



Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

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

TOTAL COST: \$ 6,320.00

AUTHOR(S): D.G. (Dan) Cardinal, P.Geo.

SIGNATURE(S):

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

YEAR OF WORK: 2011

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event No. ID 5076787/ Recorded Date Oct. 14, 2011

PROPERTY NAME: Master Ace claim group

CLAIM NAME(S) (on which the work was done): Master Ace

COMMODITIES SOUGHT: Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: New Westminster

NTS/BCGS: 092H06/092H.035

LATITUDE: 49 ° 18 ' 09 " LONGITUDE: 121 ° 08 ' 31 " (at centre of work)

OWNER(S):

1) Dan Cardinal

2)

MAILING ADDRESS:

1883 Agassiz Avenue

Agassiz, BC V0M 1A3

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

1) Same as above.

2)

MAILING ADDRESS:

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

Property is underlain by cherty-graphitic argillites of the Hozameen Complex, Permian-Jurassic age. Argillite rocks host a north-west trending, semi-concordant, dyke-like, serpentized-ultramafic sill, traceable for several km. Gold-bearing mineralization is hosted along the foot-wall side of the sill in fault-shear contact with the argillite. Alteration consists of malachite staining, iron-carbonate talcose schist and ankeritic-quartz veins. Sulfide assemblages includes: arsenopyrite, pyrite, chalcopyrite & bismuth.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 14527, 16342 & 30999

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	1kmx1km 1:4000	Master Ace tenure 710602	\$ 6,320.00
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
TOTAL COST:			\$ 6,320.00

EVENT NUMBER ID: 507687

**BC Geological Survey
Assessment Report
32625**

**GEOLOGICAL ASSESSMENT REPORT
GEOLOGICAL RECONNAISSANCE SURVEY**

ON THE

MASTER ACE CLAIM GROUP

(MA 584006; MASTER ACE 710602 & MASTER ACE 710682)

(The Master Ace Zone - Orogenic Style Gold-Related Ultramafic Structure)

Surveys Conducted On Master Ace 710602

(work centered at: 635072E - 5462747N/49°18'09" N – 121°08'31" W)

Work Conducted Between July 15-30, 2011

Located At:

NEW WESTMINSTER MINING DIVISION

NTS: 092H/06 BCGS: 092H.035

Co-ordinates (centered on claim group):

Latitude: 49° 18' 0" N; Longitude: 121° 08' 19" W

UTM: Zone 10 635500E; 5462500N

Report Prepared By:

D.G. (Dan) Cardinal, P.Geo., F.G.A.C.

1883 Agassiz Ave.

Agassiz, BC V0M 1A3

January 8, 2012

TABLE OF CONTENTS

	Page No.
A. INTRODUCTION	1.
B. LOCATION AND ACCESS	2.
C. TENURE INFORMATION	2.
D. HISTORICAL BACKGROUND	3.
E. REGIONAL GEOLOGICAL FRAMEWORK	4.
F. ALTERATION AND MINERALIZATION	4.
G. PROPERTY GEOLOGY AND FIELD MAPPING SURVEY	5.
H. BRIEF DISCUSSION OF FIELD OBSERVATIONS	6.
I. CONCLUSION	6.
J. BIBLIOGRAPHY	7.
K. STATEMENT OF EXPLORATION EXPENSES	8.
L. PROFESSIONAL CERTIFICATE	9.

FIGURES:

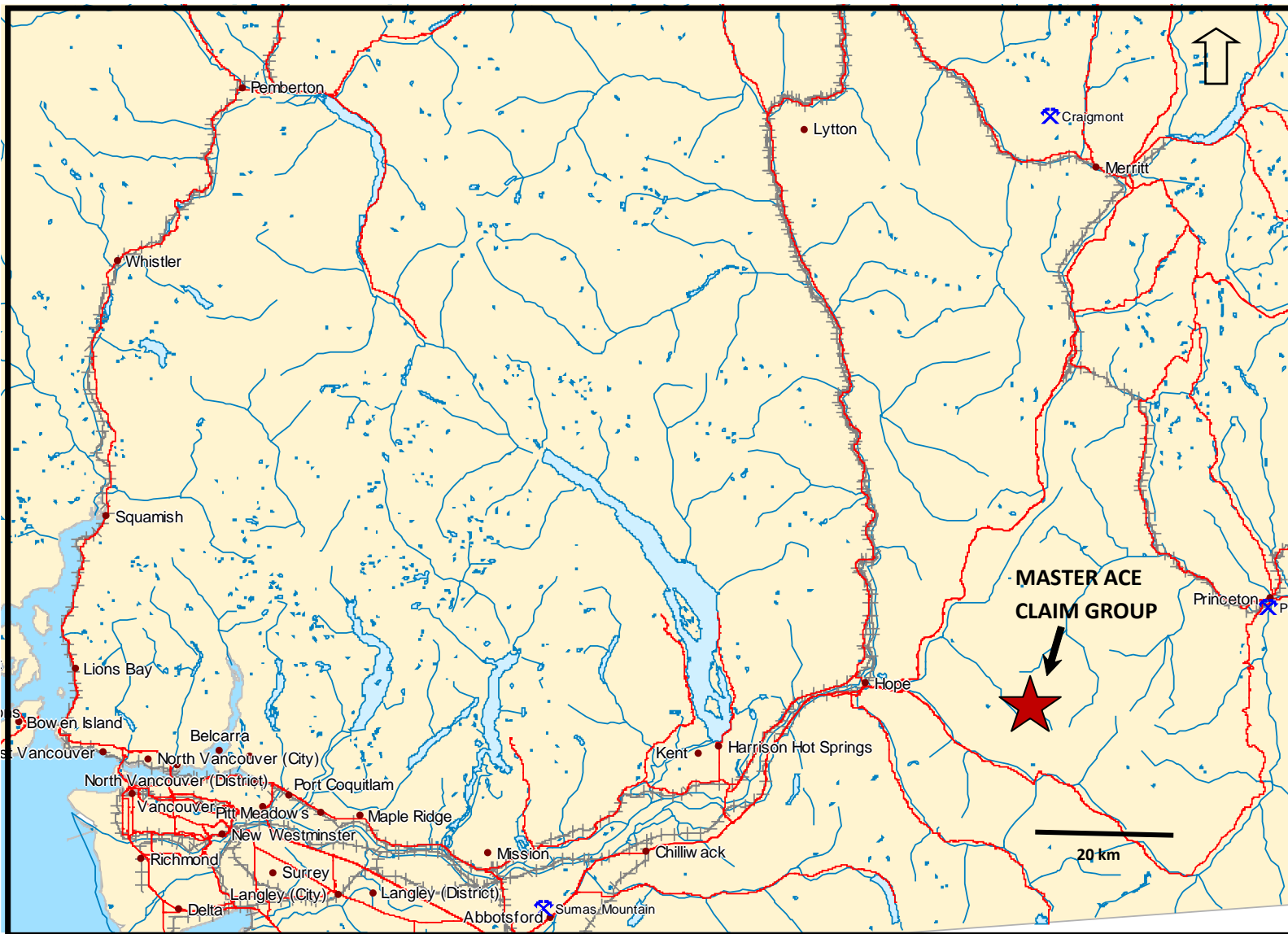
Figure 1 - Location Map

Figure 2 – Regional Geology Map

Figure 3 – Property Geology Map

TABLES:

Table 1. Mineral Tenure List



LOCATION MAP

Figure 1.

Master Ace Mineral Claim Group

Tenure Nos. 584006, 710602 and 710682

NTS Mapsheet: 92H/06 (092H.035)

Lat. 49° 18' 0"N; Long. 121° 8' 19"W

UTM: Zone 10 5462482N – 635288E

Southwestern British Columbia

A. INTRODUCTION

The **Master Ace Claim Group** is located 23 km due south-east of the town of Hope. The Sowaqua Creek logging road located east of the claims, comes within 2.7 km of the surveyed area. Present access to the claims is best achieved by utilizing a helicopter permanently based in Hope.

The claim group is comprised of 3 contiguous claim blocks covering 547.67 hectares registered to D.G. Cardinal (the author of this report). The claims straddle, and cover, much of a northwest trending gold-bearing structure traceable of some 4 km along strike.

Historically, this area was initially explored and prospected ca. late 1920s to the mid-1930s by prospectors from Coalmont, BC. During this period they discovered a north-west trending, fault-associated, serpentinized ultramafic structure traceable for several kilometres, hosting anomalous gold values. In 1932, Mr. P.B. Freeland, Inspector of Mines of the BC Ministry of Mines, examined the northern section of the structure where some of the work (trenches, pits, etc.) was taken place and reports that many samples were collected across 1-2m width mineralized veins carrying up to 8.6 gm/t Au, >150 gm/t Ag with 'picked' samples as high as 36 gm/t Au. Following this initial work the area lay dormant of exploration until the early 1980s when field investigations located physical evidence (i.e. old trenches) confirming the 'Master Ace showings'.

The auriferous-bearing, serpentinized structure was re-discovered (by the author) in 1984-85. The area was staked and subsequently optioned to a junior resource company that conducted limited exploration work along the south end of the structure, where interesting gold-silver-copper values were uncovered. No exploration work was carried out along the northern portion of the structure.

Regional geological framework is tectonically constructed by 2 juxtaposing accretionary terranes, sutured by a first order, compressional structure referred to as the Hozameen Fault. To the south-west of the accretionary zone is the east verging Bridge River terrane, comprised of Permian to Jurassic age Hozameen Group consisting of a thick sequence of deep water-derived pelagic-cherty sedimentary and volcanic rocks. To the north-west, is the Cadwallader-Methow terrane that includes Triassic volcanic arc rocks (Spider Peak Formation) and Jurassic to Cretaceous basinal clastic sediments comprised of the Ladner-Dewdney groups and overlying Jackass Mountain conglomerate. Forming the basement is the Cadwallader ophiolitic rocks of undetermined age. This orogen is intruded by post accretionary granitic stocks of Eocene age.

Underlying bedrock on the property is predominately composed of intensely foliated, north-west trending, steeply west-dipping, cherty-graphitic argillites cut by remobilized quartz and calcite veins and boudins of the Hozameen Group. Of importance, is a semi-concordant serpentinized, ultramafic sill-like intrusive hosted within the cherty argillites that has experienced intense shearing, more so along the footwall side, in structural contact with the argillite. This footwall structure consists of

several metres wide of alteration- talcose shears which hosts quartz-iron carbonate veins and lenses, carrying anomalous gold-silver-copper values and associated arsenopyrite and bismuth.

During the latter part of July, 2011 (15th-30th) several days were spent by the author and field assistant, conducting geological reconnaissance surveys along the central portion of the ultramafic structure covered by claim tenure 710602. This work is here- in documented and submitted for assessment work credits under Event Number ID: 584006.

B. LOCATION AND ACCESS

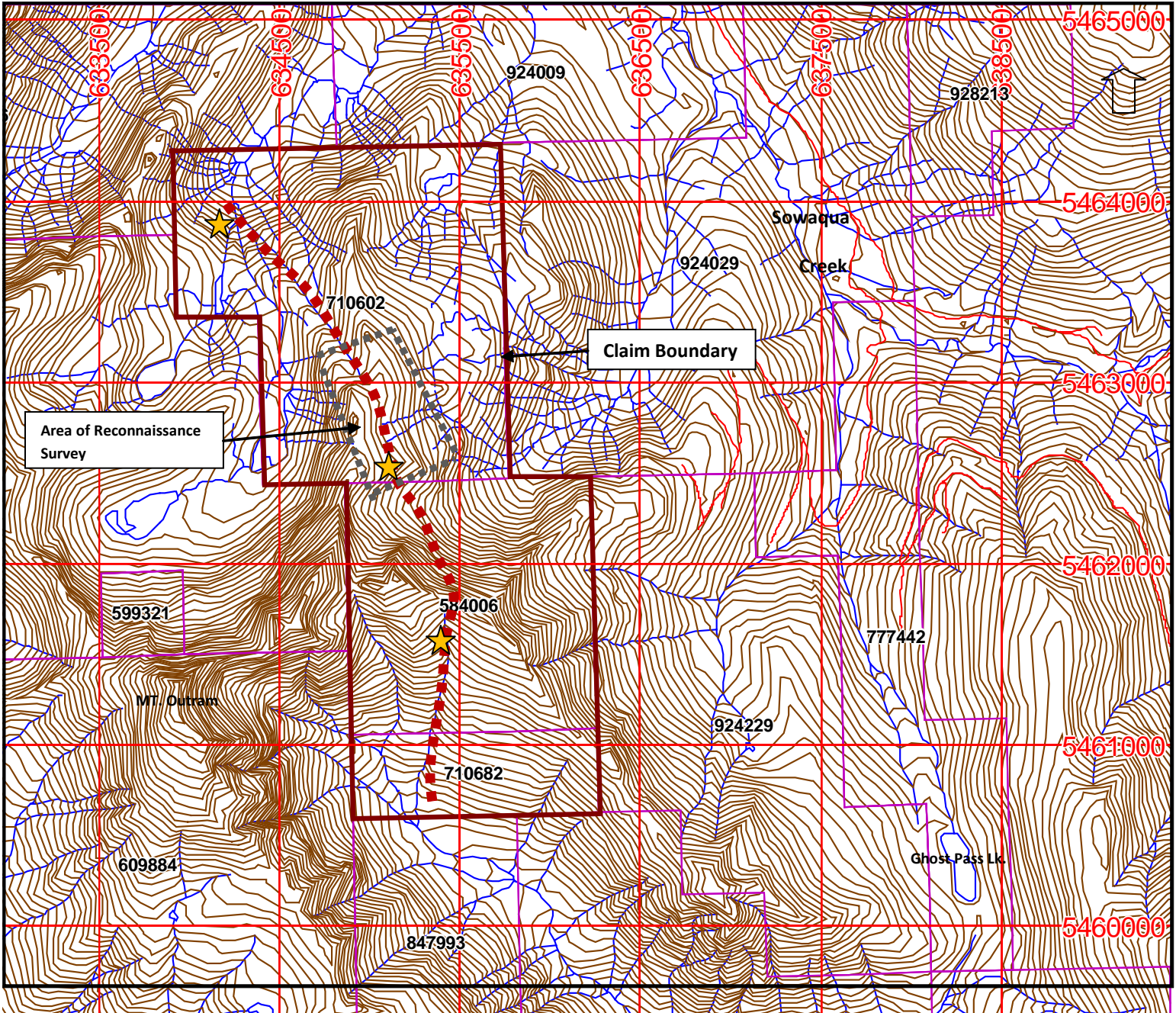
The Master Ace claim group is located 23 km south-east of the town Hope, BC. It is situated along the rugged mountainous region of the Northern Cascade Range. The region has experienced log harvest activity over the years and a series of old logging roads, constructed along local valley floors, approach the base of the claims from the eastern and western sides. Sowaqua Creek logging road is one such access road, which follows the valley floor flanking the eastern side of the claim group. The logging road is accessible from Hope via the Coquihalla Highway. However, due to the mountainous terrain and challenging topography, the claims are best accessed by helicopter permanently based in Hope - a short 20 minute ferry trip.

C. TENURE INFORMATION

Table 1.

Claim Name/Property	Tenure Number	Good To Date	Area in Hectares	Ownership	Mining Divison
MA ZONE	584006	2012/OCT/15	189.61	D. G. CARDINAL	NEW WESTMINSTER
MASTER ACE	710602	2012/OCT/15	294.85	D. G. CARDINAL	NEW WESTMINSTER
MASTER ACE	710682	2012/OCT/15	63.21	D. G. CARDINAL	NEW WESTMINSTER
Total			547.67		

The claims comprise 3 contiguous claim blocks encompassing 547.67 hectares referred to as the Master Ace claim group. They fall within the New Westminster Mining Division and within NTS: 092H/06. The claims are owned 100% by D.G. Cardinal. The claims can be viewed on the BC Ministry of Energy, Mines and Petroleum Resources website at: www.mtonline.gov.bc.ca



CLAIM MAP

MASTER ACE CLAIM GROUP

(MA 584006, Master Ace 710602 & Master Ace 710682)

Co-ordinates Center of Claim Group: UTM 10 635500E – 5462500N

 Trace of Master Ace Structure

 Au occurrence > 1 gm/t

 Logging Access Road

FIGURE 2.

D. BRIEF HISTORICAL BACKGROUND

Between mid 1920s to the mid 1930s, a small group of prospectors from the historical community of Coalmont in the Tulameen River valley near Princeton, conducted seasonal prospecting in the headwaters of the Sowaqua Creek watershed. During this period molybdenite mineralization was discovered along a creek now referred to as Rice Creek, after prospector Ernie Rice of Coalmont. Mr. Rice also discovered gold-bearing quartz veins along a serpentinite structure and systematically prospected the structure over several seasons, staking the main area of mineralization as the 'Master Ace' claims.

In 1932, Mr. P.B. Freeland, Mines Inspector of the BC Ministry of Mines examined the main workings and reported as follows: *"Along the southwest granite veins, another quartz vein, varying from 2 to 6 feet in width containing pyrite, arsenopyrite, and chalcopyrite is traceable for several miles. Many samples were taken from the outcrop of these veins over 5 foot widths and the results varied from a trace in gold and silver to: Gold, 0.26 oz. per ton; silver, 5.52 oz. per ton. Picked samples assayed as high as \$14.00 in gold per ton."*..... This vein system describes what this report now refers to as the Master Ace north zone.

However, over time prospecting in this area gradually ceased and the Sowaqua Creek watershed remained dormant of any mineral exploration for almost a half century. During the 1970s several mining companies attempted to locate the old Master Ace showings but met with little success. Based on a government mineral inventory map, in 1984 D. Cardinal also tried locating the workings without any success. However, following a meeting with one of the remaining members of the Rice family, it was learnt that the Master Ace showing was plotted incorrectly on the mineral inventory map by some 2-3 km. In the late season of 1984 the showings were rediscovered and subsequently staked.

In 1986-87, a junior resource company optioned the claims and conducted reconnaissance geological and sampling surveys along the southern end of the serpentine structure (Master Ace south zone). The exploration included some limited drilling but due to drilling difficulties some of the drill holes did not reach their intended targets. No exploration work was ever carried out on the northern end of the structure (Master Ace north zone) where much of the historical work described by Freeland was conducted. The claims were eventually allowed to lapse. No exploration has been conducted since the latter part of the 1980s to present.

With the advent of mineral staking-online, the Master Ace has been held by various interested parties. Recently, the claims covering the Master Ace lapsed and D. Cardinal had the opportunity to re-acquire the ground .

E. REGIONAL GEOLOGICAL FRAMEWORK

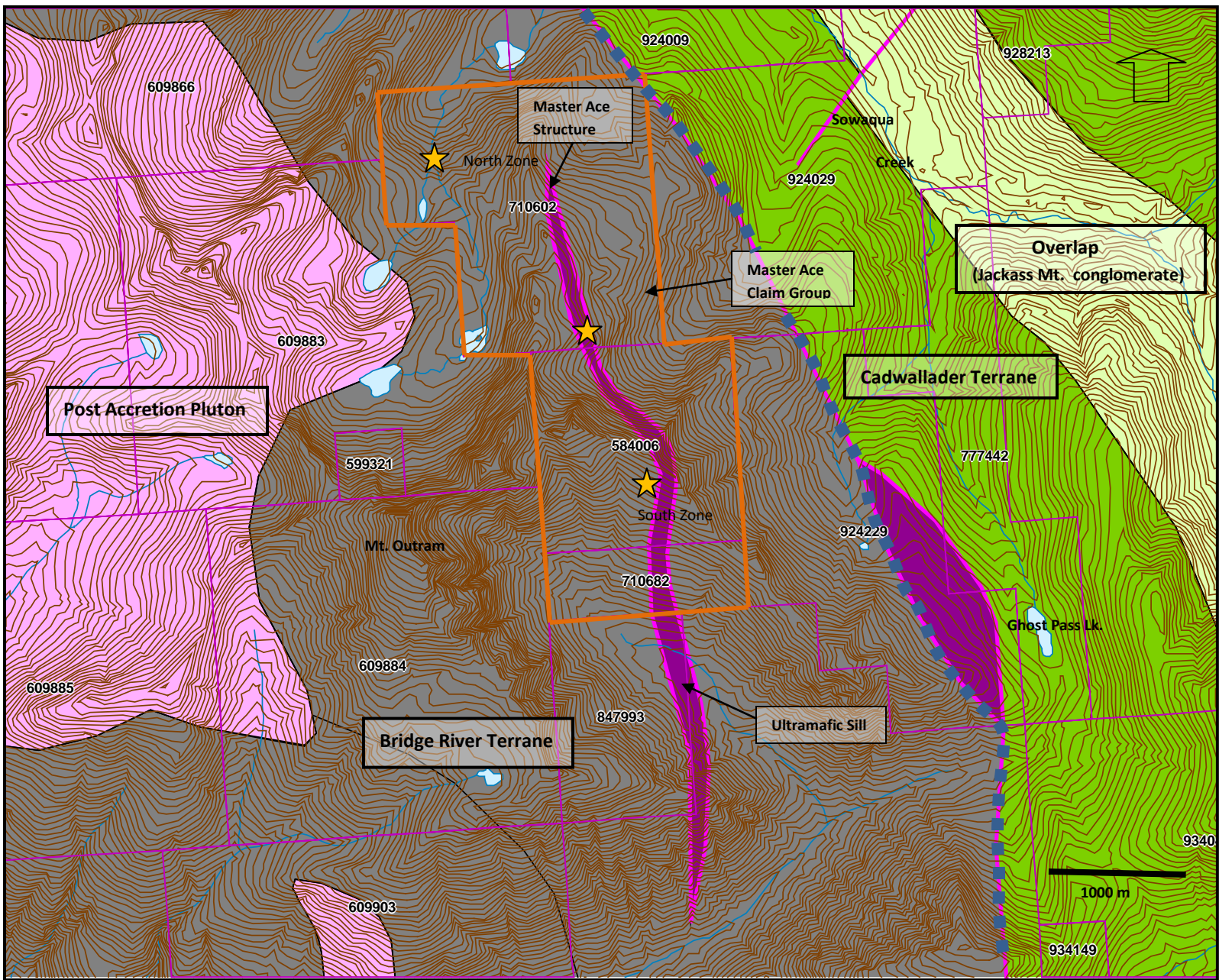
The regional tectonostratigraphic framework, along which the Master Ace claim group lies, is comprised of 2 main distinct Cordilleran accreted terranes. These terranes make up part of the extreme south western extension of the Intermontane Belt. A prominent structural break referred to as the Hozameen Fault makes up part of the regional tectonic framework. The fault represents a compressional, terrane collision-accretion boundary between the eastern verging Permian age Bridge River complex on the southwest, and the Triassic, Cadwallader volcanic arc (Spider Peak Formation) – Jurassic Methow (Ladner-Dewdney groups) basin clastic rocks to the northeast. This accretionary-orogen complex is indicative of been laterally equivalent and linked to the Cadwallader-Methow terrane mapped in the Bridge River district and to the northwest. Post accretionary, Tertiary age Mount Outram pluton intrudes the western portion of the claim boundary.

The Hozameen Fault is spatially related to several historical gold occurrences including 3 past producing gold mines (e.g. Carolin, Pipestem & Emancipation). This mineral belt and former mining camp is colloquially known as the 'Coquihalla Gold Belt'.

The Hozameen Group, which makes up part of the Bridge River terrane, underlies the claim group. It is comprised of thick sequence of ocean-derived sediments, mainly chert layers, highly foliated graphitic cherty argillites, graphitic schists and lesser cherty greenstone volcanics. Hosted within this metamorphic assemblage is a narrow (50-150m wide) lenticular structure comprised of semi-concordant, northwest trending, serpentized ultramafic sill-like intrusion, that is traceable for some 8 kilometres. The serpentine structure dips 60-70 degrees westerly and appears to either pinch out or is faulted off at both the northern and southern ends. Although this ultramafic body is highly metamorphosed, its' origin is indicative of an intrusive sill, rather than ocean floor derived ophiolite material, as it is semi-concordant with the host rock and sections along strike contain remnant sill lenses of pyroxene-periodotite in composition. Alternately, the sills may have been introduced syn-post regional metamorphic –orogenic event along the pre-existing serpentized structure.

F. ALTERATION AND MINERALIZATION

The Master Ace gold-bearing zone occurs along the northern-half (3-4 km) of this serpentized ultramafic structure. Alteration and associated mineralization predominately occurs along the hanging wall (or western) side of the ultramafic sill, in fault-shear contact with graphitic-cherty argillites. The fault-shear contact characteristically displays a zone of alteration consisting of highly oxidized, iron carbonate-talcosse schist, sericitization and sheared, lenticular ankeritic-quartz veins. The zone appears to pinch and swell along strike and down-dip, in places, where exposed, it is at least 3-4 metres wide.



REGIONAL TECTONOSTRATIGRAPHIC FRAMEWORK

MASTER ACE CLAIM GROUP

LEGEND

- Eocene, Granodioritic stock, post accretionary intrusive.
- Overlap – Lower Cretaceous, Jackass Mountain Group, conglomeratic sedimentary rocks.
- Cadwallader-Methow Terrane – Triassic ophiolitic rocks to Middle Jurassic, Ladner Group-Dewdney Creek Formation, clastic sedimentary rocks.
- Bridge River Terrane – Permian to Jurassic Hozameen Complex, chert-fine ocean-derived clastics, greenschist facies metamorphism.
- Terrane Accretion – Suture zone, Hozameen Fault.
- Au/Ag/Cu (Mo)

FIGURE 3.

The sulphide assemblage, based on historical (1987) exploration along the southern section of the Master Ace structure (Master Ace South zone), consists of arsenopyrite-pyrite-chalcopyrite-bismuth and associated anomalous gold-silver values. Mineralization is hosted in malachite-stained ankeritic-quartz veins and iron carbonate talcose schist. Historical assay values from an old trench chip sampled across 4.5 metres, returned 4.1 gm/t Au and 15.7 gm/t Ag. Several talus grab samples collected 400 m down slope from the above-noted trench reported equally anomalous Au and Ag including, one grab sample containing a high of 13.3 gm/t Au and 17.8 gm/t Ag. A number of these samples were also noted to be anomalous in copper, arsenic and bismuth (AR 16,342).

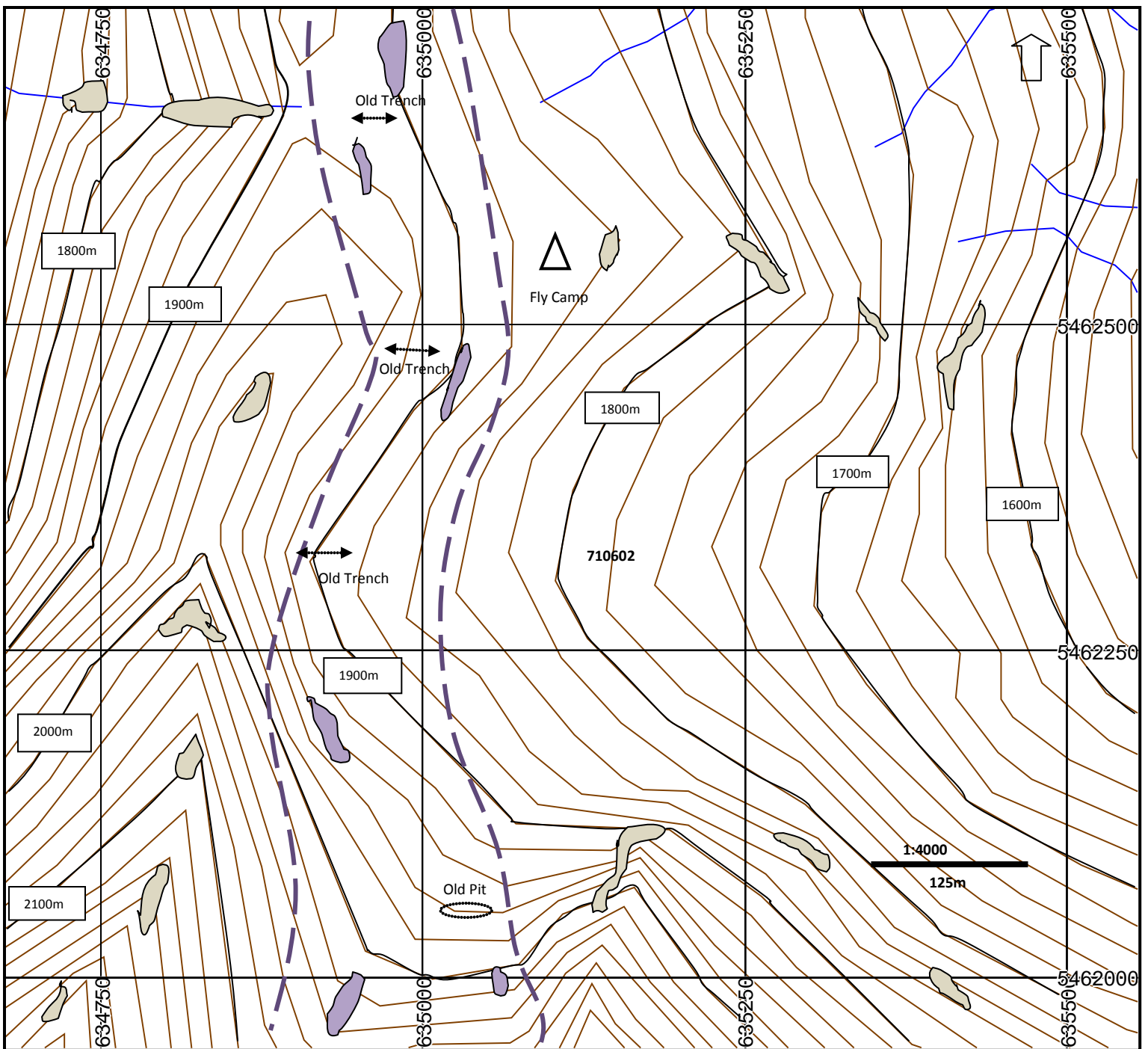
On the northern extension of the Master Ace structure (Master Ace North zone), historical (1985) samples collected from several paralleling, mineralized quartz veins hosted in granite, immediately adjacent to the structure, returned assay values of up to 3.6 gm/t Au, 13.0 gm/t Ag, 0.29% Cu and 0.157% Mo (AR 14,527).

G. PROPERTY GEOLOGY AND FIELD MAPPING SURVEY

Reconnaissance field mapping surveys were conducted along the southern portion of mineral tenure 710602. A small 2-person fly camp was established at elevation 1870m in the mapping site. A total of 4 days were spent during the latter part of July, 2011 conducting reconnaissance mapping.

Mapping was conducted utilizing a garmin hand-held GPS unit and a 1:4000 scale base map for plotting rock outcrops encountered. The area surveyed ranges in elevation between 1700 to 2000 metres and exhibits good rock exposure. The outcrop areas mapped normally were identified in terms of rock type and its' approximate dimensions plotted onto a field map. The main objective was to identify the extension of the Master Ace serpentinized structure due to its' importance for gold-bearing potential. Several rock samples were collected for future analysis. Three old (ca. 9130s) trenches and one old pit were noted (Figure 4.). Samples were also collected from these sites.

This area is underlain by 2 main rock types: (1) intensely foliated, cherty, graphitic argillite and, (2) fault-bounded, sheared serpentinite, identified as been part of the Hozameen Complex. The argillite characteristically hosts contorted and boudinage, milky white quartz veinlets associated with numerous graphitic shears. The foliation trends north-westerly and typically dips 60° to 70° southwest. The serpentinite is characterized by massive dark green lensoid bodies with shears hosting oxidized, iron carbonate talcose schist. The serpentinite is hosted within the graphitic argillite and is semi-concordant with the foliation. Its' width ranges between 50 to 100 metres and appears to dip steeply to the southwest.



RECONNAISSANCE PROPERTY GEOLOGY MAP

MASTER ACE – CLAIM TENURE 710602

LEGEND




-  Predominantly steeply dipping, northwest trending, dark grey, cherty-graphitic schist with boudinage quartz veining.
-  Mainly serpentized, schistose ultramafic with lenses iron carbonate talcose schist.
-  Approximate trace of mapped rock outcrop.

FIGURE 4.

H. BRIEF DISCUSSION OF FIELD OBSERVATIONS

The Master Ace ultramafic structure mapped, can be tied to, and is interpreted to be part of, the southern and northern extensions of the structure documented in the historical assessment reports. The serpentine structure was traced for at least 750 metres trending north-westerly and extends to the northwest and southeast. Characteristically, the fault-contact walls between the graphitic argillite and serpentine, are intensely sheared and display iron carbonate talc schist alteration.

Historical (1985) samples collected along this area where anomalous in gold and copper with values ranging between 70-116 ppb Au and 600-1000 ppm Cu (AR 14,527).

I. CONCLUSION

The Master Ace ultramafic anomalous gold-bearing structure, trends north-westerly and is hosted by Hozameen Group meta-sedimentary rocks. It can be classed as an 'orogenic style' gold-related ultramafic structure. The Master Ace can also be intrusive-related, as it is spatially associated with the Mt. Outram pluton. Evidence of this can be found along the northern extension of the structure (Master Ace north zone), where the granodioritic rocks immediately adjacent to the ultramafic, hosts several paralleling, mineralized quartz veins carrying anomalous amounts of gold-silver-copper and molybdenite.

Along the southern extension (Master Ace south zone) of the ultramafic structure, it characteristically displays hydrothermal alteration features along the footwall side, indicative of epigenetic type mineralization with the structure acting both as a seal and conduit channel way for ascending silica-carbonate-gold-bearing fluids.

The origin of the hydrothermal fluids may be from a combination of meteoric-magmatic source in mesozonal environment, developed during peak metamorphism of the Hozameen sedimentary rocks and the Mt. Outram intrusion – manifested as a result of Jurassic-Cretaceous accretionary-subduction, orogenic event.

The Master Ace ultramafic sill is related to and appears to be intruded along a deep-seated second-third order structure(s) indicative of mesozonal environment. The property merits sound exploration, combined with geologically modelling. Exploration efforts should be concentrated between the contact zone of the Mt. Outram intrusive and the ultramafic sill.

J. BIBIOGRAPHY

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Umhoefer, P.J., Schiarizza, P., Robinson, M., 2002: Relay Mountain Group, Tyaughton-Methow basin, southwest British Columbia: a major Middle Jurassic to Early Cretaceous terrane overlap assemblage; *Canadian Journal of Earth Sciences* 39; page 1143-1167.

K. STATEMENT OF EXPLORATION EXPENSES

Reconnaissance mapping surveys conducted between for 4 days between July 25 to July 30, 2011 on mineral tenure 710602; field party: geologist and field assistant.

Field Crew:	Cost
Geologist; 4 days @ \$500 per day	\$ 2,000.00
Field; 4 days, @ 250 per day	1,000.00
Field-Related Expenses:	
Helicopter support; 1 hour @ \$ 1,500.00	1,500.00
Camp supplies for party of 2; \$80 per day	320.00
Report:	
Data Compilation and documentation	1,500.00
Total Expenses Incurred:	<u>\$, 6,320.00</u>

Respectfully submitted;



D.G. Cardinal, P. Geo.



L. PROFESSIONAL CERTIFICATE

I, Daniel G. Cardinal, of the District of Kent, British Columbia, do hereby certify that:

- I am a Professional Geoscientist and reside at 1883 Agassiz Avenue, Agassiz, B.C. V0M 1A3.
- I am a graduate of the University of Alberta (1978) and received a 2 year technical diploma in Exploration-Geology from the Northern Alberta Institute of Technology (1972).
- I am member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (P.Geol.), membership #18455; a member in good standing with the Association of Professional Engineers, Geologists and Geophysicists of Alberta (P.Geol.), membership #M29405; and a Fellow of the Geological Association of Canada (FGAC).
- I have practiced my profession continuously for the past 31 years.
- I am the registered owner of the **Master Ace** mineral claim group.
- I am author of this report herein submitted as **Event Number ID 5076787** and, that I have conducted the field work documented in this report.

Signed in Agassiz, British Columbia this 8th day of January, 2012.



The image shows a handwritten signature in black ink that reads "Dan Cardinal". To the right of the signature is a red octagonal professional seal. The seal contains the text: "PROFESSIONAL" at the top, "PROVINCE OF" in the middle, "D. G. CARDINAL" in the center, "BRITISH COLUMBIA" below that, and "GEOSCIENTIST" at the bottom.

D.G. (Dan) Cardinal, P.Geol., F.G.A.C.