

Summary

Location:	Henderson
UTM Zone:	NAD 83 Zone 7
UTM Easting:	582962
UTM Northing:	7031522

Hole ID:	HDRAB17-02
Depth:	15m
Azimuth:	0
Inclination:	-90

Geologist:	Bruce Kienlen
Drill Start Date & Time:	24-Sep-17
Drill End Date & Time:	24-Sep-17

Drill Target:	Granitic dyke mapped in 2012
Comments:	rock appears to be all granitic, possibly gniess and possibly paragneiss based on garnet and fine crystal size

Footage (ft)		Lithology		Bedrock				Alteration					Mineralization				Analytical
From	To	Lith	Description	Colour	Oxidation	% Qtz vein	% Carbnt'	Chlorite	Biotite	Sericite	Silicifctn'	Potassic	% py	% aspy	% cpy	% po	Sample No.
0	1.5	O/B	No sample	org	1	0											none
1.5	3	GRNT	Predominately orange potassium feldspar with ~20% quartz and maybe 20% K-spar; minor fine anhedral opaque black mineral that appears oxidized (non-magnetic), possibly biotite; trace muscovite; trace possible fine red garnet; K-spar varies from light orange to deep orange and rare reddish; <25% of chips are elongate but may be along crystal cleavage not foliation; no fabric discernable; no sulfides seen; moderate pervasive HCl reaction but no calcite seen; weak patchy clay alteration; non magnetic;	org	1	0											30101
3	4.5	GRNT	as above; finer chips with fine crystal sizes	org													30102
4.5	6	GRNT	predominately fine sand (qtz, K-spar) in chip tray with 20% rock chips as above	org													30103
6	7.5	GRNT	as above but ~40% sand; strongly reactive to HCl (could be sand that is reacting strly)	org													30104
7.5	9	GRNT	60% sand; as above but a 1cm chip shows moderate foliation of coarser K-spar; trace fine chlorite (?);	lt org													30105

Footage (ft)		Lithology		Bedrock			Alteration				Mineralization				Analytical
9	10.5	GRNT	as above; sand predominately qtz; qtz content of rock may be higher ~35%; trace to 0.5% pyrite as mod fine-coarse blebs; seems to be more oxidized specs in tray but cannot determine original species; 10% white fine plagioclase; chips are very small	lt org	1								0.5		30106
10.5	12	GRNT	as above; still predominately light orange K-spar with ~35% qtz and 10% white plag plus 15-20% dull off white plag (?) plus minor biotite/chl, red garnet, dk grey to black opaques; weakly oxidized; weak clay alteration; moderate to str HCl reaction; no sulfides seen	lt org	1										30107
12	13.5	GRNT	90% fine sand more similar to rock than previous sand and includes most of the same constituents in the same proportions; 10% orange k-spar;	lt org	1										30108
13.5	15	GRNT	as above; trace fine clear muscovite	lt org	1										30109
15	16.5	GRNT	as above except no oxidation or alteration	lt org											30110
16.5	18	GRNT	as above; a few larger chips show mod foliation and, when dry, fine muscovite	lt org											30111
	EOH		Driller's comments:												
			Hole ended due to excessive groundwater and hole collapse/bit getting stuck. Bit freed with considerable effort. Hole abandoned.												
			Hole drilled in bottom of placer cut in area of highly mineralized bedrock. Red, rusty quartz veins cross-cut area.												

Summary

Location:	Henderson
UTM Zone:	NAD 83 Zone 7
UTM Easting:	583270
UTM Northing:	7029406

Hole ID:	HD-RAB
Depth:	7.5m
Azimuth:	180
Inclination:	-75

Geologist:	Bruce Kienlen
Drill Start Date & Time:	25-Sep-17
Drill End Date & Time:	25-Sep-17

Drill Target:	Attempted to drill across a fault zone
Comments:	No chips retained for logging;

Footage (ft)		Lithology		Bedrock				Alteration					Mineralization				Analytical
From	To	Lith	Description	Colour	Oxidation	% Qtz vein	% Carbnt'	Chlorite	Biotite	Sericite	Silicifctn'	Potassic	% py	% aspy	% cpy	% po	Sample No.
0	1.5		No Chips returned														30112
1.5	3		No Chips returned														30113
3	4.5		No Chips returned														30114
4.5	6		No Chips returned														none
6	7.5		No Chips returned														none
		EOH	Three samples were submitted to SGS although driller's record indicated 4 samples. Third sample (D00030114) has twice maximum weight is is thought to be two combined samples.														
			Driller's comments: Hole drilled on side of valley targeting visible fault														
			Hole placed 10 m upstream of fault material on surface and drilled at 75 degree angle														
			Dry, hard bedrock encountered to 3m, then highly fractured bedrock, sand and silt.														
			At 6 m considerable groundwater was encountered. Hammer filled with grit.														
			Hole producing too much water to continue drilling - sample quality compromised and water/air mixture excavating cavities around casing.														

Summary

Location:	Henderson
UTM Zone:	NAD 83 Zone 07
UTM Easting:	583312
UTM Northing:	7029579

Hole ID:	HD-RAB17-04
Depth:	10.5m
Azimuth:	325
Inclination:	-70

Geologist:	Bruce Kienlen
Drill Start Date & Time:	26-Sep-17
Drill End Date & Time:	26-Sep-17

Drill Target:	HD-RAB-04 attempted to drill across a lithological fault contact between biotite-quartz schist and quartz-biotite gneiss
Comments:	Quartz-biotite (w/ phlogopite) schist, very weakly oxidized; non-mag; no sulfides

Footage (ft)		Lithology		Bedrock				Alteration					Mineralization				Analytical	
From	To	Lith	Description	Colour	Oxidation	% Qtz vein	% Carbnt'	Chlorite	Biotite	Sericite	Silicifctn'	Potassic	% py	% aspy	% cpy	% po	Sample No.	
0	1.5	QBS	grey, finely foliated schistose chips predominately with 7% cream to rusty coloured chips (marble? or feldspar?) and 2% orange k-spar chips; ~40% qtz, 60% mafics (mostly biotite>phlogopite), trace feldspars?, foliation is defined by fine biotite and rarely qtz; possibly trace fine pyrite although this could be altering biotite; non-mag; very weak HCl reaction; spotty moderate oxidation of biotite;	gy	1								0.1					30116
1.5	3	QBS	as above except ~30% cream chips and no orange k-spar chips;	gy	1													30117
3	4.5	QBS	as above, closer to first interval (0-1.5m); muscovite seen in dry chips, 10% max; fine green chlorite imparts a faint greenish colour; no HCl reaction; non-mag;	gy	1													30118
4.5	6	QBS	as above, higher qtz content, to 50%, chips pretty small 3-4mm;	gy	1													30119

Summary

Location:	Henderson
UTM Zone:	NAD 83 Zone 07
UTM Easting:	583331
UTM Northing:	7029602

Hole ID:	HDRAB17-05
Depth:	33m
Azimuth:	270
Inclination:	-65

Geologist:	Bruce Kienlen
Drill Start Date & Time:	26-Sep-17
Drill End Date & Time:	26-Sep-17

Drill Target:	HD-RAB-05 was planned to test across an interpreted step fault
Comments:	Quartz biotite-phlogopite ± garnet schist , predominately weakly oxidized; non-mag; trace pyrite; tan yellow quartz vein 24-25.5m; rusty fault at 4.5-6m

Footage (ft)		Lithology		Bedrock				Alteration					Mineralization				Analytical
From	To	Lith	Description	Colour	Oxidation	% Qtz vein	% Carbnt'	Chlorite	Biotite	Sericite	Silicifctn'	Potassic	% py	% aspy	% cpy	% po	Sample No.
0	1.5	QBS	Predominately clear to whiteish and black chips of 50-65% biotite>phlogopite >> muscovite, 35-50% quartz, possibly minor feldspar and 30% tan coloured quartz chips; B&W (grey) chips show moderate thin foliation in fine grained micas and schistose texture, coarse qtz bands look gneissic; slight oxidation; qtz chips show fine black specs (bt?) and an slight orangey-tan discolouration; chips are non reactive to HCl and non-mag; no sulfides seen	gy	1	30											30125
1.5	3	BQS	as above, richer in qtz content in grey chips, ~60%;	gy	1	30											30126
3	4.5	QBS	As above; 3% of chips have strong oxidation but some looks wirey and very magnetic and may be contamination; qtz content varies in grey chips from 50-60%; minor reddish mineral (garnets?) on some chip surfaces;	gy	1	5											30127

Footage (ft)		Lithology	Bedrock				Alteration				Mineralization				Analytical
4.5	6	QBS Strongly to moderately oxidized with several odd shaped very magnetic chips like last interval, some are flat steel others thin rusty wire-like; strong oxidation on 60% of schist chips so it is the rock interval that is oxidized not just contamination of rusty steel; oxidation looks different than just oxidized biotite but no sulfides seen; recovery may have been poor since chip tray is only 1/3 full;	or	4	10									30128	
6	7.5	QBS Similar to above unoxidized schist chips with less quartz-only chips, 5%; minor oxidation; weakly HCl reaction; non-mag; no sulfides;	gy	2	5									30129	
7.5	9	QBS As above, micas are mostly black biotite some altering to green chlorite; very little oxidation;	gy	1										30131	
9	10.5	QBS As above; still minor muscovite recognizable in dry chips	gy	1	1									30132	
10.5	12	QBS As above, except moderate pervasive oxidation and moderate HCl reaction, non-mag; qtz chips discoloured to orangy tan; tract pyrite as very small euhedral xtals sometimes very oxidized	or gy	3	5						0.1			30133	
12	13.5	QBS As above except slightly less oxidation mostly noticable from orangish tan qtz chips; most of these chips do not look like pure quartz but rather have 5-20% bt; rare calcite xtals; weak HCl reaction (except on calcite); fine translucent pink-red xtals (garnet?) on few chips; non-mag;	gy	2	5						0.1			30134	
13.5	15	QBS As above except less oxidation and almost no HCl reaction; no qtz chips	gy	1										30135	
15	16.5	QBS As above but no oxidation; one probable anhedral pyrite xtal seen; rare tan qtz chips	gy		1						0.1			30136	

Footage (ft)		Lithology		Bedrock			Alteration					Mineralization					Analytical
16.5	18	QBS	As above except weak oxidation and more common orangy qtz chips; oxidation , limonite, seems strongest along flat chip surfaces (fractures?); no sulfides seen	gy	2	12											30137
18	19.5	QBS	As above with a bit more limonite oxidation	gy	3	2											30138
19.5	21	QBS	As above except slightly less oxidation;	gy	2	2											30139
21	22.5	QBS	As above, back to weak to moderate	gy	3	5											30140
22.5	24	QBS	As above, rare strongly oxidized chips;	gy	2	1											30141
24	25.5	QVN	Cream yellow to white quartz chips 95%, 5% schist chips; qtz chips are weakly discoloured to orangy colour, nearly pure but with very fine dark specs, maybe bt and chl; weakly HCl reactive	yel	2	95											30142
25.5	27	QBS	85% grey schist chips as above and 15% creamy qtz chips; almost no oxidation; weak HCl reaction, non-mag; bt seems massive like hornblende although typical bt predominates mafics	gy	1	10											30143
27	28.5	QBS	As above, biotite quite massive looking (possibly hornblende) and makes up 65% of chips	gy	1	2											30144
28.5	30	QBS	As above, a few qtz chips are rusty colour but otherwise no oxidation;	gy	1	2											30145
30	33		No Chips 33m EOH Wall Collapse														30146

EOH

Summary

Location:	Henderson
UTM Zone:	NAD 83 Zone 07
UTM Easting:	583316
UTM Northing:	7029576

Hole ID:	HD-RAB17-06
Depth:	60m
Azimuth:	270
Inclination:	-60

Geologist:	Bruce Kienlen
Drill Start Date & Time:	27-Sep-17
Drill End Date & Time:	27-Sep-17

Drill Target: HD-RAB-06 attempted to drill across a lithological fault contact between biotite-quartz schist and quartz-biotite gneiss

Comment: Black and white quartz-biotite to biotite-quartz schist; weakly oxidized & chlorite altered downhole with trace pyrite

Footage (ft)		Lithology		Bedrock				Alteration					Mineralization				Analytical
From	To	Lith	Description	Colour	Oxidation	% Qtz vein	% Carbnt'	Chlorite	Biotite	Sericite	Silicifctn'	Potassic	% py	% aspy	% cpy	% po	Sample No.
0	1.5	QBS	Mix of schistose chips (50-65% brownish-black micas (biotite>phlogopite) with 35-50% quartz and feldspar chips (creamy to slightly orangy); the schist chips are weakly oxidized which may result in phl micas; there are coarse qtz bands which give a coarse texture but generally schistose; non-mag, no HCl reaction; no sulfides;	gy & wt	1	15											30051
1.5	3	QBS	predominately schist chips with mostly black fine grained bt mica and white to clear quartz; qtz chips have 1-5% micas so may be bands within the schist rather than quartz veins; no oxidation; no HCl reaction & non-mag;	gy		5											30052
3	4.5	QBS	As above; weak to moderate patchy oxidation resuting in limonite; 20% dirty tan qtz chips	gy	1								0.1				30053
4.5	6	QBS	As above; no sulfide seen	gy	1												30054
6	7.5	QBS	As above	gy	1												30055
7.5	9	QBS	50:50 mix of schist chips, very weakly selectively oxidized, and off-white quartz chips with trace euhedral to anhedral fine tarnished pyrite; weak to moderate HCl reaction;	gy & wt	1	50							0.1				30056

Footage (ft)		Lithology		Bedrock			Alteration				Mineralization				Analytical
9	10.5	QBS	back to predominately black and white-clear schistose chips (90%); no oxidation; no sulfides seen; bt predominate mica	gy											30057
10.5	12	QBS	as above with 30% off white qtz chips; 10% of schist chips show moderate to strong oxidation (limonite) on flat surfaces (fractures); moderate HCl reaction; non-mag;	gy	2	30									30058
12	13.5	QBS	as above but trace pyrite on schist chips; 5% white qtz chips;	gy							0.1				30059
13.5	15	QBS	As above, trace pyrite elongate along foliation and anhedral specs; chl alteration very weak throughout; weak, selective HCl reaction; weak oxidation;	gy	1			1			0.1				30061
15	16.5	QBS	As above except no pyrite seen and almost no chl alt'n and no oxidation; no HCL reaction; non-mag	gy											30062
16.5	18	QBS	As above except phl more common (~35% of mica) (brown-black mica ~35% of chips);	gy											30063
18	19.5	QBS	As above; 15% of chips show weak limonite oxidation	gy	2										30064
19.5	21	QBS	As above but less oxidation; trace fine pyrite along foliation (which is well defined by bt-phl and coarser qtz banding)	gy	1						0.1				30065
21	22.5	QBS	As above	gy	1						0.1				30066
22.5	24	QBS	As above; 20% qtz rich chips; pyrite slightly more common as specs and elongate along foliation; weak oxidation	gy	1						0.2				30067
24	25.5	QBS	As above but no oxidation and no sulfide; no HCl reaction, non-mag	gy											30068
25.5	27	QBS	As above	gy											30069
27	28.5	QBS	As above	gy											30070

Footage (ft)		Lithology	Bedrock				Alteration				Mineralization				Analytical								
28.5	30	QBS	As above but with trace fine pyrite and trace chlorite and limonite alteration; minor fine garnets; some chips have distinct white qtz and more usual grey-clear qtz. the white				gy						1					0.1					30071
30	31.5	QBS	As above, slightly less chl and limonite alteration and no pyrite seen				gy																30072
31.5	33	BQS	grey schist as above but more qtz (55-60%), 40-55% bt>phl>musc; no sulfide seen; almost no chl alt'n and no oxidation; non-mag, no HCl reaction;				gy																30073
33	34.5	QBS	reduced qtz content, ~ 55% predominately black micas (biotite>phlogopite>musc) with 45% quartz; trace limonite alteration on chips;				gy	1															30074
34.5	36	QBS	qtz content varying between 65%-40%, chl & limonite alteration weakly present on 20% of chips; dirty quartz rich chips ~20-25%; trace pyrite as fine anhedral specs				gy	1															30075
36	37.5	QBS	As above				gy	1															30076
37.5	39	QBS	As above; qtz rich chips are commonly tan and have the most chl alteration (after biotite);				gy	1															30077
39	40.5	QBS	As above				gy	1															30078
40.5	42	QBS	As above				gy	1															30079
42	43.5	QBS	As above				gy	1															30081
43.5	45	QBS	As above; less chl alteration but slightly more pyrite at least on several chips; qtz banding pronounced				gy	1															30082
45	46.5	QBS	As above but back to just trace pyrite				gy																30083

Summary

Location:	Henderson
UTM Zone:	NAD 83 Zone 07
UTM Easting:	583303
UTM Northing:	7029535

Hole ID:	HDRAB17-07
Depth:	49.5m
Azimuth:	270
Inclination	-70

Geologist:	Bruce Kienlen
Drill Start Date & Time:	27-Sep-17
Drill End Date & Time:	27-Sep-17

Drill Target: HD-RAB-07 attempted to drill across a lithological fault contact between biotite-quartz schist and quartz-biotite gneiss
Comments: Light orange to grey quartz ± feldspar biotite schist to gneiss, weakly chlorite and clay/limonite altered; a quartz vein or

Depth (m)		Lithology		Bedrock				Alteration					Mineralization				Analytical	
From	To	Lith	Description	Colour	Oxidation	% Qtz vein	% Carbnt'	Chlorite	Biotite	Sericite	Silicifctn'	Potassic		% py	% aspy	% cpy	% po	Sample No.
0	1.5	QBS	Chips of orangy grey schistose to gneissic rock, 25-30% feldspars, some euhedral, coloured pale orange to less common to rare white (potassium feldspar>plagioclase), 40% grey quartz, and ~30% mica (biotite>phlogopite); gneissic texture is well defined by mineral layering but variably thick banding; chlorite alteration is weak to moderate, mostly on biotite and there's limonite and clay alteration of the feldspar that may be discolouring them; some intense clay alteration (dirty reddish); no sulfides seen, no HCl reaction, non-mag;	org gy				3										30301
1.5	3	QBS	As above	org gy				3										30302

Depth (m)		Lithology		Bedrock			Alteration				Mineralization				Analytical
3	4.5	QBS	As above but more orange colour of feldspars, moderate chlorite and clay alteration and probably epidote alteration; weak HCl reaction	org	gy		3								30303
4.5	6	QBS	As above but a little weaker chl alt and much less epidote alteration; less intense orange colour probably lower feldspar content; trace euhedral pyrite	gy			2				0.1				30304
6	7.5	QBS	as above	gy			2								30305
7.5	9	QBS	As above, with a bit more yellowy clay alteration on feldspars and limonite alteration; moderate HCl reaction	yel	gy		2								30306
9	10.5	QBS	As above	yel	gy		2								30307
10.5	12	QBS	a bit more intensely altered with chlorite, epidote and clay alteration and orangy pink colouration to feldspars even deep red (perhaps just on fracture surface)	org	gy		3								30308
12	13.5	QBS	As above but slightly less intense alteration; still moderate HCl reaction;	gy			2								30309
13.5	15	QBS	back to slightly more intense alteration similar to 12-13.5m above;	yel	gy		3								30310
15	16.5	QBS	As above but almost no epidote alt; more orangy feldspar chips (30%); moderate HCl reaction	org	gy		2								30311
16.5	18	QBS	As above, slightly stronger HCl reaction; 1% pure white qtz chips	org	gy	1	2								30312

Depth (m)		Lithology		Bedrock		Alteration				Mineralization				Analytical
18	19.5	QBS	As above; 5% pure white quartz chips; no sulfides; moderate HCl reaction	gy	5	3								30313
19.5	21	QBS	As above; paler coloured feldspars, no pure qtz chips; trace pyrite; weak chl-clay alteration	gy		3					0.1			30314
21	22.5	QBS	As above mixed with orange feldspar gneiss chips	org gy		3								30315
22.5	24	QBS	As above; orange feldspar is dominate mineral in gneiss chips	org gy		2								30316
24	25.5	QBS	As above, a little epidote alteration present on most chips; weak HCl reaction; no sulfides seen	org gy		2								30317
25.5	27	QBS	Predominately clean white/clear qtz-feldspar gneiss chips with 30% of previous orangy gneiss chips, some of which have moderate oxidation; alteration gone on clean chips; strong HCl reaction;	org gy	2	1								30318
27	28.5	QBS	Mix of clean and orangy gneiss chips	org gy	2	1								30319
28.5	30	QBS	predominately orangy feldspar gneiss chips and fairly pure orangy feldspar chips; clay alteration, without chlorite, is common (selective weak to moderate); weak to moderate oxidation on select chips; trace pyrite	org gy	2	2	1				0.1			30321

Depth (m)		Lithology		Bedrock			Alteration					Mineralization				Analytical
30	31.5	QBS	mix of clean, qtz rich and orangy gneiss chips; less altered than previous interval; strong oxidation on 5% of chips along probable fractures; moderate HCl reaction;	yel gy	1		1									30322
31.5	33	QBS	As above but less orangy colour more qtz rich;	gy			1									30323
33	34.5	QBS	As above;	gy			1									30324
34.5	36	QBS	As above but light orangy pink colour more prevalent suggesting higher feldspar content but hard to see cleavage; moderate HCl reaction	gy	1		1									30325
36	37.5	QBS	a bit more orangy again and more chlorite and limonite alteration; trace fine pyrite;	org gy	2		2					0.1				30326
37.5	39	QBS	As above but less orange colour and less chlorite alteration; weak HCl reaction;	gy	1		1									30327
39	40.5	QBS	As above but chlorite and clay alteration weak to moderate; moderate HCl reaction	gy			2									30328
40.5	42	QBS	As above but weaker chlorite and clay alteration; weak HCl reaction	gy			1									30329
42	43.5	QBS	As above;	gy			1									30331

Depth (m)		Lithology	Bedrock	Alteration	Mineralization	Analytical
43.5	45	QVN Change to tan yellow to orange rusty quartz vein; very clean quartz chips, yellowish-orange colour (at first I thought this was a felsic dyke but I can't see any cleavage planes or crystal faces), this may also be coarse quartzite; ~5% chips have rusty clay alteration, maybe limonite;	yel			30332
45	46.5	QVN As above	yel			30333
46.5	48	QVN As above	yel			30334
48	49.5	QVN As above	yel			30335
	EOH	Two additional samples (30336 & 30337) were submitted to SGS. It is assumed they are attempts to drill deeper and represent either one interval (49.5-51m) or two (51-52.5m) or material from higher up in the hole caving in.				
		Driller's Comments:				
		Bit jammed in fault material and ripped off.				

