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CANADIAN MALARTIC CORPORATION

2011-2012 West Kirkland (Goldbanks) Drill Program

Kirkland Lake Project

Report Prepared by Canadian Malartic Geologist:

Christopher A.L. Clarke, M.Sc., P.Geo

3/15/2016

KIRKLAND LAKE PROJECT

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Introduction

The company, West Kirkland Mining Inc. (WKM) under agreement from Queenston Mining Inc. (now controlled by Canadian Malartic Corporation or CMC) conducted an exploratory diamond drill program on the Goldbanks claims (Figure 1) during the period of April 3, 2011 to April 23, 2012. The drill program included twenty-one diamond drill holes which totaled 6160m and were concentrated on the central portion of the Goldbanks claims package (Figure 2). All holes were drilled within Teck Township. The drilling, logging and sampling was supervised by WKM VP Exploration (QP, geologist) Michael Allen.

The Goldbanks property has generated exploration interest due to the vicinity of the Main Break and the structures that strike parallel to it. While the Main Break has had a good amount of drilling conducted on it to the south and east at shallow depths and from drifts located at 4700' below surface (and below) without significant results, the other structures have had very little work done on them. In addition to the Goldbanks Break structure, there are four other structures that have been found north of the Main Break. They are tentatively termed, from north to south, the Oakes Break, the McIvor Break, the Orme Break, and the '05 Break.

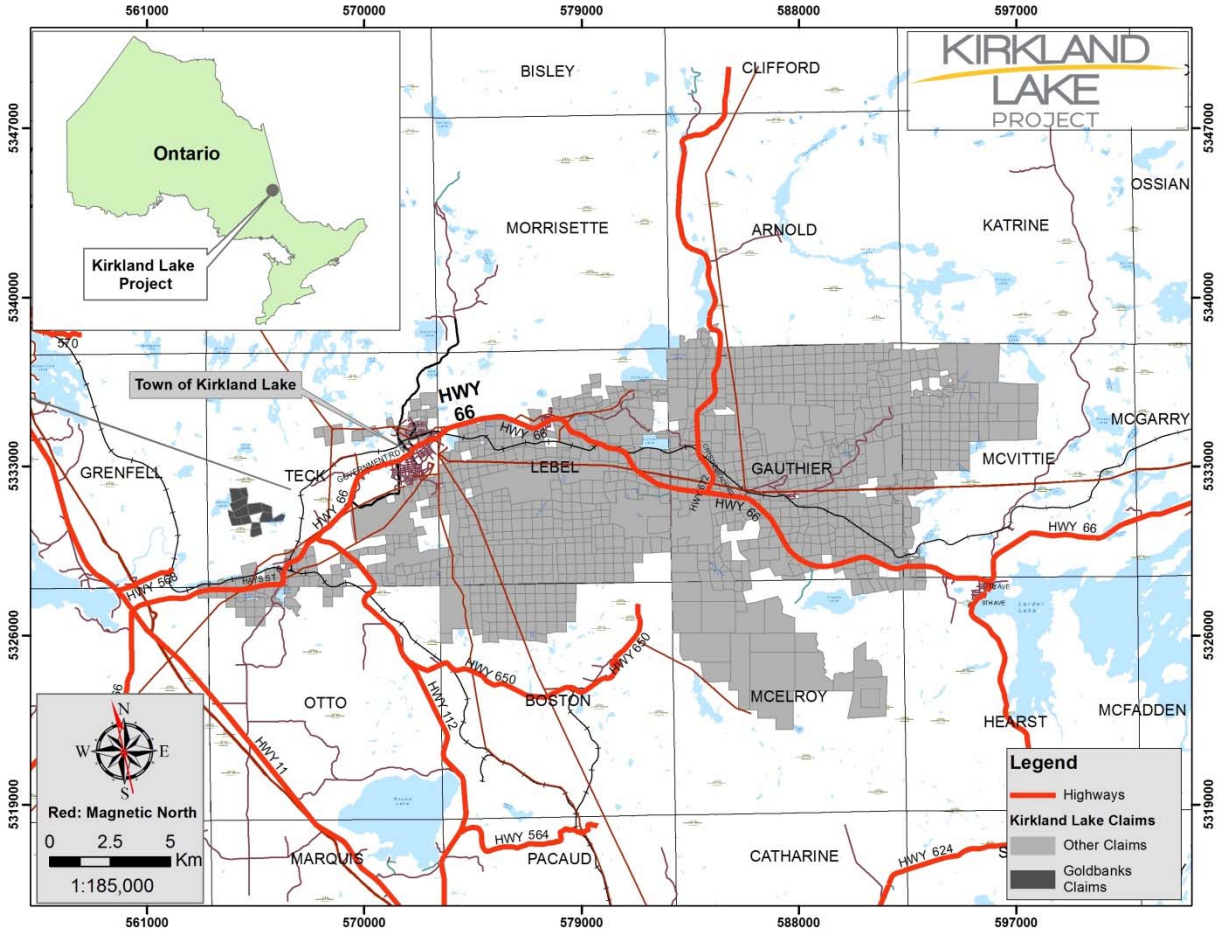


Figure 1: Location map of the Goldbanks claims relative to the CMC Kirkland Lake project.

Property Description and Access

The Goldbanks property is situated within Teck Township (Figure 1). The property is adjacent to the Kirkland Lake Gold claims group.

The Goldbanks property includes 8 leases and 5 staked claims which are listed in Table 1 and displayed in Figure 2. Access to the property is gained by All-Terrain Vehicle from Goldthorpe road that transects the property. A trail that connects the Goldthorpe road to the hamlet of Swastika provides access to the east and south regions of the property.

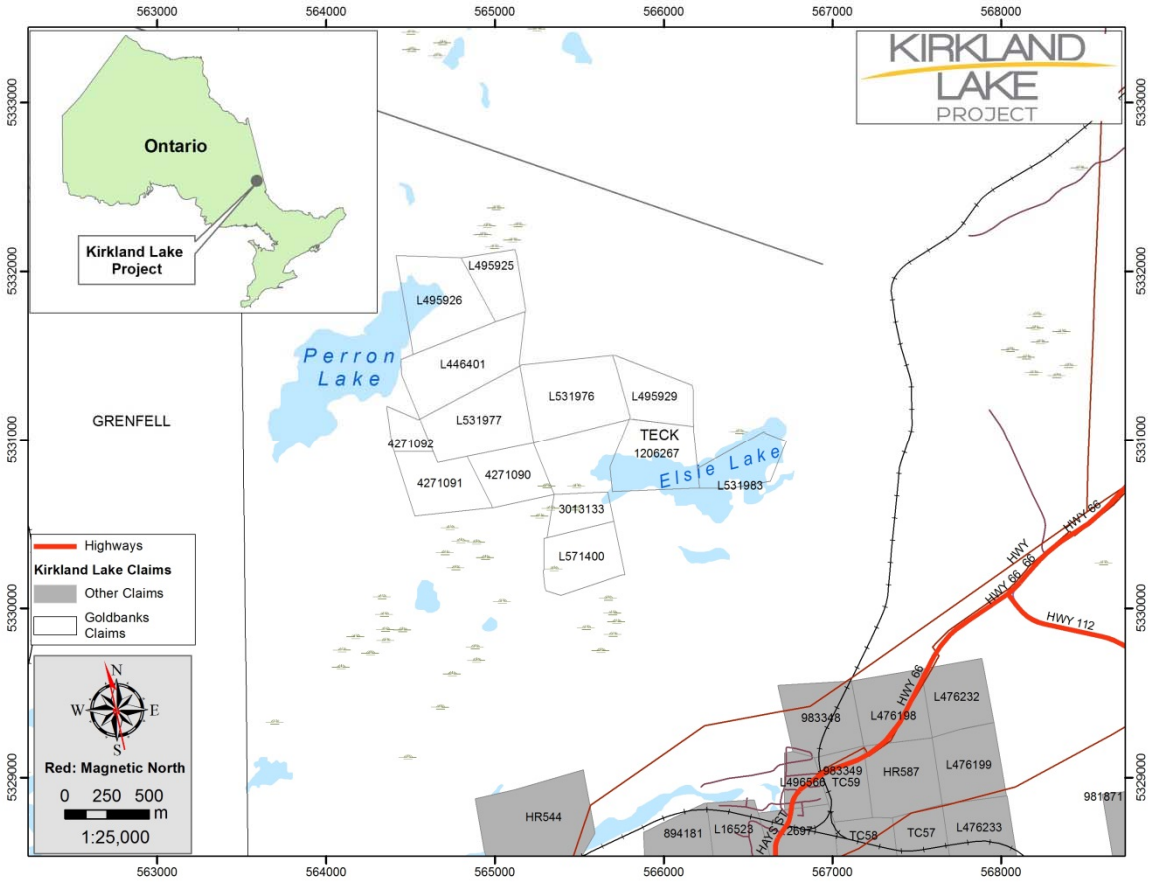


Figure 2: Location map showing the disposition of Goldbanks claims in relation to historic properties and infrastructure using a NAD 83 UTM zone 17N grid.

Table 1: List of claims in the Goldbanks Property

Claim_Number_ID	Township	Tenure_Type	Claim_Rights
3013133	Teck	Staked	MRO
1206267	Teck	Staked	MRO
4271090	Teck	Staked	MRO
4271091	Teck	Staked	MRO
4271092	Teck	Staked	MRO
446401	Teck	Leased	MRO
495925	Teck	Leased	MRO
495926	Teck	Leased	MRO
495929	Teck	Leased	MRO
531976	Teck	Leased	MRO
531977	Teck	Leased	MRO
531983	Teck	Leased	MRO
571400	Teck	Leased	MRO

History

Historical work on the Goldbanks property was predominantly undertaken in the early years of the 20th century up to 1940. The following historical review is taken with permission from the 2009 assessment report prepared by M. Sutton P.Geo.

1900-1936, file KL-4168: no records, ancient trenching; property originally held by Goldbanks-Kirkland Mines Ltd, succeeded in 1937 by Goldbanks Mines Ltd;

#3 shaft located on south contact of porphyry with A.S. Bayne reporting shaft to 100’ + 60’ x-cut north-south in 1920;

#2 shaft sunk to 45’ in porphyry with 4” lamp dyke and main shear (Glenhill);

#1 shaft sunk to 73’ north of unconformity with bottom at porphyry (Glenhill- on maps, shaft S of unconformity)- ~200’ drifting +x-cuts @-60’ (Bayne,@-70’ on Sylvanite map) are east-west with main zone @$2.80/1.5’ (0.08 oz.Au/ton) for 65’ + two other zones (north + south) with a sample of 0.15 oz.Au/ton over 2’ @ 20’S;

one drill hole (year unknown) 420’ long @100’ S #1 shaft (-45, drilled north) - all in porphyry short of shear zone (Glenhill - on maps, hole shown @’ S #1 shaft).

1936, file KL-4168: J.A. Dawson, Geological Report: 0.31 oz.Au/ton from a grab sample of “rusty quartz” claim #2934 (now L531976), “on strike” ¼ mile SW and similar visually to McIvor;

T.L. Glenhill, Geological Report +Erie Canadian Mines: surface mapping followed by drilling under his direction of 4,950’ in 17 holes (?);

ddh #12 in volcanics with 20' graphite @ 530';

other highlights: ddh #7 with 0.77 oz.Au/ton /0.7' ($26.95- Erie Canadian section, or $24.85-Barney, or $24.85/1.0'- Sylvanite section) @75.0'; ddh #3 with 0.09oz.Au/t/3.0' ($3.15) @ 246'; ddh #14 with 0.19 oz.Au/ton /5'10" ($6.65) @ 141'; ddh #6 with oz.Au/ton t/12" ($2.80) @260.0'; ddh #4 with 0.05 oz.Au/ton t/2.0' ($1.75) @ 335'; notes volcanic are rhyolites, not basalt.

1936-1944, file KL-4168: 12 maps (all claim #1218); #1 map, 1936 surface geology plan shows drill holes, quartz vein with chalcopyrite on east boundary, etc.; #2 & #5 maps, 1938 Erie Canadian Mines - same as #1 map plus section view of ddh's #1-10; #3 & #11maps, 1944 Sylvanite Gold exploration dept.- same as #2 map but more detail, shows inset of #1 shaft u/g- shows main zone being "probable Casa Kirk Break", QV in western trench ; #4 map, 1936 Erie Canadian Mines - shows mud seam N70E with 68S dip @#2 shaft; #6 map - same as #2 map but no section, inset detail #1 map shaft level incl. $1.6/1.8'-2 zones, $5.2 in dump grab - Main zone called a "Break"; #7 map, Goldbanks Mine Ltd. - detailed geology plan + ddh's shows 3' @$4.20 in west-most pit + 5'@$3.20 from volcanic pit near #4 post where zone shown is ~90 strike + east shears @ 5' of $6.80 + 5' of $5.40; #8-shows surface projection of drill hole geology + assays converted to oz.Au/t; #9 map, 1936 Erie Canadian Mines - plan shows surface qv's @ shafts, in volcanic near #4 post, @ #3 shaft, @east boundary- shows original ddh; #10 map 1936 Erie Canadian Mines - simple survey of level @#1 shaft; #12 map - detailed geology + drill holes- shows "alt.band" between #3 shaft and south shear on east boundary at 60S dip and ~ 90 strike; map with no number 1940 - simple surface plan shows 2 shafts + main zone + 2 zones on east claim boundary; one compilation plan of unknown origin.

1938, file KL-4168: M.T. Barney, Geological Report - chip samples from shafts/drifts during 1929-1937- chip samples #1 shaft @ -10' of $50.00 (1.43 oz.Au/ton) across 9" + @ drift (-75') of $5.07 (0.14 oz.Au/ton) across 9".

1940, file KL-4168: C.F. Rice, Geological Report (all from claim #1218) - channel sampled $4.00 (0.15 oz.Au/ton) across 4' of numerous east-west quartz stringers on east boundary; map (Rice) shows 5' of $4.00; map (Rice) shows 5' of $6.80 (0.19 oz.Au/ton) south of above zone + shaft #2 assays of 1.75 oz.Au/t at 22' from quartz lense + other samples to 3' of $7.10 (0.20 oz.Au/ton); notes a 1" mud seam in a shear with quartz at #2 shaft dipping 65S, with quartz leaving shaft @42'; map (Rice) shows channel sampled $4.20 (0.12 oz.Au/t) across 3' at west side of claim + 12" of $11.20 (0.32 oz.Au/ton) west of #2 shaft along main structure.

1961: on old claim #70736; 3 ddh's (317'), Hurd/Pollock, no assays provided; drilled north to south just east of #1 shaft (?); porphyry-then volcanic, with sheared contact+pyrite.

1964/1965, file KL-4168

claim 1218 (now L446401, was 77827 at the time); 3 drill holes (1-65,64-1,64-2: 403' total); no assays provided; ddh 64-1 drilled north @mid-claim, north of north porphyry- conglomerate, wacke, tuff, porphyry- somewhat sheared + pyrite+ q stringers in conglomerate, 0.8' qv in porphyry dyke 1.8' from south porphyry-tuff contact where 3" rusty mud seam is; ddh 64-1 + 1-65 drilled on eastern boundary-

64-1 has conglomerate, wacke, and porphyry with quartz stringers over 3' at south porphyry contact + 1-65 is all porphyry with one "quartz fracture zone" of 30% quartz +pyrite for 5.6'; logged by N. Evoy.

1972: A.S. Bayne, Geological Report: Orme Prospecting Syndicate staked property; Bayne notes a pit on the south part of claim group ("south contact of the north intrusive") where 25 pound "bulk sample from the dump well mineralized by chalcopyrite" assayed 1.22% copper; chip samples from #2 shaft noted from Rice (over 2' width of shear each) plus Sylvanite (over 2" width of quartz each); 1940- of 0.10-0.20 oz.Au/ton /2' + 0.13-2.00 oz.Au/ton/2"; notes a topographic depression across claim 1218 (#317657 at the time) at the south contact of the north porphyry suggests this warrants drilling; some discussion on which shear might be the western extension of the '04 Break.

1973, file KL-642: claim 1218 (now L446401, was 339578 at the time); 2 drill holes (73-1, 73-2); under #3 shaft (south porphyry contact); drilled to the north; tuff, then porphyry; samples taken on "quartz carbonate" veins, pyrite ("fair mineralization"- no assays); logged by A.S. Bayne (P.Eng.).

1973, file KL-2558: (1984?)- claim #531977 (#2933 on TWP map)- trenching ~ ½ way between #1 & #2 posts; Rick Yost-backhoe; no information or report on trenches-just locations.

1980, file KL-2558: claim #495926 (#24285 on TWP map)- 2 ddh (H-1, H-2) drilled south from north shore Perron Lake; holes 180'+222'; volcanics (acidic rhyolites) with 7' syenite dyke; no assays – barren qv's; logged by L.K. Oliver (P.Eng.).

1981, file KL-2558: claim #531983 (#7216 on TWP map)- 2 ddh (ES 81-1, 81-2) drilled north from south shore Elsie Lake from point; holes 105'+108'; conglomerate- ending in "diorite"-no assays taken; logged by A.E. Bailey; drilling- Mansfield Gray.

1982, file KL-2558: claim #495929 (#2935 on TWP map)- 2 ddh (H-3, H-4) drilled north under trenches; holes 200'+201'; conglomerate + porphyry; no significant mineralization, no assays provided- one 0.5' section "concentrated fine grained pyrite" was sampled in H-4, and two samples in H-3 taken; barren qv's; logged by L.K. Oliver (P.Eng.) for claim owners.

1986/1988/1990, file KL-2558: claim #531976 (#2934 on TWP map)- 186 (?) hours trenching north and northwest of a deep pit ~ 300' south of #1 post close to claim line; 3 assays-all 9 ppb, 2 whole-rock; samples by L.K. Oliver (P.Eng.); no information or report on trenches-just locations.

1988: claim #446401 (#1218 on TWP map)- 381 hours trenching of pit at #2 shaft area; no information or report on trench- just location.

Claim # L-1206267

1996, file KL-3937: VLF/mag./lineament interpretation- 3 single-line and one multi-line (in Lake) VLF's; 2 mag lows (one in Lake coinciding with VLF) either side of a big mag high- (Stew Carmichael- field data by Brian Madill).

1996, file KL-4168: DDH #96-1 drilled from north shore of Elsie Lake west of cross fault targeting '05 Break; rationale using Macassa (LAC) information for location of '05 Break, plus interpretation; notes historical confusion of '04/Main Break location to the SE where real Break may be further north than drilling; no significant results- all conglomerate.

Claim # L-3013133

1981: claim #571400 at the time; #7411 on TWP map)- 2 ddh (Dans 81-1, 81-2) holes 101.6'+101'; drilled north through '04/Main Break location (?); "alkali metavolcanics"; no assays taken but "some mud seams","rusty seams; logged by A.E. Bailey; drilling- Mansfield Gray.

West of Goldbanks Property

Claims #6784/#6785: J.A. Dawson, Geological Report: free gold reported "South of Perron Lake".

2004, file KL-5392: I.P. (Hinterland), strong anomaly at site of TEC-001, TEC-002 (not explained); 2 anomalies at #1 post of 6784-not drilled/explained.

2005, file KL-5485: drilling; claim #6784 2 ddh into south part of porphyry (TEC-001, TEC-002) with no significant assays- 0.08 g/t over 0.6m from QV's + 1% f py at contact, 0.04 gAu/t over 1.8m in hem'd tuff+ 2% py (TEC-001) & 0.10 gAu/t over 1.0m moly + 1% py in tuff (check did not corroborate), 0.06 gAu/t over 1.0m from QV+ 1% f py; claim #6785 one ddh (TEC-003) near #2 post but north of '05 Break extrapolation- all conglomerate, nothing significant (Julien Davy MSC Geo).

1997, file KL-4214: drilling; claim #6842 (Kinross), 1 ddh 1483' drilled north for '04/Main Break target, 343' basic syenite+tuff+wacke+cong+ many faults/shears, some mud; no assays provided (Alistair Still).

Claim # L-3008035

1991, file KL-3024: VLF/magnetometer (claim # 1151635 at the time) Queenston: 3 faults inferred from magnetic lows (2 east-west); one strong VLF + 3 single-line VLF anomalies; looking for the extrapolation of the '05 Break.

1994, file KL-3623: VLF/mag/mapping, Dyment/Obradovich/Kidston: claim #1168941 (at the time- #3409 on TWP map)- 3 N.E. trending and 4 east-west trending anomalies (2 topographic lows-lineaments, 2 mag lows, plus 2 VLF anomalies-one of which is close to the main one in 1991 and is on the extrapolation of the '05 Break- totaling 4) (Jim Whelan).

2004, file KL-5392: I.P. Survey, Hinterland: single line anomaly where magnetic low/ topographic low is located.

East of Goldbanks Property - Claims 2947/2948-Sir Harry Oakes claims

1936 :J.A. Dawson, Geological Report: 0.05 oz.Au/ton from a grab sample of py+cp in quartz stringers at south porphyry/conglomerate contact.

1940: C.F. Rice, Geological Report: sampled strong shear in porphyry 300' east of claim #317657 (now) with 65' of 2' wide 0.20-0.36 oz.Au/ton in porphyry on strike with "the low ground just east of the camps"; map by Rice shows the zone on strike with 5' of $4.00 on claim 1218 (Goldbanks proper).

1997, file KL-4509: I.P. Survey, Kinross, by Remy Belanger: high resistivity up to Goldthorpe road/unconformity, weak 2 anomalies- one liner at unconformity + one at ~south contact of porphyry.

2003/2004, file KL-4631 (lost): one ddh each year, best assay 0.06 oz.Au/ton.

Claims 5343/5362

1936- J.A. Dawson- Geological Report- 0.00 from grab samples of py+cp in quartz stringers at south porphyry/tuff contact at 2 "shallow shafts"

Claim #5980

1980, file KL-2838: geological report Wilroy: east of Amikougami fault; strong mud Break @ N70E and dipping 70- 80S in stripping- likely is the '05 Break; porphyry on south side, basic syenite+ conglomerate+ tuff on north –

Claim #1616/2830

1980: geological report Wilroy: very strong Break + mud seam-1300' strike; strikes 58º-75º & dips 65º to subvertical.

Claim #2911- McIvor shaft

1936: J.A. Dawson, Geological Report: free gold reported "in the vicinity of the McIvor shaft"; 0.10 from shaft dump-1' rusty quartz/carb vein with V.G.; shaft @100' depth in conglomerate on shear @N70E; shear "was definitely traced across the Goldthorpe road onto claim 4912"- 300' NE is a "rusty fracture plane"

South/East of Goldbanks - Claims 6822/1166/16515/16514/16513

1937, KL-1435: 10 ddh's (4950') by W.Boyes/O.Blackman; Kirkland Gateway Mines; best assay 0.12 oz.Au/ton/0.7' in conglomerate with pyrite in a schist, plus 0.03 oz.Au/ton/1.2' in conglomerate with pyrite- south shore of Lake.

1937: 18 ddh's (10,331') by B.Arnott.

1938: review of ddh's by Fockler- potentially some holes have a southern structure that is not the Main Break.

1958, KL-2006: 2 ddh's (50' each) by Nipigon Mines on claim #531983 (south shore of Lake)-no assays ()

1983: surface mapping, trenching, (G.E.Parsons for Queenston), "West KL Project"; Main Break uncovered East of Elsie Lake-best assay at 0.09 oz.Au/ton/0.75' (2"QV on porphyry/wacke contact)- two

structures both east + west of Elsie- north structure termed Gracie West Break is 12' wide with 2' quartz with 78º S dip no offset on north-south cross fault; 5 porphyry units east of Elsie Lake.

Modern Work

2008-2009: Vault Minerals Inc.: Conducted a trenching, mapping and magnetics program on the Goldbanks property. The program identified several areas which formed the basis for the 2011-2012 WKM drill program.

2010: Queenston Mining Inc.: A drill program was initiated on the property with eight holes drilled (AFRI_num: 20011365).

Regional Geology

In terms of regional disposition, the Goldbanks property is part of the southern Abitibi Greenstone belt within the Kirkland Lake Gold Camp. The Abitibi Greenstone Belt is a northeast-southwest trending, Archean-age intracratonic tectonic unit within the southern Superior Province of the Canadian Shield and is acknowledged for its world-class gold deposits. The Kirkland Lake Gold Camp is situated on the south limb of the regional Blake River synclinorium. The northern and southern limbs of the synclinorium are truncated respectively by the east-trending, Destor-Porcupine and the Cadillac-Larder Lake breaks. The majority of the historical gold production in the Abitibi Greenstone Belt is spatially associated with these two regional structures. The current geological classifications (Ayer et al, 2005) subdivide the Timmins – Kirkland Lake segment of the Abitibi Greenstone Belt into 11 supracrustal assemblages as:

Timiskaming (youngest)	Sediments and alkalic volcanics + iron formation
Porcupine	Sediments and calc-alkalic volcanics + iron formation
Upper Blake River	Calc-alkalic and tholeiitic volcanics
Lower Blake River	Tholeiitic volcanics
Upper Tisdale	Calc-alkalic volcanics
Lower Tisdale	Komatiitic, tholeiitic and calc-alkalic volcanics + Iron formation
Upper Kidd-Munro	Komatiitic, tholeiitic volcanics + iron formation
Lower Kidd-Munro	Calc-alkalic volcanics
Stoughton-Roquemaure	Komatiitic, tholeiitic and calc-alkalic volcanics
Deloro	Tholeiitic and calc-alkalic volcanics + iron formation
Pacaud (oldest)	Komatiitic, tholeiitic and calc-alkalic volcanics

Intrusive rocks are subdivided into three broad categories: synvolcanic, syntectonic and post tectonic intrusions (Ayer et al., 2005). Synvolcanic intrusives are tied, via geochronology, to the eleven supracrustal assemblages noted above. They are not well represented in the Kirkland Lake area with the felsic to intermediate Round Lake batholith to the southwest being the best example (Figure 3).

Synvolcanic mafic to ultramafic intrusions and post tectonic intrusions are similarly not well represented in the Kirkland Lake area. More important in the project area, are the syntectonic intrusives, particularly the late syntectonic members. Ayer (2005) indicates that the late syntectonic intrusives are “broadly coeval with the Timiskaming assemblage”, relatively small, and occur in close proximity to the regional structures. Larger intrusions of this type include the Otto Stock, Lebel Stock and Murdoch Creek Stock. They tend to be alkalic, ranging from syenite to mafic syenite in composition. The syenite stocks often have contaminated margins and variably altered to metamorphosed contact aureoles.

The Kirkland Lake Gold Camp is essentially defined by a 5 km corridor around the Cadillac-Larder Lake Break (Figure 3). This major, east-trending, south-dipping, regional structure has juxtaposed Tisdale assemblage mafic to ultramafic rocks against much younger alkalic rocks and sediments of the Timiskaming assemblage. Thus the Blake River and Porcupine assemblages are absent in the immediate area of the break.

Canadian Malartic Corporation’s large land package is assembled along the Cadillac-Larder Lake Break across three townships as the primary target area. The claims are underlain by both Timiskaming and Tisdale assemblage rocks and related intrusives with a number of gold occurrences including the past producing Upper Canada, McBean, Sylvanite, Crescent and Golden Gate mines. The Upper Canada and Sylvanite deposits occur within the Timiskaming assemblage, while the McBean open pit, Crescent and Golden Gate deposits are in Tisdale assemblage rocks. The past producing Upper Beaver deposit is disconnected from the LLCDZ and occurs within Upper Tisdale and Lower Blake River assemblage volcanics with associated sediments and felsic intrusives in northeastern Gauthier Township.

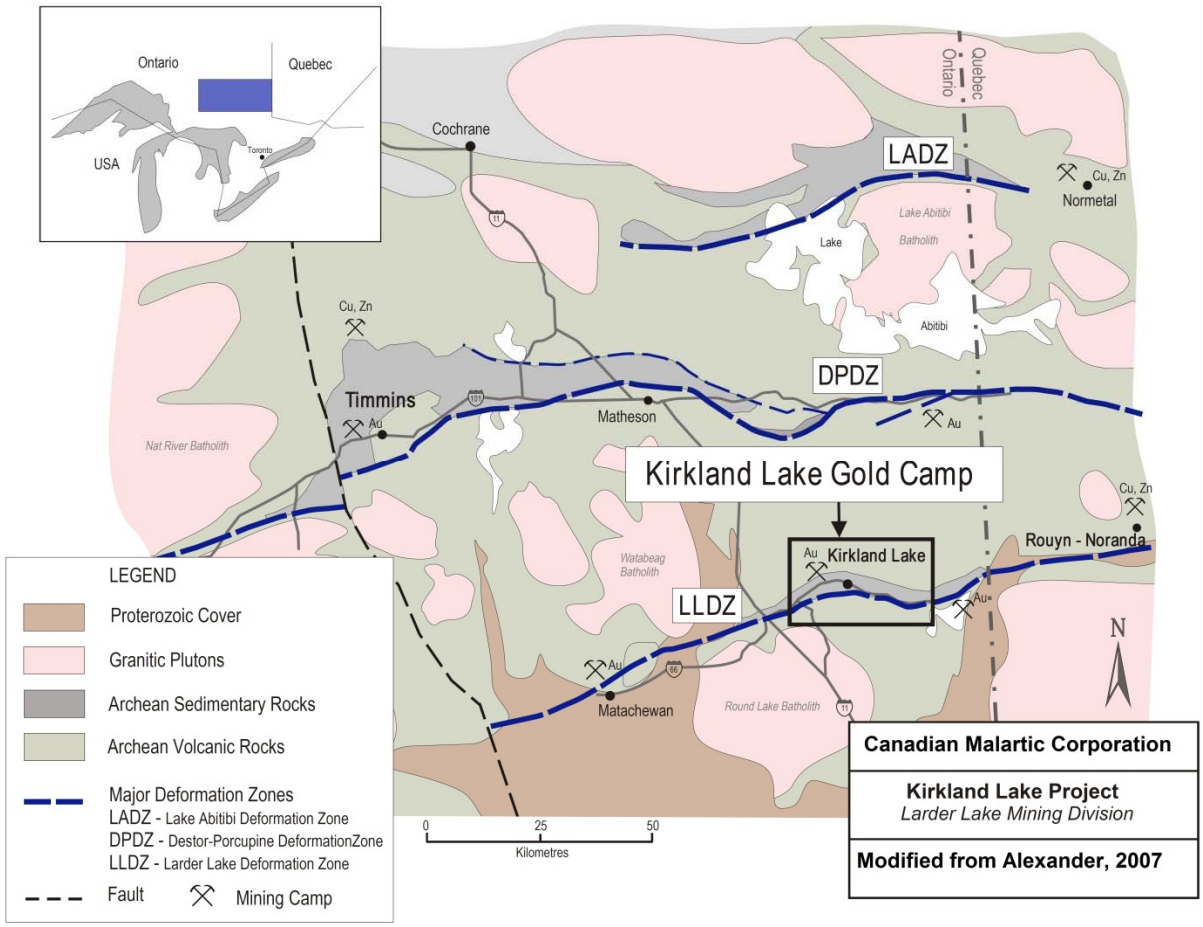


Figure 3: Regional Geology of the Kirkland Lake Gold Camp and Abitibi Greenstone Belt. Modified from Alexander, 2007.

Property Geology

The Goldbanks property encompasses a geological package which is traversed by numerous “Brek” structures, including the Kirkland Lake ‘Main’ Break (Figure 2 & Figure 4). The property is underlain by Blake River Assemblage tholeiitic, pillowed mafic volcanic rocks (2704 to 2701 Ma), Timiskaming conglomerate, greywacke & volcanic tuffs (2676 to 2670 Ma), and syenite plus basic intrusives (2695 to 2670 Ma).

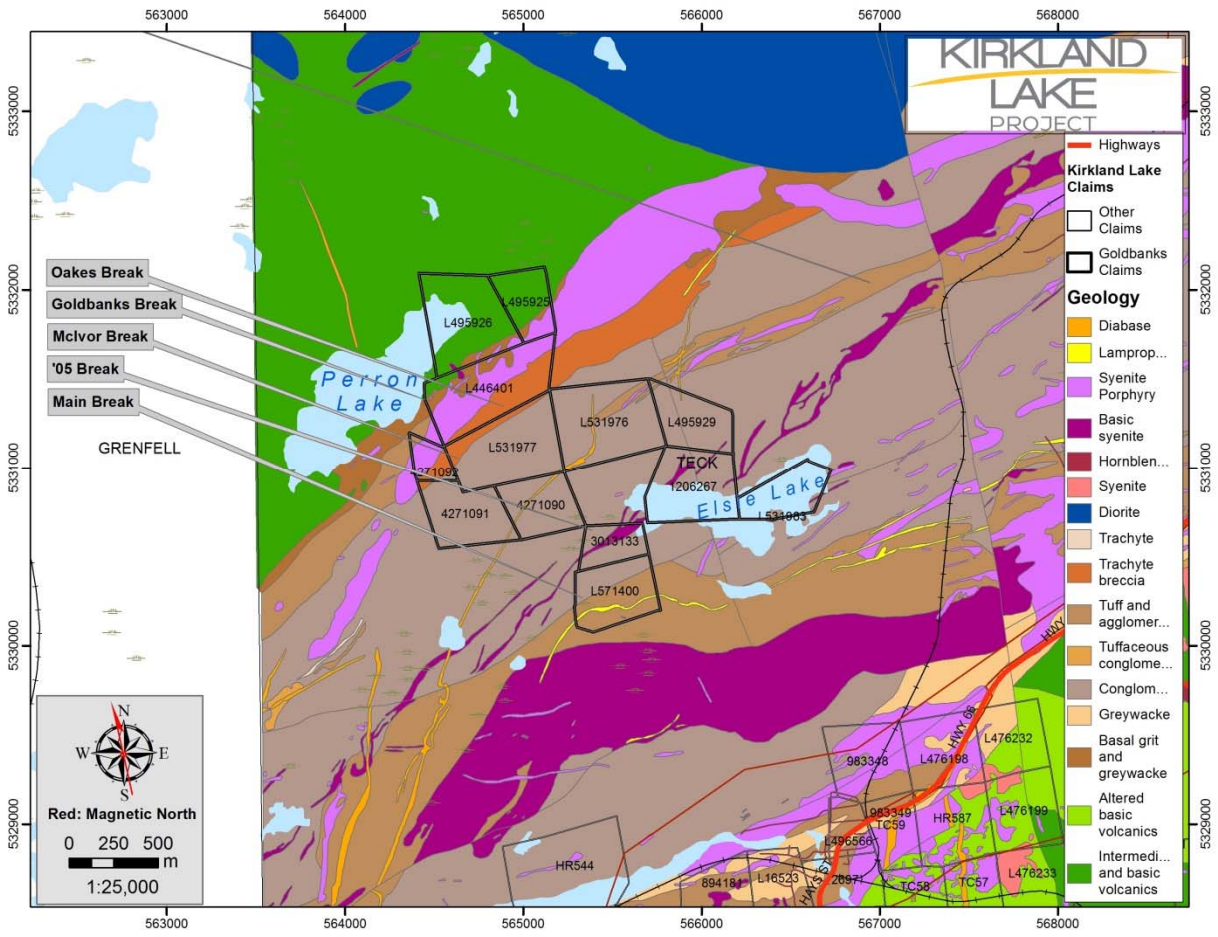


Figure 4: Property Geological map showcasing the complex deformation within the Temiskaming assemblage aged lithologies.

2011-2012 Drill Program

On April 3, 2011, a drill program was initiated on the Goldbanks claims. The drill program included twenty-one drill holes totalling 6160m, concentrated on the central portion of the Goldbanks claims package in Teck Township (Figure 5). The drill contractors were Cabo and Laframboise Drilling. The holes and collar data are presented in Table 2; the drill logs are presented in Appendix 1, scaled sections and plans are presented in Appendix 2 and assay certificates in Appendix 3.

Vault Minerals Inc.: Conducted a trenching, mapping and magnetics program on the Goldbanks property. The program identified several areas which formed the basis for the 2011-2012 WKM drill program. The WKM drill holes were designed to test the numerous interpreted breaks within the property, primarily the McIvor Break but also the Goldbanks, Oakes, '05 and '04 (Main) Breaks. Drill hole locations are displayed in Figure 5.

Table 2: List of Goldbanks drill holes and their orientation attributes.

Drill ID	NAD 83 UTM Zone 17N		Azimuth	Dip	Length (m)
	Easting (m)	Northing (m)			
KG1122	565751	5330201	320	-74	177
KG1130	565751	5330201	325	-76	1190.2
KG1152	564979	5331479	310	-45	275
KG1153	564967	5331488	130	-45	62
KG1154	565124	5331553	350	-45	317
KG1155	565688	5331376	330	-45	128
KG1156	565530	5331236	330	-45	142
KG1158	565515	5331245	150	-45	50
KG1159	565138	5331252	330	-45	500
KG1160	565165	5331205	330	-45	131.5
KG1161	565625	5331475	150	-45	77
KG11100	565222	5331210	335	-45	152
KG11101	565185	5331170	335	-56	176
KG11102	565130	5331168	335	-45	143
KG1191	566682	5330657	350	-84	1573.6
KG12111	565225	5331300	335	-45	137
KG12112	565227	5331106	335	-65	338
KG12113	565119	5331086	335	-60	164
KG12114	565048	5331014	335	-45	95.7
KG12115	565163	5331111	335	-69	221
KG12116	565099	5331124	335	-60	110

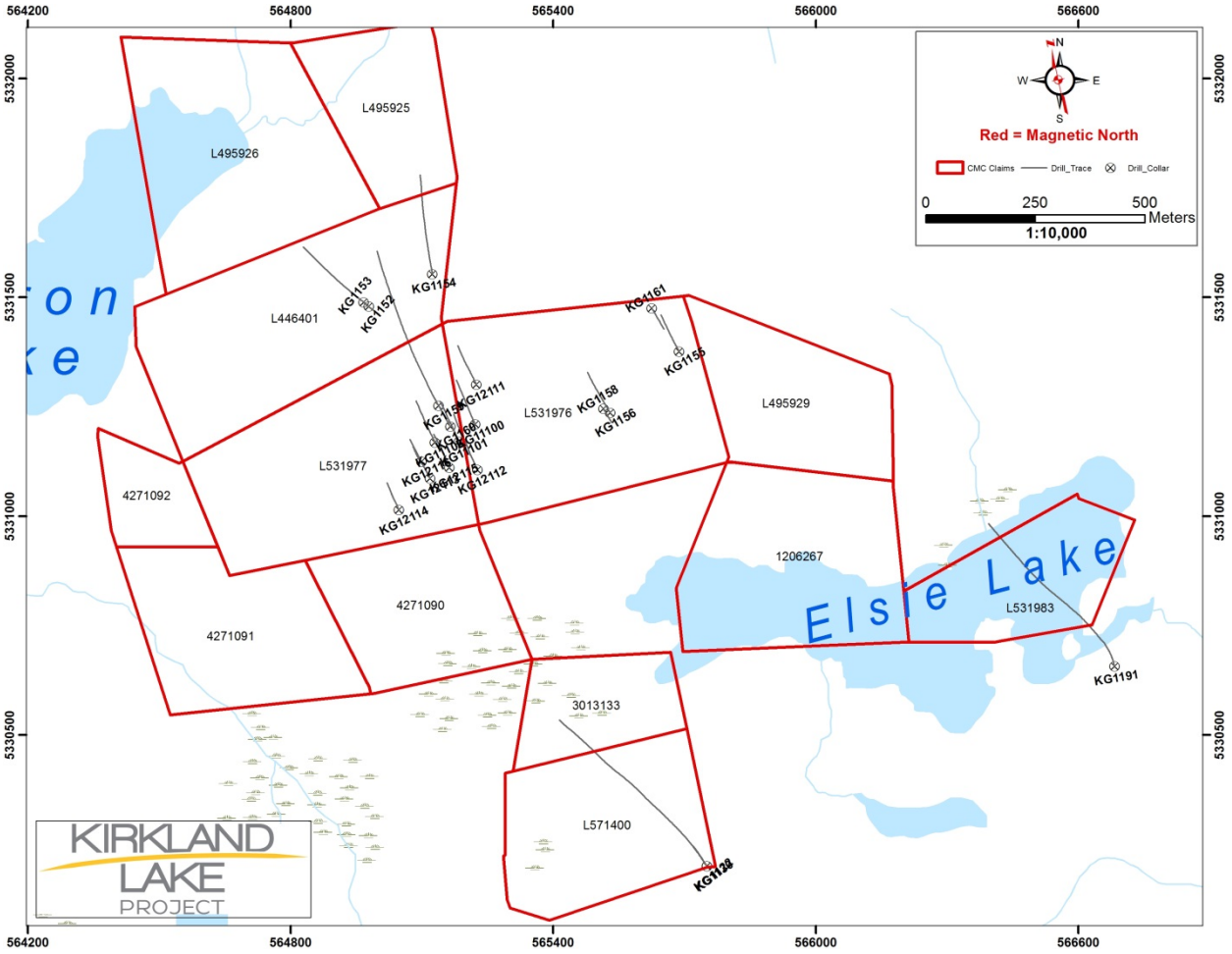


Figure 5: Plan view of the Goldbanks property WKM drill collars and associated drill traces adjusted with Reflex and Multi-shot test results.

Core Logging, Sampling and Assaying Procedures

After being recovered from the tube, the drill core was placed in wooden boxes by the drill crew. The wooden boxes were then wrapped shut with plastic wrap and delivered to the WKM Kenogami facility by the drill contractor or WKM personnel.

The core was then logged and sampled by a WKM geologist as summarized below:

The core was first measured to check that the driller's metre blocks were correct and conformed to the shift reports. The core boxes were then marked with their respective starting and ending meterage. The core was logged in detail using Microsoft Excel. Special attention was given to alteration, mineralization and structures within the core.

Drill holes were sampled top to bottom with the exception of diabase intervals and areas deemed barren. Sample intervals were 1.5m long except in areas where prospective lithological contacts were present. The samples were then cut in half lengthwise by WKM technicians using a diamond core saw. Half of the cut core was then placed in plastic sample bags with their respective assay lab sample tags.

The remaining half of the cut core was then returned to its respective core box with a corresponding assay lab tag stapled into the box corresponding to the sample tag interval. A sample blank and standard (lab standard alternated between SL51 and SG40) was inserted at every forty-fifth sample and a sample duplicate was taken at random intervals. The bagged samples were then bundled and placed in plastic fibre (rice) bags; the rice bags were then placed into wooden crates and shipped to ALS Minerals' processing facility in Sudbury with an associated work order and inventory. The remaining core in the core boxes were then inventoried with metal tags inscribed with their intervals, identifier and loaded onto pallets or core-racks depending on available space.

The WKM samples were sent to ALS Minerals where they underwent a fire assay. All samples were assayed by geochemical methods using atomic absorption spectrometry for Au ppb (1AT). Samples assaying equal of greater than 1g/t Au were re-assayed with a gravimetric finish using a second pulp from the reject. Sample pulps and rejects were returned to the WKM Kenogami facility once ALS had completed their analysis. The pulps and rejects were inventoried and then stored in wooden crates.

2011-2012 WKM Drill Results

Hole KG1122 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate and greywacke which were cross-cut with a diabase dike at 48-48.5m. The hole was not sampled.

Hole KG1130 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate and greywacke which was cross-cut by a lamprophyre dike at 38.9-49.7m. A fault zone was intersected at 167.9-171.3m and 428.40-430.22m which was interpreted as the '04 Break. From 700-913.5m the sedimentary package was cross-cut with several basic syenite dikes. No significant Au values were intersected.

Hole KG1152 collared into a porphyrytic syenite suite which continued to 195.2m downhole. The drill then intersected a sedimentary package of pebble conglomerate and greywacke/siltstone cross-cut with syenite dikes before entering an extrusive volcanic package of pillow bassalts and massive flows with basal grit at 221.3m until the end of the hole. A fault zone encountered at 163-164m was interpreted as the Goldbanks Break. No significant Au values were intersected.

Hole KG1153 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate and greywacke which was cross-cut with several porphyritic syenite and lamprophyre dikes. A fault intersected at 31m was interpreted as being the Oakes Break. No significant Au values were intersected.

Hole KG1154 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate and greywacke which were cross-cut with a lamprophyre dike at 40.1-42.6m before entering a porphyritic and mafic intrusive syenite suite at 45.8-240.9m. The hole exited the syenite suite into a sedimentary package of siltstone to conglomerate before ending in a pillow basalt unit at 243.5m which continued until the end of the hole. A clay slip intersected at 94.95m was interpreted as being the Oakes Break. No significant Au values were intersected.

Hole KG1155 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate and greywacke which were cross-cut with several syenite dikes. A unit of mafic lapilli tuffs was intersected at 81.6-88.5m which was cross-cut with two diabase dikes (78-81.6m & 85.5-87m) before returning to the overlying sedimentary package. No significant Au values were intersected.

Hole KG1156 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, greywacke, and mafic lapilli tuff which were cross-cut with several syenite dikes. No significant Au values were intersected.

Hole KG1158 intersected a pebble-cobble conglomerate from 8.4-10.7m before intersecting a mafic tuff which continued to the end of hole (50m). No significant Au values were intersected.

Hole KG1159 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone/greywacke, and mafic tuff which were cross-cut with several syenite and lamprophyre dikes. From 312.7-457.4m the hole intersected a porphyritic syenite suite before returning to the sedimentary package. The hole was terminated at 500m within pillow basalt (487.5-500m). A chlorite/sericite slip intersected at 460.05m was interpreted as being the Goldbanks Break. A sample (448163) returned an Au value of 3.73ppm over 40cm (at 5.2-5.6m downhole) which was described as a clay fault. No other significant Au values were intersected.

Hole KG1160 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose. No significant Au values were intersected.

Hole KG1161 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose cross-cut with two syenite dikes (35.8-40m & 48.5-55.3m). No significant Au values were intersected.

Hole KG1191 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and sandstone up to 1444.4m before entering into a porphyritic syenite suite which continued until the termination of the hole (1573.6m). A fault intersected at 386.4m was interpreted as the ’05 Break. No significant Au values were intersected.

Hole KG11100 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone. No significant Au values were intersected.

Hole KG11101 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone. A sample (296880) returned an Au value of 1.21ppm over 30cm (at 121.7-122.0m downhole) which was described as a contact between Timiskaming conglomerate with several quartz carbonate veins with tight clay slips. No other significant Au values were intersected.

Hole KG11102 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone. A diabase dike was intersected at 137.6-143m at which point the hole was terminated.

A sample (296885) returned an Au value of 11.8ppm over 30cm (at 49.1-49.4m downhole) which was described as a contact between Timiskaming conglomerate with a thick (15cm wide) quartz carbonate vein with clay slips. A sample (296888) returned an Au value of 1.28ppm over 40cm (at 104.8-105.2m downhole) which was described as a quartz-iron carbonate vein with trace pyrite. No other significant Au values were intersected. No other significant Au values were intersected.

Hole KG12111 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone. A porphyritic syenite dike was intersected at 128.8-131.7m. No significant Au values were intersected.

Hole KG12112 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone which was cross-cut with several mafic dikes. A sample (297958) returned an Au value of 1.03ppm over 30cm (at 273.2-273.5m downhole) which was described as two quartz-chlorite veins with trace pyrite and bound by tight clay slips. No other significant Au values were intersected. No other significant Au values were intersected.

Hole KG12113 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone which was cross-cut with a syenite dike at 54.7-62.2m. No significant Au values were intersected.

Hole KG12114 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone which was cross-cut with a syenite dike at 81.6-88.7m. No significant Au values were intersected.

Hole KG12115 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone which was cross-cut with a syenite dike at 56.6-65.1m. No significant Au values were intersected.

Hole KG12115 intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone. No significant Au values were intersected.

A location map displaying the drill holes completed in 2011-2012 on the Goldbanks property in relation to regional geology and infrastructure is presented in Figure 6 and the cross sections in Appendix 2. Costs are listed below in **Error! Reference source not found.**

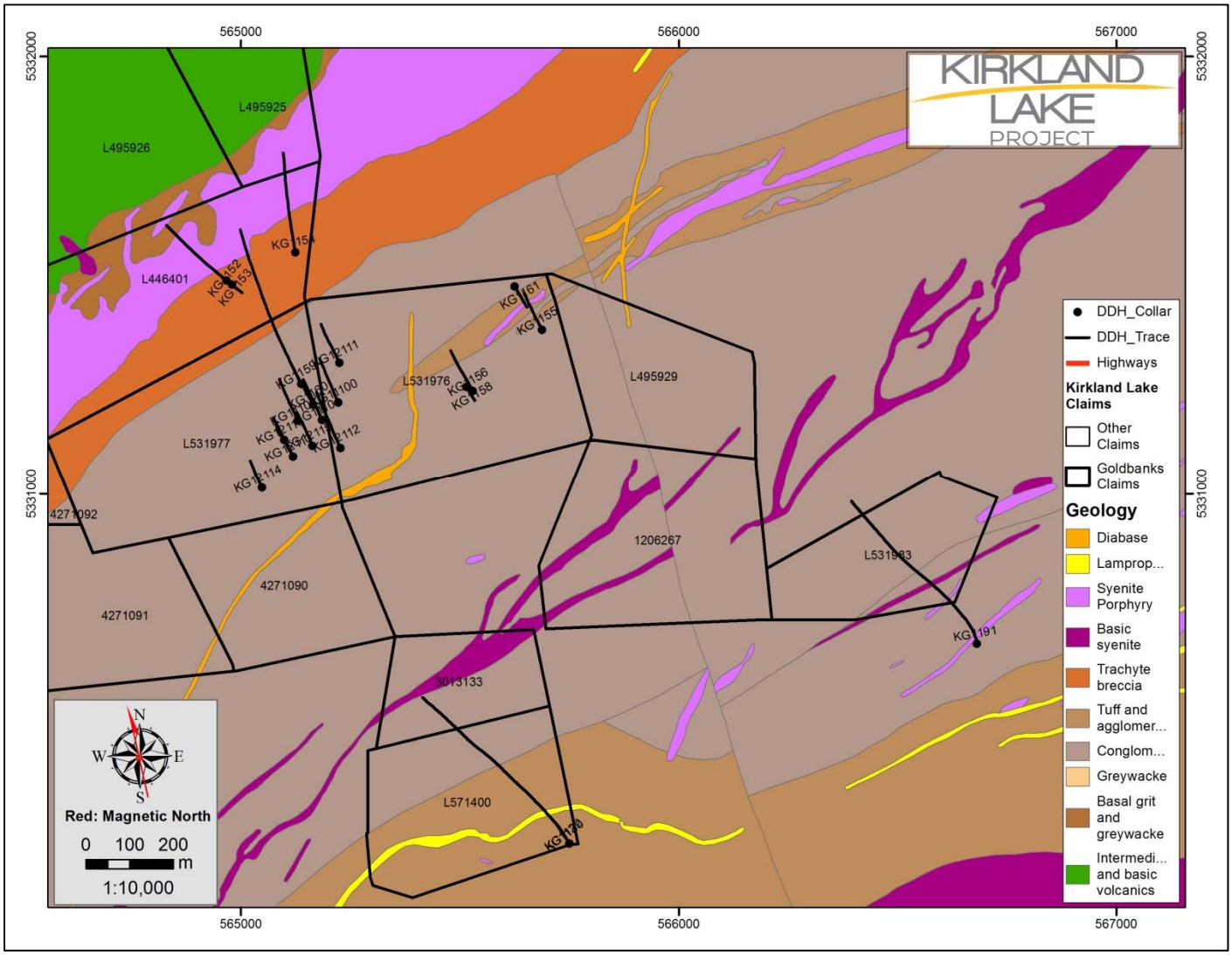


Figure 6: Location map of the drill holes completed in 2011-2012 on the Goldbanks property in relation to regional geology and infrastructure (Modified from Thompson, 1948). The majority of the drill holes are concentrated along the strike of the Oakes and McIvor Breaks. Holes KG1122, KG1130 and KG1191 tested the '04 and '05 (Main) Breaks while holes KG1152 to KG1153 tested the Goldbanks Break.

Conclusions

The company West Kirkland Mining Inc. (WKM) under agreement from Queenston Mining Inc. (now controlled by Canadian Malartic Corporation or CMC) conducted an exploratory diamond drill program on the Goldbanks claims during the period of April 3, 2011 to April 23, 2012. The drill program included twenty-two diamond drill holes which totaled 6160m and were concentrated on the central portion of the Goldbanks claims package. All holes were drilled within Teck Township.

The diamond drilling program was concentrated along the McIvor Break with other targets along the Goldbanks and '05 and '04 (Main) Breaks. The Drill program intersected a sedimentary package composed of alternating gradational beds of pebble conglomerate, mudstone and arkose/sandstone which was cross-cut with variably thick lamprophyre dikes, syenite dikes and a diabase dike generally striking in a ESE-WNW direction. A prominent northwest striking porphyritic syenite suite was also intersected during drilling along the Goldbanks Break.

While some holes intersected pyrite mineralization and quartz-carbonate stockworks the drill program failed to return any consistently significant assay values. The drill hole KG11102 was a partial exception to the lack of significant Au results as it returned an assay value of 11.8ppm over 30cm from 49.1-49.4m.

An IP survey is recommended in the Goldbanks property in order to better define the Break structures and a structural evaluation should be conducted to identify any ladderite structures. The sample gaps within the drill holes should also be re-evaluated/sampled for possible mineralization.

Respectfully Submitted,

Christopher A.L. Clarke, P.Geo
72 Upper Canada Drive
Dobie, ON, Canada

References

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Appendix 1: Goldbanks Drill Logs

Appendix 2: Goldbanks Plans and Sections

Appendix 3: Goldbanks Assay Certificates

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1122	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	JSM/DML
NAD83E:	565751	**Claim No:**	L7411	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	CABO
NAD83N:	5330201	**Start_Date:**	03/04/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	PEEWEE DEVIC	**Core Storage:**	KENOGAMI
Elevation (m):	359	**Finish_Date:**	13/04/2011	☐ **Cemented**				
Azmuth:	320	**Length (m):**	177					
Dip:	-74	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
9.00	324.70	-72.10	5,601.00	
30.00	325.80	-72.30	5,494.00	
60.00	325.30	-72.50	5,585.00	
90.00	326.00	-72.10	5,574.00	
132.00	323.90	-72.10	5,506.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	1.50	OVB									0		Overburden
1.50	6.70	CGT	MAS								0		Pebble Conglomerate. Medium grey-green. Very f-grained matrix with up to 45mm wide angular to sub-angular pebble-sized, poorly sorted, polymictic clasts. Weakly mag; MagSus = 14.4 - 37.3. Unaltered. No visible sulphide. 1.5 - 3.7m is blocky and fractured. Hematite staining along fractures.

6.70	48.00	GRW	MAS		0	Greywacke. Medium grey-green; very fine silty-sand matrix with occasional coarse sand and black granular clasts. Weak to mod mag; MagSus = 28.0 - 51.2. Unaltered. No visible sulphide. Grad upper cnt. Coarse brown sandy horizon between 27.3m & 27.6m with a carbonate matrix. 38.5 - 45.4m contains a mica rich matrix.
48.00	48.50	DB	MAS		0	Diabase. Light to medium grey; very f-grained; massive; mod mag; MagSus = 70.7. Unaltered. No visible sulphide. Upper cnt not preserved. Sharp lower cnt 50 deg TCA.
48.50	97.10	GRW	MAS		0	Greywacke. Similar to 6.7 - 48m. Very weak to mod mag; MagSus = 11.5 - 60.5. No visible sulphide. 60 - 97.1m is pretty homogeneous with fine to local coarse sand. Sharp upper cnt 50 deg TCA.
97.10	105.10	GRW	MAS		0	Greywacke. Medium grey. F- to c-grained matrix. Local pebble and cobble-sized clasts (mainly syenitic) present.
105.10	109.50	CGT	MAS		0	Pebble Conglomerate. Medium grey. F- to coarse sandy matrix with dominant pebble-sized, brown, grey subrounded (mainly felsic & intermediate) clasts. Weakly mag; MagSus = 28.1 - 29.2. Unaltered. No visible sulphide. Grad upper cnt.
109.50	111.20	GRW	MAS		0	Greywacke. Medium to dark grey. Similar to 97.1 - 105.1m but with only a few local pebble-sized clasts. No visible sulphide. Brecciated (with calcite cement) at 110.8 - 111m. Grad upper cnt.
111.20	113.30	CGT	MAS		0	Pebble Conglomerate. Similar to 105.1 - 109.5m. Grad upper cnt.
113.30	143.50	GRW	MAS		0	Greywacke. Grey, very fine-med grained, multi-lithic grains, moderately to well sorted. Mag Sus = 21-77. 6 Minor local pebbly sections occur from 121.7 - 123.5, 136.5 - 138.2. 2%calcite veinlets at various angles.

143.50	177.00	GRW	MAS		0	Greywacke. Grey, very fine-med grained, multi-lithic grains, moderately to well sorted. Mag Sus=18.7-56.4. 2% calcite veinlets at ~30 degrees. 149.1-150.1m: pebbly section. 152.4-155.9m: pebbly section160.3 - 177m: calcite veinlets at ~30 degrees show up to 1cm offset and are crosscut by very fine calcite veinlets at ~ 135 degrees.164.1 to 165.6 blocky, highly fractured section. 165.6m: gritty clay minor fault (~2mm wide). 167.0 gritty clay minor fault (~1mm wide). 170.9-176.9m: pebbly section.177m: EOH

Structure

4.00	FR	14	
48.50	CNT	50	
57.20	CCV	40	3 -5.5vm wide
124.20	CCB	50	15cm vn, bxd cts
165.60	FLT	45	gritty clay ~2mm wide
167.00	FLT	45	gritty clay ~2mm wide

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1130	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	DML/JSM
NAD83E:	565751	**Claim No:**	L7411	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	CABO
NAD83N:	5330201	**Start_Date:**	14/04/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	PEEWEE DEVIC	**Core Storage:**	KENOGAMI
Elevation (m):	359	**Finish_Date:**	07/07/2011	☐ **Cemented**				
Azmuth:	325	**Length (m):**	1190.2					
Dip:	-76	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
11.00	326.80	-74.50	55,603.00	Multi-shot survey taken every 3m from 0 -1190.2m
41.00	326.50	-74.70	55,840.00	
71.00	326.70	-74.70	55,650.00	
101.00	326.80	-74.40	55,780.00	
131.00	326.50	-73.90	55,519.00	
161.00	324.60	-73.20	55,556.00	
200.00	318.00	-72.40	55,540.00	
251.00	319.10	-72.40	56,240.00	
302.00	318.30	-72.50	56,430.00	
350.00	318.20	-71.50	56,610.00	
410.00	313.80	-69.40	56,740.00	
452.00	315.40	-68.20	55,790.00	
502.00	314.70	-67.70	56,300.00	
551.00	312.10	-67.20	56,680.00	

599.00	308.20	-66.60	57,160.00
656.00	315.00	-65.60	56,643.00
701.00	314.50	-64.80	55,560.00
750.00	308.50	-64.60	56,240.00
800.00	311.70	-64.30	56,470.00
850.00	307.20	-63.60	55,660.00
902.00	306.50	-62.50	55,510.00
950.00	314.60	-61.20	5,656.00
1,007.00	313.60	-58.10	5,661.00
1,049.00	313.60	-57.40	5,645.00
1,103.00	310.50	-56.20	55,900.00
1,157.00	311.40	-55.60	55,670.00

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	3.00	OVB											Overburden. 3m of casing.

Assay

From	To	Spl #	Len	Py %	Au PPM
		449012		0	0.01
		449042			0.01
		449038			0.01
		449024			0.01
		449018			4.08
167.50	167.90	449000	0.4	0	0.01
167.90	168.30	449001	0.40	0	0.01
168.30	168.70	449002	0.4	0	0.01
168.70	169.10	449003	0.40	0	0.01
169.10	171.40	449004	2.3	0	0.01
190.10	191.10	449005	1	0	0.01
191.10	191.30	449006	0.2	0	0.01
191.30	192.30	449007	1	0	0.01

3.00	38.90	GRW	MAS		CCV	2	0

Greywacke. Grey to grey-green. Intermittent sections of poorly sorted pebbly conglomerate with graded contacts. Localized breccia. 1-2% calcite vein(lets) (at least 3 generations-calcite veinlets, wider (up to 5mm) calcite veins with well formed crystals and a brown (alteration?) halo and calcite veins with a dark mineral-chlorite?) at various angles. Trace localized pyrite associated with calcite veins. 1% epidotized calcite veins and wispy epidote veinlets. Weakly to moderately magnetic. Mag-Sus=17.9-62.9.

3-8.2m fine to medium (up to 4cm) rounded multilithic clasts in a very fine matrix.

7.1-7.3m 3% localized sub to euhedral pyrite (up to 1.5cm) constrained by calcite/epidote vein(s) at 50 degree angle with pebbly conglomerate clearly visible.

18.6-18.7m 1% localized subhedral pyrite with small (<.3mm) grains within a calcite/chlorite? vein and larger (up to 1.2 cm)anhedral pyrite grains along the vein contact.

31.4-31.7m blocky fractured with gritty clay (fault?) at ~31.5m. 31.8-32.1m localized brecciated zone with subangular to angular monolithic sedimentary clasts. 37.4-37.8m highly fractured greywacke

38.90	49.70	LAM	MAS			0	

Lamprophyre? Dyke.Dark grey. Massive with fine to medium sized grains of feldspar (5%) and biotite (5%) in a dark grey groundmass. Sharp contacts (65°/75°).

267.76	268.76	449008	1	0	0.01
268.76	269.00	449009	0.24	0	0.01
269.00	270.07	449010	1.07	0	0.01
270.07	270.22	449011	0.15	0	0.01
270.22	271.22	449013	1	0	0.01
367.38	368.38	449014	1	0	0.01
368.38	368.72	449015	0.34	0	0.01
368.72	369.72	449016	1	0	0.04
427.36	428.40	449017	1.04	0	0.01
428.40	429.17	449019	0.77	0	0.01
429.17	429.70	449020	0.53	0	0.01
429.70	429.97	449021	0.27	0	0.01
429.97	430.22	449022	0.25	3	0.01
430.22	431.00	449023	0.78	0	0.01
431.00	432.00	449025	1	0	0.01
654.30	655.80	449026	1.5	0	0.01
655.80	656.00	449027	0.20	1	0.01
656.00	657.50	449028	1.5	0	0.01
666.93	667.96	449029	1.03	1	0.01
667.96	668.10	449030	0.14	0	0.01
668.10	668.60	449031	0.5	1	0.02
700.60	701.10	449032	0.5	0	0.01
701.10	701.40	449033	0.30	0	0.02
701.40	701.90	449034	0.5	0	0.11
736.15	736.65	449035	0.5	0	0.01
736.65	737.00	449036	0.35	0	0.01
737.00	737.50	449037	0.5	0	0.01
917.65	918.15	449039	0.5	0	0.01
918.15	918.70	449040	0.55	0	0.02

49.70	109.70	GRW	MAS	CCV	1	0	Greywacke. Grey to grey-green. Intermittent sections of poorly sorted pebbly conglomerate with graded contacts. Occasional larger sized clasts (>5cm). Localized angular to subangular clasts. 1-2% calcite vein(lets). Weakly to moderately magnetic. Mag-Sus=5.2- 49.8. 57.8-59.0m highly fractured along core axis with reddish hematite along fractured surfaces. 60.3-61.5m highly fractured same as above. 61.3m large (5cm) calcite vein at 45° crosscut by a large (2cm) epidote vein at 315°. 63.7-64.4m highly fractured-same as above. 99.4m brecciated calcite/epidote vein (~5cm). 55° angle. 104.8-108.7m Greywacke. Fine to medium grains with occasional syenite cobbles (>10cm).
109.70	118.80	CGT	MAS			0	Conglomerate (Timiskaming?). Matrix supported conglomerate. Poorly sorted pebble up to cobble sized clasts (40%) in a fine-grained dark grey matrix (60%). Clasts are rounded to subrounded. Larger clasts are mainly syenitic.
118.80	122.00	GRW	MAS	CCV	1	0	Greywacke. Grey to grey-green. Very fine to medium grained. Similar to above.
122.00	123.20	CGT	MAS			0	Conglomerate (Timiskaming?). Matrix supported conglomerate. Poorly sorted pebble up to gravel sized clasts (40%) in a fine-grained dark grey matrix (60%). Clasts are rounded to subrounded.Clasts are mainly syenitic and not as large as above.

918.70	919.20	449041	0.5	0	0.09
1,120.00	1,121.00	449043	1	0	0.01
1,121.00	1,121.70	449044	0.7	0	0.01
1,121.70	1,122.90	449045	1.20	0	0.01
1,122.90	1,124.00	449046	1.1	1	0.01
1,161.60	1,162.10	449047	0.5	0	0.01
1,170.80	1,171.10	449048	0.3	0	0.01
1,171.10	1,171.70	449049	0.6	0	0.01

123.20	167.90	GRW	MAS		CCV	3	0

Greywacke. Grey to grey green. Intermittent sections of poorly sorted pebbly conglomerate with clasts up to 3cm. 3% calcite veins at various angles. Weakly to moderately magnetic. Mag-Sus=13.6-43.2

128.3m Irregular 50% quartz vein at 45°.
129.2-129.9m blocky highly fractured.
130.4-130.9m blocky highly fractured.
130.9-135.9m pebbly conglomerate.
140.0-142.3m pebbly conglomerate.
142.5-143m blocky highly fractured with gritty clay at 142.8m along a 5mm wide calcite vein at 45°.
143.5-147.2m pebbly conglomerate.
150.8-151.6m pebbly conglomerate.
152.4-156.2m pebbly conglomerate.
160.7-161.0m blocky highly fractured with gritty clay at 160.9m along a 2mm wide calcite vein at 65°
162.3-163.0m Blocky highly fractured with gritty clay at 162.8 with fault? at 45°
163.5m highly fractured gritty clay narrow fault at ~40°
164.4-166.0m blocky fractured with
165.5-165.8m highly fractured.
167.5-167.9m blocky fractured with a large (up to 10cm) quartz/calcite vein at 15° to core axis.

167.90	171.30	FLT					Fault zone. Blocky highly fractured zone with 75% core recovery. Numerous clay seams up to 15cm width and much clay coating of rubble fragments. 5% qtz veins up to 5cm width . 168.0 : 4cm irregular white qtz vn at 55° 168.2 : 2cm gritty clay fault at 85° 168.3 - 168.6 : qtz vn breccia. white to dark grey quartz fragments in a chloritic matrix. Contacts at 50/35° 168.8 - 168.95 : Fault. 15cm gritty green-grey clay seam at 60° with 3cm white qtz vn breccia. 170.0 : 1 metre core loss noted by drillers
171.30	192.80	GRW	MAS	CCV	3	0	Greywacke. Dark grey to grey-green. 3% calcite veins at various angles. Large (>2cm) irregular quartz/calcite veins at various angles. Calcite is secondary and quartz seems brecciated in some veins. Weakly to moderately magnetic. Mag-Sus=10.4-39.4 188.0-191.0m. 40cm lost core. 190.6-191.8m Blocky highly fractured with some grey-green gritty clay covered pieces at 191.6m. 191.1-191.3m 20cm irregular brecciated white qtz vein at 45° with a single visible anhedral pyrite grain (1mm).

192.80	401.00	CGT	MAS	0.1	Timiskaming conglomerate. Brownish-grey. Sharp upper contact at 85°. Matrix supported (60%) unsorted multilithic subangular to rounded clasts (40%) from 95% pebble (<2cm) to 5% cobble (>5cm). Occasional (<1%) subrounded jasper clasts. ~60/40 mafic to felsic clast ratio. Intermittent sections of greywacke. Weakly to moderately magnetic. Mag-Sus=0.7- 53.5. 195.0-195.1m 10 cm irregular qtz /calcite vein at 45° with fine (<1mm) trace sulphide (pyrite, chalcopyrite? and an indeterminate grey metallic) grains. 198.4- 198.9m Greywacke. 204.3-205.3m Blocky highly fractured zone. Gritty grey clay slip along 2cm calcite vein at 45° and 204.4m. 204.6m Gritty grey clay slip at 15° and with irregular qtz veining (up to 6cm) at 50° 205.3m Gritty grey clay slip at 25° 207.3-209.1m Greywacke. 213.3-214.5m Greywacke. 214.3-215m Blocky highly fractured zone with a tight gritty grey clay/chlorite slip at 214.3m and 35° 221m Gradation of Timiskaming conglomerate to 30% matrix, 70% clasts with 15% pebble (<2cm) and 85% cobble (>5cm) up to 30cm. 234.1-235.8m Crystal tuff?? Purple-grey clastic? groundmass with 20% euhedral to subhedral feldspar phenocrysts up to 6mm. Gradational upper contact with sharp lower contact and some (1%) localized

subhedral to euhedral pyrite grains.

266.9-268.2m Greywacke. Sharp upper and lower contacts at 25° and 30°. 268.76-269.0m 24cm of irregular qtz/calcite veining at ~45° with trace sub to euhedral pyrite grains up to 2mm.

270.07-270.22m 15cm of irregular qtz/calcite veining with some intermixed pink carbonate at ~45°.

270.22m Tight gritty grey clay slip at ~45°

278.2-279.0m Crystal tuff. Grey-brown with 20% sub to euhedral feldspar phenocrysts up to 4mm with sharp contacts at ~45° 280.4-280.9m Crystal tuff. Grey-brown with 20% sub to euhedral feldspar phenocrysts up to 4mm and angular clasts up to 2cm. Sharp irregular contacts.

291.4-292.3m Greywacke. Sharp contacts at 90° and 35°. 303.2m ~3cm fault? along irregular qtz/calcite vein at 55°. Very little to no clay. 303.9m ~2cm fault with some gritty grey clay at 45° 306.3-307.8m minor patches of trace pyrite.

368.4-368.6m 20cm Qtz/calcite/epidote vein with trace pyrite at 30° 392.1-401.1m Timiskaming conglomerate with a weak foliation at ~15° to core axis

401.00	428.40	GRW	MAS	CCV	5	Greywacke. Grey to grey-green with graded contacts. Very fine to medium grained. Weak foliation at ~45°. Intermittent sections of Timiskaming conglomerate with weak foliation at ~45°. 5% calcite veins at various angles. Weakly magnetic. MagSus=0.1-4.1. 406.9-407.4m. 50cm calcite vein up to 50% calcite. Appears to be 2 generations. ~45° and almost parallel to core axis.

428.40	430.22	FZN		QV	40	0.1

428.4-430.22m 04 Break? Zone with 30% qtz veining. Several tight clay slips at 35° to 55°. Qtz veins ave 45 60° to core axis up to 30cm in width variably brecciated often with red-orange potassic(?) alteration. Trace py found with qtz veining. Late calcite vien(let)s (<2mm) cross-cut at an average of ~125° and infill the qtz fractures at various angles. Weakly magnetic. MagSus=0.6-0.8.

428.40-429.17m. Brecciated white to grey irregular, broken, discontinuous qtz veins with minor (10%) K-alteration with minor calcite infill. Most calcite veins at 35°. Trace sulphides.

429.17m Tight clay slip at 55°

429.17-429.70m. Highly altereded (orange-red potassic?) irregular, brecciated discontinuous qtz veins cross cut and infilled by calcite veinlets (10%). Trace sulphides.

429.52m Very tight grey clay slip at 35° with ~1cm wide microbrecciation (trace sulphide) and in contact with a grey/white qtz vein.

429.70-429.97m ~25cm white qtz vein (90% qtz) contacts at 55° & 70° with minor (5%) fracture filling potassic? alteration. Trace sulphides. This vein possibly represents the 04 Break.

429.97m Tight grey clay slip at ~50° with ~2cm microbrecciation halo and trace sulphides in contact with irregular brecciated white/grey qtz veins at ~70° & 50°. Qtz veins are cross cut and infilled by calcite.

429.99-430.22m Irregular brecciated white/grey to pink qtz veins at ~50°. ~3% fine py grains.

430.12m Tight smooth grey clay slip at ~50° with ~1cm microbrecciation halo and

							trace sulphides 430.36m ~1cm gritty grey clay slip at 50° in contact with white qtz vein with a hint of pink alteration
430.22	508.10	GRW	MAS		CCV	3 0	Greywacke. Grey to grey-green. Very fine to medium grained. 3% calcite veins at various angles and up to 20cm. Occasional pebbly sections. Weakly to moderately magnetic. Mag-Sus=0.6-32.1. 430.8-431.5m Blocky highly fractured zone. 454.2-454.6m Blocky highly fractured zone. 459.8-461.5m Blocky highly fractured zone with fractures commonly parallel to core axis and with a hematite layer.
508.10	524.10	GRW	MAS		CCV	1 0	Logged by: J. S-Momoh. Greywacke. Medium grey-green; f- to m-grained; massive; non- to very weakly mag; MagSus = 1.4 - 6.1. Unaltered. Trace sulphide. A few pebbly clasts (up to 5cm wide) occur but rarely. Only ~ 1% calcite veining (1-7mm wide, 15 - 25 deg TCA). Grad upper cnt. 5 deg TCA clacite fracture-fill between 515.8m & 516.4m
524.10	537.80	CGT	MAS			0	Conglomerate. (Timiskaming). Medium grey-green sandy matrix (~ 60%); with lithified, dominantly pebble-sized syenitic clasts. Lesser granitic and mafic clasts are present too. ~ 40% subrounded to rounded & poorly sorted clastic material. Jasper clasts (up to 12mm wide) observed. A massive unit; non- to weakly mag; MagSus = 1.8 - 18.4. Trace py generally; local 1% py. Grad upper cnt. Sub-rounded granitic boulder (~ 120 wide, buff-white, unmineralized) at 527.6m. Q-vein (1 - 13mm wide; 16 deg TCA, with solution cavities and trace cp) at 533.3m.

537.80	550.90	GRW	MAS			0	Greywacke. Similar to 508.1 - 524.1m. F- to coarse sandy matrix. Occasional 10 - 20cm wide conglomerate sections with pebbles (up to 6cm wide). Trace py. Grad upper cnt.
550.90	555.60	CGT	MAS			0	Conglomerate. (Timiskaming). Grey to grey-green matrix. Similar to 524.1 - 537.8m. Grad upper cnt.
555.60	654.30	GRW	MAS			0	Greywacke. Similar to 508.1 - 524.1m; with local pebbly horizons and trace py. Grad upper cnt. Fractured at 577.1 - 558.9m and at 593.8 - 595.5m. ~ 1(pebbles present between 602.9m & 604.7m. Fracture zone at 644.3 - 645m. 6cm wide jasper pebble at 646m.
654.30	664.90	CGT	MAS			0	Conglomerate, with sections of greywacke. Similar to 524.1 - 537.8m. Grad upper cnt. 20cm wide Q-calcite vein (40 & 85 deg TCA upper and lower cnts, respectively) with ~ 1% py at 655.8 - 656m.
664.90	675.40	GRW	MAS	QCCV	1	0	Greywacke. Similar to 508.1 - 524.1m. Grad upper cnt. 35% recovery between 666.93 and 667.96m (core is grounded). Q-calcite vein (14 cm wide; 70 and 65 deg TCA upper & lower cnts; no visible sulphide) at 667.96 - 668.10m.
675.40	700.00	CGT	MAS			0	Conglomerate, with sections of greywacke. Similar to 524.1 - 537.8m. Grad upper cnt. 681.2 - 684.2m: greywacke horizon. 700.0 : sharp contact at 35deg. Stretched pebbles and finely brecciated over 3cm at contact

700.00	715.40	SYM	MAS		0	Basic Syenite. Grey to green, locally with a pinkish hue, generally medium grained becoming finer towards contacts. Massive to locally weakly foliated at average 30deg. Magsus=45-90. Minor pinkish-brown felsic ribs up to 3cm width average 50-60deg. 2-4% calcite stringers down to 706m. 701.1 - 701.4 : 50% qtz-calcite veining qt 45/25deg 709.1 - 709.6 : highly fractured core
715.40	716.60	GRW	MAS		0	Greywacke. As above. Minor pebbles. Sharp lower contact at 30deg.
716.60	722.60	SYM	MAS		0	Basic Syenite. As above from 700.0 to 715.4. Unit is cut by 5% pinkish-brown felsic ribs upto 1cm wide averaging 30 to 50 deg. Sharp lower contact at 40deg
722.60	725.20	CGT	MAS		0	Greywacke. As above. 5% rounded pebbles. Sharp lower contact at 55deg.
725.20	741.40	SYM	MAS		0	Basic syenite. Greenish grey to grey-brown, fine to med grained, massive. Becomes finer grained towards contacts. More reddish coloured (pottassic?) towards centre of unit. 5% fine grained felsic ribs from 0.5 to 3cm thickness average 30-50deg throughout unit. Minor calcite-chlorite veining. Sharp lower contact at 55deg. 736.65 - 736.8 : 15 cm calcite-Kspar-chlorite vein at 80 deg 736.8 737.0 : 5-10% irregular calcite stringers at 0-20deg in a redder, more pottassic(?) altered basic syenite
741.40	748.40	GRW	MAS		0	Greywacke. As above. 5-10% rounded pebbles up to 4cm. Fairly abrupt but irregular lower contact.
748.40	816.30	CGT	MAS		0	Conglomerate. As above. 75-90% polymictic, rounded pebbles up to 10cm in a poorly sorted arkosic matrix. Minor jasper pebbles. 749.1 - 749.7 : highly fractured core. 50% core recovery. 816.3m sharp irregular contact.

816.30	852.50	SYM	MAS				CCV	1	0		Mafic syenite. Brownish-grey to pinky-grey, fine to medium grained, massive. Moderate to strongly magnetic. MagSus= 53.5-85.1. ~3% pink fine grained felsic ribs up to 2cm at average 40° to core axis.818.3-818.5m 20cm conglomerate unit at 45° to core axis.827m: ~5% strange bluish green-grey fibrous mineral, occurs in veinlets (1mm up to 7cm) at 15-45°.15cm wide pinkish-grey syenite dyke (40 deg TCA) at 852.35 - 852.5m.
852.50	884.10	CGT	MAS						0		Conglomerate. Medium-grey silty matrix. Contains rounded to sub-rounded felsic (mostly syenitic) and mafic clasts (up to 23cm wide). Weak to mod mag; MagSus = 14.8 - 92.5. Unaltered. Trace py. Sharp upper cnt 58 deg TCA.Jasper clasts (2 - 3cm wide) at 864.3m and 864.5m. Q-calcite vein (10 cm wide, 40 deg TCA; no sulphide) at 874.3m.
884.10	913.50	SYM	MAS	2	P	CC			0		Basic Syenite. Meidum-grey; m-grained; massive, locally foliated; mod mag; MagSus = 77.2 - 81. Mod to weak pervasive calcitic alt. Trace py. Sharp upper cnt 45 deg TCA.884.1 - 894m: mod pervasive calcitic alt. 888.0 - 888.8m is locally foliated ~ 35 deg TCA. Unmineralized Q-vein (0.5cm wide, 25 deg TCA; no sulphide) at 889.1m.894 -913.5m: weak pervasive calcitic alt.
913.50	922.10	CGT	FOL						0		Conglomerate. Pebbly. Similar to 852.5 - 884.1m. Trace py generally; up to 3% local py. Weakly foliated; locally sheared. Sharp wavy upper cnt 60 deg on average.Possible 05 Break(?) at 918.15 - 918.7m: sheared 35 - 55 deg TCA with trace py. Possible fault at 918.2m with a film of clay on a 0.5cm wide fractured rock. 1% local py in 7cm wide felsic clast b/t 918.3 & 918.4m.3% local py in felsic clast at 919.76 - 919.93m.
922.10	1,098.70	CGT	MAS						0		Conglomerate. Pebbly. Similar to 852.5 - 884.1m. Grad upper cnt.944.9-946.9m. Blocky section due re-drilling fallen core and bit change.
1,098.70	1,106.80	SYN	MAS	1	PA	CHL	QCCV	1	0		Syenite. Reddish-brown. Medium grained. Massive. Weak patchy chloritic alteration. 1% qtz calcite veins. Weakly magnetic. MagSus=3.8-7.2. Sharp upper contact at 45 deg tca.

1,106.80	1,120.00	CGT	MAS			0	Conglomerate. Similar to 922.1-1098.7m. Sharp upper contact at 45 deg tca.
1,120.00	1,121.00	CGT	FOL			0	Conglomerate. Similar to 1106.8-1120.0m. Moderate foliation at 40 deg tca on average.
1,121.00	1,121.10	FLT				0	Fault? Broken up, clay grit-coated fragments of fault gouge. Fault angle is 45 deg tca. Host rock is conglomerate.
1,121.10	1,121.70	CGT	FOL			0	Conglomerate. Similar to 1120.0-1121.0m. Moderate foliation at 35 deg tca on average.
1,121.70	1,133.10	DR	MAS			0	Diorite. Green-grey. Medium to fine grained. Massive. Non-magnetic; MagSus= 0.9 - 1.3. Trace Py. Sharp upper contact 15 deg TCA.
1,133.10	1,161.60	CGT	MAS			0	Conglomerate; Timiskaming. Similar to 1120 - 1121m; local mod to weak foliation (35 - 65 deg TCA). Weak to mod mag; MagSus = 2.2 - 48.3. Greywacke horizons occur; jasper clasts present. Sharp upper cnt 55 deg TCA.
1,161.60	1,185.20	GRW	BED	QCCV	2	0	Greywacke. Greenish-grey. Fine grained. Bedding angles of 45-55 deg tca. 2% qtz/calcite veining up to 8cm wide. Weakly to strongly magnetic. MagSus=38.8-106.2. Trace Py. Sharp upper contact at 55deg tca.Unmineralized Qtz/calcite veining 0.5 to 8cm wide at 25-80 deg tca at: 1161.7-1162.1m, 1167.5-1167.8m, 1170.8-1171.1m, 1171.4-1171.6m.1178.0-1184.0m. Very fine to fine grained with a brownish hue..
1,185.20	1,189.10	CGT	FOL			0	Conglomerate; Timiskaming. Similar to 1120 - 1121m; local mod to weak foliation (45-48 deg TCA). Weak to mod mag; MagSus =10.3-63.9. Jasper clasts present. Sharp upper cnt 58 deg TCA.
1,189.10	1,190.20	GRW	BED			0	Greywacke. Greenish-grey. Fine to medium grained. Thinly bedded at 50 deg tca. Weakly magnetic. MagSus=25.0-33.0. Trace Py. Sharp upper contact at 53 deg tca..1190.2m. EOH

Structure

31.50	FLT		Gritty clay fault
38.90	CNT	62	Lamprophyre dyke more felspar-rich
49.20	CNT	75	Lamprophyre dyke more biotite-rich
99.40	CCV	55	Brecciated calcite/epidote vein (~5cm)
128.30	QV	45	10 cm wide irregular 50% quartz vein at 45°
142.80	FLT	45	Gritty clay fault along a 5mm wide calcite vein at 45°
160.90	FLT	65	Gritty clay fault along a 2mm wide calcite vein at 65°
162.80	FLT	45	Gritty clay fault at 45°
163.50	FLT	40	Gritty clay fault at ~40°
168.00	QV	55	4cm irregular white qtz vein at 55°
168.20	FLT	85	2cm gritty clay fault at 85°
168.30	QV	42	Qtz vein breccia in chlorite matrix contacts at 50/35°
168.80	FLT	60	15cm grey-green gritty clay seam with 3cm white qtz vein breccia
189.20	CCVs	75	Calcite vein set average angle 75° crosscut and offset by minor calcite veinlets ru
191.10	QCCV	45	20cm Irregular brecciated white qtz vein with trace sulphide
195.00	QCCV	45	10cm irregular qtz/calcite vein with trace sulphides
204.40	FLT	45	Gritty grey clay slip along 2cm calcite vein at 45°
204.60	FLT	15	Gritty grey clay slip at 15° with 6cm irregular qtz vein at 50°
205.30	FLT	25	Gritty grey clay slip at 25°
214.30	FLT	35	Tight gritty grey clay/chlorite slip at 35°
268.80	QCCV	45	24cm qtz/calcite vn w/trace py
270.10	QCCV	45	15cm qtz/calcite vn w/intermixed pink carbonate
368.40	QCCV	30	20cm Irregular white qtz vein with trace py
516.10	FR	5	calcite fracture-fill
533.30	QV	16	1-13mm wide; with trace cp
655.90	QCCV	63	20cm wide; with 1% py

700.00	CNT	35	sharp
701.20	QCCV	35	50% qtz-cc veining over 30cm
715.40	CNT	30	sharp
716.60	CNT	30	sharp
719.30	FLT	30	weak
722.30	CNT	40	sharp
725.20	CNT	55	sharp
741.40	CNT	55	sharp
736.70	CCV	80	15cm cc-chl-Kspar vein
874.30	QV	40	10cm wide, no sulphide
852.50	CNT	58	sharp
913.50	CNT	60	sharp & wavy
916.00	F1	33	
918.20	FLT	53	
918.50	F1	35	
1,098.90	CNT	45	Sharp contact.
1,106.80	CNT	45	Sharp contact.
1,106.20	QCCV	55	2cm qtz/calcite/chlorite vein.
1,121.10	FLT	45	
1,121.70	CNT	15	Sharp contact.
1,133.10	CNT	55	Sharp contact.
1,161.60	CNT	55	Sharp contact.
1,162.00	QCCVs	52	1-7cm wide unmineralized qtz/calcite vein set ave angle 52 deg tca.
1,167.70	QCCVs	43	Up to 6cm wide unmineralized qtz/calcite vein set ave angle 43 deg tca.
1,169.00	BED	55	
1,170.90	QCCVs	72	Up to 4cm wide unmineralized qtz/calcite vein set ave angle 72 deg tca.
1,171.60	QCCV	70	8cm wide unmineralized qtz/calcite vein.
1,172.00	BED	45	

1,178.00	BED	50
1,184.00	BED	48
1,187.00	F1	48
1,188.50	F1	45

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1152	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	564979	**Claim No:**	L446401	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331479	**Start_Date:**	08/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	347	**Finish_Date:**	10/07/2011	☐ **Cemented**				
Azmuth:	310	**Length (m):**	275					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	307.70	-44.00	55,110.00	
60.00	310.20	-43.70	54,278.00	
90.00	309.30	-43.50	54,698.00	
120.00	312.20	-43.10	54,977.00	
150.00	313.20	-42.80	54,546.00	
180.00	313.30	-42.40	54,634.00	
210.00	314.70	-42.00	54,835.00	
240.00	315.00	-41.50	54,723.00	
270.00	315.90	-40.90	54,649.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	6.60	OVB											6m of casing.
6.60	53.90	SYN	MAS	1	PA	HEM	ANK		CCV	1	0		Porphyritic syenite. Reddish brown. Fine to medium grained mafic groundmass with coarse feldspar phenocrysts. Massive. Weak patchy hematitic/potassic alteration. Localized weak vein-controlled iron-carbonate alteration.Common broken blocky sections. 1% stockwork calcite veining. Non to weakly magnetic. MagSus=0.8-34.3. Visible blobs of magnetite throughout. Trace Py.24.1m. Sericite infill/vein at 10 deg tca.36.8-53.9m. Localized vein-controlled iron carbonate alteration.39.8m. Tight green-grey gritty clay slip at 80 deg tca.43.3m. 1cm wide qtz vein at 30 deg tca.
53.90	67.00	SYN	MAS	1	PA	HEM			QCCV	2	0		Porphyritic syenite. Reddish brown. Fine to medium grained mafic groundmass with coarse feldspar phenocrysts. Massive. Weak patchy hematitic/potassic alteration. 2% calcite veining. Weak to moderately magnetic. MagSus=9.5-53.3. Visible blobs of magnetite throughout. Trace Py. Gradational upper contact.
67.00	67.50	SYN	MAS	1	P	ANK	SER				0		Bleached porphyritic syenite. Greenish-brown. Fine to coarse grained. Massive. Localized weak pervasive iron carbonate alteration. Localized weak pervasive serecitic alteration. Weakly magnetic. MagSus=2.3-4.2. Trace Py. Gradational upper conatct.
67.50	67.90	QV	MAS								0		Unmineralized white quartz vein at 65 deg tca. Weakly magnetic. MagSus=1.5-1.6.
67.90	70.40	SYN	MAS	1	FR	ANK			QCV	1	0		Bleached porphyritic syenite. Greenish-brown. Fine to coarse grained. Massive. Localized weak fracture-controlled iron carbonate alteration. Weakly magnetic. MagSus=2.6-6.0. Trace Py. Broken upper conatct.

Assay

From	To	Spl #	Len	Py %	Au PPM
		447918			1.33
		447942			0.01
		447952			0.57
		447991			1.83
		447938			0.01
		448024			0.01
		447994			0.6
		447967			0.01
		447970			0.01
		447924			0.01
		448012			0.01
		448018			1.78
		447912			0.01
36.80	38.00	447908	1.20	0	0.01
38.00	39.50	447909	1.5	0	0.01
39.50	41.00	447910	1.5	0	0.01
41.00	42.50	447911	1.5	0	0.01
42.50	44.00	447913	1.5	0	0.01
44.00	45.50	447914	1.5	0	0.01
45.50	47.00	447915	1.5	0	0.01
47.00	48.50	447916	1.5	0	0.01
48.50	50.00	447917	1.5	0	0.01
50.00	51.50	447919	1.5	0	0.01
51.50	52.00	447920	0.5	0	0.01
52.00	52.40	447921	0.40	0	0.01
52.40	53.90	447922	1.5	0	0.01

70.40	93.30	SYN	MAS	1	PA	HEM	ANK		QCV	1	0	Porphyritic syenite. Reddish brown. Fine to medium grained mafic groundmass with coarse feldspar phenocrysts. Massive. Weak patchy hematitic/potassic alteration. Localized weak patchy iron carbonate alteration. 1% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.6-24.8. Visible blobs of magnetite throughout. Trace Py. Gradational upper contact.76.3-76.7m. 40cm wide qtz iron carbonate vein with chlorite and calcite at 0-10 deg tca.78.0-78.15m. 15cm brecciated section with iron carbonate cement.83.3-89.3m. Frequent qtz and qtz/iron carbonate veining from <1mm-5cm.
93.30	99.90	SYN	MAS	2	P	HEM			QCV	2	0	Syenite with horizons of porphyritic syenite. Reddish-brown. Fine to medium grained. Massive. Moderate pervasive and vein controlled hematitic alteration. 2% qtz/iron carbonate veining. Non magnetic. MagSus=0.3-0.5. Trace Py but locally up to 1%.95.7-95.8m. Blobs of Py.96.2-96.6m. Brecciated with qtz/iron carbonate flooding.96.6-98.0m. Broken blocky section with 60cm of lost core.
99.90	136.90	SYN	MAS	1	PA	HEM	KSP	ANK	QCV	2	0	Porphyritic syenite. Reddish-brown to greyish-brown. Fine to medium grained mafic groundmass with coarse feldspar phenocrysts. Massive. Weak patchy hematitic alteration. Weak vein-controlled potassic and iron carbonate alteration halos. Weak fracture-controlled chloritic alteration. 2% qtz/iron carbonate veining with <1% qtz/calcite veining. Non to weakly magnetic. MagSus=0.5-14.7. Trace Py. Gradational upper contact. 99.9-105.6m. Broken blocky section.114.9m. S-folded qtz vein. Left limb 45 right limb 35 deg tca.120.4-120.8m. Up to 2.5 cm unmineralized qtz/iron carbonate vein at 0-10 deg tca.
136.90	145.30	SYN	MAS	1	PA	HEM	KSP	ANK	QCV	5	0	Porphyritic syenite. Similar to 99.9-136.9m with higher percentage of qtz/iron carbonate veining (5%). Non magnetic. MagSus=0.5-0.6. Trace Py. Gradational upper contact.136.9-137.5m. Qtz/iron carbonate flooding.138.0-138.3m. 30cm wide mafic intrusive dike at 40/45 deg tca.

67.00	67.50	447923	0.5	0	0.01
67.50	67.90	447925	0.40	0	0.01
67.90	68.90	447926	1	0	0.01
68.90	70.40	447927	1.5	0	0.01
70.40	71.50	447928	1.1	0	0.01
75.30	76.30	447929	1	0	0.01
76.30	76.70	447930	0.4	0	0.01
76.70	77.10	447931	0.40	0	0.01
77.10	78.00	447932	0.90	0	0.01
78.00	78.50	447933	0.5	0	0.01
78.50	80.10	447934	1.6	0	0.01
80.10	81.70	447935	1.6	0	0.01
81.70	83.30	447936	1.60	0	0.01
83.30	84.30	447937	1	0	0.01
84.30	85.30	447939	1	0	0.01
85.30	86.30	447940	1	0	0.01
86.30	87.30	447941	1	0	0.01
87.30	88.30	447943	1	0	0.01
88.30	89.30	447944	1	0	0.01
92.50	93.30	447945	0.80	0	0.01
93.30	94.30	447946	1	0	0.01
94.30	95.20	447947	0.9	0	0.01
95.20	96.10	447948	0.90	1	0.01
96.10	96.60	447949	0.5	0	0.01
96.60	98.00	447950	1.40	0	0.01
98.00	99.00	447951	1	1	0.01
99.00	99.90	447953	0.90	0	0.01
99.90	101.00	447954	1.1	0	0.01
109.00	110.10	447955	1.1	0	0.01

145.30	148.40	GRW	BAN						1		Greywacke? Green. Banded at 75 deg tca. <1% calcite veining up to 1 cm wide. Non magnetic. MagSus=0.6-0.7m. Generally 1% Py but locally up to 10%. Sharp upper contact at 65 deg tca.147.6-147.8m. Calcite vein set at 20 deg tca up to 1cm wide.147.8-147.9m. Localized Py up to 10%.
148.40	163.00	CGT	FOL						0		Conglomerate; Timiskaming? Green. Generally monomictic subangular to subrounded clasts up to 5cm wide in a fine grained mafic groundmass. Weakly foliated at 40-45 deg tca. Non magnetic. MagSus=0.6-0.9. Generally trace Py but locally up to 1%. Gradational upper contact.
163.00	164.00	FZN		2	P	SER			0		Fault Zone-possibly Goldbanks Break. Broken up fault zone with ~80cm of lost core. Broken up qtz pieces could indicate qtz veining within fault zone. Trace Py.
164.00	168.80	SYN	MAS	2	P	ANK	CHL	QCV	2	0	Syenite. Greenish-brown. Fine to medium grained. Massive. Moderate pervasive iron carbonate alteration. Weak fracture-controlled chloritic alteration. 2% white stockwork qtz/iron carbonate veining. Non magnetic. MagSus=0.4-0.5. Broken upper contact.
168.80	169.90	SLT	FOL	4	P	SER		QCCV	1	1	Siltstone. Light green. Fine grained. Moderate to strongly foliated at 45-55 deg tca. Intense pervasive sericitic alteration. 1% qtz/calcite veining. Non magnetic. MagSus=0.4. 1% Py. Upper contact not preserved.
169.90	195.20	SYN	MAS	1	PA	HEM	CHL	CCV	1	0	Porphyritic syenite. Greenish-brown to reddish-brown. Fine to medium grained mafic groundmass with coarse grained feldspar phenocrysts. Weak patchy hematitic/potassic alteration. Localized, moderate pervasive and weak fracture-controlled chloritic alteration. 1% calcite and qtz/calcite veining. Non to weakly magnetic. MagSus=0.5-2.8. Trace Py. Sharp upper contact at 30 deg tca.185.8-186.1m. 30cm mafic intrusive dike at 60/70 deg tca.193.8-195.2m. Moderate pervasive chloritic alteration.

110.10	111.10	447956	1	0	0.01
111.10	112.10	447957	1	0	0.01
112.10	113.60	447958	1.5	0	0.01
113.60	114.50	447959	0.90	0	0.01
114.50	116.00	447960	1.5	0	0.01
116.00	116.70	447961	0.7	0	0.01
119.20	120.20	447962	1	0	0.01
120.20	121.00	447963	0.80	0	0.01
121.00	122.00	447964	1	0	0.01
136.90	137.90	447965	1	0	0.01
137.90	138.80	447966	0.90	0	0.01
138.80	140.00	447968	1.2	0	0.01
140.00	141.50	447969	1.5	0	0.01
141.50	142.50	447971	1	0	0.01
142.50	143.40	447972	0.9	0	0.01
143.40	144.30	447973	0.90	0	0.01
144.30	145.30	447974	1	0	0.01
145.30	146.80	447975	1.5	1	0.01
146.80	148.40	447976	1.6	2	0.01
148.40	149.90	447977	1.5	2	0.02
149.90	151.40	447978	1.5	1	0.03
151.40	152.90	447979	1.5	1	0.02
152.90	154.40	447980	1.5	1	0.04
154.40	156.00	447981	1.60	1	0.02
156.00	157.50	447982	1.5	0	0.01
157.50	159.00	447983	1.5	1	0.01
159.00	160.50	447984	1.5	0	0.02
160.50	161.60	447985	1.10	0	0.02
161.60	162.70	447986	1.1	0	0.02

195.20	221.30	CGT	FOL					0		Conglomerate; Timiskaming? Green. Generally monomictic (occasional jasper clasts) subangular to subrounded clasts up to 5cm wide in a fine grained mafic groundmass. Weakly foliated at 40-45 deg tca. Non to weakly magnetic. MagSus=0.7-1.0. Generally trace Py but locally up to 1%. Sharp upper contact at 50 deg tca.
221.30	235.20	MV	MAS	1	PA	EPI	QCCV	5	0	Mafic volcanics. Greenish-grey to dark grey. Fine grained. Massive. Weak patchy and vein-controlled epidote alteration. ~5% calcite and qtz/calcite veining. Non to weakly magnetic. MagSus=0.9-1.3. Generally trace Py but locally up to 10%. Sharp upper contact at 45 deg tca.233.2-233.3m. 10% Py.
235.20	242.20	GRT	MAS					0		Basal grit. Light grey. Fine to medium grained. Massive. Horizons of conglomerate with locally up to 3% Py. <1% calcite veining. Non magnetic. MagSus=0.3-0.5.Horizons of conglomerate similar to above with up to 3% Py at; 235.2-235.5m, 235.6-235.8m, 236.2-236.6m and 242.0-242.2m.241.9-242.0m. Basalt.
242.20	275.00	MVP	MAS	1	P	CC		0		Pillow basalts. Very light grey to green-grey. Fine grained. Generally massive with cooling fractures around margins and selveges with chlorite and calcite infill. Weak to locally strong pervasive calcitic alteration. Non magnetic. MagSus=0.6-0.9. Trace Py. Sharp upper contact at 60 deg tca.275.0m. EOH.

162.70	163.00	447987	0.30	0	0.8
163.00	164.00	447988	1	0	0.03
164.00	165.00	447989	1	0	0.01
165.00	166.00	447990	1	0	0.01
166.00	167.00	447992	1	0	0.02
167.00	167.90	447993	0.9	1	0.01
167.80	168.80	447995	1	1	0.01
168.80	169.90	447996	1.1	1	0.01
169.90	171.50	447997	1.60	0	0.01
175.90	176.30	447998	0.40	1	0.11
182.80	183.70	447999	0.9	0	0.07
188.90	190.00	448000	1.10	0	0.03
190.00	191.00	448001	1	0	0.01
195.20	196.20	448002	1	0	0.02
198.50	199.20	448003	0.7	2	0.06
201.90	203.50	448004	1.60	0	0.06
209.70	211.30	448005	1.60	1	0.04
211.30	211.70	448006	0.4	2	0.01
211.70	213.00	448007	1.30	1	0.03
213.00	214.50	448008	1.5	0	0.01
214.50	216.00	448009	1.5	0	0.01
216.00	217.50	448010	1.5	0	0.01
217.50	219.00	448011	1.5	0	0.01
219.00	220.50	448013	1.5	0	0.03
220.50	221.30	448014	0.80	0	0.01
229.00	229.30	448015	0.30	1	0.01
233.10	233.40	448016	0.3	5	0.03
235.20	235.60	448017	0.40	0	0.01
235.60	236.20	448019	0.6	1	0.02

236.20	236.60	448020	0.40	3	0.14
241.00	242.00	448021	1	0	0.01
242.00	242.30	448022	0.30	2	0.2
242.30	243.30	448023	1	0	0.01

Structure

18.70	QCCV	15	1cm wide unmineralized qtz/calcite vein.
43.30	QV	30	1cm wide unmineralized qtz vein.
39.80	SL	80	Tight green-grey gritty clay slip
52.40	QCV	40	1cm wide qtz/iron carbonate vein.
64.70	QCVs	40	2-10mm wide qtz/iron carbonate vein set.
67.50	QV	65	40cm wide unmineralized white qtz vein.
76.50	QCV	5	40cm wide unmineralized qtz/iron carbonate vein with chlorite and calcite at 0-1
78.20	QCV	40	5cm wide unmineralized qtz/iron carbonate vein.
83.40	QCVs	50	~5mm wide unmineralized qtz/iron carbonate vein set.
84.90	QV	50	5cm wide white qtz vein.
95.20	QCV	20	5cm wide qtz /iro carbonate vein.
111.40	QV	40	1cm wide qtz vein.
114.60	QV	50	2cm wide qtz vein.
119.40	QV	30	4cm wide qtz vein.
120.60	QCV	5	1-2.5cm wide qtz/iron carbonate vein at 0-10 deg tca.
131.70	QCCVs	50	Up to 1cm wide.
133.40	CCV	5	Vuggy calcite vein.
138.50	QCV	15	4cm wide unmineralized qtz/iron carbonate vein.
137.80	QCVs	40	Up to 2cm wide qtz/iron carbonate vein set.
143.60	QV	45	2cm wide qtz vein.
145.30	CNT	65	Sharp contact.
147.70	CCVs	20	Calcite vein set up to 1cm wide.

159.90	QV	60	4cm qtz vein forms upper contact of fault zone.
163.00	CNT	45	Sharp contact.
167.20	QCV	5	1m long qtz/iron carbonate vein up to 2 cm wide.
164.90	QCCV	5	Up to 1cm wide qtz/calcite vein.
229.10	QCCV	40	30cm qtz/calcite vein.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1153	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	564967	**Claim No:**	L446401	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331488	**Start_Date:**	11/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	341	**Finish_Date:**	11/07/2011	☐ **Cemented**				
Azmuth:	130	**Length (m):**	62					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	126.90	-43.20	54,375.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	7.70	OVB											7.5m of casing.
7.70	20.80	SYN	MAS	2	PA	HEM	CC				0		Porphyritic syenite. Reddish-brown. Fine to medium grained groundmass with coarse feldspar phenocrysts. Moderate patchy hematitic alteration. Weak to moderate pervasive calcitic alteration. <1% calcite veins. Non to weakly magnetic. MagSus=0.4-19.8. Trace Py. 20.2-20.8m. Moderate pervasive calcitic alterationgiving the rock a grey colour.
20.80	21.80	GRW	MAS								0		Greywacke. Grey. Fine to very fine grained, massive. Entire unit is broken and blocky. Non magnetic. MagSus=0.5-0.6. Trace Py.Broken upper contact.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448038			0.01
		448042			0.01
20.20	20.80	448025	0.6	0	0.01
20.80	21.80	448026	1	0	0.01
21.80	22.60	448027	0.80	0	0.01
22.60	23.50	448028	0.9	0	0.01
23.50	24.20	448029	0.70	0	0.01
24.20	24.50	448030	0.3	0	0.01
24.50	25.60	448031	1.1	0	0.01
25.60	25.80	448032	0.2	0	0.01

21.80	23.50	CGT	MAS				QCCV	1	0	Conglomerate (Timiskaming)? Greenish-grey. Subrounded to rounded clasts up to 5cm wide in a fine grained groundmass. Entire unit is broken and blocky. 1% qtz/calcite veining. Non to weakly magnetic. MagSus=0.6-1.6. Trace Py. Sharp upper contact at 50 deg tca.
23.50	31.10	LAM	MAS	3	P	CC	QCCV	2	0	Lamprophyre dike. Dark grey with a reddish hue. Medium to coarse grained. Massive. Three faults in this unit. Occasional rip-up clasts. 2% qtz/calcite veining. Weakly magnetic. MagSus=15.6-26.1. Trace Py. Broken upper contact.24.3m. 1.5cm wide gritty clay fault at 55 deg tca followed by a 1cm wide qtz/calcite vein at 45 deg tca.25.6-25.8m: 25.65m Mud slip at 85 deg tca; 25.7m. 1cm gritty clay fault at 77 deg tca; 25.75m. Tight gritty clay slip at 63 deg tca. Qtz/calcite veining found along fault and slips.27.2-27.4m: 27.25m. 3cm wide chlorite/calcite shear at 25 deg tca; 27.4m. 0.5-1cm wide gritty clay fault at 25 deg tca.31.0-31.1m. Oakes break? 1.5-2cm wide gritty clay fault at 25 deg tca.
31.10	40.50	CGT	MAS				CCV	1	1	Conglomerate (Timiskaming)? Redish-grey. Subrounded to rounded clasts up to 5cm wide in a fine grained groundmass. Massive. 1% stockwork calcite veinlets. Moderately to strongly magnetic. MagSus=75.2-194.4. 1% Py. Sharp upper contact at 25 deg tca.35.6-36.0m. 40cm wide mafic intrusive dike at 20 deg tca.
40.50	45.80	LAM	MAS	3	P	CC			0	Lamprophyre dike. Dark grey with a reddish hue. Medium to coarse grained. Massive. Weakly magnetic. MagSus=4.5-9.6. Trace Py. Sharp upper contact at 60 deg tca.
45.80	62.00	CGT	MAS	1	P		CCV	1	0	Conglomerate (Timiskaming)? Redish-grey to greenish grey. Subrounded to rounded clasts up to 5cm wide in a fine grained groundmass. Massive. Localized weak pervasive hematitic alteration. 1% stockwork calcite veinlets. Non to weakly magnetic. MagSus=0.8-13.9. Trace Py. Sharp upper contact at 25 deg tca.46.7m. 0.5cm wide gritty clay fault at 15 deg tca.56.1-58.9m. Grain size reduction <5% clasts.62.0m. EOH.

25.80	27.20	448033	1.40	0	0.01
27.20	27.50	448034	0.3	0	0.01
27.50	29.00	448035	1.5	0	0.01
29.00	29.90	448036	0.9	0	0.01
29.90	30.80	448037	0.9	0	0.01
30.80	31.10	448039	0.30	0	0.01
31.10	32.50	448040	1.4	0	0.01
32.50	33.60	448041	1.1	1	0.01
33.60	34.60	448043	1	2	0.02
34.60	35.60	448044	1	1	0.02
35.60	36.00	448045	0.40	0	0.01
36.00	37.00	448046	1	1	0.01
45.50	46.50	448047	1	0	0.01
46.50	46.80	448048	0.3	0	0.01
46.80	47.80	448049	1	0	0.01

Structure

21.80	CNT	50	Sharp contact.
24.30	FLT	55	1.5cm wide gritty clay fault.
25.70	FLT	77	1cm wide gritty clay fault.
27.40	FLT	25	0.5-1cm wide gritty clay fault.
31.00	FLT	25	Oakes break? 1.5-2cm wide gritty clay fault.
31.10	CNT	25	Sharp contact.
40.50	CNT	60	Sharp contact.
45.80	CNT	25	Sharp contact.
46.70	FLT	15	0.5cm gritty clay fault.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1154	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565124	**Claim No:**	L446401	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331553	**Start_Date:**	11/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	343	**Finish_Date:**	14/07/2011	☐ **Cemented**				
Azmuth:	350	**Length (m):**	317					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	350.90	-45.20	55,483.00	
60.00	350.10	-44.50	54,429.00	
90.00	351.80	-44.40	54,639.00	
120.00	351.40	-44.10	54,361.00	
150.00	353.50	-44.00	54,422.00	
180.00	353.20	-43.80	54,422.00	
210.00	354.40	-43.30	54,832.00	
240.00	355.90	-43.10	54,811.00	
270.00	354.90	-42.80	54,745.00	
300.00	355.40	-42.60	54,677.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	3.40	OVB											3m of casing.
3.40	10.20	CGT	MAS								0		Conglomerate (Timiskaming)? Greenish-grey. Subrounded to rounded clasts up to 4cm wide in a fine grained groundmass. Non to weakly magnetic. MagSus=0.8-1.2. Trace Py.
10.20	11.80	GRW	MAS	1	P	CC					0		Greywacke. Grey. Fine to very fine grained, massive. Weak pervasive calcitic alteration. Non magnetic. MagSus=0.1-0.6. Trace Py. Gradational upper contact.
11.80	22.90	CGT	MAS	1	P	HEM					0		Conglomerate (Timiskaming)? Reddish-grey. Subrounded to rounded clasts up to 8cm wide in a fine grained groundmass. Weak pervasive hematitic alteration. Weakly magnetic. MagSus=1.5-4.0. Trace Py. Gradational upper contact.21.3-22.9m. Bleached core. 21.3-22.5m. Grain size reduction <5% clasts.21.4m. 1cm gritty clay fault at 60 deg tca bounded by up to 3cm qtz/iron carbonate veins.
22.90	40.10	CGT	FOL								0		Conglomerate (Timiskaming)? Greenish-grey. Subrounded to rounded clasts up to 7cm wide in a fine grained groundmass. Weakly foliated at 40-55 deg tca. Non to weakly magnetic. MagSus=0.8-7.8. Trace Py. Gradational upper contact.
40.10	42.60	MI	FOL	1	P	CC					0		Mafic intrusive/Lamprophyre? Grey. Medium grained. Weak foliation at 50-55 deg tca. Localized weak calcitic alteration. Non to weakly magnetic. MagSus=0.7-23.4. Trace Py. Sharp upper contact at 60 deg tca.41.1m. Two tight mud slips at 60 deg tca.
42.60	45.80	GRW	BED								0		Greywacke. Green-grey. Very fine to fine grained. Interbedded with mudstone. Non magnetic. MagSus=0.6-0.9. Trace Py but locally up to 1%. Sharp upper contact at 65 deg tca.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448118			1.82
		448124			0.01
		448052			0.61
		448091			1.81
		448112			0.01
		448070			0.01
		448067			0.01
		448094			0.59
21.30	21.60	448050	0.30	0	0.04
21.60	22.90	448051	1.3	0	0.01
40.40	40.90	448053	0.5	0	0.01
40.90	41.20	448054	0.3	0	0.01
41.20	41.70	448055	0.5	0	0.22
41.70	42.60	448056	0.9	0	0.01
42.60	43.10	448057	0.5	0	0.29
81.00	81.60	448058	0.6	0	0.01
81.60	82.10	448059	0.5	0	0.01
82.10	83.00	448060	0.90	0	0.01
83.00	83.80	448061	0.80	0	0.01
83.80	85.00	448062	1.2	0	0.01
85.00	86.00	448063	1	0	0.01
97.60	97.90	448064	0.30	0	0.01
102.20	103.10	448065	0.90	0	0.16
106.60	106.90	448066	0.30	0	0.01
134.20	134.60	448068	0.40	0	0.01
140.90	141.30	448069	0.40	0	0.02

45.80	97.60	SYN	MAS	1	PA	HEM	CC		0		Porphyritic syenite. Reddish-brown. Fine to medium grained groundmass with coarse feldspar phenocrysts. Weak to moderate patchy hematitic alteration. Weak pervasive calcitic alteration. ~2% angular to subrounded magnetic and non magnetic rip up clasts up to 4cm. <1% calcite veins. Localized qtz veining up to 15%. Non to weakly magnetic. MagSus=0.7-33.3. Trace Py. Sharp upper contact at 60 deg tca.81.0-85.0m. ~15% qtz veining up to 10cm wide. Veins have associated 10-20cm alteration halos of light green feldspar(?) laths.84.8-84.9m. 10cm wide dirty white qtz vein at 60 deg tca.84.9-85.0m. 10cm of brecciated dirty white qtz veining with gritty grey clay slip.84.95m. Oakes break? Gritty grey clay slip at 60 deg tca.
97.60	107.80	SYN	MAS	3	P	HEM		CCV	1	0	Porphyritic syenite. Reddish-orange. Fine to medium grained groundmass with coarse feldspar phenocrysts. Strong pervasive hematitic and vein-controlled alteration. <1% angular to subrounded magnetic and non magnetic rip up clasts up to 5cm. 1% calcite veins commonly with specular hematite. Weakly magnetic. MagSus=24.4-35.4. Trace Py. Gradational upper contact.97.7m. 2cm wide calcite vein with stockwork specular hematite stringers.102.8m. Gritty red mud slip at 10 deg tca bounded by calcite veining up to 0.5cm wide.
107.80	197.50	SYN	MAS	1	PA	HEM		CCV	1	0	Porphyritic syenite. Reddish-brown. Fine to medium grained groundmass with coarse feldspar phenocrysts. Weak to moderate patchy and vein-controlled hematitic alteration. Localized moderate pervasive chloritic alteration. ~1% angular to subrounded magnetic and non magnetic rip up clasts up to 6cm. <1% calcite veins. Weakly magnetic. MagSus=8.0-35.6. Trace Py. Gradational upper contact.140.9-142.0m. Broken blocky section.140.9-141.3m. Localized moderate pervasive chloritic alteration.175.0-177.3m. Broken blocky section.177.7-177.9m. 20cm mafic intrusive dike at 30/50 deg tca.

141.30	142.00	448071	0.7	0	0.01
142.00	142.70	448072	0.7	0	0.01
196.50	197.50	448073	1	0	0.01
197.50	198.50	448074	1	0	0.01
198.50	200.00	448075	1.5	0	0.01
200.00	201.40	448076	1.4	0	0.02
201.40	201.70	448077	0.30	5	0.07
201.70	203.00	448078	1.30	0	0.01
203.00	204.50	448079	1.5	1	0.01
204.50	205.80	448080	1.30	1	0.01
205.80	206.40	448081	0.6	0	0.01
206.40	207.40	448082	1	0	0.01
207.40	208.80	448083	1.40	0	0.01
208.80	210.10	448084	1.30	0	0.01
210.10	210.60	448085	0.5	1	0.01
210.60	212.00	448086	1.4	0	0.01
212.00	213.50	448087	1.5	0	0.01
213.50	213.90	448088	0.4	2	0.01
213.90	215.10	448089	1.20	1	0.01
215.10	216.10	448090	1	0	0.01
216.10	216.30	448092	0.2	0	0.01
216.30	217.40	448093	1.1	0	0.01
217.40	218.40	448095	1	0	0.68
218.40	219.00	448096	0.60	1	0.17
219.00	220.00	448097	1	1	0.07
220.00	221.50	448098	1.5	0	0.01
221.50	222.30	448099	0.80	0	0.01
222.30	223.30	448100	1	1	0.14
223.30	224.80	448101	1.5	0	0.01

197.50	207.40	SLT	FOL	2	FOL	EPI	SER	QV	10	1	Siltstone with sandstone horizons. Light green. Very fine to fine grained. Weak to moderate foliation at 30-50 deg tca. Weak to moderate foliation-controlled epidotitic and sericitic alteration. 10% qtz veining up to 60cm wide. Non magnetic. MagSus=0.6-0.7. 1% Py but locally up to 5%. Sheared upper contact at 65 deg tca.201.4-201.7m. Localized 5% Py associated with qtz/iron carb veining.205.8-206.4m. 60cm white qtz vein with trace Py along fractures.207.2m. Possible fault. Green gritty clay fault/slip.
207.40	210.60	GRT	FOL						0		Pebbly conglomerate and grit. Grey-green. Very fine to coarse grained. Weak foliation at 55-60 deg tca. Non magnetic. MagSus=0.6. Trace Py. Sharp upper contact at 80 deg tca.208.1-208.4m. Lime green mudstone at 60/65 deg tca.210.1-210.3m. Mafic volcanic unit with Py-bearing qtz boudins. Irregular upper contact. Lower contact is 50 deg tca.
210.60	215.10	MV	FOL	1	P	CHL	SER	CV	10	0	Mafic volcanics. Light to dark green. Fine grained. Semi-massive with weak foliation at 30-42 deg tca (looks like someone took a spoon and stirred it while it was still hot). Weak pervasive chloritic alteration. Weak patchy sericitic alteration. 10% iron carbonate veining. Non to weakly magnetic. MagSus=0.7-1.3. Trace Py. Sharp upper contact at 70 deg tca.213.5-213.9m. 40cm iron carbonate vein at 60 deg tca with 2% fine disseminated Py.
215.10	233.10	SYN	MAS	1	PA	CHL	CC	QV	3	0	Porphyritic syenite. Greenish-brown to reddish-brown. Fine to medium grained groundmass with coarse feldspar phenocrysts. Weak to moderate patchy chloritic alteration. Localized weak pervasive calcitic alteration. <1% angular to subrounded magnetic and non magnetic rip up clasts up to 4cm. 3% qtz veins up to 30cm wide. Non to weakly magnetic. MagSus=0.3-2.8. Trace Py but locally up to 3%. Sharp upper contact at 60 deg tca.216.1-216.3m. 20cm mafic intrusive dike.226.1-226.2m. 8cm qtz vein with 2% Py.227.8-228.5m. Qtz veining up to 25cm wide at 50-55 deg tca with 1% Py.

224.80	225.90	448102	1.1	0	0.12
225.90	226.20	448103	0.30	2	1.15
226.20	226.90	448104	0.7	0	0.02
226.90	227.70	448105	0.80	1	0.18
227.70	228.70	448106	1	1	0.99
228.70	230.10	448107	1.40	0	0.02
230.10	231.60	448108	1.5	0	0.01
231.60	233.10	448109	1.5	0	0.01
233.10	234.00	448110	0.9	1	0.11
234.00	234.90	448111	0.9	1	0.13
234.90	236.40	448113	1.5	0	0.01
236.40	237.90	448114	1.5	0	0.01
237.90	238.80	448115	0.90	0	0.01
238.80	239.60	448116	0.80	0	0.01
239.60	239.90	448117	0.3	0	0.01
239.90	240.90	448119	1	0	0.01
240.90	241.55	448120	0.65	0	0.01
241.55	242.30	448121	0.75	0	0.01
242.30	242.80	448122	0.5	0	0.01
242.80	243.50	448123	0.7	0	0.01
243.50	243.70	448125	0.2	0	0.01
243.70	245.10	448126	1.40	0	0.02

233.10	234.90	SYN	MAS	1	P	ANK	CHL	CC		1	Porphyritic syenite. Greyish-brown. Fine to medium grained groundmass with coarse feldspar phenocrysts. Weak to moderate pervasive iron carbonate alteration. Weak fracture-controlled chloritic alteration. Weak pervasive calcitic alteration. <1% angular to subrounded magnetic and non magnetic rip up clasts up to 4cm. Non magnetic. MagSus=0.4. 1% Py. Gradational upper contact.
234.90	237.90	SYN	MAS	1	PA	CHL	CC			0	Porphyritic syenite. Reddish-brown. Fine to medium grained groundmass with coarse feldspar phenocrysts. Weak to moderate patchy chloritic alteration. Localized weak pervasive calcitic alteration. <1% angular to subrounded magnetic and non magnetic rip up clasts up to 4cm. Non magnetic. MagSus=0.6-0.7. Trace Py. Gradational upper contact.
237.90	239.60	SYN	MAS	1	P	ANK	CHL	CC		0	Porphyritic syenite. Similar to 233.1-234.9m. Trace Py.239.2-239.6m. Brecciated section.
239.60	239.70	FLT								1	Goldbanks Break. 0.5cm wide gritty clay fault with 1% Py at 40 deg tca. Remaining core in interval is broken up and clay coated.
239.70	240.90	SYN	MAS	2	P	CHL	CC			0	Chloritized syenite. Medium green. Fine to medium grained. Massive but blocky and broken up with faults and slips. Moderate pervasive chloritic alteration. Moderate pervasive calcitic alteration. Non magnetic. MagSus=0.7. Trace Py. Broken up upper contact.240.4m, 240.5m, 240.6m and 240.7m. Faults. 240.7m has only measurable angle (30 deg tca).
240.90	242.30	SLT	MAS							0	Siltstone. Light to medium green. Very fine to fine grained. Semi-massive. Localized volcanic looking sediments. Localized bedding at 75-90 deg tca. Localized breccia. Non magnetic. MagSus=0.5-0.7. Trace Py. Sharp upper contact at 50 deg tca.240.9-241.55m. Volcanic-like matrix sediments. 241.55-242.0m. Bedded at 75-90 deg tca. 242.0-242.3m. Breccia.
242.30	242.80	II	MAS							0	Intermediate intrusive. Light green. Fine grained. Massive. Non magnetic. MagSus=0.7. Trace Py. Sharp upper contact at 70 deg tca.

242.80	243.50	GRT	MAS		0	Pebbly conglomerate and grit. Grey-green. Very fine to coarse grained. Non magnetic. MagSus=0.5-0.6. Trace Py. Sharp upper contact at 35 deg tca.
243.50	317.00	MVP	VAR		0	Variolitic pillow basalt. Green. Fine grained. Massive with cooling fractures and some vesciculation. Well defined pillow margins and selveges with some hyaloclastite sections.317.0m. EOH.

Structure

21.40	FLT	60	1cm gritty clay fault.
25.50	F1	40	
32.00	F1	50	
35.00	F1	48	
38.00	F1	55	
40.10	CNT	60	Sharp contact.
41.10	SL	60	Two tight mud slips.
41.50	QCVs	58	Qtz/ iron carbonate vein set.
42.90	QCCV	60	3cm wide qtz/calcite vein.
43.00	SL	52	Tight mud slip.
45.80	CNT	60	Sharp contact.
81.60	QV	50	2cm qtz/chlorite vein with trace Py.
83.80	QV	60	6cm dirty white qtz vein.
84.40	QV	55	2cm dirty white qtz vein.
84.60	QV	45	4cm dirty white qtz vein.
84.80	QV	60	10cm dirty white qtz vein.
84.90	QVBX	60	10cm wide brecciated dirty white qtz veining.
84.95	SL	60	Oakes break? Tight gritty grey clay slip.
97.70	CCV	15	2cm wide calcite vein with stockwork specular hematite stringers.
102.80	SL	10	Gritty red mud slip.
134.40	QCCVs	25	Qtz/calcite/chlorite vein set up to 1.5cm wide.

141.00	SL	45	Tight gritty grey clay slip.
141.10	QCCV	50	10cm qtz/calcite/chlorite vein with trace Py.
197.50	CNT	65	Sheared contact.
197.70	QV	75	10cm wide qtz vein w/ trace Py.
198.50	F1	50	
202.50	F1	30	
206.10	QV	60	60cm white qtz vein with trace Py.
207.20	FLT	65	Possible fault.
207.40	CNT	80	Sharp contact.
210.60	CNT	70	Sharp contact.
215.10	CNT	60	Sharp contact.
218.60	QCCV	45	9cm qtz/calcite vein.
218.90	SL	35	Tight gritty clay slip.
226.10	QV	40	8cm qtz vein with 2% Py.
228.40	QV	55	25cm qtz vein with 1% Py associated with syenite fragments.
239.60	FLT	40	Goldbanks Break. 0.5cm wide gritty clay fault with 1% Py
240.70	FLT	30	2cm wide gritty fault.
240.90	CNT	50	Sharp contact.
241.80	BED	80	
242.30	CNT	70	Sharp contact.
242.80	CNT	35	Sharp contact.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1155	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565688	**Claim No:**	L531976	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331376	**Start_Date:**	14/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	338	**Finish_Date:**	18/07/2011	☐ **Cemented**				
Azmuth:	330	**Length (m):**	128					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	331.90	-43.70	55,045.00	
60.00	334.10	-43.00	54,698.00	
90.00	334.80	-42.50	54,978.00	
120.00	335.20	-41.90	54,941.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.40	OVB											3m of casing.
2.40	4.00	CGT	MAS								0		Conglomerate (Timiskaming)? Brownish-green. Rounded to subrounded clasts up to 5cm wide in a fine grained matrix. Weakly magnetic. MagSus=2.9-17.5. Trace Py.2.4m. 2mm gritty clay fault.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448142			0.01
		448138			0.03
40.00	40.30	448127	0.3	0	0.01
46.90	48.10	448128	1.2	0	0.03
48.10	49.60	448129	1.5	0	0.04
50.20	50.90	448130	0.70	0	0.01
50.90	52.00	448131	1.1	0	0.01

4.00	20.70	GRW	MAS	1	PA	HEM			0	Greywacke. Green-grey to reddish-grey. Fine to medium grained. Massive. Weak patchy hematitic alteration. <1% calcite veining. Weakly to strongly magnetic. MagSus=12.7-118.1. Trace Py but locally up to 1%. Broken upper contact.
20.70	31.20	CGT	MAS						0	Conglomerate (Timiskaming)? Reddish-brown to grey. Rounded to subrounded clasts up to 6cm wide in a fine grained matrix. Generally massive but with local weak foliation at 50 deg tca. Weakly to moderately magnetic. MagSus=25.4-72.4. Trace Py. Gradational upper contact.
31.20	50.20	GRW	FOL	1	PA	HEM			0	Greywacke. Greenish-brown to reddish-grey. Fine to medium grained with horizons of pebbly conglomerate. Weak foliation at 55-65 deg tca. Weak patchy and fracture-controlled hematitic alteration. <1% calcite veining. Non to weakly magnetic. MagSus=0.6-6.9. Trace Py but locally up to 2%. Sharp upper contact at 60 deg tca.33.2-33.4m. Fracture at 45 deg tca with 20cm halo of yellowish-brown surface weathering(?)34.1m. 2mm gritty clay fault with a 30cm halo of yellowish-brown surface weathering(?)34.3-38.6m. Weak foliation-controlled epidotic alteration.40.0-40.3m. Qtz/iron carbonate/k-spar vein at 45 deg tca.
50.20	52.30	SYN	MAS				QV	10	0	Syenite. Brownish-red. Medium to coarse grained. Massive. 10% qtz/k-spar veining. Non to weakly magnetic. MagSus=0.3-1.2. Trace Py. Sharp upper contact at 55 deg tca.
52.30	72.90	GRW	MAS	1	FR	HEM			0	Greywacke. Dark grey. Fine to coarse grained with horizons of pebbly conglomerate. Semi-massive with localized weak foliation at 65 deg tca. Weak fracture-controlled and patchy hematitic alteration. <1% calcite veining. Weakly to strongly magnetic. MagSus=1.2-153.3.Generally trace Py but local fracture-controlled up to 5%.

52.00	52.30	448132	0.3	0	0.01
87.50	88.50	448133	1	1	0.01
88.50	89.50	448134	1	0	0.01
89.50	90.50	448135	1	0	0.01
90.50	91.80	448136	1.30	0	0.01
91.80	92.80	448137	1	0	0.03
92.80	93.90	448139	1.1	0	0.02
93.90	94.90	448140	1	0	0.01
94.90	95.90	448141	1	0	0.01
110.20	110.60	448143	0.40	0	0.06

72.90	78.00	FVT	LAP	1	PA	HEM			0	Felsic lapilli tuff. Pinkish-brown. Fine to coarse grained with pyroclasts up to 1.5cm wide. Generally massive with weak banding at 80-85 deg tca. Weak patchy hematitic alteration. Weakly to moderately magnetic. MagSus=32.5-86.9. Trace Py. Sharp upper contact at 70 deg tca.
78.00	81.60	DB	MAS				CCV	1	0	Diabase. Green-grey. Fine grained with rare feldspar phenocrysts up to 8mm wide. Massive. <1% calcite veining. Moderately to strongly magnetic. MagSus=63.0-101.1. Generally trace Py but locally up to 1%. Sharp upper contact at 15 deg tca.
81.60	85.50	MVT	LAP						0	Mafic lapilli tuff. Greenish-brown. Fine to coarse grained with pyroclasts up to 6mm wide. Massive. Weakly to moderately magnetic. MagSus=25.9-57.4. Trace Py. Sharp upper contact at 20 deg tca.83.6-83.9m. 30cm porphyritic pink syenite dike at 80/70 deg tca.
85.50	87.00	DB	MAS				CCV		0	Diabase. Green-grey. Fine grained with rare feldspar phenocrysts up to 4mm wide. Massive. 1% calcite veining. Moderately to strongly magnetic. MagSus=75.4-109.7. Trace Py. Sharp upper contact at 30 deg tca.
87.00	88.50	MVT	LAP	1	PA	HEM			1	Mafic lapilli tuff. Pinkish-brown. Fine to coarse grained with pyroclasts up to 6mm wide. Massive. Weakly magnetic. MagSus=12.5-14.0. 1% Py. Sharp upper contact at 5 deg tca.87.6-87.7m. 10cm porphyritic pink syenite dike at 80/45 deg tca.
88.50	90.20	SYN	MAS	1	P	HEM			0	Porphyritic syenite. Reddish-orange. Fine grained groundmass with coarse feldspar phenocrysts up to 4mm wide. Massive. Weak pervasive hematitic alteration. Non magnetic. MagSus=0.5-0.9. Trace Py but locally up to 1%. Sharp upper contact at 80 deg tca.89.7-90.6m. Broken blocky section with fractures generally sub-parallel tca.

90.20	91.80	CGT	MAS	1	FR	HEM		0	Pebbly conglomerate. Reddish-grey. Rounded to subrounded pebbles in a fine grained groundmass. Generally massive but with local weak foliation at 45 deg tca. Weak fracture-controlled hematitic alteration. Weakly magnetic. MagSus=1.3-4.6. Trace Py. Sharp upper contact at 40 deg tca.
91.80	94.90	SYN	MAS	1	PA	HEM	CHL	0	Syenite. Reddish-brown. Fine to medium grained with local porphyritic horizons. Massive. Weak patchy hematitic alteration. Weak fracture-controlled chloritic alteration. Majority of unit is broken and blocky with fractures generally sub-parallel tca possibly a fault zone. Non to weakly magnetic. MagSus=0.4-1.8. Trace Py but locally up to 1%. Sharp upper contact at 65 deg tca.
94.90	112.40	CGT	MAS					0	Timiskaming conglomerate. Greenish-grey. Rounded clasts (some >10cm) in a fine grained groundmass. Massive. <1% calcite veining. Weakly magnetic. MagSus=1.3-24.3. Trace Py. Sharp upper contact at 65 tca.95.0m. Fault? Broken blocky section with gritty clay fault/fracture at 10 deg tca.
112.40	115.50	ARK	MAS					0	Arkose. Reddish-brown. Medium grained. Weakly magnetic. MagSus=12.8-24.3. Trace Py.
115.50	128.00	CGT	MAS					0	Timiskaming conglomerate. Greenish-grey. Rounded clasts (some >10cm) in a fine grained groundmass. Massive. <1% calcite veining. Weakly magnetic. MagSus=6.7-17.6. Trace Py. Gradational upper contact.128.0m. EOH.

Structure

2.40	FLT	45	2mm gritty clay fault.
28.30	F1	50	
31.20	CNT	60	Sharp contact.
34.10	FLT	65	2mm gritty clay fault.
34.50	F1	60	
39.00	F1	65	
40.20	QCV	45	20cm wide qtz/iron carbonate/k-spar vein with trace Py.

41.10	F1	60	
47.20	F1	65	
49.40	F1	55	
50.20	CNT	55	Sharp contact.
50.40	QVs	80	Qtz vein set up to 2cm wide.
52.30	CNT	65	Sharp contact.
72.90	CNT	70	Sharp contact.
78.00	CNT	15	Sharp contact.
81.60	CNT	20	Sharp contact.
85.50	CNT	30	Sharp contact.
90.20	CNT	40	Sharp contact.
91.80	CNT	65	Sharp contact.
95.00	FLT	10	Fault? Broken blocky section with gritty clay fault/fracture
112.40	CNT	60	Sharp contact.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1156	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565530	**Claim No:**	L531976	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331236	**Start_Date:**	19/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	337	**Finish_Date:**	20/07/2011	☐ **Cemented**				
Azmuth:	330	**Length (m):**	142					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	329.00	-43.40	55,372.00	
60.00	329.70	-42.20	54,270.00	
90.00	330.50	-41.10	54,617.00	
120.00	333.90	-40.10	55,126.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.70	OVB											3m of casing.
2.70	12.70	MVT	MAS								0		Mafic lapilli tuff. Dark grey. Fine to coarse grained with epiclasts up to 1.2cm. Massive. Weakly to moderately magnetic. MagSus=22.3-54.3. Trace Py.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448152			0.6
33.00	33.40	448144	0.40	0	0.01
36.10	36.40	448145	0.30	0	0.01
36.60	37.00	448146	0.40	0	0.01
98.80	99.10	448147	0.3	0	0.01
99.10	99.50	448148	0.40	0	0.01
99.50	100.50	448149	1	0	0.01

12.70	30.50	CGT	MAS			0	Timiskaming conglomerate. Greenish-grey. Rounded clasts (some >10cm) in a fine grained groundmass. Local horizons of greywacke. Massive. <1% calcite veining. Weakly magnetic. MagSus=5.7-26.4. Trace Py. Sharp upper contact at 55 deg tca.Greywacke horizons at: 14.1-15.0m, 17.1-18.6m, 21.1-22.2m and 27.3-29.1m.
30.50	37.00	SLT	FOL		QCV	2 0	Siltstone. Lime green to greenish-grey. Fine grained. Weak qtz/iron carbonate vein-associated foliation at 45 deg tca. Localized banding at 55 deg tca. Non magnetic. MagSus=0.6. Trace Py. Sharp upper contact at 60 deg tca.33.0-33.4m. Qtz/iron carbonate veining up to 5cm wide at 45 deg tca.36.6-37.0m. Qtz/iron carbonate veining up to 2cm wide at 40 deg tca.
37.00	43.90	CGT	FOL			0	Conglomerate. Greenish-grey. Subrounded to rounded clasts up to 4cm in a fine grained groundmass. Weakly foliated at 45-50 deg tca. Weakly magnetic. MagSus=5.1-12.4. Trace Py. Gradational upper contact.
43.90	47.40	GRW	MAS			0	Greywacke. Dark grey. Fine to medium grained. Massive. Weakly magnetic. MagSus=7.4-15.9. Trace Py. Sharp upper contact at 70 deg tca.
47.40	59.60	CGT	MAS			0	Conglomerate. Greenish-grey. Subrounded to rounded clasts some >10cm in a fine grained groundmass. Weakly foliated at 45-50 deg tca. Weakly magnetic. MagSus=20.8-37.5. Trace Py. Gradational upper contact.
59.60	87.10	MVT	MAS			0	Mafic tuff. Deep purple-brown to greenish-grey. Fine to coarse grained. Generally massive with weak bedding at 45-60 deg tca. Localized weak foliation at 50 deg tca. <1% qtz/calcite and qtz/iron carbonate veins. Weakly to strongly magnetic. MagSus=1.9-105.7. Generally trace Py but locally up to 1%. Sharp upper contact at 75 deg tca.78.2-78.6m. Syenitic dike? 40cm wide at 55 deg tca.

110.80	111.80	448150	1	0	0.01
111.80	112.30	448151	0.5	0	0.01
112.30	113.70	448153	1.4	0	0.01
118.10	119.10	448154	1	0	0.01
119.10	120.10	448155	1	1	0.01
120.10	120.60	448156	0.5	1	0.01
120.60	121.40	448157	0.80	1	0.01
121.40	122.40	448158	1	2	0.01
122.40	123.00	448159	0.6	0	0.02

87.10	96.80	CGT	MAS							0	Timiskaming conglomerate. Greenish-grey. Rounded clasts (some >10cm) in a fine grained groundmass. Local horizons of greywacke. Massive. <1% calcite veining. Weakly to moderately magnetic. MagSus=17.1-77.1. Trace Py but locally up to 1%. Sharp upper contact at 35 deg tca.95.7-96.4m. Greywacke.
96.80	107.60	MVT	BED							0	Mafic tuff. Deep purple-brown to greenish-grey. Fine to coarse grained. Weak bedding at 65-85 deg tca. <1% qtz/iron carbonate veins. Non to weakly magnetic. MagSus=0.6-6.7. Generally trace Py but locally up to 3%. Sharp upper contact at 70 deg tca.99.0-99.1m. 10cm wide qtz/iron carbonate/k-spar vein at 75 deg tca with trace Py.99.4-99.5m. 10cm wide qtz/iron carbonate/k-spar vein at 75 deg tca with trace Py.100.9-101.3m. Pebbly conglomerate.
107.60	113.70	FPD	MAS	1	P	EPI	ANK	QCV	8	0	Feldspar porphyry? Lime green. Fine to coarse grained. Massive. Weak to moderate pervasive epidote alteration? Weak patchy iron carbonate alteration? 8% qtz/iron carbonate veining. Non magnetic. MagSus=0.3. Trace Py. Sharp upper contact at 75 deg tca.111.8-112.3m. 50cm qtz/iron carbonate veining at 60-65 deg tca.113.1-113.5m. Qtz/iron carbonate vein set up to 1cm wide at 40 deg tca.
113.70	115.60	MVT	BED	1	P	EPI				0	Mafic tuff. Light brownish-green. Fine to coarse grained. Weak bedding at 45-85 deg tca. Non magnetic. MagSus=0.7-0.8. Trace Py. Sharp upper contact at 45 deg tca.
115.60	142.00	MVT	BED							0	Mafic tuff. Deep purple-brown to dark grey. Fine to coarse grained. Weak bedding at 75-80 deg tca. Localized weak patchy hematitic alteration. Non to strongly magnetic. MagSus=0.5-175.0. Generally trace Py but locally up to 1%. Gradational upper contact.131.2-137.0m. Occasional rounded clasts up to 5cm wide.142.0m. EOH.

Structure

12.70	CNT	55	Sharp contact.
30.50	CNT	60	Sharp contact.
33.10	QCVs	45	Qtz/iron carbonate veins up to 5cm wide.
36.80	QCVs	40	Qtz/iron carbonate veins up to 2cm wide.
43.90	CNT	70	Sharp contact.
47.40	CNT	65	Sharp contact.
59.60	CNT	75	Sharp contact.
87.10	CNT	35	Sharp contact.
96.80	CNT	70	Sharp contact.
99.00	QCV	75	10cm wide qtz/iron carbonate/k-spar vein with trace Py.
99.40	QCV	75	10cm wide qtz/iron carbonate/k-spar vein with trace Py.
107.60	CNT	75	Sharp contact.
108.10	QCV	70	3cm qtz/iron carbonate vein.
112.00	QCV	60	45cm qtz/iron carbonate veining.
113.30	QCVs	40	Qtz/iron carbonate vein set up to 1cm wide.
113.70	CNT	45	Sharp contact.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1158	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565515	**Claim No:**	L531976	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331245	**Start_Date:**	20/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	340	**Finish_Date:**	20/07/2011	☐ **Cemented**				
Azmuth:	150	**Length (m):**	50					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	148.00	-43.00	55,231.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	8.40	OVB											7.5m of casing.
8.40	10.70	CGT	MAS								0		Timiskaming conglomerate. Greenish-grey. Rounded clasts (some >10cm) in a fine grained groundmass. Massive. Weakly magnetic. MagSus=18.1-32.2. Trace Py.
10.70	50.00	MVT	MAS								0		Mafic tuff. Dark grey. Fine to medium grained with occasional purple epiclasts up to 5cm (most ~1cm or less). Massive. <1% stockwork calcite veining. Weakly to moderately magnetic. MagSus=17.9-81.0. Trace Py. Sharp upper contact at 65 deg tca.50.0m. EOH.

Assay

From	To	Spl #	Len	Py %	Au PPM
40.60	41.10	448160	0.5	0	0.01

Structure

10.70	CNT	65	Sharp contact.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1159	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565138	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331252	**Start_Date:**	20/07/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	343	**Finish_Date:**	18/08/2011	☐ **Cemented**				
Azmuth:	330	**Length (m):**	500					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	333.20	-44.30	54,248.00	
120.00	335.00	-42.40	54,891.00	
150.00	334.20	-41.90	54,514.00	
180.00	337.50	-41.40	54,832.00	
210.00	337.70	-40.70	54,778.00	
240.00	338.50	-40.20	54,507.00	
270.00	339.30	-39.80	54,414.00	
300.00	340.60	-39.20	54,631.00	
330.00	340.50	-39.10	54,230.00	
360.00	340.00	-38.50	54,440.00	
390.00	340.60	-38.20	54,092.00	
420.00	341.80	-37.90	54,404.00	
450.00	343.40	-37.60	54,856.00	
480.00	343.70	-37.20	54,783.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.20	OVB											4.5m of casing.
2.20	3.70	CGT	FOL								0		Timiskaming conglomerate (probably the McIvor structure). Greenish-grey. Rounded clasts in a fine grained groundmass. Weakly foliated at 40 deg tca. Weakly magnetic. MagSus=13.9-18.0. Trace Py.
3.70	5.90	FZN		2	FR	LIM					0		Fault zone. Host rock is greywacke as described below. Blocky highly fractured core with sandy clay coating of fractures. Fractures are commonly limonitized. Moderate to strong shear fabric at 40-50 deg tca.3.7-5.0m. ~80cm of lost core.5.3m. Fault. 1.5cm gritty brown clay seam orientation undetermined.5.6-5.9m. Vuggy qtz/carbonate stockwork. Carbonate dissolved and limonitized.
5.90	13.60	GRW	FOL								0		Greywacke. Light grey to rusty brown. Fine to medium grained. Weakly foliated at 40 deg tca. Surface weathering has turned the rock a rusty brown. Highly broken up and blocky unit. Non to weakly magnetic. MagSus=0.7-2.5. Trace Py. Broken upper contact.10.9 11.0m. 7cm of vuggy qtz/iron carbonate veining 60/80 deg tca.
13.60	28.50	CGT	FOL								0		Timiskaming conglomerate. Greenish-grey. Rounded and elongate clasts in a fine grained groundmass. Weakly foliated at 40 deg tca. Minor fracture-controlled rusty brown discolouration due to surface weathering. Weakly magnetic. MagSus=10.0-17.3. Trace Py. Sharp upper contact at 30 deg tca.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448170			0.18
		448212			0.01
		448270			0.02
		448242			0.01
		448238			0.01
		448267			0.01
		448218			1.81
		448252			0.58
		448291			1.73
		448294			0.6
		448167			0.01
		448224			0.01
2.20	3.70	448161	1.5	0	0.39
3.70	5.20	448162	1.5	0	0.01
5.20	5.60	448163	0.40	0	3.73
5.60	5.90	448164	0.30	0	0.05
5.90	7.40	448165	1.5	0	0.01
7.40	8.90	448166	1.5	0	0.01
8.90	10.80	448168	1.90	0	0.01
10.80	11.00	448169	0.2	0	0.2
11.00	12.30	448171	1.3	0	0.01
12.30	13.60	448172	1.3	0	0.02
13.60	15.10	448173	1.5	1	0.01
15.10	16.60	448174	1.5	1	0.01
16.60	18.10	448175	1.5	1	0.01
29.75	298.50	448209	269	2	0.02

28.50	99.30	CGT	MAS						0		Timiskaming conglomerate. Greenish-grey. Rounded (clasts some >10cm) in a fine grained groundmass. Occasional horizons of reduced clast size (greywacke?). Localized weak foliation at 40-45 deg tca. <1% qtz/iron carbonate veining/infilling. Minor fracture-controlled rusty brown discolouration due to surface weathering. Non to moderately magnetic. MagSus=0.8-54.8. Trace Py but locally up to 1%. Gradational upper contact.43.2-43.7m. 50cm mottled qtz/iron carbonate veining/flooding with minor vuggy rusty brown weathering (limonite?).
99.30	104.30	SS	MAS					QCV	2	0	Sandstone. Light green/tan. Medium to coarse grained. Massive. Localized weak to moderate pervasive iron carbonate alteration. 2% qtz/iron carbonate veining. Weakly magnetic. MagSus=1.5-19.9. Trace Py. Sharp upper contact at 40 deg tca.100.6-101.3m. 70cm of mottled qtz/iron carbonate flooding.
104.30	104.90	GRW	FOL						0		Greywacke. Grey. Fine to medium grained. Weakly foliated at 65-70 deg tca. Weakly magnetic. MagSus=21.2-45.5. Trace Py. Sharp upper contact at 65 deg tca.
104.90	107.10	SYM	MAS	1	P	CC			0		Mafic syenite. Grey with a pinkish hue. Fine to coarse grained. Massive. Weak pervasive calcitic alteration. Weakly to strongly magnetic. MagSus=13.3-104.4. Trace Py. Sharp upper contact at 60 deg tca.
107.10	108.70	CGT	MAS	2	P	CHL	ANK	QCV	1	0	Conglomerate. Green to tan. Rounded clasts up to 2cm wide in a fine grained groundmass. Massive. Moderate to strong pervasive chloritic alteration (masks some clasts). Weak vein-controlled iron carbonate alteration. Weakly magnetic. MagSus=14.6-16.1. Trace Py but locally up to 1%. Sharp upper contact at 65 deg tca.108.1-108.6m. Stockwork qtz/iron carbonate veining up to 0.3mm wide with alteration halos.
108.70	113.50	CGT	MAS						0		Timiskaming conglomerate. Grey. Rounded (clasts some >10cm) in a fine grained groundmass. Weakly magnetic. MagSus=39.0-49.0. Trace Py. Gradational upper contact .

43.20	43.70	448176	0.5	0	0.01
100.60	101.30	448177	0.70	0	0.01
107.10	107.40	448178	0.30	0	0.06
107.40	108.10	448179	0.7	0	0.01
108.10	108.60	448180	0.5	0	0.02
119.40	119.80	448181	0.40	0	0.01
165.70	166.00	448182	0.30	0	0.01
168.40	168.70	448183	0.30	0	0.33
241.90	242.30	448201	0.40	0	0.09
291.70	292.80	448202	1.1	0	0.01
292.80	293.00	448203	0.20	0	0.01
293.00	293.50	448204	0.5	0	0.01
293.50	294.50	448205	1	2	0.01
294.50	295.50	448206	1	2	0.02
295.50	296.50	448207	1	1	0.01
296.50	297.50	448208	1	2	0.03
298.50	299.50	448210	1	2	0.02
299.50	300.50	448211	1	2	0.03
300.50	301.50	448213	1	2	0.02
301.50	302.50	448214	1	1	0.01
302.54	303.00	448215	0.46	2	0.01
303.00	304.00	448216	1	2	0.02
304.00	305.00	448217	1	2	0.02
305.00	306.00	448219	1	1	0.01
306.00	307.00	448220	1	1	0.01
307.00	308.10	448221	1.10	2	0.02
308.10	309.10	448222	1	0	0.01
309.10	309.80	448223	0.7	0	0.01
309.80	310.80	448225	1	1	0.01

113.50	126.50	MVT	MAS			0	Mafic tuff. Dark grey. Fine to medium grained. Massive with occasional epiclasts up to 4cm wide. <1% qtz/iron carbonate veins. Weakly magnetic. MagSus=27.0-47.0. Trace Py. Sharp upper contact at 70 deg tca.119.4-119.8m. Stockwork qtz/iron carbonate veining up to 1cm wide with trace Py.
126.50	169.40	CGT	MAS			0	Timiskaming conglomerate. Dark grey. Rounded clasts (some >10cm) in a fine grained mafic groundmass. Occasional horizons of reduced clast size-greywacke or tuff? Weakly to strongly magnetic. MagSus=18.9-114.0. Trace Py. Gradational upper contact.129.0-130.3m. Broken blocky section.165.7-166.0m. Mottled qtz/iron carbonate veining.168.6m. Gritty grey clay slip at 50 deg tca.168.61m. 6cm wide qtz/iron carbonate vein at 70 deg tca.
169.40	227.60	MVT	MAS	CCV	1	0	Mafic tuff. Dark grey to purple-grey. Fine to medium grained. Massive with occasional epiclasts up to 14cm wide. 1% stockwork calcite veins. Weakly magnetic. MagSus=3.0-24.0. Trace Py. Sharp upper contact at 15 deg tca.
227.60	286.30	CGT	MAS			0	Timiskaming conglomerate. Dark grey. Rounded clasts (some >10cm) in a fine grained mafic groundmass. Occasional horizons of reduced clast size-greywacke. <1% stockwork calcite veining. Non to weakly magnetic. MagSus=0.6-5.0. Trace Py. Sharp upper contact at 80 deg tca.229.9-232.2m. Greywacke horizon at 60/55 deg tca.241.9-242.3m. Qtz veining up to 1cm wide and ranging from 10 to 70 deg tca. Qtz/iron carbonate veining up to 0.5cm wide at 210 deg tca (cross-cuts qtz veining)
286.30	293.50	LAM	MAS			0	Lamprophyre. Dark grey. Medium to coarse grained with occasional xenoliths up to 5cm wide. Weakly magnetic. MagSus=9.5-39.4. Trace Py. Sharp upper contact at 60 deg tca along a tight slip.286.3m. Tight clay slip at 60 deg tca.292.8m. Tight clay slip at 60 deg tca.292.85m. Gritty clay fault (Oakes Break) at 60 deg tca with 0.5cm calcite vein as upper contact.292.2-293.5m. Broken blocky section.

310.80	311.80	448226	1	0	0.01
311.80	312.70	448227	0.90	0	0.01
312.70	313.70	448228	1	0	0.01
313.70	314.70	448229	1	0	0.01
314.70	315.70	448230	1	0	0.01
315.70	316.70	448231	1	0	0.01
316.70	317.70	448232	1	0	0.01
317.30	318.30	448233	1	0	0.01
318.30	319.20	448234	0.90	0	0.01
319.20	319.70	448235	0.5	0	0.01
319.70	320.70	448236	1	0	0.01
368.80	370.40	448237	1.60	0	0.01
370.40	372.00	448239	1.60	0	0.01
372.00	373.50	448240	1.5	0	0.01
373.50	375.00	448241	1.5	0	0.01
375.00	376.50	448243	1.5	0	0.01
376.50	378.00	448244	1.5	0	0.01
378.00	379.40	448245	1.4	0	0.01
405.10	405.60	448246	0.5	0	0.01
405.60	405.80	448247	0.2	0	0.01
405.80	406.30	448248	0.5	0	0.01
406.30	407.00	448286	0.70	0	0.01
407.00	407.80	448287	0.8	0	0.01
407.80	408.10	448249	0.30	0	0.01
408.10	409.10	448288	1	0	0.03
409.10	410.10	448289	1	0	0.01
410.10	411.30	448290	1.2	1	0.01
411.30	411.80	448292	0.5	0	0.01
411.80	412.80	448293	1	0	0.01

293.50	302.50	CGT	MAS						2	Timiskaming conglomerate. Grey. Round clasts up to 7cm wide in a fine grained groundmass . Weakly magnetic. MagSus=1.4-14.2. ~2% clustered Py but locally up to 3%. Sharp upper contact at 60 deg tca.
302.50	303.00	MST	BED						2	Mudstone. Dark grey-brown. Fine grained. Bedded. Weakly magnetic. MagSus=10.4-21.1. 2% finely disseminated Py. Sharp upper contact at 40 deg tca.
303.00	308.10	CGT	MAS						1	Timiskaming conglomerate. Similar to 293.5-302.5m. Non to weakly magnetic. MagSus=0.9-1.3. 1-2% clustered Py. Sharp upper contact at 65 deg tca.
308.10	309.80	SYN	MAS	1	P	CC			0	Porphyritic syenite. Reddish-grey. Feldspar phenocrysts up to 0.5cm in a fine to medium grained groundmass. Weak pervasive calcitic alteration. Weakly magnetic. MagSus=1.3-10.5. Trace Py. Sharp upper contact at 60 deg tca.
309.80	312.70	MST	BED	1	FR	HEM			0	Mudstone. Purplish-green. Fine grained. Bedded. Weak fracture-controlled hematitic alteration. <1% calcite veining at 30 deg tca. Weakly magnetic. MagSus=3.7-9.8. Trace to 1% Py. Sharp upper contact at 75 deg tca.
312.70	315.70	SYN	MAS	1	P	CC			0	Porphyritic syenite. Similar to 308.1-309.8m. Weakly magnetic. MagSus=12.5-14.0. Sharp upper contact at 30 deg tca.
315.70	317.30	SYN	MAS	2	P	HEM	CC		0	Porphyritic syenite. Similar to 312.7-315.7m. Reddish-orange. Moderate pervasive hematitic alteration. Weak patchy calcitic alteration. Weakly magnetic. MagSus=1.2-9.4. Trace Py. Gradational upper contact.
317.30	368.80	SYN	MAS	1	P	CC		CCV	1 0	Porphyritic syenite. Similar to 312.7-315.7m. Reddish-brown. Angular to subrounded black/dk grey xenoliths up to 6cm are common. 1% calcite veining. Weakly magnetic. MagSus=1.0-42.6. Gradational upper contact.319.2-319.7m. 50cm qtz/calcite veining at 30 deg tca with trace Py.

412.80	414.00	448295	1.20	0	0.01
418.30	418.70	448296	0.40	0	0.01
425.80	426.80	448297	1	0	0.01
440.00	441.00	448298	1	0	0.01
441.00	442.00	448299	1	0	0.01
442.00	443.00	448300	1	0	0.01
443.00	444.00	448301	1	0	0.01
444.00	445.00	448302	1	0	0.01
445.00	446.00	448303	1	0	0.01
446.00	447.00	448304	1	0	0.01
447.00	448.00	448305	1	0	0.01
448.00	449.00	448306	1	0	0.01
449.00	450.20	448250	1.20	0	0.01
450.20	451.50	448251	1.3	1	0.01
451.50	452.50	448253	1	0	0.01
452.50	453.50	448254	1	0	0.01
453.50	454.50	448255	1	0	0.01
454.50	455.50	448256	1	0	0.01
455.50	456.30	448257	0.8	0	0.01
456.30	457.10	448258	0.80	0	0.01
457.10	458.20	448259	1.10	0	0.01
458.20	459.30	448260	1.1	0	0.02
459.30	459.60	448261	0.30	1	0.64
459.60	459.90	448262	0.3	1	0.03
459.90	460.10	448263	0.20	1	0.03
460.10	461.10	448264	1	2	0.02
461.10	461.90	448265	0.8	1	0.02
461.90	462.90	448266	1	2	0.02
462.90	463.90	448268	1	1	0.03

368.80	379.40	SYN	MAS	1	P	HEM	CC	CCV	1	0	Porphyritic syenite. Similar to 315.7-317.3m. Brownish-red. Weak to moderate pervasive hematitic alteration. Weak patchy calcitic alteration. Angular to subrounded black/dk grey xenoliths up to 2cm are common. 1% stockwork calcite veining. Weakly magnetic. MagSus=20.7-34.0. Trace Py. Gradational upper contact.
379.40	457.10	SYN	MAS	2	PA		CC	CCV	1	0	Porphyritic syenite. Similar to 312.7-315.7m. Reddish-brown. Weak to moderate patchy calcitic alteration. Angular to subrounded black/dk grey xenoliths up to 3cm are common. 1% calcite veining. Weakly magnetic. MagSus=3.9-42.2. Gradational upper contact.399.7m. Tight clay slip at 30 deg tca.405.6-405.8m. 20cm syenitic intrusion at 70 deg tca.407.8-408.1m. Qtz/calcite veining with trace Py.457.0-457.1m. Syenite is bleached green.
457.10	461.90	MST	FOL					CCV	1	0	Mudstone with bands of arenite. Green. Fine to medium grained. Weakly foliated at 50 deg tca. 1% calcite veining. Non magnetic. MagSus=0.5-0.9. Generally trace Py but locally up to 3%. Sharp upper contact at 70 deg tca.459.4-459.5m. 7cm qtz/iron carbonate veining at 65 deg tca.460.0-460.05m. 4cm qtz/iron carbonate vein at 70 deg tca with 2% Py.460.05m. Possible Goldbanks Break. Chlorite/sericite slip at 70 deg tca upper contact is qtz/iron carbonate vein. Slickensides at 340 deg to long core axis.460.1-460.3m. Broken/blocky with ground up/missing core (~10-15cm).
461.90	467.60	CGT	FOL						1		Conglomerate. Green. Rounded to sub-rounded clasts (<4cm) in a fine grained groundmass. Foliated at 60-65 deg tca. Non magnetic. MagSus=0.6-0.7. Generally 1% Py but locally up to 2%. Gradational upper contact.465.9-466.3m. Bleached zone with 4cm qtz/calcite vein at 60 deg tca as upper contact.

463.90	464.90	448269	1	1	0.02
464.90	465.90	448271	1	1	0.02
465.90	466.30	448272	0.4	0	0.81
473.00	473.70	448273	0.70	0	0.02
473.70	474.10	448274	0.4	0	0.23
474.10	474.80	448275	0.7	0	0.02
478.50	479.40	448276	0.9	0	0.01
479.40	479.80	448277	0.4	0	0.01
479.80	480.50	448278	0.70	0	0.01
480.50	481.10	448279	0.60	0	0.02
481.10	481.40	448280	0.3	0	0.01
481.40	482.00	448281	0.60	0	0.01
482.00	482.90	448282	0.9	0	0.02
482.90	484.40	448283	1.5	0	0.03
484.40	485.90	448284	1.5	0	0.01
485.90	487.50	448285	1.60	0	0.01

467.60	479.40	SYN	MAS	1	P	CC	CCV	1	0	Pophyritic syenite. Reddish-grey. Feldspar phenocrysts up to 1cm in a fine to medium grained groundmass. Weak to moderate pervasive calcitic alteration. Non to weakly magnetic. MagSus=0.6-2.0. Trace Py. Sharp upper contact at 55 deg tca.473.7-474.1m. Qtz vein swarm (30-40% qtz) with veins up to 1cm wide. ~15cm lost core.478.5-479.4m. Syenite is bleached green.
479.40	482.90	GRW	MAS						0	Greywacke with mudstone horizons. Green. Fine to coarse grained. Non magnetic. MagSus=0.5-0.7. Trace Py. Sharp upper contact at 75 deg tca.479.6m. Tight clay slip at 75 deg tca.479.8m. Broad clay slip at 75 deg tca.481.1-481.2m. Qtz/sericite/chlorite veining up to 5cm wide and some folding of smaller veins.
482.90	487.50	CGT	FOL						0	Conglomerate. Green. Rounded to sub-rounded clasts (<4cm) in a fine grained groundmass. Foliated at 55-60 deg tca. Non magnetic. MagSus=0.5-0.7. Generally trace Py but locally up to 1%. Gradational upper contact.483.5-483.6m. Qtz flooding with 1% Py.
487.50	500.00	MV	MAS						0	Pillow basalt. Green. Fine grained. Massive with cooling fractures. Well-defined pillow margins and selveges. Non magnetic. MagSus=0.5-0.7. Trace Py. Sharp upper contact at 60 deg tca.500.0m. EOH.

Structure

10.90	QCV	70	7cm of vuggy qtz/iron carbonate veining.
13.60	CNT	30	Sharp contact.
17.50	F1	40	
2.20	SL	30	2mm tan sandy-clay fault/slip
3.90	FLT	15	Gritty brown clay seam.
5.00	SL	45	Gritty brown clay seam.
41.50	SL	45	Tight clay slip.
45.90	FLT	40	2mm gritty clay fault.
99.30	CNT	40	Sharp contact.
104.30	CNT	65	Sharp contact.

104.90	CNT	60	Sharp contact.
107.10	CNT	65	Sharp contact.
113.50	CNT	70	Sharp contact.
168.60	SL	50	Gritty grey clay slip.
168.70	QCV	70	6cm wide qtz/iron carbonate vein.
169.40	CNT	15	Sharp contact.
242.10	QV	50	0.5cm qtz vein
242.20	QCV	210	0.5cm qtz/iron carbonate vein
227.60	CNT	80	Sharp contact.
286.30	SL	60	Tight clay slip
286.31	CNT	60	Sharp contact.
292.80	SL	60	Tight clay slip.
292.85	FLT	60	Gritty clay fault (Oakes break).
293.50	CNT	60	Sharp contact.
302.50	CNT	40	Sharp contact.
303.00	CNT	65	Sharp contact.
308.10	CNT	60	Sharp contact.
309.80	CNT	75	Sharp contact.
312.70	CNT	30	Sharp contact.
319.20	QCCV	30	50cm qtz/calcite veining
399.70	SL	30	Tight clay slip.
407.80	QCCV	55	4cm qtz/calcite vein with trace Py.
458.60	F1	50	
459.40	QCV	65	7cm qtz/iron carbonate veining with trace to 1% Py.
460.00	QCV	70	4cm qtz/iron carbonate vein with 2% Py.
460.05	SL	70	Possible Goldbanks Break. Chlorite/sericite slip with slickensides at 340 deg to lo
465.90	QCCV	60	4cm qtz/calcite vein with trace Py.
462.10	F1	60	

464.10	F1	65	
457.10	CNT	70	Sharp contact.
467.60	CNT	55	Sharp contact.
479.40	CNT	75	Sharp contact.
479.60	SL	75	Tight clay slip.
479.80	SL	75	Broad clay slip.
481.10	QV	78	5cm qtz/sericite/chlorite vein.
483.00	F1	55	
485.20	F1	60	
487.20	F1	55	

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1160	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565165	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331205	**Start_Date:**	10/08/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	342	**Finish_Date:**	11/08/2011	☐ **Cemented**				
Azmuth:	330	**Length (m):**	131.5					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	330.60	-44.90	54,147.00	
60.00	331.10	-44.50	54,431.00	
90.00	330.60	-43.90	54,549.00	
120.00	333.00	-43.30	54,540.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	6.50	OVB											6m of casing.
6.50	37.20	ARK	MAS	1	P	HEM					0		Arkose. Purple-grey to reddish-brown. Fine to coarse grained. Massive. Weak to moderate pervasive hematitic alteration. Weak to moderate fracture-controlled bleaching. Occasional conglomerate horizons. <1% calcite veining. Weakly to strongly magnetic. MagSus=6.0-125.0. Trace Py.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448194			0.59
		448191			1.76
40.00	0.00	448201	-40		
56.00	56.50	449050	0.5	0	0.09
56.50	56.80	448184	0.3	0	1.24
56.80	57.30	449051	0.5	0	0.01
98.00	99.50	448185	1.5	0	0.01

37.20	39.00	MST	MAS	0	Mudstone. Brownish-grey. Very fine grained. Generally massive with some visible weak bedding. Weakly magnetic. MagSus=15.0-25.3. Sharp upper contact at 70 deg tca.
39.00	56.50	CGT	MAS	0	Timiskaming conglomerate. Greenish-grey. Rounded clasts (some up to 15cm wide) in a fine grained groundmass. Massive. <1% stockwork calcite veining. Weakly to moderately magnetic. MagSus=14.0-67.0. Generally trace Py but locally up to 2%. Sharp upper contact at 50 deg tca.75.8-75.9m. Localized 2% Py.
56.50	56.60	QV1		0	QV1 (target zone). 10cm qtz/iron carbonate/calcite veining at 45 deg tca with trace Py.
56.60	98.00	CGT	mas	0	Timiskaming conglomerate. Similar to 39.0-m.
98.00	117.10	CGT	fol	0	Foliated Timiskaming conglomerate (probably McIvor structure). Greenish-grey. Rounded clasts (some up to 15cm wide) in a fine grained groundmass. Weakly foliated at 35-45 deg tca. Weakly magnetic. MagSus=1.0-34.0. Trace Py but locally up to 1%. Gradational upper contact.102.5-102.6m. 10cm qtz/iron carbonate veining at 65 deg tca and 1% Py.103.9-106.3m. Clast size reduction. Cobbles replaced by medium to coarse sand sized grains.
117.10	131.50	CGT	mas	0	Timiskaming conglomerate. Similar to 39.0-98.0m. Weakly magnetic. MagSus=2.6-11.6. Trace Py. Gradational upper contact.131.5m. EOH.

99.50	101.00	448186	1.5	0	0.01
101.00	102.30	448187	1.30	0	0.01
102.30	102.60	448188	0.3	1	0.01
102.60	104.00	448189	1.40	0	0.01
104.00	105.50	448190	1.5	0	0.01
105.50	107.00	448192	1.5	0	0.01
107.00	108.50	448193	1.5	0	0.04
108.50	110.00	448195	1.5	0	0.08
110.00	111.50	448196	1.5	0	0.01
111.50	113.00	448197	1.5	0	0.01
113.00	114.50	448198	1.5	0	0.01
114.50	116.00	448199	1.5	0	0.01
116.00	117.10	448200	1.1	0	0.01

Structure

37.20	CNT	70	Sharp contact.
39.00	CNT	50	Sharp contact.
56.50	QCV	45	10cm qtz/iron carbonate/calcite vein with trace Py.
98.60	F1	40	
101.20	F1	35	
102.50	QCV	65	10cm qtz/iron carbonate vein with 1% Py.
105.00	F1	45	
111.00	F1	40	

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1161	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565625	**Claim No:**	L531976	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331475	**Start_Date:**	18/08/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	353	**Finish_Date:**	19/08/2011	☐ **Cemented**				
Azmuth:	150	**Length (m):**	77					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	148.90	-44.00	54,545.00	
60.00	150.60	-43.40	54,788.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.60	OVB											3m of casing.
2.60	22.50	CGT	MAS								0		Timiskaming conglomerate. Brownish-dark grey. Rounded clasts (some up to 15cm wide) in a fine to coarse grained groundmass. <1% iron carbonate veining and infill. Weakly to strongly magnetic. MagSus=11.7-105.1. Trace Py.
22.50	28.90	SS	MAS								0		Sandstone with conglomerate horizons. Reddish-beige. Medium to coarse grained. Massive. Weakly magnetic. MagSus=1.0-1.1. Trace Py. Sharp upper contact at 45 deg tca.25.6m. Tight clay slip at 30 deg tca.

Assay

From	To	Spl #	Len	Py %	Au PPM
		448312			0.01
		448338			0.01
		448324			0.01
		448318			1.76
25.10	25.40	448307	0.3	0	0.03
25.40	26.00	448308	0.60	0	0.03
26.00	26.50	448309	0.5	0	0.01
28.80	29.10	448310	0.30	0	0.01
29.10	30.60	448311	1.5	0	0.01

28.90	35.80	MST	BED					0		Mudstone. Green-grey to tan-brown. Fine grained. Weak bedding visible at 30-40 deg tca. Non magnetic. MagSus=0.3-0.8. Trace Py. Sharp upper contact at 15 deg tca.29.0m. Gritty clay slip at 15 deg tca.29.0-30.1m. Broken up zone with up to 40cm of missing/lost core.35.4-35.8m. Sandstone/pebbly conglomerate.
35.80	40.00	SYN	MAS					0		Syenite with augite? Brownish-red. Dark coloured subhedral phenocrysts up to 1.5cm in fine to medium groundmass. Localized brecciated zones. Non magnetic. MagSus=0.6-0.7. Trace Py. Sharp upper contact at 25 deg tca.
40.00	48.50	SS	MAS	1	PA	HEM	QV	1	0	Sandstone. Reddish-brown to tan-grey. Fine to coarse grained. Massive. Weak patchy hematitic alteration. 1% qtz veining. Non to weakly magnetic. MagSus=0.6-1.1. Trace Py. Sharp upper contact at 80 deg tca.44.5-46.5m. Blocky and broken up zone.
48.50	55.30	SYN	MAS	1	PA	HEM		0		Syenite with augite? Brownish-red. Dark coloured subhedral to euhedral phenocrysts up to 1.5cm in fine to medium groundmass. Weak patchy hematitic alteration. Localized brecciated zones. Non magnetic. MagSus=0.5-0.7. Trace Py. Sharp upper contact at 20 deg tca.53.5-55.3m. Dark phenocrysts grade out.
55.30	77.00	SS	MAS	1	FR	HEM		0		Sandstone. Reddish to tan-green. Fine to coarse sand grains. Massive. Weak to moderate fracture-controlled hematitic alteration. Non magnetic. MagSus=0.6-0.9. Trace Py. Sharp upper contact at 40 deg tca.77.0m. EOH.

30.60	32.10	448313	1.5	0	0.01
32.10	33.60	448314	1.5	0	0.01
33.60	35.00	448315	1.40	0	0.01
35.00	35.80	448316	0.8	0	0.01
35.80	36.80	448317	1	0	0.01
36.80	37.60	448319	0.8	0	0.01
37.60	38.40	448320	0.80	0	0.01
38.40	39.20	448321	0.8	0	0.01
39.20	40.00	448322	0.8	0	0.01
40.00	41.00	448323	1	0	0.01
41.00	42.50	448325	1.5	0	0.01
42.50	44.00	448326	1.5	0	0.01
44.00	45.50	448327	1.5	0	0.01
45.50	47.00	448328	1.5	0	0.03
47.00	48.50	448329	1.5	0	0.03
48.50	49.50	448330	1	0	0.11
49.50	50.50	448331	1	0	0.01
50.50	51.50	448332	1	0	0.01
51.50	52.50	448333	1	0	0.01
52.50	53.50	448334	1	0	0.01
53.50	54.50	448335	1	0	0.02
54.50	55.30	448336	0.8	0	0.02
55.30	56.00	448337	0.70	0	0.01

Structure

22.50	CNT	45	Sharp contact.
28.90	CNT	15	Sharp contact.
25.60	SL	30	Tight clay slip.
29.00	SL	15	Gritty clay slip.

35.80	CNT	25	Sharp contact.
40.00	CNT	80	Sharp contact.
48.50	CNT	20	Sharp contact.
55.30	CNT	40	Sharp contact.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG1191	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	James Suma-Momoh
NAD83E:	566682	**Claim No:**	L531983	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	CABO
NAD83N:	5330657	**Start_Date:**	20/10/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	FLEXIT	**Core Storage:**	KENOGAMI
Elevation (m):	329	**Finish_Date:**	23/04/2012	☑ **Cemented**				
Azmuth:	325	**Length (m):**	1573.6					
Dip:	-84	**Comment:**	0 - 861m drilled on Kirkland Lake Gold/Queenston JV property. 861 - 1573.6m drilled on West Kirkland Mining property. Multi-shot survey taken at every 3m from 0 - 1573.6m.					

Survey

Depth	Azmith	Dip	Mag	Comment
12.00	350.50	-84.50	56,000.00	Multi-shot survey at 0-507m, on Nov. 29, 2011
30.00	346.60	-84.60	55,750.00	
60.00	343.70	-84.40	55,720.00	
90.00	341.50	-84.00	56,170.00	
120.00	341.00	-84.00	55,920.00	
150.00	338.10	-83.90	55,920.00	
180.00	337.90	-83.30	56,020.00	
210.00	337.70	-83.50	55,950.00	
240.00	337.90	-83.30	56,020.00	
270.00	336.50	-83.30	56,040.00	
300.00	334.50	-82.80	56,240.00	
330.00	333.60	-82.60	56,030.00	
360.00	330.90	-82.50	56,140.00	
390.00	330.60	-81.80	56,220.00	

402.00	332.90	-83.00	56,450.00	
420.00	336.00	-82.60	56,440.00	
450.00	330.20	-82.30	56,160.00	
480.00	328.80	-82.50	56,280.00	
504.00	317.10	-78.80	56,700.00	
507.00	315.40	-78.30	57,830.00	Multi-shot survey at 507 - 1167m, on Feb. 17, 2012.
516.00	326.40	-78.20	5,775.00	
541.00	315.50	-77.10	5,677.00	
550.00	318.20	-76.80	5,648.00	
570.00	318.30	-76.50	5,647.00	
588.00	318.90	-76.20	5,638.00	
612.00	319.20	-76.00	5,669.00	
642.00	319.30	-75.10	56,850.00	
672.00	318.00	-74.60	56,770.00	
702.00	317.20	-74.00	56,740.00	
732.00	316.60	-73.90	5,675.00	
762.00	314.50	-72.40	5,629.00	
790.00	313.00	-72.00	5,667.00	
820.00	311.40	-71.80	5,622.00	
850.00	310.70	-71.30	5,672.00	
880.00	310.50	-70.70	5,683.00	
910.00	309.60	-70.60	5,680.00	
940.00	309.20	-70.30	5,679.00	
970.00	307.90	-69.80	5,689.00	
1,006.00	308.40	-69.30	5,681.00	
1,030.00	310.30	-68.90	56,780.00	
1,060.00	308.90	-69.00	56,910.00	

1,090.00	310.20	-68.70	57,180.00	
1,120.00	311.50	-68.30	56,510.00	
1,150.00	311.90	-68.40	57,360.00	Multi-shot survey at 1167-1573.6m on Apr. 20, 201
1,210.00	318.30	-69.10	5,769.00	
1,240.00	317.20	-66.90	5,730.00	
1,270.00	316.50	-66.50	55,110.00	
1,300.00	319.90	-66.30	55,330.00	
1,340.00	315.50	-65.60	55,510.00	
1,370.00	322.20	-65.50	5,587.00	
1,400.00	323.60	-64.70	5,928.00	
1,430.00	318.80	-63.90	5,517.00	
1,460.00	313.90	-63.50	5,658.00	
1,490.00	313.50	-63.10	5,516.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.10	OVB											3m of casing.
2.10	30.30	CGT	mas								0		Conglomerate. Rounded to subrounded polymictic clasts (including jasper) up to 4.5cm wide in a fine-grained, green groundmass. Trace py. 95-100% RQD.
30.30	39.90	SYM	mas	1	pa	hem					0		Mafic syenite. Reddish-brown; medium- to coarse-grained. Massive. Weak patchy hematitic alteration. <1% qtz/calcite veining. Weakly magnetic. MagSus=12.6-14.2. Trace py. Unit contains green-coloured xenoliths (up to ~ 8cm wide). 95 - 100% RQD. Sharp upper contact at 28 deg TCA.
39.90	70.20	CGT	mas								0		Conglomerate. Similar to 2.1 - 30.3m. 80-90% RQD. Upper cnt not preserved.39.9-42.2m. Broken up, blocky core.

Assay

From	To	Spl #	Len	Py %	Au PPM
		449067			
		449118			
		449091			
		449112			
		449094			
		449070			
		449152			
		449124			
0.00					
0.00	0.00	449052	0		
0.00	0.00	449138	0		

70.20	79.00	CGT	mas	qccv	1	0	Conglomerate. Grey-green. 15% rounded to subrounded polymictic clasts (including jasper) in a coarse sandy green groundmass. Massive. 1% qtz/calcite veining. Trace py. 95-100% RQD. Gradational upper contact.
79.00	180.60	GRW	mas			0	Greywacke. Green. Fine- to medium-grained with coarse pebbly sections. Generally massive with local fine laminations. Non- to weakly magnetic; MagSus= 0.6 - 1.9. Generally trace py; up to about 2% local py. 90 - 95% RQD. Gradational upper contact.105.0 - 106.9m: Calcite fracture-filling common.122.9 - 123.1m: 2% fine pyrite.132.7 - 132.8m: Quartz-calcite vein, 10cm wide, 60/58 deg TCA; unmineralized. 162.8 - 162.9m: Quartz-calcite vein, 5m wide, 24 deg TCA on average; trace py.172.3 - 175.6M: fractured and broken up; 70cm lost core. 2% py at 172.6 - 172.7m.
180.60	196.50	CGT	mas	qccv	1	0	Conglomerate. Green sandy groundmass; polymictic; jasper clasts present. Massive; non-mag; MagSus = 0.8 - 2.1; trace py; 1% quartz-calcite veining. Gradational upper cnt.
196.50	197.90	GRW	mas	qccv	3	0	Greywacke. Greyish-green; fine- to c-grained with coarse pebbly horizons. Similar to 79 - 180.6m. Trace py; up to 2% local py. Grad upper cnt.196.85 - 197m: with 2% fine py.189.4m: Quartz-epidote vein (5cm wide, 65 deg TCA, unmineralized).
197.90	199.50	CGT	mas			0	Conglomerate. Similar to 180.6 - 196.5m. Gradational upper cnt.
199.50	277.80	GRW	mas	qccv	1	0	Greywacke. With coarse pebbly horizons. Gradational upper cnt. 199.75 - 200m: Quartz-calcite-epidote vein (25 - 30cm wide, 30 deg TCA, with trace sulphides).
277.80	288.50	CGT	mas			0	Conglomerate. Similar to 180.6 - 196.5m. 100% RQD. Grad upper cnt.
288.50	339.60	GRW	mas			0	Greywacke. With conglomerate horizons and jsaper granules. Non-mag; MagSus = 0.6 - 0.9. 100% RQD. Grad upper cnt. 337.5 - 338.3m: blocky and broken up.

0.00	0.00	449142	0	
0.00	0.00		0	
909.60	910.60	449053	1	0
910.60	911.40	449054	0.80	1
911.40	911.70	449055	0.3	8
911.70	912.20	449056	0.5	1
912.20	913.20	449057	1	0
1,164.60	1,165.60	449058	1	0
1,165.60	1,165.90	449059	0.30	0
1,165.90	1,166.60	449060	0.7	0
1,166.60	1,167.40	449061	0.80	0
1,167.40	1,168.40	449062	1	0
1,170.90	1,171.90	449063	1	0
1,171.90	1,172.10	449064	0.2	2
1,172.10	1,173.10	449065	1	0
1,197.50	1,198.50	449066	1	0
1,198.50	1,199.90	449068	1.40	0
1,199.90	1,201.30	449069	1.40	0
1,201.30	1,202.40	449071	1.1	1
1,202.40	1,203.50	449072	1.1	2
1,203.50	1,204.50	449073	1	2
1,204.50	1,205.50	449074	1	1
1,205.50	1,206.50	449075	1	0
1,206.50	1,207.50	449076	1	0
1,259.20	1,260.20	449077	1	0
1,260.20	1,261.50	449078	1.30	1
1,261.50	1,263.00	449079	1.5	1
1,263.00	1,264.50	449080	1.5	1
1,264.50	1,266.00	449081	1.5	1

339.60	348.80	CGT	mas			0	Conglomerate. Pebbly; with jasper clasts. ~ 60% polymictic clasts present. 95 - 100% RQD. Grad upper cnt.
348.80	383.30	GRW	mas	ccv	1	0	Greywacke. With pebbly horizons. 1% calcite veining.
383.30	386.40	CGT	fol	qccv	1	0	Conglomerate. Medium green-grey; pebbly; with granular jasper clasts in a sandy matrix. Weakly to mod foliated 25 - 30 deg TCA. 1% Q-calcite veining; trace py. 100% RQD. Grad upper cnt. Sharp upper cnt at 35 deg TCA.385.5m: 4cm wide Q-calcite vein, 38 deg TCA, with trace py.
386.40	386.50	FLT				0	04 Break? 3.5cm wide gritty-clay fault at 42 deg TCA.
386.50	388.70	GRW	mas	ccv	1	0	Greywacke. With pebbly horizons; semi-massive unit; trace py; 1% calcite veining. Upper cnt marked by fracture to fault at 42 deg TCA.
388.70	390.00	CGT	mas			0	Conglomerate. 95 - 100% RQD. Grad upper cnt.
390.00	391.70	WEG					Wedge. Clapson Retrievable Wedge. 1.7m lost core.
391.70	492.00	GRW	mas	ccv	2	0	Greywacke. Medium-grey, medium-grained; fine- to medium-grained matrix; with infrequent pebbly clasts. Non-mag; MagSus = 0.6 - 0.9; trace py; 2% calcite veining; 90 - 95% RQD. Upper cnt grounded up by wedge.488.8m: 5cm wide quartz-calcite vein, 44 deg TCA, with trace py.489.5m: 7cm wide quartz-calcite vein, 60 deg TCA, with trace py.
492.00	494.80	WEG					Clapson Retrievable Wedge. 2.8m lost core.Note: 492 - 552m: many block errors. Blocks have been corrected between this interval.
494.80	500.80	GRW	mas	ccv	1	0	Greywacke. Similar to 391.7 - 492m. 100% RQD.
500.80	507.00	CGT	mas	qccv	2	1	Conglomerate. Timmiskaming. Medium grey; f- to c-grained; massive. Non-mag; MagSus = 0.6. Py is about 1% on average, varing between trace and local 2% fine dissemination. ~2% Q-iron carbonate veining. Jasper clasts present. Minor sericite and green carbonate occur. Grad upper cnt. 503.8m: 6cm wide Q iron carbonate vein; 80/85 deg TCA; with trace to 1% py.
507.00	508.90	WEG					Clapson Retrievable Wedge. No recovery; 1.9m lost core.

1,266.00	1,267.50	449082	1.5	1
1,267.50	1,268.50	449083	1	1
1,268.50	1,269.50	449084	1	2
1,269.50	1,270.30	449085	0.80	2
1,270.30	1,271.00	449086	0.7	2
1,271.00	1,272.00	449087	1	2
1,272.00	1,273.00	449088	1	2
1,273.00	1,274.00	449089	1	2
1,274.00	1,275.00	449090	1	2
1,275.00	1,276.00	449092	1	2
1,276.00	1,277.00	449093	1	2
1,277.00	1,278.00	449095	1	1
1,278.00	1,279.50	449096	1.5	0
1,279.50	1,281.00	449097	1.5	0
1,281.00	1,282.00	449098	1	0
1,282.00	1,283.00	449099	1	0
1,283.00	1,284.50	449100	1.5	0
1,291.50	1,291.80	449101	0.30	0
1,324.20	1,324.70	449102	0.5	1
1,324.70	1,325.40	449103	0.70	0
1,325.40	1,326.40	449104	1	0
1,326.40	1,326.90	449105	0.5	0
1,326.90	1,327.80	449106	0.90	0
1,327.80	1,328.70	449107	0.9	0
1,369.20	1,369.90	449108	0.70	0
1,369.90	1,370.60	449109	0.7	1
1,370.60	1,371.60	449110	1	0
1,375.90	1,376.20	449111	0.3	1
1,383.40	1,384.40	449113	1	0

508.90	520.60	GRW	mas					0		Greywacke. Medium grey; massive; medium to c-grained; conglomerate horizons occur. Non-mag; MagSus = 0.4 - 1.3. Trace py. Less than 1% calcite veining present.
520.60	530.90	CGT	mas					0		Conglomerate. Timmiskaming. Similar to 500.8 - 507m but trace py. Contains horizons of greywacke. Grad upper cnt. 529.1m: 3.5cm wide Q-calcite vein; 25 deg TCA; with trace py.
530.90	540.00	GRW	mas				ccv	1	0	Greywacke. Similar to 508.9 - 520.6m. 1% calcite veining. Trace py but locally up to ~2% mainly associated with calcite veining. Grad upper cnt.536.5 - 537m: calcite veining and fracture-filling common. ~ 2 -3% disseminated py in this interval.537.2m: 1cm wide Q-calcite vein; 20 deg TCA; with 1-2% py.
540.00	541.80	WEG								Clapson Retrievable Wedge. No recovery. 1.8m lost core.
541.80	592.10	SYN	por	1	pa	hem	qccv	1	0	Syenite. Reddish-brown; porphyritic; fine- to c-grained; weakly mag; MagSus = 1.3 - 16.4. Weak patchy hematitic alteration. Very weak patchy chloritic alt. Trace disseminated py. ~ 1 - 2% vuggy Q-calcite veining. Occasional blocky and broken up intervals. Upper cnt has been grounded up by wedge. Note: 541.8 - 552m: many block errors. Blocks have been corrected between this interval. 550.8m: 1cm wide vuggy Q-calcite vein; with trace py.553.6m: 1cm wide vuggy Q-calcite vein; with trace py.556.3m: 2cm wide Q-calcite vein; 63 deg TCA; no visible sulphide.569.6m: 2cm wide Q-calcite vein; 15 deg TCA; with trace chalcopyrite.
592.10	716.00	GRW	mas				ccv	1	0	Greywacke. Similar to 508.9 - 520.6m. Trace to local py. Non-mag; MagSus = 0.5 - 0.7. 1% calcite veining. 95 - 100% RQD. Sharp wavy upper cnt at 60 deg TCA.640.8 - 645m; 665 - 689m; 704.2 - 716m: increase in clast number and size (~ 10 - 15%, and up to 6cm wide). 4cm wide Q-calcite vein, 35 deg TCA at 647.2m; no visible sulphide. 1% py disseminated and associated with calcite vein (1cm wide, 15 deg TCA at 681m) between 680.7m and 681.1m.

1,384.40	1,385.20	449114	0.8	2
1,385.20	1,385.50	449115	0.30	0
1,385.50	1,385.80	449116	0.30	0
1,385.80	1,386.40	449117	0.6	0
1,386.40	1,387.20	449119	0.8	1
1,387.20	1,388.20	449120	1	0
1,427.10	1,428.10	449121	1	0
1,428.10	1,428.40	449122	0.30	1
1,428.40	1,429.70	449123	1.3	0
1,429.70	1,431.00	449125	1.30	0
1,431.00	1,432.40	449126	1.40	0
1,432.40	1,433.40	449127	1	0
1,442.90	1,444.40	449128	1.5	1
1,444.40	1,446.00	449129	1.6	3
1,446.00	1,447.50	449130	1.5	0
1,491.00	1,492.00	449131	1	0
1,492.00	1,493.00	449132	1	2
1,493.00	1,494.00	449133	1	2
1,494.00	1,495.00	449134	1	2
1,495.00	1,496.00	449135	1	2
1,496.00	1,497.00	449136	1	1
1,497.00	1,498.50	449137	1.5	1
1,498.50	1,500.00	449139	1.5	0
1,535.80	1,536.10	449140	0.3	0
1,536.10	1,536.50	449141	0.40	0
1,552.20	1,553.70	449143	1.5	0
1,553.70	1,555.20	449144	1.5	0
1,555.20	1,556.70	449145	1.5	1
1,556.70	1,558.20	449146	1.5	0

716.00	724.10	CGT	mas			0	Conglomerate. Medium grey matrix hosting subrounded polymictic pebbly clasts. Jasper clasts present. Non-mag; MagSus = 0.7 - 1.6. Trace py. 90 - 95% RQD. Sharp upper cnt at 28 deg TCA.723.5m: fractured at 0 deg TCA. 723.7 - 724.3m: broken up.
724.10	744.80	GRW	mas			0	Similar to 508.9 - 520.6m. 10 - 15% clasts present (up to 5cm wide). Grad upper cnt. 727.4 - 727.6m: broken up core.
744.80	750.20	CGT	mas			0	Conglomerate. Medium grey matrix. Similar to 716 - 724.1m. Non-mag; MagSus = 0.5 - 0.7. Grad upper cnt. 745m: use of 20ft core barrel begins.748 - 749.9m: 1 - 2% fine disseminated py. Broken up core at 748 - 749.2m (20cm lost core). 1cm wide calcite vein (32 deg TCA, with trace py and cp) at 749.3m.
750.20	759.00	GRW	mas			0	Greywacke. Medium grey; f- to c-grained; massive; non-mag; MagSus = 0.5 - 0.7. Occasional occurrences of conglomerate horizons. Trace py. Upper cnt marked by a 2cm wide calcite vein, 43 deg TCA.
759.00	767.60	CGT	mas			0	Conglomerate. Similar to 716 - 724.1m. Horizons of greywacke occur. Non-mag; MagSus = 0.5 - 0.7. Grad upper cnt.764.1m: 6cm Q-calcite vein, 43 deg tca; with trace py. Broken up core follows.766m: change from 20-foot core barrel to 10-foot core barrel. Drillers adjust blocks (depths) by 1 m.
767.60	772.20	FZN				0	Fault Zone. Blocky and broken up core; clay-grit-coated rock fragments. Conglomerate host rock. Series of faults and fracture present (0 - 15 deg tca). 80cm lost core. 768.4m: 1cm wide clay-grit fault, 14 deg tca.770m: 0.5cm wide clay-grit fault, 5 deg tca.771.6m: 1.5m wide clay-grit fault, 10 deg tca.
772.20	808.20	CGT	mas	qccv	1	0	Conglomerate. Similar to 716 - 724.1m. Horizons of greywacke occur. ~ 1% Q-calcite veining.789 - 790m: broken up core.797.6m: 4m Q-calcite-chlorite vein; 48 deg tca; with 1% py.

1,558.20	1,559.40	449147	1.20	0
1,559.40	1,560.40	449148	1	0
1,560.40	1,561.90	449149	1.5	1
1,561.90	1,563.40	449150	1.5	0
1,563.40	1,565.00	449151	1.6	0
1,565.00	1,566.50	449153	1.5	0
1,566.50	1,567.70	449154	1.2	0
1,567.70	1,569.00	449155	1.30	0
1,569.00	1,569.30	449156	0.30	0
1,569.30	1,570.80	449157	1.5	0
1,570.80	1,572.20	449158	1.4	0
1,572.20	1,573.60	449159	1.40	0

808.20	812.30	FZN						0	Fault Zone. Blocky and broken up interval with clay-grit faults (0 - 5 deg tca) and fractures. Trace py but locally up to ~ 5% along fracture. 42 deg tca upper fracture.808.6m: 0.5cm clay-grit fault; 3 deg tca.809.7m: 2mm clay-grit fault; 0 deg tca.810.1m: 5% py on fractured surface.810.5m: 1mm gritty-clay fault; 0 deg tca.811.5m: 0 deg tca fracture.
812.30	826.50	CGT	mas					0	Conglomerate. Similar to 716 - 724.1m. Horizons of greywacke occur. Upper cnt to fault zone not preserved. 813 - 813.5m: 5 deg tca fracture.
826.50	827.60	FZN						0	Fault Zone. Similar to 808.2 - 812.3m; only trace py present. Fault runs near parallel to the core axis, ~ 0 - 10 deg tca. About 20cm of lost core.826.8m: 0 deg tca fracture.827.1m: 2mm wide clay-grit fault at 0 deg tca.827.4m: 7 deg tca fracture.
827.60	911.40	CGT	mas					0	Conglomerate. Similar to 716 - 724.1m. Trace py. Series of fracture running about parallel to core axis. Property boundary at 861m.848 - 849.7m: blocky and fractured interval. 0 deg tca fracture. 850.3 - 852.7m: blocky and fractured interval. 0 deg tca fracture. 853.3 - 853.5m; 860.1 - 861.6m: broken up core.863.7 - 863.9m: 8cm wide calcite vein, 18 deg tca, with no visible sulphide.903.2 - 903.7m: 4cm wide calcite vein, 2 deg tca, with trace py.
911.40	911.70	CGT	mas	2	p		sil	8	Conglomerate. This interval displays moderate pervasive silica alteration that occupies only half the core length in a concave-like manner; with the trough resting on the core axis, and hosting 8 - 10% finely disseminated py that occur only in the altered portion. It appears as an injected mineralilzed fluid. Gradational upper cnt.
911.70	1,102.40	CGT	mas					0	Conglomerate. Similar to 716 - 724.1m. Trace py; 1% local py. Gradational upper cnt. 911.7 - 913m: 1% local py.961.7 - 962.9m: fracture runs near parallel to core axis at 0 - 8 deg tca.962.9 - 963.2m: 3cm wide Q calcite vein, 12 deg tca; with trace py.993.6 - 997.8m: Fracture zone. Fracture runs almost along core axis at 0 - 15 deg tca.1002.6m: 3cm wide Q-calcite vein; 13 deg tca; with trace py.

1,102.40	1,118.90	SYN	por			0	Syenite. Light brown with a purple cast. M- to c-grained; porphyritic. ~ 70 - 80 % k-feldspars; ~ 10 % plag; 5 - 10 % ferromagnesian minerals. Weak to mod (downhole) mag; MagSus = 8.2 - 66.2. Generally unaltered; only local weak patchy hematitic and chloritic alteration downhole. Trace py. Occasional mafic xenoliths present. Sharp upper cnt at approximately 48 deg tca on average.
1,118.90	1,158.90	CGT	mas			0	Conglomerate. Greenish-grey; generally pebbly and polymictic. A few boulders present (dark chocolatte-brown, up to 300mm wide). Jasper clast up to 4cm x 2cm occur. Poorly sorted unit. Non-mag; MagSus = 5.3 - 47.7. Only trace py occur. Upper cnt is sharp and marked by a 10cm wide Q-vein, 74 deg tca on average (80/68 deg tca).
1,158.90	1,198.50	GRW	mas	qccv	1	0	Greywacke. Dark grey; massive. Matrix is made up of very f- to f-grained lithified and interlocking sand-sized particles. There is local bedding, cross-bedding and development of weak foliation at 28 - 35 deg tca. Sub-angular clasts (up to 2cm x 1cm) are not uncommon. Weak to strong mag but often moderate; MagSus = 11.4 - 126.2. ~ 1 % Q-calcite veining, often flooded. Sharp upper cnt at 33 deg tca. 1165.6 - 1165.9m: 30cm Q-calcite flooding; 25/40 deg tca. No visible sulphide. 1166.6 - 1167.4m: Q-calcite flooding, similar to above; 50/42 deg tca. No visible sulphide.1172m: 1cm wide (on average) Q-calcite vein, 20 deg tca, with ~ 2% py.1181.4 - 1181.6m: 5cm wide Q-calcite vein at 1181.4m, 68/53 deg tca with trace py. The rest of the interval is flooded with Q-calcite; trace py.

1,198.50	1,206.50	SYN	mas				qv	1	1	Syenite. Light grey-brown; m- to c-grained, with a few mafic xenoliths (green-coloured; up to ~ 10cm x 5cm). Massive unit. Non-mag; MagSus = 3.6 - 5.1. Relatively unaltered but with weak patchy green carbonate alteration in places. Trace py to local 2% finely disseminated py over 1m. ~ 1% Q-veining present. Sharp upper cnt at 53 deg tca.1203.5 - 1204.4m: Q-veining common (0.5 - 3cm wide, 45 - 75 deg tca) with trace py. The host rock contains ~ 1 - 2% finely disseminated py. Q-vein (1cm wide, 50 deg tca) at 1204.3m contains ~2% biotite.
1,206.50	1,228.80	GRW	mas						0	Greywacke. Dark grey; fine- to medium-grained with some coarse pebbly clasts; massive. Weak to strong mag; MagSus = 42.8 - 119.6. This unit is similar to 1158.9 - 1198.5m. There are local reddish beds. Sharp and irregular upper cnt at 23 deg tca on average (20/26 deg tca).
1,228.80	1,230.60	GRW	mas				qcv	1	0	Greywacke. Medium grey; m-grained to a number of coarse granular clasts occur in matrix. Massive unit. Weak to mod mag; MagSus = 38.2 - 59.6. unaltered; trace py. There is about 1% Q-iron carb veining. Gradational upper cnt.
1,230.60	1,234.50	CGT	mas	1	pa	hem			0	Conglomerate. Reddish-grey/brown. The matrix is made up mainly of medium to coarse sand-sized grains hosting granular to pebbly rounded to subrounded and ellipsoidal clasts (up to 15cm x 6cm). Weak to mod mag; MagSus = 34.7 - 77.6. Trace to local 1% disseminated py. There is a general weak and patchy hematitic alt. Sharp upper cnt at 28 deg tca.
1,234.50	1,260.20	ARK	bed	1	pa	hem			0	Arkose. Medium reddish-brown to purple brown in colour; fine- to m-grained with local granullar horizons. The unit is bedded (45 - 60 deg tca) and seldom massive. Magnetism is weak; MagSus = 2.2 - 34.2. There is a weak and patchy hematitic alteration. Py is trace overall but there are local areas of 1% py over ~ 10cm. Less than 1% Q-iron carb veins (generally < 1cm wide) and stringers (often with ~ a 1cm wide brown alteration halo). Sharp upper cnt at 55 deg tca. 1234.75 - 1234.9m: broken up core.

1,260.20	1,271.00	ARK	bed	2	fr	hem	ser			1	Arkose. Displays a mod to weak brittle fracturation. Greenish-tan coloured; f- to m-grained; thinly (< or = 1mm wide) bedded at 45 deg tca. Weakly mag; MagSus = 2.1 - 4.7. The unit is characterized by a moderate fracture- and hairline-controlled hematitic alteration with a light brown to tan-coloured alteration haloes up to ~ 3cm wide. Weak hairline sericitic alt. Py varies between trace and 3% locally, and is very fine-grained, occurring mainly in narrow Q-carbonate stringers and miro-fractures. < 1% Q-carbonate veins and stringers. Grad upper cnt.1271 - 1271.7m: brecciated; tight chlorite slip (15 deg tca) with calcite in-filling at 1271.7m.
1,271.00	1,277.00	BX	bx	2	hl	ser	ank	hem		2	Brecciated Sandstone. Pale tan-green; f- to c-grained. A few granular jasper clasts present. Moderately magnetic; MagSus = 50.1 - 59.6. There's a moderate to strong hairline sericitic alt; mod iron-carbonate alteration; very weak fracture-controlled hematitic alt. 2% disseminated py cubes (up to 1mm x 1mm) but may occur up to 3 to 4% locally associated with Q-iron carbonate stringers (< 1%) and micro-fractures. Sharp irregular upper cnt at 15 deg tca. 1271 - 1271.7m: brecciation and hairline sericite run crudely parallel to core-axis.1271.7m: Possoble 05 Break. This depth is marked by a tight chloritic slip at 15 deg tca. Both sides of the slip is brittly fratured with chlorite-calcite cement.
1,277.00	1,283.00	GRW		2	fr	hem				0	Greywacke. Brownish- to reddish-grey; f- to very f-grained sandy matrix. Moderately mag; MagSus = 51.8 - 57.4. Moderate to weak fracture- and vein-controlled hematitic alt with light-grey to reddish-brown alteration haloes up to 2cm wide. Trace py. Sharp upper cnt at 18 deg tca.

1,283.00	1,294.90	GRW						0	Greywacke. Medium to dark grey; f-grained and becoming coarser downhole; calcite present in matrix. Massive and with local weak bedding at 45 deg tca. Weak to strong mag; MagSus = 45.4 - 110.7. Generally unaltered. There are horizons of weak fractures filled with calcite. Trace py. < 1% Q-calcite veining. Sharp irregular upper cnt at 28 deg tca.1283 - 1283.1m: At upper cnt, 45 deg tca bedding (2mm wide beds) is truncated. 1291.5 - 1291.7m: two Q-calcite veins (each 1cm wide; 50 and 58 deg tca, respectively) with trace to 1% py. 1291.8m: mainly fine to c-grained.
1,294.90	1,297.50	CGT	mas	1	pa	hem		0	Conglomerate. Purple-grey; granular to coarse pebble clasts hosted by a sandy matrix. Massive; mod mag; MagSus = 57 - 64.9. Weak patchy hematitic alt. Trace py. Sharp upper cnt at 35 deg tca.
1,297.50	1,300.30	GRW	mas	2	pa	hem		0	Greywacke. Light purple-grey to grey-purple. F- to m-grained; massive; weakly mag; MagSus = 28.4 -32.3. there is a mod patchy to pervasive hematitic alt. Minor calcite present in matrix. Trace py. Sharp upper cnt at 60 deg tca.
1,300.30	1,304.00	SS	mas	1	pa	hem		0	Sandstone. Purple-tan-grey to tan-coloured with the latter becoming dominant downhole (1301.7 - 1304m). F- to coarse subrounded to subangular poorly sorted sand particles make up the rock. Massive; weakly mag; MagSus = 21 - 49.6. Weak patchy hematitic alt. Trace py. Sharp upper cnt at 50 deg tca.
1,304.00	1,320.90	GRW	mas	2	pa	hem		0	Greywacke. Light greyish-purple; f- to c-grained; massive but with local bedding. Similar to 1297.5 - 1300.3m. Thin fractures show a tan-coloured alteration halo up to ~ 2cm wide. There's a mod patchy to pervasive hematitic alt. Trace py. Sharp upper cnt at 72 deg tca.

1,320.90	1,326.90	SS	mas	2	pa	hem	qccv	5	0	Sandstone. Greyish-brown to reddish-brown; medium to coarse poorly sorted sediment looking almost like a granule conglomerate. Massive unit; weakly magnetic; MagSus = 15 - 17.4. Mod patchy hematitic alt. Trace py but locally up to ~ 1% occur over 50cm. 5% Q-calcite veining (up to 15cm wide). Sharp upper cnt at 58 deg tca.1324.2 - 1324.7m: 1% local py disseminated around Q-calcite vein (15cm wide, 62/43 deg tca at 1324.5 - 1324.7m). 1325.2m:10cm wide Q-calcite vein, 50/74 deg tca; no visible sulphide. 1326.3m: 7cm wide Q-calcite vein, 80/68 deg tca; no visible sulphide.
1,326.90	1,330.00	GRW	mas				qccv	5	0	Greywacke. Medium to dark grey; f- to m-grained. A well sorted and massive unit. Mod to strong mag; MagSus = 75.2 - 141.1. Unaltered. Only trace py occur. 5% Q-calcite veining. Sharp upper cnt at 25 deg tca.1328m: 6cm wide Q-calcite vein, 50/63 deg tca; no visible sulphide. 1328.2m: 8cm wide brecciated Q-calcite vein; 52 deg tca; no visible sulphide.1328.7 - 1329.1m: blocky and broken up core.1330m: switch to 20ft core barrel.
1,330.00	1,360.70	GRW	mas						0	Greywacke. Similar to 1326.9 - 1330m but with < 1% Q-calcite veining, and interbedded with coarse sandy horizons. Gradational upper cnt.1355.5m: 10cm Q-calcite vein at 65 deg tca; trace py.
1,360.70	1,387.20	SS	bed	1	pa	hem	qv	2	0	Sandstone. Light to medium brown-grey; f- to c-grained, poorly to moderately bedded at 45 - 70 deg tca. Weak to strong mag; MagSus = 16.5 - 122.1. Local weak patchy hematitic alt; trace py overall; ~ 1% py associated with Q (+/- albite, +/- k-feldspar) veining (2%). Grad upper cnt. 1369.2 - 1370.6m: 1.5cm Q-ksp albite vein, 30 deg tca, with trace py at 1369.4m. Q-albite flooding at 1369.9 - 1370m (trace py). Brecciated at 1370 - 1370.6m with ~ 1% py, and with 0.5 - 1.5cm wide Q-albite veins (62 - 70 deg tca).1376m: 8cm Q-ksp-albite vein, 55/40 deg tca, with 1% marginal py.1384.4 - 1385.8m: Q-albite-ksp veins common. Larger veins are 3 - 10cm wide, 45 - 60 deg tca, with trace cp and trace to 2% py. Some of the smaller veins are folded.1387 - 1387.2m: similar to above but trace sulphides.

1,387.20	1,405.70	SS	bed	1	pa	hem			0	Sandstone. Light brown-grey; poorly to mod bedded at 40 - 62 deg tca; m- to c-grained sand sized particles in matrix. Weak to strong mag; MagSus = 13.8 - 151. There is local weak patchy hematitic alt; trace py and cp. < 1% Q-calcite veining. Gradational upper cnt.
1,405.70	1,410.80	GRW	mas						0	Greywacke. Medium-grey; f- to m-grained sandy particles in matrix. Massive; strongly magnetic unit; MagSus = 106.9 - 130.8. Unaltered but weak fracture-controlled hematitic alteration occur in fracture zone. Trace py. Grad upper cnt. 1406.5 - 1407.9m: fracture zone (fracture near parallel to core axis) with calcite infilling and weak hematitic alt along fracture.
1,410.80	1,423.60	SS	mas						0	Sandstone. Light brown/tan-grey; f- to coarse grained and with pebbly horizons. Generally massive and poorly sorted and pooly bedded. Mod to strong mag; MagSus = 57.5 - 207.2. Unaltered; trace py. < 1% Q-albite veins. Grad upper cnt.
1,423.60	1,428.10	GRW	mas				qv	1	0	Greywacke. Medium grey; f- to c-grained sand present in matrix. Massive; mod to strong mag; MagSus = 77 - 136.6. Unaltered; trace py but locally up to ~ 1% py and trace cp mainly associated with Q-albite veins and stringers (~ 1%). Grad upper cnt.

1,428.10	1,432.40	SYN	fol	2	pa	chl		qv	4	0	cp0	Syenite. Brownish- to pinkish-green; c-grained; moderately foliated at 30 - 35 deg tca. Weak to mod mag; MagSus = 35.6 - 83.5. Mod to strong patchy and foliation-controlled chloritic alt; there is also a pinkish-tan alteration halo (up to 20cm wide) around Q-albite veins (3%). There is trace to local 1% py and trace cp. Two generations of Q-veining (+/- albite, +/- ksp) observed: the first group of Q-veining (0.5 - 2.5cm wide, 30 - 40 deg tca) is synchronous with foliations. Later Q-veins (0.2 - 2.5cm wide, 105 - 125 deg tca) cut across all other structures and occur in an opposite direction to the general foliation. Sulphide association is difficult to determine but is sometimes seen as disseminations; sometimes in the later generation of Q-veining; and along hairline fractures running near-parallel to and against the general foliation at 60 - 70 deg tca. Sharp upper cnt at 40 deg tca.1428.1 - 1428.4m: trace py? occurring mainly along hairline fractures at 45 and 70 deg tca.1430m: Late Q-vein (0.5cm wide, 125 deg tca; with trace cp) cuts across the general foliation (30 deg tca). 1432m: late Q-vein (0.5cm wide, 105 deg tca) cross-cuts earlier Q-albite vein (0.5cm wide, 32 deg tca). No visible sulphide in veins. 1432.4m: 2.5cm wide Q-ksp vein (40 deg tca) with trace py, marks lower cnt.
1,432.40	1,444.40	GRW	mas					qv	1	0		Greywacke. Medium grey to light grey-brown; f- to c-grained; massive. Mod to strong mag. Similar to 1423.6 - 1428.1m. Trace to 1% finely disseminated py mineralization. Sharp upper cnt marked by Q-ksp vein at 40 deg tca.
1,444.40	1,446.00	II	por						3			Intermediate Intrusive? Light to mediaum-grey, m- to coarse-grained, porphyritic with coarse (up to 3mm x 5mm) subangular plagiocalse feldspar phenocrysts (20 - 25%) embedded in a medium-grained groundmass. Mod mag; MagSus = 77.2 - 95.2. Unaltered. 3% to 5% local fine py disseminations. Sharp upper cnt at 52 deg tca.

1,446.00	1,500.00	SYM	fol	1	pa	cc		0	Mafic Syenite. Medium grey-green to dark greyish-brown (downhole); medium-grained. The groundmass contains over 50% of mafic minerals (mainly amphibole, magnetite and some biotite and chlorite); moderately to weakly foliated at 35 - 54 deg tca; weak to mod mag; MagSus = 34.5 - 83.9. Weak to mod patchy calcitic alteration; some local weak foliation-controlled to patchy chloritic alt. Trace py is common but occurs in places up to ~2%. < 1% Q-calcite veining. A few f-grained, brown syenite dykes/felsic ribs occur (up to 20cm wide) with 1 to 3% fine py. Sharp upper cnt at 53 deg tca. 1446 - 1449.2m: mainly medium grey-green, with weak foliation-controlled chloritic alt. Brecciated at 1447.6 - 1447.9m. Slicken sides at 1448m, 18 deg tca.1449.2 - 1496.2m: mainly dark greyish-brown. 20cm f-grained syenite dyke with calcite vein stockwork at 1477 - 1477.2m (38/48 deg tca). 2cm wide calcite-chlorite vein (43 deg tca) with trace py at 1492.3m. 2% py disseminated and clustered within calcite blotches and veins at 1492 - 1496.2m. Tight clay slip (30 deg tca) at 1495.7m.
1,500.00	1,547.40	SYM	mas					0	Mafic Syenite. Dark greyish-brown. Weak to commonly mod mag; MagSus = 48.1 - 90.8. Similar to 1446 - 1500 but massive; generally unaltered although a weak patchy chloritic alteration is met in places; trace py. Gradational upper cnt.1535.8 - 1536.1m: 25cm Q-calcite vein (+ minor chlorite) 38/60 deg tca, with trace py.
1,547.40	1,552.20	SYM	fol					0	Mafic Syenite. Dark greyish-brown. F- to m-grained; moderately foliated at 50 - 60 deg tca. Mod mag; MagSus = 50.2 - 85.6. Generally unaltered but a weak foliation-controlled chloritic alteration develops downhole. Trace py. Gradational upper cnt. 1551.2 - 1552.2m: weak foliation-controlled chloritic alteration.

1,552.20	1,573.60	SYN	por		qv	3	0	Syenite. Brown; f- to c-grained; porphyritic (with up to 4cm x 2cm wide plagioclase phenocrysts suspended in a finer-grained groundmass). Unit is weakly magnetic; MagSus = 3.8 - 33.7. Generally unaltered. A few mafic xenoliths present (up to 4.5cm x 3cm wide). Trace to locally 2% disseminatied py mineralization. ~ 3% Quartz (+/- calcite) veining occurs (< 1mm - 4cm wide), and some have a reddish-brown alteration halo (up to ~ 1cm wide). Sharp upper cnt at 41 deg tca.1556.1 - 1556.3m: local brecciation with ~ 2% disseminated py.1559.4 - 1572.2m: Q-veining (+/- calcite, 20 - 60 deg tca) common with only local 1% py.1573.6m: EOH. Hole terminated at Property boundary.

Structure

106.50	fr	10	
132.70	qccv	59	10cm wide, 60/58 deg TCA; no sulphide.
145.70	qccv	38	7cm wide, 38 deg TCA; with chlorite.
152.70	qccv	80	3cm wide.
162.80	qccv	24	5cm wide, trace py.
199.90	qccv	30	25 - 30cm wide, with epidote and trace py.
254.30	qccv	38	4cm wide, 40/35 deg TCA; no sulphide.
260.60	qccv	44	8cm wide, 50/38 deg TCA; no sulphide.
301.50	ccv	40	1cm wide, no sulphide.
308.40	fr	5	
401.40	fr	2	
385.50	qccv	38	4cm wide; with trace py.
383.30	cnt	35	sharp
384.00	f1	25	
385.80	f1	20	
386.40	flt	42	04 Break? 3.5cm wide gritty-clay fault.
488.80	qccv	44	5cm wide, with trace py.

489.50	qccv	60	7cm wide, with trace py.
503.80	qcv	83	6cm wide; 80/85 deg TCA; with trace to 1% py.
529.10	qccv	25	3.5cm wide; 25 deg TCA; with trace py.
537.20	qccv	20	1cm wide; with 1-2% py.
550.80	qccv	43	1cm wide; vuggy, with trace py.
553.60	qccv	17	1.5cm wide; vuggy, with trace py.
556.30	qccv	63	2cm wide, no visible sulphide.
569.60	qccv	15	2cm wide; with trace cp.
592.10	cnt	60	sharp and wavy.
647.20	qccv	35	4cm wide, no visible sulphide.
681.00	ccv	15	1cm wide, with 1% py.
716.00	cnt	28	sharp
749.30	ccv	32	1cm wide, with trace py and cp.
750.20	cnt	43	marked by a 2cm wide calcite vein.
764.10	qccv	43	6m wide, trace py.
763.20	fr	12	
768.40	flt	14	1cm clay-grit fault.
770.00	flt	5	0.5cm clay-grit fault.
771.60	flt	5	1.5cm clay-grit fault.
772.40	fr	10	
773.90	fr	10	
776.90	qv	63	3cm wide, trace py.
782.20	qv	60	5cm wide, trace py.
770.80	qccv	60	10cm wide, with chl; trace py.
797.60	qccv	48	4cm wide, with chlorite; 1% py.
808.60	flt	3	0.5cm clay-grit fault.
809.70	flt	0	2mm clay-grit fault.
810.50	flt	0	1mm gritty-clay fault.

810.90	fr	15	
811.50	fr	0	
812.00	fr	0	
813.20	fr	5	
826.80	fr	0	
827.10	flt	0	
827.40	fr	7	
849.30	fr	0	
851.50	fr	0	
857.30	fr	3	
867.80	ccv	18	8cm wide, no visible sulphide.
903.50	ccv	2	4cm wide, with trace py.
962.30	fr	4	
963.10	qccv	12	3cm wide, with trace py.
997.70	fr	15	
993.60	fr	5	
995.70	fr	0	
1,002.60	qccv	13	3cm wide; with trace py.
1,102.40	cnt	48	sharp
1,118.90	qv	74	10cm wide, 80/68 deg tca; no visible sulphide.
1,119.20	qccv	43	7cm wide, 40/45 deg tca; no visible sulphide.
1,158.90	cnt	33	sharp
1,165.70	qccv	33	30cm flooding; 25/40 deg tca; no visible sulphide.
1,167.00	qccv	46	80cm flooding; 50/42 deg tca; no visible sulphide.
1,172.00	qccv	20	1cm wide, with ~ 2% py.
1,181.40	qccv	61	5cm wide, 68/53 deg tca; with trace py.
1,198.50	cnt	53	sharp
1,203.60	qv	75	1cm wide; trace py.

1,204.00	qvs	60	0.5 - 3cm wide, with trace py.
1,206.50	cnt	23	sharp and irregular at 20/26 deg tca.
1,224.70	bed	55	
1,228.30	bed	53	
1,230.60	cnt	28	sharp
1,234.50	cnt	55	sharp
1,235.50	bed	45	
1,241.00	bed	56	
1,246.60	bed	60	
1,253.90	bed	55	
1,262.60	bed	45	
1,267.30	bed	45	
1,265.30	qcv	64	3cm wide; 64/59 deg tca; no visible sulphide.
1,271.00	cnt	15	sharp and irregular
1,277.00	cnt	18	sharp
1,283.00	cnt	28	sharp and irregular.
1,291.60	qccv	58	1cm wide, with 1% py.
1,288.00	bed	45	
1,294.90	cnt	35	sharp
1,297.50	cnt	60	sharp
1,300.30	cnt	50	sharp
1,304.00	cnt	72	sharp
1,313.80	bed	55	
1,320.20	bed	55	
1,320.90	cnt	58	sharp
1,324.60	qccv	53	15cm wide; with 1% marginal py.
1,325.20	qccv	62	10cm wide, 50/74 deg tca, no visible sulphide.
1,326.30	qccv	74	7cm wide, 80/68 deg tca, no visible sulphide.

1,320.90	cnt	25	sharp
1,328.00	qccv	56	6cm wide; no visible sulphide.
1,271.70	sl	15	tight chlorite slip with marginal brittle fracturation; possible 05 Break.
1,339.10	bed	60	
1,348.40	bed	64	
1,355.50	qccv	65	10cm wide; trace py.
1,370.40	qv	70	1.5cm wide, + albite; no visible sulphide.
1,372.00	bed	68	
1,376.00	qkv	48	8cm wide, + albite; 1% marginal py.
1,384.60	qkv	52	+albite, 10cm wide; 55/48 deg tca; 1 - 2% py.
1,384.80	qkv	60	+ albite, 9cm wide, 60 deg tca; 1% py, trace cp.
1,385.10	qkv	49	+albite, 5cm wide, 53/45 deg tca; 2% py, trace cp.
1,387.00	qkv	45	+albite, 10cm wide, 55/35 deg tca; trace py.
1,380.20	bed	45	
1,383.00	bed	60	
1,387.50	bed	60	
1,390.60	bed	53	
1,396.80	bed	40	
1,400.20	bed	53	
1,407.20	fr	2	
1,428.10	cnt	40	sharp
1,428.40	f1	35	
1,430.00	f1	30	
1,430.10	qv	125	0.5cm wide; with trace cp
1,431.00	f1	33	
1,431.10	qv	115	2.5cm wide, no visible sulphide
1,432.00	qv	32	+albite, 0.5cm wide; no visible sulphide.
1,432.10	qv	105	+albite, 0.5cm wide, no visible sulphide.

1,432.40	cnt	40	marked by 2.5cm wide Q-ksp vein, with trace py.
1,433.00	qv	50	+albite, 3cm wide, with trace py.
1,444.40	cnt	52	sharp
1,446.00	cnt	53	sharp
1,448.00	f1	42	
1,451.00	f1	54	
1,452.60	qccv	60	2.5cm wide, no visible sulphide.
1,457.00	f1	52	
1,461.50	f1	46	
1,464.40	f1	40	
1,468.70	f1	40	
1,472.60	f1	35	
1,482.50	f1	45	
1,491.40	f1	35	
1,536.00	qccv	49	25cm wide; 38/60 deg tca. Trace py.
1,548.50	f1	60	
1,551.40	f1	50	
1,552.90	cnt	41	sharp
1,559.10	qv	60	3cm wide, no visible sulphide.
1,561.30	qvs	50	<1mm - 2cm wide; up to 1% local py.
1,569.20	qccv	60	4cm wide, with minor chlorite and trace cp.
1,570.90	qccv	20	2cm wide, with minor chlorite and trace py.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG11100	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565222	**Claim No:**	L531976	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331210	**Start_Date:**	08/11/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	337	**Finish_Date:**	09/11/2011	☐ **Cemented**				
Azmuth:	335	**Length (m):**	152					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	337.10	-44.70	54,466.00	
60.00	337.10	-44.40	53,828.00	
90.00	336.80	-43.90	53,929.00	
120.00	337.20	-43.60	53,984.00	
150.00	337.40	-43.20	53,973.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	5.00	OVB											6m of casing.
5.00	13.90	CGT	mas								0		Timiskaming conglomerate. Greenish-grey. Rounded to subrounded cobble to pebble sized clasts (including jasper) in a fine grained groundmass (minor localized calcite infill). Weakly magnetic. MagSus=21.1-40.8. Trace py.

Assay

From	To	Spl #	Len	Py %	Au PPM
		296867			0.01
		296852			0.01
14.20	15.30	296851	1.1	0	0.01
15.30	15.90	296853	0.6	0	0.01
26.30	27.50	296854	1.20	0	0.02
27.50	28.40	296855	0.9	0	0.01

13.90	17.60	SLT	bed	1	fr	ank	qcv	1	0	Siltstone. Greenish-tan. Fine grained with localized conglomerate horizons up to 30cm wide. Weakly bedded. Weak fracture-controlled iron carbonate alteration. 1% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.7-1.5. Trace py but locally up to 1%. Sharp upper contact at 60 deg tca.15.3-15.8m. Qtz/iron carbonate vein set up to 2 cm wide at 55 deg tca with trace py.
17.60	19.50	CGT	mas	1	pa	hem			0	Conglomerate. Reddish-brown. Rounded pebble sized clasts in a fine grained groundmass. Weak patchy hematitic alteration. Non to weakly magnetic. MagSus=0.8-1.8. Trace py. Sharp upper contact at 65 deg tca.
19.50	20.40	SLT	bed						0	Siltstone. Similar to 13.9-17.6m without the veining. Non to weakly magnetic. MagSus=0.9-1.5. Sharp upper contact at 55 deg tca.
20.40	24.50	CGT	mas	1	pa	hem			0	Timiskaming conglomerate. Reddish-green. Rounded cobble to pebble sized clasts in a fine grained groundmass. Weak patchy hematitic alteration. Weakly magnetic. MagSus=2.5-78.1. Trace py. Sharp upper contact at 55 deg tca. 23.5-24.1m. Reduction in occurrence of clasts to <5%.
24.50	27.50	ARK	mas	1	pa	hem	qcv	1	0	Arkose. Greenish-red to maroon. Fine to coarse grained. Massive but semi-brecciated due to fault zone down hole. Weak patchy hematitic alteration. 1% qtz/iron carbonate veining at 25-40 and 240-245 deg tca. Non to weakly magnetic. 0.8-8.2. Trace py. Gradational upper contact.
27.50	28.40	FZN		2	fr	ank	qccv	1	0	Fault zone in arkose. Sub-parallel slips. Rusty brown. Fine to coarse grained. Moderate fracture-controlled iron carbonate alteration. 1% qtz/calcite veining (some vuggy). Weakly magnetic. MagSus=4.8-5.9. Trace py. Upper contact marked by tight slip at 5 deg tca.27.6m. Tight slip at 5 deg tca.28.2m. Tight slip at 5-10 deg tca.

28.40	29.60	296856	1.20	0	0.01
40.00	0.00		-40		
45.80	46.50	296857	0.70	0	0.01
72.70	73.00	296868	0.30	0	0.01
107.70	108.70	296858	1	0	0.01
108.70	109.70	296859	1	0	0.01
109.70	110.70	296860	1	0	0.01
110.70	112.10	296861	1.40	0	0.01
124.60	124.80	296862	0.20	0	0.14
137.20	137.50	296863	0.30	0	0.01
146.50	147.50	296864	1	0	0.01
147.50	148.50	296865	1	0	0.24
148.50	149.50	296866	1	0	0.01

28.40	29.60	ARK	mas	1	pa	hem	qcv	1	0	Arkose. Reddish-maroon. Fine to coarse grained. Massive. Weak patchy hematitic alteration. 1% qtz/iron carbonate stockwork veining. Moderately magnetic. MagSus=59.0-63.3. Trace py. Upper contact marked by tight slip at 5-10 deg tca.
29.60	30.20	SS	mas	1	fr	ank			0	Sandstone. Dark grey to rusty brown. Medium to coarse grained. Massive. Weak to moderate fracture-controlled iron carbonate alteration. Moderately magnetic. MagSus=84.9-95.4. Trace py. Sharp upper contact at 55 deg tca.
30.20	34.00	ARK	mas	1	fr	ank	qcv	1	0	Arkose. Reddish-grey. Fine to coarse grained. Massive. Weak fractureand vein-controlled iron carbonate alteration. Weakly magneitc. MagSus=19.7-27.3. Trace py. Sharp upper contact at 55 deg tca.30.9m. 1cm wide brecciated qtz/iron carbonate vein at 50 deg tca with trace py.
34.00	44.00	SS	mas	1	pa	hem	qcv	1	0	Sandstone. Dark grey with reddish patches. Coarse grained. Semi-massive. Weak patchy hematitic alteration. 1% qtz/iron carbonate veining. Strongly magnetic. MagSus=154.9-190.5. Trace py. Gradational upper contact.42.9-44.0m. Moderate bedding at 50 deg tca.
44.00	50.90	ARK	mas	1	fr	hem	ccv	1	0	Arkose. Reddish-maroon. Fine to coarse grained. Massive. Weak fracture-controlled hematitic alteration. 1% calcite veining. Weakly magnetic. MagSus=1.1-34.9. Trace py. Sharp upper contact at 60 deg tca.45.8-46.5m. 0.5cm wide qtz/iron carbonate vein at 10 deg tca with trace cpy (and galena?).
50.90	56.70	SS	mas						0	Sandstone. Lavender. Fine to coarse grained. Massive. Weakly magnetic. MagSus=1.3-3.0. Trace py. Gradational upper contact.
56.70	57.50	ARK	mas	1	fr	hem			0	Arkose. Similar to 44.0-50.9m. No veining. Sharp upper contact at 70 deg tca.
57.50	57.90	SS	mas						0	Sandstone. Similar to 50.9-56.7m. Gradational upper contact.

57.90	61.00	CGT	mas						0	Timiskaming conglomerate. Reddish-grey. Rounded cobble to pebble sized clasts in a coarse grained groundmass. Weakly magnetic. MagSus=5.4-10.9. Trace py. Gradational upper contact.
61.00	63.20	ARK	mas	2	pa	hem	qccv	2	0	Arkose. Red. Coarse grained. Massive. Moderate patchy hematitic alteration. 2% qtz/calcite veining at 45-55 and 200-210 deg tca. Weakly magnetic. MagSus=2.1-3.0. Trace py. Gradational upper contact.
63.20	65.30	SS	mas	1	pa	hem			0	Sandstone. Grey with a pinkish hue. Coarse grained. Weak patchy hematitic alteration. Weakly magnetic. MagSus=13.4-13.9. Trace py. Gradational upper contact.
65.30	68.50	SLT	bed						0	Siltstone. Green to brown/green. Fine grained. Weak bedding at 70 deg tca. Weakly magnetic. MagSus=7.7-11.7. Trace py. Sharp upper contact at 65 deg tca.
68.50	70.10	CGT	mas						0	Timiskaming conglomerate. Greenish-grey. Rounded to subrounded boulder to pebble sized clasts (including jasper) in a fine grained groundmass. Massive. Weakly magnetic. MagSus=23.5-27.6. Trace py. Gradational upper contact.
70.10	71.70	SS	bed						0	Sandstone. Medium to coarse grained. Brown. Weak bedding at 60-70 deg tca. Weakly to strongly magnetic. MagSus=24.3-149.2. Trace py. Gradational upper contact.
71.70	133.10	CGT	mas						0	Timiskaming conglomerate. Greenish-grey. Rounded to subrounded boulder to pebble sized clasts (including jasper) in a fine grained groundmass (minor localized calcite infill). Massive. <1% qtz/calcite veining. Weakly magnetic. MagSus=2.8-62.4. Trace py. Gradational upper contact.107.7-109.2m. 3% qtz/calcite veining up to 3cm wide and trace py.
133.10	134.50	CGT	fol						0	Foliated Timiskaming conglomerate. Greenish-grey. Rounded to subrounded boulder to pebble sized clasts (including jasper) in a fine grained groundmass (minor localized calcite infill). Weakly to moderately foliated at 45-50 deg tca. Weakly magnetic. MagSus=24.1-40.3. Trace py. Gradational upper contact.

134.50	141.30	GRW	fol		qccv	1	0	Greywacke. Green/grey. Medium to coarse grained with occasional pebbly horizons. Weakly foliated at 50-60 deg tca. 1% qtz/calcite veining. Non to weakly magnetic. MagSus=0.4-1.0. Trace py. Sharp upper contact at 30 deg tca.137.2-137.5m. Qtz/calcite +/- chlorite veining up to 2cm wide at 30-55 deg tca with trace py.
141.30	147.50	CGT	fol				0	Foliated Timiskaming conglomerate. Similar to 133.1-134.5m. Moderately foliated at 40-45 deg tca. Weakly magnetic. MagSus=6.7-8.3. Gradational upper contact
147.50	148.50	QV1	fol		qcv	40	0	QV1 (target zone). Qtz/iron carbonate stockwork veining (40%) up to 25cm wide in foliated conglomerate host rock. Non to weakly magnetic. MagSus=0.4-5.9. Trace py. Sharp upper contact at 55 deg tca marked by 5cm wide qtz vein.
148.50	152.00	CGT	fol				0	Foliated Timiskaming conglomerate. Similar to 141.3-147.5m. Moderately foliated at 45 deg tca. Weakly magnetic. MagSus=5.8-10.8. Gradational upper contact.152.0m. EOH.

Structure

13.90	cnt	60	Sharp contact.
17.60	cnt	65	Sharp contact.
19.50	cnt	55	Sharp contact.
15.60	qcvs	55	Qtz/iron carbonate vein set up to 2 cm wide at 55 deg tca with trace py.
20.40	cnt	55	Sharp contact.
27.60	sl	5	Tight slip at 5 deg tca.
28.20	sl	8	Tight slip at 5-10 deg tca.
29.60	cnt	55	Sharp contact.
30.20	cnt	55	Sharp contact.
30.90	qcv	50	1cm wide brecciated qtz/iron carbonate vein at 50 deg tca with trace py.
46.20	qcv	10	0.5cm wide qtz/iron carbonate vein at 10 deg tca with trace cpy (and galena?).
56.70	cnt	70	Sharp contact.

65.30	cnt	65	Sharp contact.
109.20	qccv	50	3cm wide qtz/calcite vein with trace py.
133.50	f1	50	
134.30	f1	45	
134.50	cnt	30	Sharp contact.
136.00	f1	50	
139.20	f1	60	
137.30	qccv	55	Qtz/calcite vein up to 2cm wide at 55 deg tca with trace py.
142.00	f1	45	
145.00	f1	40	
147.00	f1	40	
148.20	qcv	48	25cm qtz/iron carbonate vein at 60/35 deg tca with trace py.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG11101	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565185	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331170	**Start_Date:**	09/11/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	338	**Finish_Date:**	10/11/2011	☐ **Cemented**				
Azmuth:	335	**Length (m):**	176					
Dip:	-56	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
14.00	334.90	-54.90	55,165.00	
30.00	337.40	-54.70	54,990.00	
60.00	333.70	-54.70	53,052.00	
90.00	335.00	-54.70	54,407.00	
120.00	335.40	-54.70	53,797.00	
150.00	334.60	-54.20	54,091.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	3.80	OVB											4.5m of casing.
3.80	7.60	CGT	mas								0		Timiskaming conglomerate. Green/grey. Rounded to subrounded boulder to pebble sized clasts in a fine grained groundmass with localized sandstone horizons. Weakly magnetic. MagSus=1.9-30.3. Trace py.

Assay

From	To	Spl #	Len	Py %	Au PPM
		296870			0.01
7.60	8.20	296869	0.6	0	0.01
8.20	9.50	296871	1.3	0	0.01
9.50	11.00	296872	1.5	0	0.01
11.00	12.30	296873	1.3	0	0.01

7.60	15.20	SYN	mas	1	pa	hem	qcv	3	0	Syenite. Reddish to reddish-tan. Medium to coarse grained. Massive. Weak patchy hematitic alteration. 3% qtz/iron carbonate veining. Non magnetic. MagSus=0.4-0.5. Trace py. Upper contact marked by qtz/iron carbonate vein but contact not preserved.7.6-7.7m. 9cm qtz/iron carbonate vein with broken upper and lower contacts and trace py.12.7-12.8m. 5cm (average) qtz/iron carbonate vein at 55 deg tca with trace py.13.6-13.9m. Brecciated syenite.
15.20	39.70	SLT	bed	1	pa	hem	ccv	1	0	Siltstone with localized arkosic and conglomeratic horizons. Grey-green to maroon. Fine to coarse grained. Generally weak to moderate bedding at 65-70 deg tca with localized massive sections. Weak patchy hematitic alteration. 1% calcite veining. Weakly magnetic. MagSus=2.2-45.8. Trace py. Sharp upper contact at 55 deg tca.29.3-29.5m. 20cm wide diabase dike at 20/40 deg tca.29.8m. 3cm wide diabase dike at 40/45 deg tca. 29.9m. 3cm wide diabase dike at 55/45 deg tca.
39.70	62.90	ARK	mas	1	pa	hem	qcv	1	0	Arkose with greywacke horizons. Grey to maroon. Fine to coarse grained. Weak patchy hematitic alteration. 1% qtz/iron carbonate veining. Weakly to strongly magnetic. MagSus=48.2-107.3. Trace py. Sharp upper contact at 55 deg tca.44.3m. Brecciated 12cm qtz/iron carbonate vein at 45/50 deg tca with trace py.44.5m. 5cm qtz/iron carbonate vein at 55 deg tca with trace py.
62.90	82.90	ARK	mas	2	pa	hem	qcv	1	0	Arkose with localized conglomerate horizons. Maroon-tan to red. Fine to coarse grained. Moderate to strong patchy to pervasive hematitic alteration. 1% qtz/iron carbonate veining. Weakly magnetic. MagSus=2.2-29.1. Generally trace py but locally up to 1%. Gradational upper contact.78.8-81.4m. Moderate to strong pervasive hematitic alteration with up to 1% py.
82.90	85.90	SLT	mas	1	fr	ank	qcv	1	0	Siltstone. Green. Very fine grained. Massive. Weak fracture-controlled iron carbonate alteration. 1% qtz/iron carbonate veining. Weakly magnetic. MagSus=5.4-24.3. Trace py. Sharp upper contact at 70 deg tca.

12.30	12.80	296874	0.5	0	0.01
12.80	13.60	296875	0.80	0	0.01
13.60	13.90	296876	0.3	0	0.01
13.90	15.20	296877	1.3	0	0.01
44.20	44.60	296878	0.4	0	0.08
121.20	121.70	296879	0.5	0	0.01
121.70	122.00	296880	0.30	0	1.21
122.00	122.70	296881	0.7	0	0.01
122.70	123.00	296882	0.30	0	0.01
155.30	155.80	296883	0.5	0	0.01

85.90	121.80	CGT	mas	1	pa	hem			0	Timiskaming conglomerate. Greenish-grey with reddish patches. Rounded to subrounded boulder to pebble sized clasts in a fine grained groundmass. Massive. Weak patchy hematitic alteration. <1% qtz/iron carbonate +/- calcite veining. Weakly to moderately magnetic. MagSus=3.1-86.6. Trace py. Sharp upper contact at 45 deg tca.
121.80	121.90	QV1					qv	50	0	QV1 (target zone). 6cm wide brecciated qtz/iron carbonate/calcite vein at 45/55 deg tca with a tight chlorite clay slip as lower contact at 55 deg tca.121.9m. Tight chlorite clay slip at 55 deg tca.
121.90	149.00	CGT	mas	1	pa	hem			0	Timiskaming conglomerate. Similar to 85.9-121.8m. Upper contact marked by tight chlorite clay slip at 55 deg tca. 122.9m. 1cm wide qtz/iron carbonate/calcite vein at 50/60 deg tca with tight slips forming upper and lower contacts.
149.00	155.30	CGT	fol						0	Timiskaming conglomerate. Similar to 85.9-121.8m. Weak foliation at 35-40 deg tca. Weakly magnetic. MagSus=16.1-45.7. Gradational upper contact.
155.30	161.40	GRW	mas				qcv	1	0	Greywacke with minor siltstone horizons. Green-grey. Fine to coarse grained with occasional large clasts up to 10cm wide. Massive. 1% qtz/iron carbonate veining. Weakly magnetic. MagSus=4.2-4.4. Trace py. Sharp upper contact at 55 deg tca.155.5-155.6m. ~10cm wide gritty clay fault at 70 deg tca with tight gritty clay slips at 155.55 and 155.6 at 55 deg tca.155.6-155.7m. 10cm wide qtz/iron carbonate vein at 65/60 deg tca with trace py.155.7m. Possible fault. Highly fractured clay coated core with possible contacts at 60/55 deg tca.
161.40	176.00	CGT	mas						0	Timiskaming conglomerate. Similar to 149.0-155.3m. Weak foliation at 35-40 deg tca. Weakly magnetic. MagSus=3.5-26.7. Gradational upper contact.176.0m. EOH.

Structure

12.70	qcv	55	5cm (average) qtz/iron carbonate vein at 55 deg tca with trace py.
15.20	cnt	65	Sharp contact.
39.70	cnt	55	Sharp contact.
44.30	qcv	48	Brecciated 12cm qtz/iron carbonate vein at 45/50 deg tca with trace py.
44.50	qcv	55	5cm qtz/iron carbonate vein at 55 deg tca with trace py.
82.90	cnt	70	Sharp contact.
85.90	cnt	45	Sharp contact.
121.80	qcv	50	6cm wide brecciated qtz/iron carbonate/calcite vein at 45/55 deg tca with a tight
122.90	qcv	55	1cm wide qtz/iron carbonate/calcite vein at 50/60 deg tca with tight slips formin
150.50	f1	35	
153.00	f1	40	
155.30	cnt	55	Sharp contact.
155.50	flt	70	~10cm wide gritty clay fault at 70 deg tca with tight gritty clay slips at 155.55 and
155.60	qcv	62	10cm wide qtz/iron carbonate vein at 65/60 deg tca with trace py.
155.70	flt	58	Possible fault. Highly fractured clay coated core with possible contacts at 60/55
164.70	f1	40	
167.20	f1	35	
173.20	f1	35	

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG11102	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565130	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331168	**Start_Date:**	10/11/2011	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	341	**Finish_Date:**	11/11/2011	☐ **Cemented**				
Azmuth:	335	**Length (m):**	143					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	335.00	-44.50	53,839.00	
60.00	335.00	-43.80	54,283.00	
90.00	336.00	-43.40	54,223.00	
120.00	336.70	-41.50	54,125.00	
143.00	337.40	-41.20	54,802.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	7.00	OVB											7.5m of casing.

Assay

From	To	Spl #	Len	Py %	Au PPM
		296891			5.92
48.60	49.10	296884	0.5	0	0.37
49.10	49.40	296885	0.30	0	11.8
49.40	49.90	296886	0.5	0	0.13
103.80	104.80	296887	1	0	0.01
104.80	105.20	296888	0.4	0	1.28

7.00	44.20	ARK	mas	1	pa	hem			0	Arkose with localized sections of siltstone and conglomerate. Brownish/reddish-maroon. Arkose varies from fine to coarse grained. Massive with localized weak bedding. Weak patchy to fracture-controlled hematitic alteration. Weakly to strongly magnetic. MagSus=1.3-159.6. Trace py.35.1-35.5m. Conglomerate horizon. 41.8-43.9m. Green siltstone horizon.
44.20	49.10	CGT	mas						0	Timiskaming conglomerate. Green/grey. Rounded to sub-rounded boulder to pebble sized clasts in a fine grained groundmass with localized sandstone horizons. Massive. <1% qtz/calcite veining. Weakly to moderately magnetic. MagSus=1.6-89.5. Trace py. Sharp irregular upper contact.
49.10	49.30	QV1					qv	75	0	QV1 (target zone). 15cm wide qtz vein at 55 deg tca with trace py.49.3m. 0.4cm wide gritty clay slip at 75 deg tca.
49.30	103.30	CGT	mas						0	Timiskaming conglomerate. Similar to 44.2-49.1m. Upper contact marked by gritty clay slip at 75 deg tca.84.6m. 1cm wide qtz/calcite vein at 5 deg tca with trace py.
103.30	108.60	SS	mas				qcv	4	0	Sandstone. Light brownish-green. Fine to coarse grained. Massive. 4% qtz/iron carbonate veining. Weakly magnetic. MagSus=2.3-3.1. Trace py. Gradational upper contact.105.0-105.1m. 13cm wide qtz/iron carbonate veining at ~35 deg tca with trace py.
108.60	137.60	CGT	fol						0	Timiskaming conglomerate. Similar to 44.2-103.3m. Weak to moderate foliation at 40-55 deg tca. Weakly magnetic. MagSus=2.9-9.9. Trace py. Gradational upper contact.108.8-109.4m. Highly fractured section with common slips at 35-40 deg tca. 108.8m. 2mm wide gritty clay slip at 35 deg tca.109.1m? Tight clay slip at 40 deg tca.
137.60	143.00	DB	mas						0	Diabase. Dark grey/black. Fine to medium grained. Massive. Moderately magnetic. MagSus=55.0-57.8. Trace py. Sharp undulating sub-parallel contact at an average angle of 5 deg tca over 1m.143.0m. EOH.

105.20	106.20	296889	1	0	0.04
108.80	109.40	296890	0.6	0	0.01

Structure

49.20	qv	55	15cm wide qtz vein at 55 deg tca with trace py.
49.30	sl	75	0.4cm wide gritty clay slip at 75 deg tca.
84.60	qccv	5	1cm wide qtz/calcite vein at 5 deg tca with trace py.
105.00	qcv	35	13cm wide qtz/iron carbonate veining at ~35 deg tca with trace py.
105.60	qcv	70	2cm wide qtz/iron carbonate vein at 70 deg tca with trace py.
108.80	sl	35	2mm wide gritty clay slip at 35 deg tca.
137.60	cnt	5	Sharp undulating sub-parallel contact.
110.20	f1	50	
114.00	f1	45	
118.40	f1	50	
121.50	f1	40	
127.20	f1	55	
131.30	f1	45	
134.30	f1	45	

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG12111	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565225	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331300	**Start_Date:**	11/01/2012	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	351	**Finish_Date:**	12/01/2012	☐ **Cemented**				
Azmuth:	335	**Length (m):**	137					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	336.50	-51.90	5,969.00	
60.00	331.90	-43.90	5,530.00	
90.00	334.10	-43.60	5,461.00	
120.00	336.90	-43.10	5,537.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.90	OVB											3m of casing.
2.90	23.00	CGT	mas								0		Temiskaming conglomerate. Greenish-grey. Round to sub-rounded clasts up to 12cm wide in a fine grained groundmass. Semi-massive with localized weak foliation at 32-45 deg tca. <1% calcite veining. Weakly magnetic. MagSus=17.2-30.0. Trace py.12.4-23.0m. Weak foliation at 32-45 deg tca.

Assay

From	To	Spl #	Len	Py %	Au PPM
		297924			0.01
		297912			0.01
		297918			4.11
23.50	24.00	297903	0.5	0	0.07
24.00	24.10	297904	0.10	0	0.26
24.10	24.60	297905	0.5	0	0.01
24.60	25.90	297906	1.3	0	0.01

23.00	27.40	GRW	mas				qcv	2	0	Greywacke. Greenish-grey. Very fine to coarse grained. Massive. 2% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.5-3.3. Trace py. Gradational upper contact. 24.0-24.1m. 10cm wide qtz/iron carbonate vein at 55/65 deg tca with no visible sulphides.24.1m. 1-2mm wide gritty clay slip at 65 deg tca.25.9m. 1cm wide gritty clay fault at 55 deg tca with a 1cm wide qtz vein at lower contact.
27.40	118.20	CGT	mas						0	Timiskaming conglomerate with jasper clasts up to 2x6cm. Greenish-grey. Round to sub-rounded clasts up to 12cm wide in a fine grained groundmass. Semi-massive with weak foliation at 40-50 deg tca. <1% qtz/calcite veining. Weakly moderately magnetic. MagSus=1.1-71.4. Trace py. Gradational upper contact.44.9-45.1m. 14cm wide qtz/calcite vein with minor chlorite at 85/60 deg tca with trace py.86.9-87.3m. Qtz/iron carbonate cement with a 5x2cm blotch of py.105.3m. Tight gritty clay slip at 25 deg tca.
118.20	120.60	SS	mas				qccv	2	0	Sandstone. Greenish to reddish brown. Fine to medium grained with a few coarse clasts up to 5x3cm. Massive. 2% qtz/calcite +/- iron carbonate veining. Weakly magnetic. MagSus=1.7-32.5. Generally trace py but locally up to 2%. Sharp upper contact at 75 deg tca.118.2-118.8m. Localized 2% finely disseminated py.118.7m. 3cm qtz/calcite vein with minor sericite at 45 deg tca with trace py.
120.60	121.50	SLT	fol	1	fol	chl	qcv	2	1	Siltstone with broken blocky sections. Grey-green. Fine grained. Moderate foliation at 40-50 deg tca. Weak foliation-controlled chloritic alteration. 2% qtz/iron carbonate +/- calcite veining. Weakly magnetic. MagSus=6.6-14.6. Generally 1% py but locally up to 2%. Gradational upper contact. 120.7m. 6cm wide qtz/iron carbonate + calcite vein at 55 deg tca with trace py.

25.90	26.00	297907	0.10	0	0.05
26.00	26.50	297908	0.5	0	0.03
26.50	28.00	297909	1.5	0	0.01
28.00	29.40	297910	1.4	0	0.02
29.40	29.50	297911	0.10	0	0.26
29.50	30.50	297913	1	0	0.01
44.40	44.90	297914	0.5	0	0.01
44.90	45.10	297915	0.2	0	0.01
45.10	45.60	297916	0.5	0	0.01
117.20	118.20	297917	1	0	0.01
118.20	118.80	297919	0.60	2	0.01
118.80	119.70	297920	0.9	0	0.01
119.70	120.60	297921	0.90	0	0.01
120.60	120.90	297922	0.30	0	0.02
120.90	121.50	297923	0.6	1	0.02
121.50	121.90	297925	0.40	1	0.01
121.90	122.00	297926	0.1	0	0.06
122.00	122.50	297927	0.5	0	0.01
128.80	129.80	297928	1	0	0.01
129.80	130.80	297929	1	0	0.01
130.80	131.70	297930	0.9	0	0.01

121.50	122.00	QV1	mas					qcv	2	1	QV1 (target zone). 2-3mm wide gritty clay slip forms upper contact followed by qtz/iron carbonate vein set then a 10cm wide qtz/iron carbonate vein at 55/60 deg tca with trace py.121.5m. 2-3mm wide gritty clay slip at 45 deg tca.121.5-121.9m. Qtz/iron carbonate vein set <1-4mm wide at 28-30 deg tca with 1-2% py.121.9-122.0m. 10cm wide qtz/iron carbonate vein at 55/60 deg tca with trace py.
122.00	128.80	SS	mas					qccv	2	0	Sandstone. Similar to 118.2-120.6m. Weakly to moderately magnetic. MagSus=18.5-69.4. Sharp upper contact at 60 deg tca.
128.80	131.70	SYM	fol	2	p	cc	chl			0	Porphyritic mafic syenite with the presence of biotite (increases down hole). Pinkish-grey. Medium to coarse grained. Weakly foliated at 40-45 deg tca. Moderate pervasive calcitic alteration. Weak patchy chloritic alteration. <1% calcite veining. Moderately to strongly magnetic. MagSus=64.2-133.2. Trace py. Sharp upper contact at 63 deg tca.
131.70	137.00	SS	mas					qccv	1	0	Sandstone. Similar to 122.0-128.8m. Sharp upper contact at 63 deg tca.137.0m. EOH.

Structure

14.00	f1	32	
17.00	f1	40	
20.00	f1	43	
24.00	qcv	60	10cm wide qtz/iron carbonate vein at 55/65 deg tca with no visible sulphides.
24.10	sl	65	1-2mm wide gritty clay slip at 65 deg tca.
25.90	flt	55	1cm wide gritty clay fault at 55 deg tca with a 1cm wide qtz vein at lower contact
32.00	f1	43	
41.00	f1	40	
45.00	qcv	73	14cm wide qtz/calcite vein with minor chlorite at 85/60 deg tca with trace py.
53.00	f1	50	
105.30	sl	25	Tight gritty clay slip.
118.20	cnt	75	Sharp contact.

118.70	qccv	45	3cm qtz/calcite vein with minor sericite at 45 deg tca with trace py.
120.70	qcv	55	6cm wide qtz/iron carbonate + calcite vein at 55 deg tca with trace py.
121.50	sl	45	2-3mm wide gritty clay slip at 45 deg tca.
121.70	qcvs	29	Qtz/iron carbonate vein set <1-4mm wide at 28-30 deg tca with 1-2% py.
121.90	qcv	58	10cm wide qtz/iron carbonate vein at 55/60 deg tca with trace py.
122.00	cnt	60	Sharp contact.
128.80	cnt	63	Sharp contact.
131.70	cnt	63	Sharp contact.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG12112	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565227	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331106	**Start_Date:**	12/01/2012	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	340	**Finish_Date:**	16/01/2012	☐ **Cemented**				
Azmuth:	335	**Length (m):**	338					
Dip:	-65	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	334.70	-67.50	5,554.00	
60.00	337.50	-67.40	5,460.00	
90.00	333.20	-66.50	5,515.00	
120.00	342.50	-66.70	5,515.00	questionable azimuth
150.00	336.50	-66.50	5,288.00	
180.00	334.90	-66.10	5,565.00	
210.00	336.70	-65.60	5,475.00	
240.00	334.20	-65.30	5,541.00	
270.00	337.80	-64.90	5,559.00	
300.00	338.90	-64.70	5,516.00	
330.00	338.40	-64.60	5,545.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	16.20	OVB											18m of casing.
16.20	54.80	CGT	mas						qccv	2	0		Timiskaming conglomerate. Grey-green. Rounded to sub-rounded polymictic clasts up to 10cm wide in a fine to coarse grained groundmass with occasional reduced clast size (granular) sections. Massive with some localized stretching of clasts (up hole). 2% qtz/calcite +/- iron carbonate veining. Non to weakly magnetic. MagSus=0.6-22.7. Trace py.35.0-36.9m. Sub-parallel fracture at ~0 deg tca.19.2m. 2cm wide qtz/calcite vein at 45 deg tca with no visible sulphides.40.3-43.8m. Reduction in clast size (granular)40.8-41.0m. Qtz/calcite stockwork at ~50/45 deg tca with trace py.45.5m. 10cm wide qtz/calcite vein at 55 deg tca with no visible sulphides.49.5-51.6m. Broken blocky section.52.7m. 6cm wide qtz vein at 30/43 deg tca with no visible sulphides.
54.80	62.20	MI	mas								0		Mafic intrusive (diabase?). Dark grey. Fine to medium grained. Massive. Weakly to moderately magnetic. MagSus=35.9-58.8. Trace py. Upper contact not preserved.
62.20	65.10	CGT	mas								0		Timiskaming conglomerate. Greyish-brown. Sub-angular to sub-rounded polymictic clasts up to 12cm wide in a fine to coarse grained groundmass. Weakly magnetic. MagSus=23.3-34.0. Trace py. Sharp irregular upper contact at 40 deg tca.
65.10	81.60	SS	mas	1	fr	hem			ccv	2	0		Sandstone. Brownish-grey. Fine to medium grained. Massive with weakly bedded sections. Weak fracture-controlled hematitic alteration. Weakly to strongly magnetic. MagSus=4.3-106.7. Trace py. Sharp upper contact at 43 deg tca.66.5-67.6m. Sub-parallel calcite fracture fill up to 2cm wide.78.2-80.2m. Weak bedding from <1mm-30mm at 40-50 deg tca.

Assay

From	To	Spl #	Len	Py %	Au PPM
		297938			0.01
		297952			0.9
		297942			0.01
40.80	41.00	297931	0.20	0	0.01
45.00	45.50	297932	0.5	0	0.01
45.50	45.60	297933	0.1	0	0.01
45.60	46.10	297934	0.5	0	0.01
121.70	123.00	297935	1.30	0	0.01
123.00	124.00	297936	1	0	0.01
124.00	125.00	297937	1	0	0.01
125.00	125.20	297939	0.2	0	0.01
125.20	126.30	297940	1.10	0	0.01
126.30	127.40	297941	1.1	0	0.01
163.70	164.20	297943	0.5	0	0.01
164.20	164.40	297944	0.2	0	0.03
164.40	164.90	297945	0.5	0	0.01
175.50	176.00	297946	0.5	0	0.01
176.00	176.10	297947	0.10	1	0.01
176.10	176.60	297948	0.5	0	0.02
262.50	263.00	297949	0.5	0	0.01
263.00	263.20	297950	0.20	0	0.01
263.20	264.20	297951	1	0	0.01
264.20	265.20	297953	1	0	0.01
265.20	265.40	297954	0.2	0	0.01
265.40	265.90	297955	0.5	0	0.03
272.20	272.70	297956	0.5	0	0.01

81.60	97.50	MI	mas					0		Mafic intrusive (diabase?). Similar to 54.8-62.2m. Commonly broken and blocky. Sharp upper contact at 20 deg tca.88.2m. Possible fault.
97.50	112.80	CGT	mas				qccv	1	0	Timiskaming conglomerate. Greyish. Sub-angular to sub-rounded polymictic clasts up to 15cm wide in a fine to coarse grained groundmass. Weakly magnetic. MagSus=2.8-40.8. Trace py. Upper contact not preserved.97.5-100.0m. Broken blocky section with up to 1.4m of lost core.97.5-98.0m. Qtz/calcite stockwork.
112.80	121.70	MI	mas					0		Mafic intrusive (diabase?). Simlar to 54.8-62.2m. Sharp upper contact at 25 deg tca.
121.70	127.40	SYN	mas	1	fr	chl	qv	5	0	Syenite. Pinkish-grey. Medium to coarse grained. Massive. Weak fracture-controlled chloritic alteration. 5% qtz veining. Non to weakly magnetic. MagSus=0.1-5.7. Trace py. Sharp upper contact at 5 deg tca.122.0-123.6m. Stockwork qtz veining with no visible sulphides.125.1-125.2m. Stockwork qtz + chlorite veining at 72/82 deg tca with trace py.
127.40	183.40	ARK	mas	1	pa	hem	qccv	1	0	Arkose. Greenish-grey to reddish-brown. Fine to coarse grained. Massive with localized graded bedding at 45-50 deg tca. Localized weak patchy hematitic alteration. 1% qtz/calcite veining. Non to strongly magnetic. MagSus=0.9-129.9. Trace py but locally up to 1%. Sharp upper contact at 40 deg tca.164.3m. 1cm wide qtz/calcite/chlorite vein at 38 deg tca with trace py.167.1m. 1cm wide qtz/calcite vein at 45 deg tca with trace py.174.7-176.6m. Reddish-green/grey interval with patchy green carbonate and sericite.176.0m. 14cm wide qtz/calcite/chlorite/hematite/sericite vein at 55 deg tca with 1% py.
183.40	188.30	ARK	mas					0		Arkose. Reddish-brown. Fine to coarse grained groundmass with localized pebble-sized clasts. Massive. Weakly magnetic. MagSus=4.2-10.7. Trace py. Sharp upper contact at 35 deg tca.

272.70	273.20	297957	0.5	0	0.07
273.20	273.50	297958	0.3	0	1.03
273.50	274.00	297959	0.5	0	0.04
309.30	309.80	297960	0.5	0	0.01
309.80	309.90	297961	0.10	0	0.07
309.90	310.40	297962	0.5	0	0.01
335.30	335.40	297963	0.10	0	0.01
337.20	337.40	297964	0.2	0	0.01

188.30	190.60	SLT	bed			0	Siltstone. Brownish-green. Fine grained. Well bedded at 50-55 deg tca. <1% iron carbonate veining. Weakly magnetic. MagSus=1.7-28.9. Trace py. Sharp upper contact at 52 deg tca.
190.60	255.40	CGT	mas			0	Timiskaming conglomerate. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 19cm wide in a fine to coarse grained groundmass. Massive. Weakly to strongly magnetic. MagSus=12.9-116.4. Trace py. Sharp irregular contact at 55 deg tca.221.9m. 7cm qtz/calcite vein at 40 deg tca with trace py.
255.40	273.20	CGT	fol			0	Timiskaming conglomerate with occasional coarse sandstone horizons. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 15cm wide in a fine to coarse grained groundmass. Weakly to moderately foliated with some stretching of clasts at 30-45 deg tca. <1% qtz veining +/- calcite and/or iron carbonate. Non to weakly magnetic. MagSus=0.6-28.3. Trace py. Gradational upper contact.263.0m. 4cm wide qtz/calcite/chlorite vein at 85/75 deg tca with trace py.265.2-265.3m. 20% qtz/iron carbonate stockwork up to 1.5cm wide with trace py.265.3m. 5cm wide vuggy qtz/calcite vein at 50 deg tca with trace py and cpy.
273.20	273.50	QV1		qcv	80	0	QV1 (target zone). 2 qtz/chlorite veins- 10cm wide at 50/40 and 14cm at 45/50 with trace py and bound by tight clay slips at 50 (upper contact) and 40 (lower contact) deg tca.273.2m. Tight clay slip at 50 deg tca.273.5m. Tight clay slip at 40 deg tca.
273.50	309.80	CGT	fol			0	Timiskaming conglomerate with occasional coarse sandstone horizons. Similar to 255.4-273.2m. Sharp upper contact at 40 deg tca.
309.80	312.00	SS	fol	qcv	2	0	Sandstone. Light brownish-green. Medium to coarse grained. Weak foliation at 45 deg tca. 2% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.8-1.5. Trace py. Sharp upper contact marked by qtz/iron carbonate vein at 45 deg tca.309.8-309.9m. 10cm wide qtz/iron carbonate veining at 45/40 deg tca with trace py.

312.00	338.00	CGT	mas		0	Timiskaming conglomerate. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 15cm wide in a fine to coarse grained groundmass. Semi-massive with localized foliated horizons at 30-35 deg tca. Weakly to moderately magnetic. MagSus=7.7-91.3. Trace py. Sharp irregular upper contact at ~50 deg tca.319.6-326.0m. Weak foliation at 30-35 deg tca.335.3-335.4m. 8cm qtz/iron carbonate vein at 45/50 deg tca.337.2-337.3m. 10cm wide qtz/iron carbonate vein at 40/45 deg tca.338.0m. EOH.

Structure

36.00	fr	0	Sub-parallel fracture at ~0 deg tca.
19.20	qccv	45	2cm wide qtz/calcite vein with no visible sulphides.
45.50	qccv	55	10cm wide qtz/calcite vein at 55 deg tca with no visible sulphides.
62.20	cnt	40	Sharp irregular contact.
65.10	cnt	43	Sharp contact.
79.80	bed	45	
81.60	cnt	20	Sharp contact.
112.80	cnt	25	Sharp contact.
121.70	cnt	5	Sharp contact.
125.10	qv	77	Stockwork qtz + chlorite veining at 72/82 deg tca with trace py.
127.40	cnt	40	Sharp contact.
131.60	bed	45	
133.70	bed	42	
148.50	bed	45	
159.20	bed	47	
176.00	qccv	55	14cm wide qtz/calcite/chlorite/hematite/sericite vein at 55 deg tca with 1% py.
171.50	bed	50	
179.20	bed	50	
183.40	cnt	35	Sharp contact.

189.00	bed	55	
190.00	bed	50	
190.60	cnt	55	Sharp irregular contact.
201.80	sl	43	Tight clay slip.
221.90	qccv	40	7cm qtz/calcite vein with trace py.
263.00	qccv	80	4cm wide qtz/calcite/chlorite vein 85/75 with trace py.
265.30	qccv	50	5cm wide vuggy qtz/calcite vein at 50 deg tca with trace py and cpy.
273.30	qv	47	Target zone. 2 qtz/chlorite veins- 10cm wide at 50/40 and 14cm at 45/50 with tr
273.20	sl	50	Tight clay slip.
273.50	sl	40	Tight clay slip.
309.80	qcv	43	Sharp contact marked by 10cm wide qtz/iron carbonate vein at 45/40 deg tca wi
309.90	sl	45	Tight clay slip.
256.00	f1	45	
264.00	f1	40	
270.50	f1	45	
278.00	f1	35	
287.00	f1	45	
290.10	f1	35	
295.70	f1	30	
300.00	f1	40	
304.00	f1	45	
308.00	f1	40	
310.30	f1	45	
312.00	cnt	50	Sharp irregular contact.
320.20	f1	35	
324.30	f1	30	
260.00	f1	45	
275.00	f1	40	

282.50	f1	35	
335.30	qcv	48	8cm qtz/iron carbonate vein at 45/50 deg tca.
337.20	qcv	43	10cm wide qtz/iron carbonate vein at 40/45 deg tca.

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG12113	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565119	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331086	**Start_Date:**	16/01/2012	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	346	**Finish_Date:**	17/01/2012	☐ **Cemented**				
Azmuth:	335	**Length (m):**	164					
Dip:	-60	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	330.00	-60.50	5,602.00	
60.00	332.20	-60.20	5,531.00	
84.00	328.80	-59.70	5,431.00	
90.00	324.40	-59.60	5,493.00	
120.00	333.20	-59.40	5,526.00	
150.00	334.90	-58.80	5,487.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	2.20	OVB											3m of casing.
2.20	5.10	SS	mas								0		Sandstone with Timiskaming conglomerate horizon up hole. Grey. Fine to coarse grained. Massive. Moderately magnetic. MagSus=58.4-80.4. Trace py.2.2-2.6m. Timiskaming conglomerate horizon.

Assay

From	To	Spl #	Len	Py %	Au PPM
		297967			0.01
		297970			0.01
34.10	34.60	297965	0.5	0	0.01
34.60	34.90	297966	0.30	0	0.01
34.90	35.90	297968	1	0	0.01

5.10	30.10	CGT	mas			0	Timiskaming conglomerate. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 12cm wide in a fine to coarse grained groundmass. Massive. Weakly to moderately magnetic. MagSus=2.2-66.7. Trace py. Gradational upper contact.
30.10	38.10	SS	mas		qcv	1 0	Sandstone. Grey-green to brownish-green. Fine to coarse grained with occasional pebble horizons. Massive. 1% qtz/iron carbonate +/- chlorite veining. Weakly magnetic. MagSus=7.8-17.1. Trace py. Gradational upper contact. 34.6-34.9m. Qtz/iron carbonate/hematite/chlorite/sericite stockwork up to 2cm wide with trace py.36.8m. 5cm qtz/iron carbonate/hematite/chlorite vein at 45 deg tca with trace py.
38.10	49.60	ARK	mas			0	Arkose. Reddish to maroon-grey. Fine to coarse grained. Massive. <1% iron/carbonate veining/fracture fill. Non to weakly magnetic. MagSus=0.9-13.0. Trace py. Gradational upper contact.
49.60	54.70	CGT	mas			0	Timiskaming conglomerate. Similar to 5.1-30.1m with sandstone/arkose horizon down hole. Weakly magnetic. MagSus=2.9-9.7. Gradational upper contact
54.70	62.20	SYN	mas		qcv	2 0	Syenite. Light reddish-brown. Medium to coarse grained. Massive. 2% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.3-1.9. Trace py. Sharp irregular upper contact at ~65 deg tca.57.4m. 6cm wide qtz/iron carbonate vein at 45/65 deg tca with no visible sulphides.59.9m. 3cm wide qtz/iron carbonate vein at 50 deg tca with no visible sulphides.
62.20	66.50	CGT	mas		qcv	2 0	Timiskaming conglomerate. Brownish-grey. Rounded to sub-rounded polymictic clasts up to 12cm wide in a fine to coarse grained groundmass. Massive. Weakly magnetic. MagSus=5.0-18.1. Trace py. Sharp upper contact at 40 deg tca.65.4-65.6m. 20cm wide qtz/iron carbonate vein at 50/40 deg tca with trace py

35.90	36.80	297969	0.9	0	0.01
36.80	36.90	297971	0.10	0	0.01
36.90	37.30	297972	0.4	0	0.01
56.00	57.30	297973	1.3	0	0.01
57.30	58.00	297974	0.70	0	0.01
58.00	59.30	297975	1.3	0	0.01
64.40	65.40	297976	1	0	0.01
65.40	65.60	297977	0.2	0	0.01
65.60	66.60	297978	1	0	0.01
74.20	74.70	297979	0.5	0	0.01
100.20	100.90	297980	0.70	1	0.01
127.00	127.80	297981	0.80	0	0.01
134.90	135.40	297982	0.5	0	0.01
135.40	135.70	297983	0.30	0	0.04
135.70	138.20	297984	2.5	0	0.02

66.50	76.20	ARK	bed				qcv	3	0		Arkose. Reddish-grey. Fine to coarse grained. Weakly bedded at 45-50 deg tca with horizons of graded bedding. 3% qtz/iron carbonate +/- hematite veining. Non to weakly magnetic. MagSus=0.7-2.7. Trace py. Gradational upper contact.74.5m. 2cm wide qtz/iron carbonate + hematite vein at 25 deg tca.74.6-74.7m. 10cm qtz/iron carbonate vein at 30/55 deg tca.
76.20	77.50	CGT	mas				qcv	1	0		Timiskaming conglomerate. Similar to 62.2-66.5m. 1% qtz/iron carbonate veining. Gradational upper contact.76.6m. 2cm wide qtz iron carbonate vein at 50 deg tca.
77.50	95.70	ARK	bed				ccv	1	0		Arkose. Reddish to maroon-grey. Fine to coarse grained. Weakly bedded at 40-65 deg tca with horizons of graded bedding. 1% calcite veining and fracture fill. Weakly to strongly magnetic. MagSus=37.3-125.4. Trace py. Gradational upper contact. 86.0-87.0m. Calcite fracture fill up to 1cm wide sub-parallel tca.88.2-89.5m. Calcite fracture fill up to 2cm wide sub-parallel tca.
95.70	115.50	ARK	bed	1	sp	hem			0		Arkose. Reddish-brown to maroon. Fine to coarse grained. Weakly bedded at 35-45 deg tca. Weak spotty hematitic alteration giving a leopard spotted texture. Weakly magnetic. MagSus=1.6-49.5. Trace py but locally up to 1%. Gradational upper contact.
115.50	123.50	SS	mas						0		Sandstone with a siltstone horizon down hole. Reddish-grey to greenish-brown. Very fine to coarse grained. Massive. <1% narrow (up to 4mm wide) qtz veining. Weakly magnetic. MagSus=14.0-32.8. Trace py. Gradational upper contact.116.4-116.8m. White qtz vein set up to 4mm wide at 50-55 deg tca.121.0-122.9m. Siltstone horizon.
123.50	135.40	CGT	mas				qcv	1	0		Timiskaming conglomerate with occasional sandstone and siltstone horizons. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 10cm wide in a fine to coarse grained groundmass. Massive. 1% qtz/iron carbonate veining. Weakly magnetic. MagSus=20.0-36.1. Trace py. Gradational upper contact.

135.40	135.60	QV1			qccv	30 0	QV1 (target zone). (135.4m) 3cm wide qtz/calcite vein at 35/45 deg tca with a tight clay slip (upper contact) at 40 deg tca and (135.6m) 3cm wide qtz/calcite vein at 40/45 deg tca with a tight clay slip cutting the vein at 30 deg tca. Between the veins is broken blocky core with up to 10cm lost core.
135.60	164.00	CGT	mas		qcv	1 0	Timiskaming conglomerate with occasional sandstone and siltstone horizons. Similar to 123.5-135.4m. Sharp upper contact marked by qtz vein at 45 deg tca.164.0m. EOH.

Structure

36.80	qcv	45	5cm qtz/iron carbonate/hematite/chlorite vein at 45 deg tca with trace py.
54.70	cnt	65	Sharp irregular contact.
57.40	qcv	55	6cm wide qtz/iron carbonate vein at 45/65 deg tca with no visible sulphides.
59.90	qcv	50	3cm wide qtz/iron carbonate vein at 50 deg tca with no visible sulphides.
65.50	qcv	45	20cm wide qtz/iron carbonate vein at 50/40 deg tca with trace py.
68.00	bed	45	
72.00	bed	50	
73.70	bed	45	
74.60	qcv	43	10cm qtz/iron carbonate vein at 30/55 deg tca.
76.60	qcv	50	2cm wide qtz iron carbonate vein.
79.50	bed	65	
83.50	bed	50	
87.50	bed	40	
92.00	bed	45	
102.00	bed	45	
106.00	bed	35	
109.30	bed	45	
116.60	qvs	53	White qtz vein set up to 4mm wide at 50-55 deg tca.
135.40	qccv	40	Target zone. 3cm wide qtz/calcite vein at 35/45 deg tca with a tight clay slip at 4

135.60	qccv	43	Target zone. 3cm wide qtz/calcite vein at 40/45 deg tca with a tight clay slip cutti

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG12114	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565048	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331014	**Start_Date:**	17/01/2012	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	334	**Finish_Date:**	18/01/2012	☐ **Cemented**				
Azmuth:	335	**Length (m):**	95.7					
Dip:	-45	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	334.00	-44.80	5,552.00	
60.00	338.40	-44.40	5,538.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	0.00												
0.00	2.20	OVB											3m of casing.
2.20	8.70	SS	mas								0		Sandstone. Greenish-grey. Fine to coarse grained. Massive. Weakly magnetic. MagSus=2.7-21.0. Trace py.
8.70	23.90	CGT	mas								0		Timiskaming conglomerate. Grey-green. Rounded to sub-rounded polymictic clasts up to 15cm wide in a fine to coarse grained groundmass. Massive. Weakly magnetic. MagSus=16.6-45.0. Trace py. Gradational upper contact.

Assay

From	To	Spl #	Len	Py %	Au PPM
		297991			
67.90	68.60	297985	0.7	0	0.01
68.60	68.70	297986	0.1	0	0.01
68.70	69.40	297987	0.70	1	0.01
88.20	88.70	297988	0.5	0	0.01
88.70	88.80	297989	0.10	0	0.03
88.80	89.30	297990	0.5	0	

23.90	36.60	SS	mas				ccv	1	0		Sandstone with occasional timiskaming conglomerate horizons. Brownish-grey to greenish-grey. Fine to coarse grained (conglomerate horizons similar to 8.7-23.9m). Massive. 1% calcite veining. Weakly to strongly magnetic. MagSus=12.3-114.1. Trace py. Sharp upper contact at 50 deg tca.
36.60	53.00	CGT	mas						0		Timiskaming conglomerate. Similar to 8.7-23.9m. Gradational upper contact.
53.00	71.30	SS	mas				qccv	2	0		Sandstone. Greenish-grey to grey. Fine to coarse grained with pebbly horizons and occasional graded bedding. Massive. 2% qtz/calcite +/- hematite and/or chlorite veining. Weakly to moderately magnetic. MagSus=10.0-84.0. Trace py but locally up to 1%. Sharp upper contact at 55 deg tca.68.6-68.7m. Target zone? 8cm wide qtz/calcite/chlorite at 75 deg tca with trace py.68.8-69.4m. 1% py.
71.30	75.10	CGT	mas						0		Timiskaming conglomerate. Similar to 8.7-23.9m. Weakly to moderately magnetic. MagSus=23.5-70.4. Trace py. Sharp upper contact at 70 deg tca.
75.10	76.80	SS	mas				ccv	1	0		Sandstone. Reddish-brown. Fine to coarse grained. Massive. 1% calcite veining. Weakly magnetic. MagSus=3.8-6.9. Sharp upper contact at 80 deg tca.
76.80	80.30	CGT	mas						0		Timiskaming conglomerate. Similar to 8.7-23.9m. Gradational upper contact.
80.30	81.60	SS	mas				ccv	2	0		Sandstone. Reddish-brown to grey. Fine to coarse grained. Massive. 2% calcite veining and fracture fill. <1% qtz/calcite veining. Weakly magnetic. MagSus=1.6-4.6. Trace py. Sharp irregular contact at 70 deg tca.81.5m. 1.5cm wide qtz/calcite/chlorite vein at 15 deg tca with trace py.
81.60	88.70	SYN	mas	1	pa	hem	qccv	1	0		Syenite. Reddish-grey. Coarse grained. Massive. Weak patchy hematitic alteration. 1% qtz/calcite +/- chlorite viening. Non magnetic. MagSus=0.1-0.3. Trace py. Sharp upper contact at 45 deg tca.
88.70	88.80	QV1					qccv	###	0		QV1 (target zone). 5cm wide qtz/calcite + chlortite veining bounded by tight chlorite slips at 65 and 60 deg tca respectively. Margin of upper slip contains ~1% py.

88.80	95.70	SS	mas		qccv	1 0	Sandstone. Grey to reddish-brown. Fine to coarse grained. 1% qtz/calcite veining. Weakly to strongly magnetic. MagSus=2.7-115.5. Trace py. Sharp upper contact at 65 deg tca.95.7m. EOH.

Structure

23.90	cnt	50	Sharp contact.
53.00	cnt	55	Sharp contact.
68.70	qccv	75	Target zone? 8cm wide qtz/calcite/chlorite at 75 deg tca with trace py.
71.30	cnt	70	Sharp contact.
75.10	cnt	80	Sharp contact.
81.50	qccv	15	1.5cm wide qtz/calcite/chlorite vein at 15 deg tca with trace py.
80.30	cnt	70	Sharp irregular contact.
81.60	cnt	45	Sharp contact.
88.70	cnt	65	Sharp contact.
88.75	qccv	63	Target zone? 5cm wide qtz/calcite + chlortite veining bounded by tight chlorite sl

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG12115	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565163	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331111	**Start_Date:**	18/01/2012	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	340	**Finish_Date:**	19/01/2012	☐ **Cemented**				
Azmuth:	335	**Length (m):**	221					
Dip:	-69	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	337.00	-68.30	5,550.00	
60.00	338.00	-68.00	5,539.00	
90.00	337.20	-68.10	5,515.00	
120.00	334.90	-67.60	5,572.00	
150.00	331.50	-67.30	5,538.00	
180.00	338.10	-67.50	5,480.00	
210.00	333.90	-66.90	5,486.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	3.50	OVB											4.5m of casing.

Assay

From	To	Spl #	Len	Py %	Au PPM
		297994			0.84
58.50	60.00	297992	1.5	0	0.01
60.00	61.50	297993	1.5	0	0.01
61.50	63.00	297995	1.5	0	0.01

3.50	15.80	SS	mas	1	fr	hem	ccv	2	0	Sandstone. Greenish-grey to reddish-grey. Fine to coarse grained. Massive. Weak fracture-controlled hematitic alteration. 2% calcite veining and fracture fill. Weakly to moderately magnetic. MagSus=3.5-66.8. Trace py.
15.80	55.40	CGT	mas						0	Timiskaming conglomerate. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 18cm wide in a fine to coarse grained groundmass. Massive. Weakly magnetic. MagSus=4.5-30.5. Trace py. Gradational upper contact.
55.40	56.60	SS	mas						0	Sandstone. Brownish-grey. Medium to coarse grained. Massive. Weakly magnetic. MagSus=1.8-19.5. Trace py. Gradational upper contact.
56.60	65.10	SYN	mas	1	pa	hem	qcv	5	0	Syenite. Reddish-brown. Coarse grained. Massive. Weak patchy hematitic alteration. 5% qtz/iron carbonate +/- chlorite veining. Non magnetic. MagSus=0.1-0.4. Trace py. Sharp upper contact at 40 deg tca.56.6-58.2m. Broken blocky core.63.1m. 3cm wide qtz/iron carbonate vein at 65 deg tca with trace py.64.0-64.2m. 20cm of qtz/iron carbonate (70%) stockwork at 70 deg tca with trace py.64.8-65.1m. 30cm of qtz/iron carbonate + chlorite (40%) stockwork at 85 deg tca with trace py.
65.10	67.20	CGT	mas				qcv	1	0	Timiskaming conglomerate. Brownish-green. Rounded to sub-rounded polymictic clasts up to 10cm wide in a fine to coarse grained groundmass. Massive. 1% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.7-5.2. Trace py but locally up to 1%. Sharp upper contact marked by qtz/iron carbonate vein at 85 deg tca.
67.20	71.20	SS	mas						0	Sandstone with occasional arkose horizons. Brownish-green. Fine to coarse grained. Massive with localized graded beds. Weakly magnetic. MagSus=1.0-1.5. Trace py. Sharp irregular upper contact at 35 deg tca.67.9-68.4m. Arkose horizon with graded beds at 30-40 deg tca.
71.20	73.80	ARK	mas				ccv	2	0	Arkose. Maroon. Fine to coarse grained. Massive. 2% calcite veining and fracture fill. Gradational upper contact.

63.00	64.00	297996	1	0	0.01
64.00	65.10	297997	1.1	0	0.01
65.10	65.90	297998	0.80	1	0.06
65.90	67.20	297999	1.3	0	0.01
73.80	74.40	298000	0.6	0	0.01
74.40	75.20	298001	0.8	1	0.01
75.20	76.20	298002	1	0	0.01
158.30	158.80	298003	0.5	0	0.01
158.80	159.20	298004	0.4	0	0.01
159.20	159.70	298005	0.5	0	0.06
202.30	202.80	298006	0.5	0	0.19
202.80	202.90	298007	0.1	0	0.19
202.90	203.40	298008	0.5	0	0.01

73.80	76.20	SLT	mas		qcv	5 0	Siltstone. Light green. Fine grained. Massive. 5% qtz/iron carbonate +/- chlorite and hematite veining. Non to weakly magnetic. MagSus=0.8-2.6. Trace py. Sharp contact at 75 deg tca.74.4-75.3m. Common qtz/iron carbonate/chlorite/hematite veining up to 7cm at 45-65 deg tca with trace py.
76.20	139.30	ARK	mas		qcv	1 0	Arkose. Reddish-grey to maroon. Fine to coarse grained. Massive with localized weak bedding at 40-55 deg tca and some graded bedding indicating younging direction is up hole. Non to weakly magnetic. MagSus=0.5-15.7. Trace py but locally up to 1%. qkkkGradational upper contact.
139.30	141.80	CGT	mas		qcv	1 0	Timiskaming conglomerate with occasional sandstone horizons. Brownish-grey. Rounded to sub-rounded polymictic clasts up to 8cm wide in a fine to coarse grained groundmass. Massive. 1% qtz/iron carbonate veining. Weakly magnetic. MagSus=17.4-41.8. Trace py. Gradational upper contact.
141.80	145.60	SS	mas		qcv	1 0	Sandstone. Brownish-grey. Medium to coarse grained with occasional round cobble-sized clasts. Massive. 1% qtz/iron carbonate veining. Weakly magnetic. MagSus=4.7-13.7. Trace py. Gradational upper contact.142.9m. 2cm wide qtz/iron carbonate vein at 50 deg tca.
145.60	148.00	SLT	mas		qcv	2 0	Siltstone. Tan to dark green. Fine grained. Massive with localized weak bedding at 50-60 deg tca.
148.00	202.80	CGT	mas			0	Timiskaming conglomerate with occasional sandstone horizons. Greenish-dark grey. Rounded to sub-rounded polymictic clasts up to 8cm wide in a fine to coarse grained groundmass. Massive. <1% qtz/iron carbonate veining. Weakly to moderately magnetic. MagSus=2.5-60.9. Trace py. Gradational upper contact.158.8-159.0m. 3cm wide qtz/calcite vein at 75/70 deg tca and a 5cm wide qtz/iron carbonate vein at 70/75 deg tca with ~30% qtz/calcite/iron carbonate stockwork between the veins.202.8m. Tight chlorite slip with a metallic blue grey mineral (moly?) coating the slip surface in places.

202.80	202.90	QV1			qv	### 0	QV1 (Target zone). 10cm wide dirty grey/white mottled qtz + calcite vein at 35/40 deg tca with common chlorite fracture fill and trace py. The vein is bound by slips at the upper and lower contacts.
202.90	221.00	CGT	mas			0	Timiskaming conglomerate with occasional sandstone horizons. Similar to 148.0-202.8m. Sharp upper contact marked by chlorite slip at 40 deg tca. 202.9m. Chlorite slip (fault?) at 40 deg tca forms lower contact of qtz vein.221.0m. EOH.

Structure

63.10	qcv	65	3cm wide qtz/iron carbonate vein at 65 deg tca with trace py.
56.60	cnt	40	Sharp contact.
64.10	qcv	70	20cm of qtz/iron carbonate (70%) stockwork at 70 deg tca with trace py.
65.00	qcv	85	30cm of qtz/iron carbonate + chlorite (40%) stockwork at 85 deg tca with trace p
65.10	cnt	85	Sharp contact marked by qtz/iron carbonate vein at 85 deg tca.
67.20	cnt	35	Sharp irregular contact.
73.80	cnt	75	Sharp contact.
74.40	qcv	65	7cm wide qtz/iron carbonate/hematite/chlorite vein with trace py.
75.20	qcv	45	3cm wide qtz/iron carbonate/hematite/chlorite vein with trace py.
78.00	bed	40	
82.00	bed	40	
85.00	bed	55	
110.30	bed	40	
115.20	bed	50	
119.10	bed	50	
136.60	bed	55	
142.90	qcv	50	2cm wide qtz/iron carbonate vein at 50 deg tca.
146.60	bed	50	
147.70	bed	60	

158.80	qccv	73	3cm wide qtz/calcite vein at 75/70 deg tca.
158.90	qcv	73	5cm wide qtz/iron carbonate vein at 70/75 deg tca.
202.80	qv	38	Target zone. 10cm wide dirty grey/white mottled qtz + calcite vein at 35/40 deg t

DDH LOG REPORT

WEST KIRKLAND MINING

KIRKLAND LAKE PROJECT

Hole No:	KG12116	**Township:**	Teck	☑ **Casing Left Behind (Y/N)**	**Core_Size:**	NQ	**Logged_By:**	Mike Laliberty
NAD83E:	565099	**Claim No:**	L531977	☐ **Making Water**	**Collar_Survey_Type:**	GPS	**Contractor:**	LAFRAMBOISE
NAD83N:	5331124	**Start_Date:**	24/01/2012	☐ **Grout Plug**	**Downhole_Survey_Type:**	REFLEX	**Core Storage:**	KENOGAMI
Elevation (m):	346	**Finish_Date:**	25/01/2012	☐ **Cemented**				
Azmuth:	335	**Length (m):**	110					
Dip:	-60	**Comment:**						

Survey

Depth	Azmith	Dip	Mag	Comment
30.00	332.70	-58.50	53,920.00	
60.00	332.50	-58.60	53,975.00	
90.00	332.70	-58.70	55,117.00	

Geology

From	To	Litho Code	Txt Typ	Alt Int	Alt Style	Alt 1	Alt 2	Alt 3	Vn Type	Vn %	Py %	Oth Min	Comments
0.00	7.20	OVB											7.5m of casing.
7.20	11.10	SS	mas						qccv	1	0		Sandstone with siltstone horizons. Reddish-grey to green-grey. Fine to coarse grained. Massive. 1% qtz/calcite veining. Weakly magnetic. MagSus=4.0-4.8. Trace py.
11.10	14.60	CGT	mas						qcv	3	0		Timiskaming conglomerate. Reddish-grey. Rounded to sub-rounded polymictic clasts up to 15cm wide in a fine to coarse grained groundmass. Massive. 3% qtz iron carbonate veining/fracture fill. Weakly magnetic. MagSus=1.9-33.2. Trace py. Gradational upper contact.

Assay

From	To	Spl #	Len	Py %	Au PPM
		298018			4.12
		298012			0.01
29.40	29.90	298009	0.5	0	0.01
29.90	30.30	298010	0.4	0	0.07
30.30	30.80	298011	0.5	0	0.02
64.70	65.00	298013	0.30	0	0.01
78.10	78.50	298014	0.40	0	0.01
78.50	78.70	298015	0.2	0	0.09

14.60	23.50	SS	mas	qcv	1	0	Sandstone with siltstone horizons. Reddish-brown to greenish-brown. Fine to coarse grained. Massive. 1% qtz/iron carbonate veining/fracture fill. Weakly magnetic. MagSus=1.6-5.2. Trace py but locally up to 1%. Gradational upper contact.
23.50	23.70	FLT				0	Fault at 10 deg tca. Gritty clay coated ground up core ~ 1cm wide.
23.70	29.90	SS	mas			0	Sandstone. Reddish-brown to greenish-brown. Fine to coarse grained. Massive with localized weak bedding. <1% qtz fracture fill +/- specular hematite. Trace py but locally up to 1% associated with qtz veining/fracture fill. Sharp contact marked by fault at 10 deg tca.
29.90	30.30	QV	stk	qv	60	0	30cm wide qtz vein stockwork (60% qtz) at 43/25 deg tca + chlorite and iron carbonate and possible syenite clast. Trace py. Sharp upper contact at 43 deg tca.
30.30	34.70	SS	mas			0	Sandstone. Maroon to reddish-brown. Fine to coarse grained with occasional rounded clasts up to 7cm. Massive. Weakly magnetic. MagSus=1.6-15.5. Trace py. Sharp undulating upper contact marked by qtz stockwork at 25 deg tca.
34.70	37.50	CGT	mas			0	Timiskaming conglomerate. Reddish-grey. Rounded to sub-rounded polymictic clasts up to 8cm wide in a fine to coarse grained groundmass. Massive. Weakly to moderately magnetic. MagSus=16.2-81.9. Trace py. Gradational upper contact.
37.50	74.30	SS	mas	qccv	1	0	Sandstone with occasional Timiskaming conglomerate horizons. Fine to coarse grained. Massive. 1% qtz/calcite veining/fracture fill. Weakly to strongly magnetic. MagSus=1.3-178.8. Trace py. Gradational upper contact.64.8m. 1cm wide qtz/calcite vein at 10 deg tca with trace py.66.1-66.9m. Timiskaming conglomerate horizon similar to 34.7-37.5m.
74.30	77.20	SLT	bed	qcv	3	0	Siltstone. Light brownish-green. Fine grained. Weakly bedded at 60-65 deg tca. 3% qtz/iron carbonate veining. Non to weakly magnetic. MagSus=0.8-18.0. Trace py. Sharp upper contact at 65 deg tca.75.7m. 2cm wide qtz/iron carbonate vein at 45 deg tca with trace py.

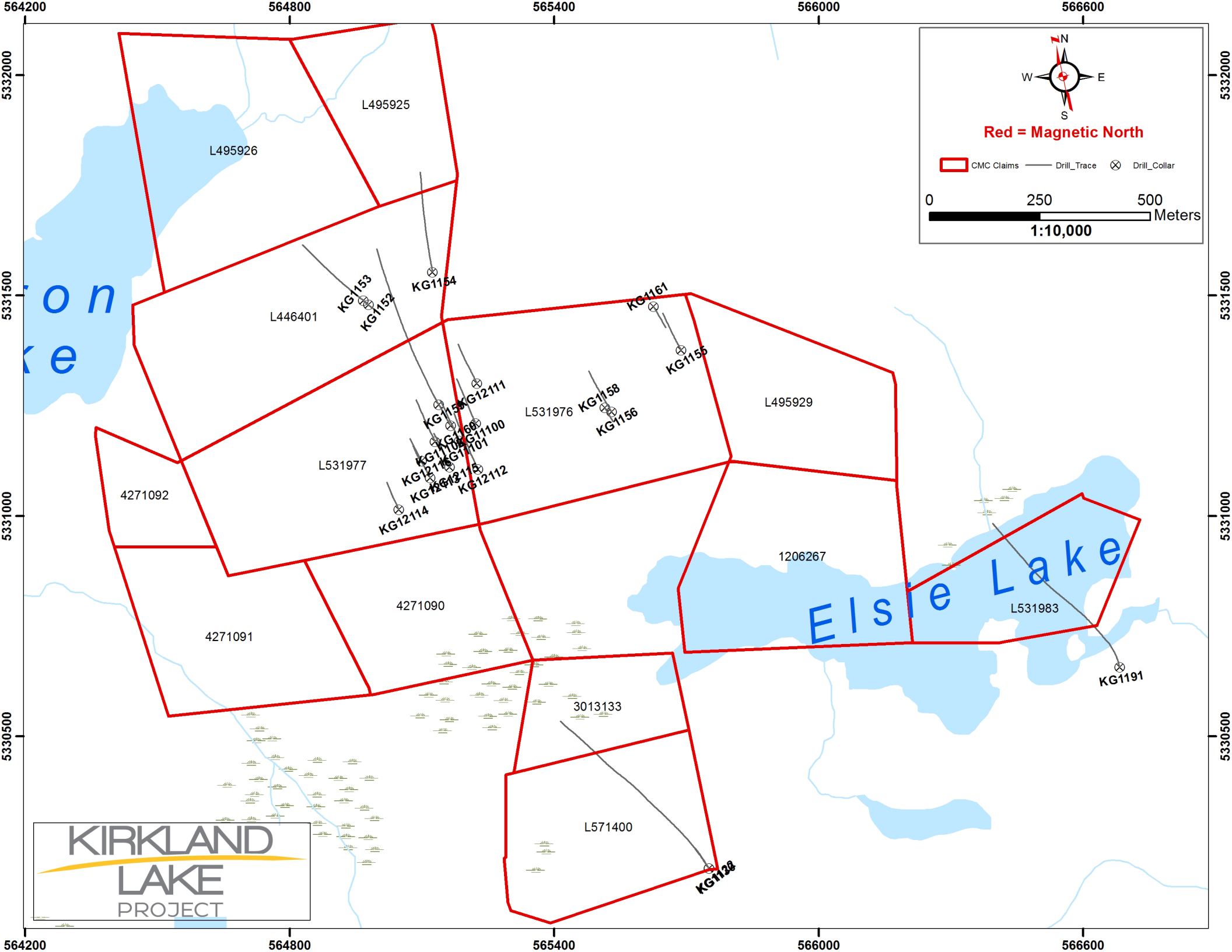
78.70	79.00	298016	0.30	0	0.22
79.00	79.40	298017	0.40	0	0.01

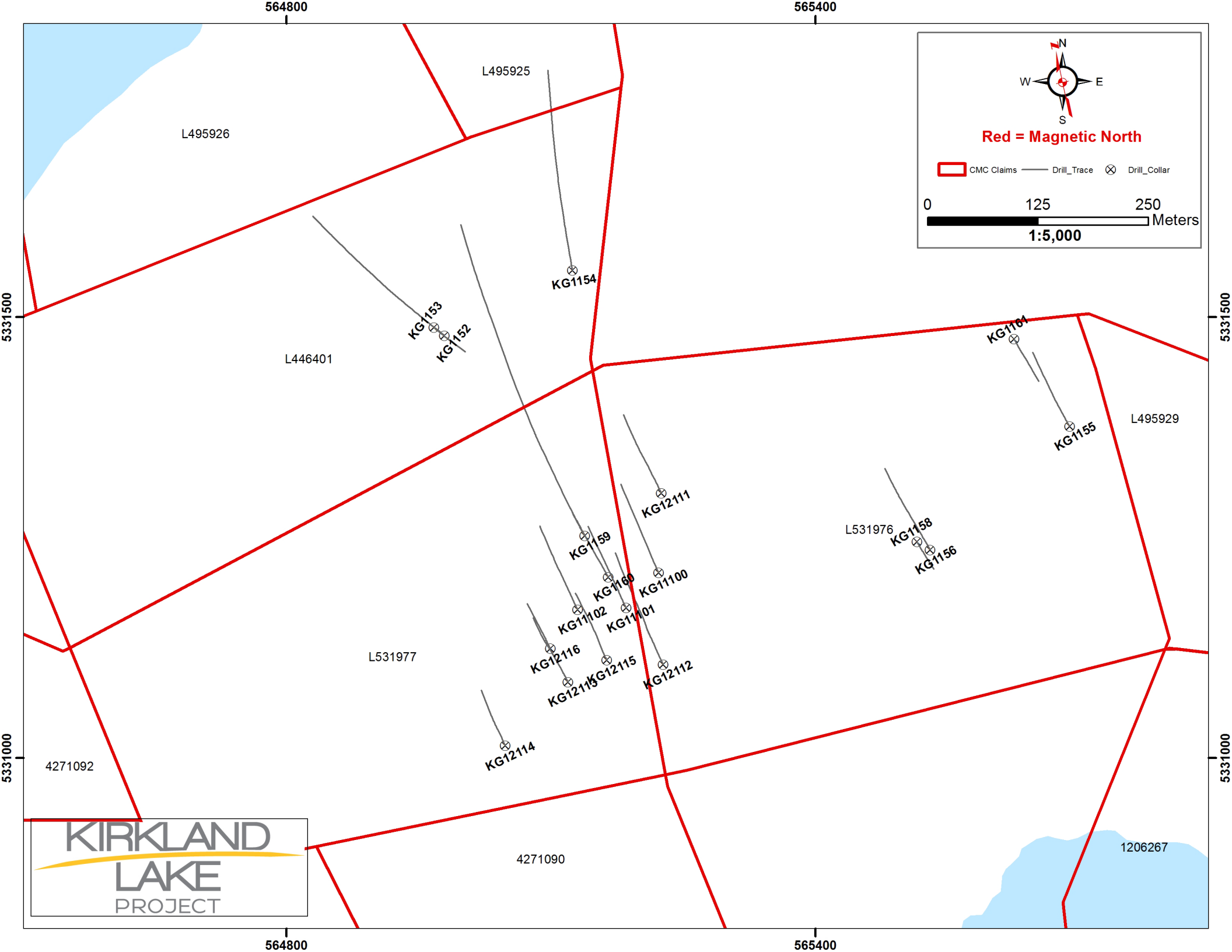
77.20	78.50	SS	mas			0		Sandstone. Reddish-grey. Coarse grained. Massive. Non to weakly magnetic. MagSus=0.7-1.1. Trace py. Sharp upper contact at 55 deg tca.
78.50	78.70	QV1	stk		qv	40	0	QV1 (Target zone). 78.5m. 1cm wide smokey grey qtz vein at 60 deg tca with a tight chlorite slip forming the upper contact. 78.55-78.59m. 3-4cm wide chlorite/clay/gouge fault at 55 deg tca.78.6m. Tight chlorite slip at 50 deg tca with slickensides at 55 deg to short core axis and forms upper contact of qtz stockwork.78.6-78.7m. Target zone. ~8cm wide qtz +chlorite stockwork (40% qtz) at 50/48 deg tca with trace py.78.7m. Tight chlorite slip at 48 deg tca with slickensides at 55 deg to short core axis with stoping indicating a reverse fault with movement down to the west.
78.70	79.40	SS	mas		qv	1	0	Sandstone. Greenish-grey. Fine to coarse grained. Massive. 1% qtz veining. Non to weakly magnetic. MagSus=0.5-2.3. Generally trace py but locally up to 1% associated with qtz veining. Sharp upper contact marked by tight chlorite slip at 48 deg tca.78.9-79.0m. 1% py associated with qtz veining.
79.40	82.10	SLT	mas			0		Siltstone. Brownish-green. Very fine grained. Massive with localized weak bedding. Weakly magnetic. MagSus=2.1-12.7. Sharp upper contact marked by bedding at 55 deg tca.
82.10	110.00	CGT	mas			0		Timiskaming conglomerate. Greenish-grey. Rounded to sub-rounded polymictic clasts up to 25cm wide in a fine to coarse grained groundmass. Massive. Weakly to moderately magnetic. MagSus=7.1-69.5. Trace py. Gradational upper contact.110.0m. EOH.

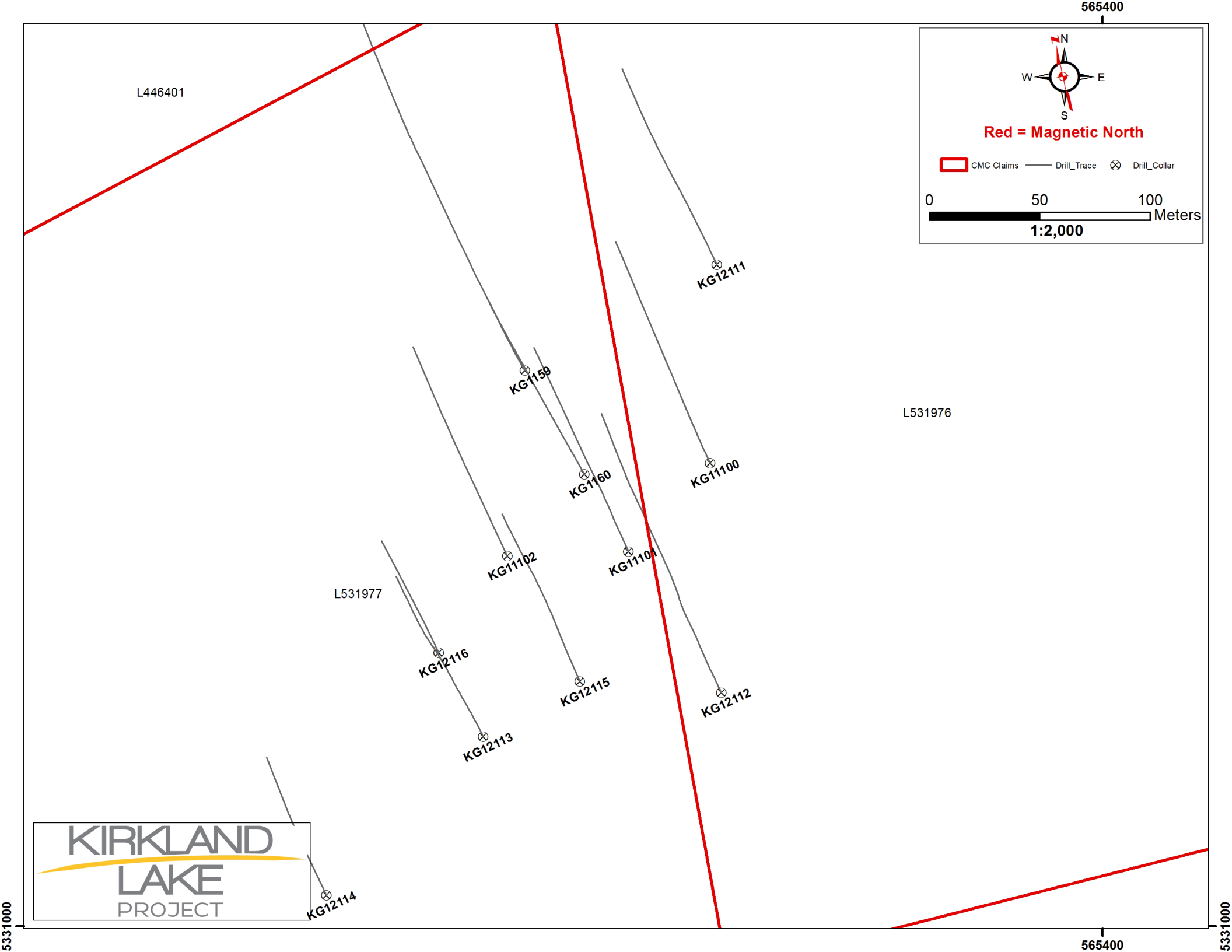
Structure

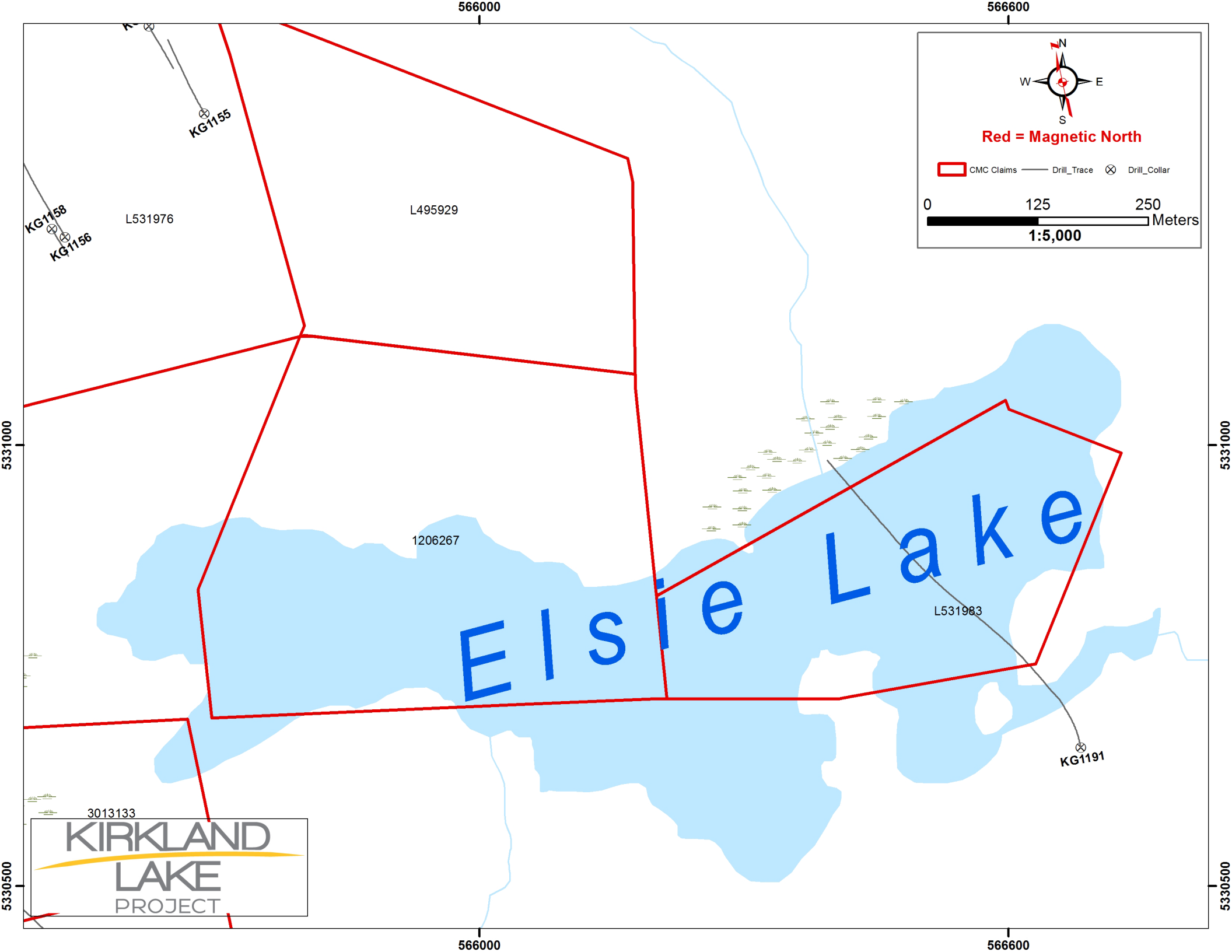
23.60	flt	10	~1cm wide gritty clay fault in blocky ground up core
30.00	qv	34	30cm of qtz vein stockwork (60% qtz) at 43/25 deg tca + chlorite and iron carbon
64.80	qccv	10	1cm wide qtz/calcite vein with trace py.
74.30	cnt	65	Sharp contact.
75.20	bed	60	

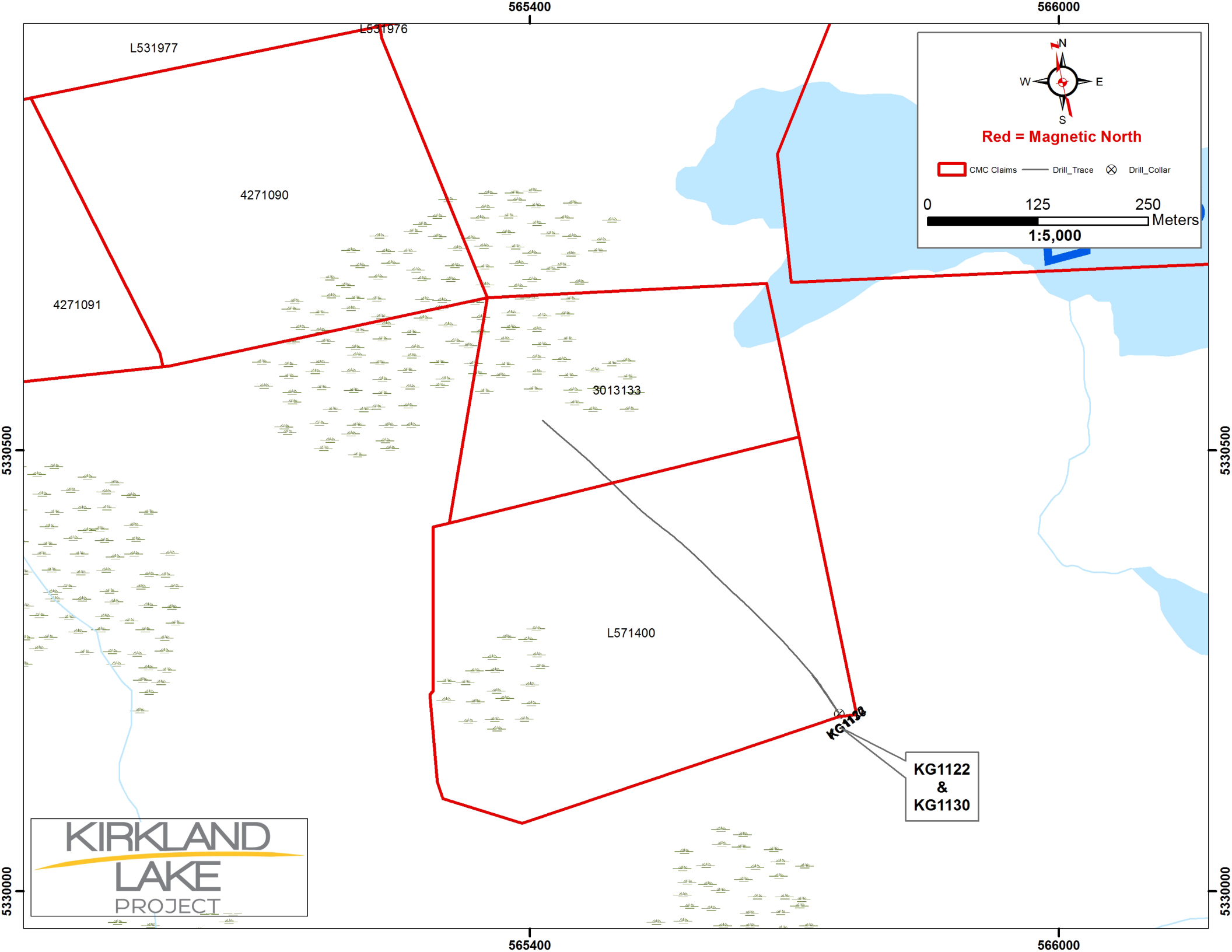
76.50	bed	65	
75.70	qcv	45	2cm wide qtz/iron carbonate vein with trace py.
77.20	cnt	55	Sharp contact.
78.55	flt	55	3-4cm wide chlorite/clay/gouge fault at 55 deg tca.
78.60	qv	49	~8cm wide qtz +chlorite stockwork (40% qtz) at 50/48 deg tca with trace py and

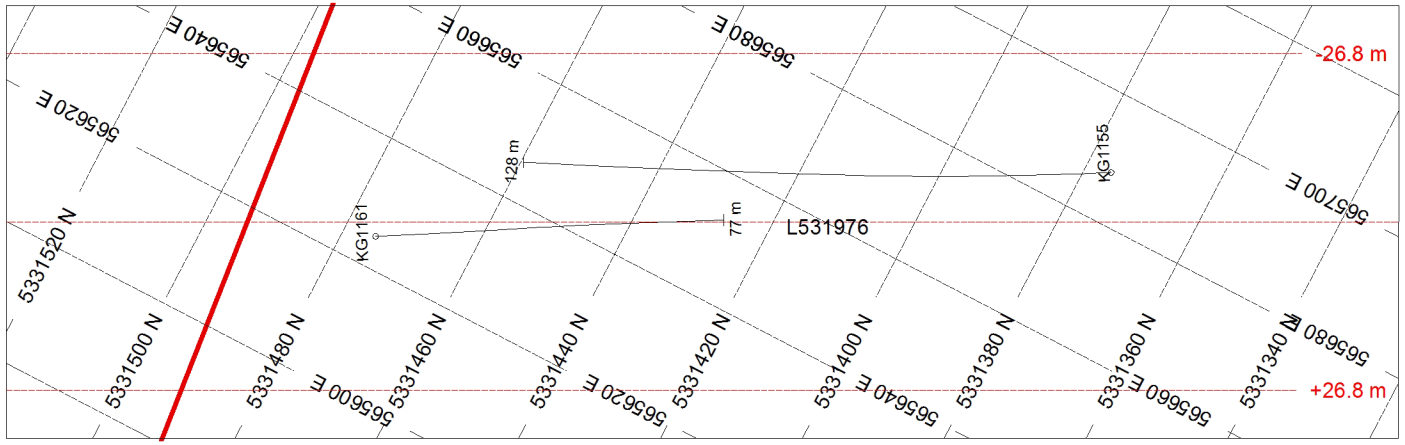

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Red = Magnetic North
CMC Claims
Drill_Trace
Drill_Collar
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KIRKLAND LAKE PROJECT

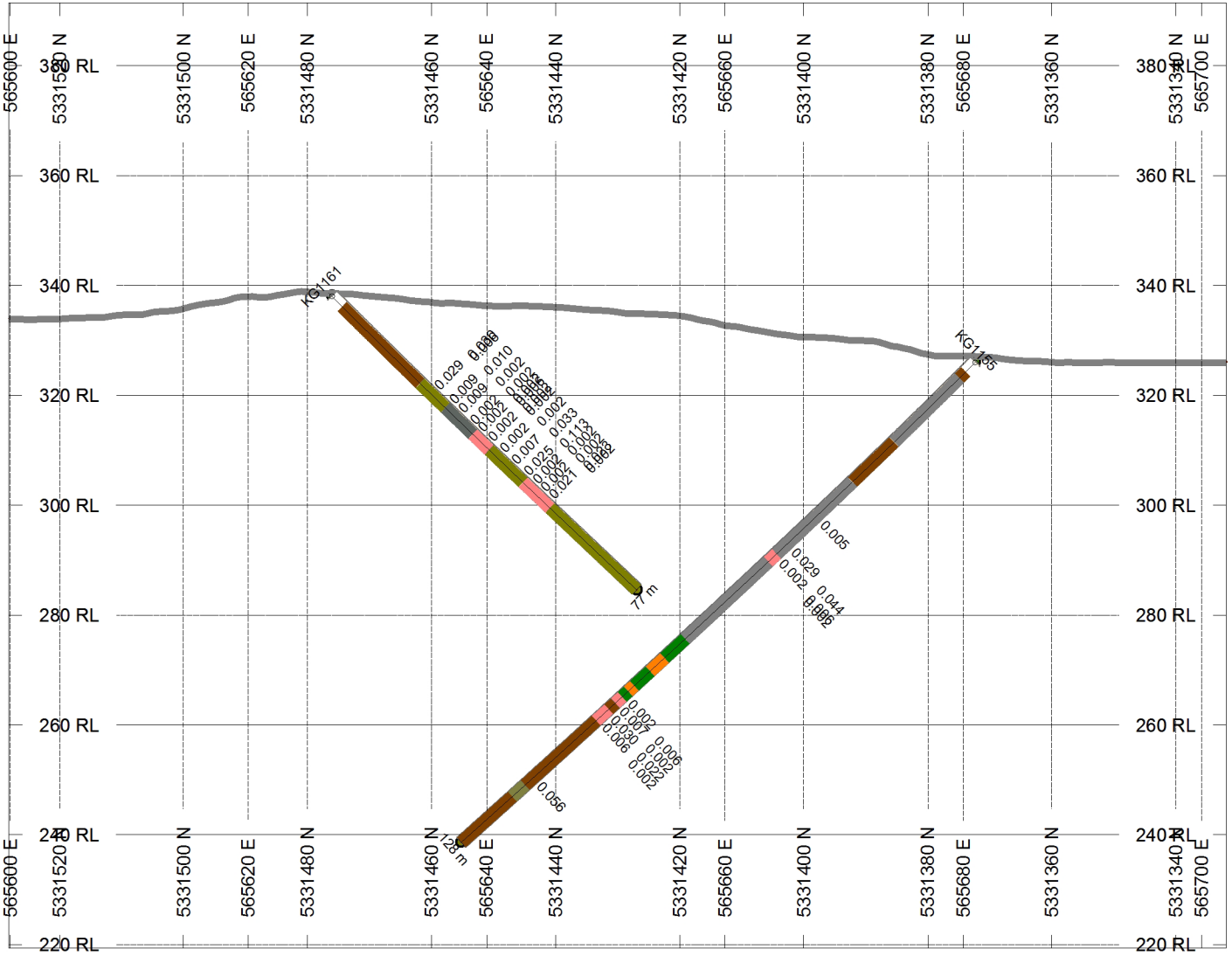

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KIRKLAND LAKE PROJECT


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Red = Magnetic North
CMC Claims
Drill_Trace
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KIRKLAND LAKE PROJECT


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Red = Magnetic North
CMC Claims
Drill_Trace
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Meters
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KIRKLAND
LAKE
PROJECT





KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		3D	Diabase
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		S7	Mudstone
		SS	Sandstone
		V9	Tuff
		V9L	Lapilli Tuff

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565651 m	5331430 m
EXTENTS	221.3 m	172.2 m
SECTION TOP, BOT	391.5 m	219.3 m
TOLERANCE +/-	26.8 m	

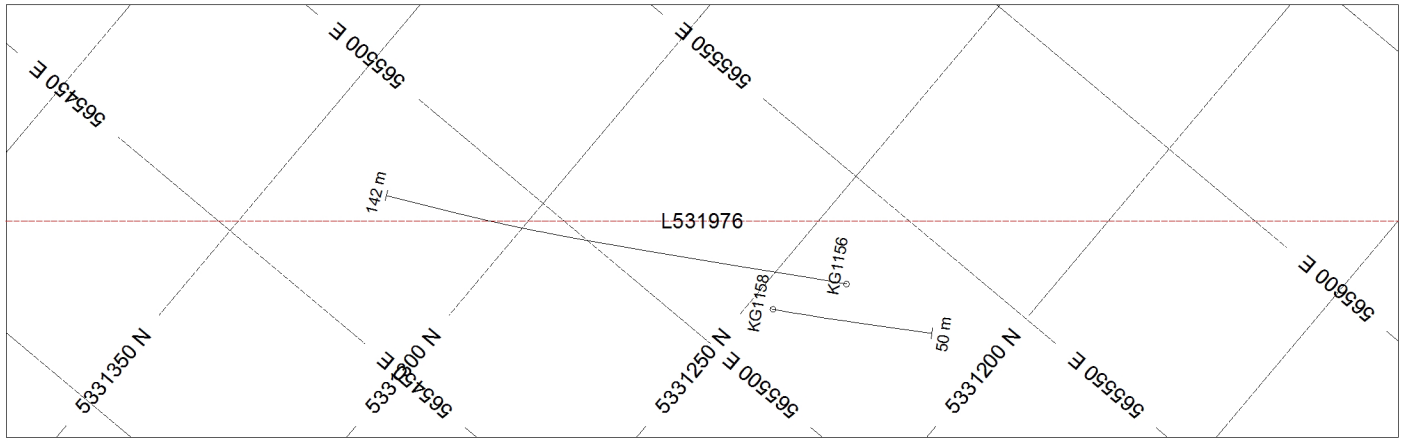
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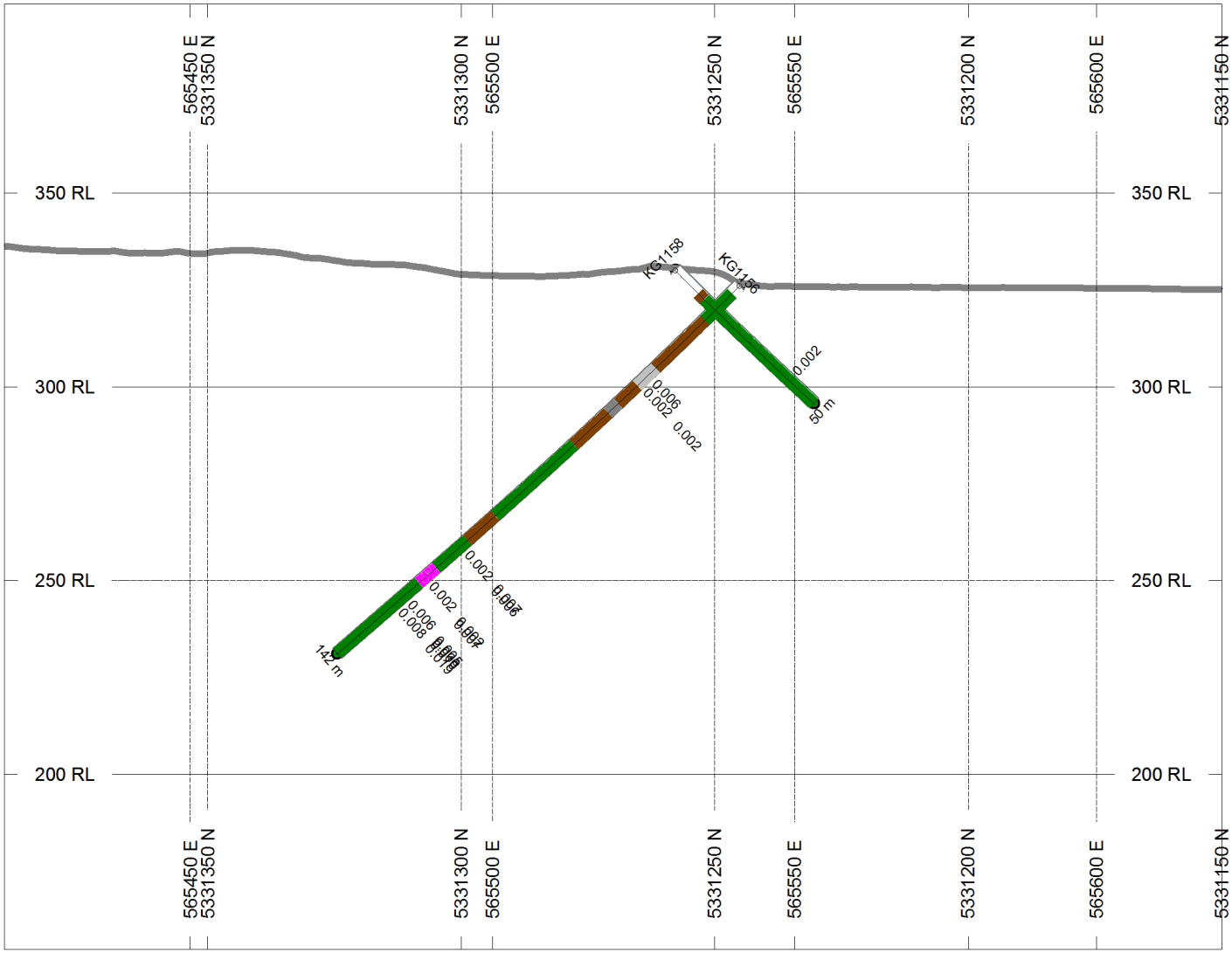
AZIMUTH = 152.5°
N
W E
S

Canadian Malartic Corporation

Kirkland Lake Project

West Kirkland Mining Drilling





KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		FP	Feldspar Porphyry
		S1	Conglomerate
		S3	Greywacke
		S6	Siltstone
		V9L	Lapilli Tuff

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565520 m	5331270 m
EXTENTS	313.5 m	243.9 m
SECTION TOP, BOT	398.7 m	154.7 m
TOLERANCE +/-	61.05 m	

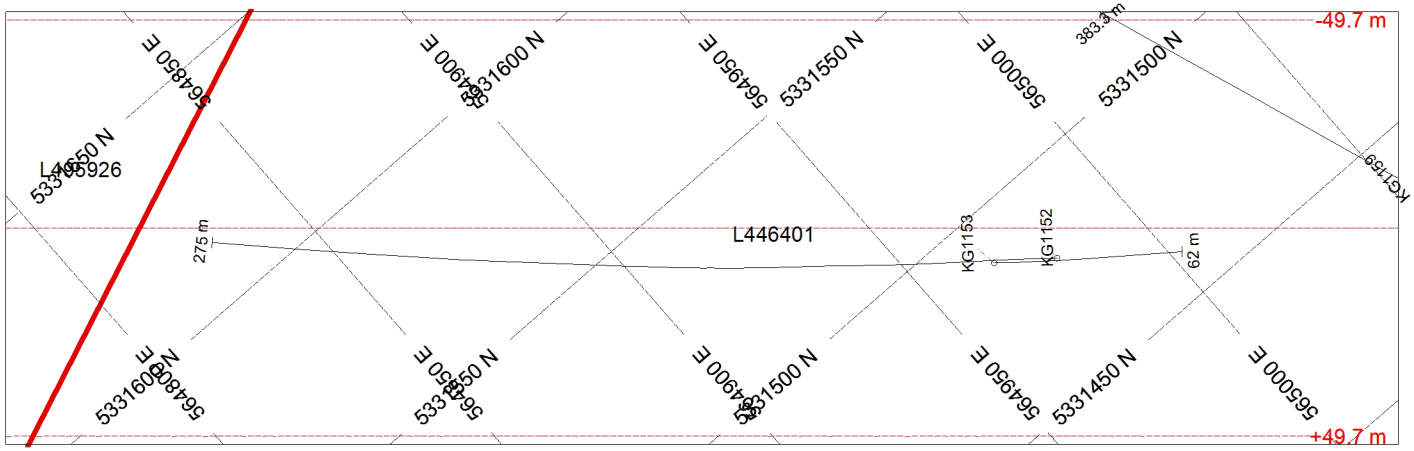
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NAD83 / UTM zone 17N

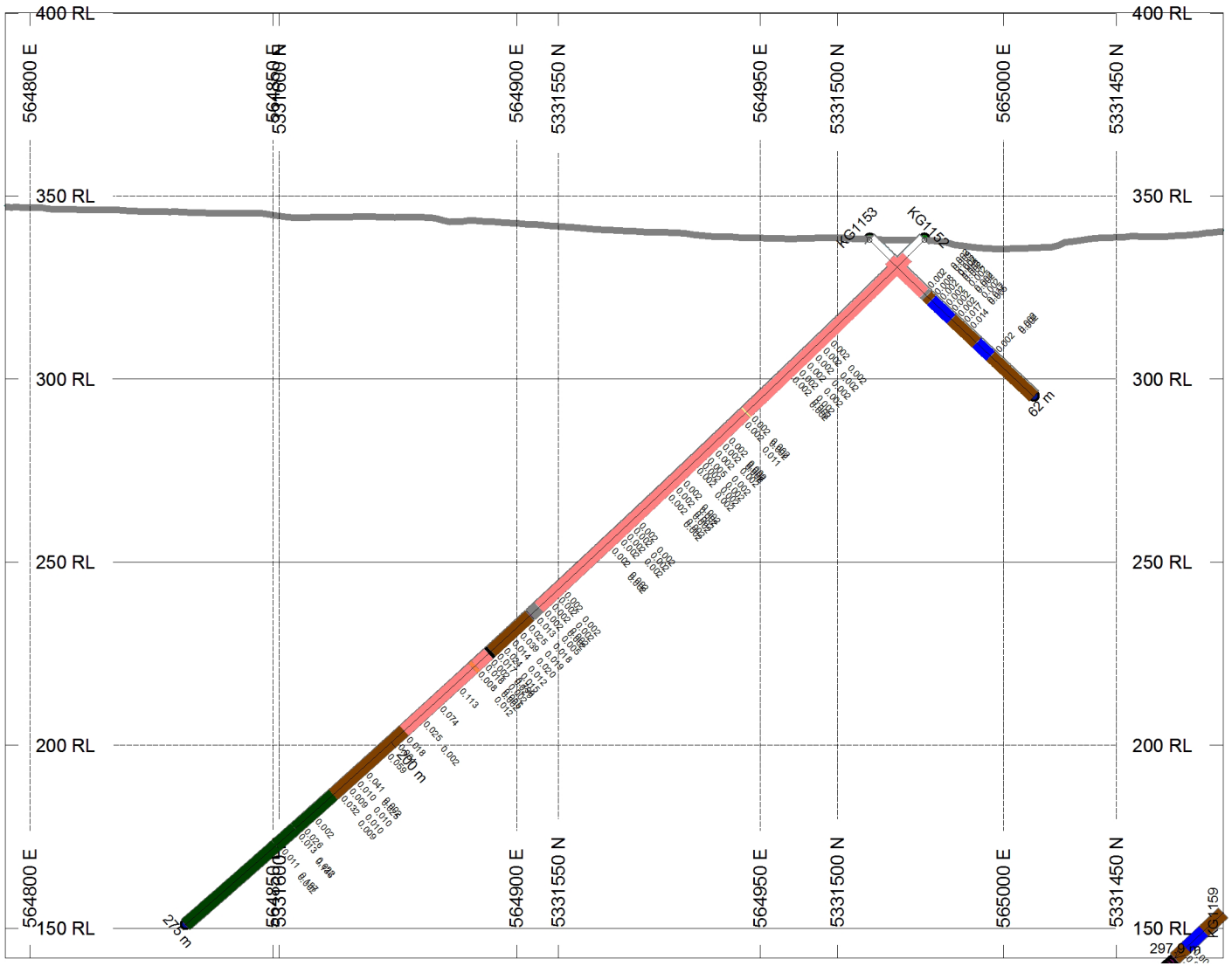
AZIMUTH = 140°
N
W E
S

Canadian Malartic Corporation

Kirkland Lake Project

West Kirkland Mining Drilling





KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		3L	Lamprophyrye
		V7	Basalt
		FAZ	Fault Zone
		M1	Schist
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S3	Greywacke
		S7	Mudstone
		SS	Sandstone
		V7BX	Volcanic Breccia
		V7p	Pillowed Basalt
		V9L	Lapilli Tuff

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	564920 m	5331540 m
EXTENTS	331.9 m	258.3 m
SECTION TOP, BOT	400.1 m	141.8 m
TOLERANCE +/-	49.7 m	

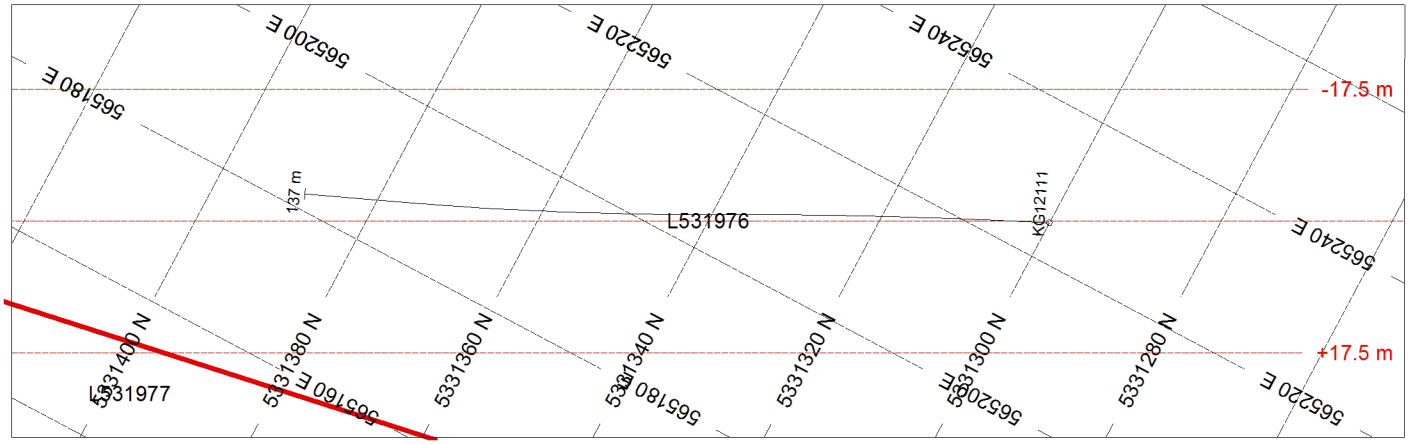
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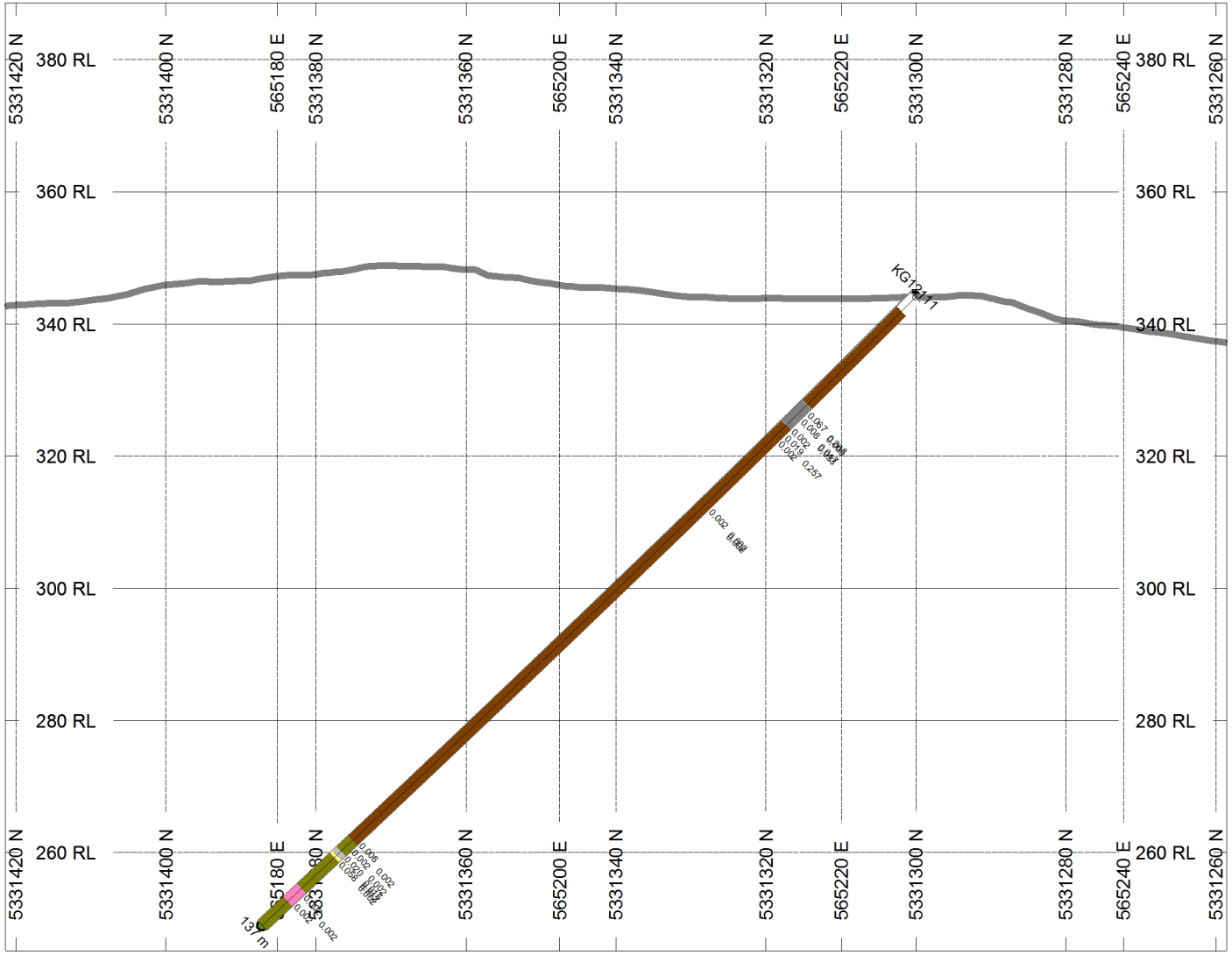
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Canadian Malartic Corporation

Kirkland Lake Project

West Kirkland Mining Drilling





KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1SMa	Mafic Syenite
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S3	Greywacke
		S6	Siltstone
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565204 m	5331340 m
EXTENTS	184.4 m	143.5 m
SECTION TOP, BOT	388.7 m	245.2 m
TOLERANCE +/-	17.5 m	

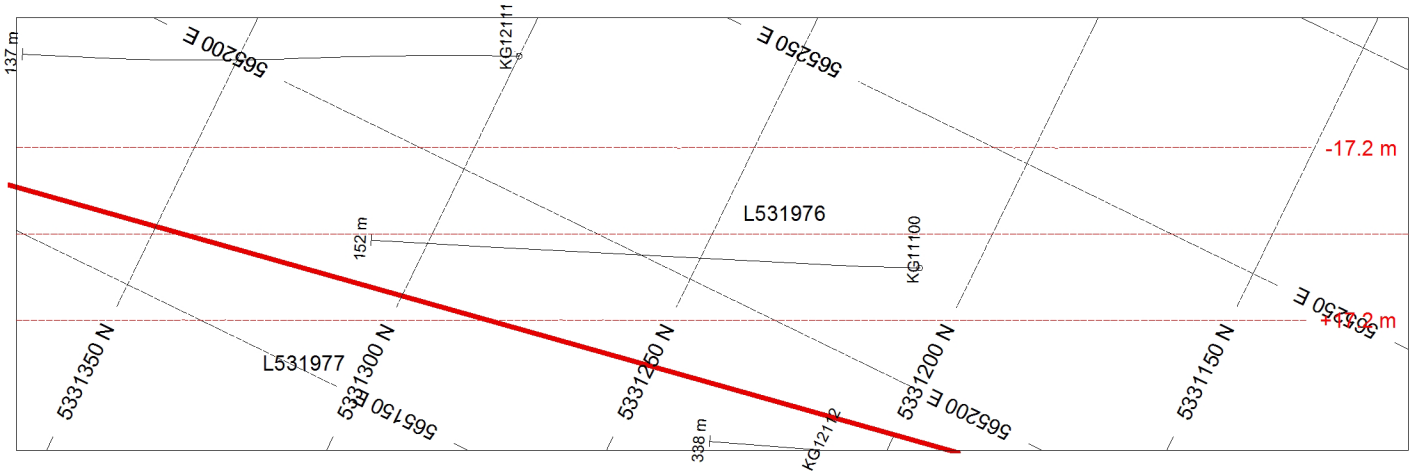
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NAD83 / UTM zone 17N

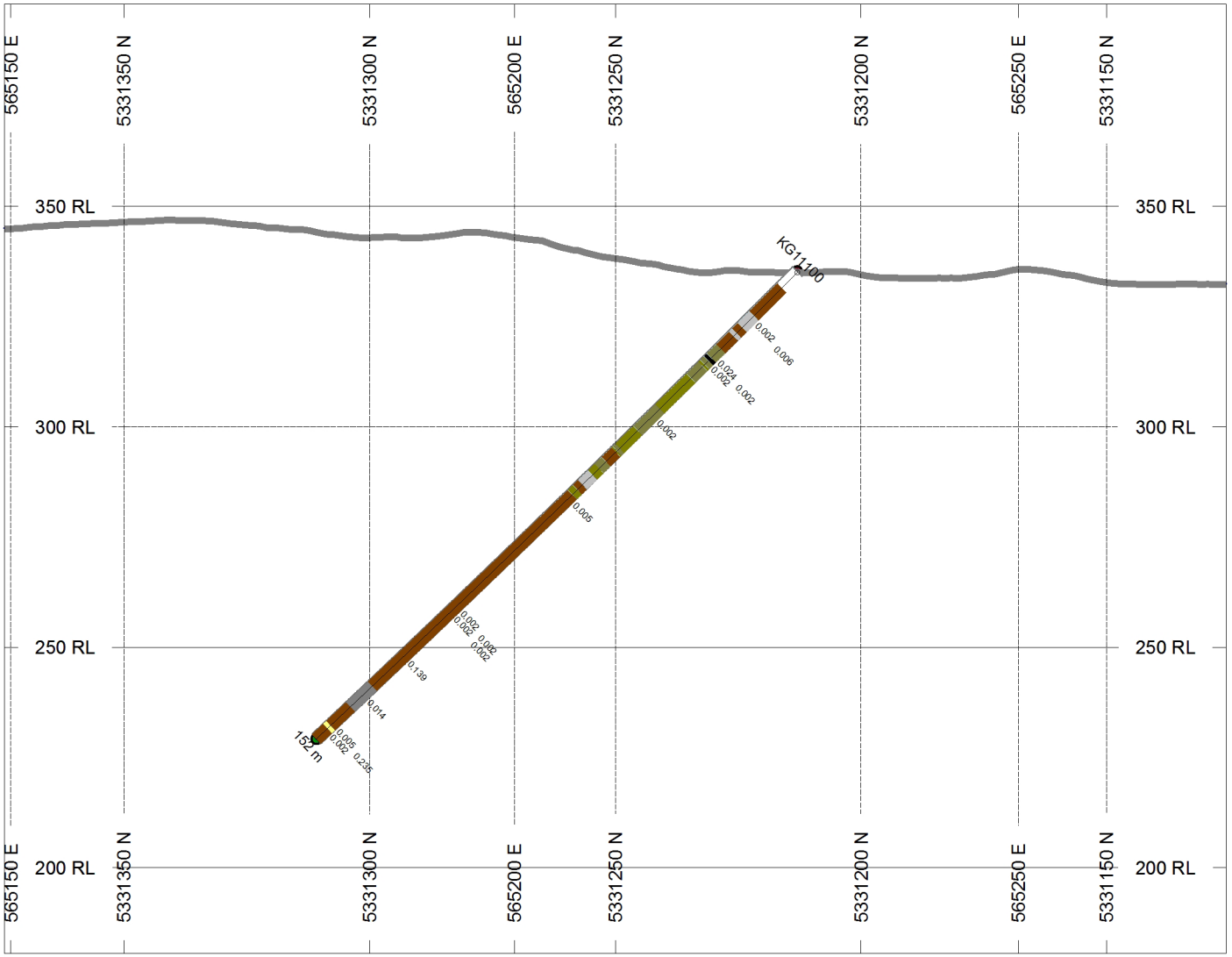
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N
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Canadian Malartic Corporation

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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		FAZ	Fault Zone
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		S6	Siltstone
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565210 m	5331250 m
EXTENTS	276.6 m	215.2 m
SECTION TOP, BOT	395.8 m	180.6 m
TOLERANCE +/-	17.16 m	

1:1,500
SCALE

(m)

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NAD83 / UTM zone 17N

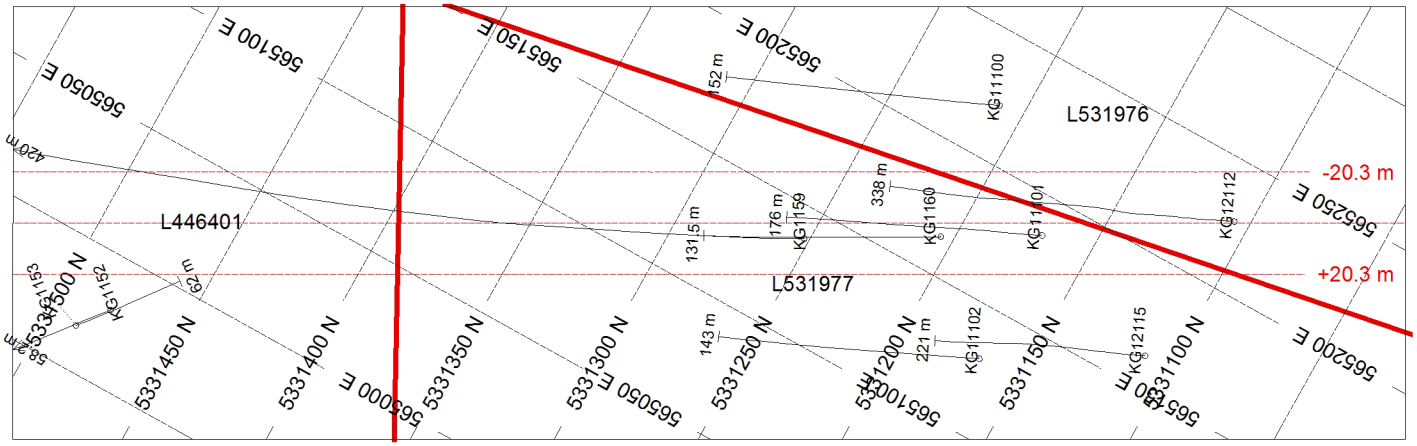
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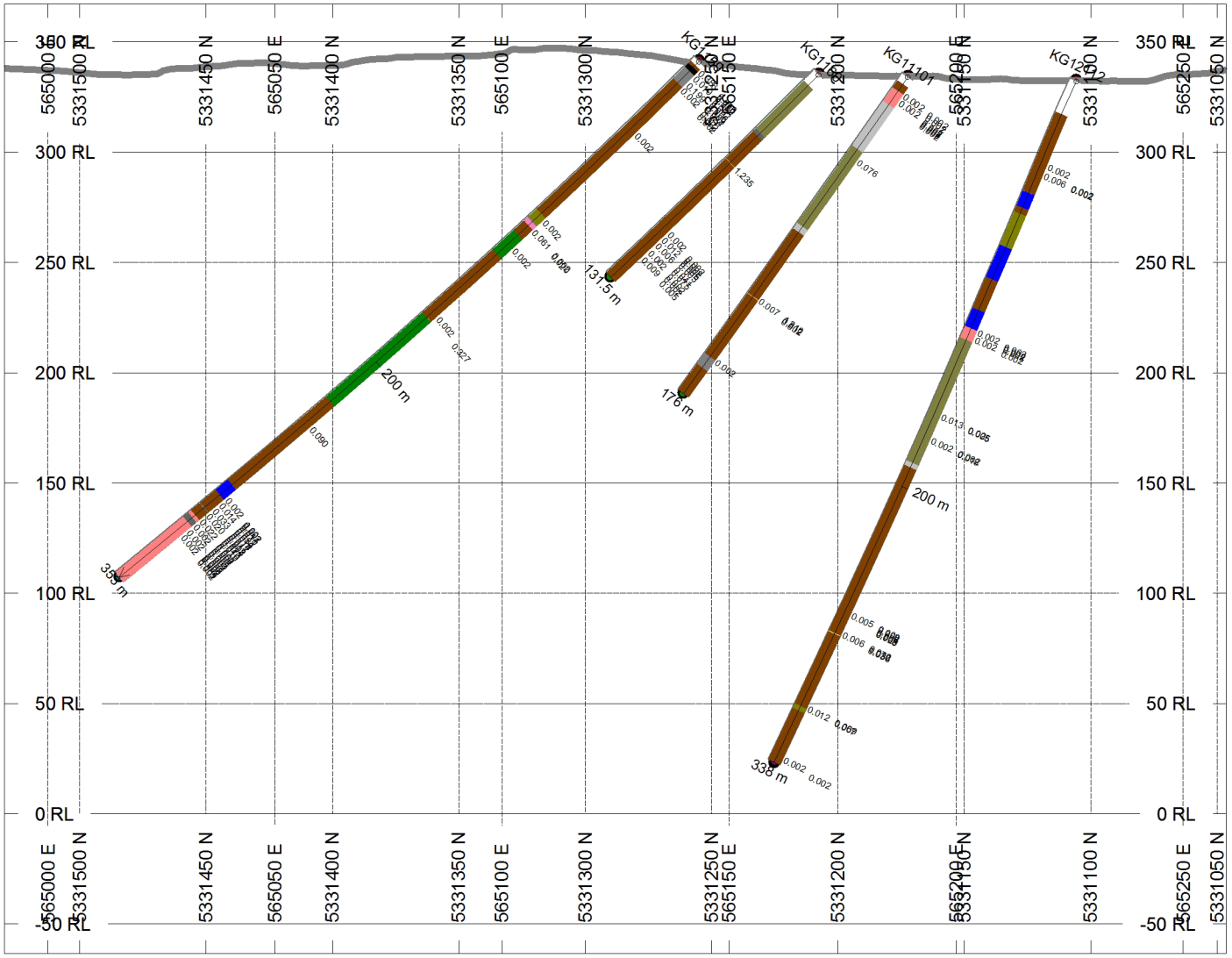
N W E S

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TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL OVB	DESCRIPTION Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		3L	Lamprophyrye
		V7	Basalt
		MI	Mafic Intrusion
		FAZ	Fault Zone
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		S6	Siltstone
		S7	Mudstone
		SS	Sandstone
		V9L	Lapilli Tuff

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565125 m	5331288 m
EXTENTS	553.2 m	430.5 m
SECTION TOP, BOT	367.1 m	-63.45 m
TOLERANCE +/-	20.32 m	

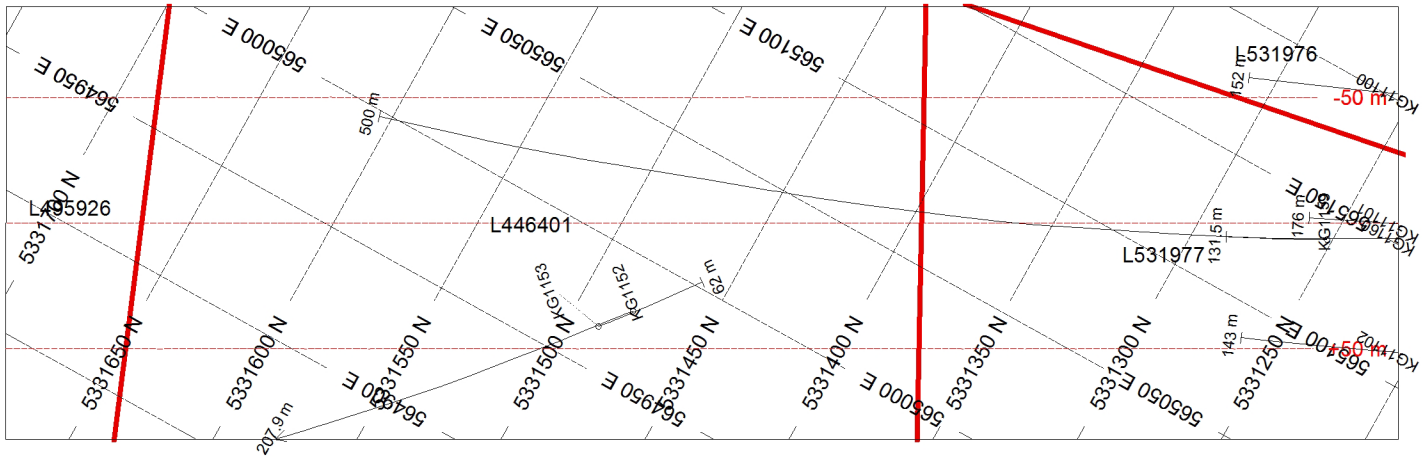
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NAD83 / UTM zone 17N

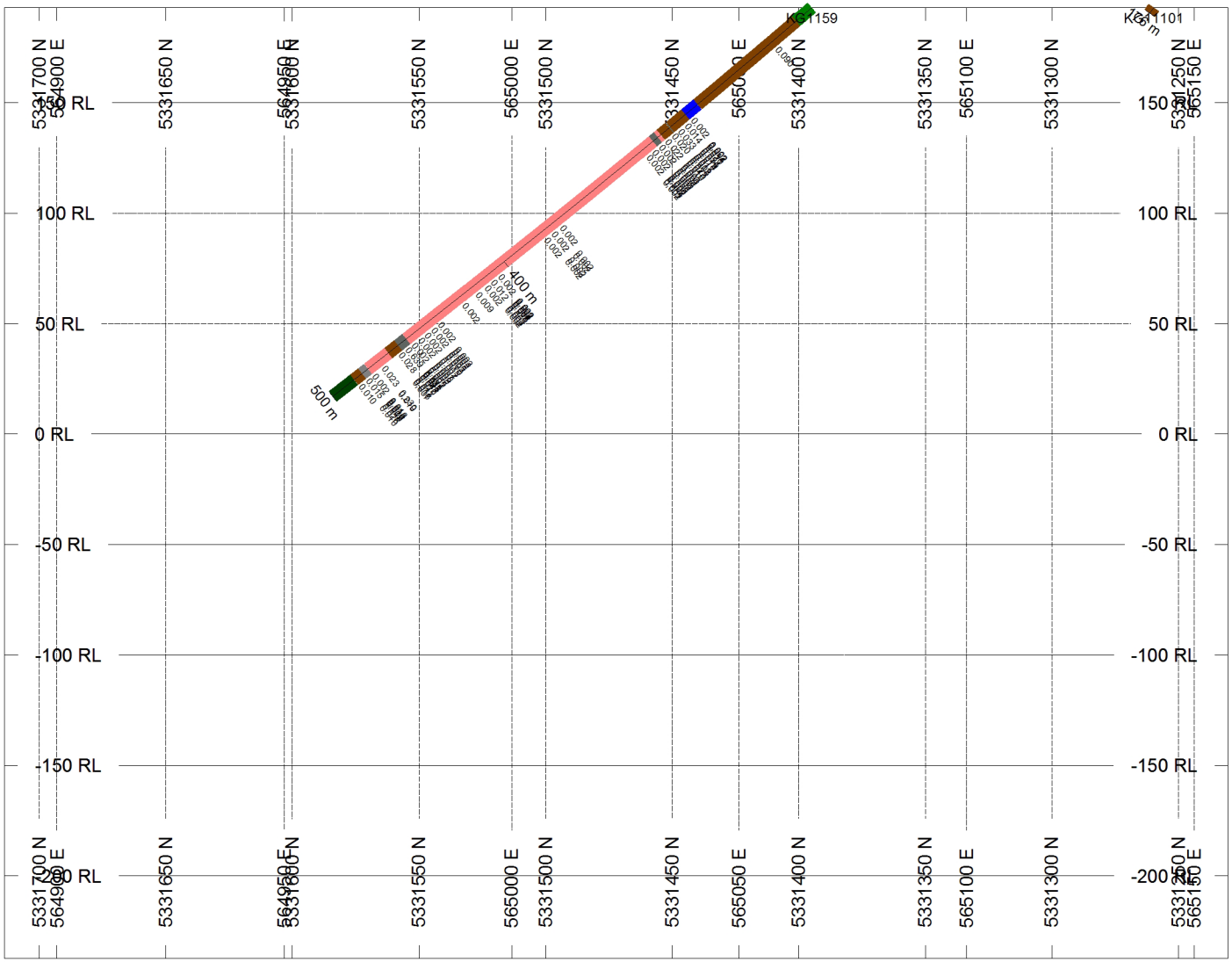
AZIMUTH = 150.9°
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Kirkland Lake Project

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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		3L	Lamprophyrye
		V7	Basalt
		FAZ	Fault Zone
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		S6	Siltstone
		S7	Mudstone
		SS	Sandstone
		V9L	Lapilli Tuff

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565023 m	5331472 m
EXTENTS	553.2 m	430.5 m
SECTION TOP, BOT	193 m	-237.4 m
TOLERANCE +/-	50 m	

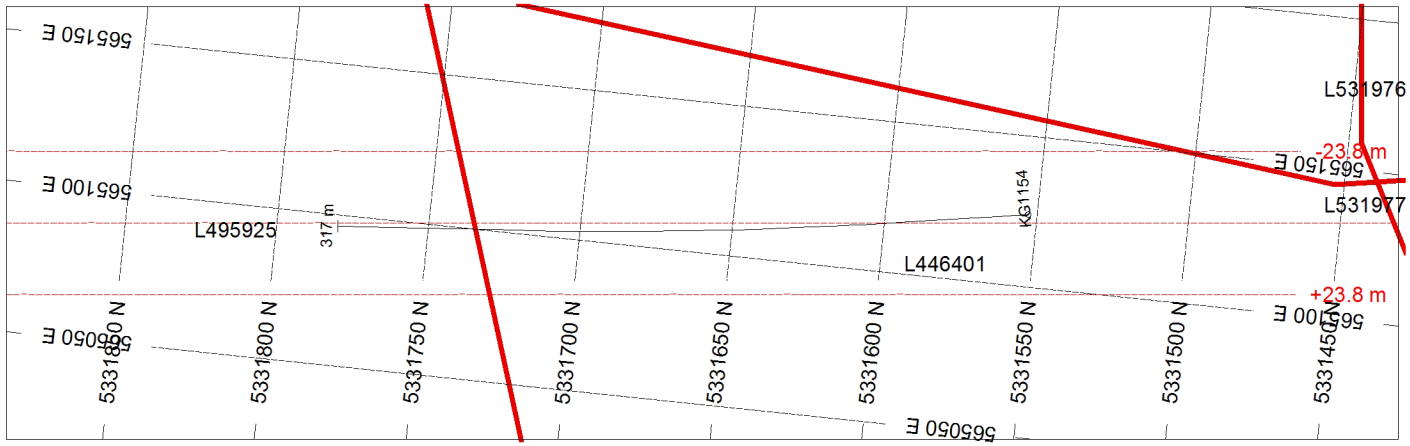
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NAD83 / UTM zone 17N

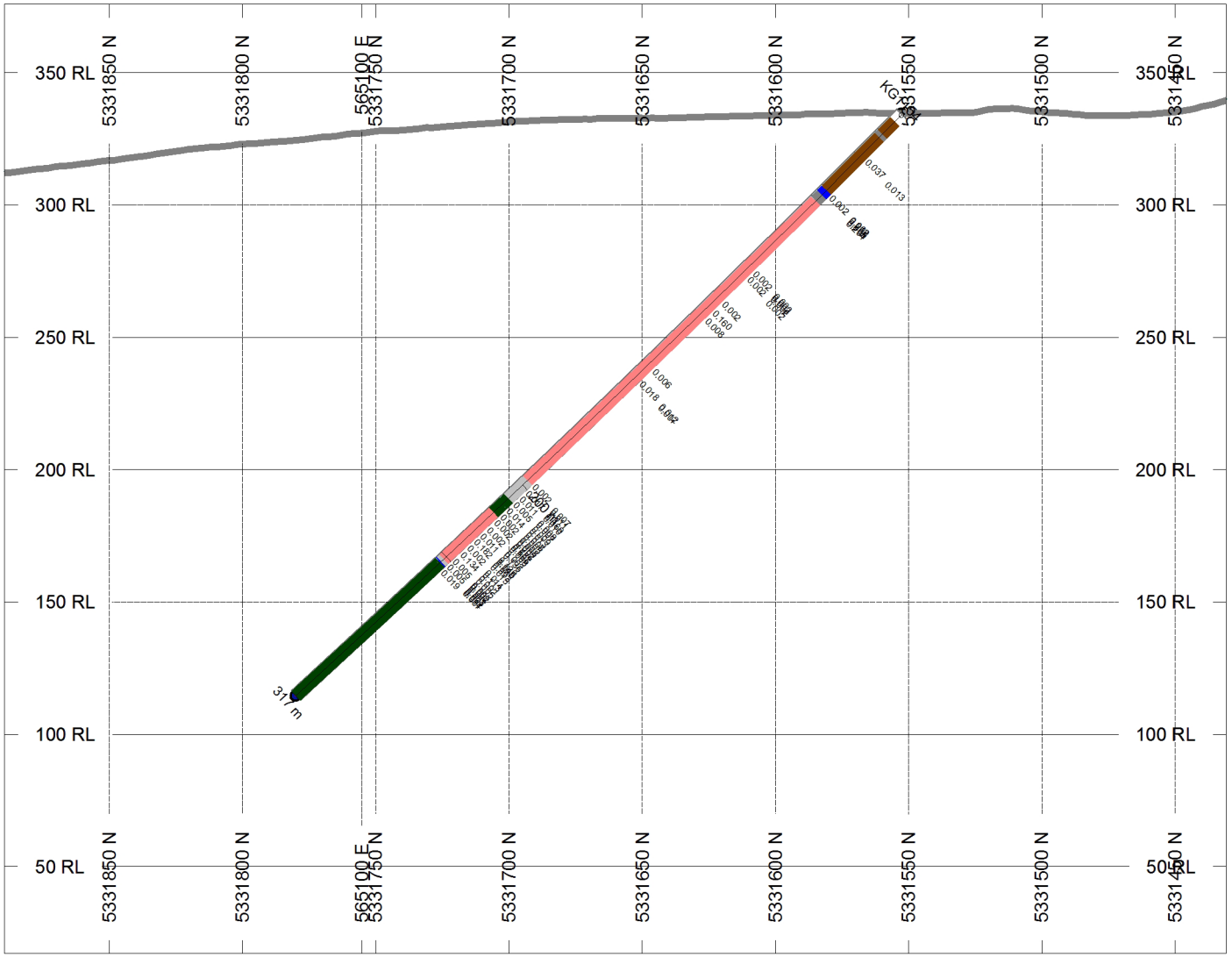
AZIMUTH = 150.9°
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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		V7	Basalt
		MI	Mafic Intrusion
		FAZ	Fault Zone
		2D	Diorite
		S1	Conglomerate
		S3	Greywacke
		S6	Siltstone
		V7BX	Volcanic Breccia
		V7p	Pillowed Basalt

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565110 m	5331660 m
EXTENTS	461 m	358.7 m
SECTION TOP, BOT	375.9 m	17.13 m
TOLERANCE +/-	23.77 m	

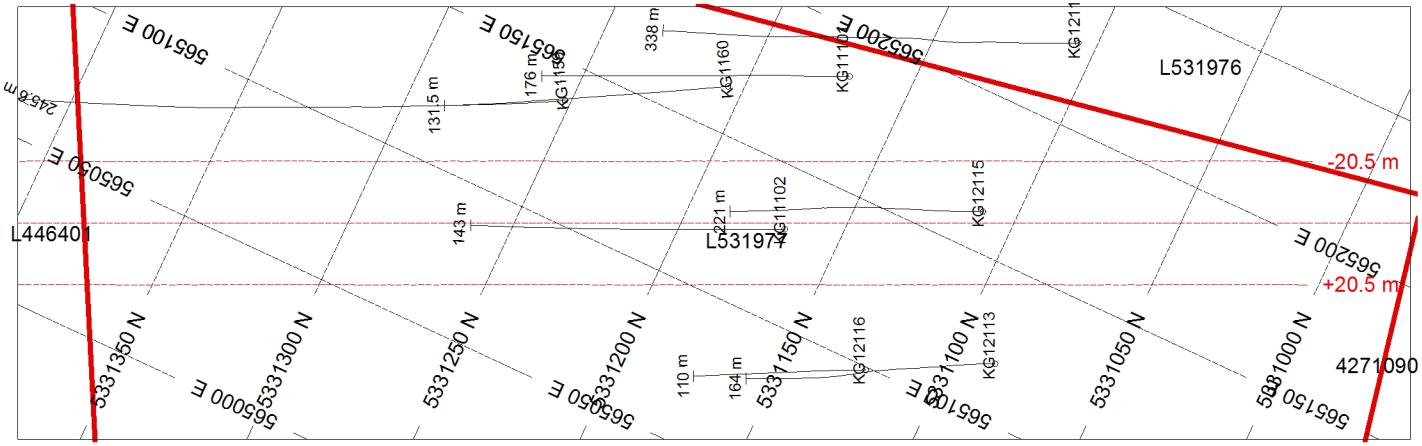
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NAD83 / UTM zone 17N

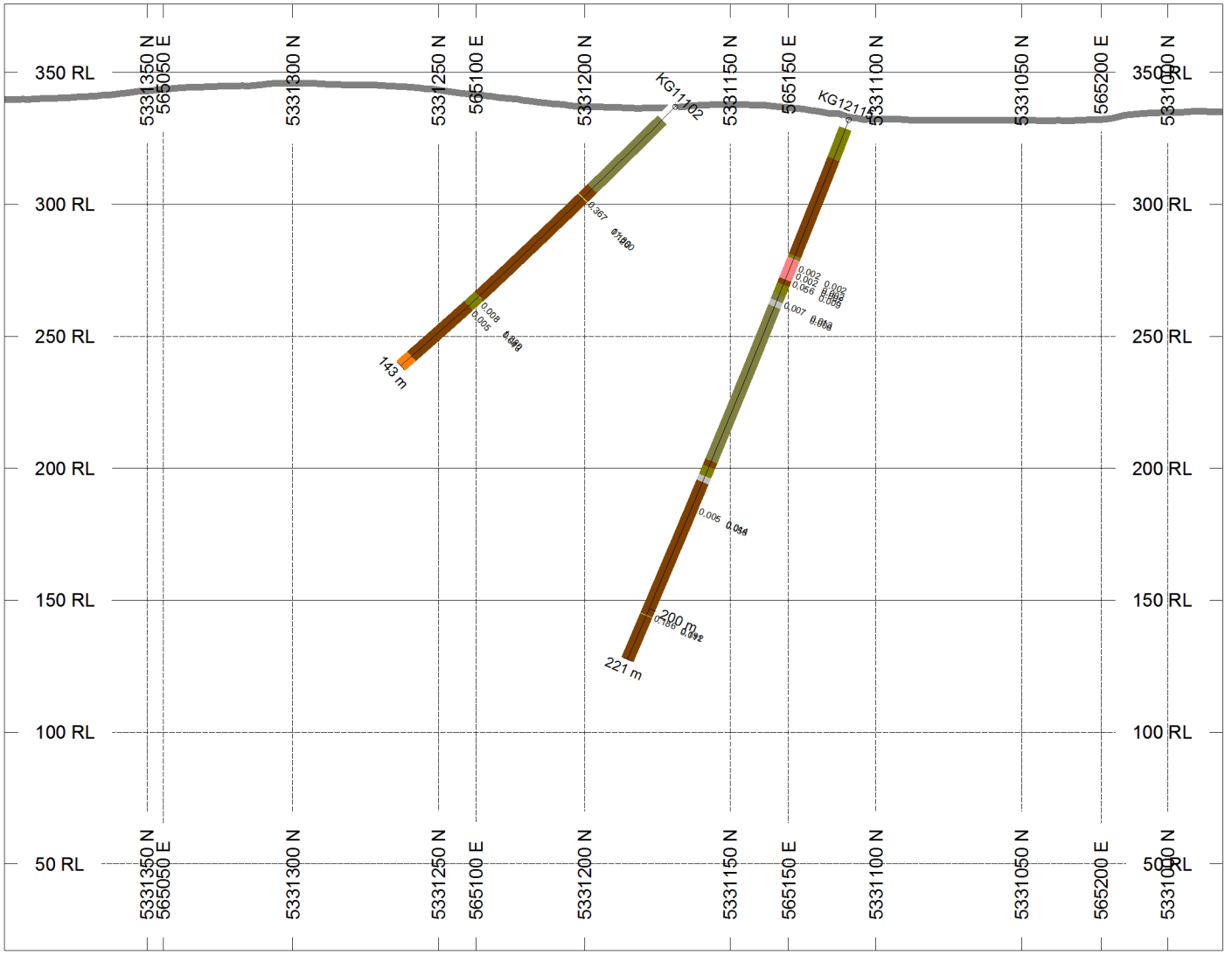
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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		3D	Diabase
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S2	Arkose
		S6	Siltstone
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565122 m	5331190 m
EXTENTS	461 m	358.7 m
SECTION TOP, BOT	375.9 m	17.13 m
TOLERANCE +/-	20.47 m	

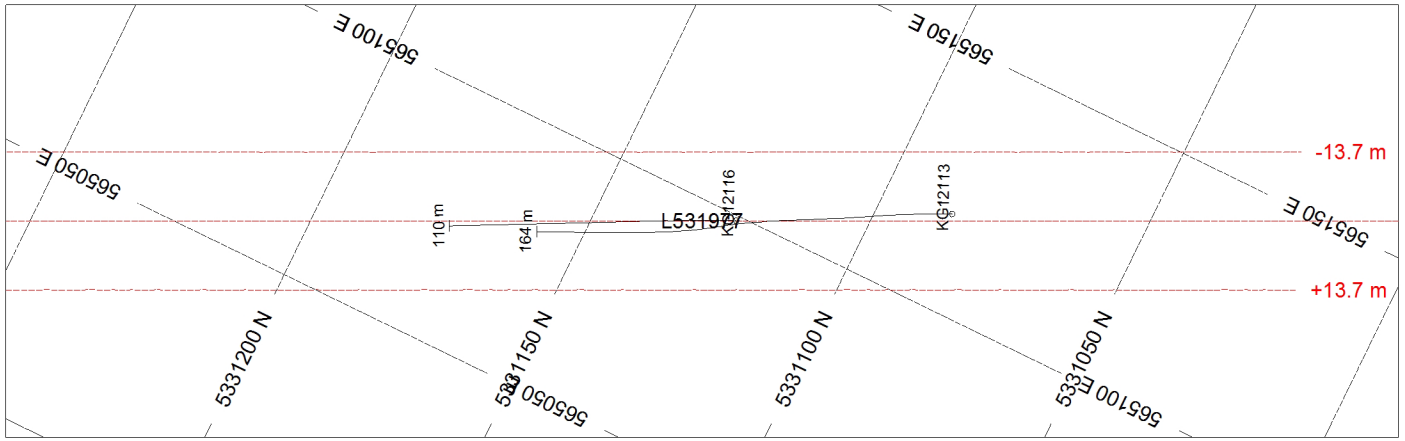
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NAD83 / UTM zone 17N

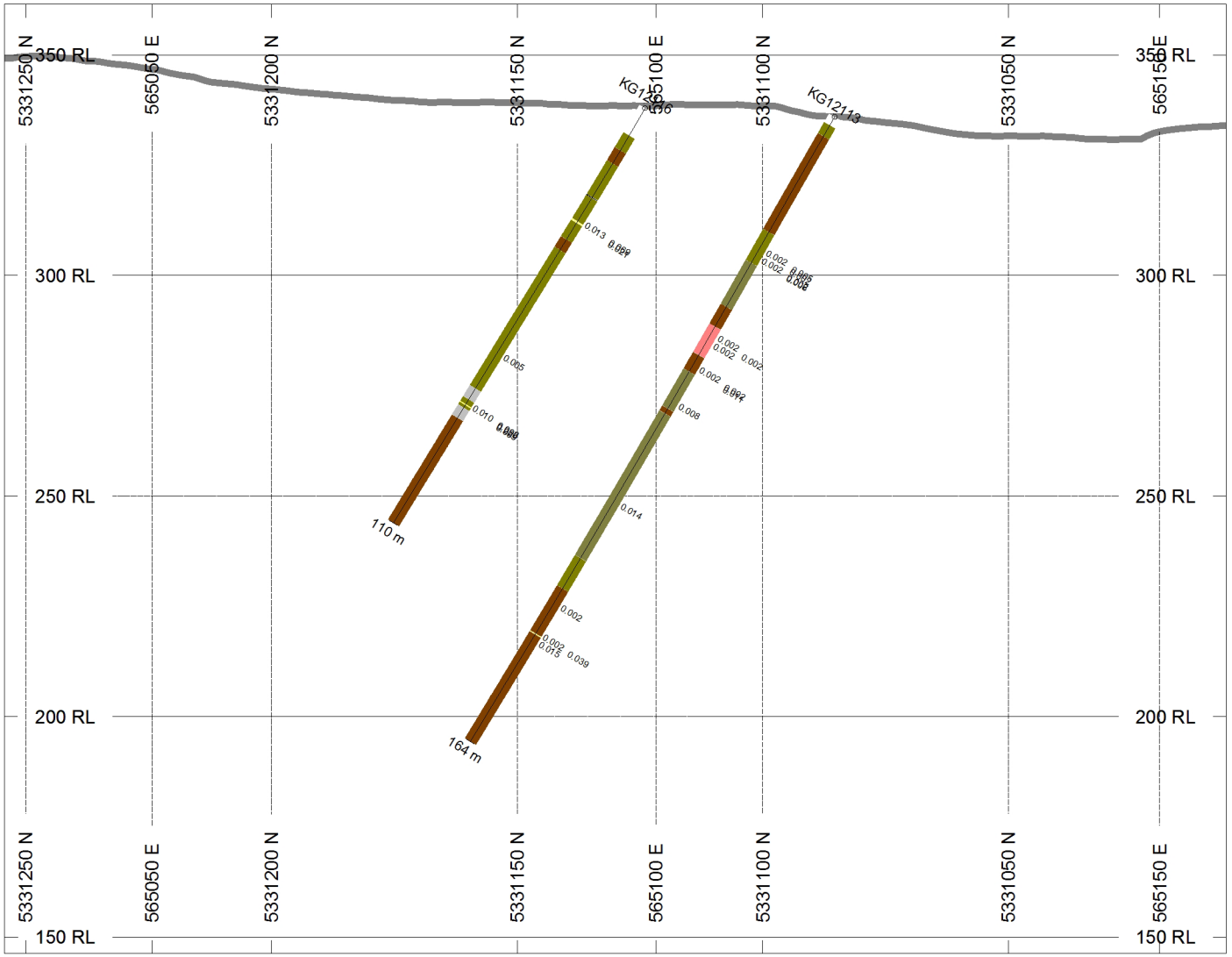
AZIMUTH = 155°
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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		FAZ	Fault Zone
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		S2	Arkose
		S6	Siltstone
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565096 m	5331130 m
EXTENTS	276.6 m	215.2 m
SECTION TOP, BOT	361.5 m	146.3 m
TOLERANCE +/-	13.72 m	

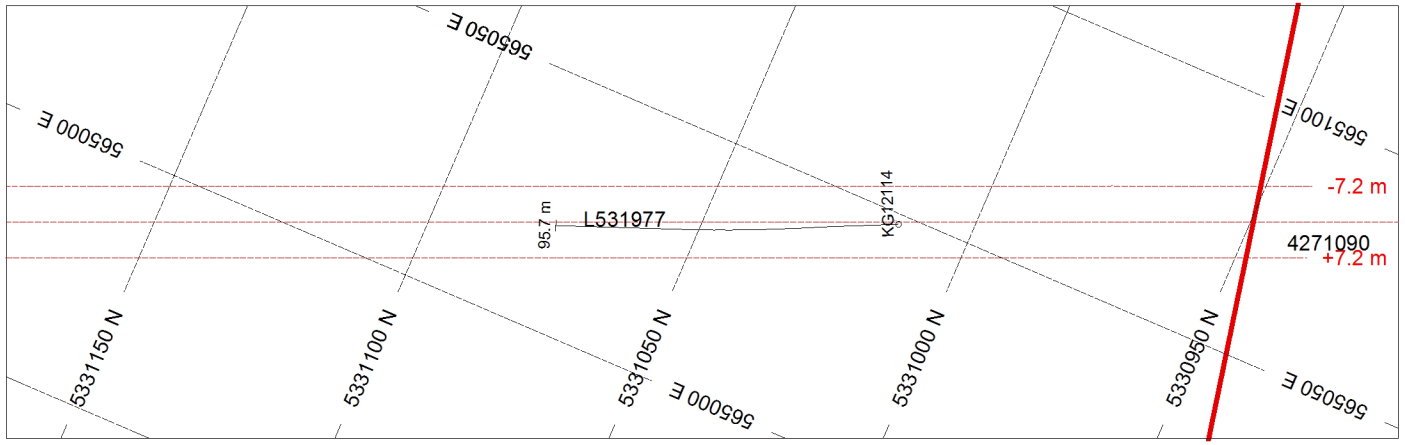
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NAD83 / UTM zone 17N

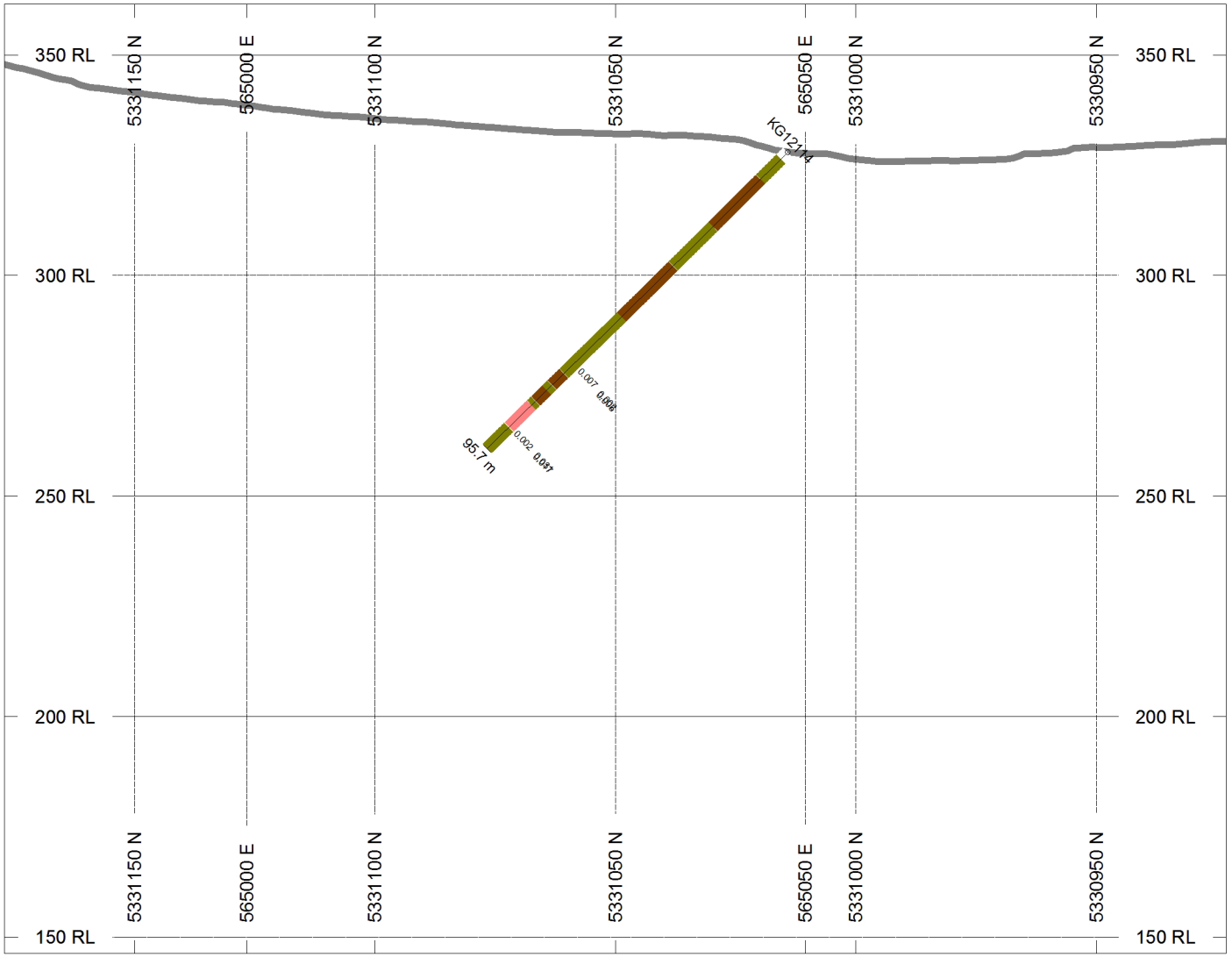
AZIMUTH = 154°
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Kirkland Lake Project

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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		QVZ	Quartz Vein Zone
		S1	Conglomerate
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565033 m	5331050 m
EXTENTS	276.6 m	215.2 m
SECTION TOP, BOT	361.5 m	146.3 m
TOLERANCE +/-	7.155 m	

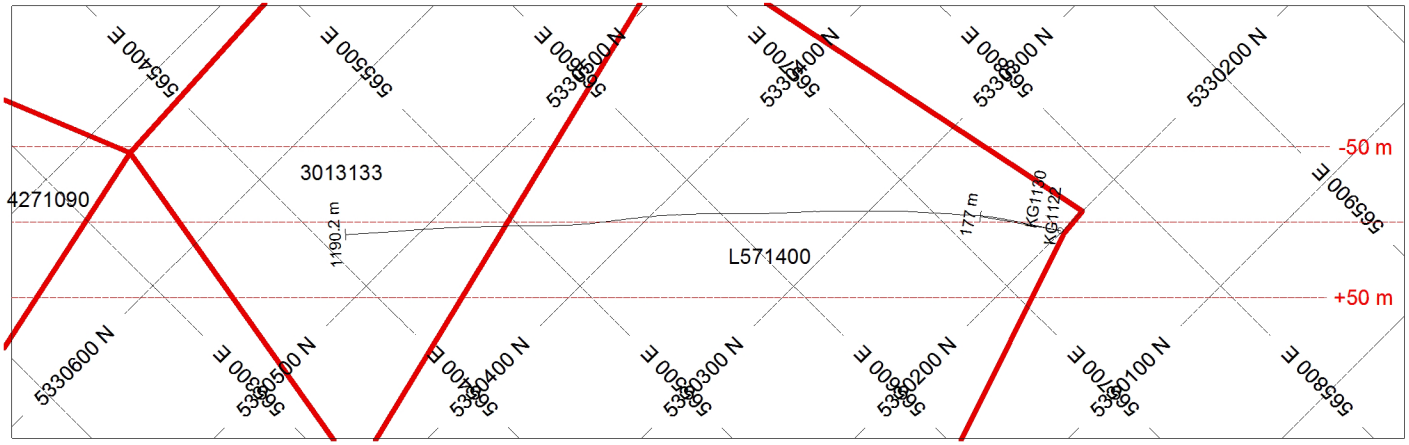
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NAD83 / UTM zone 17N

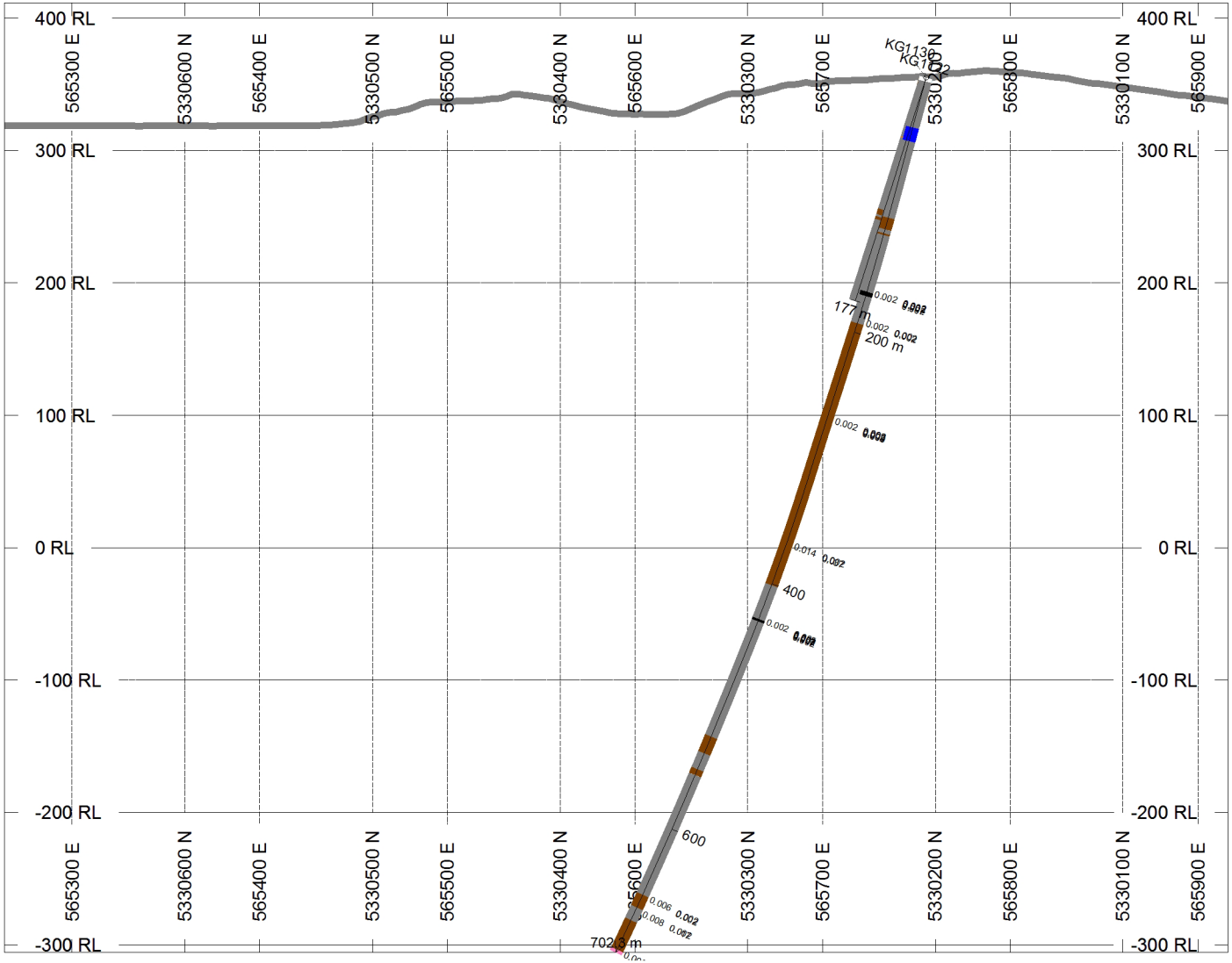
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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		3D	Diabase
		3L	Lamprophyrye
		FAZ	Fault Zone
		2D	Diorite
		S1	Conglomerate
		S3	Greywacke

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565590 m	5330370 m
EXTENTS	922 m	717.5 m
SECTION TOP, BOT	411.8 m	-305.7 m
TOLERANCE +/-	50 m	

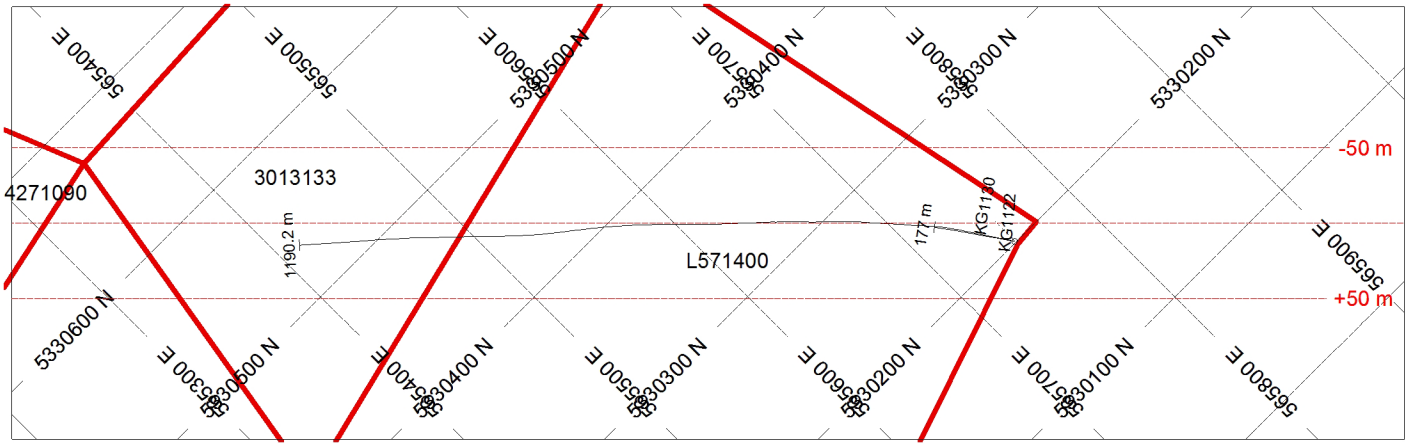
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NAD83 / UTM zone 17N

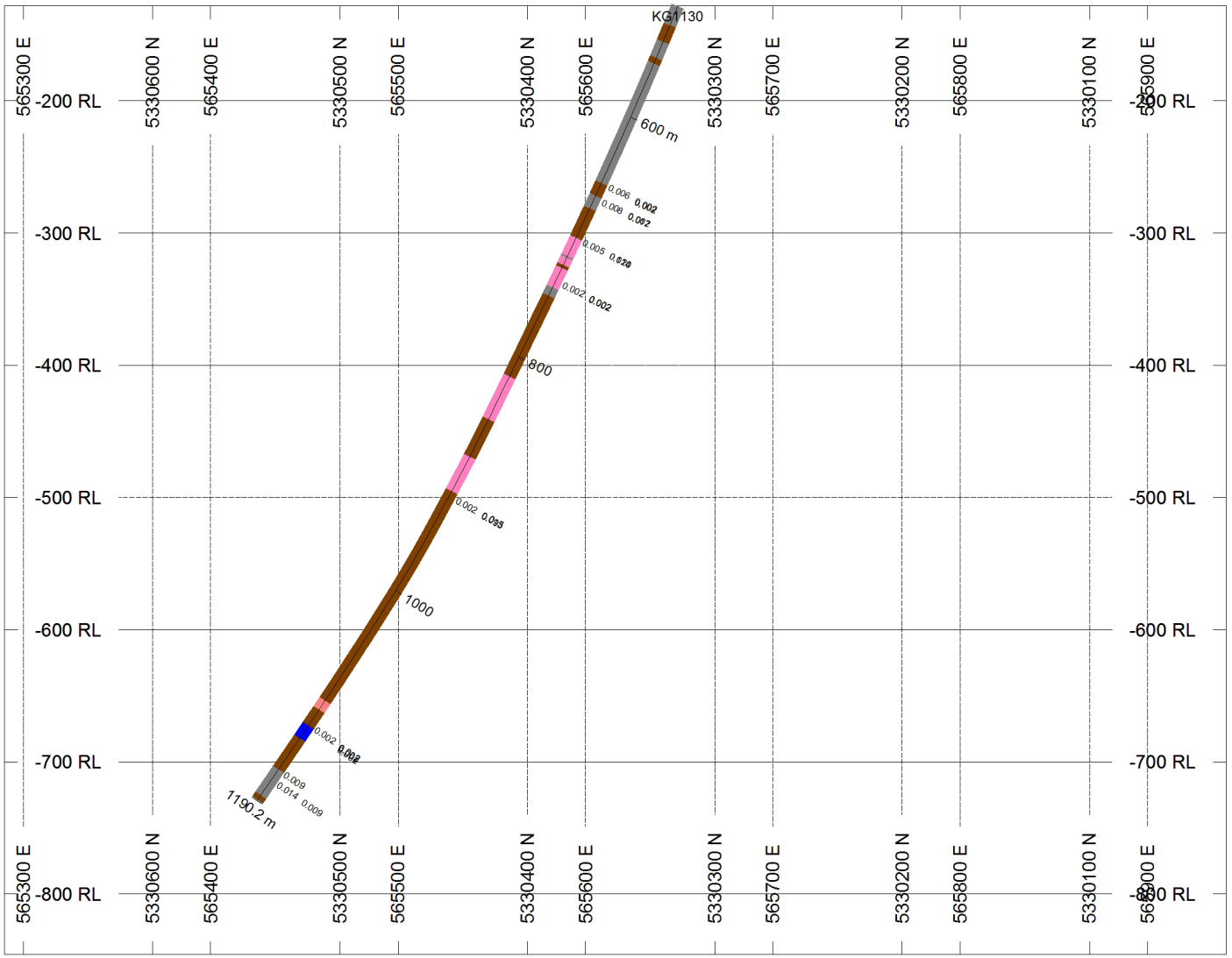
AZIMUTH = 135°
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Canadian Malartic Corporation

Kirkland Lake Project

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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		3L	Lamprophyrye
		FAZ	Fault Zone
		2D	Diorite
		S1	Conglomerate
		S3	Greywacke

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	565616 m	5330353 m
EXTENTS	922 m	717.5 m
SECTION TOP, BOT	-128.2 m	-845.7 m
TOLERANCE +/-	50 m	

1:5,000
SCALE

(m)

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NAD83 / UTM zone 17N

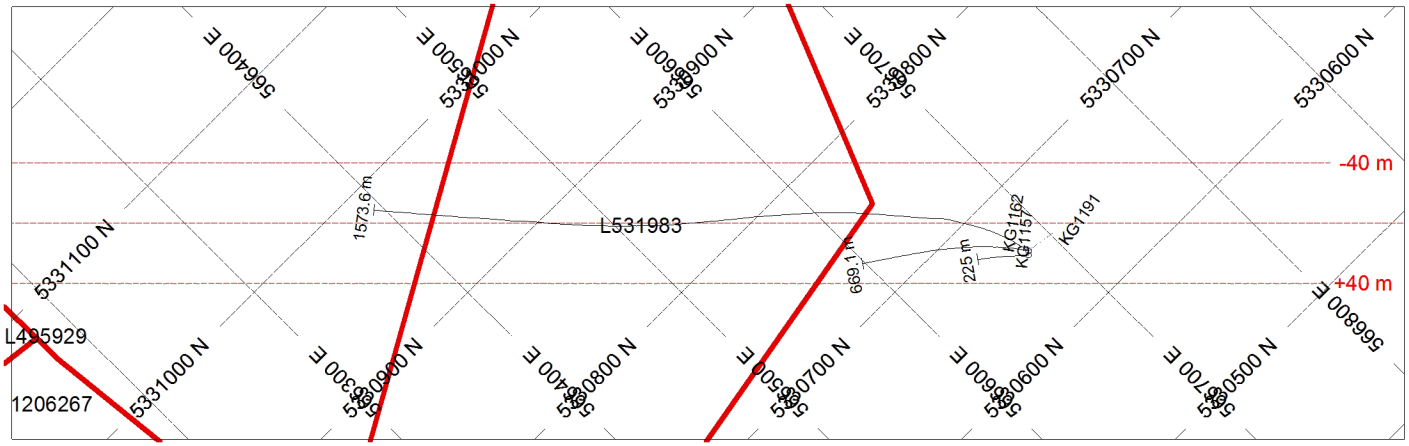
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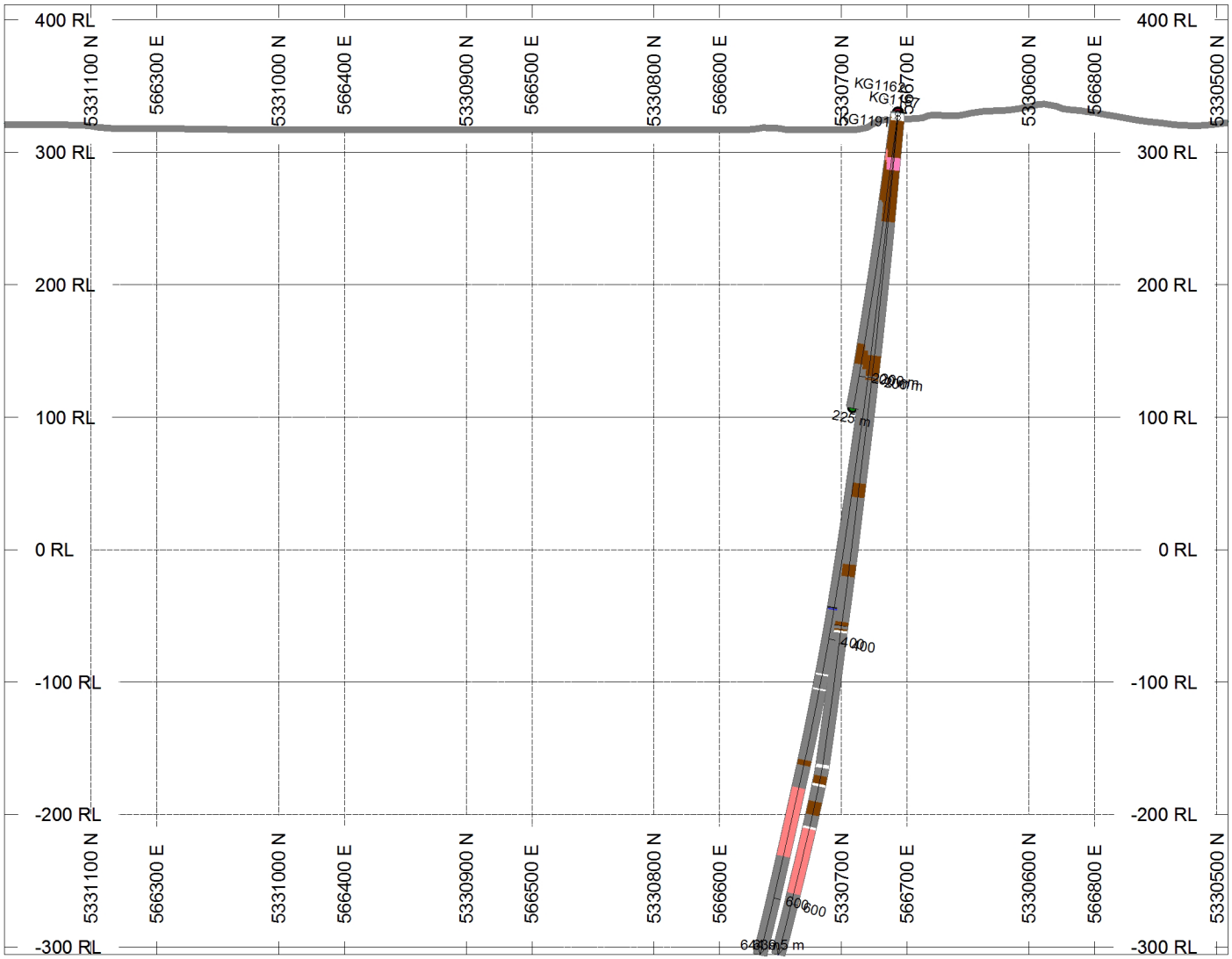
N W E S

Canadian Malartic Corporation

Kirkland Lake Project

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KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		MI	Mafic Intrusion
		FAZ	Fault Zone
		2D	Diorite
		BX	Breccia
		LCR	Lost Core
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	566545 m	5330820 m
EXTENTS	922 m	717.5 m
SECTION TOP, BOT	411.8 m	-305.7 m
TOLERANCE +/-	40 m	

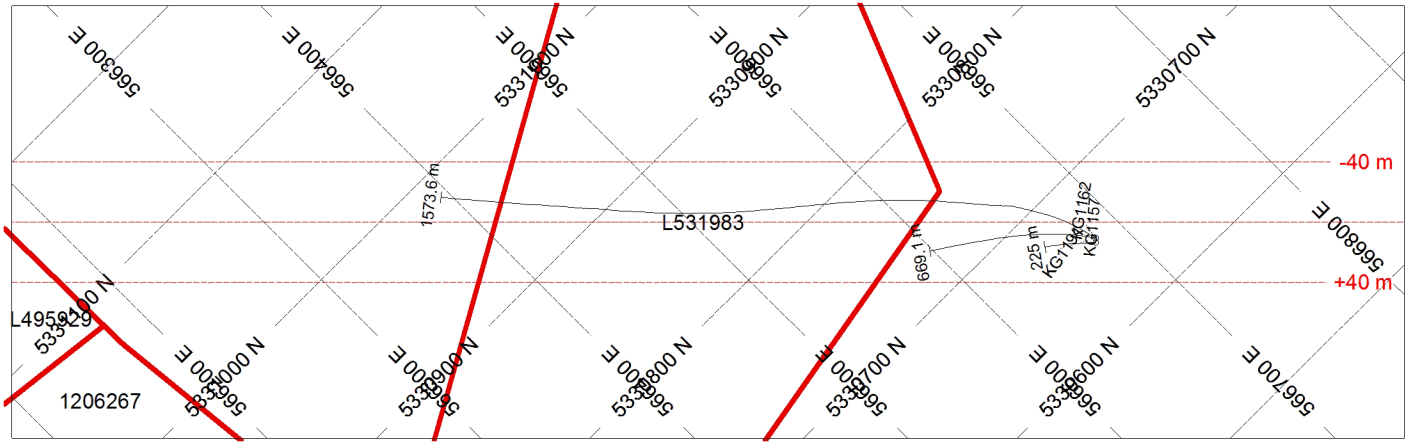
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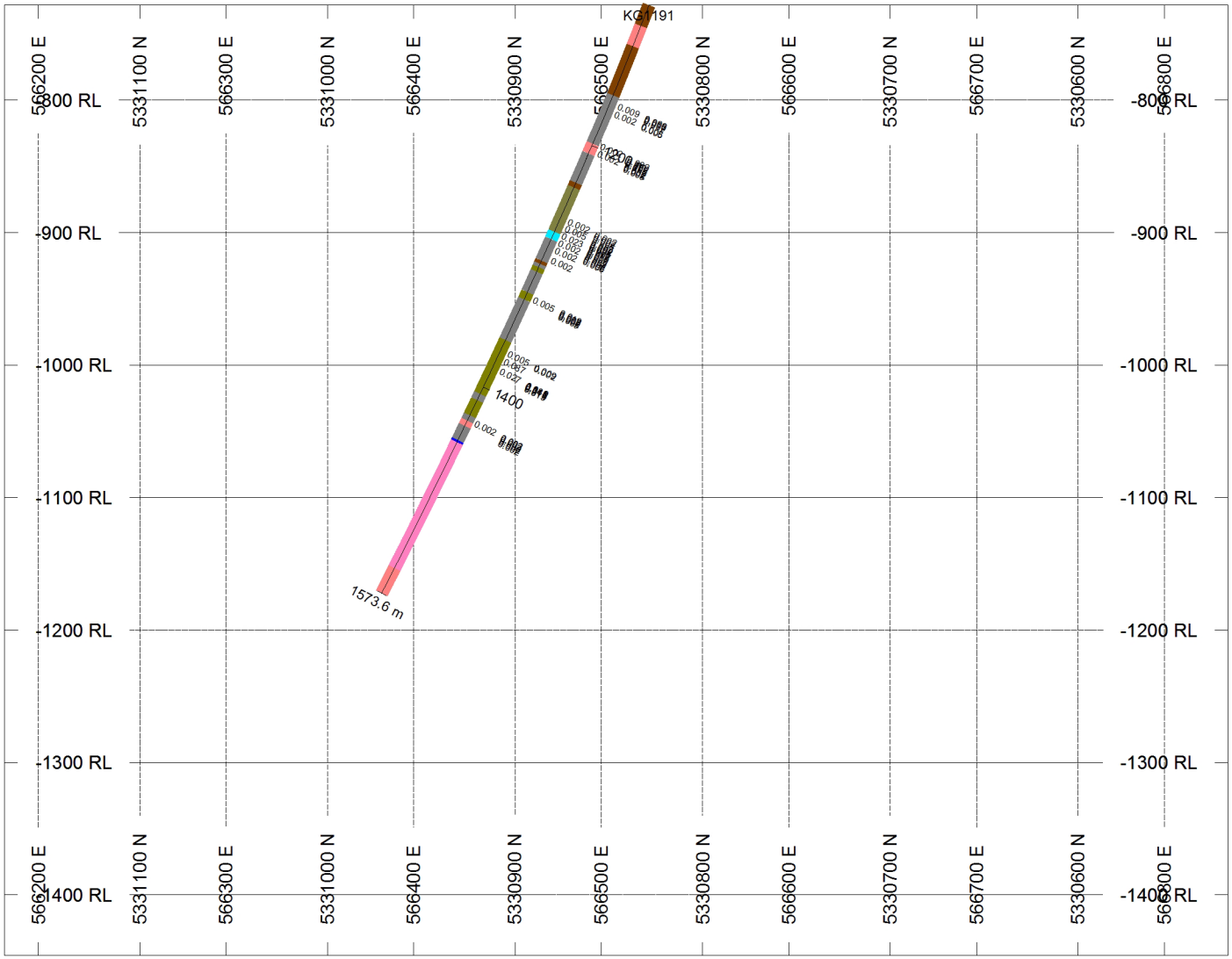
AZIMUTH = 135°
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W E
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Canadian Malartic Corporation

Kirkland Lake Project

West Kirkland Mining Drilling





KIRKLAND LAKE PROJECT

TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		FAZ	Fault Zone
		2D	Diorite
		BX	Breccia
		LCR	Lost Core
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	566508 m	5330846 m
EXTENTS	922 m	717.5 m
SECTION TOP, BOT	-728.3 m	-1446 m
TOLERANCE +/-	40 m	

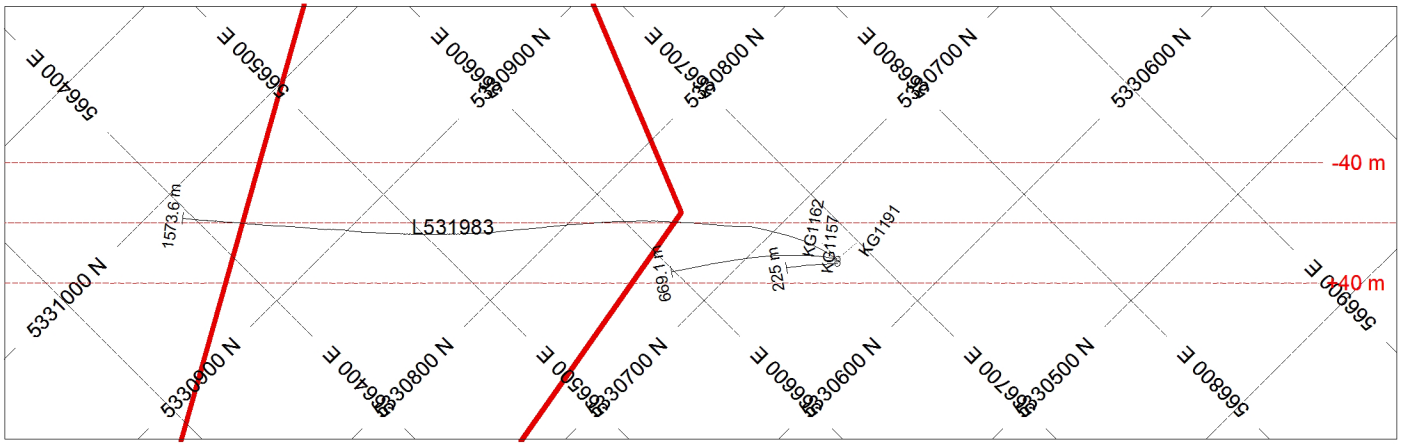
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NAD83 / UTM zone 17N

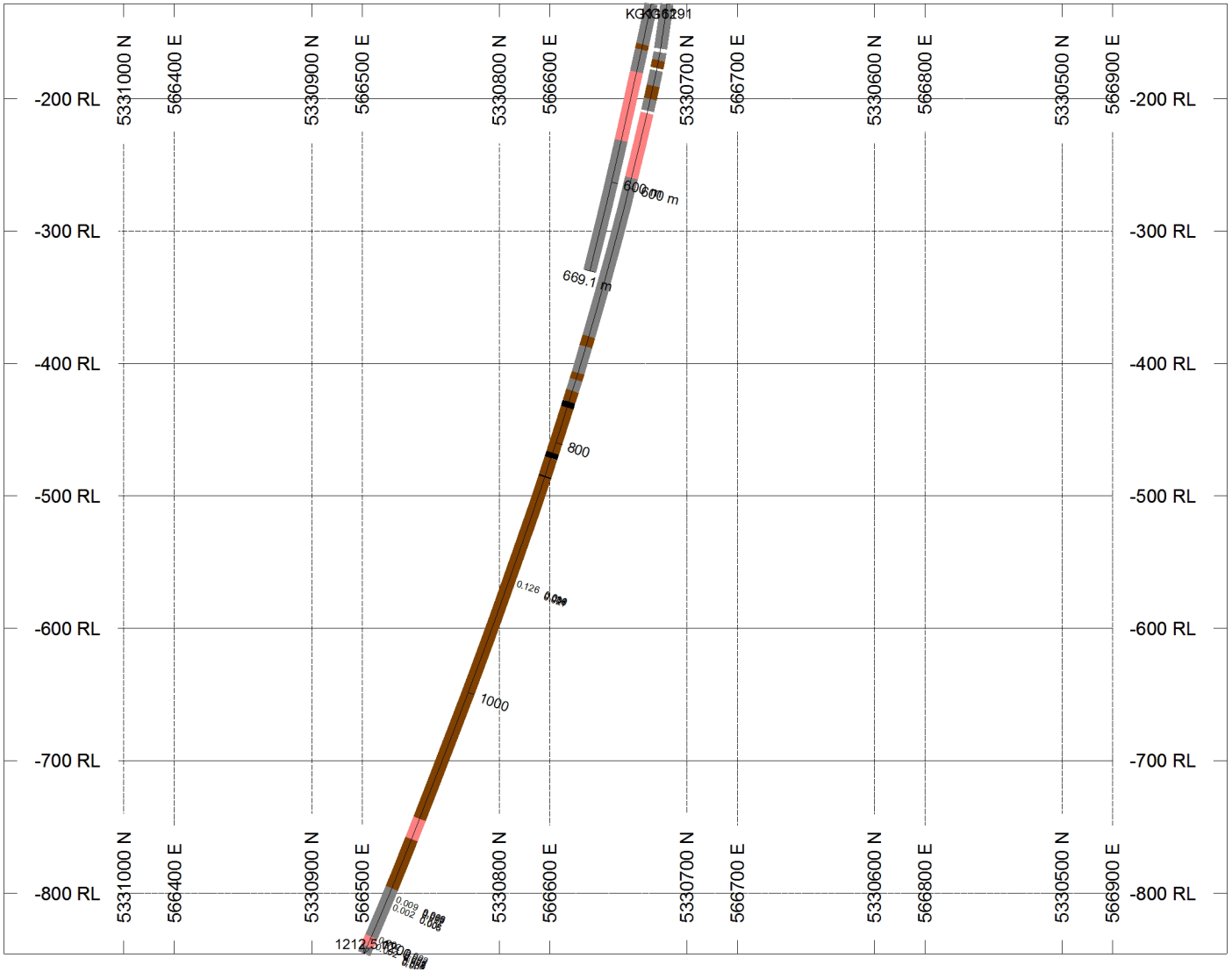
AZIMUTH = 135°
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TOPOGRAPHY

Goldbanks_Lidar.GRD

ROCK CODES LITH1	PAT	LABEL	DESCRIPTION
		OVB	Overburden
		1S	Syenite
		1SMa	Mafic Syenite
		MI	Mafic Intrusion
		FAZ	Fault Zone
		2D	Diorite
		BX	Breccia
		LCR	Lost Core
		S1	Conglomerate
		S2	Arkose
		S3	Greywacke
		SS	Sandstone

ASSAYS	L/R	TEXT
AuBest	R	-------

SECTION SPECS:

REF. PT. E, N	566635 m	5330738 m
EXTENTS	922 m	717.5 m
SECTION TOP, BOT	-128.2 m	-845.7 m
TOLERANCE +/-	40 m	

1:5,000
SCALE
(m)
-40 0 40 80 120 160
NAD83 / UTM zone 17N

AZIMUTH = 135°
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