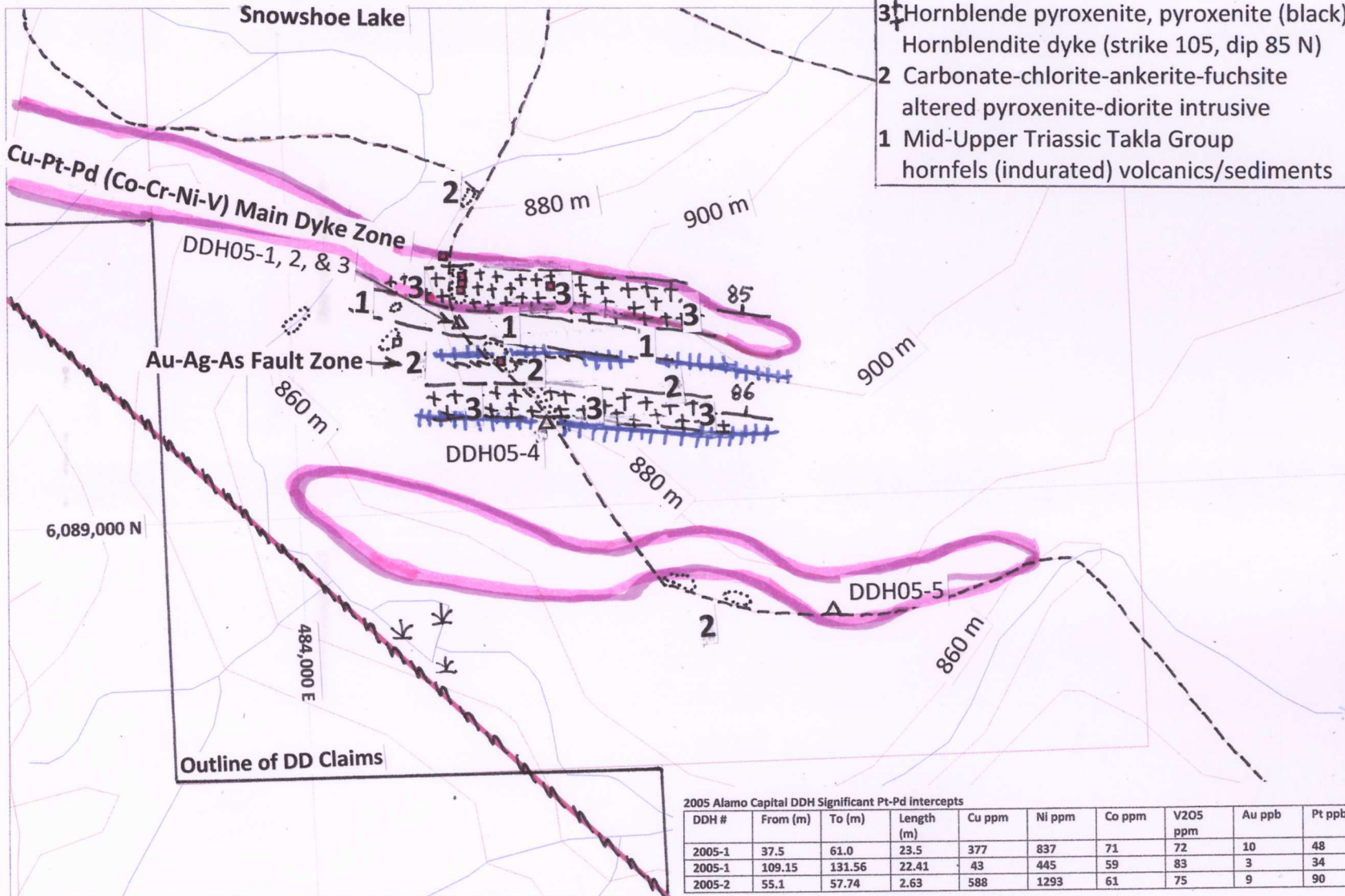


Fig 5B DD Claims Geology (2019)

NTS 093J 14/E, BCGS 093J.094, Cariboo Mining Division

Lithology Legend

- 3 Hornblende pyroxenite, pyroxenite (black), Hornblendite dyke (strike 105, dip 85 N)
- 2 Carbonate-chlorite-ankerite-fuchsite altered pyroxenite-diorite intrusive
- 1 Mid-Upper Triassic Takla Group hornfels (indurated) volcanics/sediments



2005 Alamo Capital DDH Significant Pt-Pd intercepts

DDH #	From (m)	To (m)	Length (m)	Cu ppm	Ni ppm	Co ppm	V205 ppm	Au ppb	Pt ppb	Pd ppb
2005-1	37.5	61.0	23.5	377	837	71	72	10	48	54
2005-1	109.15	131.56	22.41	43	445	59	83	3	34	41
2005-2	55.1	57.74	2.63	588	1293	61	75	9	90	98

200 m
 500 ft.

SCALE 1 : 5,000 **▲** Almo Capital Corp 2005 Diamond Drill Hole Collar

- Local-Scale Fault Regional-Scale Fault Outline of Outcrop Road
- Almo Capital Corp 2004 Positive Ground Magnetometer Anomaly
- Almo Capital Corp 2004 Ground Geophysics Positive IP & Negative Magnetometer Anomaly
- Rock Chip Sample (19DD-1 to 8)

Fig 6 DD Claims 1st Derivative Aeromagnetic Colour Contours

NTS 093J 14/E, BCGS 093J.094, Cariboo Mining Division

