



**ALTO VENTURES LTD.  
2014 SURFACE BEDROCK AND SOIL SAMPLING PROGRAMS  
EMPRESS PROJECT  
SYINE TOWNSHIP  
NORTHWESTERN ONTARIO  
NTS 42D/15**

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## SUMMARY

The Empress property is located approximately 100 km west of Hemlo and 15 km east of Terrace Bay, Ontario. The property lies within the Schreiber portion of the Archean aged Schreiber-Hemlo greenstone belt. Recent exploration by prospectors Wayne Richards and Rudy Wahl resulted in new gold discoveries within the Terrace Bay batholith on their respective properties that adjoin Alto's Empress Property to the east and south. The North Shore gold property is located approximately 20 km southwest of the Empress property. Impressive gold mineralization was reported from the west end of the Terrace Bay batholith by GTA Resources and Mining Inc. from their drill holes on the North Shore property in 2012

Previous work was focused on the Empress Structure which traverses the supracrustal rocks near the north end of the property. The work included trenching, overburden stripping and diamond drilling. The diamond drilling was limited to tracing the Empress Mine ore zone and extended only 400 m onto the Alto claims east of the Empress Mine. The drilling did intersect the shear zone with locally significant gold results including 44.23 g/t over 0.61 m core length. Surface stripping was completed on Alto's claims over the 1.6 km length of the structure northeast of the Empress Mine and several areas of significant surface gold mineralization were uncovered including Trench 6E. Previous saw-cut channel sampling is reported to have averaged 1.3 g/t gold across a 16.2 m wide section of the Empress Structure, including 5.3 g/t gold across 2.8 m. However, no significant work was completed in near the north and northeast contacts of the Terrace Bay batholith at the south end of the property.

A program including geological mapping, prospecting, bedrock sampling and soil sampling was carried out on the Empress Property in May and June 2014. The objectives of the program were (1) to locate alteration, veining and gold mineralization along sections of the north and northeast contact of the Terrace Bay batholith, and (2) to test a regional east-trending aeromagnetic anomaly with prospecting and soil and MMI geochemistry.

The mapping and bedrock sampling program has succeeded in locating several areas of strong silicification, particularly in a dried-out section of a small round lake in claim 1208719 and quartz vein breccia zones in claims 1208190 and 3008228. These vein breccia zones did not return significant gold assays (best 0.087 g/t in sample 744342). However discovery of these silicified zones as well as zones of strong silicification in Sister Creek in claim 3008228 (samples 744320 to 744323) confirm the extensive silica alteration associated with the Terrace Bay batholith near its north contact. Even though the assay results from Alto's samples did not report high gold, the area is considered to be favourable for exploration along the batholith contact as there are significant new gold occurrences reported by both Wayne Richards and Rudy Wahl on the adjoining properties in the Terrace Bay batholith.

The soil and MMI sampling programs were inconclusive in testing the regional aeromagnetic high. The overburden cover in the south half of the Empress Property

consists of mainly sandy glacial tills with only poorly developed soil profiles and therefore B Horizon soil sampling is not the best medium to sample. Bulk till sampling along the south boundary of the property may be an effective method to test for gold grains that may have been derived from sources near the contact of the Terrace Bay batholith.

The following recommendations are based on the results of this program, previous exploration work on the Empress Property and the recent success in discovering gold on adjoining properties to the east and south:

(1) additional prospecting and bedrock sampling along the north and northeast contact of the Terrace Bay batholith, and (2) a bulk-till sampling program along the south property boundary is recommended to test for gold grains that may have been derived from the north and northeast contacts of the Terrace Bay batholith.

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## **1.0 INTRODUCTION**

### **1.1 Location and Access**

The Empress Project is located approximately 100 km west of Hemlo and 15 km east of Terrace Bay, Ontario. The property lies in the Syine Township and it is covered by NTS sheet 42D/15.

The Trans-Canada Highway 17 passes at the south end of the property and old logging and mining roads which are overgrown and now reduced to ATV trails provide access to the claims further north from the highway.

### **1.2 Physiography**

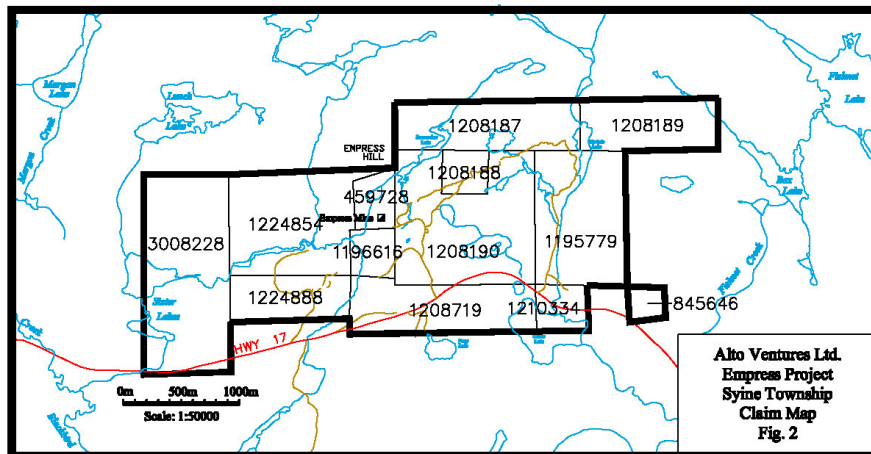
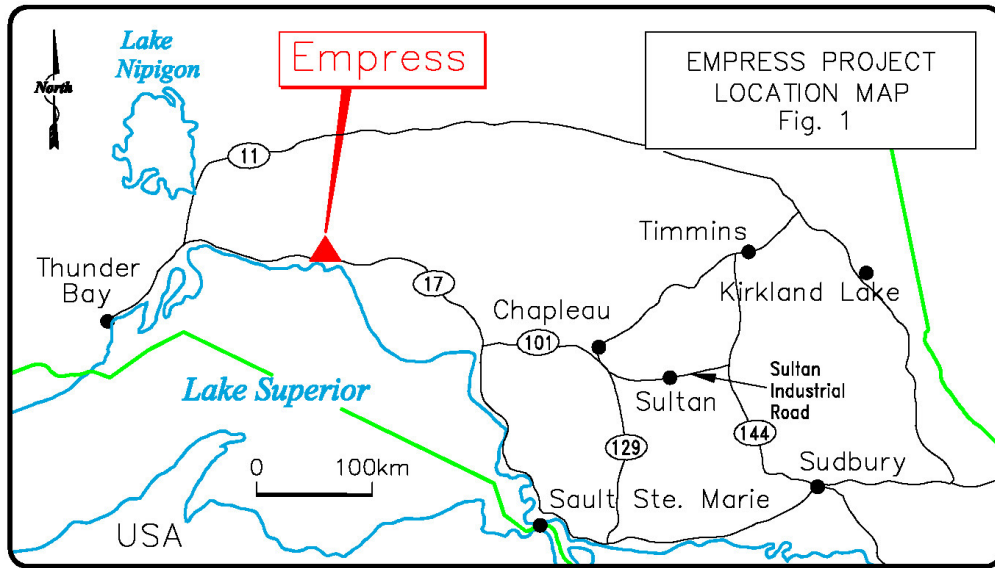
Topographic relief on the Empress Property is variable with elevations ranging from 240 m to over 470 m above mean sea level. Steep hills and ridges are commonly flanked by rock cliffs and deep ravines. The ravines are often occupied by beaver ponds and swamps which predominantly extend in an east-west direction. Locally the Empress Hill rises 410 m above mean sea level and is a dominant feature on the property. It is also visible from Highway 17. These rugged topographic features present some challenges to moving heavy equipment on the property and should be factored into the planning of future drilling programs.

Vegetation cover is moderate, dominated by spruce, white birch, balsam fir, and small amounts of trembling aspen. Undergrowth is moderate to thick, and consists of mountain maple and young conifers. Low-lying areas from the foot of Empress Hill and east towards Christie Lake were clear-cut by logging operations and are now occupied by sparse white birch, young balsam fir, and thick moose maple making prospecting and mapping in these areas difficult and unpleasant.

There is a moderate amount of outcrop on the property, but exposure is commonly masked by undergrowth of bush and by a thin cover of moss and detrital material. There are numerous bedrock exposures of the Terrace Bay batholith in road cuts and nearby ridges along the Trans-Canada Highway at the south end of the property.

### **1.3 Cultural Features**

Cultural features found on the property are mostly related to the past mining activities at the Empress Mine (claim 459728 – not part of Alto's Empress Project) in the early 1900's. These features include old adits and shafts, rock dams and steel water lines, cement foundations, waste dumps, trenches, casings, pipes, and metal debris. More recent features include logging trails and roads and hunting cabins.



Figures 1 and 2 Empress Project Location and Claims Map

## 1.4 Property and Tenure

The property consists of 12 contiguous unpatented mining claims, for a total of 46 units covering 736 hectares. The claim group lies within the Thunder Bay Mining Division and is represented on claim map G634, Syine Township.

Certain parts of the property are also held by private individuals who own the surface rights. Claims making up the Empress Property are listed in Table 1.

**Table 1: List of Claims - Empress Project**

Claim	Record Date	Units	Township	Surface Rights
1195779	Jul 15/96	6	Syine	
1196616	Mar 28/96	1	Syine	Yes R569
1208187	Feb 13/96	4	Syine	
1208188	May 17/96	1	Syine	Yes R567
1208189	Feb 13/96	3	Syine	
1208190	May 17/96	8	Syine	Yes R567
1208719	Apr 16/96	4	Syine	
1210334	Feb 12/97	1	Syine	
1224854	May 21/96	6	Syine	Yes R569
1224888	Dec 11/96	3	Syine	
3008228	Jul 11/05	8	Syine	
845646	Dec 27/85	1	Syine	

## 1.5 Previous Work

Exploration interest within the Schreiber-Hemlo District began in 1851 with the discovery of Canada's first molybdenite occurrence in the Terrace Bay area. Subsequently there were several periods when significant work was completed prior to Alto's acquisition of the Empress property (McCracken, 2000, Samson, 1999, Schnieders et al., 1996). Some of the more significant past work includes:

1895 - 1900: The Empress Gold Mining Company was incorporated and various test shafts, adits and pits were sunk on a series of gold-bearing quartz veins. A 10-stamp mill was erected, and 112 ounces of gold were produced from 1100 tons of ore (calculated average of 0.1 oz. /ton or 3.5 g/t Au). Operations were eventually shut down due to lack of funds.

1936 - 1937: The Empress Consolidated Gold Mines Ltd. was incorporated and signed an option agreement with Czarina Gold Mines in order to extensively re-evaluate the Empress mine. Dozens of trenches now found on the Empress claims are attributed to this period of activity.

1984 - 1987: Micham Exploration Inc. conducted a diamond drilling program in 1984 consisting of 1557 m (5106 ft.) in 12 holes, testing various anomalies detected in the



vicinity of the Ursa Major occurrence (486 m in 4 holes), the Empress Mine (587 m in 4 holes), and along the Empress Structure (483 m in 4 holes). The most encouraging results included 44.23 g/t over 0.61 m (ddh 441-84-8), the presence of visible gold in ddh 441-84-1, and several sub economic intersections hosted by a “carbonatized sericitic shear” coincident with the Empress Structure. Another follow-up program further testing the Empress Structure was completed in 1987 (1674 m in 10 holes); The drill logs for this last program were submitted for assessment with the MNDM, but the corresponding report and assay results were not found.

1998-2005: Cameco Gold Inc. (a subsidiary of Cameco Corporation (Cameco) acquired the property in 1998 and started work in 1999. Cameco’s 1999 program involved an intensive review of the northern portion of the current Empress property and surface work included line cutting and geological mapping (Samson, 1999). The mapping program was followed by the stripping of eight historical trenches distributed over a strike length of 1.4 km to the east of the former Empress Mine. The stripped areas were mapped and 308 channel samples were collected. Sampling at Trench 6E averaged 1.3 g/t gold across a 16.2 m wide section of the Empress Shear, including 5.3 g/t gold across 2.8 m.

To enhance the understanding of the Empress mineralized system Cameco completed 8.8 km of dipole-dipole IP surveying in 1999 on selected grid lines at locations northeast and southwest of the Empress Mine. Twelve diamond drill holes totaling 1800 metres drilled previously by Micham Resource in 1984 and 1987 were re-logged and re-sampled by Cameco. In 2000, Cameco performed a geological survey and bulk till sampling program to follow-up previous year’s results and to further explore the property (McCracken, 2000).

Alto Ventures Limited purchased the property from Cameco Corporation in 2005. In 2006 Alto completed geological work and recommended diamond drilling (Koziol, 2007).

In 2008, Alto Ventures drilled two holes, totaling 332 m to test sections of the Empress Structure (Koziol, 2008). Results returned several anomalous gold values, including 2.04 g/t gold over 0.5 m.

In 2012, Alto Ventures completed sampling of the 2008 drill cores that were not sampled previously and analyzed these samples for gold plus other trace elements (Koziol, 2012). In 2012, Alto also completed a surface channel sampling program testing targets along the Empress Structure (Koziol, 2013). Results confirmed significant gold mineralization in Trench 6 area, returning 3.97 g/t gold across 2.8 m including 6.15 g/t gold over 0.8 m.

In 2013, Alto Ventures completed a small bedrock sampling program near the south end of the property focusing on the Terrace Bay Batholith (Koziol, 2014).

## 1.6 Recent Developments Close to the Empress Project

New gold discoveries have been reported on the eastern edge of the Terrace Bay batholith by prospectors Wayne Richards and Rudy Wahl. Richards reported up to 1.28 oz./ton gold on his Jackfish Lake property and Wahl has reported gold values up to 39 g/t on the adjoining Wahl Jackfish Lake property (source of info: 2013-2104 Recommendations for Exploration booklet, produced by the OGS Resident Geologist Program). Both properties are located immediately east and south of Alto's Empress Property. Figure 3 is a reproduction of a promotional map produced by Wayne Richards showing the location of gold occurrences to east and south of Alto's Empress Property.

New gold discoveries have been reported along the west edge of the Terrace Bay batholith in the Schreiber area. Drill Results reported by GTA Resources from their North Shore Property on the 4<sup>th</sup> of February, 2012 have generated exploration excitement in the Terrace Bay-Schreiber area. The results are very impressive and include drill intersections of 3.21 g/t Au over 149.5 m. The North Shore Property is located approximately 20 km west-southwest of the Empress Property.

Alto's Empress property is situated near the north-northeast contact of the Terrace Bay Batholith and it is an excellent target for gold mineralization. This contact has not been subjected to significant past exploration.

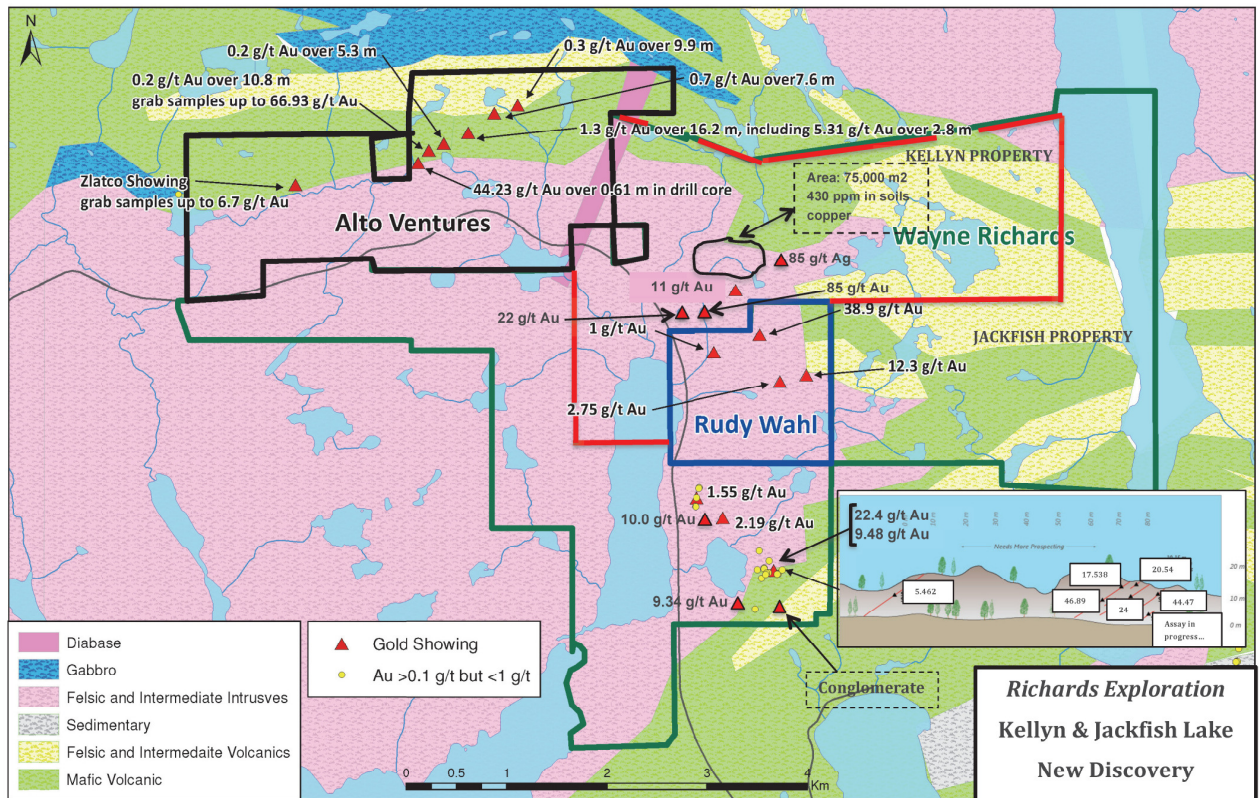


Figure 3 Reproduction of map from Wayne Richards showing gold occurrences to the east and south of Alto's Empress Property, April 2014

## 2.0 PROPERTY GEOLOGY

The Empress property lies within the Schreiber portion of the Archean aged Schreiber-Hemlo greenstone belt. It is comprised of tholeiitic and calc-alkalic mafic to felsic flows, inter-layered with coarse to fine fragmental volcanic and minor sedimentary rocks. In the Jackfish Bay area, these rocks are folded into a series of tight isoclinal folds with sub-horizontal to gently plunging east to east-southeasterly oriented fold axes (Walker 1967, Carter 1988). Large and small sill-like intrusions of gabbro, peridotite and minor quartz-feldspar porphyries have intruded the supracrustal sequences. The supracrustal and associated intrusive rocks are bounded to the northeast, north, west and south by the Black-Pic batholith, by rocks of the Quetico metasedimentary subprovince, the Crossman batholith and Terrace Bay pluton, respectively. Recently, several new gold occurrences have been discovered associated with the Terrace Bay pluton in the Schreiber area and near Jackfish Lake east of Terrace Bay.

The Terrace Bay pluton is a late tectonic intrusion that extends for 25 km from Schreiber eastward to Jackfish Lake. The pluton is dominated by massive equigranular, fine to medium grained granodiorite that for the most part is homogenous but locally it is feldspar porphyritic. Most of the pluton on the Empress property appears un-deformed but there are areas near the contacts where the intrusion contains penetrative fabric and is intensely fractured. Narrow shear zones also occur within the intrusion. White and clear-white quartz veins are associated with some of the shear zones and the fracturing as open fracture-fill veins. The pluton is cut by several generations of dykes including aplite and granitic pegmatite, diorite and diabase.

Metamorphic grade is generally upper greenschist but increases to upper amphibolite proximal to the granitoid plutons.

### 2.1 Empress Structure

The dominant gold bearing feature on the property is the Empress Structure which traverses the northern part of the property. The Empress Structure has been the focus of most of the exploration to date and has been described in detail by Samson, 1999, McCracken, 2000 and Koziol, 2007. The following is the description given by Koziol, 2007.

*“The Empress structure is a zone of shearing and deformation that has been previously exposed by trenching and stripping at various locations (Samson, 1999). The stripped area extends for approximately 1.6 km from the eastern property boundary of the former Empress Mine (Cameco’s LOE) and extending eastward to L15+00E. The most sheared portion of the structure varies from less than 15 to 25 m in width, and strikes slightly oblique to stratigraphy, at roughly 070° azimuth, dipping variably to the south at 90° to less than 50° but it is confined to an area between mafic flows.*

*The sheared rocks within the structure include quartz-sericite schist and chemical sediments bordered in the north by a  $\pm$ graphitic quartz-sericite schist which can be*

*followed eastward past L15+00E and moderately deformed clastic metasediments found discontinuously along the southern edge of the quartz-sericite schist. A 15 to 25 cm wide lamprophyre dyke occupies the centre of the shear on L1+00E.*

*Structural work by Alto in Trench 1+00E indicates that there are only a few fold closures that are defined sufficiently for determining reliable plunge directions. In Trench 1+00E lineation rods along the shear dip plane varied from 105° to 115° in azimuth and dipping 43°. The strike of the shear zone varies from 70° to 95°.*

*The rocks in Trench 2+50E are similar to those in Trench 1+00E but the intensity of alteration and mineralization associated with the Empress structure is reduced at this location. The work by Alto has identified a fold with an axial plane striking 050° and dipping 43°. A number of lineation rods were measured down the dip plane showing an azimuth of 85° and a dip of 42°.*

*In Trench 6+00E, the Empress structure is over 25 metres wide and strongly silicified, sericitized, and injected with narrow quartz veins. The structure carries 1 to 5% sulphides and displays strong shearing and folding. Measurements by Alto indicate that the axial plane strikes 85° and dips 40°. Lineation rods trend down the dip plane at 125° azimuth with 42° dips.*

*The rocks exposed in Trench 15+00E are similar to the other areas trenched but the deformation and alteration normally associated with the Empress structure is considerably diminished both in intensity and mineralization. No significant structural measurements were obtained in 2006 other than several sets of quartz micro-veins that strike at 82° and dip at 43° and other sets strike at 200° and dip at 70°.*

*General observations for along the Empress Structure include pinching and swelling on a scale of one metre to tens of metres in the individual stripped areas as well as in between the stripped areas. Similar observations were made for the quartz veins while walking past the Empress Mine where a vertical cross section in a trench shows a one metre wide quartz vein on surface pinching to 10 cm at a depth of two metres. To date, the two best exposures of the Empress Structure (including shearing, alteration, mineralization and width of zone) are (1) between the former mine and L1+00E and (2) the area of the trench on L6+00E. The best gold values obtained east of the former mine are from these two areas.”*

Very little exploration work has been completed in the past along the north and northeast contact of the Terrace Bay pluton near the south end of the Empress property. Several areas of small white and clear-white quartz veins and micro-veinlets have been identified within the batholith near its north and northeast contact with the supracrustal rocks. The veins occur in narrow shear zones and areas of intense fracturing (Koziol, 2014). At several locations, minor amounts of pyrite are associated with the quartz veins and pyrite also occurs disseminated along alteration halos near some of the fractures and as veinlets filling open-fractures.

No significant gold values have been obtained from the quartz veins and sulphide-filled fractures on the Empress property to date. However, reports of high-grade gold mineralization discovered on adjoining properties to the east in similar rocks provides encouragement for discovery of gold mineralization on the Empress Property (Puumala, M. A., et al., 2014).

### **3.0 THE 2014 SUMMER PROGRAM**

#### **3.1 Objectives**

The main objectives of the 2014 summer program were to (a) located alteration, veining and gold mineralization along sections of the north and northeast contact of the Terrace Bay batholith and (b) test the regional magnetic low that was delineated during the Government of Ontario Operation Treasure Hunt program flown in 1999 and trending through the south part of the property.

#### **3.2 Description of the 2014 Work and Logistics**

The 2014 summer work program consisted in part of geological mapping, prospecting and grab sampling of altered and quartz-veined sections of the Terrace Bay Batholith near its east and northeast contact with the greenstone rocks. Bedrock sampling was completed on outcrops exposed along the edges of Round Lake in claim 1208719, in claims 1208189 and 1208190, and along the northeast contact of the batholith in claim 1195779. Three samples were also collected along Sister Creek in claim 3008228. This work was completed at various time from May 28 to June 27, 2014 by local prospector Wayne Richards and geologist Mike Koziol, P. Geo. The geology and sample descriptions in Appendix A were completed by Mike Koziol, P. Geo. In total, 51 grab samples were collected and sent for analyses.

As part of this program Richards and Koziol collected 27 B-Horizon soil samples for analysis as well as an additional 27 samples were taken for Mobile Metals Ion (MMI) analysis from the same sample sites as the soils. The samples were collected along three lines (in claims 1224888 and 1208719) to cross the east-west trending magnetic low. Both the soils and MMI samples were collected using a spade to dig below the organic layer to the "B" Horizon in the soil profile (see Figure 6). Efforts were made to maintain a constant sample depth of 15 to 25 cm for the MMI samples; however some samples were taken from as deep as 50 cm to reach a sandy layer below the organics. Most of the samples collected for MMI are considered to be of good quality, mainly the fine sandy till. The B Horizon soils are believed to be of lesser quality, in several cases of poorly developed B Horizon.

Gold assays for rock samples were performed at Accurassay Laboratories in Thunder Bay, Ontario. The samples (rock, core, soil or humus) are first entered into Accurassay Laboratories' Laboratory Information Management System (LIMS) upon reception and the samples are unpacked and dried, if necessary.

Rock samples are then jaw crushed to 85% <10 mesh and a 500 to 1000 gram sub-sample is normally taken for analysis. The size of the sub-sample depends on the requested analytical scope. The sub-sample is pulverized to 85% <200 mesh. Either silica or a non-silica based sand is used to clean out the pulverizing dishes between each sample to prevent cross contamination. Soil samples are sieved at 80 mesh and the plus material is sent for analysis without further processing.

The samples go to the fire assay laboratory or the wet chemistry laboratory depending on the analysis required. The gold assaying method uses a standard Fire Assay with AA finish technique on a 30 gram sub-sample taken from a 500 gram split from the submitted sample. Commercially prepared standards were inserted by Alto to ensure precision of the results. The laboratory ran internal check assays every 10 samples to ensure lab quality control. The samples were also tested for 30 other elements using ICP scan methods.

In total, 51 rock samples (plus three standards) were analyzed for gold and 30 other elements at Accurassay Laboratories. Assay certificates for rock samples are included in Appendix B.

In addition 27 (plus one standard) soil samples were analyzed for gold and 30 other elements at Accurassay Labs. Soil sample descriptions are included in Appendix C and assay certificates are in Appendix D.

Samples for Mobile Metal Ion analyses were taken at approximately 25m spacing on 3 lines to cross the target magnetic low. No samples were taken from the north end of the western most line in claim 1224888 as the area is mainly outcrop ridge and the MMI method is not effective. The samples were collected from relatively constant depths of 15 cm to 25 cm by digging pits to expose the soil profile (see Figure 6). A few of the samples were taken from as deep as 50 cm to get below the wet organic cover. Sample sizes ranged from 0.33 kg to 0.78 kg and placed in numbered sample bags. The samples were then shipped to SGS Canada in Burnaby BC. The samples were analyzed for the MMI - M suite for eight elements including Ag, Au, Cu, Mo, Pb, W, Zn and Bi. In total 27 samples were analyzed. The Results are presented as part of Appendix D, in a separate certificate number VC141859.

### **3.3 Results**

Sets of stockwork quartz veins were located during the mapping and prospecting program along the east shore of a small round lake in Claim 1208719 just south of Highway 17 (see Map 1). The veins are associated with a 020° striking, brittle-ductile shear zone and have been traced discontinuously for almost 200 m on strike. They range in width from a few centimetres up to 30 cm and occur in zones up to 5 m wide in proximity to the shear zone. The veins are clear glassy to white and generally barren except for few specks of pyrite which occurs mainly along the vein-host granodiorite contact. Many of these veins were previously discovered and trenched at several locations along strike although no



records of the work has been found in the MNDM assessment records. Only low gold values were obtained from the 2014 sampling.

A historical pit measuring 10 feet by 16 feet by 20 feet was located northeast of Highway 17 and samples 744891 to 744894 were collected of the various lithologies. The pit was excavated to test a hematite-altered quartz breccia zone in granodiorite. Gold assay results from samples collected in 2014 returned low values. This pit is located along strike with the quartz stockwork veins found near Round Lake. Figure 4 is a photo of the hematite altered quartz breccia excavated from the historical pit.



Figure 4 Hematite altered quartz-vein breccia in granodiorite from historical pit sampled by 744693 and 744694 returning low gold values of 0.006 and 0.010 g/t

A breccia zone in the granodiorite was located near the northeast contact with the greenstone in claim 1195779 (see sample 744333 in Appendix A). This breccia does not carry anomalous gold but its discovery may be significant as several of the gold anomalies reported by Wayne Richards on adjoining property are associated with a similar breccia zone (personal communications with Wayne Richards, June 2014). Figure 4 is a photo of a block of breccia zone of sample 744333.

The results of the MMI analysis returned one gold anomaly in sample 23A located in claim 1208719. The sample assays 1.3 ppb Au and is coincident with a copper anomaly of 2120 ppb Cu. The MMI also delineated other anomalies in copper and these are presented as part of Appendix D. Figure 6 is a photo of MMI and soil sampling at sample site 12A

The results of the B-Horizon soil samples did not return any significant gold anomalies. The assay certificates for the soils are presented as part of Appendix D.





Figure 5 Hydrothermal (?) Breccia in granodiorite near the contact with greenstone



Figure 6 Prospector Wayne Richards sampling at MMI sample site 12A



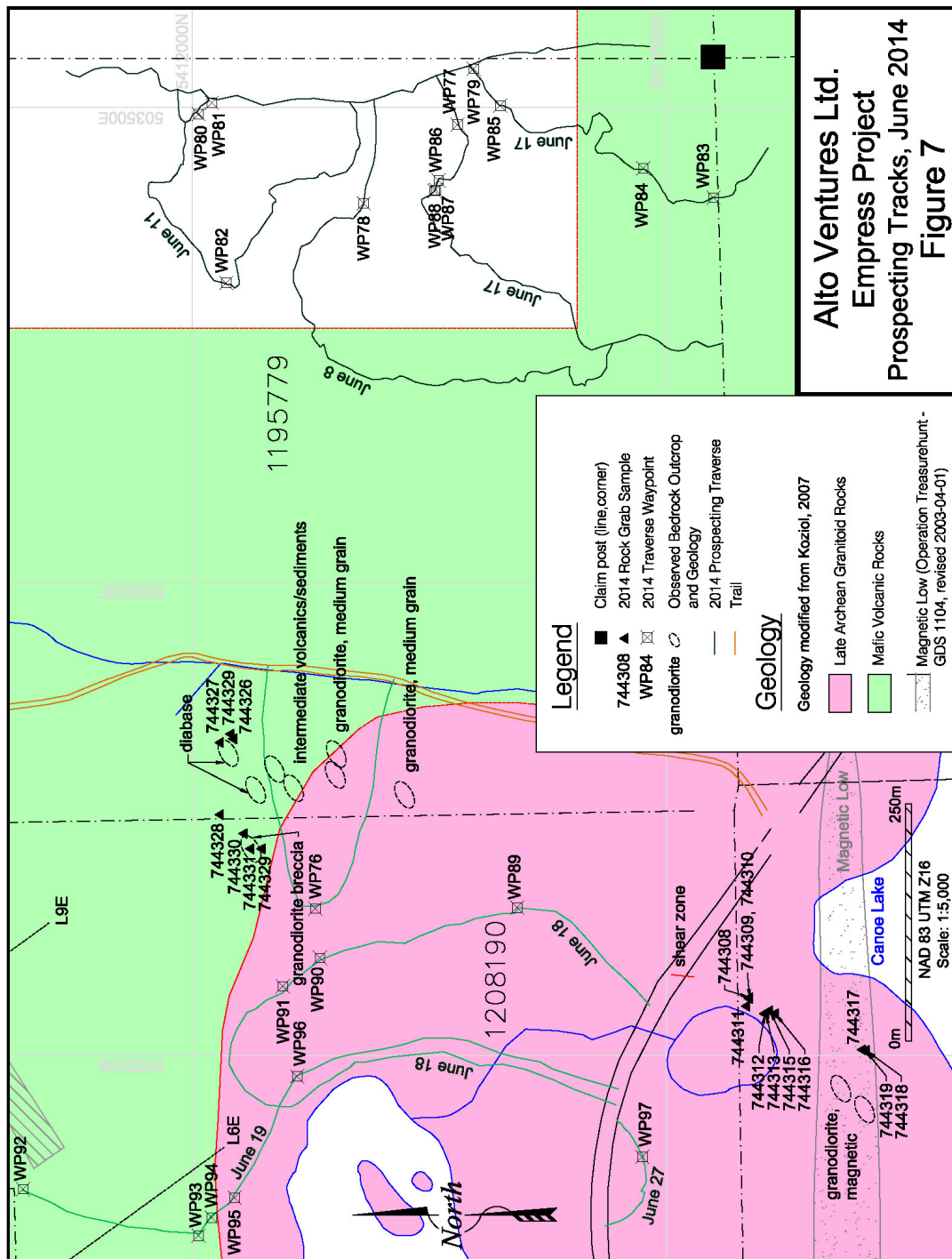


Figure 7 Empress Project Prospecting Tracks, June 2014

#### 4.0 CONCLUSIONS

A program including geological mapping, prospecting, bedrock sampling and soil

sampling was carried out on the Empress Property in May and June 2014. The objectives of the program were (1) to locate alteration, veining and gold mineralization along sections of the north and northeast contact of the Terrace Bay batholith, and (2) to test a regional east-trending aeromagnetic anomaly by prospecting and soil and MMI geochemistry. The work was encouraged by the success in discovery of new gold occurrences within the Terrace Bay pluton by prospectors Wayne Richards and Rudy Wahl on properties adjoining Alto's Empress Property to the east and south.

The mapping and bedrock sampling program has succeeded in locating several areas of strong silicification, particularly in a dried-out section of a small round lake in claim 1208719 and quartz vein breccia zones in claims 1208190 and 3008228. These vein breccia zones did not return significant gold assays (best 0.087 g/t in sample 744342). However discovery of these silicified zones as well as zones of strong silicification in Sister Creek in claim 3008228 (samples 744320 to 744323) confirm the extensive silica alteration associated with the Terrace Bay batholith near its north contact. Even though the assay results from Alto's samples did not report high gold, the area is considered to be favourable for exploration along the batholith contact as there are significant new gold occurrences reported by both Wayne Richards and Rudy Wahl on the adjoining properties in the Terrace Bay batholith.

The soil and MMI sampling programs were inconclusive in testing the regional aeromagnetic anomaly. The overburden cover in the south half of the Empress Property consists of mainly sandy glacial tills with only poorly developed soil profiles and therefore B Horizon soil sampling is not the best medium to sample. Bulk till sampling along the south boundary of the property may be an effective method to test for gold grains that may have been derived from sources near the contact of the Terrace Bay batholith.

## **5.0 RECCOMENDATIONS**

The following recommendations are based on the results of this program, previous exploration work that has been completed on the Empress Property and the recent success in discovering gold on adjoining properties to the east and south.

(1) Additional prospecting and bedrock sampling along the north and northeast contact of the Terrace Bay batholith is recommended;

(2) A bulk-till sampling program along the south property boundary is recommended to test for gold grains that may have been derived from the north and northeast contacts of the Terrace Bay batholith.

## 6.0 REFERENCES

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## **CERTIFICATE OF AUTHOR**

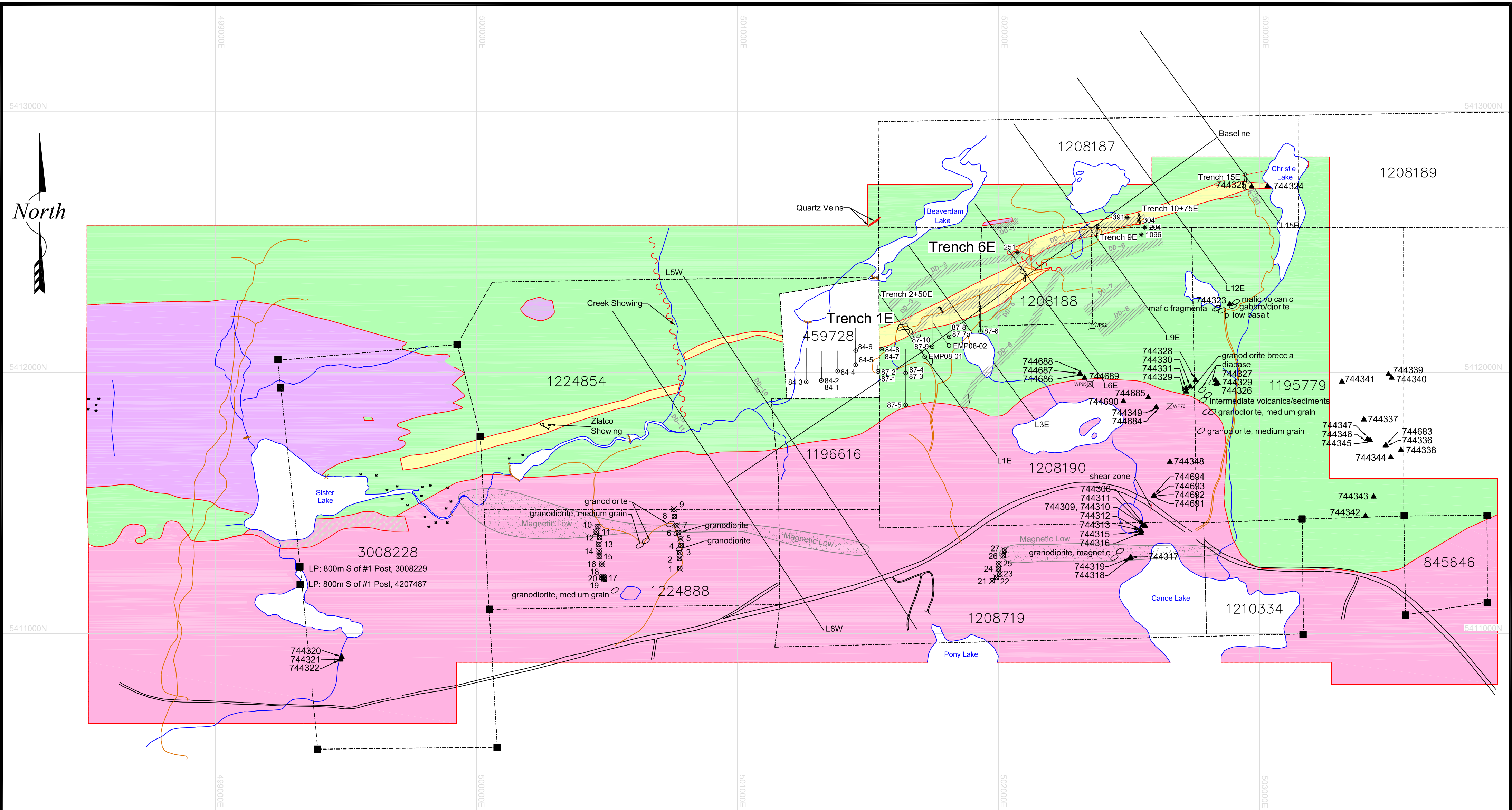
I, Marian (Mike) Koziol, P. Geo., P. Eng., resident at 26 Cognac Court, Sudbury, Ontario, P3E 6L4 do hereby certify that:

1. I am currently employed as President and Director of Alto Ventures Ltd.
2. I graduated from McGill University, Montreal, Quebec with a B.Sc. degree in Geological Sciences in 1978.
3. I am a licensed member of the Professional Engineers of Ontario (No. 100026045) and a licensed member of the Association of Professional Geoscientists of Ontario (No. 1009). I am also a member of the Association of Professional Engineers and Geoscientists of Saskatchewan (No. 05638).
4. I have worked continuously as an exploration geologist since my graduation, exploring for gold and base metals deposits in the Canadian Shield including the Churchill Province of Saskatchewan and Manitoba and the Superior Province of Manitoba, Ontario and Quebec.
5. I have read the definition of “Qualified Person” as set out in National Instrument 43-101 and certify that I fulfill the requirements to be a Qualified Person for the purposes of NI43-101 by reason of my education, relevant past work experience and affiliation with professional association as defined in NI43-101.
6. I have personally worked on the Empress property and supervised the programs described in this report.
8. As of the date of this certification, I am not aware of any material fact or change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I do not hold a direct interest in the property but I do own shares of Alto Ventures Ltd and am an Officer and Director of the Company and for the purposes of this report I am not an independent Qualified Person as defined by Section 1.5 of NI43-101.

Original Signed in Sudbury, Ontario on this 6th day of August, 2014



Marian (Mike) Koziol, P. Geo., P. Eng.



**Legend**

- Shear
- Quartz Vein
- Claim post (line, corner)
- IP Anomaly (Cameco 1999 work)
- Historical DDH
- Alto 2008 DDH
- 204 \* Location of Au Till Anomalies (Gold Grains after Morris, 1999 and 2000)
- 744308 ▲ 2014 Rock Grab Sample
- 1 ■ 2014 "B" Horizon and MMI Soil Sample Site and Sample Number
- granodiorite ○ Observed Bedrock Outcrop and Geology
- Trail

**Geology**

- Late Archean Granitoid Rocks
- Mafic to Intermediate Intrusive Rocks
- Empress Structure
- Mafic Volcanic Rocks
- Magnetic Low (Operation Treasurehunt - GDS 1104, revised 2003-04-01)



NAD 83 UTM Z16

Scale: 1:10,000



**Alto Ventures Ltd.**  
**Empress Project**  
**Geology and June 2014**  
**Sample Locations**

June, 2014

**MAP 1**

## **APPENDIX A**

### **Empress 2014 Grab Rock Sample Results and Descriptions**



## Empress 2014 Grab Rock Sample Results and Descriptions

Sample #	Easting*	Northing*	Au (ppm)	Description
744308	502561	5411412	<.005	<p>Quartz vein, 80% glassy white quartz, 20% chlorite from a 2m wide shear zone in granodiorite, shear strikes at 020°, dips 80°E, shear zone contains 20-30% quartz veining, veins are from few mm to 0,6m wide, glassy and generally barren, strong fine chlorite alteration on vein boundaries and pervasive throughout the shear zone, locally minor amounts of fine disseminated pyrite occur within the shear, extent of vein at this stop is 10m long</p> <p>Shear is hosted by medium grained granodiorite, not altered but fractured and close to the shear, some fractures are coated with fine disseminated pyrite, locally up to 5% as disseminated crystals and blobs of crystals some 1cm x 1cm x 0.1cm</p>
744309	502560	5411413	<.005	Granodiorite, medium grained biotite rich, contains average 1% disseminated and blebby pyrite along fracture surfaces
744310	502559	5411412	<.005	Fine grained mafic rock, possible dyke or greenstone?
744311	502552	5411415	<.005	Qtz stockwork veins on edge of round pond, veins appear to trend 320 to 340°, dip 80°E, sample is of 70% white to glassy white qtz vein in medium grained biotite granodiorite, vein is fractured with chlorite filling fractures and 1-2% disseminated pyrite along the chloritic fractures, host granodiorite is pyrite bearing up to 1% disseminated crystals close to the veins, area of localized stockwork veining extends from highway to SE for at least 50m along pond, Photo of stockwork veins in water
744312	502544	5411396	<.005	Sample consists of 70% qtz vein, 30% chlorite, 1% pyrite taken from 30cm wide vein in chloritized shear, vein is white to glassy white, minor hematite in some inclusions of chloritic material in vein
744313	502544	5411395	<.005	Sample of 95% white to glassy white quartz vein derived from same shear as 744312, contains 5% pyrite mainly as blobs in vugs
744314	502547	5411391	<.005	Sample of 60% glassy white quartz vein, 30% chlorite, 10% altered granodiorite (host rock), minor hematite occurs in the chlorite-rich sections, sample is from a historical blasted pit 2m x 1m x 0.6m
744315	502547	5411390	<.005	Sample of 80% white to glassy white qtz vein with inclusions of microfractured granodiorite and 5% chlorite along the microfractures, sample is from historical blasted pit 4m x 1m x 1m, photos of vein with inclusions of



				granodiorite,
744316	502544	5411385	<.005	Sample of 60% white to glassy white qtz vein, 30% granodiorite inclusions in vein and 10% chlorite along fractures, sample is from historical blasted pit 4m x 1m x 1m, photos of vein with inclusions of granodiorite, one of several along 010-020° trend, photos of vein with inclusions Wayne for scale
744317	502506	5411293	<.005	Sample of 80% qtz vein, 18% granodiorite/chlorite, 2% pyrite in cubes up to 0.5cm, vein is fractured white and discolored to yellow-white, stop covers stockwork vein area 10m long by minimum 2m wide along 010-020° trend, individual veins are up to 20 cm wide, vein exposure is along cliff and needs washing
744318	502505	5421289	<.005	Sample of 80% white qtz vein, 15% inclusions of granodiorite, 5% pyrite cubes, part of a zone of stockwork veins at least 1m wide at this exposure which is in a cliff facing south, old blasted trench?
744319	502505	5421290	0.01	Sample of 10% white qtz vein in strongly chlorite altered granodiorite, black colour of rock is due to alteration and weathering of the chlorite,
744320	499484	5410911	0.061	Sister Creek, sample of 20% qtz stockwork veins in granodiorite, veins are up to 1.5cm wide and contain 2% pyrite as crystals along vein margins, sample also contains 3% fine tourmaline, granodiorite is not altered, stockwork veins occur in a flat (20°W) dipping envelope that extends at least 15m in NS direction along the creek, outcrop is in a gorge along creek and high water flow did not allow a closer examination, photo of stockwork veins
744321	499480	5410901	0.019	Sister Creek, sample of quartz-tourmaline breccia containing 3% disseminated pyrite, breccia is hosted by granodiorite that is not altered
744322	499479	5410900	0.031	Sister Creek, sample of granodiorite containing 5% disseminated pyrite 10% white quartz veins and 5% tourmaline from stockwork zone, granodiorite is not altered
744323	502885	5412261	<.005	Christie Creek, fine grained diorite/gabbro with light greenish plagioclase crystals forming 60%, 30% pyroxene, possible olivine crystals, sample contains 3% magnetite, minor amounts of pyrrhotite (0.5%), rock is strongly magnetic
744324	503030	5412713	<.005	Christie Lake Occurrence, dark grey argillite/siltstone bands alternating with lighter grey chert and siliceous argillite bands, sample contains 2% pyrite as fine crystals aligned parallel to banding; former Cameco

				sample flag located 5m south
744325	502969	5412711	<.005	Old trench in valley between two ridges on strike from Cameco trench 15E, trench is 1m deep, 7m long, sample of rubble of bedded argillite and chert, sample contains 2% disseminated pyrite
744326	502834	5411956	<.005	Sample from just east of diabase dyke of granodiorite breccia, but strongly magnetic, contains 1% fine disseminated pyrite, see also 744331, **
744327	502830	5411970	<.005	Diorite/gabbro massive fine grained, strongly magnetic, with pinkish altered feldspars, possible contact area of gabbro and granodiorite
744328	502754	5422970	<.005	Grey-green phlogophite-pyroxene-olivine? schist, possible altered pyroxenite, on strike with gabbro in 744327, cut by stringers of feldspathic material aligned parallel to foliation fabric in the schist, rock is magnetic
744329	502718	5411926	<.005	Massive, weakly silicified, weakly epidote altered granodiorite, traces of pyrite
744330	502734	5411945	<.005	Pegmatite breccia consisting of 50% finer pink feldspar-quartz intergrowths, 15% rounded quartz blobs up to 2cm, 10% coarse pink feldspar crystals (2 cm x 1 cm), 20% fine grained mafic minerals and magnetite forming matrix between the various coarser quartzo-feldspathic pockets ***note put on watch list**
744331	502839	5411959	<.005	Retagged 744325 just west of strongly magnetic diabase dyke, sample of granodiorite breccia, light green color with pink alteration of some of the feldspars, greenish colour due to epidote alteration, sample contains 1% disseminated pyrite
744332	standard		0.513	Standard GS-P5, 0.525 +/- 0.042 g/t Au
744333	502718	5411938	<.005	Loose angular boulder of intrusive breccia, approximately 5m from photo of intrusive breccia, sample contains 0.5% very fine, hematite coated grains of pyrite, area needs more prospecting
744336	503482	5411720	<.005	Granodiorite, micro fractured with narrow qtz stockwork veins forming 30% of sample, qtz is white and contains inclusions of sericitized granodiorite, granodiorite is locally altered where biotite is altered to chlorite
744337	503399	5411819	.006	Granodiorite, fine grained, greenish grey due to chlorite alteration, contains 30% coarse crystals of calcite, 1% fine disseminated cubes of pyrite, weathered surfaces are pitted due to calcite weathering out, possible shear zone in granodiorite
744338	503541	5411703	.007	Granodiorite, massive relatively un-altered but cut by stockwork veins of glassy to white quartz, veins appear barren and form 30% of

				the sample
744339	503493	5411993	<.005	Diabase, fine grained massive dark grey-green rock, strongly magnetic, sample contains minor amounts of pyrite and chalcopyrite smeared on a fracture surface
744340	503505	5411979	.015	Gabbro (?), massive dark grey heavy, locally silicified and strongly magnetic, contains 10% pyrite cubes up to 0.2 cm disseminated throughout the sample, 5% calcite
744341	503315	5411964	<.005	Granitic pegmatite, pink feldspar-quartz granite with inclusions of chloritized greenstone, cubes of fine disseminated pyrite occur within the greenstone and near contact with the granite
744342	503405	5411450	.087	Granodiorite, pinkish grey medium grained massive, weakly altered biotite to chlorite, micro-fractured with few clear qtz veinlets along fractures
744343	503436	5411524	.007	Diorite, massive fine grained, strongly magnetic heavy, contains inclusions of epidote altered pieces, 1% fine disseminated pyrite
744344	503502	5411675	<.005	Granodiorite, fine grained massive grey-green to pinkish grey, contains 2% disseminated pyrite
744345	504323	5411740	<.005/.006	Breccia, dark grey-green brecciated granodiorite (?) cemented with qtz and carbonate filling between the breccia pieces, also contains brecciated pink and white calcite vein pieces, no sulphides
744346	503413	5411743	.006	Granodiorite, fractured and cut by cherty white and dark grey micro-veinlets containing fine disseminated pyrite (2%), rock is reddish color and silicified (looks good for hosting gold)
744347	503412	5411744	.006	Felsic volcanic fragmental (?), foliated with fragment-like shapes, contains 2% disseminated pyrite, probably dacite fragmental
744348	502656	5411657	.006	Diorite, fine grained, green-grey, massive, contains 0.5% pyrite
744349	502603	5411865	.006	Granodiorite, micro-fractured with narrow quartz veinlets along some fractures, hematite alteration along others, surface is gossaned, fresh surfaces appear bleached, 1% very fine disseminated pyrite
744350	Standard		1.136	Standard CDN-GS-1G 1.14+/-0.09 g/t Au
744683	503482	5411720	<.005	Quartz vein, white to clear white, massive, barren-looking, vein is minimum 10cm wide
744684	502603	5422865	<.005	Granodiorite, massive, light pink-grey on weathered surface and light grey on fresh, biotite enriched, contains 5% pyrite as stringers and fine disseminated crystals
744685	502573	5411904	.011	Quartz Vein, 1.5 cm wide pink and white

				veins within fine granodiorite (or arkose - sample insufficient size to be sure), vein contains 3% pyrite, fine black crystals in granodiorite maybe magnetite, these form only 0.3%
744686	502310	5411993	<.005	Granite (quartz monzonite?), pink medium grained massive, contains occasional narrow veinlets of clear quartz
744687	502310	5411993	.006/<.005	Granite, medium grained, contains 5% books of biotite cut by quartz-feldspar pegmatite veinlets
744688	502310	5411993	<.005	Diorite, similar to 744343 -massive fine to medium grained, dark grey to black with pink feldspars, heavy, strongly magnetic, <1% disseminated pyrite
744689	502329	5411979	.014	Pegmatite, quartz-feldspar, white to pink feldspars up to 4 cm crystals
744690	502478	5411889	.007	Felsic to intermediate volcanic, silicified, grey color, fine grained, heavy, contains 2% fine disseminated pyrite
744691	502593	5411525	<.005	Granodiorite, medium grained, massive, locally fractured with blobs of massive pyrite localized along some fractures as well as fine disseminated pyrite along certain fractures, Granodiorite does not appear altered
744692	502593	5411525	.008	Granodiorite, more intensely fractured than 744691, gossan along fractures due to very fine disseminated pyrite, contains discontinuous white quartz veins, biotite in the granodiorite appears altered to chlorite
744693	502593	5411525	.006	Breccia Zone, blood-red granodiorite pieces within dark grey cement matrix, breccia consists of 40% granodiorite pieces, 25% coarse calcite crystals, 10% quartz veins all cemented with 25% grey matrix material
744694	502593	5411525	.010	Breccia, predominantly quartz-carbonate (calcite) veins within dark grey matrix
744695	Standard		1.181	Standard CDN-GS-1G 1.14+/-0.09 g/t Au

\*Note: UTM NAD 83 Zone 16

**APPENDIX B**

**Empress 2014 Grab Rock Sample Assay Certificates**

Monday, July 28, 2014

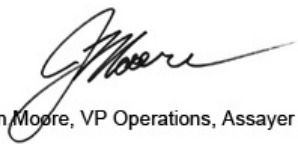
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 Alto Ventures Ltd.  
 Unit #7, 1351D Kelly Lake Rd.  
 Sudbury, ON, CAN  
 P3E5P5  
 Ph#: (705) 522-6372  
 Fax#: (705) 522-8856  
 Email: koziol@altoventures.com

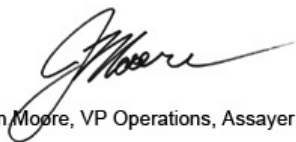
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 Date Completed: 07/28/2014  
 Job #: 201441539  
 Reference:  
 Sample #: 28

Acc #	Client ID	Au g/t (ppm)
117733	744336	<0.005
117734	744337	0.006
117735	744338	0.007
117736	744339	<0.005
117737	744340	0.015
117738	744341	<0.005
117739	744342	0.087
117740	744343	0.007
117741	744344	<0.005
117742	744345	<0.005
117743	744345 Dup	0.006
117744	744346	0.006
117745	744347	0.006
117746	744348	0.006
117747	744349	0.006
117748	744350	1.136
117749	744683	<0.005
117750	744684	<0.005
117751	744685	0.011
117752	744686	<0.005
117753	744687	0.006
117754	744687 Dup	<0.005
117755	744688	<0.005
117756	744689	0.014
117757	744690	0.007

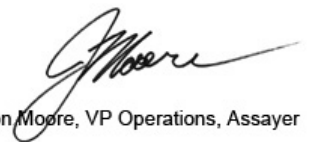
APPLIED SCOPES: ALP1, ALFA1, ALAR1

**Validated By:**
**Certified By:**
**Authorized By:**


Jason Moore, VP Operations, Assayer



Jason Moore, VP Operations, Assayer



Jason Moore, VP Operations, Assayer

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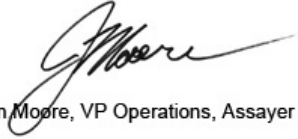
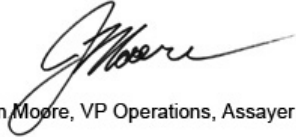
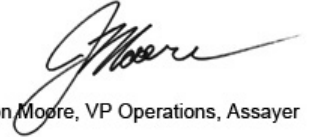
Monday, July 28, 2014

**Final Certificate**Alto Ventures Ltd.  
Unit #7, 1351D Kelly Lake Rd.  
Sudbury, ON, CAN  
P3E5P5  
Ph#: (705) 522-6372  
Fax#: (705) 522-8856  
Email: koziol@altoventures.comDate Received: 07/16/2014  
Date Completed: 07/28/2014  
Job #: 201441539  
Reference:  
Sample #: 28

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Acc #	Client ID	Au g/t (ppm)
117758	744691	<0.005
117759	744692	0.008
117760	744693	0.006
117761	744694	0.010
117762	744695	1.181

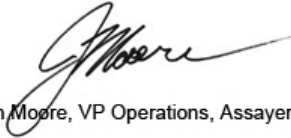
APPLIED SCOPES: ALP1, ALFA1, ALAR1

**Validated By:****Certified By:****Authorized By:**  
Jason Moore, VP Operations, Assayer  
Jason Moore, VP Operations, Assayer  
Jason Moore, VP Operations, Assayer**The results included on this report relate only to the items tested.****The Certificate of Analysis should not be reproduced except in full, without the written approval of the laboratory.**

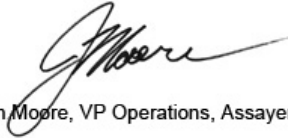
Monday, July 28, 2014

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Email: koziol@altoventures.comDate Received: 07/16/2014  
Date Completed: 07/28/2014  
Job #: 201441539  
Reference:  
Sample #: 28**Control Standards**

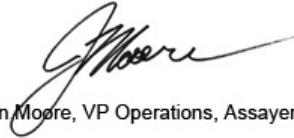
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APPLIED SCOPES: ALP1, ALFA1, ALAR1			

**Validated By:**

Jason Moore, VP Operations, Assayer

**Certified By:**

Jason Moore, VP Operations, Assayer

**Authorized By:**

Jason Moore, VP Operations, Assayer

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Monday, June 23, 2014

## Preliminary Analysis

 Alto Ventures Ltd.  
 Unit #7, 1351D Kelly Lake Rd.  
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 Ph#: (705) 522-6372  
 Fax#: (705) 522-8856  
 Email: koziol@altoventures.com

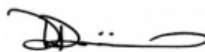
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 Date Completed: 06/23/2014  
 Job #: 201441191  
 Reference:  
 Sample #: 26

Acc #	Client ID	Au g/t (ppm)
92231	744308	<0.005
92232	744309	<0.005
92233	744310	<0.005
92234	744311	<0.005
92235	744312	<0.005
92236	744313	<0.005
92237	744314	<0.005
92238	744315	<0.005
92239	744316	<0.005
92240	744317	<0.005
92241	744317 Dup	<0.005
92242	744318	<0.005
92243	744319	0.010
92244	744320	0.061
92245	744321	0.019
92246	744322	0.031
92247	744323	<0.005
92248	744324	<0.005
92249	744325	<0.005
92250	744326	<0.005
92251	744327	<0.005
92252	744327 Dup	<0.005
92253	744328	<0.005
92254	744329	<0.005
92255	744330	<0.005

APPLIED SCOPES: ALP1, ALFA1, ALMA1

**Validated By:**


Andrew Oleski, Instrumentation Manager

**Certified By:**


Derek Demianiuk H.Bsc., Laboratory Manager

**Authorized By:**

No Signature

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Monday, June 23, 2014

**Preliminary Analysis**Alto Ventures Ltd.  
Unit #7, 1351D Kelly Lake Rd.  
Sudbury, ON, CAN  
P3E5P5  
Ph#: (705) 522-6372  
Fax#: (705) 522-8856  
Email: koziol@altoventures.comDate Received: 06/10/2014  
Date Completed: 06/23/2014  
Job #: 201441191  
Reference:  
Sample #: 26

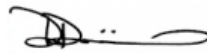
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Acc #	Client ID	Au g/t (ppm)
92256	744331	<0.005
92257	744332	0.513
92258	744333	<0.005

APPLIED SCOPES: ALP1, ALFA1, ALMA1

**Validated By:**

Andrew Oleski, Instrumentation Manager

**Certified By:**

Derek Demianiuk H.Bsc., Laboratory Manager

**Authorized By:**

No Signature

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Monday, June 23, 2014

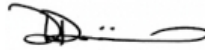
**Preliminary Analysis**Alto Ventures Ltd.  
Unit #7, 1351D Kelly Lake Rd.  
Sudbury, ON, CAN  
P3E5P5  
Ph#: (705) 522-6372  
Fax#: (705) 522-8856  
Email: koziol@altoventures.comDate Received: 06/10/2014  
Date Completed: 06/23/2014  
Job #: 201441191  
Reference:  
Sample #: 26**Control Standards**

QC Type	QC Performance (ppm)	Mean (ppm)	Std Dev (ppm)
GS26	0.820	0.804	0.043

APPLIED SCOPES: ALP1, ALFA1, ALMA1

**Validated By:**

Andrew Oleski, Instrumentation Manager

**Certified By:**

Derek Demianiuk H.Bsc., Laboratory Manager

**Authorized By:**

No Signature

**The results included on this report relate only to the items tested.****The Certificate of Analysis should not be reproduced except in full, without the written approval of the laboratory.**

Monday, July 21, 2014

### Final Certificate

 Alto Ventures Ltd.  
 Unit #7, 1351D Kelly Lake Rd.  
 Sudbury, ON, CAN  
 P3E5P5  
 Ph#: (705) 522-6372  
 Fax#: (705) 522-8856  
 Email: koziol@altoventures.com

 Date Received: 06/10/2014  
 Date Completed: 06/23/2014  
 Job #: 201441191  
 Reference:  
 Sample #: 26

Acc #	Client ID	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
92231	744308	<1	3.88	4	330	2	<1	1.52	<4	26	298	7	4.59	1.00	47	2.82	651	<1	69	1381	3	<5	24	1991	358	3525	<2	122	<10	8	158
92232	744309	<1	8.53	12	816	4	15	1.46	<4	31	80	16	3.46	1.45	12	1.29	408	<1	39	970	<1	5	46	1613	891	2165	<2	65	<10	13	61
92233	744310	<1	4.75	9	130	2	<1	5.15	<4	39	347	120	4.80	0.45	42	3.92	952	<1	81	2422	<1	<5	33	1739	1016	4483	4	148	<10	19	95
92234	744311	<1	2.59	<2	<1	2	6	0.50	<4	9	128	48	1.79	<0.01	2	0.55	202	339	16	478	8	<5	24	1800	215	828	<2	21	<10	16	24
92235	744312	<1	0.42	7	<1	<2	<1	1.15	<4	7	148	4	1.21	0.65	11	0.86	200	<1	20	448	<1	<5	20	2238	130	879	<2	31	<10	4	22
92236	744313	<1	<0.01	7	<1	<2	<1	<0.01	<4	2	116	11	0.59	0.32	<1	0.05	<100	<1	7	<100	3	<5	15	2314	84	242	<2	4	<10	<2	4
92237	744314	<1	2.51	5	276	<2	6	4.77	<4	23	417	5	4.04	1.34	26	3.39	768	<1	73	840	<1	<5	23	2220	220	1825	<2	99	<10	8	117
92238	744315	<1	0.38	2	43	<2	<1	0.31	<4	3	102	4	0.70	0.57	1	0.34	111	<1	10	271	<1	<5	15	2202	126	489	<2	14	<10	2	12
92239	744316	<1	0.25	2	43	<2	<1	4.68	<4	1	115	5	0.66	0.76	2	0.26	150	<1	9	166	4	<5	19	2170	132	354	<2	11	<10	2	<1
92240	744317	<1	<0.01	<2	<1	<2	<1	0.04	<4	4	91	4	0.54	0.36	<1	0.05	<100	4	5	114	6	6	13	2293	86	272	<2	5	<10	<2	5
92241D	744317	<1	<0.01	3	<1	<2	5	0.05	<4	4	93	4	0.50	0.44	<1	0.05	<100	2	4	114	2	<5	20	2343	87	261	<2	5	<10	<2	3
92242	744318	<1	<0.01	7	<1	<2	3	<0.01	<4	5	99	5	1.08	0.34	<1	0.06	<100	20	6	196	8	<5	24	2234	104	273	<2	6	<10	<2	6
92243	744319	<1	3.83	5	881	<2	<1	0.21	<4	5	77	6	1.26	0.70	4	0.52	268	<1	15	537	<1	<5	21	2022	476	1296	<2	28	<10	7	33
92244	744320	<1	4.18	<2	353	<2	4	1.41	<4	28	88	11	2.50	0.95	9	0.46	324	<1	57	751	<1	<5	22	1940	421	487	<2	33	<10	6	10
92245	744321	<1	2.41	3	3	2	2	5.34	<4	48	53	7	5.90	1.08	44	0.95	851	<1	30	2080	1	<5	11	1848	578	917	<2	113	<10	10	48
92246	744322	<1	2.60	6	<1	2	4	4.06	<4	34	59	9	4.46	0.93	17	0.54	672	<1	33	1204	1	7	13	1946	399	554	<2	59	<10	7	20
92247	744323	<1	4.51	<2	35	<2	<1	6.30	6	57	105	164	10.41	0.65	8	2.70	1690	<1	65	808	<1	13	12	1948	235	8584	<2	340	<10	29	124
92248	744324	<1	4.47	10	369	2	6	0.23	<4	7	33	35	3.27	1.01	10	0.61	359	<1	20	295	<1	<5	39	2034	119	1286	<2	25	<10	18	212
92249	744325	<1	4.46	5	445	<2	12	0.31	<4	3	44	27	2.78	1.07	8	0.58	278	<1	20	363	<1	<5	20	2023	133	1639	<2	29	<10	16	123
92250	744326	<1	>10.00	6	223	<2	8	9.30	5	45	718	51	10.74	0.65	34	1.16	2755	<1	92	666	<1	5	15	1491	778	3879	<2	135	<10	8	102

PROCEDURE CODES: ALP1, ALFA1, ALMA1

 Certified By:  Jason Moore, VP Operations, Assayer

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Monday, July 21, 2014

### Final Certificate

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Date Received: 06/10/2014  
 Date Completed: 06/23/2014  
 Job #: 201441191  
 Reference:  
 Sample #: 26

Acc #	Client ID	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
92251	744327	<1	4.11	<2	89	<2	<1	2.91	<4	38	107	56	5.35	0.25	14	1.07	1214	<1	40	1393	<1	<5	17	942	316	9730	<2	278	<10	19	52
92252D	744327	<1	4.58	9	98	<2	14	3.25	<4	47	116	65	6.21	0.88	16	1.30	1479	<1	47	1709	<1	<5	15	1843	379	12433	<2	330	<10	22	58
92253	744328	<1	6.01	10	99	<2	3	4.29	7	74	154	67	13.09	0.96	58	4.24	1934	<1	50	2589	<1	<5	<5	1726	458	17973	<2	417	11	31	140
92254	744329	<1	9.29	3	201	<2	<1	8.80	<4	22	168	4	4.04	0.85	27	1.36	773	<1	65	210	<1	6	37	1692	523	2755	<2	90	<10	4	30
92255	744330	<1	5.43	6	1135	3	4	1.76	<4	14	85	11	2.99	1.24	<1	0.89	495	<1	53	816	1	5	33	1684	863	2988	<2	79	<10	13	44
92256	744331	<1	6.12	9	206	<2	<1	8.83	<4	24	194	67	5.60	1.30	30	0.47	1816	<1	54	237	<1	<5	21	1723	682	2075	4	79	<10	5	49
92257	744332	<1	2.77	362	627	<2	2	<0.01	<4	32	1403	65	4.14	0.88	21	0.24	361	<1	1036	587	4	49	38	1687	122	2670	6	91	17	10	61
92258	744333	<1	6.57	7	159	<2	<1	7.30	<4	11	216	47	2.97	1.18	9	0.25	803	<1	57	192	<1	5	28	1503	595	1544	<2	64	10	2	12

PROCEDURE CODES: ALP1, ALFA1, ALMA1

Certified By:  Jason Moore, VP Operations, Assayer

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Thursday, July 31, 2014

### Final Certificate

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 Date Received: 07/16/2014  
 Date Completed: 07/28/2014  
 Job #: 201441539  
 Reference:  
 Sample #: 28

Acc #	Client ID	Au ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Si %	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
117733	744336	<0.005	<1	0.26	6	70	30	<2	<1	0.26	<4	4	52	13	0.75	<0.01	4	0.34	166	9	0.06	10	299	13	<5	<5	0.03	<10	20	395	<2	12	<10	3	73
117734	744337	0.006	<1	1.80	6	67	21	<2	2	7.40	<4	20	366	4	3.06	0.01	41	2.26	468	2	0.04	125	598	3	<5	<5	0.03	<10	152	1135	<2	76	<10	11	23
117735	744338	0.007	<1	0.60	2	75	191	<2	<1	0.98	<4	3	61	3	1.21	0.18	12	0.53	366	8	0.06	19	387	9	<5	<5	0.03	<10	51	578	<2	21	<10	6	38
117736	744339	<0.005	<1	2.36	5	74	109	<2	5	0.92	8	29	105	40	7.38	0.66	19	1.29	696	3	0.09	59	1722	7	<5	<5	0.03	<10	24	1832	<2	235	<10	9	98
117737	744340	0.015	<1	3.88	2	81	515	<2	5	3.12	9	59	140	90	9.06	2.19	41	3.03	983	2	0.05	126	1342	10	<5	<5	0.03	<10	57	3717	<2	244	<10	12	121
117738	744341	<0.005	<1	1.01	3	81	49	<2	<1	1.15	<4	9	47	33	2.05	0.18	12	0.88	257	6	0.03	21	218	6	<5	<5	0.03	<10	28	173	<2	42	<10	3	25
117739	744342	0.087	<1	0.49	3	67	48	<2	<1	0.38	<4	7	38	109	1.49	0.10	7	0.46	146	40	0.06	19	416	9	<5	<5	0.03	<10	40	601	<2	23	<10	3	16
117740	744343	0.007	<1	1.35	5	70	835	<2	6	1.37	7	38	40	17	6.16	0.11	17	0.92	312	3	0.07	29	1769	32	<5	<5	0.03	<10	66	2806	2	171	<10	20	156
117741	744344	<0.005	<1	1.36	3	86	98	<2	<1	0.78	<4	23	78	36	2.51	0.04	19	1.67	340	4	0.09	45	1133	5	<5	<5	0.05	<10	123	1762	2	47	<10	5	49
117742	744345	<0.005	<1	2.01	2	66	3018	<2	2	0.36	<4	14	153	10	2.50	0.09	23	1.96	265	6	0.07	66	417	2	<5	<5	0.03	<10	67	<100	3	56	<10	3	39
117743D	744345	0.006	<1	2.03	2	67	3169	<2	1	0.38	<4	15	161	9	2.62	0.09	24	2.04	281	6	0.07	69	447	3	<5	<5	0.03	<10	70	<100	<2	58	<10	3	39
117744	744346	0.006	<1	0.47	7	84	147	<2	<1	3.23	<4	12	121	12	2.20	0.07	7	1.18	411	7	0.09	45	576	8	<5	<5	0.04	<10	231	<100	5	63	<10	20	30
117745	744347	0.006	<1	2.58	3	77	275	<2	4	3.54	5	28	337	88	4.54	0.94	48	2.79	765	3	0.06	121	862	8	<5	<5	0.04	<10	122	1095	2	114	<10	10	69
117746	744348	0.006	<1	1.83	3	68	144	<2	3	2.05	<4	28	343	9	3.37	0.06	21	2.21	565	1	0.05	76	1796	5	<5	<5	0.06	<10	104	1818	<2	81	<10	9	50
117747	744349	0.006	1	0.72	<2	70	27	<2	3	0.06	<4	2	30	54	2.88	0.12	7	0.61	378	11	0.04	4	136	480	<5	<5	0.03	<10	9	314	<2	9	<10	3	57
117748	744350	1.136	<1	0.41	243	77	99	<2	16	>10.00	4	4	21	76	2.43	0.15	6	2.74	1692	72	0.01	76	1049	24	5	<5	0.02	<10	174	<100	7	135	20	17	351
117749	744683	<0.005	<1	0.05	6	80	27	<2	<1	0.48	<4	<1	37	8	0.40	<0.01	<1	0.14	107	9	0.01	6	<100	10	<5	<5	0.02	<10	8	<100	<2	6	<10	<2	14
117750	744684	<0.005	<1	1.20	6	69	37	<2	<1	0.08	5	3	32	45	3.05	0.20	16	0.78	617	14	0.04	4	101	344	<5	<5	0.02	<10	6	307	<2	3	<10	5	301
117751	744685	0.011	<1	0.63	9	74	34	<2	2	0.24	4	30	48	88	3.63	0.14	6	0.18	333	10	0.06	22	931	5	<5	<5	0.02	<10	5	875	<2	44	<10	7	24
117752	744686	<0.005	<1	0.31	2	72	24	<2	<1	0.23	<4	3	27	20	0.81	0.06	3	0.13	143	6	0.07	3	<100	7	<5	<5	0.02	<10	28	404	<2	12	<10	2	8

PROCEDURE CODES: ALP1, ALFA1, ALAR1

 Certified By:   
 Jason Moore, VP Operations, Assayer

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Thursday, July 31, 2014

### Final Certificate

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 Date Received: 07/16/2014  
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Acc #	Client ID	Au ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Si %	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
117753	744687	0.006	<1	0.37	3	60	16	<2	<1	0.18	<4	2	26	5	0.81	0.07	4	0.16	117	6	0.06	3	<100	4	<5	<5	0.02	<10	16	526	<2	15	<10	2	8
117754D	744687	<0.005	<1	0.39	2	72	18	<2	<1	0.19	<4	3	31	5	0.86	0.08	4	0.16	124	7	0.06	3	<100	5	<5	<5	0.02	<10	17	557	<2	16	<10	2	9
117755	744688	<0.005	<1	2.18	3	84	20	<2	8	1.13	7	34	19	72	6.39	0.06	26	1.81	629	3	0.08	27	1651	5	<5	<5	0.05	<10	30	3574	<2	232	<10	8	89
117756	744689	0.014	<1	0.38	2	71	26	<2	<1	0.68	<4	5	22	77	0.92	0.08	2	0.21	112	5	0.06	5	229	14	<5	<5	0.03	<10	38	1110	<2	25	<10	4	24
117757	744690	0.007	<1	1.73	4	101	63	<2	4	0.51	5	29	63	74	4.66	0.22	34	0.91	704	6	0.04	75	787	10	<5	<5	0.03	<10	27	1650	<2	82	<10	5	351
117758	744691	<0.005	<1	0.71	2	77	163	<2	<1	1.41	<4	15	39	5	1.93	0.07	11	0.79	358	17	0.07	25	651	8	<5	<5	0.03	<10	84	295	<2	28	<10	8	32
117759	744692	0.008	<1	0.74	2	73	95	<2	<1	0.90	<4	11	43	9	1.90	0.07	10	0.77	225	5	0.07	24	484	8	<5	<5	0.03	<10	37	800	<2	29	<10	6	32
117760	744693	0.006	<1	1.09	3	79	449	<2	<1	7.12	<4	10	134	1	1.83	0.09	19	1.14	337	33	0.02	35	786	4	<5	<5	0.04	<10	119	583	<2	48	<10	13	34
117761	744694	0.010	<1	0.78	2	66	16	<2	<1	1.67	<4	6	106	<1	1.40	0.06	14	0.84	200	20	0.01	29	433	2	<5	<5	0.02	<10	36	<100	3	29	<10	4	25
117762	744695	1.181	<1	0.41	239	84	98	<2	10	>10.00	4	4	22	76	2.42	0.15	6	2.73	1695	71	0.01	75	1040	21	6	<5	0.02	<10	175	<100	4	135	17	17	348

PROCEDURE CODES: ALP1, ALFA1, ALAR1

  
 Certified By: Jason Moore, VP Operations, Assayer

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## **APPENDIX C**

### **Empress 2014 Soil and MMI Sample Descriptions**



## Empress 2014 Soil and MMI Sample Descriptions

Sample #	Easting*	Northing*	Description
1	500779	5411249	15cm depth, oxidized, mainly fine sand and silt, below a layer of grey leach zone, sample on flat well drained area
2	500778	5411288	Fine sand and silty till, sample from 15cm depth, cobbles <10%, sample is grey colour below 10cm of humus layer, sample on flat well drained area
3	500779	5411310	15cm depth, sample is weakly oxidized to light brown below 10cm grey leach zone, sample on flat well drained area 10m from outcrop of massive granodiorite
4	500784	5411337	15cm depth, light brown weakly oxidized sand-silt till below a 10cm leach zone, sample from flat, well drained area
5	500782	5411362	15cm depth, fine light brownish, weakly oxidized sand/silt till, 5% cobbles from flat well drained area
6	500774	5411387	15cm depth, weakly oxidized, light brown-grey fine sand/silt till with 20% total cobbles of greenstone and granodiorite, sample taken from below 8 cm humus and 7 cm grey leach layer, on flat well drained area
7	500768	5411413	15cm depth, sand and silt till with 20% cobbles, mainly greenstone, sampled silt/sand is weakly oxidized, sample on edge of poorly drained area on flat ground
8	500758	5411448	20cm depth, sample of grey silt/sand till with 20% cobbles of mainly greenstone, sample is from flat, wet poorly drained area, outcrop is 10m from sample site
9	500756	5411476	35cm depth, sample of weakly oxidized silt/sand from till, sample site is on slightly higher ground than surrounding wet area but still on flat ground
10	500466	5411409	15cm depth, mainly fine sand/silt, grey till with <5% cobbles, on west slope of hill, gentle slope west
11	500459	5411388	20 cm depth, grey color weak oxidized, cobbles form <10%, 20 cm thick humus
12	500472	5411367	20cm depth, on gentle west facing slope, sample is of sandy till with 30% mafic volcanic boulders
13	500469	5411341	25cm depth sample of sandy till with 50% cobbles and pebbles of greenstone, grey not oxidized, top 20cm of sample hole is humus
14	500470	5411315	15cm depth, sample of well oxidized sand/silt till, <5% cobbles, in bad bush on gentle west facing slope 10m from granodiorite outcrop
15	500470	5411295	40cm depth, sample of black, mainly humus and black compacted mud with mica flakes, sample in poorly drained flat alder wet area
16	500480	5411266	25cm depth, grey sand till with 60% cobbles and boulders approximately 3m above wet area on edge on granodiorite outcrop ridge
17	500489	5411213	15cm depth, lower lying area between two granodiorite ridges, low land trends E-W, north edge of low land, approximately 10m from

				granodiorite outcrop, sample is weakly oxidized
18	500485	5411216		15cm depth, well oxidized sand/silt till, <5% pebbles, sample is near the centre of lower land
19	500490	5411208		10cm depth, well oxidized silt/sand till near the south edge of low land and 10m from outcrop of granodiorite
20	500479	5411216		15cm depth, sample of sandy till with 5% cobbles of greenstone, moderately oxidized, sample is located down slope from samples 17, 18, and 19.
21	501976	5411202		20cm sample depth in poorly drained area on flat area 10m west of granodiorite outcrop, sample is of sandy till, grey matrix, cobbles of greenstone and felsic intrusive form 50% of till
22	501992	5411215		25cm depth in poorly drained area along a gentle down slope from 21, sample is of dark brown, weakly oxidized sand with only few pebbles in the hole, small pebbles of intrusive and greenstone
23	500202	5411227		35cm depth in boulder till containing 50% cobbles on greenstone and less felsic intrusive, sample is of light brown-grey weakly oxidized sand
24	500199	5411247		50cm depth in flat poorly drained area, sample of black organic rich soil and sand below 40cm of black organic material
25	502001	5411267		50cm depth of sample in flat poorly drained area, sample of grey-brown sand from a boulder till containing 60% cobbles of greenstone and felsic intrusive, sample contains blobs of organic rich soil
26	502018	5411298		25cm depth in flat wet area with outcrop to east, sample is of lightly oxidized sand and silt
27	502023	5411319		15cm depth on edge of lowland on south side of outcrop ridge, sample from a sandy till with 40% cobbles of mixed greenstone and felsic intrusive, sample is of dark brown sand, north of sample 27 area rises to a massive granodiorite ridge
28	standard			For Soil only GS-P5 0.525+/-0.042 g/t

\*Note: UTM NAD 83 Zone 16

## **APPENDIX D**

### **Empress 2014 Soil and MMI Sample Assay Certificates**

Monday, June 30, 2014

## Preliminary Analysis

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 Fax#: (705) 522-8856  
 Email: koziol@altoventures.com

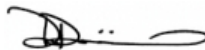
 Date Received: 06/10/2014  
 Date Completed: 06/30/2014  
 Job #: 201441192  
 Reference:  
 Sample #: 28

Acc #	Client ID	Au g/t (ppm)
92259	1B	<0.005
92260	2B	<0.005
92261	3B	0.006
92262	4B	<0.005
92263	5B	<0.005
92264	6B	<0.005
92265	7B	<0.005
92266	8B	0.005
92267	9B	<0.005
92268	10B	<0.005
92269	10B Dup	<0.005
92270	11B	<0.005
92271	12B	<0.005
92272	13B	0.006
92273	14B	<0.005
92274	15B	<0.005
92275	16B	<0.005
92276	17B	<0.005
92277	18B	<0.005
92278	19B	<0.005
92279	20B	0.009
92280	20B Dup	<0.005
92281	21B	0.005
92282	22B	<0.005
92283	23B	<0.005

APPLIED SCOPES: ALFA1, ALAR1, ALS1

**Validated By:**


Andrew Oleski, Instrumentation Manager

**Certified By:**


Derek Demianiuk H.Bsc., Laboratory Manager

**Authorized By:**

No Signature

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Monday, June 30, 2014

**Preliminary Analysis**Alto Ventures Ltd.  
Unit #7, 1351D Kelly Lake Rd.  
Sudbury, ON, CAN  
P3E5P5  
Ph#: (705) 522-6372  
Fax#: (705) 522-8856  
Email: koziol@altoventures.comDate Received: 06/10/2014  
Date Completed: 06/30/2014  
Job #: 201441192  
Reference:  
Sample #: 28

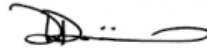
---

Acc #	Client ID	Au g/t (ppm)
92284	24B	<0.005
92285	25B	0.027
92286	26B	<0.005
92287	27B	<0.005
92288	28B	0.508

APPLIED SCOPES: ALFA1, ALAR1, ALS1

**Validated By:**

Andrew Oleski, Instrumentation Manager

**Certified By:**

Derek Demianiuk H.Bsc., Laboratory Manager

**Authorized By:**  
No Signature**The results included on this report relate only to the items tested.****The Certificate of Analysis should not be reproduced except in full, without the written approval of the laboratory.**

Monday, June 30, 2014

## Preliminary Analysis

 Alto Ventures Ltd.  
 Unit #7, 1351D Kelly Lake Rd.  
 Sudbury, ON, CAN  
 P3E5P5  
 Ph#: (705) 522-6372  
 Fax#: (705) 522-8856  
 Email: koziol@altoventures.com

 Date Received: 06/10/2014  
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 Job #: 201441192  
 Reference:  
 Sample #: 28

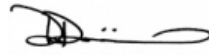
**Control Standards**

QC Type	QC Performance (ppm)	Mean (ppm)	Std Dev (ppm)
GS26	0.829	0.804	0.043
GS26	0.829	0.804	0.043
GS26	0.786	0.804	0.043
GS26	0.850	0.804	0.043
GS26	0.862	0.804	0.043
GS26	0.785	0.804	0.043
O60C	2.480	2.470	0.080
GS26	0.767	0.804	0.043
GS26	0.771	0.804	0.043

APPLIED SCOPES: ALFA1, ALAR1, ALS1

**Validated By:**


Andrew Oleski, Instrumentation Manager

**Certified By:**


Derek Demianiuk H.Bsc., Laboratory Manager

**Authorized By:**

No Signature

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Monday, July 21, 2014

### Final Certificate

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 P3E5P5  
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Date Received: 06/10/2014  
 Date Completed: 06/30/2014  
 Job #: 201441192  
 Reference:  
 Sample #: 28

Acc #	Client ID	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Si %	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
92259	1B	<1	0.96	<2	64	29	<2	<1	0.28	<4	6	28	9	1.46	0.04	11	0.29	101	<1	0.02	17	450	3	<5	<5	0.01	<10	11	933	<2	33	<10	4	35
92260	2B	<1	0.66	<2	62	18	<2	<1	0.32	<4	6	28	14	1.11	0.03	8	0.32	138	<1	0.02	18	692	4	5	<5	0.01	<10	10	732	<2	25	<10	6	30
92261	3B	<1	0.76	<2	57	17	<2	<1	0.15	<4	4	19	7	0.87	0.02	10	0.17	<100	<1	0.01	9	278	7	<5	<5	0.02	<10	7	756	<2	21	<10	4	27
92262	4B	<1	1.03	<2	70	16	<2	<1	0.22	<4	4	26	5	1.19	0.04	10	0.23	<100	<1	0.02	10	587	5	<5	<5	0.02	<10	9	831	<2	28	<10	4	18
92263	5B	<1	1.27	<2	60	28	<2	<1	0.18	<4	7	30	7	1.30	0.05	13	0.33	111	<1	0.02	16	340	4	<5	<5	0.04	<10	9	1011	<2	27	<10	4	20
92264	6B	<1	1.46	<2	56	17	<2	<1	0.18	<4	7	28	7	1.51	0.04	11	0.26	110	<1	0.02	15	498	2	<5	<5	0.01	<10	7	922	<2	31	<10	4	19
92265	7B	<1	1.25	<2	46	36	<2	<1	0.30	<4	10	26	14	1.49	0.04	10	0.34	135	<1	0.02	24	410	2	<5	<5	0.01	<10	9	1190	<2	38	<10	5	21
92266	8B	<1	0.98	<2	71	33	<2	5	0.41	<4	9	30	13	1.55	0.04	13	0.38	130	<1	0.03	24	571	<1	<5	5	<0.01	<10	13	1028	<2	35	<10	6	19
92267	9B	<1	1.52	<2	64	47	<2	<1	0.31	<4	9	27	7	1.25	0.05	15	0.26	111	<1	0.02	22	342	5	<5	<5	0.01	<10	10	850	<2	26	<10	6	18
92268	10B	<1	0.78	<2	65	23	<2	<1	0.39	<4	8	31	13	1.48	0.04	11	0.43	174	<1	0.02	20	690	2	<5	<5	<0.01	<10	13	891	<2	34	<10	5	21
92269D	10B	<1	0.78	<2	63	23	<2	20	0.39	<4	8	31	13	1.50	0.04	11	0.43	175	<1	0.02	20	716	3	<5	<5	<0.01	10	13	889	<2	34	<10	5	21
92270	11B	<1	0.90	<2	48	28	<2	<1	0.33	<4	8	26	11	1.29	0.04	11	0.34	122	<1	0.02	17	417	2	<5	<5	<0.01	<10	10	923	<2	31	<10	6	20
92271	12B	<1	1.02	<2	62	41	<2	<1	0.51	<4	12	36	13	1.96	0.07	17	0.54	220	<1	0.03	25	620	2	<5	<5	<0.01	<10	14	1180	<2	47	<10	6	26
92272	13B	<1	1.05	<2	40	65	<2	22	0.41	<4	9	31	13	1.70	0.05	19	0.41	162	<1	0.02	23	396	3	<5	<5	<0.01	<10	14	1047	<2	43	<10	6	30
92273	14B	<1	1.60	<2	51	38	<2	<1	0.30	<4	12	36	19	1.81	0.04	13	0.38	137	<1	0.02	25	597	<1	<5	<5	<0.01	<10	11	1066	<2	35	<10	7	25
92274	15B	<1	1.09	<2	44	64	<2	<1	1.08	<4	6	29	23	0.87	0.04	14	0.33	<100	<1	0.02	19	816	1	<5	<5	<0.01	<10	23	609	<2	24	<10	11	55
92275	16B	<1	0.23	<2	82	14	<2	5	0.05	<4	3	8	4	0.31	0.02	<1	0.04	<100	<1	0.02	2	<100	7	<5	<5	0.02	<10	5	1076	<2	26	<10	<2	5
92276	17B	<1	0.89	<2	37	25	<2	1	0.24	<4	6	25	9	1.17	0.04	11	0.29	212	<1	0.02	15	622	<1	<5	5	<0.01	<10	10	764	<2	25	<10	5	25
92277	18B	<1	0.71	<2	33	16	<2	<1	0.28	<4	5	26	15	1.10	0.03	8	0.31	122	<1	0.02	15	701	5	<5	<5	<0.01	<10	10	799	<2	25	<10	6	11
92278	19B	<1	1.41	<2	37	21	<2	<1	0.20	<4	7	28	8	1.99	0.02	10	0.20	<100	<1	0.02	13	534	<1	<5	<5	<0.01	<10	9	966	<2	39	<10	5	10

PROCEDURE CODES: ALFA1, ALAR1, ALS1

Certified By:  Jason Moore, VP Operations, Assayer

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Monday, July 21, 2014

### Final Certificate

 Alto Ventures Ltd.  
 Unit #7, 1351D Kelly Lake Rd.  
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 P3E5P5  
 Ph#: (705) 522-6372  
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 Job #: 201441192  
 Reference:  
 Sample #: 28

Acc #	Client ID	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Si %	Sn ppm	Sr ppm	Ti ppm	Tl ppm	V ppm	W ppm	Y ppm	Zn ppm
92279	20B	<1	0.90	<2	33	15	<2	<1	0.25	<4	4	22	6	1.22	0.03	9	0.23	<100	<1	0.02	11	671	3	<5	<5	<0.01	<10	10	828	<2	29	<10	5	15
92280D	20B	<1	0.84	<2	21	14	<2	<1	0.23	<4	4	20	6	1.13	0.03	8	0.21	<100	<1	0.01	10	615	3	<5	<5	<0.01	<10	8	776	<2	27	<10	5	14
92281	21B	<1	0.79	<2	32	23	<2	<1	0.15	<4	6	25	8	1.08	0.05	12	0.32	<100	<1	0.02	11	240	7	<5	<5	<0.01	<10	10	1352	<2	38	<10	3	44
92282	22B	<1	0.60	<2	39	23	<2	<1	0.29	<4	5	21	5	1.29	0.04	9	0.23	121	<1	0.02	9	650	5	<5	<5	<0.01	<10	12	699	<2	30	<10	5	29
92283	23B	<1	2.43	<2	33	138	<2	<1	0.48	<4	13	43	81	3.06	0.09	34	0.49	303	<1	0.02	31	661	3	<5	<5	<0.01	<10	29	1281	<2	45	<10	39	33
92284	24B	<1	1.62	<2	19	72	<2	<1	0.40	<4	7	31	22	1.52	0.05	14	0.32	117	<1	0.02	17	1167	3	<5	<5	<0.01	<10	20	512	<2	27	<10	12	25
92285	25B	<1	1.06	<2	20	52	<2	<1	0.29	<4	7	31	17	1.33	0.05	14	0.34	134	<1	0.02	15	1059	7	<5	<5	<0.01	<10	16	713	<2	34	<10	4	35
92286	26B	<1	1.31	3	38	55	<2	<1	0.40	<4	12	33	8	1.86	0.06	19	0.46	243	<1	0.02	21	820	<1	<5	<5	<0.01	<10	14	1069	<2	39	<10	8	57
92287	27B	<1	1.02	<2	28	39	<2	2	0.31	<4	8	28	18	1.63	0.04	17	0.35	206	<1	0.02	16	619	5	<5	<5	<0.01	<10	13	870	<2	37	<10	6	35
92288	28B	<1	0.36	242	21	30	<2	4	0.19	<4	19	855	45	2.95	0.25	2	0.09	219	13	0.02	650	359	4	22	8	<0.01	<10	6	<100	8	23	<10	5	39

PROCEDURE CODES: ALFA1, ALAR1, ALS1

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