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ALTO VENTURES LTD. MINER LAKE AND GREENOAKS PROPERTIES

REPORT ON THE 2016 SURFACE GLACIAL TILL GEOCHEMISTRY PROGRAM

PIFHER AND ELMHIRST TOWNSHIPS THUNDER BAY MINING DISTRICT ONTARIO NTS 42E/13

Sudbury, Ontario September 23, 2016 Mike Koziol, P. Geo.

SUMMARY

A glacial till sampling program was completed on the Alto Ventures Miner Lake and Greenoaks properties in June and July, 2016. Both properties are located approximately 45km northeast of Beardmore, Ontario and are easily accessible by gravel road and ATV trails. The Miner Lake Property consists of 26 contiguous staked mineral claims (208 units) that cover approximately 3,328 ha. The Greenoaks Property is made up of 15 patented mineral claims and licenses of occupation that cover 408.8 ha. The two properties are contiguous.

A total of 34 till samples were processed for gold grain content at Overburden Drilling Management in Ottawa. Gold grains were recovered from 33 of the 34 samples processed and 25 of these samples contained one or more pristine gold grains as shown on Map 2. The samples with the most pristine gold grains group roughly into three separate areas. The largest numbers of samples with the pristine gold occurrences and down-ice from them. A second cluster is centered within claim 4265763 and appears to also be trending northeast and parallel to the larger trend. There has been little exploration work in this area. A third, smaller cluster defined by samples ML064 to 066 occurs in the southwest corner within claims 4222543 and 4222544. This trend is still poorly defined due to lack of sampling in these two claims and in the new claims staked by Alto Ventures in July, 2016.

Based on the encouraging results from this program, prospecting is recommended along the northeast trend of the gold-in-till anomalies down ice from the currently known gold occurrences. Forestry operations that started during the summer of 2016 will provide new access and bedrock exposures along parts of this trend. Prospecting is also required in the area of the gold-in-till anomalies in claim 4265763.

Additional till sampling is recommended in the southwest corner of the property, following up the results from samples ML064 to 066 and into the new claims staked in July, 2016.

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1.0 INTRODUCTION

This report describes the 2016 summer surface glacial till geochemistry program completed by Alto Ventures Ltd. on its 100% owned Miner Lake and Greenoaks properties. The sample collection was carried out in the period between June 20 and July 7, 2016.

1.1 Property

The Miner Lake property includes 26 contiguous staked mining claims (208 units) that cover 3,328 ha. These claims are located in the Pifher Township, in the Thunder Bay Mining District, and are covered by NTS map sheet 42E/13, UTM NAD83 Zone 16 (see in Figure 1). The Greenoaks property consists of 15 contiguous patented mineral claims and licences of occupation covering 408.8 ha. It adjoins the Miner Lake property to the east and lies in the Pifher and Elmhirst townships. The claims making up the two properties are listed in Table 1 and illustrated in Figure 2.



Figure 1 Miner Lake and Greenoaks Properties Location Map

Claim	Township	Size (units)	Record Date	Property
1105654	Difhor	512c (units)	1004 00 12	Miner Lake
1215779	Difhor	0	1994-09-12	Miner Lake
1215770	Difhor	3	1998-03-18	Miner Lake
121579	Difhor	0	1998-03-18	Miner Lake
1213780	Difhor	9	1998-03-18	Miner Lake
1224927	Difhor	4	1990-11-27	Miner Lake
1224920	Difhor	15	2006 00 27	Miner Lake
4211013	Difher	6	2000-09-27	Miner Lake
4222470	Difher	12	2011-00-10	Miner Lake
4222479	Differ	12	2010-10-01	Miner Lake
4222480	Differ	10	2011-08-10	Miner Lake
4222545	Pilner	12	2011-06-15	Miner Lake
4222544	Pither	4	2011-06-15	Miner Lake
4225204	Pilner	15	2011-08-10	Miner Lake
4265761	Pifner	9	2011-09-12	Minor Lake
4265762	Pither	5	2011-09-12	Miner Lake
4265763	Pither	9	2011-09-12	Miner Lake
4265765	Pifher	16	2012-06-13	Miner Lake
4271510	Pifher	9	2012-04-27	Miner Lake
4271511	Pifher	8	2012-04-27	Miner Lake
4271513	Pifher	4	2016-06-30	Miner Lake
4271514	Pifher	8	2016-06-30	Miner Lake
4271515	Pifher	6	2016-06-30	Miner Lake
4271516	Pifher	8	2016-06-30	Miner Lake
4271517	Pifher	15	2016-07-13	Miner Lake
4278845	Pifher	10	2016-07-13	Miner Lake
TB34818	Pifher	25.0 ha		Greenoaks
TB34819	Pifher	17.9 ha		Greenoaks
TB34820	Pifher	28.2 ha		Greenoaks
TB35563	Pifher	35.9 ha		Greenoaks
TB35564	Pifher	29.6 ha		Greenoaks
TB35565	Pifher	24.7 ha		Greenoaks
TB35566	Pifher	24.1 ha		Greenoaks
TB35567	Pifher	27.9 ha		Greenoaks
TB35568	Elmhirst	26.3 ha		Greenoaks
TB35571	Elmhirst	22.9 ha		Greenoaks
TB35572	Elmhirst	23.1 ha		Greenoaks
TB35573	Elmhirst	31.7 ha		Greenoaks
TB35574	Elmhirst	18.1 ha		Greenoaks

Table 1: List of claims in the Miner Lake and Greenoaks properties

TB38746	Elmhirst	42.5 ha	Greenoaks
TB38747	Elmhirst	30.9 ha	Greenoaks

The work described in this report was completed on claims 1195654, 4211615, 4222480, 4222543, 4222544, 4225204, 4265763, 4265765, 4271510, 4271511, TB34818, and TB35563.

1.2 Location, Access, Infrastructure and Topography

The properties are located approximately 45 Km northeast from the town of Beardmore, around and including Miner Lake. Access to the Miner Lake claims is by the Trans-Canada Highway Number 11 to Nezah then by the former Ontario Tertiary Highway 801 approximately twenty-two kilometres east from Beardmore. The property is easily accessed by following Highway 801 for approximately twenty-three kilometres northwest. Highway 801 also passes through the southwest corner of the Greenoaks property.

Old forestry roads provide good access to most of the property and several can be driven by 4-wheel drive truck or ATV vehicles, although some brush clearing is required.

Infrastructure in the Beardmore-Geraldton-Longlac area includes general and skilled labour, heavy equipment, local accommodations, paved roads and easy access to the electrical grid. More specialized services can be obtained from the larger communities of Thunder Bay, Timmins and Sault Ste. Marie.

The topography in the area is characterized by a series of northeast trending bedrock ridges up to twentyfive metres high that are separated by lakes and creeks, swamps, ponds and muskeg-filled valleys. Large areas of the Miner Lake property are covered by sand-dominated overburden ranging from less than one metre to a few tens of metres. Parts of the current work areas were clear-cut logged in the past ten years. Forestry operations including clear cut logging have resumed in June 2016 over parts of the property with matures tree stands. Bedrock exposure is limited to outcrop knobs and ridges and ranges between locally abundant to areas where bedrock is accessible only through trenching.



Figure 2 Miner Lake and Greenoaks Claim Map

2.0 GEOLOGY

The geology of the Miner Lake property and surrounding area has been described in detail as part of the extensive exploration program completed by Alto Ventures in 2011. The following is an expert from the report completed by Desjardins et al, 2012:

"The property lies east of Lake Nipigon within the Pifher Township. It is located within the Eastern Wabigoon Subprovince of the Superior Province (Blackburn et al., 1991), within the Elmhirst-Castlewood-Koltz greenstone belt (ECKGB) north of the Beardmore-Geraldton greenstone belt. Previously, this greenstone belt has been referred to as the Tashota-Onaman metavolcanic belt (Kresz and Zayachivsky, 1989). Geochemically and structurally, the ECKGB is segregated from the Beardmore-Geraldton gold belt by the Paint Lake Fault (Kresz and Zayachivsky, 1989; Blackburn et al., 1991). The pronounced lithologic asymmetry and change in structural style on either side of the Paint Lake Fault suggests the Beardmore-Geraldton greenstone belt and the ECKGB have different structural histories. The Beardmore-Geraldton belt is structurally dominated by east-trending ductile-brittle shear zones, occurring at the boundaries of north-facing lithostratigraphic units; while the ECKGB is characterized by large monoclinal folds intruded by granitic rocks and are south-facing in its southern part (Kresz and Zayachivsky, 1989).

The ECKGB has not been subdivided stratigraphically and is dominated by proximal felsic to intermediate volcanic rocks, mafic volcanic rocks and related gabbro intrusions. These rocks are intruded by pre-tectonic granitic rocks of felsic to intermediate composition. Overall, the supracrustal rocks have undergone prograde metamorphism of low-grade greenschist type (Kresz and Zayachivsky, 1989). Structurally, large-scale tonalite to granodiorite plutons intruded the metavolcanic assemblage during the main tectonic event producing large folds and a pronounced syntectonic strain and metamorphic aureole (Kresz and Zayachivsky, 1989).

The rock-types observed on the Miner Lake properties are mainly mafic to intermediate (with minor felsic) intrusive rocks, occurring as differing phases of diorite, quartz diorite, tonalite to possibly granodiorite, and feldspar porphyry, a distinctive hydrothermal breccia and minor intermediate to felsic volcanic rocks. The intrusive rocks occur mainly as an ovoid body located in the centre of the Miner Lake property intruding the felsic pyroclastic to fragmental volcanic rocks occurring along the margins of the intrusive body. The hydrothermal breccia overprints the different phases of the intrusion with the exception of the feldspar porphyry. Later pyroxenite and diabase dykes cut across the intrusion."



Figure 3 Alto Ventures Miner Lake and Greenoaks properties overlain on area geology modified after the Ontario Geological Survey Map 2537 of the Pifher Township (Kresz et al., 1989).

3.0 PREVIOUS WORK

Exploration for gold in the Pifher Township dates back to the 1930's and included prospecting, trenching, airborne and ground geophysics, limited geological mapping and diamond drilling. A detailed history of exploration work completed in the Pifher Township and on the Miner Lake property has been written up by Desjardins et al (2012), in the report describing the work completed by Alto Ventures Ltd in 2011.

The most comprehensive work to date on the Miner Lake property has targeted gold and was completed by Alto Ventures in 2010 and 2011 on claims 1195654, 1215778, 1215779 and 1215780. Figure 4 illustrates the diamond drill hole locations and main gold occurrences in the core of the Miner Lake Property.



Figure 4 Miner Lake property geology and diamond drill hole locations; figure also highlights areas of Au>0.1 g/t in bedrock grab samples

In 2012 Alto has completed a prospecting program over the western parts of the Miner Lake property focused on areas mapped as mafic intrusive rocks by Kresz et al., (1989). During the program, Alto analysed 70 grab rock samples for standard Au+ICP package. In addition, the 70 samples were analysed for Pt. and Pd. Results from this initial program produced several weak anomalies (two to three times above detection levels) in gabbro and diorite (Koziol, 2013).

In 2015 Alto has completed a glacial till sampling program to determine if glacial till sampling is an effective exploration tool to locate gold anomalies and help to hone in on possible bedrock sources of the gold-in-till anomalies. A total of 38 till samples were processed and several gold-in-till anomalies were detected (Koziol, 2015).

Previous work at Greenoaks dates back to the 1940's when four gold bearing quartz veins were discovered over 400 m strike length. In 1982, 1,224 tons of ore was mined from the No 1 Zone and of this, 1,171 tons were milled at the Pan-Empire Mill in Beardmore returning an average grade of 0.18 oz/ton (6.1 g/t) gold. Northern Concentrators milled the remaining 53 tons in Thunder Bay and returned an average grade of 0.50 oz/ton (17.1 g/t) gold.

Alto Ventures acquired the Greenoaks Property in 2004 and in 2007 drilled 331 m in five holes, intersecting 12.5 g/t Au across 0.4 m in hole GRN07-01 and 7.08 g/t Au across 0.8 m in GRN07-04. In 2008 Alto completed surface stripping, mapping and sampling programs exposing narrow quartz-pyrite veins with anomalous gold including 34.16 g/t Au across 1.0 m wide saw-cut channel sample (Tremblay et al., 2009)

4.0 MINERALIZATION

Kresz and Zayachivsky (1989) identified four types of gold mineralization in the Pifher Township, all associated with ductile shear zones and brittle fractures. The four types of mineralization include: 1) quartz veins in shear zones; 2) quartz veins in tension gashes; 3) shear zones with disseminated sulphide mineralization; and 4) shear zones with massive sulphide lenses and veins. However, within the Miner Lake property, gold also occurs with hydrothermal breccia zones formed in the quartz diorite intrusive as well as mineralized shear zones near the edges of the intrusive (Desjardins et al., 2012).

Gold at Miner Lake is usually associated with local sulphide minerals including pyrite, pyrrhotite, chalcopyrite, and sphalerite. Locally, the occurrences of pyrite and pyrrhotite vary from disseminated blebs to semi-massive to massive veins associated with strong shearing. Chalcopyrite mainly occurs as disseminated blebs and discontinuous stringers/veins with malachite staining along fractures. Sphalerite is limited to only a few locations and occurs as disseminated blebs and wisps within the sheared rocks. The presence of sulphides is the main indicator of favourable settings for gold on the property but it does not necessarily imply that anomalous gold values will always be obtained. Some of the "gold-bearing breccia" within the quartz diorite contain only trace amounts of sulphide minerals but are anomalous (>100 ppb) in gold.

There are several quartz veins that contain pyrite, chalcopyrite and pyrrhotite and these carry spotty gold and are not considered to be the main targets at Miner Lake. On the adjacent Greenoaks property, approximately three kilometres to the south-east, the past-producing Greenoaks Mine produced a total of 2,395 tons with an average grade of 0.182 oz/t Au (5.66 g/t), 0.13 oz/t Ag (4.04 g/t) and 0.254% Cu. The gold mineralization in the Greenoaks Mine occurred in quartz veins hosted in metavolcanics. The Crooked Green Creek Mine, approximately 6 km to the south of Miner Lake produced a total of 1,455 tons averaging 0.323 oz/t Au (10.05 g/t), also from quartz veins.

Copper-nickel sulphide mineralization was discovered to the northeast of Miner Lake. The Jacobus deposit has reported historical resources of 938,803 tons containing 0.43% Cu and 0.40% Ni. The mineralization is hosted within a differentiated, layered gabbro sill intruding massive, porphyritic flows of dacite to rhyodacite composition. The mineralization consists of disseminated sulphides of pyrrhotite, chalcopyrite and pentlandite forming 4% to 6% of the gabbro (Baker et al., 1996).

5.0 ALTO'S 2016 SURFACE GLACIAL TILL GEOCHEMISTRY PROGRAM

A surface glacial till geochemistry program was carried out on Alto Ventures Ltd Miner Lake project by Alto Ventures geologist Mike Koziol, P. Geo., and prospectors Kyle Cote and Richard Cote from June 20 to July 7, 2016. The purpose of the 2016 till geochemistry program was to (1) detail sample near the 2015 sample ML015 where a high number of pristine gold grains were recovered, and (2) sample the more remote portions of the claims to identify new gold-in-till anomalies.

The surficial geology in the Miner Lake area was mapped by Kristjansson et al., (1990) as Bedrock-Drift Complex with minor to moderate bedrock exposures occurring as bedrock knobs. The dominant ice flow direction in this area is 240° to 260° and the most abundant glacial deposits are sand and sandy gravel of glacio-fluvial origin. Till is present but is localized to proximity to outcrop areas and the till cover is generally thin except in areas filling topographic lows. In many locations the till is covered by thin layers of sand. During the 2016 program, many of the sample pits had to be dug to below the sand cover to reach the underlying till, generally several tens of centimetres up to a maximum of one metre.

5.1 Logistics and Sampling Procedures

Alto Ventures Ltd. collected a total of 34 till samples in 2016. The sampling was done with the support of a four wheel drive truck near roads, all-terrain vehicles and on-foot hikes into the bush for sites further away from the roads and trails. Sampling sites were selected to provide a cross section across the centre of the property down-ice from the currently known gold showings at Miner Lake and Greenoaks properties. Till sample locations are plotted on the "Miner Lake Propery 2015 & 2016 Till Sample Locations" map included at the end of this report and the UTM coordinates with corresponding sample numbers are included in Appendix A.

Till sampling was completed by a two person team consisting of a geologist based out of Cedar Shores Lodge in Nezah and a helper/prospector from Beardmore. Potential sample sites were predetermined from maps and scouted in the field for suitable material for sampling. Once a site with suitable till was found, the crew removed the organic layer and dug out material by hand shovel. The till was then shaken through a 6 mm square mesh screen at each site into a 5 gallon bucket to remove coarse pebbles and organic debris. The objective was to collect a nominal 15 kg field sample from each site but individual samples weights ranged from minimum 12.5 kg to maximum 20.9 kg. The screened samples were then transferred into numbered plastic sample bags. Depths of sample pits ranged from 0.3 m to 1.5 m (along road cut). In several samples, the pits were dug through 0.2 m to 0.8 m of sand before a till was uncovered and sampled.

A flag with the sample number was left tied to a nearby bush to mark the sample location as the deeper pits were backfilled. The sample was described on a paper sheet with a GPS waypoint recorded for each site. During the screening process, a number, ranging from 15 to 50 of random pebbles were collect from each sample site. These were washed in camp and examined later to gather information on the pebble lithologies, shapes (roundness and angularity) and intensity of clay coatings of the pebbles. This information is useful to help determine if the till is sampling material from local or distal sources.

The screened till samples were shipped for processing to Overburden Drilling Management Ltd (ODM) in Ottawa by Manitoulin Transport. The samples were processed as described in the flow chart included in Appendix B to determine the number of gold grains in each till sample and classify the grains (pristine, modified, reshaped) as to their relative distance of transport. Selected samples were also processed for kimberlite indicator minerals (KIMs). Results for the gold grains are discussed below. Results for the KIM processing will be reported in a separate report after full analyses are completed.

5.2 Results

Gold grains were recovered from 33 of the 34 samples processed in 2016, ranging in counts from 1 gold grain to a maximum of 108 gold grains, when normalized to 10 kg Table Feed, including 25 samples containing one or more gold grains classified as "Pristine". Table 2 provides a summary of the gold grains in each till sample processed from the 2015 and 2016 Miner Lake and Greenoaks program. The gold grain results are plotted on the "Miner Lake Till Sampling 2015 & 2016 Normalized Total Gold Grain Results" map included at the end of this report. The ODM sample processing certificates along with the sample processing flow-chart are included in Appendix B.

A plot of the combined 2015 and 2016 gold grain-in-till anomalies identify a dominant northeast trend with best results near the centre of the property in the general areas of the known gold occurrences (see Map 2). A possible second trend has been identified in claimed 4265769 in the southeast corner of the property. This trend has been firmed up with sample ML048 which is a resample of the 2015 sample ML015 confirming the highly anomalous gold grain counts obtained in ML015 and other samples in the area (see Table 2 and Appendix B). Outcrop in the immediate vicinity of these high gold-in-till anomalies is limited and there are no records of significant exploration work up ice. A third area of interest is in the southwest corner of claim 4222544 where anomalous gold grain counts with high proportion of pristine grains were recovered from samples ML065 and ML066.

 Table 2 Summary of Gold Grains in Processed Till Samples from the 2015 and 2016 Miner Lake

 and Greenoaks Programs, Raw Count and Normalized to 10 kg Table Feed

2015 Samples					
					Gold Grains
Sample			Table Feed	Gold Grains	(Normalized
#	Easting	Northing	(kg)	(Raw count)	to 10 kg)
ML001	443068	5518092	18.8	4	2
ML002	442965	5518108	12.4	0	0
ML003	442683	5518070	15.4	0	0
ML004	442294	5518316	14.6	3	2
ML005	442036	5518289	14.7	4	3
ML006	441792	5518373	13.4	42	31
ML007	441565	5518458	13.3	108	81
ML008	441296	5518663	12.3	6	5
ML009	441640	5518969	18.6	35	19
ML010	441093	5519194	14.7	22	15
ML011	441232	5519463	14.8	3	2
ML012	441211	5519735	14.0	11	9
ML013	443482	5520800	14.6	1	1
ML014	443455	5515275	13.3	1	1
ML015	443386	5515737	12.6	578	458
ML016	443615	5515874	12.3	6	5
ML017	443846	5516199	14.4	2	1
ML018	443979	5516664	10.6	6	6
ML019	444066	5517073	15.5	44	28
ML020	444335	5517275	15.5	44	28
ML021	444479	5517155	12.5	8	6
ML022	444692	5516953	13.5	33	24
ML023	444317	5517616	13.6	5	4
ML024	444131	5517852	13.2	8	6
ML025	443941	5517972	13.1	7	5
ML026	443709	5518352	18.6	7	4
ML027	443601	5518094	14.1	10	7
ML028	442826	5518094	16.6	10	6
MLO29	442737	5519006	14.5	16	11
ML030	442747	5519131	15.3	16	10
ML031	442681	5519195	12.2	25	20
ML032	442506	5519082	14.5	35	24
ML033	442644	5518646	16.3	34	21
ML034	442440	5518515	14.9	296	199
ML035	442193	5518593	12.8	5	4
ML036	441984	5518655	14.9	256	172

ML037	441916	5518529	13.6	140	103
ML038	441334	5518241	15.6	21	13
2016					
Samples					
MLO39	438985	5519965	16.6	3	2
ML040	439901	5519220	17.6	4	2
ML041	440096	5519465	13.1	4	3
ML042	440381	5519571	14.2	0	0
ML043	440509	5519088	13.7	6	4
ML044	440578	5518560	13.6	24	18
ML045	440847	5518940	12.2	27	22
ML046	444109	5520152	16.3	20	12
ML047	443706	5520418	12.9	32	25
ML048	443386	5515737	11.5	124	108
ML049	443352	5515772	12.2	4	3
ML050	443382	5515809	11.9	8	7
ML051	443455	5515813	13.0	1	1
ML052	443507	5515754	13.8	34	25
ML053	443417	5515696	12.0	14	12
ML054	443313	5515691	12.1	2	2
ML055	443411	5515468	13.1	11	8
ML056	443318	5515436	14.4	9	6
ML057	442737	5518918	14.3	57	40
ML058	442992	5519318	14.5	3	2
ML059	443251	5518888	12.2	11	9
ML060	444926	5517636	11.9	9	8
ML061	444708	5517642	11.8	11	9
ML062	444892	5517256	14.3	11	8
ML063	438254	5518021	12.2	12	10
ML064	437865	5516365	15.3	24	16
ML065	438488	5516049	13.4	24	18
ML066	438161	5516260	16.5	19	12
ML067	442130	5516590	12.8	61	48
ML068	442430	5516882	11.3	11	10
ML069	442548	5517462	17.2	6	3
ML070	442328	5517967	13.0	8	6
ML071	441879	5517682	16.1	12	7
ML072	441892	5517931	14.6	44	30

6.0 CONCLUSIONS AND RECOMMENDATIONS

A program of surface glacial till sampling was completed on parts of the Miner Lake and Greenoaks properties in June and July, 2016. A total of 34 till samples were processed for gold grain content at Overburden Drilling Management in Ottawa. The gold grains were classified as to their shapes using the nomenclature classification of reshaped, modified and pristine to represent respective distance of transport of the gold grains; with pristine grains representing the shortest distance transported.

A total of 34 till samples were processed for gold grain content at Overburden Drilling Management in Ottawa. Gold grains were recovered from 33 of the 34 samples processed and 25 of these samples contained one or more pristine gold grains as shown on Map 2. The samples with the most pristine gold grains group roughly into three separate areas. The largest numbers of samples with the pristine gold grains occur along a northeast trend line that includes the previously sampled surface gold occurrences and down-ice from them. A second cluster is centered within claim 4265763 and appears to also be trending northeast and parallel to the larger trend. There has been little exploration work in this area. A third, smaller cluster defined by samples ML064 to 066 occurs in the southwest corner within claims 4222543 and 4222544. This trend is still poorly defined due to lack of sampling in these two claims and in the new claims staked by Alto Ventures in July, 2016.

Based on the encouraging results from this program, prospecting is recommended along the northeast trend of the gold-in-till anomalies down ice from the currently known gold occurrences. Forestry operations that started during the summer of 2016 will provide new access and bedrock exposures along parts of this trend. Prospecting is also required in the area of the gold-in-till anomalies in claim 4265763.

Additional till sampling is recommended in the southwest corner of the property, following up the results from samples ML064 to 066 and into the new claims staked in July, 2016.

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8.0 STATEMENT OF QUALIFICATION

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 Miner Lake and Greenoaks properties 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 properties 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 23rd day of September, 2016

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

APPENDIX A

TILL SAMPLE LOCATIONS UTM COORDINATES

Miner Lake 2015 and 2016 Till Locations

UTM NAD 83 Zone 16N

average glacial striation Whaleback Trench 245°

Number	Fasting	Northing	Denth (m)
MI 001	1/13068	5518092	0.6
MI 002	442965	5518108	0.0
MI 003	442683	5518070	0.7
MI 004	442294	5518316	0.7
MI 005	442036	5518289	0.0
MI 006	441792	5518373	0.1
MI 007	441565	5518458	0.5
ML008	441296	5518663	0.6
ML009	441640	5518969	1
ML010	441093	5519194	0.3
ML011	441232	5519463	0.4
ML012	441211	5519735	0.6
ML013	443482	5520800	0.7
ML014	443455	5515275	0.7
ML015	443386	5515737	0.8
ML016	443615	5515874	0.7
ML017	443846	5516199	0.5
ML018	443979	5516664	0.5
ML019	444066	5517073	0.6
ML020	444335	5517275	1
ML021	444479	5517155	0.6
ML022	444692	5516953	0.7
ML023	444317	5517616	0.6
ML024	444131	5517852	0.7
ML025	443941	5517972	0.7
ML026	443709	5518352	1.5
ML027	443601	5518094	0.2
ML028	442826	5518094	1.7
MLO29	442737	5519006	0.2
ML030	442747	5519131	1.1
ML031	442681	5519195	0.5
ML032	442506	5519082	0.9
ML033	442644	5518646	0.3
ML034	442440	5518515	1
ML035	442193	5518593	0.7
ML036	441984	5518655	1
ML037	441916	5518529	0.3
ML038	441334	5518241	0.4

2016 June

ML039	438985	5519965
NS1	439868	5519037

no sample, sand flat

0.5

ML040	439901	5519220	2.1
ML041	440096	5519465	0.7
ML042	440381	5519571	1
ML043	440509	5519088	0.6
ML044	440578	5518560	0.2
ML045	440847	5518940	0.3
ML046	444109	5520152	0.4
ML047	443706	5520418	0.7
ML048	443386	5515737	0.8 Resample ML015
ML049	443352	5515772	0.6
ML050	443382	5515809	0.7
ML051	443455	5515813	0.7
ML052	443507	5515754	0.5
ML053	443417	5515696	0.7
ML054	443313	5515691	0.5
ML055	443411	5515468	0.6
MI 056	443318	5515436	0.7
1112000	443310	5515150	017
NS2	442277	5518480 1.2+	no sample, sand flat
NS2 ML057	442277 442737	5518480 1.2+ 5518918	no sample, sand flat 1.2
NS2 ML057 ML058	442277 442737 442992	5518480 1.2+ 5518918 5519318	no sample, sand flat 1.2 2.1
NS2 ML057 ML058 ML059	442277 442737 442992 443251	5518480 1.2+ 5518918 5519318 5518888	no sample, sand flat 1.2 2.1 0.2
NS2 ML057 ML058 ML059 ML060	442277 442737 442992 443251 444926	5518480 1.2+ 5518918 5519318 5518888 5517636	no sample, sand flat 1.2 2.1 0.2 0.5
NS2 ML057 ML058 ML059 ML060 ML061	442277 442737 442992 443251 444926 444708	5518480 1.2+ 5518918 5519318 5518888 5517636 5517642	no sample, sand flat 1.2 2.1 0.2 0.5 0.6
NS2 ML057 ML058 ML059 ML060 ML061 ML062	442277 442737 442992 443251 444926 444708 444892	5518480 1.2+ 5518918 5519318 5518888 5517636 5517642 5517256	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063	442277 442737 442992 443251 444926 444708 444892 438254	5518480 1.2+ 5518918 5519318 5518888 5517636 5517642 5517256 5518021	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML064	442277 442737 442992 443251 444926 444708 444892 438254 437865	5518480 1.2+ 5518918 5519318 5518888 5517636 5517642 5517256 5518021 5516365	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML064 ML065	442277 442737 442992 443251 444926 444926 444708 444892 438254 437865 438488	5518480 1.2+ 5518918 5519318 5519318 5518888 5517636 5517642 5517256 5518021 5516365 5516049	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML064 ML065 ML066	442277 442737 442992 443251 444926 444708 444892 438254 437865 438488 438161	5518480 1.2+ 5518918 5519318 5519318 5517636 5517642 5517256 5517256 5518021 5516365 5516049 5516260	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML064 ML065 ML066 ML066	442277 442737 442992 443251 444926 444708 444892 438254 438254 437865 438488 438161 442130	5518480 1.2+ 5518918 5519318 5519318 5518888 5517636 5517642 5517256 5517256 5518021 5516365 5516049 5516260 5516290	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML063 ML065 ML066 ML067 ML068	442277 442737 442992 443251 444926 444708 444892 438254 437865 438488 438161 442130 442430	5518480 1.2+ 5518918 5519318 5519318 5517636 5517642 5517256 5517256 5518021 5516365 5516049 5516260 5516590 5516882	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML064 ML065 ML066 ML067 ML068 ML069	442277 442737 442992 443251 444926 444708 444892 438254 437865 438488 438161 442130 442230 442548	5518480 1.2+ 5518918 5519318 5519318 5517636 5517642 5517256 5517256 5518021 5516365 5516049 5516260 5516590 5516882 5517462	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5 0.5 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML063 ML065 ML066 ML067 ML068 ML069 ML070	442277 442737 442992 443251 444926 444708 444892 438254 438254 438488 438161 442130 442230 442548 442328	5518480 1.2+ 5518918 5519318 5519318 5517636 5517642 5517256 5517256 5518021 5516365 5516049 5516260 5516590 5516590 5516882 5517462 5517967	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5 0.5 0.5 0.5 0.5
NS2 ML057 ML058 ML059 ML060 ML061 ML062 ML063 ML063 ML065 ML066 ML066 ML067 ML068 ML069 ML070 ML071	442277 442737 442992 443251 444926 444708 444892 438254 437865 438488 438161 442130 442230 442548 442328 441879	5518480 1.2+ 5518918 5519318 5519318 5517636 5517642 5517256 5517256 5518021 5516365 5516049 5516260 5516260 5516590 5516882 5517462 5517967 5517682	no sample, sand flat 1.2 2.1 0.2 0.5 0.6 0.2 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5

APPENDIX B

ODM TILL SAMPLE CERTIFICATES AND STANDARD FLOW CHART FOR GOLD GRAINS



Laborator	y Data	Report
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Client Information

Alto Ventures Ltd. Unit 7 - 1351 C Kelly Lake Road Sudbury, ON P3E 5P5

kozoil@altoventures.com

Attention: Mr. M. Koziol

Data-File Information

Date:	September 7, 2016
Project name:	Miner Lake
ODM batch number:	7242
Sample numbers:	ML-039 to 058
Data file:	20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016
Number of samples in this report:	34
Number of samples processed to date:	34
Total number of samples in project:	34
Preliminary data: Final data: Revised data:	X

Sample Processing Specifications

- 1. Submitted by client: 12.5 to 20.9 kg till samples.
- 2. One ±300 g archival split taken from each sample.
- 3. All samples panned for gold, PGMs and fine-grained metallic indicator minerals.
- 4. Heavy liquid separation specific gravity: 3.20.
- 5. 0.25-2.0 mm nonferromagnetic heavy mineral fraction from 24 selected samples picked for KIMs.

Notes

Final data including KIM counts of selected 24 samples.

Remy Huneault, P.Geo. President

,

Primary Processing Sample Weights and Descriptions

Client: Alto Ventures Ltd. File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016 Total Number of Samples in this Report: 34 ODM Batch Number(s): 7242

									5	Screen	ing and Shaking Table Sample Descriptions						tions			
							Clast	s (+2.0) mm)		Matrix (-2.0 mm)							1		
		Wei	ight (kg w	/et)		Percentage						Dis	stributi	วก		Co	our	1		
		Archived	Table	+2.0 mm	Table													1		
Sample Number	Bulk Rec'd	Split	Split	Clasts	Feed	Size	V/S	GR	LS	OT	S/U	SD	ST	CY	ORG	SD	CY	L	Class	
ML-039	17.6	0.3	17.3	0.7	16.6	G	40	60	0	0	U	Y	÷	-	N	LOC	LOC		TILL	
ML-040	20.9	0,3	20,6	3.0	17.6	G	60	40	0	0	U	+	Y	-	Ν	LOC	LOC		TILL	
ML-041	14.2	0.3	13.9	0.8	13.1	G	90	10	0	0	ļυ	Y	Y	-	N	oc	oc		TILL	
ML-042	15.1	0.3	14.8	0.6	14.2	G	90	10	0	0	ļυ	+	Y	-	Ν	oc	oc		TILL	
ML-043	15.1	0.3	14.8	1.1	13.7	G	80	20	0	0	U	Y	+	-	Ν	oc	oc		TILL	
MIL-044	15.0	0.3	14.7	1.1	13.6	G	80	20	0	0	U	+	Y	-	Ν	LOC	LOC		TILL	
ML-045	12.8	0.3	12.5	0.3	12.2	G	30	70	0	0	U U	Y	÷	-	Ν	LOC	LOC		TILL	
ML-046	17.5	0.3	17.2	0.9	16.3	G	40	60	0	0	U	÷	Y	-	N	LOC	LOC		TILL	
ML-047	14.3	0.3	14.0	1.1	12.9	G	60	40	0	0	U	+	Y	-	N	oc	oc		TILL	
ML-048	12.5	0.3	12.2	0.7	11.5	G	50	50	0	0	U	+	Y	-	N	LOC	LOC		TILL	
ML-049	13.3	0.3	13.0	0.8	12.2	G	60	40	0	0	U	+	Y	-	Ν	LOC	LOC		TILL	
ML-050	12.7	0.3	12.4	0,5	11.9	G	70	30	0	0	U	+	Y	-	Ν	oc	oc		TILL	
ML-051	13.9	0.3	13.6	0.6	13.0	G	60	40	0	0	U	+	Y	-	Ν	LOC	LOC		TILL	
ML-052	15.6	0.3	15.3	1.5	13.8	G	70	30	0	0	U	+	Y	-	N	LOC	LOC		TILL	
ML-053	12.8	0.3	12.5	0.5	12.0	G	60	40	0	0	U	Y	+	-	N	LOC	LOC		TILL	
ML-054	12.9	0.3	12.6	0.5	12.1	G	60	40	0	0	U U	Y	÷	-	N	LOC	LOC		TILL	
ML-055	14.1	0.3	13.8	0.7	13.1	G	70	30	0	0	U	Y	÷	-	Y	OC	oc		TILL	
ML-056	15.7	0.3	15.4	1.0	14.4	G	60	40	0	0	U	Y	÷	-	Y	LOC	LOC		TILL	
ML-057	16.0	0.3	15.7	1.4	14.3	G	70	30	0	0	U	+	Y	-	N	LOC	LOC		TILL	
ML-058	16.2	0.3	15.9	1.4	14.5	G	70	30	0	0	U	+	Y	-	Ν	OC	oc		TILL	
ML-059	12.8	0.3	12.5	0.3	12.2	G	60	40	0	0	U	Y	+	-	Ν	oc	oc		TILL	
ML-060	12.7	0.3	12.4	0.5	11.9	G	70	30	0	0	U	Y	+	-	Ν	oc	oc		TILL	
ML-061	12.9	0.3	12.6	0.8	11.8	G	60	40	0	0	U	+	Y	-	Y	LOC	LOC		TILL	
ML-062	16.4	0.3	16.1	1,8	14.3	G	80	20	0	0	U	+	Y	-	Ν	BE	BE		TILL	
ML-063	13.6	0.3	13.3	1.1	12.2	G	60	40	0	0	U	Y	+	-	Ν	oc	oc		TILL	
ML-064	16.7	0.3	16.4	1.1	15.3	G	60	40	0	0	υ	+	Y	-	N	LOC	LOC		TILL	
ML-065	14.3	0.3	14.0	0,6	13.4	G	70	30	0	0	υ	Y	+	-	Y	oc	OC		TILL	
ML-066	14.9	0.3	14.6	1.1	13.5	G	80	20	0	0	υ	Y	+	-	Y	oc	OC		TILL	
ML-067	14.1	0.3	13.8	1.0	12.8	G	80	20	0	0	υ	Y	÷	-	Y	OC	00		TILL	
ML-068	12.5	0.3	12.2	0,9	11.3	G	70	30	0	0	U	Y	÷	-	Y	oc	OC		TILL	
ML-069	17.6	0.3	17.3	0.1	17.2	G	70	30	0	0	U	Y	÷	-	Y	oc	OC		TILL	
ML-070	13.8	0.3	13.5	0.5	13.0	G	60	40	0	0	U	Y	+	-	Y	oc	oc	•	TILL	
ML-071	17.7	0.3	17.4	1.3	16.1	G	60	40	0	0	U	+	Y	-	Y	oc	oc		TILL	
ML-072	16.2	0,3	15.9	1.3	14.6	G	70	30	0	0	U	+	Y	-	Ν	LOC	LOC		TILL	

Gold Grain Summary

Client: Alto Ventures Ltd. File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016 Total Number of Samples in this Report: 34

ODM	Batch	Number	(\mathbf{s})	· 724	42
	Daton	TACHINCH	0,		т с.

	Num	ber of Visib	le Gold Gr	rains	Nonmag	Calcul	ated PPB Vis	sible Gold
					HMC			
					Weight			
Sample Number	Total	Reshaped	Modified	Pristine	(g)*	Total	Reshaped	Modified
ML-039	3	2	0	1	66.4	<1	<1	0
ML-040	4	3	0	1	70.4	2	2	0
ML-041	4	1	3	0	52.4	2	1	1
ML-042	0	0	0	0	56.8	0	0	0
ML-043	6	5	1	0	54.8	15	15	<1
ML-044	24	17	4	3	54.4	74	53	22
ML-045	27	13	5	9	48.8	26	22	3
ML-046	20	14	2	4	65.2	68	67	<1
ML-047	32	19	4	9	51.6	102	74	26
ML-048	124	7	36	81	46.0	118	7	50
ML-049	4	4	0	0	48.8	10	10	0
ML-050	8	5	2	1	47.6	5	3	1
ML-051	1	1	0	0	52.0	4	4	0
ML-052	34	22	10	2	55.2	223	217	5
ML-053	14	12	0	2	48.0	45	45	0
ML-054	2	1	1	0	48.4	2	1	1
ML-055	11	9	2	0	52.4	14	12	1
ML-056	9	2	3	4	57.6	61	50	10
ML-057	57	39	5	13	57.2	88	56	11
ML-058	3	3	0	0	58.0	4	4	0
ML-059	11	4	4	3	48.8	6	1	5
ML-060	9	5	2	2	47.6	10	8	2
ML-061	11	3	1	7	47.2	9	2	2
ML-062	11	8	1	2	57.2	11	6	3
ML-063	12	11	0	1	48.8	11	11	0
ML-064	24	23	0	1	61.2	8	8	0
ML-065	24	14	3	7	53.6	17	10	5
ML-066	19	15	2	2	54.0	9	7	1
ML-067	61	17	13	31	51.2	41	10	11
ML-068	11	3	3	5	45.2	4	1	2
ML-069	6	5	1	0	68.8	4	4	<1
ML-070	8	5	0	3	52.0	1734	1734	0
ML-071	12	8	0	4	64.4	11	6	0
ML-072	44	24	9	11	58.4	33	26	5

Detailed Gold Grain Data

Dotaliou Obla Dialit Da
Client: Alto Ventures Ltd.
File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016
Total Number of Samples in this Report: 34
ODM Batch Number(s): 7242

)imen	isions (μm)	Numbe	r of Visible	e Gold Gri	ains	Nonmag HMC	Calculated V.G. Assav	
	Sample							· .		Weight*	in HMC	
	Number	Thick	ness	Width	Length	Reshaped	Modified	Pristine	Total	(g)	(ppb)	Metallic Minerals in Pan Concentrate
	ML-039	3	C	15	15	1		1	2		<1	No sulphides
		5	C	25	25	1		:	1		<1	SEM checks: 3 copper candidates =
									3	66.4	1	3 copper (15-25µm; contamination).
	MI-040	3	С	15	15	1		1	2		<1	5 grains pyrite (50-100um)
		8	č	25	50	2		•	2		2	o grano pyne (oo roopiny.
								Ŧ	4	70.4	2	•
	ML-041	3	C	15	15		2		2		<1	No sulphides
		5	C	25	25		1		1		<1	
		8	G	25	50	1		=	1		1	• • • •
									4	52.4	Z	
	ML-042	No Vi	sible	Gold								No sulphides
	ML-043	3	С	15	15	3	1		4		<1	No sulphides
		10	Ç	50	50	1			1		4	
		15	С	75	75	1		±	1		12	
									6	54.8	16	
	ML-044	3	С	15	15	2	2	3	7		1	No sulphides
		5	ċ	25	25	6	-		6		3	
		8	С	25	50	3			3		4	
		10	С	25	75	1			1		3	
		10	Ç	50	50	3	1		4		14	
		13	C	50	75	1			1		7	
		18	C	75 75	100	4	1		1		18	
		20	C	10	120	i.		=	24	54.4	26	
									24	04.4	10	
	ML-045	3	С	15	15	4	2	7	13		1	No sulphides
		5	С	25	25	5	2	2	9		4	· · ·
		8	С	25	50	2	1		3		4	
		10	ç	50	50	1			1		4	
		15	C	50	100	1		=	1		12	
									27	48.8	26	
i	ML-046	3	с	15	15	4	2	2	8		1	No sulphides
		5	Ċ	25	25	4		2	6		2	
		8	С	25	50	2			2		2	
		10	С	50	50	1			1		3	
		18	ç	75	100	1			1		15	
		20	č	75	125	1.			1		22	· ·
		20	C	100	100	1		=	1	05.0	23	
									20	no.Z	00	

Detailed Gold Grain Data

Client: Alto Ventures Ltd. File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016 Total Number of Samples in this Report: 34 ODM Batch Number(s): 7242

									Nonmag	Calculated	
Carrela	Dimensions (µm)		Numbe	r ot Visible	Gold Gr	ains	HMC Weight*	V.G. Assay			
Number	Thickn	ess	Width	Lenath	Reshaped	Modified	Pristine	Total	(g)	(ppb)	Metallic Minerals in Pan Concentrate
ML-047	3	C	15	15	2		7	9	<u></u>	1	No sulphides
	5	C	25	25	10	e.	1	11		5	
	8	ç	25	50	4	2	1	7 2		10 11	
	10 18	0	5U 75	50 100	2	1		ა 1		19	
	25	č	125	125	1	•				56	_
								32	51.6	102	-
MI 049	2	c	15	15	2	A	28	34		4	No sulphides
WIL-040	5	c	25	25	4	19	37	60		32	10 00,01,000
	8	Č	25	50		7	10	17		27	
	10	С	25	75			2	2		6	
	15	ç	25	125	1	1	٨	1		8	
	10	U	50	ວບ	I	3	+	124	46.0	118	=
	_	_	<u> </u>	<u>-</u>				^		-1	No eulphider
ML-049	5	C	25 25	25 50	1 1			1 1		<′ 1	NO SUIPRICES
	ö 10	с С	∠⊃ 50	50 50	2			2		8	
		~			-			4	48.8	10	=
MI 050	F	~	25	25	5	2		7		4	No suinhides
ML-000	э 8	č	25 25	·50	5	2	1	1		2	-
								8	47.6	5	-
ML-051	10	С	50	50	1			1		4	No sulphides
WE-001	.0	Ŷ	00		•			1	52.0	4	-
	-	~	45	45	F	2	4	0		1	No subbidos
ML-052	3	C	15	10	o q	5	1	9 15		7	No suprides
	8	č	25	50	4	2	•	6		8	
	10	С	50	50	1			1		3	
	13	C	50	75	2			2		13	
	25	М	150	3/5	1			34	55.2	223	=
								•			
ML-053	3	С	15	15	4		2	6		1	No sulphides
	5	C	25	25 60	5			ວ າ		3	
	22	č	25 75	150	1			1		39	
		_						14	48.0	46	=
ML OF4	5	c	25	25	1			1		1	No sulphides
WIL-004	с 8	č	25 25	20 50	I	1		<u> </u>		1	
								2	48.4	2	-
ML-055	3	С	15	15	3	1		4		<1	No sulphides
	5	č	25	25	2	-		2		1	
	8	С	25	50	3	1		4		6	
	13	С	50	75	1			<u>1</u>	52.4	<u>7</u> 14	=
								11	VZ.7	17	
ML-056	3	C	15	15	1		2	3		<1	No sulphides
	5	C	25 50	25 60		1	2	3		1 3	
	13	C C	50 50	30 75		1		1		6	
	25	č	125	125	1	•		1		50	_
								9	57.6	61	-

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Detailed Gold Grain Data

Client: Alto Ventures Ltd. File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016 Total Number of Samples in this Report: 34 ODM Batch Number(s): 7242

		<u>(0)</u>			· · ·			·	Norman Calculated		· · · · · · · · · · · · · · · · · · ·	
	Dimensions (µm)		Numbe	r of Visible	e Gold Griz	ins	HMC					
Sample				<u> , .</u>					Weight*	in HMC		
Number	Thick	ness	Width	Length	Reshaped	Modified	Pristine	Total	(g)	(ppb)	Metallic Minerals in Pan Concentrate	
ML-057	3	С	15	15	16		3	19		2	No sulphides	
	5	С	25	25	11	3	7	21		9		
	8	Ç	25	50	6		_	6		8	·	
	10	C	50	50	4	1	2	7		24		
	13	C	50	75 75		1		1		6		
	10	č	75	100	1		· · · •	4		22 17		
	10	0	10	100	I		÷	57	57.2	88	-	
								0.	01.2	00		
ML-058	5	С	25	25	2			2		1	No sulphides	
	10	C	50	50	-1		_	1		3	1 grain scheelite (250µm).	
								3	58.0	4		
ML-059	3	С	15	15	2	2	3	7		1	No sulphides	
	5	C	25	25	2	1		3		1		
	10	C	50	50		1	=	1	40.0	4	•	
								11	48.8	0		
ML-060	3	C	15	15	3		2	5		1	No sulphides	
WIE-000	5	č	25	25	1	1	2	2		1	No Supridea	
	8	ē	25	50		1		1		2		
	13	.C	50	75	1		_	1		8		
							-	. 9	47.6	11		
ML-061	3	C	15	15	_		3	3		<1	No sulphides	
	5	C	25	25	3		2	5		3		
	10	Č	20	50 75		1	1	1		3		
	10	C	20	75			' =	11	47.2	<u></u>	:	
							:		71.2	5		
ML-062	3	С	15	15	3		1	4		<1	No sulphides	
	5	С	25	25	3			3		1		
	8	С	25	50	1		1	2		3		
	10	С	50	50	1	1	=	_2		77		
								11	57.2	11		
MI 000	~	~	45	45				~			No overhiden	
ML-063	3	C C	15	15	1		1	2		~1	No sulprides	
	8	č	25	50	3			3		4		
	10	č	50	50	ĩ			ĩ		4		
							=	12	48.8	12		
ML-064	3	С	15	15	10		1	11		1	No sulphides	
	5	C	25	25	11			11		4	SEM check: 1 PGM candidate = 1	
	8	С	25	50	2		=	2		2	native osmium (25µm; Os,Ru).	
								24	61.2	8		
ML-065	3	c	15	15	7		6	13		1	No sulphides	
ME-000	5	č	25	25	, 3	1	1	5		2		
	8	č	25	50	2	1	-	3		4		
	10	Ċ	25	75	2			2		5		
	10	С	50	50		1		1		4		
								24	53.6	17		
	~	~	45	45	-			~			NT	
ML-066	3	C	15 05	15 25	í e	2	1	ð n		1	ivo suipnides	
	ວ ຊ	ĉ	20 25	20 50	0 1	2	L	9 1		4 1		
	10	č	25	75	1			1		3		
	.0	5			•		=	19	54.0	ğ		

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Detailed Gold Grain Data

Client: Alto Ventures Ltd. File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016 Total Number of Samples in this Report: 34 ODM Batch Number(s): 7242

	Dimensions (um)				Numbe	r of Visible	e Gold Gr	ains	Nonmag HMC	Calculated	
Sample				<u>, </u>					Weight*	in HMC	
Number	Thickn	ness	Width	Lenath	Reshaped	Modified	Pristine	Total	(g)	(ppb)	Metallic Minerals in Pan Concentrate
- Humbol											·
ML-067	3	С	15	15	5	6	26	37		4	No sulphides
	5	С	25	25	10	5	2	17		8	
	8	С	25	50	1	1	1	3		4	
	10	С	50	50	1			1		4	
	13	С	50	75		1	2	3		21	=
								61	51.2	41	
ML-068	3	С	15	15	2	1	5	8		1	No sulphides
	5	С	25	25	1	1		2		1	
	8	С	25	50		1		<u> </u>		2	=
								1 1	45.2	4	
ML-069	3	с	15	15	2			2		<1	No sulphides
	5	С	25	25	1	1		2		1	
	8	С	25	50	1			1		1	
	10	С	50	50	1					3	2
								6	68.8	5	
ML-070	3	с	15	15	1		3	4		<1	No sulphides
	5	С	25	25	1			1		<1	
	8	С	25	50	2			2		3	
	100	М	300	400	1					1731	=
								8	52.0	1734	
ML-071	3	С	15	15	3		1	4		<1	No sulphides
	5	С	25	25	2		1	3		1	
	8	С	25	50	2		1	3		3	
	10	С	50	50	1		1	2		6	#
								12	64.4	11	
ML-072	3	С	15	15	10	6	8	24		2	No sulphides
	5	С	25	25	7	2	3	12		5	
	8	С	25	50	4			4		5	
	10	C	50	50	2	1		3		10	
	15	С	75	75	1					11	=
								44	58.4	33	

PLATINUM GROUP MINERALS SUMMARY

Client: Alto Ventures Ltd.

File Name: 20167242 - AltoVentures - Koziol - Gold and Selected KIMs - July 2016 Total Number of Samples in this Report: 34 ODM Batch Number(s): 7242

Observed PGMs Number of Total Sample Number Mineral* Grains Grains None Observed ML-039 0 0 ML-040 None Observed 0 0 None Observed ML-041 0 0 None Observed ML-042 0 0 ML-043 None Observed 0 0 None Observed ML-044 0 0 ML-045 None Observed 0 0 ML-046 None Observed 0 0 ML-047 None Observed 0 0 ML-048 None Observed 0 0 None Observed ML-049 0 0 ML-050 None Observed 0 0 None Observed 0 ML-051 0 ML-052 None Observed 0 0 None Observed 0 ML-053 0 None Observed 0 0 ML-054 None Observed 0 0 ML-055 None Observed 0 ML-056 0 ML-057 None Observed 0 0 None Observed ML-058 0 0 ML-059 None Observed 0 0 ML-060 None Observed 0 0 ML-061 None Observed 0 0 ML-062 None Observed 0 0 None Observed 0 0 ML-063 ML-064 1 Sperrylite 1 ML-065 None Observed 0 0 ML-066 None Observed 0 0 0 0 None Observed ML-067 None Observed 0 0 ML-068 0 0 ML-069 None Observed ML-070 None Observed 0 0 ML-071 None Observed 0 0 ML-072 None Observed 0 0

*All samples are oxidized; therefore only native PGE minerals and the most resistant PGE arsenide and antimonide grains (no PGE sulphides or tellurides) are likely to be preserved.



Processing flow sheet for gold grains without heavy mineral concentrate preparation.



