



Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

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

TOTAL COST: \$ 30,020.00

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

SIGNATURE(S): Dan Cardinal

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-3-128

YEAR OF WORK: 2012

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event No. ID 5427670; Recorded Date January 22, 2013

PROPERTY NAME: Dot-Apex Claim Group

CLAIM NAME(S) (on which the work was done): Dragon (558159), Apex (565067), Dot 2 (604687), Dot (623903), 839461 & 839468

COMMODITIES SOUGHT: Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: New Westminster & Kamloops

NTS/BCGS: NTS:0921/4; BCGS:0921.002

LATITUDE: 50 ° 03 '39 " LONGITUDE: 121 ° 38 '22 " (at centre of work)

OWNER(S):

1) Dan Cardinal 2)

MAILING ADDRESS:

1883 Agassiz Ave.

Agassiz, BC V0M 1A3

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

1) Same 2)

MAILING ADDRESS:

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

Bridge River Terrane, Kwoiek Creek Fault, Mississippian - Permian, lower order fault-shear, Dot Zone, Apex Zone

carbonitization, chlorite schist, flower structure, pull-apart, compression-transpression, accretion, subduction, Fraser Fault
dextral, biotite granodiorite, quartz monzonite, IRGS, sedimentary-hosted, orogenic, pyrite, arsenopyrite, pyrrhotite, alteration.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 4985, 13634, 22665, 25411, 30564, & 31003

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	8km x 2km (1:15000 & 1:5000)	558159, 565067, 604687, 623903, 839	\$18,360.00
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil	30 - multi-element	565067 & 623903	\$140.00
Silt			
Rock	30 - multi-element	565067 & 623903	\$280.00
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	12 km	558159, 604687 & 623903	\$8,340.00
Trench (metres)			
Underground dev. (metres)			
Other	Report: field compilation & documentation	558159, 565067, 604687, 623903, 839	\$2,900.00
TOTAL COST:			\$ 30,020.00

EVENT NUMBER ID: 5427670

**BC Geological Survey
Assessment Report
33781**

GEOLOGICAL ASSESSMENT REPORT

GEOLOGICAL RECONNAISSANCE MAPPING AND SAMPLING SURVEY
(Evidence of Orogenic-Related Sedimentary-Hosted & Intrusive Related Gold Mineralized Systems)

ON THE

DOT – APEX CLAIM GROUP

*(Tenure Numbers: 558159, 565067, 598515, 604687, 623903, 759322
779482, 779503, 839461, 839468, & 920089)*

Surveys Conducted On Dot-Apex claims: 565067, 558159, 839461, 839468 & 623903
(Center of Survey Project: Lat. 50°03'07"N; Long. 121°37'43"W)

Surveys Commenced August 27th completed October 4th, 2012

Located Within:

NEW WESTMINSTER & KAMLOOPS MINING DIVISIONS

NTS: 0921/04; BSGC: 0921.002

(Co-ordinates centered on claim group)

Latitude: 50°03'39"N; Longitude: 121°38'22"W

UTM: Zone 10 597380E; 5546277N

Report Prepared By:

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

1883 Agassiz Ave.

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April 8, 2013

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A. INTRODUCTION

The Dot-Apex claim group (also the property) covers a deep-seated, northwest trending, transpressional break, referred to as the Kwoiek Creek Fault. This fault system is spatially related to 2 sedimentary-hosted, structurally controlled, orogenic style, gold-bearing systems referred to as the Dot and Apex zones. Mapping surveys carried out during the 2012 field season have also tentatively identified an intrusive related gold system (IRGS), (more work will be required to properly define this system). The IRGS signature is spatially related to the Apex gold zone with the intrusive as probable, in part, causative for the anomalous gold found along the Apex structure.

The Dot zone located near the southeast end of the property has experienced some mineral exploration including limited historical (1984-85) drilling (6 drill holes). More recently (2011), a 43-101 compliant exploratory drilling program was conducted (5 drill holes) to verify the historical drilling. This work is documented in a 2012, 43-101 Technical Report completed by an independent consulting geologist, which describes the positive gold results encountered.

The Apex zone located near the northern end of the property, based on limited reconnaissance surveys, hosts anomalous gold values. Historically, it has experienced very limited amount of mineral exploration and has never being drill tested. With the recent discovery of spatially related IRGS type mineralization, the Apex zone offers additional gold-bearing potentials.

Both of these gold zones are sedimentary-hosted in sheared, graphitic-carbonaceous argillites, shales and siltstones. The mineralization is associated with structurally controlled quartz vein systems, with disseminated sulphide replacement and carbonitization of the sediments adjacent to the vein systems.

The mineralized stock intruding metasedimentary rocks, which host the Apex zone, is a medium to coarse grain, biotite- granodiorite to biotite- quartz monzonite composition. This intrusion hosts a series of multi-stage, sheeted-like quartz veins some carry arsenopyrite and pyrite mineralization with associated anomalous gold values. In the Canadian Cordillera, this type of mineralized, gold-bearing intrusive system(s) is known to host economic deposits of mineable gold, referred to as IRGS – a type of class of gold deposit. Detail mapping and sampling would have to be conducted to confirm if such a model underlies the Apex zone.

During the late season of 2012 (August-October), a series of mapping and sampling surveys were conducted by the author and field assistant, along an 8 km strike length of the Kwoiek Creek fault system, in order to attempt to better understand the spatial and temporal relationship of the structural system and gold mineralization (i.e. Dot-Apex zones).

This study report documents preliminary findings and gold potential implications, herein submitted for assessment work credits under event number: 5427670.

B. LOCATION AND ACCESS

The property is located in southwestern British Columbia (Figure 1). Geographically, it is situated along the southern end of the Lillooet Range, which forms part of the mountain range that flanks the south-eastern Coast Mountain Belt.

It is some 135 km due northeast of the city of Vancouver or, about 3.5 -4 hour drive via the Trans Canada Highway (Hwy# 1) and is about a 2-2.5 hour drive north of the town of Hope.

Access is from the community of Boston Bar located about 1 hour drive north of Hope on Hwy 1. From Boston Bar the property and project site (near center of property) can be reached by a series of roads for a total distance of 30 km. The first 15 km is along well maintained, all season public gravel road leading to the Nahatlatch River valley provincial park. From here, remaining 15 km is along seasonal roads with the last 10 km recommended for 4-wheel drive vehicle use only, which is part of the old forestry fire-tower lookout and mineral exploration road. It is approximately 1- 1.5 hour drive from Boston Bar to reach the project site and base camp at elevation 1,580 m asl (photo below).



Photo 1:

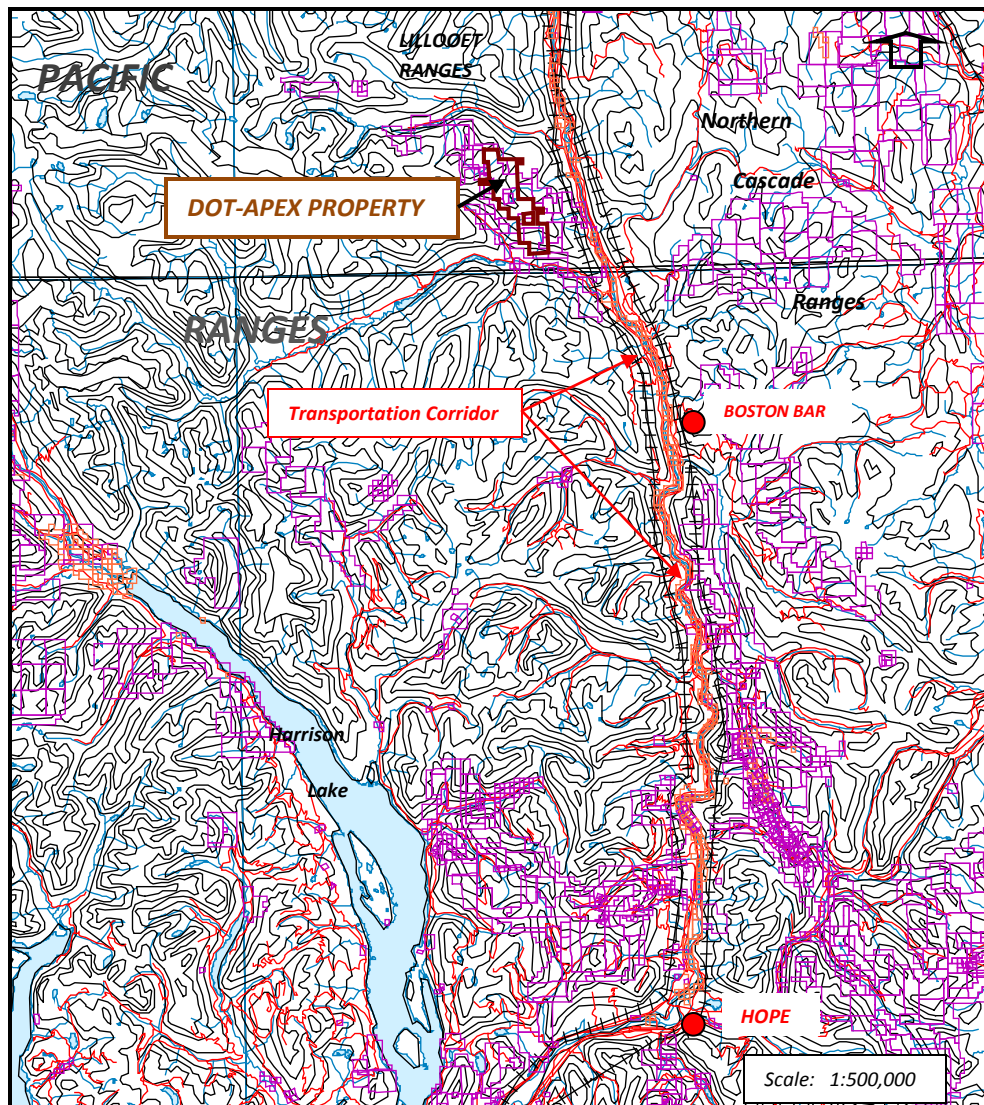
GEOLOGY BASE CAMP – PROJECT SITE (Dragon Fly Lake)

Lat. 50°03'07"; Long. 121°37'43"W Elevation: 1,580m ASL

C. PHYSIOGRAPHY AND INFRASTRUCTURE

The property straddles a height of land along the southern end of the Lillooet Ranges (a subdivision of the Pacific Ranges), a rugged mountain range that flanks the eastern side of the southeastern Coast Mountain Belt. It covers topography that ranges from a summit of 1,940m at the northern end along the Apex zone, down to 820m in the south at the Dot zone. Vegetation varies from sub-alpine type to timber stands of hemlock and pine at lower elevations. There are semi-plateau areas with small, fen-like marshes and snow-fed lakes (e.g. Photo 1). The area experiences more of the dry weather type climate influenced by the dry, semi-arid interior plateau located to the east and south such as in Lytton and Boston Bar communities. The Apex zone is generally free of snow by mid-June through to mid-October with the Dot zone open to surface exploration by late April through to late October-early November.

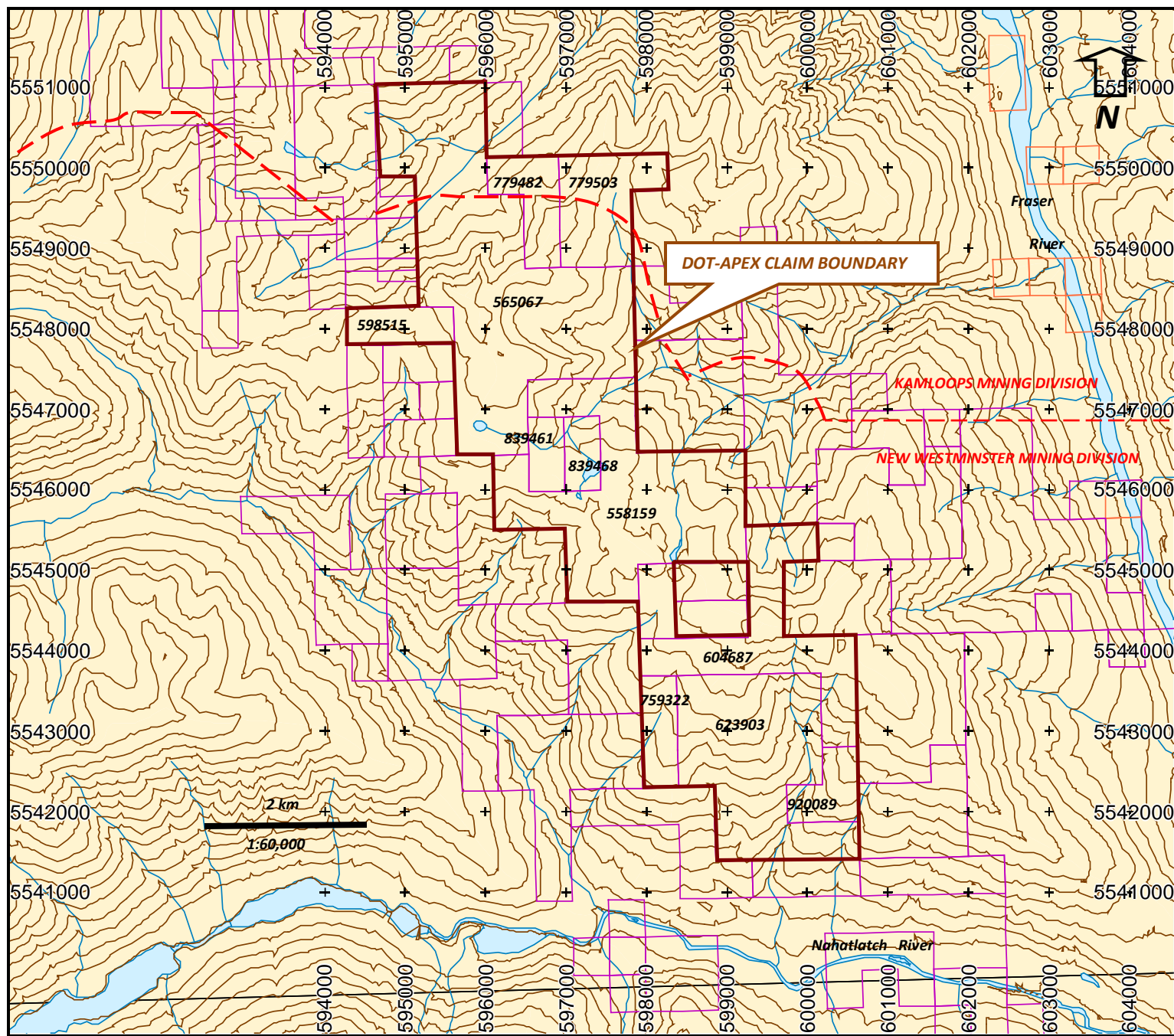
Boston Bar lies along an active transportation corridor that includes the Trans Canada Highway and 2 major railways (see map below). For electrical power, there are hydro power grids that run adjacent to the property including a run-of-the-river power-plant located few kilometers to the northeast. Boston Bar is a historical logging community and has an experience work force, and the town of Hope offers schools, hospital, stores and heavy equipment contractors.



PHYSIOGRPAHY AND INFRASTRUCTURE

D. MINERAL CLAIM TENURE INFORMATION

The Dot-Apex claim group consists of 11 contiguous mineral claims encompassing 2,323.13 hectares (Figure 2). The claims partly straddle the New Westminster and Kamloops mining divisions within NTS mapsheet 0921/04 in southwestern British Columbia. Co-ordinates are centered on the claim group at: Latitude: 50°03'39" N and Longitude: 121°38'22" W. The property is owned by D. G. (Dan) Cardinal, P.Geo. (author of this report), FMC # 104232.



DOT-APEX CLAIM GROUP
MINERAL CLAIM AND TENURE MAP

FIGURE 2

Pertinent tenure information listed in Table 1 below:

Tenure Number	Claim Name	Good To Date	Area (ha)	Owner/FMC
558159	Dragon	August 30, 2019	477.11	104232
565067	Apex	August 30, 2019	725.66	104232
598515	Apex	August 30, 2019	62.2	104232
604687	Dot 2	August 30, 2019	249.01	104232
623903	Dot	August 30, 2019	373.62	104232
759322	Dot 3	August 30, 2019	62.27	104232
779482	Apex	August 30, 2019	82.92	104232
779503	Apex	August 30, 2019	145.11	104232
839461		August 30, 2019	41.48	104232
839468		August 30, 2019	41.48	104232
920089	Dot 10	August 30, 2019	62.27	104232

Total Hectares: 2,323.13

E. PURPOSE OF THE PROJECT AND FIELD PROCEDURES

A reconnaissance field mapping project was conducted on the Dot-Apex claim group. This survey was carried out over a 17 day period between August 27th and October 4th, 2012. The main purpose of the project was to better define the Kwoiek Fault system and its spatial relationship to the auriferous-bearing mineralization found on the property, as well as, the type of host rock, alteration features and structural controls.

In order to gain access to the mapping project, an old (1981) mineral exploration and former logging road was rehabilitated for a total distance of some 12 km. A field base camp was established along height-of-land near the center of the claim group at a small lake referred to as Dragon Fly Lake, elevation 1,580 m (Photo 1). From here, mapping traverses were made possible to the northern end of the claims in the area of the Apex gold zone. An old (circa late 1920s) prospecting trail, in places still well visible, which leads to the zone, was found to be quite useful during the course of the project.

Mapping surveys were also conducted to the southeast in the area covering the Dot gold zone. However, only limited time was spent mapping this area as both historical (1983-85) and recent (2011) work, including diamond drilling, have document this area in some detail. As well, Dot-Apex claims covering the south facing slopes overlooking the Nahatlatch River valley, are densely covered by vegetation affording very little bedrock exposure other than road-cuts, and incise streams thereby mitigating constructive mapping.

A combination of computer generated field maps, hand-held Garmin GPS and a Trimble (Yuma Tablet) unit were utilized for mapping control. Mapping scale was generally 1:15000 (more detail at 1:5000) with field geodata, such as rock outcrops and structures and related information, entered into the GPS and/or Trimble unit as well as a field log book. An area approximately 8 km long by 2 km wide was covered during the mapping surveys. Survey area is centered at co-ordinates: Lat. 50° 03' 07" N and Long. 121° 37' 34" W (Base Camp) on NTS mapsheet 0921/04.

A number of mineralized rock-grab samples were collected. The samples were indented (e.g. DA-003R) using the prefix DA=DotApex and a GPS fixed position (UTM co-ordinates) of each of the sample sites was logged. The samples are tabulated below.

Several rock specimens were collected for further detail examination under binocular microscope with a number of the more mineralized and altered samples selected for laboratory multi-element analysis.

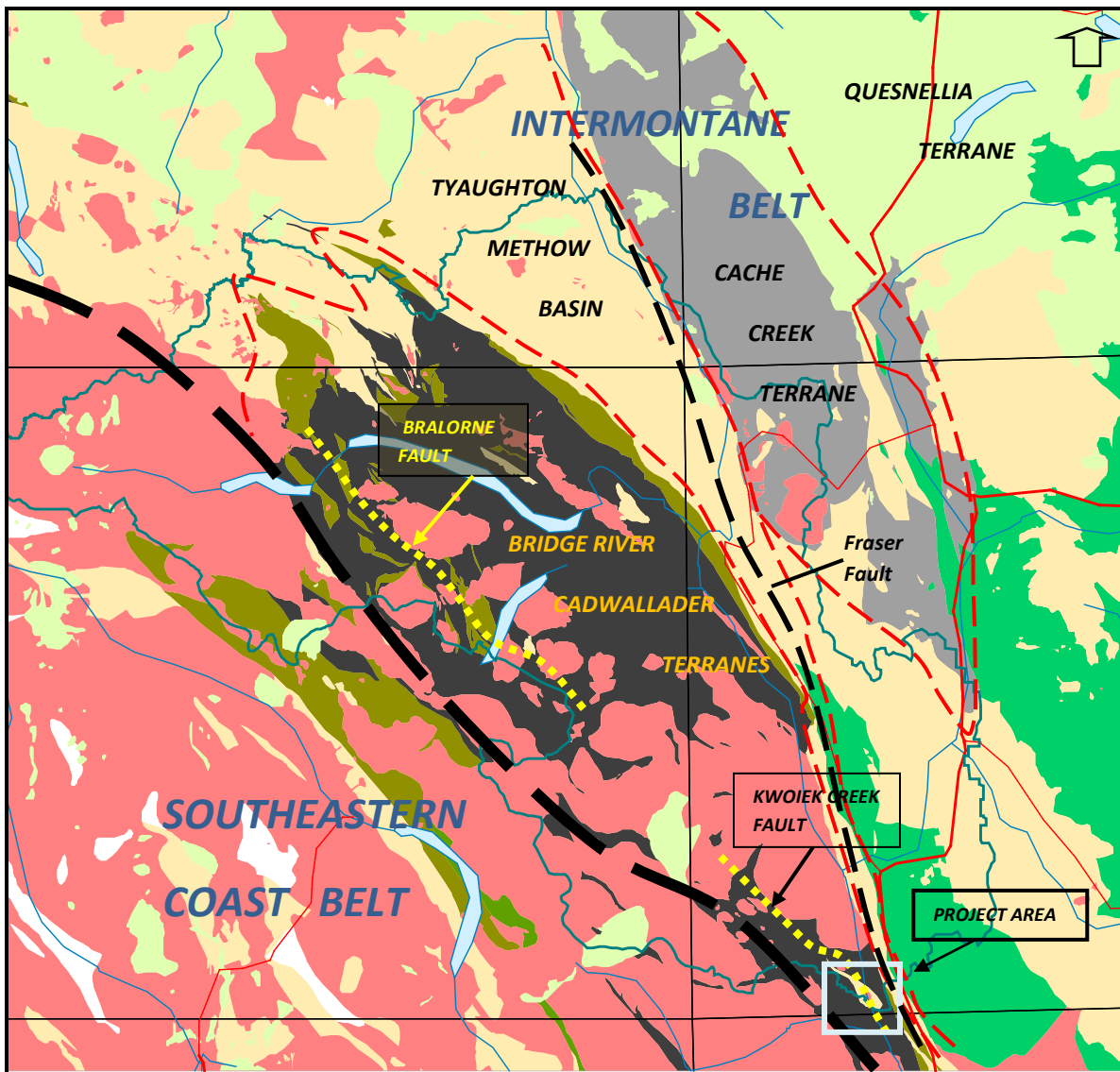
F. REGIONAL GEOLOGICAL AND TECTONIC FRAMEWORK:

The project area is within the southeastern Coast Belt near its contact boundary with the Intermontane Belt, an area of structural complexity and intense deformation. Tectonically, the region is largely underlain by Mississippian to Middle Jurassic accretionary complexes of oceanic rock assemblages of the Bridge River Terrane including the stratigraphically overlying Cayoosh Assesmblage. To the east, these assemblages are juxtaposed by the Paleogene age Fraser Fault with clastic, marine to mainly non-marine successions belonging to Jurassic-Cretaceous Tyaughton-Methow Basin, and overlapping Upper-Cretaceous clastic, Jackass Mountain Group.

Magmatically, the region is intruded by a range of Cretaceous-Tertiary plutonic rocks that define the eastern limit of the Coast Plutonic Complex. The project is bordered to the south by the Spuzzum batholith with several local

small stocks intruding the mapping area. Structurally, the region is marked by a prominent transpressional fault system referred to as the Kwoiek Creek Fault, reactivated during the younger (Tertiary) dextral movement of the Fraser Fault. KCF is represented by a belt of serpentinized ophiolitic rocks that comprise part of the Bridge River Terrane oceanic complex. This first order fault, along with proximal stocks, is spatially related to a number of structurally controlled gold occurrences hosted in lower order fault-shear systems (e.g. Dot and Apex gold zones, Figures 1 & 2).

Based on crustal seismic lithoprobe survey data (Spence and Mclean, 1998), the KCF is interpreted to be the southeastern extension of the Bralorne Fault system, associated with the historical Bridge River gold camp, which form a deep-seated crustal break interrupted by the southeastern Coast Range batholitic intrusions (Figure 3 below).



REGIONAL GEOLOGICAL AND TECTONIC FRAMEWORK

FIGURE 3.

G. BRIEF HISTORICAL BACKGROUND

At the turn of the century as placer miners headed to the Cariboo Goldfields, limited placer gold activity took place on some of the local streams and gravel bars of the Fraser River. In 1932, the BC Ministry of Mines Annual Report noted that prospectors had found some very coarse gold on Log Creek. Part of the creek cuts along the western flank of the DOT-Apex claim group. Potential source of some this placer gold led prospectors to explore the Kwoiek Creek fault system and serpentine belt. In 1936, H.C. Horwood of the G.S.C. (Paper 36-7) briefly examined 3 gold and silver workings along the belt between Pyramid Mtn. and Nahatlatch River, a strike length of some 15 km. The old workings include: (i) 'Serpentine and Summit' now covered by the Apex claim, (ii) 'Jubilee' covered by the DOT claim (Figures 4 & 5) and, (iii) the 'Paystreak' or Randi claims (not part of the Dot-Apex group). Horwood describes these workings, consisting mainly of open cuts and shallow pits and reported to contain quartz veins with sulphide mineralization in altered sediments carrying minor amounts of gold and silver.

The Geological Survey of Canada carried out a regional mapping program between 1945-47, which included mapping of the Kwoiek Creek fault structure and related lithologies (S. Duffel and K.C. McTaggart, G.S.C Memoir 262). In 1989, J.W.H. Monger (G.S.C.) updated and produced a structural terrain map of the area (Maps 41-1989 & 42-1989). Except for brief period in 1972-73, when limited exploration surveys were conducted to investigate the ultramafic rocks associated with the fault system for potential nickel – the area has largely remained unexplored from the late 1930s until early 1980s.

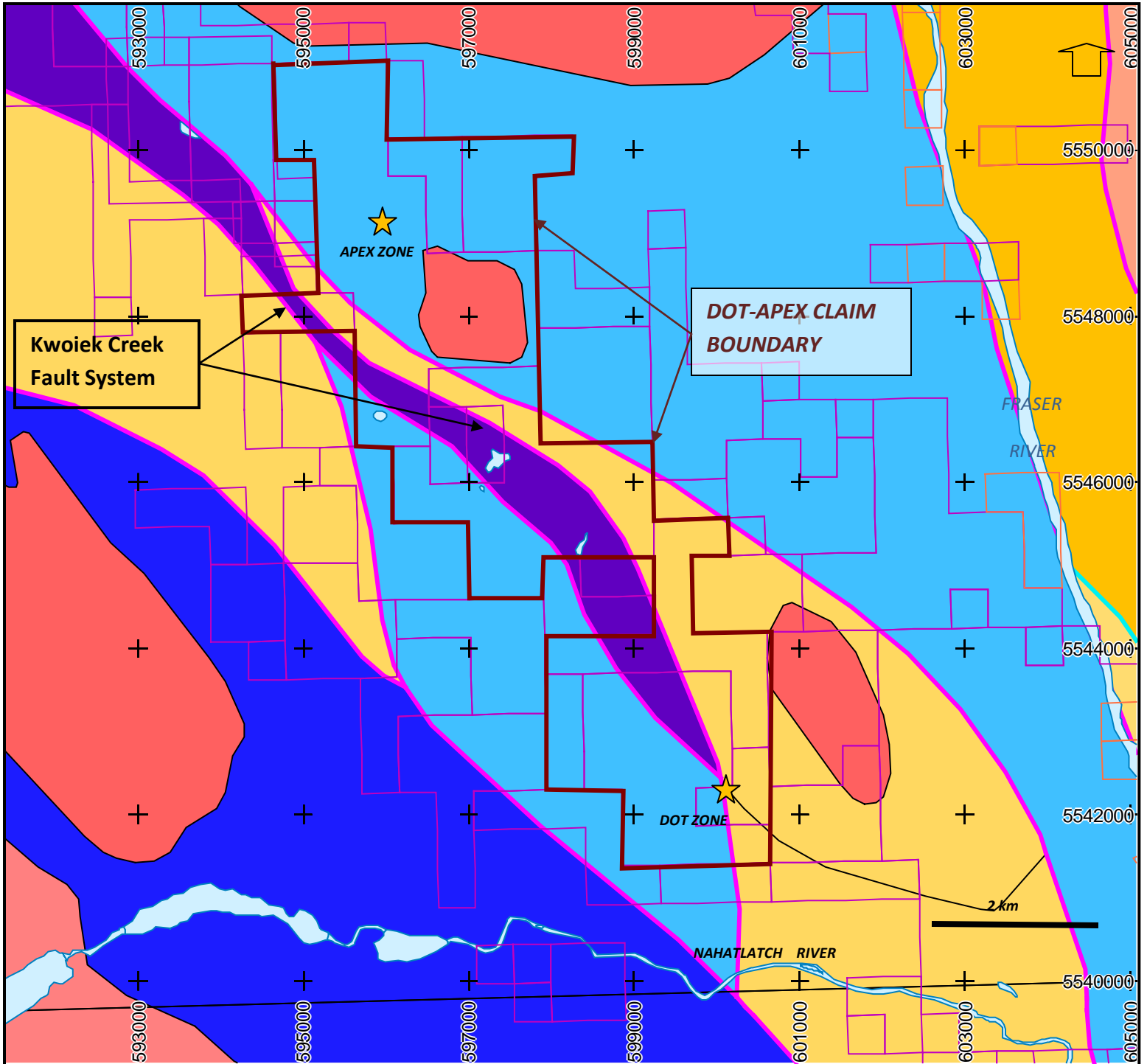
In the late season of 1983, the author with 2 field assistants and, based on oral history (retired prospectors) of the area combined with limited geological data, rediscovered the old Jubilee showing. A grab sample from the showing taken from one of sheared oxidized structures and containing abundant arsenopyrite, assayed 0.766 oz/ton Au (26.0 gm/t). The old Serpentine and Summit showings were also subsequently located. Following these discoveries the area was staked with claims straddling the Kwoiek Creek fault system for some 10 km along strike (parts now covered by the Dot-Apex claim group). In 1984, Hudson Bay Exploration & Development Co. Ltd. became the owner-operator of the claims. Between 1984-85 Hudbay conducted both reconnaissance geophysical (VLF-EM) and geochemical surveys along strike of the mineralized structure this included 6 exploratory diamond drill holes over the area now referred to as the 'DOT Zone'. Although Hudbay was encouraged by the results it concluded in an in-house report "...with a dramatic increase in the price of gold, the claims might still have some potential, however, at present price levels of US \$300-350 per oz. it is no longer worth pursuing". The company subsequently dropped the claims in 1986. Results of some of Hudbay's work can be studied from 2 assessment reports (AR 13167 & 13634) submitted to BC Ministry of Energy, Mines and Petroleum Resources (EMR).

Following Hudbays' drilling, very little of this encouraging work was ever followed up. Subsequent to MTO-staking online system, various owners have claimed the area with no serious attempt to explore the area. In 2002, the author began to gradually acquire claims in this area and over time, was able to re-acquire majority of the original claim block now referred to as DOT-Apex claim group, which cover the old Serpentine, Summit and Jubilee gold showings noted above. In December, 2009 the claims were optioned to Electra Gold Ltd.

In 2011, commencing April and finishing July, Electra Gold Inc. conducted an exploratory drilling program to test the gold potential of the DOT Zone. This included upgrading access roads, trail building, drill pad construction and diamond drilling. Results of this work are documented in an assessment report (dated October 20, 2011) filed under Event Number 4912770.

Although the 2011 drill results were encouraging, very similar to the Hudbay results of the 1984-84, Electra was not in the financial position to continue with follow-up drilling. The company subsequently terminated its' option agreement and the Dot-Apex property returned to the owner (the author).

In the late summer summer-early fall of 2012, the author carried out reconnaissance mapping and sampling surveys mainly in the northern portion of the property. This work and findings are herein documented and submitted toward assessment work credits under event number 5427670.



DOT-APEX CLAIM GROUP

REGIONAL PROPERTY GEOLOGY

Legend:

Bridge River Terrane:

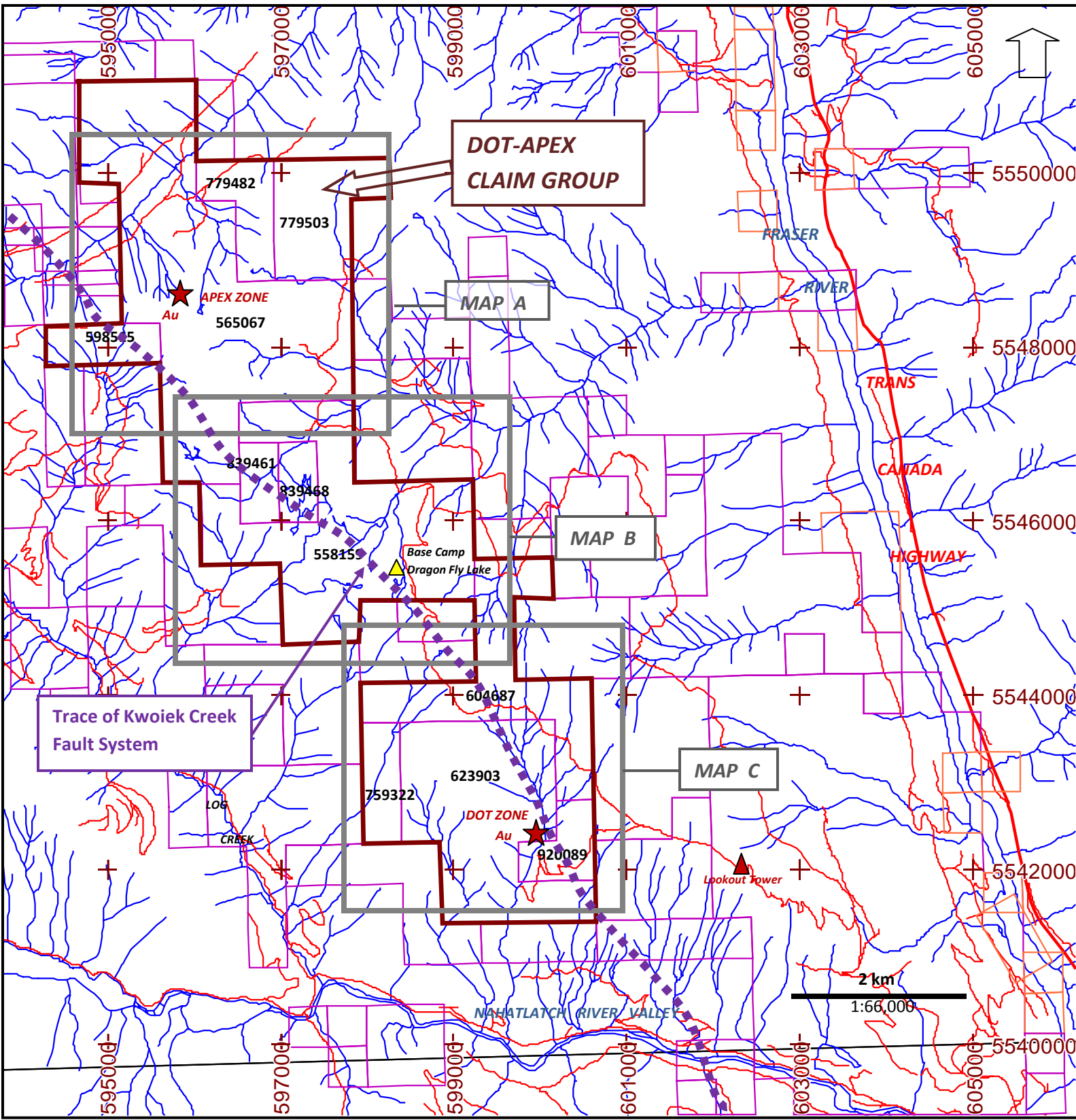
- Jurassic-Cretaceous, Cayoosh Assessemblage: marine, coarse clastic sedimentary rocks.
- Mississippian-Jurassic Bridge River Complex: undifferentiated meta-sedimentary and met-volcanic rocks.
- Faulted, serpentized ophiolitic rocks – defines the Kwoiek Creek fault system.

Shuksan Terrane:

- Cretaceous-Tertiary, amphibolites-andalusite grade metamorphic rocks.
- Post accretionary granitic plutons.



FIGURE 4.



DOT-APEX CLAIM GROUP

INDEX MAP TO MAPPING PROJECT AREAS

North-Map A; Central-Map B; and South-Map C

FIGURE 5

H. PROPERTY GEOLOGY:

Regionally, the property straddles the southeastern extension of the Kwoiek Creek Fault (Figures 4 & 5), a prominent northwest trending, first-order structural system defined by fault-bounded serpentinitized - ophiolitic rocks, which form part of the Bridge River Complex. This serpentine-structural system is traceable for some 35 kilometers, from the southeast, near the Nahatlatch River, where it is (dextrally) offset by the Fraser River Fault, extending northwest to the Stein River watershed where it is cut-off by southeast Coast Range batholithic rocks.

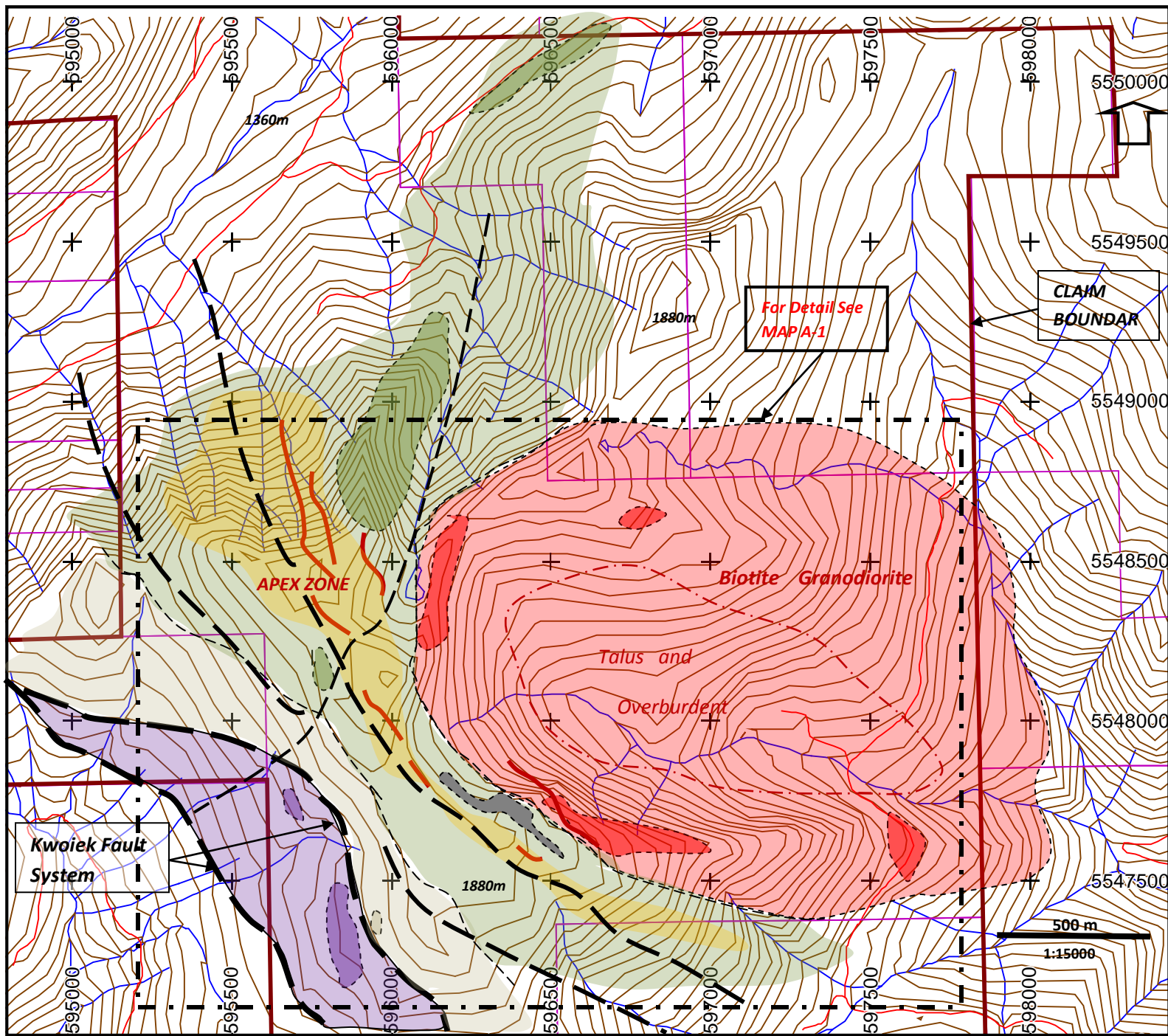
Within the mapping project area, the dominate rock type is a northwest trending, steeply dipping, foliated, graphitic-quartz schist, in conformable contact with lower green schist facies, volcanic clastic - greenstone volcanic rocks. The schist is in fault-contact and structurally bounds a body of massive, dark green, serpentinite, which defines part of the KCF system. Based on the mapping, the serpentinite is interpreted as pinching out near the northwestern end and faulting off along the southeast-central portion of the property (Figures 6, 7 & 8). This structural complex is intruded by 2 post accretionary granitic stocks. Both events, structurally and magmatically, are spatially related to at least 2 gold-enriched sites, the Dot and Apex zones, discussed in more detail below.

Mapping Project:

The mapping project was conducted in sections, northern (Map A & A-1), central (Map B & B-1), and southern (Map C & C-1) sections (Index Map Figure 5). A-1, B-1 & C-1 are scales of 1:5000.

Map A & A-1: *Along the northern section (Figure 6), four main rock types were encountered: near the western claim boundary, (i) serpentine rocks are in fault-contact (KCF) with highly foliated (ii) graphitic-quartz schist. The schist characteristically displays tightly crenulated, thin boudin quartz lenses in graphitic schistose matrix. Further east at higher elevation, the graphitic schist is in conformable contact with highly foliated, (iii) volcanic-greenstone schist, altered to chloritic, greenschist facies grade metamorphism. Intruding the greenstone is a medium to coarse grain (iv) biotite granodiorite. Along the greenstone-granodiorite contact is a structurally controlled, blackish, massive, coarse grain, lamprophyritic dyke, which can be traced for some 250 m along strike.*

Alteration halo consisting of moderate to strong carbonitization and silicification characterizes the greenstone-schist adjacent to the biotite granodiorite. In places, it is pervasively altered with lensoid bodies of iron carbonate, cross-cutting quartz veinlets, and listwanite-green chrome mica (fuchsite) mineralization. The Mg-rich mica is referred to as phengite mica or phengite alteration. The strongest zone of alteration and associated sulphide mineralization is in an area which overlooks a valley, here, the zone is well exposed along the north facing slope.



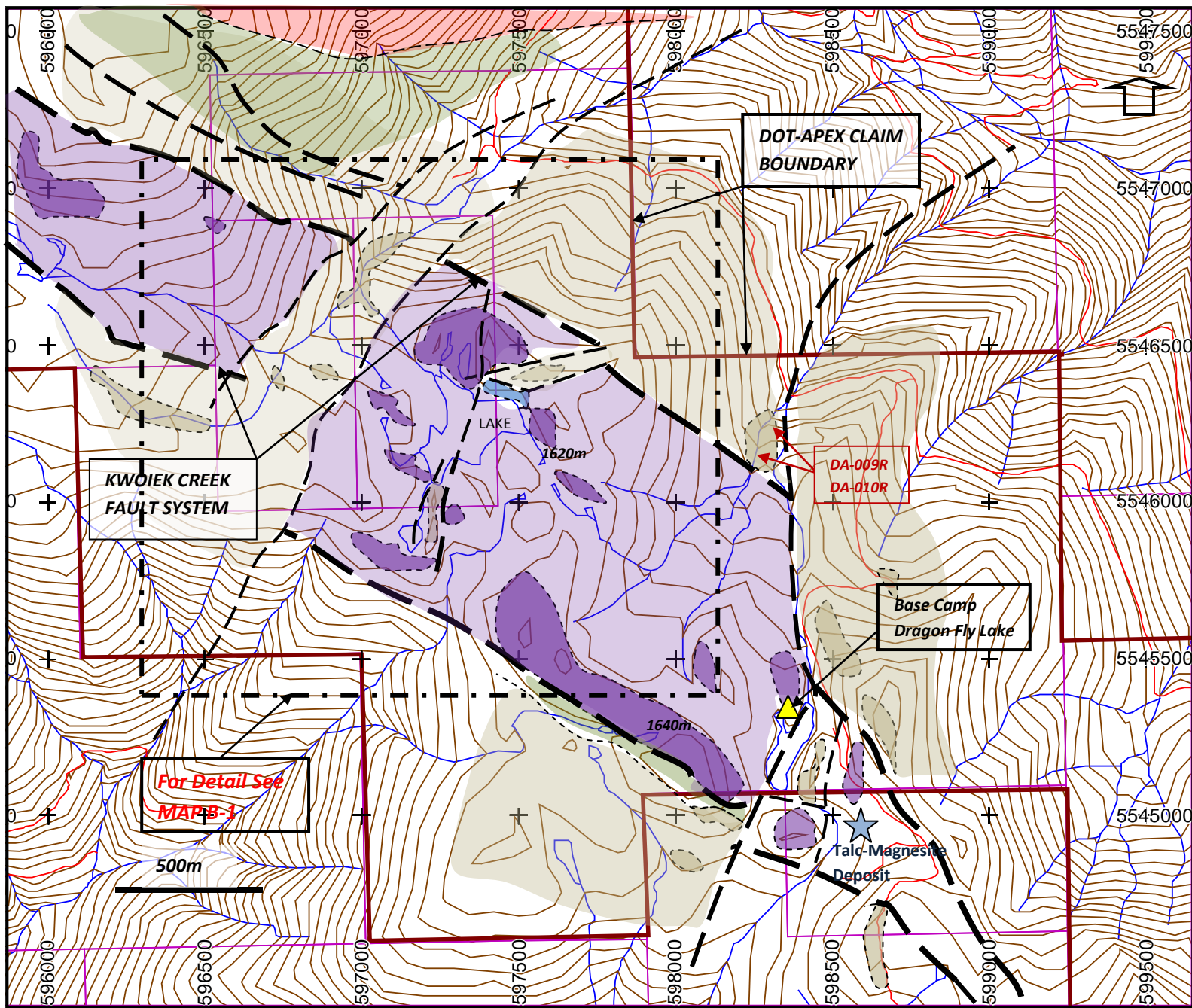
DOT-APEX MINERAL CLAIM GROUP

MAP A

Legend:

-
- Serpentinite, faulted, massive dark green – Kwoiek Creek fault structure.
Extent of mapped exposed bedrock.
- Graphitic-quartz schist dominate and minor phyllite; northwest trending, steeply dipping, highly foliated.
- Chloritic-quartz schist, volcanic – volcanic clastic rocks.
Quartz veins with associated sulphide mineralization.
- Zone of alteration: carbonitization, iron carbonate pervasive.
Lower order fault-shear structures and cross-cutting faults.
- Mafic, fine grain; lamprophyritic (mafic) dyke.

FIGURE 6.



DOT-APEX MINERAL CLAIM GROUP

MAP B

Legend:

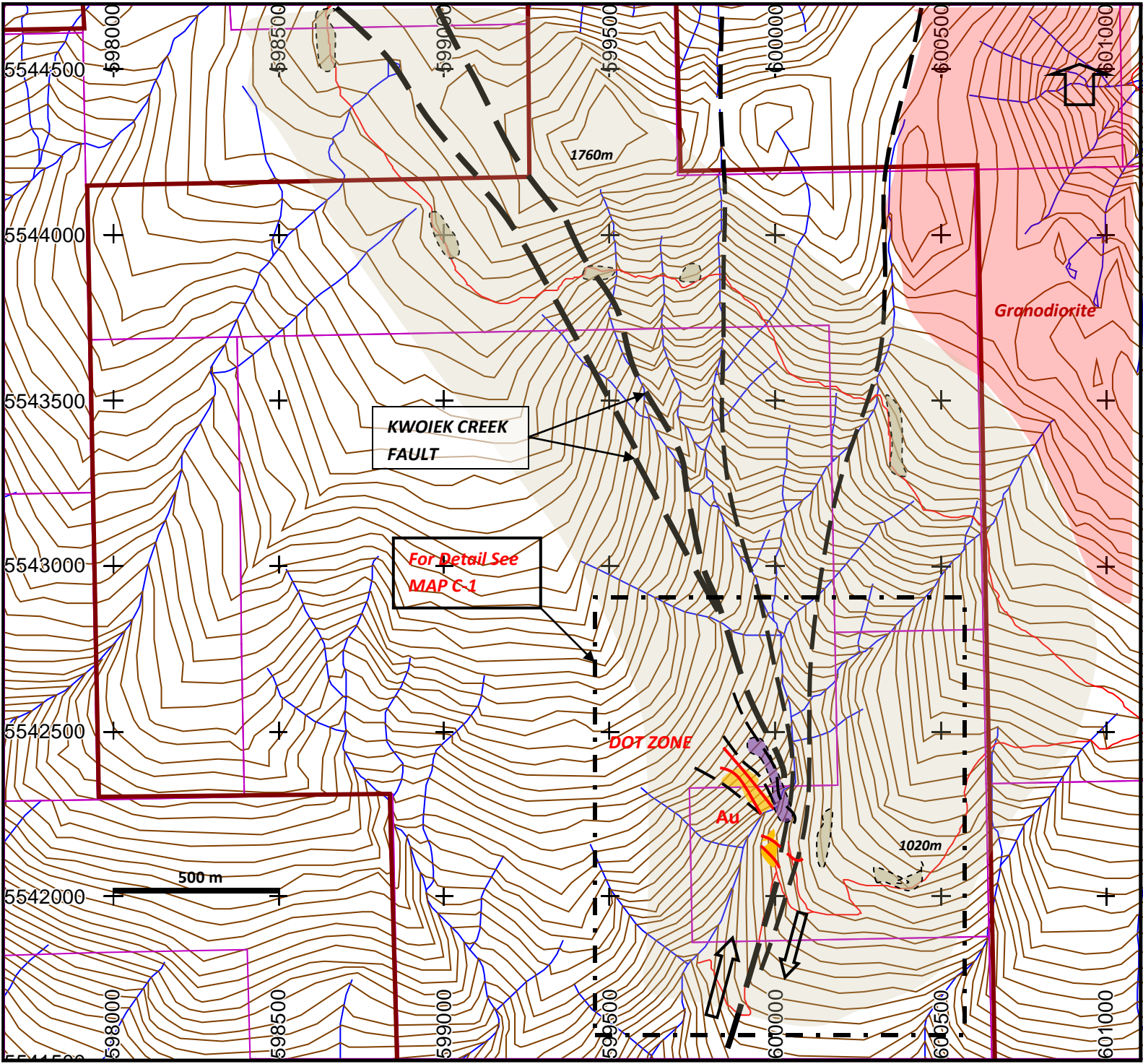
- Highly foliated graphitic-quartz schist.
- Serpentinized ophiolite, flows and fragmental flows.
- Medium grain, recrystallized marble.
- Chloritic, greenstone schist.
- Medium grain, equigranular, biotite granodiorite.

DA-009R Sample Site DA-009R: 156.3 ppb Au
 DA-010R: 81.6 ppb Au

First Order Fault system (KCF)

Cross-cutting faults

FIGURE 7



DOT-APEX MINERAL CLAIM GROUP

MAP C

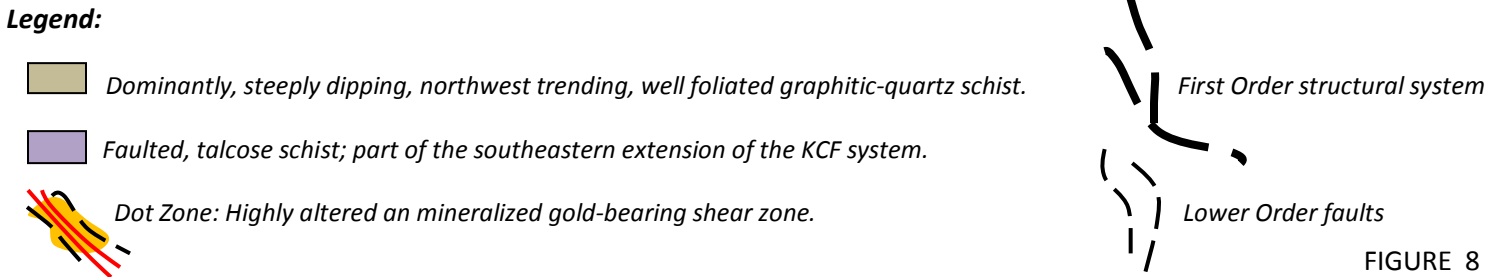


FIGURE 8

Referred to as the 'Apex Zone' (Figure 6), exposed along the slope are several large, sub-parallel quartz veins hosted in shear zones (Photo 2). Characteristically, the veins carry little to no mineralization, however adjacent to the walls of the veins the rock is highly altered with iron carbonate carrying lenses of predominately fine grain, disseminated, arsenopyrite, minor pyrite and pyrrhotite. Previous (2010) sampling from this zone by the author returned up to 4 gm/t Au.



Photo 2. Apex Zone: displaying shear control quartz veining and associated sulphide mineralization and iron carbonate alteration.

Map B & B-1: The central portion of the property is underlain by a large section of northwest trending, faulted, massive, dark green, serpentinite, which is fault-bounded to the northeast and southwest by foliated, graphitic-quartz schist. The serpentinite is offset by northeast-southwest trending secondary faults and juxtaposed with highly foliated graphitic-quartz schist. Near the center of the property is a small lake (Figure 7). Along its' shores are well exposed rock outcrops of serpentinite. Along east shore of the lake is a band, approximately 5-10 m wide and traceable for at least 50 m along strike, of greyish, medium grain, crystalline marble, and displays a gradational contact with finely laminated, carbonate altered, serpentinite rocks. Along this area are prominent ridges of serpentinite, which characteristically display primary structures that

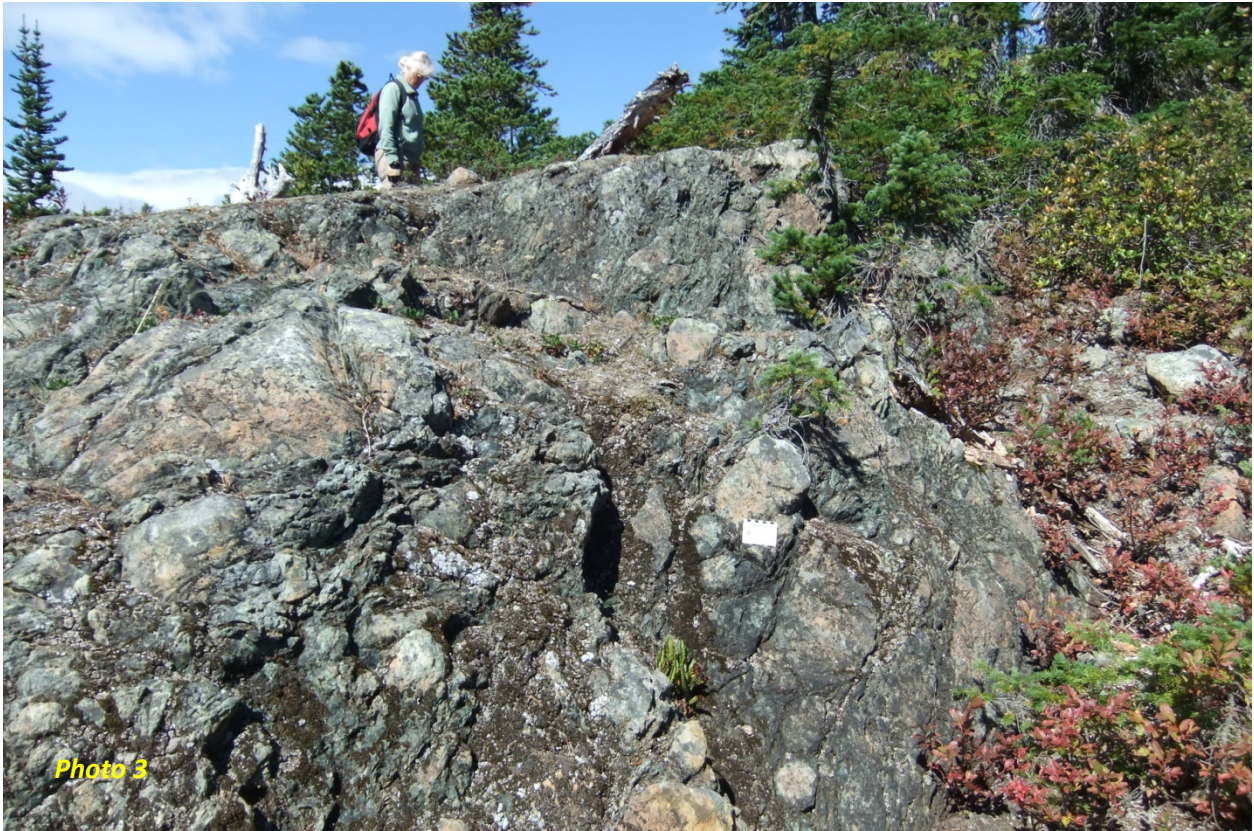


Photo 3

include flow matrix textures with large, rafted, sub-rounded, to sub-angular pyroclastic-like fragments, that resemble proximal vent source material (Photo 3 above and Photo 4 below).



Photo 4

The body of serpentine in this area is traceable for at least 2 km on northwesterly strike and is up to 1 km wide. Limited alteration was observed along its' fault-contact with the graphitic-quartz schist, in places consisting of weak to moderate iron carbonate hosted in the schist. However, this area has more vegetation coverage than in map area A. This is mainly due to the elevation difference. For example, the Apex Zone occurs along alpine environment located at summit of 1925 m versus elevation along the lake shore is 1610 m, overburden along this area could be masking any potential sulphide mineralization.

Near base camp at Dragon Fly Lake (Photo 1), a significant northeast-southwest trending, cross-cutting fault has offset and has partly terminated the southeastern extension of the serpentine belt. Immediately south of the claim boundary (Figure 7) is a talc-magnesite deposit where a lense of the fault-bounded serpentine rocks have completely altered to talcose material.

Map C & C-1: This southeastern portion of the mapping area is underlain dominantly by steeply dipping, northwest trending, foliated, graphitic-quartz schist. An incise stream cuts down the center of the mapping area, which reflects the southeastern extension of the KCF system (Figure 8). Here, the fault system appears to come together along with a series of lower order, north-south trending faults, coalescing to form a single fault strand, and dextrally offsetting KCF. Spatially related to this structural feature, is a fault-shear that controls a highly altered and well

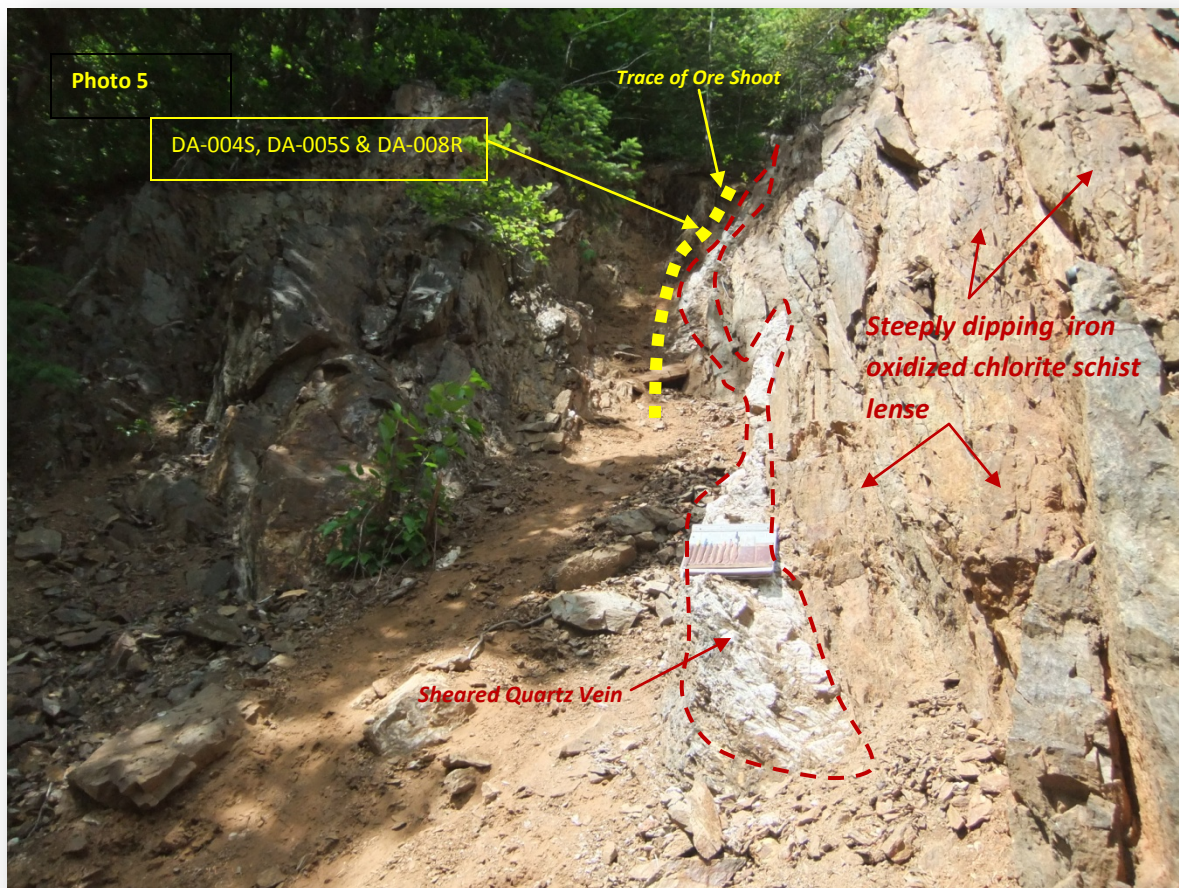


Photo 5. Photo showing part of the Dot Zone with younger cutting quartz veins.

mineralized zone referred to as the Dot Zone (Figure 8 & Photo 5).

The zone is partially exposed along west bank of the stream and is approximately 40 meters wide. Alteration assemblage consists of K-spar, biotite, chlorite, quartz, iron carbonate, lesser albite and occasionally finely disseminate garnet. Sulphide assemblage includes arsenopyrite, pyrite, pyrrhotite and minor chalcopyrite. The zone in places, hosts lenses of quartz-iron carbonate breccia, which is associated with abundant disseminated sulphides. The zone is cut by younger sub-parallelizing quartz structures that are generally not mineralized (Photo 5).

In 2011, the Dot Zone was drill tested by Electra Gold Ltd. with a series of 5 holes from 2 drill stations. A number of sub-parallelizing gold-bearing zones were encountered with the best section containing 2.067 gm/t Au over 5.59 meters.

Limited mapping conducted across and east side of the stream, along a section of road cut, displays fault slices of potassic and quartz vein alteration (Figure8). This alteration, although not as well mineralized as the west side of the stream, is believed to be the southeastern extension of a faulted slice of the Dot Zone. Dextral movement along younger, post mineral, lower order faults appear to have offset or simply faulted off the extension of the Dot Zone to the southeast.

More detail discussion of the Dot and Apex mineralization and alteration is discussed below.

I. MINERALIZATION AND ALTERATION

Dot Zone:

During the 2012 mapping project, the author briefly examined the Dot mineral – alteration zone (Photo 5) and collected 3 samples (see Table 1 below) from highly altered, oxidized structure adjacent to the walls of intensely sheared quartz veins.

The Dot zone measures about 40 metres wide and is exposed on a steep escarpment about 50-75 high. The zone hosts a number of highly fractured, steeply dipping, milky white quartz veins. Normally these veins carry little to no sulphides and suggest a late phase event or, post mineralization. The alteration assemblage includes: sheared, lensoid bodies of chlorite schist with biotite, veins and 23reccias lenses of pink, siliceous, potassium feldspar, minor muscovite, fine grains of dark red garnet, some green epidote and quartz 23reccias veins. Some of the veins carry stringers of albite.

The sulphide assemblage consists of pyrite, pyrrhotite, arsenopyrite and minor chalcopyrite. Pyrite and pyrrhotite tend to be more ubiquitous associated with the chlorite lenses. Arsenopyrite can be found as finely disseminated salvages along walls of quartz veins and with quartz breccia. Based on recent and historical drill assays, majority of the sulphides tend to have some anomalous amounts of gold with arsenopyrite being more enriched. Drilling and surface sampling, have also defined several narrow (<0.5m) 'ore shoots' that tend to carry high grade gold. Characteristically, the shoots host quartz veins with massive, irregular veinlets of arsenopyrite that are highly enriched in gold.

The zone is hosted along a fault-shear structure that appears to have acted as a hydrothermal plumbing system for ascending mineral-rich fluids. There also appears to be an overprint of some late stage skarn alteration evident by the skarn-related minerals associated with the zone.

Results: Three selected grab samples were collected from one of the structurally controlled ore shoots noted above (see Photo 5 above).

Table 2. List of Samples and Results – Dot Zone

Sample Number	Au gm/t	Description
DA-004S	15.398	Orange, residual gossan soil with quartz & arsenopyrite chips.
DA-005S	6.848	As above – similar type of sample.
DA-008R	1.987	Rock sample: quartz vein with massive stringers of arsenopyrite.

Samples DA-004S & 005S are from an intensely oxidized, decomposed vein, which would have higher concentration of gold particles and partly explains the high assay values. This same ore shoot was intersected at depth in one of the 2011 drill holes, contained 4.05 gm/t Au over core length of 5.48 metres.

Apex Zone:

The Apex zone is traceable for at least 2,500 metres along northwesterly trend. Based on escarpment exposure, its down dip structural extension would appear to exceed well beyond 300 metres depth.



Photo (looking southerly) on the right shows exposed face of the zone approximately 30 to 35 wide. It is a structurally controlled, sedimentary-hosted, gold-bearing zone.

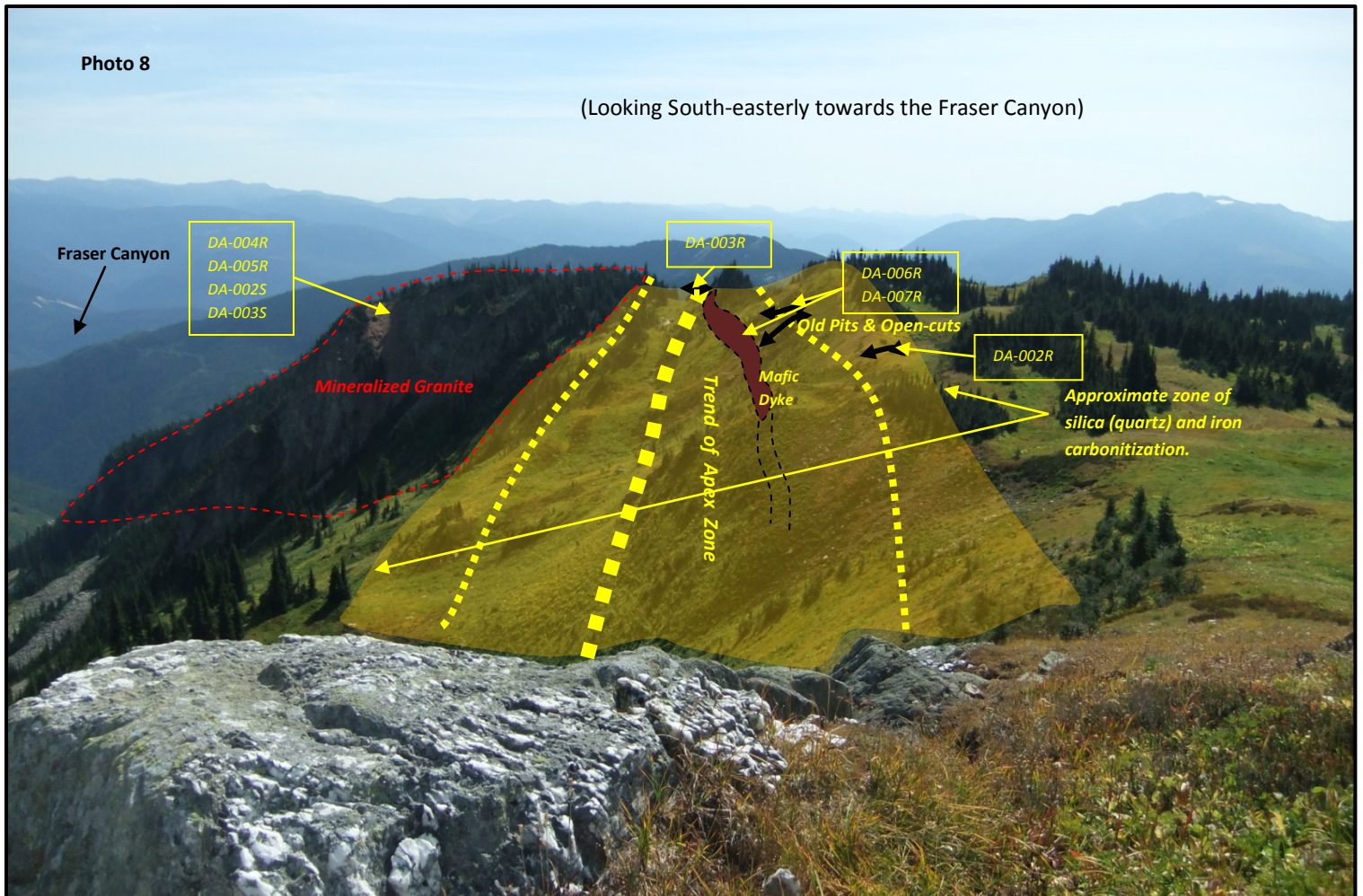
In 2010, 12 grab samples were collected across the face all were in anomalous in gold with the highest carrying 4.33 gm/t.



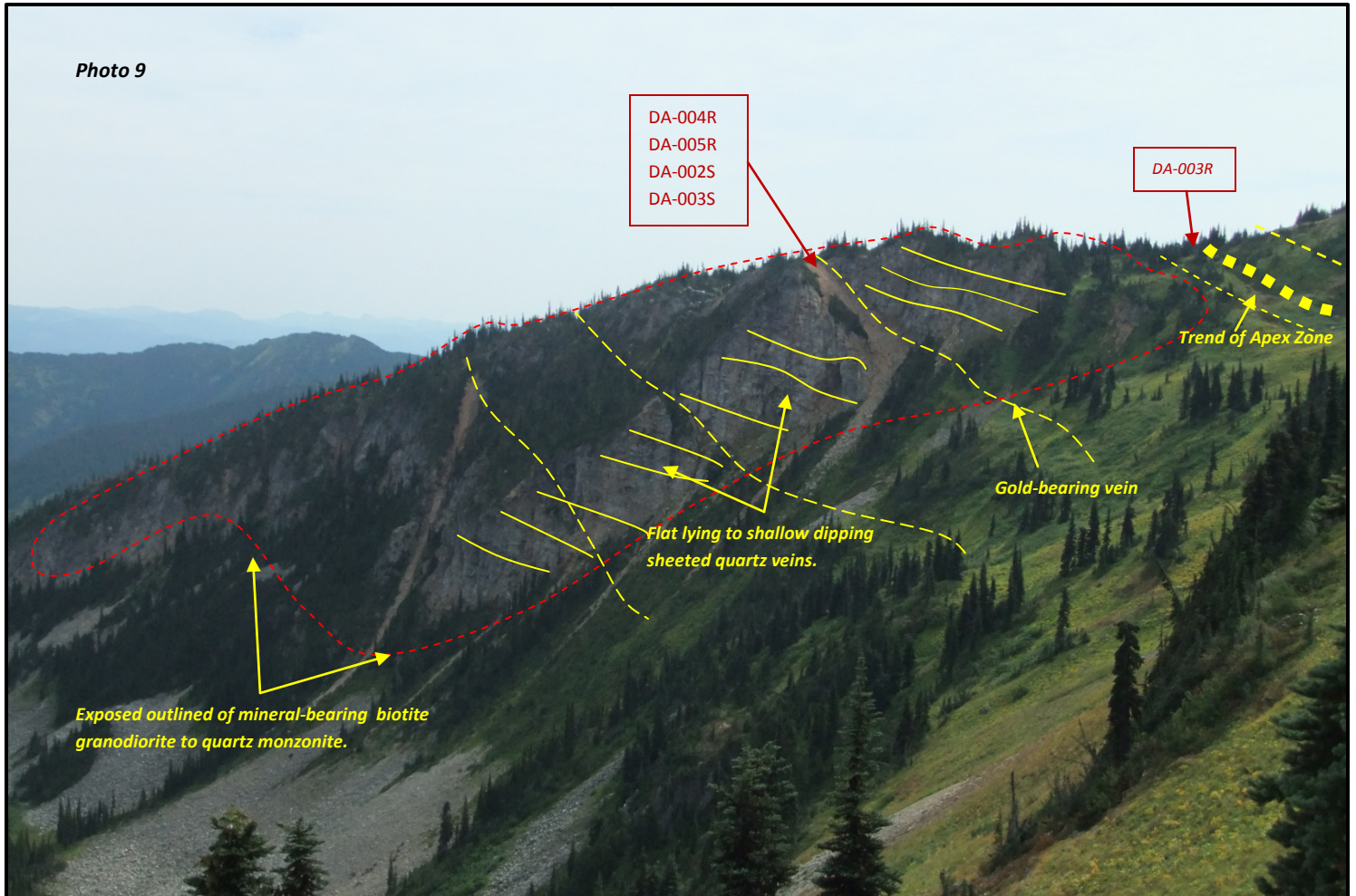
Photo (looking northerly) shows steeply dipping and structural down-dip (dip-strike) extension of the zone (note geologist for scale).

The rocks hosting the zone are well altered and suggest several stages of alteration. The alteration assemblage includes a chlorite phase as been probably the initial phase. The chlorite schist was subsequently pervasively carbonitized – iron carbonate, followed by late stage silica flooding as evident the abundant quartz veins. Majority of the sulphide mineralization observed occurs as narrow salvages (few centimetres wide) to replacement zones (> 1m wide) along the walls and between quartz veins, indicating the mineralized event was introduced during silica-quartz flooding phase. The massive quartz structures noted in the photos above generally carry little to no sulphides.

Series of next 2 photos show the south-easterly trend of the Apex zone and its spatial and probable genetic relationship to the intrusive stock. Based on the initial (2012) surveys the intrusive hosts a number of sheeted-like quartz some of which carry gold values and displays mineral characteristics of an intrusive related-type gold system (IRGS).



Apex zone showing approximate trend and area of alteration containing lenses of silica-carbonitization (iron carbonate) enrichment with associated sulphide mineralization, anomalous gold and quartz veining. In foreground of photo is a massive, milky white quartz structure part of the Apex zone. Black arrows depict areas of old (circa 1930s) open-cuts and shallow pits. Red dashed line outlines mineralized intrusive stock with possible IRGS type signature (photo below for more detail). Magnesium- enriched, massive, dense, with megacrystic-laths of amphibole-like mineral dyke intrudes the zone.



Exposed north face of mineralized granite stock (above photo) hosts numerous sheeted veins. The veins are characteristically flat lying to shallow dipping and are cut by a second system of larger veins, which cross-cut the shallow dipping veins. Grab samples of both reddish residual soil and rock collected from one of the cross-cutting veins (shown above) returned high values in gold (see Table 3 below). An interesting and intriguing mafic dyke (Photo 9) intrudes and partly sub-parallel the Apex zone adjacent to the intrusive stock. It appears to be associated to a late stage hydrothermal event and what genetic relationship it may have with the gold mineralization and the intrusive is currently unknown. Geochemical analysis of a sample taken from the dyke (DA-007R) shows that it is low in Au (4.2 ppb), anomalous in Ni (2327 ppm), Ca (4.45%), B (25 ppm), Cr (422 ppm) and, enriched in Mg (17.87). Physically, the dyke is: massive, dense, very coarse grain with megacrystic-lath texture of amphibole-like minerals. Immediately adjacent to the dyke are old open-cuts that expose abundant quartz veins associated with listwanite-mariposite (green, phengite mica) alteration. The dyke may be genetically related to the pervasive carbonitization associated with the Apex zone. A sample (DA-006R) collected from the listwanite alteration is low in gold.

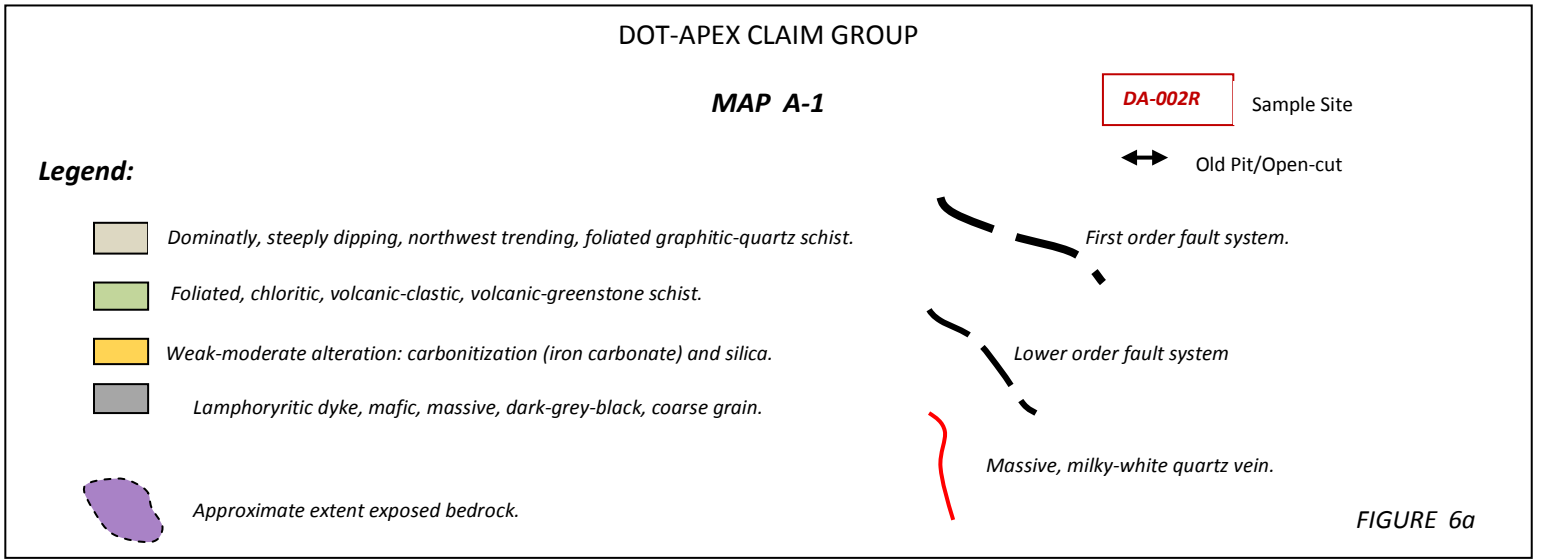
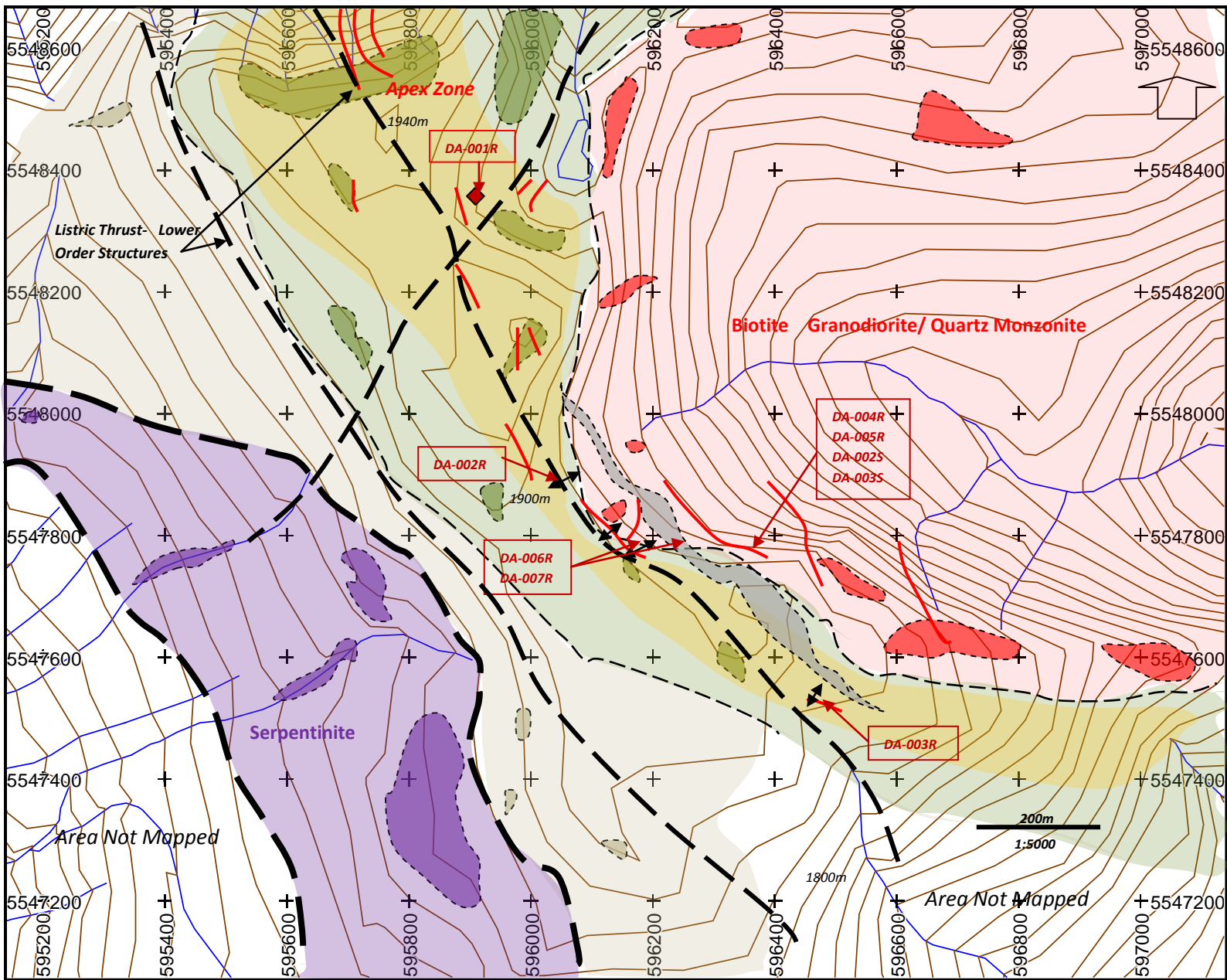
Results:

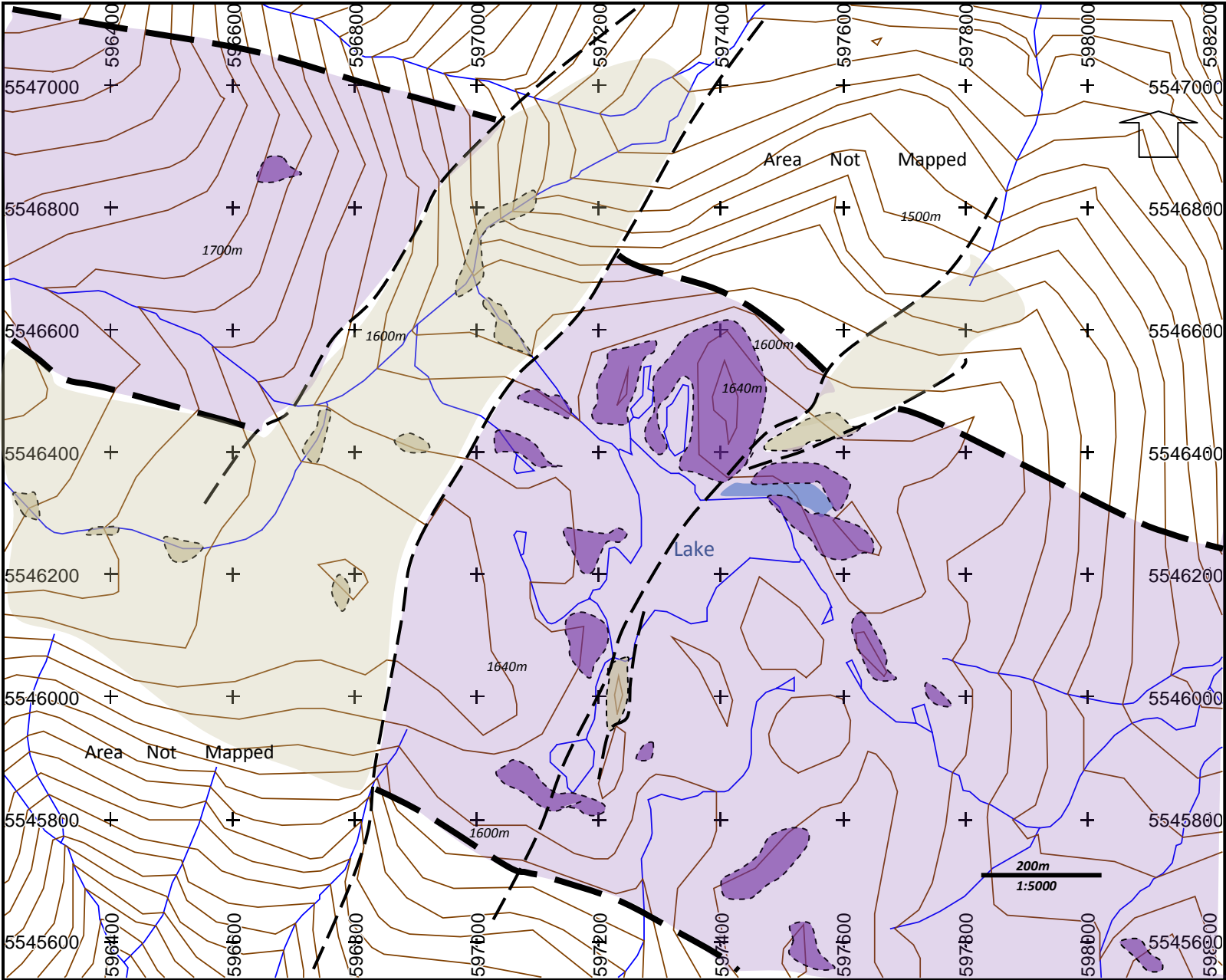
A total of 10 grab samples from various parts of the Apex zone and a sample from one of the veins cutting the intrusive stock (above Photo 10) were collected. These samples were selected from well mineralized and oxidized parts of the zone are identified as DA-002R (rock sample) or DA-002S (soil or gossan sample). Seven of the samples are highly anomalous in gold and are tabulated in Table 3 below.

Table 3. List of Sample Sites and Results – Apex Zone

Sample Number	Au gm/t	Brief Description
DA-001R	1.025	Finely disseminated arsenopyrite with iron carbonate, angular talus sample 200m north of Apex escarpment (Photos 7 & 8).
DA-002R	1.588	Finely disseminated arsenopyrite, siliceous iron carbonate from old open-cut.
DA-003R	6.776	Finely disseminated arsenopyrite + pyrite, quartz stringers and siliceous iron carbonate taken from old pit.
DA-004R	0.164	Quartz vein with pyrite hosted biotite granodiorite.
DA-005R	2.010	Cross-cutting quartz vein hosted biotite granodiorite carrying dominantly arsenopyrite and pyrite.
DA-002S	0.807	Gossan soil adjacent to sample DA-005R.
DA-003S	3.579	Composite gossan sample taken across 1 m adjacent to sample DA-005R.

Series of the 3 maps below (Figures 6a, 7a, & 8a) are approximately 1:5000 scale and show in more detail the Dot and Apex zones and, correspond to map figures 6, 7 and 8. They highlight mineralized and altered zones including associated lower order fault-shear structures.









DOT-APEX CLAIM GROUP

MAP B-1

Legend:

-  Massive, dark green, faulted serpentine – first order fault structures.
-  Dominantly, steeply dipping, northwest trending, foliated graphitic-quartz schist.
-  Light grey, massive, crystalline, finely laminated marble.
-  Approximate extent of exposed bedrock.

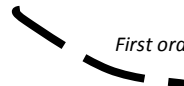
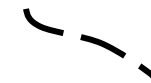
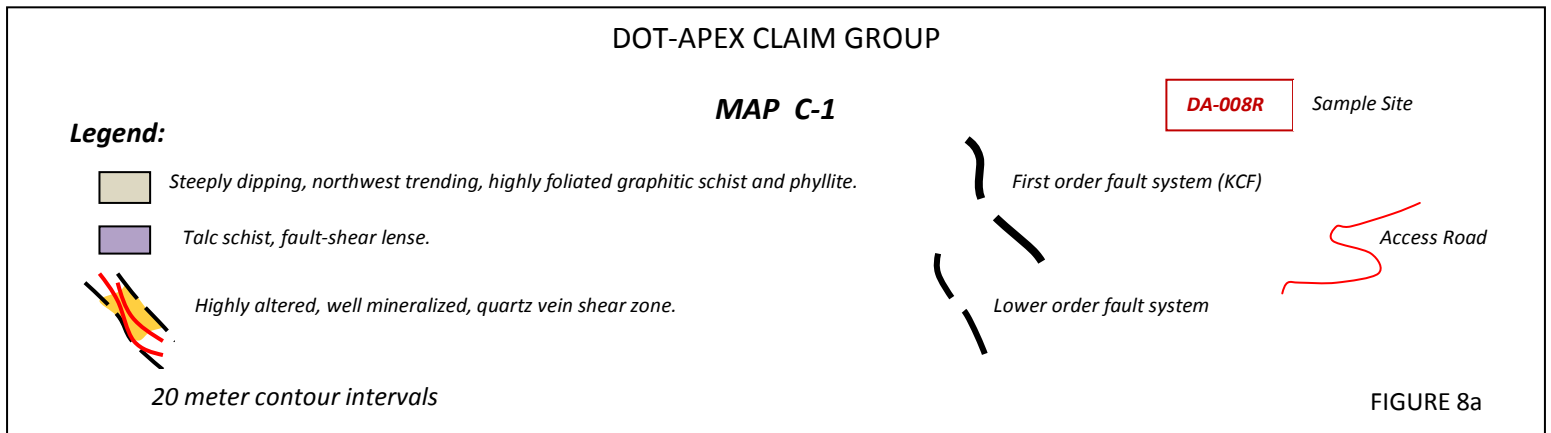
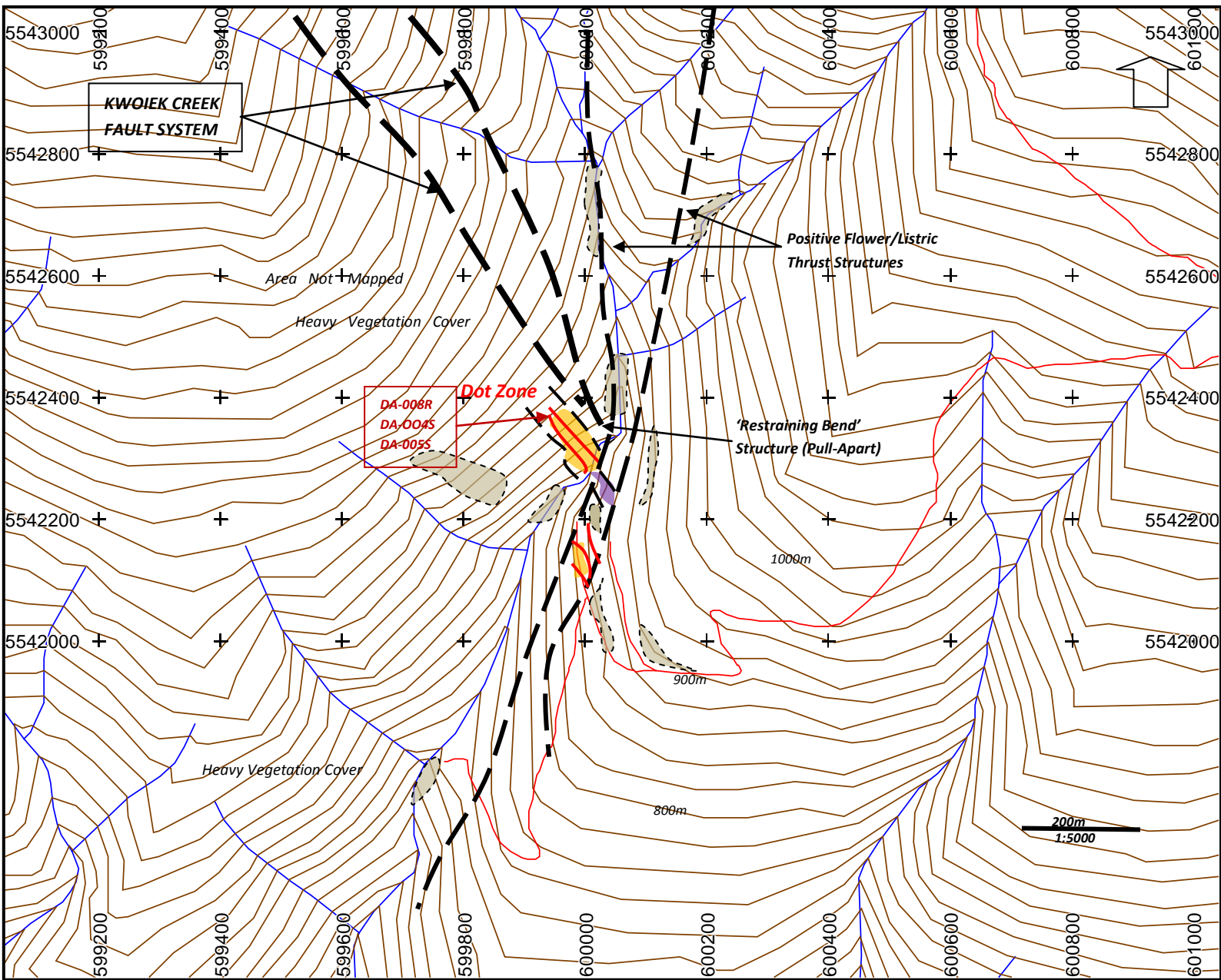
-  First order fault-contact
-  Lower order cross-cutting fault

FIGURE 7a



J. STRUCTURE:

The Dot and Apex zones are structurally controlled and hosted in lower order fault-shear systems that are spatially and temporally related to Kwoiek Creek Fault (KCF) a first to second order, deep-seated structure. KCF forms part of the regional tectonic framework, caused as a result of Mesozoic orogenic dynamic processes that included the subduction-accretion of the west verging Mississippian-Jurassic Bridge River Terrane to western buttress of the Superterrane (Stikine-Cache Creek-Quesnel terranes), refer to Figure 3. The ophiolitic (serpentinite)-sedimentary-basaltic (schist-greenstone) unit mapped on the property (Figures 6 & 7) represents part of the Bridge River oceanic floor assemblage, which subsequently was subjected to compressional processes during Jurassic-Cretaceous terrane collision event, producing deep crustal faults including the KCF system. Ophiolitic, rift-like textures, observed on the property, i.e. flows and rafted fragments, suggest proximal, fossilized, remnant of an ocean floor rift (Photos 3 & 4). The band of marble hosted within the ophiolite represents an environment possibly conducive to living organisms near an ocean floor rift-vent (Figure 7).

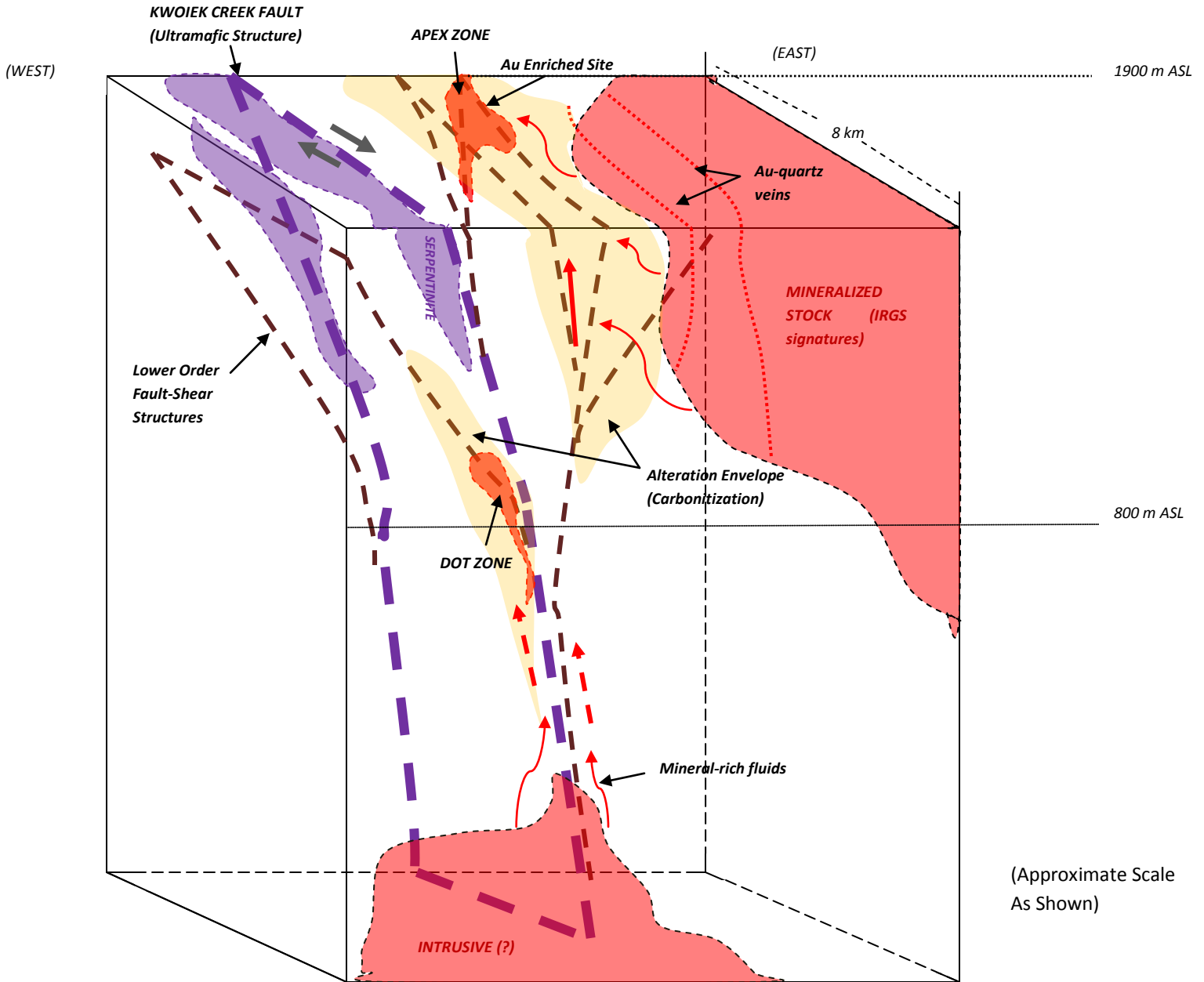
The topographic terrain on the property lends itself to apparent 3D view in particular, the steep terrain overlooking the Dot and Apex zones. Based on the mapping surveys, topography and field structural interpretations, the Dot zone is positioned at least 1000 m structurally deeper along the KCF system, than the Apex zone and are about 8 km apart. Dot flanks the southwestern side of the KCF main structural strand with Apex on northeast flank and little more distal (at least 250 m) from the KCF, both are hosted along fault-shear strands that make up the overall structural system.

In the Dot zone area, the faulting forms a 'positive 'flower' type structural pattern (Figures 8a) branching off the main KCF strand, which has a dextral, strike-slip movement. Typically, positive flower structures occur at restraining bends. At the Dot zone the bend occurs where the main KCF strand changes direction from southeasterly to southerly (Figure 8a). At restraining bends or compressional jogs (or pull -apart), such sites are potential for formation of ore deposits (see schematic 3-D model, Figure 9).

The author believes the KCF system to be deep-seated, associated with a series of sub-parallel, lower order, listric thrust faulted, compressional-rotated panels (Figure 8a), which initially formed as a result of west verging North American plate and subduction of the east verging Bridge River Terrane. This tectonic event would have developed both ductile and brittle (D_1 & D_2) deformational features now manifested on the property. This structural system was subsequently reactivated during the Paleogene and subjected to transpressional forces and, was dextrally offset by some 150-180 km during the formation of the Fraser Fault (Figure 3). The southern end of the KCF terminates along the western banks of the Fraser River canyon just north of the community of Boston Bar.

This last tectonic event produced various penetrative fabric features on the property including steeply dipping, northwest trending foliation, mineral lineation, striations, schistosity including numerous boudin and strike-slip dilatational quartz-filled veinlets.

The Apex zone exposed along the steep escarpment noted-above, is interpreted to occur along the same flower-type or listric, lower order thrust structure (Figure 6a and Photos 8 & 9).



(Approximate Scale As Shown)

HYPOTHETICAL 3-D SCHEMATIC VIEW – DOT & APEX ZONES

3-D simplified model depicts structurally controlled, gold enriched sites (Dot & Apex zones) hosted along lower order, pull-apart-listric thrust fault-shear structures(dashed brown lines), spatially and temporally related to the Kwoiek Creek Fault (bold purple dashed line) system. Remobilized, hydrothermal gold-rich fluids along prepared channel ways are believed to be genetically related to proximal intruding mineralized stocks.

Figure 9

K. DISCUSSION:

The reconnaissance mapping-study project was carried out in order to better define the KCF – serpentinized-ultramafic structural system, granitic intrusions and their spatial and possible genetic relationship to the gold-enrich sites (Dot and Apex zones).

This area forms part of the regional tectonic framework, caused as a result of Mesozoic, orogenic dynamic processes that included the subduction-accretion of the Mississippian-Jurassic Bridge River Terrane to western edge of the Superterrane (Stikine-Cache Creek-Quesnel terranes). The ophiolite (serpentinite)-sedimentary-basaltic (schist-greenstone) unit mapped on the property represents part of the Bridge River oceanic floor assemblage, which subsequently was subjected to compressional processes during Jurassic-Cretaceous terrane collision event, producing deep crustal faults including the KCF system.

The mapping area was intruded by 2 post (Cretaceous-Tertiary) accretionary granitic stocks that are spatially related to the gold-enriched sites. Just east of the property, Paleogene age, transpressional dextral movement produced the Fraser River Fault, which reactivated the accretionary zone between the 2 terranes, offsetting the western edge of the Bridge River Terrane by some 160 km. This fault would have also reactivated first order, KCF system and would also have reactivated, and or, generated the lower order structures that now offset the Dot Zone.

In conclusion, gold-bearing hydrothermal solutions migrated up architecturally prepared conduits that are spatially related to the 2 stocks, this is especially more evident on the Apex Zone. It is also probable that the stocks played a role and have some genetic relationship to both the Apex and Dot zones, by remobilizing and concentrating enriched auriferous fluids along lower order faults. The stock intruding the Apex zone hosts fracture controlled, gold-bearing quartz veins and resembles IRGS type mineralization.

The Dot Zone is also deeper in the structural system than the Apex by at least 1000 metres in depth based on topography and mapping. Both zones may vary between epizonal to mesozonal range, as suggested by the varying sulphide alteration assemblages of both zones. Dot Zone for example, hosts chalcopyrite and abundant pyrrhotite suggesting higher temperatures versus the Apex, which dominantly contains arsenopyrite with minor pyrite. Both zones contain arsenopyrite, which is closely associated with gold. In this area, geochemically, arsenic makes a good pathfinder for gold.

This structural and geological exploration model opens the possibility for the potential of locating additional gold-bearing zones at depth and along strike.

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M. STATEMENT OF EXPLORATION EXPENSES

Reconnaissance mapping and sampling surveys were conducted for 18 days between August 27th and October 4th, 2012 on mineral tenures: 558159, 565067, 604687, 623903, 839461 and 589468.

Field Crew:	Cost
Geologist; 18 days @ \$650 per day	\$11,700.00
Field Assistant; 18 days, @ \$200 per day	3,600.00
Field-Related Expenses:	
Road Access – up-grade & re-construction	
Twelve (12) km, 8 days-10hrs/d @ \$100 per hr.	8,000.00
Mob. and De-mob. Komatsu PC78 Excavator	340.00
Field Base Camp: 18 days @ \$70/d plus materials (2 people)	1,260.00
Transportation: 4x4 drive truck; 18 days @ \$100/d (+gas)	1,800.00
Laboratory Geochemical Analysis: 12 samples @ \$35 per sample	420.00
Report: Field Data Compilation and Documentation	2,900.00
Total Expenses Incurred:	<u>\$, 30,020.00</u>

Respectfully submitted;



D.G. Cardinal, P. Geo.



N. 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; a Fellow of the Geological Association of Canada (FGAC) and ,member ID #9166924 with The Geological Society Of America.*
- *I have practiced my profession continuously for the past 31 years.*
- *I am the registered owner of the **Dot-Apex** mineral claim group.*
- *I am author of this report herein submitted as **Event Number ID 54277670** and, that I have conducted the field work documented in this report.*

Signed in Agassiz, British Columbia this 8th day of April, 2013.



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.

APPENDIX I

GEOCHEMICAL LABORATORY ANALYSIS



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

www.acmelab.com

Client: Cardinal Geoconsulting Ltd.
1883 Agassiz Avenue
Agassiz BC V0M 1A3 Canada

Submitted By: Dan Cardinal
Receiving Lab: Canada-Vancouver
Received: October 26, 2012
Report Date: November 20, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN12005124.1

CLIENT JOB INFORMATION

Project: DOT-APEX
Shipment ID:
P.O. Number
Number of Samples: 11

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Table with 6 columns: Method Code, Number of Samples, Code Description, Test Wgt (g), Report Status, Lab. Contains two rows of sample preparation data.

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

ADDITIONAL COMMENTS

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Cardinal Geoconsulting Ltd.
1883 Agassiz Avenue
Agassiz BC V0M 1A3
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Cardinal Geoconsulting Ltd.**
 1883 Agassiz Avenue
 Agassiz BC V0M 1A3 Canada

Project: DOT-APEX
 Report Date: November 20, 2012

Page: 2 of 2

Part: 1 of 1

CERTIFICATE OF ANALYSIS

VAN12005124.1

Method	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
G1	Prep Blank	<0.01	<0.1	1.8	5.9	47	<0.1	4.2	4.5	567	1.92	<0.5	1.2	5.0	74	<0.1	<0.1	0.1	37	0.49	0.066
G1	Prep Blank	<0.01	<0.1	5.4	44.4	52	0.1	5.4	5.0	571	2.06	0.9	<0.5	5.0	79	<0.1	<0.1	0.2	39	0.54	0.069
DA-001R	Rock	1.24	2.4	81.3	59.8	80	0.4	102.7	47.4	792	8.06	>10000	1025	<0.1	16	<0.1	3.3	14.9	231	0.63	0.054
DA-002R	Rock	1.70	2.9	35.5	62.5	73	0.4	91.0	33.9	1082	6.76	>10000	1588	0.7	377	<0.1	3.7	12.6	179	4.76	0.148
DA-003R	Rock	1.63	2.6	58.9	28.5	47	0.5	24.1	17.5	210	7.73	>10000	6776	1.7	62	<0.1	19.6	9.6	59	0.84	0.369
DA-004R	Rock	1.74	2.4	7.2	21.1	29	0.4	2.5	4.1	51	2.16	3174	164.0	0.9	22	<0.1	2.5	1.8	4	0.14	0.075
DA-005R	Rock	1.81	0.2	3.6	15.7	38	0.8	2.2	3.6	43	1.51	6004	2010	1.2	16	0.1	2.2	1.2	<2	0.13	0.046
DA-006R	Rock	1.12	0.1	13.2	1.3	14	<0.1	784.2	46.6	689	3.01	68.0	1.3	<0.1	464	<0.1	60.8	0.5	8	4.65	0.007
DA-007R	Rock	1.04	<0.1	7.0	1.7	15	<0.1	2327	98.6	657	4.40	54.6	4.2	<0.1	24	<0.1	<0.1	1.8	6	0.67	0.001
DA-008R	Rock	1.76	0.6	11.1	6.7	12	1.4	18.9	4.2	406	1.38	9224	1987	0.3	9	<0.1	11.3	1.0	9	0.06	0.012
DA-009R	Rock	1.74	<0.1	147.6	16.7	39	2.2	88.9	21.9	1649	3.29	3788	156.3	0.7	129	<0.1	16.8	3.1	6	1.88	0.016
DA-010R	Rock	1.96	1.1	14.1	19.3	40	0.4	18.0	14.7	1208	3.65	>10000	81.6	0.4	153	0.2	2.1	2.7	22	4.45	0.020
DGC-001R	Rock	1.75	<0.1	>10000	586.7	468	>100	1.1	0.5	44	0.29	1074	523.3	<0.1	49	<0.1	1481	13.5	<2	0.06	0.016



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Project: DOT-APEX
 Report Date: November 20, 2012

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CERTIFICATE OF ANALYSIS

VAN12005124.1

Method	Analyte	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
G1	Prep Blank	11	9	0.61	223	0.118	2	1.03	0.097	0.50	<0.1	<0.01	2.7	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank	11	9	0.62	217	0.126	2	1.08	0.111	0.49	<0.1	<0.01	2.8	0.5	<0.05	5	<0.5	<0.2
DA-001R	Rock	2	321	1.52	36	0.142	3	2.10	0.057	1.56	0.1	<0.01	25.4	0.5	2.45	27	4.8	6.6
DA-002R	Rock	8	77	2.85	43	0.106	2	2.12	0.071	2.15	0.2	0.01	13.1	0.8	2.65	30	5.4	8.9
DA-003R	Rock	10	22	0.68	28	0.059	3	0.86	0.056	0.59	0.7	0.01	8.7	0.2	3.52	9	6.3	5.6
DA-004R	Rock	5	2	0.24	37	0.005	3	0.46	0.066	0.23	0.3	<0.01	1.3	<0.1	1.11	3	0.9	1.3
DA-005R	Rock	6	6	0.02	38	0.002	5	0.38	0.005	0.26	0.5	0.02	0.4	<0.1	1.08	2	0.6	0.8
DA-006R	Rock	<1	213	11.68	28	<0.001	1	0.11	0.009	0.07	<0.1	0.02	6.2	<0.1	<0.05	<1	<0.5	<0.2
DA-007R	Rock	<1	422	17.87	4	<0.001	25	0.09	0.010	0.04	0.3	<0.01	6.2	<0.1	0.11	<1	0.6	0.4
DA-008R	Rock	2	9	0.07	28	0.002	1	0.13	0.009	0.07	0.1	0.24	1.9	<0.1	0.54	<1	0.8	<0.2
DA-009R	Rock	5	14	0.82	56	0.002	5	0.32	0.004	0.16	0.1	0.03	5.8	<0.1	2.32	3	2.0	0.6
DA-010R	Rock	2	10	1.73	38	<0.001	6	0.29	0.050	0.09	<0.1	0.10	10.9	<0.1	1.20	2	6.7	9.5
DGC-001R	Rock	<1	22	<0.01	304	<0.001	<1	0.06	0.003	0.05	<0.1	>50	0.7	<0.1	0.19	2	2.9	<0.2



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QUALITY CONTROL REPORT

VAN12005124.1

Method	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Pulp Duplicates																					
DA-010R	Rock	1.96	1.1	14.1	19.3	40	0.4	18.0	14.7	1208	3.65	>10000	81.6	0.4	153	0.2	2.1	2.7	22	4.45	0.020
REP DA-010R	QC		1.0	14.4	18.3	40	0.4	17.1	14.3	1164	3.51	>10000	78.8	0.4	145	0.2	2.3	2.7	21	4.30	0.019
DGC-001R	Rock	1.75	<0.1	>10000	586.7	468	>100	1.1	0.5	44	0.29	1074	523.3	<0.1	49	<0.1	1481	13.5	<2	0.06	0.016
REP DGC-001R	QC		<0.1	>10000	602.4	547	>100	1.1	<0.1	46	0.30	1111	689.8	<0.1	48	<0.1	1609	13.3	<2	<0.01	0.010
Core Reject Duplicates																					
DA-003R	Rock	1.63	2.6	58.9	28.5	47	0.5	24.1	17.5	210	7.73	>10000	6776	1.7	62	<0.1	19.6	9.6	59	0.84	0.369
DUP DA-003R	QC	<0.01	3.0	61.3	32.6	49	0.5	23.5	17.8	230	8.29	>10000	7760	1.9	64	0.2	19.8	10.7	62	0.85	0.383
Reference Materials																					
STD DS9	Standard		13.0	108.7	124.4	292	1.8	40.2	7.7	601	2.43	25.9	115.3	7.1	82	2.4	4.8	6.7	43	0.77	0.081
STD DS9 Expected			12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	11.3	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1	Prep Blank	<0.01	<0.1	1.8	5.9	47	<0.1	4.2	4.5	567	1.92	<0.5	1.2	5.0	74	<0.1	<0.1	0.1	37	0.49	0.066
G1	Prep Blank	<0.01	<0.1	5.4	44.4	52	0.1	5.4	5.0	571	2.06	0.9	<0.5	5.0	79	<0.1	<0.1	0.2	39	0.54	0.069



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QUALITY CONTROL REPORT

VAN12005124.1

Method		1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
DA-010R	Rock	2	10	1.73	38	<0.001	6	0.29	0.050	0.09	<0.1	0.10	10.9	<0.1	1.20	2	6.7	9.5
REP DA-010R	QC	2	11	1.67	38	<0.001	6	0.29	0.047	0.09	<0.1	0.12	10.6	<0.1	1.17	2	7.0	9.3
DGC-001R	Rock	<1	22	<0.01	304	<0.001	<1	0.06	0.003	0.05	<0.1	>50	0.7	<0.1	0.19	2	2.9	<0.2
REP DGC-001R	QC	<1	11	0.02	296	<0.001	<1	0.05	0.004	0.05	<0.1	>50	<0.1	<0.1	0.20	<1	18.3	0.2
Core Reject Duplicates																		
DA-003R	Rock	10	22	0.68	28	0.059	3	0.86	0.056	0.59	0.7	0.01	8.7	0.2	3.52	9	6.3	5.6
DUP DA-003R	QC	10	22	0.74	28	0.061	3	0.96	0.060	0.62	0.7	0.02	9.2	0.2	3.57	9	6.9	6.2
Reference Materials																		
STD DS9	Standard	16	121	0.64	293	0.122	4	1.00	0.094	0.41	2.7	0.21	2.8	5.2	0.17	5	5.5	5.0
STD DS9 Expected		13.3	121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	11	9	0.61	223	0.118	2	1.03	0.097	0.50	<0.1	<0.01	2.7	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank	11	9	0.62	217	0.126	2	1.08	0.111	0.49	<0.1	<0.01	2.8	0.5	<0.05	5	<0.5	<0.2



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Submitted By: Dan Cardinal
Receiving Lab: Canada-Vancouver
Received: October 26, 2012
Report Date: November 08, 2012
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CERTIFICATE OF ANALYSIS

VAN12005125.1

CLIENT JOB INFORMATION

Project: DOT-APEX
Shipment ID:
P.O. Number
Number of Samples: 8

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Cardinal Geoconsulting Ltd.
1883 Agassiz Avenue
Agassiz BC V0M 1A3
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Table with 6 columns: Method Code, Number of Samples, Code Description, Test Wgt (g), Report Status, Lab. Contains 3 rows of sample preparation data.

ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: DOT-APEX
 Report Date: November 08, 2012

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CERTIFICATE OF ANALYSIS

VAN12005125.1

Method	Analyte	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
DA-001S	Soil	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<2	<0.01	<0.001	<1	
DA-002S	Soil	20.3	30.0	119.9	138	1.2	6.9	6.4	402	5.91	6415	807.0	2.4	8	0.4	4.0	14.5	46	0.07	0.065	9
DA-003S	Soil	110.6	65.9	130.1	121	2.8	4.8	13.4	604	6.91	>10000	3579	2.0	32	1.0	11.1	10.0	14	0.33	0.160	9
DA-004S	Soil	18.7	605.8	39.7	163	13.3	224.0	40.5	9217	13.35	>10000	15398	1.4	57	0.8	23.1	3.9	72	0.67	0.121	13
DA-005S	Soil	9.8	229.9	32.9	394	4.1	386.1	88.5	6965	12.83	>10000	6848	0.4	28	0.5	18.5	5.8	164	0.51	0.147	5
RG-01S	Soil	5.8	55.7	9.2	241	0.1	56.9	22.4	4785	17.15	127.1	6.1	1.1	27	2.2	3.2	0.1	63	0.38	0.100	8
RG-02S	Soil	3.1	7.1	3.5	63	<0.1	5.5	2.6	8476	20.60	24.1	3.8	0.3	130	1.1	1.9	<0.1	<2	2.21	0.045	5
RG-03S	Soil	8.9	67.6	9.8	120	0.3	51.2	22.9	3078	17.62	208.9	4.1	1.0	28	1.0	4.5	0.1	76	0.55	0.056	12



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CERTIFICATE OF ANALYSIS

VAN12005125.1

Method	Analyte	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
DA-001S	Soil	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
DA-002S	Soil	13	0.51	51	0.062	1	1.99	0.005	0.08	0.9	0.04	3.0	0.1	<0.05	10	1.0	4.7
DA-003S	Soil	4	0.15	39	0.009	<1	0.52	0.005	0.05	1.4	0.06	2.9	<0.1	<0.05	2	1.6	3.7
DA-004S	Soil	20	0.32	117	0.015	1	0.67	0.004	0.17	0.5	3.04	15.2	0.7	<0.05	4	<0.5	0.3
DA-005S	Soil	155	1.72	126	0.072	2	1.88	0.003	0.83	0.4	0.95	20.7	1.0	<0.05	13	1.3	1.1
RG-01S	Soil	59	0.46	270	0.067	2	1.81	0.005	0.07	0.6	0.08	5.4	<0.1	<0.05	5	0.9	<0.2
RG-02S	Soil	2	0.19	303	0.014	3	0.35	0.010	0.03	0.9	0.04	0.9	<0.1	<0.05	1	1.3	<0.2
RG-03S	Soil	62	0.40	204	0.070	2	2.00	0.005	0.04	1.1	0.16	7.3	<0.1	<0.05	5	1.8	<0.2



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QUALITY CONTROL REPORT

VAN12005125.1

Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
Reference Materials																					
STD DS9	Standard	13.1	107.7	125.3	297	1.7	40.2	7.6	558	2.24	21.9	120.0	6.4	63	2.2	4.5	5.4	49	0.70	0.076	13
STD DS9 Expected		12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819	13.3
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	7	<0.01	<0.001	<1



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QUALITY CONTROL REPORT

VAN12005125.1

Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Reference Materials																	
STD DS9	Standard	120	0.60	281	0.110	2	0.90	0.075	0.35	2.8	0.21	2.4	5.2	0.17	4	4.8	5.1
STD DS9 Expected		121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2