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**GEOLOGY AND STRUCTURAL ANALYSIS**

**of the**

**BRADSHAW PORTAL OUTCROP**

**BRADSHAW GOLD DEPOSIT  
NORTH TIMMINS PROJECT**

**PORCUPINE MINING DIVISION,  
NORTHEASTERN ONTARIO**

**for**

**GOWEST GOLD LTD.**

**February 15, 2017**

**J Kevin Montgomery, P. Geo.**

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**Gowest**



Bradshaw Portal Outcrop Report 2017

## SUMMARY

The North Timmins Project, held by Gowest Gold Ltd., is situated 32 km north-northeast of Timmins, Ontario. It is comprised of 672 claim units (10,908 hectares) in Evelyn, Tully, Little, Gowan, Prosser and Wark Townships. It is accessible from Highway 655 via an all-weather gravel road that turns east off Highway 655, 11.5 km north of the Kidd Creek Mine access road.

Gowest Gold is developing the Bradshaw gold deposit towards mine production. A closure plan (B22) for an advanced exploration bulk sample program was approved by MNM on August 11, 2015. There is limited bedrock exposure in the vicinity of the Bradshaw gold deposit so the closest exposure was chosen to drive a decline into the deposit. The Bradshaw portal outcrop (487000E, 5399000N NAD 83) is an elliptical shaped rock hill, 12 m (303 to 291 m ASL) above the surrounding surface. A UAV drone topographical and video survey was conducted by Talbot Surveying Ltd of Timmins Ontario in May 2016. Final products of the survey included an orthomosaic aerial photograph and a topographical survey of the outcrop.

Geological mapping and structural analysis of the outcrop known as Bradshaw Portal Outcrop was carried out from June 16 to 30, 2016. The mapping and analysis utilized a 10 m by 10 m flagged grid on the outcrop.

The outcrop is composed of amygdaloidal pillowed mafic volcanic flows (basalt). Pillow long axis trends 050 degrees and tops are to the north. Varioles are common throughout the outcrop. Geological mapping confirmed three main vertical to sub-vertical fracture/joint orientations observed on the orthomosaic aerial photograph of the outcrop. Mapping also identified a subhorizontal fracture/joint set. A total of 219 geological features were measured on the outcrop during the mapping survey. The fracture/joint measurements were stereonet analysed. This fracture/joint data was subsequently used by Denis Thibodeau of Stantec Consulting Limited to provide ground support guidelines for the proposed Bradshaw Decline.

Gowest continues to develop the Bradshaw Gold deposit towards mine production.

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## **INTRODUCTION**

The Bradshaw Gold deposit is located on the Frankfield Property, part of the North Timmins Project of Gowest Gold Ltd. The project is comprised of 78 mining claims (672 claim units) covering approximately 10,908 hectares, east of the Kidd Creek Mine site.

This report describes the geological mapping and structural analysis of the outcrop known as Bradshaw Portal Outcrop on leased claim 107280 of the Frankfield Property.

## **PROPERTY LOCATION AND ACCESS**

The North Timmins Project area is located in Evelyn, Tully, Little, Prosser and Wark Townships, approximately 32 km north-northeast of the city of Timmins, Ontario (Figure 1). Surface access to the Frankfield Property, is easily gained via Highway 655 and an all-weather gravel road (Whidden Road) that turns east off Highway 655, 11.5 km north of the Kidd Creek Mine access road. This 14 km long all-weather road (Whidden Road) ends at the former Texmont gold zone pit on the Frankfield Property. In 2016, the Whidden Road was extended 1.5 km on the Frankfield Property to the Bradshaw Portal Outcrop.

## **PROPERTY DESCRIPTION**

The North Timmins Project of Gowest is comprised of one patented mineral claim, ten leased mineral claims and 67 unpatented mineral claims variously located in Prosser, Wark, Tully, Gowan, Little and Evelyn Townships (Figure 2). It consists of 672 claim units covering approximately 10,908 hectares. The Frankfield Property consists of nine mining leases (54 contiguous mining claim units) in Tully and Prosser Townships totalling 837 hectares. Gowest owns the surface rights to seven of the mining leases. A detailed list of the North Timmins Project claims is found in Appendix B.



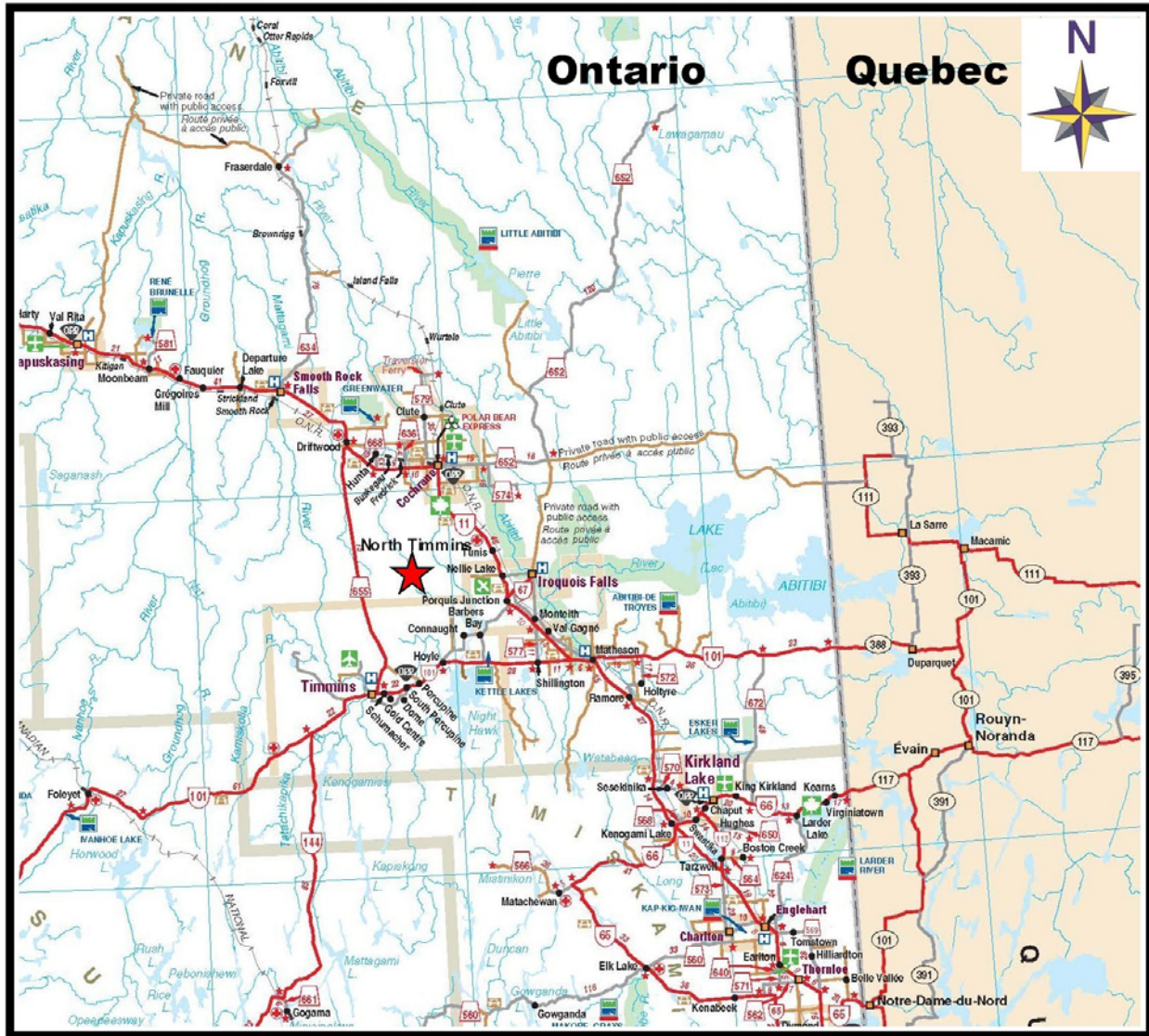


Figure 1 Location Map



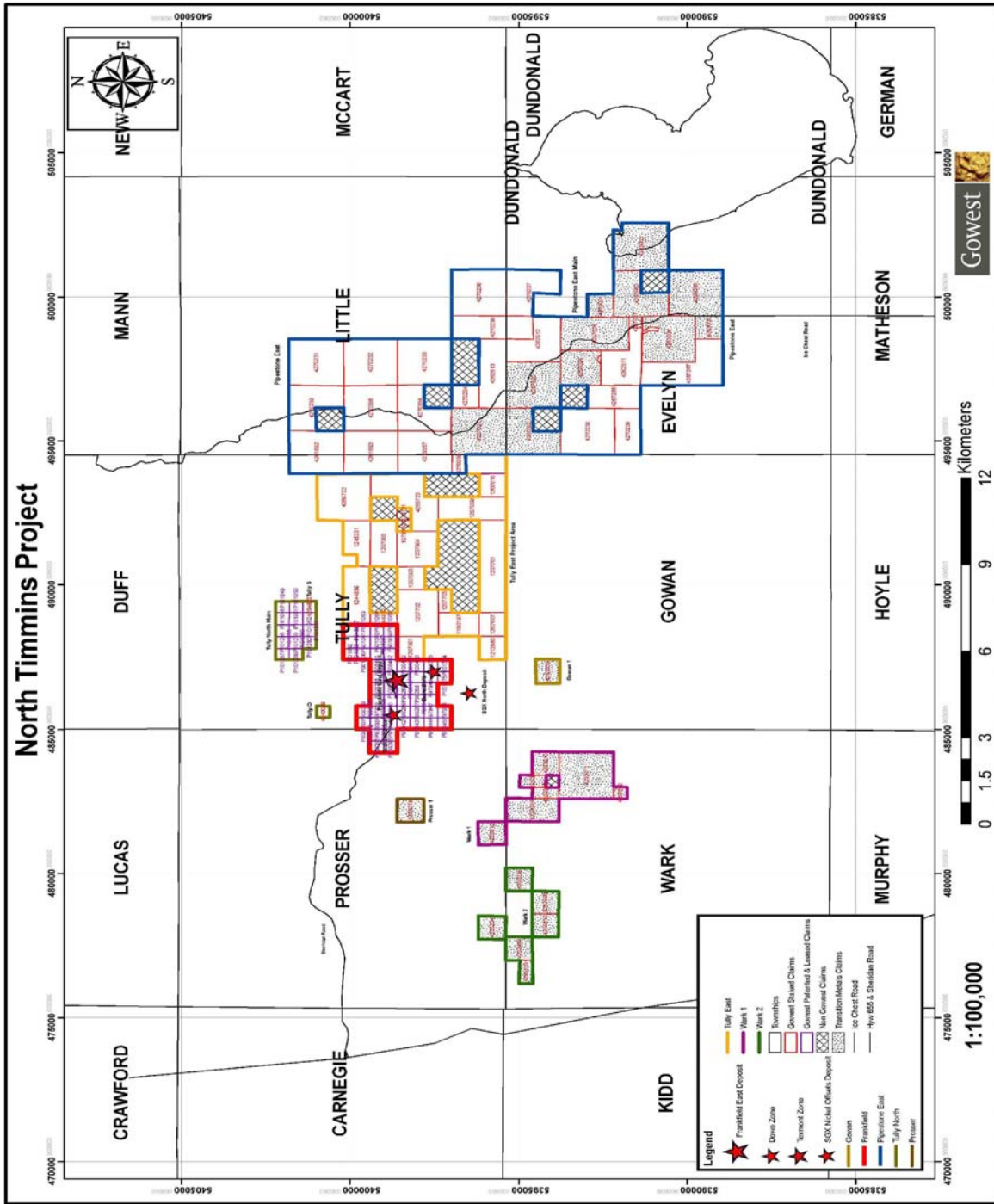


Figure 2 Project Map



## **REGIONAL GEOLOGY**

The project lies within the Superior Province of Archean basement rocks, in the Eastern Canadian Shield. It is situated in the northern part of the Abitibi Greenstone Belt (“AGB”). Gold deposits are structurally controlled and are widely distributed within the AGB, although the majority of gold deposits occur within 2 km of the Destor-Porcupine Fault Zone, the Pipestone Fault Zone and the Cadillac-Larder Lake Shear Zone.

Two dominantly volcanic assemblages and one dominantly sedimentary assemblage underlie the Gowest North Timmins Project area (Ayer and Trowell, 2001). To the west of the northwest-trending Buskegau River Fault, the Porcupine (sedimentary) assemblage (2696-2675 Ma) is present and unconformably overlies the Kidd-Munro (volcanic) assemblage (2719-2711 Ma). The Kidd-Munro underlies the central part of the project area and is underlain to the northwest by the upper Tisdale (volcanic) assemblage (2710- 2703 Ma). To the east of the Buskegau River Fault, Kidd-Munro assemblage rocks underlie the project area. Upper Tisdale assemblage rocks overlie the Kidd-Munro assemblage to the north, and possibly interfolded Porcupine assemblage rocks near the contact between these two tectonostratigraphic units.

The Kidd-Munro assemblage is divisible into two distinct suites. A tholeiitic to komatiitic portion that consists of komatiites, magnesium- and iron-rich tholeiites and a calc-alkaline portion consisting of intermediate to felsic pyroclastic rocks. Rare sedimentary rocks are generally confined to narrow interflow units within the mafic volcanic rocks. Synvolcanic felsic intrusions and later diabase dykes intrude the sequence. The calc-alkaline portion of the assemblage is host to the Kidd Creek VMS deposit and several smaller VMS deposits in Munro Township. The ultramafic/mafic portion is host to the Bradshaw (formerly known as the Frankfield East gold deposit) and other gold zones within the area (Figure 3).

An airborne magnetic survey shows considerable relief within the Kidd-Munro assemblage (Dumont et al. 2002). Magnetic highs appear to be coincident with unaltered ultramafic flows and magnetic lows appear to be coincident with mafic flows and altered ultramafic flows. The magnetic patterns also appear to define west verging folds, or possibly transposed stratigraphy along contact parallel faults. Airborne electromagnetic patterns appear to be following stratigraphic horizons, and drill hole data indicates that most conductive horizons are graphitic responses.

The upper Tisdale assemblage disconformably overlies the Kidd-Munro assemblage and is comprised of intermediate and felsic, epiclastic and pyroclastic volcanic rocks of calc-alkaline affinity. The magnetic pattern over this assemblage is subdued, with low





amplitude magnetic responses over stratiform gabbroic sills. Electromagnetic responses within this assemblage are diffuse and of low conductivity.

Porcupine assemblage rocks unconformably overlie the Kidd-Munro assemblage in the southern part of the project area. The sedimentary rocks are composed predominantly of fine-grained turbiditic sedimentary rocks with minor graphitic argillite and conglomerate horizons. The magnetic pattern associated with this assemblage is subdued with stratiform electromagnetic responses.

Structural features of the bedrock are mainly interpreted from airborne magnetic surveys. Stratigraphic units as represented by their magnetic signatures generally trend east-northeast within the Kidd-Munro assemblage. This direction is also characterized by a well-developed penetrative foliation. Fold axes also appear to trend east-northeast as noted by reversals in younging directions determined from flow features. Stratigraphy parallel shear zones, such as at the Bradshaw Gold deposit are developed at some lithological contacts. Extensional lineations developed in the shear zones are moderately northeast plunging, a direction that is similar to lineations observed in the Timmins area (Pyke, 1982).

Within the upper Tisdale assemblage magnetic patterns indicate northwest-trending lithologies cut by east-northeast-trending late faults. Stratigraphic facings indicate younging directions towards the northeast within this assemblage.

## **PROPERTY GEOLOGY**

The property is underlain by tholeiitic basalt flows and komatiitic basalt to peridotite flows of the Kidd-Munro assemblage. The tholeiitic basalt flows dominate the northern half of the property and the komatiitic peridotite flows the southern half. Thin (<10 m) units of pyritic graphitic argillite interflow sediments are commonly at or close to the contacts of the komatiitic peridotite flows in the north tholeiitic volcanic sequence. Depositional indicators demonstrate a steeply north dipping and north younging direction for the Kidd-Munro assemblage on the property. The stratigraphy has been deformed by at least two periods of deformation, as is common in the Abitibi Greenstone Belt.

Three gold mineralization areas presently exist on the Frankfield Property: the Bradshaw deposit (see description below), the Sheridan (formerly known as the Texmont) deposit and the Dowe gold zone.

In the northwest part of the property, the Sheridan deposit is hosted in a carbonate,

hematite and sericite altered shear zone within a sequence of tholeiitic basalt flows. The shear zone strikes N086°E and dips 75° to the north. Sheridan is a sulphide mineralized zone of 3-5% disseminated pyrite and very fine microscopic arsenopyrite with quartz vein flooding. Intex reported in 1982 that the Sheridan (Texmont) Zone contained 103,400 t averaging 7.54 g/t Au across and average width of 3 m along a strike length of 152 m and to a depth of 75 m. Gowest is not treating this historic mineral resource estimate as a NI 43-101 compliant resource verified by a qualified person and the estimate should not be relied upon. Subsequent drilling by Cyprus Gold (Canada) Limited in 1991 showed that the deposit extended to at least a depth of 360 m. Gowest drilled six diamond drill holes in 2010. The two best intersections obtained were 4.1 g/t Au over a down-hole length of 13.7 m and 4.1 g/t Au over 0.6 m. The Gowest drilling has traced the Sheridan zone for 250 m and it is open along strike and at depth below 200 m. Gowest has not prepared a mineral resource estimate for this deposit.

The Dowe gold zone is located in the southeast part of the Frankfield Property. Intersections of 2.86 g/t Au over 3.38 m, 1.8 g/t Au over 12 m and 1.9 g/t Au over 3.4 m have been reported from drilling in 1997-1998. Mineralization is reported to occur in quartz veins within a wedge of mafic volcanic rocks enclosed in ultramafic rocks. The mafic rocks are reported to be ankeritized and slightly silicified. Visible gold has been reported, together with pyrite. No arsenopyrite has been reported. The showing is reported to have a strike length of at least 150 m and has not been closed off.

### **Bradshaw Gold deposit**

The sulphide enrichment gold deposit model best describes the mineralization of the Bradshaw Gold deposit.

Gold mineralization in the Bradshaw deposit occurs primarily within a fractured, sulphidized and brecciated hydrothermal alteration horizon in basaltic flow rocks at or near the contact with steeply north dipping (85°) footwall ultramafic rocks to the south. This portion of the deposit is identified as the geological Main Zone. The mineralization is not confined to narrow vein-like structures (as can be seen in many other deposits in the area) but rather, in a more massive/tabular structure than is consistently present throughout the mineralized horizon.

Within the geological Main Zone, higher-grade gold mineralization is localized along the footwall of the horizon, termed the MZ1 Zone and along the hanging wall of the horizon, termed the MZ2 Zone. Pervasive silicification, minor ankerite veining, hematite staining along with the presence of tourmaline generate a recognizable mauve to pink hue for the Main Zone. Total sulphide content of the mineralized horizon varies from 3-30% with



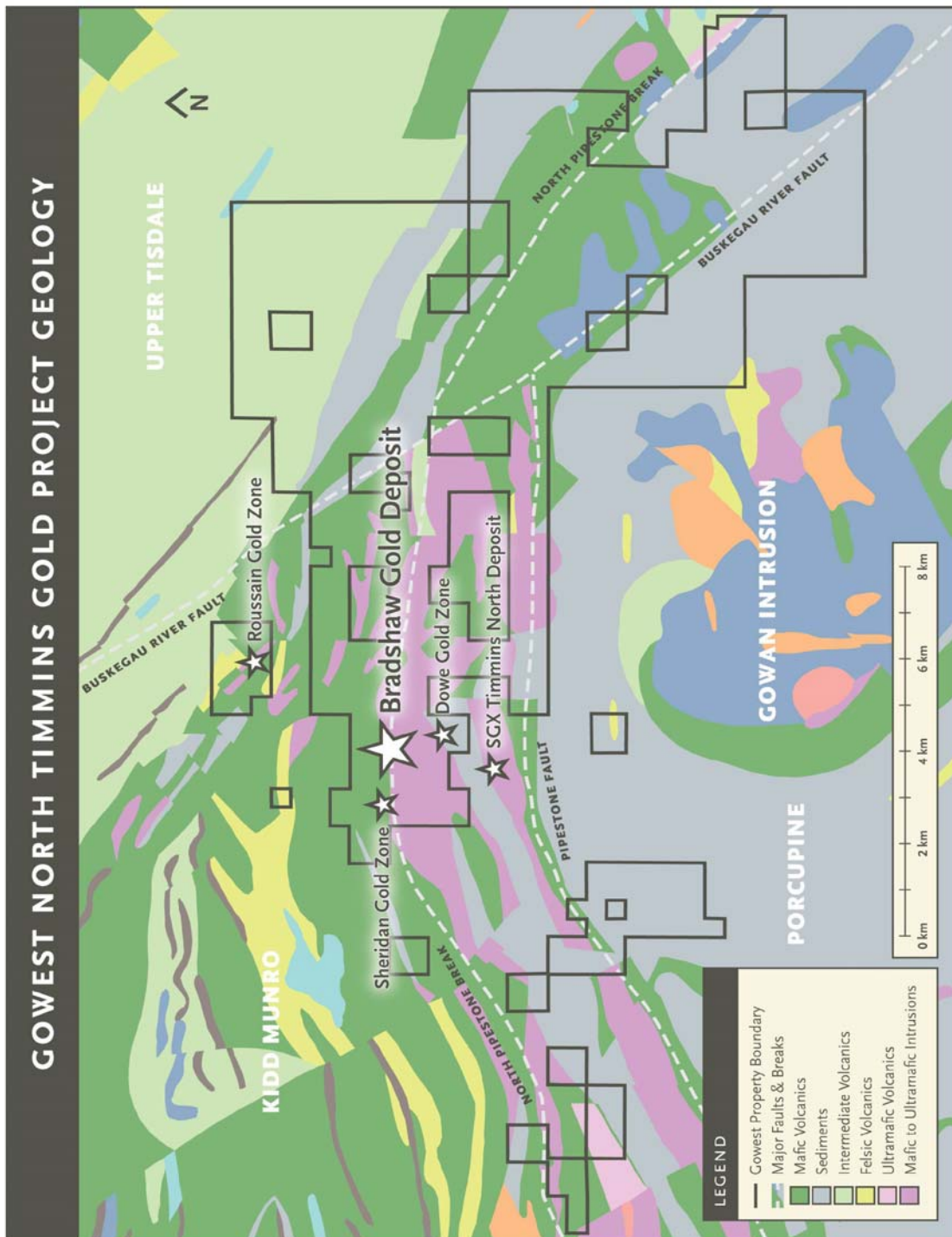


Figure 3 North Timmins Project Geology



occasional 2-5 cm wide bands of massive arsenopyrite and pyrite. The largest concentrations of sulphides correspond to the highest gold concentrations.

A second type of gold mineralization is hosted within the basalt flows. This mineralization forms multiple structures parallel to the strike and dip of the Main Zone and are referred to as Hanging Wall Zones as they are located immediately north of the Main Zone. They are seen as highly silicified zones accompanied by intense bleaching, brecciation and quartz flooding, tourmaline, 5-10% pyrite and arsenopyrite. As in the Main Zone, higher concentrations of arsenopyrite give rise to higher gold values. A total of six such parallel structures (HWZ1 to HWZ6) have been identified in locations and are significant contributors to the total number of ounces of gold contained within the overall Bradshaw deposit.

To date, the deposit has a drilled strike length in excess of 950 m, trending N070-080°E, and has been tested to a depth in excess of 1,000 m. The horizontal width of the geological Main Zone varies from 2 m to 22 m. The Bradshaw zones are from 1 m to up to 15 m in horizontal width and average 2 to 3 m. The deposit remains open along strike and at depth. Currently, Bradshaw contains a National Instrument 43-101 Indicated Resource estimated at 2.1 million tonnes ("t") grading 6.19 g/t Au containing 422 thousand oz Au and an Inferred Resource of 3.6 million t grading 6.47 g/t Au containing 755 thousand oz Au (Stantec, 2015). Further, based on the Pre-Feasibility Study produced by Stantec Mining and announced on June 9, 2015, Bradshaw contains Probable Mineral Reserves, using a 3 g/t Au cut-off and utilizing a gold price of US\$1,200 / oz, totalling 1.8 million t grading 4.82 g/t Au for 277 thousand oz Au.

## **GEOLOGICAL AND STRUCTURAL MAPPING**

The Bradshaw portal outcrop (487000E, 5399000N NAD 83) is an elliptical shaped rock hill with a long axis oriented in a northeast-southwest direction. The long axis is approximately 129 m long and the short axis 77 m long. It has a height of 12 m (303 to 291 m ASL) above the surrounding surface. Gowest diamond drill holes around the outcrop indicate the overburden depth south and southwest varies from 4-6 m vertical depths.

The outcrop hill is the closest surface bedrock exposure to the Bradshaw Gold deposit and Gowest selected it as the location to drive a decline into the deposit. A closure plan was prepared for an advanced exploration bulk sample program and the plan (B22) was approved by MNDM on August 11, 2015. In order to conduct an engineering study of the ground support requirements for the proposed Bradshaw decline, the outcrop hill was stripped of vegetation in December 2015 and January 2016. Upon the arrival of

spring and the melt of snow cover on the Bradshaw portal outcrop, a UAV drone topographical and video survey was conducted. This was completed by Talbot Surveying Ltd of Timmins Ontario on May 26, 2016. Final products of the survey included an orthomosaic aerial photograph and a topographical survey of the outcrop (Map 1 and Map 2).

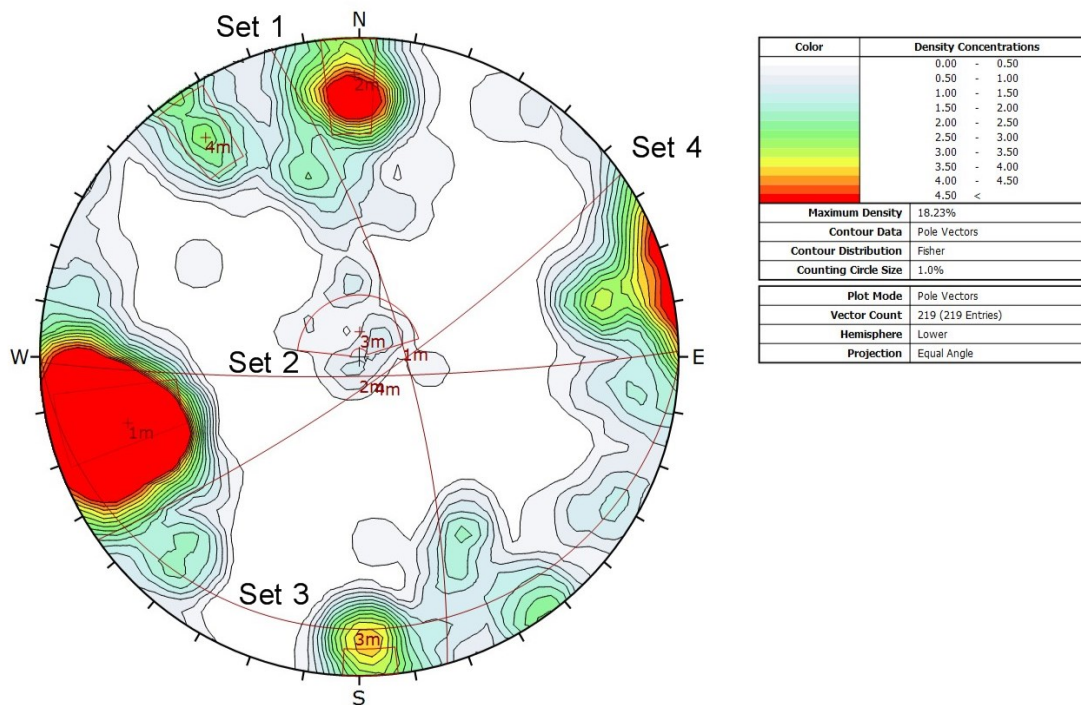
Geological mapping was carried out over the period of June 16 to June 30, 2016 (Map 3). It commenced with the establishment of a 10 m by 10 m flagged grid on the Bradshaw portal outcrop using the GPS point 487000E, 5399000N (NAD 83) as the centre of the grid. This centre point was measured utilizing a chain from an established survey bar on the outcrop. The grid was the base for the detail structural mapping of the portal outcrop. The compass and chaining of the flagged grid was completed by Katie Papineau and Dan Collin of Timmins Ontario. Geological and structural mapping was conducted by Kevin Montgomery PGeo. and assisted by Katie Papineau or Dan Collin.

The outcrop is composed of dark green, fine-grained, amygdaloidal pillowed mafic volcanic flows (basalt). Pillows are prominent in the northeast quadrant of the outcrop with local pillow breccias present (Appendix D, Photo 1 and 2). Pillow long axis directions vary from 040 to 070 degrees with the average being 055 degrees (Appendix C). Pillow tops are to the north as evident from their cusped forms and amygdaloidal margin tops. Varioles are common throughout the outcrop with good exposures on the western side of the outcrop (Appendix D Photo 3). Very locally within the mafic volcanics flows are patches of intense quartz veining (Appendix D Photo 4).

On the southern edge of the portal outcrop, a small shear zone was observed. It was traced for 20 m before being lost under overburden. The shear zone is about 3 m wide and strikes 245 degrees dipping 60 degrees north (Appendix D Photo 5).

Based on the orthomosaic aerial photograph of the outcrop, there are three main vertical to subvertical fracture/joint orientations evident (Map 4). This was confirmed by the geological mapping and stereonet analysis of the fracturing (Figure 4). A total of 219 geological structural features were measured utilizing the standard geological right hand rule, during the mapping (Appendix C). The most prominent joint set is a vertical set which strikes 340 to 360 degrees and has an average plane striking 344 dipping 74 degrees (Appendix D Photo 6). A second set is also a vertical set that strikes 080 to 100 degrees and has an average plane striking 089 degrees dipping 83 degrees. The third set is a weaker sub-horizontal set observed during the mapping (Appendix D Photo 6). It has a variable strike and dips range from 5 to 30 degrees. Stereonet analysis of the sub-horizontal joints revealed an average plane striking 091 degrees and dipping 9 degrees (Figure 4). A fourth joint set was also identified ranging from 030 to 060 degrees and having an average plane striking 055 degrees dipping 80 degrees. This

vertical set is less prominent than vertical sets one and two. All joint sets are tight and are not infilled with quartz or carbonate material.



**Figure 4 Bradshaw Portal Joint Stereonet Analysis (Thibodeau, 2016)**

## **CONCLUSION AND RECOMMENDATIONS**

The outcrop is composed of amygdaloidal pillowed mafic volcanic flows (basalt). Pillow long axis trends 050 degrees and tops are to the north. A total of 219 geological features were measured on the outcrop during the mapping survey. Geological mapping and stereonet analysis identified three main vertical to sub-vertical fracture/joint orientations and a subhorizontal fracture/joint set. The four joint sets are tight and not filled with mineral material. The fracture/joint data is of good quality to be used to determine ground support guidelines for a possible decline on the Bradshaw portal outcrop (487000E, 5399000N NAD 83).



## **REFERENCES**

Ayer, J.A. and Trowell, N.F., 2001, Project Unit 95-24: The Abitibi Greenstone Belt: A Program Update; in Summary of Field Work and Other Activities 2001, Ontario Geological Survey OFR 6070, p.4-1 to 4-9.

Ayer, J.A. et al, 2006, Geological compilation of the central Abitibi greenstone belt: Kapuskasing Structural Zone to the Quebec border: Ontario Geological Survey, Preliminary Map P3585, scale 1:250, 000.

Dumont, R., Coyle, M., Oneschuk, D. and Potvin, J., 2002, Residual magnetic field contours and EM anomalies with Keating coefficients "42A/11NE", Geological Survey of Canada Open File 4439, Ontario Geological Survey Map 81 733, scale 1:20,000.

Pyke, D.R. 1982, Geology of the Timmins Area, District of Cochrane; Ontario Geological Survey Report 219, 141 p. Accompanied by Map 2455, Scale 1:50,000, 3 Charts, and 1 Sheet Microfiche.

Stantec, 2015, Gowest Gold Ltd. Bradshaw Gold Deposit Timmins Ontario NI43-101 Technical Report and Prefeasibility Study (SEDAR).

Thibodeau, Denis (Stantec Consulting Limited) 2016, North Timmins Gold Project Decline Ramp Geotechnical Services Document No. Rpt 16567-001 Final Report Version 1 Oct 6, 2016.



## **CERTIFICATE OF QUALIFICATIONS**

I, J. Kevin Montgomery, of the City of Timmins, Province of Ontario, do hereby certify that:

- (1) I am a professional Consulting Geologist, residing at 1190 Lozanne Crescent, Timmins Ontario, P4P 1E8.
- (2) I hold a B.Sc. Honours degree in Geological Sciences (1984) from Queen's University of Kingston, Ontario and a M.Sc. (App.) in Mineral Exploration (1987) from McGill University at Montreal, Quebec.
- (3) I am a registered professional geoscientist with the Association of Professional Geoscientists of Ontario.
- (4) This report is based on my mapping of the Bradshaw Portal Outcrop on the Frankfield Property in June 2016.
- (5) I have no personal interest in the property covered by this report.
- (6) Permission is granted for the use of this report, in whole or in part, for assessment and qualification requirements but not for advertising purposes.

*J Kevin Montgomery*

Dated at Timmins, Ontario  
This 10th day of February, 2017.

J. Kevin Montgomery, P.Geo. M.Sc. (App.)





**APPENDIX A EXPENDITURES**  
 Gowest Gold Ltd.  
 June 15, 2016 to February 15, 2017

Topographical UAV Drone Survey	\$ 5,085.00
Geologists	\$ 3,390.00
Technicians	\$ 2,130.00
Truck	\$ 500.00
Report Writing & Drafting of Maps	\$ 3,390.00

**TOTAL      \$ 14,495.00**

**Distribution of Expenditures per Claim**

The mapping was conducted on mining claim units P508399 to 508402 that forms lease claim 107280.

Certified by: *J Kevin Montgomery*

Date: Feb 15, 2017

Note: This certificate has been constructed from the Detailed Cost Accounting Ledgers of Gowest Gold.



## APPENDIX B NORTH TIMMINS GOLD PROJECT CLAIM LIST

<u>District/Division</u>	<u>Project/Property</u>	<u>Township</u>	<u>Claim Number</u>	<u>Recording Date</u>	<u>Claim Due Date</u>
Porcupine - 60	GW Orphan Tully (G-3985)	Tully	4240049	2010-Mar-03	2022-Mar-03
Porcupine - 60	GW Orphan Tully (G-3985)	Tully	4254623	2010-Mar-03	2020-Mar-03
Porcupine - 60	GC Tully East Block-1	Tully	1207009	1996-Mar-19	2019-Mar-19
Porcupine - 60	GC Tully East Block-1	Tully	1244809	2001-Mar-30	2019-Mar-30
Porcupine - 60	Guidoccio Tully East	Tully	4269722	2012-Mar-08	2018-Mar-08
Porcupine - 60	Guidoccio Tully East	Tully	4269723	2012-Mar-08	2018-Mar-08
Porcupine - 60	Gowest Tully East	Tully	4277620	2014-Aug-28	2021-Aug-28
Porcupine - 60	Gowest Tully East	Tully	4277624	2014-Aug-29	2021-Aug-29
Porcupine - 60	Transition Pipestone East	Evelyn	4253001	2010-Feb-02	2019-Feb-02
Porcupine - 60	Transition Pipestone East	Evelyn	4253002	2010-Feb-02	2019-Feb-02
Porcupine - 60	Transition Pipestone East	Evelyn	4253003	2010-Feb-02	2019-Feb-02
Porcupine - 60	Transition Pipestone East	Evelyn	4253004	2010-Feb-02	2019-Feb-02
Porcupine - 60	Transition Pipestone East	Evelyn	4253005	2010-Feb-02	2019-Feb-02
Porcupine - 60	Transition Pipestone East	Evelyn	4253006	2010-Feb-02	2019-Feb-02
Porcupine - 60	Transition Pipestone East	Evelyn	4257022	2010-Jul-12	2019-Jul-12
Porcupine - 60	Transition Pipestone East	Evelyn	4257023	2010-Jul-12	2019-Jul-12
<u>District/Division</u>	<u>Project/Property</u>	<u>Township</u>	<u>Claim Number</u>	<u>Recording Date</u>	<u>Claim Due Date</u>
Porcupine - 60	Transition Pipestone East	Evelyn	4257024	2010-Jul-12	2019-Jul-12
Porcupine - 60	Transition Pipestone East	Evelyn	4257025	2010-Jul-12	2019-Jul-12
Porcupine - 60	Transition Pipestone East	Evelyn	4257027	2010-Jul-12	2019-Jul-12
Porcupine - 60	Gowan	Gowan	4253015	2010-Feb-02	2018-Feb-02
Porcupine - 60	Transition Pipestone East	Little	4257021	2010-Jul-12	2019-Jul-12
Porcupine - 60	Prosser	Prosser	4253014	2010-Feb-02	2018-Feb-02
Porcupine - 60	Wark 1	Prosser	4255012	2010-Mar-09	2019-Mar-09
Porcupine - 60	Wark 2	Prosser	4255234	2010-Apr-26	2019-Apr-26
Porcupine - 60	Wark 2	Wark	4252998	2010-Apr-27	2019-Apr-27
Porcupine - 60	Wark 2	Wark	4252999	2010-Apr-26	2019-Apr-26
Porcupine - 60	Wark 1	Wark	4253007	2010-Feb-02	2019-Feb-02
Porcupine - 60	Wark 1	Wark	4253009	2010-Feb-02	2019-Feb-02
Porcupine - 60	Wark 1	Wark	4253010	2010-Feb-02	2019-Feb-02
Porcupine - 60	Wark 1	Wark	4253011	2010-Feb-02	2019-Feb-02
Porcupine - 60	Wark 1	Wark	4253012	2010-Feb-02	2019-Feb-02
Porcupine - 60	Wark 1	Wark	4253013	2010-Feb-02	2019-Feb-02
Porcupine - 60	Wark 2	Wark	4255013	2010-Mar-09	2019-Mar-09
Porcupine - 60	Wark 2	Wark	4255233	2010-Apr-26	2019-Apr-26



Porcupine - 60	Wark 2	Wark	4255235	2010-Apr-26	2019-Apr-26	
Porcupine - 60	GW Pipestone East	Little	4270230	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Evelyn	4262511	2011-Jun-15	2018-Jun-15	
Porcupine - 60	GW Pipestone East	Evelyn	4262512	2011-Jun-15	2018-Jun-15	
Porcupine - 60	GW Pipestone East	Little	4262513	2011-Jun-15	2018-Jun-15	
Porcupine - 60	GW Pipestone East	Little	4270231	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Little	4270232	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Little	4270233	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Little	4270234	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Little	4270235	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Little	4270236	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Evelyn	4270237	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Evelyn	4270238	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Evelyn	4270239	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Evelyn	4267266	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Evelyn	4267267	2012-May-04	2018-May-04	
Porcupine - 60	GW Pipestone East	Little	4270356	2013-Apr-08	2018-Apr-08	
Porcupine - 60	GW Pipestone East	Little	4270357	2013-Apr-08	2018-Apr-08	
Porcupine - 60	GW Pipestone East	Little	4270358	2013-Apr-08	2018-Apr-08	
Porcupine - 60	GW Pipestone East	Tully	4270359	2013-Apr-08	2018-Apr-08	
Porcupine - 60	GW Pipestone East	Little	4261682	2013-Apr-22	2018-Apr-22	
Porcupine - 60	GW Pipestone East	Little	4261683	2013-Apr-22	2018-Apr-22	
<b><u>District/Division</u></b>	<b><u>Project/Property</u></b>	<b><u>Township</u></b>	<b><u>Lease or License</u></b>	<b><u>Claim No.</u></b>	<b><u>Start/Anniversary</u></b>	<b><u>Lease Expiry</u></b>
Porcupine - 60	Dowe	Tully	107242	101372	1999-Feb-01	2020-Jan-31
Porcupine - 60	Dowe	Tully	107242	101373	1999-Feb-01	2020-Jan-31
Porcupine - 60	Dowe	Tully	107242	101374	1999-Feb-01	2020-Jan-31
Porcupine - 60	Dowe	Tully	107242	101375	1999-Feb-01	2020-Jan-31
Porcupine - 60	Texmont/Frankfield	Prosser	107280	508392	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Prosser	107280	508394	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508389	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508395	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508396	1999-Dec-01	2020-Nov-30
<b><u>District/Division</u></b>	<b><u>Project/Property</u></b>	<b><u>Township</u></b>	<b><u>Lease or License</u></b>	<b><u>Claim No.</u></b>	<b><u>Start/Anniversary</u></b>	<b><u>Lease Expiry</u></b>
Porcupine - 60	Texmont/Frankfield	Tully	107280	508398	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508397	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508399	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508400	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107280	508401	1999-Dec-01	2020-Nov-30



Porcupine - 60	Texmont/Frankfield	Tully	107280	508402	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Prosser	107281	508391	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Prosser	107281	508393	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107281	508390	1999-Dec-01	2020-Nov-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97938	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97941	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97942	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97943	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97939	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97940	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97948	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107335	97949	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107336	97944	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107336	97945	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107336	97947	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107336	97946	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107360	99286	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107360	99287	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107360	99289	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107360	99288	2000-Oct-01	2021-Sept-30
Porcupine - 60	Texmont/Frankfield	Tully	107361	100440	2001-Jun-01	2022-May-31
Porcupine - 60	Texmont/Frankfield	Tully	107361	100437	2001-Jun-01	2022-May-31
Porcupine - 60	Texmont/Frankfield	Tully	107361	100441	2001-Jun-01	2022-May-31
Porcupine - 60	Texmont/Frankfield	Tully	107361	100438	2001-Jun-01	2022-May-31
Porcupine - 60	Texmont/Frankfield	Tully	107361	100442	2001-Jun-01	2022-May-31

<u>District/Division</u>	<u>Project/Property</u>	<u>Township</u>	<u>Lease or License</u>	<u>Claim No.</u>	<u>Start/Anniversary</u>	<u>Lease Expiry</u>
Porcupine - 60	Texmont/Frankfield	Tully	107361	100439	2001-Jun-01	2022-May-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101255	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101256	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101257	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101258	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101259	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101260	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101261	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101262	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101948	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101949	2003-Sept-01	2024-Aug-31



Porcupine - 60	GC Tully North Block-1	Tully	107484	101950	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101951	2003-Sept-01	2024-Aug-31
Porcupine - 60	GC Tully North Block-1	Tully	107484	101952	2003-Sept-01	2024-Aug-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501055	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501056	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107310	501057	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107310	501058	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501059	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501060	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501061	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107310	501062	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107310	501063	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501064	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107311	501065	2000-June-01	2021-May-31
Porcupine - 60	White Star/Frankfield	Tully	107310	515807	2000-June-01	2021-May-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1160197	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207001	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207003	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207004	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207005	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207007	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207010	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207701	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207702	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1207703	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1212880	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1244810	2013-Aug-01	2034-Jul-31
Porcupine - 60	GC Tully East Block-1	Tully	109337	1245331	2013-Aug-01	2034-Jul-31

**District/Division****Project/Property****Township and Location**

Porcupine - 60

Boudreau purchase

Tully

SE1/4 &amp; SW1/4 N1/2 and S1/2 of Lot 1, Conc 1



### APPENDIX C Structural Measurements on Bradshaw Portal Outcrop

NAD83 UTM		Fracture		NAD83 UTM		Shearing	
Easting	Northing	Azimuth	Dip	Easting	Northing	Azimuth	Dip
486970	5399000	235	85	486972	5398972	245	60
486971	5399000	74	55				
486970	5399010	342	70				
486972	5399011	130	10				
486972	5399019	335	65				
486971	5399025	340	66				
486971	5399025	72	90				
486972	5399029	350	72				
486972	5399029	92	82				
486969	5399039	345	80				
486969	5399039	90	65				
486970	5399048	94	80				
486970	5399048	75	28				
486973	5399055	170	80				
486970	5399057	335	90				
486968	5399000	340	76				
486966	5399000	342	60				
486966	5399000	82	45				
486962	5399000	348	70				
486963	5399003	350	75				
486960	5399002	342	60				
486960	5399002	70	60				
486959	5399022	330	90				
486960	5399028	265	82				
486960	5399030	75	45				
486958	5399031	84	85				
486958	5399031	344	70				
486961	5399037	335	80				
486962	5399039	250	70				
486960	5399045	355	88				
486960	5399045	90	80				
486950	5399030	344	75				

NAD83 UTM		Pillow long Axis	
Easting	Northing	Azimuth	Dip
487017	5399045		55
486960	5398972		40
487030	5398938		70
487024	5398959		55



486949	5399031	340	70
486947	5399035	100	80
486956	5399041	350	85
486950	5399045	325	80
486950	5399045	185	85
486943	5399000	60	84
486943	5399000	350	75
486940	5399006	110	50
486940	5399006	342	72
486940	5399014	355	85
486923	5399026	330	80
486935	5399025	110	65
486940	5399038	90	70
486940	5399038	340	80
486940	5399040	90	30
486943	5399043	345	80
486938	5399000	340	85
486930	5399001	320	90
486930	5399001	268	85
486930	5399010	85	80
486930	5399010	340	76
486930	5399013	90	75
486930	5399013	100	50
486930	5399013	185	80
486920	5399002	350	75
486920	5399002	95	75
486922	5399008	155	85
486923	5399012	315	69
486970	5398995	350	78
486970	5398988	330	64
486970	5398981	156	82
486970	5398981	164	85
486970	5398981	95	74
486972	5398972	355	80
486977	5398972	186	68
486973	5398970	346	70



486960	5398999	346	90
486962	5398995	344	75
486962	5398995	90	54
486959	5398992	340	90
486962	5398984	330	76
486962	5398984	170	72
486960	5398977	350	86
486965	5398972	220	76
486965	5398972	350	80
486950	5398997	340	75
486950	5398997	270	80
486952	5398989	335	80
486950	5398982	330	85
486950	5398982	245	65
486950	5398980	310	78
486953	5398977	352	78
486953	5398977	15	88
486948	5398976	330	65
486945	5398972	340	78
486956	5398974	344	85
486950	5398969	345	80
486954	5398967	360	85
486956	5398969	240	68
486940	5398998	350	60
486940	5398994	310	90
486940	5398994	344	77
486942	5398990	314	80
486940	5398985	355	76
486940	5398985	340	70
486946	5398998	340	68
486946	5398998	190	76
486946	5398998	270	85
486928	5398999	265	85
486928	5398999	10	80
486931	5398989	270	80
486929	5398988	330	75





486930	5398982	270	85
486930	5398979	340	88
486929	5398982	310	80
486929	5398982	340	70
486929	5398982	85	60
486924	5398994	350	70
486918	5398993	336	70
486918	5398993	90	75
486918	5398993	30	60
486919	5398991	340	78
486920	5398987	8	85
486920	5398987	85	80
486923	5398985	260	85
486980	5399000	355	85
486980	5399000	70	70
486982	5398995	360	80
486980	5399890	340	70
486978	5399887	340	70
486978	5399887	355	88
486981	5399883	235	85
486978	5399882	330	70
486978	5399878	200	84
486983	5399881	340	80
486982	5399877	265	60
486982	5399877	325	85
486988	5399000	50	78
486991	5398992	50	76
486989	5398996	30	90
486990	5398990	270	80
486986	5398996	20	80
486991	5398982	235	62
487000	5399000	348	80
487000	5399000	58	76
486978	5399007	340	70
486979	5399014	355	70
486979	5399019	330	72



486982	5399023	275	85
486982	5399023	340	70
486979	5399031	90	80
486982	5399040	90	76
486977	5399047	360	80
486979	5399053	342	78
486982	5399055	345	76
486978	5399058	340	60
486978	5399058	160	5
486980	5399060	170	80
486990	5399005	160	70
486990	5399010	236	60
486990	5399020	70	65
486990	5399020	356	78
486990	5399025	355	84
486990	5399025	90	80
486991	5399028	340	84
486991	5399028	166	74
486993	5399030	342	60
486990	5399040	360	64
486996	5399048	20	25
486993	5399043	350	78
486993	5399043	78	60
486999	5399043	250	80
486990	5399055	354	87
487000	5399000	58	76
487000	5399000	348	80
487000	5399010	348	90
487002	5399005	352	80
487003	5399018	80	80
487003	5399018	358	83
487003	5399018	50	85
487003	5399020	334	88
486997	5399020	348	64
487000	5399050	75	64
487000	5399050	310	10



487000	5399050	340	65
487002	5399064	170	70
487003	5399070	170	80
486999	5399070	120	84
486999	5399070	163	70
487003	5399000	215	85
487010	5399020	340	74
487010	5399030	320	60
487010	5399038	310	78
487010	5399041	335	65
487010	5399045	185	87
487010	5399051	80	85
487010	5399057	355	65
487010	5399057	80	75
487019	5399013	248	78
487024	5399020	50	90
487015	5399023	58	88
487024	5399046	165	80
487024	5399046	210	82
487024	5399046	57	75
487020	5399048	330	80
487021	5399051	75	80
487021	5399053	335	85
487023	5399061	346	90
487018	5399062	345	70
487030	5399020	350	68
487030	5399020	146	15



**APPENDIX D Photographs of the Bradshaw Portal Outcrop**

Photo 1 Looking North: Small pillow at 5399043N, 487013E with tops to the N



Photo 2 Looking South: Pillow Breccia at 5399030N, 487030E





Photo 3 Looking North: Large varioles at 5399000N, 486943E



Photo 4 Intense quartz vein flooding at 5398990N, 486935E



Photo 5 Looking North: Close-up of Shear Zone at 5398970N, 486970E



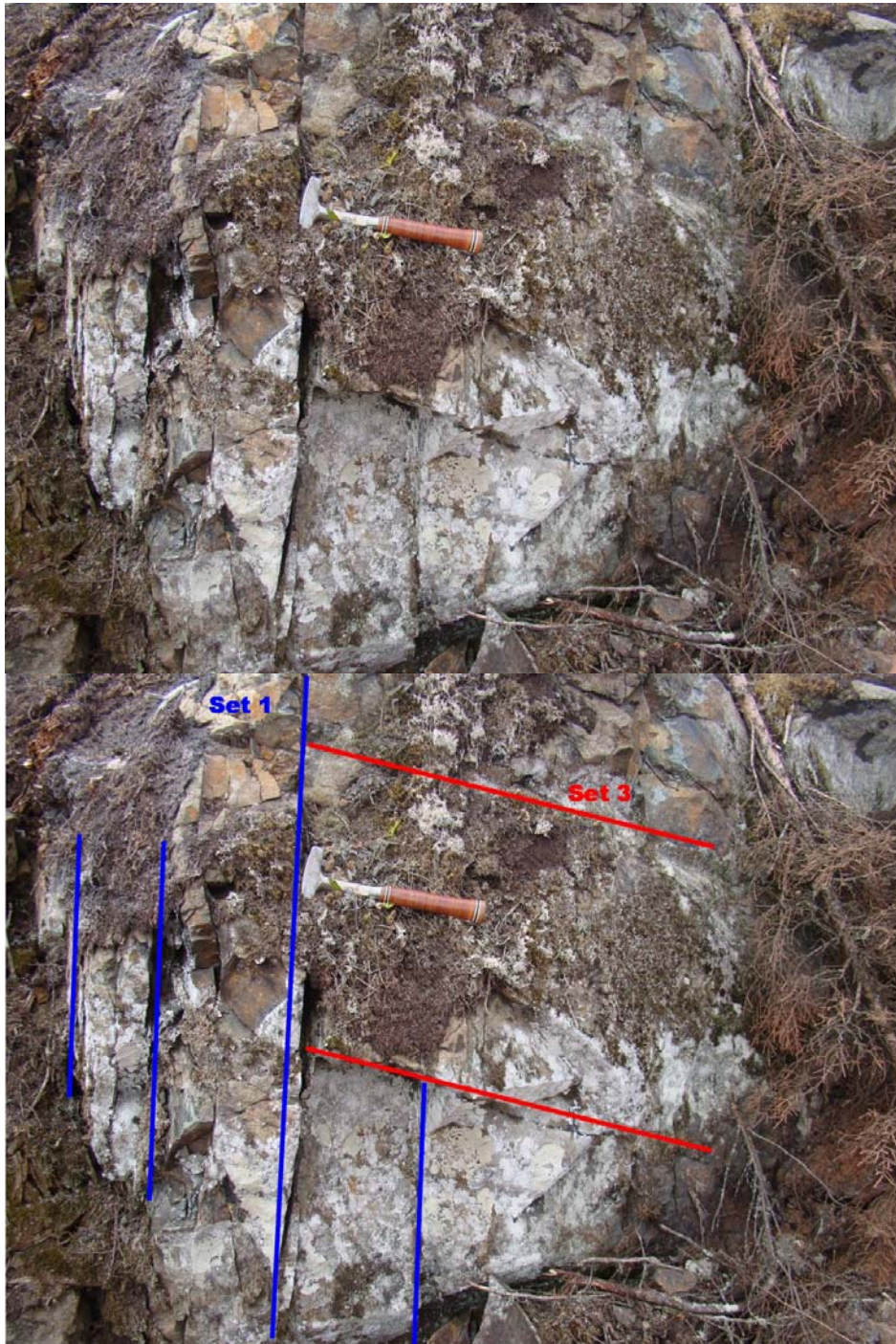


Photo 6 Joint Set 1 and 3 at Bradshaw Portal outcrop.



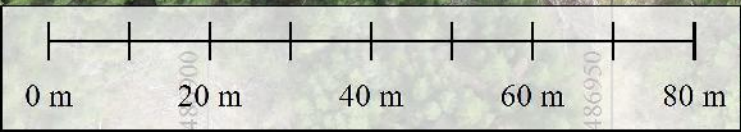
5399100

5399050

5399000

5398950

5398900

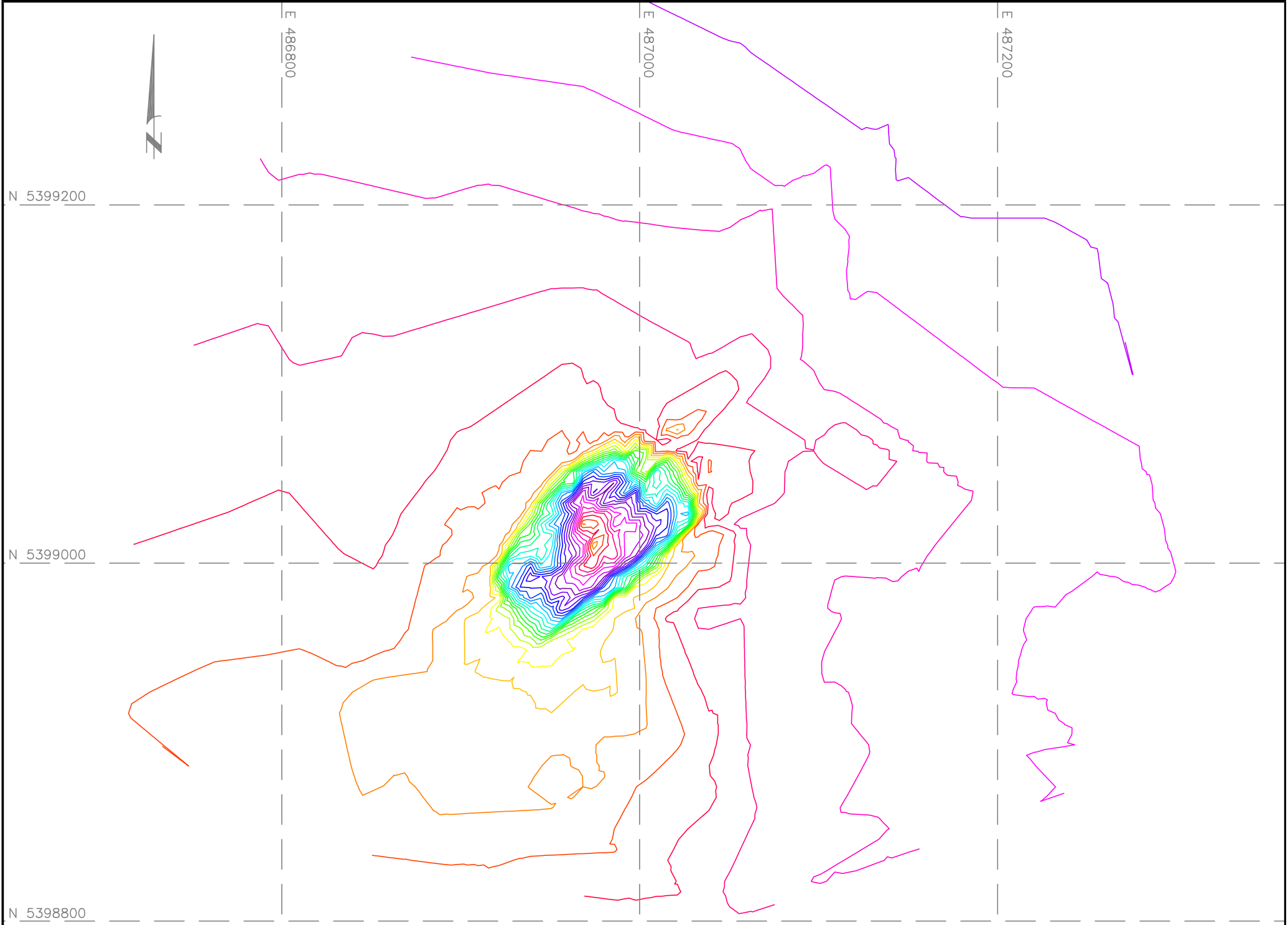


486950

487000

487050





N 5399200

N 5399000

N 5398800

E 486800

E 487000

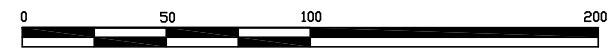
E 487200

**TALBOT**  
**SURVEYS INC.**

101 Jubilee Ave East  
Timmins, ON  
(705) 267-8050

DATE: June 2nd, 2016.  
DRAFTED BY: Kyle Talbot

Outcrop and Ground UAV Survey  
UTM Nad 83  
GoWest



SHEET  
1  
OF 1

Nad 83 486900E 486950E 487000E 487050E

# Bradshaw Portal Outcrop Geology



5399050N

5399050N

P508399

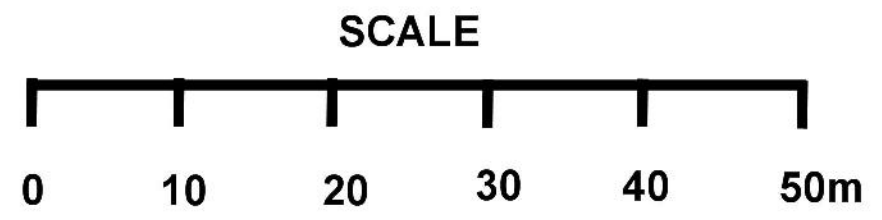
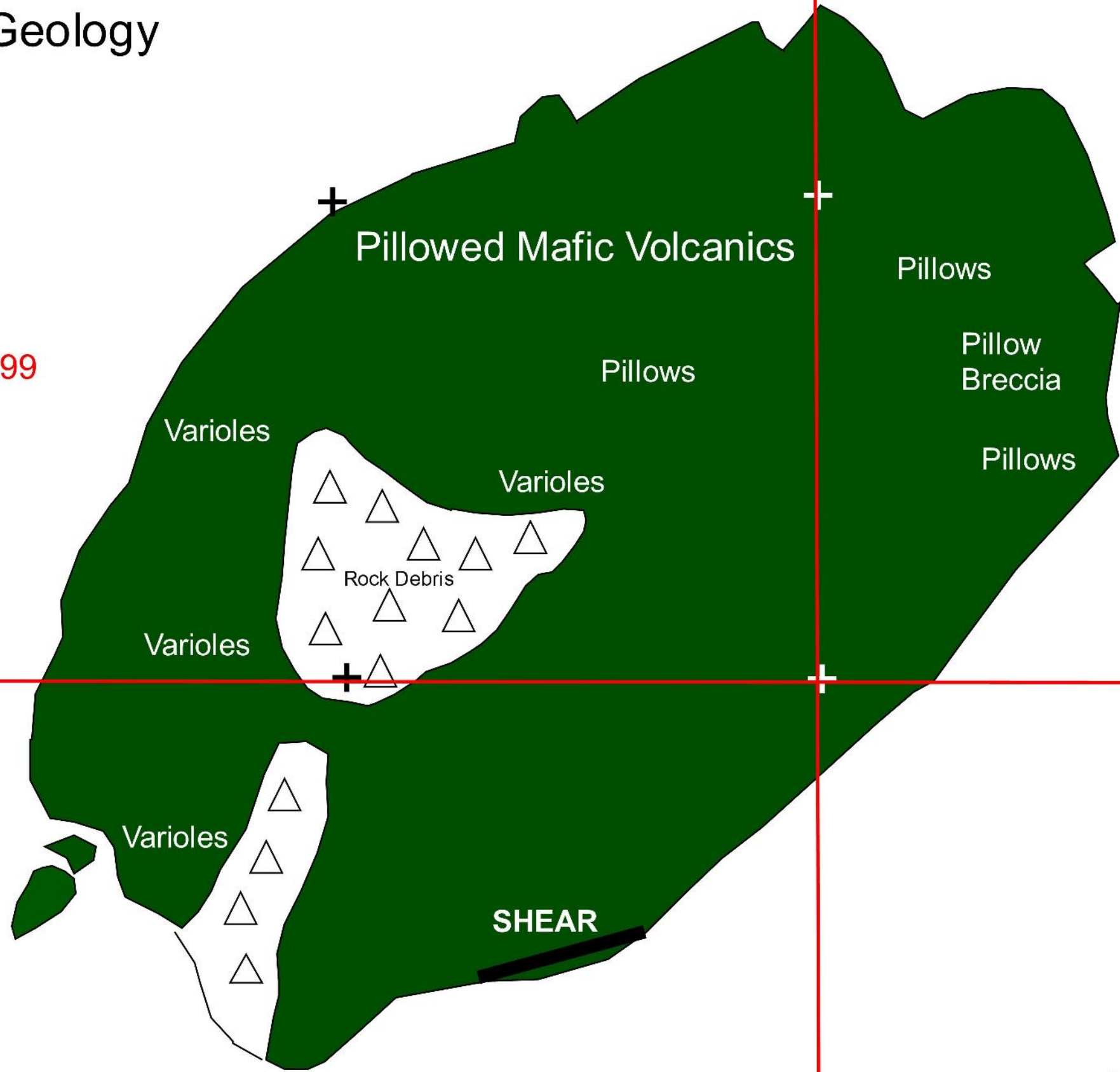
P508401

5399000N

5399000N

P508400

P508402



Structural Measurements in Appendix C

Mapping by Kevin Montgomery PGeo

