

# **TECHNICAL REPORT**

## **NORTHERN CHAMPION MINERAL PROPERTY SOUTH-CENTRAL BRITISH COLUMBIA CANADA**

Center of Mineral Title 1038840:

49°30'37"N Latitude, 120°54'15"W Longitude

UTM Zone 10 - 651,700E 5,486,296N (NAD83)

NTS MAP 92H/10; BCGS MAP 092H 056

Similkameen Mining Division

### **Prepared for:**

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## Date and Signature Page

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D.G. MacIntyre, Ph.D., P.Eng.

# Table of Contents

Title Page.....	i
Date and Signature Page .....	ii
Table of Contents .....	iii
List of Tables .....	iv
List of Figures.....	v
List of Photos.....	vi
1 Summary.....	1
2 Introduction .....	2
3 Reliance on other Experts.....	6
4 Property Description and Location .....	6
4.1 Mineral Titles .....	7
4.2 Claim Ownership .....	9
4.3 Option Agreement .....	9
4.4 Required Permits and Reporting of Work .....	10
4.5 Environmental Liabilities .....	12
5 Accessibility, Climate, Local Resources, Infrastructure and Physiography .....	12
5.1 Access.....	12
5.2 Climate and Vegetation .....	12
5.3 Local Resources.....	13
5.4 Infrastructure .....	13
5.5 Physiography.....	13
6 History.....	14
6.1 Regional Exploration .....	14
6.2 Showings on the Northern Champion Property .....	18
6.2.1 Jenson’s, H & H (Minfile 092HNE008).....	18
6.2.2 Britton (Minfile 02HNE010) .....	18
6.2.3 Cathy, J and L (Minfile 092HNE038).....	19
6.2.4 Red Gold, Rocket, Champion Creek (Minfile 092HNE097 ).....	19
6.2.5 Copper Queen, Quartz (Minfile 092HNE202) .....	19
6.2.6 Blue Gold, Z, Mount Britton (Minfile 092HNE208) .....	20
7 Geological Setting and Mineralization .....	20
7.1 Regional and Local Geology.....	20
7.1.1 Magmatic and Tectonic History.....	22
7.2 Property Geology and Mineralization.....	24
7.2.1 Stratified Rocks.....	24

7.2.2 Ultramafic Rocks.....	25
7.2.3 Mafic Intrusive Rocks.....	27
7.2.4 Mineralization.....	28
8 Deposit Types .....	31
9 Exploration .....	33
9.1 North Central Area.....	34
9.2 South Central Area .....	38
9.3 Upper Road Area.....	39
9.4 Western Area.....	43
9.5 Results .....	46
9.5.1 Copper.....	46
9.5.2 Gold .....	46
9.5.3 Platinum.....	47
9.5.4 Palladium .....	47
9.5.5 Silver.....	48
9.5.6 Nickel.....	48
9.5.7 Chromium .....	48
9.5.8 Lead.....	49
9.5.9 Zinc.....	49
10 Drilling.....	49
11 Sample Preparation, Analyses and Security .....	49
12 Data Verification.....	52
13 Mineral Processing and Metallurgical Testing.....	53
14 Mineral Resource and Mineral Reserve Estimates .....	53
15 Adjacent Properties.....	54
16 Other Relevant Data and Information.....	58
17 Interpretation and Conclusions .....	58
18 Recommendations .....	59
19 References.....	61
20 Certificate of Author .....	65

## List of Tables

Table 1. List of Mineral Titles, Northern Champion Property as of April 10, 2017 .....	8
Table 2. Option Agreement Terms .....	9
Table 3. Rock sample descriptions, North Central Area.....	36



Table 4. Analytical results for rock samples, North Central Area.....	36
Table 5. Rock sample descriptions, South Central Area .....	38
Table 6. Analytical results for rock samples, South Central Area.....	39
Table 7. Rock sample descriptions, Upper Road Area.....	41
Table 8. Analytical results for rock samples, Upper Road Area.....	41
Table 9. Rock sample descriptions, Western Area .....	45
Table 10. Analytical results for rock samples, Western Area.....	45
Table 11. Elements and Detection Limits (ppm, except where noted) for Actlabs analytical package UT-1M.....	50
Table 12. Elements and Detection Limits (ppb) for Actlabs Analytical Technique 1C-EXP2.51	
Table 13. Code 1B1 (NiS Fire Assay-INAA) Elements and Detection Limits (ppb) .....	52
Table 14. Comparison of analytical results for Au, Pt and Pd in check samples collected by the writer and samples collected by Rich River.....	53
Table 15. Proposed Phase 1 Budget for the Northern Champion Property. ....	59
Table 16. Proposed Phase 2 Budget for the Northern Champion Property (Contingent on results from phase 1).....	59

## List of Figures

Figure 1. General location map, Northern Champion Property, south central British Columbia.....	3
Figure 2. Detailed location and infrastructure map, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017.....	5
Figure 3. Mineral title map, Northern Champion Property. Map prepared by D.G. MacIntyre using Mineral Titles Online geospatial data. Data current as of April 10, 2017. ..	7
Figure 4. Sketch map showing the approximate location of 1992 stream sediment samples and values for Pt in ppb (Roed, 1992). Also shown are the current boundaries of the Northern Champion mineral titles, reverted crown grants (purple outline) and location of 2016 rock samples (green squares).....	17
Figure 5. Tectonic setting of the Tulameen Ultramafic Complex. Source: Nixon and Rublee, 1988.....	21
Figure 6. Regional Geologic Setting of the Tulameen Ultramafic Complex (TUC) and the Northern Champion Property. Map prepared by D.G. MacIntyre from digital geology data from the B.C. Ministry of Energy and Mines (Massey et al., 2005).23	

Figure 7. Property geology. Source: Nixon et al., 1994. ....	28
Figure 8. Index map showing location of 2016 sampling areas. Map prepared by D.G. MacIntyre, April 2017. ....	33
Figure 9. Map showing location of rock samples and analytical results for Cu, Cr, Ni, Au, Pt and Pd, North Central Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017. ....	35
Figure 10. Map showing location of rock samples and analytical results for Cu, Cr, Ni, Au, Pt and Pd, South Central Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017. ....	37
Figure 11. Map showing location of rock samples and analytical results for Cu, C, Ni, Au, Pt and Pd, Upper Road Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017. ....	40
Figure 12. Map showing location of rock samples and analytical results for Cu, Cr, Ni, Au, Pt and Pd, Western Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017. ....	44
Figure 13. Adjacent properties and Minfile mineral occurrences, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017. ....	57

## List of Photos

Photo 1. View northeast toward the south central part of the Northern Champion Property. Photo taken by the writer, November 21, 2016 .....	6
Photo 2. Sample site 451, Upper Road Area. This sample (0451 in tables 7 & 8) returned 841 ppb Au and >100 ppm Ag from a quartz vein cutting foliated ultramafic rocks of the Tulameen Complex. Photo taken by C. Lynes, November 2016. ....	43

# 1 Summary

This technical report describes and evaluates historical and recent exploration work done on the Northern Champion mineral property (the “Property”). The Property, which is road accessible, is located approximately 163 kilometres east-northeast of the city of Vancouver and 29 kilometres west-northwest of the town of Princeton in southern British Columbia, Canada.

This technical report has been prepared at the request of Rain City Resources Inc. (“Rain City” or the “Company”), a private company seeking listing on the Canadian Securities Exchange (“CSE”). The qualifying property consists of 8 contiguous mineral titles covering an area of 678.59 hectares within the Similkameen Mining Division of south central British Columbia, Canada. These mineral titles were acquired by electronic staking by Craig Lynes and cover a number of reverted Crown Granted mineral claims. Rain City has entered into an option agreement with Mr. Lynes whereby it can earn an undivided 100% interest in the Property. To exercise its option, Rain City is required at the stipulated dates to (i) pay an aggregate \$130,000 in cash payments to Rich River; (ii) issue an aggregate 700,000 common shares to Rich River; and (iii) incur an aggregate minimum of \$650,000 in exploration expenditures on the property all on or before the 4<sup>th</sup> anniversary date of Rain City being listed on the CSE. Rich River will retain a 3% net smelter return royalty if the Property goes into commercial production.

The Property lies along the western margin of the Quesnel Terrane. The Quesnel Terrane is a volcano-sedimentary arc terrane that stretches along most of the length of the Canadian Cordillera. Rocks underlying the mineral property are represented by the Triassic rocks of the Tulameen Ultramafic Complex, and metamorphosed sedimentary and volcanic rocks of the Upper Triassic Nicola Group. The Tulameen Ultramafic Complex is an Alaskan-type magmatic intrusion that hosts platinumiferous chromites in its dunite core. The dunite rocks are believed to be the source for placer platinum found in the Tulameen River and its tributaries. Gold bearing placer deposits occur with the platinum but the Nicola volcanic rocks are believed to be the source of gold.

The main exploration targets in the vicinity of the Property have been gold and Platinum Group Element (“PGE”) mineralization associated with the Tulameen Ultramafic Complex and Nicola volcanic rocks. The carbon sequestration potential of olivine rich dunite has also been identified as a potential mineral resource on the Property (Voormeij, 2001). There are six documented mineral showings on the Property, most of which were first discovered in the late 1880’s and these have been intermittently explored by a number of operators over

the years. The Red Gold-Rock-Champion Creek showing is classified as a skarn or polymetallic vein occurrence and the Blue Gold, Z, Mount Britton showing is classified as a polymetallic vein in the Minfile database. All the other showings are within the Tulameen Ultramafic Complex and are classified as Alaskan type PGE occurrences (type M05).

This report describes the results of the 2016 exploration program completed on the Northern Champion Property. This program involved prospecting and rock sampling mostly within the central and western parts of the Property. A total of 101 rock samples, mostly grab samples from outcrop, were collected in November 2016. This work was supervised by Craig Lynes and was done on behalf of Rain City. All samples were analyzed by Activation Laboratories Ltd. (“Actlabs”) in Kamloops B.C.

The analytical results confirmed the presence of widespread but localized copper, with lesser gold, platinum and palladium bearing mineralization, mostly within the hornblende pyroxenite border phase of the Tulameen Ultramafic Complex. These showings, many of which appear to be new discoveries, are classified as Alaskan type PGE occurrences associated with emplacement and crystallization of the ultramafic rocks. Of the 34 rock samples collected from the Upper Road area, 9 returned Cu values greater than 3000 ppm. The highest value was sample 0452 which returned 9490 ppm Cu. Seventeen other samples were moderately to strongly anomalous with values ranging between 345 to 2980 ppm Cu. Two samples were also strongly anomalous in Pt, returning 287 ppb and 546 ppb respectively and three samples were strongly anomalous in Pd returning 437 ppb, 474 ppb and 1370 ppb respectively. The best Au result was for a sample from the Upper Road area which returned 841 ppb Au.

In the writer’s opinion, based on the results of the 2016 rock geochemical program, the Northern Champion Property is a property of merit and additional expenditures on mineral exploration are warranted. The main focus of this work, which is estimated to cost \$101,000, should be to determine the overall extent and grade of the new showings discovered in 2016, particularly in the Upper Road Area. This work would involve additional close spaced rock chip sampling, hand trenching and a soil geochemical grid. A coincident Beep Mat geophysical survey should also be done to detect near surface sulphide and/or magnetite mineralization in covered areas. Depending on the results of this work, a second stage of exploration would involve diamond drilling of the best targets.

## 2 Introduction

This technical report has been prepared at the request of Rain City Resources Inc., the property operators. The writer has been asked to review all the data pertaining to the

Property and to prepare a technical report that describes the historical work completed on the Property, reviews the results of the 2016 work done by Rain City and makes recommendations for further work, if warranted.

This technical report is based on work done on the Property in November 2016 by Craig Lynes on behalf of Rich River Exploration. Mr. Lynes is the registered owner of the mineral titles that comprise the Northern Champion Property.

This technical report has been prepared in compliance with the requirements of National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* and Form 43-101F1 and is intended to be used as supporting documentation to be filed by Rain City with the Securities Commissions in connection with an initial public offering of its common shares and the listing thereof on the Canadian Securities Exchange (the "CSE").



Figure 1. General location map, Northern Champion Property, south central British Columbia.

In preparing this report, the author has reviewed the geological, geophysical and geochemical reports, maps and miscellaneous papers listed in the References section. Of particular value are a number of publically available assessment reports and property files recording work done by previous operators on the Northern Champion Property. These reports contain detailed information on the results of work done on the property since its initial discovery. These reports also form the basis for the Minfile descriptions referenced in this report. These descriptions were prepared by professional geoscientists on contract to the B.C. Ministry of Energy and Mines using publically available assessment reports, property file reports and Minister of Mines Annual Reports. The writer has read key reports for the Minfile occurrences covered by the Property and can confirm that the Minfile descriptions accurately report work done on individual showings and the nature and extent of mineralization.

The writer visited the Northern Champion Property on November 21, 2016. At the time of this visit Mr. Lynes was conducting a rock geochemical sampling program. Several sites with newly discovered sulphide mineralization were visited. The results of the 2016 program are documented in this technical report. A search of Mineral Titles Online did not reveal any new Statements of Work filed after 2016. This suggests there has not been any additional work that would constitute a material change to the Property since the writers visit in 2016.

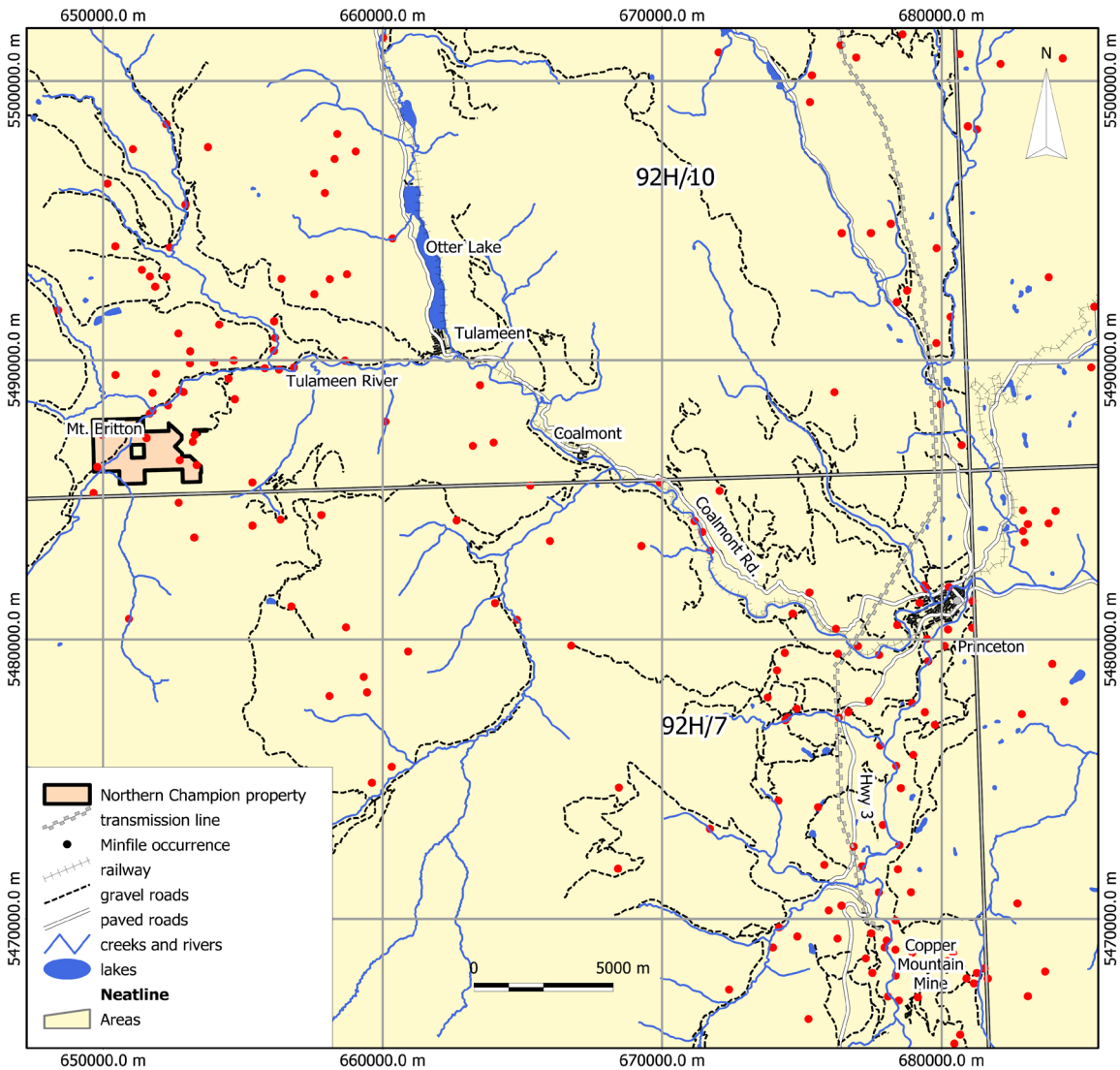


Figure 2. Detailed location and infrastructure map, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017.

The units of measure used in this report are metric; monetary amounts are in Canadian dollars. All maps, with the exception of the general location map (Figure 1), are in Universal Transverse Mercator projection, Zone 10N and are based on the North American 1983 datum (NAD83) or World Geodetic 1984 datum (WGS84).





*Photo 1. View northeast toward the south central part of the Northern Champion Property. Photo taken by the writer, November 21, 2016*

### **3 Reliance on other Experts**

The writer has not relied on the opinion of non-qualified persons in the preparing of this report. All opinions expressed in this report are those of the writer based on a review of historical work done on the property including work done in 2016 by Craig Lynes, prospector and owner of Rich River Exploration Ltd.

### **4 Property Description and Location**

The Northern Champion Property is located approximately 163 kilometres east-northeast of the city of Vancouver and 29 kilometres west-northwest of the town of Princeton in southern British Columbia, Canada (Figures 1 and 2). The property is road accessible via the Tulameen River road. The writer is not aware of any restrictions to access or other factors that could affect the ability to perform work on the property. The property is on Crown Land and is open to mineral exploration providing a Notice of Work is filed with the Province of British Columbia for any physical disturbances and that local First Nations are consulted.



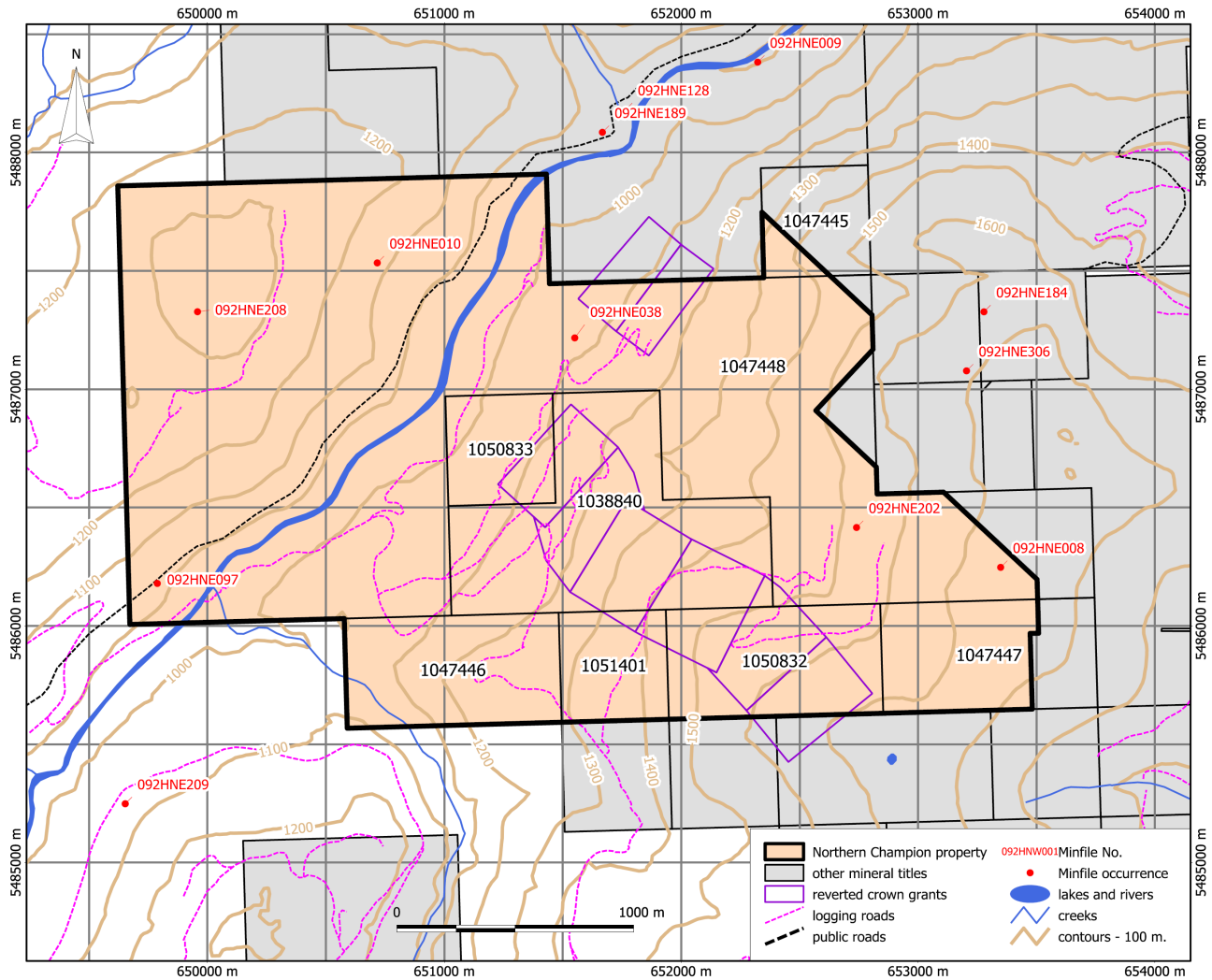


Figure 3. Mineral title map, Northern Champion Property. Map prepared by D.G. MacIntyre using Mineral Titles Online geospatial data. Data current as of September 17, 2018.

### 4.1 Mineral Titles

Data obtained from Mineral Titles Online (“MTO”) indicates that the Northern Champion Property consists of 8 contiguous mineral titles covering a total area of approximately 734.15 hectares (Table 1). However, the property partially overlaps pre-existing mineral titles that are still in good standing and when the area of overlap is subtracted, the total area of the Property is reduced to 678.59 (Table 1). As shown in Figure 3, the Property straddles the Tulameen River and the Tulameen River Road and is centered approximately 11.7 kilometres east-northeast of the community of Tulameen. The Property is located in the Similkameen Mining District of southern British Columbia, Canada.

Details of the status of title ownership for the Northern Champion Property were obtained from the MTO database managed by the Mineral Titles Branch of the Province of British Columbia. All mineral titles located after February, 2005 were acquired online using a grid cell selection system. Title boundaries are based on lines of latitude and longitude. There is no requirement to mark title boundaries on the ground as these can be determined using a Global Positioning System (GPS). The Northern Champion mineral titles were acquired after 2005 and therefore do not need to be surveyed.

The mineral titles comprising the Northern Champion Property are shown in Figure 3 and listed in Table 1. The mineral titles map shown in Figure 3 was generated from Geographic Information System (GIS) spatial data downloaded from the Province of B.C. GeoBC website. These spatial layers are the same as those incorporated into the MTO electronic staking system that is used to locate and record mineral titles in British Columbia. The information presented in Table 1 and Figure 3 is current as of September 17, 2018.

The Property is located in the Similkameen Mining Division, on NTS map sheet 92H/10.

**Table 1. List of Mineral Titles, Northern Champion Property as of September 17, 2018.**

Title Number	Claim Name	Issue Date	Good To Date	Area (ha)	Area (ha)*
1038840	OLIVINE	2015/SEP/27	2025/JUL/01	83.91	83.91
1047445	NORTH OLIVINE	2016/OCT/25	2025/JUL/01	20.97	3.88
1047446	THE CHAMP	2016/OCT/25	2025/JUL/01	41.96	41.96
1047447	OLIVINE GREEN	2016/OCT/25	2025/JUL/01	41.96	29.67
1047448	NORTHERN CHAMPION	2016/OCT/25	2025/JUL/01	461.43	435.25
1050832	OLIVINE II	2017/MAR/17	2019/MAR/17	41.96	41.96
1050833	GREEN OLIVE	2017/MAR/17	2019/MAR/17	20.98	20.98
1051401	OLIVE GREEN III	2017/APR/13	2019/APR/14	20.98	20.98
				734.15	678.59

The mineral titles that comprise the Northern Champion Property were acquired by electronic staking using MTO. These titles cover a number of reverted Crown Granted mineral claims (Figure 3). The total area of the mineral titles listed in Table 1 that do not overlap pre-existing mineral titles that are still in good standing is 678.59 hectares. The non-overlap mineral title areas were determined using the Manifold GIS clipping function which produced the mineral title polygons shown in Figure 3.

## 4.2 Claim Ownership

Information posted on the MTO website indicates that all of the mineral titles listed in Table 1 are owned 100% by Craig A. Lynes (FMC # 116233). Mr. Lynes holds these mineral titles on behalf of his company, Rich River Exploration Ltd. (“Rich River”). Mineral title details given in Table 1 were obtained using an online mineral title search engine available on the MTO web site. Mr. Lynes filed a Statement of Work (“SOW”) with the B.C. Ministry of Energy and Mines on September 1, 2017 claiming \$70,104.56 in assessment credit for the work done on the Property in 2016 (MTO Event 5662777). This work credit was applied to the first 5 mineral titles listed in Table 1 and advanced their Good to Dates to July 1, 2025. Mineral Titles 1050832, 1050833 and 1051401 were extended to their current Good to Dates by paying cash in lieu of exploration work.

## 4.3 Option Agreement

The Northern Champion mineral titles are subject to an option agreement dated October 25, 2016 between Rain City, Craig A. Lynes and Rich River whereby Rain City was granted an irrevocable and exclusive option to acquire a 100% interest in the property. Details of this agreement are described in greater detail below.

To exercise its option, Rain City is required to (i) pay an aggregate \$130,000 in cash payments to Rich River; (ii) issue an aggregate 700,000 common shares to Rich River; and (iii) incur an aggregate minimum of \$650,000 in exploration expenditures on the property, in accordance with the following schedule:

**Table 2. Option Agreement Terms**

<b>Date for Completion</b>	<b>Cash Payment</b>	<b>Number of Common Shares to be Issued</b>	<b>Min. Exploration Expenditures</b>
Upon execution of property option agreement	\$5,000	Nil	Nil
Within one year of execution of the option agreement	Nil	Nil	\$75,000
Upon listing on a Canadian Stock Exchange	\$5,000	100,000	Nil
On or before the 1 <sup>st</sup> anniversary of Listing	\$10,000	100,000	\$75,000
On or before the 2 <sup>nd</sup> anniversary of Listing	\$20,000	100,000	\$100,000
On or before the 3 <sup>rd</sup>	\$40,000	200,000	\$200,000

<b>Date for Completion</b>	<b>Cash Payment</b>	<b>Number of Common Shares to be Issued</b>	<b>Min. Exploration Expenditures</b>
anniversary of Listing			
On or before the 4 <sup>th</sup> anniversary of Listing	\$50,000	200,000	\$200,000

In accordance with the terms of the property option agreement, Rich River and Mr. Lynes will retain a 3% net smelter returns royalty (the "NSR") on the Northern Champion Property. Rain City will have the right to purchase 1% of such NSR for \$750,000 and the remaining 2% of such NSR for \$1,000,000. Otherwise, once Rain City exercises its option to acquire a 100% interest in the Northern Champion Property and upon the commencement of commercial production thereon, the NSR is payable to Rich River and Mr. Lynes on all base, rare earth elements and precious metals upon receipt by Rain City of payment from the smelter refinery or other place of treatment of the proceeds from the sale of the minerals, ore, concentrates or other products from the Northern Champion Property. Rain City will be the operator of the Northern Champion Property during the term of the Property Option Agreement and Rich River Exploration Ltd. will be the primary contractor when possible. Rain City will also pay any rates, taxes, duties, royalties, assessments or fees levied with respect to the Northern Champion Property or Rich River and Mr. Lynes' operations thereon and will apply and pay for assessment credits for the mineral claims comprising the Northern Champion Property for all the work and expenditures conducted on all or any part of the Northern Champion Property.

#### **4.4 Required Permits and Reporting of Work**

Acquisition of mineral titles in British Columbia is done electronically through MTO. The electronic map used by MTO allows you to select single or multiple adjoining grid cells. Cells range in size from approximately 21 hectares (457m x 463m) in the south at the 49<sup>th</sup> parallel to approximately 16 hectares in the north at the 60<sup>th</sup> parallel. This is due to the longitude lines that gradually converge toward the North Pole. Clients are limited to 100 selected cells per submission for acquisition as one mineral title. The number of submissions is not limited, but each submission for a claim must be completed through to payment before another can commence. No two people can select the same cells simultaneously, since the database is live and updated instantly; once you make your selection, the cells you have selected will no longer be available to another person, unless the payment is not successfully completed within 30 minutes.

In British Columbia, the owner of a mineral title acquires the right to the minerals which were available at the time of title acquisition as defined in the Mineral Tenure Act of British

Columbia. Surface rights and placer rights are not included. Mineral titles are valid for one year and the anniversary date is the annual occurrence of the date of recording (the “Issue Date”).

A mineral title has a set expiry date (the “Good To Date”), and in order to maintain the title beyond that expiry date, the recorded holder (or an agent) must, on or before the expiry date, register either exploration and development work that was performed on the title, or a payment instead of exploration and development (“PIED”). Failure to maintain a title results in automatic forfeiture at the end (midnight) of the expiry date; there is no notice to the title holder prior to forfeiture.

When exploration and development work or a PIED is registered, the title holder or agent may advance the title forward to any new date. With PIED the minimum requirement is 6 months, and the new date cannot exceed one year from the current expiry date; with work, it may be any date up to a maximum of ten years beyond the current anniversary year. All recorded holders of a mineral title must hold a valid Free Miners Certificate (“FMC”) when either work or PIED is registered on a mineral title.

The following are the current exploration expenditure or PIED amounts required to maintain a mineral title in good standing for one year:

Mineral Title - Work Requirement:

- \$5 per hectare for anniversary years 1 and 2;
- \$10 per hectare for anniversary years 3 and 4;
- \$15 per hectare for anniversary years 5 and 6; and
- \$20 per hectare for subsequent anniversary years

Mineral Title - PIED

- \$10 per hectare for anniversary years 1 and 2;
- \$20 per hectare for anniversary years 3 and 4;
- \$30 per hectare for anniversary years 5 and 6; and
- \$40 per hectare for subsequent anniversary years

Only work and associated costs for the current anniversary year of the mineral title may be applied toward that title. A report detailing work done and expenditures made must be filed with the B.C. Ministry of Energy and Mines within 90 days of filing of a Statement of Work (“SOW”). After the report is review by ministry staff it is either approved or returned to the submitter for correction. Failure to produce a compliant report could result in loss of assessment credit and forfeiture of the mineral titles to which the credit was applied.

At the time of writing, Mr. Lynes had not filed a Statement of Work for the exploration work done on the Property in 2016.

Prior to initiating any physical work such as drilling, trenching, bulk sampling, camp construction, access upgrading or construction and geophysical surveys using live electrodes (IP) on a mineral property a Notice of Work permit application must be filed with and approved by the Ministry of Energy and Mines. The filing of the Notice of Work initiates engagement and consultation with all other stakeholders including First Nations.

#### **4.5 Environmental Liabilities**

The writer is not aware on any environmental issues or liabilities related to historical exploration or mining activities that would have an impact on future exploration of the property.

## **5 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

### **5.1 Access**

The Property can be accessed by driving a paved road (Coalmont Road) from Princeton to Tulameen, a distance of 27 kilometres, and then continuing west on the narrow but well maintained Tulameen River Road for another 15.6 kilometres to a junction that connects to a number of active Forest Service Roads (“FSRs”). Access to the southern part of the property is gained by turning right at this junction and following a well-maintained FSR that crosses the Tulameen River and connects with a network of secondary forestry roads on the southeast side of the river. These forestry roads provided access to the area sampled in 2016.

### **5.2 Climate and Vegetation**

The climate in the vicinity of the Property is typical of southern B.C. interior mountainous areas with moderate winters and warm, semi-arid summers. The region experiences moderate precipitation (356 mm per year) due to being located on the lee side of the Cascade Mountains. Snow covers higher elevations starting in November and lasts until late May. There is usually only a light snow cover that averages 22 centimetres but heavier snowfalls have also been recorded. The seasonal snow melt reaches its climax in June and July resulting in high water levels in creeks and rivers. In a typical year, starting with the month of August the water levels on most creeks have dropped to a point where they can be crossed without danger. With appropriate bridge construction and road maintenance there is no reason to believe that a mine could not operate a full 365 days of the year in the

Tulameen River area. Although exploration can be conducted on the property at any time during the year, the summer months have the least challenges in terms of keeping the main access road open.

The Property is partially covered by mature fir forests usually developed on glacial till. Extensive logging has occurred southeast of the Tulameen River. Elsewhere, lower elevations are sometimes covered by dense second growth forests. A few types of plants that are specific to 'serpentine soils' have developed on the ultramafic rocks of the Tulameen Ultramafic Complex.

### **5.3 Local Resources**

Mining and the forest industry are mainstays of the local economy. Supplies to sustain such operations are readily available in Princeton, a town of approximately 2,800 people. There are three mining operations in the area. The important Copper Mountain Mine is located 14 kilometres south of Princeton, the Basin Coal Mine is located 9 kilometres south of Coalmont on the Blakeburn Forestry Road and the Treasure Mountain silver-base metals mine is located about 17 kilometres southwest of the Property.

### **5.4 Infrastructure**

The Northern Champion Property is well situated with regard to local logging road infrastructure. Adequate fresh water for a mining operation could be drawn from the Tulameen River and its tributaries. There is a hydro transmission line located approximately 12 east-northeast of the property at the community of Tulameen (Figure 2).

### **5.5 Physiography**

The Property is located in a transition zone between the Cascade Mountains to the west and the Interior Plateau to the east. On the Property the elevations range from just over 900 m metres down in the Tulameen River valley to just over 1,700 metres in the southeast corner of the property. The tops of the mountains are rounded by weathering and glaciation. Glacial till covers many mountain slopes. Massive outcrops with little or no soil development, talus slopes and fluvial terraces occur on the steeper mountain slopes and in the canyon of the Tulameen River.

The Tulameen River flows northeastward from the Cascade Mountains for 30 kilometres to the town of Tulameen. The upper part of the river runs through a wide valley extending from its headwaters in Paradise Valley southward to Champion Creek. The river continues through a narrow rock-walled canyon between Grasshopper and Olivine Mountains to the mouth of Olivine (Slate) Creek.

## 6 History

### 6.1 Regional Exploration

The following description of the history of the area is modified from B.C. Ministry of Mines assessment reports by Oancea (2013) and Yeomans (2014). Most of the British Columbia records of production come from the Annual Reports of the Minister of Mines (ARMM).

Gold was first discovered in the Similkameen region in 1853 by George B. McClellan but the 1861 discovery of gold in the Cariboo region of British Columbia caused most of the placer miners to leave the poorer diggings on the Similkameen for the prospect of new riches. The first record of placer mining in the area was recorded in 1860, at the Blackfoot Camp on the Similkameen River, 11 kilometres south of Princeton. In the period 1885 to 1950, some 42,719 ounces of gold were reported as being produced in the Similkameen Mining Division. It is estimated that a total of 20,000 ounces of platinum was placer mined in the region in the period prior to 1905.

Gold and platinum deposits have been found over the lower 40 kilometres of the Tulameen River. Most recorded production and exploration has occurred along two stretches. The upper stretch begins about 2 kilometres west of Tulameen and continues up the river for 12 kilometres to the mouth of Champion Creek. The lower stretch begins at Coalmont, just above the mouth of Granite Creek, and continues southeast for 19 kilometres to Princeton. (Minfile 092HNE199). There are no records for the placer mining activity that took place before 1885 as many of the miners used to ship the gold out of the country without paying taxes. There is even less information on the quantity of platinum produced in the region as it was usually shipped and sold out of the province. The records after 1885 are 'reasonably complete' (Holland, 1950).

In 1885, cowboy Johnny Chance discovered gold nuggets in the Tulameen River next to the confluence with Granite Creek, which is Tulameen's southern tributary. Large quantities of gold were subsequently found not only on Granite Creek but also on the Tulameen River and many of its southern tributaries. A city was founded at the confluence of Granite Creek with the Tulameen River. Granite City boasted a population of over 700 people and was a typical city for the gold rush era. Early placer miners noticed the association of gold with a heavy whitish metal but not recognizing it as platinum they have initially discarded it. However, by 1891, the Tulameen mining district was considered to be one of the most important producers of platinum in North America.



Production of placer gold was first reported in 1877, and may have commenced as early as 1860. By 1887, most of the shallower gravel deposits mined along the Tulameen River are reported to be exhausted (ARMM 1887). In 1890 over 100 people were reportedly mining the Tulameen River by employing rudimentary methods (rockers). Even so during that year a miner is reported to have recovered 40 ounces of platinum from the river (ARMM 1890). A few operators along the upper section persisted through the early 1900's. One operation on the Schubert lease, 10 kilometres up river from Tulameen, is reported to have recovered 620 grams of gold and also some platinum from 1500 cubic metres of gravel (ARMM 1916). The community of Tulameen had developed during the same years, while the community of Coalmont was founded in 1912 when the gold rush subsided and the development of local coal deposits started.

High platinum prices during World War I and the 1920's prompted a revival of placer mining along both the upper and lower sections of the river. Several deposits saw significant production during this time on the upper part of the river. The Sootheran lease, 1 kilometre below Britton (Eagle) Creek, operated intermittently between 1925 and 1947, producing 3920 grams of platinum and 530 grams gold between 1926 and 1928. Big Bend Platinum Gold Mining Company Ltd. produced 280 grams of gold and 930 grams of platinum from the J. Marks lease, 10 kilometres upstream from Tulameen (ARMM 1928).

Sporadic exploration and production occurred during the 1950's, 1960's and 1970's, mostly below the canyon, between Olivine Creek and the town of Tulameen. Crude gold production for the entire river between 1885 and 1945 is estimated at 297,000 grams (9,548 ounces). (Minfile 092HNE199).

Approximately 2.2 kilometres of the Tulameen River downstream from its confluence with Champion Creek is covered by the Property. On this section the gold to platinum ratio was 1:1 but usually close to the mouth of Britton Creek more platinum had been recovered than gold.

In general placer mining activities on the Tulameen River have been concentrated on areas endowed with thinner alluvium (gravels) or on higher elevation benches. This was also characteristic for the narrow rock walled canyon area located on the Northern Champion Property. Areas where the Tulameen valley was wider display thicker but poorer gravels that have never been worked for gold or platinum (Camsel, 1913).

Kemp (1902) noted that the larger platinum nuggets found in the river are associated with chromite, olivine and pyroxenes. He was the first to propose that placer platinum was derived from ultramafic rocks that outcrop in an area cut by the river and which coincided with the richest platinum placers.

Important contributions to understanding the geology of the Tulameen Ultramafic Complex (“TUM”) and its hosted mineralization were brought by Camsell (1913), O'Neill and Gunning (1934), Findlay (1969), Mertie (1969), St. Louis (1982), St. Louis et al. (1986) and Nixon (1988, 1990, 1990a).

The platiniferous dunite rocks of the Tulameen Ultramafic Complex continued to attract the attention of numerous explorers. Explorers with notable finds include Imperial Metals (1984-1986), Newmont Exploration (1986), Longreach Resources Ltd (1987-1988) and Dia Met Minerals (1986-1989).

The industrial mineral potential for olivine was the focus of research done by CANMET in the early 1980's. Further evaluation was done by G.V. White in 1986 (White, 1987) and K.D. Hancock in 1991 (Hancock et. al, 1991). Dia Met Minerals Ltd., using the CANMET data focused on the industrial mineral potential for olivine in the area immediately northeast of the confluence of Britton Creek with the Tulameen River. This area was tested by diamond drilling during the period from 1986 to 1989. Dia Met also re-sampled the area studied by CANMET and, on the basis of this data, thirty-one (31) percussion drill holes totalling 1,411 metres were completed. This work outlined a zone of potential economic interest for olivine that extended to a depth of 170 meters, with a surface dimension of 105 meters by 270 meters along the north side of the Tulameen River within the dunite core of the Tulameen Ultramafic complex.

Dia Met crews also conducted a soil orientation survey on the Chapman property. Following the orientation survey, an additional of 52 soil samples were collected and assayed at Bondar Clegg for Pt-Pd and Au. A heavy mineral survey utilizing “The Fipke Method” was conducted at 16 sites at depths from 100 to 150 cm from glaciofluvial, talus and stream sediment sites on the claims. Seventy-eight chip channel rock samples were also collected and assayed for Pt, Pd, Cr and Au (Schiller, 1987).

In 1992, Geoterrain Consultants compiled and evaluated all of the Dia Met data and conducted reconnaissance terrain mapping and analysis of preglacial, glacial and post-glacial deposits and geologic history to provide a framework for interpretation of geochemical results and future work on the claims. This work was done on behalf of R. Chapman. Part of this evaluation involved a silt sampling program of north flowing creeks draining into the Tulameen River between Champion and Britton Creeks. Part of this survey area is covered by mineral titles 1047448 and 1038840 of the Northern Champion Property (Figure 4). Several samples contained anomalous Pt concentrations, the highest value being 1327 ppb.

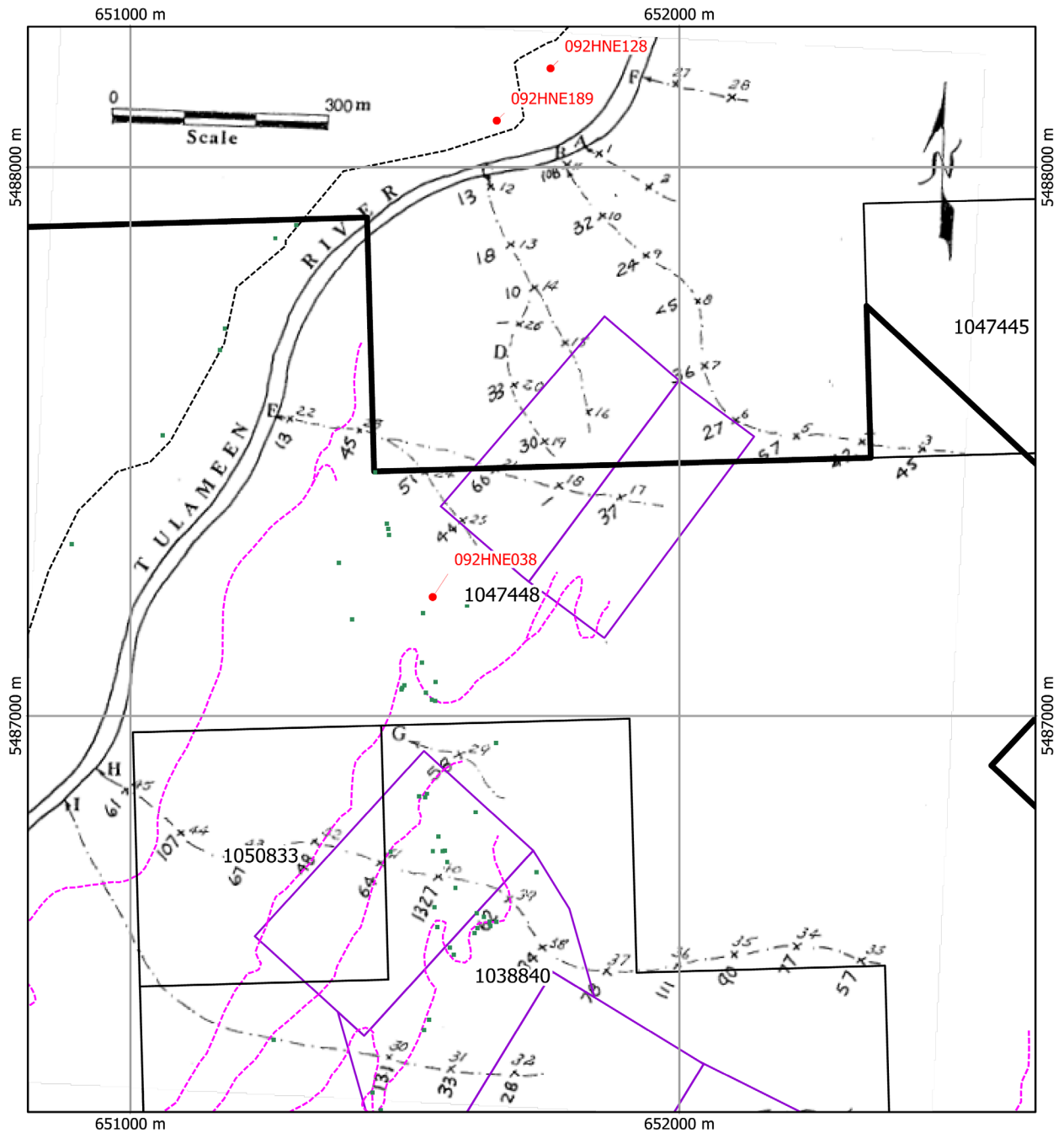


Figure 4. Sketch map showing the approximate location of 1992 stream sediment samples and values for Pt in ppb (Roed, 1992). Also shown are the current boundaries of the Northern Champion mineral titles, reverted crown grants (purple outline) and location of 2016 rock samples (green squares).

The mineral sequestration of carbon dioxide (CO<sub>2</sub>) potential of the Tulameen olivine rich dunite rocks has also been studied since the early 2000s (Voormeig, 2001) and the test results proved that the rock represents a suitable candidate for mineral carbonation (Oancea, 2013).

In June and October 2014, a numbered company, 6372347 B.C. Ltd. collected and assayed 60 rock samples from the Chapman Claims (Yeomans, 2014) in two separate areas. The area sampled in June 2014 is now covered by mineral title 1047447 of the Northern Champion Property. Unfortunately samples collected from this area (13 samples) were not analyzed for Platinum Group Elements (PGE). A second area approximately 500 metres to the north was sampled in October 2014 (47 rock samples). These samples were analyzed for PGE and the results demonstrated that the central dunite core of the Tulameen ultramafic complex contains elevated platinum values, and is probably the source for historical platinum placer deposits located downstream from Olivine Mountain on the Tulameen River. Grab samples ranging up to 0.368 g/t Pt were obtained during the October 2014 sampling program, with many additional samples ranging in the 0.10 g/t to 0.20 g/t Pt range.

## **6.2 Northern Champion Property**

### **6.2.1 Jenson's, H & H (Minfile 092HNE008)**

Various copper showings occur just south and east of the summit of Olivine Mountain, 9 to 10 kilometres southwest of Tulameen. The Jenson's showings are hosted in pyroxenite of the Early Jurassic Tulameen Ultramafic Complex. The showings were prospected and trenched between 1912 and 1917. D.K. Platinum Corporation conducted rock and soil sampling over the area in 1987.

Samples taken across the north-trending shears assayed trace gold and silver and 0.5 per cent copper (Minister of Mines Annual Report 1917, page 208). In 1987, a grab sample from a quartz vein with malachite and chalcopyrite assayed 0.115 per cent copper and 1.3 grams per tonne silver (Goodall and Fox, 1987). Assays from the west-trending shears have ranged up to 3 per cent copper (Camsell, 1913).

### **6.2.2 Britton (Minfile 02HNE010)**

The Britton showing outcrops on Mount Britton, just northwest of the Tulameen River and 11.5 kilometres west-southwest of the town of Tulameen. The showing was periodically explored on surface and underground by W. Britton between 1899 and 1913. West Coast Platinum Ltd. completed geological mapping, and soil and rock sampling in 1987 (Zastavnikovich and Wilson, 1987).

A sample of a massive pyrite vein, 1 centimetre wide, with minor chalcopyrite, assayed 0.705 per cent copper and 11.8 grams per tonne silver (Zastavnikovich and Wilson, 1987; Assessment Report 17,325, page 5, sample W708). A sample of brecciated ultramafic rock with 5 per cent disseminated pyrite and minor chalcopyrite analysed 0.935 per cent copper

and 20.1 grams per tonne silver (Zastavnikovich and Wilson, 1987, Assessment Report 17,325, page 4, sample W712).

### **6.2.3 Cathy, J and L (Minfile 092HNE038)**

The Cathy copper-chromite showing is 400 metres southeast of the Tulameen River, 950 metres south-southwest of the mouth of Britton (Eagle) Creek and 11 kilometres west-southwest of the town of Tulameen. A small zone of disseminated chalcopyrite and chromite occurs in mildly tremolite-altered peridotite. A grab sample assayed 0.21 per cent copper, 0.17 grams per tonne platinum and 0.12 grams per tonne palladium (Coveney and Lee, 1970; Assessment Report 2,274, page 16). The property was also explored by D.K. Platinum Corp. in 1983 (Ryback-Hardy, 1983) and by R.L. Wright and Associates on behalf of Imperial Metals Corp. in 1987 (Wright, 1987).

### **6.2.4 Red Gold, Rocket, Champion Creek (Minfile 092HNE097 )**

This molybdenum-copper showing outcrops on either side of the Tulameen River, 13 kilometres west-southwest of the town of Tulameen.

A zone of disseminated molybdenite, chalcopyrite, bornite, pyrite and trace covellite occurs in a roadside quarry on the north side of the river, 250 metres west-northwest of the mouth of Champion Creek. Most of the mineralization is in the marbles, and lies close to the Eagle Plutonic Complex contact (0 to 10 metres distance). A sample taken across the face of a nearby adit assayed 1.4 grams per tonne gold, 17 grams per tonne silver and a trace of copper over 0.46 metre (Minister of Mines Annual Report 1913, page 234).

Similar mineralization occurs sporadically along a stretch of Champion Creek, beginning near the creek's mouth, and continuing upstream for about 1.5 kilometres. Disseminated molybdenite, pyrite, chalcopyrite, sphalerite, and tetrahedrite are found in skarn-altered limestones in a gangue of quartz, reddish garnet, epidote, hornblende and pyroxene. High gold and silver assays are reported from this mineralization (Camsell, 1913; page 161). The schists and marbles along Champion Creek are occasionally cut by shears containing near vertical quartz veins up to 6 centimetres wide. The veins are mineralized with pyrite, sphalerite and tetrahedrite. A sample of such a vein taken near an old adit, 200 metres south of the creek's mouth, analysed 0.044 gram per tonne gold, 7.8 grams per tonne silver and 0.7806 per cent zinc (Zastavnikovich, 1988a; Assessment Report 17324, page 4).

### **6.2.5 Copper Queen, Quartz (Minfile 092HNE202)**

The Copper Queen copper showing outcrops on the northwest slope of Olivine Mountain, 10 kilometres west-southwest of Tulameen.

Pyrite and chalcopyrite occur in pyroxenite of the Early Jurassic Tulameen Ultramafic Complex. The minerals are disseminated through the pyroxenite in small, distinct zones. Typical trench samples assayed 1 per cent copper with a trace of gold and nil platinum or chromite, while selected samples assayed up to 3 per cent copper (Minister of Mines Annual Report 1918, page 214).

### **6.2.6 Blue Gold, Z, Mount Britton (Minfile 092HNE208)**

This showing is located 100 metres southwest of the peak of Mount Britton, 900 metres northwest of the Tulameen River and 12.5 kilometres west-southwest of the town of Tulameen.

Rubble from an old pit is mineralized with coarse-grained pyrite and galena. A grab sample analysed 0.085 gram per tonne gold, 49.1 grams per tonne silver, 2.255 per cent copper, 2.9474 per cent lead, 5.742 per cent zinc and 0.1107 per cent cadmium (Zastavnikovich and Wilson, 1987; Assessment Report 17,325, page 6).

## **7 Geological Setting and Mineralization**

The following descriptions of Regional and Property geology are modified from a B.C. Ministry of Energy and Mines assessment report by Yeomans (2014). This report describes the geology and results of sampling on the Chapman claim group which covered the area of the current Property back in 2014. The regional tectonic and geologic setting of the Tulameen area is shown on Figures 5 and 6. The source of this geologic information is Nixon and Rublee (1988). The writer is confident this mapping was done to a very high standard and is the best source of current geologic information for the area covered by the Property.

### **7.1 Regional and Local Geology**

The Northern Champion Property covers part of the western boundary of the Tulameen Ultramafic complex. Nixon and Rublee (1988) have reported that Alaskan-type ultramafic complexes such as the Tulameen are potential hosts for exploitable deposits of platinum metals. The Tulameen ultramafic complex is situated immediately east of the boundary between the Mount Lytton complex and the Quenellia tectonostratigraphic terrane, and is situated within the southwestern Intermontane Belt of southern B.C. (Figure 5). This part of B.C. has been subjected to Early tertiary “transtensional” block faulting related to regional right-lateral transform movement that has taken place along the Fraser River – Straight Creek fault system (Monger, 1985).

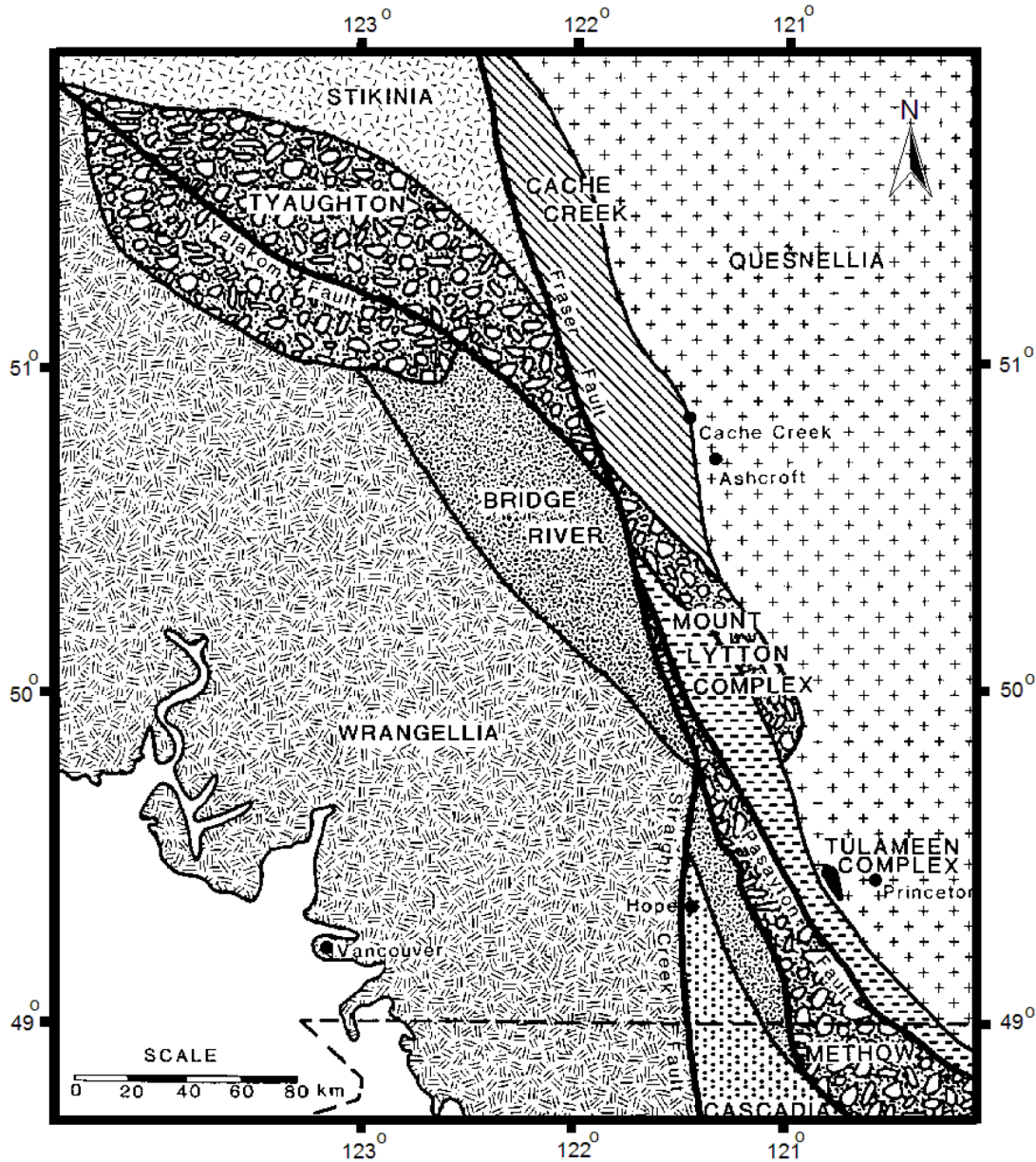


Figure 5. Tectonic setting of the Tulameen Ultramafic Complex. Source: Nixon and Rublee, 1988.

The Tulameen ultramafic complex (“TUC”) covers an area of 64 square kilometres, which makes it the largest of all Alaskan-type ultramafic complexes that occur within the Intermontane Belt.

The TUC extends north-northwest for 20 kilometres between Grasshopper Mountain and Arrastrada Creek in the south, parallel to the contact between Upper Triassic Nicola Group volcanic and metasedimentary rocks and the granitic terrane of the Eagle Plutonic Complex (LJto) located to the west (Figure 6). The Nicola Group volcanic host rocks (uTrJNc) in this region are generally intermediate to felsic in composition and belong to the western facies of

the Upper Triassic Nicola volcanic assemblage (Nixon and Rublee, 1988). This assemblage has undergone greenschist to amphibolite grade metamorphism.

The Tulameen Ultramafic Complex is a zoned, southeasterly elongated ultramafic-gabbroic body that has been emplaced into upper Triassic Nicola group metasedimentary and metavolcanic rocks (Rublee, 1986, 1994). It is unconformably overlain by non-marine sedimentary rocks and andesitic to basaltic flows of the Eocene Princeton Group. The Jurassic Eagle Plutonic Complex granodiorite, a phase of the Mount Lytton Batholith, lies to the west. The ultramafic complex has been assigned a mid Jurassic age on a basis of K-Ar determinations of  $174 \pm 4$  Ma on hornblende by (Roddick, 1970), and of 186 Ma on biotite (Leech et al., 1963).

The lithologies of the TUC are Early Jurassic, elongate ultramafic to gabbroic intrusive bodies. The Tulameen ultramafic assemblage was emplaced into the Upper Triassic Nicola Group during a late Triassic deformation event in an island arc setting near the collision boundary between the Quenellia and Wrangellia plates. During this time, Nicola group volcanics were folded along north to northwest trending fold axis (Findlay, 1969). Age dates for the complex yield a preferred age of 175 Ma (Mid-Jurassic), but this age may be erroneous due to argon loss during metamorphism. Preliminary age dates on the Eagle Plutonic Complex suggest an Early to mid-Cretaceous (97 to 120 Ma.) age of emplacement (Nixon and Rublee, 1988). The eastern margin of the TUC and its host Nicola volcanic assemblage are unconformably overlain by terrigenous metasedimentary and metavolcanic assemblages of the Early Tertiary (Eocene) Princeton Group (ETPe, ETPr) along with Miocene plateau basalt flows (Miv).

### **7.1.1 Magmatic and Tectonic History**

Locally, erosional tectonic unconformities transect earlier layers within the TUC, indicating that magmatic layers either slumped or were tectonically disrupted while precipitation of cumulate crystal layers took place in the magma chamber. Along the Tulameen River, layering features preserved in outcrop indicate that stratigraphic tops face west and dip steeply west towards the central dunite core in the Tulameen ultramafic complex. Breccia zones have been observed in the gabbro in outcrops exposed along the Tulameen River, with rounded to sub-rounded blocks enclosed in a medium grained, uniform gabbroic groundmass. Net-textured sulphide mineralization (pyrite) has also been observed in the same section, and in this area the pyrite also lines fractures.



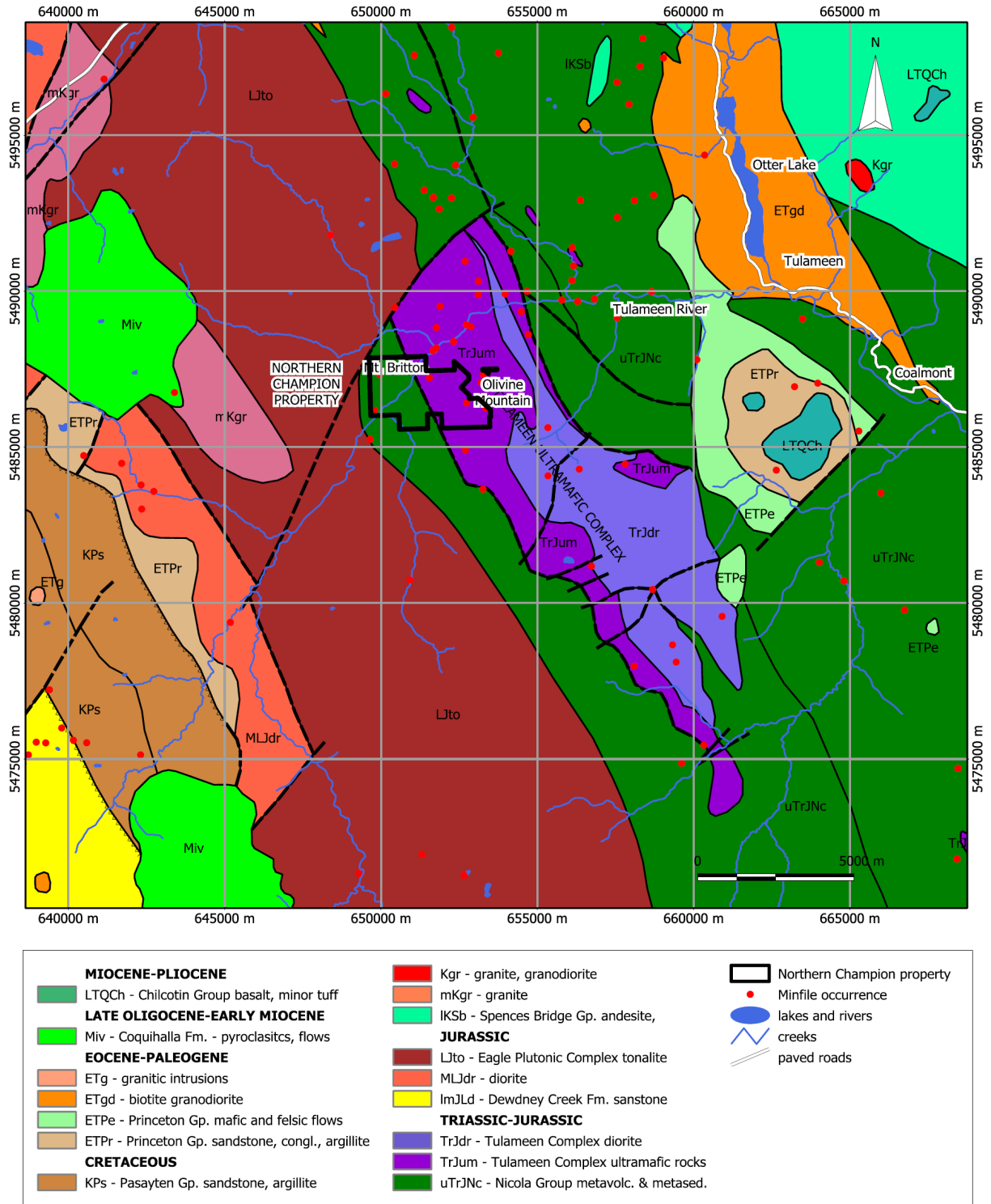


Figure 6. Regional Geologic Setting of the Tulameen Ultramafic Complex (TUC) and the Northern Champion Property. Map prepared by D.G. MacIntyre from digital geology data from the B.C. Ministry of Energy and Mines (Massey et al., 2005).

The Tulameen ultramafic sequence is represented by a dunite core with peripheral olivine clinopyroxenite. The hornblende olivine clinopyroxenites and magnetite-rich hornblendites

are late-stage border phases peripheral to the olivine clinopyroxenites which are also proximal to syenodiorite and late-stage gabbros. Magnetite bodies within hornblende clinopyroxenites represent very late stage fluids. These iron deposits represent end members of the final crystallization event for the Tulameen ultramafic complex.

There is evidence of a complex alpine tectonic history that occurred during the emplacement of the Tulameen complex, which occurred in a collision plate, island-arc setting. Local displacements of the layered magmatic stratigraphy occur along high-angle transcurrent faults, and may have locally disturbed the magma chamber. Findlay (1969) considers the origin of gabbroic rocks within the Tulameen complex to be comagmatic with the Nicola volcanics and genetically linked but separate from the ultrabasic magma.

Regional structures include major faults trending north-northwest and are characterized by a westward dipping foliation that parallels the eastern margin and extends into the Mount Lytton Batholith, also known as the Eagle Plutonic Complex.

## **7.2 Property Geology and Mineralization**

The geology of the Northern Champion property is shown in Figure 6 and is based on the geology map included in B.C. Ministry of Energy, Mines and Petroleum Resources Bulletin 93 (Nixon et al., 1994). This bulletin describes the geology of the Tulameen Ultramafic Complex based on mapping done by Findlay (1969). This work showed that the ultramafic rocks within the TUC form asymmetrically zoned, steeply dipping plugs, enclosed by an older alkalic (potassium rich, silica undersaturated) gabbroic suite (Findlay, 1969). Findlay describes the distribution of the three areas of ultramafic rocks within the complex. In the northern part of the complex, the ultramafic units display the characteristic zonal pattern of similar intrusions in Alaska and U.S.S.R., comprising a dunite core surrounded by shells of olivine pyroxenite and hornblende clinopyroxenite (Figure 6). South of Olivine Mountain, where dunite is not exposed, the two main ultramafic zones contain a median zone of olivine clinopyroxenite bounded by hornblende clinopyroxenite. The Northern Champion Property straddles the boundary between the zoned ultramafic complex and intruded Nicola volcanic and sedimentary rocks (Figures 5 and 6).

### **7.2.1 Stratified Rocks**

#### **Nicola Group (ut N)**

Rocks of the Nicola Group in the Tulameen region comprise black, thinly laminated argillites, green and brown tuffaceous siltstones and lapilli tuffs, dark grey-green aphyric to plagioclase phyrlic pyroxene andesite and hornblende dacite flows, rare aphanitic rhyolites, cherts, chert breccias and dark grey limestones. On the Northern Champion Property the

predominant Nicola rock type is thinly laminated argillite. All lithologies are regionally metamorphosed to greenschist grade. Chlorite-muscovite schists with minor biotite are common to the west of the ultramafic complex and marbles with weakly developed skarns commonly occur adjacent to the contact with the Eagle Plutonic Complex. Skarn mineralization includes traces of molybdenite, chalcopyrite, pyrite, covellite, bornite and chalcocite (Nixon et al., 1994).

The east slope of Mount Britton is underlain by a mylonitic zone (My), 800 to 1000 metres wide, developed at the contact between the Early Jurassic Tulameen Ultramafic Complex, a zoned Alaskan-type intrusive complex, and Upper Triassic Nicola Group metavolcanics and metasediments (Figure 6). The zone is largely comprised of mylonitic mafic to ultramafic igneous rocks derived from both units.

## **7.2.2 Ultramafic Rocks**

### **Dunite (Du)**

Outcrops of dunite within central core of the Tulameen complex are restricted to Grasshopper and Olivine Mountain, which is covered by the northeast corner of the Property (Figure 6). The dunite is generally medium to dark grey in colour when fresh. The primary mineralogy consists of up to 90% forsteritic olivine with accessory chromite and rare diopsidic augite. Alteration minerals occur along fractures, breccias and in shear zones, including serpentine, carbonate, magnetite and talc. The degree of serpentinization varies from less than 20% to more than 80 % of the rock. The most intense areas of serpentinization occur near the eastern margin of the complex. Chromite and chrome spinel appear to be randomly distributed throughout the dunite as discrete layers, nodular masses and schlieren up to 1 meter in length and 6 centimetres in width.

Magnetite is disseminated throughout the dunite often forming thin, fine-grained bands or coarse aggregates. Generally the chromite can be distinguished from magnetite by the highly magnetic attraction of the magnetite, and the chromite is generally coarser grained and has a granular, sugary texture.

### **Olivine Clinopyroxenite (OPx)**

Olivine clinopyroxenite (OPx) surrounds the dunite core of the TUC (Figure 6). The southwest flank of the OPx shell cuts through the Property (Figure 6). The fresh rock is medium to coarse grained and has a blotchy green and black appearance due to partially serpentinized olivine and deep green coloured clinopyroxene. Sporadic pegmatitic phases contain crystals up to 8 centimetres across and olivine crystals locally form schlieren (Nixon and Rublee, 1988).

Within the contact zone, the dunite locally encapsulates the olivine clinopyroxenite while in other areas the reverse relationship is preserved in outcrop, and the olivine clinopyroxenite encapsulates the dunite. Breccias occur within the olivine clinopyroxenite near the western contact of the dunite between Britton and Champion Creeks. Angular to rounded blocks of dunite, pyroxenite and interlayered dunite-pyroxenite are enclosed in a serpentinized pyroxene-rich groundmass. A similar breccia occurs on the eastern margin of the dunite. Contacts dip moderately to steeply south.

### **Hornblende Clinopyroxenite (HPx)**

Hornblende clinopyroxenite (HPx) generally occurs along the periphery of the Tulameen ultramafic complex and is exposed in a northwest trending band that cuts through the Property (Figure 6). Fresh rock is medium to coarse grained and contains diopsidic augite, hornblende, and relatively abundant magnetite with accessory minerals including biotite, rutile, sulphides and apatite. Mineral foliations are observable in medium-grained varieties and amphiboles may reach up to 3 centimetres in length in coarse-grained varieties. Accessory biotite and apatite locally occur in 6-meter thick magnetite-rich horizons. The magnetite-rich horizons can also occur as schlieren and podiform masses.

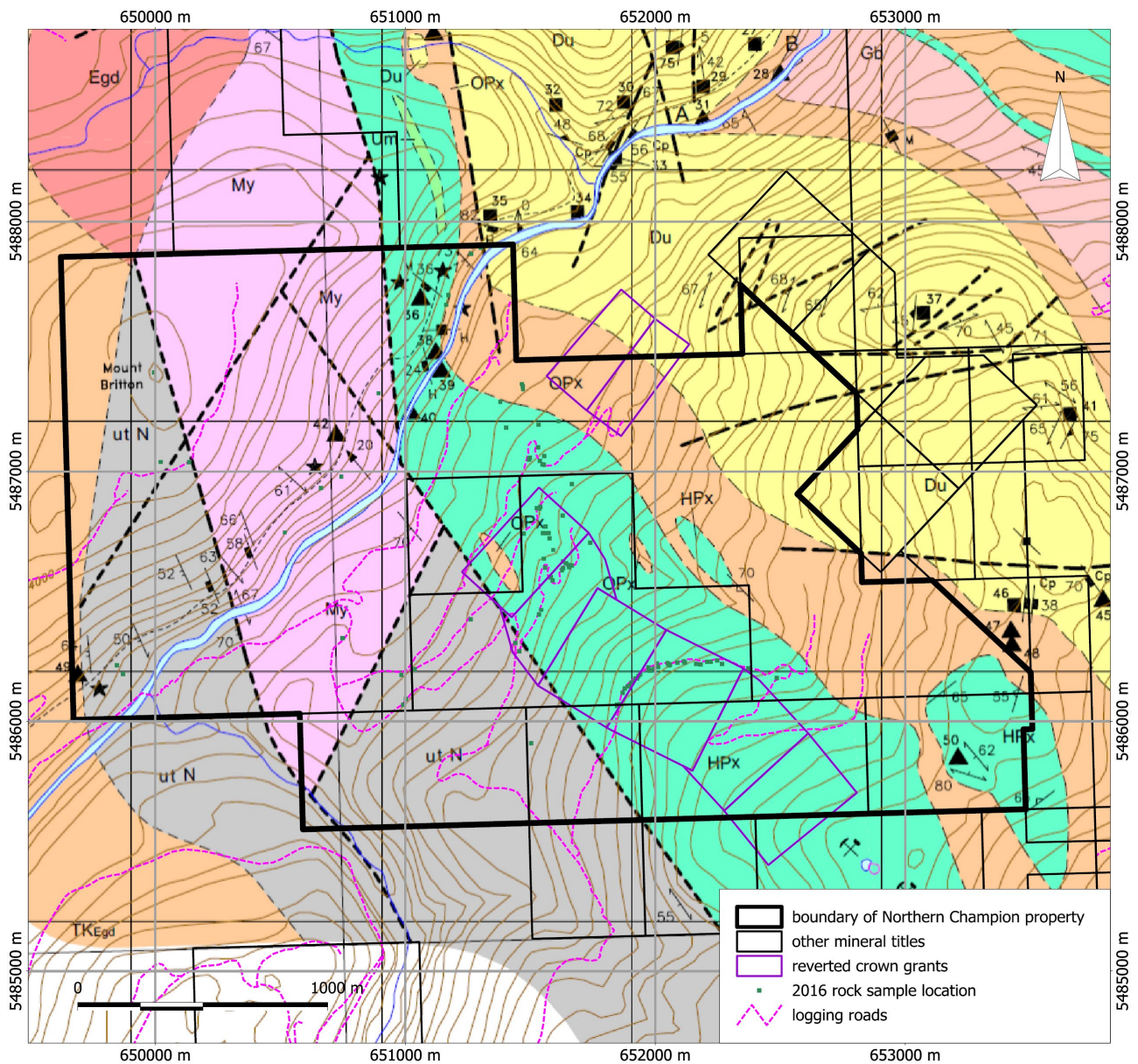
There is a well-defined trend of iron enrichment related to the crude concentric zonation of the TUC, with iron enrichment increasing outward from the central dunite core of the complex towards the outer peripheral rock types. The olivine clinopyroxenite rock unit zoned outward from the dunite core is more iron enriched due to the introduction of magmatically precipitated clinopyroxene in the magma chamber. The hornblende clinopyroxenite unit which precipitated at a later stage of magmatic evolution is more iron rich than the olivine clinopyroxenite due to the increased abundance of iron-rich hornblende, iron-rich clinopyroxene as well as accessory primary magnetite. The most iron-rich phases of the hornblende clinopyroxenite unit contain local magnetite-rich deposits which have previously been tested by previous explorers.

Mafic pegmatites (hornblendites) are preferentially distributed near the margins of hornblende clinopyroxenite bodies (Findlay, 1969). One of the mafic pegmatites was sampled and identified as containing significant PGE values, with heavy pyrite and chalcopyrite mineralization exposed in the vicinity of Hines Creek along the sheared eastern contact zone between hornblende clinopyroxenites of the TUC with Nicola Group metvolcanic rocks (Zastavnikovich, 1988).

### 7.2.3 Mafic Intrusive Rocks

#### Gabbros (Gb)

Large gabbroic intrusives occur throughout the TUC, proximal to the eastern margin of the complex. There are no gabbros identified by previous government geological mapping programs on the Property (Figure 6). Findlay (1969) classified the gabbros as syenogabbros and syenodiorites. These gabbros are commonly in contact with olivine clinopyroxenite and only rarely come in contact with dunite. The syenodiorite is restricted to the southeastern margin of the TUC where it is unconformably overlain by lithologies of the Princeton Group.





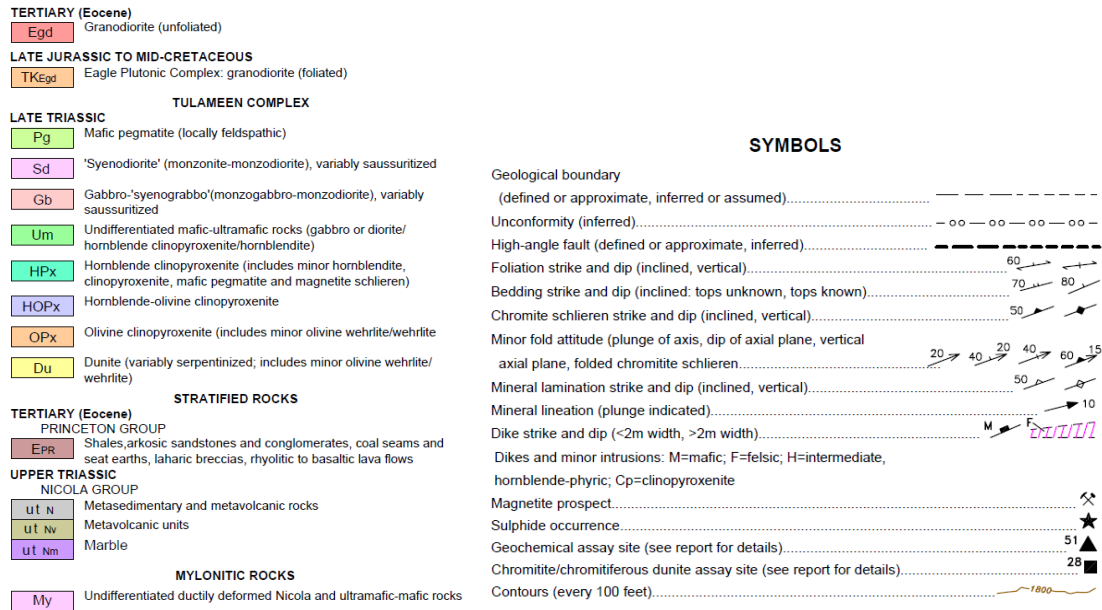


Figure 7. Property geology. Source: Nixon et al., 1994. Claim boundaries added by D.G. MacIntyre, September, 2018.

The essential minerals within the syenogabbros include plagioclase (andesine), clinopyroxene, hornblende and potassium feldspar, with accessory minerals including apatite, opaque minerals, minor biotite and sphene. Most of the exposures of gabbro are saussuritized, are pale to dark grey in colour, and medium grained. Layered gabbros are common throughout the TUC, and preserve a wealth of layering features, including modal grading of plagioclase and ferromagnesian phenocrysts in which the density grading may be normal or reversed in different layers (Nixon and Rublee, 1988).

### 7.2.4 Mineralization

In the writer’s opinion the following descriptions represent the most current information available for mineral showings on the property. The writer has not visited any of the showings described here so cannot provide any additional information or interpretations beyond what is currently available in the public record. The following descriptive information is provided in order to give the reader some sense of the style and tenor of mineralization that is present on the Property.

### **Jenson's, H & H (Minfile 092HNE008)**

Various copper showings occur just south and east of the summit of Olivine Mountain, 9 to 10 kilometres southwest of Tulameen. The Jenson's showings are hosted in pyroxenite of the Early Jurassic Tulameen Ultramafic Complex.

Mineralization occasionally occurs in north and west-trending shears within the pyroxenite. The north-trending shears contain quartz veins sparsely mineralized with pyrite, chalcopyrite and pyrolusite. The west-trending shears contain chalcopyrite along cleavage planes; chalcopyrite is also disseminated in the pyroxenite in the vicinity of the mineralized planes. Individual chalcopyrite grains are in part embedded in pyroxene crystals, suggesting some of this mineralization may be of magmatic origin.

Samples taken across the north-trending shears assayed trace gold and silver and 0.5 per cent copper (Minister of Mines Annual Report 1917, page 208). In 1987, a grab sample from a quartz vein with malachite and chalcopyrite assayed 0.115 per cent copper and 1.3 grams per tonne silver (Goodall and Fox, 1987). Assays from the west-trending shears have ranged up to 3 per cent copper (Camsell, 1913).

### **Britton (Minfile 092HNE010)**

The Britton showing outcrops on Mount Britton, just northwest of the Tulameen River and 11.5 kilometres west-southwest of the town of Tulameen.

Mineralization occurs in a zone of brecciation of undetermined width, which has been traced northwest from the bank of the Tulameen River over the east flank of Mount Britton for at least 400 metres. The breccia contains fragments of pyroxenite and altered sediments (layered dunite (?)) with disseminations and stringers of pyrite, chalcopyrite and magnetite up to 1 centimetre thick. In places, the breccia is healed with a calcite-quartz matrix, which is also mineralized.

A sample of a massive pyrite vein, 1 centimetre wide, with minor chalcopyrite, assayed 0.705 per cent copper and 11.8 grams per tonne silver (Zastavnikovich and Wilson, 1987; Assessment Report 17,325, page 5, sample W708). A sample of brecciated ultramafic rock with 5 per cent disseminated pyrite and minor chalcopyrite analysed 0.935 per cent copper and 20.1 grams per tonne silver (Zastavnikovich and Wilson, 1987, Assessment Report 17,325, page 4, sample W712).

**Cathy, J and L (Minfile 092HNE038)**

The Cathy copper-chromite showing is 400 metres southeast of the Tulameen River, 950 metres south-southwest of the mouth of Britton (Eagle) Creek and 11 kilometres west-southwest of the town of Tulameen.

This occurrence is hosted in peridotite of the Early Jurassic Tulameen Ultramafic Complex, a zoned Alaskan-type intrusive complex. The showing lies in a northwest trending band of olivine clinopyroxenite with minor peridotite that flanks the southwestern margin of the dunite-rich core of the complex.

A small zone of disseminated chalcopyrite and chromite occurs in mildly tremolite-altered peridotite. A grab sample assayed 0.21 per cent copper, 0.17 grams per tonne platinum and 0.12 grams per tonne palladium (Coveney and Lee, 1970; Assessment Report 2,274, page 16).

**Red Gold, Rocket, Champion Creek (Minfile 092HNE097)**

This molybdenum-copper showing outcrops on either side of the Tulameen River, 13 kilometres west-southwest of the town of Tulameen. The Red Gold occurrence is hosted in Upper Triassic Nicola Group metamorphic rocks, immediately east of the contact with the Late Jurassic to Early Cretaceous Eagle Plutonic Complex. The Nicola Group rocks in this vicinity are comprised of weakly skarned marbles and mica and chlorite schists of upper greenschist grade. These rocks dip steeply westward, parallel to the contact with schistose, medium-grained granodiorite of the Eagle Plutonic Complex. Dikes of granodiorite intruding the Nicola Group are boudinaged and folded by a regional deformation that appears to be either syn or post-mineralization. A zone of disseminated molybdenite, chalcopyrite, bornite, pyrite and trace covellite occurs in a roadside quarry on the north side of the river, 250 metres west-northwest of the mouth of Champion Creek. Most of the mineralization is in the marbles, and lies close to the Eagle Plutonic Complex contact (0 to 10 metres distance). A sample taken across the face of a nearby adit assayed 1.4 grams per tonne gold, 17 grams per tonne silver and a trace of copper over 0.46 metre (Minister of Mines Annual Report 1913, page 234).

Similar mineralization occurs sporadically along a stretch of Champion Creek, beginning near the creek's mouth, and continuing upstream for about 1.5 kilometres. Disseminated molybdenite, pyrite, chalcopyrite, sphalerite, and tetrahedrite are found in skarn-altered limestones in a gangue of quartz, reddish garnet, epidote, hornblende and pyroxene. High gold and silver assays are reported from this mineralization (Camsell, 1913; page 161). The schists and marbles along Champion Creek are occasionally cut by shears containing near



vertical quartz veins up to 6 centimetres wide. The veins are mineralized with pyrite, sphalerite and tetrahedrite. A sample of such a vein taken near an old adit, 200 metres south of the creek's mouth, analysed 0.044 gram per tonne gold, 7.8 grams per tonne silver and 0.7806 per cent zinc (Zastavnikovich, 1988a; Assessment Report 17324, page 4).

### **Copper Queen (Minfile 092HNE202)**

The Copper Queen copper showing outcrops on the northwest slope of Olivine Mountain, 10 kilometres west-southwest of Tulameen.

Pyrite and chalcopyrite occur in pyroxenite of the Early Jurassic Tulameen Ultramafic Complex. The minerals are disseminated through the pyroxenite in small, distinct zones. Typical trench samples assayed 1 per cent copper with a trace of gold and nil platinum or chromite, while selected samples assayed up to 3 per cent copper (Minister of Mines Annual Report 1918, page 214).

### **Blue Gold, Z, Mount Britton (Minfile 092HNE208)**

This showing is located 100 metres southwest of the peak of Mount Britton, 900 metres northwest of the Tulameen River and 12.5 kilometres west-southwest of the town of Tulameen.

The Blue Gold occurrence is hosted in a northwest trending band of metavolcanics and metasediments of the Upper Triassic Nicola Group situated between the Early Jurassic Tulameen Ultramafic Complex to the east and the Late Jurassic to Early Cretaceous Eagle Plutonic Complex to the west.

Rubble from an old pit is mineralized with coarse-grained pyrite and galena. A grab sample analysed 0.085 gram per tonne gold, 49.1 grams per tonne silver, 2.255 per cent copper, 2.9474 per cent lead, 5.742 per cent zinc and 0.1107 per cent cadmium (Assessment Report 17325, page 6).

## **8 Deposit Types**

The Red Gold-Rock-Champion Creek showing is classified as a skarn or polymetallic vein occurrence and the Blue Gold, Z, Mount Britton showing is classified as a polymetallic vein in the Minfile database. All the other showings are within the Tulameen Ultramafic Complex and are classified as Alaskan type PGE occurrences (type M05).

The general structure of Alaskan-type ultramafic complexes is characterized by a crudely concentric outward zonation of rock types ranging from olivine-bearing to hornblende – rich

or magnetite rich clinopyroxenites about a steeply dipping dunite core (Taylor, 1967). Typical cumulate minerals include forsteritic olivine, diopsidic augite, chromite and magnetite. Orthopyroxene is characteristically absent in Alaskan-type ultramafic intrusions, indicating an alkalic affinity. Gabbroic rocks are typically tholeiitic in composition, but in the case of the Tulameen, the gabbro complex is unique in composition since these rocks are classified as syenogabbros and syenodiorites (Nixon et. al., 1994). The geology of the Tulameen ultramafic complex is similar to other well-documented Alaskan-Type ultramafic complexes located along the southeast coast of Alaska and in the Ural Mountains of Russia.

A study of the geochemistry of PGE within the Tulameen complex, undertaken by St. Louis (1982) and St. Louis et al. (1986), demonstrated the distribution of PGE to be a function of the degree of differentiation (zoning) within the ultramafic intrusive. The highest platinum, iridium, osmium and rhodium values were obtained from dunites, peridotites, and their altered (serpentinized) equivalents; the pyroxenites and hornblendites were depleted (St. Louis, 1982; St. Louis et al., 1986). Palladium appears to be confined to the marginal phases (hornblende clinopyroxenite and hornblende) and enclosing gabbroic rocks.

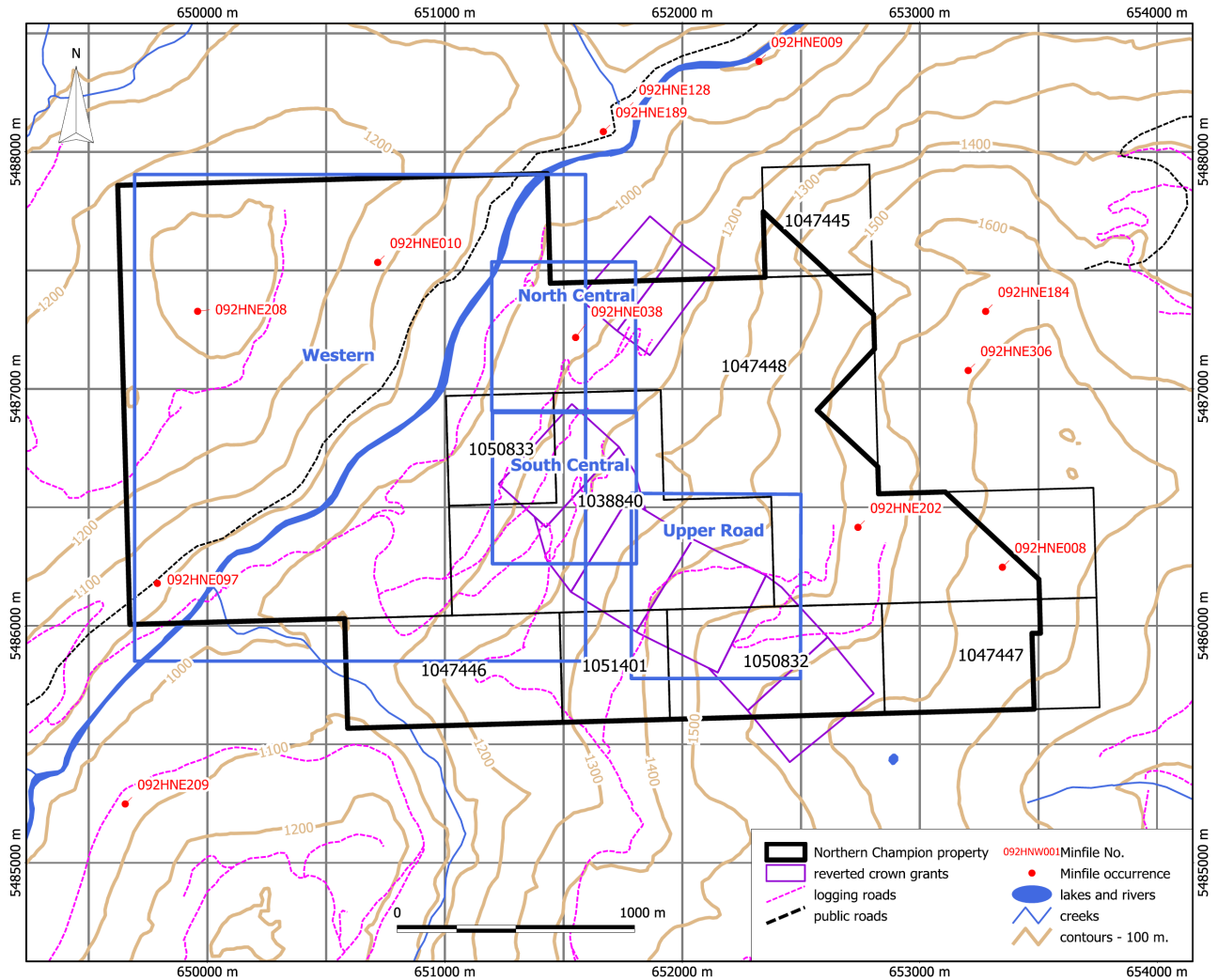


Figure 8. Index map showing location of 2016 sampling areas. Map prepared by D.G. MacIntyre, September 2018.

## 9 Exploration

The 2016 exploration program done on the Property on behalf of Rain City and described in this section of the report was conducted by Rich River Exploration. The program involved prospecting and rock sampling mostly within the central and western parts of the property (Figure 8). A total of 101 rock samples, mostly grab samples from outcrop, were collected in October 2016. This work was supervised by Craig Lynes.

All samples were analyzed using an Aqua Regia digestion and an Inductively Coupled Plasma Mass Spectrometry (“ICP/MS”) finish to determine the concentrations of a standard suite of 36 elements. This analytical work was done by Activation Laboratories Ltd.

(“Actlabs”) in Kamloops B.C. Selected samples (51) were also analyzed for Pt, Pd and Au using a combination of fire assay and ICP/MS finish. Of these, four samples were also analyzed using Actlabs Nickel Sulphide Fire Assay technique and an Instrumental Neutron Activation Analysis (“INAA”) finish.

Sample descriptions and analytical results for selected elements are presented in Tables 3-10. Maps showing sample locations and analytical results for Cu, Cr, Ni, Au, Pt and Pd were produced by the writer from original analytical certificates and GPS coordinates provided by Mr. Lynes. These maps are presented in Figures 9, 10, 11 and 12. These areas have been named the North Central, South Central, Upper Road and Western map areas. The locations of these map areas relative to the mineral title boundaries are shown in Figure 8.

## 9.1 North Central Area

A total of 18 rock samples were collected from outcrops exposed along logging roads and within areas of clearcut logging in the North Central Area (Figure 9). Sample descriptions suggest most were either hornblende pyroxenite or serpentinized peridotite of the Tulameen Ultramafic Complex. Copper mineralization in the form of chalcopyrite and malachite were observed in 12 of the samples from this area (Table 3). Magnetite was a common accessory mineral. Table 4 gives the analytical results for Au, Pt, Pd, Ag, Cu, Pb and Zn. The Cathy/J&L showing, which is described as a small zone of disseminated chalcopyrite and chromite in mildly tremolite-altered peridotite, plots within the sample area (Figure 9). The actual location of this showing was not found in 2016. An historical grab sample from this showing collected in 1970 is reported to have assayed 0.21 per cent copper, 0.17 grams per tonne platinum and 0.12 grams per tonne palladium (Coveney and Lee, 1970; Assessment Report 2,274, page 16).

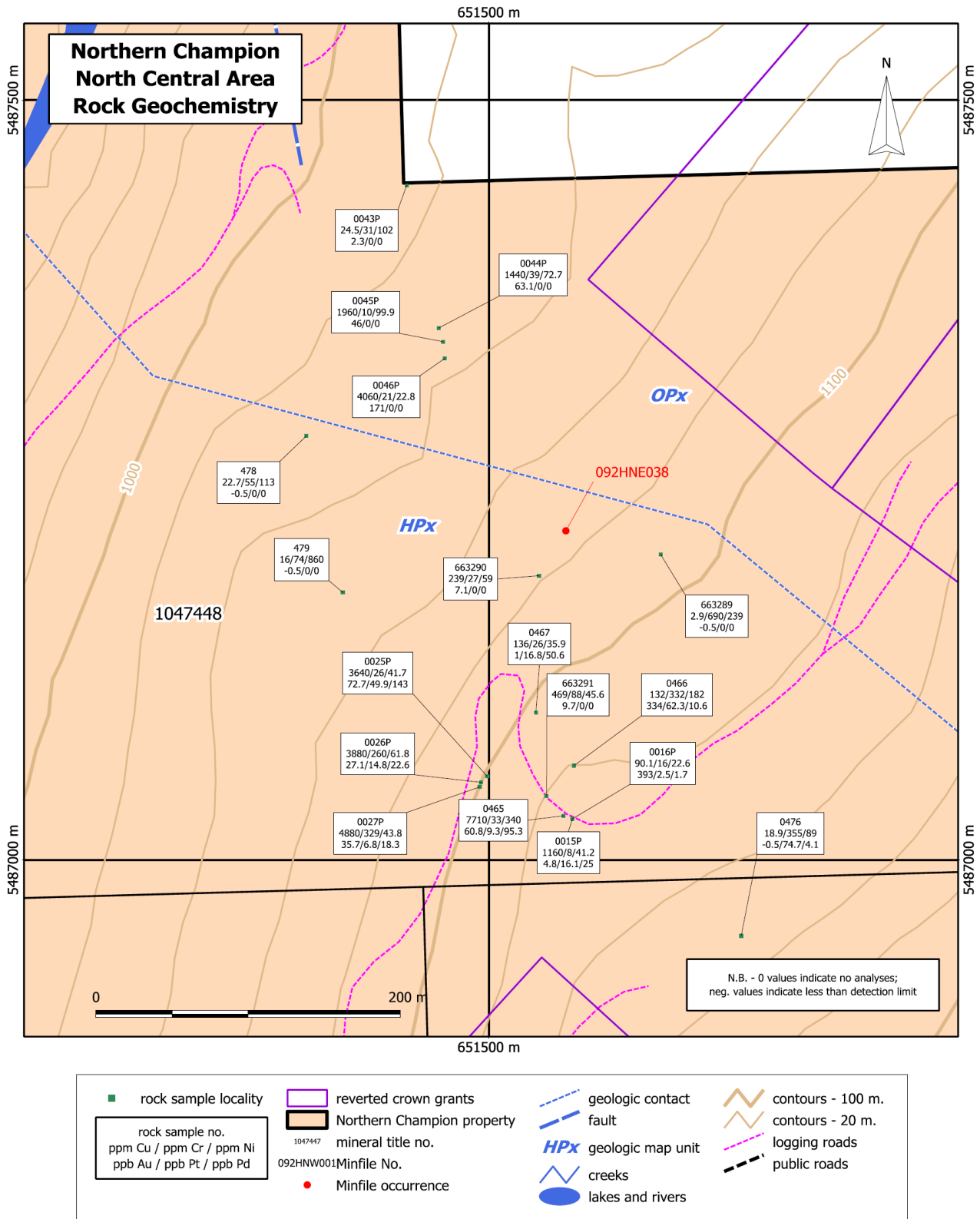


Figure 9. Map showing location of rock samples and analytical results for Cu, Cr, Ni, Au, Pt and Pd, North Central Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017.

**Table 3. Rock sample descriptions, North Central Area**

Sample No.	UTM E	UTM N	Rock type	Mineralization
0015P	651555	5487027	pyroxenite	mt, cpy, mal
0016P	651555	5487027	alt. gneiss and pyroxenite	py, trace cpy, gn?
0025P	651499	5487055	hornblende pyroxenite	cpy, mal
0026P	651495	5487051	hornblende pyroxenite	cpy
0027P	651494	5487048	hornblende pyroxenite	cpy, mt
0043P	651446	5487444	ultramafic rock	mt, trace cpy
0044P	651467	5487350	hornblendite	mt, mal, trace cpy
0045P	651470	5487341	magnetite hornblende pyroxenite	az, mal
0046P	651471	5487330	serpentinized ultramafic rock	cpy
0465	651549	5487029	serpentinized peridotite	mal
0466	651556	5487062	listwanite?	py
0467	651531	5487097	altered peridotite	py
0476	651666	5486950	pyroxenite	mt, hm
478	651380	5487279	olivine pyroxenite	mt
479	651404	5487176	dunite subcrop	
663289	651613	5487201	seperentinized ultramafic	
663290	651533	5487187	ultramafic rock	trace cpy
663291	651538	5487042	hornblende pyroxenite	mt, trace cpy

Abbreviations: *mt*=magnetite, *cpy*=chalcopyrite, *py*=pyrite, *mal*=malachite, *hm*=hematite, *gn*=galena, *sp*=sphalerite, *az*=azurite, *cr*=chromite

**Table 4. Analytical results for rock samples, North Central Area.**

Sample No.	Au ppb **	Pt ppb **	Pd ppb **	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm	Pt ppb *	Pd ppb *	Au ppb *
0015P	12	16.1	25	1.2	4.8	1160	0.5	31			
0016P	351	2.5	1.7	7.8	393	90.1	1820	373			
0025P	100	49.9	143	1.3	72.7	3640	< 0.1	19			
0026P	38	14.8	22.6	1.8	27.1	3880	< 0.1	19			
0027P	56	6.8	18.3	1.9	35.7	4880	< 0.1	19			
0043P				0.3	2.3	24.5	< 0.1	41			
0044P				1.4	63.1	1440	< 0.1	36			
0045P				1.4	46	1960	< 0.1	43			
0046P				2.5	171	4060	0.9	7			
0465	103	9.3	95.3	4.5	60.8	7710	3.6	39	10	103	92.4
0466	303	62.3	10.6	4.4	334	132	12.2	172			
0467	4	16.8	50.6	0.9	1	136	0.4	16	23	56	2.6
0476	2	74.7	4.1	0.2	< 0.5	18.9	< 0.1	16			
478				0.3	< 0.5	22.7	< 0.1	36			
479				0.2	< 0.5	16	< 0.1	35			
663289				0.3	< 0.5	2.9	< 0.1	55			
663290				0.3	7.1	239	0.2	25			
663291				0.4	9.7	469	< 0.1	16			

*N.B. \*\* = fire assay, ICP/MS finish; \* = nickel sulphide fire assay, INAA finish; all others aqua regia digestion, ICP/MS finish*

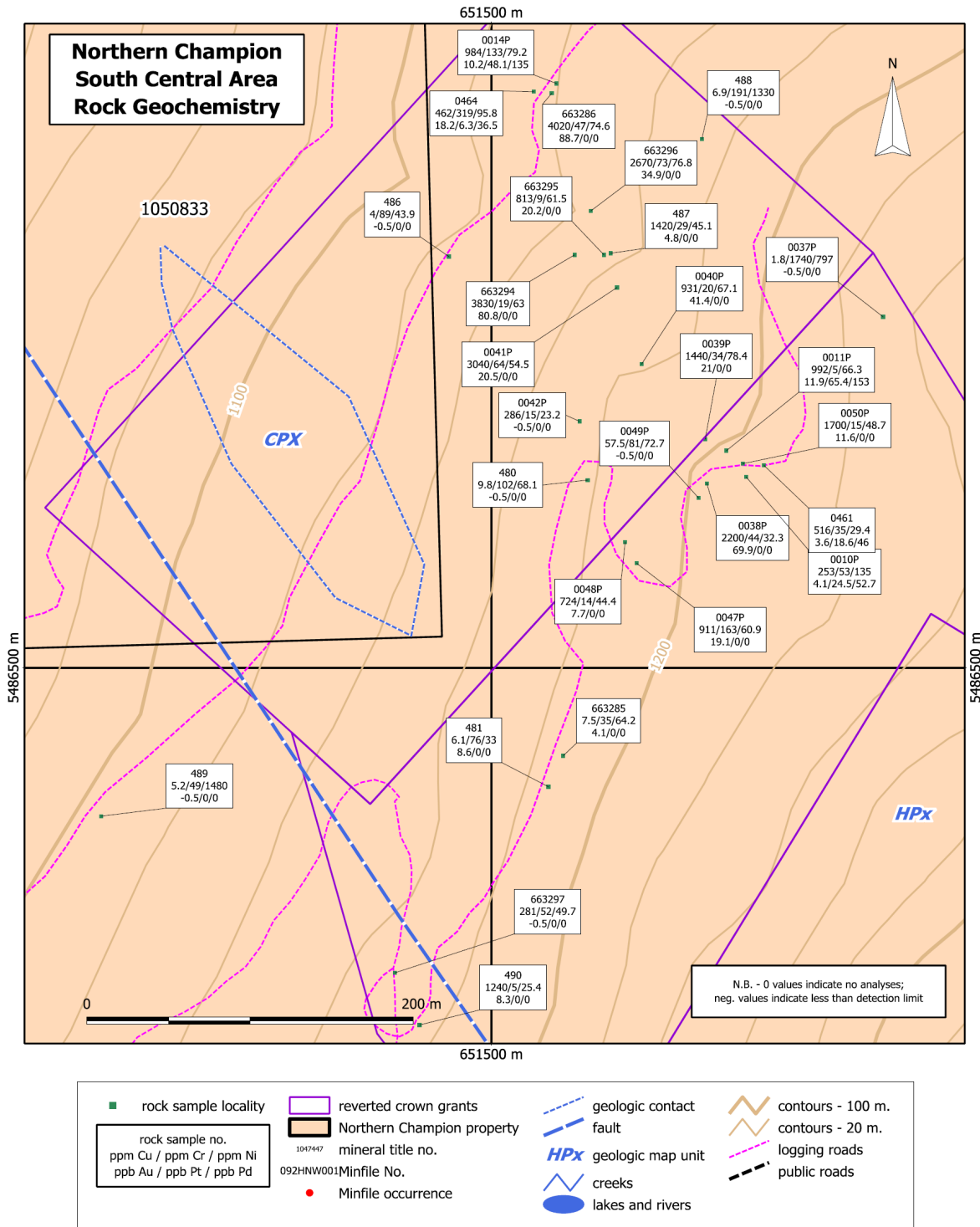


Figure 10. Map showing location of rock samples and analytical results for Cu, Cr, Ni, Au, Pt and Pd, South Central Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017.

## 9.2 South Central Area

At total of 28 rock samples were collected within the South Central Area, mostly from outcrops exposed by logging road construction and within an area of clearcut logging between logging roads (Figure 10). As with the North Central area most samples are described as hornblende pyroxenite or clinopyroxenite of the southeastern border phase (HPx) of the Tulameen Ultramafic Complex (Table 10). Visible copper mineralization as malachite and/or chalcopyrite was reported for 20 of the 28 samples with magnetite as a common accessory mineral. The area sampled is within an area previously covered by now reverted crown grants.

**Table 5. Rock sample descriptions, South Central Area**

Sample No.	UTM E	UTM N	Rock type	Mineralization
0010P	651656	5486617	shear zone in ultramafic rock	py, cpy?
0011P	651644	5486633	ultramafic rock	mal, mt
0014P	651540	5486858	gabbro	mt, cpy
0037P	651740	5486715	dunite with pyroxenite	cr
0038P	651632	5486613	olivine pyroxenite with carb veinlets	cpy
0039P	651631	5486640	pyroxenite	mal, mt
0040P	651592	5486686	pyroxenite	mal, mt
0041P	651577	5486733	pyroxenite	mt, cpy, mal
0042P	651554	5486651	ultramafic rock	py, trace cpy
0047P	651589	5486564	hornblende pyroxenite	mt, trace cpy
0048P	651582	5486577	hornblende pyroxenite	mt, trace cpy
0049P	651627	5486604	hornblende pyroxenite	mt, cpy, mal
0050P	651654	5486625	hornblende pyroxenite	mt, cpy, mal
0461	651667	5486624	qtz vein (sub crop)	cpy
0464	651526	5486853	serpentinized periodotite	minor py
480	651559	5486615	peridotite	mt
481	651535	5486427	qtz vein in pyroxenite	py, mt
486	651474	5486752	hornblende clinopyroxenite	mt
487	651573	5486754	qtz-carb vein in pyroxenite	py, minor cpy
488	651629	5486824	dunite	cr?
489	651261	5486409	dunite	cr
490	651456	5486281	hornblende clinopyroxenite	cpy, mt
663285	651544	5486446	hornblende pyroxenite	mt
663286	651537	5486852	ultramafic rock with carb. veinlets	cpy,
663294	651551	5486753	hornblende pyroxenite float	cpy, mt
663295	651569	5486753	hornblende pyroxenite	cpy, mal, mt
663296	651561	5486780	fault breccia float, carb. veinlets	cpy
663297	651441	5486313	chl. ultramafic breccia with carb. veinlets	cpy, mt

*Abbreviations: qtz=quartz, carb=carbonate, mt=magnetite, cpy=chalcopyrite, py=pyrite, mal=malachite, hm=hematite, gn=galena, sp=sphalerite, az=azurite, cr=chromite*



**Table 6. Analytical results for rock samples, South Central Area.**

Sample No.	Au ppb **	Pt ppb **	Pd ppb **	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm
0010P	7	24.5	52.7	1	4.1	253	0.3	75
0011P	10	65.4	153	0.7	11.9	992	< 0.1	34
0014P	12	48.1	135	4.1	10.2	984	3.3	44
0037P				0.1	< 0.5	1.8	< 0.1	73
0038P				1.4	69.9	2200	< 0.1	11
0039P				0.9	21	1440	< 0.1	33
0040P				0.7	41.4	931	< 0.1	39
0041P				1.9	20.5	3040	< 0.1	31
0042P				0.6	< 0.5	286	< 0.1	55
0047P				1.2	19.1	911	0.3	22
0048P				0.8	7.7	724	< 0.1	15
0049P				0.4	< 0.5	57.5	< 0.1	23
0050P				1.1	11.6	1700	< 0.1	23
0461	2	18.6	46	1.2	3.6	516	0.5	30
0464	5	6.3	36.5	1	18.2	462	5.3	33
480				0.2	< 0.5	9.8	< 0.1	15
481				0.3	8.6	6.1	2.5	36
486				0.2	< 0.5	4	< 0.1	10
487				4.1	4.8	1420	1	33
488				0.6	< 0.5	6.9	< 0.1	26
489				0.3	< 0.5	5.2	< 0.1	29
490				0.7	8.3	1240	< 0.1	31
663285				0.3	4.1	7.5	2.3	19
663286				2.8	88.7	4020	1.6	37
663294				2.4	80.8	3830	0.7	14
663295				1.2	20.2	813	< 0.1	36
663296				1.3	34.9	2670	< 0.1	27
663297				0.5	< 0.5	281	< 0.1	14

*N.B. \*\* = fire assay, ICP/MS finish; all others aqua regia digestion, ICP/MS finish*

### 9.3 Upper Road Area

At total of 34 rock samples were collected from outcrop exposed in the cut banks of a logging road near the southern limit of the property. These samples were collected over a distance of 600 metres. The location of these samples is shown in Figure 11; sample descriptions and analytical results are given in Tables 8 and 9 respectively. Most of the samples from this area are described as hornblende pyroxenite and occur within the southwestern border phase (HPx) of the Tulameen Ultramafic Complex. Many of the samples contained visible copper mineralization as malachite or chalcopyrite along with pyrite and magnetite (Table 8).

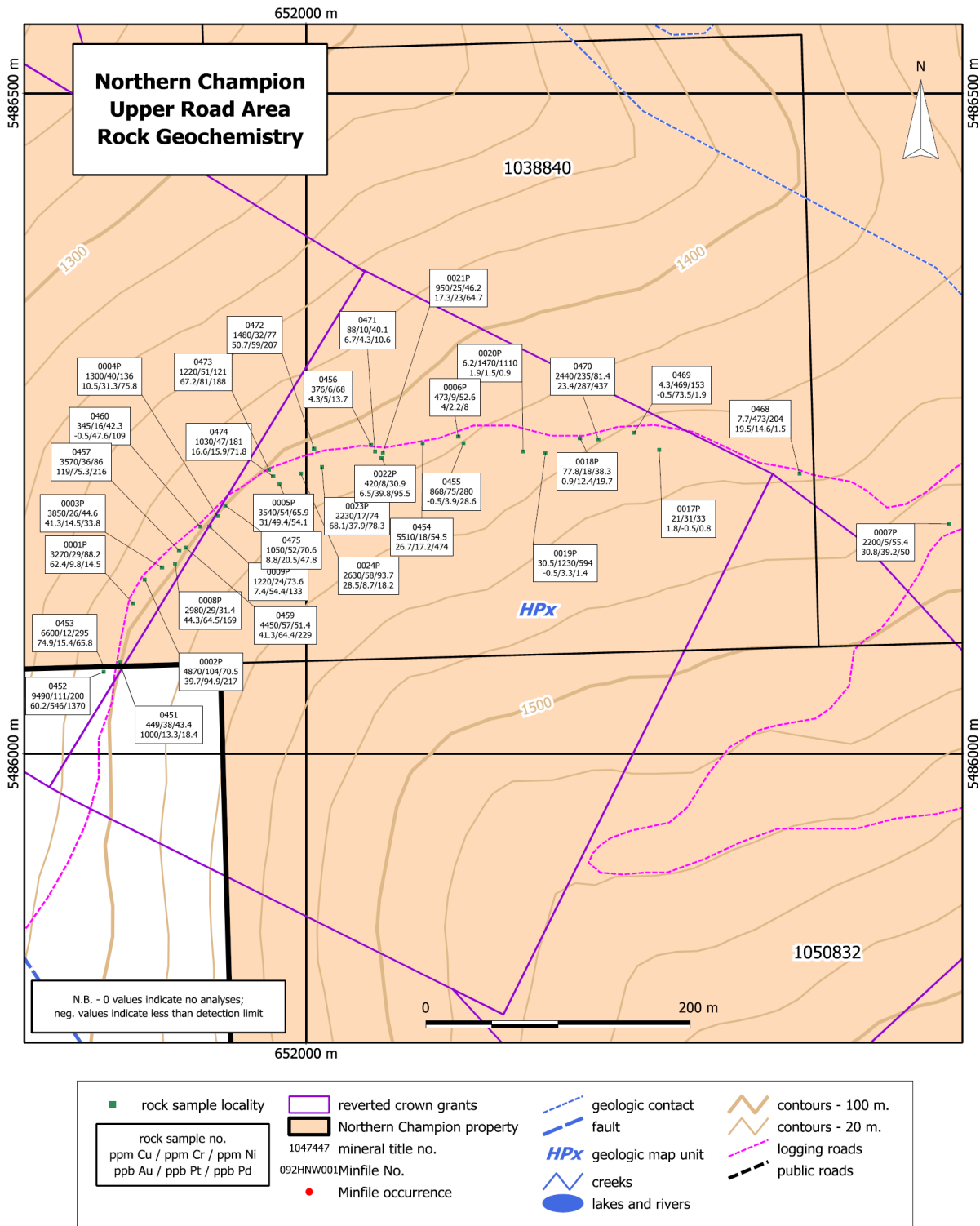


Figure 11. Map showing location of rock samples and analytical results for Cu, C, Ni, Au, Pt and Pd, Upper Road Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017.

**Table 7. Rock sample descriptions, Upper Road Area**

Sample No.	UTM E	UTM N	Rock type	Mineralization
0001P	651869	5486114	ultramafic rock	mal, mt, trace cpy
0002P	651878	5486132	ultramafic rock	mal, mt
0003P	651891	5486141	ultramafic rock	cpy
0004P	651933	5486180	ultramafic rock	py, mt
0005P	651980	5486204	ultramafic rock	mal, cpy, mt
0006P	652115	5486240	ultramafic rock	py, mt, trace cpy
0007P	652486	5486174	ultramafic rock float	mal, mt
0008P	651901	5486144	ultramafic rock	minor mal
0009P	651927	5486172	ultramafic rock	mal
0017P	652267	5486230	hornblendite	
0018P	652207	5486239	olivinite with hornblende veins	
0019P	652181	5486228	chrysotile-serp alt periodotite	
0020P	652164	5486229	dunite with chrysotile	hm
0021P	652058	5486228	hornblende pyroxenite	cpy, mal
0022P	652057	5486224	chrysotile ultramafic rock	cpy
0023P	652012	5486217	hornblende pyroxenite	cpy, mt
0024P	651996	5486212	hornblende pyroxenite	mt, mal, trace cpy
0451	651859	5486069	qtz vein	py, minor cpy
0452	651847	5486062	vein	py, minor cpy
0453	651847	5486066	semi-massive sulphide	py, cpy
0454	652088	5486235	altered pod	cpy, mal
0455	652119	5486235	pyroxinite	py, po, mt
0456	652049	5486234	hornblende pyroxenite	py, mt
0457	651904	5486154	hornblende pyroxenite	
0459	651909	5486156	pyroxinite	cpy, mal
0460	651920	5486172	pyroxinite (subcrop)	
0468	652373	5486212	shear zone	
0469	652248	5486243	altered peridotite	
0470	652221	5486238	hornblendite	mal
0471	652052	5486229	qtz-carb vein	minor py
0472	652006	5486231	hornblende pyroxenite	cpy, mal
0473	651972	5486215	pyroxenite	mal, po?
0474	651975	5486210	pyroxenite	mt, minor cpy
0475	651939	5486188	hornblende clinopyroxenite	minor cpy, py, mt

Abbreviations: qtz=quartz, carb=carbonate, mt=magnetite, cpy=chalcopyrite, py=pyrite, mal=malachite, hm=hematite, gn=galena, sp=sphalerite, az=azurite, cr=chromite

**Table 8. Analytical results for rock samples, Upper Road Area.**

Sample No.	Au ppb **	Pt ppb **	Pd ppb **	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm	Pt ppb *	Pd ppb *	Au ppb *
0001P	237	9.8	14.5	1.3	62.4	3270	0.5	34			
0002P	34	94.9	217	2.3	39.7	4870	< 0.1	26			
0003P	50	14.5	33.8	2.4	41.3	3850	< 0.1	15			

Sample No.	Au ppb **	Pt ppb **	Pd ppb **	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm	Pt ppb *	Pd ppb *	Au ppb *
0004P	18	31.3	75.8	0.7	10.5	1300	1.2	30			
0005P	41	49.4	54.1	2	31	3540	< 0.1	47			
0006P	6	2.2	8	0.6	4	473	< 0.1	39	< 5	8	4.2
0007P	25	39.2	50	1.3	30.8	2200	< 0.1	19			
0008P	23	64.5	169	2.4	44.3	2980	< 0.1	23			
0009P	10	54.4	133	1	7.4	1220	< 0.1	35			
0017P	2	< 0.5	0.8	1	1.8	21	1.3	85			
0018P	2	12.4	19.7	0.6	0.9	77.8	1.4	62			
0019P	3	3.3	1.4	0.4	< 0.5	30.5	< 0.1	37			
0020P	2	1.5	0.9	1.8	1.9	6.2	1.5	44			
0021P	22	23	64.7	1	17.3	950	< 0.1	37			
0022P	7	39.8	95.5	0.4	6.5	420	< 0.1	25			
0023P	42	37.9	78.3	1.1	68.1	2230	< 0.1	36			
0024P	42	8.7	18.2	1.4	28.5	2630	< 0.1	58			
0451	841	13.3	18.4	> 100	> 1000	449	156	235			
0452	142	546	1370	19.8	60.2	9490	< 0.1	251			
0453	97	15.4	65.8	10.2	74.9	6600	1.6	36			
0454	54	17.2	474	5.2	26.7	5510	0.7	76			
0455	5	3.9	28.6	0.6	< 0.5	868	< 0.1	34	< 5	30	5.7
0456	6	5	13.7	0.6	4.3	376	< 0.1	46			
0457	22	75.3	216	1.1	119	3570	< 0.1	26			
0459	52	64.4	229	2.4	41.3	4450	0.7	31			
0460	4	47.6	109	0.9	< 0.5	345	< 0.1	17			
0468	3	14.6	1.5	0.3	19.5	7.7	< 0.1	30			
0469	< 1	73.5	1.9	0.2	< 0.5	4.3	< 0.1	22			
0470	33	287	437	1.4	23.4	2440	< 0.1	57			
0471	4	4.3	10.6	0.7	6.7	88	1.4	50			
0472	42	59	207	0.9	50.7	1480	< 0.1	38			
0473	61	81	188	2	67.2	1220	< 0.1	64			
0474	31	15.9	71.8	1.2	16.6	1030	< 0.1	93			
0475	9	20.5	47.8	0.5	8.8	1050	< 0.1	42			

*N.B. \*\* = fire assay, ICP/MS finish; \* = nickel sulphide fire assay, INAA finish; all others aqua regia digestion, ICP/MS finish*



*Photo 2. Sample site 451, Upper Road Area. This sample (0451 in tables 7 & 8) returned 841 ppb Au and >100 ppm Ag from a quartz vein cutting foliated ultramafic rocks of the Tulameen Complex. Photo taken by C. Lynes, November 2016.*

## **9.4 Western Area**

A total of 21 rock samples were collected within the Western Area, mainly from outcrops along roads north and south of the Tulameen River. The location of these samples is shown in Figure 12; sample descriptions and analytical results are given in Tables 10 and 11 respectively. Sample 0463 was collected near the Blue Gold, Z, Mount Britton (Minfile 092HNE208) showing is located 100 metres southwest of the peak of Mount Britton. The Blue Gold occurrence is hosted in a northwest trending band of metavolcanics and metasediments of the Upper Triassic Nicola Group. Rubble from an old pit is mineralized with coarse-grained pyrite and galena.



Samples 482 and 663287 were float samples of peridotite and marble that were collected in the vicinity of the Red Gold, Rocket, Champion Creek (Minfile 092HNE097) showing which is described as a Mo-Cu showing in Nicola Group metavolcanic rocks. Sample 482 contained low grade Cu; sample 663287 was unmineralized marble.

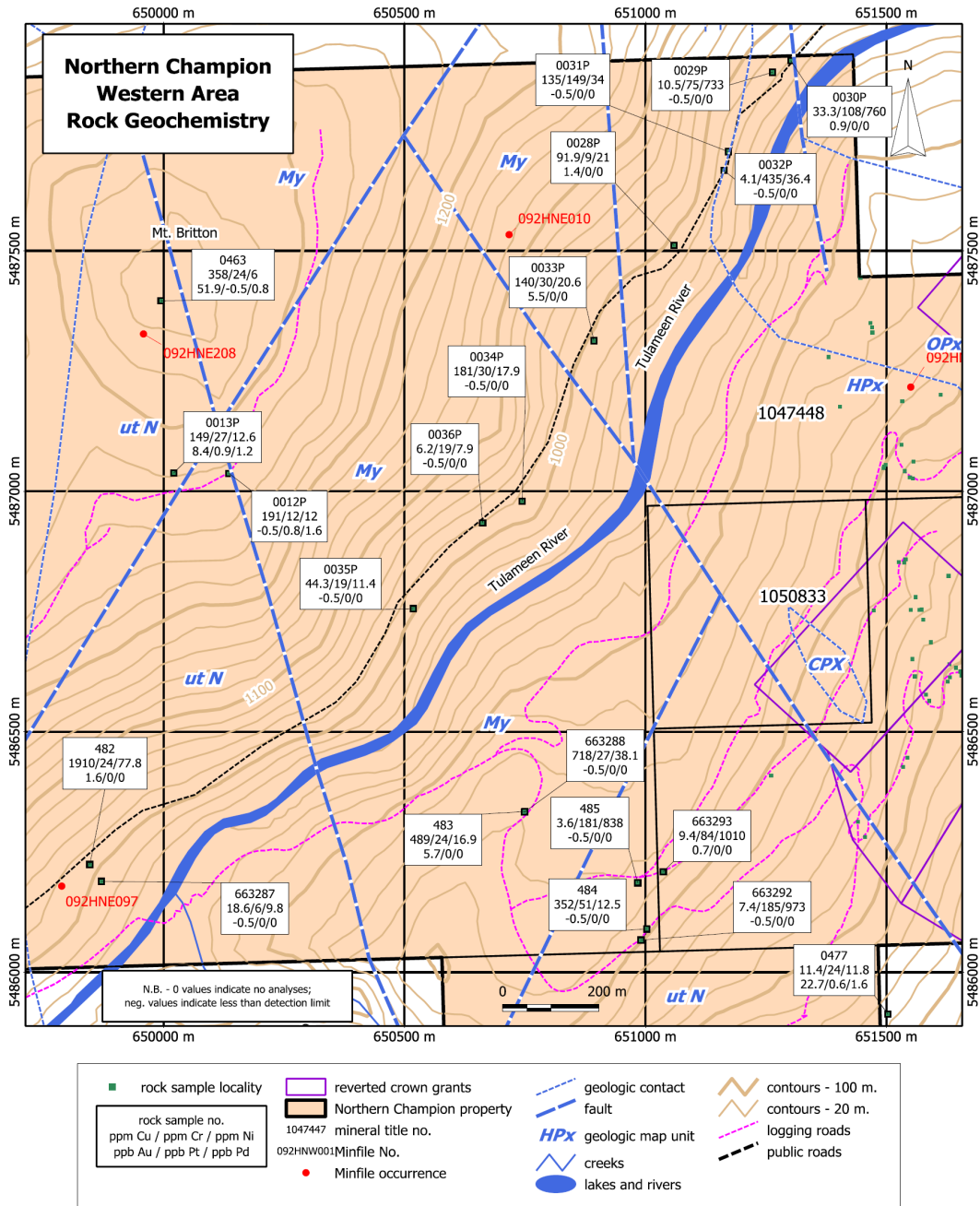


Figure 12. Map showing location of rock samples and analytical results for Cu, Cr, Ni, Au, Pt and Pd, Western Area, Northern Champion Property. Map prepared by D.G. MacIntyre, April 2017.

**Table 9. Rock sample descriptions, Western Area**

Sample No.	UTM E	UTM N	Rock type	Mineralization
0012P	650136	5487037	metavolcanic rock	py,
0013P	650021	5487038	gneiss float with qtz-carb veins	trace gn
0028P	651059	5487511	gneiss with pyroxenite dyke, qtz veins	py
0029P	651264	5487871	olivinite float	cr
0030P	651302	5487895	olivinite	cr
0031P	651172	5487706	pyroxenite	trace py, cpy
0032P	651163	5487667	olivinite/pyroxenite breccia	
0033P	650893	5487313	metaseds float	py, po
0034P	650744	5486979	hornblende diorite float	py
0035P	650518	5486756	hornblende phyric dyke	py
0036P	650662	5486934	hornblende diorite dyke	py
463	649995	5487396	quartzite metaseds	gn, sp, py
477	651503	5485913	qtz vein in pyroxenite	minor py, cpy, mal
482	649847	5486224	peridotite float	py?
483	650750	5486334	altered vein in metavolcanic	minor py, cpy, aspy
484	651003	5486090	quartz vein in metavolcanic	py, minor cpy
485	650984	5486186	dunite	cr
663287	649871	5486189	marble float	trace py, sp
663288	650749	5486333	metavolcanic with qtz-carb veins	py
663292	650991	5486067	dunite dyke	
663293	651037	5486209	dunite/olivinite	

**Table 10. Analytical results for rock samples, Western Area.**

Sample No.	Au ppb **	Pt ppb **	Pd ppb **	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm
0012P	1	0.8	1.6	0.5	< 0.5	191	8.3	12
0013P	7	0.9	1.2	4	8.4	149	> 5000	189
0028P				0.3	1.4	91.9	2.4	19
0029P				0.2	< 0.5	10.5	< 0.1	25
0030P				0.2	0.9	33.3	< 0.1	37
0031P				0.2	< 0.5	135	0.3	15
0032P				0.1	< 0.5	4.1	< 0.1	6
0033P				0.3	5.5	140	23.8	177
0034P				0.2	< 0.5	181	0.7	13
0035P				0.2	< 0.5	44.3	0.4	13
0036P				0.2	< 0.5	6.2	0.6	14
0463	49	< 0.5	0.8	12	51.9	358	> 5000	4520
0477	29	0.6	1.6	0.4	22.7	11.4	1	9
482				0.3	1.6	1910	< 0.1	35
483				1	5.7	489	3.6	29
484				0.6	< 0.5	352	1.1	13
485				0.3	< 0.5	3.6	< 0.1	53

Sample No.	Au ppb **	Pt ppb **	Pd ppb **	Ag ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm
663287				0.5	< 0.5	18.6	3.3	424
663288				0.9	< 0.5	718	4.1	69
663292				0.2	< 0.5	7.4	< 0.1	36
663293				0.1	0.7	9.4	0.3	40

*N.B. \*\* = fire assay, ICP/MS finish; all others aqua regia digestion, ICP/MS finish*

## 9.5 Results

### 9.5.1 Copper

Of the 18 rock samples collected from the North Central area (Tables 3 and 4; Figure 9), 5 returned significant Cu values in excess of 3000 ppm – samples 0025P, 0026P, 0027P, 0046P and 0465. The highest value was sample 0465 at 7710 ppm Cu in a malachite stained, serpentinized peridotite. Three other samples were moderately anomalous with values ranging from 469 to 1960 ppm Cu.

Of the 28 rock samples collected from the South Central area (Tables 5 and 6; Figure 10), only 3 samples returned Cu values greater than 3000 ppm – samples 0041P, 663294 and 663286. Twelve (12) other samples were moderately anomalous with values ranging between 462 to 2670 ppm Cu.

Of the 34 rock samples collected from the Upper Road area (Tables 7 and 8 Figure 11), 9 returned Cu values greater than 3000 ppm – samples 0001P, 0005P, 0457, 0003P, 0459, 0002P, 0454, 0453 and 0452. The highest value was 0452 which returned 9490 ppm Cu. Seventeen (17) other samples were moderately to strongly anomalous with values ranging between 345 to 2980 ppm Cu.

Of the 21 rock samples collected from the Western area (Tables 9 and 10 Figure 12), only 2 returned moderately anomalous Cu values ranging from 718 to 1910 ppm Cu – samples 663288 and 482 respectively.

### 9.5.2 Gold

Of the 18 rock samples collected from the North Central area (Tables 3 and 4; Figure 9), only 4 samples returned Au greater than 100 ppb, the best value being 393 ppb for sample 0016P. This sample was also analyzed using fire assay and returned a similar 351 ppb Au value.



All of the 28 rock samples collected from the South Central area (Tables 5 and 6; Figure 10) returned less than 100 ppb Au.

Of the 34 rock samples collected from the Upper Road area (Tables 7 and 8 Figure 11), only 1 sample, 00451, was strongly anomalous returning 841 ppb Au (fire assay method). Two other samples, 0452 and 0001P were weakly anomalous returning 142 and 237 ppb Au respectively.

None of the 21 rock samples collected from the Western area (Tables 9 and 10 Figure 12) returned significant Au values.

### **9.5.3 Platinum**

Of the 18 rock samples collected from the North Central area, only 9 samples were analyzed for Pt. using fire assay and an ICP-MS finish. Pt values for these samples ranged from 2.5 to 74.7 ppb.

Of the 28 rock samples collected from the South Central area, only 5 samples were analyzed for Pt.. The Pt values for these samples ranged from 6.3 to 65.4 ppb.

All of the 34 samples collected from the Upper Road area were analyzed for Pt. Two samples, 0470 and 0452, were strongly anomalous returning 287 ppb Pt and 546 ppb Pt respectively. The remaining samples had Pt values ranging from 8.7 to 94.9 ppb.

A total of 21 rock samples were collected from the Western area (Tables 9 and 10 Figure 12). Of these only 4 were analyzed for Pt with values ranging from 0.6 to 39.2 ppb.

### **9.5.4 Palladium**

Of the 18 rock samples collected from the North Central area, only 9 samples were analyzed for Pd. using fire assay and an ICP-MS finish. Pd values for these samples ranged from 1.7 to 143 ppb.

Of the 28 rock samples collected from the South Central area, only 5 samples were analyzed for Pd. The Pd values for these samples ranged from 1.7 to 143 ppb.

All of the 34 samples collected from the Upper Road area were analyzed for Pd. Three samples - 0470, 0454 and 0452, were strongly anomalous returning 437 ppb, 474 ppb and 1370 ppb Pd respectively. Sample 0452 is described as a 30 centimetre wide vein in outcrop containing massive pyrite and minor chalcopyrite. The remaining 30 samples had Pd values ranging from 0.8 to 229 ppb. Of these, the 8 samples that returned Pd values greater than 100 ppb should be considered moderately anomalous.

A total of 21 rock samples were collected from the Western area. Of these, only 4 were analyzed for Pd, returning values ranging from 0.8 to 50 ppb.

### **9.5.5 Silver**

Of the 18 rock samples collected from the North Central area (Tables 3 and 4; Figure 9), 14 contained anomalous Ag values greater than 1 ppm (1000 ppb), the best value being 7.8 ppm for sample 0016P. This sample also contained anomalous Au (351 ppb) and Pb (1820 ppm). It is described as a carbonate altered gneiss at the contact with pyroxenite.

Of the 28 rock samples were collected from the South Central area (Tables 5 and 6; Figure 10), 11 contained anomalous Ag values greater than 1 ppm with sample 487 returning the best Ag value of 4.1 ppm.

Of the 34 rock samples collected from the Upper Road area (Tables 7 and 8; Figure 11), 20 returned Ag values greater than 1 ppm (1000 ppb) with the highest value being 100 ppm for sample 00451. This sample was also strongly anomalous in Au (841 ppb).

Of the 21 rock samples collected from the Western area (Tables 9 and 10; Figure 12) only 4 samples returned values greater than 1 ppm Ag, with the best value 12 ppm in sample 0463. This sample also returned >5000 ppm Pb and 4520 ppm Zn. This sample is described as a 15 centimetre quartzite band in metasedimentary rocks from an old blast pit with visible galena, sphalerite and pyrite.

### **9.5.6 Nickel**

Two samples in the North Central area - 0465 and 479 - returned values greater than 300 ppm Ni. In the South Central area 3 samples - 0037P, 488 and 451 - returned Ni values of 797, 1330, and 1480 ppm respectively. Two samples from the Upper Road area – 0019P and 0020P - were also anomalous returning values of 594 and 1110 ppm Ni respectively. Five samples of dunite from the western area – 0029P, 0030P, 485, 663292 and 663293 – returned values greater than 700 ppm.

### **9.5.7 Chromium**

A total of 5 samples from North Central, two samples from South Central, 4 samples from Upper Road and 1 sample from the Western area returned Cr values greater than 300 ppm. The highest value was for a sample of dunite (sample 00337P) from the South Central area which returned 1740 ppm Cr.

### **9.5.8 Lead**

Only two samples, 0463 and 0013P, both from the Mt. Britton area, contained significant Pb. Both samples returned values greater than the upper detection limit for Pb using ICP-MS (5000 ppm).

### **9.5.9 Zinc**

Only 6 of the 101 samples collected in 2016 contained greater than 100 ppm Zn. Of these, the only significant value was for sample 0463, collected near the top of Mt. Britton, which returned 4520 ppm Zn.

## **10 Drilling**

As near as can be determined from publically available assessment reports there has not been any drilling done within the current boundaries of the Northern Champion Property.

## **11 Sample Preparation, Analyses and Security**

The following descriptions of the analytical procedures used were obtained from the Actlabs website. The writer personally observed the sampling procedures used by Rich River personnel and confirms that they are appropriate for the purposes of characterizing the mineralogy and grade of sulphide mineralization that occurs on the Property.

Rock chip samples taken on the Northern Champion Property were kept secure prior to shipment to Actlabs, Kamloops, BC. At the lab samples were dried and subjected to a 4 inch wide jaw crusher in order to achieve -6 millimetre sized material, and then split into sub-samples using a riffle splitter creating a 250 gram representative sample that is pulverized to 75 micron (0.075 millimetres) size material using a ring and puck style steel grinding mill. The pulverized sample is reduced to 0.5 grams used for multi-element ICP and 20 grams used for Au geochemical analysis. QA/QC procedures were applied to all geochemical data documented, and all instrumentation was operated in accordance with operating instructions as supplied by manufacturer. Equipment checkout and calibration activities occurred prior to sampling/operation. All calibration was documented. Actlabs is independent of the issuer.

Quality assurance and quality control of sample data was acted upon in order to generate representative quantitative geochemical analysis results. The author believes that adequate preparation, security and analytical procedures have been applied with regard to rock samples collected on and shipped from the property.

This 50,000 square foot Actlabs laboratory in Kamloops has been in operation since 2012. It is staffed by experienced personnel and houses state-of-the-art equipment and instrumentation for Sample Preparation, Fire Assay, ICP-OES, ICP-MS, XRF, Atomic Absorption, Gravimetry, Leco Carbon/Sulphur, Mercury Analysis, and Davis Tube Magnetic Separation. The laboratory is ISO/IEC 17025 Accredited (Lab 790) by the Standards Council of Canada for specific methods listed in the scope of accreditation available at <https://www.scc.ca/en/palcan/1088>.

Rock samples collected in 2016 were submitted to Actlabs for routine aqua regia digestions and ICP/MS finish (Actlabs code UT-1M). In this technique a 0.5 g sample is digested in aqua regia at 90 °C in a microprocessor-controlled digestion block for 2 hours. Digested samples are diluted and analyzed by Perkin Elmer Sciex ELAN 6000, 6100 or 9000 ICP/MS. One blank is run for every 68 samples. An in-house control sample is run every 33 samples. Digested standards are run every 68 samples. After every 15 samples, a digestion duplicate is analyzed. Instrument is recalibrated every 68 samples. Detection and upper limits for each element included in analytical package UT-1M is given in the following table.

**Table 11. Elements and Detection Limits (ppm, except where noted) for Actlabs analytical package UT-1M**

Element	Detection Limit	Upper Limit	Element	Detection Limit	Upper Limit	Element	Detection Limit	Upper Limit
Ag	0.1	100	Fe *	0.01 %	30 %	S +	1 %	20 %
Al *	0.01 %	8 %	Ga *	1	1,000	Sb *	0.1	500
As	0.5	10,000	Hg	0.01	10,000	Sc *	0.1	10,000
Au *	0.5 ppb	1,000 ppb	K *	0.01 %	5 %	Se *	0.5	10,000
B *	20	2,000	La *	1	10,000	Sr *	1	5,000
Ba *	1	10,000	Mg *	0.01 %	10 %	Te *	0.2	500
Bi *	0.1	2,000	Mn *	1	10,000	Th *	0.1	200
Ca *	0.01 %	50 %	Mo *	0.1	10,000	Ti *	0.001 %	10 %
Cd *	0.1	2,000	Na *	0.001 %	5 %	Tl *	0.1	500
Co	0.1	5,000	Ni *	0.1	10,000	V *	2	1,000
Cr *	1	10,000	P *	0.001 %	5 %	W *	0.1	200
Cu	0.1	10,000	Pb	0.1	5,000	Zn *	1	5,000

**Note:**

Assays are recommended for values which exceed the upper limits.

Au is semi-quantitative due to the small sample size.

\* Element may only be partially extracted.

+ Sulphide sulphur and soluble sulphates are extracted.

The Au, Pt and Pd concentrations in samples collected in 2016 were determined using a combination of fire assay and ICP/MS finish (Actlabs code 1C-Exp 2). In this technique a

sample size of 5 to 50 grams can be used but the routine size is 30 g for rock pulps, soils or sediments (exploration samples). The sample is mixed with fire assay fluxes (borax, soda ash, silica, litharge) and with Ag added as a collector and the mixture is placed in a fire clay crucible. The mixture is then preheated at 850°C, intermediate 950°C and finish 1060°C with the entire fusion process lasting 60 minutes. The crucibles are then removed from the assay furnace and the molten slag (lighter material) is carefully poured from the crucible into a mould, leaving a lead button at the base of the mould. The lead button is then placed in a preheated cupel which absorbs the lead when cupelled at 950°C to recover the Ag (doré bead) + Au, Pt and Pd.

The Ag doré bead is digested in hot (95°C) HNO<sub>3</sub> + HCl. After cooling for 2 hours the sample solution is analyzed for Au, Pt, Pd by a Perkin Elmer Sciex ELAN 6000, 6100 or 9000 ICP/MS. On each tray of 42 samples there are two method blanks, three sample duplicates, and 2 certified reference materials.

If values exceed upper limits, reanalysis by fire assay Au, Pt, Pd (Code 8) is recommended. The analytical technique used to determine Au and PGE’s using fire assay and ICP/MS is described in Hoffman et al. (1998, 2002).

**Table 12. Elements and Detection Limits (ppb) for Actlabs Analytical Technique 1C-EXP2.**

Element	Detection Limit	Upper Limit
Au	1	30,000
Pt	0.5	30,000
Pd	0.5	30,000

Selected samples were also analyzed for PGE’s using Actlabs Nickel Sulphide Fire Assay technique (Code 1B1-NiS Fire Assay-INAA). In this technique samples up to 25 g in size are fire assayed using a nickel sulphide (NiS) fire assay procedure. The nickel sulphide button is dissolved in concentrated HCl and the resulting residue which contains all the PGE and Au are collected on a filter paper. This residue undergoes 2 irradiations and 3 separate counts to measure all the PGE and Au. One batch of 34 samples includes 2 blanks, 3 certified standards and 3 duplicates.

Instrumental Neutron Activation Analysis (INAA) is an analytical technique which is dependent on measuring gamma radiation induced in the sample by irradiation with neutrons. The primary source of neutrons for irradiation is usually a nuclear reactor. Each element which is activated emits a “fingerprint” of gamma radiation which can be measured and quantified. Multi-element analyses of practically any material, from the smallest sample which can be weighed accurately to very large samples, have been analyzed routinely by INAA. This analytical technique is discussed in Hoffman (1978) and Hoffman et al. (1992).

**Table 13. Code 1B1 (NiS Fire Assay-INAA) Elements and Detection Limits (ppb)**

Element	Detection Limit	Upper Limit
Os	2	20,000
Ir	0.1	10,000
Ru	5	50,000
Rh	0.2	20,000
Pt	5	100,000
Pd	2	100,000
Au	0.5	20,000
Re	5	50,000

Activation Laboratories Ltd. (“Actlabs”) performs quality assurance and quality procedures that include repeat sampling and insertion of blank and/or standard samples for the purpose of data verification.

The writer has reviewed the original analytical certificates issued by Actlabs for rock samples submitted to the lab by Rich River Exploration in 2016. In the writer’s opinion the analytical procedures used to determine the concentrations of base, precious and PGE metals in the samples submitted was appropriate. The quality control employed by Actlabs indicates a high level of precision and accuracy in the analytical results.

## 12 Data Verification

The writer collected 4 check samples during his visited to the property in October, 2016. These samples (NC16-001 to NC16-004) were collected at or near sample sites 0016P, 0015P, 0006P and 663286 respectively. These samples were shipped by the writer to Actlabs in Kamloops for Fire Assay – ICP/MS analyses of Au, Pt and Pd (package 1C-EXP2). Table 14 compares the results for Au, Pt and Pd for these samples and samples collected by Rich River at the same site. As shown in the table the results obtained were comparable. Note that sample 663286 was not submitted for fire assay – ICP/MS analysis for Au, Pt and Pd. The Au value shown in Table 14 was determined using Aqua Regia digest and an ICP/MS finish. However, both this sample and check sample NC16-004 indicate slightly anomalous Au concentrations. Sample 0016P and check sample NC16-001 also returned above background level Au values of 351 and 279 ppb respectively. All samples in Table 14 returned low Pt and Pd values. The results indicate that the potential for anomalous concentrations of these elements at the sites sampled is low. Check samples collected by the writer were only analyzed for Au, Pt and Pd. The writer observed visible copper mineralization in the form of malachite, azurite and chalcopyrite at the sample sites visited but the samples collected by the writer were not analyzed for Cu and other base metals.

Therefore, the analytical results obtained by Rich River for these elements have not been verified.

**Table 14. Comparison of analytical results for Au, Pt and Pd in check samples collected by the writer (NC16-001 to N16-004) and samples collected by Rich River (bold type).**

Sample Nos.	UTM E	UTM N	Au ppb	Pt ppb	Pd ppb	Area	Site Description
<b>0016P</b>	<b>651555</b>	<b>5487027</b>	<b>351</b>	<b>2.5</b>	<b>1.7</b>	North Central	Carbonate-altered mafic gniess at pyroxenite contact. Trace chalcopryrite, up to 1 % pyrite. Possible galena flakes.
NC16-001	651560	5487024	279	24	16		
<b>'0015P</b>	<b>651555</b>	<b>5487027</b>	<b>12</b>	<b>16</b>	<b>25</b>	North Central	Medium grained magnetite pyroxenite with 1 % chalcopryrite disseminated in fine grains. Malachite on some fractures.
NC16-002	651553	5487029	11	15	70		
<b>'0006P</b>	<b>652115</b>	<b>5486240</b>	<b>6</b>	<b>2.2</b>	<b>8</b>	Upper Road	Pyrite veined ultramafic rock. Magnetite 30 to 80 %, disseminated pyrite 1 % to 10 %, sparse chalcopryrite.
NC16-003	652112	5486239	6	3.2	14		
<b>663286</b>	<b>651537</b>	<b>5486852</b>	<b>88.7</b>	<b>n.d.</b>	<b>n.d.</b>	South Central	Fine-grained ultramafic rock with 1 % chalcopryrite in very fine grains plus large blebs in carbonate veinlets.
NC16-004	651536	5486851	49	23	81		

Note: n.d. = not determined; Au determined by Agua regia – ICP/MS for sample 663286; all other values Fire Assay and ICP/MS.

## 13 Mineral Processing and Metallurgical Testing

There has not been any mineral processing or metallurgical testing done on mineral samples from the Northern Champion Property.

## 14 Mineral Resource and Mineral Reserve Estimates

There has not been sufficient drilling to determine subsurface extent and overall grade of mineralization on the Northern Champion Property. There are no historical mineral resource estimates for any of the showings on the Northern Champion Property.

## 15 Adjacent Properties

Mineral properties and mineral occurrences adjoining the Northern Champion Property are shown in Figure 3. The reader is cautioned that the results obtained on adjacent properties do not indicate similar results, whether negative or positive, will occur or could be expected to occur on the Northern Champion property.

The largest mineral title block is northeast of the property and is held by North Bay Resources Inc. These mineral titles cover a number of showings, but the ones of interest with regard to proximity to Northern Champion are the Sootheran, D-R-Creek Zone and Grasshopper Mountain-Olivine showings (Figure 13).

The Sootheran showing is on the south bank of the Tulameen River, 580 metres east-northeast of the mouth of Britton (Eagle) Creek and 10 kilometres west-southwest of the town of Tulameen. A zone of quartz veining occurs in peridotite of the Early Jurassic Tulameen Ultramafic Complex, a zoned Alaskan-type intrusive complex. The showing is in the northern margin of the dunite-rich core of the complex. The zone strikes 010 degrees and dips steeply west. At one point, it is 1.8 metres wide, containing 0.6 metre of quartz and a 0.3-metre thick mass of country rock, in addition to some sheared and oxidized material. The quartz is sparsely mineralized with pyrite, galena, chalcopyrite and sphalerite. Galena also occurs in a band, 10 centimetres thick, on the east wall of the zone. Three chip samples taken across the zone assayed traces of gold and a few grams per tonne silver; a sample of the galena band assayed trace gold and 21 grams per tonne silver (Property File - M.S. Hedley, 1937).

The D platinum-chromite showing occurs at the confluence of Britton (Eagle) Creek with the Tulameen River, 10.5 kilometres west-southwest of the town of Tulameen. This occurrence is hosted in the dunite-rich core of the Early Jurassic Tulameen Ultramafic Complex, a zoned Alaskan-type intrusive complex. Mineralization occurs in a serpentine breccia zone containing fragments of dunite/peridotite cemented by a matrix of serpentine. The zone is 180 metres long, up to 155 metres wide and lies mostly north of the river, on either side of the creek. Chromite occurs in the breccia and the surrounding dunite in areas of stronger magnesium alteration, mostly along Britton Creek. The mineral forms irregular lenses up to 20 centimetres long and 10 centimetres wide, fracture fillings up to 2 centimetres wide and primary layers of magmatic origin up to 15 centimetres thick. Platinum occurs in elevated values in the breccia and in the surrounding dunite/peridotite. Two samples from the breccia assayed 2.150 and 4.400 grams per tonne platinum (Chamberlain, 1988, Assessment Report 17170, page 5). Values of up to 0.481 gram per tonne platinum occur west and south of the breccia zone, in peridotite with little visible



chromite (Chamberlain, 1988, Assessment Report 17170, Figure 3). The breccia zone is noted to be practically free of sulphides (Chamberlain, 1988), yet earlier reports suggest the presence of chalcopyrite and millerite. Magnetite, sperrylite and asbestos have also been reported in the past. The showing was mapped and sampled by Imperial Metals Corporation, Newmont Exploration of Canada and Tiffany Resources between 1984 and 1987.

White (1987) collected 19 samples that outlined three significant areas of "fresh" dunite on the lower slopes of Grasshopper Mountain that showed initial potential for raw olivine. All the samples taken from Olivine Mountain had loss on ignition values in excess of 2 per cent. The three zones are described by White (1987) as follows: "Three zones with loss-on-ignition less than 2 per cent have been identified north of the Tulameen River on the southwest slopes of Grasshopper Mountain. The northern zone, approximately 100 metres long by 75 metres wide, is open to the east. A second, central zone is approximately 50 metres long by 40 metres wide and open to the west. The third, irregular zone, cut by the Tulameen River road, is approximately 100 metres long by 65 metres (maximum) wide." Sampling was not carried out on the southeastern slopes of Grasshopper Mountain or the northeastern slopes of Olivine Mountain due to the difficulty of access. These areas are within the less than 20 per cent serpentinized zone as outlined by Findlay (1963) and therefore have the potential for fresh olivine. The bulk samples taken from the zone along the road were shipped to CANMET laboratories in Ottawa for further testing. The results are described below. In 1986, a 20-kilogram sample was tested to determine if it would be suitable for foundry sand applications. The testing considered several properties including crushing and screening characteristics, mouldability, clay and water requirements, wet and dry compressibility and permeability. The Grasshopper Mountain olivine sand performed well, or adequately, in all categories in the initial testing. Due to the favourable performance, a second, larger bulk sample was shipped to CANMET for full scale testing as foundry sand. In 1987, a 454-kilogram bulk sample taken along the Tulameen River road, 113 metres west of the mouth of Britton Creek, was shipped to CANMET for detailed foundry sand testing. The examination included optimum crushing method and grain characteristics. Also examined was the greensand preparation including clay and water requirements, compactability, density, mold hardness and mouldability. Further, the casting performance was assessed for burn-on, scabbing, surface finish and mold penetration. The performance of the sand with repeated use was tested by five sequential castings and the sand was examined for moisture content, clay demand, grain sizing and attrition as well as acid resistance and loss on ignition. The olivine test sand from Grasshopper Mountain performed well against an industry standard sand, IMC Olivine 50, from the United States. Most results were equivalent and little variation occurred between tests. This indicates that the olivine from Grasshopper Mountain could perform well against sands already available on the market. Subsequent work was conducted by Dia Met Minerals Ltd., along and above

the Tulameen River road, about 400 metres southwest of the mouth of Britton Creek. Here, the dunite is variably serpentinized, with both fibrous and asbestiform varieties of serpentine replacing 10 to 90 per cent olivine along grain boundaries and internally. Talc replaces 2 to 5 per cent of the olivine, and minor carbonate alteration is also noted. Loss on ignition for most of the olivine ranged from 2.0 to 4.0 per cent. Beneficiation tests on 23 dunite samples from drill core indicated no sample with greater than 3.5 per cent ignition loss could be reduced to less than 2 per cent ignition loss by grinding and gravity separation (Waldman, 1989, Assessment Report 19480). The company drilled two holes in 1988, and conducted mapping and surface sampling over a 300 by 200 metre area in 1989.

It should be noted that much of the previous work done on mineral titles now held by North Bay Resources was focussed on the industrial mineral potential of olivine from the dunite core of the Tulameen Complex. Since the Northern Champion property only covers a small part of this core, there is a lower potential for high quality olivine to be found on the Property.

There are two Minfile occurrences, 092HNE306 and 092HNE184, that occur on mineral titles adjacent to the northeastern corner of the Property. These mineral titles are held by D.J. Javorsky and 632347 B.C. Ltd respectively.

The general area of the Olivine Mountain Diamond occurrence (092HNE306) is given as the exact locality of Olivine Mountain (Camsell, 1911). The dunite-rich core of the Tulameen Ultramafic Complex, crops out over an elongate area extending from Grasshopper Mountain up the northwest slope of Olivine Mountain to its summit. Chromite frequently occurs as clusters of disseminated coarse crystals, particularly in areas of intense serpentinization within the dunite. The mineral also forms small blebs, minute veinlets, massive pods and lenses up to 100 by 6 centimetres in size within the dunite and is associated with lesser magnetite. These are scattered randomly throughout the dunite, not occurring in any significant concentrations. Four thin sections made from chromite-rich serpentines carried diamonds in veinlets of serpentine and hornblende, visible under a microscope (Camsell, 1911). The general appearance of the diamonds is given as brownish to yellowish in colour, partly or wholly opaque and having a spherical or quite irregular outline. Their size is described as being about the size of an ordinary pin's head.

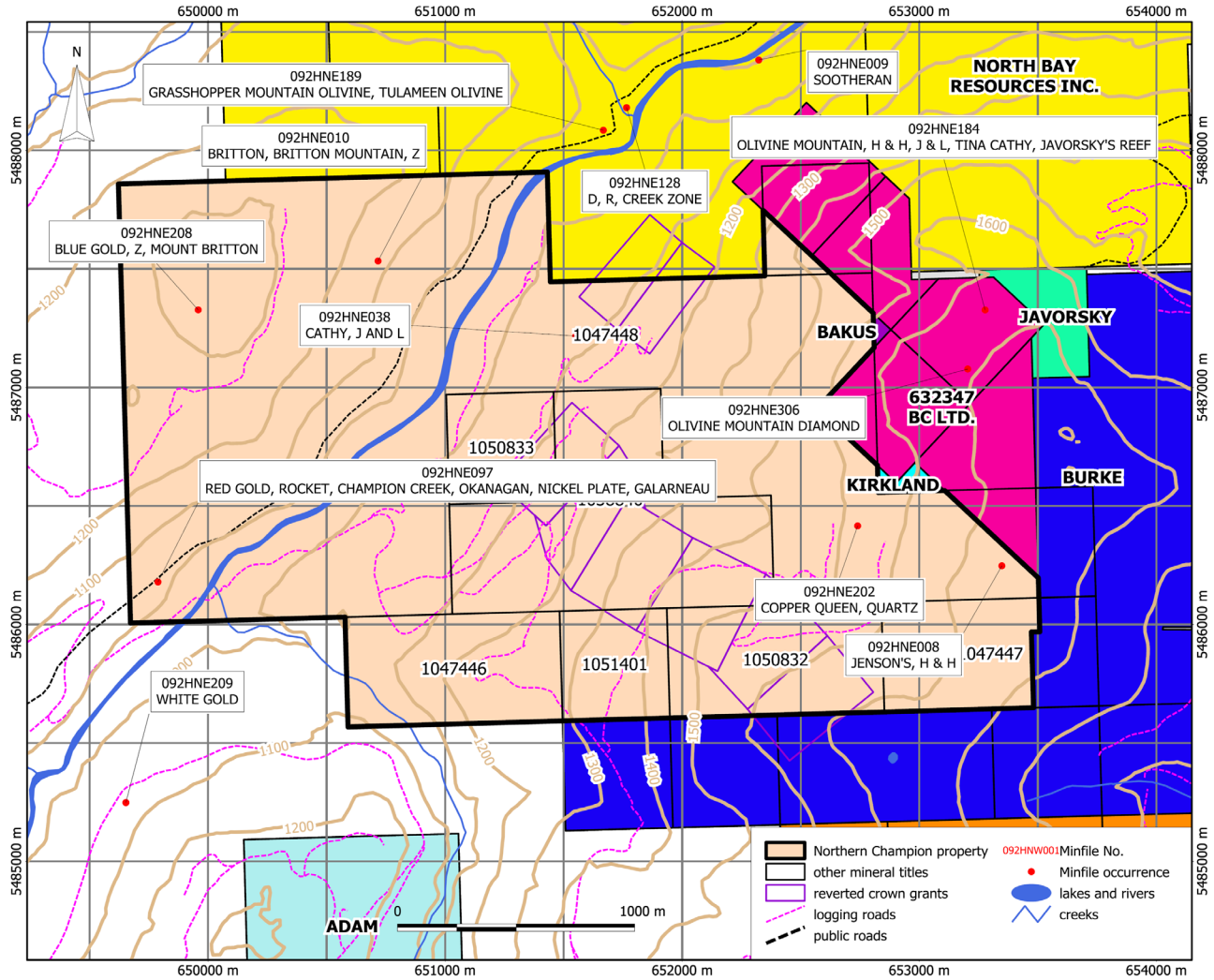


Figure 13. Adjacent properties and Minfile mineral occurrences, Northern Champion Property. Map prepared by D.G. MacIntyre, September 17, 2018.

The Olivine Mountain platinum-chromite showing (092HNE184) occurs on the northwest slope of Olivine Mountain, and is hosted in the dunite-rich core of the Tulameen Ultramafic Complex. A grab sample of brown olivine pyroxenite with chromite assayed 3.186 grams per tonne platinum (Fox and Goodall, 1987, Assessment Report 16125, Appendix 1, sample 11492). A chip sample, taken 150 metres to the south, assayed 1.98 grams per tonne platinum and 1.07 per cent chromium over 7.9 metres (Fipke, 1987, Assessment Report 16691, Appendix 1, page 4, sample 31+35-31+61E). Two other samples (9442, 57981), of uncertain location, assayed 5.49 and 1.1 grams per tonne platinum respectively, and 21.96 and greater than 1 per cent chromium respectively (Gravel, J., 1987, Assessment Report 16323, Appendix 4). Sample 57981 is of serpentinized dunite with magnetite and chromite. Higher platinum values also occur in strongly serpentinized, mildly asbestos-veined peridotite and dunite (Fipke, 1987, Assessment Report 16691). The summit and north slope

of Olivine Mountain were extensively sampled by Tarnation Mining, North American Platinum Corporation, D.K. Platinum Corporation and Dia Met Minerals Ltd. between 1983 and 1987. David Javorsky prospected in the area in 2001 under the Prospectors Assistance Program and recovered platinum nuggets from placer deposits (Tulameen River) with crystals of chromite within them. He also recovered chromite nuggets with included pieces of platinum. The area of Olivine Mountain was overstaked by Lynes but only a small wedge of ground was acquired because the mineral titles held by Javorsky, Laroche, Burke and 632347 B.C. Ltd. are still in good standing.

The White Gold showing (092HNE209) is exposed along a roadcut on the south side of the Tulameen River, across from the mouth of McGee Creek (Figure 13). This area is covered by mineral titles held by A.L. Adam that adjoin the southern boundary of the Northern Champion Property. Quartz-pyrite veins, up to 4 centimetres wide, occupy near-vertical shears in granodiorite of the Late Jurassic to Early Cretaceous Eagle Plutonic Complex. The showing lies about 500 metres southwest of the contact with schists and marbles of the Upper Triassic Nicola Group. A sample from one of the veins analysed 0.021 gram per tonne gold, 27.3 grams per tonne silver and 0.4525 per cent zinc (Zastavnikovich, 1988a, Assessment Report 17324, page 5). The showing was sampled by Blast Resources Ltd. in 1987.

## 16 Other Relevant Data and Information

The author is not aware of any additional sources of information that might significantly change the conclusions presented in this technical report.

## 17 Interpretation and Conclusions

The rock geochemical sampling done 2016 has shown the widespread occurrence of copper mineralization within the hornblende pyroxenite border phase of the Tulameen Ultramafic Complex. Locally samples have also returned anomalous Pt, Pd and Au values. Au was determined by aqua regia digestion and an ICP/MS finish. Selected samples were also analyzed for Au, Pt and Pd using fire assay and an ICP/MS finish. Two samples, 0470 and 0452, were strongly anomalous in Pt, returning 287 ppb and 546 ppb respectively and three samples - 0470, 0454 and 0452, were strongly anomalous in Pd returning 437 ppb, 474 ppb and 1370 ppb respectively. The best Au result was for a sample from the Upper Road area which returned 841 ppb Au (fire assay – ICP/MS method). These showings, many of which are new, are classified as Alaskan type PGE occurrences associated with emplacement and crystallization of the ultramafic rocks. There is no evidence of any previous work on these

showings even though historically the area was covered by a number of crown granted mineral claims. In recent years there has been extensive logging and road building on the Property and this has resulted in many new rock exposures of the hornblende pyroxenite border phase of the Tulameen Complex and associated veins and disseminations of pyrite, chalcopyrite and malachite. Exploration of these new mineral occurrences is at a very early stage and their overall extent and economic significance is not known at this time.

## 18 Recommendations

In the writer's opinion, based on the results of the 2016 rock geochemical program, the Northern Champion Property is a property of merit and additional expenditure on mineral exploration is warranted. The main focus of this work should be to determine the overall extent and grade of the new showings discovered in 2016, particularly in the Upper Road Area. This work would involve additional close spaced rock chip sampling, hand trenching and a soil geochemical grid. A Beep Mat geophysical survey would also assist in identify areas where near surface sulphide and/or magnetite mineralization might exist. Depending on the results of this work, a second stage of exploration would involve diamond drilling of the best targets.

Budget details for the recommended 2 phase exploration program are listed in Table 15 and 16:

**Table 15. Proposed Phase 1 Budget for the Northern Champion Property.**

Item	Est. Cost
Geologist, & 2 Geotechnicians, 45 days	\$64,000
Analysis & assays soil, rock samples	\$9,500
Equipment and Supplies	\$7,500
Communication	\$1,000
Meals & Accommodations	\$4,500
Transportation	\$4,000
Report writing	\$5,500
,Beep Mat equipment rental	\$5,000
Total	\$101,000

**Table 16. Proposed Phase 2 Budget for the Northern Champion Property  
(Contingent on positive results from phase 1)**

Item	Est. Cost
Geologist, 2 geotechnicians, 18 days	\$14,000

<b>Item</b>	<b>Est. Cost</b>
Core drilling 500 meters	\$50,000
Assays & analysis 180	\$5,900
Equipment and Supplies	\$3,000
Communication	\$1,000
Meals & Accommodations	\$4,600
Transportation	\$4,000
Report	\$2,500
Contingencies	\$15,000
Total	\$100,000

TOTAL PHASE 1 and 2: \$200,000.00

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## 20 Certificate of Author

I, Donald George MacIntyre, Ph.D., P.Eng., do hereby certify that:

1. I am an independent consulting geologist providing services through D.G. MacIntyre and Associates Ltd. a wholly owned company incorporated December 10, 2004 in the Province of British Columbia (registration no. BC0710941). My residence and business address is 4129 San Miguel Close, Victoria, British Columbia, Canada, V8N 6G7.
2. I graduated with a B.Sc. degree in geology from the University of British Columbia in 1971. In addition, I obtained M.Sc. and Ph.D. degrees specializing in Economic Geology from the University of Western Ontario in 1975 and 1977 respectively.
3. I have been registered with the Association of Professional Engineers and Geoscientists of British Columbia since September, 1979, registration number 11970.
4. I have practiced my profession as a geologist, both within government and the private sector, in British Columbia and parts of the Yukon for over 35 years. Work has included detailed geological investigations of mineral districts, geological mapping, mineral deposit modeling and building of geoscientific databases. I have directly supervised and conducted geologic mapping and mineral property evaluations, published reports and maps on different mineral districts and deposit models and compiled and analyzed data for mineral potential evaluations.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirement to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for all sections of the technical report titled “Technical Report: Northern Champion Mineral Property, Southern Central British Columbia, Canada” dated December 10, 2018 (the “Technical Report”). The effective date of this Technical Report is September 17, 2018.
7. I visited the Northern Champion property on November 21, 2016.
8. I have not had prior involvement with the property that is the subject of the Technical Report.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report the omission of which would make the Technical Report misleading.
10. I am independent of the issuer, the property vendors and the property applying all of the tests in Section 1.5 of National Instrument 43-101.
11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 10th day of December, 2018



D.G. MacIntyre, Ph.D. P.Eng.