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

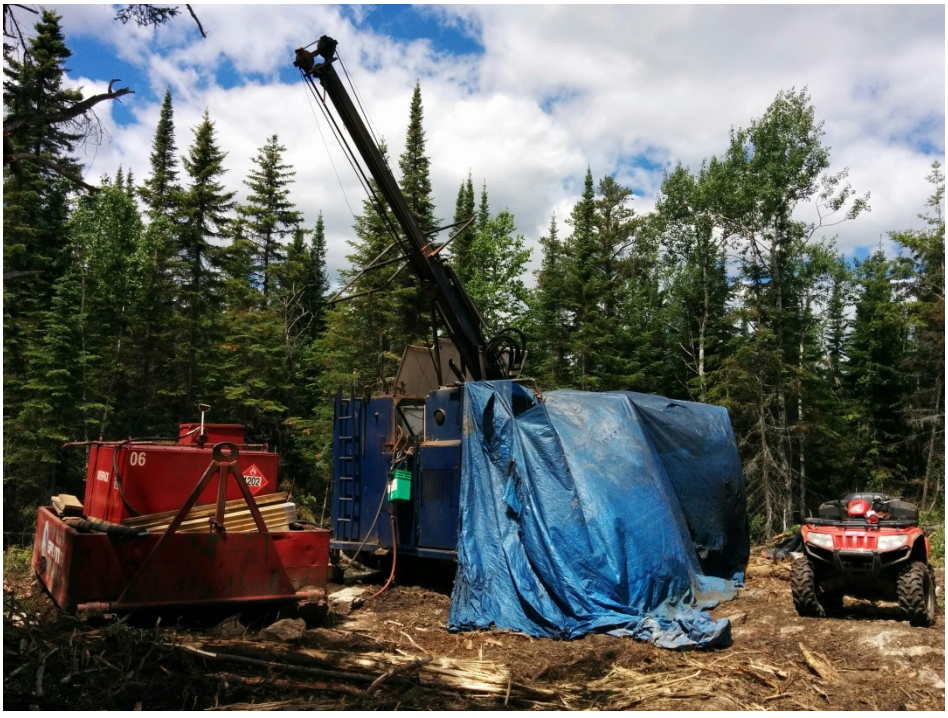
Nous tenons à améliorer l’accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d’aide à la communication, veuillez nous contacter.

2015 Assessment Report

On the

Amalgamated Kirkland Property

Kirkland Lake, Ontario
Larder Lake Mining Division
NTS 42A/1



Canadian Malartic Corporation
March 01, 2016

Table of Contents

List of Figures

List of Tables

Appendix 1

Appendix 2

Appendix 3

Appendix 4

Introduction

The Amalgamated Kirkland Property (AK) is located within the Larder Lake Mining Division, in the southeast quarter of Teck Township, immediately south of the Town of Kirkland Lake (NTS 42-A/1), in northeastern Ontario (See Figure 1). The property is owned 100% by Canadian Malartic Corporation (CMC).

This report summarizes the results from a portion of Canadian Malartic Corporation's 2015 exploration diamond drilling program conducted on the AK property during the period of June 15th to October 11th, 2015. The work reported on herein consists of 3,066 metres of diamond drilling in nineteen (19) bore-holes.

Diamond drilling was contracted to Spektra Drilling of Val D'Or, QC. Program planning, site supervision, inspections, location spotting and surveying were conducted by Canadian Malartic personnel.

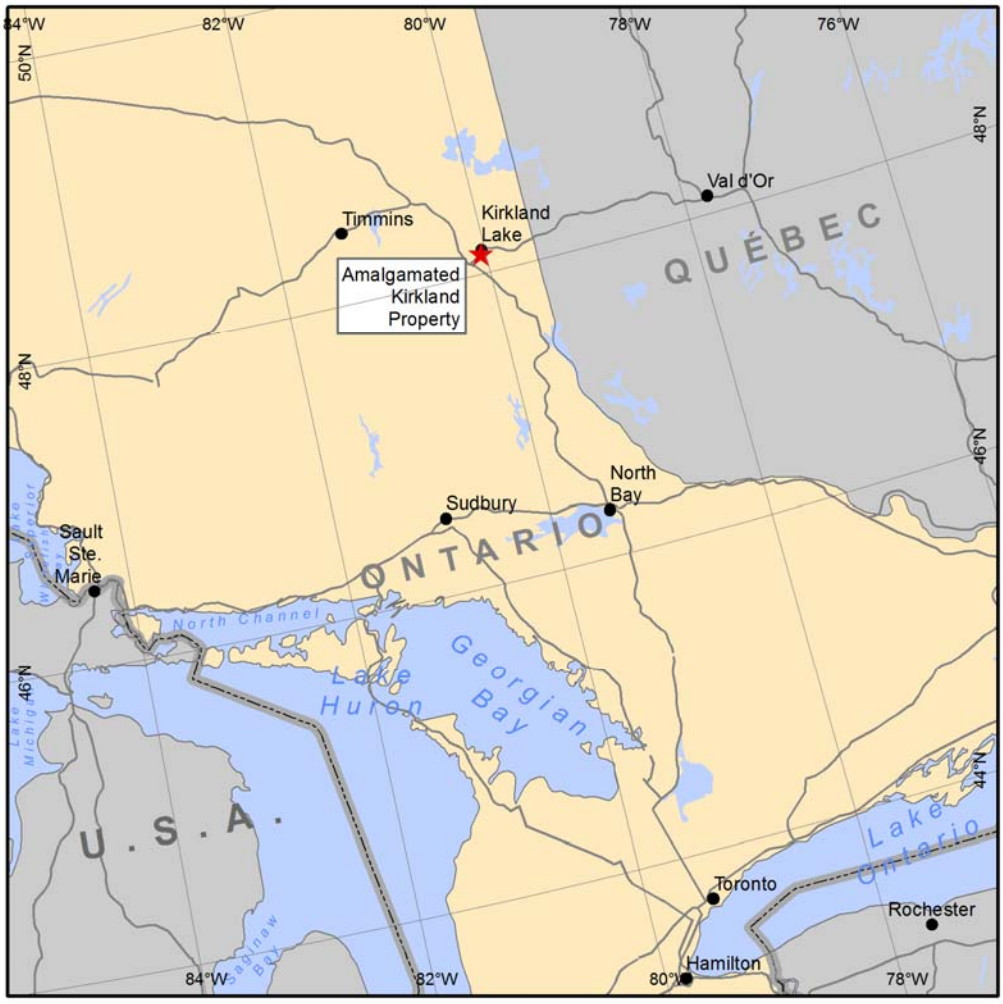


Figure 1 Location map of Amalgamated Kirkland Property in Ontario, Canada

Property Description and Location

The Amalgamated Kirkland Property (AK) is located within the Larder Lake Mining Division, in the southeast quarter of Teck Township, immediately south of the Town of Kirkland Lake (NTS 42-A/1), in northeastern Ontario (Figure 2).

The AK property is comprised of 21 mining claims, covering approximately 368 hectares, held under a single 21 year mining lease (Claim 328-See Figure 2), which was recently renewed and expires May 31, 2033. The mining lease is for mining rights only and the majority of the surface rights are held by the corporation of the Town of Kirkland Lake. For the tenure attributes of the 21 mining claims under Lease Claim 328 see Table 2. The AK property is bounded on the north and west by ground held by Kirkland Lake Gold (Macassa Mine), and is contiguous with CMC's Teck A property to the south and the Kirkland Gold Rand (Rand) property to the east.

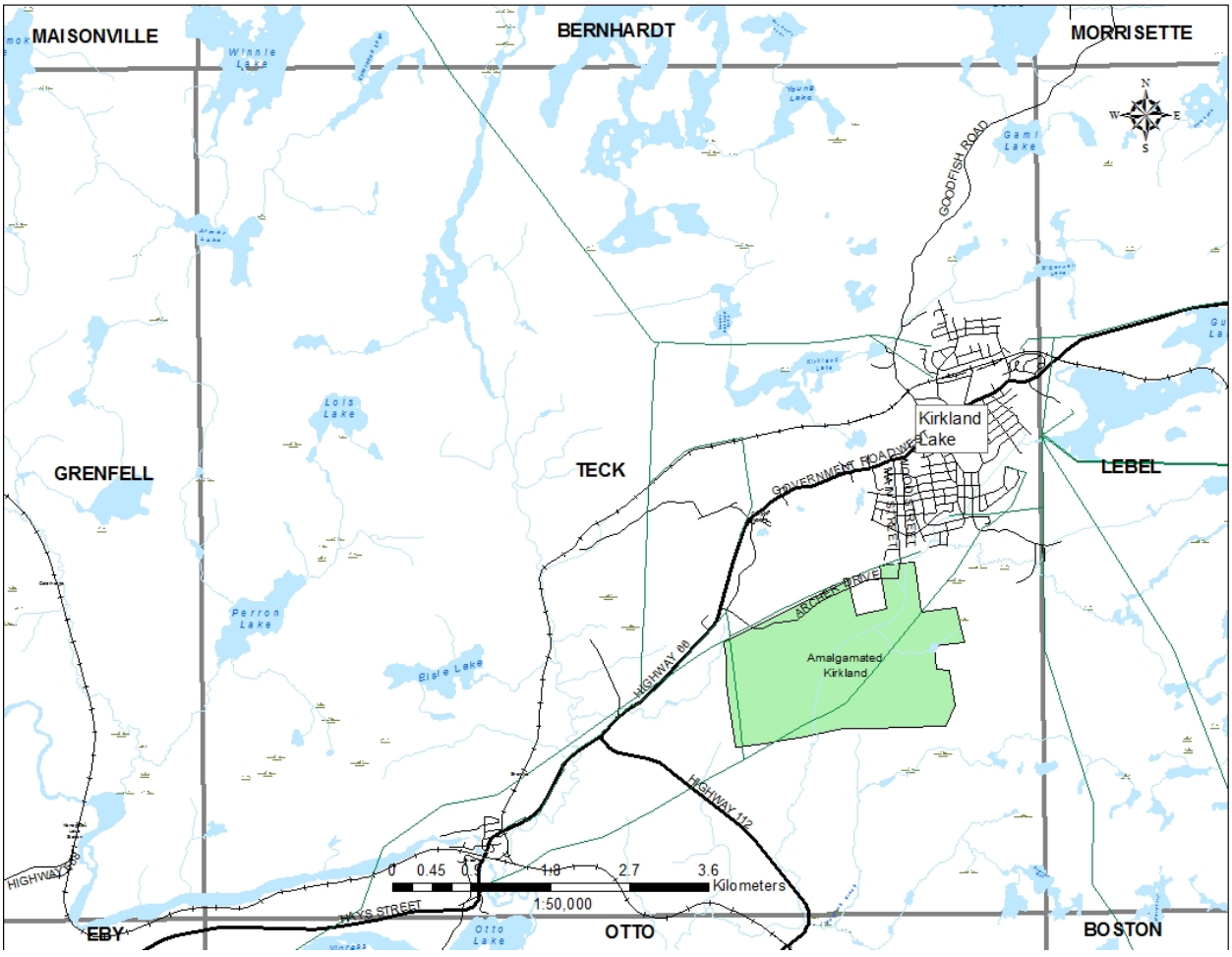


Figure 2 Property Location map - Teck Township

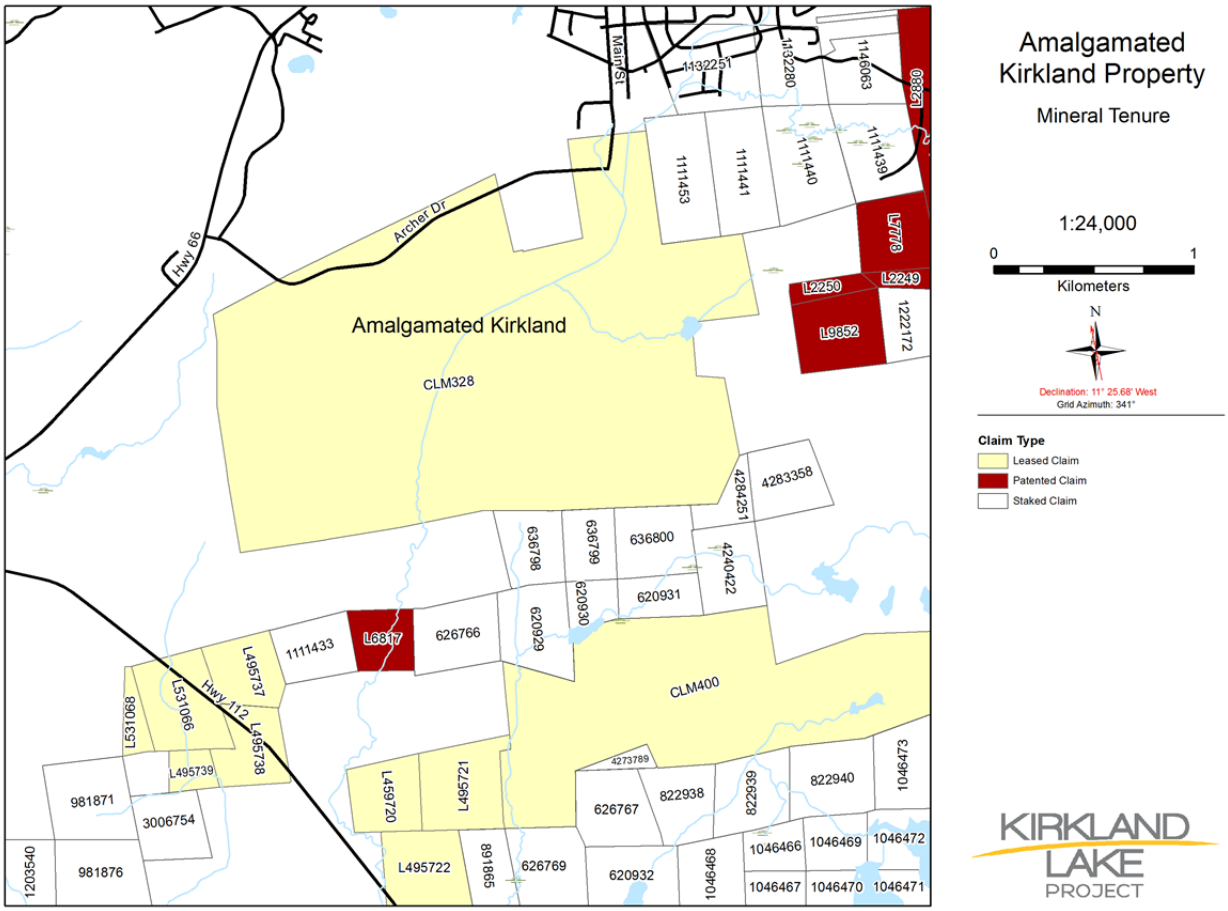


Figure 3 Amalgamated Kirkland Property - Mineral Tenure

All necessary work permits, as well as consultations with First Nations, were obtained for the property prior to the commencement of work undertaken in 2015. An exploration plan and permit was received from the Ministry of Northern Development and Mines in accordance with section 78.3 of the Mining Act (Permit # PR-15-10746) which expires on September 28, 2018.

The AK property is accessible from Archer Drive, which transects the northern portion of the claim group, and provides access to a gated bush road and numerous trails and drill roads.

Summary of Work Completed

During the period of June 15th to October 11th, 2015 nineteen (19) NQ diameter drill holes totalling 3,066 metres of core were completed on the AK property. The drill-core is stored at CMC`s Kirkland Lake office complex in Dobie, Ontario (former Upper Canada mine site). Drill-hole data is summarised in Table 1.
Diamond drilling was carried out by Spektra Drilling of Val D'Or, QC.
The main focus of the drilling program was designed to explore for the westerly strike extension of mineralization previously defined on the property which is associated with the Amalgamated Kirkland Shear Zone (AKSZ).

The following is a brief summary of the drill holes. Detailed geological descriptions are available within the accompanying drill logs including assays and assay certificates. Drill-hole summary data is listed in Table 1 below.

Drill-holes AKC15-78, 91, 99, 101-106, 113, 116 and 117

All of the above bore-holes encountered interbedded sequences of Timiskaming sediments (greywacke, conglomerate and argillites) and trachytic tuffs. Minor sulphide mineralization was intersected in the majority of the drill-holes, commonly associated with narrow, sericitic shear zones, but failed to return any significant gold values.

Drill-holes AKC15-77, 82, 83, 85, 100, 107 and 111

All of the above bore-holes traversed through interbedded sequences of Timiskaming sedimentary and tuffaceous rocks, as with the previous bore-holes, however all of the holes intersected geochemically anomalous or sub-economic gold values related to shear zones accompanied by pyrite +/-galena mineralization often accompanied by narrow, centimeter scale quartz-ankerite veining.

Further exploration is warranted to follow-up on these anomalous intersections.

Table 1 Amalgamated Kirkland Property - 2015 Drill-hole summary

DDH	Azimuth	Dip	Length(m)	UTM-Nad83 - East	UTM-Nad83 - North	UTM-Nad83 - Elevation
AKC15_77	180	-46	201	570059.65	5331312.72	334.08
AKC15_78	180	-45	63	570059.58	5331216.63	337.95
AKC15_82	0	-45	105	570012.94	5331164.80	335.84
AKC15_83	0	-49	102	569961.90	5331177.14	331.31
AKC15_85	0	-50	216	569846.29	5331095.42	336.07
AKC15_91	0	-45	150	570197.55	5331151.67	336.69
AKC15_99	180	-45	156	569811.80	5331251.45	332.11
AKC15_100	180	-62	198	569811.79	5331252.16	332.09
AKC15_101	0	-45	240	569675.51	5331119.24	331.32
AKC15_102	0	-50	186	569675.50	5331118.90	331.32
AKC15_103	0	-45	189	569606.68	5331103.54	329.96
AKC15_104	0	-45	111	569635.25	5331168.72	330.51
AKC15_105	0	-45	198	569740.83	5331093.61	336.25
AKC15_106	0	-45	141	569675.29	5331167.64	331.18
AKC15_107	0	-45	120	570009.98	5331125.88	339.45
AKC15_111	0	-53	246	570116.56	5331075.69	342.78
AKC15_113	0	-49	15	570097.04	5330991.37	339.26
AKC15_116	355	-54	330	569875.18	5331032.71	336.81
AKC15_117	180	-50	99	569896.77	5331222.16	330.87

Property Geology

The Amalgamated Kirkland property can be subdivided into three main geological domains; northern, central and southern (see Figure 4). The northern portion of the property is primarily underlain by east-west to locally north-south trending, steeply dipping volcanic (pyroclastic and re-worked equivalents) and sedimentary rocks of the Timiskaming Group. The southern half of the property is pre-dominantly underlain by the alkalic Murdoch Creek Stock. The oldest rocks on the property are the Lower Tisdale Assemblage-Larder Lake Group, which occur in the central portion of the claim group and are represented by a narrow east-west trending band of tholeiitic to komatiitic volcanic flows, preserved along the northern margins of the Murdoch Creek Stock. These rocks have been extensively deformed and altered and effectively demarcate the faulted contact between the Timiskaming and Larder Lake Groups and define the location of the Cadillac-Larder Lake Break (CLLB) in this area. The CLLB is a regionally extensive, east-west trending, southerly-dipping crustal scale tectonic zone of ductile and brittle deformation with a significant thrust component of displacement. The youngest rocks on the property are represented by east-west to north-south trending Proterozoic(?) diabase dykes.

Lower Tisdale Group (Central Domain)

The *Lower Tisdale Group (Larder Lake Group)* is the oldest rock formation that occurs on the property. This assemblage is represented by an east-west trending, wedge-shaped band varying in thickness from 25 meters in the western portion of the claim group to upwards of 250 meters thick in the eastern portion. The Lower Tisdale Group rocks consist of tholeiitic to komatiitic flows that have been variably sheared and altered to green and brown Fe-carbonate-fuchsite-chlorite assemblages. These structurally overlie younger Timiskaming Group rocks which lie to the north, and are interpreted to represent the northern branch of the Cadillac-Larder Lake Break in this area. The southern contact of the Larder Lake Group is a heterogeneous zone comprised of tholeiitic and komatiitic flows complexly intermingled with pyroxenite phases of the Murdoch Creek Stock.

Murdoch Creek Stock (Southern Domain).

The *Murdoch Creek stock* is a crudely elliptical body measuring approximately 3.5 kilometers (east-west) long by 1.5 kilometer wide (north-south) which underlies the southern portion of the AK property. The stock lies immediately south of the CLLB, and intrudes komatiitic volcanics of the Larder Lake Group. The stock is a zoned intrusive plug comprised primarily of leuco-syenite to meso-syenite and hornblendite with rare pegmatitic dykes. Enclaves of highly altered komatiitic volcanics of the Larder Lake Group are commonly found within the stock, particularly in the northeastern portions.

Timiskaming Group (Northern Domain)

Timiskaming Group rocks occupy the northern half of the AK property, and are the predominant host of the gold mineralization defined on the property to date. The group is comprised of epiclastic sedimentary rocks dominated by greywackes and conglomerates with lesser mudstone and siltstone horizons which are complexly interdigitated with trachytic ash, lapilli and agglomeratic tuffs. Transitional lithologies are also identifiable within this group displaying mixed provenance, or a degree of re-working and commonly contain both sedimentary and volcanic clast components generally within a tuffaceous matrix. Sedimentary and tuffaceous units display irregular tabular to wedge-shaped geometries, both laterally and vertically, and internal bedding fabrics display both conformable

and discordant relationships with lithological contacts, indicative of a high energy, fluvial, likely deltaic environment.

Porphyritic, pseudo-leucite bearing trachytic flows can be observed in drill-core in the far north-western portions of the property, north of the Hunton Fault, but are volumetrically insignificant.

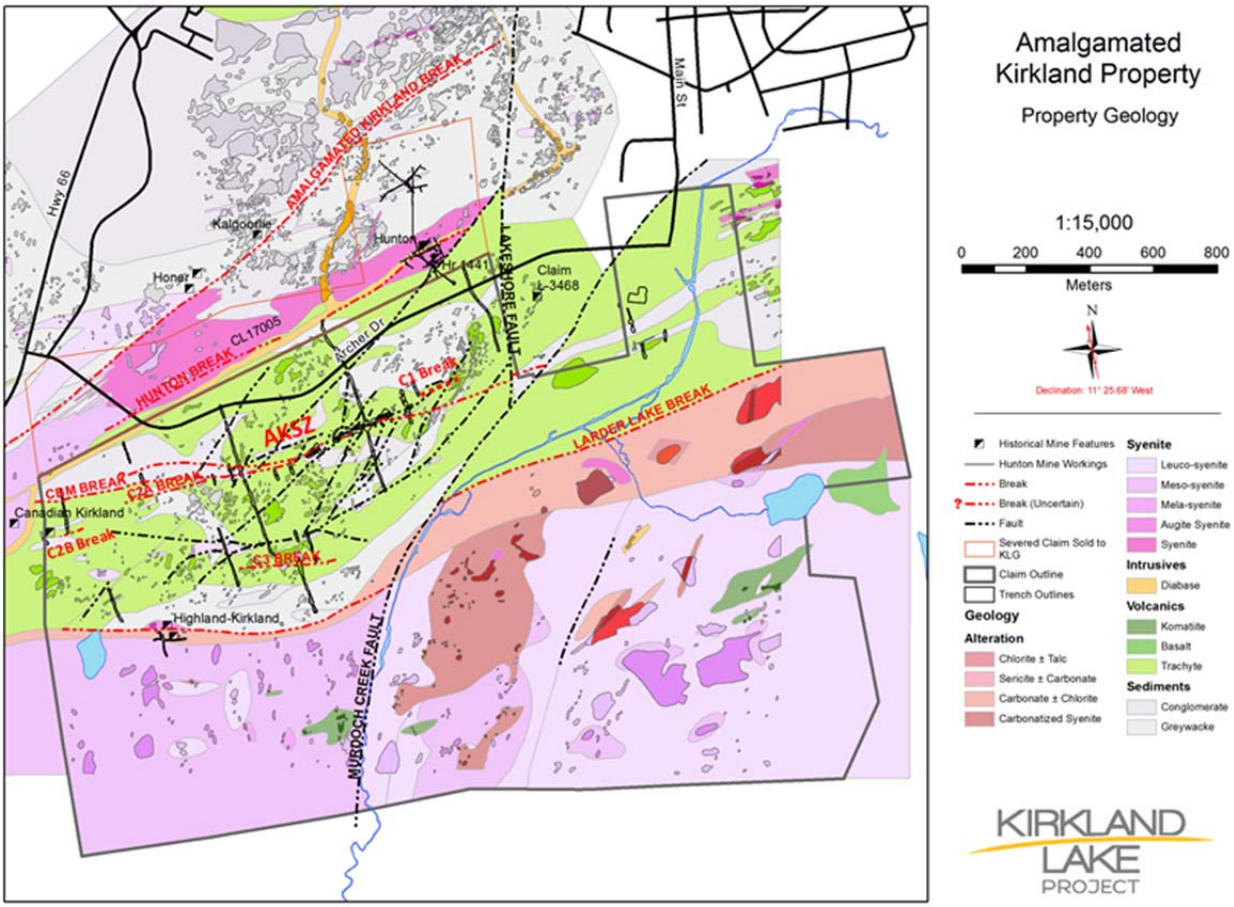


Figure 4 Amalgamated Kirkland - Property Geology

Conclusions and Recommendations

Diamond drilling reported herein as part of the shallow exploration program of the Amalgamated Kirkland property by Canadian Malartic Corp. has successfully outlined areas of weak gold mineralization along the western extensions of the AKSZ.

A continued exploration program is warranted to follow-up on anomalous low-grade and sub-economic mineralization intersected in the 2015 diamond drilling program.

Authorship

This report was prepared and completed by Canadian Malartic Corp. geological staff members Mark Masson P.Geo., and Christal Hanuszczak P.Geo., at the Company's Kirkland Lake Office. 72 Upper Canada Drive, Dobie ON P0K 1B0 (705) 567-4377.

X

Mark Masson P.Geo
Senior Project Geologist

References

Ayer, J. A. et al, 2005: Overview of Results from the Greenstone Architecture Project Discover Abitibi Initiative; OGS open File Report 6154, 146 pp.

Alexander, D. R., 2007: Technical Report on Mineral Properties of Queenston Mining Inc. in the Kirkland Lake Gold Camp; NI 43-101 Report filed for Queenston Mining Inc. on SEDAR.

Benham, W., 1990: Report on Geological Mapping Amalgamated Kirkland Property, Teck Township, Larder Lake Mining Division, Battle Mountain Canada Inc., 52 p., Internal Report Queenston Mining Inc.

Broughton, D. W., and Stevenson, D. B., 1994: 1993 Final Report Amalgamated Kirkland Project, Kirkland Lake, Ontario, Canada, Cyprus Canada Inc, 36p with 18 figures and 38 maps; and 1994 Final Report Amalgamated Kirkland Project, Kirkland Lake, Ontario, Canada, Cyprus Canada Inc, 20p report with 33 figures and 10 maps, and all ddh logs for AK93-46 to AK94-63A, Internal Reports Queenston Mining Inc.

Gamble, A. P. D., 2011: Technical Report on the Resources at Amalgamated Kirkland Property Teck Township Larder Lake Mining Division; Ni 43-101 Report filed for Queenston Mining Inc. October 18, 2011

Table 2 Amalgamated Kirkland Property Claim List

Tenure Type:	Lease	**Sub-TenureType:**	21 Year
Lease or Licence:	109284	**Tenure Rights:**	Mining Rights Only
Start Date:	2013-Apr-01	**Lease Expiry Date:**	2033-May-31

LAND ATTRIBUTES

Status:	Active	**Area in Hectares:**	368.339
Township or Area:	TECK		
Description:	CLM328 Land and land under water, CLM328, L477912, L447913, L447299, L477300, L477419, PT L491182, L491183, Pt L491650, L491651, PT L491662, L491663, L495227-L495229, L495358, L495361-L495364, Pt L500057, L500058-L500059, L500061, Pt L524843, L531085, L531770 & Pt L571358, pt 1 on Plan 54R-3678, excepting all of Location CL17005, being part of CLM328		
Location No:		**Section or Block No:**	
Survey Plan:	54R-3678	**Part on Plan:** 1	**CLM No:** 328
Land Registry Office:	HAILEYBURY (TIMISKAMING)	**Parcel No:**	**PIN No:** 61402-0986(LT)

Claim Numbers	Lot	Concession		Claim Numbers	Lot	Concession
L500059				L491650		
L500058				L500061		
L495229				L495362		
L500057				CLM328		
L491651				L477419		
L571358				L495228		
L477299				L524843		
L495361				L495227		
L495363				L491182		
L495358				L531085		
L477300				L491183		
L491663				L447912		
L531770				L447913		
L495364				L491662		

OWNER ATTRIBUTES

Owner:	CANADIAN MALARTIC CORPORATION

Table 3 Amalgamated Kirkland - Drill-hole lengths by claim

HOLE ID	CLAIM	FROM	TO	TOTAL (m)	CLAIM	FROM	TO	TOTAL (m)
AKC15_77	L1355	0	129	129	L6730	129	201	72
AKC15_78	L6730	0	63	63				
AKC15_82	L6730	0	58	58	L1355	58	105	47
AKC15_83	L6730	0	16	16	L1355	16	102	86
AKC15_85	L6730	0	81	81	L1355	81	216	135
AKC15_91	L6730	0	84	84	L16589	84	150	66
AKC15_99	L5687	0	156	156				
AKC15_100	L5687	0	198	198				
AKC15_101	L5687	0	240	240				
AKC15_102	L5687	0	186	186				
AKC15_103	L5687	0	189	189				
AKC15_104	L5687	0	111	111				
AKC15_105	L6729	0	39	39	L5687	39	198	159
AKC15_106	L5687	0	141	141				
AKC15_107	L6730	0	107	107	L1355	107	120	13
AKC15_111	L6730	0	246	246				
AKC15_113	L6730	0	15	15				
AKC15_116	L6730	0	206	206	L1355	206	330	124
AKC15_117	L1355	0	91	91	L6730	91	99	8

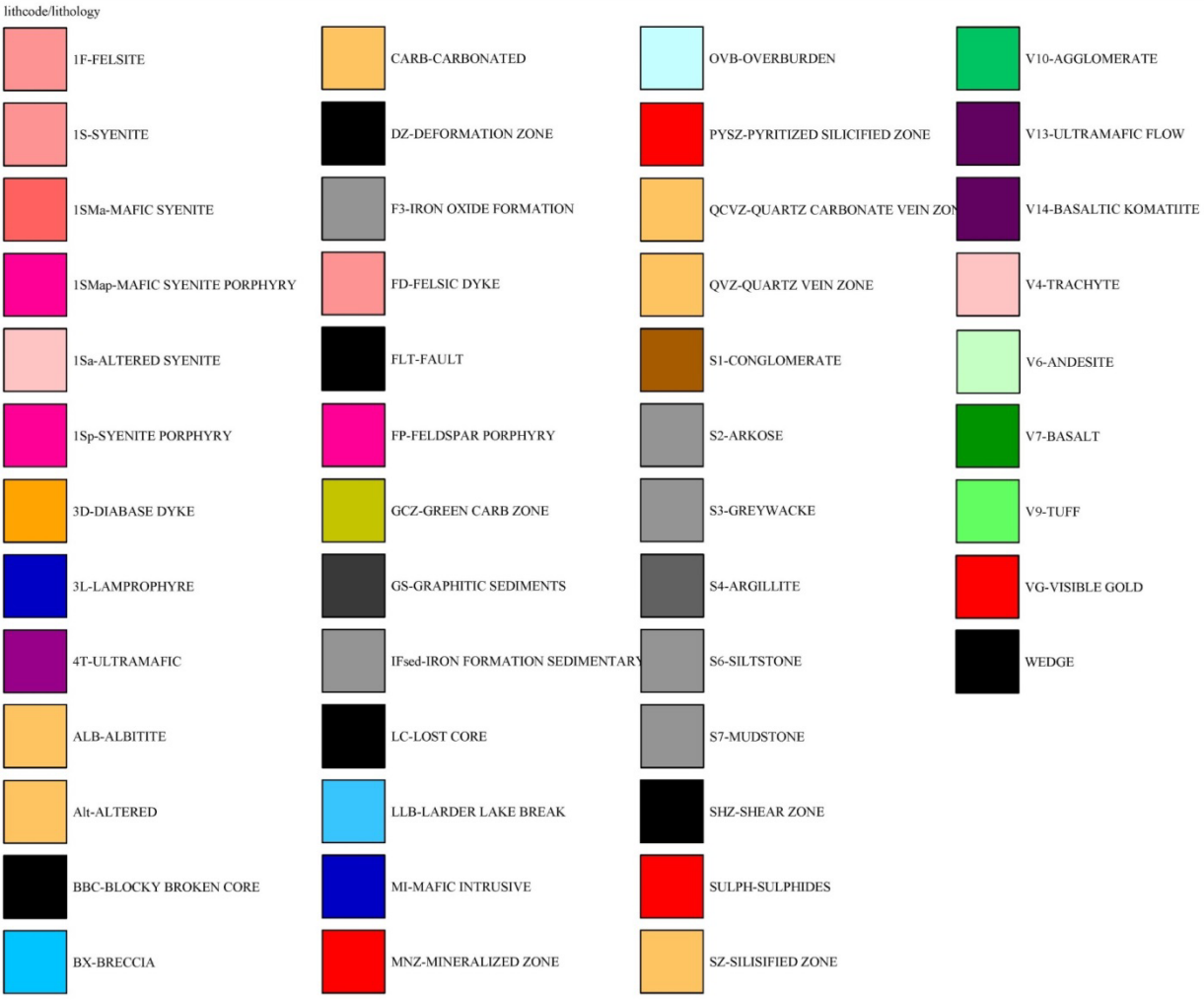
Table 4 Legend to accompany drill-logs

Lithological Codes	
Code	Unit Name
3D	Diabase
1Sp	Syenite Porphyry
1Spa	Altered Syenite Porphyry
Alt	Altered
ALZ	Altered Zone
DZ	Deformation Zone
FAZ	Fault Zone
SHZ	Shear Zone
MNZ	Mineralized Zone
OVB	Overburden
QCVZ	Quartz Carbonate Vein Zone
S1	Conglomerate
S3	Greywacke
S6	Siltstone
S7	Mudstone
V4	Trachyte
V4a	Trachyte Altered
V4S	Trachyte Spotted
V9	Tuff
V9BX	Tuff Breccia
V9L	Lapilli Tuff

Alteration Descriptions	
Code	Description
Ank	Ankerite
Ca	Calcite
Cl	Chlorite
Ep	Epidote
He	Hematite
K	Potassic
Se	Sericite
Si	Silica

Structural Descriptions	
Code	Description
Bxh	Breccia healed
FLT	Fault
Gg	Fault Gouge
FAZ	Fault Zone
Shrh	Shear healed
SZ	Shear Zone
SLP	Slip

Figure 5 Geology Legend to accompany cross-sections



Canadian Malartic GP Exploration Division

DDH: AKC15_77

Claims title:	CLM328		Section:		
Township:	Teck		Level:		
Range:			Work place:	Upper Canada Mine Site	
Lot:					
Start date:	20/06/2015		Description date:	29/06/2015	
End date:	22/06/2015				

Contractor: Spektra

Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 180.0°

Dip: -46.00°

Length: 201.00

	UTM-Nad83	AK-Geo
East	570059.653	7962.978
North	5331312.716	10357.852
Elevation	334.084	333.979

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	182.5°	-45.7°	No
Multishot	15.00	182.5°	-45.7°	
Multishot	18.00	182.6°	-45.6°	
ReflexEZS	21.00	181.8°	-45.7°	Yes
Multishot	21.00	183.0°	-45.5°	
Multishot	24.00	182.7°	-45.3°	
Multishot	27.00	182.2°	-45.2°	
Multishot	30.00	182.7°	-45.1°	
Multishot	33.00	182.5°	-44.9°	
Multishot	36.00	183.5°	-44.7°	

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	183.2°	-44.6°	
Multishot	42.00	183.0°	-44.5°	
Multishot	45.00	184.2°	-44.3°	
Multishot	48.00	184.2°	-44.2°	
Multishot	51.00	183.2°	-44.0°	
Multishot	54.00	184.7°	-44.0°	
Multishot	57.00	183.2°	-43.9°	
Multishot	60.00	184.2°	-43.7°	
Multishot	63.00	184.9°	-43.6°	
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: No

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	182.5°	-45.7°	No		102.00	Multishot	186.9°	-41.6°		
15.00	Multishot	182.5°	-45.7°			105.00	Multishot	187.0°	-41.5°		
18.00	Multishot	182.6°	-45.6°			108.00	Multishot	187.2°	-41.3°		
21.00	ReflexEZS	181.8°	-45.7°	Yes		111.00	Multishot	187.2°	-41.2°		
21.00	Multishot	183.0°	-45.5°			114.00	Multishot	186.7°	-41.0°		
24.00	Multishot	182.7°	-45.3°			117.00	Multishot	186.2°	-41.0°		
27.00	Multishot	182.2°	-45.2°			120.00	Multishot	186.4°	-41.1°		
30.00	Multishot	182.7°	-45.1°			123.00	Multishot	187.8°	-41.1°		
33.00	Multishot	182.5°	-44.9°			126.00	Multishot	186.8°	-41.1°		
36.00	Multishot	183.5°	-44.7°			129.00	Multishot	188.0°	-41.1°		
39.00	Multishot	183.2°	-44.6°			132.00	Multishot	186.9°	-41.1°		
42.00	Multishot	183.0°	-44.5°			135.00	Multishot	188.6°	-41.1°		
45.00	Multishot	184.2°	-44.3°			138.00	Multishot	188.4°	-41.2°		
48.00	Multishot	184.2°	-44.2°			141.00	Multishot	188.2°	-41.2°		
51.00	Multishot	183.2°	-44.0°			144.00	Multishot	187.3°	-41.2°		
54.00	Multishot	184.7°	-44.0°			147.00	Multishot	187.4°	-41.1°		
57.00	Multishot	183.2°	-43.9°			150.00	Multishot	187.5°	-41.1°		
60.00	Multishot	184.2°	-43.7°			153.00	Multishot	187.9°	-41.1°		
63.00	Multishot	184.9°	-43.6°			156.00	Multishot	186.8°	-41.1°		
66.00	Multishot	184.3°	-43.5°			159.00	Multishot	187.8°	-41.0°		
69.00	Multishot	184.7°	-43.3°			162.00	Multishot	187.9°	-41.0°		
72.00	Multishot	184.8°	-43.1°			165.00	Multishot	187.8°	-41.0°		
75.00	Multishot	183.7°	-43.0°			168.00	Multishot	187.9°	-40.9°		
78.00	Multishot	185.3°	-42.9°			171.00	Multishot	187.8°	-40.9°		
81.00	Multishot	185.1°	-42.7°			174.00	Multishot	187.5°	-40.9°		
84.00	Multishot	185.8°	-42.6°			177.00	Multishot	187.0°	-40.8°		
87.00	Multishot	186.4°	-42.4°			180.00	Multishot	188.0°	-40.8°		
90.00	Multishot	186.0°	-42.3°			183.00	Multishot	187.4°	-40.7°		
93.00	Multishot	187.2°	-42.1°			186.00	Multishot	187.7°	-40.7°		
96.00	Multishot	186.8°	-41.9°			189.00	Multishot	186.8°	-40.7°		
99.00	Multishot	186.5°	-41.8°			192.00	Multishot	188.3°	-40.6°		

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
195.00	Multishot	188.4°	-40.5°								
198.00	Multishot	188.8°	-40.5°								
201.00	Multishot	189.2°	-40.4°								

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00 6.00 **Overburden**OVB Overburden.					
6.00 11.10 **Tuff Breccia**V9BX Dark green to brown fine/very fine grained tuff breccia. Moderately to strongly magnetic. Pervasive ankeritic alteration with localized strong mix of ank-ser-hmt alteration. Fragments within th unit are angular to subangular and range in size from 1mm to >5cm and typical abundance is ~30-40% though can be more or less withs ome intervals with abundancs of ~5% over 2m. Fragments are more susceptible to the ank-hmt-ser mix alteration though where the tuff is altered strongly to that composition the fragments ar emore chloritic or more strongly sericitic. Some of the breaks are very rusty/oxidized hematitic (minor limonite) with orientations of 20 and 45-50 deg TCA. Unit continues past the fault which is oriented 20 deg TCA.					
6.00 138.80 **Ankerite; Sericite; Hematite**Ank; Se; He Pervasive ankeritic alteration with localized strong mix of ank-ser-hmt alteration.					
11.10 11.70 **Fault Zone**FAZ Strong fault oriented 15 deg TCA. Fault is <1cm wide with chloritic and hematitic gouge and friable sheets along the surface, partially washed away. Subparallel to the fault are breaks abvoe and below oriented more 20 deg TCA with polished joint surfaces and the lower break is parted along a 7mm wide quartz-ank vein. Fault occurs withint he tuffs.					
11.10 11.70 **Fault**FLT 0.5cm wide strong fault oriented 15 deg of chlorite-hematite clay and gouge coating the surface, partially washed away. There are some breaks above and below the fault oriented 20 deg TCA with 7mm wide quartz-ankerite veins below the fault.					
11.70 126.50 **Tuff Breccia**V9BX Continuation of the tuff breccia described abvoe the fault, mod-storng					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
magnetic, dark green to brown/altered brown-green inc olour with varrying sizes and abundances of angular fragments. Overall hosting <0.5% veining wth local areas up to 3% qtz-ank veins commonly at 50 deg TCA, and occassional oxidized breaks. Overall massive and repetitive in texture and appearance. There is a 6cm wide qtz-ank vn @ 60 deg TCA from 50.35-50.4m with strong alteration up to 5cm either side of the vien. Vein and alteration also consist of trace disseminated pyrite with htm-ser-ank alteration associated with vein an dsurrounding tuff. Following the vein the tuff breccia is modertely and on and off ankerite-sericite-hematite altered until about 55.3m. 71.25-72.15m: Very fine grained interval with few to no lapilli fragments, appearing almost cherty (glassy/muddy) reltive to the rest of the tuff intervals. 75.5-79.0m: More altered interval to a brownish hue with hmt-sericite-ankerite mix. Ank+/-qtz veining 1-3mm and 8mm wide over 4% of the interval, sheeted, oriented 25-30 and 60 deg TCA and some fractures oriented 130 deg TCA. 90.9-91.0m: 9cm wide pink calcite-quartz vein oriented 50 deg TCA. Veyr little calcite has been present up to this point except rarely within some fractures. Tuffs are still ankeritic. Unit ends in change of alteration style, but the tuff breccia/lapilli tuff/tuffs continue.					
35.40 35.55 Vn vein (5 mm - 10 cm) Vn;;;;;; 3cm wide quartz vein oriented 40-50 deg TCA with ankerite fractures and surroudned by quartz-ankerite flooding and rusty hematitic oxidation of the host rock and along vein/flood contacts.					
	48.00	49.00	1.00	S026502	0.003
	49.00	50.00	1.00	S026503	0.008

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			50.00	50.50	0.50	S026504	0.003
50.35	50.40	Vn vein (5 mm - 10 cm) Vn;;;;;; 6cm wide quartz-ank-hmt-ser vein @ 60 deg TCA. Contains trace disseminated pyrite. Verin is dominantly fractured quartz with ank fracture fill. Discoloured to a light reddish beige Surrounding the vien is silicification, sericite-ankerite and hematite alreration and trace disseminated pyrite. Alteration halo is strong up to 5cm away from the vein.					
			50.50	51.50	1.00	S026505	0.008
			51.50	52.50	1.00	S026506	0.003
			52.50	53.50	1.00	S026507	0.003
			53.50	54.50	1.00	S026508	0.005
			54.50	55.50	1.00	S026509	0.003
			55.50	56.50	1.00	S026510	0.005
			74.50	75.50	1.00	S026511	0.003
			75.50	76.50	1.00	S026512	0.003
			76.50	77.50	1.00	S026513	0.006
			77.50	78.50	1.00	S026514	0.003
			78.50	79.50	1.00	S026515	0.003
			79.50	80.50	1.00	S026516	0.005
			80.50	81.50	1.00	S026517	0.003
			81.50	82.50	1.00	S026518	0.003
			82.50	83.00	0.50	S026520	0.003
			83.00	84.00	1.00	S026521	0.003
83.40	83.55	Vn vein (5 mm - 10 cm) Vn;;;;;; A couple of 2cm wide veins with shearing of the tuffs and chlorite coating, fabric and veins oriented 60 deg TCA. Veins are pink ankerite-quartz and 2-3mm wide. Tuff is very chloritized and friable with force parting alongt					

		Description	Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		he fabric. Prior to the veining is 20cm of locally stronger ser-hmt-ank alteration.					
			84.00	85.00	1.00	S026522	0.005
90.90	91.00	Vn vein (5 mm - 10 cm) Vn;;;;;; 9cm wide pink calcite-quartz vein oriented 50 deg TCA. Massive and bullish light pink hue of a calcite and a few 1-2cm wide coarse quartz. Veining up to this point and follwng has mostly been ankerite with a few calcitic fractures here and there.					
			125.00	126.00	1.00	S026523	0.011
			126.00	127.00	1.00	S026524	0.005
126.50	138.80	Tuff Breccia; alteredV9BX; Alt Reddish purple, bleached green, beige variably altered fine grained tuff breccia/tuff/lapilli tuff. Moderately magnetic. Variable degrees of alteration, though pervasive moderate to strong ankeritic alteration, semi-pervasive moderate to weak hematization and semi-pervasive weak to strong sericitic alteration. Monolithic fragments are also variably altered with hematite, sericite, chlorite, ankerite or combinations of the above. Slight increase in ank-qtz veining throguhout the interval up to 3% overall often as 1-2mm wide fractures to 1-1.5cm wide veins oriented 35, 70 and 90 deg TCA. 130.2-130.3m: Weak fault breccia interval with sharp contacts (@60 deg TCA) where alteration changes from pervasive hematitic to chloritic , and hosting a few quartz-ankerite veins oriented 60-90 deg TCA. The veins cover 3cm of the core flanked by difference of alteraitn, likely not cause dby faulting but supported from the veining. 132.0-132.1m: Quartz flooding oriented 30 deg TCA. Sharp 1mm wide hematitic fractures outline the flood zone and contain disseminated pyrite within their bounds over the 10cm. There's another fracture running parallel TCA from leading to end fracture. ~1-1.5cm wide quartz vein is within the flooding oriented 30 deg TCA as well. Up to 2% pin prick disseminated pyrite					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		throughout. Interval is also more susceptibble to ank-hmt alteration relative to the directly surrounding tuffs. Alteration drops at the end of the unit as the tuff continues.					
			127.00	128.00	1.00	S026527	0.003
			128.00	129.00	1.00	S026528	0.008
			129.00	130.00	1.00	S026529	0.005
			130.00	131.00	1.00	S026530	0.003
			131.00	132.00	1.00	S026531	0.003
132.00	132.10	Fl floods Fl;;;;;; 10cm wide silica-rich zone confined between two hematitic fractures oriented 30 deg TCA. There is another 1mm wide hematitic fracture running along the core axis from lead to end zone contacts. Interval is bleached/brighter pinkish-orange from hematite-ankerite-silica alteration. A greyer 1.5cm widw quartz enrichment is present within the zone as well. 2% disseminated pyrite hosted throughout the interval.	132.00	133.00	1.00	S026532	0.009
			133.00	134.00	1.00	S026533	0.007
133.20	133.30	Vn vein (5 mm - 10 cm) Vn;;;;;; 3cm wide qtz-ank vn @ 40 deg TCA. Reddish-pink from hematite staining. Surroudning the vein is a moderate shear fabric emphasized with sericitic laminations/fractures and chlorite and hematitc rich layers <0.5mm in width over 3cm core length from the vein.					
			134.00	135.00	1.00	S026534	0.007
			135.00	136.00	1.00	S026535	0.012
			136.00	137.00	1.00	S026536	0.005
			137.00	138.00	1.00	S026537	0.008
			138.00	139.00	1.00	S026538	0.010
138.80	157.50	Tuff BrecciaV9BX Cotninuation of the relatively less altered tuff breccia, moderately magnetic.					

		Description	Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Fragments are squished and aligned along a fabric at 60 deg TCA near the start of the unit, then become more regular and less deformed past 139.5m. 148.1-156.8m: Some of the fragments within this interval are squished while others appear to be lined up with a fabric oriented 30-60 deg TCA. Lower contact is sharp, oriented 40 deg TCA still of tuffs but of a fault zone before a switch into mudstones.					
			139.00	140.00	1.00	S026540	0.006
			140.00	141.00	1.00	S026541	0.015
			141.00	142.00	1.00	S026542	0.003
			142.00	143.00	1.00	S026543	0.003
			143.00	144.00	1.00	S026544	0.006
			144.00	145.00	1.00	S026545	0.003
			145.00	146.00	1.00	S026546	0.006
			146.00	147.00	1.00	S026547	0.008
			147.00	148.00	1.00	S026548	0.007
			148.00	149.00	1.00	S026549	0.003
			149.00	150.00	1.00	S026552	0.003
			150.00	151.00	1.00	S026553	0.003
			151.00	152.00	1.00	S026554	0.003
			152.00	153.00	1.00	S026555	0.003
			153.00	154.00	1.00	S026556	0.003
			154.00	155.00	1.00	S026557	0.003
			155.00	156.00	1.00	S026558	0.007
			156.00	157.00	1.00	S026560	0.006
			157.00	158.00	1.00	S026561	0.195
157.50	157.80	Fault ZoneFAZ A 30cm wide fault zone oriented 30 deg TCA. Moderate to weak strength and healed, with sericite cementation and qtz-ank veining. Two main veins, one at leading contact and one half way through the fault zone 1 and 3cm wide respectively. The tuff between veining and following the vein is layered					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
with sericite fracture fill filling shear bands and wrapping around smaller fragments. Overall fault is chlorite-ank-sericte altered. Lower contact is oriented 30 deg TCA.					
157.50 157.80 **Fault**FLT Healed moderate to weak strength fault zone 30cm core length oriented 30 deg TCA. Two quartz-ankerite veins within the fault zone, one at upper contact and one half way through also oriented 30 deg TCA. The veins are 1 and 3 cm wide respectively. Host is sheared tuff with sericite shear laminations and containing some <1cm sized autobrecciated fragments.					
157.80 165.80 **Mudstone**S7 Green, yellowish green beeded mudstones/siltstones. Non-magnetic to locally weakly magnetic. Beds range in widths from 3mm to 40cm. Some are more susceptible to sericitic alteration. Orientations vary down the unit starting at 30, 40, 15, 20, 30, 40, 10, then staying at 30 from 163m to ~166m. Some of the beds are fractured and sheared, with displacement up to 3cm dextrally and fractures are oriented comonly at 70-80 deg TCA. Lower contact appears to be a phasing from mudstone to ashtuff.					
	158.00	159.00	1.00	S026562	1.850
	159.00	160.00	1.00	S026563	0.216
	160.00	161.00	1.00	S026564	0.008
	161.00	162.00	1.00	S026565	0.008
	162.00	163.00	1.00	S026566	0.009
	163.00	164.00	1.00	S026567	0.011
	164.00	165.00	1.00	S026568	0.101
	165.00	165.70	0.70	S026569	0.786
	165.70	166.70	1.00	S026570	0.091
165.80 166.70 **Tuff**V9 Beige hued fine grained ash tuff. Weakly to non-magnetic. Semi-pervasively sericite-anekrite altered with mottled green relatively unaltered patches up to 1cm in size. ~4% qtz-ank veining 1-3cm wide oriented 70 and 40 deg TCA.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Unit is brief and terminates with a 3cm wide quartz vein separating a fault zone oriented 80 deg TCA.					
165.80	168.50	**Sericite; Ankerite**Se; Ank Semi-perv ser-ank alteration.					
166.70	167.10	**Fault Zone; Mineralized Zone**FAZ; MNZ 40cm wide fault zone. Upper contact is a 3cm wide qtz-ank vein oriented 80 deg TCA,, followed by 15cm of autobrecciated tuff with qtz-ank fill. There is ~0.5% pyrite and chalcopyrite hosted within some of the quartz-ankerite matrix of the breccia portion of the vein. 0.5cm wide strong gougy fault at 167.9m oriented 70 deg TCA. Fault is non-competent with spongy chloritic clay and gouge with fragments 1mm or less which are more platy. Following the fault the rock is broken and blocky qith RQD = 0 and fragments 2x4cm in size with break angles at 10, 30 and 70 deg TCA with a couple of chips of discing at the end of the interval with minor gouge coating the breaks.	166.70	167.40	0.70	S026571	0.029
166.90	166.95	**Fault**FLT Strong spongy/gougy 0.5cm wide fault roiented 70 deg TCA. Chloritic clay and gouge sandwhiced between competent pieces of core. Fault is friably to gougy with fragments and plates <1mm in size. 15cm ahead of the fault is qtz-ank flooded autobreccia a a qtz-ank vein oriented 80 deg TCA. ~0.5% chalcopyrite and pyrite is hosted in part of the qtz-ank matrix of the breccia fill. After the fault is some broken blocky core over 10cm with a couple of "discs" of core <1cm core width with some gouge coating the surfaces, oriented 70 deg TCA, hosted by mudstone. Fault and earlier is hosted in tuff.					
167.10	168.95	**Mudstone; Mineralized Zone**S7; MNZ More dark green/blackish to lighter brown-green very fine grained mudstone with bedding oriented 60-70 deg TCA. 168.5-168.395: Interval begins hosting some dark greyish quartz floods with					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
qtz-ank veining. Possibly galena hosted within the silica flooded zones though they have sharp contacts roughly 60 deg TCA. Flooding occurs in bands 1cm to 10cm in core length and over ~40% of the interval. 168.5-168.6m: Interval is mostly flooded with quartz-galena oriented 60 deg TCA and hosting some qtz-ank veins oriented 65 deg TCA ~0.5-1.5cm wide, cross cut and dispalced 2.5cm by a 0.5cm wide qtz-ank vein oriented 140 deg TCA. Lower contact has a 1cm wide mod-storng shear band strongly sericitized oriented 60 deg TCA.			167.40	168.40	1.00	S026572	0.658
			168.40	168.90	0.50	S026573	9.810
168.50	168.95	**Sericite; Ankerite; Silica**Se; Ank; Si Semi-perv ser-ank alteration with silica floods.					
168.50	168.60	Fl **floods** Fl;;;;;; 10cm wide band of silica flooding hosting some 0.5-1.5cm wide qtz-ank veins oriented 65 deg TCA. Trace-1% pyrite through the flood. Flooding is mostly greyish smokey quartz and veining.					
			168.90	169.70	0.80	S026574	1.310
168.95	170.45	**Tuff; Mineralized Zone**V9; MNZ Beigey-brown (reddish) fine grained tuff. Weakly magnetic to non-magnetic. Pervasive weak hematite and silica, moderate sericite and mod-strong ankerite alteration. Trace-2% disseminated pyrite throughout the unit. ~3% qtz-ank veining in 1mm-2cm wide veins oriented 40-70 and 170 deg TCA. Included are some smaller stockwork fractures. Lower contact is sharp, oriented 50 deg TCA.					
168.95	170.45	**Hematite; Silica; Sericite; Ankerite**He; Si; Se; Ank Pervasive weak hematite and silica, moderate sericite and mod-strong ankerite alteration.					
168.95	170.45	**Pyrite**Py					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Tr-2% diss py throughout t he unit.					
			169.70	170.40	0.70	S026577	0.036
			170.40	171.30	0.90	S026578	0.307
170.45	171.30	**Mudstone**S7 Dark green/black and lighter green very fine grained mudstone. Bedding appears to be at 10 and 140 deg TCA but microfaulted and shifted likely exagerating the orientation of the beds. Soem shifts occur over 2cm along hairline micro-faults oriented 40 and 50 deg TCA with some qtz-ank fill. Lower contact is sharp, oriented 65 deg TCA.					
171.30	201.00	**Tuff Breccia; Tuff**V9BX; V9 Following the mudstones are coarse fragmental tuff breccias, though the unit alternates from breccia, lapilli to fine grained tuffs and cycles between the units in 3-10m intervals. Overall unit is dark green to green. Moderately to strongly magnetic. Initial 50cm is fairly sericitized and anekritic which drops quickly to a strong pervasive anekrite and moderate to weak hematitic altered (strong hmt and weak ser, and strong ser weak hmt are interchangeable). Fragmental intervals have up to 40% angular clasts <3cm in size. Tuff intervals are massive and barely contain any qtz-ank fractures. Otherwise tuff breccia and laippili tuff intervals have <5% veining local in qtz-ank veins 15cm wide oriented 30-50 deg TCA and stronger ank-ser alteration proximal to veins. 182.8: 0.5cm wide fault oriented 45 deg TCA. Fault is chloritic, sericitic and ankeritic with hairline sericite shear bands and overall minor clay in gouge. 183.6-183.7m: 6cm wide qtz vn oriented 80/55 deg TCA with minor ankerite fractures and trace disseminated pyrite. Surrounding the vein is strong sericite-ankerite bleaching and stockwork ankerite fractures/veinlets up to 10cm prior to the vein. Starting at 192.3m the unit display weak bedding fabric oriented 35-40 deg TCA.	171.30	172.30	1.00	S026580	0.006

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Between the fault (182.8m) and up to 185m the tuff is more darker and hematitic but some similairites between the mineralized zone "red rock" is present. Also this zone appears to be glassier, very weakly silicified. Hole successfully passed through target and terminates within tuff breccia/lapilli tuff.					
171.30	201.00	**Hematite; Sericite; Ankerite**He; Se; Ank Initial 50cm is fairly sericitized and anekritic which drops quickly to a strong pervasive Ankerite and moderate to weak hematitic altered (strong hmt and weak ser, and strong ser weak hmt are interchangeable).					
			172.30	173.00	0.70	S026581	0.003
			173.00	174.00	1.00	S026582	0.003
			174.00	175.00	1.00	S026583	0.011
			175.00	176.00	1.00	S026584	0.015
			176.00	177.00	1.00	S026585	0.005
			177.00	178.00	1.00	S026586	0.007
			178.00	179.00	1.00	S026587	0.005
			179.00	180.00	1.00	S026588	0.003
			180.00	181.00	1.00	S026589	0.003
			181.00	182.00	1.00	S026590	0.003
			182.00	183.00	1.00	S026591	0.003
182.80	182.85	**Fault**FLT 1cm wide strong fault oriented 45 deg TCA. Strongly sheared with clay supporting gouge between sheared walls. Overall chloritic, ankeritic and hairline sericite shear bands.					
			183.00	184.00	1.00	S026592	0.003
183.60	183.70	Vn **vein (5 mm - 10 cm)** Vn;;;;;; 6cm wide qtz-py-ank vn @ 80/55 ddeg TCA. Fractured light grey qtz vein with hairline ankeritic fractures and trace disseminated pyrite throughout the vein. 10cm prior to the vein is a stockwork of ankerite fractures and					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
veinlets and localized bleaching from strong sericite-ankerite alteration of the tuff.					
	184.00	185.00	1.00	S026593	0.005
	185.00	186.00	1.00	S026594	0.012
	186.00	187.00	1.00	S026595	0.020
	187.00	188.00	1.00	S026596	0.003
	188.00	189.00	1.00	S026597	0.003
	189.00	190.00	1.00	S026598	0.003
	190.00	191.00	1.00	S026602	0.003
	191.00	192.00	1.00	S026603	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_78

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 22/06/2015
End date: 23/06/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 05/07/2015

Contractor: Spektra
Author: Mark Masson

Christal Hanuszczak

Collar

Azimuth: 180.0°
Dip: -45.00°
Length: 63.00

	UTM-Nad83	AK-Geo
East	570059.578	7932.126
North	5331216.627	10266.850
Elevation	337.954	337.849

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Multishot	0.00	179.5°	-44.7°	No
Multishot	3.00	179.7°	-44.7°	No
Multishot	6.00	180.1°	-44.7°	No
Multishot	9.00	179.5°	-44.7°	No
Multishot	12.00	180.3°	-44.7°	No
Multishot	15.00	180.1°	-44.7°	No
ReflexEZS	18.00	180.8°	-44.5°	Yes
Multishot	18.00	180.5°	-44.7°	No
Multishot	21.00	181.1°	-44.6°	No
Multishot	24.00	180.1°	-44.6°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	27.00	179.6°	-44.5°	No
Multishot	30.00	179.8°	-44.5°	No
Multishot	33.00	179.5°	-44.5°	No
Multishot	36.00	180.2°	-44.5°	No
Multishot	39.00	180.5°	-44.5°	No
Multishot	42.00	181.0°	-44.5°	No
Multishot	45.00	180.6°	-44.4°	No
Multishot	48.00	180.5°	-44.4°	No
Multishot	51.00	180.8°	-44.4°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

Project: Amalgamated Kirkland

11/03/2016

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Multishot	179.5°	-44.7°	No							
3.00	Multishot	179.7°	-44.7°	No							
6.00	Multishot	180.1°	-44.7°	No							
9.00	Multishot	179.5°	-44.7°	No							
12.00	Multishot	180.3°	-44.7°	No							
15.00	Multishot	180.1°	-44.7°	No							
18.00	ReflexEZS	180.8°	-44.5°	Yes							
18.00	Multishot	180.5°	-44.7°	No							
21.00	Multishot	181.1°	-44.6°	No							
24.00	Multishot	180.1°	-44.6°	No							
27.00	Multishot	179.6°	-44.5°	No							
30.00	Multishot	179.8°	-44.5°	No							
33.00	Multishot	179.5°	-44.5°	No							
36.00	Multishot	180.2°	-44.5°	No							
39.00	Multishot	180.5°	-44.5°	No							
42.00	Multishot	181.0°	-44.5°	No							
45.00	Multishot	180.6°	-44.4°	No							
48.00	Multishot	180.5°	-44.4°	No							
51.00	Multishot	180.8°	-44.4°	No							
54.00	Multishot	179.7°	-44.4°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	3.40	**Overburden**OVB Casing driven to 3.6m. Coring starts at 3.4m					
3.40	21.84	**Tuff; Lapilli Tuff**V9; V9L Massive ash/lapilli tuff. Varies from light green to green-bn to red-bn dependent on alt'n ser-chl-hem. Typy mody magnetic, mody ankeritic. 1% ubiq, barren QA strgrs/ff. 9.4 - 10.5 FZ: Healed flt bx bounded by serc slip planes @ 15 tca. Comprised of healed angular rock frags in a ser-chl mx. Appears to be a x-flt. Non-mineralized. Lcon mkby a tight serc slip @ 65 tca.					
3.40	21.84	**Sericite; Chlorite; Hematite**Se; Cl; He Variable sericite-chlorite-hematite alteration.					
9.40	10.50	**Breccia healed 15°; Fault Zone**Bxh; FAZ15° 9.4 - 10.5 FZ: Healed flt bx bounded by serc slip planes @ 15 tca. Comprised of healed angular rock frags in a ser-chl mx. Appears to be a x-flt. Non-mineralized.					
21.84	22.70	**Mudstone**S7 Light yellow-green, sericitized mud beds interbedded with vfg buff-bn ash tuff ranging from a feww mm's to a few cm's thick @ 65 tca					
22.70	44.80	**Lapilli Tuff**V9L Massive with a very weak clast elongation locy devd @ 40 tca. Very stgy alt'd Light pink-bn to mauve (hematitic) with patchy sercitic alt'd, pale yellow-green areas. Mody to stgy magnetic and mody to stgy ankeritic. 1-2% ubiq barren QA strgrs/vnlt's as stkwrk and sheeted. This pink-bn colouration is similar to the alt'n sometimes seen associatd with the mnzn, but is not quite the same and no mnzn is evident. This would correspond to the vertical projection of the zone found in AKC13-66. 32.1-32.2 FZ: Healed FltBx @ 35 tca. Rx frags and minor QA within a fg healed mx.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Lcon sharp @ 50 tca					
22.70	44.80	**Hematite; Sericite**He; Se Stringy hmt and patchy ser alt'n.					
			29.00	30.00	1.00	S026364	0.006
			30.00	31.00	1.00	S026365	0.005
			31.00	32.00	1.00	S026366	0.005
			32.00	33.00	1.00	S026367	0.003
32.10	32.20	**Fault Zone; Breccia healed**FAZ; Bxh 32.1-32.2 FZ: 7 cm wide Healed FltBx @ 35 tca. Rx frags and minor QA within a fg healed mx. Non-mnzd					
			33.00	34.00	1.00	S026368	0.003
			34.00	35.00	1.00	S026369	0.003
			35.00	36.00	1.00	S026371	0.008
			36.00	37.00	1.00	S026372	0.011
			37.00	38.00	1.00	S026373	0.003
			38.00	39.00	1.00	S026374	0.003
			39.00	40.00	1.00	S026377	0.003
			40.00	41.00	1.00	S026378	0.008
			41.00	42.00	1.00	S026379	0.011
			42.00	43.00	1.00	S026380	0.003
			43.00	44.00	1.00	S026381	0.003
			44.00	45.00	1.00	S026382	0.007
44.80	45.50	**Greywacke; Mudstone**S3; S7 Interbedded mudstone/wacke horizon-Upper 20 cm's is a light green-bn poorly bedded mudstone then a light grey wacke in part with narrow mudstone interbeds and the last 15 cm is again mudstone.					
			45.00	46.00	1.00	S026383	0.024
45.50	47.14	**Tuff; Lapilli Tuff**V9; V9L FG ash/lapilli tuff with <5% clast component which are notably smaller than previous lap tuff horizons, typy <1cm. Dark grey-green to 46.5m then					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
becomes increasingly sericitic alt'd to a bleached yellow-bn colour towards lcon with fz and mnzd zone below. Lcon mkby a stg serc mud flt @ 65 tca.					
45.50 47.14 **Sericite**Se Sericite altered.					
	46.00	47.00	1.00	S026384	0.016
	47.00	48.00	1.00	S026385	0.345
47.14 47.90 **Mineralized Zone; Fault Zone 65°**MNZ; FAZ65° Mineralized FZ with a pervasive shear fabric and crushed texture with wispy serc partings. Uppper and lower contacts are 1-5mm thick serc mud breaks @ 65 tca. Host appears to be a fg wacke. MNzn consists of Tr-5% vfg diss Py. Mx hosts 1-5% fractured, attenuated and bxd smoky Qtz strgrs/frags with wispy sericite. QA vng is rare.					
47.14 47.90 **Pyrite**Py Tr-5% diss py.					
47.90 53.10 **Lapilli Tuff**V9L Massive to wkly foliated with weak clast elongation @ 40 tca. Dark grey-green with patchy pale brown areas due to spotty serc alt'n. Mody magnetic and mody-stgy ankeritic. Poorly sorted, mx supported with 10-20% heterolithic subrounded to angular clasts from a few mm's to 2-3 cm's. Minor jasper noted and may have a small sediment component. 47.9 - 49.8: Interval is wkly mnzd with Tr-1% Py as irregular wispy seams and clots with a few patches of disseminations. Py is brassy in places and varies from vfg dusty to sub-euhedral. Lcon is sharp and mkby a 1.5 cm barren QA vn @ 50 tca.					
47.90 53.10 **Ankerite; Sericite**Ank; Se Mod-str ankeritic and patchy sericite altered.					
	48.00	49.00	1.00	S026386	0.106
	49.00	50.00	1.00	S026387	0.070

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			50.00	51.00	1.00	S026388	0.010
			51.00	52.00	1.00	S026389	0.003
			52.00	53.00	1.00	S026391	0.006
			53.00	54.00	1.00	S026392	0.010
53.10	55.10	**Mudstone**S7 Well bedded, light green mudstone with soft-sed features such as flame structures. At 53.4 is a tight fold (synformal) approx. 5 cm across, axis @ 60 tca. Lcon mkby a muddy, serc flt gg @ 60 tca.					
			54.00	55.00	1.00	S026393	0.075
			55.00	56.00	1.00	S026394	0.009
55.10	63.00	**Lapilli Tuff**V9L Massive to weakly foliated @ 45 tca. Dark grey-green to mauve with patchy pale green serc alt'd intervals. Clasts are predominantly light pink porphyritic and range from a few mm's to 3 cm's. Mody to stgy magnetic, mody ankeritic, 1-2% ubiq barren QA strgrs and FF. 55.1 Fault @ 60 tca: 5 mm wide serc mud gouge flt. 55.7 Flt @ 55 tca: 1 cm wide healed bx with angular rock frags in a chl-ser mx - moderate limonitic staining EOH					
55.10	63.00	**Sericite**Se Patchy sericite intervals.					
55.10	55.13	**Fault gouge 60°**Gg60° 55.1 Fault @ 60 tca: 5 mm wide serc mud gouge flt.					
55.70	55.71	**Breccia healed 55°**Bxh55° 55.7 Flt @ 55 tca: 1 cm wide healed bx with angular rock frags in a chl-ser mx - moderate limonitic staining					
			56.00	57.00	1.00	S026395	0.008
			57.00	58.00	1.00	S026396	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	58.00	59.00	1.00	S026397	0.003
	59.00	60.00	1.00	S026398	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_82

Claims title:	CLM328		Section:		
Township:	Teck		Level:		
Range:			Work place:	Upper Canada Mine Site	
Lot:					
Start date:	30/06/2015		Description date:	05/07/2015	
End date:	01/07/2015				

Contractor: Spektra

Author: Mark Masson

Christal Hanuszczak

Collar

Azimuth: 0.0°

Dip: -45.00°

Length: 105.00

	UTM-Nad83	AK-Geo
East	570012.937	7871.339
North	5331164.796	10232.691
Elevation	335.838	335.733

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	359.5°	-45.0°	No
Multishot	12.00	359.5°	-45.0°	No
Multishot	15.00	0.6°	-45.0°	
Multishot	18.00	1.2°	-45.1°	
Multishot	21.00	1.5°	-45.1°	
Multishot	24.00	1.7°	-45.1°	
Multishot	27.00	1.8°	-45.0°	
Multishot	30.00	1.9°	-45.0°	
Multishot	33.00	2.1°	-45.0°	
Multishot	36.00	2.2°	-44.9°	

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	2.3°	-44.9°	
Multishot	42.00	2.4°	-44.9°	
Multishot	45.00	2.5°	-44.9°	
Multishot	48.00	2.5°	-44.8°	
Multishot	51.00	2.6°	-44.9°	
Multishot	54.00	2.7°	-44.8°	
Multishot	57.00	2.9°	-44.8°	
Multishot	60.00	3.0°	-44.8°	
Multishot	63.00	2.8°	-44.7°	
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	359.5°	-45.0°	No		102.00	Multishot	4.5°	-44.5°		
12.00	Multishot	359.5°	-45.0°	No		105.00	Multishot	4.5°	-44.4°		
15.00	Multishot	0.6°	-45.0°								
18.00	Multishot	1.2°	-45.1°								
21.00	Multishot	1.5°	-45.1°								
24.00	Multishot	1.7°	-45.1°								
27.00	Multishot	1.8°	-45.0°								
30.00	Multishot	1.9°	-45.0°								
33.00	Multishot	2.1°	-45.0°								
36.00	Multishot	2.2°	-44.9°								
39.00	Multishot	2.3°	-44.9°								
42.00	Multishot	2.4°	-44.9°								
45.00	Multishot	2.5°	-44.9°								
48.00	Multishot	2.5°	-44.8°								
51.00	Multishot	2.6°	-44.9°								
54.00	Multishot	2.7°	-44.8°								
57.00	Multishot	2.9°	-44.8°								
60.00	Multishot	3.0°	-44.8°								
63.00	Multishot	2.8°	-44.7°								
66.00	Multishot	2.9°	-44.8°								
69.00	Multishot	3.0°	-44.7°								
72.00	Multishot	2.9°	-44.7°								
75.00	Multishot	3.5°	-44.7°								
78.00	Multishot	3.4°	-44.7°								
81.00	Multishot	3.5°	-44.6°								
84.00	Multishot	3.7°	-44.6°								
87.00	Multishot	3.8°	-44.6°								
90.00	Multishot	3.9°	-44.5°								
93.00	Multishot	4.1°	-44.5°								
96.00	Multishot	4.2°	-44.5°								
99.00	Multishot	4.3°	-44.5°								

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	5.70	**Overburden**OVB Overburden					
5.70	7.40	**Greywacke; Mudstone; Mineralized Zone**S3; S7; MNZ Green to dark green altered medium to fine grained greywacke hosting intercalated dark green banded yellowish mudstones (1-13cm core length widths). Non-magnetic. Varyign degrees of sericite alteration from weak to locally moderate. >85% greywacke in the interval with partially digested mudstone bands. Some quartz-ankerite veining as fractures, but there is a 30cm core length zone which may be the mineralized zone. Since it is the start of the hole fractures and joints are hmt-ox alt'd though restricted to just coating the surface. AMZ: Strong sericite, tr py/galena qtz-ank vn'g 7.0-7.4m: Bleached interval of strong sericite and anekrite alteration so the greywacke is a beige hue, consisting of ~35% qtz-ank veining. Veins are low angled from 0-20 deg TCA and range from 1mm to 3cm thick. Outlines and fractures are a light to dark grey metallic hue, galena, with some pockets of anhedral recrystalized or late brassy pyrite also haloed or hosted within galena(?)moly(?). Overall ~0.5% galena and pyrite through this part of the unit. Lower contact is sharp, oriented 40 deg TCA.	5.70	7.00	1.30	S026604	0.003
5.70	7.40	**Sericite**Se Weak to locally moderate sericite alteration.					
7.00	7.40	**Pyrite; Galena**Py; PbS Tr py and galena mineralization in veins.	7.00	8.00	1.00	S026605	0.021
7.25	7.50	Vn **vein (5 mm - 10 cm)** Vn;;;;;; ~4cm wide quartz-ankerite-galena-pyrite vein oriented 0-30 deg TCA. Msotly the vein runs parallel to the core axis with a few splays also at 0 deg TCA up to 1cm thick. Vein is dominantly quartz and ankerite with some patchy dissmeinated to fine fracture controlled galena with					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		disseminated oyrite up to 0.5%.					
7.40	21.15	Mudstone; GreywackeS7; S3 Dark green striped yellowish green very fine grained mudstones with intercalated greenish-yellow greywacke. Non-magnetic. Very weakly to locally anekrite altered associated with qtz-ank veinlets (<1% of the unit). Mudstone banding from 2mm to 1cm thick bands alternating between sericite-rich to chlorite-rich. Orientations change rapidly throughout, dominantly at a 60-90 deg TCA but some intervals are also at 0 deg TCA. >80% of the unit is mudstone though there are some greywacke intervals present, mostly <5cm wide and frequently occur banded proximal to one another over as much as 50cm core lengths. 14.9-15.25m: Interval of greywacke with sharp upper contact oriented 40 deg TCA and sharp lower cotnact at 70 deg TCA. The greywacke hosts ~10% zoned fragments of mudstone with 2-5mm wide seriite halos and chloritic cores, and are ~0.5-1cm wide and 1-2cm long. Prior to the greywacke is ~10cm core length of mudstone oriented 0 deg TCA. Following the greywacke is 40cm of alternating greywacke/mudstone 2-5cm thick oriented 70 deg TCA. 17.9-18.6m: Another interval of fine to medium graine dgreywacke, becoming increasingly more sericitc from a very weak to a weak-mod alteration and bleaching to a beige hue. Contacts are sharp oriented 60 deg TCA. Approaching the end of the unit starting within the greywacke occuring at 17.9m, the unit takes on a very weak altered/bleaching causing a washed out green/yellow green colouration. Lower contact is sharp, oriented 50 deg TCA.						
			8.00	9.00	1.00	S026606	0.011
			9.00	10.00	1.00	S026607	0.033
			10.00	11.00	1.00	S026608	0.024
			11.00	12.00	1.00	S026609	0.248
			12.00	13.00	1.00	S026610	0.018

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			13.00	14.00	1.00	S026611	0.103
			14.00	15.00	1.00	S026612	0.030
			15.00	16.00	1.00	S026613	0.270
			16.00	17.00	1.00	S026614	0.009
			17.00	18.00	1.00	S026615	0.006
			18.00	19.00	1.00	S026616	0.009
			19.00	20.00	1.00	S026617	0.020
			20.00	21.00	1.00	S026618	0.023
			21.00	22.00	1.00	S026620	0.014
21.15	42.90	Greywacke; Mineralized ZoneS3; MNZ Bleached green fine grained altered greywacke. Non-magnetic. Weak to moderately ankerite and moderately sericite altered. ~5% ank-qtz veining at 0, 50 and 80 deg TCA. in a stockwork of veins from 1mm to ~6cm wide. Trace disseminated pyrite ins oem of the veins and within greywacke proximal to veining and within fine fractures. Hosts a few intervals of mudstone form 10-30cm wide but overall >90% greywacke throughout this unit. 23.2-23.6m: Qtz-ank-galena-py veining @ 20, 40, 150 deg TCA. Quartz flooding with quartz-ankerite, ankerite, and ankerite-galena-pyrite veining/pockets. Pyrite is only associated associated with galena within this vein sustem, which is interstitial to quartz and quartz-ankerite. Overall <0.5% galena and pyrite. 25.9-26.1m: Moderate shear zone within greywacke with fabric oriented 60 deg TCA with hairline sericite stringers and minor chlorite-sericite clay gouge coating some of the break surfaces. Weak fault zone. 26.2-26.6m: Interval of banded mudstone 1-20mm thick beds oriented 50 deg TCA. 27.05-27.2m:Fracture/dilation zone with chlorite fill and quartz-ankerite pockets hosted within some of the wider chlorite bands (<1cm wide). Fractures are msotly 1-2mm wide though balloon out to ~1cm. Generally					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
oriented 30-60 deg TCA. After 28.3m the greywacke becomes mor emedium grained with a spotty appearance due to bleachign of finer grained minerals and speckled with 1-2mm sized chloritic spots at ~5-10% abundance. 30.7-31.1m: Another zone of silicification with larger chloritic spots associated with quartz flooding and some smokey quartz veinlets/fractures 1-5mmm wide oriented 40-45 and 130 deg TCA. Clotted to disseminated trace pyrite within the veins and fractures with dark outlines and bluish metallic tinge, appearing to be some galena associated with veinlet boundaries or disseminated within host/quartz flood. Alot of the alteration hugging the veins is chlorite. Few fractures are of smokey quartz up to 2mm thick. 30.7-35.2m: Qtz-amk vein zone with vienelts 2mm to 2cm wide with main orientations of 0, 50, 20 deg TCA and abundance of ~7%. Trace disseminated pyrite hosted within the greywacke int his itnerval. Also abundance of 5-20% darkg reen spots within the grewaycke 1mm-<1cm in size. White to light grey qtz-ank veins do not appear ot host nay disseminated pyrite and are cut by smokey quartz veins with displacement up to 5mm. 31.5-31.55m: 1cm wide smokey quartz vein oriented 40 deg TCA with disseminated pyrite (~10% within the vien, overall <0.5%). 33.0-33.1m: 1-3mm wide pyrite fracture oriented 10 deg TCA. Brassy dark brown coloured subhedral pyrite along a fracture. 41.1m: 3cm wide qtz-ank-py-chl vn @ 85-90 deg TCA. Qtz with ankerite stringers and chlorite fractures. Disseminated trace pin prick pyrite in fractures and in quartz. Sharp slips surround the vein with vine clay coating the surfaces. Lower contact is sharp, oriented at 55 deg TCA. 21.15 42.90 **Ankerite; Sericite**Ank; Se					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Weak to moderately ankerite and moderately sericite altered.					
21.15	42.90	**Pyrite**Py Tr dis py in veins.					
			22.00	23.00	1.00	S026621	0.006
			23.00	24.00	1.00	S026622	0.009
23.20	23.60	Vn **vein (5 mm - 10 cm)** Vn;;;;;; ~40cm wide vein zone with quartz flooding with sharp contacts, later quartz-ankerite and ankerite veins, fractures of galena with pyrite. Veining orientations are 20, 40 and 150 deg TCA. The pyrite is disseminaed with the galena, which forms spotty to fine fractured to interstitial to the ankerite veining within the quartz flooding. Trace py and galena.					
			24.00	25.00	1.00	S026623	0.012
			25.00	26.00	1.00	S026624	0.039
25.90	26.10	**Shear healed**Shrh Moderate shear zone which is likely a weak healed fault zone oriented 60 deg TCA. Greywacke is sheared with hairline sericite stringers and a mix of chlorite-sericite clay and gouge coating some of the break surfaces. Fault would be ~5cm wide but very weak.					
			26.00	27.00	1.00	S026627	0.062
			27.00	28.00	1.00	S026628	0.027
			28.00	29.00	1.00	S026629	0.120
			29.00	30.00	1.00	S026630	0.087
			30.00	31.00	1.00	S026631	0.524
30.70	31.10	Vn **vein (5 mm - 10 cm)** Vn;;;;;; Another quartz flooded zone with 1-5mm wide quartz veinlets oriented 40-45 and 130 deg TCA. Host greywacke is spotted (<1cm sized chloritic patches over 5% of the interval) and hardened with weak/moderate silicification. Stringyt o disseminated pyrite and disseminated galena					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		associated with viening and hsot rock, msotly pyrite present within the fractures and veins and galena as outliens or dissemianted within smokey quartz veinlets. Overall trace py/gal. 1-2mm wide smokey quartz fractures cut veining within the interval.					
			31.00	32.00	1.00	S026632	0.925
			32.00	33.00	1.00	S026633	0.168
			33.00	34.00	1.00	S026634	1.015
			34.00	35.00	1.00	S026635	0.043
			35.00	36.00	1.00	S026636	0.059
			36.00	37.00	1.00	S026637	0.042
			37.00	38.00	1.00	S026638	0.025
			38.00	39.00	1.00	S026640	0.009
			39.00	40.00	1.00	S026641	0.006
			40.00	41.00	1.00	S026642	0.067
			41.00	42.00	1.00	S026643	0.441
			42.00	42.90	0.90	S026644	0.034
42.90	50.80	MudstoneS7	42.90	44.00	1.10	S026645	0.016
		Dark green bedded vfg mudstones. Some bands of lighter chloritic altered beds, however not the same as the yellowish sericitized ones as seen above. Actually sericite alteration dropped off at the end of the previous unit and very weak at the start of this unit. No trace pyrite through the unit.					
		Bedding is oriented more consistently overall between 50-70 deg TCA without abrupt and drastic changes.					
		Some quartz-ankerite veining within the unit, overall <1% with exception to a 5cm wide vein occuring at 46.1m oriented 40 deg TCA.					
		45.5-45.8m: Broken blocky interval with breaks causing core to be 2-3cm wide before a break which are oriented 60-70 deg TCA which ara parallel to local sericite strinegrs and hematitic rusty oxidation.					
		45.65-46m: ~40cm wide interval of greywacke with the last 10cm in situ breccia with 1-2cm sized fragments.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Between 50m and the end of the unit ~40cm of core is lost as the unit becomes very broken and blocky and fractured for 60cm. Approaching lower contact, there is intercalated banding of greywacke and mudstonee. Lower contact is sharp, oriented 50 deg TCA.					
			44.00	45.50	1.50	S026646	0.008
			45.50	47.00	1.50	S026647	0.009
46.10	46.20	Vn vein (5 mm - 10 cm) Vn;;;;;; 5cm wide milky white to light grey bullish quartz-ankerite vein oriented 40 deg TCA. 0.5cm wide bands of ankerite form along the veinw alls and ankerite crystals hosted within quartz up to 2-7mm in diameter, generally blocky and equant.					
			47.00	48.50	1.50	S026648	0.008
			48.50	50.00	1.50	S026649	0.007
			50.00	51.50	1.50	S026652	0.013
50.80	59.70	GreywackeS3 Green/dark green fine to medium grained greywacke, with occassional intervals of mudstone. From 53-53.5m the unit has a "spotty" appearance likely from alteration cause dby local ankerite vienining oriented 20-30 deg TCA in veins <0.5cm wide and up to 5% abudnance. Aside formt hsi interval, very little to none ank-qtz veining occurs within the unit. Intervals of mudstone are present withint he unit up to 1m wide with sharp contacts oriented 50 deg TCA. Around 59.7m the greywacke begins picking up some sericite alteration and eventually some disseminated pyrite.					
50.80	59.70	AnkeriteAnk Spotty appearance due to ankeritic alteration.					
			51.50	53.00	1.50	S026653	0.007
			53.00	54.50	1.50	S026654	0.003
			54.50	56.00	1.50	S026655	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	56.00	57.50	1.50	S026656	0.003
	57.50	59.00	1.50	S026657	0.003
	59.00	60.50	1.50	S026658	0.007
59.70 63.80 **Tuff Breccia**V9BX Altered/bleached light green fine to medium grained tuff breccia. Moderately sericite altered and weak to moderate pervasive anekrite alteration. ~2-20% fragments all under 2cm in size and varianly altered with degrees of ankerite, sericite, chlorite or mixes. initially starts out as fine grained and a continuation of the greywacke, likely a contact somewhere within there obscurred by alteration, but change in magnetism from non magnetic to weakly magnetic and the pressence of angular fragments occurs within this interval. 61.5-63.8m: Strongest alteration associated with ankerite-quartz veining and sericite stringers oriented 50 deg TCA. Disseminated pyrite through thetuff, and within some fractures as subhedral late brown brassy looking clots. There are also pyritic seams from fracture sup to 3mm wide oriented 10-40 deg TCA with a darker mineral (chl?). Overall ~5% ank-wtz veining @ 30-40 deg TCA and trace to <0.5% pyrite. Lower contact is sharp, oriented 50 deg TCA.					
59.70 63.80 **Sericite; Ankerite**Se; Ank Moderately sericite altered and weak to moderate pervasive Ankerite alteration.					
	60.50	62.00	1.50	S026660	0.003
	62.00	63.50	1.50	S026661	0.006
63.20 63.60 Vn **vein (5 mm - 10 cm)** Vn;;;;;; Vein zone with0.5-5cm wide qtz-ank veining oriented 30-40 deg TCA with some splays running subparallel to the core axis <0.5cm wide. Trace disseminated pyrite surrounding veining hsoted within greywacke, as well as some pyritic seams with darker mineral (chl? Galena?) and darker					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		patchy alteration similar to the galena patches though not the right colour, as seen in other areas of the zone.					
			63.50	65.00	1.50	S026662	0.009
63.80	72.20	**Mudstone; Tuff Breccia**S7; V9BX Dark green very fine grained mudstones with light/altered green intercalated altered tuff breccia (up to 5%). Tuff/mudstone contacts are sharp, oriented 25-50 deg TCA. Some of the mudstones have altered banding with a mix of sericite-chlorite and are oriented 30-50 deg TCA parallel to bedding. Overall <1% ank-qtz veinlets 1-10mm wide oriented 40-50 and 70 deg TCA. Lower contact is sharp, oriented 40 deg TCA.					
			65.00	66.50	1.50	S026663	0.005
			66.50	68.00	1.50	S026664	0.007
			68.00	69.50	1.50	S026665	0.009
			69.50	71.00	1.50	S026666	0.010
			71.00	72.20	1.20	S026667	0.008
72.20	86.60	**Tuff**V9 Dark green to altered lighter yellowish green very fine to fine grained tuff/altered tuff. Weakly to moderately magnetic. Moderate pervasive ankerite alteration. Locally weak sericite alteration overall. 80.3-84.5m: Moderate to strong mix of pervasive sericite alteration bleaching the unit. Some orangey oxidized section associated with breaks. Some qtz/qtz-ank/ank stringers 1-2mm wide oriented 60-85 deg TCA and some trace disseminated pyrite proximal to veining hosted within tuff. 84.5-86.6m: Non-sericitized very dark hued and slightly more magnetic interval of very fine grained massive tuff hosting some alteration bands of sericite oriented 40-60 deg TCA associated sometime with some quartz-ank stringers. Lower contact is sharp, oriented 50 deg TCA.		72.20	73.00	0.80	S026668	0.005
72.20	86.60	**Ankerite; Sericite**Ank; Se . Moderate pervasive ankerite alteration. Locally weak sericite alteration					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		overall.					
			73.00	74.50	1.50	S026669	0.009
			74.50	76.00	1.50	S026670	0.006
			76.00	77.50	1.50	S026671	0.005
			77.50	79.00	1.50	S026672	0.012
			79.00	80.50	1.50	S026673	0.003
			80.50	82.00	1.50	S026674	0.003
			82.00	83.50	1.50	S026677	0.009
			83.50	85.00	1.50	S026678	0.008
			85.00	86.50	1.50	S026680	0.003
			86.50	88.00	1.50	S026681	0.007
86.60	105.00	**Tuff Breccia**V9BX Dark green fine grained tuff breccia. Weakly to moderately magnetic. Weak pervasive ankerite alteration. Fragments from 1-20% and ranging in size msotly <1-2cm though some fragments are up to 5cm in size, variously altered between ankerite, sericite and chlorite.. Some patchy sericite alteration not with sharp contacts. Unit terminates within the tuff breccia.					
86.60	105.00	**Ankerite**Ank Weak pervasive ankerite alteration.					

Canadian Malartic GP Exploration Division

DDH: AKC15_83

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 01/07/2015
End date: 02/07/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 09/07/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -49.00°
Length: 102.00

	UTM-Nad83	AK-Geo
East	569961.897	7826.944
North	5331177.141	10260.736
Elevation	331.311	331.206

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	2.0°	-49.4°	No
Multishot	18.00	2.0°	-49.4°	
Multishot	21.00	3.7°	-49.4°	
Multishot	24.00	3.2°	-49.3°	
Multishot	27.00	2.9°	-49.2°	
Multishot	30.00	2.7°	-49.1°	
Multishot	33.00	2.8°	-49.1°	
Multishot	36.00	2.8°	-49.0°	
Multishot	39.00	2.9°	-49.0°	
Multishot	42.00	2.9°	-49.1°	

Type	Depth	Azimuth	Dip	Invalid
Multishot	45.00	2.8°	-49.1°	
Multishot	48.00	2.8°	-49.1°	
Multishot	51.00	2.7°	-49.0°	
Multishot	54.00	2.7°	-49.0°	
Multishot	57.00	2.8°	-49.0°	
Multishot	60.00	2.7°	-48.9°	
Multishot	63.00	2.5°	-48.9°	
Multishot	66.00	3.1°	-48.8°	
Multishot	69.00	3.1°	-48.8°	
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	2.0°	-49.4°	No							
18.00	Multishot	2.0°	-49.4°								
21.00	Multishot	3.7°	-49.4°								
24.00	Multishot	3.2°	-49.3°								
27.00	Multishot	2.9°	-49.2°								
30.00	Multishot	2.7°	-49.1°								
33.00	Multishot	2.8°	-49.1°								
36.00	Multishot	2.8°	-49.0°								
39.00	Multishot	2.9°	-49.0°								
42.00	Multishot	2.9°	-49.1°								
45.00	Multishot	2.8°	-49.1°								
48.00	Multishot	2.8°	-49.1°								
51.00	Multishot	2.7°	-49.0°								
54.00	Multishot	2.7°	-49.0°								
57.00	Multishot	2.8°	-49.0°								
60.00	Multishot	2.7°	-48.9°								
63.00	Multishot	2.5°	-48.9°								
66.00	Multishot	3.1°	-48.8°								
69.00	Multishot	3.1°	-48.8°								
72.00	Multishot	3.4°	-48.8°								
75.00	Multishot	2.8°	-48.8°								
78.00	Multishot	2.9°	-48.7°								
81.00	Multishot	3.5°	-48.7°								
84.00	Multishot	3.4°	-48.7°								
87.00	Multishot	3.2°	-48.7°								
90.00	Multishot	3.4°	-48.6°								
93.00	Multishot	2.8°	-48.6°								
96.00	Multishot	2.9°	-48.6°								
99.00	Multishot	3.5°	-48.6°								
102.00	Multishot	3.1°	-48.5°								

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	7.00	**Overburden**OVB Overburden					
7.00	11.00	**Mudstone; Greywacke; Mineralized Zone**S7; S3; MNZ Top of the hole starting out in mudstone with a ~60cm wide interval of greywacke. Some of the joints are oxidized and weathered, with 10cm wide zones of broken blocky core. Mudstone hosts a 10cm wide mineralized qtz-py vn and continues past 11.0m. Interval is moderately/strongly sericite altered and pervasively mod-strong ankerite altered. 7.25-7.4m: Strongly oxidized orangey brown interval with a 1.5cm wide core oriented 30 deg TCA, appearing slightly sheared with sericite stringers. Either a strong shear zone or a weak healed fault. 7.55-8.1m: Interval of strongly sericitized beige greywacke, with sharp contacts oriented 70/40 deg TCA respectively. Both lower and upper contacts are oxidized. Trace dis. py in the greywacke. 8.3-8.5m: BBC with broken surfaces coated in oxidation. Fragments are ~1x2cm in size and sharp/angular with breaks occuring roughly at 20 and 40 deg TCA. 10.9-11.0m: ~10cm wide qtz-py-gal/mol?-ank vn oriented 45 deg TCA. Mostly dark bluish grey quartz vein laminated with disseminated pyrite throughout. 1-2mm wide boudinaged ankerite veinlets within the vein and some fractures with chlorite fill. ~5% pyrite within the vein. This resembles the mineralization of the target zone. Zone is shifted??? Mudstone continues from this point forward but hosting little to no pyrite.	7.00	8.00	1.00	S026785	0.129
7.00	31.40	**Sericite; Ankerite**Se; Ank Interval is moderately/strongly sericite altered and pervasively mod-strong ankerite altered.					
			8.00	9.00	1.00	S026786	0.085
			9.00	10.00	1.00	S026787	0.181

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			10.00	11.00	1.00	S026788	1.930
11.00	21.65	MudstoneS7 Yellowish green/dark green very fine grained bedded mudstones. Pervasively altered with mod-strong anekrite and sericite. Usually mudstones displays alternating layers of yellowish green and dark gree but majority of ht eunit is sericitic and yellowish. Bedding direction changes down the unit initially at 80 deg alternating between 45, 10, 50, 80, 60, 40 deg TCA. Lower contact is sharp and rusty with oxidation and chlorite fractures, oriented 40 deg TCA.	11.00	12.00	1.00	S026789	7.060
			12.00	13.50	1.50	S026790	0.108
			13.50	15.00	1.50	S026791	0.070
			15.00	16.50	1.50	S026792	0.036
			16.50	18.00	1.50	S026793	1.690
			18.00	19.50	1.50	S026794	2.050
			19.50	21.00	1.50	S026795	1.155
			21.00	22.50	1.50	S026796	0.026
21.65	31.40	GreywackeS3 Fine grained green massive greywacke. Pervasive moderate ankerite alteration and weak sericite alteration. 23.9-24.2m: Rusty and broken up interval. RQD=0 with fragments 1cm to 4cm in size. Minor limonitic oxidation associated with hematitic alt. 24.2m: A couple of pyrite hosting fractures <1mm wide oriented 70 deg TCA. Lower contact is sharp, oriented 50 deg TCA.	22.50	24.00	1.50	S026797	0.026
			24.00	25.50	1.50	S026798	0.013
			25.50	27.00	1.50	S026802	0.010
			27.00	28.50	1.50	S026803	0.009
			28.50	30.00	1.50	S026804	0.007
			30.00	31.50	1.50	S026805	0.015

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
31.40	35.65	**Mudstone; Mineralized Zone**S7; MNZ Green very fine to fine grained massive mudstone with some narrow bands of greywacke (2-5cm wide through 2% of the interval). Unit terminates with a 2cm wide amkerote-quartz-pyrite-galena vein oriented 15 deg TCA. Milky white quartz-ankerite with irregular needles and blobs of disseminated pyrite with moly/galena (up to 15% of the vein).					
			31.50	33.00	1.50	S026806	0.019
			33.00	34.00	1.00	S026807	0.007
			34.00	35.00	1.00	S026808	0.015
			35.00	36.00	1.00	S026809	0.009
35.50	35.65	Vn **vein (5 mm - 10 cm)** Vn;;;;;; 2cm wide milky white quartz-ank-py-gal/moly vn oriented 15 deg TCA. Upper contact contains minor gouge along breaks. Vein is ~15% disseminated pyrite and galena in blades and irregular blobs within qtz-ank. Surrounding hosts are non-altered.					
35.60	35.65	**Pyrite; Galena**Py; PbS Unit terminates with a 2cm wide amkerote-quartz-pyrite-galena vein oriented 15 deg TCA. Milky white quartz-ankerite with irregular needles and blobs of disseminated pyrite with moly/galena (up to 15% of the vein).					
35.65	55.30	**Greywacke**S3 Green lightly bleached/altered green fine grained massive greywacke. Pervasive moderate to strong ankerite and very weak to locally moderate sericite alteration. Consistent/frequent ank/qtz-ank veinlets stacked throughout 2-3% of the unit 1-3mm wide oriented 50-60 and 150 deg TCA. Lower contact appears more gradational than an actual contact, with the sudden appearance of fragments.					
35.65	55.30	**Ankerite; Sericite**Ank; Se Pervasive moderate to strong ankerite and very weak to locally moderate					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		sericite alteration					
			36.00	37.50	1.50	S026810	0.008
			37.50	39.00	1.50	S026811	0.005
			39.00	40.50	1.50	S026812	0.007
55.30	102.00	Tuff Breccia; TuffV9BX; V9 Dark green fine grained fragmental unit of tuff breccia, with ~1-15% fragments rangign from 1mm to 5cm in size, with larger fragments appearing more rounded and smaller fragments are angular and blocky. Very weakly magnetic at the start of th einterval but gradually becoming moderately magnetic through the rest of the unit. Very fine grained intervals throughout over 1-3m of dark green ash tuff to lapilli tuff. 74.5-77.3m: Some of the veins and fragments pick up a maroon red hue from hematite alterastion or fspar included in some of the veins. Starting at 81.2m there appears to be ash bedding oriented 10-15 deg TCA. 83.0-90.3m: Weak but relatively more pervasive sericitic alteration compared to the rest of the unit. Hole finished within the tuffs.					
83.00	90.30	SericiteSe Weak but pervasive sericite alteration.					
99.00	99.10	Vn vein (5 mm - 10 cm) Vn;;;;;; 11cm wide quartz-ank vein oriented 25 deg TCA. Orangey in hue from fspar or hematite staining. Last 2cm of the vein is a chloritized matrix brecciated part of the vein with qtz-ank fragments up to 1cm ins ize.					
101.80	102.00	Vn vein (5 mm - 10 cm) Vn;;;;;; A couple of veins sandwhiched between sharp alteration? Bands of a beige fine grained altered unit? Veins are 1.5, 2 and 3cm in size oriented 40 deg TCA, sandwhiching beige aphanitic massive bands 3-4cm wide. Middle vein is a breccia veinw ith chlorite fill with upper and lower veins					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
being qtz-ank veins.					

Canadian Malartic GP Exploration Division

DDH: AKC15_85

Claims title:	CLM328		Section:		
Township:	Teck		Level:		
Range:			Work place:	Upper Canada Mine Site	
Lot:					
Start date:	03/07/2015		Description date:	11/07/2015	
End date:	04/07/2015				

Contractor: Spektra

Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°

Dip: -50.00°

Length: 216.00

	UTM-Nad83	AK-Geo
East	569846.288	7691.247
North	5331095.416	10220.351
Elevation	336.068	335.963

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Multishot	0.00	0.9°	-49.9°	
Multishot	3.00	0.4°	-49.9°	
Multishot	6.00	359.9°	-49.9°	
Multishot	9.00	359.7°	-49.9°	
Multishot	12.00	359.8°	-49.8°	
Multishot	15.00	359.9°	-49.8°	
Multishot	18.00	359.9°	-49.8°	
Multishot	21.00	359.9°	-49.8°	
Multishot	24.00	359.7°	-49.7°	
Multishot	27.00	359.7°	-49.6°	

Type	Depth	Azimuth	Dip	Invalid
Multishot	30.00	359.8°	-49.6°	
Multishot	33.00	0.1°	-49.6°	No
Multishot	36.00	359.1°	-49.5°	
Multishot	39.00	359.6°	-49.5°	
Multishot	42.00	0.2°	-49.5°	
Multishot	45.00	359.6°	-49.4°	
Multishot	48.00	359.4°	-49.4°	
Multishot	51.00	359.2°	-49.3°	
Multishot	54.00	0.0°	-49.2°	
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Multishot	0.9°	-49.9°			93.00	Multishot	359.7°	-48.8°		
3.00	Multishot	0.4°	-49.9°			96.00	Multishot	359.7°	-48.7°		
6.00	Multishot	359.9°	-49.9°			99.00	Multishot	359.7°	-48.6°		
9.00	Multishot	359.7°	-49.9°			102.00	Multishot	359.6°	-48.6°		
12.00	Multishot	359.8°	-49.8°			105.00	Multishot	359.6°	-48.6°		
15.00	Multishot	359.9°	-49.8°			108.00	Multishot	359.5°	-48.6°		
18.00	Multishot	359.9°	-49.8°			111.00	Multishot	359.6°	-48.5°		
21.00	Multishot	359.9°	-49.8°			114.00	Multishot	359.5°	-48.5°		
24.00	Multishot	359.7°	-49.7°			117.00	Multishot	359.6°	-48.4°		
27.00	Multishot	359.7°	-49.6°			120.00	Multishot	359.5°	-48.3°		
30.00	Multishot	359.8°	-49.6°			123.00	Multishot	359.5°	-48.3°		
33.00	Multishot	0.1°	-49.6°	No		126.00	Multishot	359.5°	-48.2°		
36.00	Multishot	359.1°	-49.5°			129.00	Multishot	359.6°	-48.1°		
39.00	Multishot	359.6°	-49.5°			132.00	Multishot	359.6°	-48.1°		
42.00	Multishot	0.2°	-49.5°			135.00	Multishot	359.7°	-48.0°		
45.00	Multishot	359.6°	-49.4°			138.00	Multishot	359.7°	-47.9°		
48.00	Multishot	359.4°	-49.4°			141.00	Multishot	359.7°	-47.9°		
51.00	Multishot	359.2°	-49.3°			144.00	Multishot	359.7°	-47.9°		
54.00	Multishot	0.0°	-49.2°			147.00	Multishot	359.9°	-47.8°		
57.00	Multishot	0.5°	-49.2°			150.00	Multishot	359.8°	-47.8°		
60.00	Multishot	0.0°	-49.2°			153.00	Multishot	0.0°	-47.8°		
63.00	Multishot	359.9°	-49.1°			156.00	Multishot	0.0°	-47.8°		
66.00	Multishot	359.8°	-49.0°			159.00	Multishot	0.0°	-47.7°		
69.00	Multishot	359.8°	-49.1°			162.00	Multishot	0.1°	-47.7°		
72.00	Multishot	359.8°	-49.0°			165.00	Multishot	0.2°	-47.7°		
75.00	Multishot	359.9°	-49.0°			168.00	Multishot	0.3°	-47.7°		
78.00	Multishot	359.7°	-48.9°			171.00	Multishot	0.3°	-47.7°		
81.00	Multishot	359.6°	-48.9°			174.00	Multishot	0.3°	-47.6°		
84.00	Multishot	359.7°	-48.9°			177.00	Multishot	0.4°	-47.6°		
87.00	Multishot	359.7°	-48.8°			180.00	Multishot	0.5°	-47.6°		
90.00	Multishot	359.7°	-48.8°			183.00	Multishot	0.5°	-47.6°		

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
186.00	Multishot	0.5°	-47.5°								
189.00	Multishot	0.7°	-47.5°								
192.00	Multishot	0.7°	-47.5°								
195.00	Multishot	0.8°	-47.5°								
198.00	Multishot	0.8°	-47.5°								
201.00	Multishot	0.7°	-47.5°								
204.00	Multishot	0.8°	-47.5°								
207.00	Multishot	1.0°	-47.5°								
210.00	Multishot	1.0°	-47.4°								

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	1.80	**Overburden**OVB Overburden. 30cm wide coarse granitic boulder.					
1.80	65.65	**Tuff Breccia; Tuff**V9BX; V9 Altered beige-green/beige-brown to subtly purplish to yellowish-brown altered laminated tuff breccias and tuffs. Weak to moderately magnetic. Mod-strong pervasive ankerite alteration with intervals of mod to weak hematitie or sericite, or mixtures of all of the above. Finely bedded with laminatiins and fabric oriented 40-60 deg TCA. Fragments rnage in size msotly 1-7mm in size or some from 1-6cm, some flattened and elongated rotated parallel to the foliation. Larger fragments are not deformed. Abundance of fragments ranges from 0 to 20% over widths of 20cm to 1.3m, but frequently alternating between tuff and tuff breccia. 25.6m: 2cm wide strongly sericitized healed fault oriented 35 deg TCA within a qtz-ank vein zone oriented 60 deg TCA. Fault bisects the vein zone occuring between 25.4-25.8m which is yellowish and strongly sericitized with minor hematitic alteration of the tuff-breccia. Overall unit is not very veined except from 29.5-36m with 1-2% qtz-ank veinlets 1mm to 2cm wide oriented 40-50 deg TCA. Sericite and hematite alteration rapidly drop off after the veining and the unit becomes more regularly altered greenish from anekritealteration. 65.3-65.4m: Local subhedral pyrite cubes hosted in tuff within an increasingly sericitic zone. Up to 5% pyrite cubes 1-4mm in size. Approahcing lower contact starting at 65.4-65.8m (and into the next unit) sericite alteration rapidly increases due to a fault zone still hosted within tuff, oriented 55 deg TCA.	1.80	3.00	1.20	S026682	0.005
1.80	65.65	**Ankerite; Hematite; Sericite**Ank; He; Se Mod-strong pervasive ankerite alteration with intervals of mod to weak hematitie or sericite, or mixtures of all of the above.	3.00	4.50	1.50	S026683	0.007

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			4.50	6.00	1.50	S026684	0.003
			6.00	7.50	1.50	S026685	0.005
			7.50	9.00	1.50	S026686	0.005
			9.00	10.50	1.50	S026687	0.003
			10.50	12.00	1.50	S026688	0.003
			12.00	13.50	1.50	S026689	0.003
			13.50	15.00	1.50	S026690	0.003
			15.00	16.50	1.50	S026691	0.003
			16.50	18.00	1.50	S026692	0.003
			18.00	19.50	1.50	S026693	0.012
			19.50	21.00	1.50	S026694	0.003
			21.00	22.50	1.50	S026695	0.013
			22.50	24.00	1.50	S026696	0.003
			24.00	25.50	1.50	S026697	0.009
			25.50	27.00	1.50	S026698	0.003
25.60	25.65	**Fault**FLT 2cm wide brecciated fault oriented 35 deg TCA, strongly sericitized and healed. Fragments of host tuff/tuff breccia up to 3mm in size. Centered within a qtz-amk vein zone from 65.4-65.8m oriented 60 deg TCA.					
			27.00	28.50	1.50	S026699	0.005
			28.50	30.00	1.50	S026702	0.003
			30.00	31.50	1.50	S026703	0.003
			31.50	33.00	1.50	S026704	0.003
			33.00	34.50	1.50	S026705	0.003
			34.50	36.00	1.50	S026706	0.003
			36.00	37.50	1.50	S026707	0.003
			63.50	65.00	1.50	S026708	0.029
			65.00	66.00	1.00	S026709	0.006
65.30	65.40	**Pyrite**Py 5% cubic pyrite locally.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
65.40	65.80	Vn **vein (5 mm - 10 cm)** Vn;;;;;; ~40cm wide vein zone of quartz-ankerite veining and flooded with sharp contacts oriented 60 deg TCa. At the center of the vein zone is a strong sericitic fault 2cm wide oriented 35 deg TCA. Quartz-ank vn zone appears to be brecciated internally.					
65.65	65.80	**Fault Zone**FAZ 15cm wide mod-strong fault zone oriented 55 deg TCA. A strong 1cm wide gougy and clay fault starts off the fault zone followed by moderate shearing, overall sericite and anekrite altered. Some ankerite flood/vein fill occurs withint he fault zone up to 3%.					
65.65	65.70	**Fault**FLT 2cm wide strong fault of clay-gouge (ank-ser alt'd tuff protolith) oriented 55 deg TCA. Fault zone follows from 65.65-65.8m and is locally strongly ank-ser altered, with some ank flooding up to 3% within the shearing.					
65.80	71.10	**Tuff**V9 Green very fine grained tuff/mudstone? Weakly magnetic. Pervasive weak ankertic alteration with locally storng ank-ser alteration mostly centered on ankerite veins (overall <<1% oriented 40-50 deg TCA. 69.9-70.35m: Strongly sericitized interval with fabric oriented 70 deg TCA. Looks like its layered with bedding? And strongly altered yellow green, potentially protolith is a short itnerval of storngly altered mudstone. Lower contact is sharp, oriented 60 deg TCA.					
65.80	71.10	**Sericite; Ankerite**Se; Ank Pervasive weak ankertic alteration with locally storng ank-ser alteration mostly centered on ankerite vein					
			66.00	67.50	1.50	S026710	0.007
			67.50	69.00	1.50	S026711	0.003
			69.00	70.50	1.50	S026712	0.015
			70.50	72.00	1.50	S026713	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
71.10	87.15	**Conglomerate** S1 Green conglomerate/pebbly greywacke. Pervasive ankerite alteration. 5-45% rounded to subrounded fragments, various compositions from very fine grained mafic to felsic fragments, to porphyritic and granitic. They vary in size from 1mm to 7cm in size. Some of the fragments are red jaspers which ar emore angular than the other fragments. 1-2% ankerite veining 1-4mm wide oriented 35-50 and 160 deg TCA. 85.8: 2cm wide qtz-ank vein, dark greyish quartz with fine disseminated pyrite. Vein is oriented 60 deg TCA. Matrix continues where fragments end and unit changes from a conglomerate to a greywacke.					
71.10	87.15	**Ankerite** Ank Pervasive ankerite alteration.					
			72.00	73.50	1.50	S026714	0.038
			73.50	75.00	1.50	S026715	0.025
			75.00	76.50	1.50	S026716	0.023
			76.50	78.00	1.50	S026717	0.013
			78.00	79.50	1.50	S026718	0.014
			79.50	81.00	1.50	S026720	0.022
			81.00	82.50	1.50	S026721	0.012
			82.50	84.00	1.50	S026722	0.009
			84.00	85.50	1.50	S026723	0.018
			85.50	87.00	1.50	S026724	0.077
			87.00	88.50	1.50	S026727	0.008
87.15	132.70	**Greywacke** S3 Fine to medium grained massive greywacke. Moderate pervasive ankerite alteration and weak pervasive sericite alteration (increases in intensity proximal to the fault zone at the end of this interval). Non magnetic. Rare 1mm sized fragments of red jasper within the greywacke. ~1% ank/quartz veinlets 1-2mm wide, often stacked or cross-cutting one another oriented					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		40/160 and 50/130 deg TCA 94.8-95.3m: Veined and brecciated interval, likely a healed fault zone, oriented 30-40 deg TCA. Qtz-ank veining and flooding with a 1cm wide band of chlorite. Fractured with chlorite fill. Greywacke is also sericitized ot a yellowish green hue. 104.8-113.75m: Interval of 3% qtz/qtz-ank veinswhich are 3mm to 2cm wide and typically oriented 15 and 170 deg TCA. 128.5-132.7m: The unit becomes increasingly sericitic to a moderate sericite alteration and fractured with chlorite fill. A fault zone occurs at the end of this interval, sitll within greywacke.					
87.15	133.90	**Ankerite; Sericite**Ank; Se Moderate pervasive ankerite alteration and weak pervasive sericite alteration (increases in intensity proximal to the fault zone at the end of this interval).					
94.80	95.30	Fl **floods** Fl;;;;;; Qtz-ank-chl flood/vein zone oriented 30-40 deg TCA. Brecciated with chlorite fracture fill. There's also a sharp 1cm wide chlorite band bisecting te intersection. Weakly resembles a flooded/healed fault zone. Some sericitic alteration of the host and as stringers within the veining.					
			129.00	130.50	1.50	S026728	0.008
			130.50	132.00	1.50	S026729	0.009
			132.00	133.50	1.50	S026730	0.010
132.70	133.90	**Fault Zone; Greywacke**FAZ; S3 Yellowish green fault zone within greywacke. Fine grained and mod-strongly sericite and anekrite altered. 132.7-132.8m: 3cm wide qtz-ank vein oriented 30 deg TCA. Fractures parallel to vein orientation is chlorite caoted and soem are even gougy as crack and seal slip faults.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		133.5-133.55m: 4cm wide strong fault oriented 25 deg TCA. Crumbly with chlorite-sericite gouge breccia, fragments up to 4mm in size, broken bits of qtz vein up to 8mm wide. Easily friable with little force applied for it to crumble. Some of the gouge and fractures are darker grey in colour, almost graphitic looking but nt graphitic. 133.5-133.9m: BBC with fragments ranging from 1x1mm to 2x3cm in size, of crumbly ser-chl altered greywacke to fragments of qtz-ank veins.					
132.70	132.80	Vn **vein (5 mm - 10 cm)** Vn;;;;;; 3cm wide crack and seal qtz-ank-chl fault oriented 30 deg TCA Vein has fractures parallel to orientation whicha re coated in chlorite and minor gouge, btu also a dark greyish hue which looks like it should be graphite but doesn't rub off like graphite.					
133.50	133.55	**Fault**FLT 4cm wide strong fault oriente 25 deg TCA. Friable with any exerted force and crumbles apart, Semi-competent. Chl+/-graphite clay gouge and sericite stringers. Fragments up to 4mm in size and broken up parts of qtz/qtz-ank veins present within the fault.	133.50	135.00	1.50	S026731	0.019
133.90	141.80	**Greywacke**S3 Yellowish-green fine to medium grained altered greywacke continues through and past the fault zone. Qtz-carb vening locally up to 10% and overall <3% with orientations from 40-50 deg TCA and at 170 deg TCA. Oterwise massive. Unit continues on but with the presence of pyrite. This itnerval of greywacke doe snto apepar to bear any pyrite but possibly may contain trace disseminated pyrite.					
			135.00	136.50	1.50	S026732	0.016
			136.50	138.00	1.50	S026733	0.017
			138.00	139.50	1.50	S026734	0.038
			139.50	141.00	1.50	S026735	0.502
			141.00	142.00	1.00	S026736	0.176

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
141.80 144.60 **Greywacke; Mineralized Zone**S3; MNZ Fine grained yellowish-green altered green continuation of the greywacke form above with pyritic seams and disseminated pyrite throughout the unit. Moderate to locally strong sericite alteration and mod-strong ankerite alteration. Unit also appeas to be greyish with another alteration flood of silica? But not too hard. ~5% qtz/qtz-ank/ank veins occur within the unit at 60-85 deg and 130 deg TCA and others at 0 and 170 deg TCA. Often these veins are bent and brecciated/fragmented. Some sshearing going on too proximal to veins in bands from 1-3cm wide. Overall trace to 2% disseminated pyrite int he greywacke and up to 80% relative to <1cm wide frature bands with brown disseminated pyrite. Some of the viens also host trace disseminated pyrite, though msotly within fractures or alogn contacts. 141.8m: <1cmw ide pyritic band roiented 30-40 deg TCA (pinches and swells) with up to 0.5% disseminated pyrite. 142.85m: 4cm wide qtz-ank vein @ 70 deg TCA, surrounded by 5cm wide sericitized greywacke band weakly sheared with fabric at 70. 143.3-144.3m: Dsrkgreenish brown hued greywacke due to ~5% disseminated pyrite hosted withint he silicified greywacke. Some viening ~1cm wide at 170/0 deg TCA and 60-70 deg TCA, thoguh pyrite is within the host. 144.3-144.6m: Fabric developed due to wear shearing and sericite alteration, oriented 70 deg TCA, exagerated with chloritic fractures. BBC as well with the core broken up to 3cm in core length and sharply at 70 deg TCA. Interval ends at the end of the weak shearing.					
141.80 201.10 **Sericite; Ankerite**Se; Ank Moderate to locally strong sericite alteration and mod-strong ankerite alteration.					
141.80 144.60 **Pyrite**Py					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Diss Py and py seams throughout the unit.					
			142.00	142.70	0.70	S026737	0.450
			142.70	143.70	1.00	S026738	3.360
			143.70	144.60	0.90	S026740	1.975
144.60	158.10	ConglomerateS1	144.60	146.00	1.40	S026741	0.068
		Yellowish beige hued altered conglomerate (pebbly greywacke). Greywacke becomes more consistently medium to coarse grained hosting 1-35% fragments which ary in size from 1mm to 6cm in diameter, rounded to subrounded and variably compositioned and altered, generally sericite, ankerite, chlorite and some which appear almost fusschitic(malachite?). Overall strongly sericite-ankerite altered. 148.3-148.5m: Some staining along a joint and surrounding soem of the fragments is emerald green/bright green, similar to fusccit or malachite. overall <1%. Some more stained fragments occur at 152.6m, 153.1m, 157.1m 153.1-154.2m: Interval with no fragments, massive with some fining to grain size. Fragments dropped off and start suddenly at upper and lower limits. 156.1-156.2m: A silicified pinkish grey fragment whichlooks like aporphyritic quartz nodule hsoting trace disseminated pyrite, Fragment is 7cm in diameter. Unit grades back into fine to medium grained fragment-poor greywacke.					
			146.00	147.50	1.50	S026742	0.374
			147.50	149.00	1.50	S026743	1.245
			149.00	150.50	1.50	S026744	2.950
			150.50	152.00	1.50	S026745	0.215
			152.00	153.10	1.10	S026746	0.091
			153.10	154.50	1.40	S026747	0.025
			154.50	156.00	1.50	S026748	0.068
			156.00	157.30	1.30	S026749	0.093
			157.30	158.10	0.80	S026752	0.020
158.10	201.10	GreywackeS3	158.10	159.60	1.50	S026753	0.028

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
Yellowish-green/beige fine to medium grained massive greywacke continued from above, with <<<<1% fragments 1-3mm in size. Strong ankerite and moderate sericite alteration, both pervasive. <2% ankerite-sericite vienelts 1-2mm wide oriented 30 deg TCA and qtz-ank veins <5mm wide oriented 70 deg TCA. Does not appear to consist of any dissemiated pyrite. 180.2-194.5m: Not massive as the above section of greywacke, more fractured with dark blackish chlorite fill(~1% of the interval), more broken up choppy semi-penetrating ank veins/ribs oriented 30-40, 50 and 140 deg TCA. Increase in sericite alteration again causinga yellowish brownish hue compared to the green, lightly altered/bleached green. Approaching the end of the unit there is an increase in qtz-amk veining as sheeted vein networks generally oriented 170-180 deg TCA up to 8% of the interval startong from 199.5m to 201.1m. Unit grades into a pebbly greywacke, conglomerate, rapidly.					
	159.60	161.10	1.50	S026754	0.013
	161.10	162.60	1.50	S026755	0.013
	162.60	164.00	1.40	S026756	0.010
	164.00	165.50	1.50	S026757	0.005
	165.50	167.00	1.50	S026758	0.005
	167.00	168.50	1.50	S026760	0.005
	168.50	170.00	1.50	S026761	0.006
	170.00	171.50	1.50	S026762	0.008
	171.50	173.00	1.50	S026763	0.003
	173.00	174.50	1.50	S026764	0.008
173.60 173.90 Vn **vein (5 mm - 10 cm)** Vn;;;;;; Bullish milky white-light grey quartz with fracture filled ankerite vein oriented 40 deg TCA. Along a fracture is some ankerite crystals radating within the quartz vien up to 1cm in size, but typically its fine wispy ankerite along fractures and joints/ Some chloritic fractures occur within the vein					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
as well oriented 30 and 160 deg TCA.							
			174.50	176.00	1.50	S026765	0.005
			176.00	177.50	1.50	S026766	0.016
			177.50	179.00	1.50	S026767	0.007
			179.00	180.50	1.50	S026768	0.008
			180.50	182.00	1.50	S026769	0.006
			182.00	183.50	1.50	S026770	0.010
			183.50	185.00	1.50	S026771	0.006
			185.00	186.50	1.50	S026772	0.007
			186.50	188.00	1.50	S026773	0.010
			188.00	189.50	1.50	S026774	0.006
			189.50	191.00	1.50	S026777	0.012
			191.00	192.50	1.50	S026778	0.009
			192.50	194.00	1.50	S026779	0.010
			194.00	195.50	1.50	S026780	0.012
			195.50	197.00	1.50	S026781	0.007
			197.00	198.50	1.50	S026782	0.009
			198.50	200.00	1.50	S026783	0.011
			200.00	201.50	1.50	S026784	0.010
201.10	216.00	ConglomerateS1 Variably coloured mottled conglomerate. Fragments vary from 1mm to 12cm in diameter and are variously composed and altered. Most noticibly are aphanitic sericitic or chloritic fragments, vibrant brick red jaspers, porphyritic chlorite-rich matrix with darker chlorite replaced augites or pinkish qtz matrix porphyritic fragments. All rounded or subrounded. Up to 80% fragments. Some clast support but generally matrix supported. Overall weak-mod ankerite altered and weak sericite altered matrix. No visible sulphides. Relatively few ank-qtz veins @ 40-45 deg TCA and are <0.5cm wide. 214-.8-216.0m: Fine to medium grained greywacke interval with <1% fragments.					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
201.10 216.00 **Ankerite; Sericite**Ank; Se Overall weak-mod ankerite altered and weak sericite altered matrix.					

Canadian Malartic GP Exploration Division

DDH: AKC15_91

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 14/07/2015
End date: 15/07/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 18/08/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 150.00

	UTM-Nad83	AK-Geo
East	570197.547	8042.015
North	5331151.667	10161.116
Elevation	336.690	336.585

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Multishot	0.00	351.6°	-45.1°	Yes
Surface	0.00	357.1°	-45.1°	No
Multishot	3.00	351.4°	-45.1°	Yes
Multishot	6.00	351.4°	-45.1°	Yes
Multishot	9.00	354.8°	-45.1°	Yes
Multishot	12.00	357.1°	-45.1°	No
Multishot	15.00	358.7°	-45.0°	No
Multishot	18.00	359.2°	-45.0°	No
Multishot	21.00	358.8°	-45.0°	No
Multishot	24.00	359.1°	-45.0°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	27.00	358.7°	-45.0°	No
Multishot	30.00	359.0°	-44.9°	No
Multishot	33.00	358.9°	-44.9°	No
Multishot	36.00	358.9°	-44.8°	No
Multishot	39.00	358.7°	-44.8°	No
Multishot	42.00	358.7°	-44.8°	No
Multishot	45.00	358.5°	-44.7°	No
Multishot	48.00	358.6°	-44.7°	No
Multishot	51.00	358.8°	-44.6°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Multishot	351.6°	-45.1°	Yes		90.00	Multishot	359.0°	-44.2°	No	
0.00	Surface	357.1°	-45.1°	No		93.00	Multishot	359.4°	-44.2°	No	
3.00	Multishot	351.4°	-45.1°	Yes		96.00	Multishot	358.3°	-44.1°	No	
6.00	Multishot	351.4°	-45.1°	Yes		99.00	Multishot	358.7°	-44.1°	No	
9.00	Multishot	354.8°	-45.1°	Yes		102.00	Multishot	358.4°	-44.1°	No	
12.00	Multishot	357.1°	-45.1°	No		105.00	Multishot	358.9°	-44.0°	No	
15.00	Multishot	358.7°	-45.0°	No		108.00	Multishot	358.6°	-44.0°	No	
18.00	Multishot	359.2°	-45.0°	No		111.00	Multishot	358.8°	-44.0°	No	
21.00	Multishot	358.8°	-45.0°	No		114.00	Multishot	358.5°	-44.0°	No	
24.00	Multishot	359.1°	-45.0°	No		117.00	Multishot	358.2°	-44.0°	No	
27.00	Multishot	358.7°	-45.0°	No		120.00	Multishot	358.2°	-44.0°	No	
30.00	Multishot	359.0°	-44.9°	No		123.00	Multishot	358.9°	-43.9°	No	
33.00	Multishot	358.9°	-44.9°	No		126.00	Multishot	2.4°	-43.9°	Yes	
36.00	Multishot	358.9°	-44.8°	No		129.00	Multishot	359.7°	-43.9°	No	
39.00	Multishot	358.7°	-44.8°	No		132.00	Multishot	0.0°	-43.8°	No	
42.00	Multishot	358.7°	-44.8°	No		135.00	Multishot	359.5°	-43.8°	No	
45.00	Multishot	358.5°	-44.7°	No		138.00	Multishot	359.6°	-43.8°	No	
48.00	Multishot	358.6°	-44.7°	No		141.00	Multishot	358.9°	-43.8°	No	
51.00	Multishot	358.8°	-44.6°	No		144.00	Multishot	358.8°	-43.8°	No	
54.00	Multishot	358.6°	-44.6°	No		147.00	Multishot	359.8°	-43.7°	No	
57.00	Multishot	358.0°	-44.5°	No							
60.00	Multishot	358.2°	-44.5°	No							
63.00	Multishot	359.6°	-44.4°	No							
66.00	Multishot	0.2°	-44.4°	No							
69.00	Multishot	359.4°	-44.4°	No							
72.00	Multishot	357.4°	-44.4°	No							
75.00	Multishot	359.4°	-44.3°	No							
78.00	Multishot	359.9°	-44.3°	No							
81.00	Multishot	359.4°	-44.3°	No							
84.00	Multishot	359.3°	-44.2°	No							
87.00	Multishot	0.1°	-44.2°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	4.90	**Overburden**OVB Overburden.					
4.90	9.70	**Tuff Breccia; Tuff**V9BX; V9 Bleached light green fine graiend tuff breccia/tuff. Weakly magnetic. Weak pervasive anekrite alteration, as well as oxidation coating many of the joints within this interval of low to high angle. Half the interval hosts fragments from 1-5cmin size, subangular and bleached hues pf pink/beiges, light greens from ser/ank/chl/hmt alteration. Becomes less bleached approaching lower contact. Lower contact is sharp oriented 40 deg TCA.					
4.90	23.00	**Ankerite**Ank Weak to mod pervasive ankerite alteration.					
9.70	23.00	**Tuff**V9 Dark purplish-green fine grained massive mafic tuff. Strongly magnetic. Pervasive mod ankerite alteration though the unit appears mafic. Some of the joints are also oxidized with alteration bands of hmt-liminote up to 1.5cm wide. Minor breccia and lapilli within the interval, otherwise massvie with a sense of bedding oriented 50-60 deg TCA. 20.95 - 21.3m: Chlorite-quartz-fspar vein oriented 30 deg TCA and up 1-5cm wide pinching off. Qtz-chl vein with fracture/gap filled orangey fspar. Approachign end of the interval theres more chlorite-quartz-fspar veinlets/fracture fills up to 2% and oriented at 20-30 and 70-80 deg TCA. Unit transitions back to a less mafic variation at the end of this interval.	18.50	20.00	1.50	S025247	0.003
			20.00	21.50	1.50	S025248	0.005
			21.50	23.00	1.50	S025249	0.005
23.00	150.00	**Tuff; Tuff Breccia**V9; V9BX Green/altered (bleached) green to beige fine grained tuff and tuff breccia. Weakly magnetic to moderately/strongly magnetic. Mod pervasive ankerite and sericite alteration. Variations from massive tuff to beeded with orientation	23.00	24.50	1.50	S025252	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
of 50 deg TCA, to lapilli tuff to fragmental brecciated tuff. Throughout the unit <<0.5% of it, there are pinkish orangey kspar veins and veinlets, often associated with qtz-ank and oriented from 10-80 eg TCa, typically 1-3mm in width. Stronger sericite alteration aorund 39.0-55.5m. 50.5 - 53.7m: Tuff breccia with a fabric oriented 50 deg TCA. Fragments are uniformly <1cm in size and angular and rotated with fabbric, ~40% abundance. **Note* Block 57m was skipped so the metres are 3m ahead of what they should be. Blocks have been moved accordingly. 74.5m: 1mm wide gougy slip fault oriented 50 deg TCA. Coated in a layer of chloritic clay/gouge. Also leading contact of a qtz-ank-kspar vein. 74.5-74.6m: Pink and white quartz-ankerite-kspar vein which iw wormy and irregular with a leading contact of 50 deg TCA. Starting at 116m approximately, the fragments adopt a potassic reddish alteration (possily minor hematite). The tuffs become more magnetic/mafic and the fragments are becoming red with potasstic alteration. >90% of fragments are red/potassic at 120m until 133m where the unit loses its really mafic appearance and fragments are variably altered onc emore with sericite, chlorite, ankerite, ect. Following this the unit occassional has patchy bleaching from locally mod sericite alteration aorund some breaks and qtz-ank veins. 148.7-149.7m: Interval of what appears to be siltstone or greywacke, fine to medium grained, green and massive though no real sharp contacts occur. Is a sdden disappearance and reappearance of lapilli which marks the difference between tuff and the regular coarser grained appearance of this section of the unit. Hole terminates within the tuff breccia/tuff. 23.00 150.00 Ankerite; SericiteAnk; Se					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
Mod pervasive ankerite and sericite alteration.					
	24.50	26.00	1.50	S025253	0.003
	26.00	27.50	1.50	S025254	0.054
	27.50	29.00	1.50	S025255	0.012
	39.00	40.50	1.50	S025256	0.003
	40.50	42.00	1.50	S025257	0.003
	42.00	43.50	1.50	S025258	0.005
	43.50	45.00	1.50	S025260	0.011
	45.00	46.50	1.50	S025261	0.008
	46.50	48.00	1.50	S025262	0.006
	48.00	49.50	1.50	S025263	0.006
	49.50	51.00	1.50	S025264	0.005
	51.00	52.50	1.50	S025265	0.014
	52.50	54.00	1.50	S025266	0.010
	54.00	55.50	1.50	S025267	0.007
	55.50	57.00	1.50	S025268	0.023
	57.00	58.50	1.50	S025269	0.032
	58.50	60.00	1.50	S025270	0.013
	60.00	61.50	1.50	S025271	0.006
	61.50	63.00	1.50	S025272	0.008
	63.00	64.50	1.50	S025273	0.016
	64.50	66.00	1.50	S025274	0.019
	66.00	67.50	1.50	S025277	0.012
	67.50	69.00	1.50	S025278	0.216
	69.00	70.50	1.50	S025280	0.514
	70.50	72.00	1.50	S025281	0.018
	72.00	73.50	1.50	S025282	0.009
	73.50	75.00	1.50	S025283	0.409
74.50 74.55 **Fault**FLT					
1mm wide slip fault oriented 50 deg TCA. Coated in 1mm thick of chloritic					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		clay and gouge. Contact for a qtz-annk-fspar vein.					
74.50	74.60	Vn **vein (5 mm - 10 cm)** Vn;;;;;; 10cm wide pinkish orangey wormy quartz-ank-kspar vein with an upper contact of 50 deg TCA. Vein is broke up into a few pieces 2-7cm in core length, and broken surfaces are coated with sericite.					
			75.00	76.50	1.50	S025284	0.011
			76.50	78.00	1.50	S025285	0.013
			78.00	79.50	1.50	S025286	0.003
			79.50	81.00	1.50	S025287	0.003
			81.00	82.50	1.50	S025288	0.003
			82.50	84.00	1.50	S025289	0.006
			84.00	85.50	1.50	S025290	0.008
			85.50	87.00	1.50	S025291	0.013
			87.00	88.50	1.50	S025292	0.003
			88.50	90.00	1.50	S025293	0.003
			90.00	91.50	1.50	S025294	0.011
			91.50	93.00	1.50	S025295	0.012
			93.00	94.50	1.50	S025296	0.005
			94.50	96.00	1.50	S025297	0.025
			96.00	97.50	1.50	S025298	0.005
			97.50	99.00	1.50	S025302	0.003
			99.00	100.50	1.50	S025303	0.003
			100.50	102.00	1.50	S025304	0.006
			102.00	103.50	1.50	S025305	0.003
			103.50	105.00	1.50	S025306	0.005
			105.00	106.50	1.50	S025307	0.006
			106.50	108.00	1.50	S025308	0.006
			108.00	109.50	1.50	S025309	0.015
			109.50	111.00	1.50	S025310	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	111.00	112.50	1.50	S025311	0.003
	112.50	114.00	1.50	S025312	0.003
	114.00	115.50	1.50	S025313	0.009
	115.50	117.00	1.50	S025314	0.003
	117.00	118.50	1.50	S025315	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_99

Claims title:	CLM328		Section:		
Township:	Teck		Level:		
Range:			Work place:	Upper Canada Mine Site	
Lot:					
Start date:	16/08/2015		Description date:	02/09/2015	
End date:	17/08/2015				

Contractor: Spektra

Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 180.0°

Dip: -45.00°

Length: 156.00

	UTM-Nad83	AK-Geo
East	569811.804	7708.564
North	5331251.449	10379.208
Elevation	332.114	332.009

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Multishot	0.00	177.6°	-44.5°	No
Multishot	3.00	179.0°	-44.5°	No
Multishot	6.00	179.5°	-44.5°	No
Multishot	9.00	179.7°	-44.5°	No
Multishot	12.00	179.8°	-44.4°	No
Multishot	15.00	180.1°	-44.4°	No
Multishot	18.00	180.0°	-44.4°	No
Multishot	21.00	180.0°	-44.4°	No
Multishot	24.00	180.1°	-44.3°	No
Multishot	27.00	180.2°	-44.4°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	30.00	180.2°	-44.3°	No
Multishot	33.00	180.1°	-44.4°	No
Multishot	36.00	180.2°	-44.4°	No
Multishot	39.00	180.4°	-44.3°	No
Multishot	42.00	180.4°	-44.3°	No
Multishot	45.00	180.4°	-44.3°	No
Multishot	48.00	180.5°	-44.3°	No
Multishot	51.00	180.5°	-44.3°	No
Multishot	54.00	180.6°	-44.3°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Multishot	177.6°	-44.5°	No		93.00	Multishot	181.1°	-44.0°	No	
3.00	Multishot	179.0°	-44.5°	No		96.00	Multishot	181.4°	-43.9°	No	
6.00	Multishot	179.5°	-44.5°	No		99.00	Multishot	181.2°	-43.9°	No	
9.00	Multishot	179.7°	-44.5°	No		102.00	Multishot	181.3°	-43.9°	No	
12.00	Multishot	179.8°	-44.4°	No		105.00	Multishot	181.4°	-43.8°	No	
15.00	Multishot	180.1°	-44.4°	No		108.00	Multishot	181.4°	-43.8°	No	
18.00	Multishot	180.0°	-44.4°	No		111.00	Multishot	181.5°	-43.7°	No	
21.00	Multishot	180.0°	-44.4°	No		114.00	Multishot	181.5°	-43.7°	No	
24.00	Multishot	180.1°	-44.3°	No		117.00	Multishot	181.6°	-43.6°	No	
27.00	Multishot	180.2°	-44.4°	No		120.00	Multishot	181.7°	-43.6°	No	
30.00	Multishot	180.2°	-44.3°	No		123.00	Multishot	181.7°	-43.6°	No	
33.00	Multishot	180.1°	-44.4°	No		126.00	Multishot	181.6°	-43.6°	No	
36.00	Multishot	180.2°	-44.4°	No		129.00	Multishot	181.6°	-43.6°	No	
39.00	Multishot	180.4°	-44.3°	No		132.00	Multishot	181.9°	-43.5°	No	
42.00	Multishot	180.4°	-44.3°	No		135.00	Multishot	181.8°	-43.5°	No	
45.00	Multishot	180.4°	-44.3°	No		138.00	Multishot	182.0°	-43.5°	No	
48.00	Multishot	180.5°	-44.3°	No		141.00	Multishot	182.1°	-43.4°	No	
51.00	Multishot	180.5°	-44.3°	No		144.00	Multishot	181.8°	-43.4°	No	
54.00	Multishot	180.6°	-44.3°	No		147.00	Multishot	182.5°	-43.4°	No	
57.00	Multishot	180.8°	-44.2°	No							
60.00	Multishot	180.7°	-44.2°	No							
63.00	Multishot	180.7°	-44.2°	No							
66.00	Multishot	180.8°	-44.2°	No							
69.00	Multishot	180.8°	-44.2°	No							
72.00	Multishot	180.9°	-44.1°	No							
75.00	Multishot	180.9°	-44.1°	No							
78.00	Multishot	180.8°	-44.1°	No							
81.00	Multishot	181.0°	-44.1°	No							
84.00	Multishot	181.0°	-44.0°	No							
87.00	Multishot	181.0°	-44.1°	No							
90.00	Multishot	181.2°	-44.0°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	6.20	OverburdenOVB Overburden.					
6.20	126.30	GreywackeS3 Green medium to medium fine grained greywacke. Weak to weak-mod altred with breaks and fractures Fe-oxidized and typical orientations of 30, 60, 90 deg TCA. Fe-Oxidation drops after 16m core length. <1% 1-2mmw ide ank-qtz fractures, oftens tacked tightly over 5cm core length intervals, oriented 40-50 and 75 deg TCA. On and off very fine dusting of disseminated pin prick pyrite from 0-2%, sometimes in 2mm stacked bands (following bedding fabric?). 20.6-21.0m: ~40cm wide milky ank-qtz-kspar vein oriented 15-20 deg TCA. Late ank, qtz and chl fractures through the vein at 30 to 0 deg TCA 29.9-31.1m: Interval of rounded clasts of conglomerate, with >60% abundance. Fragments from 4mm to 3.5cm in diameter. 36.45-43.1m: Another pebbly wacke/conglomerate interval with 1-50% fragmental abundance through ht einterval. Rounded heterolithic fragments from syenite prophyry to tuff/fine grained looking fragments susceptible to variaitons of chlorite, sericite, ankerite, kspasthic alteration, and typical looking red jaspers. 43.1-52.0m: Fine dusting of tr-2% disseminated pyrite through the greywacke. Overall weakly bleached with weak pervasive sericite alteration, and ~1-2% ankerite-quartz veinlets from hairline to 1cm wide oriented 30-60 deg TCA and 0.5% abundance of chlorite fractures @ 50-60 deg TCA. This dusting of pyrite seems to continue throughout the unit, going from 0-2%. 42.5-58.7m : Weak to moderate pervasive sericitic alteration. Sericite alteration increases proximal to an increase in ankerite veining seen in a few locations of the un, but overall weak within this interval. A moderately altered interval isplaying some Fe-oxidation and some fspathic alteration to overall moderately altered interval from 44.1-47.7m with an iregular network of dark	6.20	7.00	0.80	S027657	0.006

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
chloritic fractures Weak shear fabric is also developed within this altered section with fabric at 50 deg TCA. Trace disseminated pyrite also within this section. 53.25-58.7m: Interval of increased ank-qtz veining from 5-7% and orientations from 30-70 and 130 deg TCA. Following this altered section disseminated pyrite is more freuqnetly trace to 2% common. 67.0-67.4m: 1-2mm wide laminations of disseminated pyrite, locally up to 2%, oriented 50 deg TCA. 72.9-73.2m: More abundance of laminated pyrite, oriented 30 deg TCA and along a fracture at 20 deg TCa locally up to 2%. 70.9-71.3m: Another fractured ank-qtz-fspar vein @ 45 deg TCA with altered host rock fragments withint he vein up to 1cm in size and enveloping larger fragments of in situ brecciated and altered greywacke up to 6cm core length. 76.0-76.4m: Local veining ~15%. Some qtz-ank veinlets 1-3mm wide oriented 70-90 deg TCA and some ank-qtz veins oriented 30 deg TCA also 1-4mm wide. Qtz dominant veins are more reyish (not the darkish grey) and host trace disseminated pyrite along contacts. Followng this vein zone there is also 1-2mm bands of disseminated pyrite over 10cm oriented 60 deg TCA. 83.7-83.8m: Short interval of altered mudstones with bedding oriented 70 deg TCA with a few pieces of broken "discked" core at 70-90 deg angles. Following this brief mudstone there's 15cm where pyrite displays 1-2mm wide laminted banding oriented 70-80 deg TCA and locally <2% pyrite. 90.85 - 92.15m: Highly fractured and very veined interval. Dark chlorite fractures ~5-8% oriented 50 deg TCA dominantly, but variable and stockworky, with fractured and sheared ank-qtz veining from 1mm to 2cm wide oriented from 0-70 deg TCA, often sheared and displaced up to 1cm also ~8-10% over the interval. Between the fractured zone above and where the sericite alteration drops off, there is the occassional clast present, often the only one over 2-3m core					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
length. Sericite alteration ceases being pervasive over mod or weak intensity at 101.3m and becomes more irregular patchy forward. 100.65-101.4m: Interval of stacked pyritic fractures oriented 90 deg TCA 1-3mm wide and for locally 5% pyrite. 102.5-106.7m: Interval which consists of on and off congloemrate and generally coarse grain size of wacke. Fragments range from 1mm to 3cm in size and vary between 1-35% abundance. Sericite alteration, weak to moderate, pervasive, between 107.5-128.5m. End of the unit is a shear inerval associated with a fault zone, oriented ~65 deg TCA.					
	7.00	8.00	1.00	S027658	0.003
	8.00	9.50	1.50	S027660	0.195
	9.50	11.00	1.50	S027661	0.008
	11.00	12.50	1.50	S027662	0.005
	12.50	14.00	1.50	S027663	0.003
	14.00	15.50	1.50	S027664	0.003
	15.50	17.00	1.50	S027665	0.007
	17.00	18.50	1.50	S027666	0.009
	18.50	20.00	1.50	S027667	0.007
	20.00	21.50	1.50	S027668	0.007
	21.50	23.00	1.50	S027669	0.008
	23.00	24.50	1.50	S027670	0.005
	24.50	26.00	1.50	S027671	0.007
	26.00	27.50	1.50	S027672	0.008
	27.50	29.00	1.50	S027673	0.008
	29.00	30.50	1.50	S027674	0.088
	30.50	32.00	1.50	S027677	0.011
	32.00	33.50	1.50	S027678	0.003
	33.50	35.00	1.50	S027680	0.013

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			35.00	36.50	1.50	S027681	0.009
			36.50	38.00	1.50	S027682	0.038
			38.00	39.50	1.50	S027683	0.016
			39.50	41.00	1.50	S027684	0.006
			41.00	42.50	1.50	S025629	0.044
42.50	58.70	SericiteSe Wk-mod perv ser alt'n.	42.50	44.00	1.50	S025630	0.025
43.10	52.00	PyritePy On and off very fine dusting of disseminated pin prick pyrite from 0-2%, sometimes in 2mm stacked bands (following bedding fabric?) more frequently lower end of the estimate.					
			44.00	45.50	1.50	S025631	0.041
			45.50	47.00	1.50	S025632	0.020
			47.00	48.50	1.50	S025633	0.008
			48.50	50.00	1.50	S025634	0.023
			50.00	51.50	1.50	S025635	0.016
			51.50	53.00	1.50	S025636	0.005
			53.00	54.50	1.50	S025637	0.006
			54.50	56.00	1.50	S025638	0.007
			56.00	57.50	1.50	S025640	0.003
			57.50	59.00	1.50	S025641	0.006
58.70	126.30	PyritePy On and off very fine dusting of disseminated pin prick pyrite from 0-2%, sometimes in 2mm stacked bands (following bedding fabric?), more frequently higher end.					
			59.00	60.50	1.50	S025642	0.006
			60.50	62.00	1.50	S025643	0.006
			62.00	63.50	1.50	S025644	0.005
			63.50	65.00	1.50	S025645	0.003
			65.00	66.50	1.50	S025646	0.005

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	66.50	68.00	1.50	S025647	0.003
	68.00	69.50	1.50	S025648	0.005
	69.50	70.90	1.40	S025649	0.006
	70.90	72.50	1.60	S025652	0.010
	72.50	74.00	1.50	S025653	0.009
	74.00	75.50	1.50	S025654	0.003
	75.50	77.00	1.50	S025655	0.008
	77.00	78.50	1.50	S025656	0.003
	78.50	80.00	1.50	S025657	0.005
	80.00	81.50	1.50	S025658	0.003
	81.50	83.00	1.50	S025660	0.008
	83.00	84.50	1.50	S025661	0.011
	84.50	86.00	1.50	S025662	0.009
	86.00	87.50	1.50	S025663	0.007
	87.50	89.00	1.50	S025664	0.007
	89.00	90.50	1.50	S025665	0.006
	90.50	92.00	1.50	S025666	0.008
	92.00	93.50	1.50	S025667	0.006
	93.50	95.00	1.50	S025668	0.005
	95.00	96.50	1.50	S025669	0.005
	96.50	98.00	1.50	S025670	0.003
	98.00	99.50	1.50	S025671	0.010
	99.50	101.00	1.50	S025672	0.014
	101.00	102.50	1.50	S025673	0.016
	102.50	104.00	1.50	S025674	0.010
	104.00	105.50	1.50	S025677	0.006
	105.50	107.00	1.50	S025678	0.007
	107.00	108.50	1.50	S025680	0.015
	108.50	110.00	1.50	S025681	0.008
	110.00	111.50	1.50	S025682	0.006

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			111.50	113.00	1.50	S025683	0.012
			113.00	114.50	1.50	S025684	0.009
			114.50	116.00	1.50	S025685	0.009
			116.00	117.50	1.50	S025686	0.007
			117.50	119.00	1.50	S025687	0.006
			119.00	120.50	1.50	S025688	0.009
			120.50	122.00	1.50	S025689	0.009
			122.00	123.50	1.50	S025690	0.010
			123.50	125.00	1.50	S025691	0.011
			125.00	126.00	1.00	S025692	0.015
			126.00	127.00	1.00	S025693	0.017
126.30	126.75	**Fault Zone; Greywacke**FAZ; S3 Bleached, sheared, veined and altered fault zone oriented 50-60 deg TCA. Strongly ank-sericite altered with a shear fabric of greywacke. Some breaks with ser-ank gouge. ~15cm wide qtz-ank flooding healing the fault zone at the core of the zone, enveloped by sericite stringers.					
126.75	147.10	**Greywacke; Conglomerate**S3; S1 Bleached green to green medium to medium fine greywacke and conglomerate intervals. Non-magnetic. Initially mod pervasve sericite alteration which drops around 128.7m to overall mod ank alteration. Unit grades back and forth through greywackey, pebbly wacke and conglomerate, with a coarser greywacke phase which appears to be between wacke and congloemrate. These intervals go from 1-5m with dominance of greywacke in the unit. 0-1% disseminated pyrite, msot frequently trace and often associated with fine hairline fractures, throughout the greywacky. Congloemrate intervals: 129.2-131.0m, 132.5-132.8m, 135.3-136.5m, 139.7-142.3m. Unit terminates where it switches over to a wide package of conglomerate.					
126.75	128.70	**Sericite**Se Pervasive sericite alteration.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
126.75	147.10	**Pyrite**Py 0-1% dis py.					
			127.00	128.50	1.50	S025694	0.010
			128.50	130.00	1.50	S025695	0.014
128.70	156.00	**Ankerite**Ank Mod ank alt'n.					
			130.00	131.50	1.50	S025696	0.012
			131.50	133.00	1.50	S025697	0.009
			133.00	134.50	1.50	S025698	0.008
			134.50	136.00	1.50	S025702	0.008
			136.00	137.50	1.50	S025703	0.007
			137.50	139.00	1.50	S025704	0.008
			139.00	140.50	1.50	S025705	0.006
			140.50	142.00	1.50	S025706	0.008
			142.00	143.50	1.50	S025707	0.211
			143.50	145.00	1.50	S025708	0.050
			145.00	146.50	1.50	S025709	0.037
			146.50	148.00	1.50	S025710	0.194
147.10	156.00	**Conglomerate; Greywacke**S1; S3 >80% of the unit is conglomerate, dark green in hue with some intervals of dark green greywacke. Non to mod-weakly magnetic. Weak pervasive ankerite alteration and lack of sericite alteration as seen above. Variably fragments with abundances <70% and sized 2mm to 5cm in diameter. 149.5-150.0m: Interval of very fine graiend siltstone with fabric oriented 70 deg TCA. Hole terminates in an interval of greywacke which starts at 155.4m until 156.0m which is EOH.					
			148.00	149.50	1.50	S025711	0.006
			149.50	151.00	1.50	S025712	0.003
			151.00	152.50	1.50	S025713	0.005

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	152.50	154.00	1.50	S025714	0.131
	154.00	155.00	1.00	S025715	0.024
	155.00	156.00	1.00	S025716	0.019

Canadian Malartic GP Exploration Division

DDH: AKC15_100

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 17/08/2015
End date: 18/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 10/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 180.0°
Dip: -62.00°
Length: 198.00

	UTM-Nad83	AK-Geo
East	569811.787	7708.775
North	5331252.159	10379.886
Elevation	332.090	331.985

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	176.8°	-61.9°	No
Multishot	12.00	176.8°	-61.9°	No
Multishot	15.00	177.3°	-62.0°	
Multishot	18.00	177.4°	-62.0°	
Multishot	21.00	177.7°	-61.9°	
Multishot	24.00	177.7°	-61.9°	
Multishot	27.00	178.0°	-61.9°	
Multishot	30.00	177.9°	-61.9°	
Multishot	33.00	178.0°	-61.8°	
Multishot	36.00	178.1°	-61.8°	

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	177.9°	-61.8°	
Multishot	42.00	177.9°	-61.7°	
Multishot	45.00	178.7°	-61.7°	
Multishot	48.00	178.9°	-61.7°	
Multishot	51.00	178.7°	-61.6°	
Multishot	54.00	178.7°	-61.7°	
Multishot	57.00	179.0°	-61.6°	
Multishot	60.00	178.8°	-61.6°	
Multishot	63.00	178.9°	-61.6°	
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	176.8°	-61.9°	No		102.00	Multishot	179.5°	-61.3°		
12.00	Multishot	176.8°	-61.9°	No		105.00	Multishot	179.2°	-61.3°		
15.00	Multishot	177.3°	-62.0°			108.00	Multishot	179.2°	-61.3°		
18.00	Multishot	177.4°	-62.0°			111.00	Multishot	179.3°	-61.3°		
21.00	Multishot	177.7°	-61.9°			114.00	Multishot	179.4°	-61.2°		
24.00	Multishot	177.7°	-61.9°			117.00	Multishot	179.4°	-61.2°		
27.00	Multishot	178.0°	-61.9°			120.00	Multishot	179.6°	-61.2°		
30.00	Multishot	177.9°	-61.9°			123.00	Multishot	179.8°	-61.2°		
33.00	Multishot	178.0°	-61.8°			126.00	Multishot	179.4°	-61.2°		
36.00	Multishot	178.1°	-61.8°			129.00	Multishot	179.4°	-61.2°		
39.00	Multishot	177.9°	-61.8°			132.00	Multishot	179.6°	-61.1°		
42.00	Multishot	177.9°	-61.7°			135.00	Multishot	179.7°	-61.1°		
45.00	Multishot	178.7°	-61.7°			138.00	Multishot	179.8°	-61.1°		
48.00	Multishot	178.9°	-61.7°			141.00	Multishot	179.7°	-61.1°		
51.00	Multishot	178.7°	-61.6°			144.00	Multishot	179.7°	-61.1°		
54.00	Multishot	178.7°	-61.7°			147.00	Multishot	179.9°	-61.0°		
57.00	Multishot	179.0°	-61.6°			150.00	Multishot	179.9°	-61.0°		
60.00	Multishot	178.8°	-61.6°			153.00	Multishot	179.8°	-61.0°		
63.00	Multishot	178.9°	-61.6°			156.00	Multishot	179.8°	-61.0°		
66.00	Multishot	179.0°	-61.5°			159.00	Multishot	179.8°	-61.0°		
69.00	Multishot	178.9°	-61.5°			162.00	Multishot	180.0°	-61.0°		
72.00	Multishot	179.0°	-61.5°			165.00	Multishot	180.1°	-60.9°		
75.00	Multishot	179.2°	-61.5°			168.00	Multishot	180.1°	-60.9°		
78.00	Multishot	179.1°	-61.5°			171.00	Multishot	179.9°	-60.9°		
81.00	Multishot	179.1°	-61.5°			174.00	Multishot	180.0°	-60.9°		
84.00	Multishot	179.0°	-61.5°			177.00	Multishot	180.0°	-60.9°		
87.00	Multishot	179.0°	-61.5°			180.00	Multishot	180.2°	-60.8°		
90.00	Multishot	179.2°	-61.4°			183.00	Multishot	180.1°	-60.8°		
93.00	Multishot	179.4°	-61.4°			186.00	Multishot	180.0°	-60.8°		
96.00	Multishot	179.3°	-61.4°			189.00	Multishot	180.1°	-60.7°		
99.00	Multishot	179.3°	-61.4°			192.00	Multishot	180.3°	-60.7°		

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
195.00	Multishot	180.3°	-60.7°								
198.00	Multishot	180.6°	-60.7°								

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	5.90	OverburdenOVB Overburden					
5.90	75.50	GreywackeS3 Green lightly altered/bleached green medium to medium fine grained greywacke. Non-magnetic. Weak pervasive ankerite and sericite alteration of the wacke. Occassional breaks are Fe-oxidized and typically trending 30 and 60 deg TCA. <1% qtz-ank veins 1-3m and 1-2cm wide also oriented 30 deg and 60. Some intervals of conglomerate present within the greywacke as suddenly clasts appear. Throughout the unit theres occassionally 1-2% fragments locally which don't really represent a conglomeratatic unit. Conglomerate: Frafgments are subrounded to rounded and subsquished to not squished, altered to variable degrees of chlorite, sericite or mixes (also with ank). Some of the fragments are actually the typical red jaspers. 24.3-25.2m ~40% abundance with fragments 1-3cm in size. 26.0-27.2m ~30% abundance with fragments from 0.5-3cm in size. 28.3-29.7m: ~40% abundanc eof fragments sized 2mm to 4cm in size. 53.5-56.3m: ~25% abundance of fragments sized 1mm to 8cm wide. Also beginning to see potassic altered and porphyritic fragments as well as red jaspers and chlorite-sericite altered. 62.0-67.8m: ~30% fragment abundance. Some of the clasts are squished, ad some host disseminated pyrite, even within the matrix of the conglomerate. 70.2-71.3m: ~60% abundance with fragments from 1-5cm in size tightly packed but matrix supported. 39-52.5m: Moderate to weak SERICITE ALTN bleaching the unit to a green-beige beige hue. Coincidentally increased amount of ankerite-quartz veinlets occur up to 7% of the interval in veinlets 1-4mm wide oriented 0-30, 60 and 80 deg TCA. 51m: Start seeing trace disseminated pyrite within the greywackes and conglomerates occasionally. 52.8-52.9m: 3cm wide ank-qtz-kspar-jasper-chl-cpy vein oriented 15 deg					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		TCA. ~30% ank and 30% kspar, 20% jasper, 10% qtz and 10% chl with trace cpy splashes. Around 73m to the end of the unit dark chloritic fractures develop as irregular stockworks but larder braided branches oriented roughly 20-30 deg TCA. Alteration change occurign as lower contact which is sharp, oriented 30 deg TCA.					
5.90	39.00	SericiteSe Weak pervasive sericite alteration					
39.00	52.50	SericiteSe Moderate to weak sericite alteration, stronger locally proximal to qtz-ank veining.					
			42.00	43.50	1.50	S025717	0.005
			43.50	45.00	1.50	S025718	0.007
			45.00	46.50	1.50	S025720	0.010
			46.50	48.00	1.50	S025721	0.010
			48.00	49.50	1.50	S025722	0.007
			49.50	51.00	1.50	S025723	0.003
			51.00	52.50	1.50	S025724	0.003
			52.50	54.00	1.50	S025727	0.012
			54.00	55.50	1.50	S025728	0.033
			55.50	57.00	1.50	S025729	0.028
			57.00	58.50	1.50	S025730	0.005
			58.50	60.00	1.50	S025731	0.003
			60.00	61.50	1.50	S025732	0.009
			61.50	63.00	1.50	S025733	0.008
			63.00	64.50	1.50	S025734	0.019
			64.50	66.00	1.50	S025735	0.096
			66.00	67.50	1.50	S025736	0.088
			67.50	69.00	1.50	S025737	0.005
			69.00	70.50	1.50	S025738	0.006

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			70.50	72.00	1.50	S025740	0.003
			72.00	73.50	1.50	S025741	0.005
			73.50	74.50	1.00	S025742	0.010
			74.50	75.50	1.00	S025743	0.018
75.50	78.60	**Greywacke; Mineralized Zone**S3; MNZ Dark green, green, green-brown medium to fine grained altered greywacke. Non-magnetic. Very weak to non-ankerite altered. Fractured with chlorite or nkerite fill, generally <1mm thick oriented 40-50 for ank and 60/10 deg for chlorite fractures. Tr-2% disseminated brassy pyrite through the unit with elevated pyrite associated with quartz flooded zones. 75.5-76.4m: Dark green very fractured with underlying chlorite and chlorite fill, a weak silicification so it appears soemwhat glassy but of weak/very weak intensity. Very weak sericite as well so the interval is patchy beige-green. 76.4-77.55m: Sericite altered host greywacke but also very fractured with black chlorite fill and strinegrs throughout the unit. Some ankerite veinlets and fill. Also weak silicification, slightly stronger than above, but overall weak still. Appearance of some smokey quartz veining with pin pricks/trace pyrite within the veins. Veins are 2-4mm wide and oriented roughly 20/160 deg TCA. Contacts appear alteration based and are sharp, oriented 30 and 50 deg TCA respectively for upper/lower contacts. 77.55-78.6m: Silica flooded, moderately fractured with chlorite fill, and qtz-ank veiend interval. Strongly silicified, glassy, and grey to smokey to white in colour with some underlying greenish greywacke. 2% disseminated pin pricks of sulphides, sometimes as 1cm wide wormy bands mixed with host rock around quartz veins with dark brassy and dark green/black hue of higher concentrations of pyrite. Veins are angled 50-70 deg TCA. Lower contact is sharp, oriented 70 deg TCA. Following the veined zone silica alteration drops off, including most alteration, though trace to <1% dissemiated pyrite continues on. Lower contact is sharp oriented 70 deg TCA which is the end of the silica flooded interval.	75.50	76.50	1.00	S025744	0.111

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
76.40	77.55	**Sericite; Silica**Se; Si Moderately pervasive sericite altered greywacke with chloritic fractures. On and off weak silicification. Trace disseminated pyrite within smokey quartz veins.					
76.40	77.55	**Pyrite**Py Trace disseminated py mostly wihtin smokey quartz veining.					
			76.50	77.50	1.00	S025745	0.396
			77.50	78.60	1.10	S025746	5.180
78.60	110.20	**Greywacke**S3 Green/yellowish-brownish green and dark green medium to medium fine grained greywacke. Non-magnetic. Weak patchy sericite alteration, emphasizing mottled appearance of more chloritized spots. Some areas the unit looks like the "Spotty rock" associated with some of the zones in AK, with spots up to 5mm in diameter, but generally the chlorite alteration is <2mm spotty to more pervasive. Spottiness is on and off throughout the unit. Trace-2% dissemainted pyrite trhoughout the unit, often just in the matrix of the greywacke but occassionally along hairline fractures oriented 25 deg TCA. Overall <0.5% ank-qtz veinlets 1-2mm wide oriented 30-50 deg TCA. Weak sense of bedding oriented 60 deg TCA near upper portion of the unit. 85.8-86.2m: From 85.8-86.0m the greywacke is broken up nto 1-3cm wide pieces, sharp edges mostly blocky but not quite disced. A vein which is visible starting from pinched to swelling to 4cm width is from 86-86.2m oriented <10 deg TCA is terminited within this broken section. The vein is a qtz-chl-ank-py vein with chlo mixed with disseminated py up to 1% forms fractures and strinegrs throguh and enveloping the vein. 93.3-93.7m: 4cm? wide qtz-ank-chl-py vein oriented 50/0 deg TCA. Initially vein is 4cm wide oriented 50 deg TCA but just as it exits the core it runs parallel to the axis skimming along the edge of the core for ~30cm. Vein appears to be crack and sealed with 1-2mm thick chlorite-pyrite laminations parallel to vien orientation up 0.5% pyrite for the vein.	78.60	80.00	1.40	S025747	0.026

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Overall ~75% of the unit is "spotty" in appearance with trace-2% disseminated pyrite throughout, often associated with fractures and veins but also within the matrix of the greywacke. Lower contact has a dark green chloritic halo but also the start of a conglomerate unit, oriented 60 deg TCA.					
78.60	110.20	**Sericite**Se Patchy on and off weak sericite alteration with overall tr-2% disseminated py throughout.					
78.60	110.20	**Pyrite**Py Trace to 2% disseminated pyrite within the unit.					
			80.00	81.50	1.50	S025748	0.010
			81.50	83.00	1.50	S025749	0.020
			83.00	84.50	1.50	S025752	1.080
			84.50	85.50	1.00	S025753	1.820
			85.50	87.00	1.50	S025754	0.952
			87.00	88.50	1.50	S025755	0.049
			88.50	90.00	1.50	S025756	0.020
			90.00	91.50	1.50	S025757	1.125
			91.50	93.00	1.50	S025758	1.380
			93.00	94.50	1.50	S025760	1.360
			94.50	96.00	1.50	S025761	0.638
			96.00	97.50	1.50	S025762	0.937
			97.50	99.00	1.50	S025763	3.480
			99.00	100.50	1.50	S025764	1.715
			100.50	102.00	1.50	S025765	2.450
			102.00	103.50	1.50	S025766	0.792
			103.50	105.00	1.50	S025767	0.536
			105.00	106.50	1.50	S025768	0.455
			106.50	108.00	1.50	S025769	4.080
			108.00	109.50	1.50	S025770	3.550
			109.50	111.00	1.50	S025771	0.272

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
110.20 122.80 **Greywacke; Conglomerate**S3; S1 Green to yellow-green medium grained greywacke/conglomerate. Dominantly greywacke with occassional 1-3m intervals of conglomerate. Unit initially starts out as a heterolithic congloemrate with ~60% rounded/subrounded fragments up to 6cm in size. Overall moderately altered with semi-pervasive on and off sericite alteration to underlyign chloritic alteration. 110.2-114.2m: Conglomerate 121.0-121.8m: Conglomerate Unit terminates where conglomerate becomes dominant memebr of the intervals with the sudden appearance of clasts within greywacke.					
110.20 122.80 **Sericite**Se Moderate on and off patchy semi-pervasive sericite alteration.					
110.20 122.80 **Pyrite**Py Trace disseminated py.					
	111.00	112.50	1.50	S025772	0.449
	112.50	114.00	1.50	S025773	0.013
	114.00	115.50	1.50	S025774	0.003
	115.50	117.00	1.50	S025777	0.008
	117.00	118.50	1.50	S025778	0.007
	118.50	120.00	1.50	S025780	0.005
	120.00	121.50	1.50	S025781	0.005
	121.50	123.00	1.50	S025782	0.005
122.80 146.60 **Conglomerate**S1 Beige green medium to medium fine grained conglomerate. Non-magnetic. Moderate-weakly altered with very weak to non-ankerite alteration and weak-mod pervasive sericite alteration. No longer disseminated pyrite within the interval. ~50-60% abundance of rounded fragments variably composed with porphiries, amphanitic rocks, jaspers, ect, typical composition and size ranges 1-10cm widths with various alteration styles.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Unit terminates where clasts cease being present.					
122.80	146.60	**Sericite**Se					
		Weak to mod pervasive sericite alteration.					
			123.00	124.50	1.50	S025783	0.035
			124.50	126.00	1.50	S025784	0.009
			126.00	127.50	1.50	S025785	0.013
			127.50	129.00	1.50	S025786	0.007
			129.00	130.50	1.50	S025787	0.009
			130.50	132.00	1.50	S025788	0.047
			132.00	133.50	1.50	S025789	0.014
			133.50	135.00	1.50	S025790	0.010
146.60	198.00	**Greywacke**S3					
		Greent o lightly altered/bleached green fine/medium fine grained greywacke. Weakly altered overall with weak to mdoerate pervasive ankerite alteration and weak pervasive sericite alteration from 146.6-151m, though sericite alteration comes and goes throughout the unit. ~1% qtz-ank veining in veinlets 1-5mm wide oriented 0, 40 and 70 deg TCA.					
		164.8-165.0m: Conglomerate					
		176.5-177.1m: Conglomerate					
		177.9-179.6m: Conglomerate					
		184.5-186.0m: Conglomerate					
		187-189m: Conglomerate					
		195.1-195.8m: Conglomerate					
		196.1-197.5m: Conglomerate					
		Hole terminated at 198.0m in Greywacke.					

Canadian Malartic GP Exploration Division

DDH: AKC15_101

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 19/08/2015
End date: 25/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 12/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 240.00

	UTM-Nad83	AK-Geo
East	569675.507	7537.099
North	5331119.243	10297.631
Elevation	331.324	331.219

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	359.7°	-44.9°	No
Multishot	15.00	349.1°	-44.9°	Yes
Multishot	18.00	359.7°	-44.9°	No
Multishot	21.00	0.1°	-44.9°	No
Multishot	24.00	0.1°	-44.9°	No
Multishot	27.00	360.0°	-44.9°	No
Multishot	30.00	0.1°	-44.9°	No
Multishot	33.00	0.0°	-44.9°	No
Multishot	36.00	360.0°	-44.9°	No
Multishot	39.00	359.8°	-44.8°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	42.00	359.8°	-44.7°	No
Multishot	45.00	359.9°	-44.6°	No
Multishot	48.00	359.7°	-44.5°	No
Multishot	51.00	359.8°	-44.5°	No
Multishot	54.00	359.9°	-44.5°	No
Multishot	57.00	359.9°	-44.5°	No
Multishot	60.00	360.0°	-44.4°	No
Multishot	63.00	0.0°	-44.4°	No
Multishot	66.00	0.1°	-44.4°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	359.7°	-44.9°	No		105.00	Multishot	0.8°	-44.3°	No	
15.00	Multishot	349.1°	-44.9°	Yes		108.00	Multishot	0.8°	-44.2°	No	
18.00	Multishot	359.7°	-44.9°	No		111.00	Multishot	0.8°	-44.2°	No	
21.00	Multishot	0.1°	-44.9°	No		114.00	Multishot	0.7°	-44.1°	No	
24.00	Multishot	0.1°	-44.9°	No		117.00	Multishot	0.8°	-44.1°	No	
27.00	Multishot	360.0°	-44.9°	No		120.00	Multishot	0.7°	-44.1°	No	
30.00	Multishot	0.1°	-44.9°	No		123.00	Multishot	0.7°	-44.1°	No	
33.00	Multishot	0.0°	-44.9°	No		126.00	Multishot	0.9°	-44.1°	No	
36.00	Multishot	360.0°	-44.9°	No		129.00	Multishot	0.4°	-44.1°	No	
39.00	Multishot	359.8°	-44.8°	No		132.00	Multishot	1.0°	-44.0°	No	
42.00	Multishot	359.8°	-44.7°	No		135.00	Multishot	0.9°	-44.0°	No	
45.00	Multishot	359.9°	-44.6°	No		138.00	Multishot	0.9°	-44.0°	No	
48.00	Multishot	359.7°	-44.5°	No		141.00	Multishot	0.7°	-44.0°	No	
51.00	Multishot	359.8°	-44.5°	No		144.00	Multishot	0.8°	-44.0°	No	
54.00	Multishot	359.9°	-44.5°	No		147.00	Multishot	0.9°	-44.0°	No	
57.00	Multishot	359.9°	-44.5°	No		150.00	Multishot	0.9°	-44.0°	No	
60.00	Multishot	360.0°	-44.4°	No		153.00	Multishot	0.9°	-44.0°	No	
63.00	Multishot	0.0°	-44.4°	No		156.00	Multishot	1.0°	-43.9°	No	
66.00	Multishot	0.1°	-44.4°	No		159.00	Multishot	1.1°	-44.0°	No	
69.00	Multishot	360.0°	-44.4°	No		162.00	Multishot	0.9°	-43.9°	No	
72.00	Multishot	0.1°	-44.4°	No		165.00	Multishot	0.9°	-43.9°	No	
75.00	Multishot	0.1°	-44.4°	No		168.00	Multishot	1.0°	-43.9°	No	
78.00	Multishot	0.1°	-44.4°	No		171.00	Multishot	1.8°	-43.9°	No	
81.00	Multishot	0.2°	-44.3°	No		174.00	Multishot	0.2°	-43.8°	No	
84.00	Multishot	0.2°	-44.3°	No		177.00	Multishot	359.0°	-43.8°	Yes	
87.00	Multishot	0.3°	-44.3°	No		180.00	Multishot	1.4°	-43.8°	No	
90.00	Multishot	0.5°	-44.3°	No		183.00	Multishot	2.2°	-43.8°	No	
93.00	Multishot	0.4°	-44.3°	No		186.00	Multishot	1.2°	-43.8°	No	
96.00	Multishot	0.6°	-44.3°	No		189.00	Multishot	1.2°	-43.8°	No	
99.00	Multishot	0.5°	-44.3°	No		192.00	Multishot	1.2°	-43.7°	No	
102.00	Multishot	0.7°	-44.3°	No		195.00	Multishot	1.2°	-43.8°	No	

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
198.00	Multishot	0.7°	-43.7°	No							
201.00	Multishot	360.0°	-43.7°	No							
204.00	Multishot	3.8°	-43.7°	No							
207.00	Multishot	359.6°	-43.7°	Yes							
210.00	Multishot	2.8°	-43.7°	No							
213.00	Multishot	2.2°	-43.6°	No							
216.00	Multishot	1.9°	-43.6°	No							
219.00	Multishot	1.4°	-43.6°	No							
222.00	Multishot	360.0°	-43.6°	No							
225.00	Multishot	2.6°	-43.6°	No							
228.00	Multishot	2.4°	-43.5°	No							
231.00	Multishot	2.0°	-43.5°	No							
234.00	Multishot	1.3°	-43.4°	No							
237.00	Multishot	356.7°	-43.4°	Yes							
240.00	Multishot	358.1°	-43.3°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	8.00	**Overburden**OVB Overburden.					
8.00	10.20	**Greywacke**S3 Dark green fine grained altered greywacke. Jointed with breaks coated in minor orangey Fe-oxidization (hmt+lim) and typically oriented 70 deg TCA. Weak-mod pervasive anekritic alteration. Laminated with stacked ankerite stringers occssionally oxidized, oriented 60 deg TCA. 8.95m: 3mm wide strong oxidized gougy FAULT oriented 60 deg TCA. Lower contact sharp, oriented 40 deg TCA.	8.00	9.50	1.50	S025791	0.003
			9.50	11.00	1.50	S025792	0.007
10.20	10.30	**Fault Zone**FAZ 5cm wide rubbly FAULT ZONE with ~6cm of rubbly core and ~1-3cm of more crushed gougy fault oriented 40 deg TCA. Some of the fragments are coated in clay.					
10.30	32.90	**Greywacke**S3 Green, lightly altered/bleached green fine grained greywacke with occassional pebbly wacke intervals (~10% of the interval). Weak to moderate pervasive ankerite alteration. Some veinlets and fractures of wispy ankerite-quartz oriented commonly at 40 and 130 deg TCA, Pebbly/conglomerate intervals over 50cm to 3m in some cases with 5-40% abundances of rounded fragments from 3mm to 9cm in diameter. 24.5-32.9m: Mod-strong pervasie SERICITE ALTN bleaching the unit to a beige/beige-green hue. Approaching the fault the unit also becomes weakly to mdoerately fractured with fine chlorite fill. Lower contact is sharp, oriented 30 deg TCA.	11.00	12.50	1.50	S025793	0.003
			12.50	14.00	1.50	S025794	0.003
			14.00	15.50	1.50	S025795	0.009
			15.50	17.00	1.50	S025796	0.025
			17.00	18.50	1.50	S025797	0.129

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			18.50	20.00	1.50	S025798	0.008
			20.00	21.50	1.50	S025802	0.006
			21.50	23.00	1.50	S025803	0.006
			23.00	24.50	1.50	S025804	0.006
24.50	32.90	**Sericite**Se Mod-strong pervasive sericite alteration.	24.50	26.00	1.50	S025805	0.003
			26.00	27.50	1.50	S025806	0.003
			27.50	29.00	1.50	S025807	0.003
			29.00	30.50	1.50	S025808	0.003
			30.50	32.00	1.50	S025809	0.006
			32.00	32.80	0.80	S025810	0.008
			32.80	34.30	1.50	S025811	0.003
32.90	33.00	**Fault Zone**FAZ 5cm wide strong FAULT oriented 30 deg TCA. 1-4mm sized fragments hosted in partially healed gouge. Some fragments appear to be potassic altered. The fault marks the beginning of what i slikely the CBM break which appears to continue to 39.2m.					
33.00	39.20	**Deformation Zone; Greywacke**DZ; S3 Pinkish orange and greenish yellow fine grained strongly altered deformation zone of what looks like was originally greywacke, and is likely the CBM Break. Fractured with chlorite fill and overprinted with strong to moderate potassic alteration and sericite-chl, ep? sausseritic alteration and hosting some fragments which appear to have been weakly silicified. Joints continue to be oxidized with a minor coating on the surfaces. Also ~1-2% qtz-ank veinlets from 1mm to 1cm wide oriented 0-30 deg TCA. Weak fabric developed oriented 20-30 deg TCA. Lower contact is sharp where potassic alteration ends, oriented 40 deg TCA.					
33.00	39.20	**Potassic; Sericite; Chlorite; Epidote**K; Se; Cl; Ep Strong to moderate potassic alteration with ser-chl, ep? And sausseritic					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		alteration.					
			34.30	35.80	1.50	S025812	0.003
			35.80	37.30	1.50	S025813	0.003
			37.30	38.30	1.00	S025814	0.010
			38.30	39.30	1.00	S025815	0.009
39.20	150.50	**Conglomerate**S1 Mostly green/dark green to lightly bleached and variably coloured fragments of conglomerate. Overall very mafic appearance and relatively unaltered with weak on and off calcitic alteration and occassional local sericitic patches <50cm in core length. Fragmental abundance ranges from 5-60%. <1% qtz-cc veining from hairline to 4cm wide oriented 20-50 deg TCA. Lower contact is sharp, oriented 60 deg TCA.					
39.20	150.50	**Calcite; Sericite**Ca; Se Weak on and off calcitic alteration and occassional local patchy sericite alteration.					
			39.30	40.80	1.50	S025816	0.011
			40.80	42.30	1.50	S025817	0.003
			141.00	142.50	1.50	S025818	0.005
			142.50	144.00	1.50	S025820	0.006
			144.00	145.50	1.50	S025821	0.007
			145.50	147.00	1.50	S025822	0.006
			147.00	148.50	1.50	S025823	0.007
			148.50	150.00	1.50	S025824	0.003
			150.00	151.50	1.50	S025827	0.006
150.50	152.70	**Greywacke; Mineralized Zone**S3; MNZ Dark green medium fine/fine grained greywacke. Locally weakly magnetic (Associated with black fractures). Pervasive mod-wk calcitic alteration/reaction to HCl throughout, particular with fractures and veinlets. Moderately fractured with chlorite +/- mgt fill (some fractures are magnetic). Though no visible sulphides there is the fractures which we see below and					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
also darker smokier quartz veinlets which are associated with possibly galena in the next unit, These quartz veins are 1-4mm wide and oriented 0-30 deg TCA and 50 deg TCA over ~1% of the unit. No lower contact as it suddenly grade sinto a conglomerate.					
150.50 152.70 **Calcite**Ca Pervasive mod-wk cc alteration.					
	151.50	153.00	1.50	S025828	0.003
152.70 154.30 **Conglomerate; Mineralized Zone**S1; MNZ Dark green/green conglomerate. Locally magnetic due to fractures. Moderately fractured with chlorite+/-magnetite fill. Weak pervasive/semi-pervasive calcitic alteration and patchy minimal seritic alteration. 1-2% smokey-purplish quartz veins as seen in the above greywacke @ 0-30 deg TCA and some sericitic stringers giving the unit a sense of fabric oriented 30-40 deg TCA. Lower contact is oriented 30 deg TCA.					
152.70 154.30 **Calcite; Sericite**Ca; Se Weak pervasive/semi-pervasive calcitic alteration and patchy minimal sericite alteration.					
	153.00	154.30	1.30	S025829	0.005
154.30 156.50 **Greywacke; Mineralized Zone**S3; MNZ	154.30	155.70	1.40	S025830	0.003
Dark green/greenish yellow medium fine grained greywacke. Weakly altered with weak pervasive calcite and weak-mod sericitic alterastion wth sericitic stringers and fracture fill, as well as chorite+/-magnetite fractures throguhout the unit simialr to the above congl and greywacke. Fractures mostly at 0-30 and 60 deg TCA. 156.05-156.15: 1cm wide qtz-hmt-gal?-py vn @ 30 deg TCA. Dark reddish purplish black vein with trace disseminated pyrite through the vein. Some coarser heamtite crystals (Still fine) but also along the edges a bright blueish hue from galena or molybdenite? Lower contact is sharp, oriented 70 deg TCA.					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
154.30 156.50 **Calcite; Sericite**Ca; Se Weakly altered with weak pervasive calcite and weak-mod sericitic alterastion wth sericitic stringers and fracture fill.	155.70	156.50	0.80	S025831	0.007
156.05 156.15 **Pyrite**Py Disseminated pyrite throughout a vein.					
156.50 156.90 **Mudstone**S7 Yellowish green very fine grained mudstone with intercalations of medium fine grainy altered greywacke? Greywacke ~25% of the interval. Sericitic mudstone with calcitic greywacke. Lower contact is sharp, oriented 85 deg TCA.	156.50	157.00	0.50	S025832	0.008
156.50 164.70 **Calcite; Sericite**Ca; Se Weak and patchy calcite and sericite alteration.					
156.90 164.70 **Greywacke**S3 Dark green medium fine grained altered greywacke. Weak calcitic alteration with weak intragranular sericitic alteration. Overall very mafic appearance likely derived from the diabase dike below the unit. Otherwise fairly massive with some fine fractures and weak fabric, oriented 30-50 and 90 deg TCA. Approaching lower contact the unit begins to look finer, but could be an alteration feature. Also some coarser greywacke fragments appear within a finer matrix, and the unit appears ot grade into very fine looking dark brown simialr to the diabase below, so difficult to discern exactly the contact, but likely at 164.7 along the break (few black injections bifurcating from the dark edge of what might be the contact.	157.00	158.50	1.50	S025833	0.005
	158.50	160.00	1.50	S025834	0.003
	160.00	161.50	1.50	S025835	0.003
	161.50	163.00	1.50	S025836	0.003
	163.00	164.00	1.00	S025837	0.003
	164.00	164.70	0.70	S025838	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
164.70	184.85	**Diabase**3D Black to very dark green and brown fine to coarse grained diabase. Weak to strongly magnetic. Mod-strongly fractured and healed with chlorite+/-magnetite, oriented 70 and 150 deg TCA. Some reddish hues due to kspar content(enriched by below unit??). Otherwise massive with a coarse grained core and chilled margins. Lower contact is sharp, oriented 60 deg TCA.	164.70	166.20	1.50	S025840	0.003
			181.10	182.60	1.50	S025841	0.003
			182.60	184.10	1.50	S025842	0.003
			184.10	185.60	1.50	S025843	0.038
184.85	192.35	**Syenite Porphyry**1Sp Dark reddish brown green-brown syenite porphyry. ~35% 1-3mm sized fspar phenos within an aphanmitic matrix. Fine hairline fracture network of vairous orientations as well as <0.5% cc fractures 1-2mm wide oriented 40-60 deg TCA. Overall unit is brittle, but approaching lower contact it begins to break up with an RQD of ~15% from 191.1-192.2m. Occassionally trace disseminated pyrite through the unit. Lower contact is sharp, oriented 70 deg TCA.	185.60	187.10	1.50	S025844	0.013
			187.10	188.60	1.50	S025845	0.003
			188.60	190.10	1.50	S025846	0.009
			190.10	191.60	1.50	S025847	0.011
			191.60	192.40	0.80	S025848	0.006
192.35	192.75	**Fault Zone**FAZ Rubbly, broken, altered FAULT ZONE with a 4cm wide strong fault oriented 40 deg TCA. Fault is at 192.45m and is partially healed but pitted and partially broken up with oen strong contact which seems to match but is parted from a semi-competent piece of host rock. Host appears to be strongly altered trachyte. RQD = 0 for this interval with fragments up to 5cm in core length. Fragments are coated in some gouge. Some quartz-ank					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
veining within the unit with locally strong ankerite alteration and bleaching. Veining appears to be oriented roughly 20 deg TCA.	192.40	193.00	0.60	S025849	0.012
192.75 198.75 **Trachyte Altered**V4a Moderately altered beige-green trachyte. Weakly magnetic. Moderately altered with pervasive weak to locally moderate ankerite alteration. ~5% qtz-ank vening from 3cm to 10cm wide oriented 40-60 deg TCA. Unit is moderately to strongly fractured with chlorite or ankerite fill. Lower contact is sharp, oriented 50 deg TCA.					
192.75 198.75 **Ankerite**Ank Pervasive weak to locally moderate ankeritic alteration.	193.00	194.50	1.50	S025852	0.008
	194.50	196.00	1.50	S025853	0.005
	196.00	197.50	1.50	S025854	0.010
	197.50	199.00	1.50	S025855	0.014
198.75 226.40 **trachyte spotted**V4S Red-brown to brown-green spotted trachyte. Mdoerately altered with on and off pervasive hematitic, ankeriteic and chloritic alteration. Mod-strongly magnetic. Very mafic appearance wth leucosite phenos (hexagonal, tabular, subrounded) <1-4mm in size which are variably altered by chlorite or hematite or white in hue (chl/hmt altered, relatively unaltered). Less veined than the faulted/altered section above Trace disseminated pyrite throguh the unit. 221.05-221.35m: Short interval of altered tuff with a straight fabric oriented 70 deg TCA and sharp upper and lower contacts oriented 40 and 85 deg TCA respectively. Approahcing lower contact the unot picks up some sericitic alteration so its a mix of hmt-ank-ser and alternatingly reddish brown to yellowish green-beige. Lower contact is marked by some pink qtz-ank veining oriented 50-70 deg TCA over 10cm and lower contact itself is 70 deg TCA.					
198.75 226.40 **Hematite; Ankerite; Chlorite**He; Ank; Cl					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Mdoerately altered with on and off pervasive hematitic, ankeriteic and chloritic alteration.					
			199.00	200.50	1.50	S025856	0.024
			200.50	202.00	1.50	S025857	0.014
			202.00	203.50	1.50	S025858	0.017
			203.50	205.00	1.50	S025860	0.018
			205.00	206.50	1.50	S025861	0.012
			206.50	208.00	1.50	S025862	0.020
			208.00	209.50	1.50	S025863	0.032
			209.50	211.00	1.50	S025864	0.039
			211.00	212.50	1.50	S025865	0.017
			212.50	214.00	1.50	S025866	0.018
			214.00	215.50	1.50	S025867	0.024
			215.50	217.00	1.50	S025868	0.033
			217.00	218.50	1.50	S025869	0.016
			218.50	220.00	1.50	S025870	0.024
			220.00	221.50	1.50	S025871	0.021
			221.50	223.00	1.50	S025872	0.021
			223.00	224.50	1.50	S025873	0.013
			224.50	225.50	1.00	S025874	0.016
			225.50	226.50	1.00	S025877	0.022
226.40	240.00	TuffV9 Dark green fine grained ash tuff. Mod/strongly magnetic. Towards upper conatct ~50cm of sheared and sericite banded/altered, otherwuse faurly unaltered except for a very weak semi-pervasive hematitic alterationc ausing a faint reddish hue over parts of the tuff. Shear fabric above is oriented 70 deg TCA parallel with the contact. Also an overall weak reaction to HCl through the unit with stronger reactions wthin fractures. Hole terminates within the tuff.					
			226.50	228.00	1.50	S025878	0.014

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	228.00	229.50	1.50	S025880	0.011
	229.50	231.00	1.50	S025881	0.023
	231.00	232.50	1.50	S025882	0.035
	232.50	234.00	1.50	S025883	0.035
	234.00	235.50	1.50	S025884	0.015
	235.50	237.00	1.50	S025885	0.031
	237.00	238.50	1.50	S025886	0.035
	238.50	240.00	1.50	S025887	0.038

Canadian Malartic GP Exploration Division

DDH: AKC15_102

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 25/08/2015
End date: 26/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 14/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -50.00°
Length: 186.00

	UTM-Nad83	AK-Geo
East	569675.504	7536.987
North	5331118.903	10297.310
Elevation	331.322	331.217

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	1.3°	-48.8°	No
Multishot	9.00	1.3°	-48.8°	No
Multishot	12.00	0.9°	-48.8°	No
Multishot	15.00	0.6°	-48.8°	No
Multishot	18.00	0.6°	-48.7°	No
Multishot	21.00	0.7°	-48.8°	No
Multishot	24.00	0.7°	-48.8°	No
Multishot	27.00	0.7°	-48.8°	No
Multishot	30.00	0.9°	-48.8°	No
Multishot	33.00	1.1°	-48.7°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	36.00	1.0°	-48.6°	No
Multishot	39.00	1.2°	-48.6°	No
Multishot	42.00	1.7°	-48.6°	No
Multishot	45.00	1.2°	-48.6°	No
Multishot	48.00	1.3°	-48.5°	No
Multishot	51.00	1.0°	-48.5°	No
Multishot	54.00	1.0°	-48.5°	No
Multishot	57.00	0.9°	-48.5°	No
Multishot	60.00	1.1°	-48.4°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	1.3°	-48.8°	No		99.00	Multishot	2.0°	-48.1°	No	
9.00	Multishot	1.3°	-48.8°	No		102.00	Multishot	1.7°	-48.1°	No	
12.00	Multishot	0.9°	-48.8°	No		105.00	Multishot	1.4°	-48.1°	No	
15.00	Multishot	0.6°	-48.8°	No		108.00	Multishot	1.6°	-48.1°	No	
18.00	Multishot	0.6°	-48.7°	No		111.00	Multishot	0.4°	-48.0°	No	
21.00	Multishot	0.7°	-48.8°	No		114.00	Multishot	1.8°	-48.0°	No	
24.00	Multishot	0.7°	-48.8°	No		117.00	Multishot	0.8°	-48.0°	No	
27.00	Multishot	0.7°	-48.8°	No		120.00	Multishot	1.3°	-48.0°	No	
30.00	Multishot	0.9°	-48.8°	No		123.00	Multishot	2.4°	-47.9°	No	
33.00	Multishot	1.1°	-48.7°	No		126.00	Multishot	1.5°	-47.9°	No	
36.00	Multishot	1.0°	-48.6°	No		129.00	Multishot	0.8°	-47.9°	No	
39.00	Multishot	1.2°	-48.6°	No		132.00	Multishot	1.8°	-48.0°	No	
42.00	Multishot	1.7°	-48.6°	No		135.00	Multishot	1.7°	-47.9°	No	
45.00	Multishot	1.2°	-48.6°	No		138.00	Multishot	1.6°	-47.9°	No	
48.00	Multishot	1.3°	-48.5°	No		141.00	Multishot	2.0°	-47.9°	No	
51.00	Multishot	1.0°	-48.5°	No		144.00	Multishot	2.1°	-47.9°	No	
54.00	Multishot	1.0°	-48.5°	No		147.00	Multishot	2.2°	-47.9°	No	
57.00	Multishot	0.9°	-48.5°	No		150.00	Multishot	2.2°	-47.9°	No	
60.00	Multishot	1.1°	-48.4°	No		153.00	Multishot	2.3°	-47.9°	No	
63.00	Multishot	1.0°	-48.4°	No		156.00	Multishot	2.4°	-47.9°	No	
66.00	Multishot	0.9°	-48.4°	No		159.00	Multishot	2.5°	-47.9°	No	
69.00	Multishot	0.8°	-48.4°	No		162.00	Multishot	2.6°	-47.9°	No	
72.00	Multishot	1.1°	-48.4°	No		165.00	Multishot	2.9°	-47.9°	No	
75.00	Multishot	1.1°	-48.4°	No		168.00	Multishot	2.7°	-47.8°	No	
78.00	Multishot	1.2°	-48.4°	No		171.00	Multishot	2.7°	-47.8°	No	
81.00	Multishot	1.3°	-48.3°	No		174.00	Multishot	2.6°	-47.8°	No	
84.00	Multishot	1.1°	-48.3°	No		177.00	Multishot	1.1°	-47.8°	No	
87.00	Multishot	1.2°	-48.3°	No		180.00	Multishot	332.8°	-47.8°	Yes	
90.00	Multishot	1.6°	-48.2°	No		183.00	Multishot	3.4°	-47.8°	No	
93.00	Multishot	2.5°	-48.2°	No		186.00	Multishot	8.2°	-47.6°	No	
96.00	Multishot	1.6°	-48.2°	No							

Canadian Malartic GP Exploration Division

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	4.20	**Overburden**OVB Overburden.					
4.20	7.30	**Tuff**V9 Green fine grained tuff. Non-magnetic. Weak pervasive ankerite alteration. Fine bedding with orientation of 30-40 deg TCA. Unit grades into a tuff breccia at the end of this interval.	4.20	5.70	1.50	S025888	0.003
4.20	12.50	**Ankerite**Ank Weak pervasive ankerite alteration.	5.70	7.20	1.50	S025889	0.007
			7.20	8.20	1.00	S025890	0.011
7.30	8.20	**Tuff Breccia**V9BX Brief tuff breccia interval with slightly squished angular to subangular fragments which are sericite-ankerite altered and 2-5cm in size. End of interval is a transition to a fault zone of tuff/tuff breccia.					
8.20	8.80	**Fault Zone; Tuff; Tuff Breccia**FAZ; V9; V9BX Fault zone oriented 20 deg TCA. Two main strong faults within the zone which is broken up, splintered, rubbly with RQD = 0. 8.2-8.3m: Hairline to 0.5cm wide strong fault oriented 20 deg TCA. Core broken surrounding the fault is oxidized. Glued together with chloritic clay and slivers of host rock oblique to the fault along the fault. Friable with little force. 8.6-8.8m: 1cm wide strong gougy fault oriented 20 deg TCA. Altered with limonite, sericite, chlorite and sericitic clay. Fragments up to 3mm in size within the fault which is friable to maleable confined between brittle semi-competent tuffs	8.20	9.00	0.80	S025891	0.012
8.80	12.50	**Greywacke**S3 Green medium fine grained massive greywacke. Non-magnetic. Weak/very weak pervasive ankerite alteration. <<0.5% ank/ser-ank stringers throguh the unit oriented 70 deg TCA.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Unit grades into conglomerate at the end of this interval.					
			9.00	10.50	1.50	S025892	0.003
			10.50	12.00	1.50	S025893	0.003
			12.00	12.50	0.50	S025894	0.005
12.50	21.70	**Conglomerate**S1	12.50	14.00	1.50	S025895	0.007
		Variably hued form dark green to beige/bleached/altered conglomerate. ~30-50% rounded to subangular clasts from0.5-7cm in diameter. Non-magnetic. Overally moderately altered with underying chloritization overpritned by patchy sericite and anekrite alteration through the unit. Trace disseminated pyrite hosted within the greywacke matrix particularly associated with a mroe sericite altered segment from 16.6-21.4m. Unit grades into greywacke witht he absence of pebbles at the end of the interval.					
12.50	21.70	**Ankerite; Sericite**Ank; Se					
		Overally moderately altered with underying chloritization overpritned by patchy sericite and Ankerite alteration through the unit. Trace disseminated py associated with ser patches.					
12.50	32.20	**Pyrite**Py					
		Trace disseminated pyrite throughout the host.					
			14.00	15.50	1.50	S025896	0.016
			15.50	17.00	1.50	S025897	0.005
			17.00	18.50	1.50	S025898	0.006
			18.50	20.00	1.50	S025902	0.003
			20.00	21.50	1.50	S025903	0.003
			21.50	23.00	1.50	S025904	0.003
21.70	32.30	**Greywacke**S3					
		Beige fine to medium fine grained altered greywacke. Non-magnetic. Pervasive weak ankerite and mod-strong sericite alteration of the unit. ~1% qtz-ank stringers/veins from <1mm to 2.5cm wide oriented 0, 40-50, 145 deg TCA. Very fine disseminated trace pyrite throguh the unit.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Lower contact is sharp, oriented 35 deg TCA.					
21.70	32.30	**Sericite; Ankerite**Se; Ank Pervasive weak ankerite and mod-strong sericite alteration of the unit.					
			23.00	24.50	1.50	S025905	0.003
			24.50	26.00	1.50	S025906	0.003
			26.00	27.50	1.50	S025907	0.003
			27.50	29.00	1.50	S025908	0.003
			29.00	30.50	1.50	S025909	0.003
			30.50	32.00	1.50	S025910	0.008
			32.00	33.50	1.50	S025911	0.003
32.30	32.70	**Fault Zone**FAZ 3cm wide strong fault oriented 30-35 deg TCA. Shattered gougy 1-3mm sized fragments of chloritized, nearly serpentinized pieces of rock coated with some clay and rock flour. Fault has pockets of kspar and chlorite veining/recrystalization. Host rock is storngly altered and broken up to fragments <4cm in size.					
32.70	39.60	**Deformation Zone; Greywacke**DZ; S3 Strongly altered deformation zone representing the CBM Break occuring within possibly a greywacke protolith. Pink to yellowish in with undelrying hmt/kspar alteration, stringers of sericite and chlorite oriented 30-60 deg TCA and pockets of ank-qtz flooding. Contact between an earlier fractures and stringered segment whoch is chlorite+sericite alteration dominance switched to hmt-kspar alteration rich segment at 33.6m with a sharp contact oriented 40 deg TCA. Likely still the alteration form the CBM Break but less deformation, more massive except for veining occuring within the interval, and more pervasive pinkish hue from the hmt/kspar-sericite alteration. ~5-10% qtz-ank veiing,wormy to sharp, from 2mm to 3cm oriented 0-20, 60-70 and 140 deg TCA. Lower contact is sharp oriented 70 deg TCA.					
32.70	39.60	**Potassic; Hematite; Sericite; Chlorite**K; He; Se; Cl Strongly altered DFZ with underlying potassic/hematitic alteration and					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		sericite and chlorite stringers.					
			33.50	35.00	1.50	S025912	0.003
			35.00	36.50	1.50	S025913	0.003
			36.50	38.00	1.50	S025914	0.010
			38.00	39.50	1.50	S025915	0.008
			39.50	41.00	1.50	S025916	0.003
39.60	169.30	**Conglomerate**S1 Dark green mottled variably altered clasts conglomerate. Abundance ~30-40% with sizes 0.5-2.5cm wide Non-magnetic. Groundmass is fine grained and fairly dark green. Overprint of some ankerite rhombs occur from 45.0-45.5m ~15% abundace and 2-3mm in size. Sericite alteration ends at 69.0m. The unit becomes mor emafic and ankerite alteration drops completely. Now the groundmass is weakly calcite altered with calcite replacing ankerite in qtz-cc veining which is <1% unit in veins from 1mm to 5cm wide oriented 30 and 70 deg TCA. Around 162m start seeing some trace disseminated pyrite. Also the unit becomes even more mafic in appearance due to a more consistent chloritization to clasts rather than mottled ank-ser-chl-calcitic alterations and is more uniformly chloritized. 163.7-164.3m: Dark chlorite-calcite-quartz-tr pyrite veining oriented 0-30 deg TCA running along the acis. A little brecciated with some fragments of host rock. Appears sugary to chlorite filled. Lower contact is sharp oriented 40 deg						
39.60	69.00	**Sericite; Ankerite**Se; Ank Sericite stringers with on and off weak sericite alteration. And a weak semi-pervasive anekerite alteration.					
			41.00	42.50	1.50	S025917	0.005
			42.50	44.00	1.50	S025918	0.003
			44.00	45.50	1.50	S025920	0.003
			45.50	47.00	1.50	S025921	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			47.00	48.50	1.50	S025922	0.003
			48.50	50.00	1.50	S025923	0.003
			50.00	51.50	1.50	S025924	0.003
69.00	174.30	**Calcite**Ca Pervasive calcitic alteration picks up where ankerite drops off, and gradually gets stronger approaching the diabase at 174.3m.					
			150.00	151.50	1.50	S025927	0.003
			151.50	153.00	1.50	S025928	0.005
			153.00	154.50	1.50	S025929	0.005
			154.50	156.00	1.50	S025930	0.003
			156.00	157.50	1.50	S025931	0.005
			157.50	159.00	1.50	S025932	0.008
			159.00	160.50	1.50	S025933	0.006
			160.50	162.00	1.50	S025934	0.003
162.00	174.30	**Pyrite**Py Trace disseminated pyrite.	162.00	163.50	1.50	S025935	0.003
			163.50	165.00	1.50	S025936	0.011
			165.00	166.50	1.50	S025937	0.003
			166.50	168.00	1.50	S025938	0.003
			168.00	169.30	1.30	S025940	0.003
169.30	174.30	**Tuff**V9 Dark blackish to brownish aphanitic massive tuff. Very calcitic due to proximity with diabase. Weakly magnetic. Lower contact is sharp oriented 70 deg TCA.	169.30	170.80	1.50	S025941	0.003
			170.80	172.30	1.50	S025942	0.003
			172.30	173.80	1.50	S025943	0.003
			173.80	174.30	0.50	S025944	0.019
174.30	186.00	**Diabase**3D Black to dark green fine to coarse grained diabase. Weak to storngly magnetic (proximal to coarser grained core). Massive and <<0.5% qtz-cc	174.30	175.80	1.50	S025945	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
veining with pervasive weak calcitic alteration. Hole terminates within diabase.	175.80	177.30	1.50	S025946	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_103

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 27/08/2015
End date: 28/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 12/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 189.00

	UTM-Nad83	AK-Geo
East	569606.683	7466.871
North	5331103.542	10304.805
Elevation	329.962	329.857

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	358.4°	-43.5°	No
Multishot	12.00	358.4°	-43.5°	No
Multishot	15.00	359.4°	-43.4°	No
Multishot	18.00	359.2°	-43.5°	No
Multishot	21.00	359.6°	-43.5°	No
Multishot	24.00	359.6°	-43.4°	No
Multishot	27.00	359.6°	-43.4°	No
Multishot	30.00	359.5°	-43.5°	No
Multishot	33.00	359.0°	-43.5°	No
Multishot	36.00	359.0°	-43.5°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	359.5°	-43.4°	No
Multishot	42.00	359.7°	-43.4°	No
Multishot	45.00	359.5°	-43.4°	No
Multishot	48.00	359.6°	-43.4°	No
Multishot	51.00	359.8°	-43.4°	No
Multishot	54.00	359.4°	-43.4°	No
Multishot	57.00	359.5°	-43.4°	No
Multishot	60.00	358.6°	-43.4°	No
Multishot	63.00	359.2°	-43.4°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ Cemented: Yes Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	358.4°	-43.5°	No		102.00	Multishot	360.0°	-42.9°	No	
12.00	Multishot	358.4°	-43.5°	No		105.00	Multishot	0.4°	-42.9°	No	
15.00	Multishot	359.4°	-43.4°	No		108.00	Multishot	0.5°	-43.0°	No	
18.00	Multishot	359.2°	-43.5°	No		111.00	Multishot	0.6°	-42.9°	No	
21.00	Multishot	359.6°	-43.5°	No		114.00	Multishot	0.7°	-43.0°	No	
24.00	Multishot	359.6°	-43.4°	No		117.00	Multishot	0.6°	-43.0°	No	
27.00	Multishot	359.6°	-43.4°	No		120.00	Multishot	0.6°	-43.0°	No	
30.00	Multishot	359.5°	-43.5°	No		123.00	Multishot	0.9°	-43.0°	No	
33.00	Multishot	359.0°	-43.5°	No		126.00	Multishot	0.7°	-42.9°	No	
36.00	Multishot	359.0°	-43.5°	No		129.00	Multishot	0.8°	-42.9°	No	
39.00	Multishot	359.5°	-43.4°	No		132.00	Multishot	1.0°	-42.9°	No	
42.00	Multishot	359.7°	-43.4°	No		135.00	Multishot	359.6°	-42.9°	No	
45.00	Multishot	359.5°	-43.4°	No		138.00	Multishot	357.8°	-42.8°	Yes	
48.00	Multishot	359.6°	-43.4°	No		141.00	Multishot	1.5°	-42.8°	No	
51.00	Multishot	359.8°	-43.4°	No		144.00	Multishot	3.4°	-42.8°	No	
54.00	Multishot	359.4°	-43.4°	No		147.00	Multishot	357.9°	-42.8°	No	
57.00	Multishot	359.5°	-43.4°	No		150.00	Multishot	359.3°	-42.7°	No	
60.00	Multishot	358.6°	-43.4°	No		153.00	Multishot	358.9°	-42.7°	No	
63.00	Multishot	359.2°	-43.4°	No		156.00	Multishot	0.6°	-42.7°	No	
66.00	Multishot	359.6°	-43.4°	No		159.00	Multishot	0.7°	-42.7°	No	
69.00	Multishot	360.0°	-43.3°	No		162.00	Multishot	0.3°	-42.7°	No	
72.00	Multishot	357.8°	-43.4°	No		165.00	Multishot	359.5°	-42.7°	No	
75.00	Multishot	358.3°	-43.3°	No		168.00	Multishot	359.4°	-42.7°	No	
78.00	Multishot	0.6°	-43.3°	No		171.00	Multishot	358.7°	-42.6°	No	
81.00	Multishot	359.8°	-43.2°	No		174.00	Multishot	358.4°	-42.6°	No	
84.00	Multishot	0.2°	-43.2°	No		177.00	Multishot	3.1°	-42.7°	No	
87.00	Multishot	359.8°	-43.1°	No		180.00	Multishot	358.1°	-42.6°	No	
90.00	Multishot	0.2°	-43.1°	No		183.00	Multishot	0.3°	-42.7°	No	
93.00	Multishot	0.3°	-43.1°	No		186.00	Multishot	0.6°	-42.6°	No	
96.00	Multishot	0.4°	-43.0°	No		189.00	Multishot	0.3°	-42.7°	No	
99.00	Multishot	360.0°	-43.0°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	4.60	**Overburden**OVB Overburden.					
4.60	111.60	**Conglomerate**S1 Variably coloured and overall weakly altered conglomerate. > 75% heterolithic fragments from 2mm to 7cm in diameter, subangular to rounded and variably altered with various intensities. Weakly magnetic. Very weak pervasive ankeritic alteration with local sericitic alteration as 20cm-2m weak/mod sericitized zones (overall <5% of the unit). <1% qtz-ank veining from hairline to 3cm wide oriented 60 and 30 deg TCA. Trace to none disseminated pyrite throguhout the unit until ~20.5m, often within the finer matrix or in fine fractures within clasts and along clast/matrix contacts. Weak/mod oxidized breaks and fractures from the start of the hole until ~18m typically 15-30 deg TCA and occassionally some of the 60 deg breaks though overall infrequent especially relative to other holes. 62.5-71.0M: Tr to 0% disseminated pyrite within matrix and clasts. Lower contact is sharp, oriented 40 deg TCA.	4.60	6.00	1.40	R324881	0.007
4.60	111.60	**Ankerite; Sericite**Ank; Se Very weak pervasive ankeritic alteration with local sericitic alteration as 20cm-2m weak/mod sericitized zones (overall <5% of the unit).					
4.60	111.60	**Pyrite**Py Trace to non disseminated pyrite throughout the unit.					
			6.00	7.50	1.50	R324882	0.010
			7.50	9.00	1.50	R324883	0.009
			9.00	10.50	1.50	R324884	0.010
			10.50	12.00	1.50	R324885	0.005
			12.00	13.50	1.50	R324886	0.009
			13.50	15.00	1.50	R324887	0.005
			15.00	16.50	1.50	R324888	0.007
			16.50	18.00	1.50	R324889	0.008
			18.00	19.50	1.50	R324890	0.009

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	19.50	21.00	1.50	R324891	0.003
	59.50	61.00	1.50	R324892	0.006
	61.00	62.50	1.50	R324893	0.010
	62.50	64.00	1.50	R324894	0.007
	64.00	65.50	1.50	R324895	0.006
	65.50	67.00	1.50	R324896	0.008
	67.00	68.50	1.50	R324897	0.006
	68.50	70.00	1.50	R324898	0.005
	70.00	71.50	1.50	R324902	0.003
	71.50	73.00	1.50	R324903	0.006
	106.00	107.50	1.50	R324904	0.006
	107.50	109.00	1.50	R324905	0.009
	109.00	110.50	1.50	R324906	0.006
	110.50	112.00	1.50	R324907	0.007
111.60 116.90 **Greywacke**S3 Green/yellowish green fine to medium fine grained greywacke. Non-magnetic. Weak pervasive calcitic alteration and weak-mod irregular on and off alteration. Occassional fractures of calcitre typically oriented 50-60 deg TCA and some chl-cc fractures and veins from 1-9mm wide oriented 15 deg TCA. Lower contact is sharp, oriented 50 deg TCA. 111.60 116.90 **Calcite; Sericite**Ca; Se Weak perv cc alt and wk-mod irregular ser alteration.					
	112.00	113.50	1.50	R324908	0.010
	113.50	115.00	1.50	R324909	0.006
	115.00	116.50	1.50	R324910	0.009
	116.50	118.00	1.50	R324911	0.007
116.90 129.20 **Conglomerate**S1 Green altered conglomerate. Overall weak to locally mod magnetic and overall calcitic with a weak-mild reaction to HCl, especially fractures and					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		some veinlets which are cc-qtz oriented 45 deg TCA. Upper contact has silica flooding for he first 20cm but isnt like mienralized silcia flooding. Is more of a qtz-cc mix and brittle, highly fractured with calcite fill, giving it a broken glassy appearance slightly stained bluish from chloritic inclusion. Similar patchy qtz-cc brittle zones occur also around 120.9-121.2m with an orientation of 70 deg TCA. Here they appear more veined or banded dark smokey quartz with calcitic fractures and some sericitic stringers, though sericite within this unit is far less than the above greywacke. Fragments within this unit are smaller <1cm in size an dmore abundant up to ~50% fragments. Unit appears more mafic and more calcitic than typical due to its proximity to the diabase below. As it approaches the diabase the unit is interdigited with brownish tendrils likely derived fromt he diabase. Contact seems feathered. Clasts present up until approximately 129.2m where there appears to be a contact oriented 50 deg TCA. Following this ocntact the unit is very fine grained.					
116.90	129.20	**Calcite**Ca Wk perv cc alt.					
			118.00	119.50	1.50	R324912	0.008
			119.50	121.00	1.50	R324913	0.010
			121.00	122.50	1.50	R324914	0.007
			122.50	124.00	1.50	R324915	0.006
			124.00	125.50	1.50	R324916	0.005
			125.50	127.00	1.50	R324917	0.007
			127.00	128.50	1.50	R324918	0.007
			128.50	129.20	0.70	R324920	0.010
129.20	155.70	**Diabase**3D Dark green (almost black) and dark brown very fine grained to medium-coarse grained diabase. Core of the diabase is storngly magnetic but near upper and lower contacts magnetism is on and off. Weakly fractures	129.20	130.70	1.50	R324921	0.012

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
initially wth black chlorite +/- magnetite fill and where th eunit becomes coarser and browner it is filled with calcite. Whee it is calcitic, ther eseems to be some brownish heamtization and some staining, as well as ~15% fspar content. Occassional hmt+sericite stringers oriented 60 deg TCA. Lower contact is sharp, oriented 50 deg TCA.					
129.20 155.70 **Calcite; Hematite**Ca; He Pervasive calcite alteration and local hematization.					
	130.70	132.20	1.50	R324922	0.029
	152.70	154.20	1.50	R324923	0.003
	154.20	155.70	1.50	R324924	0.003
155.70 161.20 **Trachyte**V4	155.70	157.20	1.50	R324927	0.037
Very dark nearly blackish with subtle brown altered trachyte. Finly fractured but with calcite fill more rather than the chlorite fill seen up in the diabase. Also distinguished by a more massive appearance and brownish hue rather than the greenish one form the diabase. Also present are 1-3mm sized hexagonal to subrounded to tabular luecites. Moderately magnetic. Very reactive with HCl - Pervasive calcitic alteration. Lower contact is sharp, oriented 70 deg TCA.					
155.70 161.20 **Calcite**Ca Pervasice calcite alteration.					
	157.20	158.70	1.50	R324928	0.037
	158.70	160.20	1.50	R324929	0.075
	160.20	161.70	1.50	R324930	0.020
161.20 161.50 **Fault Zone**FAZ 30cm wide strong fault oriented 70 deg TCA. Hunton fault, pitted, rough, original host rock completely altered to a healed gouge appearance. Strongly calcitic with rubbly fragments up to 3mm in size.					
161.50 163.90 **Altered Syenite Porphyry**1Spa Strongly altered syenite porphyry. Banded, veined, and sheared and altered from the fault above with trends of 40-50 deg TCA. Ank, hmt, ep, ser altered					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
and ~1% qtz-ank veined oriented 50 deg TCA in veins 1-2.5cm wide. Also very fractured following the 40-50 deg trend. Lower contact is sharp, oriented 50 deg TCA.					
161.50 163.90 **Ankerite; Hematite; Epidote; Sericite**Ank; He; Ep; Se Strongly Ank, hmt, ep, ser altered asociated with the Hunton Break.					
	161.70	163.00	1.30	R324931	0.003
	163.00	164.50	1.50	R324932	0.007
163.90 174.70 **Syenite Porphyry**1Sp Red/red-brown syenite porphyry. ~35% fspar phenos from 1-2mm in size. Overall hematized or dusted with a hematitic alteration where the rock appears red/red browna nd phenos are similarly stained. Fine fractures and veins <1cm wide (<<0.5% of the itnerval) oriented 40-50 deg TCA, some of the qtz-ank veins also consisting of specular hematite. Overall weak-moderately magnetic. Lower contact is irregular/jagged but roughly trending 30 deg TCA with the syentie porphyry chilled over 0.5cm to the contact.					
163.90 174.70 **Hematite**He Overall weakly hematized interval.					
	164.50	166.00	1.50	R324933	0.024
	166.00	167.50	1.50	R324934	0.054
	167.50	169.00	1.50	R324935	0.008
	169.00	170.50	1.50	R324936	0.020
	170.50	172.00	1.50	R324937	0.007
	172.00	173.50	1.50	R324938	0.008
	173.50	174.70	1.20	R324940	0.006
174.70 189.00 **trachyte spotted**V4S Red/brown, purplish, altered yellow-muddy-green spotted altered trachyte. Weak to storngly magnetic. Overall very reddish and hematized but some intervals are bleached slightly or a more greenish hue due to some anekrite-sericite alteration, or a dark green with calcite alteration. Overall	174.70	176.20	1.50	R324941	0.015

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
~60% phenos with ~35% abundance of more tabular to hexagonal greyish white-blue hued 1-2mm sized leucites? And ~25% 2-4mm sized off-white hematite stained fspars? and occassionally some pen pricks of black crystals tanding out against an aphanitic matrix. 180.35-180.9m: Strongly (relatively) altered interval wth is darker green in hue and very chloritic and calcitic, with calcitic alteraiton to the phenos which display zonation. Alteration contacts are sharp, oriented 70 deg TCA. Also contains some interstitial alteraiton grains which are either sericite or leucoxene. 184.8-185.1m and 188.0-188.4m: Bleached yellow green intervals of spotted trachyte due to ank-ser alteration of the interval, less magnetism but also an appearance of interstitial ser/leucoxene grains about the side of a pen prick. Contains some qtz-ank veining and diseminated pyrite overall trace amounts. Hole terminates within the spotted trachyte.							
174.70	189.00	**Hematite; Ankerite; Sericite**He; Ank; Se Overall hematized with patchy intervals ogf ankerite-sericite alteration.					
			176.20	177.70	1.50	R324942	0.021
			177.70	179.20	1.50	R324943	0.031
			179.20	180.20	1.00	R324944	0.019
			180.20	181.00	0.80	R324945	0.003
			181.00	182.50	1.50	R324946	0.015
			182.50	184.00	1.50	R324947	0.012
			184.00	185.50	1.50	R324948	0.003
			185.50	187.00	1.50	R324949	0.026
			187.00	188.00	1.00	R324952	0.003
			188.00	189.00	1.00	R324953	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_104

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 28/08/2015
End date: 28/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 13/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 111.00

	UTM-Nad83	AK-Geo
East	569635.250	7514.813
North	5331168.723	10357.399
Elevation	330.511	330.406

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	358.8°	-44.5°	No
Multishot	12.00	358.8°	-44.5°	No
Multishot	15.00	359.9°	-44.5°	No
Multishot	18.00	0.4°	-44.5°	No
Multishot	21.00	0.6°	-44.5°	No
Multishot	24.00	1.1°	-44.5°	No
Multishot	27.00	0.9°	-44.5°	No
Multishot	30.00	1.1°	-44.5°	No
Multishot	33.00	1.1°	-44.5°	No
Multishot	36.00	1.2°	-44.4°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	1.0°	-44.4°	No
Multishot	42.00	1.3°	-44.4°	No
Multishot	45.00	1.3°	-44.4°	No
Multishot	48.00	1.3°	-44.4°	No
Multishot	51.00	1.3°	-44.4°	No
Multishot	54.00	1.0°	-44.3°	No
Multishot	57.00	1.3°	-44.3°	No
Multishot	60.00	1.1°	-44.3°	No
Multishot	63.00	1.3°	-44.3°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

Project: Amalgamated Kirkland

11/03/2016

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	358.8°	-44.5°	No		102.00	Multishot	0.4°	-43.9°	No	
12.00	Multishot	358.8°	-44.5°	No		105.00	Multishot	0.9°	-43.9°	No	
15.00	Multishot	359.9°	-44.5°	No		108.00	Multishot	1.4°	-43.9°	No	
18.00	Multishot	0.4°	-44.5°	No		111.00	Multishot	1.2°	-43.9°	No	
21.00	Multishot	0.6°	-44.5°	No							
24.00	Multishot	1.1°	-44.5°	No							
27.00	Multishot	0.9°	-44.5°	No							
30.00	Multishot	1.1°	-44.5°	No							
33.00	Multishot	1.1°	-44.5°	No							
36.00	Multishot	1.2°	-44.4°	No							
39.00	Multishot	1.0°	-44.4°	No							
42.00	Multishot	1.3°	-44.4°	No							
45.00	Multishot	1.3°	-44.4°	No							
48.00	Multishot	1.3°	-44.4°	No							
51.00	Multishot	1.3°	-44.4°	No							
54.00	Multishot	1.0°	-44.3°	No							
57.00	Multishot	1.3°	-44.3°	No							
60.00	Multishot	1.1°	-44.3°	No							
63.00	Multishot	1.3°	-44.3°	No							
66.00	Multishot	1.3°	-44.3°	No							
69.00	Multishot	1.3°	-44.2°	No							
72.00	Multishot	1.2°	-44.2°	No							
75.00	Multishot	1.4°	-44.2°	No							
78.00	Multishot	1.1°	-44.2°	No							
81.00	Multishot	1.1°	-44.2°	No							
84.00	Multishot	1.0°	-44.1°	No							
87.00	Multishot	0.7°	-44.0°	No							
90.00	Multishot	0.7°	-44.0°	No							
93.00	Multishot	2.8°	-44.0°	No							
96.00	Multishot	0.1°	-44.0°	No							
99.00	Multishot	2.0°	-44.0°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	7.00	**Overburden**OVB Overburden.					
7.00	68.60	**Conglomerate**S1 Dark green to bleached beige/green (locally) conglomerate. Weakly magnetic. Patchy sericitic alteration but generally chloritized and very weak pervasive ankerite alteration (stronger locally to qtz-ank veins) and occassional sericite altered intervals. ~50% clast abundance, rounded to subangular and containing red jaspers and heterolithic fragments varuably altered and variably hued. Qtz-nk veins throughout the unit from <1% overall which are 1mm to 3cm thick oriented 20-50 and 140 deg TCA. 19.2-21.5m: Bleached beige intervald ue to moderate sericite-ank alteration. 34.4-39.7m: Another bleached moderately altered section of conglomerate with pervasive ser-ank alteration causing beige hue to this part of the unit's matrix. 43-44.7m: Interval of greywacke lacking any pebbles. Grading in and out of conglomerate. 48.2-56.9m: Weak-mod altered bleached beige hue interval of sericite-ankerite affecting the greywacke matrix pervasively. 57.85-59.0m: Another interval of mostly massive greywacke, with a few pebbles <0.5% overall. 63.8m: 0.5cm wide strong fault oriented 40 deg TCA. Gougy, friably into sheets with some force, minor clay coating the surface. 63.55-68.0m: Interval containing <10% qtz-ank/cc veining, irregular to wormy, and variable in widths from 0.5-5cm wide oriented 50 deg TCA. Also this section is moderately fractured with dark green chlorite fill and qtz-ank fil/qtz-ank-chl fractures which are more randomly oriented but some trends are at 20-30 and 150 deg TCA. Weak semi-pervasive sericitic alteration also associated with this interval. Before 65.5m ankerite-quartz is dominant then following is calcite-quartz.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Starting at 65.5m-68.6m the alteration switches from ankeritic to calcitic including fractures and veins. Approaching lower contact clasts appear to be squished and aligned with a fabric oriented 50 deg TCA, with intercalations of mudstone feather near the contact. Contact is sharp, oriented 50 deg TCA.					
7.00	19.20	**Chlorite; Ankerite; Sericite**Cl; Ank; Se Chloritized with very weak pervasive ankerite alteration and patchy sericite intervals.					
			16.00	17.50	1.50	R324954	0.003
			17.50	19.00	1.50	R324955	0.003
			19.00	20.50	1.50	R324956	0.025
19.20	21.50	**Sericite; Ankerite**Se; Ank Moderate sericite-ankerite alteration.					
			20.50	22.00	1.50	R324957	0.003
21.50	34.40	**Chlorite; Ankerite; Sericite**Cl; Ank; Se Chloritized with very weak pervasive ankerite alteration and patchy sericite intervals.					
			22.00	23.50	1.50	R324958	0.010
			23.50	25.00	1.50	R324960	0.006
			25.00	26.50	1.50	R324961	0.007
			26.50	28.00	1.50	R324962	0.008
			28.00	29.50	1.50	R324963	0.005
			29.50	31.00	1.50	R324964	0.009
			31.00	32.50	1.50	R324965	0.005
			32.50	34.00	1.50	R324966	0.003
			34.00	35.50	1.50	R324967	0.005
34.40	39.70	**Sericite; Ankerite**Se; Ank Another moderate ser-ank alt.					
			35.50	37.00	1.50	R324968	0.003
			37.00	38.50	1.50	R324969	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			38.50	40.00	1.50	R324970	0.006
39.70	48.20	**Chlorite; Ankerite; Sericite**Cl; Ank; Se Chloritized with very weak pervasive ankerite alteration and patchy sericite intervals.					
			40.00	41.50	1.50	R324971	0.009
			41.50	43.00	1.50	R324972	0.009
			43.00	44.50	1.50	R324973	0.010
			44.50	46.00	1.50	R324974	0.006
			46.00	47.50	1.50	R324977	0.007
			47.50	49.00	1.50	R324978	0.007
48.20	56.90	**Sericite; Ankerite**Se; Ank Another moderate ser-ank alt.					
			49.00	50.50	1.50	R324980	0.006
			50.50	52.00	1.50	R324981	0.003
			52.00	53.50	1.50	R324982	0.003
			53.50	55.00	1.50	R324983	0.003
			55.00	56.50	1.50	R324984	0.005
			56.50	58.00	1.50	R324985	0.003
56.90	63.50	**Chlorite; Ankerite; Sericite**Cl; Ank; Se Chloritized with very weak pervasive ankerite alteration and patchy sericite intervals.					
			58.00	59.50	1.50	R324986	0.003
			59.50	61.00	1.50	R324987	0.005
			61.00	62.50	1.50	R324988	0.005
			62.50	64.00	1.50	R324989	0.006
63.50	68.60	**Sericite; Calcite**Se; Ca Weak semi-pervasive sericitic alteration and calcitic alteration.					
63.80	63.85	**Fault**FLT 0.5cm wide storng fault at 40 deg TCA, friable, clay coated, peels off in sheets wth some pressure.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			64.00	65.50	1.50	R324990	0.017
			65.50	67.00	1.50	R324991	0.003
			67.00	68.60	1.60	R324992	0.008
68.60	69.20	**Mudstone**S7 Interval of dark green and yellow green bedded and aphanitic mudstones. Isn't as ncie as typical mudstones, some deformation and fractured with dark chlorite healing and orientation of 50 deg TCA. Some greywacke present within the mudstones. Lower contact is sharp, oriented 40 deg TCA.	68.60	69.20	0.60	R324993	0.015
69.20	72.10	**Greywacke**S3 Green/dark green fine grained greywacke (some pebbly wacke as well). Weakly to non-magnetic. Weak pervasive calcitic alteration.From 70.2-72.9m ~20% abundance of rounded clasts for a pebbly wacke, but <1.5cm in size and not quite as prominent as in the above conglomerate unit. End of the unit marks a change from greywacke to conglomerate.	69.20	70.70	1.50	R324994	0.014
69.20	86.70	**Calcite**Ca Weak pervasice calcitic alteration.					
			70.70	72.10	1.40	R324995	0.017
72.10	78.40	**Conglomerate**S1 Really weird looking conglomerate. Very mafic in appearance and calcitic, due to approachign the diabase dike. >50% clasts 0.5-2cm sized rounded clasts also also and cooked but faint underlying differences in alteration and colours. Occassional jaspers still visible. Weakly magnetic. Lower contact is sharp, oriented 50 deg TCA.	72.10	73.50	1.40	R324996	0.020
			73.50	74.90	1.40	R324997	0.012
			74.90	76.30	1.40	R324998	0.008
			76.30	77.70	1.40	R327202	0.013
			77.70	78.40	0.70	R327203	0.005
78.40	86.70	**Tuff**V9 Very dark, very mafic slightly brownish black fvery fine grained aphanitic to chilled tuff. Partly displaying a fabric due to some wispy alteration stringers	78.40	79.90	1.50	R327204	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		from 78.4-82.0m with orientations from 30-50 deg TCA. Weakly to non-magnetic. Trace disseminated pyrite. Very little to non-veining. Pervasive weak calctiic alteration. Chilled and brownish hue from 85.6-86.7m and weird mottled potassic/heamtitic red alterations over 10cm at the lower contact, which resembles the albitic sweats observed on other properties (Upper Canada and Beaver). Lower contact is sharp, oriented 70 deg TCA.					
78.40	86.70	**Pyrite**Py Trace disseminated pyrite.					
			79.90	81.40	1.50	R327205	0.005
			81.40	82.90	1.50	R327206	0.010
			82.90	84.40	1.50	R327207	0.017
			84.40	85.90	1.50	R327208	0.164
			85.90	86.70	0.80	R327209	0.075
86.70	109.50	**Diabase**3D Dark green/blackish chilled to coarse grained diabase. Strongly magnetic. Pervasive calcitic alteration and weakly fractured with chlorite or calcite fill. Chlorite tends to form black wisps throughout the unit and tend to be oriented 90 and 40-50 deg TCA. 104.8-109.5m: Unit becomes slightly broken up, overall RQD ~25% with semi-competent core, but areas which are more broken upw ith dominant angles at 15 and 50 deg TCA. Lower contact is sharp, oriented 50 deg TCA.	86.70	88.20	1.50	R327210	0.003
86.70	109.50	**Calcite; Chlorite**Ca; Cl Pervasive calcitic alteration and chlorite fracture fill.					
			88.20	89.70	1.50	R327211	0.003
			106.50	108.00	1.50	R327212	0.003
			108.00	109.50	1.50	R327213	0.062
109.50	110.00	**Fault Zone**FAZ Fault zone with fabric oriented 50 deg TCA and the Hunton Fault from 109.7-110.0m ~25cm wide oriented 50-70 deg TCA. Discs of core withint he	109.50	110.40	0.90	R327214	0.018

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
fault but overall mostly fault gouge partially cemented with chloritic clay and calcite. Fault is a strong fault and friable with some force. Host rock may have been tuff?					
109.70 110.00 **Fault**FLT ~25cm wide strong Fault oriented 50-70 deg TCA. Within the fault are some semi-competent dics of core <1cm wide showing 50 deg TCA angles but a sharp contact with fault/underlyign unit is at 70 deg TCA and other core is also showing that trend. Structure is the Hunton break. Pitted/gouged/weathered and friable with force, cemented with chloritic clay and calcite.					
110.00 110.35 **Tuff**V9 Deformation/alteration zone part of the Hunton break. Host rock is likely tuff as it is fine grained and lacking distinguishing features. Overprinted with chlorite, sericite, calcite alteration which is irregular to trending at 40-70 deg TCA. Initerstitial leucoxene/sericite grains. Lower contact is sharp, oriented 45 deg TCA.					
110.00 110.35 **Chlorite; Sericite; Calcite**Cl; Se; Ca Deformation zone of the Hunton Break overprinted with chlorite, sericite, calcite alteration.					
110.35 111.00 **Trachyte**V4 Mottled dark red-green very mafic appear trachyte. Consists of leucites, some larger hematitie stained ones at 1-2mm in size and smaller bluish more calcitic altered appearing onces whicha re <1mm in size. ~35% of the (brief) interval. Hexagonal to tabular to rounded shapes. Hole terminates within the trachyte reaching the northern property boundary.					
110.35 111.00 **Calcite**Ca Pervasive calcitic alteration.					
	110.40	111.00	0.60	R327215	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_105

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 29/08/2015
End date: 30/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 15/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 198.00

	UTM-Nad83	AK-Geo
East	569740.833	7590.769
North	5331093.605	10252.418
Elevation	336.253	336.148

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	359.9°	-44.4°	No
Multishot	12.00	359.9°	-44.4°	No
Multishot	15.00	359.8°	-44.4°	No
Multishot	18.00	0.4°	-44.4°	No
Multishot	21.00	0.8°	-44.4°	No
Multishot	24.00	0.0°	-44.4°	No
Multishot	27.00	0.6°	-44.3°	No
Multishot	30.00	0.0°	-44.3°	No
Multishot	33.00	359.8°	-44.3°	No
Multishot	36.00	359.6°	-44.3°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	359.8°	-44.3°	No
Multishot	42.00	359.6°	-44.3°	No
Multishot	45.00	359.9°	-44.3°	No
Multishot	48.00	359.7°	-44.3°	No
Multishot	51.00	0.9°	-44.3°	No
Multishot	54.00	0.1°	-44.2°	No
Multishot	57.00	0.0°	-44.2°	No
Multishot	60.00	0.1°	-44.2°	No
Multishot	63.00	0.1°	-44.1°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	359.9°	-44.4°	No		102.00	Multishot	0.6°	-43.8°	No	
12.00	Multishot	359.9°	-44.4°	No		105.00	Multishot	0.5°	-43.7°	No	
15.00	Multishot	359.8°	-44.4°	No		108.00	Multishot	0.6°	-43.7°	No	
18.00	Multishot	0.4°	-44.4°	No		111.00	Multishot	0.9°	-43.7°	No	
21.00	Multishot	0.8°	-44.4°	No		114.00	Multishot	0.9°	-43.7°	No	
24.00	Multishot	0.0°	-44.4°	No		117.00	Multishot	1.0°	-43.6°	No	
27.00	Multishot	0.6°	-44.3°	No		120.00	Multishot	0.4°	-43.6°	No	
30.00	Multishot	0.0°	-44.3°	No		123.00	Multishot	0.4°	-43.6°	No	
33.00	Multishot	359.8°	-44.3°	No		126.00	Multishot	0.4°	-43.6°	No	
36.00	Multishot	359.6°	-44.3°	No		129.00	Multishot	0.5°	-43.6°	No	
39.00	Multishot	359.8°	-44.3°	No		132.00	Multishot	0.7°	-43.6°	No	
42.00	Multishot	359.6°	-44.3°	No		135.00	Multishot	0.9°	-43.5°	No	
45.00	Multishot	359.9°	-44.3°	No		138.00	Multishot	0.8°	-43.5°	No	
48.00	Multishot	359.7°	-44.3°	No		141.00	Multishot	1.1°	-43.5°	No	
51.00	Multishot	0.9°	-44.3°	No		144.00	Multishot	1.1°	-43.4°	No	
54.00	Multishot	0.1°	-44.2°	No		147.00	Multishot	1.2°	-43.4°	No	
57.00	Multishot	0.0°	-44.2°	No		150.00	Multishot	1.2°	-43.4°	No	
60.00	Multishot	0.1°	-44.2°	No		153.00	Multishot	1.2°	-43.3°	No	
63.00	Multishot	0.1°	-44.1°	No		156.00	Multishot	1.1°	-43.3°	No	
66.00	Multishot	0.1°	-44.1°	No		159.00	Multishot	1.2°	-43.3°	No	
69.00	Multishot	0.1°	-44.1°	No		162.00	Multishot	1.1°	-43.3°	No	
72.00	Multishot	0.2°	-44.1°	No		165.00	Multishot	1.4°	-43.3°	No	
75.00	Multishot	0.3°	-44.1°	No		168.00	Multishot	1.2°	-43.2°	No	
78.00	Multishot	0.3°	-44.0°	No		171.00	Multishot	0.8°	-43.3°	No	
81.00	Multishot	0.3°	-44.0°	No		174.00	Multishot	0.9°	-43.2°	No	
84.00	Multishot	0.4°	-44.0°	No		177.00	Multishot	1.0°	-43.2°	No	
87.00	Multishot	0.4°	-43.9°	No		180.00	Multishot	0.9°	-43.2°	No	
90.00	Multishot	0.4°	-43.9°	No		183.00	Multishot	1.7°	-43.2°	No	
93.00	Multishot	0.4°	-43.9°	No		186.00	Multishot	0.9°	-43.1°	No	
96.00	Multishot	0.4°	-43.9°	No		189.00	Multishot	0.3°	-43.1°	No	
99.00	Multishot	0.5°	-43.8°	No		192.00	Multishot	0.9°	-43.1°	No	

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
195.00	Multishot	0.9°	-43.1°	No							
198.00	Multishot	1.1°	-43.0°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	3.70	**Overburden**OVB Overburden.					
3.70	54.50	**Tuff; Lapilli Tuff; Tuff Breccia**V9; V9L; V9BX Dark purplish brown fine grained tuff/lapilli tuff. Moderately magnetic. Very weak pervasive ankeritic alteration. Pervasive hematitic alteration? Withint he sericite altered section soem of the fragments are reddish from a hematitic overprint? From 3.7-19m occassional breaks with limonitic oxidation. Generally the tuffs are massive to bedded to hosting lapilli to brecciated. Beds are 2mm to1.5cm wide and oriented 50-60 deg TCA when present. Lapilli <1cm in size and abundances from 0-15%. Breccia fragments are faint, fuzzy to angular. subrounded to elongated or oriented following bedding and vary in size from 3mm to 13cm diameter with variable abundances from 0 to $$$$ 26.6m a weak pervasive sericitic alteration causing a bleaching to the otherwise dark hue starts. 41m the hematization drops so the unit is no longer purplish, but the above sericitic bleaching remains with underlying chloritic alteration so a faded green hue. Sericite is still weak and pervasive. Unit terminates at a fault oriented 35 deg TCA.					
3.70	26.60	**Ankerite; Hematite**Ank; He Weak pervasive ankerite-hematite alteration.					
26.60	41.00	**Ankerite; Hematite; Sericite**Ank; He; Se Weak pervasive ankerite-hematite-sericite alteration.					
			27.00	28.50	1.50	S025947	0.009
			28.50	30.00	1.50	S025948	0.003
			30.00	31.50	1.50	S025949	0.003
			31.50	33.00	1.50	S025952	0.003
			33.00	34.50	1.50	S025953	0.006
			34.50	36.00	1.50	S025954	0.003
			36.00	37.50	1.50	S025955	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			37.50	39.00	1.50	S025956	0.003
			39.00	40.50	1.50	S025957	0.003
			40.50	42.00	1.50	S025958	0.006
41.00	54.50	**Ankerite; Sericite**Ank; Se Weak pervasive ankerite-sericite alteration.					
			42.00	43.50	1.50	S025960	0.003
			43.50	45.00	1.50	S025961	0.003
			45.00	46.50	1.50	S025962	0.003
			46.50	48.00	1.50	S025963	0.003
54.50	54.60	**Fault Zone**FAZ Weak fault zone with a sharp upper contact oriented 40 deg TCA which is very minor ser-ank clay. Mostly the rock is shatered and splintered in sizes from 1mm to 3cm in size, very sharp and angular.					
54.60	64.35	**Greywacke; Conglomerate**S3; S1 Green medium fine to medium grained greywacke. Intervals alternating between massive greywacke to sudden appearances of clasts which are rounded and up to ~20% abundance, but with a coarser matrix (much smaller fragments which would make it >60%?)Fragments are rounded and more part of a pebbly wacke, overall 2mm to 2.5cm in size. Overall 70/30 wacke/congl. Sharp lower contact oriented 50 deg TCA.					
64.35	81.30	**Conglomerate; Greywacke**S1; S3 Light green medium grained matrix congloemrate with few greywacke intervals. Clasts size and abundance varies between 3mm and 14cm diameter, from 0-60%, and variably altered but overall much larer and rounder compared to above. 68-71m: Trace dissemiated pyrite withint he matrix, fragments and some minor quartz pockets found within the matrix. Unit terminates along a sharp break oriented 25 deg TCA.					
			64.50	66.00	1.50	S025964	0.005

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	66.00	67.50	1.50	S025965	0.031
	67.50	69.00	1.50	S025966	0.013
68.00 71.00 **Pyrite**Py Trace disseminated py within the matrix, some fragments and some quartz fractures.					
	69.00	70.50	1.50	S025967	0.013
	70.50	72.00	1.50	S025968	0.012
81.30 107.10 **Greywacke; Conglomerate**S3; S1 Green medium fine grained greywacke. Less bleached than above intervals of con/wacke. Occassionally some clasts and pebbles but overall a greywacke which is fairly massive aside from the congloemrate from 87.5-87.9m (abundance ~20%, sized 1mm-4cm diameter) and ubiquitous 1-5mm wide ank veinlets oriented 20-40 deg TCA. Approaching lower contact is ank-qtz veined(brecciated) from 106.8-107.05m with veins oriented50 deg TCA. Unit terminates where congloemrate grades in.					
107.10 118.90 **Conglomerate**S1 Green mottled variably hued conglomerate with some intervals of bedded greywacke. Abundances up to 50% clasts ranging in size from 1mm to 10cm, rounded to subangular. Wacke intervals form 30cm to 2m. From 116.5m on looks more likea tuff breccia. No jaspers to confirm, but also no sharp contact from greywacke to breccia unit? 113.9m onwards is a faint and increasing bleaching from a pervasive sericite alteration. Lower contact appears to be a local brecciation between two units with angular fragments followed by intercalations. Lower contact roughly oriented 60 deg TCA following breaks of fragments.					
	110.00	111.50	1.50	S025969	0.008
	111.50	113.00	1.50	S025970	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	113.00	114.50	1.50	S025971	0.006
113.90 123.15 **Sericite**Se Weak pervasive sericite alteration.					
	114.50	116.00	1.50	S025972	0.005
	116.00	117.50	1.50	S025973	0.003
	117.50	119.00	1.50	S025974	0.003
118.90 123.15 **Tuff; Tuff Breccia**V9; V9BX Reddish/pinkish brown fine grained to very fine grained ash tuff to brecciated unit. Might be the "Red Rock". Non-magnetic. Lightly bleached with a weak pervasive sericitic alteration. Finely fractured with chl/hmt fill. Fractures oriented 70/150 deg TCA. Other fractures/veinelts include ankerite which are more errectic/irregular with general trends oriented 30 deg TCA. Unit is brittle and wek pervasive hematitic altered. Contains fragments up to 120 deg TCA which are ~7cm in size and appearing more like a finer version of the greywacke or ripped up fragment sof non-hematized tuff. Also unit becoems slightly aphanitic (picke dup some siltstone intervals?) from 122.1-122.5m. Lower contact is sharp, oriented 70 deg TCA.					
	119.00	120.50	1.50	S025977	0.003
	120.50	122.00	1.50	S025978	0.003
	122.00	123.50	1.50	S025980	0.003
123.15 131.40 **Conglomerate**S1 Variably hued (mostly dark green, bleached green, reddish orangey, beige), variably altered conglomerate. Fine jaspers present withint he greywacke matrix. Some of the fragments appear to be albitic with a orangey pink hue, possibly hematitic? From 123.5-126m The unit is brittle, very fractured with chlorite or ankerite fill of errectic/various orientations. Following this interval the unit is still still somewhat vained <1% from 2mm to 3cm wide oriented 30-60 deg TCA. 124.6m: Strong FAULT oriented 50 deg TCA. Gouge with fragments <3mm in size and friable/maleable with little force, compacted between competent					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		pieces of congloemrate. Ankerite oresent within the gouge. 130.8-131.4m: Interval devlopes a slight shear fabric oriented 40 deg TCA. Lower contact is sharp, oriented 40 deg TCA.					
			123.50	125.00	1.50	S025981	0.007
124.60	124.65	**Fault**FLT 2.5cm wide strong fault oriented 50 deg TCA. Ank-chl clay and gouge supporting fragments 1-3mm in size. Maleable and friable with little force.					
			125.00	126.50	1.50	S025982	0.020
			126.50	128.00	1.50	S025983	0.031
			128.00	129.50	1.50	S025984	0.165
			129.50	131.00	1.50	S025985	0.023
			131.00	132.50	1.50	S025986	0.003
131.40	156.35	**Greywacke**S3 Dark green fine to medium fine grained massive greywacke. Ubiquitous ank-qtz veins 1-5mm wide oriented 30-50 deg TCA over 1-2% of the unit. Pebbly wackes occur between 143.6-144.2m, and 150.7-151.5m. Lower contact is sharp, oriented 70 deg TCA.					
156.35	198.00	**Conglomerate**S1 Mostly green thoguh variably hued (Dark green, pinkish orange, reddish, beige) massive congloemrate with ~50% clast abundance. Clasts are rounded to subrounded, variable in size (from <1-5cm in diameter) and alteration styles (chl, ank, ser, fspar). Subtle ankeritic alteraitont he greywacke matrix due to qtz-ank vn'g over <2% of th einterval in fine veinlets 30-50 deg TCA. Ankerite is replaced by calcite around 181m to the end of the hole, with veins now being calcitic and the hsot rock weakly calcitic or reactive with HCl. Hole terminated within conglomerate.					
156.35	181.00	**Ankerite**Ank Weak pervasive anekritic alteration.					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
181.00 198.00 CalciteCa Weak pervasice calcitic alteration.					

Canadian Malartic GP Exploration Division

DDH: AKC15_106

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 30/08/2015
End date: 30/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 24/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 141.00

	UTM-Nad83	AK-Geo
East	569675.290	7552.397
North	5331167.644	10343.552
Elevation	331.184	331.079

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	0.7°	-43.8°	No
Multishot	12.00	139.8°	-43.8°	Yes
Multishot	15.00	0.7°	-43.8°	No
Multishot	18.00	1.0°	-43.8°	No
Multishot	21.00	1.1°	-43.9°	No
Multishot	24.00	1.2°	-43.8°	No
Multishot	27.00	1.1°	-43.8°	No
Multishot	30.00	1.0°	-43.8°	No
Multishot	33.00	1.1°	-43.8°	No
Multishot	36.00	1.0°	-43.7°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	1.0°	-43.7°	No
Multishot	42.00	1.3°	-43.6°	No
Multishot	45.00	1.0°	-43.6°	No
Multishot	48.00	1.1°	-43.6°	No
Multishot	51.00	1.0°	-43.6°	No
Multishot	54.00	1.0°	-43.6°	No
Multishot	57.00	0.9°	-43.5°	No
Multishot	60.00	1.2°	-43.5°	No
Multishot	63.00	1.1°	-43.5°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ Cemented: Yes Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	0.7°	-43.8°	No		102.00	Multishot	1.1°	-43.0°	No	
12.00	Multishot	139.8°	-43.8°	Yes		105.00	Multishot	1.2°	-43.0°	No	
15.00	Multishot	0.7°	-43.8°	No		108.00	Multishot	1.2°	-43.0°	No	
18.00	Multishot	1.0°	-43.8°	No		111.00	Multishot	1.2°	-42.9°	No	
21.00	Multishot	1.1°	-43.9°	No		114.00	Multishot	0.5°	-42.9°	No	
24.00	Multishot	1.2°	-43.8°	No		117.00	Multishot	352.2°	-42.8°	No	
27.00	Multishot	1.1°	-43.8°	No		120.00	Multishot	343.6°	-42.8°	Yes	
30.00	Multishot	1.0°	-43.8°	No		123.00	Multishot	358.7°	-42.8°	No	
33.00	Multishot	1.1°	-43.8°	No		126.00	Multishot	0.8°	-42.8°	No	
36.00	Multishot	1.0°	-43.7°	No		129.00	Multishot	0.8°	-42.8°	No	
39.00	Multishot	1.0°	-43.7°	No		132.00	Multishot	1.1°	-42.8°	No	
42.00	Multishot	1.3°	-43.6°	No		135.00	Multishot	0.7°	-42.7°	No	
45.00	Multishot	1.0°	-43.6°	No		138.00	Multishot	1.1°	-42.7°	No	
48.00	Multishot	1.1°	-43.6°	No		141.00	Multishot	1.5°	-42.7°	No	
51.00	Multishot	1.0°	-43.6°	No							
54.00	Multishot	1.0°	-43.6°	No							
57.00	Multishot	0.9°	-43.5°	No							
60.00	Multishot	1.2°	-43.5°	No							
63.00	Multishot	1.1°	-43.5°	No							
66.00	Multishot	1.2°	-43.5°	No							
69.00	Multishot	0.4°	-43.5°	No							
72.00	Multishot	0.9°	-43.4°	No							
75.00	Multishot	0.8°	-43.4°	No							
78.00	Multishot	0.8°	-43.4°	No							
81.00	Multishot	0.8°	-43.3°	No							
84.00	Multishot	0.8°	-43.3°	No							
87.00	Multishot	0.9°	-43.2°	No							
90.00	Multishot	1.0°	-43.2°	No							
93.00	Multishot	0.8°	-43.2°	No							
96.00	Multishot	0.9°	-43.1°	No							
99.00	Multishot	1.2°	-43.1°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	9.30	**Overburden**OVB Overburden.					
9.30	13.80	**Conglomerate**S1 Dark green and mottled various colours conglomerate in a medium fine to fine greywacke matrix. ~15% abundance of clasts rounded and sized from 3mm to 9cm in diameter. Some joints within this unit are coated in limonite oxidation and typically oriented 10, 40-55 deg TCA. Lower contact is sharp oriented 70 deg TCA.					
13.80	15.20	**Siltstone**S6 Green/dark green very fine grained siltstone. 30cm following upper contact there is a fabric due to seritic +/- calcitic alteration oriented 45 deg TCA. Lower contact is sharp, oriented 15 deg TCA.					
15.20	18.90	**Greywacke**S3 Dark green coarse to medium grained greywacke. Beds oriented 35 deg TCA with alternating banding due to a weakankeritic alteration. Lower contact is oriented 20 deg TCA.					
18.90	20.10	**Conglomerate**S1 Repeat of the earlier dark green conglomerate. Clasts are rounded and 1-4cm in size with ~25-35% abundance. Lower contact is oriented 35 deg TCA.					
20.10	22.40	**Siltstone**S6 Dark green very fine grained siltstone. Massive. some breaks and joitns coated in limonite oxidation oriented 15 and 50 deg TCA, Lower contact is oriented roughly 85 deg TCA.					
22.40	39.20	**Greywacke**S3 Green coarse to fine grained greywacke. Weakly ankerite altered. Weakly magnetic. Coarser grained portions of the greywacke occassionally host ~1% pebbles >1cm in size. Coarse grained grades to fine grained around 28.8m hosting trace disseminated pyrite within this transition zone (28.6-29.0m).	22.40	23.90	1.50	R327216	0.008

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		30.8-39.2m: ~25% 2mm sized ankerite rhombs in a fine grained greywacke host.					
		Lower contact is sharp, oriented 25 deg TCA.					
22.40	39.20	**Ankerite**Ank					
		Weak ankeritic alteration.					
			23.90	25.40	1.50	R327217	0.026
			25.40	26.90	1.50	R327218	0.058
			26.90	28.40	1.50	R327220	0.017
			28.40	29.90	1.50	R327221	0.016
			29.90	31.40	1.50	R327222	0.016
			31.40	32.90	1.50	R327223	0.023
			32.90	34.40	1.50	R327224	0.103
39.20	49.00	**Conglomerate**S1					
		Green medium-fine grained conglomerate with fine jaspers in the greywacke matrix. Clast abundance varies from 10-40% and are rounded, heterolithic up to 5cm in diameter.					
		Unit grades into medium grained greywacke with <5% clasts.					
49.00	65.80	**Greywacke; Conglomerate**S3; S1					
		Green to blackish green medium grained greywacke. Occassionally hosting intervals of conglomerate. Interval is very mafic, a very dark green appearing blackish gorundmass Unit hosts trace disseminated pyrite in the greywacke.					
		55.8-58.8m: Interval of conglomerate.					
		60.6-62.4m: Another conglomerate interval					
		64.2-65.4m: Interval hosting up to 1-3% dissemianted pyrite in layers oriented 20 deg TCA.					
		Lower contact is sharp, oriented 70 deg TCA.					
49.00	64.20	**Pyrite**Py					
		Trace disseminated pyrite.					
55.80	81.35	**Sericite**Se					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Weak to moderate sericite alteration					
			56.40	57.90	1.50	R327227	0.062
			57.90	59.40	1.50	R327228	0.048
			59.40	60.90	1.50	R327229	0.070
			60.90	62.40	1.50	R327230	0.045
			62.40	63.90	1.50	R327231	0.008
			63.90	65.40	1.50	R327232	0.027
64.20	65.40	PyritePy 1-3% dis py often in layers at 20 deg TCA.					
			65.40	66.90	1.50	R327233	0.026
65.80	81.35	ConglomerateS1 Lightly bleached altered green to patchy beige and mottled varies colours of conglomerate. At the contact the unit becomes not mafic at all like what the greywacke had done above. Also the unit is pervasively altered with a WEAK TO MODERATE SERICITE ALTERATION.. Clasts up to 50% and up to 8cm in diameter but more commonly 2-4cm in size. Lower contact is sharp, oriented 60 deg TCA.					
			66.90	68.40	1.50	R327234	0.014
			68.40	69.90	1.50	R327235	0.034
			69.90	71.40	1.50	R327236	0.027
			71.40	72.90	1.50	R327237	0.021
			72.90	74.40	1.50	R327238	0.212
			74.40	75.90	1.50	R327240	0.081
			75.90	77.40	1.50	R327241	0.122
			77.40	78.90	1.50	R327242	0.052
			78.90	80.40	1.50	R327243	0.045
			80.40	81.90	1.50	R327244	0.155
81.35	93.90	GreywackeS3 Green to dark green fine grained to very fine grained altered greywacke. Has patchy semi-pervasive weak sericitic alteration between 81.35-86.0m. Trace					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		disseminated fine pyrite throughout. 86.3-93.9m: Strongly chloritized to the point where the unit appears talcose in some regions (87.3-89.3m). RQD for the interval is ~10% with breaks and fractures occurring at 10 and 55 deg TCA. 88.2-89.0m: 2mm wide stacked beds of pyrite oriented 10 deg TCA. Stacked thickness is approximately 5cm, parallel to local breaks. Locally up to 2% pyrite. Lower contact is sharp, oriented 80 deg TCA.					
81.35	93.90	**Pyrite**Py Trace disseminated pyrite to stacked beds of disseminated pyrite at 10 deg TCA from 88.2-89.0m.					
			81.90	83.40	1.50	R327245	0.015
			83.40	84.90	1.50	R327246	0.008
			84.90	86.40	1.50	R327247	0.010
86.30	93.90	**Chlorite**Cl Strongly chloritized with locally talcose appearing itnervals.					
			86.40	87.90	1.50	R327248	0.049
			87.90	89.40	1.50	R327249	0.107
			89.40	90.90	1.50	R327252	0.020
			90.90	92.40	1.50	R327253	0.017
			92.40	93.90	1.50	R327254	0.034
93.90	98.50	**Mineralized Zone; Mudstone; Greywacke**MNZ; S7; S3 Green/yellowish green/blackish green fine grained altered zone. Difficult to discern parent, but appears to be a mix between mudstones and greywacke. Majority is mudstones with alternating banding layers which have been squished and deformed then later broken in a brittle environment with a strong fracture network with chlorite fill. Some of it is patchy irregular sericite enriched but overall a very mafic unit. <1% disseminated pyrite through the unit. 95-98.5m: Unit is weak to moderately calcitic, mostly around fractures at first,	93.90	95.40	1.50	R327255	0.012

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		bu then the unit is reactive with HCl, especially woards lower contact. This coincides with a greater contribution of greywacke relative to earlier in the interval. Lower contact is sharp, oriented 60 deg TCA.					
93.90	98.50	**Pyrite**Py <1% diss py throughout unit.					
95.00	104.90	**Calcite**Ca Weak to moderately calcite altered.					
			95.40	96.90	1.50	R327256	0.006
			96.90	98.40	1.50	R327257	0.011
			98.40	99.90	1.50	R327258	0.014
98.50	104.90	**Greywacke**S3 Green fine grained greywacke. Pervasive weak to mdoerate calcitic alteration. Fine hairline calcitic fractures oriented 40-60 deg TCA. Lower contact is sharp, oriented 30 deg TCA.					
			99.90	101.40	1.50	R327260	0.015
			101.40	102.90	1.50	R327261	0.015
			102.90	104.40	1.50	R327262	0.012
			104.40	105.90	1.50	R327263	0.010
104.90	112.30	**Tuff Breccia; Tuff**V9BX; V9 Really dark greyish green, blackish, fine grained tuff/tuff breccia. Moderately magnetic. Moderately calcitic and strong reaction to HCl. Very mafic in appearance we it approaches the diabase dike. Also semi-pervasively hematitic approaching lower contact starting at 109.3m Mostly autobrecciated with angular fragments local to in situ. Lower contact is sharp, oriented 60 deg TCA.					
104.90	112.30	**Calcite; Hematite**Ca; He Moderately calcitic and increasingly from very weak to weak/mod hematitic.					
			105.90	107.40	1.50	R327264	0.007

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			107.40	108.90	1.50	R327265	0.006
			108.90	110.40	1.50	R327266	0.018
			110.40	111.40	1.00	R327267	0.039
			111.40	112.40	1.00	R327268	0.048
112.30	133.00	**Diabase**3D Dark greyish-greenish-brownish black fine to medium grained diabase. Strongly magnetic. Contacts are chilled but through the core of the diabase it is coarse-medium grained with a fair component of green chloritic patches as well as black chloritic fractures. Unit looks a little frosted with calcitic alteration, but as if a thin coating of paint dried with tension splits. Lower contact is sharp, oriented 70 deg TCA.					
112.30	133.00	**Calcite; Chlorite**Ca; Cl Patchy to mod calcite and chlorite altered interval of the diabase.					
			112.40	113.90	1.50	R327269	0.003
			113.90	115.40	1.50	R327270	0.003
			115.40	116.90	1.50	R327271	0.005
			116.90	118.40	1.50	R327272	0.007
			118.40	119.90	1.50	R327273	0.003
			119.90	121.40	1.50	R327274	0.007
			121.40	122.90	1.50	R327277	0.005
			122.90	124.40	1.50	R327278	0.007
			124.40	125.90	1.50	R327280	0.005
			125.90	127.40	1.50	R327281	0.003
			127.40	128.90	1.50	R327282	0.003
			128.90	130.40	1.50	R327283	0.003
			130.40	131.90	1.50	R327284	0.008
			131.90	133.00	1.10	R327285	0.006
133.00	136.80	**Tuff**V9 Dark greenish-brown fine graiend tuff. Very calcitic and very altered/cooked due ot proximity with the diabase dike. Fine fractures of calcite throughout	133.00	134.50	1.50	R327286	0.026

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		oriented 60-80 deg TCA.					
		Interval ends in a broken up zone part of the fault zone of the Hunton break.					
133.00	136.80	**Calcite**Ca					
		Strongly calcitic.					
			134.50	136.00	1.50	R327287	0.025
			136.00	136.70	0.70	R327288	0.010
			136.70	137.60	0.90	R327289	0.021
136.80	137.60	**Fault Zone**FAZ					
		Hunton Break hosting in tuff but in contact with trachytes. Prior to the fault the tuff is broken up with RQD=0 and breaks occuring at 30-50 deg TCA.					
		137.4m: 3cm wide strong fault oriented 30 deg TCA.. Maleable with some force, clay and platy to small fragments <2mm in size.					
137.60	141.00	**trachyte spotted**V4S	137.60	138.50	0.90	R327290	0.028
		Pink-brown-beige/grey Spotted trachyte. Pervasive mod ank alt'n and ank vnlts/stgrs @ 0-30 and 110 deg TCA. 1-3mm sized euhedral leucocites zoned with chloritic cores and bleached rims. Trace disseminated pyrite throughout, especially at the core of leucocites.					
		Hole terminated withint he trachyte at the northern claim boundary.					
137.60	141.00	**Ankerite**Ank					
		Perv mod-strong ank alt'n.					
			138.50	139.50	1.00	R327291	0.018
			139.50	141.00	1.50	R327292	0.025

Canadian Malartic GP Exploration Division

DDH: AKC15_107

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 31/08/2015
End date: 31/08/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 26/09/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -45.00°
Length: 120.00

	UTM-Nad83	AK-Geo
East	570009.981	7856.074
North	5331125.884	10196.776
Elevation	339.450	339.345

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	1.5°	-44.0°	No
Multishot	12.00	1.5°	-44.0°	No
Multishot	15.00	359.6°	-44.0°	No
Multishot	18.00	357.2°	-44.0°	No
Multishot	21.00	358.4°	-44.0°	No
Multishot	24.00	357.3°	-43.9°	No
Multishot	27.00	357.1°	-43.8°	No
Multishot	30.00	357.5°	-43.8°	No
Multishot	33.00	358.5°	-43.7°	No
Multishot	36.00	357.6°	-43.6°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	357.2°	-43.6°	No
Multishot	42.00	357.2°	-43.5°	No
Multishot	45.00	358.5°	-43.4°	No
Multishot	48.00	358.1°	-43.4°	No
Multishot	51.00	357.9°	-43.3°	No
Multishot	54.00	357.8°	-43.2°	No
Multishot	57.00	357.7°	-43.2°	No
Multishot	60.00	357.6°	-43.1°	No
Multishot	63.00	357.7°	-43.1°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	1.5°	-44.0°	No		102.00	Multishot	358.2°	-42.5°	No	
12.00	Multishot	1.5°	-44.0°	No		105.00	Multishot	358.1°	-42.5°	No	
15.00	Multishot	359.6°	-44.0°	No		108.00	Multishot	358.1°	-42.4°	No	
18.00	Multishot	357.2°	-44.0°	No		111.00	Multishot	358.0°	-42.4°	No	
21.00	Multishot	358.4°	-44.0°	No		114.00	Multishot	357.7°	-42.4°	No	
24.00	Multishot	357.3°	-43.9°	No		117.00	Multishot	357.2°	-42.4°	No	
27.00	Multishot	357.1°	-43.8°	No		120.00	Multishot	358.2°	-42.3°	No	
30.00	Multishot	357.5°	-43.8°	No							
33.00	Multishot	358.5°	-43.7°	No							
36.00	Multishot	357.6°	-43.6°	No							
39.00	Multishot	357.2°	-43.6°	No							
42.00	Multishot	357.2°	-43.5°	No							
45.00	Multishot	358.5°	-43.4°	No							
48.00	Multishot	358.1°	-43.4°	No							
51.00	Multishot	357.9°	-43.3°	No							
54.00	Multishot	357.8°	-43.2°	No							
57.00	Multishot	357.7°	-43.2°	No							
60.00	Multishot	357.6°	-43.1°	No							
63.00	Multishot	357.7°	-43.1°	No							
66.00	Multishot	357.5°	-43.0°	No							
69.00	Multishot	357.7°	-43.0°	No							
72.00	Multishot	357.7°	-43.0°	No							
75.00	Multishot	357.8°	-42.9°	No							
78.00	Multishot	357.8°	-42.9°	No							
81.00	Multishot	357.9°	-42.8°	No							
84.00	Multishot	357.9°	-42.8°	No							
87.00	Multishot	357.9°	-42.7°	No							
90.00	Multishot	357.9°	-42.7°	No							
93.00	Multishot	358.0°	-42.7°	No							
96.00	Multishot	358.1°	-42.6°	No							
99.00	Multishot	358.1°	-42.6°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	1.30	**Overburden**OVB Overburden.					
1.30	46.30	**Tuff Breccia; Tuff; Lapilli Tuff**V9BX; V9; V9L Lightly bleached green fine gained tuff breccia/lapilli tuff/tuff. Weak tom oderate magnetism. Weak to moderate pervasive ankeritic alteration. Alternating layers of brecciated tuff, lapilli tuff and fine grained tuff. initially pinkish in hue due to some hematitic alteration, as well as reaks having lim+hmt alt and typical orientations of 40-70 deg TCA. In the tuff and lapili tuff occassional bedding is displayed oriented 50-60 deg TCA. 37.7- 46.3m: Moderate sericitic alteration, initially weak but rapidly becoming pervasive moderate-weak to locally weak in some places. Approaching lower contact the unit becomes sheared and altered into a fault zone. Lower contact is sharp, oriented 50 deg TCA.					
1.30	37.70	**Ankerite**Ank Weak to moderate pervasive ankerite alteration.					
			27.00	28.50	1.50	S027077	0.007
			28.50	30.00	1.50	S027078	0.011
			30.00	31.50	1.50	S027080	0.007
			31.50	33.00	1.50	S027081	0.003
			33.00	34.50	1.50	S027082	0.003
			34.50	36.00	1.50	S027083	0.007
			36.00	37.50	1.50	S027084	0.003
			37.50	39.00	1.50	S027085	0.006
37.70	46.30	**Sericite; Ankerite**Se; Ank Mod-strong sericite-ankerite alteraton. Sericite alterations tarts weak and gradually increases.					
			39.00	40.50	1.50	S027086	0.003
			40.50	42.00	1.50	S027087	0.005
			42.00	43.50	1.50	S027088	0.006
			43.50	45.00	1.50	S027089	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			45.00	46.30	1.30	S027090	0.003
46.30	46.55	**Fault Zone**FAZ Sheared and highly altered fault zone, oriented 45 deg TCA. Strongly sericite-ankerite and rusty hmt-lim'c oxidation. Hosted in the end of the tuffs prior to a contact with mudstones. 46.45-46.5m: Very weak fault oriented 45 deg TCA. Central part of the alteration an dmostly oxidized with a strong sericite halo stemming form here. Fault is more a series of slip faults 1-5mm stacked separations with very minor clay coating some of the breaks. Lower contact is sharp, oriented 60 deg TCA.	46.30	47.30	1.00	S027091	0.011
46.55	48.30	**Mudstone**S7 Green/dark green very fine grained mudstone. Weak/moderate pervasive ankerite alteration and very weak bedding fabric oriented 60-70 deg TCA. Some layers are slightly more sericitic than others but overall a weak sericite alteration through the unit. Lower contact is sharp, oriented 30 deg TCA.					
46.55	48.30	**Ankerite; Sericite**Ank; Se Weak/mod pervasive ankerite alteration and alternating layers of weak mod sericite alteration.					
			47.30	48.30	1.00	S027092	0.010
48.30	59.10	**Siltstone; Lapilli Tuff**S6; V9L Beige to green-beige fine to medium grained unit, uncertain the protolith, mod-strong altered siltone and lapilli tuff No red jaspers present, and unit fines. Pervasive strong sericite alteration and ankerite alteration. Intervals which are very fine grained with irregular sharp angular contacts(oriented 50 deg TCA) with the coarser salt and pepper medium grained unit with <1mm sized chloritic spots up to 20% of the unit. Digested unit with both lapilli tuff and finer grained sediments. Overall **strongly sericitic* unit. Lower contact is sharp, oriented 40 deg TCA.	48.30	49.80	1.50	S027093	0.031
48.30	59.10	**Sericite; Ankerite**Se; Ank					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Pervasive strong sericite and ankerite alteration.					
			49.80	51.30	1.50	S027094	0.006
			51.30	52.80	1.50	S027095	0.003
			52.80	54.30	1.50	S027096	0.003
			54.30	55.80	1.50	S027097	0.006
			55.80	57.30	1.50	S027098	0.005
			57.30	58.80	1.50	S027102	0.003
			58.80	60.30	1.50	S027103	0.011
59.10	59.65	**Fault Zone**FAZ Fault zone @ 40-45 deg TCA hosted in tuff. At 59.15m there is a 0.5cm wide fault oriented 40 deg TCA, storng and gougy with clay and 1mm sized rock fragments. Following the fault is semi-competent tuff rock that is brokne up a little, and fractured with ankerite fill. Lower contact is sharp, oriented 50 deg TCA.					
59.15	59.20	**Fault**FLT At 59.15m there is a 0.5cm wide fault oriented 40 deg TCA, storng and gougy with clay and 1mm sized rock fragments.					
59.65	61.10	**Mudstone**S7 Fractured, altered green/yellowish green fine grained mudstone. Highly fractured with chlorite healing. Bedding is oriented 130 deg TCA and fractures at 40-60 deg TCA. At the end of the interval it enters another deformation zone due to the fault.					
			60.30	61.80	1.50	S027104	0.026
61.10	62.30	**Fault Zone**FAZ Green/dark green fault zone hosted in mudstone but there is greywacke within the deformation zome following the fault. 61.15-61.25m: 6cm wide strong cataclastic fault oriented 50 deg TCA, Cemented/healed pitted rough fault with fragment sup to 5mm in size. Healed by ank-chl.					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
A bit of greywacke is present within the interval from 61.5-62.3m interdigited with mudstone, following a fault slip oriented 40 deg TCA @ 61.5m which is 1mm wide and covered in platy chlorite. Greywacke hosts trace disseminated pyrite. 62.2-62.3m: Autobrecciated interval with chlorite cracks and fracturres. Lower contact is sharp, oriented 40 deg TCA.					
61.15 61.25 **Fault**FLT 61.15-61.25m: 6cm wide strong cataclastic fault oriented 50 deg TCA, Cemented/healed pitted rough fault with fragment sup to 5mm in size. Healed by ank-chl.					
61.50 61.55 **Fault**FLT Fault slip oriented 40 deg TCA @ 61.5m which is 1mm wide and covered in platy chlorite					
	61.80	63.30	1.50	S027105	0.026
62.30 64.10 **Mudstone**S7 Green-yellow green fine grained mudstone. Bedding and weakly deformed with fabric oriented 50 deg TCA. Interval ends at a fault oriented 40 deg TCA.					
	63.30	64.80	1.50	S027106	0.018
64.10 64.20 **Fault Zone**FAZ 4cm wide strong cataclastic fault oriented 40 deg TCA. Pitted, gougy fragmented with fragment sup to 7mm in size. Part of the fault is washed away. No cement holding it togetehr and crumbels with little to some force.					
64.10 64.20 **Fault**FLT 4cm wide strong cataclastic fault oriented 40 deg TCA. Pitted, gougy fragmented with fragment sup to 7mm in size. Part of the fault is washed away. No cement holding it togetehr and crumbels with little to some force.					
64.20 65.70 **Mudstone**S7					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Another banded layer of green-yellow green mudstones with bedding oriented 40-60 deg TCA. Very fine grained and some layers appear to be mroe sericite rich. Lower contact is sharp, oriented 50 deg TCA.	64.80	66.30	1.50	S027107	0.038
65.70	71.40	**Greywacke**S3 Green fine grained greywacke. Weak pervasive ankerite alteration ang locally moderate sericite alteration up to 1cm wide centered on hairline fractures throughout the unit. Unit is fractured with trace disseminated pyrite in the stockwork of fractures of variable orientations. 67.8m: 3mm wide gougy slip fault oriented 50 deg TCA, cemented by ank-chl but still weak and ccrumbly with little to some force. Leads a brittle fracture zone which is weakly silicified-ank altered. 67.8-68.0m: Brittle fracture zone with sil-ank alteration to the wacke and chloritic fractures hostng trace disseminated pyrite. 67.8-67.9m is brecciated with chlorite matrix fill and fragments <1cm in size. Minor sericitic alteration msotly along fractures. ~3% pyrite hosted in fractures. Very weak stockwork under stronger py-hosted fractures. Some 2-3mm wide bands of pyrite ~5% oriented 10 deg TCA cutting across veinelts/fractures of chl-py+/-qtz-ank. Lower contact is sharp, oriented 40 deg TCA.					
65.70	71.40	**Ankerite; Sericite**Ank; Se Weak perv ank alt'n and loc'y mod ser alt'n.	66.30	67.90	1.60	S027108	0.099
67.80	67.85	**Fault**FLT 67.8m: 3mm wide gougy slip fault oriented 50 deg TCA, cemented by ank-chl but still weak and ccrumbly with little to some force.	67.90	69.40	1.50	S027109	1.170
			69.40	70.40	1.00	S027110	0.056
			70.40	71.40	1.00	S027111	0.032

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
71.40	73.90	**Mudstone** S7 Green/yellowish green banded fine grained mudstones. Bedding oriented 65/70 deg TCA with some layers of medium grained greywacke over up to 5cm core length over <15% of the unit. Lower contact is sharp, oriented 50 deg TCA.	71.40	72.90	1.50	S027112	0.046
			72.90	74.00	1.10	S027113	0.039
73.90	91.10	**Greywacke** S3 Green mediumt o fine grained greywacke. SERICITE alteration from 73.9-83.0m as weak semi pervasive and locally strong proximal to some fractures and ank veining. 84.7-86.3m: Some mudstone bands oriented 45 deg TCA as well as 3 <1cm wide stacked qtz-ank veins oriented 20 deg TCA cutting across mudstone and wacke. 87.0-88.7m: Broken blocky interval with rubbly fragments up to 4cm core length but generally 1x2xm in size and coated in hematitic oxidation. Breaks occuring maonly at 40 deg TCA. Lower contact is sharp, oriented 50 deg TCA.					
73.90	83.00	**Sericite** Se SERICITE alteration from 73.9-83.0m as weak semi pervasive and locally strong proximal to some fractures and ank veining.					
			74.00	75.50	1.50	S027114	0.006
			75.50	77.00	1.50	S027115	0.011
			77.00	78.50	1.50	S027116	0.017
			78.50	80.00	1.50	S027117	0.006
			80.00	81.50	1.50	S027118	0.006
91.10	97.60	**Siltstone; Greywacke** S6; S3 Green fine grained siltstone with occassional layers of greywacke. Weak pervasive ankerite alteration and locally moderate patchy sericite alteration associated with 2-9mm wide qtz-ank veins <<1% of the unit.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Lower contact is sharp, oriented 80 deg TCA.					
91.10	97.60	**Ankerite; Sericite**Ank; Se Weak pervasive ankerite alteration and locally moderate patchy sericite alteration.					
97.60	104.40	**Conglomerate**S1 Green to patchy weak ser-green conglomerate. ~15% clasts up to 4cm in diameter, rounded to subangular. Lower contact is sharp, oriented 50 deg TCA.					
97.60	120.00	**Sericite**Se Very weak patchy sericite bleahcing.					
104.40	110.50	**Siltstone; Greywacke; Mudstone**S6; S3; S7 Multilayered unit switching units every 50cm-2m from a very fine grained dark siltstone, medium grained slightly sericite blwwached greywacke, and very fine grained banded yellow-green/green bedded mudstone with beds oriented 50 deg TCA. Contacts between the units oriented 60-70 deg TCA. Lower contact is sharp, oriented 45 deg TCA.					
110.50	120.00	**Conglomerate**S1 Lightly bleached green medium fine to fine grained conglomerate in greywacke matrix. Clast abudnance varies from <5% to 20% and mostly sized <1cm though some fragments up to 4cm in diameter. Hole terminated within the conglomerate.					

Canadian Malartic GP Exploration Division

DDH: AKC15_111

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 15/09/2015
End date: 16/09/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 12/10/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -53.00°
Length: 246.00

	UTM-Nad83	AK-Geo
East	570116.564	7940.962
North	5331075.692	10115.087
Elevation	342.783	342.678

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	357.0°	-52.8°	No
Multishot	12.00	357.0°	-52.8°	No
Multishot	15.00	357.6°	-52.8°	No
Multishot	18.00	359.3°	-52.8°	No
Multishot	21.00	359.6°	-52.8°	No
Multishot	24.00	0.3°	-52.8°	No
Multishot	27.00	359.9°	-52.7°	No
Multishot	30.00	0.2°	-52.7°	No
Multishot	33.00	0.1°	-52.7°	No
Multishot	36.00	0.6°	-52.7°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	1.4°	-52.6°	No
Multishot	42.00	1.7°	-52.7°	No
Multishot	45.00	0.5°	-52.6°	No
Multishot	48.00	0.3°	-52.6°	No
Multishot	51.00	359.9°	-52.6°	No
Multishot	54.00	359.6°	-52.5°	No
Multishot	57.00	359.6°	-52.6°	No
Multishot	60.00	360.0°	-52.5°	No
Multishot	63.00	359.9°	-52.5°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	357.0°	-52.8°	No		102.00	Multishot	359.3°	-51.9°	No	
12.00	Multishot	357.0°	-52.8°	No		105.00	Multishot	359.0°	-51.8°	No	
15.00	Multishot	357.6°	-52.8°	No		108.00	Multishot	359.1°	-51.8°	No	
18.00	Multishot	359.3°	-52.8°	No		111.00	Multishot	359.3°	-51.8°	No	
21.00	Multishot	359.6°	-52.8°	No		114.00	Multishot	0.7°	-51.8°	No	
24.00	Multishot	0.3°	-52.8°	No		117.00	Multishot	0.8°	-51.7°	No	
27.00	Multishot	359.9°	-52.7°	No		120.00	Multishot	0.4°	-51.7°	No	
30.00	Multishot	0.2°	-52.7°	No		123.00	Multishot	0.3°	-51.6°	No	
33.00	Multishot	0.1°	-52.7°	No		126.00	Multishot	0.2°	-51.6°	No	
36.00	Multishot	0.6°	-52.7°	No		129.00	Multishot	0.0°	-51.6°	No	
39.00	Multishot	1.4°	-52.6°	No		132.00	Multishot	0.4°	-51.5°	No	
42.00	Multishot	1.7°	-52.7°	No		135.00	Multishot	0.4°	-51.5°	No	
45.00	Multishot	0.5°	-52.6°	No		138.00	Multishot	0.2°	-51.4°	No	
48.00	Multishot	0.3°	-52.6°	No		141.00	Multishot	0.1°	-51.4°	No	
51.00	Multishot	359.9°	-52.6°	No		144.00	Multishot	358.4°	-51.3°	No	
54.00	Multishot	359.6°	-52.5°	No		147.00	Multishot	359.7°	-51.3°	No	
57.00	Multishot	359.6°	-52.6°	No		150.00	Multishot	359.2°	-51.3°	No	
60.00	Multishot	360.0°	-52.5°	No		153.00	Multishot	0.4°	-51.3°	No	
63.00	Multishot	359.9°	-52.5°	No		156.00	Multishot	0.3°	-51.3°	No	
66.00	Multishot	358.3°	-52.4°	No		159.00	Multishot	0.1°	-51.3°	No	
69.00	Multishot	359.2°	-52.4°	No		162.00	Multishot	358.4°	-51.3°	No	
72.00	Multishot	359.7°	-52.3°	No		165.00	Multishot	0.5°	-51.3°	No	
75.00	Multishot	360.0°	-52.3°	No		168.00	Multishot	359.9°	-51.3°	No	
78.00	Multishot	0.3°	-52.3°	No		171.00	Multishot	1.2°	-51.3°	No	
81.00	Multishot	359.5°	-52.2°	No		174.00	Multishot	0.5°	-51.3°	No	
84.00	Multishot	359.5°	-52.2°	No		177.00	Multishot	0.8°	-51.3°	No	
87.00	Multishot	359.3°	-52.1°	No		180.00	Multishot	359.9°	-51.3°	No	
90.00	Multishot	359.4°	-52.0°	No		183.00	Multishot	0.7°	-51.2°	No	
93.00	Multishot	359.6°	-52.0°	No		186.00	Multishot	1.0°	-51.2°	No	
96.00	Multishot	359.4°	-51.9°	No		189.00	Multishot	0.4°	-51.3°	No	
99.00	Multishot	359.4°	-51.9°	No		192.00	Multishot	0.6°	-51.2°	No	

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
195.00	Multishot	1.1°	-51.2°	No							
198.00	Multishot	2.1°	-51.2°	No							
201.00	Multishot	3.0°	-51.2°	No							
204.00	Multishot	2.1°	-51.2°	No							
207.00	Multishot	1.9°	-51.2°	No							
210.00	Multishot	1.0°	-51.2°	No							
213.00	Multishot	1.2°	-51.2°	No							
216.00	Multishot	3.2°	-51.2°	No							
219.00	Multishot	3.5°	-51.2°	No							
222.00	Multishot	3.4°	-51.2°	No							
225.00	Multishot	3.6°	-51.1°	No							
228.00	Multishot	3.8°	-51.1°	No							
231.00	Multishot	3.9°	-51.1°	No							
234.00	Multishot	4.0°	-51.1°	No							
237.00	Multishot	4.2°	-51.1°	No							
240.00	Multishot	4.3°	-51.0°	No							
243.00	Multishot	4.4°	-51.0°	No							
246.00	Multishot	4.6°	-51.0°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	2.40	**Overburden**OVB Overburden.					
2.40	6.15	**Tuff Breccia**V9BX Green to slightly brownish fine grained tuff breccia/tuff. Very weak semi-pervasive calcitic alteration. Breaks withint he interval are rusty-raongey brown hmt'c oxidized with orientations of 40 and 80 deg TCA. Fragments are angular and almost auto-brecciated with sizes usualyl <0.5cm but some up to 3cm in length and up to 75% abundance to 0% abundance. Lower contact is sharp, oriented 70 deg TCA.					
2.40	45.00	**Calcite**Ca Very weak semi-pervasive cc alt'n.					
6.15	23.40	**Tuff**V9 Green fine grained massive tuff. Occassionally contains lapilli fragments. Moderately magnetic. Weak semi-pervasive to locally moderate calcitic alteration. Upper contact is weakly hematitzed for 20cm to a green-brownish hue. Tuff ends where fragments reappear with no sharp contact.					
23.40	213.60	**Tuff Breccia; Lapilli Tuff; Tuff**V9BX; V9L; V9 Green fine grained tuff breccia/lapilli tuff. Moderately magnetic. Weakly calitic. Fragments vary in size up to 5cm and as little as 3mm and are variably abundant and mostly chlorite or hematite altered. The more chloritic altered fragments appear more orunded and more of an alteration breccia appearace. Calcitic alteration ends around 45m and a weak pervasiive ankerite alteration picks up. 51.0m onwards: Weak to strong semi-pervasive ser alt develops bleaching the unit slightly to an altered green-beige. The sericite alteration drops off at 160m where the unit becomes more mafic in appearance again. 62.4-63.4m: Interval of very fine grained tuff with weak bedding fabric appearing at 10 deg TCA.					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Disseminated pyrite begins to appear along break surfaces and in fractures very ocassionally between 67-70.7m and oriented 10-30 deg TCA. 81.5-85 m: Interval of weak wispy sericite alteration and tr-nil vfg dusting of pyrite occssionally within the host and fine fractures. 88.0-88.5m: Rusty/oxidized interval due to a broken up ank-qtz vein oriented 25 deg TCA. Vein has crack and seal texture with pyritic lenses up to 5% of the vein. 108.25-114.8m: A more heavily altered and viened interval acting as matrix to local brecciation, Veining is a faint intensity stockwork with general trend oriented 40-45 deg TCA with fragents rotated and seemingly aligned in the same orientation. Veining is comprised of ankerite and minor quartz and a locally stronger ankeritic alteration to this interval occurs. 168.3-168.5m: A couple of subrounded chalcopyrite clots 1x2mm in size which appear similar to the fragments within this brecciated interval to slightly smaller. Possibly more chalcopyrite within the unit but overall tr-nil cpy. 165-177m: Unit picks up a weak pervasive calcitic alteration, replacing the ankeritic alteration. Though at 177m ankerite alteration resumes. 178-199.0m: Weak to moderate pervasive hematitic alteration with weak ankeritic alteration, giving the itnerval a brownish hue as opposed to the greenish hue seen elsewhere within the tuffs(bx, lap). 203.5-207.m: Interval with banded to wispy and patchy semi-pervasive/pervasive ona nd off sericite with occassional clusters of anhedral metamorphic pyrite, in breaks or osted within more pervasively altered tuff. Overall tr py. Lower contact is irregular but a rough trend oriented 35 deg TCA in veining and some of the contacts and intercalations.					
45.00	51.00	**Ankerite**Ank Weak perv ank alt'n.					
51.00	108.00	**Ankerite; Sericite**Ank; Se					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Weak perv ank and weak to strong semi-perv ser alt'n.					
			64.00	65.50	1.50	S027120	0.003
			65.50	67.00	1.50	S027121	0.003
			67.00	68.50	1.50	S027122	0.003
			68.50	70.00	1.50	S027123	0.010
			70.00	71.50	1.50	S027124	0.003
			71.50	73.00	1.50	S027127	0.003
			73.00	74.50	1.50	S027128	0.003
			74.50	76.00	1.50	S027129	0.003
			76.00	77.00	1.00	S027130	0.003
			77.00	78.50	1.50	S027131	0.003
			78.50	80.00	1.50	S027132	0.003
			80.00	81.50	1.50	S027133	0.003
81.50	85.00	PyritePy Diss py and sericitic stringers.	81.50	83.00	1.50	S027134	0.011
			83.00	84.50	1.50	S027135	0.013
			84.50	86.00	1.50	S027136	0.014
			86.00	87.50	1.50	S027137	0.003
			87.50	89.00	1.50	S027138	0.010
88.00	88.50	Vn vein (5 mm - 10 cm) Vn;;;;;; 88.0-88.5m: Rusty/oxidized interval due to a broken up ank-qtz vein oriented 25 deg TCA. Vein has crack and seal texture with pyritic lenses up to 5% of the vein. ~5cm wide with oxidation coating break suraces parallel to the vein orientation.					
			89.00	90.50	1.50	S027140	0.003
			90.50	92.00	1.50	S027141	0.007
			92.00	93.50	1.50	S027142	0.003
			106.00	107.50	1.50	S027143	0.003
			107.50	109.00	1.50	S027144	0.003

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
108.00	114.80	**Ankerite; Sericite**Ank; Se Mod to mod-str altered intersection with ankerite and sericite alt'n.					
			109.00	110.50	1.50	S027145	0.009
			110.50	112.00	1.50	S027146	0.018
			112.00	113.50	1.50	S027147	0.009
			113.50	115.00	1.50	S027148	0.020
114.80	165.00	**Ankerite; Sericite**Ank; Se Weak perv and semi perv ank ser alt'n.					
			115.00	116.50	1.50	S027149	0.011
			116.50	118.00	1.50	S027152	0.003
			118.00	119.50	1.50	S027153	0.003
			119.50	121.00	1.50	S027154	0.003
			135.00	136.50	1.50	S027155	0.010
			136.50	138.00	1.50	S027156	0.003
			138.00	139.50	1.50	S027157	0.003
			139.50	141.00	1.50	S027158	0.003
			141.00	142.50	1.50	S027160	0.010
			142.50	144.00	1.50	S027161	0.009
			144.00	145.50	1.50	S027162	0.008
			145.50	147.00	1.50	S027163	0.008
			147.00	148.50	1.50	S027164	0.009
			148.50	150.00	1.50	S027165	0.008
			150.00	151.50	1.50	S027166	0.009
			151.50	153.00	1.50	S027167	0.007
			153.00	154.50	1.50	S027168	0.007
			154.50	156.00	1.50	S027169	0.009
			156.00	157.50	1.50	S027170	0.009
			157.50	159.00	1.50	S027171	0.008
			159.00	160.50	1.50	S027172	0.005
			160.50	162.00	1.50	S027173	0.006

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			162.00	163.50	1.50	S027174	0.011
			163.50	165.00	1.50	S027177	0.022
165.00	177.00	**Calcite**Ca	165.00	166.50	1.50	S027178	0.013
		Weak calcitic alteration as ankeritic alt'n drops.					
			166.50	168.00	1.50	S027180	0.012
			168.00	169.50	1.50	S027181	0.010
168.30	168.50	**Chalcopyrite**Cp					
		A few irregular clots of cpy.					
			169.50	171.00	1.50	S027182	0.010
			171.00	172.50	1.50	S027183	0.010
			172.50	174.00	1.50	S027184	0.010
			174.00	175.50	1.50	S027185	0.009
			175.50	177.00	1.50	S027186	0.011
			177.00	178.50	1.50	S027187	0.008
178.00	199.00	**Hematite; Ankerite**He; Ank					
		Weak to moderate pervasive heamtitic alteration wth weak ankeritic alteration.					
			178.50	180.00	1.50	S027188	0.008
			180.00	181.50	1.50	S027189	0.006
			181.50	183.00	1.50	S027190	0.005
			183.00	184.50	1.50	S027191	0.007
			184.50	186.00	1.50	S027192	0.006
			186.00	187.50	1.50	S027193	0.008
			187.50	189.00	1.50	S027194	0.007
			189.00	190.50	1.50	S027195	0.006
			190.50	192.00	1.50	S027196	0.011
			192.00	193.50	1.50	S027197	0.033
			193.50	195.00	1.50	S027198	0.015
			195.00	196.50	1.50	S027202	0.008
			196.50	198.00	1.50	S027203	0.010

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			198.00	199.50	1.50	S027204	0.028
			199.50	201.00	1.50	S027205	0.005
			201.00	202.50	1.50	S027206	0.007
			202.50	204.00	1.50	S027207	0.003
			204.00	205.50	1.50	S027208	0.003
			205.50	207.00	1.50	S027209	0.169
			207.00	208.50	1.50	S027210	0.006
			208.50	210.00	1.50	S027211	0.009
			210.00	211.50	1.50	S027212	0.005
			211.50	213.00	1.50	S027213	0.006
			213.00	213.60	0.60	S027214	0.008
213.60	238.40	**Siltstone; Mudstone**S6; S7 Dark green banded with yellowish green very fine grianed/aphanitic, sometimes bedded siltstone layers of mudstone. Often the contacts are irregular, while others have sharp distinct contacts oriented 10-50 deg TCA. Mudstones are typically more sericitic (weakly) and a lighter mroe yellowish appearance and bedding at 30 deg TCA. 231.3m: 1cm wide qtz-ank-py vn @ 35 deg TCA. ~7% of the vein is disseminated to lenses late pyrite along the edges but within the vein, and a 1-2mm wide bluish rimming following vein contacts and pyrite (possibly some galena???). 233.9-234.0m: 7cm wide qtz-ank-py vn @ 50 deg TCA. Laminated vein with a 3cm wide translucent quartz core with ankerite fracture full and wispy chlorite/chloritized host within the vein. Other ank-qtz and qtz-ank veinlets as hairline to 2mm wide vienlets stacked within the vein. Overall disseminated vfg pyrite within chloritic portions of the vein and up to 2cm withint host rock surrounding the viening. 235.6-236.5m: Interval of tuff breccia with sharp contacts oriented 50/60 deg TCA respectively. Lower contact is sharp and irregular oriented 40 deg TCA.		213.60	215.00	1.40	S027215	0.010

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			215.00	216.50	1.50	S027216	0.012
			216.50	218.00	1.50	S027217	0.009
			218.00	219.50	1.50	S027218	0.008
			219.50	221.00	1.50	S027220	0.011
			221.00	222.50	1.50	S027221	0.016
			222.50	224.00	1.50	S027222	0.011
			224.00	225.50	1.50	S027223	0.006
			225.50	227.00	1.50	S027224	0.010
			227.00	228.50	1.50	S027227	0.011
			228.50	230.00	1.50	S027228	0.012
			230.00	231.50	1.50	S027229	0.016
231.30	231.35	Vn vein (5 mm - 10 cm) Vn;;;;;; 1cm wide qtz-ank-py vn @ 35 deg TCA. ~7% of the vein is disseminated to lenses late pyrite along the edges but within the vein, and a 1-2mm wide bluish rimming following vein contacts and pyrite (possibly some galena???).					
			231.50	233.00	1.50	S027230	0.035
			233.00	234.50	1.50	S027231	1.550
233.90	234.00	Vn vein (5 mm - 10 cm) Vn;;;;;; 233.9-234.0m: 7cm wide qtz-ank-py vn @ 50 deg TCA. Laminated vein with a 3cm wide translucent quartz core with ankerite fracture full and wispy chlorite/chloritized host within the vein. Other ank-qtz and qtz-ank veinlets as hairline to 2mm wide vienlets stacked within the vein. Overall disseminated vfg pyrite within chloritic portions of the vein and up to 2cm withint host rock surrounding the viening.					
			234.50	236.00	1.50	S027232	0.020
			236.00	237.50	1.50	S027233	0.018
			237.50	239.00	1.50	S027234	0.024

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
238.40 241.35 **Tuff Breccia**V9BX Green/lightly altered bleached green due to a weak pervasive ankeritic alteration stronger proximal to qtz-ank veining through 3% of the unit in veins which are hairline to 2cm wide and oriented 45 and 70 deg TCA. Lower contact is sharp, oriented 60 deg TCA.					
238.40 2462... **Ankerite**Ank Weak perv ank alt'n.					
	239.00	240.50	1.50	S027235	0.005
	240.50	242.00	1.50	S027236	0.019
241.35 245.70 **Mudstone; Tuff Breccia**S7; V9BX Dark green banded yellowish green very fine grained mudstones with some <15cm wide layers of tuff bx/lapilli tuff. Overall weak pervasive ankeritic alteration. Mudstones are also sheared or displaying a fabric from tight laminatiosn of alteration with sericite rich beds ~1mm wide oriented 20-40 deg TCA. Lower contact is sharp, oriented 60 deg TCA.					
	242.00	243.50	1.50	S027237	0.016
	243.50	245.00	1.50	S027238	0.010
	245.00	246.00	1.00	S027240	0.008
245.70 246.00 **Tuff Breccia**V9BX 30cm itnerval of tuff breccia as seen as above. Hole terminates within this, so uncertainw hetehr its a start of a tuff breccia package or just a narrow layer intercalated within mudstones.					

Canadian Malartic GP Exploration Division

DDH: AKC15_113

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 22/09/2015
End date: 23/09/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 13/10/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 0.0°
Dip: -49.00°
Length: 15.00

	UTM-Nad83	AK-Geo
East	570097.035	7895.451
North	5330991.372	10041.466
Elevation	339.259	339.154

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Surface	0.00	0.0°	-45.0°	No

Type	Depth	Azimuth	Dip	Invalid

Description:

Hole terminated at 15m due to insufficient dip. Retrying with AKC15-114.
Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: No | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Surface	0.0°	-45.0°	No							

Canadian Malartic GP Exploration Division

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	3.50	**Overburden**OVB Overburden.					
3.50	8.70	**Siltstone**S6 Green/bleached green very fine grained siltstone. some of the joints and breaks are rusty with oxidation. Underlying chloritization overprinted with a weak/mod perv ank'c alt'n and wispy/patchy on and off sericite alt'n. Lower contact is sharp, oriented 35 deg TCA.	3.50	4.50	1.00	S027330	0.003
3.50	8.70	**Ankerite; Sericite**Ank; Se Weak mod per ank and wispy-patchy on and off ser alt'n.					
			4.50	6.00	1.50	S027331	0.003
			6.00	7.50	1.50	S027332	0.003
			7.50	9.00	1.50	S027333	0.003
8.70	15.00	**Greywacke**S3 Bleached green fine to very fine grained greywacke with some narrow intervals of siltstone. Rusty oxidaiton is more prevalent int his itnerval occassonally up to 70cm core length with pervasive rusted alteration. Veins and fractures within these intervals run <20 deg TCA and are often hematite healed. Oxidation has sharp alteration contacts oriented 30-55 deg TCA with some of the broken surfaces coated with limonite. 11.15-12m: 5mm wide qtz-ank-hmt-py vein @ 20 deg TCA with a few splays of qtz-hmt+/- py runninng parallel to the core axis. Overall tr late stringers of py in the veins. Starting at 13.5m there is on and off greywacke/siltstone dominance/intercalations with a weak shear fabric from 14.5-14.9m oriented 50 deg TCA. The hole was abandoned at 15m depth due to the hole being too shallow to reach the target.					
			9.00	10.50	1.50	S027334	0.003
			10.50	12.00	1.50	S027335	0.003
			12.00	13.50	1.50	S027336	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	13.50	15.00	1.50	S027337	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_116

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 06/10/2015
End date: 08/10/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 21/10/2015

Contractor: Spektra
Author: Christal Hanuszczak

Christal Hanuszczak

Collar

Azimuth: 355.0°
Dip: -54.00°
Length: 330.00

	UTM-Nad83	AK-Geo
East	569875.184	7698.532
North	5331032.706	10151.690
Elevation	336.812	336.707

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Multishot	0.00	358.6°	-54.0°	No
Multishot	12.00	358.6°	-54.0°	No
Multishot	15.00	358.9°	-54.1°	No
Multishot	18.00	356.3°	-54.1°	No
Multishot	21.00	356.7°	-54.0°	No
Multishot	24.00	356.6°	-54.0°	No
Multishot	27.00	356.2°	-53.9°	No
Multishot	30.00	356.8°	-53.9°	No
Multishot	33.00	355.8°	-53.9°	No
Multishot	36.00	357.2°	-53.8°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	39.00	355.9°	-53.8°	No
Multishot	42.00	356.8°	-53.7°	No
Multishot	45.00	355.5°	-53.7°	No
Multishot	48.00	355.5°	-53.7°	No
Multishot	51.00	356.1°	-53.7°	No
Multishot	54.00	355.1°	-53.7°	No
Multishot	57.00	356.2°	-53.6°	No
Multishot	60.00	356.7°	-53.6°	No
Multishot	63.00	356.9°	-53.7°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ Cemented: Yes Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Multishot	358.6°	-54.0°	No		102.00	Multishot	355.2°	-53.7°	No	
12.00	Multishot	358.6°	-54.0°	No		105.00	Multishot	355.5°	-53.7°	No	
15.00	Multishot	358.9°	-54.1°	No		108.00	Multishot	355.0°	-53.6°	No	
18.00	Multishot	356.3°	-54.1°	No		111.00	Multishot	355.1°	-53.6°	No	
21.00	Multishot	356.7°	-54.0°	No		114.00	Multishot	356.0°	-53.7°	No	
24.00	Multishot	356.6°	-54.0°	No		117.00	Multishot	355.0°	-53.6°	No	
27.00	Multishot	356.2°	-53.9°	No		120.00	Multishot	356.2°	-53.6°	No	
30.00	Multishot	356.8°	-53.9°	No		123.00	Multishot	355.6°	-53.6°	No	
33.00	Multishot	355.8°	-53.9°	No		126.00	Multishot	356.9°	-53.6°	No	
36.00	Multishot	357.2°	-53.8°	No		129.00	Multishot	1.4°	-53.6°	Yes	
39.00	Multishot	355.9°	-53.8°	No		132.00	Multishot	356.2°	-53.6°	No	
42.00	Multishot	356.8°	-53.7°	No		135.00	Multishot	355.8°	-53.6°	No	
45.00	Multishot	355.5°	-53.7°	No		138.00	Multishot	355.7°	-53.6°	No	
48.00	Multishot	355.5°	-53.7°	No		141.00	Multishot	355.5°	-53.6°	No	
51.00	Multishot	356.1°	-53.7°	No		144.00	Multishot	355.5°	-53.7°	No	
54.00	Multishot	355.1°	-53.7°	No		147.00	Multishot	355.7°	-53.6°	No	
57.00	Multishot	356.2°	-53.6°	No		150.00	Multishot	356.2°	-53.7°	No	
60.00	Multishot	356.7°	-53.6°	No		153.00	Multishot	356.6°	-53.7°	No	
63.00	Multishot	356.9°	-53.7°	No		156.00	Multishot	357.1°	-53.7°	No	
66.00	Multishot	356.5°	-53.7°	No		159.00	Multishot	356.8°	-53.7°	No	
69.00	Multishot	356.4°	-53.7°	No		162.00	Multishot	3.2°	-53.7°	Yes	
72.00	Multishot	356.0°	-53.7°	No		165.00	Multishot	356.8°	-53.7°	No	
75.00	Multishot	356.8°	-53.7°	No		168.00	Multishot	356.8°	-53.6°	No	
78.00	Multishot	355.4°	-53.7°	No		171.00	Multishot	356.9°	-53.7°	No	
81.00	Multishot	356.6°	-53.7°	No		174.00	Multishot	357.1°	-53.6°	No	
84.00	Multishot	356.0°	-53.7°	No		177.00	Multishot	356.8°	-53.6°	No	
87.00	Multishot	355.9°	-53.7°	No		180.00	Multishot	356.9°	-53.6°	No	
90.00	Multishot	355.4°	-53.7°	No		183.00	Multishot	357.0°	-53.6°	No	
93.00	Multishot	355.4°	-53.7°	No		186.00	Multishot	357.1°	-53.6°	No	
96.00	Multishot	355.3°	-53.7°	No		189.00	Multishot	357.0°	-53.6°	No	
99.00	Multishot	355.8°	-53.7°	No		192.00	Multishot	357.1°	-53.7°	No	

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
195.00	Multishot	357.0°	-53.6°	No		288.00	Multishot	0.2°	-53.6°	No	
198.00	Multishot	357.1°	-53.6°	No		291.00	Multishot	0.2°	-53.6°	No	
201.00	Multishot	357.2°	-53.6°	No		294.00	Multishot	0.4°	-53.7°	No	
204.00	Multishot	357.1°	-53.6°	No		297.00	Multishot	0.5°	-53.7°	No	
207.00	Multishot	357.2°	-53.6°	No		300.00	Multishot	0.7°	-53.8°	No	
210.00	Multishot	357.2°	-53.6°	No		303.00	Multishot	0.7°	-53.9°	No	
213.00	Multishot	357.4°	-53.6°	No		306.00	Multishot	0.8°	-53.9°	No	
216.00	Multishot	357.4°	-53.6°	No		309.00	Multishot	0.8°	-53.9°	No	
219.00	Multishot	357.5°	-53.6°	No		312.00	Multishot	1.0°	-53.9°	No	
222.00	Multishot	357.6°	-53.5°	No		315.00	Multishot	1.1°	-53.9°	No	
225.00	Multishot	357.5°	-53.5°	No		318.00	Multishot	1.2°	-53.9°	No	
228.00	Multishot	357.6°	-53.5°	No		321.00	Multishot	1.2°	-53.9°	No	
231.00	Multishot	357.7°	-53.5°	No		324.00	Multishot	1.2°	-54.0°	No	
234.00	Multishot	357.8°	-53.5°	No		327.00	Multishot	1.5°	-54.1°	No	
237.00	Multishot	358.0°	-53.5°	No		330.00	Multishot	1.4°	-54.0°	No	
240.00	Multishot	358.0°	-53.4°	No							
243.00	Multishot	358.1°	-53.4°	No							
246.00	Multishot	358.4°	-53.4°	No							
249.00	Multishot	358.5°	-53.5°	No							
252.00	Multishot	358.7°	-53.5°	No							
255.00	Multishot	358.9°	-53.5°	No							
258.00	Multishot	358.8°	-53.5°	No							
261.00	Multishot	359.0°	-53.5°	No							
264.00	Multishot	359.1°	-53.5°	No							
267.00	Multishot	359.2°	-53.5°	No							
270.00	Multishot	359.4°	-53.5°	No							
273.00	Multishot	359.6°	-53.5°	No							
276.00	Multishot	359.6°	-53.5°	No							
279.00	Multishot	359.8°	-53.6°	No							
282.00	Multishot	359.9°	-53.6°	No							
285.00	Multishot	0.1°	-53.6°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	2.70	**Overburden**OVB Overburden.					
2.70	102.00	**Tuff Breccia; Lapilli Tuff; Tuff**V9BX; V9L; V9 Green fine grained alternating units of tuff breccia, lapilli tuff and tuff. Moderately magnetic. Weak pervasive ankerite alteration with underlying chlorite alteration and weak on and off semi-pervasive sericite alteration. Fragmental and lapilli abundances up to 40% with fragments up to 10cm in width but more commonly 1-2cm in size. Overall <1% ank-qtz veining from 1mm to 3.5cm in size oriented 40-60 deg TCA between 25.5-36.5m and 30 deg in pink hematite stained veins from 39.5-46.0m. 2.7-20.5m: Rusty oxidation along breaks throughout this interval with local mod-str perv ser alt'n. Strongest alt'n section is between 8-13m with >90% of the interval oxidized. Breaks oriented 20-50 deg TCA. 74.0-90.3m: Unit becomes very mafic/melanocratic with pervsive chl-hmt alt'n and weak pervasive calccitic alteration. The tuff is nearly black to really dark green-brown-black in hue. 90.3-102.0m: Hmt alt'n drops so the unit is green with pervasive chlorite and calcite alteration. Massive tuff packages end at 102m where there is intercalated mudstones and tuffs/tuff breccias for a few metres. Lower contact is broken up but assumed to be with the qtz-ank vns oriented 25-30 deg TCA, Veins are 1cm wide and spaces 2-3cm apart over 10cm of core length.					
2.70	20.50	**Ankerite; Sericite**Ank; Se Wk prv ank alt with weak on and off semi-perv ser alt'n. This interval also contains rusty oxidation along breaks and fractures.					
20.35	74.00	**Ankerite; Sericite**Ank; Se Wk prv ank alt with weak on and off semi-perv ser alt'n.					
74.00	90.30	**Hematite; Calcite**He; Ca Pervasive chl-hmt alt'n with wk perv cc alt'n.					
90.30	102.00	**Calcite**Ca					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Weak pervasive calcite altn.					
			96.00	97.50	1.50	S027447	0.003
			97.50	99.00	1.50	S027448	0.003
			99.00	100.50	1.50	S027449	0.003
			100.50	102.00	1.50	S027452	0.003
102.00	115.30	**Mudstone; Tuff; Tuff Breccia**S7; V9; V9BX	102.00	103.50	1.50	S027453	0.006
		Dark green fine to very fine grained intercalated mudstones (>70% of the unit) and tuff/tuff breccia. Contacts between the two are sharp oriented 40-60 deg TCA. Overall non-magnetic to very weakly magnetic. Initially starts out as weakly calcitic but calcite alteration becomes replaces as ankerite alteration, weak semi-pervasive, and mostly manifesting within veins orienred 10-30 deg TCA.					
		102.95-103.05m: 5cm wide qtz-cc-cpy-chl vn oriented 45/25 deg TCA respective of upper and lower contacts. Vein is actually multiple veins stacked with cc-qtz rich layers, laminations of qtz-chl with py clots, or off-white/greyish quartz with perpedindicar fractures filled with calcite. <1% py/cpy.					
		104.5-105.0m: 1cm wide ank-qtz-hmt/gal? vn running 0-25 deg TCA. >80% ankerite with quartz in the core of the vein. Some bluish anhedral spots throughout the vien up to 2mm diamter which may be diss hmt or gal. Given the slight pinkish/reddish hue of the quartz, likely is hmt though resembles some of the spotty inclusions in other veins which were suspected to be galena.					
		Lower contact is sharp, oriented 30 deg TCA and consists of trace fine stringy chalcopyrite within fine fractures.					
			103.50	105.00	1.50	S027454	0.006
			105.00	106.50	1.50	S027455	0.003
			106.50	108.00	1.50	S027456	0.003
			108.00	109.50	1.50	S027457	0.003
			109.50	111.00	1.50	S027458	0.007

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			111.00	112.50	1.50	S027460	0.006
			112.50	114.00	1.50	S027461	0.003
			114.00	115.50	1.50	S027462	0.005
115.30	128.10	**Tuff Breccia; Tuff; Lapilli Tuff**V9BX; V9; V9L Green fine grained tuff/tuff breccia/lapilli tuff. Moderate to locally strongly magnetic. Weak pervasive ankeritic alteration over undelrying pervasive chloritic alteration. Approaching end of the uniot there is stringers of disseminated magnetite oriented 15 deg TCA up to 2mm thick in an area with locally very strong magnetism. Lowert contact is sharp, oriented 80 deg TCA.					
115.30	141.35	**Ankerite**Ank Weak perv ankerite alt'n.					
			115.50	117.00	1.50	S027463	0.009
			117.00	118.50	1.50	S027464	0.007
			118.50	120.00	1.50	S027465	0.006
			120.00	121.50	1.50	S027466	0.013
			121.50	123.00	1.50	S027467	0.003
			123.00	124.50	1.50	S027468	0.005
			124.50	126.00	1.50	S027469	0.018
			126.00	127.50	1.50	S027470	0.005
			127.50	129.00	1.50	S027471	0.003
128.10	141.35	**Tuff; Mudstone**V9; S7 Green fine grained to very fine grained massive tuff layers interdigited with massive mudstone layers and intercalated lapilli tuff/tuff breccia and bedded mudstones. Weak-mod to non-magnetic interval, with magnetism in the tuff units. Weak semi-pervasive to pervasive ankerite alteration. <1% ank-qtz veins, sometimes sharp, other times wormy, roughly oriented 15, 45 and 60 deg TCA. Tr disseminated pyrite in some of the veins. Unit ends in sheared section of mudstone with sharp contact oriented 50 deg TCA.					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	129.00	130.50	1.50	S027472	0.005
	130.50	132.00	1.50	S027473	0.003
	132.00	133.50	1.50	S027474	0.006
	133.50	135.00	1.50	S027477	0.012
	135.00	136.50	1.50	S027478	0.003
	136.50	138.00	1.50	S027480	0.010
	138.00	139.50	1.50	S027481	0.003
	139.50	141.00	1.50	S027482	0.003
	141.00	142.50	1.50	S027483	0.003
141.35 163.55 **Tuff; Lapilli Tuff**V9; V9L Green, brown and green brown fine grained tuff (bedded, massive) and lapilli tuff. Moderately magnetic. Underlying chloritic alteration with pervasive weak-mod ankerite alteration. Whenever bedding is present, orientaiton appears to be 30-50 deg TCA. ~1-2% sheeted ank-qtz veins oriented 30 or 50 deg TCA also throughout the unut from 1mm to 4cm wide. 141.35-142.8m: Mod stringy sericite alteration as well as chl-ank alt. 142.8-148.2m: Mod perv hmt alt'n as well as chl-ank alt. Lower contact is sharp, oriented 60 deg TCA.					
141.35 142.80 **Ankerite; Sericite**Ank; Se Weak perv ank alt'n with mod stringy sericite altn.					
	142.50	144.00	1.50	S027484	0.007
142.80 148.20 **Hematite; Ankerite**He; Ank Mod perv hmt-ank alt'n.					
	144.00	145.50	1.50	S027485	0.003
	145.50	147.00	1.50	S027486	0.003
	147.00	148.50	1.50	S027487	0.003
148.20 163.60 **Ankerite**Ank Weak pervasive ankerite alteration.					
	148.50	150.00	1.50	S027488	0.011
	150.00	151.50	1.50	S027489	0.003

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	151.50	153.00	1.50	S027490	0.003
	153.00	154.50	1.50	S027491	0.003
	154.50	156.00	1.50	S027492	0.008
	156.00	157.50	1.50	S027493	0.012
	157.50	159.00	1.50	S027494	0.009
	159.00	160.50	1.50	S027495	0.003
	160.50	162.00	1.50	S027496	0.003
	162.00	163.50	1.50	S027497	0.007
	163.50	165.00	1.50	S027498	0.015
163.55 163.60 **Fault Zone**FAZ 1cm wide moderate fault oriented 60 deg TCA. Partially pitted with porousity and some shearing. Healed with ankerite.					
163.60 168.00 **Greywacke**S3 Green fine grained massive greywacke. Non-magnetic. Weak pervasive ankerite and semi-pervasive very weak sericite alteration giving a slight bleahcing to parts of the unit. Some faint laminations of disseminatex leucoxene and trace disseminated pyrite, like a bedding fabric but not strong, appears late. Unit ends where conglomerate begins in a rapid gradational change.					
163.60 330.00 **Ankerite; Sericite**Ank; Se Weak perv ank and semi-perv ser alt'n.					
163.60 168.00 **Pyrite**Py Tr diss py in faint laminations through the unit.					
	165.00	166.50	1.50	S027502	0.008
168.00 330.00 **Conglomerate**S1 Green (light/altered and normal green) conglomerate with some intervals of greywacke. Non-magnetic. ~25% clasts where present which are rounded/subrounded and up to 3cm in length, variably altered. Patchy weak to moderate sericite alteration throughout the whoole unit and weak/very weak ankeritic alteration.					

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
251.5-252.0m: 75% qtz-ank veins oriented 40 deg TCA 3-8cm wide. Veins are 70% ank, 25% qtz and some chlorite stirngers with trace disseminated pyrite. Along some of the fractures there is some fuschiitic alteration. Trace splashy disseminated galena. 247.8-263.0m: Tr-1% diss py in more greywacke matrix areas. 254.7-254.9m: A few qtz-ank veins oriented 55 deg TCA. Veins are 2-3cm wide with chunks of ank and qtz hosted in the greywacke matrix. Trace disseminated py. 255.1-255.2m: Another 6cm qtz-ank-dis py vein @ 60 deg TCA. Tr py with chlorite fractures and sheared lamiantions. 262.7-263.9m: Qtz flooding hosting disseminated py. Some veining withint he interval usually 0.5cm wide oriented 50-55 deg TCA with sericitic strinegrs givign a shear appearance oriented 45 deg TCA. Interval ends with 20cm of semi-massive ankerite with some quartz veins oriented 45 deg TCA with chloritic outlines and fractures and trace diss py within fractures. Veins are ~5cm wide. 276.65-283.6m: Some qtz-ank veining from 2mm to 4cm wide oriented 20-40 and 65 deg TCA. Qtz fvn and some silicification/flooding over ~20% of the interval. At 295.9m the unit becomes less clastic with abundances from ~0-20% on and off with intervals of pebbly wacke (often <5% clasts). Hole terminates within the greywacke conglomerate.					
	228.00	229.50	1.50	S027503	0.011
	229.50	231.00	1.50	S027504	0.007
	231.00	232.50	1.50	S027505	0.019
	232.50	234.00	1.50	S027506	0.010
	234.00	235.50	1.50	S027507	0.007
	235.50	237.00	1.50	S027508	0.005
	237.00	238.50	1.50	S027509	0.012

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			238.50	240.00	1.50	S027510	0.007
			240.00	241.50	1.50	S027511	0.012
			241.50	243.00	1.50	S027512	0.012
			243.00	244.50	1.50	S027513	0.020
			244.50	246.00	1.50	S027514	0.013
			246.00	247.50	1.50	S027515	0.063
			247.50	249.00	1.50	S027516	0.008
247.80	263.00	PyritePy Tr-1% dis py in matrix.					
			249.00	250.50	1.50	S027517	0.012
			250.50	252.00	1.50	S027518	0.011
			252.00	253.50	1.50	S027520	0.022
			253.50	255.00	1.50	S027521	0.017
			255.00	256.50	1.50	S027522	0.016
			256.50	258.00	1.50	S027523	0.009
			258.00	259.50	1.50	S027524	0.009
			259.50	261.00	1.50	S027527	0.012
			261.00	262.50	1.50	S027528	0.011
			262.50	264.00	1.50	S027529	0.660
			264.00	265.50	1.50	S027530	0.047
			265.50	267.00	1.50	S027531	0.045
			267.00	268.50	1.50	S027532	0.019
			268.50	270.00	1.50	S027533	0.022
			270.00	271.50	1.50	S027534	0.010
			271.50	273.00	1.50	S027535	0.027
			273.00	274.50	1.50	S027536	0.012
			274.50	276.00	1.50	S027537	0.011
			276.00	277.50	1.50	S027538	0.032
			277.50	279.00	1.50	S027540	0.137
			279.00	280.50	1.50	S027541	0.038

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	280.50	282.00	1.50	S027542	0.025
	282.00	283.50	1.50	S027543	0.009
	283.50	285.00	1.50	S027544	0.080
	285.00	286.50	1.50	S027545	0.030
	286.50	288.00	1.50	S027546	0.013
	288.00	289.50	1.50	S027547	0.046
	289.50	291.00	1.50	S027548	0.034
	291.00	292.50	1.50	S027549	0.018
	292.50	294.00	1.50	S027552	0.025
	294.00	295.50	1.50	S027553	0.035
	295.50	297.00	1.50	S027554	0.048
	297.00	298.50	1.50	S027555	0.028
	298.50	300.00	1.50	S027556	0.012
	300.00	301.50	1.50	S027557	0.010
	301.50	303.00	1.50	S027558	0.011
	303.00	304.50	1.50	S027560	0.011
	304.50	306.00	1.50	S027561	0.009
	306.00	307.50	1.50	S027562	0.010
	307.50	309.00	1.50	S027563	0.030
	309.00	310.50	1.50	S027564	0.012
	310.50	312.00	1.50	S027565	0.020
	312.00	313.50	1.50	S027566	0.013
	313.50	315.00	1.50	S027567	0.008
	315.00	316.50	1.50	S027568	0.010
	316.50	318.00	1.50	S027569	0.008
	318.00	319.50	1.50	S027570	0.009
	319.50	321.00	1.50	S027571	0.007
	321.00	322.50	1.50	S027572	0.018
	322.50	324.00	1.50	S027573	0.011
	324.00	325.50	1.50	S027574	0.011

Description	Assay				
	From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
	325.50	327.00	1.50	S027577	0.016
	327.00	328.50	1.50	S027578	0.003
	328.50	330.00	1.50	S027580	0.003

Canadian Malartic GP Exploration Division

DDH: AKC15_117

Claims title: CLM328
Township: Teck
Range:
Lot:
Start date: 09/10/2015
End date: 10/10/2015

Section:
Level:
Work place: Upper Canada Mine Site
Description date: 14/10/2015

Contractor: Spektra
Author: Mark Masson
Christal Hanuszczak

Collar

Azimuth: 180.0°
Dip: -50.00°
Length: 99.00

	UTM-Nad83	AK-Geo
East	569896.773	7779.673
North	5331222.161	10324.245
Elevation	330.874	330.769

Down hole survey

Type	Depth	Azimuth	Dip	Invalid
Multishot	0.00	182.6°	-49.8°	No
Multishot	3.00	182.7°	-49.8°	No
Multishot	6.00	182.9°	-49.8°	No
Multishot	9.00	182.4°	-49.8°	No
Multishot	12.00	182.9°	-49.9°	No
Multishot	15.00	183.4°	-49.9°	No
Multishot	18.00	183.2°	-49.9°	No
Multishot	21.00	183.5°	-50.0°	No
Multishot	24.00	183.6°	-49.9°	No
Multishot	27.00	183.6°	-50.0°	No

Type	Depth	Azimuth	Dip	Invalid
Multishot	30.00	183.4°	-49.9°	No
Multishot	33.00	183.6°	-49.9°	No
Multishot	36.00	183.7°	-49.9°	No
Multishot	39.00	183.6°	-49.9°	No
Multishot	42.00	183.9°	-49.9°	No
Multishot	45.00	184.6°	-49.5°	No
Multishot	48.00	183.9°	-49.9°	No
Multishot	51.00	183.9°	-49.8°	No
Multishot	54.00	184.0°	-49.7°	No
.....	.....	.....	.....	.....

Description:

Core is stored at the Upper Canada Mine Site in Dobie, ON.

Core size: NQ | Cemented: Yes | Stored: Yes

...

Depth	Type	Azimuth	Dip	Invalid		Depth	Type	Azimuth	Dip	Invalid	
0.00	Multishot	182.6°	-49.8°	No		93.00	Multishot	183.7°	-48.9°	No	
3.00	Multishot	182.7°	-49.8°	No		96.00	Multishot	183.6°	-48.9°	No	
6.00	Multishot	182.9°	-49.8°	No		99.00	Multishot	182.0°	-50.0°	No	
9.00	Multishot	182.4°	-49.8°	No							
12.00	Multishot	182.9°	-49.9°	No							
15.00	Multishot	183.4°	-49.9°	No							
18.00	Multishot	183.2°	-49.9°	No							
21.00	Multishot	183.5°	-50.0°	No							
24.00	Multishot	183.6°	-49.9°	No							
27.00	Multishot	183.6°	-50.0°	No							
30.00	Multishot	183.4°	-49.9°	No							
33.00	Multishot	183.6°	-49.9°	No							
36.00	Multishot	183.7°	-49.9°	No							
39.00	Multishot	183.6°	-49.9°	No							
42.00	Multishot	183.9°	-49.9°	No							
45.00	Multishot	184.6°	-49.5°	No							
48.00	Multishot	183.9°	-49.9°	No							
51.00	Multishot	183.9°	-49.8°	No							
54.00	Multishot	184.0°	-49.7°	No							
57.00	Multishot	184.0°	-49.6°	No							
60.00	Multishot	184.0°	-49.6°	No							
63.00	Multishot	183.9°	-49.6°	No							
66.00	Multishot	183.9°	-49.6°	No							
69.00	Multishot	183.6°	-49.7°	No							
72.00	Multishot	184.0°	-49.4°	No							
75.00	Multishot	184.0°	-49.3°	No							
78.00	Multishot	183.9°	-49.2°	No							
81.00	Multishot	183.6°	-49.1°	No							
84.00	Multishot	183.5°	-49.1°	No							
87.00	Multishot	183.6°	-49.0°	No							
90.00	Multishot	183.6°	-48.9°	No							

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
0.00	5.00	**Overburden**OVB Casing driven to 6.6m coring starts @ 5m					
5.00	17.60	**Mudstone**S7 Dark green to grey-green, massive to locy well bedded with bdg angles varying rapidly from 0-90 tca, so presumably muds are folded in this location, although no fold-closures are apparent. Wkly Ankeritic. 10.5 Flt @ 15 tca; stg flt with mud gouge and healed cataclastiteérock frags. Broken rubbly core, hard to determine width but probably around 10cm`s. Probably x-fault. 12.0 Flt @ 15 tca; 3-5 mm thick serc mud flt Lcon is sharp, very irregular, serrated.					
			9.00	10.50	1.50	R327630	0.003
10.50	10.60	**Fault; Fault gouge 15°**FLT; Gg15° 10.5 Flt @ 15 tca; stg flt with mud gouge and healed cataclastiteérock frags. Broken rubbly core, hard to determine width but probably around 10cm`s. Probably x-fault.	10.50	12.00	1.50	R327631	0.003
12.00	12.10	**Fault gouge 15°**Gg15° 12.0 Flt @ 15 tca; 3-5 mm thick serc mud flt	12.00	13.50	1.50	R327632	0.003
			13.50	15.00	1.50	R327633	0.006
			15.00	16.50	1.50	R327634	0.007
			16.50	18.00	1.50	R327635	0.005
17.60	24.00	**Lapilli Tuff**V9L Massive, mx supported heterolithic lap tuff with angular lap clasts from a few mm`s to 2cm with rare bx clasts > 5cm. Dominant clast type is a pale pink-bn colour. Wkly to mody magnetic and mody ankeritic. Lcon is taken at the point where serc alt'n begins.					
			18.00	19.50	1.50	R327636	0.003
			19.50	21.00	1.50	R327637	0.008

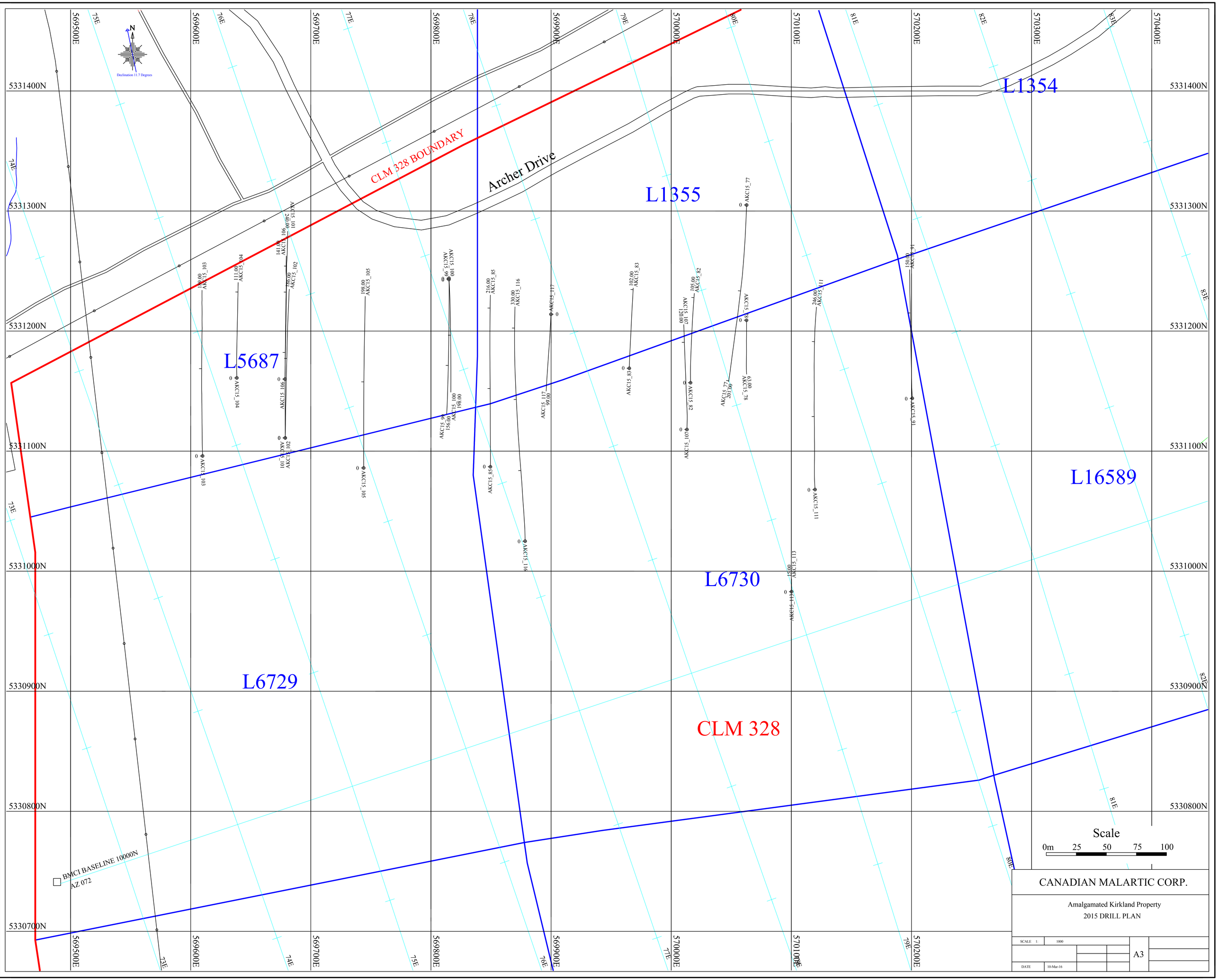
Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			21.00	22.50	1.50	R327638	0.003
			22.50	24.00	1.50	R327640	0.005
24.00	35.80	**Altered Zone; Lapilli Tuff**ALZ; V9L	24.00	25.50	1.50	R327641	0.010
		Same unit as above, just alt'd version.					
		24.0 - unit becomes altered to a pale brown to pink-bn colour, probably serc alt'n and magnetics drop off drastically. Between 24.2-27m unit locy takes on a purplish-pink colour and locy displays white 'spots' common to the RED ROCK alt'n but with very low intensity. Intensity of serc alt'n increases towards Icon with narrow mudstone interval. This looks like where the zone should be, but there is very little mnzn developed.					
		24.6-24.8 SZ @ 60 tca-serc wispy partings + qa vnlts					
		35.2-35.8 Defm'n Zone; wkly sheared/crenulated, stgy serc interval with ser/chl slips @ 40-50 tca and cntng 5-7% QA vng/ff. Tr Py along mm scale, black chl seams					
24.00	35.00	**Sericite**Se					
		Weak to moderate, patchy to pervasive serc alt'n, magnetite destructive.					
24.60	24.80	**Shear Zone 60°**SZ60°					
		24.6-24.8 SZ @ 60 tca-serc wispy partings + qa vnlts					
			25.50	27.00	1.50	R327642	0.005
			27.00	28.50	1.50	R327643	0.006
			28.50	30.00	1.50	R327644	0.003
30.00	45.00	**Quartz Carbonate Vein Zone**QCVZ	30.00	31.50	1.50	R327645	0.003
		This interval can be considered a Qtz-Ank vn zone cntng 3% irregular cream-wht QA vng, gash vns and ff. Shows multiple x-cutting generations, at least 2-3.					
			31.50	33.00	1.50	R327646	0.007
			33.00	34.50	1.50	R327647	0.003
			34.50	35.50	1.00	R327648	0.006
35.00	45.00	**Sericite**Se					
		Very stg, pervasive serc alt'n with 3% QA vng, gash and ff. this grades					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		down-hole into a weaker, more patchy serc alt'n.					
			35.50	36.00	0.50	R327649	0.038
35.80	36.40	**Mudstone**S7 Very stgy sericitized, light yellow-green mudstone, faintly bedded @ 50 tca. Lcon is sharp but partly obscured by a QA vn.					
			36.00	37.50	1.50	R327652	0.007
36.40	38.60	**Lapilli Tuff**V9L Mody to stgy sericitized, as alt'n intensity wanes in and out. weaker areas have wispy ser threads while stronger alt'd intervals ser is pervasive. Weak foliation defined by clast elongation @ 5-15 tca, otherwise fairly massive. Mody ankeritic in mx and cntn's 1% QA vng with Tr Py. There is a series of hairline to 2mm, black chloritic seams which carry Tr-0.% fg Py, commonly @ 20 tca which x-cut and are in turn x-cut by QA vnlt's. Lcon is sharp and very irregular.					
			37.50	39.00	1.50	R327653	0.054
38.60	39.40	**Mudstone**S7 Light yellow green massive, aphanitic, pervasively sericitized mud. Cntn's 2% cream-wht QA strgrs/vnlt's and ff which carry Tr spotty Py. There are a minor amount of dark green to black chl+/-qa seams and threads typy @ 25 tca but which also splay of into discontinuous fractures, that carry Tr-0.5% vfg Py. Lcon is very irregular and partly obscured by QA vng.					
			39.00	40.50	1.50	R327654	0.014
39.40	68.05	**Greywacke; Altered Zone**S3; ALZ Massive, grey-green to locy yellow-bn where pervasively sericitized. Ser alt'n varies from moderate to stg, patchy with wispy ser to locy pervasive. Mody Ankeritic throughout. Tr Py evident along hairline-1-2mm wide Chl+-/Qtz seams/threads, typy @					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		20-30 tca and within QA vng. 39.4 - 45.0 unit cntn's 2-3% irregular cream-wht to translucent QA vng and ff. 45.0 - 60 Unit displays patchy ser+Chl alt'n very similar to the "SPOTTED ROCK" commonly seen associated with the MZ, but here the dark chl alt'n takes on a more of a banded appearance as oppsosed to spots, although some spotting is locy developed. This alt'n gradually wanes between 60 to 68m. Lcon is a tight ser slip @ 35 tca.					
			40.50	42.00	1.50	R327655	0.010
			42.00	43.50	1.50	R327656	0.011
			43.50	45.00	1.50	R327657	0.005
45.00	60.00	Sericite; ChloriteSe; Cl Very similar to the "SPOTTED ROCK" but less intense and dark chl alt'n occurs more as bands with few spotting.	45.00	46.50	1.50	R327658	0.008
			46.50	48.00	1.50	R327660	0.005
			48.00	49.50	1.50	R327661	0.007
			49.50	51.00	1.50	R327662	0.025
			51.00	52.50	1.50	R327663	0.007
			52.50	54.00	1.50	R327664	0.006
			54.00	55.50	1.50	R327665	0.006
			55.50	57.00	1.50	R327666	0.014
			57.00	58.50	1.50	R327667	0.007
			58.50	60.00	1.50	R327668	0.006
			60.00	61.50	1.50	R327669	0.006
			61.50	63.00	1.50	R327670	0.006
			63.00	64.50	1.50	R327671	0.008
			64.50	66.00	1.50	R327672	0.008
			66.00	67.50	1.50	R327673	0.011
			67.50	69.00	1.50	R327674	0.009
68.00	74.50	SericiteSe					

Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
		Stg pervasive serc alt'n, possibly associated with flt structures @ 68m and at 73.7m					
68.05	69.40	**Fault Zone; Greywacke 20°**FAZ; S320° Healed Flt Bx comprised of serd wlrk and bxd cream to buff coloured QA fragments in avfg dark, siliceous grdmass. angles quite variable from 0-40 tca. No visible sulphide. This fracturing is evident within the wacke down to 70.5m					
			69.00	70.50	1.50	R327677	0.010
69.40	73.70	**Greywacke**S3 Mody to stgy sericitized wacke locy bleached to a pale yellow-bn colour. Abundant frcaturing typy infilled with black chlorite which locy open into breccia seams ^ 3cm thick with angular wlrk frags as per the fault previously. This looks like it might be related to a X-flt?? No Sulphides. Lcon mkby a stg serc mud flt @ 65 tca.					
			70.50	72.00	1.50	R327678	0.008
			72.00	73.50	1.50	R327680	0.006
			73.50	75.00	1.50	R327681	0.010
73.70	78.00	**Tuff; Lapilli Tuff 65°**V9; V9L65° Grey green to yellow green, mody to stgy sericitized ash-lap tuff with prominent, serc foliation deved @ 60-65 tca, which seems to be related to the flt at the ucon. Foliation and serc alt'n decreases rapidly past 74m. Lcon is very sharp, a little irregular @ 85 tca					
73.70	73.72	**Fault gouge 65°**Gg65° Stg serc mud flt @ 65 tca. Appears to be 1cm thick but is broken, rubbly.					
			75.00	76.50	1.50	R327682	0.047
			76.50	78.00	1.50	R327683	0.031
78.00	81.05	**Mudstone**S7 Massive to locy finely bedded @ 60-90 tca, yellow-green stg pervasive sericite. Abundant fracture fills of dark green chl+/-qa. Minor interbedded wacke horizons ^ 35 cm. Lcon is sharp @ 55 tca with rip clasts of mudstone in underlying wacke	78.00	79.50	1.50	R327684	0.023

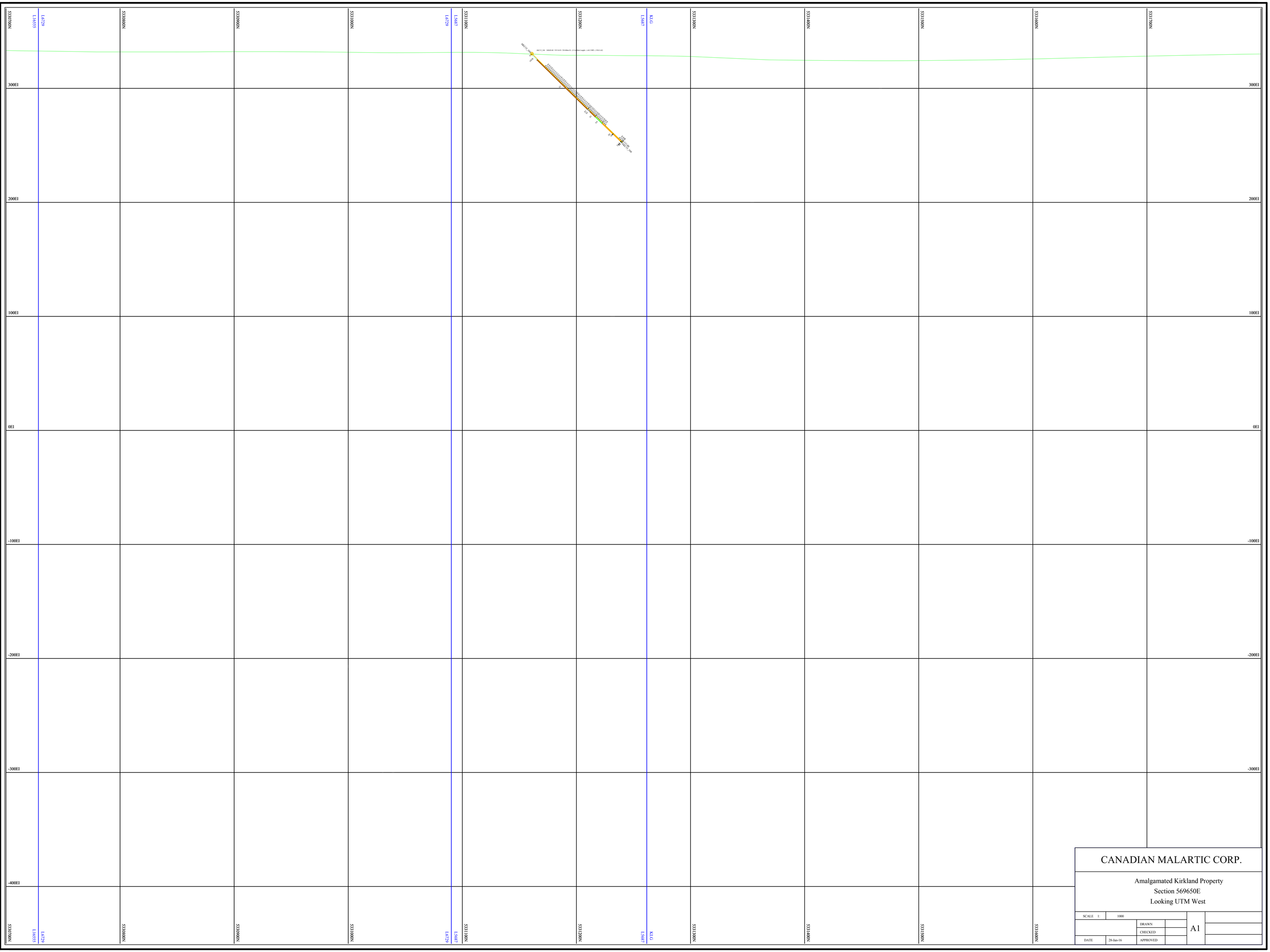
Description			Assay				
			From	To	Sample Length (m)	Sample number	Plot_Au (g/t)
			79.50	81.00	1.50	R327685	0.007
81.05	99.00	GreywackeS3 Massive grey-green, fg wacke. Wkly-mody ankeritic. Patchy serc alt'n as halos around bullish, cream-wht QA vng. Otherwise very fresh looking. 91.7 - 94.0 QA vn @ 0-10 tca; 4-5cm wide cream-wht, barren bullish QA vn running along core-axis. Stg serc alt'n adjacent to vein. NO sulphides. 99.0 EOH					
			90.00	91.50	1.50	R327686	0.013
			91.50	93.00	1.50	R327687	0.003
91.70	94.00	Vn90%Qak vein (5 mm - 10 cm) 90% quartz-ankerite 0° Vn;90%;Qak;;0°;;0° 91.7 - 94.0 QA vn @ 0-10 tca; 4-5cm wide cream-wht, barren bullish QA vn running along core-axis. Stg serc alt'n adjacent to vein. NO sulphides.					
			93.00	94.50	1.50	R327688	0.006
			94.50	96.00	1.50	R327689	0.012
			96.00	97.50	1.50	R327690	0.024
			97.50	99.00	1.50	R327691	0.013


Declination 11.7 Degrees
CLM 328 BOUNDARY
Archer Drive
L1354
L1355
L5687
L16589
L6730
L6729
CLM 328
BMCI BASELINE 10000N
AZ 072
Scale
0m 25 50 75 100
CANADIAN MALARTIC CORP.
Amalgamated Kirkland Property
2015 DRILL PLAN
SCALE 1: 1000
A3
DATE 10-Mar-16

CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569600E
Looking UTM West

SCALE 1:	1000			A1
		DRAWN		
		CHECKED		
DATE	28-Jan-16	APPROVED		



CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569650E
Looking UTM West

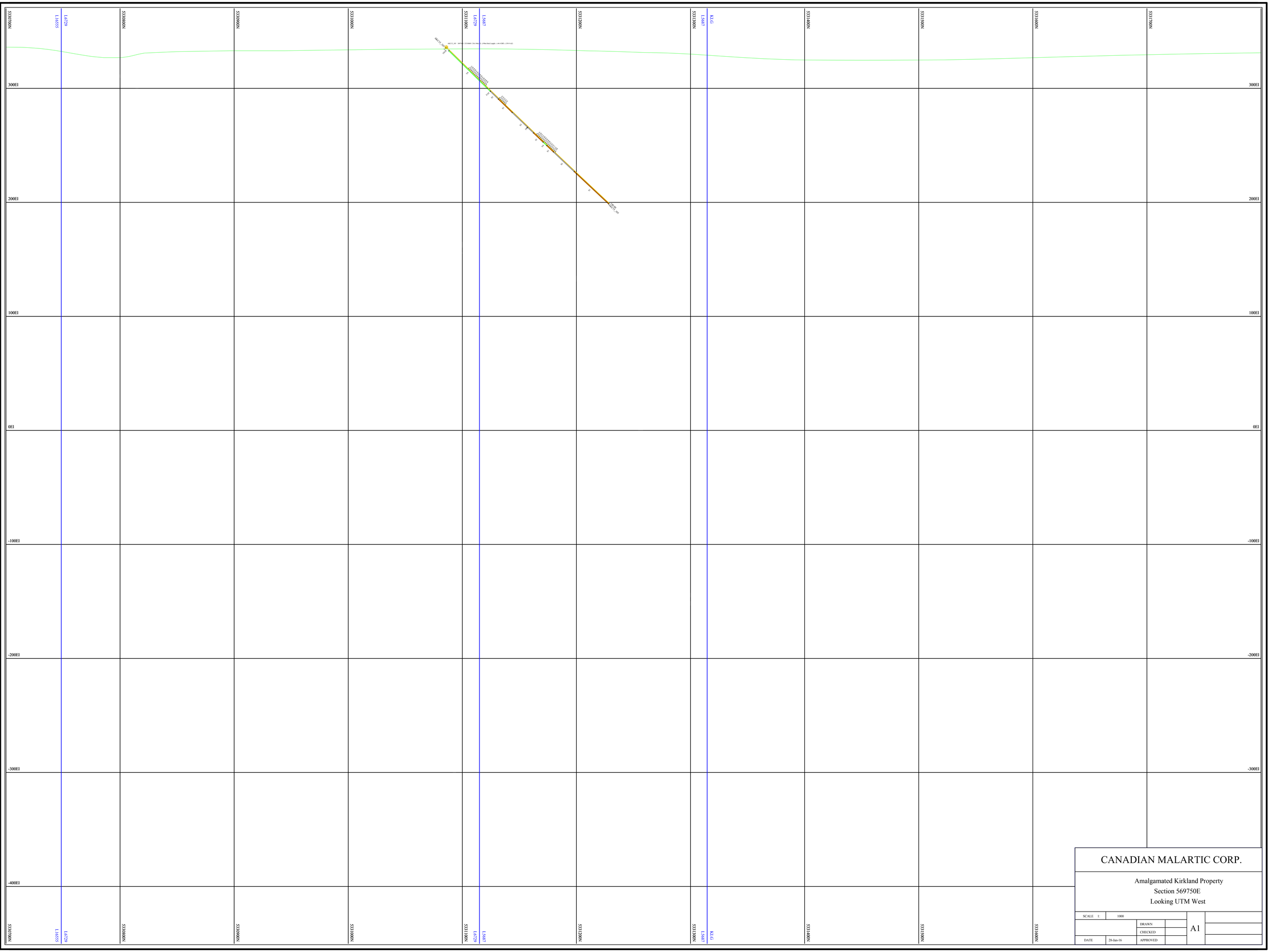
SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	

5370700N
5370800N
5370900N
5371000N
5371100N
5371200N
5371300N
5371400N
5371500N
5371600N
5371700N
L16555
L6729
L6729
L5867
KLG
300EI
200EI
100EI
0EI
-100EI
-200EI
-300EI
-400EI

CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569675E
Looking UTM West

SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	

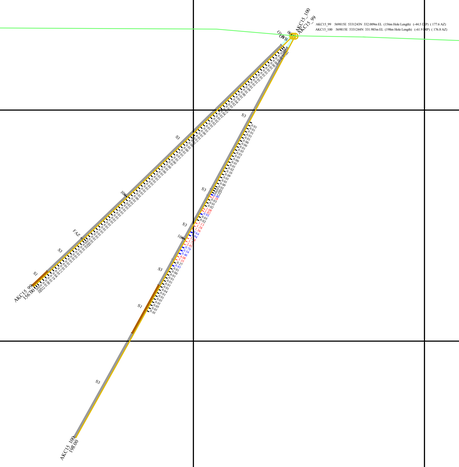


CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569750E
Looking UTM West

SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	

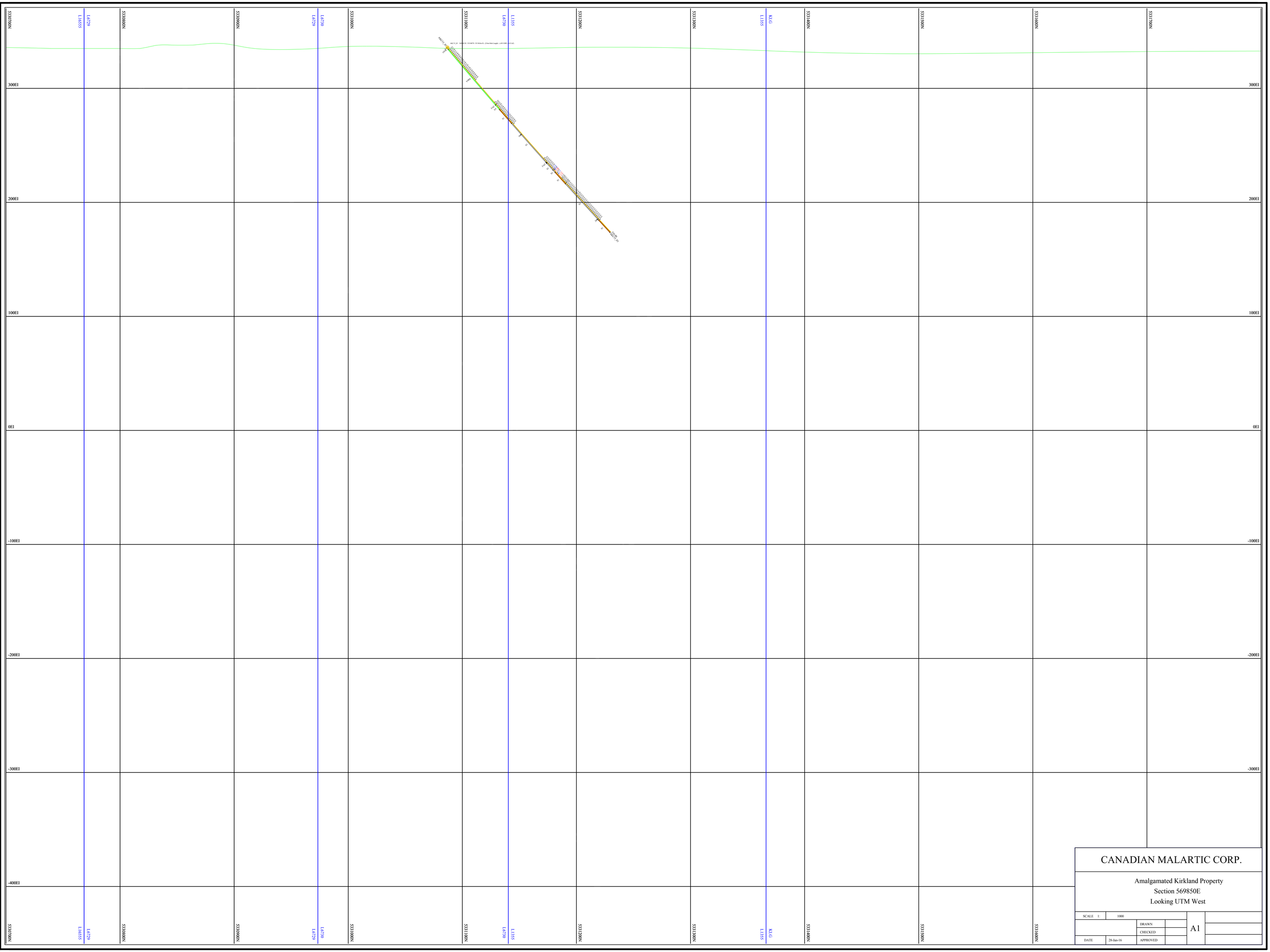
5370700N
5370800N
5370900N
5371000N
5371100N
5371200N
5371300N
5371400N
5371500N
5371600N
5371700N
L19555
L19729
L19867
KLG
300EI
200EI
100EI
0EI
-100EI
-200EI
-300EI
-400EI
5369700N
5369800N
5369900N
5370000N
5370100N
5370200N
5370300N
5370400N
5370500N
5370600N
5370700N
L19555
L19729
L19867
KLG



CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569825E
Looking UTM West

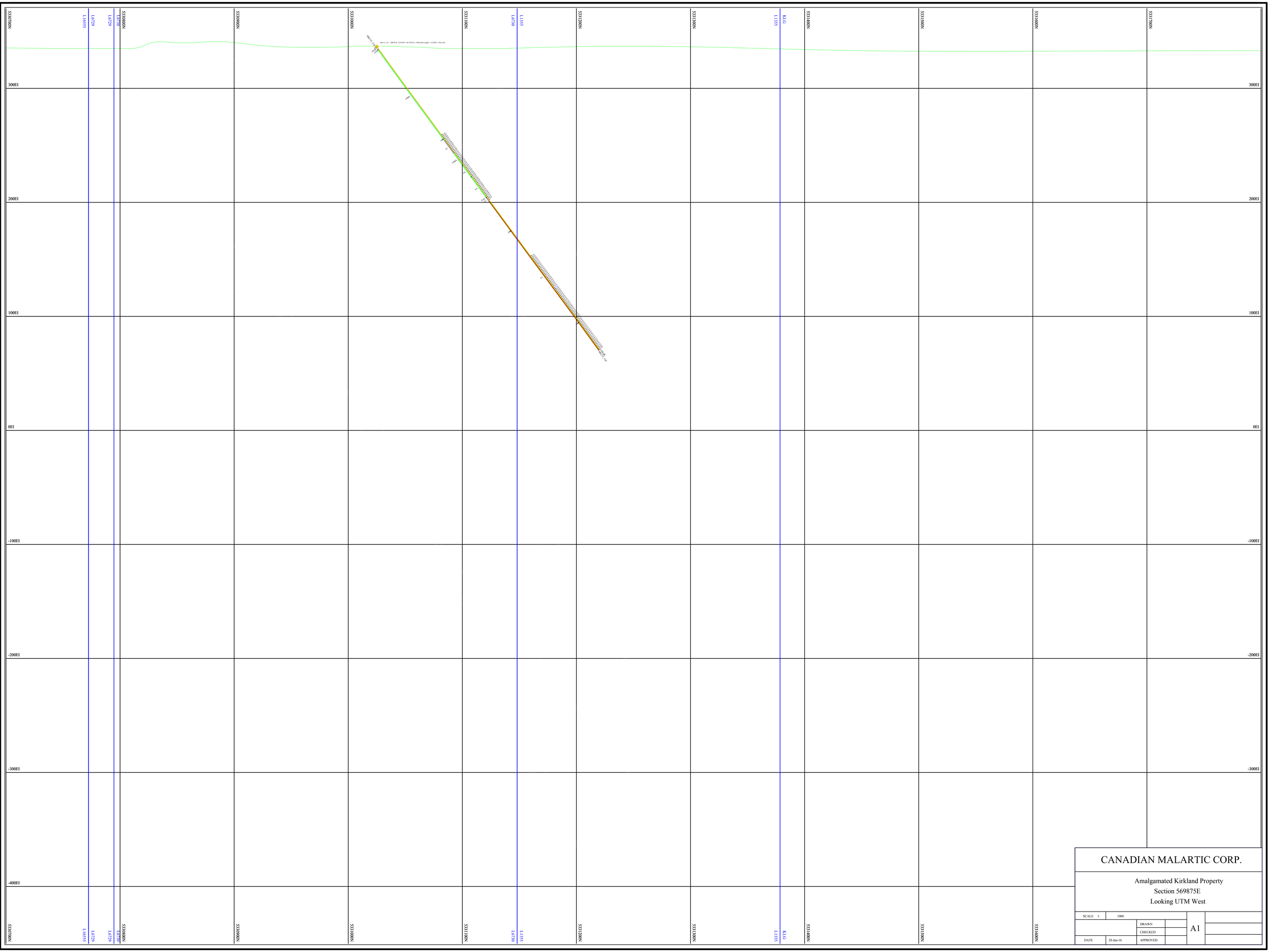
SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	



CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569850E
Looking UTM West

SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	

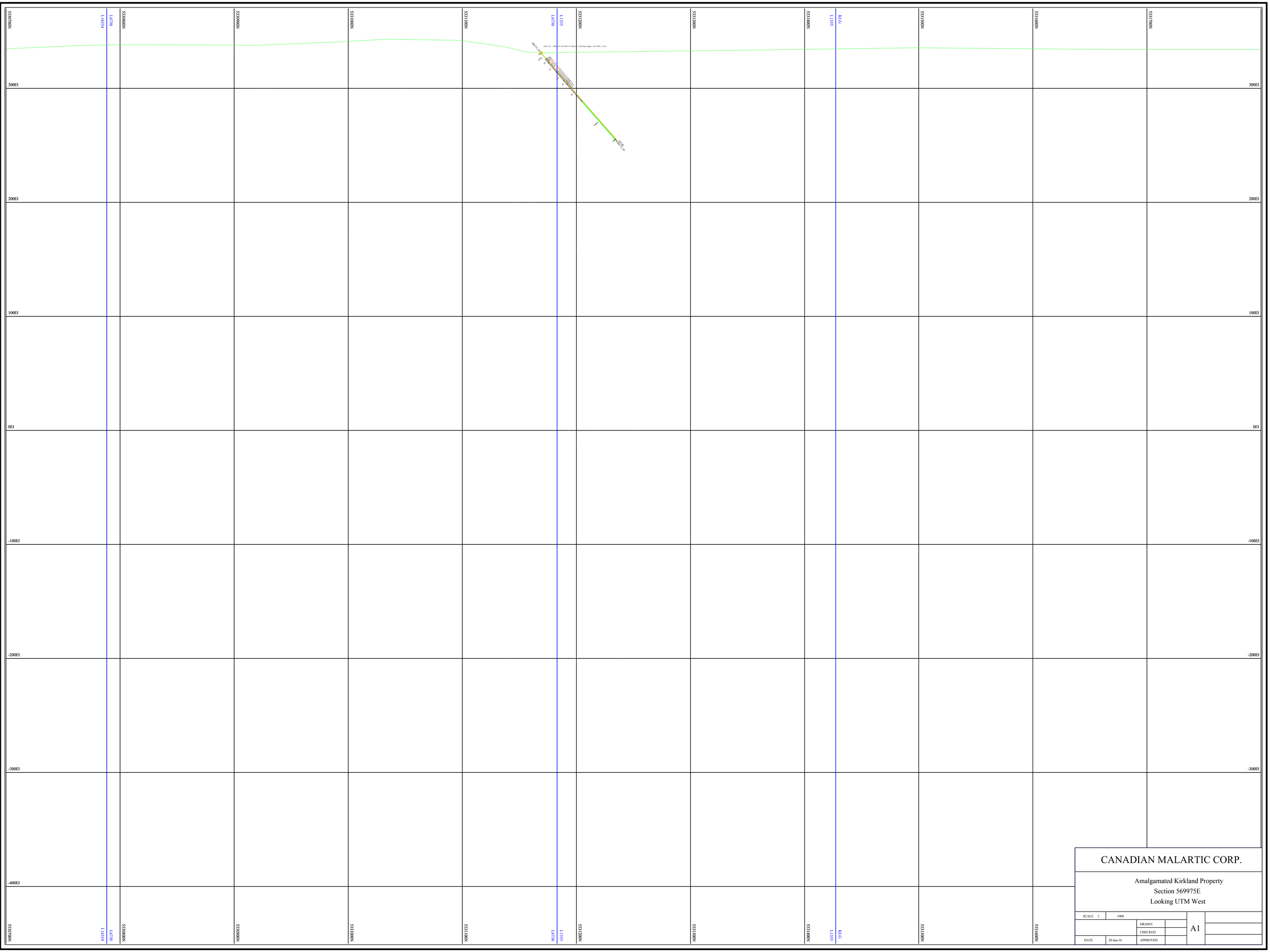


CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569875E
Looking UTM West

SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	


5330700N
5330800N
5330900N
5331000N
5331100N
5331200N
5331300N
5331400N
5331500N
5331600N
5331700N
L16554
L6730
L1355
KLG
300El
200El
100El
0El
-100El
-200El
-300El
-400El
AKC15_117 569899.9E 5331214N 330.769m EL (99m Hole Length) (-49.8 DIP) (182.6 AZ)
AKC15_117
99.00
OVB
S7
V9L
ALZ
S3
FAZ
V9
CANADIAN MALARTIC CORP.
Amalgamated Kirkland Property
Section 569900E
Looking UTM West
SCALE 1: 1000
DRAWN
CHECKED
DATE 28-Jan-16
APPROVED
A1



CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 569975E
Looking UTM West

SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	

CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 570000E
Looking UTM West

SCALE 1:	1000			A1
		DRAWN		
		CHECKED		
DATE	28-Jan-16	APPROVED		

5330700N
5330800N
5330900N
5331000N
5331100N
5331200N
5331300N
5331400N
5331500N
5331600N
5331700N
300El
200El
100El
0El
-100El
-200El
-300El
-400El
CANADIAN MALARTIC CORP.
Amalgamated Kirkland Property
Section 570025E
Looking UTM West
SCALE 1: 1000
DRAWN
CHECKED
APPROVED
DATE 28-Jan-16
A1

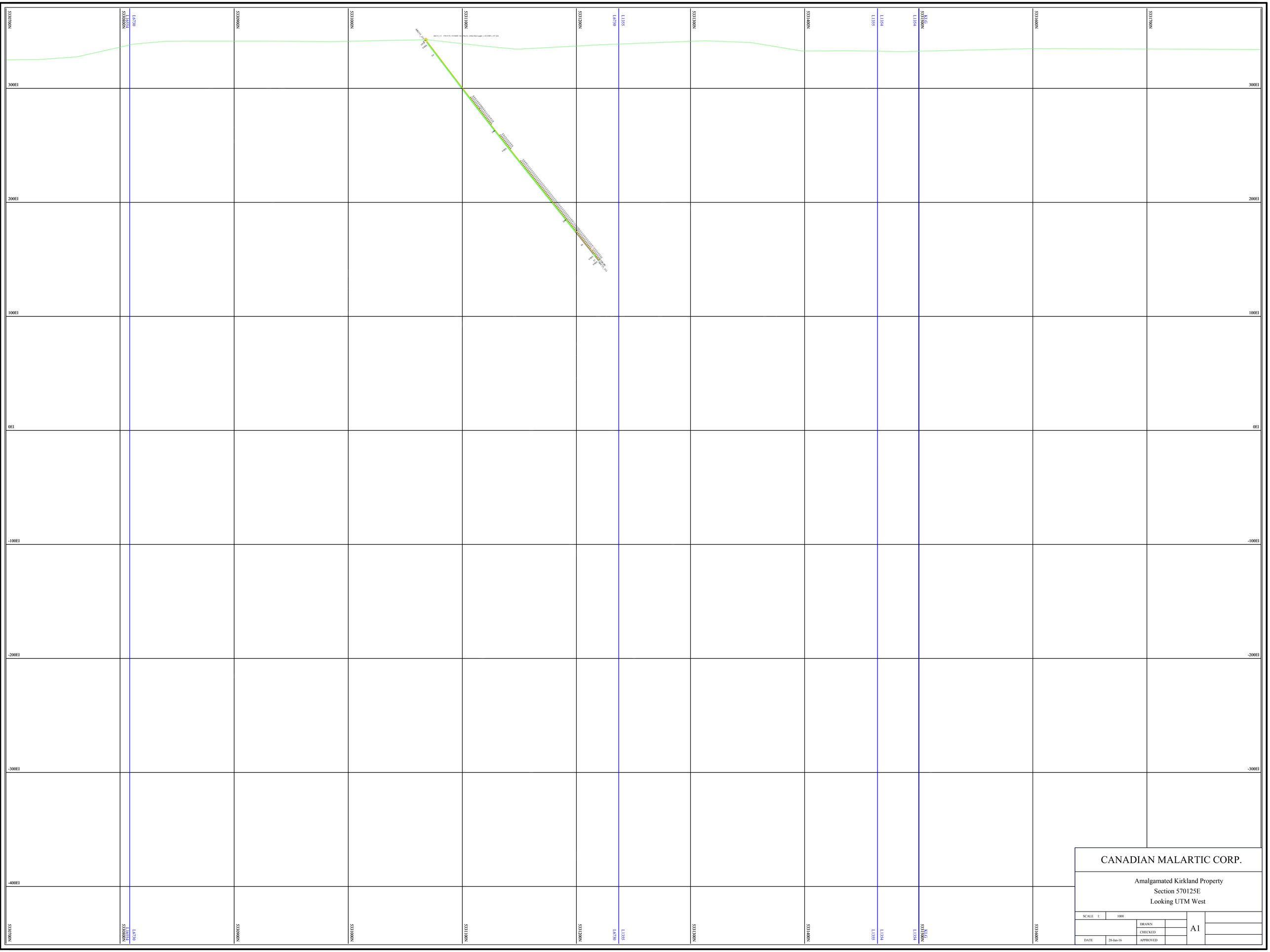
CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 570050E
Looking UTM West

SCALE 1: 1000		DRAWN	A1
		CHECKED	
DATE	28-Jan-16	APPROVED	


5330700N
5330800N
5330900N
5331000N
5331100N
5331200N
5331300N
5331400N
5331500N
5331600N
5331700N
L6730
L1355
KLG
300El
200El
100El
0El
-100El
-200El
-300El
-400El
CANADIAN MALARTIC CORP.
Amalgamated Kirkland Property
Section 570075E
Looking UTM West
SCALE 1: 1000
DRAWN
CHECKED
APPROVED
DATE 28-Jan-16
A1


300El
200El
100El
0El
-100El
-200El
-300El
-400El
5330700N
5330900N
5331000N
5331100N
5331200N
5331300N
5331400N
5331500N
5331600N
5331700N
CANADIAN MALARTIC CORP.
Amalgamated Kirkland Property
Section 570100E
Looking UTM West
SCALE 1: 1000
DRAWN
CHECKED
DATE 28-Jan-16
APPROVED
A1



CANADIAN MALARTIC CORP.

Amalgamated Kirkland Property
Section 570125E
Looking UTM West

SCALE 1:	1000		A1
		DRAWN	
		CHECKED	
DATE	28-Jan-16	APPROVED	


5330700N
5330800N
L16554
L6730
5330900N
5331000N
5331100N
5331200N
L16589
L1354
5331300N
5331400N
5331500N
KLG
5331600N
5331700N
300El
200El
100El
0El
-100El
-200El
-300El
-400El
CANADIAN MALARTIC CORP.
Amalgamated Kirkland Property
Section 570200E
Looking UTM West
SCALE 1: 1000
DRAWN
CHECKED
APPROVED
DATE 28-Jan-16
A1