

## **2010 Drilling**

**On the**

### **Bishop Property**

**IN 1 to 10 (YD29081 to YD29090)**

**IN 11 to 12 (YD06597 to YD06598)**

**IN 13 to 23 (YC95373 to YC95383)**

**Dawson Mining District, Yukon  
NTS Sheet 115O10 &11  
63°41'N. Lat., 139°00'W. Long.**

**Operated by and Recorded to**



**By  
Mark Fekete, P.Geo.  
and  
Ben Dubois, B.Sc., G.I.T.  
November 1, 2011**

## Summary

From September 30, 2010 to December 1, 2010 Taku Gold Corp. completed a drilling program on the over 23-claim (466ha) Bishop property situated approximately 45km south of Dawson City in the Klondike gold camp of Yukon. The work included 5 drill holes with a total length of 692m.

The Bishop property is held 100% by Taku Gold Corp. under the terms of an option agreement with a local prospecting syndicate subject to 2% Net Smelter Returns production royalty. Taku has the right to purchase one-half (or 1%) of the Royalty for one million dollars (\$1,000,000) cash and has a right of first refusal to purchase the remaining 1%. The mineral claims included in the Property are held under the Yukon Quartz Mining Act. The surface rights for the area of the Property are held by the Crown. The work described in this report was completed as a Class 1 program.

The property is located in an isolated part of the Yukon with no local resources or infrastructure. The property can be accessed by road or by helicopter from a camp located near the property. Fuel, supplies and equipment can be trucked in from Dawson City using a network of summer roads.

Previous work on Bishop outlined a strong, southeast conductor on the margin of a magnetic high. Property vendors utilizing mechanical auger drilling to test for placer gold found unusual gold grains in bedrock samples collected across the geophysical anomaly. The grains are angular, dark yellow in colour and are often attached to quartz fragments. They are generally atypical and don't resemble placer gold produced in the immediate area. There are three placer operations currently situated to the south of the property.

The October 2010 drilling intersected a zone indicative of shearing, quartz veins, stockworks, breccias as well as weak sulphide mineralization in four of the five holes drilled. The structure generally follows a contact between ultramafic and metasedimentary rocks.

The Property lies within the Yukon-Tanana Terrane which consists of several successions of complexly deformed Late Proterozoic to Late Permian sedimentary and volcanic rocks episodically intruded by various intrusive rocks in the Permian, Jurassic, Cretaceous, and Tertiary periods. The intrusive events have been accompanied by volcanic activity especially in the Upper Jurassic to Lower Cretaceous.

The most recent regional mapping and compilation work in the Stewart River area indicates that the Property is underlain mainly by Devonian to Mississippian quartz-mica schist and Upper Cretaceous Carmacks Group volcanic rocks.

Ryan and Gordey (2005) infer from a regional magnetic map that there are Upper Cretaceous Carmacks Group volcanic rocks on the Property. However, previous work and the work described in this report demonstrate that the magnetic high is in fact caused by an ultramafic intrusion similar to other late Paleozoic ultramafic rocks observed elsewhere in the Stewart River Area.

The drilling did not return significant any gold assay results. The best gold value was 0.5gpt Au across 1.0m from 32.5m in Hole IN10-03. A zone marked by shearing, quartz veins, stockworks and breccias as well as weak sulphide mineralization was intersected in four of the drill holes. This structure follows a contact between ultramafic intrusive rock and metasediment. Although the assay results did not produce significant gold values, the structure remains interesting and should be further explored. A detailed soil geochemical grid is recommended.

## Certificate of Qualifications

I, Mark Fekete, having my place of residence at 178 Dennison Boulevard in Val d'Or in the Province of Quebec do hereby certify that:

1. I obtained a Bachelor of Science Degree in Geology from the University of British Columbia in 1986, I have been engaged as a Geologist continuously since 1986 and I am a Member in good standing of the Order of Geologists of Quebec (OGQ #553) and the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC #31440), and I am a "qualified person" as defined in Section 1.2 in and for the purposes of National Instrument 43-101;
2. I have visited the Bishop property on numerous occasions including most recently in October 2010;
3. I co-wrote and I am, as the senior author and qualified person, responsible for the contents of this technical report entitled "2010 Drilling on the Bishop Property, Dawson Mining District, Yukon, NTS Sheets 115010 & 115011, 63°41'N. Lat., 139°00'W. Long.," based on my professional experience, a review of relevant reports and maps made available to me from government and corporate sources and my participation in the work programs described in the report;
4. I am not aware of any material fact or material change with respect to the subject matter of the report that is not disclosed in the report which, by its omission, makes the report misleading;
5. I am an Officer and Director, and I beneficially hold a number of shares in Taku Gold Corp.;
6. I hold no direct interest in the Bishop property as a result of my prior involvement with the property; and
7. I have read, and this report has not been prepared for the purposes, nor in full compliance with, National Instrument 43-101,1 and according to Form 43-101F1.

Respectfully submitted this 1<sup>st</sup> day of November 2011,

(s) "**Mark Fekete**"

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Mark Fekete, P.Geo.

## Certificate of Qualifications

I, Ben Dubois, having my place of residence at 7 Main Street, Paris Ontario do hereby certify that:

1. I obtained a Bachelor of Science Degree in Geology from Acadia University in May 2011, I am not a “qualified person” as defined in Section 1.2 in and for the purposes of National Instrument 43-101;
2. I have not visited the Bishop property;
3. I co-wrote this technical report entitled “2010 Drilling on the Bishop Property, Dawson Mining District, Yukon, NTS Sheets 115010 & 115011, 63°41’N. Lat., 139°00’W. Long.,” under the supervision of Mark Fekete, P.Geo.;
4. I am not aware of any material fact or material change with respect to the subject matter of the report that is not disclosed in the report which, by its omission, makes the report misleading;
5. I do not beneficially hold a number of shares in Taku Gold Corp.;
6. I hold no direct interest in the Bishop property as a result of my prior involvement with the property;  
and
7. I have read, and this report has not been prepared for the purposes, nor in full compliance with, National Instrument 43-10,1 and according to Form 43-101F1.

Respectfully submitted this 1<sup>st</sup> day of November 2011,

(s) “*Ben Dubois*”

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Ben Dubois B.Sc., G.I.T

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## 1. Introduction and Terms of Reference

Breakaway Exploration Management Inc. (“Breakaway”) was retained by Taku Gold. Corp. (“Taku”) to write a technical report (the “Report”) describing a five-hole drill program carried out on the Bishop property (“Bishop” or the “Property”) in Yukon in 2010. The goal of the work was to investigate the gold potential of a geophysical anomaly.

The Report is based primarily on the results of the work completed on Bishop in 2010 but also contains information obtained from a review of relevant reports and maps cited throughout the Report. The Report was prepared by Geologist in Training Ben Dubois (the “Junior Author”) under the supervision of Professional Geologist Mark Fekete (the “Senior Author”). The Senior Author has visited and personally inspected the property on numerous occasions. The Senior Author is the designated “qualified person” as defined in Section 1.2 in and for the purposes of National Instrument 43-101. The main purpose of the Report is to complete statutory assessment work filings required under the Yukon Quartz Mining Act. It is not intended to and does not fully comply with National Instrument 43-101. The Report contains specific recommendations and proposes a budget for further work.

The metric system is used for all units of measure mentioned in the Report and all dollar amounts are in Canadian funds unless otherwise stated. All figures presented in the Report are plotted in map projection UTM NAD 83, Zone 7 unless otherwise stated.

## 2. Reliance on Other Experts

The Authors may have relied on technical data and interpretations found in various sources cited throughout the report. The Authors may not have verified this information and take no responsibility for its accuracy or completeness. Reference to the compliance or non-compliance with NI 43-101 standards of historical information and data referred to in this Report are made where appropriate. The Authors do not offer any opinion concerning legal, title, environmental, political or other non-technical issues that may be relevant to the Report. The Report may contain links to several web-sites. The Authors take no responsibility for the functionality or content of these websites.

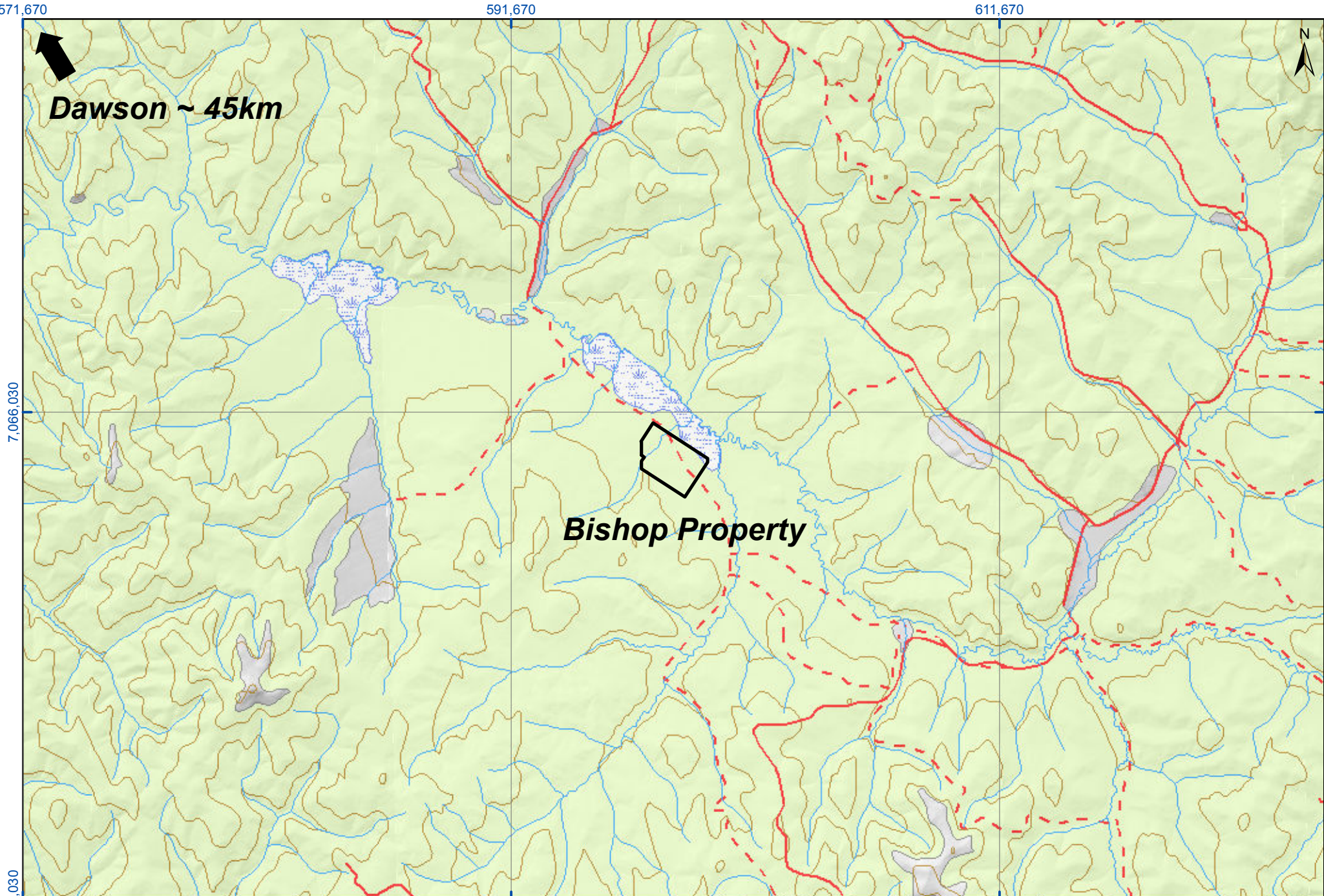
## 3. Location and Property Description

The Property covers an approximate area of 466 hectares within the Dawson Mining Division of Yukon. It is located 45km south of Dawson City (Figure 1). The approximate center of the Property is described by 63°41’26” North Latitude and 139°00’39” West Longitude on N.T.S. Sheets 115010 & 115011. The Property includes 23 contiguous, un-surveyed mineral titles (Figure 2) more fully described in Table 1 below.

**Table 1 - List of Claims**

<b>Claim Name No.</b>	<b>Tag No.</b>	<b>Expiry Date</b>	<b>#</b>
IN 1 to 10	YD29081 to YD29090	15-Sep-11	10
IN 11 to 12	YD06597 to YD28166	15-Sep-11	2
IN 13 to 23	YC95373 to YC95383	14-Oct-11	11
		Total	23

On August 20, 2010 Taku entered into a purchase and sale agreement with a local prospecting syndicate (the “Vendors”) of Dawson City, Yukon. Under the terms of the agreement, Taku agreed to purchase a one-hundred per cent (100%) interest in the Montana property, in consideration of 320,000 common shares of Taku and staking costs not to exceed \$250 per claim. The Vendors are entitled to a production royalty (the “Royalty”) consisting of 2% Net Smelter Return (“NSR”) royalty on all smeltable minerals of metals extracted from the claims. Taku has the right to purchase one-half (or 1%) of the Royalty for one million dollars cash. Subsequent to the date of the agreement the Montana property was expanded by staking to include the 23 claims discussed in this Report.



7,066,030

7,046,030

591,670

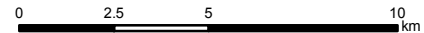
611,670

**Bishop Property**

**Dawson ~ 45km**

**BISHOP PROPERTY**  
**Figure 1. GENERAL LOCATION**

Universal Transverse Mercator Zone 7  
World Geodetic System 1984  
Scale 1:200 000

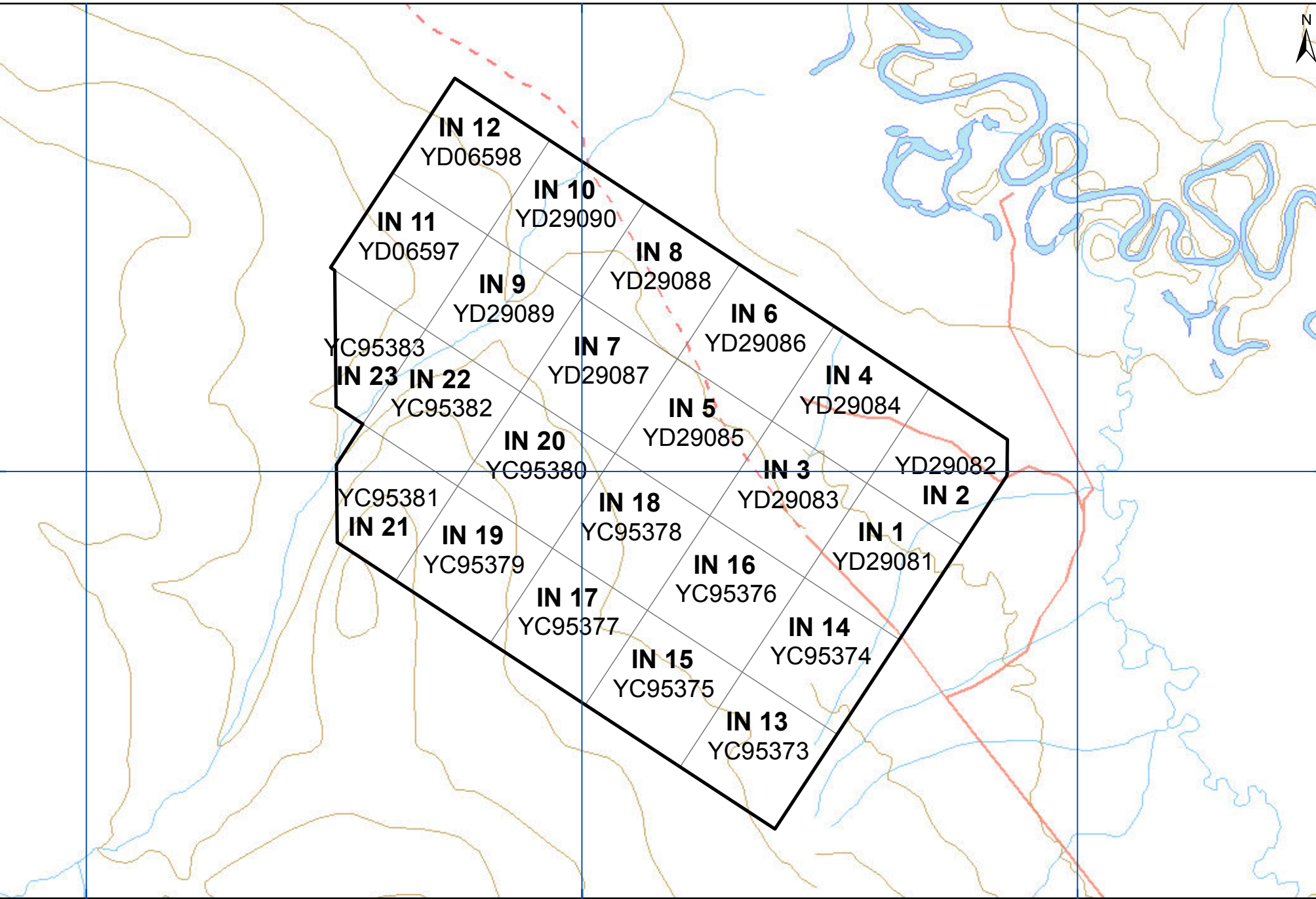


Bishop Property  
Figure 1. General Location  
Taku Gold Corp.  
NTS Sheet: 1150  
Date: October 31, 2011

596000

598000

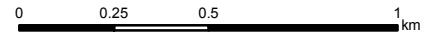
600000



7064000

**BISHOP PROPERTY**  
**Figure 2. CLAIM MAP**

Universal Transverse Mercator Zone 7  
 World Geodetic System 1984  
 Scale 1:20 000



Bishop Property  
 Figure 2. Claim Map  
 Taku Gold Corp.  
 NTS Sheet: 1150/10 & 11  
 Date: October 31, 2011

The mineral claims included in the Property were acquired under the Yukon Quartz Mining Act which grants only the hard rock mineral rights to the claim holder. The surface rights for the area of the Property are held by the Crown. To maintain the claims in good standing, a minimum of \$100 assessment work per claim must be completed annually. There are provisions to apply for more than one year work at a time up to a maximum of five years, to apply work from one claim to other adjoining claims (grouping) up to a maximum of 750 contiguous claims and to pay cash in lieu of work up to a maximum of five years. The Quartz Mining Land Use Regulations consist of a classification system based on varying levels of specific activities. These threshold levels categorize exploration activities into four classes of operation. Classes 1 through 4 represent activities with increasing potential to cause adverse environmental impacts.

Activities within a Class 1 program are defined as “grassroots” exploration with low potential to cause adverse environmental effects, and where activities and reclamation are completed within a year. A Class 1 program does not require government approval but the operator must comply with the certain operating conditions. An assessment under the Yukon Environmental and Socio Economic Assessment Act (“YESAA”) is not required for a Class 1 program. The work described in this Report was completed as a Class 1 program.

Class 2 programs are considered to represent the upper level of “grassroots” exploration activities. A notification submitted through the Mining Lands Office which outlines the activities and how they will be reclaimed is required. These programs comprise activities that have a moderate potential to cause adverse environmental effects and therefore require an assessment through YESAA. All work and reclamation must be completed within one year.

All Class 3 and Class 4 programs require submission of a detailed “Operating Plan” to the Mining Lands Office. A YESAA assessment is required. The Operating Plan must be approved before any exploration activities can be undertaken. Operating Plans may entail multi-year exploration programs to allow greater flexibility for the operator.

The work described in this Report was completed as a Class 1 Program.

#### **4. Accessibility, Local Resources, Infrastructure, Physiography and Climate**

Access to the Property is relatively good compared to other parts of the Dawson City area as it is reachable by a network of summer roads (Figure 2) and an ATV trail. To get to the Property from Dawson City one takes the Hunker Creek Road off the Klondike highway east of Dawson City, and then onto Quartz Creek road down to the mouth of Quartz Creek to an old sunken dredge. Just before the dredge, the road turns left and follows the Indian River upstream for approximately 9km to the Indian River Hay Farm. From the farm, an old Cat trail can be travelled by ATV for approximately 1.5km to Bishop Creek and then another 1.5km along the right limit of Bishop Creek.

The Bishop property is located in an isolated part of Yukon with relatively few local resources or infrastructure. The Property can be worked from Dawson City by truck or from an exploration camp set up on or near the Property. A camp can be supported from Dawson City, where services are limited, or from Whitehorse where a full range of services are available including line-cutting, geophysics, drilling, assaying, aircraft charters etc. The work described in this Report was done out of the Gimlex camp located on the Indian River approximately 5km from the Property.

Unlike most parts of Yukon, the Dawson Range was not affected by the last period of continental glaciations and so it is characterized by low rolling hills incised with steep sided, V-shaped valleys. Bedrock is typically deeply weathered and there is very little (perhaps less than 5%) outcrop exposed; usually on ridges above tree-line or in rare canyons in the creek valleys. Elevations on the Property range from 480m to 850m above sea level. Most of the Property lies below tree-line and is covered by a typical boreal mixture of pine, spruce, balsam fir, aspen and birch trees, and willow and alder brush. North and west slopes are often covered with thick moss blanketing permafrost.

The Dawson City area is characterized by a semi-arid, sub-arctic continental climate with mild to hot summers and cold winters. Precipitation is generally light in the summer and overall clear skies and warm temperatures prevail. Heavy morning fog can be a problem for aircraft especially towards the end of the summer season. Forest fires are common and thick smoke at times may impede exploration work. Maximum snow accumulations in the winter are typically less than one meter. Due to the northerly latitude of the region, summer days are long and winter days very short. The best season for exploration is during the summer months from mid-May to mid-October. Although it is possible to work during the winter months, costs rise exponentially due to cold temperatures, inclement weather and short daylight hours.

## 5. Exploration History

The following exploration history of the Property has been compiled from the Yukon Energy and Mines and Resources Library and Yukon Geological Survey MINFILE database. There has been limited exploration work on the property. Table 2 below lists all known assessment reports that describe work done adjacent to and within the boundaries of the present Property in whole or in part.

**Table 2 - Previous Assessment Work Files**

Company	Year	AFR No.	Author	Work	Link
19651 Yukon Inc.	2002	094397	T. Morgan & V. Matkovich	Linecutting, Geophysics, Geochem	<a href="#">094397.pdf</a>
19651 Yukon Inc	2003	094422	T. Morgan & V. Matkovich	Linecutting, Geophysics, Drilling	<a href="#">094422.pdf</a>

There is one mineral showing documented within and adjacent to the area of the Property listed in Table 3 below:

**Table 3 - MINFILE Showings**

MINFILE No.	MINEFILE Name	Link
1150 164	MATGAN	<a href="#">1150 164</a>

In 2001, Vern Matkovich and Tom Morgan completed line-cutting as well as basic prospecting. Samples were collected at eight locations that were trenched and blasted by hand. This work was continued in 2002 with an additional line-cutting followed by 9.4km of magnetic and 4.5km of VLF-electromagnetic surveys (AFR No. 094397).

This work was followed up later in 2002 and into 2003 with 17km of additional line-cutting and magnetic and VLF-electromagnetic surveys. Six auger-type drill holes for a total of 59 meters were also completed in the in the Bishop Creek Valley (AFR No. 094422).

## 6. Geology

The Property lies within the Yukon-Tanana Terrane which, due to large areas with little or no bedrock exposure and limited modern regional or detailed mapping, remains very poorly understood. Generally it consists of several successions of layered sedimentary and volcanic rocks ranging from Late Proterozoic to Late Permian age that overlay the older Nisling Terrane. These complexly deformed layered rocks have been episodically intruded by various intrusive rocks in the Permian, Jurassic, Cretaceous and Tertiary periods. The intrusive events have been accompanied by volcanic activity especially in the Upper Jurassic to Lower Cretaceous. The Yukon-Tanana has been subjected to numerous prolonged deformational events including subduction and accretion that has led to significant structural thickening. Imbricated allochthonous terranes such as Slide Mountain Terrane are evidenced by altered ultramafic fragments.

The Property lies within the Klondike gold district of the Stewart River area (Figure 3). The district has been interpreted to be underlain by the Klondike assemblage (Mortensen, 1990, 1996) which is comprised of strongly deformed and altered mafic to felsic metavolcanic rocks and as well as deformed subvolcanic and plutonic equivalents, together with interlayered non-carbonaceous metasediments. This assemblage

has been emplaced as a stack of three distinct thrust plates over rocks of the Late Devonian Early Mississippian Nasina assemblage.

The most recent regional mapping and compilation work in the Stewart River area (Ryan and Gordey, 2005) indicates that the Property is underlain mainly by Devonian to Mississippian quartz-mica schist (DMps). This is further described and subdivided into metasedimentary rocks dominated by metapsammite, semipelite and metapelite. Quartz-garnet-biotite-muscovite schist possibly derived from siliceous siltstone is common as well as members of micaceous quartzite. Conglomerate is found rarely.

Ryan and Gordey (2005) infer from a regional magnetic map (Shives et al, 2002) that there are Upper Cretaceous Carmacks Group volcanic (uKCv) rocks on the Property. However, from the work done by Matkovich and Morgan (AFR #094422 & 094397) and the work described in this report, it is clear that the magnetic high is in fact caused by an ultramafic intrusion similar to other late Paleozoic ultramafic rocks observed elsewhere in the Stewart River Area.

## **7. Deposit Types**

The 2001 to 2003 work was primarily focused on locating platinum group element mineralization in ultramafic intrusion-type deposits similar to Wellgreen in Yukon, Scotty Creek in British Columbia or the Ural Mountain of Russia (Duke, 1996). This work outlined a magnetic high which is caused by a body of ultramafic rock. The VLF-electromagnetic survey identified a moderate to strong conductor along the south margin of the magnetic high. The auger-type drilling found unusual gold grains in bedrock samples collected across the geophysical anomaly. The grains are angular, dark yellow and often attached to quartz fragments. They are generally atypical and don't resemble placer gold produced in the immediate area. The drill program was designed to test the geophysical anomaly as a possible bedrock source for the unusual placer gold found in the auger drill samples.

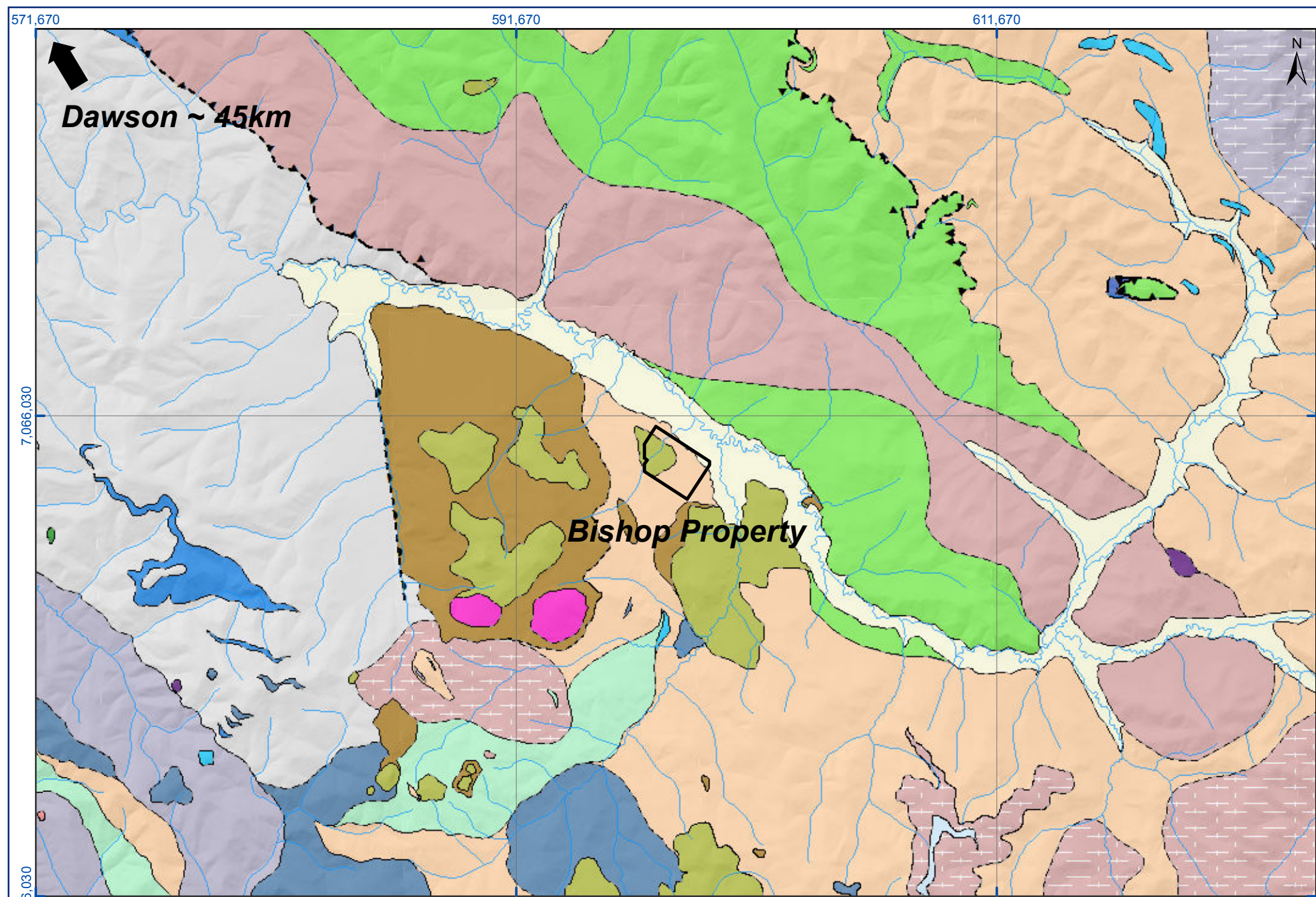
The Property lies within an underexplored part of the loosely defined Tintina Gold Belt. This metallurgical province has past production of 29.9 million ounces and 39.3 million ounces of resources for total gold resources of 69.2 million ounces. Notable gold deposits are Donlin Creek, Ft. Knox, Pogo and Brewery Creek. The underexplored nature of the Klondike-White Gold district was highlighted by Underworld's discovery of the Saddle and Arc zones in May 2009 on the White property located 63km south of Bishop, and more recently by the Supreme discovery on Kaminak's Coffee property located approximately 92km south of Bishop.

The Klondike-White Gold district lies within the larger Dawson Range area where a number of known gold and porphyry copper deposits show a wide range of styles, geological settings and geochemical associations. Taku's exploration effort at Bishop is not adhering to any firm deposit model but is instead based on practical survey methods that generate drill targets and have led to discoveries by other groups working in the area.

Detailed geochemical surveys have proven to be effective in the area, as shown by prospector Shawn Ryan's success on the White and Coffee properties. The Dawson Range generally shows deeply weathered, oxidized soils in a periglacial environment. This simply means that in order to collect soils that best represent the underlying bedrock it is necessary to take relatively deep soil samples that are likely less weathered and less oxidized. Another useful exploration tool is to fly closely spaced, low altitude, helicopter-borne geophysical surveys to assist in interpreting bedrock units, structure, and alteration.

## **8. Mineralization**

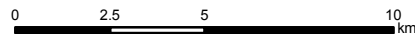
Very little *in situ* mineralization has been identified on Property to date due primarily to the lack of outcrop. Matkovich and Morgan reported values of 0.12gpt Pd and 0.05gpt Pt (AFR No. 094397). They also reported unusual placer gold in the auger drill samples (AFR No. 094422).



**BISHOP PROPERTY**

**Figure 3. REGIONAL GEOLOGY**

Universal Transverse Mercator Zone 7  
 World Geodetic System 1984  
 Scale 1:200 000



Bishop Property  
 Figure 3. Regional Geology  
 Taku Gold Corp.  
 NTS Sheet: 1150  
 Date: October 31, 2011

596000

598000

600000



PKs

uKCv

Qs

DMps

IKTcg

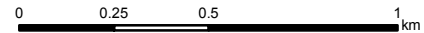
IKTcg

uKCv

7064000



**BISHOP PROPERTY**  
**Figure 4. PROPERTY GEOLOGY**

Universal Transverse Mercator Zone 7  
World Geodetic System 1984  
Scale 1:20 000




Bishop Property  
Figure 2. Property Geology  
Taku Gold Corp.  
NTS Sheet: 1150/10 & 11  
Date: October 31, 2011

## QUATERNARY

-  Qs  
Fluvial silt, sand and gravel
-  Qb  
Basalt

## TERTIARY

-  Ts  
Conglomerate, sandstone, shale

## DEVONIAN TO MISSISSIPPIAN?


-  DME  
Earn group

## TERTIARY EOCENE

-  Er  
Porphyry

## CRETACEOUS

### UPPER CRETACEOUS

-  uKcV  
Carmacks Group

### MID?-CRETACEOUS

-  Kg/Kgd  
Granite/Granodiorite

### LOWER CRETACEOUS

-  IKToG  
Tantalus(?) Formation


## JURASSIC

### EARLY JURASSIC

-  EJgd  
Granodiorite

## TRIASSIC

### LATE TRIASSIC

-  LTrum  
Pyroxene Mountain Body

## PALEOZOIC AND/OR MESOZOIC

-  PMd  
Gabbro





## CARBONIFEROUS

-  CD  
Dawson-Clinton Creek Assemblage

## MID(?) - TO LATE PALEOZOIC

-  mPum/mPums  
Ultramafic-Gabbro

## PERMIAN

-  Pv  
Foliated volcanic
-  PKs  
Klondike Schist
-  Pg  
Jim Creek Pluton
-  Pogg, Pogq/Poga  
Pogt  
Orthogneiss (Younger, 264-259 Ma)

## DEVONIAN TO MISSISSIPPIAN

-  DMNq/DMNI  
Nasina Assemblage
-  DMogg/DMoga  
DMogt  
Orthogneiss (Older, 363-343 Ma)
-  DMogta  
Undivided DMogt (Orthogneiss (older))  
and DMA (Amphibolite)
-  DMA  
Amphibolite
-  DMm  
Mafic schist
-  DMc  
Marble
-  DMps  
Quartz-Mica schist
-  DMcg  
Metaconglomerate
-  DMq  
Quartzite

## SYMBOLS

-  Geological contact  
(defined, approximate, assumed)
-  Fault, sense of movement uncertain  
(defined, approximate, assumed)
-  Fault, transcurrent, dextral  
(approximate)
-  Fault, thrust (teeth on upper plate)  
(defined, approximate, assumed)
-  Fault, normal (teeth on upper plate)  
(defined, approximate, assumed)
-  Fault, low-angle normal  
(teeth on upper plate)  
(approximate, assumed)

Figure 3 continued. Legend for Regional Geology

## **9. 2010 Exploration Work**

### **9.1. Introduction**

The drilling, including preparations and demobilization, was done from September 30, 2010 to December 1, 2010 under the supervision of the Senior Author. A total of 691.9m of NQ-diameter core was completed in five holes. The drilling contractor was Kluane Drilling Ltd. of Whitehorse, Yukon. A detailed Statement of Work is included herein as Appendix A.

The core was logged and sampled by of geologist Daithi MacGearailt, (“MacGearailt”) of Dawson City, Whitehorse. The core was split by geological technician Darrell Kraemer of Kitchener, Ontario. Food and lodging for the drill and geological crew was provided at the Gimlex camp located on the Indian River approximately 5km west of the Property. All drill collar locations were recorded with a Garmin 76CX GPS receiver in map datum UTM NAD 83 Zone 7. Collar locations, dips, azimuths and depths are summarized in the table included as Appendix B. Drill logs are included as Appendix C. The primary goal of the drilling was designed to test if the southeast trending conductor located at the margin of the magnetic high was gold bearing. The Junior Author compiled the field data into digital maps and wrote this Report up to November 1, 2011.

### **9.2. Sampling and Analytical Procedures**

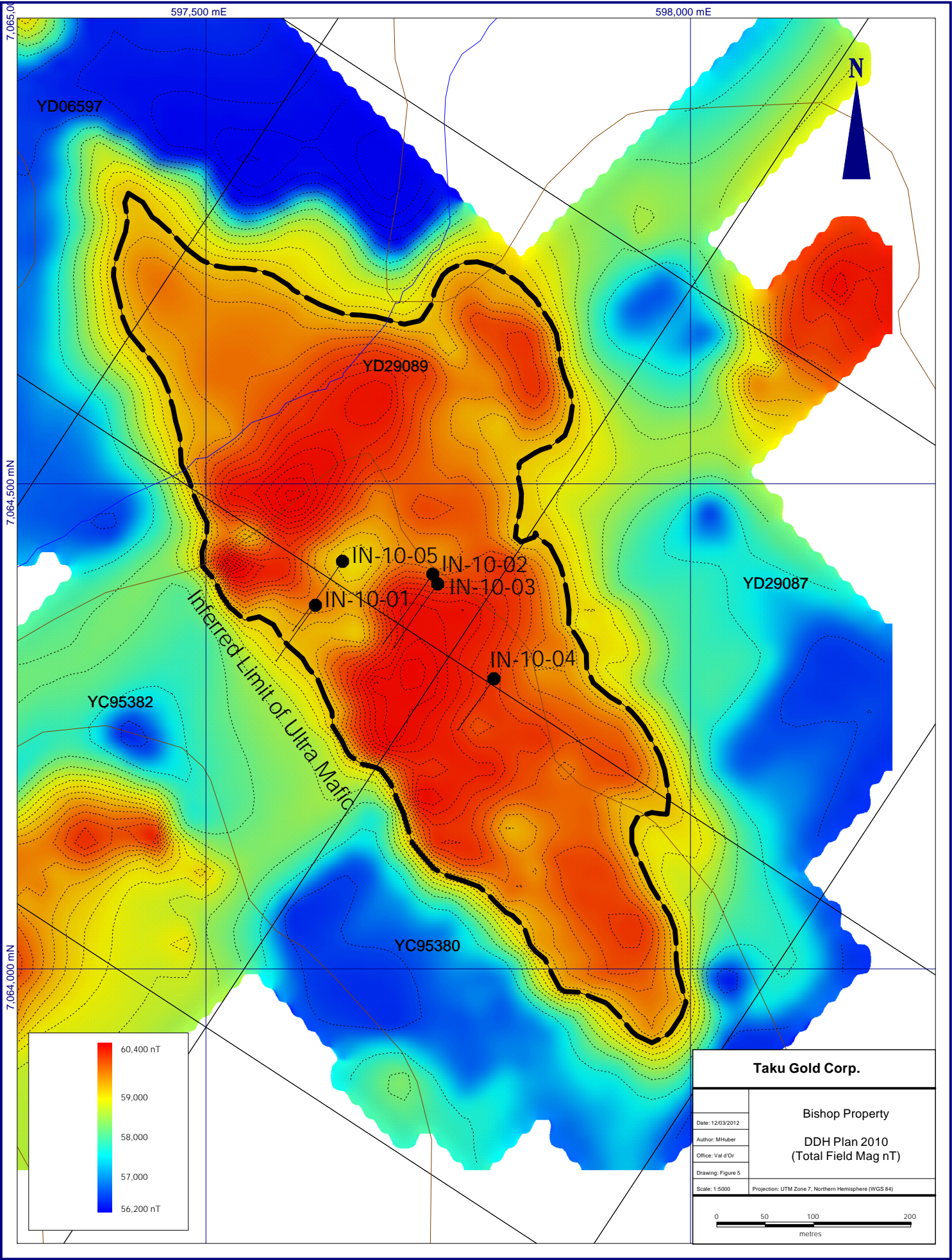
Drill core was delivered to the core shack on a per shift basis by the drill contractor in sealed core boxes. All sample intervals were recorded in the core logs and marked in the core boxes with numbered metal tags stapled at the beginning of the sample interval. The core was split with a hydraulic core splitter. One-half of each split core sample interval was returned to its appropriate core box location. The remainder of each sample was placed with the appropriate sample tag in a plastic sample bag marked in indelible ink with the proper sample number and sealed with a plastic tie-wrap. Batches of samples were subsequently sealed in rice bags with security plastic tie wraps bearing unique serial numbers. The samples were delivered to Acme Analytical Laboratories Ltd. (“Acme”) in Vancouver, B.C. for analysis. A shipping manifest was sent with each batch of samples.

Gold values were determined by conventional 30g fire assay-atomic absorption finish method. Acme is accredited under ISO 9001. Assay results are included as Appendix D and a detailed description of the analytical procedures followed by Acme is included as Appendix E.

It is the Authors’ opinion that the sampling procedures, security measures, sample preparations and analytical methods applied to the drill core samples were diligently followed and are adequate to meet industry standards commonly accepted for this level of exploration. The Authors have relied upon the adequacy and accuracy of the analytical results and independent verification of those results as discussed below.

### **9.3. Data Verification**

The drill core sampling was done according to a QA/QC protocol, independently designed and monitored by consulting Geologist Tracy Armstrong, P.Geo. of Magog, Quebec. Samples were organized into batches of 24 samples that contained one reference standard, one core duplicate and one blank sample. Each batch was subsequently sealed into three rice bags with security plastic tie wraps. One of two reference standards (Appendix E) was inserted into each batch on an alternate basis (i.e. every second batch). Fist-sized, washed river gravel was used for blanks. Armstrong did not report any abnormalities with the sample results.



YD06597

YD29089

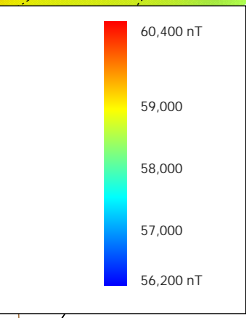
YD29087

YC95382

YC95380

*Inferred Limit of Ultra-Mafic*

IN-10-01  
 IN-10-02  
 IN-10-03  
 IN-10-04  
 IN-10-05



<b>Taku Gold Corp.</b>	
Bishop Property	
DDH Plan 2010 (Total Field Mag nT)	
Date: 12/03/2012	
Author: MHuber	
Office: Val d'Or	
Drawing: Figure 5	
Scale: 1:5000	Projection: UTM Zone 7, Northern Hemisphere (WGS 84)

#### **9.4. Drill Results**

The drilling did not return significant any gold assay results. The best gold value was 0.5gpt Au across 1.0m from 32.5m in Hole IN10-03. A zone marked by shearing, quartz veins, stockworks and breccias as well as weak sulphide mineralization was intersected in four of the drill holes. This structure follows a contact between ultramafic intrusive rock and metasediment.

#### **10. Adjacent Properties**

No lode gold deposits are known to exist on the properties immediately adjacent to the Property. Significant gold mineralization has been reported approximately 60km south of Bishop at Kinross's White Gold deposit with a current resource estimation at the Golden Saddle zone of 1,004,570 indicated ounces at 3.2gpt Au and 407,413 inferred ounces at 2.5gpt Au; and at the Arc Zone of 170,470 inferred ounces at 1.2gpt Au (Underworld Press Release - January 19, 2010). Kaminak's discovery hole of 15.5m over 17.1gpt Au at the Supremo zone (Kaminak Press Release - May 26, 2010) is located approximately 90km south of Bishop.

The Authors have not verified the information made public on these adjacent properties and cautions that **any such information is not necessarily indicative of the mineralization on the Bishop property.** However, this information does indicate that the White Gold district is an underexplored area that has solid potential for hosting significant gold deposits.

#### **11. Mineral Processing and Metallurgical Testing**

To date no mineral processing or metallurgical testing has been completed at Bishop

#### **12. Mineral Resource and Mineral Reserve Estimates**

To date no mineral resource or mineral reserve estimates have been completed at Bishop. The Property is at a "grassroots" level of exploration such that it is too early to make any resource or reserve estimates.

#### **13. Other Relevant Data and Information**

The Authors are not aware of any other relevant data and information or explanation to make this report more understandable and not misleading.

#### **14. Interpretation of Results and Conclusions**

The drilling was designed to test if the southeast trending conductor located at the margin of the magnetic high was gold bearing. Although the assay results did not produce significant gold values, the brecciated structure with quartz veins, shearing and stockworks found within 4 of the 5 holes is interesting and should be further explored.

#### **15. Recommendations**

It is the Authors' opinion that the Bishop property is of sufficient merit to recommend that further surface and subsurface exploration work continue. The ultramafic intrusion as well as the southeast trending conductor is of interest. The property should be expanded to detect possible mineralization occurring along the boundaries of the intrusion. A detailed soil geochemical grid should also be completed to help narrow down gold bearing locations, with stations every 50m spaced 100m apart. Collecting deeper C-horizon samples must be emphasized for this survey.

#### **16. References**

Gordey, S.P. and Ryan, J.J. (2005): Geology, Stewart River Area (115 N, 115-O and part of 115 J), Yukon Territory; Geological Survey of Canada, Open File 4970, scale 1:250 000.

- Mortensen, J.K. (1996): Geological compilation maps of the northern Stewart River map area, Klondike and Sixtymile Districts (115N/15, 16; 115O/13, 14; and parts of 115O/15, 16). Exploration and Geological Services Division, Yukon region, Indian and Northern Affairs Canada, Open File 1996-1 (G).
- Duke, J.M. (1996): Podiform (ophiolitic) Chromite; In Geology of Canadian Mineral Deposit Types, (ed) O.R. Eckstrand, W.D. Sinclair, and R.I. Thorpe; Geological Survey of Canada, Geology of Canada, no. 8, p.621-624.
- Shives, R.B.K., Carson, J.M., Ford, K.L., Holman, P.B., Gordey, S. and Abbott, G. (2002): Geological Survey of Canada Open File 4310, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada Open File 2002-16, Magnetic Anomaly Map (Residual Total Field) Stewart River Area -115N, 115O, 116B (parts of) Scale 1:250,000.

## **Appendix A - Statement of Work Expenditures**

I, MARK FEKETE  
\_\_\_\_\_  
\_\_\_\_\_  
of VAL D'OR, QUEBEC  
\_\_\_\_\_  
Phone 819-874-8182  
\_\_\_\_\_  
make oath and say that:

Office Date Stamp

- I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.
- I have done, or caused to be done, work, on the following mineral claim(s): (Here list claims on which work was actually done by number and name)

SEE ATTACHED SCHEDULE  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

situated at BISHOP CREEK Claim sheet No. 1150/10&11  
in the DAWSON Mining District, to the value of at least 169,103.27 dollars,  
since the 30th day of SEPTEMBER 2010 .  
to represent the following mineral claims under the authority of Grouping Certificate No. \_\_\_\_\_ .  
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

SEE ATTACHED SCHEDULE  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 56).

The work included a drilling program over 3 of the 23 total claims. The work began September 30 and continued until  
\_\_\_\_\_  
December 1, 2010. A total of 5 drill holes were completed during this time with a total length of 692m drilled.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sworn before me at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_ .

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Owner or Authorized Agent

Claim List for Cert of Work 2010 Bishop

Type	Claim Information				Work Done	Renewal		
	Grant No.	Claim Name	Claim No.	Expiry Date	Soil Geochem Survey	Years	Annual Fee	Total
Quartz	YD29081	IN	1	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29082	IN	2	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29083	IN	3	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29084	IN	4	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29085	IN	5	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29086	IN	6	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29087	IN	7	9/15/2011 0:00	\$ 56,367.76	5	\$ 5.00	\$ 25.00
Quartz	YD29088	IN	8	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD29089	IN	9	9/15/2011 0:00	\$ 56,367.76	5	\$ 5.00	\$ 25.00
Quartz	YD29090	IN	10	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD06597	IN	11	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YD06598	IN	12	9/15/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95373	IN	13	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95374	IN	14	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95375	IN	15	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95376	IN	16	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95377	IN	17	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95378	IN	18	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95379	IN	19	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95380	IN	20	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95381	IN	21	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
Quartz	YC95382	IN	22	10/14/2011 0:00	\$ 56,367.76	5	\$ 5.00	\$ 25.00
Quartz	YC95383	IN	23	10/14/2011 0:00	\$ -	5	\$ 5.00	\$ 25.00
				Column Total	\$ 169,103.27	115		\$ 575.00
					23 claims			
				Check	\$ -			

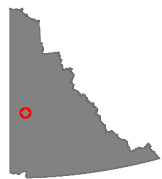
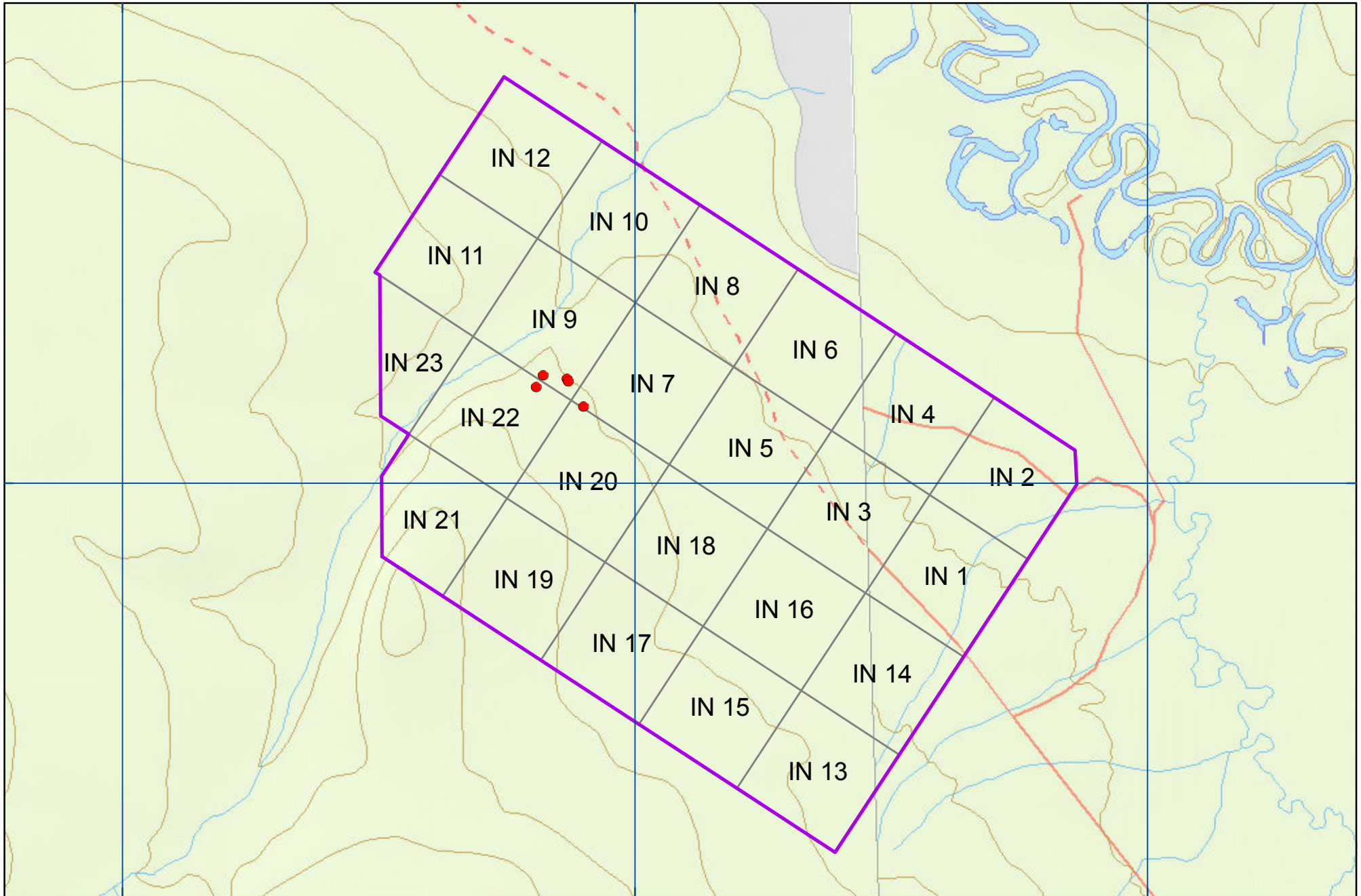
Supplier	Invoice	Date			Drilling						Total
					Wages & Contract	F&L	Supplies	Transport	Rentals	Assays	Total
Name	Ref No.	Date	Month	Project	5450	5451	5452	5453	5454	5456	Total
Breakaway	643	30-Sep-10	09-10	Bishop	1,875.00			55.60			1,930.60
Trans North Helicopters	49036	30-Sep-10	09-10	Bishop				843.22			843.22
Small's Exp.	K4556	12-Oct-10	10-10	Bishop	27.65						27.65
ASL	3946	18-Oct-10	10-10	Bishop						123.11	123.11
CDN Res Lab	301036	18-Oct-10	10-10	Bishop						95.55	95.55
Small's Exp.	K4636	19-Oct-10	10-10	Bishop			717.78				717.78
Small's Exp.	K4702	19-Oct-10	10-10	Bishop				375.00			375.00
Small's Exp.	K4704	19-Oct-10	10-10	Bishop	55.00						55.00
Small's Exp.	K4705	19-Oct-10	10-10	Bishop	2,000.00						2,000.00
Kluane Drilling	8115	20-Oct-10	10-10	Bishop	104,359.54						104,359.54
Gimlex Ent.	2010-T03	23-Oct-10	10-10	Bishop	462.50	8,850.00	129.99				9,442.49
AFD Yukon	59027ct	31-Oct-10	10-10	Bishop			325.65				325.65
Small's Exp.	K4778	31-Oct-10	10-10	Bishop	55.00						55.00
Small's Exp.	K4814	8-Nov-10	11-10	Bishop	39.50						39.50
Acme	VANI064179	9-Nov-10	11-10	Bishop						1873.26	1,873.26
Acme	VANI064551	12-Nov-10	11-10	Bishop						1911.48	1,911.48
Acme	VANI064822	16-Nov-10	11-10	Bishop						1682.10	1,682.10
Alberta Fuel Dist.	58648	16-Nov-10	11-10	Bishop			3,161.63				3,161.63
AFD Petroleum	IN001265	30-Nov-10	11-10	Bishop				50.02			50.02
AFD Petroleum	IN001838	30-Nov-10	11-10	Bishop				127.72			127.72
Breakaway	650	30-Nov-10	11-10	Bishop	16,125.00	4,570.90	713.02	4,512.42	2,475.00		28,396.34
D. Mac Gearailt		30-Nov-10	11-10	Bishop		47.29	79.20	584.14			710.63
Druid Expl.	1	1-Dec-10	12-10	Bishop	10,000.00			600.00	200.00		10,800.00
bottom					134,999.19	13,468.19	5,127.27	7,148.12	2,675.00	5,685.50	169,103.27

596000

598000

600000

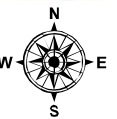
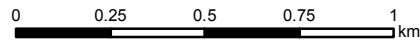
7064000



- Drill Collar Locations
- IN 1 - 23 Grouping
- Taku Claims
- Main
- - - Trail
- Watercourse
- Waterbody
- Vegetation

**TAKU GOLD CORP.**  
**IN 1 - 23 GROUPING MAP**

Universal Transverse Mercator Zone 7  
 World Geodetic System 1984  
 Scale 1:20 000



Taku Gold Corp.  
 IN 1 - 23 Grouping Map  
 NTS Sheet: 1150/10&11  
 Date: September 28, 2011

### Appendix B - Drill Hole Summary Table

<b>ID</b>	<b>UTM Zone</b>	<b>UTMmE</b>	<b>UTMmN</b>	<b>Elev.</b>	<b>Dip°</b>	<b>Azi°</b>	<b>Depth (m)</b>
IN-10-001	7N	597613	7064375	545	-55	215	121.9
IN-10-002	7N	597734	7064407	524	-55	215	157
IN-10-003	7N	597739	7064397	530	-55	215	140.2
IN-10-004	7N	597797	7064299	528	-55	215	112.8
IN-10-005	7N	597641	7064420	559	-55	215	160
						Total	691.9

**Appendix C - Drill Hole Logs**

**Breakaway Exploration Management inc.**

<b>DDH:</b>	<b>IN10-001</b>	Claims title:	YC95382	Section:	
		Township:	NTS 115O11	Level:	
		Range:		Work place:	Dawson Core Shack
Drilled by:	KLUANE DRILLING	Lot:			
Described by:	DAITHI MAC GEARAIT	From:	17/10/2010	Description date:	19/10/2010
		To:	19/10/2010		

Collar

				LL_WGS84
Azimuth:	215.00°	East		597,613.0000
Dip:	-55.00°	North		7,064,375.0000
Length:	121.92 m	Elevation		545.0000

Down hole survey

Type	Depth	Azimuth	Dip	Invalid	Description
Reflex	121.92	215.40°	-54.40°	No	Roll: 154.7 - Temp: 2.2 dC - Mag: 5663

Description

Core size:	NQ	Cemented:	No	Stored:	No
------------	----	-----------	----	---------	----

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
0.00	4.60	CAS <b>Casing</b> Casing	4.20	5.20	527001	1.00	
4.60	40.40	M8 <b>Schist</b> SILICIFIED SHEARED AND BRECCIATED ZONE: Dark grey to buff colour with w/ distinct rusty weathered appearance. Foliated. Med to coarse grained phaneritic. Fabric is dominated by qtz breccias and schistose foliations in less silicified areas. Brecciation generally consists of small (2mm to 25mm) angular silicified clasts in varying degrees of a silicified to limonitic matrix. Fresh sulphides are rare if any. Mineralogy is dominated by qtz, mica / biotite, sericite, dendrites of manganese on fractures and silica and limonite alt. Multiple micro fractures are present throughout giving a shattered appearance. Multiple faults throughout zone consisting of mainly buff coloured clay and fault gouge. 3 to 10mm reddy brown qtz bandings along foliations are common. Silicification appears to intensify at upper contacts of faults. Metre to half metre intact core runs are common in more siliceous / brecciated sections. Core recovery in general is in the high 90% range. Limonitic overprinting is pervasive throughout. Original protolith appears to be an ultra mafic, most likely a dunite - seen nearby in outcrop. LOWER CONTACT: 70°	5.20	6.00	527002	0.80	
4.60	5.50	OB <b>Over Burden</b> OVERBURDEN: Light brown to orangey brown coloured clay. Heavily oxidized and limonitic w/ occasional qtz clasts / fragments.					
5.50	9.10	BR; CS <b>Becciated; Sheared</b> SILICIFIED SHEARED AND BRECCIATED ZONE: Banded dark grey to black w/ locally orangey brown oxidized sections. Med grained (MG) w/ locally silicified and brecciated zones at upper margins of faults. Minor fault from 7.2 to 7.5. Fault zone consists of heavily oxi limonitic fault gouge. 9.0 to 9.1 section of brecciated bull qtz - heavily fractured w/ slight oxidization along fractures, appears barren of sulphide. Dark grey banded sections have a foliation of 70° to core axis. Minor sericite. Pervasive					

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
		limonite overprinting.						
5.50	9.10	brec; OX	6.00	7.00	527003	1.00		
		<b>Breccia; oxidized</b>	7.00	8.00	527004	1.00		
		Alteration	8.00	9.00	527005	1.00		
			9.00	10.00	527006	1.00		
9.10	11.00	FAI	10.00	11.00	527008	1.00		
		<b>Fault</b>						
		FAULT: Dark brown to orangey brown limonitic fault gouge. Heavily oxi app. Blurred contact.						
11.00	12.20	OX; Se; Sil; Lm						
		<b>oxidized; Sericite; Silica; Limonite</b>						
		SILICIFIED SHEARED AND BRECCIATED ZONE: Dark gray to light brown w/ oxi app. Med to coarse grained. Foliated, schistose. Quartz alt is pervasive as is limonitic overprinting. Sheared and brecciated. Competent. Minor sericite and dendrites of manganese on fracture surfaces. Intense fracturing throughout. No fresh sulphides observed. Heavily oxidized.						
11.00	12.20	BRE; CIS; FRC	11.00	12.00	527009	1.00		
		<b>Breccia; Sheared; Fractured</b>	12.00	13.00	527010	1.00		
		Sheared and brecciated. Competent. Minor sericite and dendrites of manganese on fracture surfaces. Intense fracturing throughout. No fresh sulphides observed. Heavily oxidized.						
12.20	12.70	Lm; OX						
		<b>Limonite; oxidized</b>						
		FAULT: Dark brown to orangey brown limonitic fault gouge / clay. Heavily oxi app. Blurred contact.						
12.20	12.70	FAI						
		<b>Fault</b>						
		FAULT: Dark brown to orangey brown limonitic fault gouge / clay. Heavily oxi app. Blurred contact.						
12.70	16.80	OX; Bl; Lm; Se; Sil						
		<b>oxidized; Bleached; Limonite; Sericite; Silica</b>						
		SILICIFIED SHEARED AND BRECCIATED ZONE: General dark brown to buff colour w/ generally oxidized app w/ locally dark gray to black banded sections and occasional rusty brown sections w/ black specs. Med to coarse grained. Foliated, schistose. Qtz alt is moderate throughout w/ locally more intense sections possessing a bleached and vuggy app. Limonite overprinting - Pervasive. Schistosity 80° to core axis (TCA) Black speckled highly schistose sections are biotitic, micaceous w/ minor sericite.						
12.70	16.80	BRE; CIS	13.00	14.00	527011	1.00		
		<b>Breccia; Sheared</b>	14.00	15.00	527012	1.00		
		SILICIFIED SHEARED AND BRECCIATED ZONE: General dark brown to buff colour w/ generally oxidized app w/ locally dark gray to black banded sections and occasional rusty brown sections w/ black specs. Med to coarse grained. Foliated, schistose. Qtz alt is moderate throughout w/ locally more intense sections possessing a bleached and vuggy app. Limonite overprinting - Pervasive. Schistosity 80° to core axis (TCA) Black speckled highly schistose sections are biotitic, micaceous w/ minor sericite.	15.00	16.00	527013	1.00		
			16.00	17.00	527014	1.00		

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
16.80	18.80	Lm; OX <b>Limonite; oxidized</b> FAULT: Dark brown to orangey brown limonitic fault gouge / clay. Heavily oxi app. Blurred contact.						
16.80	18.80	FAI <b>Fault</b> FAULT: Dark brown to orangey brown limonitic fault gouge / clay. Heavily oxi app. Blurred contact.	17.00	18.00	527016	1.00		
			18.00	19.00	527017	1.00		
			19.00	20.00	527018	1.00		
			20.00	21.00	527019	1.00		
			21.00	22.00	527020	1.00		
			22.00	23.00	527021	1.00		
			23.00	24.00	527022	1.00		
			24.00	25.00	527023	1.00		
			25.00	26.00	527024	1.00		
26.00	27.00	527026	1.00					
26.80	28.30	OX; Lm <b>oxidized; Limonite</b> FAULT: Dark brown to orangey brown limonitic fault gouge / clay. Heavily oxi app. Blurred contact.						
26.80	28.30	FAI <b>Fault</b> FAULT: Dark brown to orangey brown limonitic fault gouge / clay. Heavily oxi app. Blurred contact.	27.00	28.00	527027	1.00		
			28.00	29.00	527028	1.00		
			29.00	30.00	527029	1.00		
			30.00	31.00	527030	1.00		
			31.00	32.00	527031	1.00		
			32.00	33.00	527032	1.00		
			33.00	34.00	527033	1.00		
			34.00	35.00	527034	1.00		
			35.00	36.00	527035	1.00		
			36.00	37.00	527037	1.00		
			37.00	38.00	527038	1.00		
			38.00	39.00	527039	1.00		
39.00	40.40	527040	1.40					
40.40	71.00	I4 <b>Ultramafic Intrusive</b> ULTRA MAFIC: Dark grey to greeny black. Fine grained aphanitic. Foliated. Heavily sheared. Chlorite	40.40	41.00	527041	0.60		
			41.00	42.00	527043	1.00		

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
		alteration is pervasive throughout as is serpentinization. Serpentine appears over printed by later stage chlorite. Localized silicification is common. Quartz carbonate veinlets throughout associated with foliations / cleavage planes and micro fractures. Faulting is common with sections of poor core recovery. Upper contact is schistose with bleached appearance. Lower contact is approximate and is blurred due to faulting and gradational with interfingerings of graphitic argillite. There is an increase of silicification at lower contacts. Foliations range from 45° to 60° to core axis (TCA) w/ random wavy texture locally. Mineralization consists of qtz / carb veinlets and blebs, occasional reddy carb fragments Ankarite(?), altered / weathered garnets, mica - biotite & seracite + minor diss sulphide < 1%.	42.00	43.00	527044	1.00	
			43.00	43.50	527045	0.50	
40.40	57.50	VEI;0.5;;;Cb; <b>Vein 0.5 Carbonate</b> A 50cm carb vein located at 53.8m.					
43.50	46.90	Cl50 <b>Chlorite 50</b> FAULT: Light grey to green coloured. Remnants of original fabric intact but in general consists of heavily sheared fault material w/ pervasive chlorite alt. Occasional brecciated quartz fragments that carry minor diss pin head sulphides. Lower contact of fault intact at 50° TCA.					
43.50	46.90	FAI; CIS <b>Fault; Sheared</b> FAULT: Light grey to green coloured. Remnants of original fabric intact but in general consists of heavily sheared fault material w/ pervasive chlorite alt. Occasional brecciated quartz fragments that carry minor diss pin head sulphides. Lower contact of fault intact at 50° TCA.	46.00	47.00	527046	1.00	
			47.00	48.00	527047	1.00	
48.00	48.50	Cl <b>Chlorite</b> FAULT: Chloritic fault gouge. Lower contact 50°.					
48.00	48.50	FAI <b>Fault</b> FAULT: Chloritic fault gouge. Lower contact 50°.	48.00	49.00	527048	1.00	
			49.00	50.00	527049	1.00	
			52.00	53.00	527051	1.00	
52.40	57.50	I4; GM; VQ <b>Ultramafic Intrusive; Grain Medium ; Vein Quartz</b> ULTRA MAFIC: Dark gray to black, med grained, massive - 100% recovery. This section of unit is carbonaceous w/ minor qtz alt. A 50cm carb vein located at 53.8m. Vein is distinct with occasional scattered salmon coloured cubes of feldspar?(photo taken). Qtz / carb veinlets common throughout. Irregular fractures w/ minor serpentine.					

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
52.40	57.50	Sil; Cb; St <b>Silica; Carbonate; Serpentine</b> ULTRA MAFIC: Dark gray to black, med grained, massive - 100% recovery. This section of unit is carbonaceous w/ minor qtz alt. A 50cm carb vein located at 53.8m. Vein is distinct with occasional scattered salmon coloured cubes of feldspar?(photo taken). Qtz / carb veinlits common throughout. Irregular fractures w/ minor serpentine.					
52.40	57.50	FRC <b>Fractured</b> Irregular fractures					
52.40	57.50	Su10 <b>Sulfides 10%</b> sulfides	53.00	54.00	527052	1.00	
			54.00	55.00	527053	1.00	
			55.00	56.00	527054	1.00	
			56.00	57.00	527055	1.00	
			57.00	58.00	527056	1.00	
57.50	63.00	I4; GM; FOL; BR <b>Ultramafic Intrusive; Grain Medium ; Foliation; Becciated</b> ULTRA MAFIC: Dark gray to black, med grained foliated. Blocky and broken texture. Pervasive qtz and sericite alteration w/ 50cm brecciated qtz/ sericite section at end.					
57.50	63.00	Sil; Se <b>Silica; Sericite</b> ULTRA MAFIC: Dark gray to black, med grained foliated. Blocky and broken texture. Pervasive qtz and sericite alteration w/ 50cm brecciated qtz/ sericite section at end.	58.00	59.00	527057	1.00	
			62.00	63.00	527058	1.00	
63.00	69.90	I4; S6; GM; FOL <b>Ultramafic Intrusive; Mudrock; Grain Medium ; Foliation</b> ULTRA MAFIC / ARGILLITE MIX: Light gray to white with dark sections. Med grained, foliated with up to 40cm pale sections of qtz / carb alt. Blocky broken sections with chloritic fault gouge are common throughout. Darker sections of graphitic argillite towards end of section. Contact is faulted and gradational. There is an increase of diss sulphide (Py) in graphitic sections.					
63.00	69.90	Sil; Cb; Cl; Gp					

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
		<p><b>Silica; Carbonate; Chlorite; Graphite</b>                      ULTRA MAFIC / ARGILITE MIX: Light gray to white with dark sections. Med grained, foliated with up to 40cm pale sections of qtz / carb alt. Blocky broken sections with chloritic fault gouge are common throughout. Darker sections of graphitic argillite towards end of section. Contact is faulted and gradational. There is an increase of diss sulphide (Py) in graphitic sections.</p>					
63.00	69.90	<p>FAI  <b>Fault</b>                      ULTRA MAFIC / ARGILITE MIX: Light gray to white with dark sections. Med grained, foliated with up to 40cm pale sections of qtz / carb alt. Blocky broken sections with chloritic fault gouge are common throughout. Darker sections of graphitic argillite towards end of section. Contact is faulted and gradational. There is an increase of diss sulphide (Py) in graphitic sections.</p>					
63.00	69.90	<p>Su  <b>Sulfides</b>                      There is an increase of diss sulphide (Py) in graphitic sections.</p>	64.50	65.00	527059	0.50	
			66.00	67.20	527061	1.20	
			68.00	69.00	527062	1.00	
			69.00	70.00	527063	1.00	
69.90	71.00	<p>I4; GM; GG; FOL; BR  <b>Ultramafic Intrusive; Grain Medium ; Grain Course; Foliation; Becciated</b>                      ULTRA MAFIC: Dark grey to black, med to coarse grained, foliated w/ pervasive qtz / carb alt. Slightly speckled app in places due to qtz + carb blebs - 1-2mm. Qtz carb stringers and veinlits along foliations and concordant to brecciated near what appears to be the final contact with the argillites. Contact angle is 50°. There is an increase in sulphide (Py 2-3%) in this zone.</p>					
69.90	71.00	<p>Su03  <b>Sulfides 3%</b>                      ULTRA MAFIC: Dark grey to black, med to coarse grained, foliated w/ pervasive qtz / carb alt. Slightly speckled app in places due to qtz + carb blebs - 1-2mm. Qtz carb stringers and veinlits along foliations and concordant to brecciated near what appears to be the final contact with the argillites. Contact angle is 50°. There is an increase in sulphide (Py 2-3%) in this zone.</p>					
69.90	71.00	<p>VLT;;;;Cb Qz;  <b>Veinlets Carbonate Quartz</b>                      Qtz carb stringers and veinlits along foliations</p>	70.00	71.00	527064	1.00	

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
71.00	121.90	S6 <b>Mudrock</b> BANDED GRAPHITIC ARGILITE: Light to dark grey +off white and black, banded. Med grained, foliated with pervasive graphitic alteration throughout. Qtz carb veinlits + qtz albeit veins and veinlits are common as are silicified zones. Talc and sericite along foliations w/ bleached white talc zones in places. Banding appears to represent bedding. Bedding or foliation angle fairly consistent through section at 65 to 70° TCA. Faults are minor with only minor core lost mainly due to soft graphitic zones. Disseminated sulphides are common throughout unit, mainly Py and associated with the qtz. A bright green alteration on fractures at end of hole is possible chrom mica / mariposite. Soft and associated with talc so difficult to tell.					
71.00	72.50	Gp; Se <b>Graphite; Sericite</b> BANDED GRAPHITIC ARGILITE: Light to dark grey + off white and black, banded. Med grained, foliated. Qtz alt is pervasive in this section related to contact with UM. Qtz carb veinlits + qtz common. Graphite appears overprinted by qtz. Foliations and qtz veinlits carry 5% to 10% sulphide - Py. Clusters of euhedral biotite throughout. Abundant sericite. 100 % recovery. Foliation angle is 60°.					
71.00	121.90	FRC <b>Fractured</b> fractured	71.00	72.00	527065	1.00	
			72.00	73.00	527066	1.00	
			73.00	74.00	527067	1.00	
71.00	72.50	Su <b>Sulfides</b> Foliations and qtz veinlits carry 5% to 10% sulphide - Py.					
71.00	72.50	VLT;;;;;Qtz Cb; <b>Veinlets Quartz Carbonate</b> Qtz carb veinlits + qtz common. Foliations and qtz veinlits carry 5% to 10% sulphide - Py.					
76.00	78.50	Sil <b>Silica</b> BANDED GRAPHITIC ARGILITE: Dark grey to black banded. Med grained, foliated. Qtz alt is pervasive in this section. Unit is compositionally similar to rest except for 2 qtz veins (8cm and 7cm). Minor albeit associated w/ veins. Veins are coincident to foliation at 60°. Argillite proximal to veins carry increased sulphides 5% to 10%. Clusters of diss Py.	76.00	77.00	527068	1.00	
			77.00	78.10	527069	1.10	
			78.10	79.00	527071	0.90	
			82.00	83.00	527072	1.00	
			83.00	84.00	527073	1.00	
			84.00	85.00	527074	1.00	
			85.00	86.00	527075	1.00	
			90.00	91.00	527076	1.00	
			92.70	93.70	527078	1.00	
			93.70	94.70	527079	1.00	
			94.70	96.00	527080	1.30	
			105.00	106.00	527081	1.00	

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
76.00	78.10	Su05 <b>Sulfides 5%</b> Argillite proximal to veins carry increased sulphides 5% to 10%. Clusters of diss Py.						
76.00	78.10	VEI;;;;Qz; <b>Vein Quartz</b> 2 qtz veins (8cm and 7cm). Minor albeit associated w/ veins. Veins are coincident to foliation at 60°. Argillite proximal to veins carry increased sulphides 5% to 10%.						
110.00	121.90	Gp; Sil; Cl; Fc; Bl; TC <b>Graphite; Silica; Chlorite; Fuchsite; Bleached; Talc</b> BANDED GRAPHITIC ARGILITE: Dark grey to black banded. Med grained, foliated. Qtz alt is pervasive in this section with it being the highest in the hole. Unit is competent w/ 100 % core recovery. Foliation is at 75° TCA. Distinct rhythmically banded appearance. Also contains non fractured wavy laminations / crenulations in places. Qtz veins throughout often brecciated w/ black stringers of chlorite that carry diss Py. 118, 120 and 121 contain crenulated qtz veins with chrome mica and appear to be fuchsite altered or mariposite? Between 112.5 and 113.5 are two 15 to 20cm bleached silicified talc lenses. Sulphides are pervasive throughout section w/ 2 to 3cm clusters of euhedral Py, and possibly occasional diss Chalcopyrite. Entire section sampled.						
110.00	121.90	Su05; Fc <b>Sulfides 5%; Fuchsite</b> Sulphides are pervasive throughout section w/ 2 to 3cm clusters of euhedral Py, and possibly occasional diss Chalcopyrite. Entire section sampled. 118, 120 and 121 contain crenulated qtz veins with chrome mica and appear to be fuchsite altered or mariposite?						
110.00	121.90	VEI;;;;Qz; <b>Vein Quartz</b> Qtz veins throughout often brecciated w/ black stringers of chlorite that carry diss Py. 118, 120 and 121 contain crenulated qtz veins with chrome mica and appear to be fuchsite altered or mariposite?	110.00	111.00	527082	1.00		
			111.00	112.00	527083	1.00		
			116.00	117.00	527084	1.00		
			117.00	118.00	527086	1.00		
			118.00	119.00	527087	1.00		
			119.00	120.00	527088	1.00		
			120.00	121.00	527089	1.00		
			121.00	121.92	527090	0.92		
121.92	End of DDH Number of samples: 80 Number of QAQC samples: 10 Total sampled length: 79.22							

**Breakaway Exploration Management inc.**

<b>DDH:</b>	<b>IN10-002</b>	Claims title:	YD29089	Section:	
		Township:	NTS 115O11	Level:	
		Range:		Work place:	Dawson Core Shack
Drilled by:	KLUANE DRILLING	Lot:			
Described by:	DAITHI MAC GEARAIT	From:	10/10/2010	Description date:	12/10/2010
		To:	12/10/2010		

Collar

				LL_WGS84
Azimuth:	215.00°	East		597,734.0000
Dip:	-55.00°	North		7,064,407.0000
Length:	157.00 m	Elevation		524.0000

Down hole survey

Type	Depth	Azimuth	Dip	Invalid	Description
Reflex	157.00	215.60°	-56.67°	No	

Description

Core size:	NQ	Cemented:	No	Stored:	No
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Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
0.00	3.00	OB <b>Over Burden</b> Casing						
3.00	38.70	I4; MAG <b>Ultramafic Intrusive; Magnetic</b> FUCHSITE-ALTERED SERPENTINIZED MAGNETIC ULTRA MAFIC: Dark grey to black w / light green and reddy brown mottling throughout. Off white to light brown veinlits (Primary) with light black stringers / micro-fractures pervasive. Fine grained. Foliated. ALT: Silicification - Pervasive. Serpentinization - Pervasive. Fuchsite alteration of serpentine - Pervasive. Red hematite and yellow sericite - Local. Carbonate - confined to fractures and foliation - uniform but local. Sheared, fractured and brecciated w/ crenulated texture in places. Black micro-fractures (shattered texture) appear infilled w/ fine granular magnetite? Little visible sulphide w/ only minor oxi seen adjacent to hanging wall (guess) of lower contact. Unit is uniformly strongly magnetic. Green Fuchsite / serpentine blebs (1 to 2cm) appear "clast aligned" to primary foliations at 50° to 65° and are cut by black in-filled micro fractures. Carbonate / sericite veinlits are youngest. Occasional Hematite patches.	10.00	11.00	527161	1.00		
			11.00	12.00	527162	1.00		
			12.00	13.00	527163	1.00		
			13.00	14.00	527164	1.00		
			14.00	15.00	527166	1.00		
			15.00	16.00	527167	1.00		
			20.00	21.00	527168	1.00		
			21.00	22.00	527169	1.00		
			26.00	27.00	527170	1.00		
32.10	33.50	FAI <b>Fault</b> FAULT: Dark grey to greeny grey granular and clayey fault gouge. 50°						
33.50	38.70	Sil; Se; St <b>Silica; Sericite; Serpentine</b> FUCHSITE-ALTERED SERPENTINIZED MAGNETIC ULTRA MAFIC: Compositionally similar to above except completely brecciated and more intensely silicified. Breccia clasts are sharp angular and average in the 1cm to 2cm range. More obvious yellow sericite throughout. Magnetic.						
33.50	38.70	BRE <b>Breccia</b> FUCHSITE-ALTERED SERPENTINIZED MAGNETIC ULTRA MAFIC: Compositionally similar to above except completely brecciated and more intensely silicified. Breccia clasts are sharp angular and average in the 1cm to 2cm range. More obvious yellow sericite throughout. Magnetic.						
33.50	38.70	Fc <b>Fuchsite</b> FUCHSITE-ALTERED SERPENTINIZED MAGNETIC ULTRA MAFIC: Compositionally similar to above except completely brecciated and more intensely silicified. Breccia clasts are sharp angular and average in the 1cm to 2cm range. More obvious yellow sericite throughout. Magnetic.	33.50	34.50	527171	1.00		
			34.50	35.50	527172	1.00		
			35.50	36.40	527173	0.90		
			36.40	37.00	527174	0.60		
			37.00	38.00	527175	1.00		

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
			38.00	38.70	527177	0.70	
38.70	40.10	<p>FAI</p> <p><b>Fault</b></p> <p>Dark grey to greeny grey granular and clayey fault gouge. Contact between magnetic and non magnetic ultra mafics.</p>					
40.10	84.00	<p>I4; FOL</p> <p><b>Ultramafic Intrusive; Foliation</b></p> <p>GARNETIFEROUS ULTRA MAFIC: Dark grey to black with rose pink and black speckles. Medium to coarse grained. Foliated. Silicification is localized and intense when fault related. Chlorite pervasive. Serpentinization local. Yellow sericite - local. Qtz carb veinlets common. Weathered garnets (3 - 10mm) 20%, Euhedral biotite throughout - 30%. Fine diss sulphides &lt; 2%, with oxi seen at upper contact. Unit is cut by at least 4 significant faults which has resulted in some poor core recover in places due to clay seems. 30cm of opaque qtz vein seen between 51 and 52m. Unit is sheared and brecciated relative to faults otherwise competent. Foliations range between 50° and 55°</p>	40.10	41.10	527178	1.00	
			46.00	47.00	527179	1.00	
			51.00	52.00	527180	1.00	
40.10	45.30	<p>FAI</p> <p><b>Fault</b></p> <p>FAULT: Dark grey to greeny grey granular and clayey fault gouge. Contact between magnetic and non magnetic ultra mafics.</p>					
51.60	52.60	<p>Fc</p> <p><b>Fuchsite</b></p> <p>QTZ VEIN: Opaque bull qtz vein. Fractured. Appears barren of sulphide. Lower contact of UM is Fuchsite altered.</p>					
51.60	52.60	<p>VEI;;;;Qz;</p> <p><b>Vein Quartz</b></p> <p>QTZ VEIN: Opaque bull qtz vein. Fractured. Appears barren of sulphide. Lower contact of UM is Fuchsite altered.</p> <p>QTZ VEIN: Opaque bull qtz vein. Fractured. Appears barren of sulphide. Lower contact of UM is Fuchsite altered.</p> <p>QTZ VEIN: Opaque bull qtz vein. Fractured. Appears barren of sulphide. Lower contact of UM is Fuchsite altered.</p> <p>QTZ VEIN: Opaque bull qtz vein. Fractured. Appears barren of sulphide. Lower contact of UM is Fuchsite altered.</p>	52.00	53.00	527181	1.00	
			55.00	56.00	527183	1.00	

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
56.30	57.50	FAI; CNR <b>Fault; Core Not recovered</b> FAULT: Lost core (1m) Dark grey / black fault gouge. An increase in sulphide at upper contact. 80°	59.00	60.00	527184	1.00	
63.50	70.10	FAI <b>Fault</b> FAULT: Possibly two adjacent faults. Dark grey to black - blocky and broken grades into soft chloritic clay and fault gouge for 3.5m. Last 1.2m is chloritic and silicified 40%.					
68.90	70.10	Cl40; Sil40 <b>Chlorite 40; Silica 40</b> chloritic and silicified 40%.	70.00	71.00	527185	1.00	
			71.00	72.00	527186	1.00	
76.00	82.50	FRC <b>Fractured</b> BLOCKY AND BROKEN: w/ .2m sections of fault gouge.	76.00	77.00	527187	1.00	
			82.00	83.00	527188	1.00	
82.50	84.00	I4; GM; GG; FOL <b>Ultramafic Intrusive; Grain Medium ; Grain Course; Foliation</b> GARNETIFEROUS ULTRA MAFIC: Dark grey to black with rose pink and black speckles. Medium to coarse grained. Foliated. Competent. Crenulated w/ increased sulphides 5%. Contact: 50 to 55.	83.00	84.00	527189	1.00	
84.00	157.00	RUB; S6 <b>Banded; Mudrock</b> BANDED GRAPHITIC ARGILITE: Light to dark grey + off white and black, banded. Med grained, foliated with pervasive graphitic alteration throughout. Qtz carb veinlits + qtz veins and veinlits are common as are silicified zones. Silicification intensifies with proximity to larger faults. Talc and sericite along foliations w/ bleached white talc zones in places. Banding appears to represent bedding. Bedding or foliation angle range from 40° to 60° possibly representing a folding of the unit. Multiple faults throughout section w/ much blocky / broken sections. Disseminated sulphides are common throughout unit, mainly Py and % increases with the qtz %. Silicified breccias are localized.	84.00	85.00	527191	1.00	
			85.00	86.00	527192	1.00	
			86.00	87.00	527193	1.00	
88.00	89.20	Gp <b>Graphite</b> graphitic fault gouge. Contacts are blurred.					
88.80	89.20	FAI <b>Fault</b> FAULT: Black sheared graphitic fault gouge. Contacts are blurred.					

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
94.80	96.70	Gp; Sil <b>Graphite; Silica</b> Dark grey to black sheared granular silicified graphitic fault gouge. Contacts @ 70° UPPER, 77° LOWER.						
94.80	96.70	FAI <b>Fault</b> FAULT: Dark grey to black sheared granular silicified graphitic fault gouge. Contacts @ 70° UPPER, 77° LOWER.	98.00	99.00	527194	1.00		
			102.00	103.00	527195	1.00		
103.50	111.70	Gp <b>Graphite</b> Dark black graphitic clayey / fault gouge. Minor qtz. Some sheared fabric intact in places. Upper contact 77°, Lower contact 52°.						
103.50	111.70	FAI <b>Fault</b> FAULT: Dark black graphitic clayey / fault gouge. Minor qtz. Some sheared fabric intact in places. Upper contact 77°, Lower contact 52°.	106.70	107.70	527196	1.00		
			113.00	114.00	527197	1.00		
			114.00	115.00	527198	1.00		
			118.00	119.00	527199	1.00		
119.20	125.00	Sil; Gp <b>Silica; Graphite</b> Silicified angular graphitic clastic and gouge.						
119.20	125.00	FRC <b>Fractured</b> BLOCKY / BROKEN: Silicified angular graphitic clastic and gouge.	125.00	126.00	527201	1.00		
			126.00	127.00	527202	1.00		
			130.00	131.00	527203	1.00		
			131.40	132.00	527204	0.60		
			135.00	136.00	527205	1.00		
			154.00	155.00	527206	1.00		
			155.00	156.00	527207	1.00		
			156.00	157.00	527208	1.00		
157.00	End of DDH Number of samples: 43 Number of QAQC samples: 5 Total sampled length: 41.80							



Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
0.00	11.00	OB <b>Over Burden</b> Green / light grey gouge and clay. Pervasive chl alt. Granular fragments of ultra mafic						
11.00	24.80	FOL; I4 <b>Foliation; Ultramafic Intrusive</b> OXIDIZED ULTRA MAFIC: Greeny black oxidized rusty brown on all fractures. Med / coarse grained. Foliated. Chlorite alt is pervasive. Locally silicified, minor yellow sericite. Pervasive overprinting by oxi staining. Heavily weathered app. Blocky and broken. Minor qtz veins and local silicification and brecciation adjacent to faults. Silicified sections appear to carry weathered garnets? Diff to be certain due to weathering. Minor qtz / carb veinlits throughout. Foliation 60°.						
11.00	24.80	OX; Cl; Sil; Se <b>oxidized; Chlorite; Silica; Sericite</b> Chlorite alt is pervasive. Locally silicified, minor yellow sericite. Pervasive overprinting by oxi staining. Heavily weathered app. Blocky and broken. Minor qtz veins and local silicification and brecciation adjacent to faults. Silicified sections appear to carry weathered garnets? Diff to be certain due to weathering. Minor qtz / carb veinlits throughout. Foliation 60°.						
11.00	24.80	VLT;;;;;Qz Cb; <b>Veinlets Quartz Carbonate</b> Minor qtz / carb veinlits throughout.	20.00	21.00	527209	1.00		
			21.00	22.00	527210	1.00		
25.80	35.00	BR <b>Becciated</b> OXI - FAULTED AND BRECCIATED UNIT? Rusty brown - grey black. Med / coarse grained. Foliated and faulted. Pervasively oxidized. Qtz / sericite local. Chlorite? Appears local but heavily over-printed. 50% rusty fault gouge. Minor intact qtz breccias. Completely rotten appearance.						
25.80	35.00	OX; Se; Cl <b>oxidized; Sericite; Chlorite</b> Pervasively oxidized. Qtz / sericite local. Chlorite? Appears local but heavily over-printed. 50% rusty fault gouge. Minor intact qtz breccias. Completely rotten appearance.						
25.80	35.00	BRE; FAI <b>Breccia; Fault</b> OXI - FAULTED AND BRECCIATED UNIT? Rusty brown - grey black. Med / coarse grained. Foliated and faulted. Pervasively oxidized. Qtz / sericite local. Chlorite? Appears local but heavily over-printed. 50% rusty fault gouge	25.80	26.50	527212	0.70		
			26.50	27.50	527213	1.00		
			27.50	28.50	527214	1.00		
			28.50	29.50	527215	1.00		
			29.50	30.50	527216	1.00		
			30.50	31.50	527218	1.00		
			31.50	32.50	527219	1.00		
			32.50	33.50	527220	1.00		
			33.50	35.00	527221	1.50		
35.00	43.60	FIN; I4; FOL <b>Fine grains; Ultramafic Intrusive; Foliation</b>						

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
35.00	43.60	<p>FINE GRAINED ULTRAMAFIC: Dark grey to light green. Fine-grained. Foliated. Pervasively chlorite altered. Local weathered serpentine along fractures. Localized Qtz alt w/ Qtz/ carb veinlits common. Tight laminar foliations ranging from 65° to 70° TCA. Soft and friable.</p> <p>Cl; St; Sil  <b>Chlorite; Serpentine; Silica</b>                      Pervasively chlorite altered. Local weathered serpentine along fractures. Localized Qtz alt</p>					
35.00	43.60	<p>VLT;;;;;Cb Qz;  <b>Veinlets Carbonate Quartz</b>                      Qtz/ carb veinlits common. Tight laminar foliations ranging from 65° to 70° TCA. Soft and friable.</p>	35.00	36.40	527222	1.40	
			36.40	37.00	527223	0.60	
43.60	51.80	<p>M8; FOL  <b>Schist; Foliation</b>                      QTZ SCHIST: Off white to dark grey. Coarse grained. Foliated. Qtz alt is pervasive. Sericite pervasive but overprinted by silicification. Chl - localized throughout. Minor black wispy lineations (non magnetic) possibly alt chl follow foliations and contain mm scale euhedral to sub hedral Py. 5%. Foliations at 70° to 75°.</p>					
43.60	51.80	<p>Sil; Se; Cl; OX  <b>Silica; Sericite; Chlorite; oxidized</b>                      Qtz alt is pervasive. Sericite pervasive but overprinted by silicification. Chl - localized throughout. Minor black wispy lineations (non magnetic) possibly alt chl follow foliations and contain mm scale euhedral to sub hedral Py. 5%. Foliations at 70° to 75°.</p>					
43.60	51.80	<p>48.5 to 49.5 QTZ SCHIST: Similar to above but heavily oxidized.                      Py05  <b>Pyrite 5%</b>                      Py. 5%</p>	43.60	44.70	527224	1.10	
			44.70	45.70	527226	1.00	
			45.70	46.70	527227	1.00	
			46.70	47.50	527228	0.80	
			47.50	48.50	527229	1.00	
			48.50	49.50	527230	1.00	
			49.50	50.50	527231	1.00	
			50.50	51.80	527232	1.30	
51.80	99.50	<p>FOL; I4  <b>Foliation; Ultramafic Intrusive</b>                      FOLIATED BIOTITIC ULTRA MAFIC: Dark grey to dark black w/ slight greenish hue. Med grained, foliated. ALT: Serpentinization - pervasive but over printed by chl. Silicification pervasive. Qtz / carb veinlits pervasive. Euhedral biotite throughout w/ increasing % w/ schistosity and shearing. Minor sulphide (Py) throughout - 1%. Intensely silicified zones related to faulting. Occasional Qtz veins &gt;10cm. Foliation angle range from 90° TCA to 55° TCA. Non-magnetic.</p>	51.80	52.80	527233	1.00	
			60.50	61.50	527234	1.00	
64.00	65.20	<p>FAI  <b>Fault</b>                      FAULT: Dark black to green soft friable ultra mafic fault gouge. Foliation above fault is 60°.</p>					

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
67.50	71.60	FAI <b>Fault</b> FAULT: Dark black to green soft friable ultra mafic fault gouge. Foliation above fault is 60°.						
78.00	85.10	Se; Sil; Gp <b>Sericite; Silica; Graphite</b> Pervasive qtz sericite alt. Appears to contain fragments of graphitic argillite and " qtz						
78.00	85.10	FAI <b>Fault</b> FAULTED: Dark grey to black, med grained, foliated and blocky and broken. Pervasive qtz sericite alt. Appears to contain fragments of graphitic argillite and " qtz sericite schist" fragments.	82.30	83.30	527236	1.00		
			83.30	84.30	527237	1.00		
			84.30	85.30	527238	1.00		
			85.30	86.30	527239	1.00		
86.00	99.50	I4; FOL <b>Ultramafic Intrusive; Foliation</b> FOLIATED BIOTITIC ULTRA MAFIC: Dark grey to dark black. Med grained and foliated (50° to 75°) - Pervasively silicified throughout. Soft friable chloritic and fuchsite altered serpentinite at fault contact. Contact angle is blurred.						
86.00	99.50	Cl; Fc; Sil; St <b>Chlorite; Fuchsite; Silica; Serpentine</b> Pervasively silicified throughout. Soft friable chloritic and fuchsite altered serpentinite at fault contact. Contact angle is blurred.	92.40	93.40	527240	1.00		
			97.20	98.20	527241	1.00		
99.50	140.20	FOL; S6; BR <b>Foliation; Mudrock; Becciated</b> GRAPHITE ARGILITE: Light to dark grey to dark black banded. Fine to med grained. Foliated and occasionally brecciated. Pervasive graphitic alt throughout entire unit. Zones of pervasive silicification. Qtz veinlits common with qtz veins rare. Diss Py throughout and associated w/ qtz and on fracture / foliations. Can be in fine disseminations, in tight clusters on cleavage planes or as impressive "black sulphide" and Py mixed mineralization within qtz fractures and on margins of qtz veinlits. Foliation angles range from 60° to 80°.	106.00	107.00	527242	1.00		
107.00	108.00	Sil40 <b>Silica 40</b> FOLIATION: 60° - silicified 40%, Py 5%.						
107.00	108.00	Py05 <b>Pyrite 5%</b> FOLIATION: 60° - silicified 40%, Py 5%.	112.00	113.00	527243	1.00		

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
113.00	121.20	Se10 <b>Sericite 10</b> BRECCIATED: Qtz clasts, sericite 10%, Py3% to 5%. Soft friable gougey.						
113.00	121.20	Py05 <b>Pyrite 5%</b> BRECCIATED: Qtz clasts, sericite 10%, Py3% to 5%. Soft friable gougey.	113.00	114.00	527244	1.00		
			114.00	115.00	527245	1.00		
			117.00	118.00	527247	1.00		
126.00	126.10	Sil60 <b>Silica 60</b> FOLIATION: 80° - silicified 60%, Py 10%.						
126.00	126.10	Py10 <b>Pyrite 10%</b> FOLIATION: 80° - silicified 60%, Py 10%.	131.00	132.00	527248	1.00		
			132.00	133.00	527249	1.00		
			138.50	139.50	527250	1.00		
139.00	139.10	Sil70 <b>Silica 70</b> FOLIATION: 80° - silicified 70%, Py 15 %.						
139.00	139.10	Py15 <b>Pyrite 15%</b> FOLIATION: 80° - silicified 70%, Py 15 %.						
140.20	End of DDH Number of samples: 37 Number of QAQC samples: 5 Total sampled length: 37.40							

**Breakaway Exploration Management inc.**

<b>DDH:</b>	<b>IN10-004</b>	Claims title:	YD29087	Section:	
		Township:	NTS 115O11	Level:	
		Range:		Work place:	Dawson Core Shack
Drilled by:	KLUANE DRILLING	Lot:			
Described by:	DAITHI MAC GEARAIT	From:	13/10/2010	Description date:	15/03/2012
		To:	15/10/2010		

Collar

				LL_WGS84	
Azimuth:	215.00°		East	597,797.0000	
Dip:	-55.00°		North	7,064,299.0000	
Length:	112.80 m		Elevation	528.0000	

Down hole survey

Type	Depth	Azimuth	Dip	Invalid	Description
Reflex	112.80	215.40°	-55.30°	No	Roll: 10 - Temp (dC): 0.7 - Mag: 5673

Description

Core size:	NQ	Cemented:	No	Stored:	No
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Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
0.00	7.10	OB; CAS; I4 <b>Over Burden; Casing; Ultramafic Intrusive</b> OVER BURDEN / CASING - ULTRA MAFIC: Contain fragments of: dark black, fine-grained, blocky ultra mafic. Unit is highly magnetic and serpentinized. Pervasive silicification with only minor fuchsite. Yellow sericite common. Not much to work with but at a guess appears to be more magnetic and a darker black colour than lower unit. Fault separating units is significant. Appears hole was collared directly above Faulted contact with lower unit.	6.00	7.00	527251	1.00	
7.10	12.19	I4 <b>Ultramafic Intrusive</b> FAULT: Light brown to dark green. Chloritic fault gouge with altered ultra mafic clasts. Upper contact missing; lower contact blurred but appears to be 73° TCA.					
7.10	12.19	CI <b>Chlorite</b> Chloritic fault gouge with altered ultra mafic clasts					
7.10	12.19	FAI <b>Fault</b> FAULT: Light brown to dark green. Chloritic fault gouge with altered ultra mafic clasts. Upper contact missing; lower contact blurred but appears to be 73° TCA.					
12.19	29.40	I4; MAG <b>Ultramafic Intrusive; Magnetic</b> FUCHSITE-ALTERED SERPENTINIZED MAGNETIC ULTRA MAFIC: Light to dark green and black - blotchy w/ reddy brown mottling and black specs throughout. Light rusty brown veinlets, pervasive. Fine grained. Foliated and brecciated. ALT: Silicification - Pervasive. Serpentinization - Pervasive. Fuchsite alteration of serpentine - Pervasive. Red hematite and yellow sericite - Local. Carbonate - confined to fractures and foliation appears ankaritic / oxi. Sheared, fractured and brecciated w/ crenulated texture in places. Little visible sulphide. Fine black speckled mineral throughout possibly diss magnetite. Unit is uniformly strongly magnetic. Rusty weathered blebs appear "clast aligned" to primary foliations at 60° to 70° TCA.	13.00	14.00	527253	1.00	
			21.50	22.50	527254	1.00	
			23.00	24.00	527255	1.00	
			24.00	25.00	527256	1.00	
			25.00	25.90	527257	0.90	
12.19	25.90	Fc; St; Se; Sil; OX <b>Fuchsite; Serpentine; Sericite; Silica; oxidized</b> ALT: Silicification - Pervasive. Serpentinization - Pervasive. Fuchsite alteration of serpentine - Pervasive. Red hematite and yellow sericite - Local. Carbonate - confined to fractures and foliation appears ankaritic /					
25.90	28.20	CI <b>Chlorite</b> chloritic gouge + 0.2m section of qtz vein.					
25.90	28.20	FAI <b>Fault</b>					

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
		FAULT: Blocky broken w/ soft chloritic gouge + 0.2m section of qtz vein.						
25.90	28.20	VEI;0.2;::;Qz; <b>Vein 0.2 Quartz</b> 0.2m section of qtz vein.	28.00	29.00	527258	1.00		
29.40	29.90	TC <b>Talc</b> Blocky broken + white soft talc gouge and w/ 0.1m qtz vein.						
29.40	29.90	FAI <b>Fault</b> FAULT: Blocky broken + white soft talc gouge and w/ 0.1m qtz vein.						
29.40	29.90	VEI;0.1;::;Qz; <b>Vein 0.1 Quartz</b> 0.1m qtz vein.						
29.90	48.40	FIN; FOL; I4; BR <b>Fine grains; Foliation; Ultramafic Intrusive; Becciated</b> SERPINTINIZED ULTRA MAFIC: Dark black, fine-grained, foliated. Silicification - pervasive 80%. Serpentinization pervasive but overprinted. Chlorite - pervasive. Qtz / carb veinlits pervasive giving shattered appearance. Minor sulphide 1%. Foliation angle 65° TCA. Brecciated in places.						
29.90	48.40	St; Sil; Cl <b>Serpentine; Silica; Chlorite</b> Silicification - pervasive 80%. Serpentinization pervasive but overprinted. Chlorite - pervasive.						
29.90	48.40	BRE <b>Breccia</b> Brecciated in places						
29.90	48.40	Py01 <b>Pyrite 1%</b> py	30.00	31.00	527259	1.00		
			31.00	32.00	527261	1.00		
			35.00	36.00	527262	1.00		
			36.00	37.00	527263	1.00		
			45.90	47.00	527264	1.10		
			47.00	48.00	527265	1.00		
48.40	56.60	M12; RUB; GG <b>Quartzite; Banded; Grain Course</b> BLEACHED AND BRECCIATED UNIT: Possibly a quartzite? Off white vitreous w/ green hue. Black speckles throughout with dark grey to black banding in places. Coarse grained. Fractured and brecciated. Pervasive silicification 80%, w/ chlorite and yellow sericite. Fractures have bleached app. Black speckles / patches app almost dendritic. Non-magnetic. Minor diss sulphide - Py 1%. No app foliation.						
48.40	56.60	Sil80; Bl; Se; Cl <b>Silica 80; Bleached; Sericite; Chlorite</b>						

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
48.40	56.60	BLEACHED. Pervasive silicification 80%, w/ chlorite and yellow sericite. BRE <b>Breccia</b> brecciated						
48.40	56.60	Py01 <b>Pyrite 1%</b> 1% py	50.00	51.00	527266	1.00		
			51.00	52.00	527267	1.00		
			52.00	53.00	527268	1.00		
			53.00	54.00	527269	1.00		
			54.00	55.00	527271	1.00		
			55.00	56.00	527272	1.00		
56.60	61.60	I4; RUB; GF; FOL <b>Ultramafic Intrusive; Banded; Grain Fine; Foliation</b> ULTRA MAFIC: Light to dark green w/ light to dark grey banding. Fine grained? Foliated. Chlorite alt pervasive. Silicification local. Soft chloritic and friable. Thinly laminated. Appears to have chl over printed biotite. Localized qtz carb veinlits. Foliation angle range from 65° to 75° Lower contact blurred but silicified fragments.						
56.60	61.60	Cl; Sil <b>Chlorite; Silica</b> Chlorite alt pervasive. Silicification local. Soft chloritic and friable. Thinly laminated. Appears to have chl over printed biotite.						
56.60	61.60	VLT;;;;;Qz Cb; <b>Veinlets Quartz Carbonate</b> Localized qtz carb veinlits	58.00	59.00	527273	1.00		
61.60	109.50	S6; RUB; GF; GM; FOL; BR <b>Mudrock; Banded; Grain Fine; Grain Medium ; Foliation; Becciated</b> GRAPHITE ARGILITE: Light to dark grey to dark black banded. Fine to med grained. Foliated and occasionally brecciated. Pervasive graphitic alt throughout entire unit. Zones of pervasive silicification. Qtz veinlits common with occasional qtz veins associated w/ faults. Diss Py throughout and associated w/ qtz % and on fracture / foliations. Can be in fine disseminations, in tight clusters on cleavage planes. Entire unit is blocky and broken (gave a lot of trouble when drilling). Contains large runs of fault gouge. Contains bleached section and pervasively silicified sections.	62.00	63.00	527274	1.00		
			63.00	64.00	527275	1.00		
64.60	66.20	Sil; Se; Bl <b>Silica; Sericite; Bleached</b> BLEACHED SECTION: Light grey to off white. Blocky and broken. Pervasive silicification. Sericite - pervasive.						
64.60	66.20	Py10 <b>Pyrite 10%</b> Sulphide 10% in places						
64.60	66.20	VEI;;;;;Qz; <b>Vein Quartz</b>						

Breakaway Exploration Management inc.

Description			Assay					
			From	To	Number	Length	Au (ppb)	
66.20	72.50	0.3m bull qtz vein at end of sub-section. Appears fault related. Sil <b>Silica</b> FAULT: Blocky and broken fault gouge. Silicified. Fragment of qtz.						
66.20	72.50	FAI <b>Fault</b> FAULT: Blocky and broken fault gouge. Silicified. Fragment of qtz.	79.00	80.00	527276	1.00		
80.40	84.00	Gp <b>Graphite</b> FAULT: Dark black fault gouge with clast of graphitic argillite.						
80.40	84.00	FAI <b>Fault</b> FAULT: Dark black fault gouge with clast of graphitic argillite.						
84.00	89.40	Gp <b>Graphite</b> FAULTED: Blocky and broken "completely" black graphitic argillite.						
84.00	89.40	FAI <b>Fault</b> FAULTED: Blocky and broken "completely" black graphitic argillite.	85.00	86.00	527277	1.00		
89.40	99.00	Se <b>Sericite</b> FAULTED: Blocky and broken qtz sericite mix w/ 10% sulphide in places.						
89.40	99.00	FAI <b>Fault</b> FAULTED: Blocky and broken qtz sericite mix w/ 10% sulphide in places.						
89.40	99.00	Su10 <b>Sulfides 10%</b> 10% sul in Places	92.00	93.00	527278	1.00		
			96.00	97.00	527279	1.00		
			97.00	98.00	527280	1.00		
			98.00	99.00	527282	1.00		
99.00	110.90	Gp; TC <b>Graphite; Talc</b> Soft black clayey graphitic fault gouge w/ sections of pale grey talcy clayey gouge. Minor bull qtz						

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
fragments that appear barren of sulphides.							
99.00	110.90	FAI	100.00	101.00	527283	1.00	
		<b>Fault</b>	105.00	106.50	527284	1.50	
		FAULT: Appears to be one long fault. Soft black clayey graphitic fault gouge w/ sections of pale grey talcy clayey gouge. Minor bull qtz fragments that appear barren of sulphides.	109.50	110.50	527285	1.00	
			110.50	110.90	527286	0.40	
110.90	112.80	M8; FOL					
		<b>Schist; Foliation</b>					
		BIOTITE SCHIST: Light grey to light brown w/ black specs. Talc alt pervasive. Foliated. Soft friable platy schistose w/ euhedral biotites and 3% to 5% Py in sections. High contact angle of 20° TCA. Minor qtz vein.					
110.90	112.80	TC					
		<b>Talc</b>					
		Talc alt pervasive.					
110.90	112.80	Py05	110.90	111.90	527288	1.00	
		<b>Pyrite 5%</b>	111.90	112.80	527289	0.90	
		5% Py in sections					
112.80	End of DDH						
	Number of samples: 34						
	Number of QAQC samples: 5						
	Total sampled length: 33.80						



**Breakaway Exploration Management inc.**

Description			Assay					
			From	To	Number	Length	Au (ppb)	
0.00	10.00	OB; CAS <b>Over Burden; Casing</b> Casing						
0.00	40.80	I4; FOL; GM; GG <b>Ultramafic Intrusive; Foliation; Grain Medium ; Grain Course</b> GARNETIZED ULTRA MAFIC: Dark grey to black w/ greeny hue in places slight oxi throughout w/ pink speckled app. Med to coarse grained. Foliated w/ zones that have higher degree of schistosity. Silicification throughout pervasive adjacent to faults. Chlorite alt common w/ degrees of intensity. Chlorite alt of serpentine throughout. Qtz carb veinlits. Occasional hematite staining of qtz. Biotite 20% and sericite 10%. Weathered garnets 10% throughout. 2 -10mm. Oxi along all fractures. Competent but brittle. Sulphides diff to see due to oxi.						
0.00	40.80	OX; Sil; Cl; St; Se <b>oxidized; Silica; Chlorite; Serpentine; Sericite</b> Silicification throughout pervasive adjacent to faults. Chlorite alt common w/ degrees of intensity. Chlorite alt of serpentine throughout. Qtz carb veinlits. Occasional hematite staining of qtz. Biotite 20% and sericite 10%.						
0.00	40.80	VLT;;;;;Qz Cb; <b>Veinlets Quartz Carbonate</b> Qtz carb veinlits.						
10.00	112.40	FOL; GM; GG <b>Foliation; Grain Medium ; Grain Course</b> FOLIATED ULTRA MAFIC: Dark grey to black w/ greeny grey to bleached off white sections. Med grained to locally coarse grained. Foliated. Alteration consists of chlorite altered serpentinite pervasive locally w/ metre scale sections of soft chlorite altered serpentinized fault gouge. Silicification is generally localized associated with qtz veining to pervasive in what appear to be multi metre scale faulted structures. Localized sericite and talc throughout. Mineralization: weathered garnets 2-10mm blebs in upper 40m. Diss to mm scale euhedral cubes of pyrite throughout. Biotite and sericite in localized zone of higher schistosity. Fuchsite altered chlorite in some qtz sections. Qtz carb veinlits and dark grey pyritic and possibly chlorite veins and veinlits w/ associated fine sulphides. Rare red hematitic qtz seen on fractures. Structure: a major fault appears to off set / separate the garnetized, more foliated ultra mafic from the lower less foliated and more qtz alt ultra mafic. White bleached zones are definitive of fracture controlled silicification.	15.00	16.00	527091	1.00		
			16.00	17.00	527092	1.00		
			17.00	18.00	527093	1.00		
			24.00	25.00	527094	1.00		
			25.00	26.00	527096	1.00		
			26.00	27.00	527097	1.00		
			30.00	31.00	527098	1.00		
			37.00	38.00	527099	1.00		
			38.00	39.00	527100	1.00		
			39.00	40.10	527101	1.10		
40.80	44.00	St; Cl <b>Serpentine; Chlorite</b> FAULT: Light green grey "fibrous" fault gouge. Chlorite alt serpentinite. Clear contacts at 60°.						
40.80	44.00	FAI <b>Fault</b> FAULT: Light green grey "fibrous" fault gouge. Chlorite alt serpentinite. Clear contacts at 60°.	44.00	45.00	527102	1.00		
			45.00	46.00	527103	1.00		
			52.00	53.00	527104	1.00		
			53.00	54.00	527105	1.00		

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
			54.00	55.00	527107	1.00	
			55.00	56.00	527108	1.00	
			57.50	58.50	527109	1.00	
			58.50	59.50	527110	1.00	
			64.00	65.20	527111	1.20	
65.20	77.00	Bl; Se; Sil; TC <b>Bleached; Sericite; Silica; Talc</b> BLEACHED. Pervasive silicification w/ chlorite and yellow sericite and scilified talc? Upper 20cm of white qtz vein followed by intensely silicified ultramafics (dark black)					
65.20	77.00	Su30 <b>Sulfides 30%</b> pervasive grey sulphides along all fractures. Unit is speckled w/ black patches almost dendritic ( Scilified manganese?) and contain high % of diss sulphides that appear to be Py. Sulphide 30%	65.20	66.00	527113	0.80	
			66.00	67.00	527114	1.00	
			67.00	68.00	527115	1.00	
			68.00	69.00	527116	1.00	
			69.00	70.00	527117	1.00	
			70.00	71.00	527118	1.00	
			71.00	72.00	527119	1.00	
			72.00	73.10	527121	1.10	
			73.10	74.00	527122	0.90	
			74.00	75.00	527123	1.00	
			75.00	76.00	527124	1.00	
			76.00	77.00	527125	1.00	
77.00	110.80	Sil <b>Silica</b> Brecciated and Silicified zones.					
77.00	110.80	Su <b>Sulfides</b> diss sulphide % throughout and the presence of euhedral biotite xtals throughout.	77.00	78.00	527126	1.00	
			78.00	79.00	527127	1.00	
			79.00	80.00	527128	1.00	
			80.00	81.00	527129	1.00	
82.20	84.90	BRE <b>Breccia</b> SHEARED / BRECCIATED AND BLEACHED: Silicified w/ sulphides.	82.20	83.20	527136	1.00	
			83.20	84.20	527137	1.00	
			84.20	84.90	527138	0.70	
			95.00	96.00	527131	1.00	
			96.00	97.00	527132	1.00	
			97.00	98.00	527133	1.00	

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
110.90	112.40	Sil; St; Fc <b>Silica; Serpentine; Fuchsite</b> FAULT CONTACT: Off white to grey w/ green wavy banding. Heavily silicified fault gouge w/ fuchsite-altered serpentinite.	98.00	99.00	527134	1.00	
			109.90	110.90	527135	1.00	
110.90	112.40	FAI <b>Fault</b> FAULT CONTACT: Off white to grey w/ green wavy banding. Heavily silicified fault gouge w/ fuchsite-altered serpentinite.	110.90	111.50	527139	0.60	
			111.50	112.40	527140	0.90	
112.40	160.00	S6; RUB; GM; GG <b>Mudrock; Banded; Grain Medium ; Grain Course</b> GRAPHITIC ARGILITE: Dark gray to black banded. Med to coarse grained. Pervasive graphitic alteration. Localized silicification increasing with depth. Minor sericite and chlorite with occasional talc seams. Bleached sections common throughout. Sulphide % is in the high 10% range seen as diss Py along foliations and associated with qtz veins. Qtz / carb veinlits common w / occasional 10 to 20cm qtz veins. Qtz vein contacts follow foliations between 70 and 80°. Minor faults w/ soft graphitic soft black fault gouge. Qtz veins are have fractured shattered appearance. Bull qtz.	112.40	113.40	527142	1.00	
			113.40	114.00	527143	0.60	
			114.00	115.20	527144	1.20	
115.60	115.70	FOL; S6 <b>Foliation; Mudrock</b> FOLIATION ANGLE: 80°	126.50	127.50	527145	1.00	
			127.50	128.50	527146	1.00	
			129.60	130.20	527150	0.60	
129.70	130.10	Se; Gp <b>Sericite; Graphite</b> QTZ VEIN: Off white opaque. Fractured w/ diss sulphides along fractures. Sy % 2%. Contact angle at 80° Minor associated sericite.					
129.70	130.10	Su02 <b>Sulfides 2%</b> Sy 2% QTZ VEIN: Off white opaque. Fractured w/ diss sulphides along fractures. Sy % 2%. Contact angle at 80° Minor associated sericite.					
129.70	130.10	VEI;:::;Qz; <b>Vein Quartz</b>	135.00	136.00	527148	1.00	
			137.00	138.00	527149	1.00	

Breakaway Exploration Management inc.

Description			Assay				
			From	To	Number	Length	Au (ppb)
		<p>QTZ VEIN: Off white opaque. Fractured w/ diss sulphides along fractures. Sy % 2%. Contact angle at 80° Minor associated sericite.</p> <p>QTZ VEIN: Off white opaque. Fractured w/ diss sulphides along fractures. Sy % 2%. Contact angle at 80° Minor associated sericite.</p>					
140.00	140.10	<p>FOL; S6</p> <p><b>Foliation; Mudrock</b></p> <p>FOLIATION ANGLE: 72°</p>	142.00	143.00	527151	1.00	
			147.00	148.00	527152	1.00	
			148.00	149.00	527153	1.00	
			149.00	150.00	527154	1.00	
			150.00	151.00	527156	1.00	
			151.00	152.00	527157	1.00	
			152.00	153.00	527158	1.00	
157.90	160.00	<p>Gp; Sil60; Se; Cl</p> <p><b>Graphite; Silica 60; Sericite; Chlorite</b></p> <p>GRAPHITIC ARGILITE: Dark gray to black rhythmically banded. Med to coarse grained. Pervasive silicification 60%. Minor sericite and chlorite seems. Brecciated and fractured giving shattered app, w/ pyritic sulphide infilling of fractures. Highest sulphide % seen in this section at about 20%.</p>					
157.90	160.00	<p>Su20</p> <p><b>Sulfides 20%</b></p> <p>20 % Sulfides</p>	158.00	159.00	527159	1.00	
			159.00	160.00	527160	1.00	
160.00	<p><b>End of DDH</b></p> <p>Number of samples: 62</p> <p>Number of QAQC samples: 8</p> <p>Total sampled length: 60.70</p>						

## **Appendix D - Analytical Certificates and Procedures**



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

[www.acmelab.com](http://www.acmelab.com)

**Client:** **Taku Gold Corp**  
680 3rd Ave, Suite 203  
Val D'Or QC J9P 1S5 Canada

Submitted By: Mark Fekete  
Receiving Lab: Canada-Whitehorse  
Received: October 26, 2010  
Report Date: November 09, 2010  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

WHI10000622.1

### CLIENT JOB INFORMATION

Project: IN  
Shipment ID:  
P.O. Number  
Number of Samples: 100

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	94	Crush, split and pulverize 250 g rock to 200 mesh			WHI
G601	100	Fire Assay fusion Au by ICP-ES	30	Completed	VAN

### 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: Taku Gold Corp  
680 3rd Ave, Suite 203  
Val D'Or QC J9P 1S5  
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.  
\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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680 3rd Ave, Suite 203
Val D'Or QC J9P 1S5 Canada

Project: IN
Report Date: November 09, 2010

Page: 2 of 5 Part 1

CERTIFICATE OF ANALYSIS

WHI10000622.1

Table with columns: Method, Analyte, Unit, MDL, WGHT, Wgt, G6, Au, gm/t. Rows 527001 to 527030.



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Page: 3 of 5 Part 1

CERTIFICATE OF ANALYSIS

WHI10000622.1

Table with columns: Method, Analyte, Unit, MDL, WGHT, Wgt, G6, Au, gm/t. Rows include sample IDs 527031-527060 and their corresponding weights and gold content.



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**Page:** 4 of 5 **Part** 1

## CERTIFICATE OF ANALYSIS

WHI10000622.1

Method	WGHT	G6
Analyte	Wgt	Au
Unit	kg	gm/t
MDL	0.01	0.005
527061	Rock	3.13 <0.005
527062	Rock	3.44 <0.005
527063	Rock	3.17 <0.005
527064	Rock	3.09 <0.005
527065	Rock	3.12 <0.005
527066	Rock	2.83 <0.005
527067	Rock	3.13 <0.005
527068	Rock	3.58 <0.005
527069	Rock	1.54 <0.005
527070	Rock	1.53 <0.005
527071	Rock	2.94 <0.005
527072	Rock	2.50 0.022
527073	Rock	2.77 0.008
527074	Rock	3.10 0.005
527075	Rock	3.31 <0.005
527076	Rock	2.67 <0.005
527077	Rock Pulp	0.06 0.334
527078	Rock	2.99 <0.005
527079	Rock	2.68 <0.005
527080	Rock	3.76 <0.005
527081	Rock	3.17 <0.005
527082	Rock	2.75 <0.005
527083	Rock	2.85 <0.005
527084	Rock	2.78 <0.005
527085	Rock	1.13 <0.005
527086	Rock	3.20 0.010
527087	Rock	3.19 0.007
527088	Rock	4.31 <0.005
527089	Rock	2.84 <0.005
527090	Rock	1.56 <0.005



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**Project:** IN  
**Report Date:** November 09, 2010

**Page:** 5 of 5 **Part** 1

## CERTIFICATE OF ANALYSIS

WHI10000622.1

	Method	WGHT	G6
	Analyte	Wgt	Au
	Unit	kg	gm/t
	MDL	0.01	0.005
527091	Rock	3.56	<0.005
527092	Rock	3.53	<0.005
527093	Rock	3.19	0.012
527094	Rock	3.06	<0.005
527095	Rock Pulp	0.06	0.880
527096	Rock	3.15	0.015
527097	Rock	3.41	<0.005
527098	Rock	4.02	<0.005
527099	Rock	3.38	<0.005
527100	Rock	2.68	<0.005



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**Project:** IN

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**Page:** 1 of 2 **Part** 1

## QUALITY CONTROL REPORT

WHI10000622.1

Method	WGHT	G6
Analyte	Wgt	Au
Unit	kg	gm/t
MDL	0.01	0.005
Pulp Duplicates		
527017	Rock	3.17 <0.005
REP 527017	QC	<0.005
527066	Rock	2.83 <0.005
REP 527066	QC	<0.005
527094	Rock	3.06 <0.005
REP 527094	QC	<0.005
Core Reject Duplicates		
527013	Rock	2.91 0.006
DUP 527013	QC	0.005
527048	Rock	2.95 <0.005
DUP 527048	QC	<0.005
527083	Rock	2.85 <0.005
DUP 527083	QC	<0.005
Reference Materials		
STD OXH66	Standard	1.243
STD OXH66	Standard	1.245
STD OXH66	Standard	1.369
STD OXH66	Standard	1.263
STD OXH66	Standard	1.247
STD OXK79	Standard	3.612
STD OXK79	Standard	3.512
STD OXK79	Standard	3.747
STD OXK79	Standard	3.608
STD OXK79	Standard	3.428
STD OXH66 Expected		1.285
STD OXK79 Expected		3.532
BLK	Blank	<0.005
BLK	Blank	<0.005



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**Page:** 2 of 2 **Part** 1

## QUALITY CONTROL REPORT

WHI10000622.1

		WGHT	G6
		Wgt	Au
		kg	gm/t
		0.01	0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
Prep Wash			
G1	Prep Blank		0.011
G1	Prep Blank		<0.005



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Client: **Taku Gold Corp**  
680 3rd Ave, Suite 203  
Val D'Or QC J9P 1S5 Canada

Submitted By: Mark Fekete  
Receiving Lab: Canada-Whitehorse  
Received: October 26, 2010  
Report Date: November 10, 2010  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

WHI10000623.1

### CLIENT JOB INFORMATION

Project: IN  
Shipment ID:  
P.O. Number  
Number of Samples: 100

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	100	Crush, split and pulverize 250 g rock to 200 mesh			WHI
G601	100	Fire Assay fusion Au by ICP-ES	30	Completed	VAN

### SAMPLE DISPOSAL

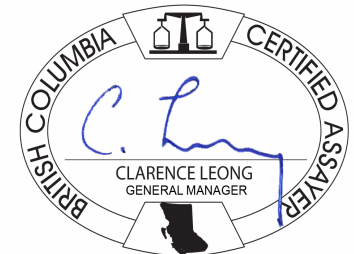
DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 90 days

### 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: Taku Gold Corp  
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Project: IN
Report Date: November 10, 2010

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CERTIFICATE OF ANALYSIS

WHI10000623.1

Table with columns: Method, Analyte, Unit, MDL, WGHT, Wgt, G6, Au, gm/t. Rows 527101-527130.



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CERTIFICATE OF ANALYSIS

WHI10000623.1

Table with columns: Method, Analyte, Unit, MDL, WGHT, Wgt, G6, Au, gm/t. Rows 527131 to 527160.



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Report Date: November 10, 2010

Page: 4 of 5 Part 1

# CERTIFICATE OF ANALYSIS

WHI10000623.1

Method	WGHT	G6
Analyte	Wgt	Au
Unit	kg	gm/t
MDL	0.01	0.005
527161	Rock	2.87 <0.005
527162	Rock	3.05 <0.005
527163	Rock	3.14 <0.005
527164	Rock	2.80 <0.005
527165	Rock Pulp	0.06 0.910
527166	Rock	2.95 <0.005
527167	Rock	3.11 <0.005
527168	Rock	2.76 <0.005
527169	Rock	3.31 <0.005
527170	Rock	3.22 <0.005
527171	Rock	3.45 <0.005
527172	Rock	3.64 <0.005
527173	Rock	2.81 <0.005
527174	Rock	1.70 0.007
527175	Rock	1.73 <0.005
527176	Rock	1.75 <0.005
527177	Rock	2.61 <0.005
527178	Rock	3.78 <0.005
527179	Rock	3.28 <0.005
527180	Rock	2.93 <0.005
527181	Rock	3.01 <0.005
527182	Rock Pulp	0.06 0.350
527183	Rock	3.64 <0.005
527184	Rock	3.08 0.007
527185	Rock	3.69 <0.005
527186	Rock	3.61 <0.005
527187	Rock	3.15 <0.005
527188	Rock	3.03 <0.005
527189	Rock	3.25 0.079
527190	Rock	1.54 0.007



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**Project:** IN  
**Report Date:** November 10, 2010

**Page:** 5 of 5 **Part** 1

## CERTIFICATE OF ANALYSIS

WHI10000623.1

	Method	WGHT	G6
	Analyte	Wgt	Au
	Unit	kg	gm/t
	MDL	0.01	0.005
527191	Rock	1.88	<0.005
527192	Rock	2.93	<0.005
527193	Rock	2.55	<0.005
527194	Rock	2.98	<0.005
527195	Rock	3.13	<0.005
527196	Rock	2.53	0.010
527197	Rock	3.33	0.007
527198	Rock	1.77	0.007
527199	Rock	3.75	<0.005
527200	Rock Pulp	0.06	1.002



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**Project:** IN

**Report Date:** November 10, 2010

**Page:** 1 of 2 **Part** 1

## QUALITY CONTROL REPORT

WHI10000623.1

Method	WGHT	G6
Analyte	Wgt	Au
Unit	kg	gm/t
MDL	0.01	0.005
Pulp Duplicates		
527130	Rock Pulp	0.06 0.852
REP 527130	QC	0.861
527134	Rock	2.92 <0.005
REP 527134	QC	<0.005
527182	Rock Pulp	0.06 0.350
REP 527182	QC	0.387
Core Reject Duplicates		
527103	Rock	2.95 <0.005
DUP 527103	QC	<0.005
527138	Rock	2.20 <0.005
DUP 527138	QC	<0.005
527173	Rock	2.81 <0.005
DUP 527173	QC	<0.005
Reference Materials		
STD OXH66	Standard	1.287
STD OXH66	Standard	1.301
STD OXH66	Standard	1.330
STD OXH66	Standard	1.254
STD OXK79	Standard	3.498
STD OXK79	Standard	3.626
STD OXK79	Standard	3.681
STD OXK79	Standard	3.549
STD OXH66 Expected		1.285
STD OXK79 Expected		3.532
BLK	Blank	<0.005
BLK	Blank	<0.005
BLK	Blank	<0.005
BLK	Blank	<0.005



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**Project:** IN

**Report Date:** November 10, 2010

**Page:** 2 of 2 **Part** 1

## QUALITY CONTROL REPORT

WHI10000623.1

		WGHT	G6
		Wgt	Au
		kg	gm/t
		0.01	0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
Prep Wash			
G1	Prep Blank		<0.005
G1	Prep Blank		<0.005



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**Client:** **Taku Gold Corp**  
680 3rd Ave, Suite 203  
Val D'Or QC J9P 1S5 Canada

Submitted By: Mark Fekete  
Receiving Lab: Canada-Whitehorse  
Received: October 26, 2010  
Report Date: November 15, 2010  
Page: 1 of 4

## CERTIFICATE OF ANALYSIS

WHI10000624.1

### CLIENT JOB INFORMATION

Project: IN  
Shipment ID:  
P.O. Number  
Number of Samples: 89

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	84	Crush, split and pulverize 250 g rock to 200 mesh			WHI
G601	89	Fire Assay fusion Au by ICP-ES	30	Completed	VAN

### SAMPLE DISPOSAL

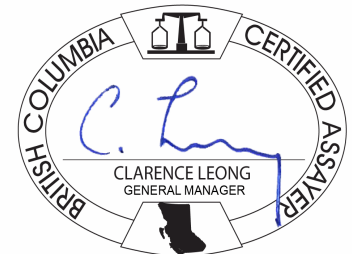
DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 90 days

### 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.

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only.  
\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Client: Taku Gold Corp
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Val D'Or QC J9P 1S5 Canada

Project: IN
Report Date: November 15, 2010

Page: 2 of 4 Part 1

CERTIFICATE OF ANALYSIS

WHI10000624.1

Table with columns: Method, Analyte, Unit, MDL, WGHT, Wgt, G6, Au, gm/t. Rows 527201 to 527230.



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Project: IN
Report Date: November 15, 2010

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CERTIFICATE OF ANALYSIS

WHI10000624.1

Table with columns: Method, Analyte, Unit, MDL, WGHT, Wgt, G6, Au, gm/t. Rows 527231 to 527260.



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**Report Date:** November 15, 2010

**Page:** 4 of 4 Part 1

## CERTIFICATE OF ANALYSIS

WHI10000624.1

Method	WGHT	G6
Analyte	Wgt	Au
Unit	kg	gm/t
MDL	0.01	0.005
527261	Rock	3.31 <0.005
527262	Rock	2.47 <0.005
527263	Rock	3.22 <0.005
527264	Rock	3.31 <0.005
527265	Rock	3.05 <0.005
527266	Rock	3.28 <0.005
527267	Rock	3.26 <0.005
527268	Rock	2.91 <0.005
527269	Rock	2.61 <0.005
527270	Rock Pulp	0.10 0.832
527271	Rock	3.44 <0.005
527272	Rock	3.73 <0.005
527273	Rock	3.39 <0.005
527274	Rock	3.06 <0.005
527275	Rock	3.42 <0.005
527276	Rock	3.10 <0.005
527277	Rock	3.42 0.007
527278	Rock	4.00 <0.005
527279	Rock	3.93 <0.005
527280	Rock	1.60 <0.005
527281	Rock	1.54 <0.005
527282	Rock	3.04 <0.005
527283	Rock	4.14 <0.005
527284	Rock	3.21 <0.005
527285	Rock	2.75 <0.005
527286	Rock	1.59 <0.005
527287	Rock Pulp	0.10 0.322
527288	Rock	3.70 <0.005
527289	Rock	2.72 <0.005



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**Project:** IN

**Report Date:** November 15, 2010

**Page:** 1 of 2 **Part** 1

# QUALITY CONTROL REPORT

WHI10000624.1

Method	WGHT	G6
Analyte	Wgt	Au
Unit	kg	gm/t
MDL	0.01	0.005
Pulp Duplicates		
527204	Rock	2.10 0.065
REP 527204	QC	0.071
527245	Rock	1.97 <0.005
REP 527245	QC	<0.005
REP 527272	QC	<0.005
Core Reject Duplicates		
527202	Rock	3.00 <0.005
DUP 527202	QC	<0.01 <0.005
527237	Rock	3.27 0.015
DUP 527237	QC	<0.01 0.012
527272	Rock	3.73 <0.005
DUP 527272	QC	<0.01 <0.005
Reference Materials		
STD OXH66	Standard	1.382
STD OXH66	Standard	1.265
STD OXH66	Standard	1.208
STD OXH66	Standard	1.266
STD OXH66	Standard	1.320
STD OXK79	Standard	3.751
STD OXK79	Standard	3.552
STD OXK79	Standard	3.530
STD OXK79	Standard	3.650
STD OXH66 Expected		1.285
STD OXK79 Expected		3.532
BLK	Blank	<0.005
BLK	Blank	<0.005
BLK	Blank	<0.005
BLK	Blank	<0.005



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**Client:** **Taku Gold Corp**  
680 3rd Ave, Suite 203  
Val D'Or QC J9P 1S5 Canada

**Project:** IN

**Report Date:** November 15, 2010

**Page:** 2 of 2 **Part** 1

## QUALITY CONTROL REPORT

WHI10000624.1

		<b>WGHT</b>	<b>G6</b>
		<b>Wgt</b>	<b>Au</b>
		<b>kg</b>	<b>gm/t</b>
		<b>0.01</b>	<b>0.005</b>
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
BLK	Blank		<0.005
Prep Wash			
G1	Prep Blank		<0.005
G1	Prep Blank		<0.005

## **Appendix E - Reference Standards**

# CDN Resource Laboratories Ltd.

#2, 20148 – 102<sup>nd</sup> Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

## REFERENCE MATERIAL: CDN-GS-P3A

Recommended value and the "Between Laboratory" two standard deviations

**Gold concentration:  $0.338 \pm 0.022$  g/t (30g Fire Assay / ICP)**

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** July 16, 2010

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-GS-P3A was prepared using ore supplied by Barrick Gold Inc. from their Bald Mountain Mine in Nevada, USA. It is Carlin Style Mineralization in the prolific Battle Mountain-Eureka Trend in Northern Nevada, USA. The material is from breccias near the contact between the Mississippian Pilot Shale and the underlying Devonian Guilmette formation. Near the center of the system, micron-sized native Au occurs with base metal sulfides and sulfosalts. In peripheral deposits and in later stages of mineralization, Au is typically submicron in size and resides in pyrite or arsenopyrite.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 14 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14
Sample	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
GS-P3A-1	0.349	0.354	0.330	0.32	0.348	0.335	0.340	0.276	0.291	0.36	0.36	0.334	0.37	0.335
GS-P3A-2	0.317	0.346	0.320	0.32	0.338	0.349	0.340	0.280	0.284	0.34	0.34	0.333	0.35	0.325
GS-P3A-3	0.326	0.345	0.351	0.32	0.340	0.338	0.350	0.295	0.272	0.34	0.34	0.331	0.34	0.327
GS-P3A-4	0.332	0.336	0.354	0.31	0.342	0.340	0.340	0.273	0.289	0.35	0.34	0.335	0.35	0.326
GS-P3A-5	0.336	0.332	0.333	0.31	0.340	0.347	0.330	0.289	0.274	0.35	0.32	0.340	0.33	0.343
GS-P3A-6	0.338	0.330	0.335	0.34	0.337	0.341	0.340	0.275	0.291	0.36	0.36	0.326	0.37	0.294
GS-P3A-7	0.332	0.339	0.329	0.32	0.335	0.345	0.340	0.289	0.268	0.37	0.33	0.341	0.33	0.292
GS-P3A-8	0.350	0.349	0.328	0.30	0.341	0.354	0.350	0.294	0.285	0.35	0.34	0.340	0.35	0.338
GS-P3A-9	0.330	0.342	0.330	0.30	0.333	0.350	0.350	0.286	0.321	0.35	0.33	0.333	0.35	0.295
GS-P3A-10	0.346	0.328	0.341	0.31	0.328	0.349	0.340	0.286	0.311	0.35	0.34	0.337	0.36	0.315
Mean	0.336	0.340	0.335	0.314	0.338	0.345	0.342	0.284	0.289	0.352	0.341	0.335	0.350	0.319
Std. Dev'n	0.0105	0.0086	0.0106	0.0108	0.0055	0.0061	0.0063	0.0079	0.0167	0.0092	0.0117	0.0047	0.0141	0.0191
%RSD	3.14	2.53	3.17	3.45	1.61	1.76	1.85	2.77	5.79	2.61	3.44	1.39	4.04	5.99

*Note: Data from both Labs 8 and 9 was removed for failing the t test.*

### APPROXIMATE CHEMICAL COMPOSITION:

	Percent		Percent		ppm
SiO <sub>2</sub>	60.9	Na <sub>2</sub> O	0.5	As	560
Al <sub>2</sub> O <sub>3</sub>	11.2	MgO	0.2	Sb	50
Fe <sub>2</sub> O <sub>3</sub>	9.1	K <sub>2</sub> O	1.7		
CaO	0.6	TiO <sub>2</sub>	0.9		
MnO	< 0.1	LOI	13.6		
Total S	3.2	Total C	0.1		
Sulphide S	2.8	Inorganic C	0.1		

**REFERENCE MATERIAL: CDN-GS-P3A**

**Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean  $\pm 2$  standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

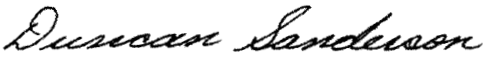
Participating Laboratories: (not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, B.C., Canada  
Activation Laboratories, Ancaster, Ontario, Canada  
Activation Laboratories, Thunder Bay, Ontario, Canada  
AGAT Laboratories Ltd., Mississauga, Ontario, Canada  
ALS Chemex, North Vancouver, B.C., Canada  
ALS Chemex, Nevada, USA  
American Assay Laboratories, Nevada, USA  
Assayers Canada Ltd., Vancouver, B.C., Canada  
Eco Tech Laboratory Ltd., Kamloops, B.C., Canada  
Genalysis Lab Services, Australia  
Labtium Inc., Finland  
OMAC Laboratories Ltd., Ireland  
TSL Laboratories Ltd., Saskatoon, SK, Canada  
Ultra Trace Laboratories Ltd., Australia


Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by

  
\_\_\_\_\_  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
\_\_\_\_\_  
Dr. Barry Smee, Ph.D., P. Geo.



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**CERTIFICATE OF ANALYSIS FOR**  
**GOLD ORE REFERENCE MATERIAL**  
**OREAS 2Pd**

**SUMMARY STATISTICS**

<b>Constituent</b>	<b>Recommended Value</b>	<b>95% Confidence</b>		<b>Tolerance limits</b>	
		<b>Interval</b>		<b>1-<math>\alpha</math>=0.99, <math>\rho</math>=0.95</b>	
		<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>
Gold, Au (ppm)	0.885	0.871	0.898	0.869	0.900

*Prepared by:*  
*Ore Research & Exploration Pty Ltd*  
*December 2006*

## INTRODUCTION

OREAS reference materials (RM) are intended to provide a low cost method of evaluating and improving the quality of precious and base metal analysis of geological samples. To the analyst, they provide an effective means of calibrating analytical equipment, assessing new techniques and routinely monitoring in-house procedures. To the explorationist, they provide an important control in analytical data sets related to exploration from the grass roots level through to resource definition.

As a rule, only source materials exhibiting an exceptional level of homogeneity of the element(s) of interest are used in the preparation of these materials. This has enabled Ore Research & Exploration to produce a range of gold RM exhibiting homogeneity that matches or exceeds that of currently available international reference materials. In many instances RM produced from a single source are sufficiently homogeneous to produce a relatively coarse-grained form designed to simulate drill chip samples. These have a grain size of minus 3mm and are designated with a "C" suffix to the RM identification number. These standards are packaged in 1kg units following homogenisation and are intended for submission to analytical laboratories in subsample sizes of as little as 250g. They offer the added advantages of providing a check on both sample preparation and analytical procedures while acting as a blind standard to the assay laboratory. The more conventional pulped standards have a grain size of minus 75 microns and a higher degree of homogeneity. These standards are distinguished by a "P" suffix to the standard identification number. In line with ISO recommendations successive batch numbers are now designated by the lower case suffixes "a", "b", "c", "d", etc.

## SOURCE MATERIALS

OREAS 2Pd was prepared from a blend of oxidised ore and barren material taken from the flanks of a mineralised shear zone within Ordovician flysch sediments in the Blackwood area of central Victoria. The sedimentary succession hosting the shear zone consists predominantly of medium-grained greywackes together with subordinate interbedded siltstone and slate. Hydrothermal alteration in the vicinity of the mineralisation is indicated by the development of phyllite. The shear zone, in which gold grades attain a maximum, is manifested by foliated sericitic and chloritic fault gouge and goethitic quartz veins.

Although no ore mineragraphy or scanning electron microscopy has been undertaken to determine the nature of occurrence of the gold, the very homogeneous distribution on a mesoscopic scale and uniform concentration gradient away from the ore zone suggests the gold is extremely fine-grained and evenly disseminated. Limited percussion drilling indicates that sulphides are rare to absent at depth in the shear zone.

The approximate major and trace element composition of this oxidised, quartz-veined metagreywacke comprising gold ore standard OREAS 2Pd is given in Table 1. The constituents SiO<sub>2</sub> to Total are the means of duplicate XRF analyses determined using a borate fusion method, S and C are means of duplicate IR combustion furnace analyses, while the remaining constituents, Ag to Zr, are means of duplicate analyses determined by ICP-OES and ICP-MS.

Gold homogeneity has been evaluated and confirmed by INAA on twenty 0.5 gram sample portions and by a nested ANOVA program using conventional fire assay. The tolerance interval is determined from the INAA data while the recommended value and confidence

interval are based on a round robin program incorporating a total of 116 analyses at 17 laboratories.

## COMMINUTION AND HOMOGENISATION PROCEDURES

The gold-bearing basaltic material comprising OREAS 2Pd was prepared in the following manner:

- a) *jaw crushing to minus 3mm*
- b) *drying to constant mass at 105°C*
- c) *milling of the barren material to 98% minus 75 micron*
- d) *milling of the gold-bearing material to 100% minus 20 micron*
- e) *blending in appropriate proportions to achieve the desired grade*
- f) *bagging into 25kg sublots*

Table 1. Approximate major and trace element composition of gold-bearing reference material OREAS 2Pd; wt.% - weight percent; ppm - parts per million.

Constituent	wt.%	Constituent	ppm	Constituent	ppm	Constituent	ppm
SiO <sub>2</sub>	75.5	Ag	<0.05	Gd	5.0	Sb	62
TiO <sub>2</sub>	0.62	As	827	Hf	8.0	Sc	14.5
Al <sub>2</sub> O <sub>3</sub>	12.1	Ba	575	Ho	0.75	Sm	7.0
Fe <sub>2</sub> O <sub>3</sub>	4.84	Be	5.9	In	0.06	Sn	4.0
MnO	0.007	Bi	0.10	La	23	Sr	58
MgO	0.55	Cd	<0.5	Li	30	Ta	1.0
CaO	0.02	Ce	82	Lu	0.33	Tb	0.72
Na <sub>2</sub> O	0.12	Co	<5	Mo	2.0	Te	<0.2
K <sub>2</sub> O	2.83	Cs	6.9	Nb	15	Th	14.7
P <sub>2</sub> O <sub>5</sub>	0.08	Cu	36	Nd	34	U	3.4
LOI	2.88	Dy	4.0	Ni	31	W	10.0
Total	99.5	Er	2.0	Pb	20	Y	29
C	0.06	Eu	1.3	Pr	10.1	Yb	2.2
S	0.01	Ga	16	Rb	164	Zn	66
						Zr	240

## ANALYSIS OF OREAS 2Pd

Seventeen laboratories participated in the analytical program and are listed in the section headed Participating Laboratories. To maintain anonymity laboratories have been randomly designated the letter codes A through Q. With the exception of Laboratory Q, each laboratory received two scoop-split 120 gram subsamples from each of two 1kg test units taken at regular intervals during the bagging stage. They were instructed to carry out one 20-50 gram fire assay gold determination on each subsample. This two-stage nested design for the interlaboratory programme was amenable to analysis of variance (ANOVA) treatment and enabled a comparative assessment of within- and between-unit homogeneity.

For the determination of a statistical tolerance interval, a 10 gram scoop split was taken from each of the twenty test units and submitted to Laboratory Q for gold assay via instrumental neutron activation analysis on a reduced analytical subsample weight of 0.5 gram.

Individual assay results for the fire assay and INAA methods are presented in Tables 2 and 3 together with the mean, median, standard deviations (absolute and relative) and percent deviation of the lab mean from the corrected mean of means for each data set (PDM<sup>3</sup>). Interlaboratory agreement of the means is good with all labs lying within 5% relative of the corrected mean of means of 0.885 ppm Au.

## STATISTICAL EVALUATION OF ANALYTICAL DATA FOR OREAS 2Pd

### Recommended Value and Confidence Limits

The recommended value was determined from the mean of means of accepted replicate values of accepted laboratory data sets A to Q according to the formulae

$$\bar{x}_i = \frac{1}{n_i} \sum_{j=1}^{n_i} x_{ij}$$

$$\dot{x} = \frac{1}{p} \sum_{i=1}^p \bar{x}_i$$

where

$x_{ij}$  is the  $j$ th result reported by laboratory  $i$ ;

$p$  is the number of participating laboratories;

$n_i$  is the number of results reported by laboratory  $i$ ;

$\bar{x}_i$  is the mean for laboratory  $i$ ;

$\dot{x}$  is the mean of means.

The confidence limits were obtained by calculation of the variance of the consensus value (mean of means) and reference to Student's- $t$  distribution with degrees of freedom ( $p-1$ ):

$$\hat{V}(\ddot{x}) = \frac{1}{p(p-1)} \sum_{i=1}^p (\bar{x}_i - \dot{x})^2$$

$$\text{Confidence limits} = \dot{x} \pm t_{1-x/2}(p-1) \left( \hat{V}(\ddot{x}) \right)^{1/2}$$

where  $t_{1-x/2}(p-1)$  is the  $1-x/2$  fractile of the  $t$ -distribution with  $(p-1)$  degrees of freedom.

The distribution of the values is assumed to be symmetrical about the mean in the calculation of the confidence limits.

The test for rejection of individual outliers from each laboratory data set was based on  $z$  scores (rejected if  $|z_i| > 2.5$ ) computed from the robust estimators of location and scale,  $T$  and  $S$ , respectively, according to the formulae

$$S = 1.483 \frac{\text{median} / x_j - \text{median} (x_i)}{j=1 \dots n \quad i=1 \dots n}$$

$$z_i = \frac{x_i - T}{S}$$

where

*T* is the median value in a data set;

*S* is the median of all absolute deviations from the sample median multiplied by 1.483, a correction factor to make the estimator consistent with the usual parameter of a normal distribution.

Table 2. Analytical results for gold (ppm) in OREAS 2Pd by 50g fire assay/ flame AAS/OES/ES (Std. Dev. - one sigma standard deviation; RSD – one sigma relative standard deviation; PDM<sup>3</sup> – percent deviation of lab mean from corrected mean of means; outliers in bold).

Replicate	Lab A	Lab B	Lab C	Lab D	Lab E	Lab F	Lab G	Lab H	Lab I	Lab J
	FA*OES	FA*AAS	FA*AAS	FA*AAS	FA*AAS	FA*OES	FA*OES	FA*AAS	FA*AAS	FA*AAS
1	0.898	0.903	0.890	0.870	0.860	0.920	0.960	0.896	0.860	0.804
2	<b>0.811</b>	0.895	0.890	0.883	0.920	0.930	0.935	0.898	0.800	0.835
3	0.904	0.897	0.890	0.856	0.940	0.940	0.963	0.895	0.840	0.812
4	0.910	0.888	0.890	0.865	0.890	0.930	0.980	<b>0.874</b>	0.810	0.813
5	0.898	0.900	0.880	0.879	0.910	0.920	0.968	0.886	0.840	0.823
6	0.869	<b>0.873</b>	0.870	0.887	0.900	0.920	0.935	0.894	0.860	0.832
Mean	0.882	0.893	0.885	0.873	0.903	0.927	<b>0.957</b>	0.891	0.835	<b>0.820</b>
Median	0.898	0.896	0.890	0.875	0.905	0.925	0.962	0.895	0.840	0.818
Std.Dev.	0.037	0.011	0.008	0.012	0.027	0.008	0.018	0.009	0.025	0.012
Rel.Std.Dev.	4.24%	1.22%	0.95%	1.35%	3.02%	0.88%	1.91%	1.02%	3.01%	1.49%
PDM <sup>3</sup>	-0.34%	0.90%	0.03%	-1.29%	2.11%	4.74%	8.15%	0.66%	-5.62%	-7.33%

Table 2. Continued.

Replicate	Lab K	Lab L	Lab M	Lab N	Lab O	Lab P
	FA*AAS	FA*AAS	FA*AAS	FA*AAS	FA*OES	FA*AAS
1	0.883	0.888	<b>0.870</b>	<b>0.850</b>	0.836	<b>0.900</b>
2	0.893	0.893	0.900	0.890	0.851	0.870
3	0.828	0.886	0.900	0.880	0.840	0.880
4	0.905	<b>0.863</b>	0.900	0.880	0.819	0.880
5	0.908	0.883	0.910	<b>0.910</b>	0.813	0.890
6	0.833	0.892	0.910	0.880	0.858	0.880
Mean	0.875	0.884	0.898	0.882	0.836	0.883
Median	0.888	0.887	0.900	0.880	0.838	0.880
Std.Dev.	0.036	0.011	0.015	0.019	0.018	0.010
Rel.Std.Dev.	4.07%	1.25%	1.64%	2.20%	2.10%	1.17%
PDM <sup>3</sup>	-1.10%	-0.06%	1.54%	-0.34%	-5.49%	-0.16%

The same principles were applied in testing for outlying laboratory means. In certain instances statistician's prerogative has been employed in discriminating outliers. Individual and mean outliers are shown in bold type in Tables 2 and 3, and have been omitted in the determination of recommended values.

The magnitude of the confidence interval is inversely proportional to the number of participating laboratories and interlaboratory agreement. It is a measure of the reliability of the recommended value, i.e. the narrower the confidence interval the greater the certainty in the recommended value.

Table 3. Analytical results for gold (ppm) in OREAS 2Pd by instrumental neutron activation analysis on 0.5 gram analytical subsample weights (abbreviations as for Table 2).

Replicate Number	Lab Q INAA
1	0.949
2	0.837
3	0.847
4	0.818
5	0.946
6	0.983
7	0.903
8	0.959
9	0.841
10	0.851
11	0.888
12	0.860
13	0.978
14	0.916
15	0.890
16	0.900
17	0.881
18	0.884
19	0.920
20	0.849
Mean	0.895
Median	0.889
Std.Dev.	0.049
Rel.Std.Dev.	5.48%
PDM <sup>3</sup>	1.16%

Table 4. Recommended value and 95% confidence interval

Constituent	Recommended value	95% Confidence interval	
		Low	High
Gold, Au (ppm)	0.885	0.871	0.898

### Statement of Homogeneity

The variability of replicate assays from each laboratory is a result of both measurement and subsampling errors. In the determination of a statistical tolerance interval it is therefore necessary to eliminate, or at least substantially minimise, those errors attributable to measurement. One way of achieving this is by substantially reducing the analytical subsample weight to a point where most of the variability in replicate assays is due to inhomogeneity of the reference material and measurement error becomes negligible. This approach was adopted in the INAA data set (Table 3) where a 0.5 gram subsample weight was employed. The homogeneity was determined from tables of factors for two-sided tolerance limits for normal distributions (ISO Guide 3207) in which

$$\text{Lower limit is } \bar{x} - k'_2(n, p, 1 - \alpha)s$$

$$\text{Upper limit is } \bar{x} + k'_2(n, p, 1 - \alpha)s$$

where

$n$  is the number of results reported by laboratory  $Q$ ;

$1 - \alpha$  is the confidence level;

$p$  is the proportion of results expected within the tolerance limits;

$k_2'$  is the factor for two-sided tolerance limits ( $m, \sigma$  unknown);

and  $s$  is computed according to the formula

$$s = \left[ \frac{\sum_{j=1}^n (x_j - \bar{x})^2}{n - 1} \right]^{1/2}$$

**No individual outliers were removed from the results prior to the calculation of tolerance intervals.**

Table 5. Recommended value and tolerance interval.

Constituent	Recommended value	Tolerance interval $1-\alpha=0.99, p=0.95$	
		Low	High
Gold, Au (ppm)	0.885	0.869	0.900

From the INAA data set an estimated tolerance interval of  $\pm 0.01$  ppm at an analytical subsample weight of 50 gram was obtained (using the sampling constant relationship of Ingamells and Switzer, 1973) and is considered to reflect the actual homogeneity of the material under test. The meaning of this tolerance interval may be illustrated for gold (refer Table 5), where 99% of the time at least 95% of 50g-sized subsamples will have concentrations lying between 0.869 and 0.900 ppm. Put more precisely, this means that if the same number of subsamples were taken and analysed in the same manner repeatedly, 99% of the tolerance intervals so constructed would cover at least 95% of the total population, and 1% of the tolerance intervals would cover less than 95% of the total population (ISO Guide 35).

### Performance Gates

Performance gates provide an indication of a level of performance that might reasonably be expected from a routine laboratory being monitored by this standard in a QA/QC program. They incorporate errors attributable to bias, precision and inhomogeneity and are simply calculated from the standard deviation of the pooled individual analyses (fire assay data only) generated from the certification program. All individual and lab dataset (batch) outliers are removed prior to determination of the standard deviation. These outliers can only be removed after the absolute homogeneity of the CRM has been independently established, i.e. the outliers must be confidently deemed to be analytical rather than arising from inhomogeneity of the CRM.

Table 6. Proposed performance gates for 2Pd

Constituent	Recommended value	Performance Gates					
		1SD		2SD		3SD	
		Low	High	Low	High	Low	High
Gold, Au (ppm)	0.885	0.855	0.914	0.826	0.943	0.797	0.973

Performance gates have been calculated for one, two and three standard deviations of the accepted pool of certification data and are presented in Table 6. As a guide these intervals may be regarded as informational (1SD), warning or rejection for multiple outliers (2SD), or rejection for individual outliers (3SD) in QC monitoring although their precise application should be at the discretion of the QC manager concerned.

## PARTICIPATING LABORATORIES

Acme Analytical Laboratories Ltd, Vancouver, BC, Canada  
 Activation Laboratories, Ancaster, Ontario, Canada  
 Amdel Laboratories, Perth, WA, Australia  
 Amdel Laboratories Ltd, Thebarton, SA, Australia  
 ALS Chemex, Garbutt, QLD, Australia  
 ALS Chemex, La Serena, Chile, South America  
 ALS Chemex, Reno, Nevada, USA  
 ALS Chemex, Val-d'or, Quebec, Canada  
 ALS Chemex, Vancouver, BC, Canada  
 ANSTO, Lucas Heights, NSW, Australia  
 Genalysis Laboratory Services Pty Ltd, Maddington, WA, Australia  
 Intertek Testing Services, Jakarta, Indonesia  
 McPhar Laboratories, Legaspi Village, Makati City, Philippines  
 OMAC Laboratories Ltd, Loughrea, County Galway, Ireland  
 SGS Indonesia, Balikpapan, Kalimantan Timur, Indonesia  
 SGS, Townsville, Qld, Australia  
 SGS, Welshpool, WA, Australia  
 Ultra Trace, Canning Vale, WA, Australia

## PREPARER AND SUPPLIER OF THE REFERENCE MATERIAL

The gold ore reference material, OREAS 2Pd has been prepared and certified and is supplied by:

Ore Research & Exploration Pty Ltd  
 6-8 Gatwick Road  
 Bayswater North, VIC 3153  
 AUSTRALIA

Telephone (03) 9729 0333 International +613-9729 0333  
 Facsimile (03) 9729 4777 International +613-9729 4777

It is available in unit sizes of 60g foil packets and 1kg jars.

## **INTENDED USE**

OREAS 2Pd is a reference material intended for the following:

- i) for the calibration of instruments used in the determination of the concentration of gold;
- ii) for the verification of analytical methods for gold;
- iii) for the preparation of secondary reference materials of similar composition;
- iv) as an arbitration sample for commercial transactions.

## **STABILITY AND STORAGE INSTRUCTIONS**

OREAS 2Pd has been prepared from a blend of gold-bearing and gold-free sedimentary materials obtained from the oxidised zone of a mineralised shear zone. The CRM is therefore considered to have long-term stability under normal storage conditions.

## **INSTRUCTIONS FOR THE CORRECT USE OF THE REFERENCE MATERIAL**

The recommended value for OREAS 2Pd refers to the concentration level of gold after removal of hygroscopic moisture by drying in air to constant mass at 105<sup>0</sup> C. If the reference material is not dried by the user prior to analysis, the recommended value should be corrected to the moisture-bearing basis.

## **LEGAL NOTICE**

Ore Research & Exploration Pty Ltd has prepared and statistically evaluated the property values of this reference material to the best of its ability. The Purchaser by receipt hereof releases and indemnifies Ore Research & Exploration Pty Ltd from and against all liability and costs arising from the use of this material and information.

**CERTIFYING OFFICER:** Dr Paul Hamlyn

## **REFERENCES**

Ingamells, C. O. and Switzer, P. (1973), *Talanta* 20, 547-568.

ISO Guide 35 (1985), Certification of reference materials - General and statistical principals.

ISO Guide 3207 (1975), Statistical interpretation of data - Determination of a statistical tolerance interval.