

# **‘JD Claims’ Technical Report**

## **Prospecting and Geochemical Survey of Selected Rock Samples**

**JD 89-96 Claims, Grant #'s YE 85021 - YE 85028**

**West of Km 155, Campbell Highway**

**UTM Center - 9v 466700 E, 6789900 N**

**Claims Ownership - 100% Everett Van Krichbaum**

**Work Primarily Done on Claim JD 90  
Aug 4, 2012**

**on**

**Claim Maps 105 H/05**

**Watson Lake Mining District**

**Report by Van Krichbaum**

## TABLE OF CONTENTS

|   |    |
|---|----|
| 1. INTRODUCTION   |    |
| A. LOCATION & ACCESS .....  | 3  |
| B. CLIMATE, TOPOGRAPHY & VEGETATION .....                             | 3  |
| C. CLAIM STATUS & PROPERTY MAP .....                                  | 4  |
| D. PREVIOUS WORK HISTORY .....  | 5  |
| E. 2012 WORK PROGRAM .....  | 6  |
| F. SAMPLE PREPARATION & ANALYTICAL PROCEDURE .....                    | 7  |
| 2. GEOLOGY  |    |
| A. REGIONAL GEOLOGY .....   | 8  |
| B. PROPERTY GEOLOGY .....   | 10 |
| 3. ROCK SAMPLES   |    |
| A. PRESENTATION OF RESULTS .....                                      | 11 |
| 4. DISCUSSION .....   | 14 |
| 5. CONCLUSIONS & RECOMMENDATIONS .....                                | 15 |
| 6. REFERENCES .....   | 15 |
| 7. STATEMENT OF EXPENDITURES .....                                    | 16 |
| 8. STATEMENT OF QUALIFICATIONS .....                                  | 17 |
| 9. APPENDICES   |    |
| A. Table 3. JD Assay Rock Descriptions .....                          | 17 |
| B. Table 4. Sample Locations .....                                    | 18 |
| C. Table 5. Analytical Results - Rock Samples .....                   | 18 |
| D. Table 6. Yukon-Tanana RGS Silt Percentile Threshold Cut-offs ..... | 20 |

## 1. INTRODUCTION

### LOCATION & ACCESS

The Julsey D claims are located 3.5 Km west of the Campbell Highway at Km 155 and can be reached by a 4 Km hike from Km 157 or motorized ATV access to within 3.6 Km using the gazetted trail at Km 160 to the West and overland cross-country. Please see the map on pages 6 and 13 for the traverse route used for this assessment work.

### CLIMATE

Most of the Yukon has a subarctic climate (Köppen climate classification Dfc), characterized by long cold winters and brief warm summers. The climate is generally very dry, with little precipitation, but is considerably wetter in the southeast. Precipitation is much greater in the mountains, and the snowpack continues to melt well into the summer, sometimes resulting in high water in July or August.

### TOPOGRAPHY

The claims area covers the southern slope of a rounded mountain of the southern Campbell Range which rises to the west of the Robert Campbell Highway north of Tuchtua Junction at Km 155. The 1730m mountain rises 800m from the Frances River Valley floor (930m). The claims area slope is moderately steep south-facing down to the base at Jules Creek. Treeline is approximately 1400m elevation.

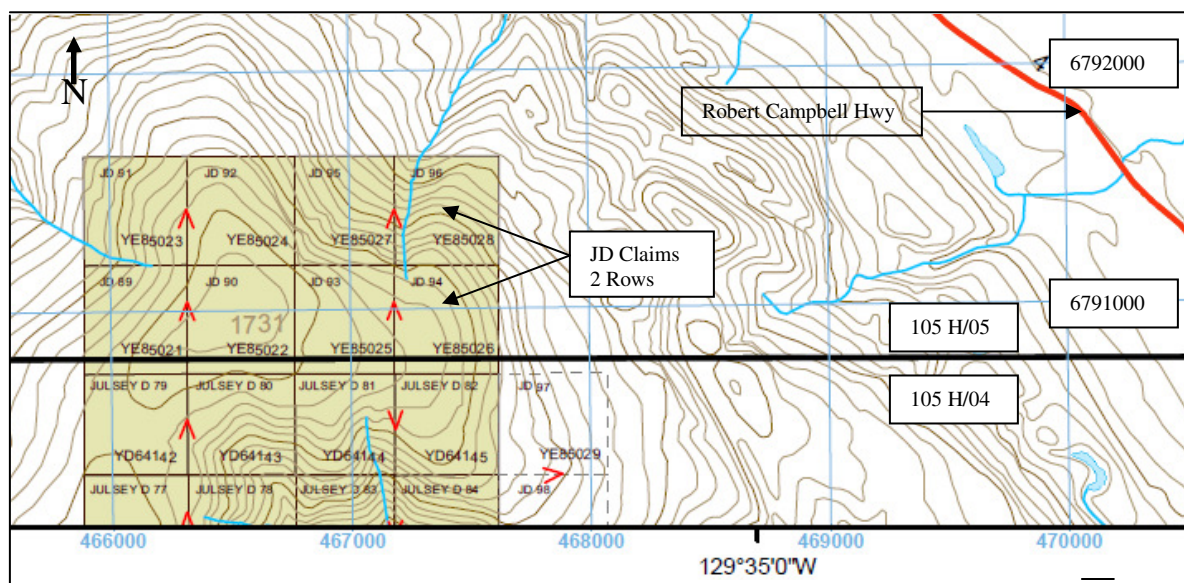
### VEGETATION

In southern Yukon, Black Spruce (*Picea mariana*), White Spruce (*Picea glauca*), Quaking Aspen (*Populus tremuloides*) and Balsam poplar (*Populus balsamifera*) are found throughout much of the territory. Although relatively uncommon, the Alaska birch (*Betula neoalaskana*) is also found in most areas. The Lodgepole Pine (*Pinus contorta*) reaches its northern extreme the south-central part of the territory, while Tamarack (*Larix laricina*) is found in the southeast and the Sub-Alpine fir (*Abies lasiocarpa*) is found at higher elevations in the southern part of the Territory.

## CLAIM STATUS & PROPERTY MAP

| Grant Number | Claim Name | Claim # | Claim Owner                         | Recording Date | Staking Date | Expiry Date |
|--------------|------------|---------|-------------------------------------|----------------|--------------|-------------|
| YE85021      | JD         | 89      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85022      | JD         | 90      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85023      | JD         | 91      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85024      | JD         | 92      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85025      | JD         | 93      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85026      | JD         | 94      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85027      | JD         | 95      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |
| YE85028      | JD         | 96      | <u>Everett Van Krichbaum - 100%</u> | 2012-07-30     | 2012-07-24   | 2014-07-30  |

Table 1. JD Claims Status - Watson Lake Mining District. *Operator: Van Krichbaum*



Map 1. JD 89-96 Claims Map. *Southeast border of 105 H/05, northeast border of 105 H/04.*

## PREVIOUS WORK HISTORY

Minfile Occurrence Number 105H 085; Occurrence Name BEANS; Occurrence Type Hard-rock; Location: 61 °13'15" N -129 °38'16" W; NTS Mapsheet 105H/04.

Claims (Previous & current) BEANS, CAMPBELL, CHIEF, GOFHER, JADE, JOE, LIMA, PIKA, TACK, TRAPPER, JULSEY D

Beginning in Oct/83 the occurrence was staked within various small claim groups including Beans cl 1 (YA70692) by J. and H. Caesar, Pika cl 1-4 (YA70700) by H. Caesar, and Jade cl 1 (YA91081) by B. McGeorge. T. Dickson staked Joe cl 1 (YA71347) 3 km to the northwest in Jul-Sep/84.

H. Caesar, T. Dickson and others staked Campbell cl 1-2 (YA73625) 2 km to the north in Aug/85 and Jun/86. G. Edzerza staked Lima cl 1-4 (YA99397) 1 km northeast of the Jade claim in Sep/86. J. Chief tied on Chief cl 1-2 (YB14552) to the south in Jul/88. Later in the month, H. Caesar staked Gofpher cl 1 (YB14426) and D. Morris staked Trapper cl 1 (YB14427) beside the Jade claim. No assessment reports were filed for any of these claim groups.

Restaked within Tack cl 1-550 (YB78704) in Mar/96 by Westmin Resources Ltd, which explored with soil and stream sediment sampling later in the year. In Mar/98 Westmin was acquired by Boliden Ltd and in Sep/98 ownership in the claims was transferred to Boliden Westmin Limited. In Apr/99 the claims were transferred to Archer Cathro and Associates (1981) Ltd. The last remaining claims lapsed in Mar/2000.

The original claims were mostly staked over units located in the footwall of the Jules Creek Thrust. According to Murphy (2001) nephrite jade is locally developed near the basal contact of the ultramafic body (unit PPum) and is the presumed cause of the staking activity in the 1980's.

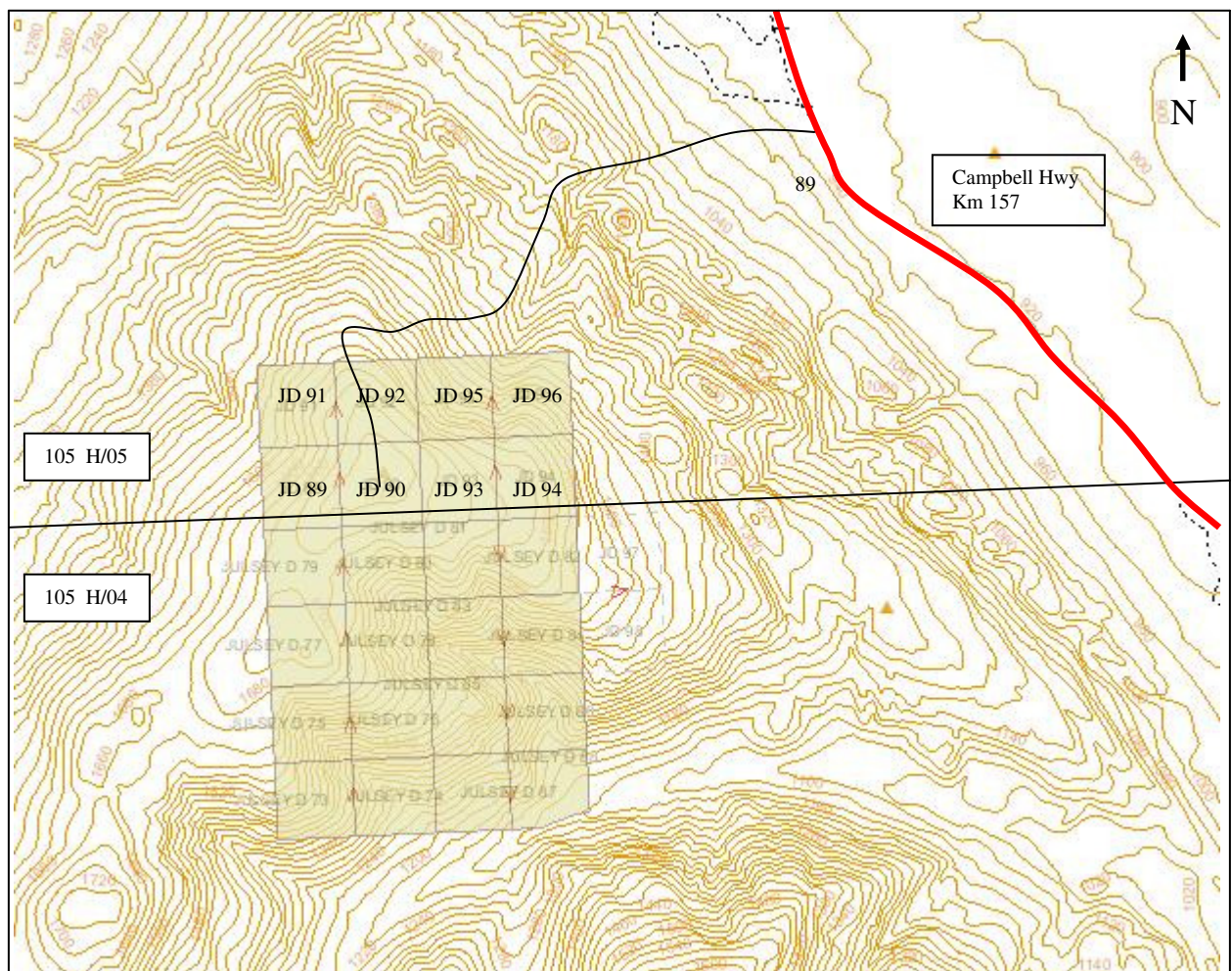
Wide spaced soil sampling by Westmin, searching for volcanogenic massive sulphide (VMS) deposits, yielded only spotty Cu (<195 ppm), Pb (<26 ppm) and Zn (<140ppm) values. Gold analysis returned only background values (Terry, 1997). Additional soil sampling by Westmin in 1997 yielded a small gold in soil anomaly (<90 ppb) over a chert - ultramafic contact (Terry et al, 1998). Spotty soil anomalies were returned for Cu (<105 ppm), Pb (<36 ppm) and a small coherent, multi sample, anomaly for Zn (<1125 ppm). Geologic mapping by Westmin in 1996 and 1997 failed to locate stratigraphy similar to that hosting the Wolverine VMS deposit (Minfile Occurrence #105G 072) and the Tack claims were allowed to gradually lapse.

The Julsey D claims were staked in 2011, and added to on the north side with the JD claims in 2012 by Van Krichbaum. A very small silt sampling program during staking yielded a significant Au anomaly (52 ppb). This prompted a very small "ridge and spur" soil sampling program in 2012 that was conducted on the ridge at the top of the basin and to the north. A few anomalous assays were obtained upslope above the previous Au anomalous silt for assessment work.

## 2012 WORK PROGRAM

Work on the JD claims was carried out by Van Krichbaum on Aug. 4, 2012. The traverse access was a 4 km hike from approximately Km 157 up the north shoulder of the east flowing stream. See the map below for the traverse route. Prospecting was carried out by walking the ground, observing outcrops, etc. using standard prospecting tools. Rock samples sent for assay were collected within the JD 90 claim on the 'flat' rounded top of the mountain ridge. Rock samples were marked with an indelible pen by GPS Waypoint # and placed into a large plastic sample bag marked JD Claims. The 6 rock sample descriptions, plus 1 from the highway gravel pit at Km 160 are in the Appendix, plus their UTM's.

An overview of the access traverse is shown on the map below.



Map 2. Traverse Overview Map. *Traverse from Km 157, Robert Campbell Hwy. to JD 90 claim. Return route was the same traverse in reverse.*

Interesting highlights are noted in the Discussion section and in the Rock Samples section. Geophysical magnetic maps were examined "on line" from the Yukon MapPlace Online website and are presented in the Regional Geology section along with regional geology mapping by Murphy (2000, 2001). Please refer to the Property Geology section for the map showing the JD claims local area geology. Locations and assay result highlights for the rock samples are presented on 2 maps in the Rock Samples section.

## SAMPLE PREPARATION & ANALYTICAL PROCEDURES

Selected rock samples were sent for assay to Acme Analytical Lab in Vancouver, B.C. Soil samples were assayed for 36 elements by the ICP-MS method 'Group 1DX2', except when the sample size provided insufficient pulp (>15g), then the 'Group 1DX1' method was instructed to be used on a 0.5g pulp sample. The larger split size was selected for more representative Au analysis. Sample splits were leached in hot (95°C) Aqua Regia. Refractory and graphitic samples possibly limited Au solubility. Sample analysis quality control was done by Acme Analytical Labs inserting blanks and running duplicates. Quality control results are presented in the Appendix with the Acme assay certificates.

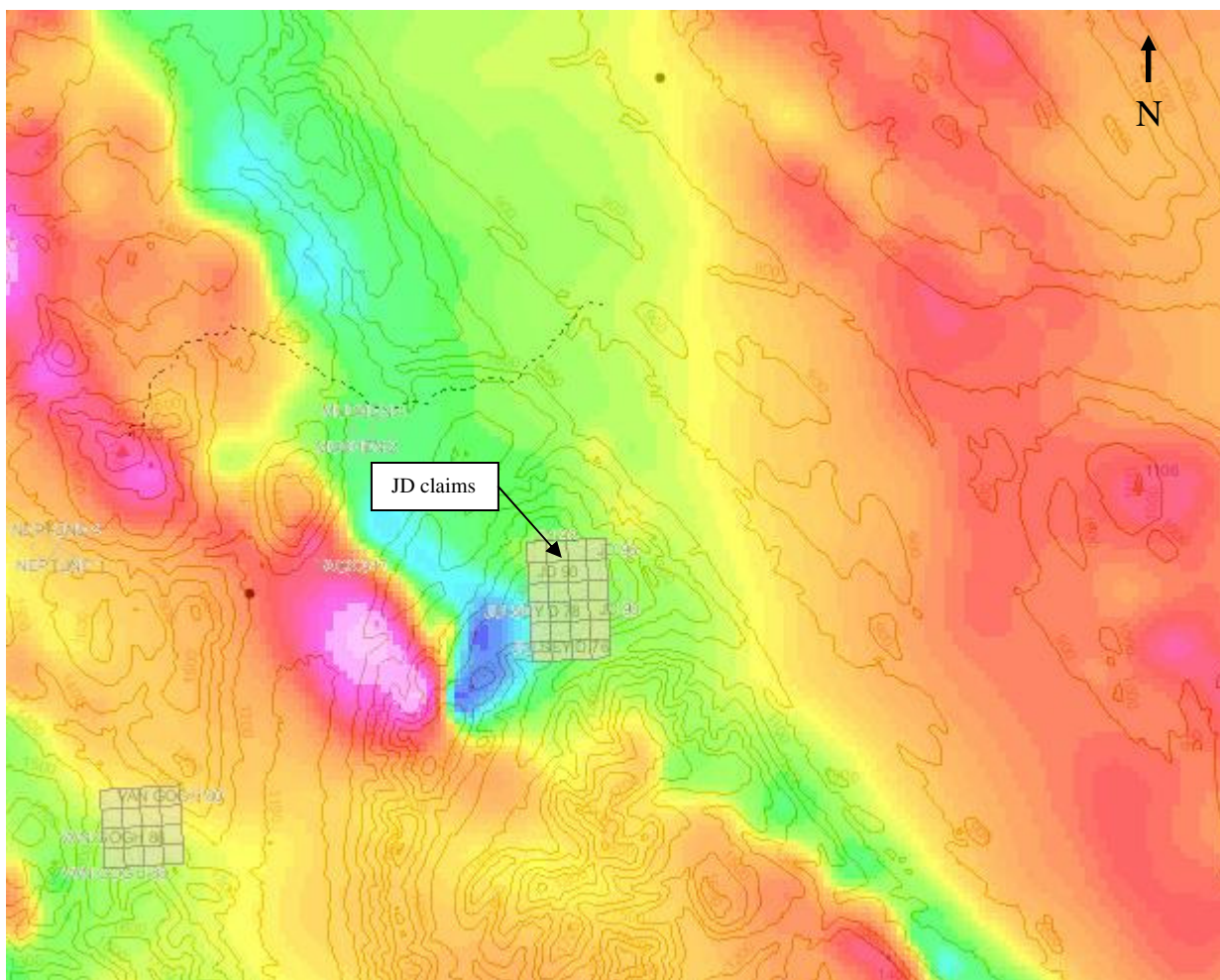
## **2. GEOLOGY**

### REGIONAL GEOLOGY

The area lies within the Yukon -Tanana Terrane which in the Frances Lake area consists of several fault or unconformity-bound successions. These rock packages are bound to the southwest by the Tintina Fault zone and on the northeast by the Finlayson Lake Linear. Prominent regional scale thrust faults are along the Jules Creek Thrust.

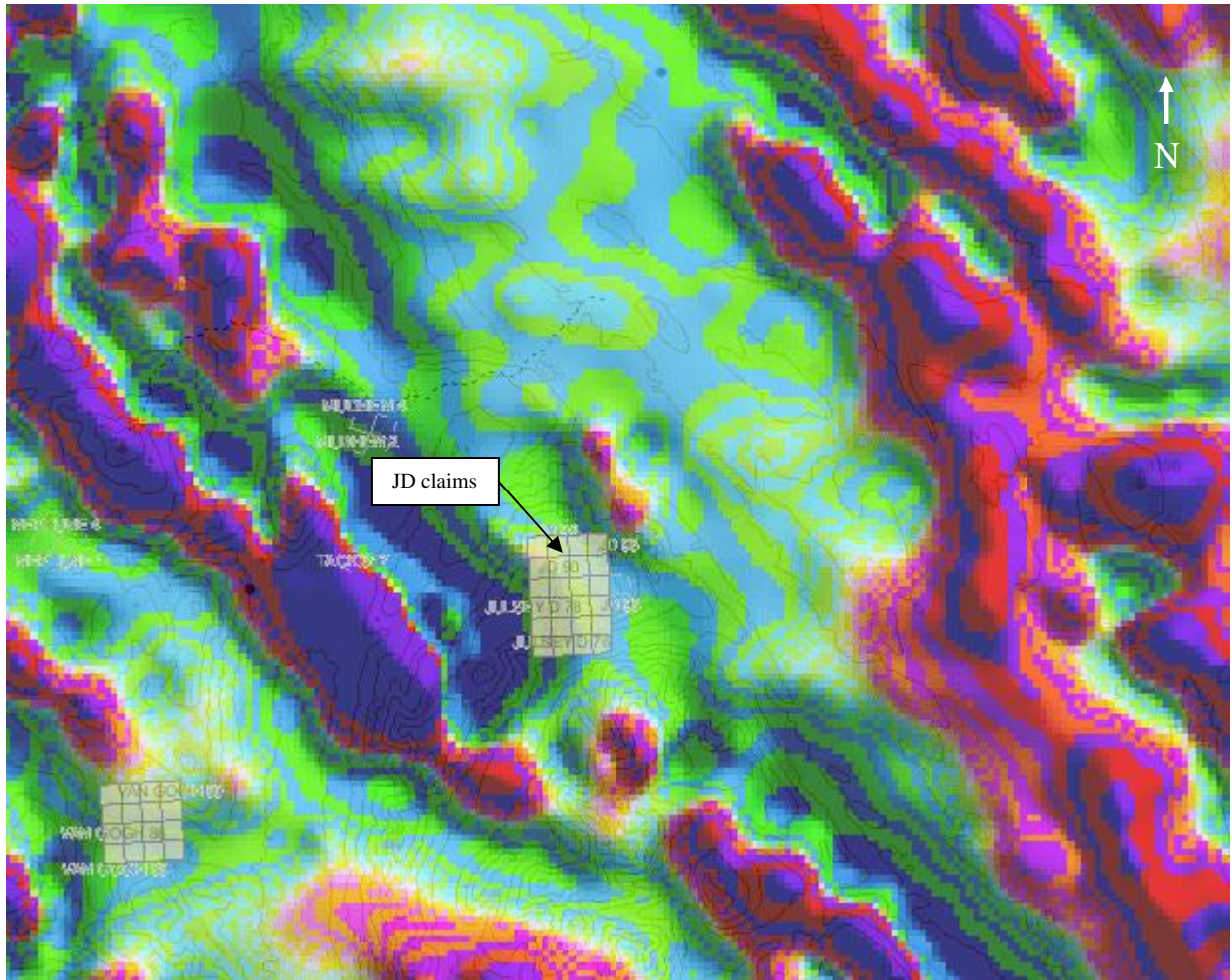
Devine et al. (2004) reports the southern Campbell Range is underlain by greenschist facies volcanoclastic, epiclastic and sedimentary units of the Tutchitua River and Money Creek formations. Stratigraphy is deformed by at least three syn- to post-Early Permian folding events. Northwest-striking, high-angle faults imbricate the folded metasedimentary package with sheets of serpentinite. These rocks are juxtaposed against basinal rocks of the Fortin Creek group to the east, along the Jules Creek Thrust fault.

The aeromag map below and on the next page show prominent northwest linear trends in the regional geology. Both maps were acquired from the Yukon YGS MapPlace Online website.



Map 3. Residual Total Field Aeromag. *JD claims area.* (From Yukon MapPlace web site).

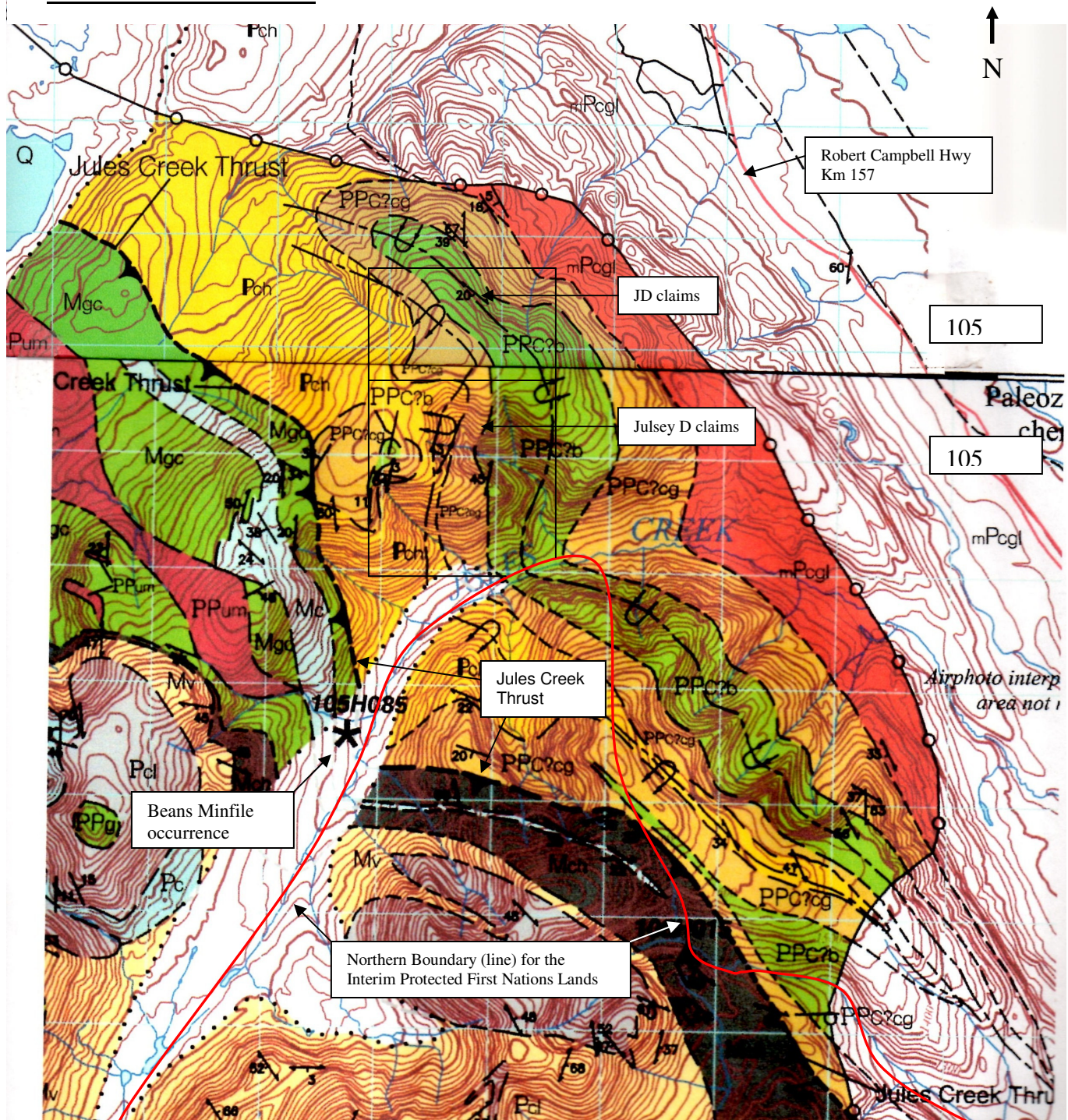
The Residual Total Field Aeromag map shows a magnetic low to the west of the JD claim block. This corresponds to the Campbell Range Basalt (unit PPC?b) mafic meta-volcanic unit on the regional geologic mapping done by **Don Murphy in Yukon Open File 2000-16** (105H/ 04) shown on page 10. Normally a mafic unit would be a magnetic high, so the rock unit has perhaps been affected by thermal alteration of the magnetite. This mag low and the description by Murphy of **PPC?b** as mafic meta-volcanic rock with carbonate throughout points to a listwaenite affinity.



Map 4. 1<sup>st</sup> Vertical Derivative Aeromag. *JD claims area.* (From Yukon MapPlace web site).

The 1<sup>st</sup> Vertical Derivative Aeromag map also shows a magnetic low just west of the JD claim block. This corresponds to the Campbell Range Basalt (unit PPC?b) mafic meta-volcanic unit on the regional geologic mapping done by [Don Murphy in Yukon Open File 2000-16](#) (105H/ 04) shown on page 10. Normally a mafic unit would be a magnetic high, so the rock unit has perhaps been affected by thermal alteration of the magnetite. This mag low and the description by Murphy of **PPC?b** as mafic meta-volcanic rock with carbonate throughout points to a listwaenite affinity. Interesting magnetic anomalies just to the northeast of the Julsey D claims are targets for future exploration.

## PROPERTY GEOLOGY



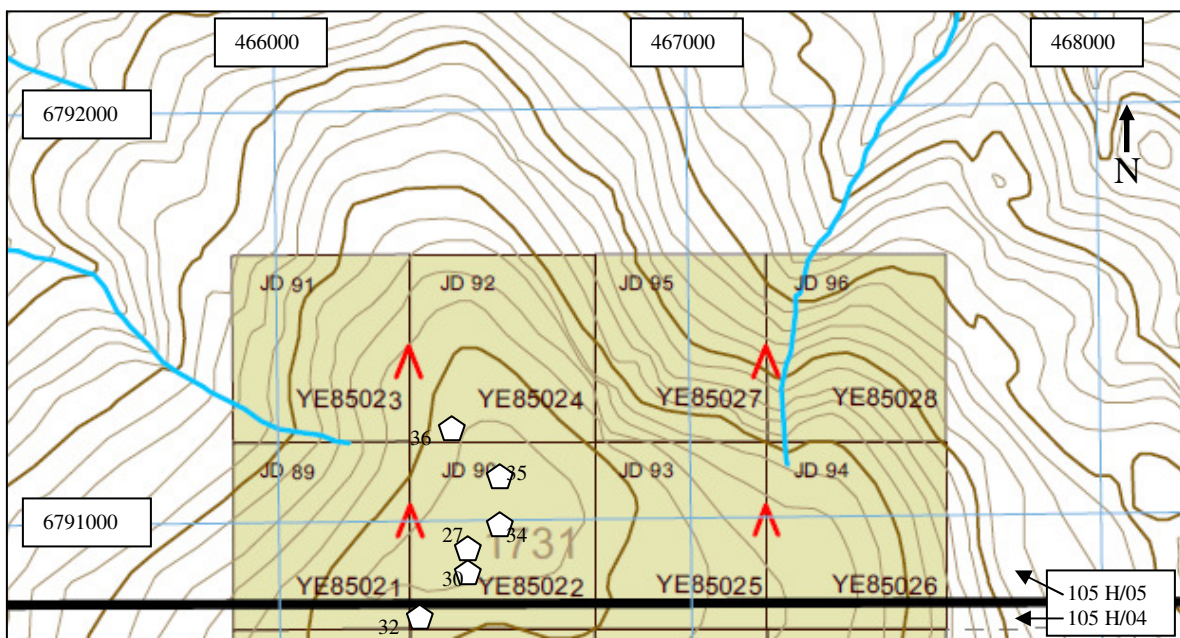
Map 5. JD area Geology Map. Area of interest around the JD claims contains the Jules Creek Thrust Fault. This area is folded (overturned anticline and syncline) and contains the rocks of interest, **PPC?cg** (ferruginous breccia, local dolomitic sandstone) capped by mafic meta-volcanic rock with carbonate throughout (**PPC?b**). The geology is compiled from Yukon Open File 2000-16 (105H/ 04) and Yukon Open File 2000-17 (105H/ 05) by Murphy (2000).

Recent mapping by Murphy (2000, 2001) of the Yukon Geology Program shows the Beans occurrence (Minfile 105H 085) lying on or very close to the Jules Creek Thrust. In the occurrence area the Jules Creek Thrust sheet consists of a Mississippian intermediate volcanic unit (unit **Mv**) overlying two Pennsylvanian and/or Lower Permian units consisting of mixed sediments (unit **Pcl**) including carbonaceous argillite, chert, matrix supported diamictite and a massive to thickly bedded marble (unit **Pc**). The footwall of the thrust consists of Pennsylvanian and/or Lower Permian argillite and chert (unit **Pch**), ferruginous tectonite-clast pebble and cobble breccia and other siliciclastics (unit **PPC?cg**) and Campbell Range Basalt (unit **PPc?b**) mafic meta-volcanics (Murphy, 2000). Pennsylvanian and/or Permian meta gabbro (unit **PPg**) and variably serpentinized ultramafic rock (unit **PPum**) are found higher in the section. The area is underlain by a northwest trending ultramafic body (unit **PPum**) within a medium to coarse grained, foliated actinolite-plagioclase-chlorite meta gabbro (unit **PPg**) (Murphy, 2000, Terry et al., 1998). Three main units appear on the JD property - units **PPc?b**, **PPC?cg** and **Pch**.

### 3. ROCK SAMPLES

#### PRESENTATION OF RESULTS

Six rock samples that were collected from the JD 90 claim were chosen for assay in the late fall in 2012. One rock from a gravel pit at Km 160 was also sent for assay. The focus of the rock sampling program was to collect green chrome? chalcedony rocks for possible gemstone evaluation. Other rocks collected from the same area were of listwaenite affinity, collected to test for Au.

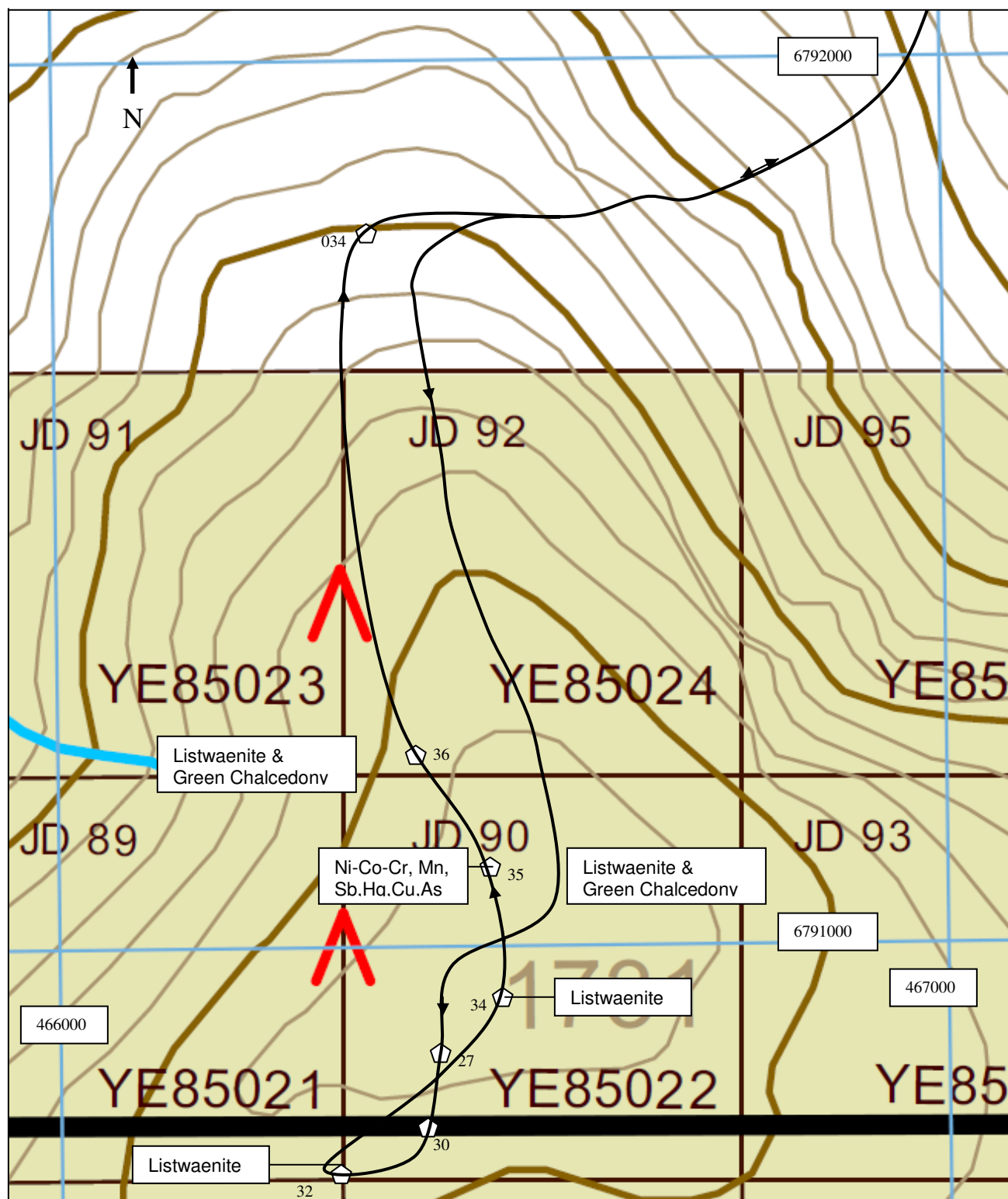


Map 6. Locations Overview of Rock Samples Described in this Report.

The Google Earth image below shows the 6 rock sample locations that were collected associated with the JD claims. These are placed based on their GPS locations, as are the JD Claim posts. The rock sample locations are in the Appendix by UTM coordinates.



Map 7. Sample Locations Map. *Google Earth image showing JD rock sample locations (circles and flag) that were sent for assay or otherwise discussed in this report. View looking north.*



Map 8. Detailed Traverse and Locations of Rock Sample Collected.

#### 4. DISCUSSION

The JD claims were staked after the Julsey D claims because the Julsey D property results from a very small silt sampling program was promising from a geochemical standpoint. The NTR 348 silt sample for the south-facing basin that comprises the majority of the Julsey D property showed for a potential gold deposit upslope, being very anomalous for gold (98<sup>th</sup> percentile) and anomalous for As (90<sup>th</sup> percentile) and extremely anomalous (>99<sup>th</sup> percentile) for Hg when compared to the Yukon-Tanana RGS Silt Percentile Threshold Cut-offs Table in the Appendix. Cu, Ni and Co results for the basin indicate high potential for a Ni-Cu-Co deposit as well. Rock that appeared to be green chalcedony was observed at that time, and this work program was designed to quickly sample the quality and size of the deposit for gemstone use. Listwaenite type rocks were also encountered and samples sent for assay along with some green chalcedony.

The geochemical and structural features of the southern basin suggest a model of hot-spring Au-Ag as described by Panteleyev (1996), being a Au (Ag, Hg byproduct) commodity deposit type. He states "In some cases, serpentized ultramafic and mafic rocks in major fault zones in areas of post-faulting volcanic activity are mineralized." The basin above the NTR 348 silt sample that was very highly anomalous for Au and Au pathfinder elements is almost entirely within the mafic meta-volcanics unit (**PPc?b**). The rock collected in this sampling program is also in that geological unit.

The presence of rock outcrop with listwaenite characteristics was found at the north edge of the Julsey D claim block and at least 300m further north beyond the NTR 348 silt sample drainage basin on the JD claim 90 - and the presence of the chalcedony (silica cap?) over a large area further north on Claim 90 on the rounded ridgetop in the immediate vicinity of the 'listwaenite' rock supports this hot-spring Au-Ag deposit model. The exploration guide geochemical signature for this deposit type is Au, Sb, As, Hg, and Tl near surface. Listwaenite is well known to be associated with Au deposits.

Assay results were generally disappointing for Au and other metallic elements. There only significant assay out of the 7 rocks analyzed. That exception was assay sample JD12-RK-35, at GPS waypoint #35. It assayed very anomalous for Ni-Co-Cr, plus Mn and Sb, and exceptionally anomalous for Hg. It was weakly anomalous for Cu and As. The green emerald colour in the chalcedony is almost certainly from the abundant Cr at this site. The same coloured green chalcedony was present at GPS waypoint #36 but no rock was assayed from that location. The assay certificate results are in the Appendix.

The green chalcedony is surface material subject to very intense weathering but shows promise. The color and clarity was excellent but in small areas no larger than 1-2 cm. The primary defects were intense fracturing (probably freeze - thaw surface effects) and related limonite coatings on surfaces and in fractures. A photo is included on the next page to illustrate typical material characteristics.



Photo 1. Typical Green Chalcedony Sample.

## 5. CONCLUSIONS & RECOMMENDATIONS

The current exploration results for the JD claim block (and the immediate area to the north), though only a very small sampling program, has indicated some potential for possibly a hot-spring Au-Ag type deposit or a Ni-Co-Cr-(Cu? deposit).

A more extensive soil, silt and rock sampling exploration program is warranted for future work centered on the vicinity of GPS site #35. An extended 'ridge and spur' soil sampling program should be conducted to augment the small rock sample program conducted this year. Additionally, a more extensive silt sediment sampling program is also warranted for other drainage channels flowing off of the rounded mountain top above the JD claims, especially to the north. Hand trenching at the green chalcedony area is recommended to obtain unweathered or less weathered material for cutting and polishing trials. Finally, it is also recommended that the JD claim block and surrounding area should be more extensively prospected for rock outcrops, gossans, etc. for quartz veins and Ni-Cu-Co outcrops. Interesting small magnetic high anomalies to the northeast of the JD claims are targets for future exploration.

## 6. REFERENCES

Devine, F., Murphy, D.C., Kennedy, R., Tizzard, A.M. and Carr, S.D., 2004. Geological setting of retrogressed eclogite and jade in the southern Campbell Range: Preliminary structure and stratigraphy, Frances Lake area (NTS 105H), southeastern Yukon. *In: Yukon Exploration and Geology 2003*, D.S. Emond and L.L. Lewis (eds.), Yukon Geological Survey, p. 89-105.

Murphy, D.C., 2000. Preliminary geological mapping of Tuchitua River North area (105H/4), southeastern Yukon (1:50,000 scale). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 2000-16.

Murphy, D.C., 2000. Preliminary geological mapping of Tuchitua River North area (105H/5), southeastern Yukon (1:50,000 scale). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 2000-17.

Murphy, D.C., 2001. Yukon-Tanana Terrane in southwestern Frances lake area (105H/3, 4 and 5), southeastern Yukon. In: Yukon Exploration and Geology 2000, D.S. Emond and L.H. Weston, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p.217-233.

Panteleyev, A. (1996): Hot spring Au-Ag (H03), in Lefebvre, D.V. and Höy, T., Editors, Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, British Columbia Ministry of Employment and Investment, Open File 1996-13, pages 33-36.

Westmin Resources Ltd, May/98. Assess. Report #093799 by D.A. Terry, D. Gale, N.A. Duke.

## 7. STATEMENT OF EXPENDITURES

| Exploration Work, expenses          | Comment   | Days        |             |                  | Totals           |
|-------------------------------------|---|-------------|-------------|------------------|------------------|
| <u>Position @ YMIP Rates</u>        | <u>Field Days (list actual days)</u>  | <u>Days</u> | <u>Rate</u> | <u>Subtotal</u>  |                  |
| Geo-tech /prospector (myself)       | Aug 4, 2012   | 1           | \$350.00    | \$350.00         |                  |
|                                     |   |             |             | \$350.00         | \$350.00         |
| <u>Office work</u>                  |   |             | <u>Rate</u> | <u>Subtotal</u>  |                  |
|                                     | Including rock descriptions, mapping, printing, sending hardcopy and digital copy | 12 hr       | \$30.00     | \$360.00         |                  |
| Report Writing                      |   |             |             | \$990.00         | \$360.00         |
|                                     | <u>Number of Samples -</u>  |             |             | <u>Incl. GST</u> |                  |
| <u>Geochemical Surveying</u>        | <u>Assayer</u>  |             | <u>Rate</u> | <u>Subtotal</u>  |                  |
| Rock                                | 7 - Acme Labs   |             | \$ 29.54    | \$206.74         |                  |
|                                     |   |             |             | \$206.74         | \$206.74         |
| <u>Transportation @ YMIP Rates</u>  | <u>Dates</u>  | <u>Days</u> | <u>Rate</u> | <u>Subtotal</u>  |                  |
| 4X4 truck, incl. Watson Lk - filing | Aug. 4,2012   | 1           | \$50.00     | \$50.00          |                  |
|                                     |   |             |             | \$50.00          | \$50.00          |
|                                     |   |             | <u>YMIP</u> |                  |                  |
| <u>Accommodation &amp; Food</u>     | <u># of Person/Days</u>   | <u>Days</u> | <u>Rate</u> | <u>Subtotal</u>  |                  |
| (incl. GPS, chain saw)              | 1 persons X 1 Days  | 1           | \$100       | \$100.00         |                  |
|                                     |   |             |             | \$100.00         | \$100.00         |
| <u>Other Expenses</u>               |   |             |             |                  |                  |
| Freight to ship samples             | Not included.   |             |             | \$0.00           |                  |
|                                     |   |             |             | \$0.00           | \$0.00           |
| <b>TOTAL Expenditures</b>           |   |             |             |                  | <b>\$1066.74</b> |

Table 2. Work Assessment Expenditures

## 8. STATEMENT OF QUALIFICATIONS

- ❑ 34 years experience doing geological prospecting in Yukon.
- ❑ Author of several Yukon YMIP reports on mineral property evaluations or grassroots prospecting programs, plus previous Yukon assessment reports.
- ❑ 13 years Geology teaching experience at first year University equivalent.
- ❑ Operator of one mine property in Yukon (for Nephrite Jade).
- ❑ Owner of 75 Yukon quartz claims.
- ❑ Many geological short courses including ones on diamonds, platinum, geophysics, glacial drift prospecting, VMS deposits, rare earth elements, MMI and several on gold exploration.
- ❑ Exploration manager and technical report writer for Crusader Gold in B.C. 2007-2013, including ARIS Reports 28546, 30293, and 31281.
- ❑ BSc degree in Biology, (including some university geology courses)

## 9. APPENDICES

### JD Assay Rock Descriptions

| Rock Assay<br>Sample # | Description   | Acid<br>Test<br>+ / - |
|------------------------|---|-----------------------|
| JD12-RK-08             | Brown and whitish carbonate with a mafic contact and minor vein or xenolith, minor limonite rust patches, appears unmineralized.  | +                     |
| JD12-RK-27             | Rusty weathering sanded surface on listwaenite?/greenish tinted granular carbonate, calcite and quartz thin veining in some areas, not much limonite internally. Porus. | +                     |
| JD12-RK-30             | Very rusty weathering granular vuggy surface carbonate/quartzite? Light grey granular internally with only minor limonite.  | +                     |
| JD12-RK-32             | Very rusty weathering granular carbonate/quartzite? Very rusty with limonite specs mostly throughout, some thin calcite veining and white patches, 1 large rusty vug.   | +                     |
| JD12-RK-34             | Irregularly limonitic weathering deeply incised brecciated quartz carbonate. Abundant small limonite patches/specs and very many small vugs throughout.                 | +                     |
| JD12-RK-35             | Gray tan greenish limonite weathering listwaenite-type rock, coarsely granular. Found in same area as green chalcedony.   | +                     |
| JD12-RK-041            | White (bull?) quartz with patchy limonite coatings on irregular weathered surface. Appears unmineralized. Some limonite internally, mostly on fracture surfaces.        | -                     |

Table 3. JD Rock Sample Descriptions.

## Sample Locations

| Sample Type | Sample #         | Zone | Easting | Northing |
|-------------|------------------|------|---------|----------|
| Rock        | JD12-RK-08       | 9V   | 467972  | 6796501  |
| Rock        | JD12-RK-27       | 9V   | 466432  | 6790873  |
| Rock        | JD12-RK-30       | 9V   | 466417  | 6790791  |
| Rock        | JD12-RK-32       | 9V   | 466323  | 6790712  |
| Rock        | JD12-RK-34       | 9V   | 466511  | 6790935  |
| Rock        | JD12-RK-35       | 9V   | 466486  | 6791067  |
| Rock        | JD12-RK-034      | 9V   | 466357  | 6791808  |
| Rock        | 36 - not assayed | 9V   | 466397  | 6791206  |

Table 4. Sample Locations - JD Claims. *Sample location by UTM Coordinates*

## Analytical Results - Rock Samples



Acme Analytical Laboratories (Vancouver) Ltd.

PHONE (604) 253-3158

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

Client: **Krichbaum, Van**  
Box 382  
New Denver BC V0G 1S0 CANADA

Submitted By: Van Krichbaum  
Receiving Lab: Canada-Vancouver  
Received: November 13, 2012  
Report Date: December 18, 2012  
Page: 1 of 2

### CERTIFICATE OF ANALYSIS

VAN12005357.1

#### CLIENT JOB INFORMATION

Project: JD Gold  
Shipment ID:  
P.O. Number  
Number of Samples: 7

#### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

| Method Code | Number of Samples | Code Description                                  | Test Wgt (g) | Report Status | Lab |
|-------------|-------------------|---|--------------|---------------|-----|
| R200-250    | 7                 | Crush, split and pulverize 250 g rock to 200 mesh |              |               | VAN |
| 1DX2        | 7                 | 1:1:1 Aqua Regia digestion ICP-MS analysis        | 15           | Completed     | VAN |

#### SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage  
Dispose of Reject After 90 days

#### ADDITIONAL COMMENTS

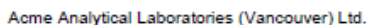
Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: **Krichbaum, Van**  
Box 382  
New Denver BC V0G 1S0  
CANADA

CC:



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



**Client:** Krichbaum, Van  
Box 382  
New Denver BC V0G 1S0 CANADA

Project: JD Gold  
Report Date: December 18, 2012

PHONE (604) 253-3158

Page: 2 of 2

Part 1 of 1

## VAN12005357.1

|             | Method     | Analyte | Unit  | MDL  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |
|-------------|------------|---------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
|             |            |         |       | WGHT | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 |       |   |
|             |            |         |       | Wgt  | Mo    | Cu    | Pb    | Zn    | Ag    | Ni    | Co    | Mn    | Fe    | As    | Au    | Th    | Sr    | Cd    | Sb    | Bi    | V     | Ca    | P |
|             |            |         |       | kg   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | %     | ppm   | ppb   | ppm   | ppm   | ppm   | ppm   | ppm   | %     | % |
|             |            |         |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |   |
| G1          | Prep Blank |         | <0.01 | 0.1  | 3.1   | 2.8   | 48    | <0.1  | 4.3   | 4.6   | 573   | 1.98  | 0.6   | <0.5  | 5.2   | 57    | <0.1  | <0.1  | <0.1  | 35    | 0.45  | 0.080 |   |
| JD12-RK-08  | Rock       |         | 0.11  | 0.2  | 0.8   | 0.7   | 4     | <0.1  | 1.7   | 0.8   | 1907  | 2.57  | 0.8   | <0.5  | 0.9   | 774   | <0.1  | <0.1  | <0.1  | 5     | 23.72 | 0.016 |   |
| JD12-RK-27  | Rock       |         | 0.14  | 0.3  | 4.2   | 3.6   | 32    | <0.1  | 19.7  | 3.2   | 6181  | 2.24  | 2.1   | <0.5  | 0.6   | 38    | 0.5   | 0.2   | <0.1  | 8     | 15.38 | 0.037 |   |
| JD12-RK-30  | Rock       |         | 0.06  | 0.6  | 4.9   | 5.1   | 57    | 0.2   | 34.5  | 4.6   | 2907  | 2.48  | 2.5   | 2.2   | 0.3   | 12    | 0.3   | 0.6   | <0.1  | 9     | 1.29  | 0.054 |   |
| JD12-RK-32  | Rock       |         | 0.10  | 0.1  | 2.2   | 0.5   | 14    | <0.1  | 15.2  | 2.1   | 335   | 3.21  | 1.4   | <0.5  | <0.1  | <1    | <0.1  | <0.1  | <0.1  | 2     | 0.05  | 0.010 |   |
| JD12-RK-34  | Rock       |         | 0.13  | <0.1 | 5.8   | 0.5   | 13    | <0.1  | 7.7   | 0.6   | 348   | 0.91  | <0.5  | <0.5  | 0.2   | 1     | 0.2   | <0.1  | <0.1  | <2    | 0.09  | 0.003 |   |
| JD12-RK-35  | Rock       |         | 0.16  | 0.3  | 15.6  | 3.5   | 35    | <0.1  | 930.9 | 58.5  | 1932  | 4.83  | 14.5  | 1.3   | <0.1  | 230   | 0.4   | 6.4   | <0.1  | 18    | 15.09 | 0.001 |   |
| JD12-RK-034 | Rock       |         | 0.08  | <0.1 | 6.1   | 3.1   | 19    | <0.1  | 18.7  | 4.3   | 925   | 3.65  | 0.5   | <0.5  | 0.5   | 113   | <0.1  | 1.1   | <0.1  | 6     | 14.11 | 0.017 |   |

## VAN12005357.1

|             | Method     | Analyte | Unit | MDL | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15  | 1DX15 | 1DX15 | 1DX15  | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 |     |      |      |
|-------------|------------|---------|------|-----|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-----|------|------|
|             |            |         |      |     | La    | Cr    | Mg    | Ba    | Ti     | B     | Al    | Na     | K     | W     | Hg    | Sc    | Ti    | S     | Ga  | Se   | Te   |
|             |            |         |      |     | ppm   | ppm   | %     | ppm   | %      | ppm   | %     | %      | %     | ppm   | ppm   | ppm   | ppm   | %     | ppm | ppm  | ppm  |
|             |            |         |      |     | 1     | 1     | 0.01  | 1     | 0.001  | 1     | 0.01  | 0.001  | 0.01  | 0.01  | 0.1   | 0.01  | 0.1   | 0.05  | 1   | 0.5  | 0.2  |
| G1          | Prep Blank |         |      |     | 10    | 8     | 0.59  | 234   | 0.130  | <1    | 1.00  | 0.088  | 0.49  | <0.1  | <0.01 | 2.2   | 0.4   | <0.05 | 5   | <0.5 | <0.2 |
| JD12-RK-08  | Rock       |         |      |     | 3     | 2     | 3.39  | 267   | <0.001 | <1    | 0.09  | 0.003  | 0.02  | <0.1  | 0.03  | 1.7   | <0.1  | <0.05 | <1  | <0.5 | <0.2 |
| JD12-RK-27  | Rock       |         |      |     | 5     | 7     | 7.22  | 83    | <0.001 | <1    | 0.12  | 0.004  | 0.03  | <0.1  | 0.18  | 2.2   | <0.1  | <0.05 | <1  | <0.5 | <0.2 |
| JD12-RK-30  | Rock       |         |      |     | 3     | 13    | 0.56  | 320   | <0.001 | <1    | 0.10  | 0.001  | 0.03  | <0.1  | 0.28  | 1.8   | <0.1  | <0.05 | <1  | 0.6  | <0.2 |
| JD12-RK-32  | Rock       |         |      |     | <1    | 4     | 0.03  | 14    | <0.001 | <1    | 0.03  | <0.001 | <0.01 | <0.1  | 0.05  | 0.6   | 0.1   | <0.05 | <1  | <0.5 | <0.2 |
| JD12-RK-34  | Rock       |         |      |     | 1     | 3     | 0.02  | 56    | <0.001 | <1    | 0.04  | <0.001 | <0.01 | <0.1  | 0.07  | 0.5   | <0.1  | <0.05 | <1  | <0.5 | <0.2 |
| JD12-RK-35  | Rock       |         |      |     | <1    | 451   | 6.16  | 259   | <0.001 | <1    | 0.19  | 0.004  | 0.03  | <0.1  | 1.99  | 7.8   | <0.1  | 0.06  | <1  | <0.5 | <0.2 |
| JD12-RK-034 | Rock       |         |      |     | 5     | 5     | 5.13  | 37    | <0.001 | <1    | 0.08  | 0.004  | 0.01  | <0.1  | 0.05  | 1.0   | <0.1  | <0.05 | <1  | <0.5 | <0.2 |

## VAN12005357.1

|                     | Method     | Analyte | Unit  | MDL   | WGHT  | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15  | 1DX15  | 1DX15  |       |       |       |
|---------------------|------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|
|                     |            |         |       |       | Wgt   | Mo    | Cu    | Pb    | Zn    | Ag    | Ni    | Co    | Mn    | Fe    | As    | Au    | Th    | Sr    | Cd    | Sb    | Bi     | V      | Ca     | P     | X     |       |
|                     |            |         |       |       | kg    | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppm   | ppb   | ppm   | ppm   | ppm   | ppm   | ppm    | ppm    | ppm    | ppm   | ppm   | ppm   |
|                     |            |         |       |       | 0.01  | 0.1   | 0.1   | 0.1   | 1     | 0.1   | 0.1   | 0.1   | 1     | 0.01  | 0.5   | 0.5   | 0.1   | 1     | 0.1   | 0.1   | 0.1    | 2      | 0.01   | 0.001 | 0.001 | 0.001 |
| Pulp Duplicates     |            |         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |        |        |       |       |       |
| JD12-RK-27          | Rock       |         | 0.14  | 0.3   | 4.2   | 3.6   | 32    | <0.1  | 19.7  | 3.2   | 6181  | 2.24  | 2.1   | <0.5  | 0.6   | 38    | 0.5   | 0.2   | <0.1  | 8     | 15.38  | 0.037  | 0.037  |       |       |       |
| REP JD12-RK-27      | QC         |         |       | 0.3   | 4.4   | 3.7   | 32    | <0.1  | 18.5  | 3.0   | 6044  | 2.22  | 2.5   | 1.4   | 0.6   | 41    | 0.4   | 0.2   | <0.1  | 8     | 15.12  | 0.036  | 0.036  |       |       |       |
| Reference Materials |            |         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |        |        |       |       |       |
| STD D59             | Standard   |         |       | 13.2  | 113.2 | 132.6 | 322   | 1.8   | 40.6  | 8.1   | 599   | 2.44  | 25.5  | 121.8 | 7.1   | 64    | 2.2   | 5.6   | 6.6   | 38    | 0.69   | 0.080  | 0.080  |       |       |       |
| STD D59 Expected    |            |         |       | 12.84 | 108   | 126   | 317   | 1.83  | 40.3  | 7.6   | 575   | 2.33  | 25.5  | 118   | 6.38  | 69.6  | 2.4   | 4.94  | 6.32  | 40    | 0.7201 | 0.0815 | 0.0815 |       |       |       |
| BLK                 | Blank      |         |       | <0.1  | <0.1  | <0.1  | <1    | <0.1  | <0.1  | <0.1  | 3     | <0.01 | <0.5  | <0.5  | <0.1  | <1    | <0.1  | <0.1  | <0.1  | <2    | 0.04   | <0.001 | <0.001 |       |       |       |
| Prep Wash           |            |         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |        |        |       |       |       |
| G1                  | Prep Blank |         | <0.01 | 0.1   | 3.1   | 2.8   | 48    | <0.1  | 4.3   | 4.6   | 573   | 1.98  | 0.6   | <0.5  | 5.2   | 57    | <0.1  | <0.1  | <0.1  | 35    | 0.45   | 0.080  | 0.080  |       |       |       |

## VAN12005357.1

|                     | Method     | 1DX15 | 1DX15 | 1DX15  | 1DX15 | 1DX15  | 1DX15 | 1DX15  | 1DX15  | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15 | 1DX15  | 1DX15 | 1DX15 |      |
|---------------------|------------|-------|-------|--------|-------|--------|-------|--------|--------|-------|-------|-------|-------|-------|--------|-------|-------|------|
|                     | Analyte    | La    | Cr    | Mg     | Ba    | Ti     | B     | Al     | Na     | K     | W     | Hg    | Sc    | Ti    | S      | Ga    | Se    | Te   |
|                     | Unit       | ppm   | ppm   | %      | ppm   | %      | ppm   | %      | %      | %     | ppm   | ppm   | ppm   | ppm   | %      | ppm   | ppm   | ppm  |
|                     | MDL        | 1     | 1     | 0.01   | 1     | 0.001  | 1     | 0.01   | 0.001  | 0.01  | 0.1   | 0.01  | 0.1   | 0.05  | 1      | 0.5   | 0.2   |      |
| Pulp Duplicates     |            |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |      |
| JD12-RK-27          | Rock       | 5     | 7     | 7.22   | 83    | <0.001 | <1    | 0.12   | 0.004  | 0.03  | <0.1  | 0.18  | 2.2   | <0.1  | <0.05  | <1    | <0.5  | <0.2 |
| REP JD12-RK-27      | QC         | 5     | 7     | 7.35   | 82    | <0.001 | 1     | 0.11   | 0.004  | 0.03  | <0.1  | 0.20  | 2.3   | <0.1  | <0.05  | <1    | <0.5  | <0.2 |
| Reference Materials |            |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |      |
| STD D59             | Standard   | 13    | 123   | 0.63   | 278   | 0.114  | 2     | 0.97   | 0.083  | 0.40  | 3.3   | 0.20  | 2.3   | 5.7   | 0.16   | 5     | 4.3   | 5.4  |
| STD D59 Expected    |            | 13.3  | 121   | 0.6165 | 295   | 0.1108 |       | 0.9577 | 0.0853 | 0.395 | 2.89  | 0.2   | 2.5   | 5.3   | 0.1615 | 4.59  | 5.2   | 5.02 |
| BLK                 | Blank      | <1    | <1    | <0.01  | <1    | <0.001 | <1    | <0.01  | <0.001 | <0.01 | <0.1  | <0.01 | <0.1  | <0.1  | <0.05  | <1    | <0.5  | <0.2 |
| Prep Wash           |            |       |       |        |       |        |       |        |        |       |       |       |       |       |        |       |       |      |
| G1                  | Prep Blank | 10    | 8     | 0.59   | 234   | 0.130  | <1    | 1.00   | 0.088  | 0.49  | <0.1  | <0.01 | 2.2   | 0.4   | <0.05  | 5     | <0.5  | <0.2 |

19

## RGS Element Percentile Thresholds

| Yukon-Tanana Terrane |        |        |        |       |        |        |         |        |       |        |      |        |  |
|----------------------|--------|--------|--------|-------|--------|--------|---------|--------|-------|--------|------|--------|--|
| SAMPLE               | AG     | AS     | AS_INA | AU    | AU_R   | AU_INA | BA      | BA_INA | BI    | CD     | CO   | CO_INA |  |
| min                  | 0.1    | 0.5    | 0.2    | 0.5   | 0.5    | 1      | 54      | 270    | 0.1   | 0.1    | 1    | 2.5    |  |
| 50th percentile      | 0.1    | 3.5    | 5.8    | 1     | 4      | 3      | 870     | 1100   | 0.1   | 0.1    | 8    | 13     |  |
| 90 th percentile     | 0.2    | 13.5   | 15.8   | 9     | 37     | 10     | 1247.9  | 1700   | 0.26  | 0.6    | 14   | 21     |  |
| 95th percentile      | 0.3    | 22     | 23.4   | 18    | 85     | 17     | 1493.35 | 1900   | 0.28  | 1.1    | 17   | 24     |  |
| 98th percentile      | 0.5    | 46.02  | 36     | 46.86 | 172    | 40.8   | 1900    | 2300   | 0.292 | 2.1    | 22   | 32     |  |
| 99th percentile      | 0.7    | 80     | 54.608 | 96.43 | 280    | 62     | 2222.9  | 2500   | 0.296 | 3.001  | 29   | 40     |  |
| max                  | 3.3    | 489    | 280    | 1680  | 1185   | 1050   | 11550   | 3600   | 0.3   | 46.8   | 180  | 160    |  |
| n                    | 8206   | 7200   | 1013   | 7158  | 801    | 1013   | 7472    | 1013   | 5     | 7900   | 8206 | 1013   |  |
|                      |        |        |        |       |        |        |         |        |       |        |      |        |  |
|                      | CU     | FE     | FE_INA | HG    | MN     | MO     | NI      | PB     | SB    | SB_INA | SN   |        |  |
| min                  | 1      | 0.11   | 0.7    | 2.5   | 2.5    | 1      | 1       | 1      | 0.1   | 0.05   | 0.5  |        |  |
| 50th percentile      | 18     | 1.95   | 3.76   | 30    | 330    | 1      | 18      | 7      | 0.3   | 0.6    | 1    |        |  |
| 90 th percentile     | 37     | 2.97   | 5.6    | 84    | 780    | 2      | 41      | 16     | 0.9   | 1.6    | 4    |        |  |
| 95th percentile      | 48     | 3.49   | 6.2    | 119   | 1479.5 | 3      | 58      | 23     | 1.4   | 2      | 5    |        |  |
| 98th percentile      | 68     | 4.337  | 6.8    | 170.5 | 2900   | 5      | 96.9    | 36     | 2.42  | 2.876  | 7    |        |  |
| 99th percentile      | 94     | 5.5195 | 7.788  | 245   | 4899.3 | 7      | 147     | 47     | 3.6   | 3.488  | 10   |        |  |
| max                  | 4510   | 29.9   | 18     | 3349  | 40546  | 94     | 1000    | 694    | 170   | 9.1    | 138  |        |  |
| n                    | 8206   | 8206   | 1013   | 8176  | 8206   | 8206   | 8206    | 8206   | 7191  | 1013   | 7876 |        |  |
|                      |        |        |        |       |        |        |         |        |       |        |      |        |  |
|                      | TA_INA | U      | U_INA  | V     | W      | W_INA  | ZN      | PH     | F_W   | U_W    |      |        |  |
| min                  | 0.25   | 0.2    | 0.8    | 2.5   | 1      | 0.5    | 2       | 4.1    | 10    | 0.02   |      |        |  |
| 50th percentile      | 0.9    | 3.3    | 3.7    | 35    | 2      | 0.5    | 63      | 7.2    | 80    | 0.11   |      |        |  |
| 90 th percentile     | 1.4    | 8.6    | 13     | 59    | 3      | 2      | 123     | 7.9    | 240   | 1.5    |      |        |  |
| 95th percentile      | 1.5    | 13.1   | 19     | 68    | 5      | 3      | 165     | 8      | 350   | 2.746  |      |        |  |
| 98th percentile      | 1.8    | 26.104 | 34.096 | 83    | 10     | 4      | 249.8   | 8.2    | 540   | 5.2    |      |        |  |
| 99th percentile      | 2      | 40.104 | 60.291 | 92    | 16     | 7.88   | 350     | 8.3    | 720   | 8.272  |      |        |  |
| max                  | 2.7    | 236    | 351    | 470   | 140    | 29     | 2510    | 8.6    | 3170  | 255    |      |        |  |
| n                    | 1013   | 7499   | 722    | 7884  | 7475   | 1013   | 8206    | 8065   | 8066  | 8065   |      |        |  |

Table 6. Yukon-Tanana RGS Silt Percentile Threshold Cut-offs