We are committed to providing <u>accessible customer service</u>. If you need accessible formats or communications supports, please <u>contact us</u>.

Nous tenons à améliorer <u>l'accessibilité des services à la clientèle</u>. Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez <u>nous contacter</u>.





# REPORT ON PROSPECTING WORK CONDUCTED ON CLAIMS 633593, 853165 AND 4270945 OF THE RIDLEY LAKE (SWAYZE) PROPERTY

ROLLO AND RANEY TOWNSHIPS

NTS Sheet

0410/15

Work Period September 14-15, 2014

Authors: Bogdan Nitescu, P.Geo. Warren Hawkins, P. Eng. Lucas Currah

April 10, 2015

#### **Table of Contents**

Introduction	3
Location and Access	3
Geology	4
Prospecting Work Results	5
Recommendations	6
References	7
Signatures of the Authors	8
Appendix 1 – AGAT Laboratories Assay Report Appendix 2 – B SPOT Outcrop Pictures	

#### **List of Maps**

Map 1 – Ridley Lake (Swayze) Property and Location of Claims 633593, 853165 and 4270945, Scale 1: 100,000

Map 2 – Prospecting Work Conducted on Claim 633593, Scale 1: 5,000

Map 3 – Prospecting Work Conducted on Claim 853165, Scale 1: 5,000

Map 4 – Prospecting Work Conducted on Claim 4270945, Scale 1: 5,000

#### Introduction

Richmond Minerals Inc. ("the Company") owns 154 contiguous unpatented mining claims comprising a total of 194 mining units in the Rollo and Raney Townships, which form the Ridley Lake (Swayze) Property (the "Property") (Map 1). The initial property comprising 150 mining claims was staked in the 1980's. No exploration was conducted between 1990 and 2014, due to Certificates of Pending Legal Proceedings that were attached to the claims of the Property. The certificates were vacated by court order in February 2014. The Company resumed exploration on June 04, 2014, by conducting a prospecting traverse in the area covered by the central core of claims of the Property. The purpose of the traverse was to locate and sample the historic Agaura and Cyril Knight gold occurrences. The results of this work were presented in a previous report (Nitescu et al., 2014).

On September 14 and 15, 2014, the Company conducted follow-up prospecting work on claims 633593, 853165 and 4270945 of the Property. The specific goals of the work were:

- 1. New sampling of the Agaura gold occurrence outcrop both at the location where it was sampled as part of the prospecting work conducted on June 4, 2014 and at a new location;
- 2. Search for (and sampling of) mineralized rock exposures along the segment of an abandoned lumber road on claim 853165 that lies on strike with the west-trending structures hosting the Agaura gold occurrence, approximately 1,600 m to the west-southwest from the Agaura outcrop;
- 3. Search for (and sampling of) mineralized rock exposures in the area covered by the southwestern part of claim 4270945, which lies along strike with the Raney gold occurrence, situated approximately 800 m to the northwest from the claim boundary (along strike direction), on mineral claims owned by MPH Ventures. Claim 4270945 is part of a group of four claims comprising 44 claim units that were staked in 2012 and are contiguous to the SW-W corner of the original property of 150 claims, and which have no historical reports of exploration work.

#### **Location and Access**

The Property is located in northern Ontario, Canada, approximately 110 km southwest of the city of Timmins, and 200 km northwest of Sudbury, extending between the Raney Lake and the southern half of the Rollo Lake, within the Raney and Rollo Townships, on N.T.S. Sheet 41O/15 (Map 1). Access is granted by a network of well maintained lumber roads. The Foleyet road can be taken south from highway 101, and Dore road can be taken north from the Sultan industrial road. A road that loops around Rollo Lake from the Foleyet road passes through the east of the property, and a smaller lumber road continues to the west, crossing the southwestern part of claim 4270945. An un-maintained lumber road that branches off southwest from this road

reaches claim 853165. In the area of the Property, the topography is gently undulating and elevations vary from ca. 380 m to ca. 430 m. Most of the Property appears to have been logged over the past 25 years and is currently covered by dense secondary growth forest that is difficult to penetrate, and this is the case for claims 633593 and 4270945. The area accessed on claim 853165 was cleared out by logging, and currently does not have significant secondary growth.

#### Geology

The Property is located within the western part of the Swayze-Deloro Greenstone Belt, which lies in the western region of the Abitibi Sub-Province of the Superior Province. The Swayze-Deloro greenstone belt trends in a general east-west direction and consists of mafic to felsic volcanic and sedimentary rocks intruded locally by quartz-feldspar porphyry, gabbro and diorite bodies.

Geological data from the Ontario Ministry of Northern Development and Mines (Precambrian bedrock geology digital data, see Maps 2, 3, 4) and the Geological Survey of Canada Open File Report 3384b (Heather and Shore, 1999) indicate that the areas covered by the prospecting work described in this report are underlain by mafic to intermediate metavolcanic rocks.

Hillier (1989) provides a summary of the geological features associated with the gold mineralization in the Agaura area, based on detailed logging of drill core. He states that "several geological features appear to be of significance in the deposition of gold mineralization in this area:

- Shear zone development producing permeable conditions favourable for hydrothermal fluid circulation;
- Carbonatization of the mafic volcanic possibly releasing gold into the system;
- Development of silicified, carbonatized, chloritized and mineralized fracture zones;
- Development of quartz + carbonate ± chlorite veins, stringers and stockworks generally with sulphide mineralization containing lower grade gold values in the surrounding wallrock;
- Emplacement of the feldspar porphyry sill/ dike creating a "heat engine" for hydrothermal re-concentration;
- Higher concentration of both disseminated and cubic pyrite mineralization;
- Contacts between mafic to intermediate flows and slightly coarser-grained mafic to intermediate flows;
- Contact between mafic flows and felsic to intermediate flows; and
- Proximity to mafic intrusive dikes."

Further details on the geology of the area covered by the Property and the geology, mineralization and history of exploration at the Agaura and Cyril Knight gold occurrences can be

found in the following reports available in the public domain: Rickaby (1935), Thurston et al. (1977), Phendler (1982), Filo (1983), Hillier (1989).

#### **Prospecting Work Results**

The prospecting work presented in this report was conducted by a three-person crew: Warren Hawkins, P.Eng., Exploration Manager of Richmond Minerals; Bogdan Nitescu, P.Geo., Director of Richmond Minerals; and Lucas Currah, Field Assistant.

On September 14, 2014, the crew conducted an on-foot traverse to collect samples from the Agaura gold occurrence outcrop, which is located on claim 633593 (see Map 2). Two mineralized samples were taken from the Agaura showing outcrop. Later that day claim 853165 was accessed by 4X4 vehicle via an unmaintained lumber road and one mineralized outcrop was identified and sampled on the western side of the road, on-strike with the Agaura gold occurrence (see Map 3). On September 15, 2014, the crew completed an on-foot traverse of the southwestern part of claim 4270945 (see Map 4). A total of three outcrops were found along the traverse, two of which are mineralized. A rock sample was taken from each of the mineralized outcrops (see Map 4).

The crew identified the rocks exposed in all the outcrops that were prospected to be intermediate to mafic metavolcanic rocks, in agreement with the Ministry of Northern Development and Mines bedrock geology data (see Maps 2, 3, 4).

The fire assaying of the samples collected during these traverses was done at the AGAT Laboratories in Mississauga, Ontario, Canada. This laboratory is ISO 9001 certified. The AGAT Laboratories assay report, which includes the Certificate of Analysis, the Quality Assurance Report and the Method Summary, is provided in the Appendix 1.

Note: All location coordinates provided below are NAD83 UTM Zone 17N.

The Agaura gold occurrence is found within a prominent intermediate to mafic metavolcanic bedrock exposure containing numerous zones of quartz veining/ stockworks that extends in an east-west direction for approximately 150 meters. Sample E5153668 (GPS coordinates 372501E, 5303464N, elevation 412 m) was taken from the central-western area of the outcrop and sample E5153665 (GPS coordinates 372563E, 5303449N, elevation 404 m) was taken from the south-eastern margin of the outcrop (see Map 2). Both samples consisted of intermediate to mafic metavolcanic rock with quartz/ carbonate veining and disseminated sulphide mineralization. The samples were assayed for gold (fire assay, AAS finish) and returned concentrations of 6.16 ppm Au and 3.66 ppm Au, respectively.

The Location labeled B SPOT on Map 3 demarcates an approximately 10 meter long outcrop on a small ridge on the western side of the bush road that crosses claim 853165. The outcrop contains a sharp contact between a mafic metavolcanic unit with disseminated sulfides (pyrite and bornite) and a laminated felsic volcanic rock (possible tuff) with amygdules. The assay for

gold (fire assay, AAS finish) of samples E5153664 and E5153667 (GPS coordinates for both samples 370907E, 5303176N, elevation 410 m), which were taken from the mafic metavolcanic rock unit, returned concentrations of 0.004 ppm Au and 0.013 ppm Au, respectively. Pictures taken at the B SPOT outcrop are presented in the Appendix 2.

The location labeled OUT 01 on Map 4 (367165E, 5302862N) corresponds to a large outcrop (in excess of 30 meters by 30 meters), situated on the north side of the access road. The exposed rock is a chloritized mafic metavolcanic rock that is sporadically transected by 6-8 cm wide quartz veins. No sulfide mineralization was observed.

The location labeled L SPOT on Map 4 (GPS coordinates 366499E, 5303096N, elevation 414 m) corresponds to an approximately two-meter-long outcrop of chloritized mafic metavolcanic. The rock is foliated and along the eastern end of the rock exposure carbonate stringers and disseminations of pyrite and chalcopyrite were observed. A grab sample of rock with sulfide mineralization (sample E5153663) was assayed for gold (fire assay, AAS finish) and returned a concentration of <0.002 ppm Au.

The location labeled B SPOT2 on Map 4 (GPS coordinates 366539E, 5303027N, elevation 406 m) corresponds to a one meter-long outcrop of chloritized mafic metavolcanic. A narrow zone (approx. 10 cm) of altered sheared rock with chlorite, quartz carbonate veining and lenses of disseminated sulfides (pyrite and minor chalcopyrite) was sampled (sample E5153666). The assay for gold for this sample (fire assay, AAS finish) returned a concentration of 0.009 ppm Au.

#### Recommendations

Claim 633593

The significant gold assay results of the samples from the Agaura outcrop are in agreement with previous results obtained from this location (see Nitescu et al., 2014). In order to explore further the potential of gold-bearing mineralization in the area of the Agaura gold occurrence, previously made recommendations (Nitescu et al., 2014) are re-iterated in this report:

- An exploration grid should be established to provide spatial control for further exploration
  activities in the area that covers the Agaura and Cyril Knight showings. The grid should cover
  presumed strike extensions of mineralization at the Agaura gold occurrence. Nominal line
  spacing of 75-100 m with stations at a 25 m spacing is recommended;
- Preliminary geophysical surveying, including magnetometer and VLF-EM surveys, should be carried out over the grid that will be cut. The results of these surveys will assist in 1) the mapping of the of the area covered by the grid; 2) the mapping of possible zones of alteration; and 3) the identification of possible off-setting structures;

- Induced polarization/ resistivity surveying should be carried out over parts of the grid in an attempt to extend or locate anomalous zones with gold-bearing mineralization. In particular, the interpretation of previous IP/ resistivity work has indicated the existence of targets in the area of the Agaura occurrence that are open to the east-northeast (e.g., target T1; see the Appendix 1 in Nitescu et al., 2014). In support of this aspect are also the 1989 drill results, which returned significant gold values in the easternmost drill holes (S89-07 and S89-08). Therefore, re-examining and extending these anomalies should be given a high priority;
- Once all the technical information is compiled, a program of diamond drilling should be conducted to test new anomalous zones that suggest mineralization potential.

#### Claims 853165 and 4270945

Although the outcrops identified on claim 853165 and on claim 4270945 lie along strike to the Agaura and Raney gold occurrences, respectively, no significant gold mineralization was found. It is however recommended that more prospecting work be conducted in both areas, in order to determine if there are any other rock exposures with potential for hosting gold mineralization. In addition, a study of available airborne magnetic and air photography data is recommended, in order to seek any relevant information on the potential westward extension on claim 853165 of the structures hosting the Agaura gold occurrence and of the potential extension to the south-east of the structures hosting the Raney gold occurrence, on ground covered by claim 4270945.

#### References

Filo, J.K. 1983. Geological Report on the Ridley Lake Prospect in Rollo Township, Sudbury Mining Division, for Carlson Mines Ltd. (Available in the Assessment Work Database of the Ontario Ministry of Northern Development and Mines; AFRI File: 41O15SE0024)

Heather, K.B and Shore, G.T. 1999. Geology, Rollo Lake, Swayze Greenstone Belt, Ontario. Geological Survey of Canada, Open File 3384b, scale 1:50,000

Hillier, D. 1989. Diamond Drilling Report on the Swayze Property of Black Gregor Explorations Ltd. and Carlson Mines Ltd. (Available in the Assessment Work Database of the Ontario Ministry of Northern Development and Mines; AFRI File: 41015SE0001)

Nitescu, B., Hawkins, W., Carter G. 2014. Report on prospecting work conducted on the Ridley Lake (Swayze) Property in the area of the Agaura and Cyril Knight gold occurrences. (Submitted to the Ontario Ministry of Northern Development and Mines on behalf of Richmond Minerals Inc.)

Phendler, R.W. 1982. Report on the Ridley Lake Property for Carlson Mines Ltd. (Available in the Assessment Work Database of the Ontario Ministry of Northern Development and Mines; AFRI File: 41O15SE0020)

Rickaby, H.C. 1935. Geology of the Swayze Gold Area. Ontario Department of Mines, Annual Report, v. 43, part 3, pp. 1-36. (Available in the Ontario Geological Survey Publications Database of the Ontario Ministry of Northern Development and Mines; Publication No: ARV43-03.001)

Thurston, P.C., Siragusa, G.M. and Sage, R.P. 1977. Geology of the Chapleau Area, Districts of Algoma, Sudbury and Cochrane. Ontario Department of Mines, Geoscience Report 157, 293p. (Available in the Ontario Geological Survey Publications Database of the Ontario Ministry of Northern Development and Mines; Publication No: M2352)

#### **Signatures of the Authors**

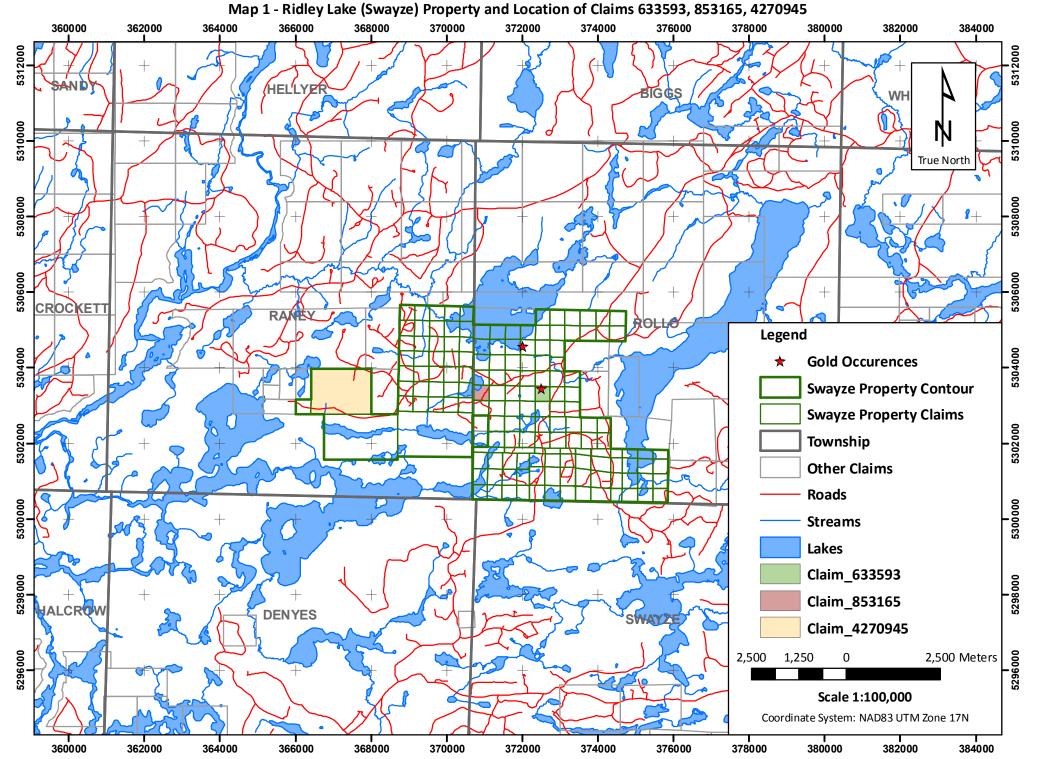
Bogdan Nitescu, P.Geo.

Warren Hawkins, P.Eng.

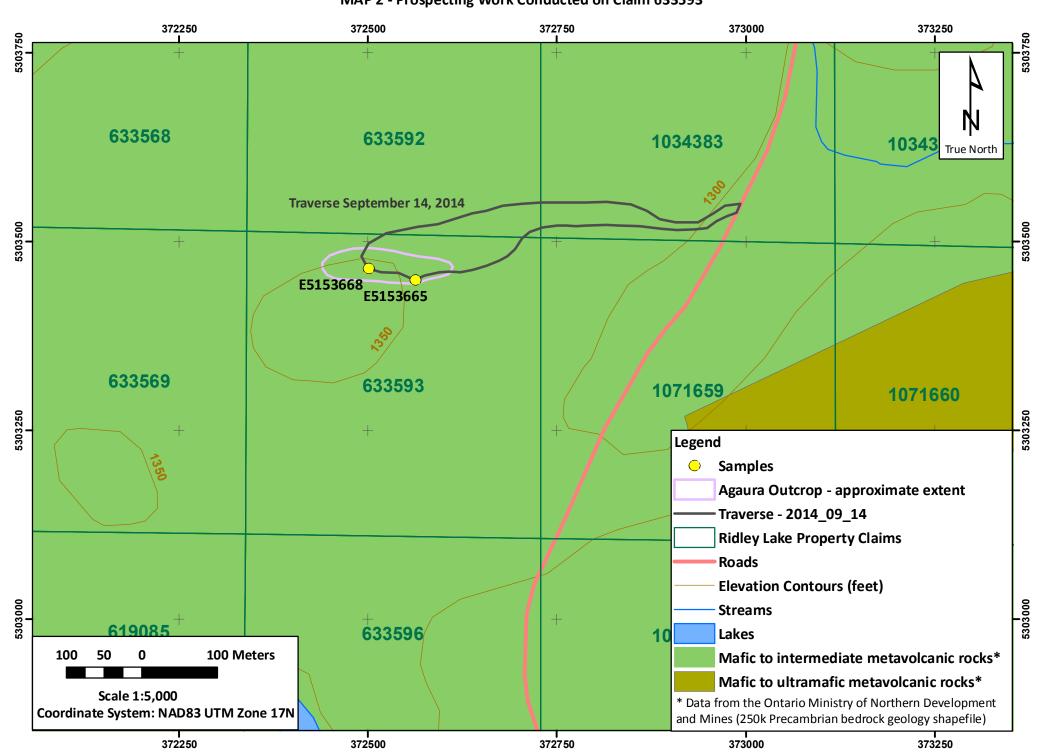
Lucas Currah

#### **RICHMOND MINERALS INC.**

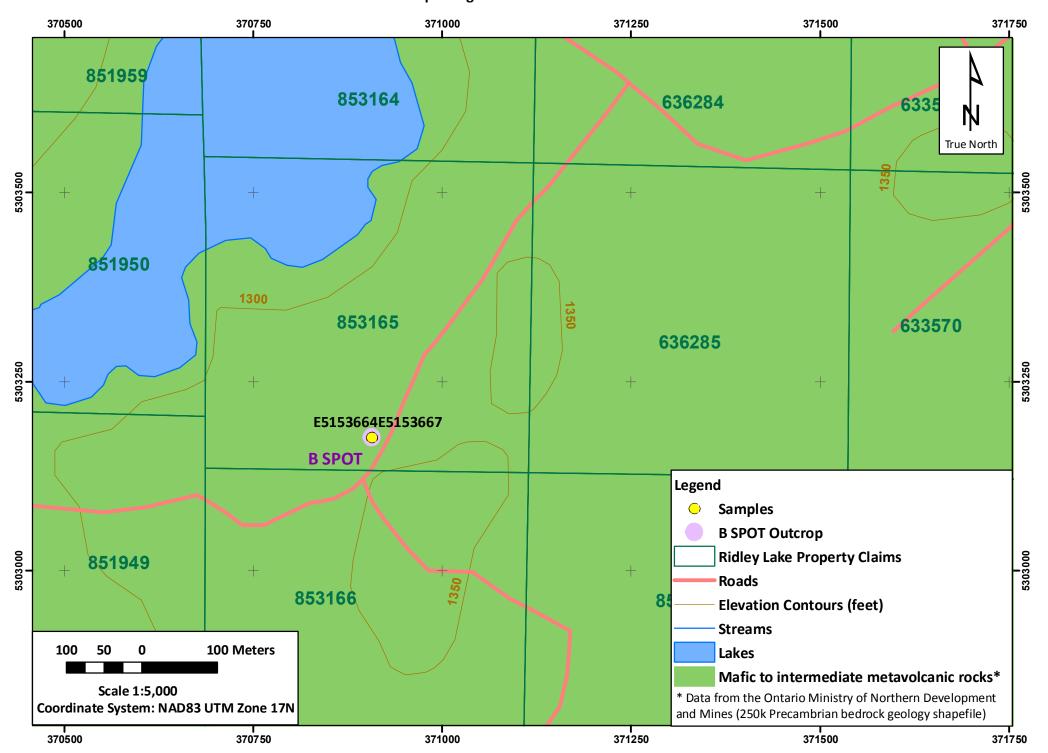




RICHMOND MINERALS INC.
MAP 2 - Prospecting Work Conducted on Claim 633593

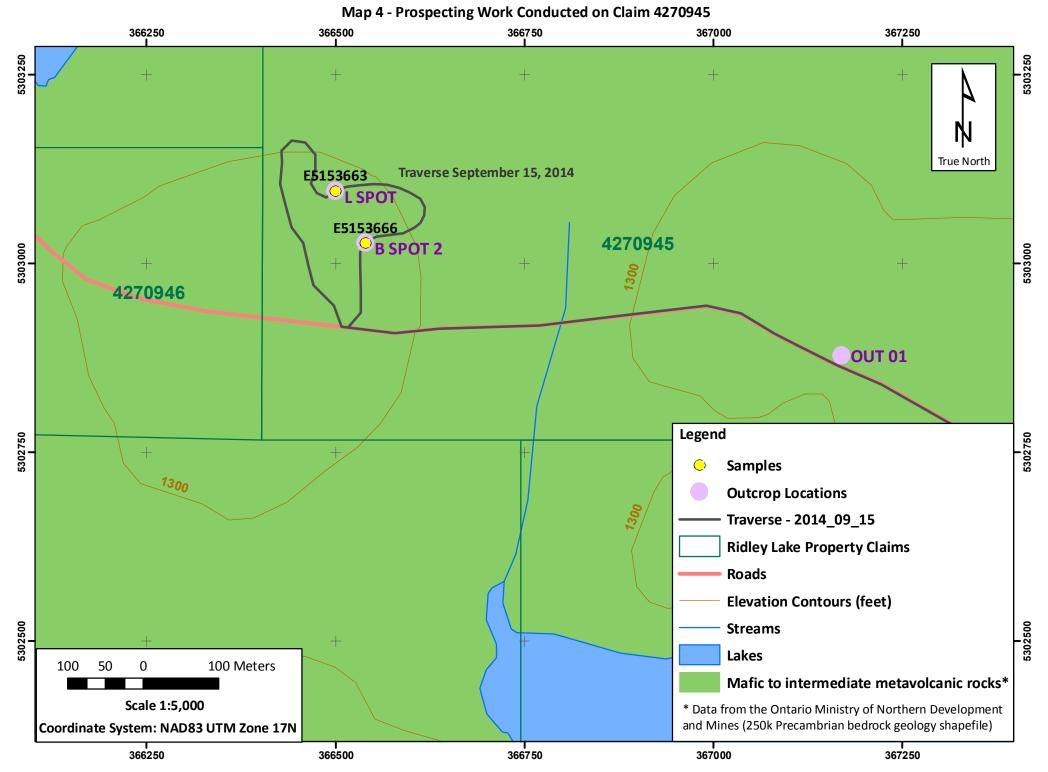


## RICHMOND MINERALS INC. MAP 3 - Prospecting Work Conducted on Claim 853165



RICHMOND MINERALS INC.

4an 4 Prospecting Work Conducted on Claim 4270945



## APPENDIX 1 AGAT LABORATORIES ASSAY REPORT

#### **Table of Contents**

Cover Page	1
Certificate of Analysis	2
Quality Assurance – Replicate	3
Quality Assurance – Certified Reference Materials	4
Method Summary	5



5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: RICHMOND MINERALS INC. 133 RICHMOND ST. WEST, SUITE 403 TORONTO, ON M5H2L3 (416) 603-2114

**ATTENTION TO: Warren Hawkins** 

**PROJECT: SWAYZE** 

AGAT WORK ORDER: 14T891578

SOLID ANALYSIS REVIEWED BY: Yufei Chen, Lab Co-ordinator

DATE REPORTED: Sep 24, 2014

**PAGES (INCLUDING COVER): 5** 

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES	

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



### **Certificate of Analysis**

**AGAT WORK ORDER: 14T891578** 

**PROJECT: SWAYZE** 

5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: RICHMOND MINERALS INC.

ATTENTION TO: Warren Hawkins

(202-051) Fire Assay - Trace Au, AAS finish										
DATE SAMPLED: Sep 22, 2014				DATE RECEIVED: Sep 17, 2014	DATE REPORTED: Sep 24, 2014	SAMPLE TYPE: Rock				
	Analyte:	Sample Login Weight	Au							
	Unit:	kg	ppm							
Sample ID (AGAT ID)	RDL:	0.01	0.002							
E5153663 (5832559)		2.86	<0.002							
E5153664 (5832560)		2.85	0.004							
E5153665 (5832561)		1.86	3.66							
E5153666 (5832562)		0.92	0.009							
E5153667 (5832563)		3.11	0.013							
E5153668 (5832564)		3.79	6.16							

Comments: RDL - Reported Detection Limit

Certified By:

J. cha



Quality Assurance - Replicate AGAT WORK ORDER: 14T891578 PROJECT: SWAYZE 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: RICHMOND MINERALS INC.

ATTENTION TO: Warren Hawkins

(202-051) Fire Assay - Trace Au, AAS finish													
	REPLICATE #1												
Parameter	Sample ID	Original	Replicate	RPD									
Au	5832559	< 0.002	< 0.002	0.0%	·								



**Quality Assurance - Certified Reference materials AGAT WORK ORDER: 14T891578** 

**PROJECT: SWAYZE** 

5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: RICHMOND MINERALS INC.

ATTENTION TO: Warren Hawkins

(202-051) Fire Assay - Trace Au, AAS finish														
	CRM #1 (ref.1P5K)													
Parameter	Expect	Actual	Recovery	Limits										
Au	1.44	1.39	96%	90% - 110%										



5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

### **Method Summary**

CLIENT NAME: RICHMOND MINERALS INC.

AGAT WORK ORDER: 14T891578

PROJECT: SWAYZE

ATTENTION TO: Warren Hawkins

SAMPLING SITE: SAMPLED BY:

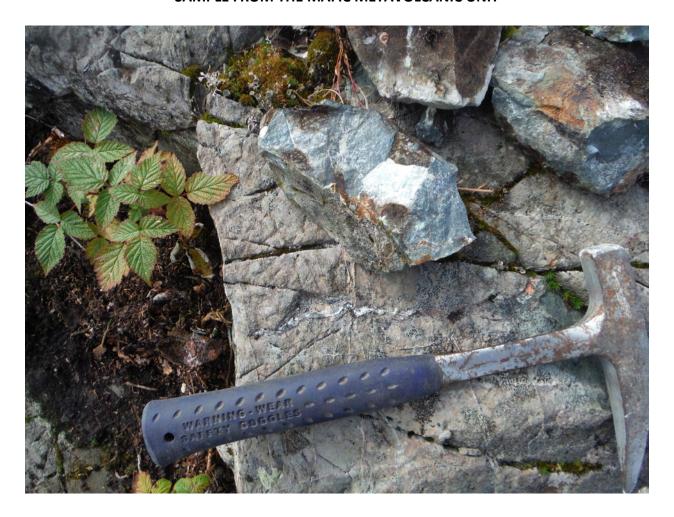
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS

## APPENDIX 2 B SPOT OUTCROP PICTURES

## B SPOT OUTCROP WITH MAFIC METAVOLCANIC UNIT IN THE FOREGROUND GPS UTM COORDINATES (NAD 83 UTM ZONE 17): 370907E, 5303176N



## B SPOT OUTCROP SAMPLE FROM THE MAFIC METAVOLCANIC UNIT



B SPOT OUTCROP
CONTACT BETWEEN MAFIC METAVOLCANIC UNIT AND FELSIC VOLCANIC ROCK



## RICHMOND MINERALS INC. RIDLEY LAKE PROPERTY - CLAIM CONTIGUITY MAP

