

Event 5124692

**Petrology Study on Two Rocks from the Imperial Claims, Munro Mountain,
Atlin Mining Division, British Columbia, Canada**

At 59° 36' 37.3 '' North, 133° 36' 13.1'' West

Map sheet 104N/12E; Minfile 104N-008

By

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Community of Atlin, BC, with Munro Mountain on upper left, and part of Atlin Lake in foreground.

**With
Petrography by**

Dr. John G. Payne,

**Vancouver Petrographics Ltd, 8080 Glover Road, Langley,
B.C. V1M 3S3, Tel:604-888-1323**

Date of field Work: 12th November 2011

Date of Report: 23rd December 2011



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: EVENT 5124692

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At 59° 36' 37.3 '' North, 133° 36' 13.1'' West

Map sheet 104N/12E: MINFILE: 104N-008

TOTAL COST: \$3,183.00

AUTHOR(S): NICHOLAS CLIVE ASPINALL, M.SC., P.ENG

SIGNATURE(S):

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

STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5124692; 2011.11.12

YEAR OF WORK: 2011

PROPERTY NAME: Imperial Claim Group

CLAIM NAME(S) (on which work was done): TENURES 379554

COMMODITIES SOUGHT: Au & Ag

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN: 104N-008

MINING DIVISION: ATLIN

NTS / BCGS:

LATITUDE: 59 ° 36 ' 37.3 N "

LONGITUDE: 133 ° 36 ' 13.1 W " (at centre of work)

UTM Zone:

OWNER(S): Nicholas Clive Aspinall

MAILING ADDRESS:

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

MAILING ADDRESS: **AS ABOVE**

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization,

- Upper Paleozoic
- Fine grained metagabbro
- Listwanites, carbonatized ultramafics
- Harzburgite, dunite, peridotite cumulates, non-differentiated
- Meta-andesitic basalts
- Scattered quartz veins with sulphides, copper carbonates and fuchsite are associated with the carbonatized ultramafics and meta-andesitic basalts within fault zones and contact zones.
- Chalcopyrite, malachite, galena, gold, silver, chromite

size and attitude. **Do not use abbreviations or codes**) size and attitude. **Do not use abbreviations or codes**)

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

17493, 16511, ASPINALL 2000, 2004, 2006, 2007, 2008, 2009,

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Silt			
Other			

DRILLING (total metres, number of holes, size, storage location)		
Non-core		
RELATED TECHNICAL		
Sampling / Assaying		
	379554	3,183.00
Petrographic		
Mineralographic		
Metallurgical		
PROSPECTING (scale/area)		
PREPATORY / PHYSICAL		
Line/grid (km)		
Topo/Photogrammetric (scale, area)		
Legal Surveys (scale, area)		
Road, local access (km)/trail		
Trench (number/metres)		
Underground development (metres)		
Other		
	TOTAL COST	\$3,183.00

Details attached

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Summary

The Imperial Claim Group within the Atlin Mining Division, now covered by two tenures held by the writer, has a long history dating back to 1899-1902. Leases then which covered the property were worked for hard rock gold from within two adits, recovering a reported 1.5 kg gold.

During the mid 1980's, Homestake Mineral Development Ltd investigated the area, but then allowed the claims to drop due to discouraging results.

On 9th August 2000, the writer 4-post staked the Imperial claim tenure 379550 and carried out limited surface work during 2000, 2004, 2006, 2007, 2008 and 2009.

On 10th September 2009 the writer electronically staked Imperial 2, tenure 631884. Total area of both claims covers 447.37 hectares.

The Imperial claim has served the writer primarily as a geological model in assisting to understand the style of hard rock gold mineralization that sourced the Atlin gold placers during pre-Tertiary times.

This report endeavors to document petrographically two ultramafic rocks sourced to Munro Mountain and the Imperial Property.

Therefore, on 12th November 2011 one day was spent on tenure 379550 to collect two rock samples for petrographic study by Dr. John G. Payne of Vancouver Petrographics. This report focuses on this study.

This petrographic study provides additional information to the Imperial claim database, and is therefore useful to a future drilling program on the property, which is recommended.

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Introduction

Two rock samples were collected from the Imperial mineral claim (tenure 379554), on 12th November 2011, and sent to Vancouver Petrographics Ltd for petrographic work.

Historically the tenure area was the site of the only hard rock gold producer (1899-1902) within the historic Atlin placer gold camp, Northwest British Columbia.

This work is being applied as development work on tenure 379550 and contiguous tenure 631884, both claims referred to the Imperial Claim Group, the imperial Property, or the Property in this report, Ref: Figures 1 &2.

The objective of the continuing development work on the Imperial Claim Group is to build up a database of rock types to create a better understanding of the geology and rock types, in preparation for a future drilling program.

Reliance on Other Experts.

Petrographic work was carried out by Dr. John G. Payne of Vancouver Petrographics Ltd, 8080 Glover Road, Langley, B.C.V1M 3S3.

Property Location and Description

The Imperial claim Group are located 7 km northeast of the community of Atlin. A bush road leads from Surprise lake road to the base of Munro Mountain, where the claims are situate, Ref: Figure 3.

The Imperial mineral claim is a legacy claim of 12 units, tenure # 379554 acquired on 9th August 2000 by on-site claim post staking. The adjoining Imperial 2 claim, tenure 631884, consisting of six units, is an electronically staked claim, acquired on 10th September 2009.

Both claims fall within NTS (National Topographic System) 104N/12E.

The LCP to tenure #379554 is located in a wooded area. Geographic Positioning System (GPS) coordinates are: North 59 degrees, 36 minutes and 24 seconds, West 133 degrees, 35 minutes and 37.1 seconds, elevation 921.8 metres. Details of the Imperial claims are given in Table 1

Table 1

Imperial Claim Group, Atlin Mining Division, British Columbia, Located 7 km NE of Atlin						
Tenure#	Name	Issue Date	Old Good To Date	New Good to Date	Days Forward	Ha
379554	Imperial	2000/Aug/09	2011/Nov/20	2012/Nov/20*	366	300
631884	2	2009/Sep/10	2011/Nov/20	2012/Nov/20*	366	147.37
Total						447.37

* Based on acceptance of this report by Mineral Titles.

The Imperial property lies with the traditional territories of the Taku River Tlingit

Accessibility, Climate, Infrastructure and Physiography

Access can be gained by a trail leading northwards off the Surprise Lake road approximately 5 kilometres east of the community of Atlin. The access point is approximately 1 kilometre past the Spruce Creek Bridge turn-off. The trail gradually turns westward following the base of Munro Mountain before meeting the Atlin Highway leading to Jakes Corner on the Alaska Highway, Ref: Figure 3. One of-shoot trail leads to the lower slopes of the mountain.

Access to the southern boundary of the Imperial Property can be gained by 4-wheel drive jeep.

Atlin experiences mild falls extending from September to November, with some -40° F below days during January. Snows usually have been coming late, arriving to stay in December and last until April. Spring and summer weather in the Atlin is variable from year to year.

Munro Mountain has an elevation of 1,283 metres, while Atlin Lake has an elevation of 667.5 metres (ASL). The base of Munro Mountain has an elevation of 1,097 metres above sea level.

History

Much of the following history of mineral exploration and gold mining on the Imperial Claim has been taken from the 1988 Homestake Mineral Development Ltd assessment report on Imperial Property, (A/R 17,495) and BC.Minfiles.

The original Imperial property was first staked in 1899. Gold had been discovered in a 150 metre long quartz vein. Two cross cut tunnels, an upper and a lower, were driven to intersect the discovered quartz vein. This quartz vein reportedly trends between 295° - 310° dipping Southwest at 50° - 60° .

The veins width varies reportedly from 0.12 metres to 2.6 metres. A bunkhouse and a small stamp mill were built from funding by a syndicate called Nimrod.

According to BC Minfiles and other reports, in 1900 the Nimrod Syndicate miners milled 245 tonnes from the upper level, which yielded 13.7 grams per tonne gold while the lower tunnel produced 23 tonnes ore, which yielded 5.1 grams per tonne gold. These records testify the Imperial claim as the only "past producer" of hard rock gold in the Atlin mining camp. Yet all records continue to show the property has never been drilled.

According to the Homestake report, in 1902 a 1485 kilogram (3267 lbs.) test sample from the upper tunnel was treated in Vancouver. This sample reportedly analyzed 1.2 oz./t Au and 1.26 oz./t Ag.

Homestake reported, that in 1933 a geologist from British Columbia Mines Branch took 14 samples from a 0.5 metre section of the upper tunnel vein over a length of 10.9 metres (35 feet). These samples reportedly averaged 0.8 oz./t Au and 1.0 oz./t Ag, but were not duplicated by Homestake geologists.

In 1984, Lear Oil and Gas acquired the Imperial Property and adjacent properties. This company contracted out a program of geological mapping, soil sampling, and VLF-EM and magnetometer surveys.

Homestake Mineral Development Company Ltd who carried out the following work in 1987 then optioned the Property.

- 19 Km of grid line surveys
- Detailed geological mapping at 1:1000
- Collection of 245 rock and 26 soil samples for multi-element analysis.

. The Property was allowed to lapse and re-staked by the writer on 9th August 2000 as the namesake Imperial claim of 12 units, and in 2009 an additional claim of 6 units was acquired by electronic staking named Imperial 2. The writer has worked the property briefly during summers of 2000, 2004, 2006, 2007, 2008 and 2009¹.

Both Nimrod adit portals are now covered by rock talus, and have never been found by the writer, although the approximate location is known. The writer has found the old Nimrod bunkhouse and mill, now both collapsed.

Regional Geological Setting

The Atlin region for the past 114 years has been a focus of placer gold mining, and the source of gold has been attributed to the proximity of the ultramafic rocks in the region, specifically carbonate altered ultramafics, or listwanites. These potential source rocks have been investigated during the early years of the Atlin gold camp, and then more intensively since the 1980s.

The Imperial Property falls within the historic Atlin gold camp and is the only historic hard rock producer within the camp, from 1898 to 1902, when 1.5 kg of gold is reported as produced.

Geologically, the Imperial property falls within the northwestern margin of the northern Cache Creek Terrane. This Terrane consists of allochthonous remnants of a late Paleozoic to early Mesozoic Tethyan Ocean.²

Within the Atlin area where the Imperial claims are situate, individual ultramafic thrust slices or klippen of the Atlin Ophiolite Assemblage are localized invariably in sedimentary and meta-volcanic rocks, known collectively as the Atlin Accretionary Complex.

Ultramafic rocks in the Atlin region include harzburgite associated with dunites and peridotite cumulates, believed to be wehrlite.

This report endeavors to document petrographically two ultramafic rocks sourced to Munro Mountain and the Imperial Property.

¹ Aspinall, 2009.

² Ash, 1994.

Property Geology

With the help of BC Bulletin 95³, the writer reclassified Imperial claim property rocks and traces of mineralization to include the following:

- Upper Paleozoic in age
- Fine grained metagabbro
- Listwanites, carbonatized ultramafics
- Harzburgite, dunite, peridotite cumulates, non-differentiated
- Meta-andesitic basalts
- Scattered quartz veins with sulphides, copper carbonates and fuchsite are associated with the carbonatized ultramafics and meta-andesitic basalts within fault zones and contact zones.
- Traces mineralization consists of chalcopyrite, malachite, galena, gold, silver, and chromite.

The following rock descriptions are partly based on Dr.J.G Payne's petrology work on samples collected from the Imperial claim in 2004 and 2007⁴, and partly on the writers classification.

Fine-grained metagabbro: Within the Imperial Claim, two metagabbro bodies are recognized. One forms a distinct plug and lies on the west side of the claims. The second metagabbro body is mainly a sub-crop of rock and glacier debris. Until the present study, no petrographic work had been done, to the writer's knowledge, on this rock type.

Dr. Payne studied the following type rocks collected from the Imperial Property microscopically⁵.

Listwanites, carbonatized ultramafics

In weathered outcrop, the rock is light tan in colour, and on fresh surface is light grey, very hard and very fine-grained. Fuchsite is concentrated as macro-lenses and averages up to 15% as seen on selected rock surfaces.

Silica alteration is pervasive and gives the rock its hard characteristic. It is almost cherty in texture. Silica alteration is associated with the carbonate, described as magnesite in the Homestake report.

Carbonate is more pervasive than the silica alteration, and is reflected on weathered surface by providing the tan colour to surface exposures. In all cases, it is the fuchsite that catches the eye, and detailed prospecting reveals it uniquely associated with the ultramafic rocks.

Under thin section this rock shows scattered clusters of chromite (altered to pyrite and locally magnetite) enclosed with intergrowths of magnesite and quartz that in places show strongly

³ Ash, 1994

⁴ Aspinall, 2004, 2007.

⁵ Aspinall, 2004.

elongated textures. Minor patches of fuchsite are in part associated with chromite and in part associated with quartz.

Harzburgite, dunite, peridotite cumulates, non-differentiated.

In hand specimen this is a dark rock ranging from aphanitic to porphyritic in texture. In this section the dunite shows minor relic grains of chromite in replaced and recrystallized intergrowths of extremely fine grained magnesite and coarser grained ankerite, with less abundant quartz and minor fuchsite and opaques. Subparallel, fracture-filling veinlets are dolomite/magnesite.

Meta-andesitic basalts. In hand specimen this is a fine grained dark grey rock, and looks more like basalt than an andesite. Under the microscope plagioclase and actinolite is present as moderate to strong, but in varying proportions. Disseminated opaques are concentrated in patches and seams, mainly in actinolite-rich zones. Numerous veinlets of quartz, in part with minor actinolite and/or plagioclase; some show evidence of strong deformation and recrystallization. A few veinlets are of actinolite.

Traces of sulphide and copper carbonate mineralization: In hand specimen sulphides are only seen in quartz, especially where quartz shows composite veining. The sulphides show preference to one pulse of quartz veining. In 2004 a thin section of quartz showed: Seams of sericite-ankerite and disseminated grains and clusters of sulphides. One sulphide patch consists of chalcopyrite and pyrite with minor gold/electrum. Another smaller sulphide patch consists of galena and chalcopyrite. Sulphides and ankerite are altered moderately to strongly to limonite, hematite, and malachite.

Diorite/diabase dike. In hand sample, the rock is crystalline, dark grey, fine grained, with diabase texture. It shows traces of disseminated pyrite. Is located in a fault zone. Under the microscope one sample shows phenocrysts of plagioclase (altered completely to quartz and ankerite), a few of clinopyroxene (altered completely to chlorite-ankerite), and one of quartz in a groundmass of plagioclase (altered strongly to sericite-ankerite), patches of ankerite, disseminated elongate flakes of biotite, interstitial patches of quartz, and minor pyrite, No quartz is present within this dike, but has been subject to alteration with adjacent carbonate ultramafics.

Diorite dike. During 2007 work a diorite dike was noted on the northwest side of the Imperial claim. In hand specimen, rock is crystalline, dark grey, porphyritic, sericite alteration. Under thin section, the rock can be described as porphyritic diorite that contains phenocrysts of plagioclase (altered slightly to sericite) and minor ones of hornblende (altered completely to tremolite/actinolite and biotite) in a groundmass of equant plagioclase, prismatic tremolite/actinolite, and flakes of biotite.

Mineral Deposit Type

The Property provides an ideal auriferous hard rock model that likely prevailed in multiple geological situations during pre-Tertiary times in the Atlin region, and this model style or similar is believed (by the writer and others) the source of Atlin placer gold.

Investigations by the writer in 2000, 2004, 2006, 2007 and 2008 show Imperial gold mineralization to be very weak on surface, only with traces of sulphides in scattered quartz veinlets. Only one sample showed a microscopic speck of gold/electrum, (identified in polished section in 2004)⁶.

However, within the Imperial Claim model it is recognized that the quartz veinlets within the Imperial claim have three types of host rock.

- Bull white quartz veinlet's within massive and structureless carbonated ultra-mafics, with no visible sulphides; analyses show no trace of gold or silver.
- Bull white quartz veinlets within altered silicified and carbonated andesite-basalt volcanics along fault contacts with diabase or diorite. These quartz veinlets show traces of chalcopyrite, (including associated malachite) and galena, also analyze trace of gold and silver.
- Bull white quartz veins within andesite-basalt volcanics, and show carbonated alteration and associated slip and/or fault structures. These invariably show traces of chalcopyrite, (including associated malachite) and galena. Traces fuchsite is invariably present.

Mineralization

Continued investigations have recognized quartz veinlets within the Property have three types of host rock.

- Bull white quartz veinlets within massive and structureless carbonated ultra-mafics, with no visible sulphides; analyses show no trace of gold or silver. Trace fuchsite invariably present.
- Bull white quartz veinlets within altered silicified and carbonated andesite-basalt volcanics along fault contacts with diabase or diorite. These quartz veinlets show traces of chalcopyrite, (including associated malachite) and galena, also analyze trace of gold and silver. Trace fuchsite invariably present.
- Bull white quartz veins within andesite-basalt volcanics, and show carbonated alteration and associated slip and/or fault structures. These invariably show traces of chalcopyrite, (including associated malachite) and galena. Traces fuchsite invariably present.

Drilling

The Property is a grass roots property, and there are no known records that show diamond drilling ever took place on the property.

2011 Exploration and Petrographic Observations

One day was spent on the Property on 12th November 2011, and two rock types were collected from Imperial, tenure 379554, Ref: Figures 4, 5. Both rocks were taken from large boulders

⁶ Aspinall, 2004

identified as sub-outcrop. Sample identification, UTM coordinates, date and time collected, elevations, and field name rock types are listed in Table 2, below.

Table 2.

Datum NAD83						Sub-Outcrop
IMPERIAL PROPERTY, TENURES 379554, 631884, PETROGRAPHIC SAMPLE LOCATIONS						
SAMPLE ID	SECTOR	EASTING	NORTHING	DATE AND TIME	ELEV: M	Boulders Field Name
Imp 11 01	8V	578356	6608504	12-NOV-11 3:15:28PM	1241.5	META-GABBRO
Imp 11 02	8V	577757	6608725	12-NOV-11 4:11:20PM	1220.1	DUNITE

Sample Summary notes after Dr. John G. Payne.

Sample IMP-11-01 is of metamorphosed porphyritic diabase that contains phenocrysts of plagioclase and of diopside (metamorphosed to actinolite) in a groundmass of finer grained plagioclase and actinolite, with accessory ilmenite, biotite, and pyrrhotite, and minor chalcopyrite and apatite. Biotite and pyrrhotite commonly are associated. The rock has a felted texture typical of diabase. Two veinlets of hematite/limonite have weak alteration envelopes (?) in which biotite is more abundant than normal, and ilmenite and actinolite were altered slightly to strongly to limonite.

Sample IMP-11-02 is of massive that is dunite dominated by olivine (altered strongly to serpentine, lesser talc, and minor magnetite), with disseminated clusters of tremolite (altered slightly to completely to serpentine- [carbonate]), minor disseminated pyroxene grains (altered completely to unoriented talc-carbonate- [magnetite]), and minor disseminated grains and clusters of chromite (altered slightly in patches to magnetite and non-reflective silicates and along grain borders to magnetite). A few patches enclosing chromite grains are of talc-chlorite. A wispy veinlet is of carbonate. Mainly near one end of the section are a few zones of slight bleaching that in thin section are stained slightly to moderately by limonite.

Sample Detailed notes after Dr. John G. Payne.

**Sample IMP-11-01 Metamorphosed Porphyritic Diabase
 Veinlets: Hematite/Limonite**

Phenocrysts of plagioclase and of diopside (metamorphosed to actinolite) are set in a groundmass of finer grained plagioclase and actinolite, with accessory ilmenite, biotite, and pyrrhotite, and minor chalcopyrite and apatite. Biotite and pyrrhotite commonly are associated. The rock has a felted texture typical of diabase. Two veinlets of hematite/limonite have weak alteration envelopes (?) in which biotite is more abundant than normal, and ilmenite and actinolite were altered slightly to strongly to limonite.

Mineral	percentage	main grain size range
phenocrysts		
plagioclase	5- 7%	0.7-1.5 (one phenocryst 2.5 mm across)
diopside/actinolite	4- 5	0.5-1

groundmass

plagioclase	40-45	0.1-0.3
actinolite	35-40	0.1-0.3
biotite	2- 3	0.05-0.15
ilmenite	1- 2	0.03-0.1
pyrrhotite	0.3	0.05-0.2
chalcopyrite	minor	0.02-0.05
apatite	minor	0.03-0.05

veinlets

1: hematite/limonite 1- 2 cryptocrystalline

Plagioclase forms subhedral prismatic phenocrysts that were altered slightly to moderately to dusty clinzoisite and locally to disseminated prismatic grains of actinolite.

Diopside forms equant subhedral phenocrysts and clusters of a few phenocrysts that were metamorphosed completely to pseudomorphic actinolite with pleochroism from light to medium slightly yellowish green. A few phenocrysts also contain lensy patches of biotite oriented parallel to the c-axis of the original diopside grain.

In the groundmass, plagioclase and actinolite form an unoriented intergrowth of equant to slightly prismatic grains.

Biotite forms disseminated equant anhedral flakes and clusters up to 1 mm in size of subhedral flakes with pleochroism from pale to light brown. Some of these are intergrown with actinolite, with textures suggesting that they are in equilibrium.

Ilmenite forms disseminated anhedral grains and clusters of a few to several grains.

Pyrrhotite forms disseminated gains and clusters of a few to several anhedral grains; some grains are fresh, some are altered to secondary pyrite and non-reflective iron-bearing minerals, and some are altered moderately to completely to hematite. An irregular patch up to 1 mm across intergrown with groundmass actinolite and plagioclase consists of hematite (probably secondary after pyrrhotite) with minor inclusions of chalcopyrite.

Chalcopyrite forms disseminated grains, in part associated with pyrrhotite. A few patches up to 0.3 mm across contain cores of chalcopyrite surrounded by intergrowths of covellite and an unknown, non-reflective, cryptocrystalline material, probably a secondary Cu-oxide.

Apatite forms acicular grains mainly associated with groundmass plagioclase.

A partly braided veinlet up to 0.05 mm wide and a much narrower one 0.02 mm wide are of limonite; where the larger veinlet cuts actinolite and ilmenite, they are altered to limonite. In places an envelope up to 0.5 mm wide about this veinlet contains more abundant biotite than normal, perhaps formed by replacement of actinolite, but no intermediate textures were seen of groundmass actinolite partly altered to biotite.

Sample IMP-11-02

**Dunite: Olivine-(Tremolite-Chromite)
 Alteration: Serpentine-Talc-Magnetite-Carbonate
 Veinlet: Carbonate**

The sample is of massive that is dunite dominated by olivine (altered strongly to serpentine, lesser talc, and minor magnetite), with disseminated clusters of tremolite (altered slightly to completely to serpentine-[carbonate]), minor disseminated pyroxene grains (altered completely to unoriented talc-carbonate-[magnetite]), and minor disseminated grains and clusters of chromite (altered slightly in patches to magnetite and non-reflective silicates and along grain borders to magnetite). A few patches enclosing chromite grains are of talc-chlorite. A wispy veinlet is of carbonate. Mainly near one end of the section are a few zones of slight bleaching that in thin section are stained slightly to moderately by limonite.

mineral	percentage	main grain size range
olivine (fresh)	2- 3%	0.7-1.5 (original)
serpentine	85-88	0.02-0.05
talc	5- 7	0.07-0.3
magnetite	0.5	0.01-0.03
tremolite	4- 5	0.5-1.5
pyroxene	1	1-1.5
chromite	0.5	0.1-0.4 (one grain 0.7 mm across)
pyrite	0.1	0.02-0.05
limonite	0.3	cryptocrystalline
veinlet		
1: carbonate	minor	0.01-0.03

Olivine forms anhedral equant grains that were fractured strongly and altered strongly, mainly to serpentine with wispy patches and seams of magnetite, with relic cores of fresh olivine (0.02-0.07 mm) between the fractures. Talc forms disseminated flakes and clusters of flakes as a replacement of olivine or of serpentine-(magnetite).

Tremolite forms scattered clusters of prismatic grains that were altered slightly to strongly to pseudomorphic serpentine, with or without patches of talc and minor carbonate.

Pyroxene forms a few subhedral prismatic grains that were altered completely to unoriented aggregate of talc with lesser carbonate, scattered flakes of chlorite, and disseminated magnetite.

Chromite forms equant angular grains with a deep reddish brown colour. Some of these were fractured coarsely with serpentine and talc, and locally pyrite, filling some of the larger fractures. Some grains were altered along their margins and in patches inwards from the margins to magnetite, which in places contains moderately abundant inclusions (0.005-0.02 mm) of non-reflective silicates. The largest chromite grains are enclosed in a lens of talc-chlorite.

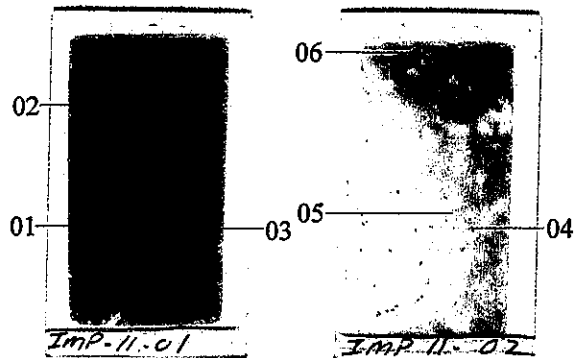
Pyrite forms disseminated patches, many of which were altered partly to hematite along fractures.

A wispy veinlet up to 0.02 mm wide is of carbonate.

Mainly near one end of the section are zones of moderate bleaching, which in thin section are identified by the presence of diffuse limonite.

Photo Section Description

111093 aspinall sections

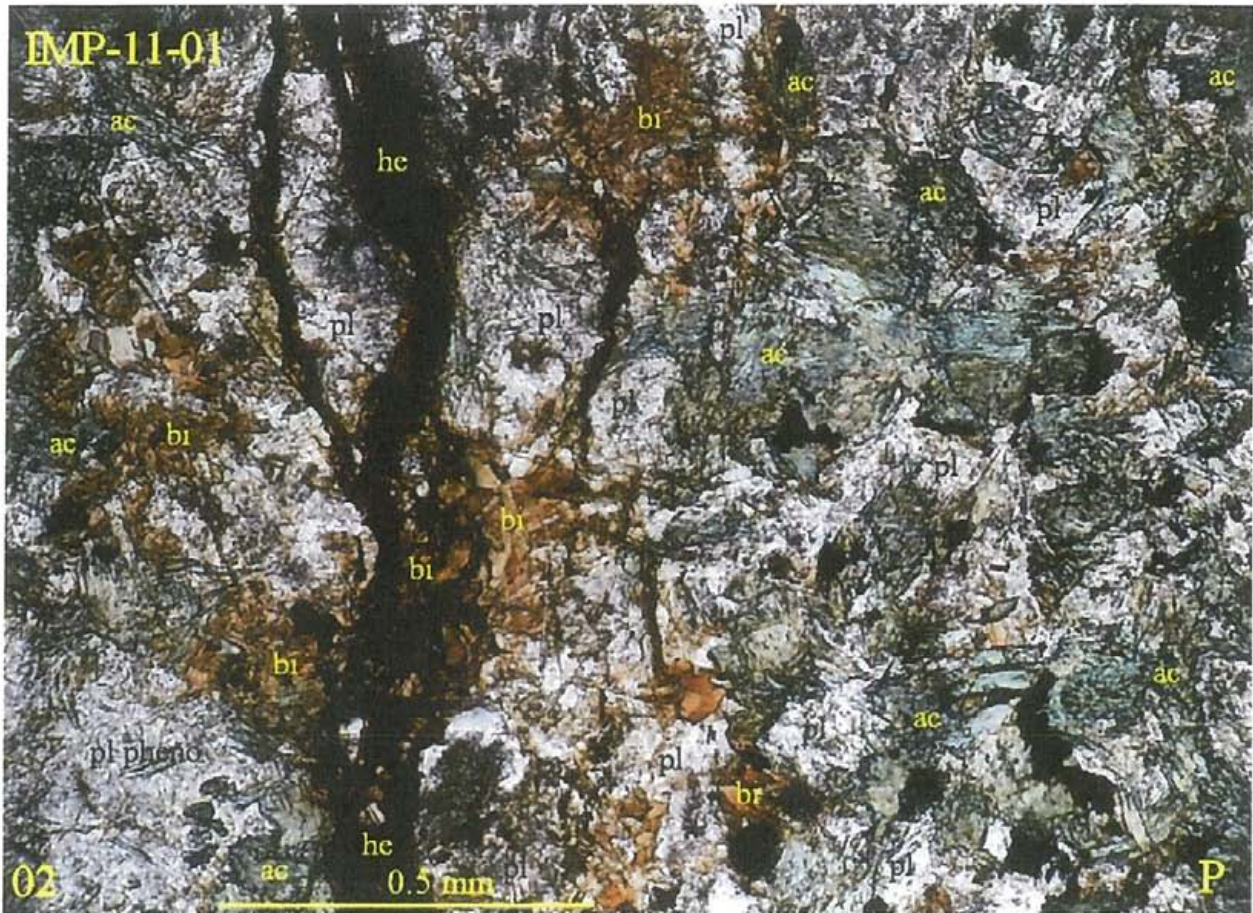


Photographic Notes:

The scanned section shows the gross textural features of the sections; these features are seen much better on the digital image than on the printed image. Photo numbers are shown in the lower left corner of the photographs. The letter in the lower right-hand corner indicates the lighting conditions: P = plane light, X = plane light in crossed nicols; R = reflected light, RP = reflected light and plane incident light; ~RX = reflected light in moderately crossed nicols and incident light in crossed nicols.

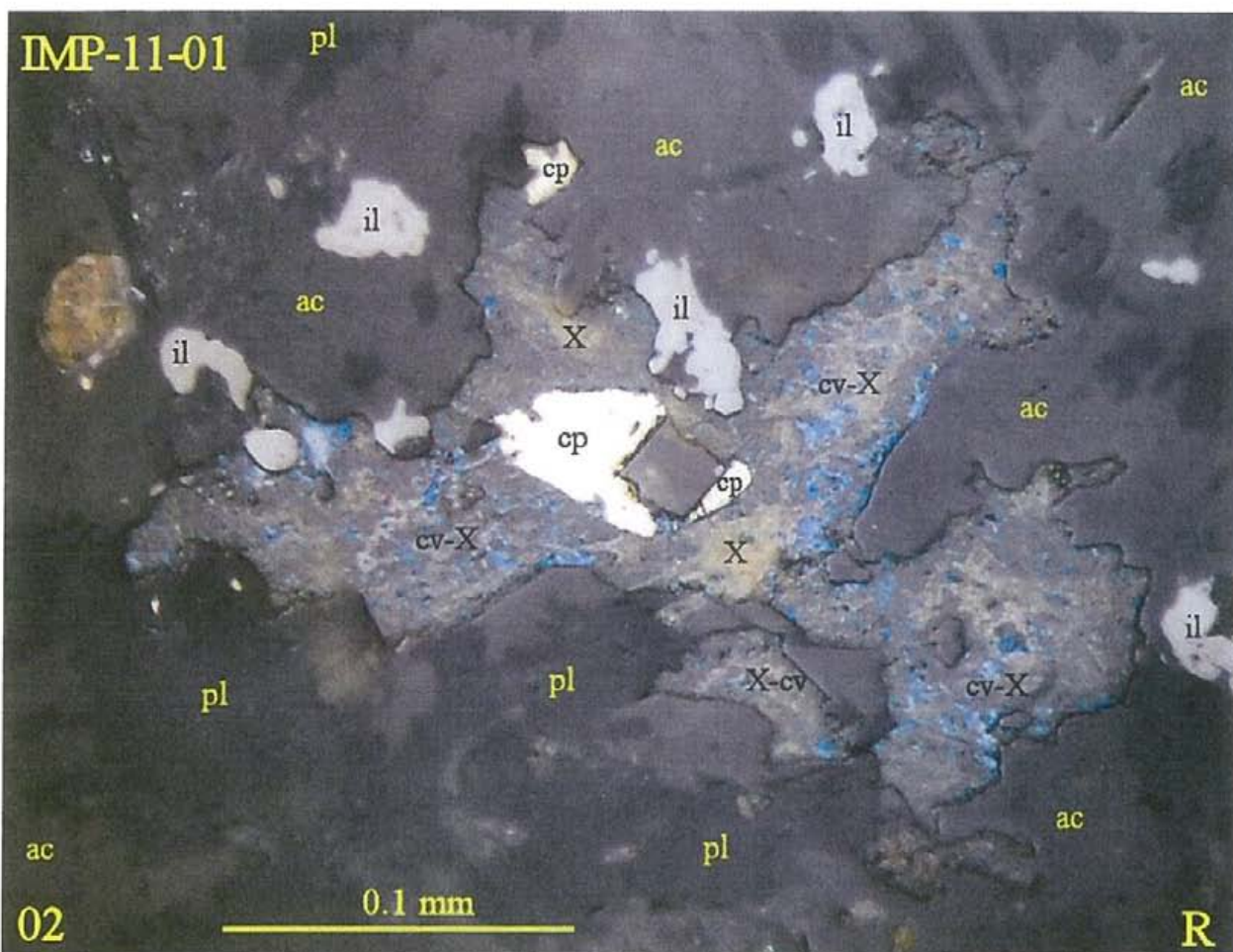


- 01 IMP-11-01 phenocrysts of diopside (metamorphosed to pseudomorphic actinolite) and plagioclase (altered slightly to dusty clinzoisite(?)) in a groundmass of unoriented plagioclase and actinolite, with disseminated patches of ilmenite.

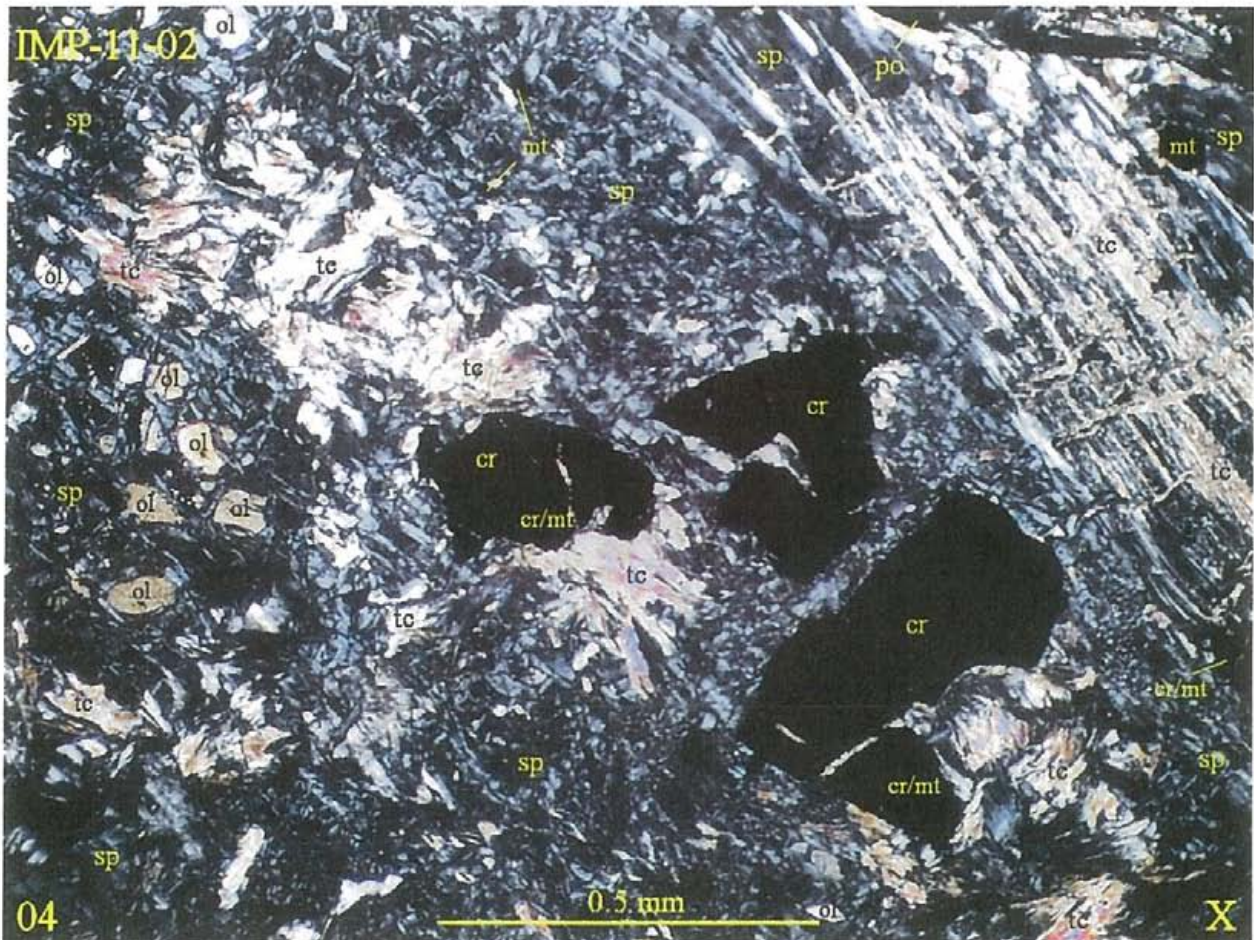


02 IMP-11-01

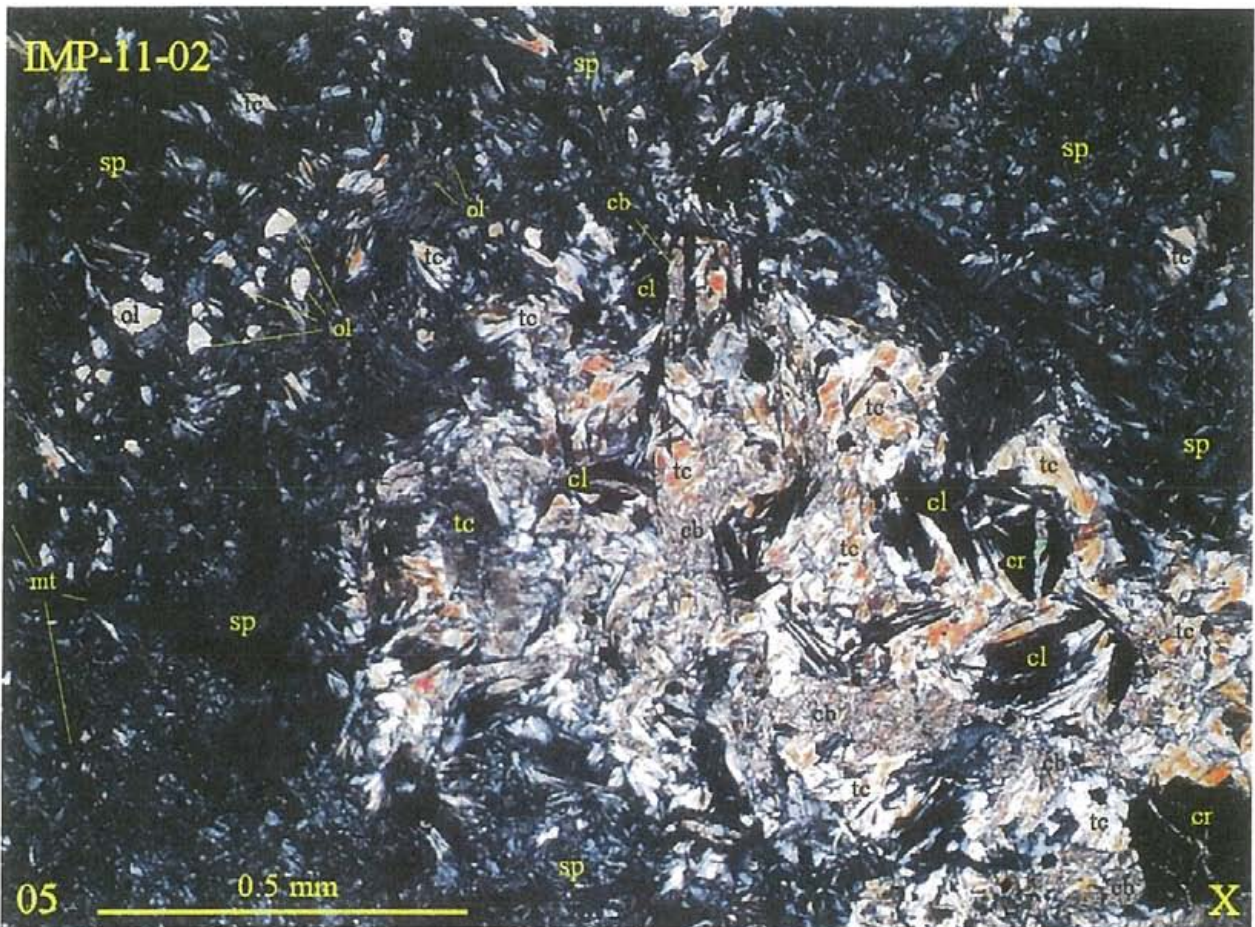
plagioclase phenocryst in groundmass of plagioclase-actinolite with lesser patches of biotite and scattered grains of ilmenite; cut by veinlet of hematite/limonite; biotite is more abundant near the veinlet than further away, although it is not obviously replacing either actinolite or plagioclase, and it would be unusual for such a late veinlet to have developed a biotite-bearing alteration envelope.



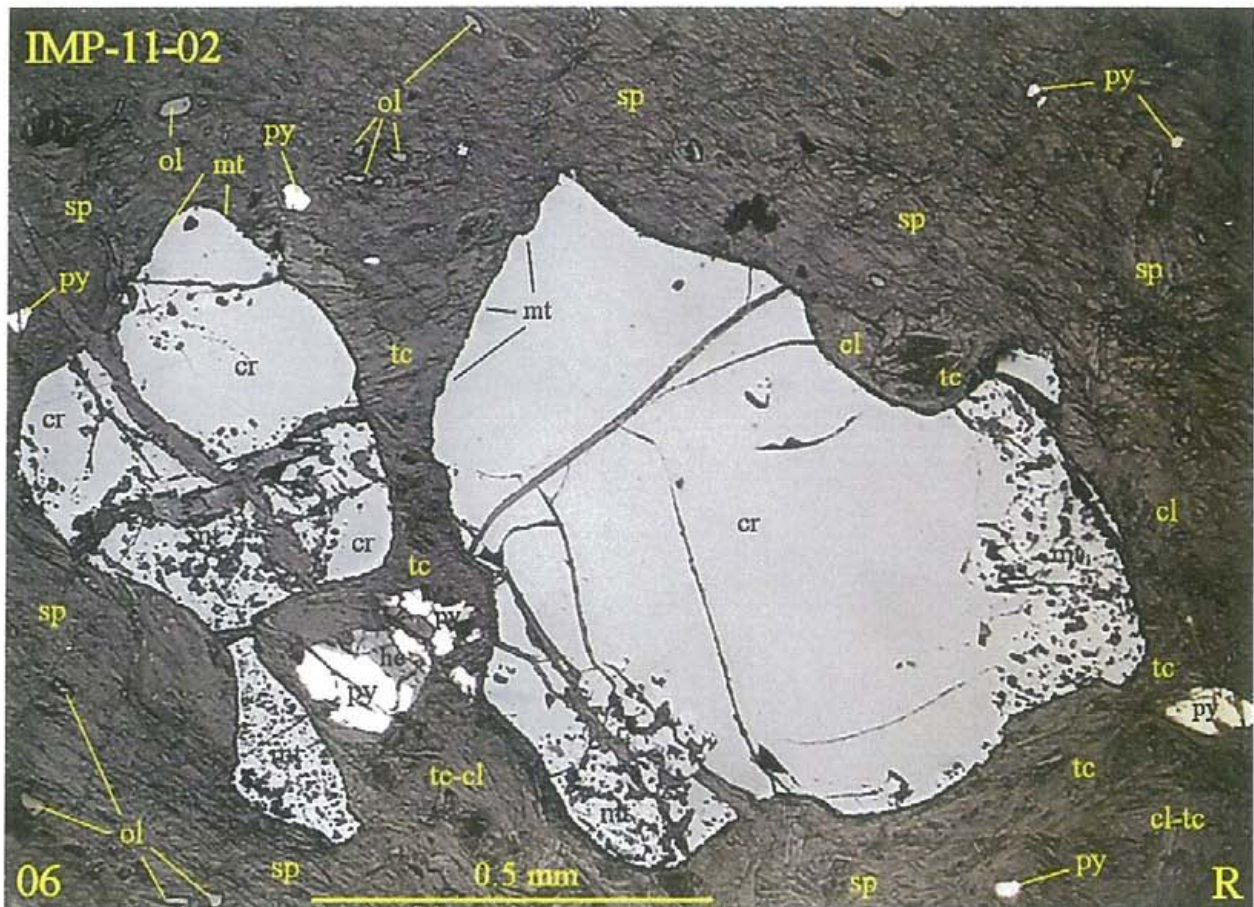
03 IMP-11-01 patch of chalcopyrite (altered strongly to covellite and an unknown secondary mineral (X), possibly a copper oxide); enclosed in actinolite with lesser plagioclase and disseminated patches of ilmenite.



04 IMP-11-2 olivine grains, locally with relic cores of olivine (mainly in one original grain), altered to serpentine (with minor wispy disseminated patches of magnetite) and a few ragged patches of talc; one prismatic cluster of tremolite (altered of pseudomorphic serpentine with lesser talc), cluster of chromite grains (altered in a few patches to magnetite; trace pyrrhotite (at top right).



05 IMP-11-02 prismatic pyroxene grain (altered completely to talc with lesser carbonate and chlorite) and two inclusions of chromite; enclosed in olivine (altered strongly to completely to serpentine, wispy patches and seams of magnetite, and scattered flakes of talc), with a few relic cores of olivine in one original olivine grain.



06 IMP-11-02 chromite grains (altered in patches to magnetite and non-reflective silicates and locally to magnetite in a thin zone along the margins of chromite grains; enclosed in a lens of talc-chlorite with a few patches of pyrite (altered slightly to hematite); surrounded by olivine (altered almost completely to serpentine) with minor patches of pyrite.

Data Verification

Samples collected were located with a GPSmap 76CSX and downloaded on to Ozi Explorer software incorporating B.C. NTS maps. The writer has used this system since 2006 with no misrepresentations. Dr. John G. Payne is a professional petrographer contracting to Vancouver Petrographics Ltd, the most professional organization in the industry.

Adjacent Properties

Other mineral properties are situating in the Atlin gold camp

- Yellow Jacket, hard rock gold
- Pine Creek placer gold
- Spruce Creek placer gold
- Birch Creek placer gold
- Boulder Creek placer gold
- Ruby Creek, placer gold
- Otter Creek, placer gold
- Snake Creek placer gold
- Mckee Creek placer gold

All above mineral properties lie proximal to ultramafic rocks similar to those found on the Imperial Property.

Mineral Processing and Metallurgical Testing

There is no history of metallurgical testing on the Imperial property.

Mineral Resource and Mineral Reserve Estimates

Despite this property classified as a past gold producer, it is very much a grass roots property and no mineral reserves or estimates are possible at present time.

Other Relevant Data

To the best of the writer's knowledge, all relevant data has been included in this report.

Conclusions

This petrographic study provides additional information to the Imperial Property database, therefore is useful to a future drilling program on the property.

Recommendations

It is recommended the property needs be optioned and diamond drilled.
A tentative drilling budget is provided below.

Table 3

Recommended Budget for Diamond Drilling the Imperial Claim Group.	
Hydro-core Drill. 500metres at \$90.00 per meter.	45,000.00
Helicopter Support, 10 hours	13,000.00
Room and Board, 7 days, 4 men	2,240.00
Drill Fuel,	28,000.00
Mobilization/Demobilization	8,000.00
Vehicle and fuel, 7 days	700.00
Sample analysis, 100 samples @ \$30.00 per sample	3,000.00
Geologist, 7 days at \$600.00 per day	4,200.00
Miscellaneous	5,000.00
Report	5,000.00
Total	114,140.00



Clive Aspinall, P.Eng
Geologist

23rd December 2011



References.

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Ash, Chris. (1994). Origin and Tectonic Setting of Ophiolite Ultramafic and Related Rocks in the Atlin Area, British Columbia (NTS 104N). BCMM

Aspinall, NC. (1002). Assessment Report Covering preliminary geological investigations for jade and serpentines on and around the Imperial mineral claim, (12 Units), tenure number 379554, Monroe Mt., Located in the Atlin Mining Division, British Columbia, Canada.

Aspinall, NC. (2004). Assessment Report Covering Preliminary Geological Investigations on Altered Ultramafic and Volcanic Rocks on the Imperial Mineral Claim, (12 Units), Tenure Number 379554, Monroe Mountain in the Atlin Mining Division, British Columbia, Canada. (With Petrology Report by Dr. John G. Payne).

Aspinall, NC. (2005). Geological Reconnaissance of the Lake View Mineral Claims, Tenure Nos. 408341 and 408342, Located 59 deg 38' N, 133 deg 27' W, NTS 104N063, Atlin MD., BC.

Aspinall, N.Clive (2006) Assessment Report Covering Geological-Geochemical Investigations on Rocks and soils on the Imperial Mineral Claim, (12 Units), Tenure Number 379554, Monroe Mountain in the Atlin Mining Division, British Columbia, Canada. Mineral Claim Tag#209661; Field work Date: 3rd July 2006
Report Dated: 6th November 2006

Aspinall, N.C. (2007). Imperial Mineral Claim, (12 Units), tenure number 379554, Monroe Mountain in the Atlin Mining Division, British Columbia, Canada. By N. Clive Aspinall, M.Sc., P.Eng-(FMC#101024) Petrological work and rock descriptions by John G. Payne, Ph.D., P.Geol. Field work Date 3rd October 2007 Report Dated: 1st December 2007

Cairns, D.D. (1910). Portions of the Atlin District, B.C. Paper No 26. Geological Survey Branch. Department of Mines, Ottawa.

Dandy, Linda, (1987). Diamond Drilling Report on the Lakeview Property, Atlin Mining Division, NTS 104 N/11W. Mark Management. Assessment Report 15,686.

Dandy, Linda. (2005). Technical Report on the Atlin Gold Property, Atlin Mining Division, BC. For Muskox Mineral Corp., Suite 120, 3442-118 Ave SE, Calgary, Alberta, T2Z 3X1.

Holland, S.S., (1950). Placer Gold Production of British Columbia. B.C Ministry of Energy, Petroleum Resources, Bulletin 28, pp.89.
Claim (20 units), Margarita (1 Claim), Butterfly (1 Claim). Kerr, Dawson & Associates LTD.

Copy of Original Written Report from Dr. John G. Payne, of Vancouver Petrographics Ltd.
Appendices

Figures

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
LOCATION IN NW BRITISH COLUMBIA
FIGURE 1

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
LOCATION RELATIVE TO ATLIN TOWNSITE
FIGURE 2

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
LOCATION SAMPLES COLLECTED
RELATIVE TO ATLIN TOWNSITE
FIGURE 3

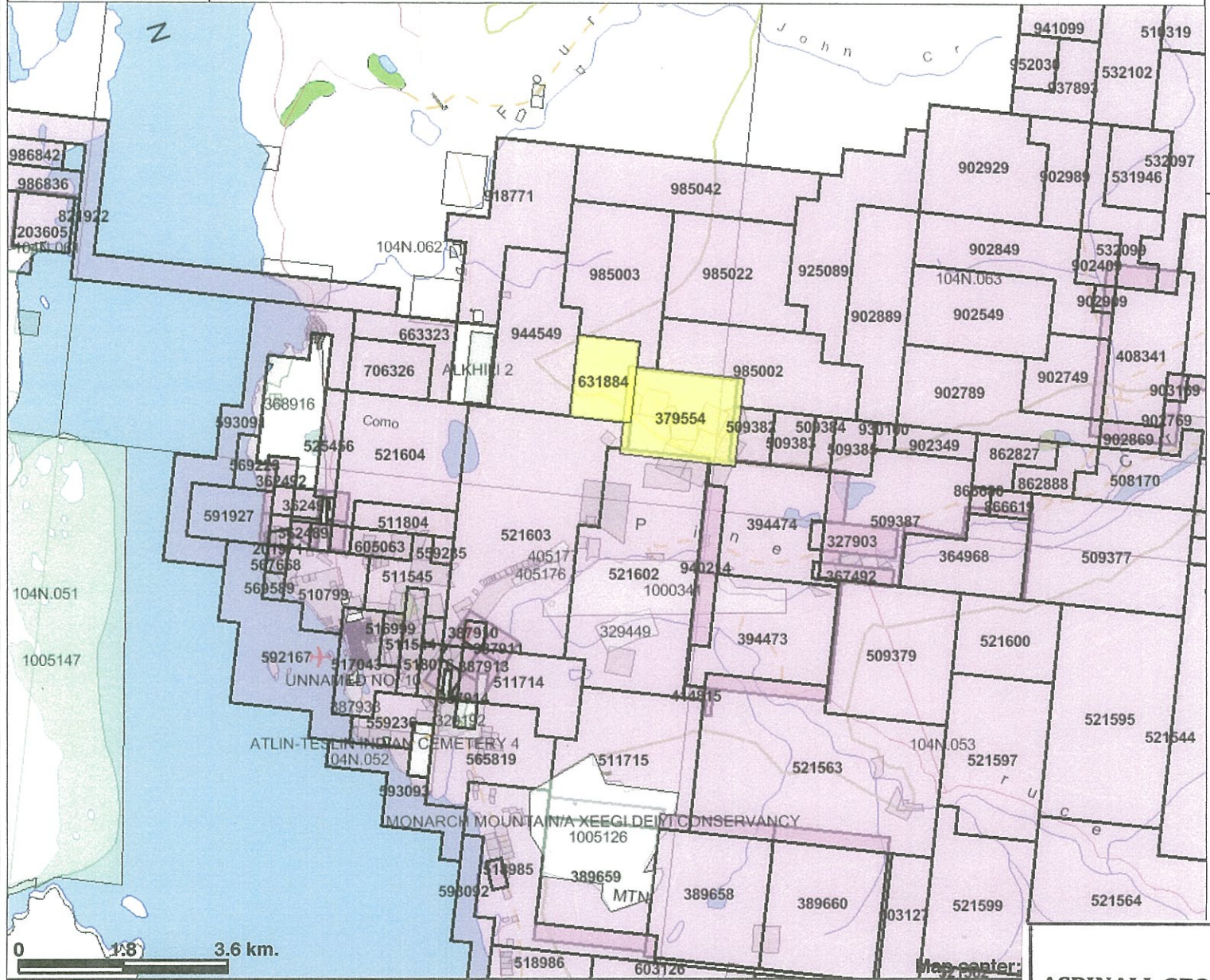
ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
DETAIL LOCATION OF ROCK SAMPLES
RELATIVE TO TENURE 379554 & 631884
BOUNDARIES
FIGURE 4

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
LOCATION OF ROCK SAMPLES RELATIVE
TO TENURES 379554 & 631884
FIGURE 5



**ASPINALL GEOLOGICAL CONSULTING
 IMPERIAL CLAIM GROUP
 LOCATION IN NW BRITISH COLUMBIA
 FIGURE 1**

TENURES 631884 & 379554



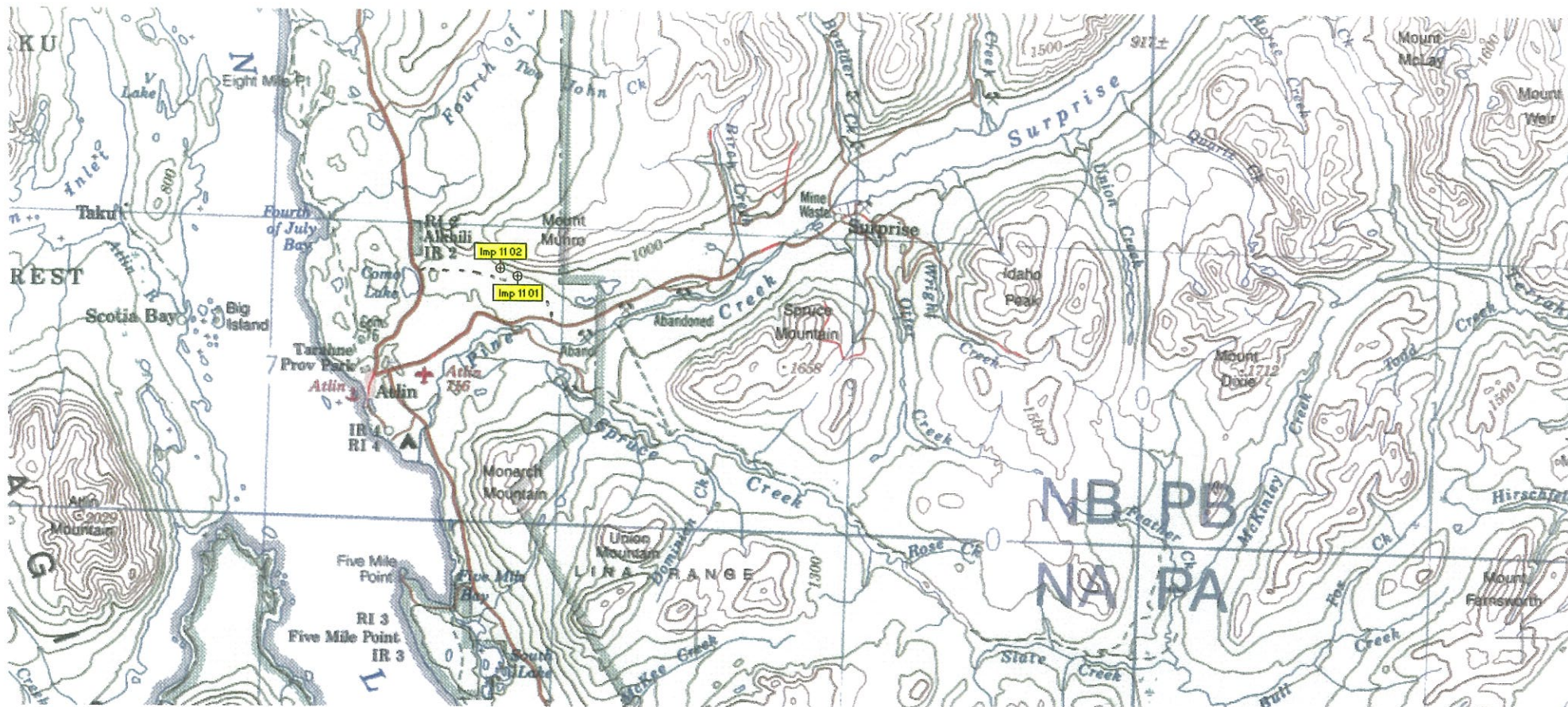
- ### Legend
- Indian Reserves
 - National Parks
 - Conservancy Areas
 - Parks
 - Federal Transfer Lands
 - Mineral Tenure (current)
 - Mineral Claim
 - Mineral Lease
 - Mineral Reserves (current)
 - Placer Claim Designation
 - Placer Lease Designation
 - No Staking Reserve
 - Conditional Reserve
 - Release Required Reserve
 - Surface Restriction
 - Recreation Area
 - Others
 - First Nations Treaty Related Lands
 - First Nations Treaty Lands
 - Survey Parcels
 - BCGS Grid
 - Contours (1:250K)
 - Contour - Index
 - Contour - Intermediate
 - Area of Exclusion
 - Area of Indefinite Contours
 - Annotation (1:250K)
 - Transportation - Points (1:250K)
 - Airfield
 - Anchorage - Seaplane
 - Ferry Route

0 1:8 3.6 km.

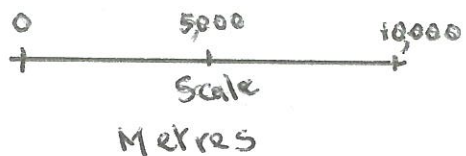
This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

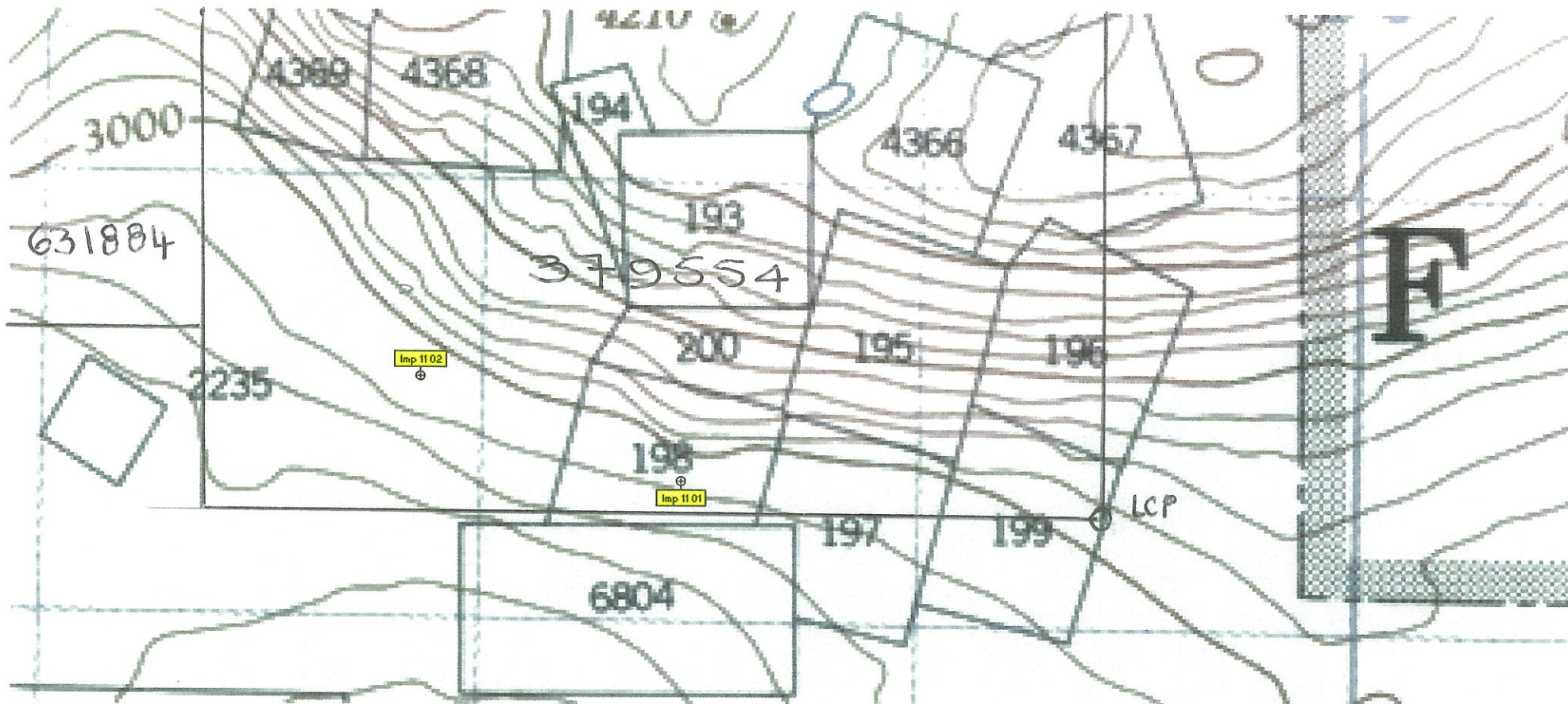
0 1000 2000

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
 LOCATION RELATIVE TO ATLIN TOWNSITE
 FIGURE 2



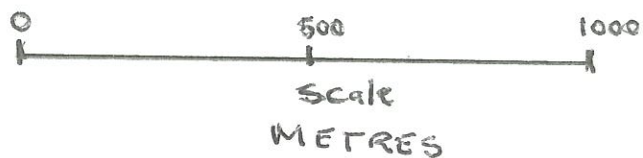
ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
LOCATION SAMPLES COLLECTED
RELATIVE TO ATLIN TOWNSITE
FIGURE 3



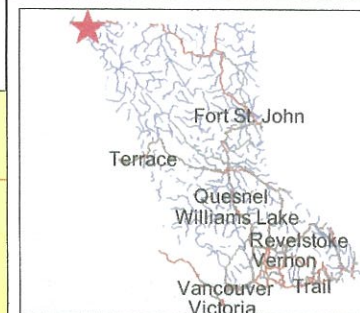
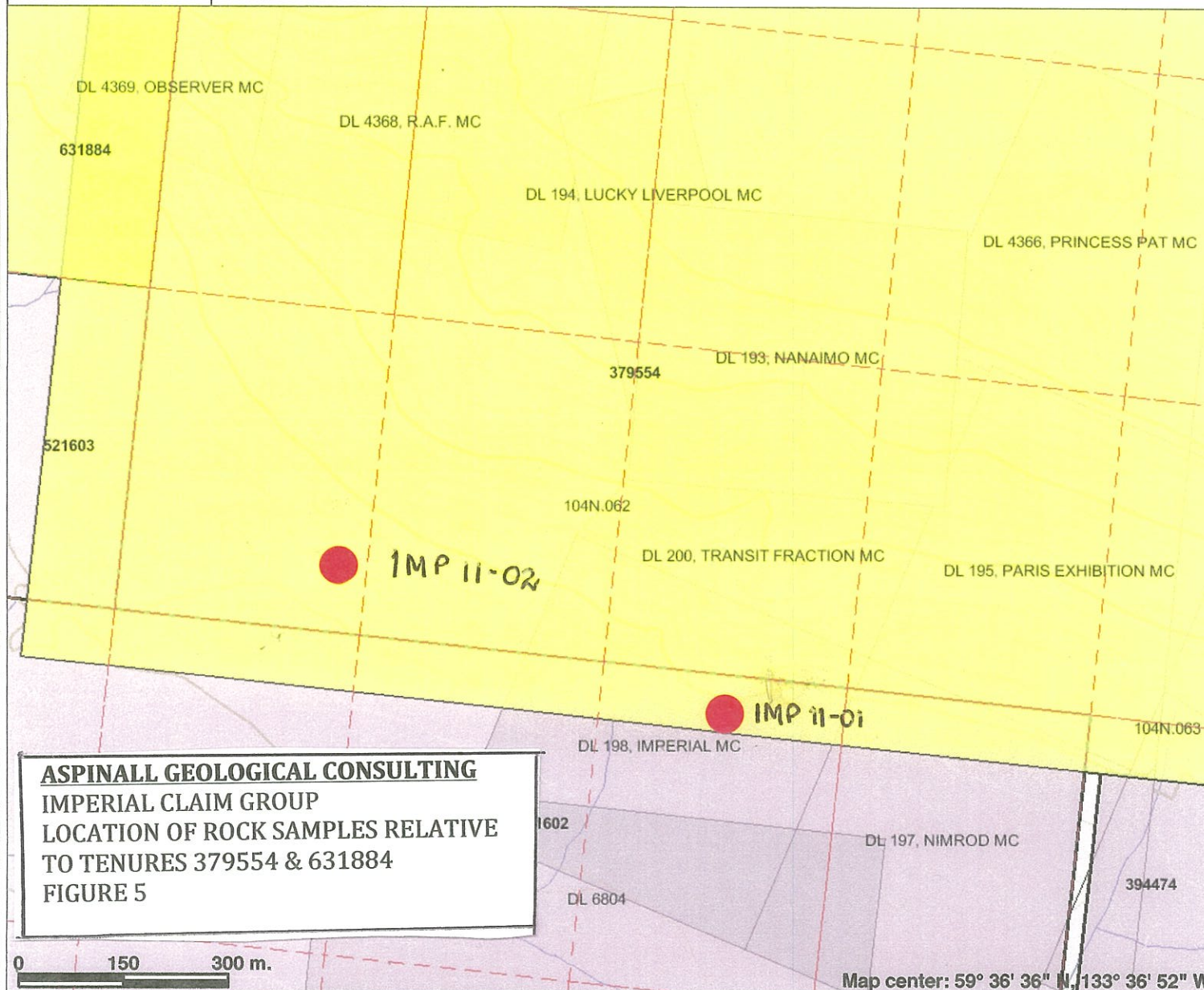


Datum NAD83					
IMPERIAL PROPERTY, TENURES 379554, 631884, PETROGRAPHIC SAMPLES					
SAMPLE ID	SECTOR	EASTING	NORTHING	DATE AND TIME	ELEV:M
Imp 11 01	8V	578356	6608504	12-NOV-11 3:15:28PM	1241.5
Imp 11 02	8V	577757	6608725	12-NOV-11 4:11:20PM	1220.1

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
DETAIL LOCATION OF ROCK SAMPLES
RELATIVE TO TENURE 379554 & 631884
BOUNDARIES
FIGURE 4



LOCATION PETROGRAPHIC SAMPLES



Legend

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- Federal Transfer Lands
- MTO Grid (MTO)
- Mineral Tenure (current)
- Mineral Claim
- Mineral Lease
- Mineral Reserves (current)
- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others
- First Nations Treaty Related Lands
- First Nations Treaty Lands
- Integrated Cadastral Fabric
- Survey Parcels
- BCGS Grid
- Contours (TRIM)
- Contour - Index
- Contour - Index.Indefinite
- Contour - Index.Depression
- Contour - Index.Depression Indefinite
- Contour - Intermediate
- Contour - Intermediate.Indefinite
- Contour - Intermediate.Depression



Scale: 1:8,731

ASPINALL GEOLOGICAL CONSULTING
IMPERIAL CLAIM GROUP
LOCATION OF ROCK SAMPLES RELATIVE
TO TENURES 379554 & 631884
FIGURE 5

Map center: 59° 36' 36" N, 133° 36' 52" W

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

Report 111093 for
Clive Aspinall,
Aspinall Geological Consulting,
3A Diamond Way,
Whitehorse, YT, Y1A 6G4
ncaspinall@gmail.com

December, 2011

Samples: IMP-11-01, IMP-11-02

Summary:

Sample IMP-11-01 is of metamorphosed porphyritic diabase that contains phenocrysts of plagioclase and of diopside (metamorphosed to actinolite) in a groundmass of finer grained plagioclase and actinolite, with accessory ilmenite, biotite, and pyrrhotite, and minor chalcopyrite and apatite. Biotite and pyrrhotite commonly are associated. The rock has a felted texture typical of diabase. Two veinlets of hematite/limonite have weak alteration envelopes(?) in which biotite is more abundant than normal, and ilmenite and actinolite were altered slightly to strongly to limonite.

Sample IMP-11-02 is of massive that is dunite dominated by olivine (altered strongly to serpentine, lesser talc, and minor magnetite), with disseminated clusters of tremolite (altered slightly to completely to serpentine-[carbonate]), minor disseminated pyroxene grains (altered completely to unoriented talc-carbonate-[magnetite]), and minor disseminated grains and clusters of chromite (altered slightly in patches to magnetite and non-reflective silicates and along grain borders to magnetite). A few patches enclosing chromite grains are of talc-chlorite. A wispy veinlet is of carbonate. Mainly near one end of the section are a few zones of slight bleaching that in thin section are stained slightly to moderately by limonite.

Photographic Notes:

The scanned section shows the gross textural features of the sections; these features are seen much better on the digital image than on the printed image. Photo numbers are shown in the lower left corner of the photographs. The letter in the lower right-hand corner indicates the lighting conditions: P = plane light, X = plane light in crossed nicols; R = reflected light, RP = reflected light and plane incident light; ~RX = reflected light in moderately crossed nicols and incident light in crossed nicols. Locations of photographs are shown on the scanned section. Descriptions of the photographs are at the end of the report.

John G. Payne, Ph.D., P.Geol.
Tel: (604)-597-1080
email: jppayne@telus.net

Statement of Costs

Table 4

Cost of collecting two samples from Imperial claim, 12 November 2011 & Reporting			
Geologist, one day field work			\$600
Two rocks petrographic work			\$598.00
Shipping	Samples	Vanpetro	\$40.00
Vehicle, one day			\$100.00
Report, 3 days			\$1,800.00
Scanning	& copying		\$45.00
Total			\$3,183.00

Qualifications of writer

I, **N. Clive ASPINALL**, of Pillman Hill, the community of Atlin, British Columbia, and the City of Whitehorse Y.T do hereby certify that:

- I am a geologist with private offices within the above community and City
- I am a graduate of McGill University, Montreal, Quebec, with B.Sc degree in Geology (1964), and a Masters degree (1987) from the Camborne School of Mines, Cornwall, England, in Mining Geology.
- I am registered member of the Associations of Professional Engineers in the province of British Columbia.
- I own 100% interest in the Imperial mineral claim group covered described in this report.
- I have practiced mineral exploration for 52 years, in countries such as Libya, Saudi Arabia, North Yemen, Morocco, Indonesia, Mexico, Peru, Argentina, USA, Newfoundland, Ontario, Quebec, British Columbia and Yukon Territory, Canada.
- I am author of: **Event 5124692, Petrology Study on Two Rocks from the Imperial Claims, Munro Mountain, Atlin Mining Division, British Columbia, Canada at 59° 36' 37.3 '' North, 133° 36' 13.1'' West. Map sheet 104N/23;Minfile 104N-008.**

Respectfully submitted,


N. CLIVE ASPINALL, M.Sc, P.Eng.

Geologist

23rd December 2011

