

PROSPECTING / GEOCHEMISTRY



REPORT

CALLUM 1-4

GRANT# YCO1939-YCO1942

MAYO MINING DISTRICT

NTS# 115 P-15

094178

LAT 63'47 NORTH

LONG 136' 58 WEST

AUTHOR OF REPORT SHAWN RYAN

WORK PERFORMED AUGUST 1999

DATE OF REPORT JANUARY 2001

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 400.00.

for *M. B. h*
Regional Manager, Exploration and
Geological Services for Commissioner,
of Yukon Territory.

4 - 100

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SUMMARY

The Callum 1-4 claims were staked to cover a new pyrrhotite replacement style showing. Callum 1-4 grant # yco1939-yco1942 registered to Shawn Ryan will be renewed for one year. The new showing is anomalous in copper, bismuth and gold.

INTRODUCTION

The Callum 1-4 claims were staked to cover a new pyrrhotite replacement style showing found while prospecting the surrounding area.

LOCATION

The Callum 1-4 claims are located on a high ridge top overlooking the head waters of Vancouver creek. The claims are 35 miles north west of Mayo.

ACCESS

Access can be attained via helicopter from Mayo or from Dawson City. The other potential access is via a placer miner road that starts from the Klondike highway at Mcquesten river. The road follows the Mcquesten river for about 15 miles till it comes to Vancouver creek. At this point it travels up Vancouver creek and then over land to the head water of Vancouver creek. The Callum claims are about one mile north of the road from the placer miner camp.

PROPERTY GEOLOGY

The property geology according to the Sprague Creek Geology Map, the Callum claims lie in the Tombstone strain zone of the proterozoic Hyland group. Don Murphy author of the Sprague Creek geology map has also pointed out a highly calcareous and calc-silicate rock unit that sits on the ridge top. I have also found mafic lamprophyre dikes and a potential tombstone intrusion sills. On the ridge top in the calcareous rock unit is where we find massive pyrrhotite with chalcopyrite. This massive sulfide showing seems to a replacement style mineralization.

WORK PERFORMED/ METHOD

I researched the GSC government geochem data and it pointed to some gold geochem coming from the headwater of Vancouver creek. This lead to a ground follow up on the ridge top above Vancouver creek. I and Scott Fleming carefully walk the ridge top and found massive pyrrhotite rocks on the ridge edge. This led to finding more outcrop with pyrrhotite and chalcopyrite on the west and east side of the ridge. We took four soil sample and two rock samples. All soil where placed in kraft paper bags. I ship all assay work to Northern analytical in Whitehorse. They perform fire assay work for gold plus 32 element ICP. The amount of time spent on the property was 1.5 days for both Scott and I.

INTERPRETATION

SOILS

Soils from the Callum claims show a very anomalous gold value raging from 66-267 ppb. The ICP also show highly anomalous value in Bi, 43-201 ppm and copper, 185-478 ppm.

ROCKS

I ran two rocks from the Callum claims. Both where massive pyrrhotite with minor chalcopyrite. One rock ran 931 ppb in gold with 1866ppm copper and 568ppm bismuth. The second rock gave a low gold value of 14 ppb with 551 ppm copper and less than 2 ppm in bismuth.

RECOMMENDATION

The results of the this small number of sample points to a potential large gold replacement style mineralization. The anomalous soils are from three different areas 200-400 meter apart from each other. The rock samples also give positive indication. This points to a nice target area which should be followed up with ground geophysiques such as a magnetometer survey and a V.L.F. survey. This should be conducted on a grid that can also be used for a soil survey follow up.

COST

prospector 1.5 days @ 250.	375.00
Assay work	115.00
report	200.00

Total	\$ 690.00

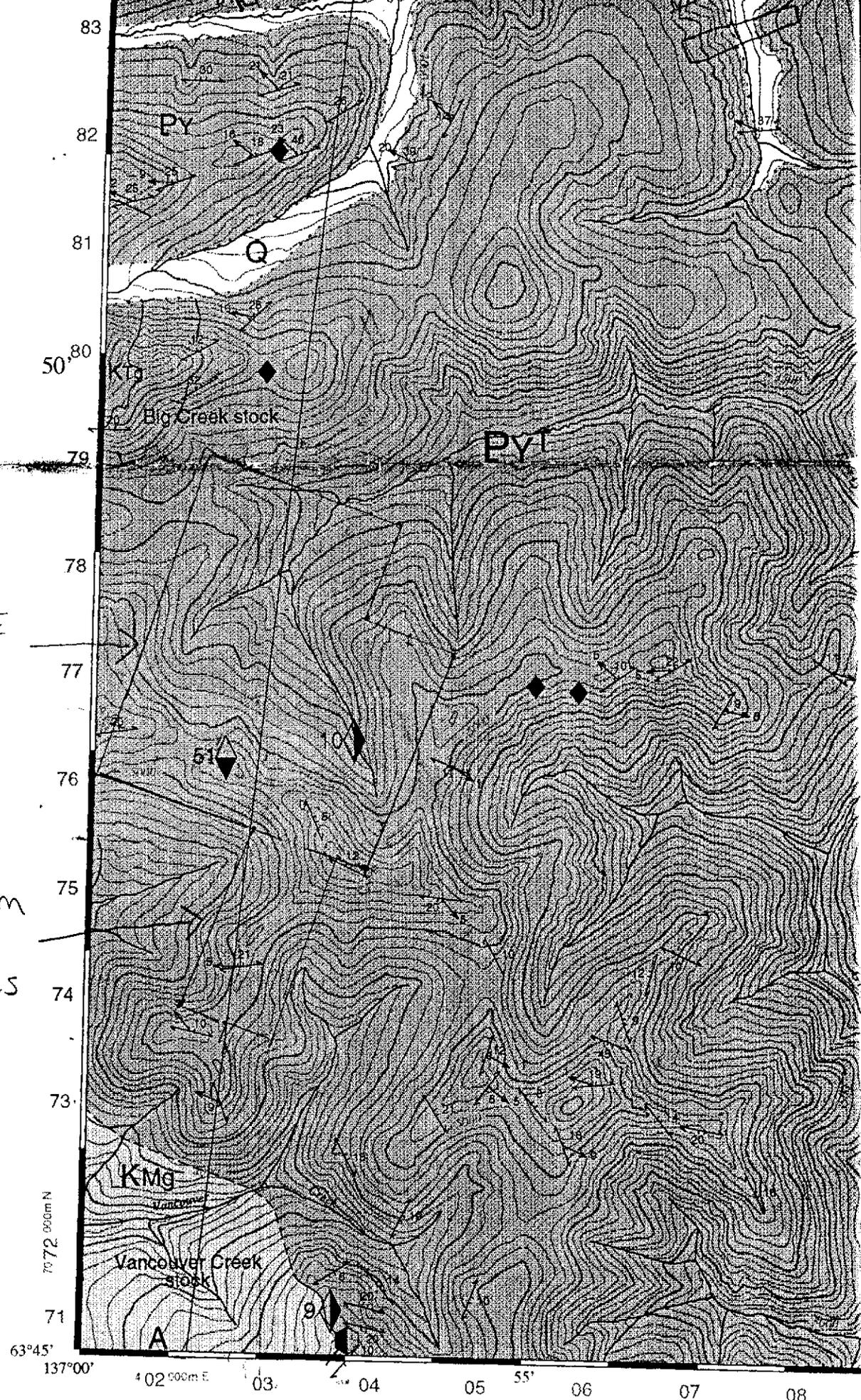
ROCK DESCRIPTION

ALPSR99R31

Float sample found on west side of ridge. Massive pyrrhotite with chalcopyrite. Very magnetic.

ALPSR99R32

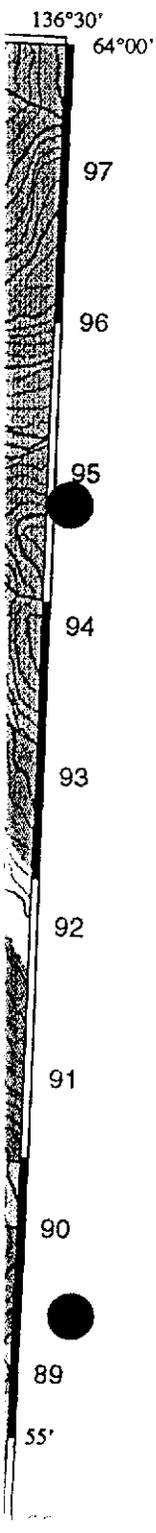
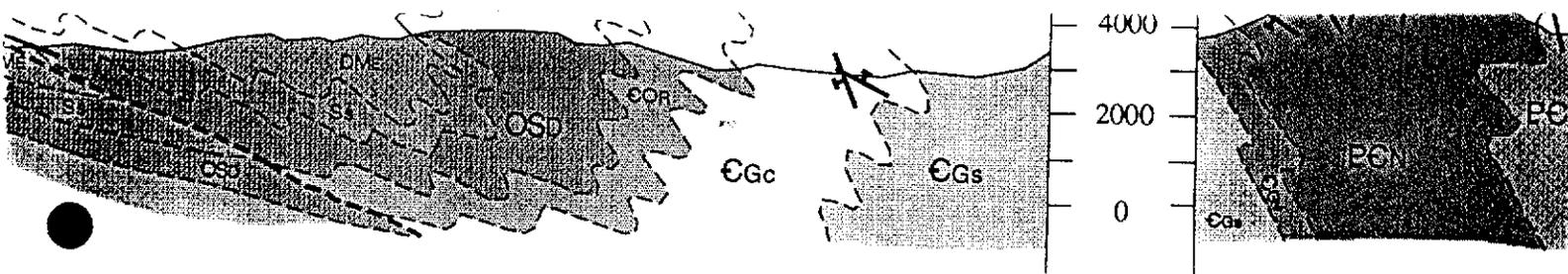
Float sample found on east side of ridge next to a rusty oxidized gopher denying area. Massive pyrrhotite with some chalcopyrite. Very magnetic.



ALPINE
1-38
Claims

Callum
1-8
Claims

Geological map of SPRAGUE CREEK AREA
GROSCIENCE MAP 1996-2



LEGENE

QUATERNARY

Q Alluvium, colluvium and glacial deposits

LATE CRETACEOUS

*McQUESTEN INTRUSIONS*¹

KMg Medium- to coarse-grained, locally porphyritic (locally potassium feldspar megacrystic) biotite-muscovite granite and quartz monzonite

EARLY LATE CRETACEOUS

*TOMBSTONE INTRUSIONS*²

KTg Medium- to coarse grained, locally porphyritic biotite ± hornblende, clinopyroxene granite, quartz monzonite and granodiorite

DEVONIAN-MISSISSIPPIAN

EARN GROUP

DME Grey to black shale/phyllite, siltstone, sandstone, and chert-pebble conglomerate

~~~~~ *unconformity* ~~~~~

ORDOVICIAN-SILURIAN

*ROAD RIVER GROUP*

**Ss** Steel Formation<sup>3</sup>: beige-orange, massive to well laminated, locally ripple cross-laminated, locally dolomitic siltstone and mudstone; common feeding traces and mottling due to bioturbation

**OSD** Duo Lake Formation<sup>3</sup>: grey to black shale and thin-bedded chert

UPPER CAMBRIAN-ORDOVICIAN

**COR** Rabbitkettle Formation<sup>3</sup>: laterally persistent calcareous phyllite, thin- to medium-bedded marble/dolomitic marble, and rare limestone-pebble conglomerate; cherty calcsilicate rock near intrusions.

~~~~~ *unconformity* ~~~~~

ORDOVICIAN-SILURIAN

ROAD RIVER GROUP



Steel Formation³: beige-orange, massive to well laminated, locally ripple cross-laminated, locally dolomitic siltstone and mudstone; common feeding traces and mottling due to bioturbation

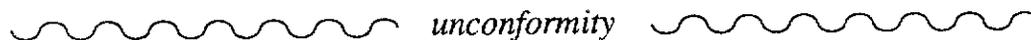


Duo Lake Formation³: grey to black shale and thin-bedded chert

UPPER CAMBRIAN-ORDOVICIAN

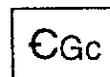


Rabbitkettle Formation³: laterally persistent calcareous phyllite, thin- to medium-bedded marble/dolomitic marble, and rare limestone-pebble conglomerate; cherty calcsilicate rock near intrusions.



unconformity

CAMBRIAN



Gull Lake Formation³: Tan- to brown-weathering thinly-bedded calcareous siltstone, sandstone, shale and limestone



Gull Lake Formation³: Greenish-grey phyllite with mm-scale siltstone laminae, uncommon sandstone and pebbly sandstone, and greenish-grey chert



Gull Lake Formation³: Light to dark grey, locally pebbly quartzite (siliceous meta-sandstone) and dark grey phyllite (qp)



Gull Lake Formation³: Dark green massive to fragmental mafic meta-volcanic and volcanoclastic rocks

UPPER PROTEROZOIC-LOWER CAMBRIAN

HYLAND GROUP^{3,4}



Narchilla Formation³: maroon and green phyllite with cm-scale green-grey siltstone laminations, grey to green meta-sandstone and pebbly meta-sandstone (grit), and sandy limestone



Sandy limestone and limestone-breccia-rich member



Yusezyu Formation^{3,4}: foliated tan to grey meta-sandstone, muscovite-chlorite phyllite, blue-grey quartz and chalky white feldspar pebbly meta-sandstone (grit) pebble meta-conglomerate and uncommon sandy marble (EYc). Purplish/maroonish siliceous pelitic hornfels and calcsilicate hornfels near intrusions

TOMBSTONE STRAIN ZONE UPPER BOUNDARY



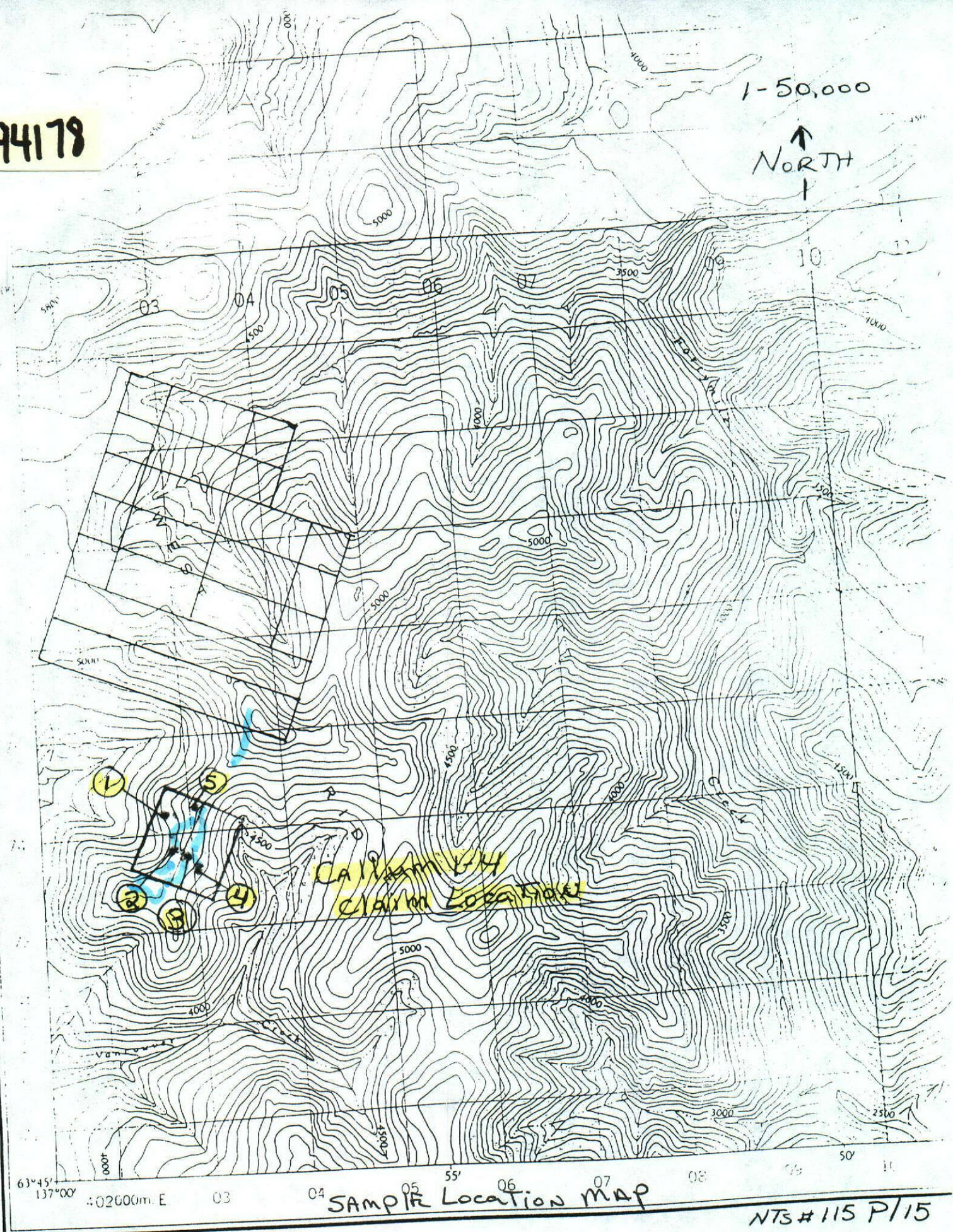
Yusezyu Formation^{3,4} (in Tombstone Strain Zone): prominently foliated and linedated muscovite-chlorite phyllite, quartzofeldspathic and micaceous psammite, gritty psammite, rare calc-silicate rock and marble (EYc^T)

- 64-67 Ma U-Pb zircon and/or monazite age determinations by Jim Mortensen, University of British Columbia
- 91-94 Ma U-Pb zircon and/or titanite age determinations by Jim Mortensen, University of British Columbia
- Formation names are those defined or used by Gordey and Anderson (1993) for Nahanni map area (105 I)
- Yusezyu and Narchilla formations are intruded by intermediate to mafic sills and dykes of unknown age that are too small to portray at the scale of mapping

094179

1-50,000

↑
NORTH
↓



Callum 1-4
claims location

63°45'
137°00'

0:2000m. E

SAMPLE Location MAP

NTS# 115 P/15

Callum 1-4 claims

TRAVERSE ROUTE

Produced and printed by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF MINES AND TECHNICAL SURVEYS, 1961, from air photographs taken in 1949 and 1953.



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS

iPL 99H0822

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[082216:47:34:99090399]

Northern Analytical Laboratories

13 Samples

Out: Sep 03, 1999 In: Aug 31, 1999

Project : PO#05742
Shipper : Norm Smith
Shipment : PO#: 176711
Analysis:
ICP(AQR)30

Comment:

Document Distribution

| | | | | | |
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| 1 Northern Analytical Laboratories | EN | RT | CC | IN | FX |
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| Whitehorse | DL | 3D | EM | BT | BL |
| YT Y1A 2Z7 | 0 | 0 | 0 | 0 | 0 |
| Canada | | | | | |
| Att: Norm Smith | Ph:867/668-4968 | | | | |
| | Fx:867/668-4890 | | | | |
| | Em:NAL@hypertech.yk.ca | | | | |

| CODE | AMOUNT | TYPE | PREPARATION DESCRIPTION | PULP | REJECT | | |
|--------------------|--------|--------|---|-------------------------------|------------|-----------|------------|
| B311 | 13 | Pulp | Pulp received as it is. no sample prep. | 12M/Dis | 00M/Dis | | |
| Analytical Summary | | | | | | | |
| ## | Code | Method | Units | Description | Element | Limit Low | Limit High |
| 01 | 0721 | ICP | ppm | Ag ICP | Silver | 0.1 | 99.9 |
| 02 | 0711 | ICP | ppm | Cu ICP | Copper | 1 | 20000 |
| 03 | 0714 | ICP | ppm | Pb ICP | Lead | 2 | 20000 |
| 04 | 0730 | ICP | ppm | Zn ICP | Zinc | 1 | 20000 |
| 05 | 0703 | ICP | ppm | As ICP | Arsenic | 5 | 9999 |
| 06 | 0702 | ICP | ppm | Sb ICP | Antimony | 5 | 999 |
| 07 | 0732 | ICP | ppm | Hg ICP | Mercury | 3 | 9999 |
| 08 | 0717 | ICP | ppm | Mo ICP | Molydenum | 1 | 999 |
| 09 | 0747 | ICP | ppm | Tl ICP (Incomplete Digestion) | Thallium | 10 | 999 |
| 10 | 0705 | ICP | ppm | Bi ICP | Bismuth | 2 | 9999 |
| 11 | 0707 | ICP | ppm | Cd ICP | Cadmium | 0.1 | 99.9 |
| 12 | 0710 | ICP | ppm | Co ICP | Cobalt | 1 | 9999 |
| 13 | 0718 | ICP | ppm | Ni ICP | Nickel | 1 | 9999 |
| 14 | 0704 | ICP | ppm | Ba ICP (Incomplete Digestion) | Barium | 2 | 9999 |
| 15 | 0727 | ICP | ppm | W ICP (Incomplete Digestion) | Tungsten | 5 | 999 |
| 16 | 0709 | ICP | ppm | Cr ICP (Incomplete Digestion) | Chromium | 1 | 9999 |
| 17 | 0729 | ICP | ppm | V ICP | Vanadium | 2 | 9999 |
| 18 | 0716 | ICP | ppm | Mn ICP | Manganese | 1 | 9999 |
| 19 | 0713 | ICP | ppm | La ICP (Incomplete Digestion) | Lanthanum | 2 | 9999 |
| 20 | 0723 | ICP | ppm | Sr ICP (Incomplete Digestion) | Strontium | 1 | 9999 |
| 21 | 0731 | ICP | ppm | Zr ICP | Zirconium | 1 | 9999 |
| 22 | 0736 | ICP | ppm | Sc ICP | Scandium | 1 | 9999 |
| 23 | 0726 | ICP | x | Ti ICP (Incomplete Digestion) | Titanium | 0.01 | 1.00 |
| 24 | 0701 | ICP | x | Al ICP (Incomplete Digestion) | Aluminum | 0.01 | 9.99 |
| 25 | 0708 | ICP | x | Ca ICP (Incomplete Digestion) | Calcium | 0.01 | 9.99 |
| 26 | 0712 | ICP | x | Fe ICP | Iron | 0.01 | 9.99 |
| 27 | 0715 | ICP | x | Mg ICP (Incomplete Digestion) | Magnesium | 0.01 | 9.99 |
| 28 | 0720 | ICP | x | K ICP (Incomplete Digestion) | Potassium | 0.01 | 9.99 |
| 29 | 0722 | ICP | x | Na ICP (Incomplete Digestion) | Sodium | 0.01 | 5.00 |
| 30 | 0719 | ICP | x | P ICP | Phosphorus | 0.01 | 5.00 |

EN=Envelope # RT=Report Style CC=Copies IN=Invoices Fx=Fax(1=Yes 0=No) Totals: 1=Copy 1=Invoice 0=3 1/2 Disk
DL=Download 3D=3 1/2 Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No) ID=C030901

* Our liability is limited solely to the analytical cost of these analyses.

BC Certified Assayer: David Chiu



CERTIFICATE OF ANALYSIS
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INTERNATIONAL PLASMA LABORATORY LTD

Client : Northern Analytical Laboratories
Project: PO#05742

13 Samples
13=Pulp

[082216:47:34:99090399] Out: Sep 03, 1999 Page 1 of 1
In: Aug 31, 1999 Section 1 of 1

| Sample Name | Ag
ppm | Cu
ppm | Pb
ppm | Zn
ppm | As
ppm | Sb
ppm | Hg
ppm | Mo
ppm | Tl
ppm | Bi
ppm | Cd
ppm | Co
ppm | Ni
ppm | Ba
ppm | W
ppm | Cr
ppm | V
ppm | Mn
ppm | La
ppm | Sr
ppm | Zr
ppm | Sc
ppm | Ti
% | Al
% | Ca
% | Fe
% | Mg
% | K
% | Na
% | P
% |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|---------|--------|---------|--------|
| ALPAA99 S12 | P 0.6 | 39 | 24 | 242 | 172 | < | < | 1 | < | < | 3.3 | 13 | 35 | 108 | < | 18 | 31 | 1129 | 24 | 17 | 1 | 2 | 0.02 | 1.17 | 0.25 | 2.64 | 0.63 | 0.05 | 0.02 | 0.05 |
| ALPAA99 S15 | P 0.2 | 17 | 16 | 54 | 84 | < | < | 2 | < | < | < | 14 | 14 | 129 | < | 21 | 39 | 1121 | 14 | 16 | < | 1 | 0.02 | 1.39 | 0.21 | 2.56 | 0.36 | 0.03 | 0.02 | 0.06 |
| ALPS99 SS02 | P 0.2 | 24 | 43 | 183 | 59 | < | < | 1 | < | < | < | 10 | 26 | 87 | < | 16 | 26 | 810 | 22 | 30 | 1 | 1 | 0.01 | 1.07 | 0.48 | 2.38 | 0.34 | 0.03 | 0.02 | 0.07 |
| ALPSR99 S03 | P 0.9 | 43 | 41 | 102 | 122 | < | < | 1 | < | < | < | 10 | 26 | 61 | < | 12 | 14 | 292 | 26 | 8 | 1 | 1 | < | 0.85 | 0.03 | 3.86 | 0.24 | 0.05 | 0.02 | 0.05 |
| 1- 99S05 | P 0.7 | 185 | 13 | 57 | 28 | < | < | 2 | < | 43 | < | 11 | 26 | 109 | 5 | 23 | 43 | 244 | 15 | 55 | 1 | 3 | 0.05 | 2.07 | 0.18 | 5.24 | 0.37 | 0.14 | 0.08 | 0.07 |
| 2- 99S06 | P 0.8 | 314 | 24 | 113 | 16 | < | < | 2 | < | 201 | < | 20 | 43 | 134 | < | 27 | 46 | 676 | 15 | 22 | 2 | 3 | 0.05 | 2.10 | 0.20 | 5.33 | 0.46 | 0.11 | 0.03 | 0.07 |
| 3- 99S07 | P 0.9 | 493 | 17 | 97 | < | < | < | 2 | < | 97 | < | 10 | 26 | 179 | < | 26 | 47 | 414 | 15 | 30 | 2 | 3 | 0.05 | 2.65 | 0.20 | 8.07 | 0.35 | 0.05 | 0.06 | 0.07 |
| 4- 99S08 | P 1.5 | 478 | 24 | 163 | < | < | < | 1 | < | 74 | < | 12 | 37 | 176 | < | 29 | 45 | 696 | 17 | 55 | 2 | 4 | 0.05 | 2.75 | 0.28 | 8.57 | 0.35 | 0.07 | 0.09 | 0.06 |
| 99S10 | P 23.0 | 107 | 1382 | 1192 | 2836 | < | < | 1 | < | 31 | 24.3 | 14 | 32 | 89 | < | 12 | 22 | 1030 | 16 | 40 | 1 | 2 | 0.01 | 0.71 | 0.11 | 4.78 | 0.22 | 0.07 | 0.02 | 0.06 |
| MCF 99 SS01 | P 0.3 | 22 | 21 | 65 | 20 | < | < | 3 | < | < | < | 9 | 15 | 205 | < | 17 | 45 | 376 | 17 | 27 | 1 | 4 | 0.04 | 1.09 | 0.89 | 2.59 | 0.41 | 0.14 | 0.03 | 0.25 |
| MCSR 99 SS01 | P 0.3 | 31 | 11 | 83 | 17 | < | < | 2 | < | < | < | 11 | 17 | 396 | < | 22 | 51 | 681 | 21 | 78 | 1 | 5 | 0.05 | 1.71 | 0.89 | 2.68 | 0.64 | 0.11 | 0.04 | 0.10 |
| MCSR 99 SS03 | P 0.6 | 58 | 11 | 59 | 15 | < | < | 3 | < | < | < | 7 | 17 | 627 | < | 26 | 46 | 305 | 31 | 42 | 1 | 4 | 0.04 | 1.77 | 0.66 | 2.41 | 0.45 | 0.07 | 0.03 | 0.07 |
| SCSR 99 SS06 | P 0.2 | 19 | 6 | 67 | < | < | < | 2 | < | < | < | 14 | 24 | 335 | < | 39 | 65 | 705 | 15 | 58 | 1 | 4 | 0.08 | 1.39 | 0.81 | 3.01 | 0.88 | 0.21 | 0.03 | 0.14 |

Callum 1-4 claims

NTs # 115 P/15

NUMBER REFER TO SOIL LOCATION ON INDEX MAP NTs # 115 P/15

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|------|-------|-------|-------|------|-----|------|-----|-----|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Min Limit | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Max Reported* | 99.9 | 20000 | 20000 | 20000 | 9999 | 999 | 9999 | 999 | 999 | 9999 | 99.9 | 9999 | 9999 | 9999 | 999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 9999 | 1.00 | 9.99 | 9.99 | 9.99 | 9.99 | 9.99 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

—No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample P=Pulp

24/08/99

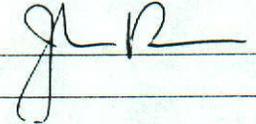
Certificate of Analysis

Page 2

Shawn Ryan

WO# 05730

Certified by



| Sample # | | Au
ppb | |
|----------|------------|-----------|---------------------|
| s | ALPS99SS06 | 11 | |
| s | ALPSR99S02 | <5 | |
| s | ALPSR99S03 | 16 | |
| s | ALPSR99S04 | 18 | |
| s | ALPSR99S05 | 66 | ① Soil |
| s | ALPSR99S06 | 222 | ② Soil |
| s | ALPSR99S07 | 182 | ③ Soil |
| s | ALPSR99S08 | 267 | ④ Soil |
| s | ALPSR99S09 | 8 | ⑤ Soil |
| s | ALPSR99S10 | 42 | |
| s | ALPF99S01 | <5 | |
| s | ALPF99S02 | 5 | |
| s | ALPF99S03 | 11 | |
| m | ALPF99S04 | 10 | |
| m | ALPF99S05 | 15 | |
| m | ALPCASS | 24 | |
| r | ALPSR99R02 | 12 | |
| r | ALPSR99R16 | 123 | |
| r | ALPSR99R31 | 931 | △ Rock Location # ② |
| r | ALPSR99R32 | 14 | Rock Location # ③ |
| r | ALPSR99R33 | <5 | |
| r | ALPSR99R36 | 33 | |
| r | ALPSR99R37 | 13 | |
| r | ALPSR99R38 | <5 | |

Soil Location
ON NTS# 115 P/15

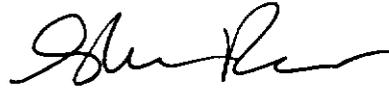
094178

$26 \text{ Soil on AlPINA} \times 3 \times 12.00 = 912$
 $6 \text{ Rock on AlPINA} \times 14.00 = 84$

QUALIFICATIONS

I have worked in the exploration business for the last 19 years. I have run geophysical survey for the last 12 years. I have being actively prospecting in the Yukon for the last 7 years. I have personally work on this project and state that all the data to be true.

Prospector
Shawn Ryan

A handwritten signature in black ink, appearing to read "Shawn Ryan", written in a cursive style.