

QUEENSTON MINING INC

DIAMOND DRILL HOLE RECORD

Drill Hole: AN03-47W  
 Property: ANOKI  
 Northing: 17500.00  
 Easting: 7200.00  
 Elevation: 11000.00

Collar Azimuth (Grid) .0  
 Collar Dip: -64.0  
 (0 Degrees Grid equals 017 degrees True)  
 Hole Length: 3557.0  
 Date Printed: 16 Apr, 2004

| *** Dip Tests *** |      |       | *** Dip Tests *** |      |       |
|-------------------|------|-------|-------------------|------|-------|
| Depth             | Azi. | Dip   | Depth             | Azi. | Dip   |
| 85.3              |      | -64.0 | 2066.4            |      | 60.0  |
| 301.8             |      | -63.0 | 2368.2            |      | -56.0 |
| 597.0             |      | -63.0 | 2663.4            |      | 54.0  |
| 892.2             |      | -62.0 | 2958.6            |      | -54.0 |
| 1187.4            |      | -62.0 | 3253.8            |      | -50.0 |
| 1482.6            |      | -62.0 | 3557.0            |      | -49.0 |
| 1777.8            |      | -61.0 |                   |      |       |

Date Started: June 5, 2003  
 Date Completed: July 22, 2003  
 Drilled by: Heath and Sherwood  
 Core Size: NQ  
 Material left in hole NX CASING  
 Core Location: Upper Canada Site 1  
 Logged by: Dale R. Alexander



| From (ft) | To (ft) | Geology | Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|-----------|---------|---------|------------|-----------|---------|----------|------|---------|----------|---------|
|-----------|---------|---------|------------|-----------|---------|----------|------|---------|----------|---------|

SUMMARY LOG

|        |        |                                      |
|--------|--------|--------------------------------------|
| .0     | 62.8   | OVERBURDEN                           |
| 62.8   | 72.2   | FELDSPAR PORPHYRY                    |
| 72.2   | 837.0  | BASALT GABBRO                        |
| 837.0  | 1827.8 | ULTRAMAFIC KOMATIITE                 |
| 1827.8 | 2008.1 | BASALT GABBRO                        |
| 2008.1 | 2034.5 | ULTRAMAFIC                           |
| 2034.5 | 2169.4 | CARBONATED ZONE GREEN CARBONATE ZONE |
| 2169.4 | 3010.9 | VOLCANICLASTIC                       |
| 3010.9 | 3027.1 | FAULT ZONE CARBONATED ULTRAMAFICS    |
| 3027.1 | 3230.6 | VOLCANICLASTIC                       |
| 3230.6 | 3237.7 | ULTRAMAFIC                           |
| 3237.7 | 3294.1 | VOLCANICLASTIC                       |
| 3294.1 | 3333.5 | ULTRAMAFIC                           |
| 3333.5 | 3557.0 | VOLCANICLASTIC                       |







From To  
(ft) (ft)

Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

pitted to vuggy fractures with calcite. Overall, the rocks are weakly fractured with less than 5% calcite +/- hematite stringers, and, are sparsely mineralized with pyrite. Flow features are somewhat better developed in this section but tops are unclear. Magnetic susceptibilities range from 0.30 to 26.5 - most are less than 1.0. This section is also cut by a mafic intrusive from 230.5-235.9 at 27/19 degrees - lower contact somewhat threading the core axis after 234.7 feet. The dyke is dull grey green in colour with a weak reddish cast. It is pervasively calcitic, flecked to speckled with amphibole and is magnetic with susceptibilities from 21.1 to 46.9. The lower contact with a feldspar porphyry dyke is a little irregular at 39 degrees - the dyke cutting a brecciated flow top (??).

274.4 278.2 Feldspar Porphyry - contact into another dyke of feldspar porphyry. Both contacts of this dyke are a little irregular to ragged at 39/33 degrees - the dyke appears to cut a flow margin zone in the basalt. The feldspar porphyry is dull grey in colour with variable pinkish tones. It is finer grained than the earlier dykes with close packed phenocrysts of feldspar to 4 mms in size in a fine grained matrix with a weak chlorite and epidote component. The dyke is irregularly cut by fine reddish stained fractures with calcite +/- hematite and there is a weak fine speckling with calcite. Magnetic susceptibilities are low from 0.08 to 0.14. There is trace only pyrite in the unit.

278.2 524.0 Basalt - return to basaltic flows. The rocks vary from medium to dark green and grey green in colour and fine gabbroic textures are noted once more in this interval. At the top of the section to roughly 298 feet, the package is dark green in colour with a number of brecciated to ropey and variably foliated sections. Magnetic susceptibilities in this portion are erratic and range from 0.31 to 38.3. The rocks become more uniform in appearance overall after 298 feet. Susceptibilities after 298 are generally more uniform from 0.18 to 8.61, but there are isolated sections with magnetite in the system yielding readings up to 369. The strongest magnetics are related to a 6 cm, flow-top breccia with magnetite streaks to contorted layers from 308.0 to 308.7 at 19 degrees to the core axis and readings from 34.3 to 369 (tops are suggested to be downhole). A second flow top breccia from 355.0-355.5 at 42 degrees has readings from 73.5 to 130 where the magnetite is more patchy to streaky and fracture controlled. Footwall to a 2 mm mud seam and a 4.5 cm calcite vein (both at 61 degrees) at 350.0 feet, the adjacent basalt is partly amphibolitized, pervasively calcitic and also contains patchy magnetite - susceptibilities from 98.8 to 111 up to 350.6 feet. There is also some patchy magnetite at 356.9 feet - reading of 63.7 just below the flow top interval from 355.0 to 355.5, with patchy magnetics as 1.00 to 63.7 from 355.5 to 358.5.

278.2 524.0 Basalt (continued). There are several flow margin sections, however, without elevated magnetics - for example between 358.5

From To  
(ft) (ft)

## Geology

Sample From To Len PY AU AU1 AU2  
No. (ft) (ft) (ft) % OZ/T OZ/T PPB

and 468, fractured to brecciated and ropey flow margins are common in the system but magnetics are consistently low from 0.23 to 0.80. Magnetics rise slightly again from 0.38 to 5.47 after 468, prior to another of the strongly magnetic flow-top (??) breccias with patchy magnetite over 3.5 cms from 471.9-472.1 at 43/39 degrees - readings of 175 to 215. From 472.1 to 517.5, susceptibilities range from 0.18 to 8.61 (most under 0.50) with readings rising again in the lower contact zone after 517.5, from 0.70 to 38.1. The basalt is weakly fractured with calcite +/- quartz at generally shallow angles to the core axis. Mineralization is weak but will reach up to 1-2% disseminated to fracture controlled pyrite over a few mms - tending to cue with the fractures, or, some of the flow margin zones. As noted above, the basalt is more erratically magnetic after 517.5 approaching the lower contact. The rock also grades more strongly and pervasively calcitic and chloritic below 520.6 prior to the contact with a foliated zone at 524.0 at 69 degrees.

278.2 524.0 Basalt (continued). The system is also cut by a number of mafic intrusives, that are typically fine grained, flecked to speckled with amphibole, weakly to moderately calcitic, and generally more weakly magnetic than the adjacent host. Mafic intrusives include: 282.4-284.8 at 64/58 degrees, susceptibilities (MS) at 0.31 to 0.53; 292.6-294.4 at 44 degrees with moderately foliated contacts over 7 cms and 10 cms respectively, MS 0.41 to 0.84 - the adjacent basalt is partly amphibolitized with susceptibilities from 4.10 to 38.3; 340.6-341.1 at 19/26 degrees, MS 0.44 to 0.46, and; 363.7-364.6 at 53/62 degrees, MS 0.33 to 0.38. The lower contact of this basalt section is gradational into more strongly foliated material at 69 degrees.

524.0 536.9 Foliated ankeritic calcite - contact into a highly foliated to contorted segment that has a moderate to strong reaction to the presence of ankerite between 524.8 and 530.1, hanging wall to a narrow, 7 cm, pinkish red dykelet of feldspar porphyry from 530.1-530.4 at 48/14 degrees. There is a weaker reaction to ankerite from 531.4-533.6 at 24/32 degrees, where the rocks are speckled with ankerite and are streaked to incipient altered in appearance. In the main ankeritic corridor, from 524.8-530.1, the rocks are irregularly veined with about 10% quartz-ankerite stringers in addition to having highly contorted ankeritic streaks and more uniform alteration striped to incipient altered ankeritic sections that are foliated at 25 to 50 degrees to the core axis. The protolith is suggested to be an altered, reddish to brownish basalt but there are numerous streaks to fractures of dark bluish green, soft, ultramafic (??) material in the main zone and, lesser so, at the base of the system from 535.2 to 536.9. The ankeritic segments are weakly streaked to refractured (??) with calcite, and, the enclosing rocks are very strongly calcitic. The upper contact zone, from 524.0 to 524.8 is a dull reddish green, foliated, calcitic basalt - foliation at 60 to 70 degrees. The lower contact zone, from 535.2-536.9, is dull

From To  
(ft) (ft)

## Geology

Sample From To Len PY AU AU1 AU2  
No. (ft) (ft) (ft) % OZ/T OZ/T PPB

- reddish brown in colour and is streaked to fractured with ultramafic material at 45 to 60 degrees - lower contact at 58 degrees.
- 524.0 536.9 Foliated ankeritic calcite (continued). Magnetic susceptibilities are highly variable across the section from 20.7-28.5 in the upper contact zone; 0.38-26.8 in the main ankeritic corridor; 32.0 58.2 from 530.4 to 535.2 with disseminated magnetite common, and; 0.70-15.7 in the lower contact zone. Aside from the main ankeritic zone, veining is largely expressed as streaks to alteration-healed fractures. Typical to the incipient alteration style, the rocks are moderately hard, and, are mineralized with up to 1-2% disseminated pyrite over a few cms (no sustained mineralization). There is no distinct structure or gouge noted in the section. The lower contact is foliated at 58 degrees with streaky ultramafic material.
- 536.9 666.4 Basalt pillowed massive - contact below the foliated corridor into a sequence of massive to pillowed lavas. The top of the section, to 605.2 feet, is the pillowed portion with erratically distributed chloritic selvages on a scale of a few cms to less than a meter in core length. After 605.2 feet, the rocks are more massive to fractured and brecciated with only a minor amount of material that could be construed as selvage zones. Both the pillowed and the massive flows are fine grained with a granular to very fine gabbroic texture. The rocks vary from medium to dark green in colour - pillow margins are commonly paler in colour, and amygdaloidal next to the dark, chloritic selvage zones that often have disseminated magnetite. In the massive to brecciated flow segment, the breccias are usually paler in colour with accessory epidote +/- grungy feldspathic alteration and scattered amygdules. There is a minor amount of amphibolitization in the pillowed segment but amphibolitization is stronger in the massive flows after 645.8 in two main corridors: from 645.8-649.2 at 24/45 degrees, and 657.6-658.5 at 60/62 degrees. The top amphibolitized section is related to strong fracturing at the top of the section (645.8-646.5 at 24/44 degrees) with a soft, amphibolitized ultramafic component. The lower section contains some accessory calcite fracturing, silicification and orangish staining prior to 3 cms of softer, foliated, amphibolitized ultramafic at its base.
- 536.9 666.4 Basalt pillowed massive (continued). Beneath the lower amphibolitized zone, the basalt is foliated, siliceous, strongly calcitic, and pinkish to orangish stained to 658.8 at 62/76 degrees - it is hanging wall to a dyke of feldspar porphyry that threads the core axis (or contains coarse fragments to inclusions of basalt) to 660.0 at 76/66 degrees. The irregular dyke is followed by a coarsely granular, calcitic, soft amphibolitized ultramafic from 660.0-660.8 at 66/38 degrees. From this last amphibolitized ultramafic, the rock is a dark green, fine to medium, grained gabbroic textured basalt of the

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

- hornblende spotted type down to the lower contact with another dyke of feldspar porphyry at 666.4 at 19 degrees.
- 536.9 666.4 Basalt pillowed massive (continued). At the upper contact of the system, the pillowed basalt is pinkish toned and pervasively calcitic to 538.9 feet. The core is also blocky to broken from 538.0 to 538.9 due to a pitted to vuggy calcite fracture nearly along the core axis. There is also a narrow shear to foliated section in the pillow lave at 565.0 feet - 7 cms at 39 degrees, with a trace of reddish hematitic mud. Just inside the section of massive flows, there is an 8 mm to 3 cm calcite vein breccia with coarse needles of hematite at 19 degrees to the core axis from 605.4-606.2. Magnetic susceptibilities are variable. In the pillowed corridor, selvage zones are invariably more magnetic than the pillow centers with susceptibilities ranging from 0.62 to 110. In the massive flows, readings range from 0.82 to 15.0 (from 605.2-645.8). The lower contact zone is more magnetic again with susceptibilities from 1.00 to 56.8 in the basalts and amphibolitized basalt, 1.61 to 6.45 in the feldspar porphyry, and, 0.28 to 0.50 in the coarsely granular, more definite ultramafic from 660.0-660.8. Overall, the rocks are weakly fractured with 5-10% calcite +/- quartz stringers at variable angles to the core axis. Pyrite mineralization is weak but will reach 1-2% disseminated to fracture controlled material in some of the selvage zones and around a few of the fractures. The lower contact is clean and sharp at 19 degrees.
- 666.4 682.2 Feldspar Porphyry - contact into a dyke, or series of dykes, of feldspar porphyry at very shallow angles to the core axis cutting basalt. Dykes are found at 666.4-675.6 at 19/7 degrees; 676.6-677.4 at 45/52 degrees; 678.0-678.5 running along but not entirely cutting across the core axis, and; 679.1-682.2 both contacts irregular at 38/39 degrees. The dykes vary from grey to grey beige and grey red in colour with variable red to orangish staining around fine open fractures with calcite +/- chlorite. The dykes are hard and siliceous and are peppered with phenocrysts of feldspar to a cm in size (most under 3 mms) along with much more scattered blebs to patches of greyish quartz to a cm in size. The phenocrysts are relatively close packed such that there is only a minor amount of chlorite, epidote, biotite and amphibole noted in the siliceous matrix. Aside from the fine open fractures with staining, the dykes are essentially unveined, and, are very sparsely mineralized with trace only fine points of pyrite. Magnetic susceptibilities are low from 0.03 to 0.62. The basaltic host is fine grained and siliceous between the first two dykes (675.6-676.6). It is dull green in colour with beige toned patches. It is irregularly fractured with calcite with some pinkish to red staining - susceptibilities of 0.02 to 0.08, trace only fine pyrite. The section from 677.4-679.1 is a brecciated basalt with a possible dark green mafic intrusive (speckled with acicular amphibole) from 677.4-677.8 at 52/59 degrees.

From To  
(ft) (ft)

## Geology

Sample From To Len PY AU AU1 AU2  
No. (ft) (ft) (ft) % OZ/T OZ/T PPB

666.4 682.2 Feldspar Porphyry (continued). The age relationship between the mafic intrusive and the feldspar porphyry is unclear. Magnetic susceptibilities in the mafic intrusive vary from 0.41 to 1.12 - 2.12 to 5.98 in the brecciated basalt. Trace only pyrite. The lowest feldspar porphyry dyke is the more greyer toned of the sequence. The lower contact is at 39 degrees.

682.2 752.4 Basalt return to basaltic flows, parts of which appear to be pillowed but there is no sustained occurrence of the selvage style of contact feature. The rocks are medium to dark green in colour and have a finely granular to crudely developed gabbroic texture. Flow margins are fractured to brecciated and/or foliated with two instances of siliceous to cherty tops from 712.0 to 715.3 at 24/14 degrees - crude layering at 35 to 40 degrees, and, just before the lower contact zone from 750.9 to 751.1 at 38 degrees. The lower contact zone is a brecciated to ropey flow to tuffaceous basalt from 751.1 to 752.4 - lower contact irregular averaging 43 degrees with much more weakly magnetic basalt. The two siliceous to cherty parts are partly bleached to orangish stained. The first siliceous to cherty segment appears to be cut off by a mafic intrusive from 715.3-721.4 at 14/17 degrees. There is a second mafic intrusive earlier in the system from 697.9-708.8 at 12/17 degrees - this dyke appears to be threading the core axis along its length but precise contacts are ill defined due to the blocky nature to the core (in both dykes). The mafic intrusives are dull to dark green to reddish green in colour. They are granular textured, flecked with amphibole and moderate to strongly calcitic - susceptibilities vary from 0.20 to 2.56 in the dykes.

682.2 752.4 Basalt (continued). Magnetic susceptibilities continue to be erratic in the mafic flows ranging from 0.11 to 54.2. The flows are weakly magnetic at the outset (to 692.6), with readings from 0.27 to 1.76; the central zone varies from 0.11 to 51.2, with a range of 0.11 to 2.39 in the siliceous to cherty parts; the lower contact ropey flow to tuffaceous zone ranges from 0.35 to 0.55. In addition to the siliceous flow margins, there is a foliated, calcitic and amphibolitized flow margin section from 730.3-731.8 at 52/51 degrees, foliated to streaked at 35 to 50 degrees, susceptibilities from 4.12 to 54.2. Overall, the basalt is moderately fractured with 5 to 15% calcite streaks and stringers at variable angles to the core axis with pervasive calcite common in the system. Pyrite mineralization is generally weak. The lower contact is irregular, averaging 43 degrees.

752.4 773.8 Basalt silicified - contact into a short interval of thin flows with siliceous to cherty tops. The flows in this section are dull grey to grey green and creamy coloured - the paler parts generally reflecting the siliceous tops to the flows. The flows are on a scale of a few cms to 1.5 meters in size - average is 30 to 50 cms at 35 to 55 degrees to the core axis. The rocks vary from hard to very hard in the more siliceous parts. The



From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

basalt is weakly fractured to streaked with calcite and is very weakly to nonmagnetic with susceptibilities from 0.08 to 0.34. There is no true chert in the section. The rocks are very sparsely mineralized with trace only pyrite accompanying some of the fine calcite stringers. The basalt is fine grained to finely granular textured. The lower contact with more chloritic rocks is sharp at 61 degrees.

773.8 811.3 Basalt Gabbro - contact into a much more chloritic section of basalt. The basalt is fine to medium grained with a well developed granular to gabbroic texture that is of the hornblende spotted variety. It is medium green in colour, weakly fractured with calcite, and, sparsely mineralized with pyrite. The core is locally mottled in appearance from the strong chlorite alteration. Flow features are relatively poorly defined until the lower contact zone - the basalt is increasingly foliated and calcitic with streaks to lozenges and discontinuous stringers of pitted to vuggy calcite from 807.0 to 811.3, capped by a 6.5 cm, very fine grained siliceous section at the base at 50/47 degrees. The foliated section is foliated at 35 to 60 degrees to the core axis. The top of this overall zone is weakly magnetic with susceptibilities from 0.15 to 0.57. A change to magnetic rocks appears to occur after a dyke of feldspar porphyry from 799.3-802.7 - contacts irregular at 58/60 degrees (upper contact varies from 0 to 58 degrees from 799.1 to 799.7). Susceptibilities in the dyke range from 0.10 to 0.31; in the basalt beneath the dyke readings vary from 2.93 to 80.6 - strongest in the foliated corridor from 23.0 to 80.6. The feldspar porphyry is typically reddish grey in colour with close packed phenocrysts of feldspar to 4 mms, isolated spots of quartz to 1 cm, and, traces of amphibole, chlorite and epidote +/- biotite noted in the matrix. The lower contact of the sequence is sharp at 47 degrees.

811.3 837.0 Contact Zone Basalt Basaltic Komatiite - the contact zone package of the basalt sequence is dark in colour and much richer in ferromagnesian minerals than the vast majority of the basalt sequence. The rocks are dark green in colour with a weak bluish cast, moderate to strongly chloritic, and, are softer than the normal basalt but harder than the ultramafic rocks that follow. The section appears to be transitional between the basalts and ultramafics. There is no megascopically visible feldspar in this corridor. The matrix component is finely felted with flecks to spots of hornblende. Magnetic susceptibilities are low from 0.22 to 2.78 up to the lower contact zone from 835.6-837.0 where readings are 1.35 to 33.0. The lower contact zone is siliceous and much harder than the adjacent rocks - it is also greyer in colour with orange staining and partial amphibolitization. The initial part of the lower contact zone is cut by a narrow mafic intrusive from 835.6-836.0 at 49/38 degrees - susceptibilities of 16.0 to 23.4. A second mafic intrusive is found at

| From<br>(ft) | To<br>(ft) | Geology   | Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|--------------|------------|---|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
|              |            | 832.7-833.7 at 37/41 degrees with much lower susceptibilities of 0.67 to 0.72 - the only difference is that the lower dyke is pervasively calcitic. The basaltic komatiite is more reactive to the presence of ankerite in the top of the section to roughly 817, although the fracturing in the system continues to be calcitic. Pyrite is present in trace amounts only. The lower contact is sharp at 43 degrees.  |               |              |            |             |         |            |             |            |
| 837.0        | 1827.8     | ULTRAMAFIC KOMATIITE  |               |              |            |             |         |            |             |            |
|              |            | Contact into a package of ultramafic rocks. The package is complex but is dominated by blue grey to blue black and dark bluish green flows with locally well developed flow breccias and isolated sightings of spinifex textures. The rocks are normally soft and soapy, and, are moderate to strongly magnetic with susceptibilities above 20 common in the more massive parts of the system. The rocks are also variably fractured with calcite +/- magnesite and are variably amphibolitized. A foliation at shallow angles (less than 40 degrees) is common. The ultramafics are normally sparsely to unmineralized. The sequence breakdown includes:.  | 69192         | 837.0        | 840.0      | 3.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69193         | 840.0        | 843.0      | 3.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69194         | 892.0        | 895.0      | 3.0         | TR      | tr         | .000        | 3          |
|              |            |   | 69195         | 895.0        | 897.7      | 2.7         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69196         | 897.7        | 899.5      | 1.8         | 1-2     | tr         | .000        | 7          |
|              |            |   | 69197         | 899.5        | 902.0      | 2.5         | 2-3     | tr         | .000        | 3          |
|              |            |   | 69198         | 902.0        | 904.2      | 2.2         | 2-3     | tr         | .000        | 9          |
|              |            |   | 69199         | 904.2        | 907.0      | 2.8         | TR-1    | tr         | .000        | 4          |
|              |            |   | 69200         | 907.0        | 910.0      | 3.0         | TR-1    | tr         | .000        | 3          |
|              |            |   | 69201         | 910.0        | 913.0      | 3.0         | TR-1    | tr         | .000        | 3          |
|              |            |   | 69202         | 913.0        | 915.0      | 2.0         | 1-3     | tr         | .000        | 12         |
| 837.0        | 864.1      | Ultramafic Komatiite - the contact unit of the ultramafic package is characteristic of the main part of the sequence. The rocks are blue grey to blue black and dark bluish green in colour and are fine grained with a granular to mottled texture. They are weakly fractured with 5-10% calcite +/- magnesite stringers and are sparsely mineralized with trace only disseminated pyrite. Magnetic susceptibilities range from 7.88 to 78.6, with most greater than 30. The upper contact is greener in colour and partly chloritic over 9 cms at 43/55 degrees. There is a bit of granulated core with a trace of mud in this section at 860.6 - 1 cm at 72 degrees. Flow breccias are not well developed in this section but there is a trace of spinifex at 852 feet. The lower contact is sharp but broken at 25 degrees. | 69203         | 915.0        | 918.0      | 3.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69204         | 918.0        | 921.3      | 3.3         | TR      | tr         | .000        | 2          |
|              |            |   | 69205         | 921.3        | 923.5      | 2.2         | 2-4     | tr         | .000        | 10         |
|              |            |   | 69206         | 923.5        | 926.1      | 2.6         | 2-5     | tr         | .000        | 10         |
|              |            |   | 69207         | 926.1        | 929.0      | 2.9         | 1-2     | tr         | .000        | 2          |
|              |            |   | 69208         | 929.0        | 932.0      | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69209         | 932.0        | 935.0      | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69210         | 1323.0       | 1326.0     | 3.0         | TR      | tr         | .000        | 3          |
|              |            |   | 69211         | 1326.0       | 1329.2     | 3.2         | TR      | tr         | .000        | 3          |
|              |            |   | 69212         | 1329.2       | 1332.0     | 2.8         | 1-2     | tr         | .000        | 4          |
|              |            |   | 69213         | 1332.0       | 1335.0     | 3.0         | TR-1    | tr         | .000        | 3          |
|              |            |   | 69214         | 1352.0       | 1355.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69215         | 1355.0       | 1358.0     | 3.0         | 1-2     | tr         | .000        | 2          |
| 864.1        | 866.6      | Mafic Intrusive - contact into a short dyke of mafic intrusive. It is harder than the adjacent ultramafic but with softer, amphibolitized contact zones over 2 cms and 5 cms respectively at 25/31 degrees. The dark is dark grey to brownish and black in colour with a fine granular texture and a speckling with amphibole in addition to being moderately amphibolitized and pervasively calcitic throughout. Magnetic susceptibilities range from 1.77 to 6.94. The mafic intrusive is moderately fractured with about 10% irregular calcite fractures and is mineralized with trace to 1% disseminated pyrite. The lower contact is sharp and amphibolitized at 31 degrees.   | 69216         | 1358.0       | 1361.0     | 3.0         | 1-2     | .001       | .000        | 26         |
|              |            |   | 69217         | 1361.0       | 1363.7     | 2.7         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69218         | 1363.7       | 1367.0     | 3.3         | TR      | nil        | .000        | nil        |
|              |            |   | 69219         | 1367.0       | 1370.0     | 3.0         | NIL     | tr         | .000        | 2          |
|              |            |   | 69220         | 1569.0       | 1572.0     | 3.0         | NIL     | tr         | .000        | 2          |
|              |            |   | 69221         | 1572.0       | 1575.2     | 3.2         | TR      | tr         | .000        | 2          |
|              |            |   | 69222         | 1680.0       | 1683.0     | 3.0         | NIL     | .005       | .000        | 172        |
|              |            |   | 69223         | 1683.0       | 1685.4     | 2.4         | NIL     | .001       | .000        | 22         |
|              |            |   | 69224         | 1685.4       | 1688.0     | 2.6         | TR      | tr         | .000        | 17         |
|              |            |   | 69225         | 1688.0       | 1691.0     | 3.0         | TR      | tr         | .000        | 9          |
|              |            |   | 69226         | 1691.0       | 1693.0     | 2.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69227         | 1693.0       | 1695.2     | 2.2         | TR      | nil        | .000        | nil        |
| 866.6        | 897.7      | Foliated - contact into a variably foliated and amphibolitized segment of the ultramafics. The rocks vary from blue black to black and brownish in colour with less of the dark blue green rocks. The rocks are moderate to strongly foliated and contorted throughout at 0 to 50 degrees to the core axis - the foliation  | 69228         | 1695.2       | 1698.0     | 2.8         | TR      | tr         | .000        | 17         |
|              |            |   | 69229         | 1698.0       | 1700.5     | 2.5         | TR      | nil        | .000        | nil        |
|              |            |   | 69230         | 1700.5       | 1702.5     | 2.0         | TR      | tr         | .000        | 14         |
|              |            |   | 69231         | 1702.5       | 1705.0     | 2.5         | TR      | nil        | .000        | nil        |
|              |            |   | 69232         | 1705.0       | 1707.2     | 2.2         | TR      | nil        | .000        | nil        |



From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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amphibolitization around the dyke contacts. The ultramafic is soft and highly streaked to foliated with calcite at 20 to 45 degrees. Magnetic susceptibilities range from 1.34 to 30.7. The ultramafic is sparsely mineralized with up to trace to 1% disseminated pyrite - the basaltic section with chert contains up to 3-5% disseminated to streaky and fracture controlled pyrite, and, the porphyries host up to 2-3% disseminated pyrite with a rare splash of chalcopyrite. The altered feldspar porphyry also contains some shallow angle fractures with gypsum. The lower contact of this system is along a feldspar porphyry dyke at 45 degrees - contact irregular and partly absorbed.

929.0 1329.2 Ultramafic Komatiite - return to more uniform dark bluish green to black and blue black ultramafic flows with well developed flow breccia sections. The first spinifex is noted in the system at 987.4 with some stunning examples below that point (to 1033). Where there is a sufficient contrast between the flows, tops appear to be downhole - flows have brecciated margins with or without spinifex textured tops. The rock is fine grained with a variable massive to granular and mottled texture. The ultramafic is more weakly fractured with only 5-10% irregular calcite +/- magnesite stringers in this sector (magnesite is common) - pervasive alteration with calcite is minimal. The rocks are sparsely mineralized with traces of disseminated cubic pyrite. Magnetic susceptibilities are elevated again from 18.9 to 73.2. Near the top of the section, there is a narrow, brownish, strongly amphibolitic, calcitic mafic intrusive from 959.4 to 960.5 at 42/44 degrees - susceptibilities from 1.15 to 3.07. The unit also contains a trace of gouge at 1029.8 - 1 cm broken at 30-40 degrees. From 1155.5-1161.6 there are three thin flows with brecciated margins at 15 to 40 degrees to the core axis, and, weaker magnetic susceptibilities from 1.05 to 18.7 - tops appear to be downhole. A second, more weakly magnetic, zone is associated with a more brownish altered and spinifex textured flow top from 1249.1-1253.1 at 8/21 degrees with susceptibilities from 9.68 to 25.7 (tops downhole).

929.0 1329.2 Ultramafic Komatiite (continued). Magnetic susceptibilities are strong again below this section from 18.9 to 53.6 up to the next brownish altered flow top from 1291.4-1294.8 at 40/22 degrees. This flow top section has a brownish altered, calcite speckled, segment at the base, from 1293.0 to 1294.8 at 29/22 degrees with susceptibilities of 0.33 to 0.90 (susceptibilities in the balance of this section from 0.75 to 14.8). The calcite speckled section is strongly amphibolitic and resembles some of the relict mafic intrusives although this corridor remains very soft. Susceptibilities are more erratic below 1294.8 with readings from 0.40 to 62.7. The rocks are greener in colour, to dark green and black, soft ultramafic from 1314.4 to the lower contact at 1329.2 - susceptibilities in this lower contact corridor range from 0.40 to 9.16. Contacts of the greener

From To  
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| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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corridor are at 49/45 degrees. There is one further, highly fractured to weakly granulated section in the ultramafics from 1254.0-1255.9 - no mud, but some very soft granulated parts at 35 to 50 degrees to the core axis. The lower contact of the ultramafic section is irregular, averaging 45 degrees to the core axis.

1329.2 1363.7 Mafic Intrusive Basalt - contact into a section that could be either a mafic intrusive or a section of basalt (mafic intrusive appears the preferred designation). The unit is dull dark grey to dark grey green in colour with a granular texture and very scattered amphibolitic spots to a cm in size. It is moderately fractured with about 10% irregular calcite stringers and mineralized with trace to 1-2% disseminated cubic pyrite. The unit is moderately hard. Its relatively uniform texture and mineralization is suggestive of a mafic intrusive, combined with partial amphibolitization of the adjacent, and internal, ultramafic rocks. Internally, there are sections of ultramafic from 1355.0-1356.1 at 35/60 degrees, 1361.9-1362.5 at 31/49 degrees, and, at 1363.5 - 4 cms at 49/44 degrees. Below the appearance of the first ultramafic, the mafic intrusive is more chloritic, partly amphibolitized and mottled in texture. Magnetic susceptibilities range from 5.88 to 23.2 in the main dyke, 0.55 to 19.5 in the more mottled lower contact area, and, 0.33 to 3.13 in the ultramafics. The lower contact of this section is sharp at 53 degrees with strong brownish alteration and amphibolitization over 5 cms in the adjacent ultramafic.

1363.7 1434.5 Ultramafic Ultramafic Komatiite - return to ultramafic rocks. The top of this section is dark green to bluish green and black in colour with variable brownish alteration down to 1367.5 (contact at 71 degrees) before more continuous blue black ultramafic is reached. The upper contact is also more weakly magnetic with susceptibilities from 1.06 to 22.0, versus the much stronger readings in the blue black ultramafic from 14.3 to 62.0. One further, greenish to black brecciated potential flow top zone with weaker magnetics and strong amphibolitization is found between 1377.0 and 1380.1 - susceptibilities from 1.32 to 3.15. This section is accompanied by blocky to broken core with gouge over 30 cms at the upper contact (1 gouge at 73 degrees ??), and, 19 cms at the lower contact. Broken to granulated core +/- gouge is also found in the top of the system at 1381.0-1381.9 ending on 6 mms of gouge at 9 degrees, and, 1386.8 to 1387.3, granulated, orientation unclear. In this corridor, flow features are not well developed - most of the rocks are fine grained to massive with a finely granular to mottled texture. The core is weakly fractured with 5-10% calcite +/- magnesite stringers, and, is very sparsely to unmineralized. Magnetic susceptibilities weaken once more over the basal 30 cms, approaching the



From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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|------------|-----------|---------|----------|------|---------|----------|---------|

corridor sitting between two ultramafic members. The basalt is dark grey green to dark green in colour with a finely granular texture that becomes more mottled after 1707.2. The rocks are quite ferromagnesian rich and, once the mottled nature to the core occurs at 1707.2, the core is softer, more strongly chloritic, and, appears marginal to ultramafic in composition. The ultimate lower contact chosen, however, is both a flow margin and a magnetic contact at 1715.0 at 43 degrees. Magnetic susceptibilities are quite uniformly low and less than 0.40, with a range of 0.11 to 2.33 including two isolated readings that are greater than 0.83. Just inside the upper contact, the basalt is well fractured with calcite to the point of being a calcitic vein breccia with fragments of basalt from 1686.9-1695.2 at 22/41 degrees. A second, weaker, fractured to calcitic vein breccia zone extends from 1700.9-1701.7 at 50/47 degrees. Outside of the two vein breccias, calcite (with rare quartz) fractures and stringers make up about 10% of the rock. Flow features are not well developed until the lower, mottled corridor where there are foliated to contorted and crudely brecciated sections at variable angles to the core axis. Pyrite mineralization is weak, with trace only disseminated cubic pyrite and pyrite aggregates. The lower contact is sharp at 43 degrees.

1715.0 1755.1 Ultramafic Komatiite Ultramafic - return to an ultramafic package of rocks. In this sector, the rocks are fine grained to very fine grained with a massive to locally mottled texture. The ultramafics are highly foliated to contorted at shallow angles to the core axis and are irregularly fractured to streaked with calcite +/- magnesite. The foliated to contorted nature precludes much potential definition of the flows. Magnetics are strongest in the central portion of this zone with susceptibilities from 3.77 to 36.7 - there are weaker readings at the upper contact (to 1716.2) from 1.33 to 5.47, and, weaker readings from 1743.9-1748.5 of 0.57 to 2.38 prior to one of the calcite fractured to vein breccia styles of occurrence at the base of the zone from 1748.5-1754.1 where susceptibilities are 0.72 to 12.7. The vein breccia zone is at 23/44 degrees - the lower contact is gradational into foliated, streaky calcitic ultramafics that are much more weakly magnetic. Some of the fragments in the vein breccia zone are greener in colour and look marginal to basalt to basaltic komatiite in composition, but most are clearly ultramafic with a variable mottling from carbonate +/- amphibolitization. The rocks continue to be sparsely mineralized with disseminated pyrite but a few streaks with fine pyrite and calcite are noted at the top of the system down to 1722.6 feet. There is a narrow granulated section with a trace of mud over 1.2 cms at 1735.6 at 52 degrees. The lower contact is at 44 degrees.







From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

degrees - lower contact broken with veining. There is also a fine grained mafic intrusive in the system from 1922.7-1923.5 at 24/23 degrees - contacts with more strongly epidote altered basalt over 2.5 and 6 cms respectively. Below the dyke the core is blocky and partly ground from 1923.5-1923.8, and, the core is ground with 3 feet lost from 1925.2-1928.2 (no physical indication of gouge). The core becomes more erratically magnetic again after 1965 feet with susceptibilities from 0.47 to 12.6. The lower contact is gradationally more calcitic and, after 1971, more reddish toned and amphibolitic. The lower contact is tentatively placed along a 5.2 cm quartz calcite vein at 42 degrees.

1974.8 2008.1 Amphibolitic calcite - contact into an amphibolitic and calcitic corridor with increased magnetic susceptibilities from 5.38 to 51.5. The magnetics, in a crude sense, increase with depth, and, the intensity of alteration with calcite and amphibole is similarly stronger with depth. A weak foliation is developed in the top of the system at 45 to 55 degrees with wispy to streaky amphibolitic material and strong calcite in a dark green to black, amphibolitized, basaltic protolith. Beneath the weakly foliated zone there is a more highly altered and contorted unit with traces of ultramafic material from 1988.8 to 1993.0 at 32/68 degrees, prior to the basal segment which is strongly altered with calcite and amphibole and is locally marginal to incipient alteration in appearance. The basal segment has a weakly to moderately developed foliation at 60 to 70 degrees and is more orangish toned over a dull grey to black and brownish toned basaltic protolith. The basal segment also contains scattered wisps to streaks with ultramafic material up to 6 cms in core length - largest section at 1999.8, 6 cms with ultramafic streaks at 62/59 degrees. Beyond the lower contact, the dominant protolith appears to be altered ultramafic.

1974.8 2008.1 Amphibolitic calcite (continued). Veining with quartz and calcite is best developed in the top of the system with 5 to 15% irregular veins down to 1993.0. Pyrite mineralization is weak - the contorted zone contains up to 1-2% disseminated to streaky material plus one tiny bleb of chalcopyrite at 1989.8. The basal, more strongly altered, segment hosts trace to 1% disseminated pyrite. There are also a handful of fine fractures with gypsum in the basal segment to 3 mms in size - parallel to the foliation. The lower contact is sharp at 57 degrees.

## 2008.1 2034.5 ULTRAMAFIC

Contact into a short package of rocks that sit between the basalts and the carb rocks at the start of the Anoki Deep System. The package is dominated by black to blue black ultramafic but there are a number of brownish to greyish altered sections in the top of the sequence to 2019.8 that may

|       |        |        |     |     |      |      |     |
|-------|--------|--------|-----|-----|------|------|-----|
| 69260 | 2008.1 | 2011.3 | 3.2 | 1-2 | .001 | .000 | 22  |
| 69261 | 2011.3 | 2014.5 | 3.2 | 1-2 | tr   | .000 | 7   |
| 69262 | 2014.5 | 2017.0 | 2.5 | TR  | tr   | .000 | 2   |
| 69263 | 2017.0 | 2019.8 | 2.8 | TR  | nil  | .000 | nil |







| From<br>(ft) | To<br>(ft) | Geology   | Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|--------------|------------|---|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
|              |            | developed layering at 50 to 60 degrees. The sequence is beige to pale greenish beige in colour and is highly streaked with beige to off-white ankerite. There are scattered streaks to patches of fuchsitic carb to 5 cms in size within the system with one larger interfingered carb section from 2184.9-2187.6 at 58/41 degrees. Some semblance of a gritty texture is common in the system. The altered volcanoclastics are normally weakly magnetic with susceptibilities less than 0.35, but there is some disseminated magnetite in the system such that the range in readings is from 0.17 to 15.3. Quartz +/- ankerite veining is poorly developed, averaging less than 5% irregular veins. Pyrite mineralization reaches up to 3-5% dull bronzy disseminated to to streaky material. The lower contact area is more highly contorted along the core axis from 2195.7-2204.6 and contains a stronger chloritic +/- ultramafic component in the very fine matrix (silty ??). Lower contact at 60 degrees.   | 69334         | 2211.0       | 2214.0     | 3.0         | 1-2     | .002       | .000        | 74         |
|              |            |   | 69335         | 2214.0       | 2217.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69336         | 2217.0       | 2220.0     | 3.0         | 3-5     | nil        | .000        | nil        |
|              |            |   | 69337         | 2220.0       | 2223.0     | 3.0         | 1 2     | .004       | .000        | 146        |
|              |            |   | 69338         | 2223.0       | 2226.0     | 3.0         | 2-3     | .002       | .000        | 72         |
|              |            |   | 69339         | 2226.0       | 2229.0     | 3.0         | 2-3     | .004       | .000        | 149        |
|              |            |   | 69340         | 2229.0       | 2231.4     | 2.4         | TR      | .001       | .000        | 46         |
|              |            |   | 69341         | 2231.4       | 2234.0     | 2.6         | TR 1    | .001       | .000        | 43         |
|              |            |   | 69342         | 2234.0       | 2237.0     | 3.0         | TR      | .003       | .000        | 116        |
|              |            |   | 69343         | 2237.0       | 2240.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69344         | 2240.0       | 2243.0     | 3.0         | TR      | tr         | .000        | 14         |
|              |            |   | 69345         | 2243.0       | 2246.0     | 3.0         | TR      | tr         | .000        | 15         |
|              |            |   | 69346         | 2246.0       | 2249.0     | 3.0         | TR      | tr         | .000        | 12         |
|              |            |   | 69347         | 2249.0       | 2252.0     | 3.0         | TR      | tr         | .000        | 12         |
|              |            |   | 69348         | 2252.0       | 2255.0     | 3.0         | TR      | .001       | .000        | 19         |
|              |            |   | 69349         | 2255.0       | 2258.0     | 3.0         | TR      | tr         | .000        | 12         |
|              |            |   | 69350         | 2258.0       | 2261.0     | 3.0         | TR      | nil        | .000        | nil        |
| 2204.6       | 2217.0     | Volcanoclastic altered - contact into a short, more chloritic section of volcanoclastic sitting between two, more highly bleached and carbonated intervals. Fragments continue to be common in the system with numerous subrounded to stretched fragments to 3 cms in size in addition to some larger, subrounded features to 11 cms that may be fragments. The matrix component is very fine grained and silty to ashy in nature with a strong chlorite component plus some softer, reworked (??) ultramafic material. Sericite is more common after 2211.7. With increased ankerite streaks to layers (?) and fractures, the rocks grade from streaked and contorted after 2211.7, to more foliated, streaky altered, and carbonate injected to ankerite layered after 2213.5 at 60 to 70 degrees to the core axis. Sericite and ankerite increase across this lower zone grading to more highly bleached and altered volcanoclastics at the lower contact at 67 degrees. Magnetic susceptibilities in this interval are low from 0.18 to 0.41. True veining is hard to separate from the ankerite streaking to injections (??) but it appears minimal. Mineralization consists of up to 2-3% dull bronzy pyrite over a few cms as streaky to to disseminated grains and pyrite aggregates. The lower contact is tentative and gradational into more highly altered and bleached rocks at 67 degrees. | 69351         | 2261.0       | 2264.0     | 3.0         | TR-1    | .001       | .000        | 22         |
|              |            |   | 69352         | 2264.0       | 2267.0     | 3.0         | TR      | .001       | .000        | 38         |
|              |            |   | 69353         | 2267.0       | 2270.0     | 3.0         | TR      | tr         | .000        | 15         |
|              |            |   | 69354         | 2270.0       | 2273.0     | 3.0         | TR-1    | tr         | .000        | 10         |
|              |            |   | 69355         | 2273.0       | 2276.0     | 3.0         | TR-1    | .003       | .000        | 99         |
|              |            |   | 69356         | 2276.0       | 2279.0     | 3.0         | TR-1    | .002       | .000        | 81         |
|              |            |   | 69357         | 2279.0       | 2282.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69358         | 2282.0       | 2285.0     | 3.0         | TR-2    | .003       | .000        | 102        |
|              |            |   | 69359         | 2285.0       | 2288.0     | 3.0         | TR      | .001       | .000        | 41         |
|              |            |   | 69360         | 2288.0       | 2290.0     | 2.0         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69361         | 2290.0       | 2292.7     | 2.7         | TR-1    | tr         | .000        | 15         |
|              |            |   | 69362         | 2292.7       | 2296.0     | 3.3         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69363         | 2296.0       | 2299.0     | 3.0         | TR-1    | .003       | .000        | 91         |
|              |            |   | 69364         | 2299.0       | 2301.2     | 2.2         | TR      | tr         | .000        | 15         |
|              |            |   | 69365         | 2301.2       | 2304.0     | 2.8         | TR      | .001       | .000        | 45         |
|              |            |   | 69366         | 2304.0       | 2307.0     | 3.0         | TR-1    | tr         | .000        | 14         |
|              |            |   | 69367         | 2307.0       | 2310.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69368         | 2310.0       | 2313.0     | 3.0         | TR-1    | .001       | .000        | 50         |
|              |            |   | 69369         | 2313.0       | 2316.0     | 3.0         | 1-2     | .002       | .000        | 63         |
|              |            |   | 69370         | 2316.0       | 2319.0     | 3.0         | TR-1    | .002       | .000        | 65         |
|              |            |   | 69371         | 2319.0       | 2322.0     | 3.0         | TR-1    | .001       | .000        | 41         |
|              |            |   | 69372         | 2322.0       | 2325.0     | 3.0         | TR      | tr         | .000        | 12         |
|              |            |   | 69373         | 2325.0       | 2327.0     | 2.0         | 1-2     | .001       | .000        | 36         |
|              |            |   | 69374         | 2327.0       | 2330.0     | 3.0         | TR-1    | .001       | .000        | 24         |
| 2217.0       | 2231.4     | Carbonated Zone Volcanoclastic - return to highly altered and bleached volcanoclastics as the contact zone of the system. Again, the rocks are much paler in colour to beige and greenish beige with some streaky altered patches to streaks of fuchsitic and sericitic carb. For the most part, the protolith is nearly obliterated by the strong ankerite alteration with only a weak semblance of the granular to gritty texture and poorly defined altered fragments to a couple of cms in size. The package continues to be variably contorted with a dominant foliation at 60 to 70 degrees. Magnetic susceptibilities are  | 69375         | 2330.0       | 2331.8     | 1.8         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69376         | 2331.8       | 2335.0     | 3.2         | TR      | tr         | .000        | 14         |
|              |            |   | 69377         | 2335.0       | 2338.0     | 3.0         | TR-1    | .001       | .000        | 24         |
|              |            |   | 69378         | 2338.0       | 2341.0     | 3.0         | TR-1    | tr         | .000        | 14         |
|              |            |   | 69379         | 2341.0       | 2344.0     | 3.0         | TR-1    | tr         | .000        | 12         |
|              |            |   | 69380         | 2344.0       | 2347.0     | 3.0         | TR-1    | tr         | .000        | 12         |
|              |            |   | 69381         | 2347.0       | 2350.0     | 3.0         | TR-1    | tr         | .000        | 10         |
|              |            |   | 69382         | 2350.0       | 2353.0     | 3.0         | TR      | tr         | .000        | 14         |
|              |            |   | 69383         | 2353.0       | 2356.0     | 3.0         | TR-1    | tr         | .000        | 14         |
|              |            |   | 69384         | 2356.0       | 2358.9     | 2.9         | TR      | nil        | .000        | nil        |

| From<br>(ft) | To<br>(ft) | Geology   | Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|--------------|------------|---|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
|              |            | low from 0.22 to 0.29. Again, true veining averages less than 5% at generally steep angles to the core axis - veins may be contorted but do not necessarily follow the foliation. Pyrite mineralization is patchy with up to 5-7% dull bronzy disseminated grains to streaks and pyrite aggregates. The lower contact is gradational into greener rocks again - foliation at the lower contact at 64 degrees, cut by a partly disrupted quartz-ankerite vein at 46 degrees.   | 69385         | 2358.9       | 2362.0     | 3.1         | TR      | tr         | .000        | 3          |
|              |            |   | 69386         | 2362.0       | 2364.0     | 2.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69387         | 2364.0       | 2366.0     | 2.0         | TR      | tr         | .000        | 5          |
|              |            |   | 69388         | 2366.0       | 2369.0     | 3.0         | NIL     | nil        | .000        | nil        |
|              |            |   | 69389         | 2400.0       | 2403.0     | 3.0         | NIL     | tr         | .000        | 2          |
|              |            |   | 69390         | 2403.0       | 2406.1     | 3.1         | TR      | tr         | .000        | 2          |
|              |            |   | 69391         | 2406.1       | 2409.0     | 2.9         | TR      | tr         | .000        | 7          |
|              |            |   | 69392         | 2409.0       | 2412.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69393         | 2412.0       | 2415.0     | 3.0         | TR      | tr         | .000        | 7          |
| 2231.4       | 2273.0     | Volcaniclastic - contact into greener coloured and somewhat cleaner volcaniclastics, dominated by the granular to gritty textured phase with moderate to strong wispy to streaky alteration from sericite and chlorite. There are scattered tiny fragments in the system, and, blebs to fragments (??) of ankerite but, for the most part, foreign fragments at a premium. As above, the rocks are variably contorted with a dominant foliation to streaking and layering at 60 to 70 degrees. The rocks are moderate to strongly ankeritic but there are few sections where the protolith is obliterated by the alteration, and then, only over a couple of cms. The rocks, however, are more foliated to streaked with ankerite below 2261.0 approaching the lower contact with a more silty to ashy phase. Magnetic susceptibilities are stronger in this lower section from the presence of disseminated magnetite - susceptibilities are elevated from 0.68 to 19.1 commencing at 2252.6, versus 0.19 to 0.46 at the top of the zone. There is about 5% irregular to contorted quartz-ankerite veining in the system. Pyrite mineralization is much weaker here with up to trace to 1% streaky to disseminated material. The lower contact is streaky altered and is in a partly contorted area at 52 degrees - the ankerite streaked rocks having a weak reddish cast in this area as well. | 69394         | 2415.0       | 2418.0     | 3.0         | TR      | tr         | .000        | 7          |
|              |            |   | 69395         | 2418.0       | 2421.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69396         | 2421.0       | 2424.0     | 3.0         | TR      | tr         | .000        | 12         |
|              |            |   | 69397         | 2424.0       | 2427.0     | 3.0         | NIL     | tr         | .000        | 5          |
|              |            |   | 69398         | 2427.0       | 2430.0     | 3.0         | TR      | tr         | .000        | 9          |
|              |            |   | 69399         | 2430.0       | 2433.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69400         | 2433.0       | 2435.2     | 2.2         | TR      | tr         | .000        | 10         |
|              |            |   | 69401         | 2435.2       | 2438.0     | 2.8         | NIL     | nil        | .000        | nil        |
|              |            |   | 69402         | 2438.0       | 2441.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69403         | 2474.0       | 2477.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69404         | 2477.0       | 2480.3     | 3.3         | TR      | nil        | .000        | nil        |
|              |            |   | 69405         | 2480.3       | 2483.0     | 2.7         | NIL     | nil        | .000        | nil        |
|              |            |   | 69406         | 2483.0       | 2486.0     | 3.0         | NIL     | nil        | .000        | nil        |
|              |            |   | 69407         | 2486.0       | 2489.0     | 3.0         | NIL     | tr         | .000        | 2          |
|              |            |   | 69408         | 2489.0       | 2492.0     | 3.0         | TR      | tr         | .000        | 3          |
|              |            |   | 69409         | 2492.0       | 2495.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69410         | 2495.0       | 2498.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69411         | 2498.0       | 2501.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69412         | 2501.0       | 2504.0     | 3.0         | TR      | tr         | .000        | 5          |
|              |            |   | 69413         | 2504.0       | 2507.0     | 3.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69414         | 2507.0       | 2510.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69415         | 2510.0       | 2513.0     | 3.0         | NIL     | nil        | .000        | nil        |
|              |            |   | 69416         | 2513.0       | 2516.0     | 3.0         | TR      | tr         | .000        | 5          |
|              |            |   | 69417         | 2516.0       | 2518.5     | 2.5         | NIL     | tr         | .000        | 3          |
| 2273.0       | 2331.8     | Volcaniclastic coarse - contact into a section of volcaniclastic with a generally finer grained, dark green to dark grey green, silty to ashy matrix. Granular to gritty textured sections are at a minimum in this corridor, becoming more common with depth approaching the contact with more granular textured rocks. The section also contains relatively numerous coarser fragments to 10 cms in size - most fragments are in the range of 5 mms to 4 cms, and are subrounded to stretched subparallel to the foliation to layering. The foliation to layering is contorted to locally chaotic with a primary orientation at 60 to 70 degrees to the core axis. The ankerite streaked nature to the core persists into the coarse fragmentals, and, there are a handful of carbonate injected to carbonate replaced intervals from a cm to 37 cms in size where the the protolith is totally obliterated by off-white to beige ankerite +/- streaky to wispy sericite (more rarely with fuchsite). The largest of these carbonated replaced intervals extends from 2290.6-2291.8 at 69/77 degrees, with the last of  | 69418         | 2518.5       | 2520.5     | 2.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69419         | 2520.5       | 2523.4     | 2.9         | TR      | tr         | .000        | 3          |
|              |            |   | 69420         | 2523.4       | 2525.9     | 2.5         | TR      | tr         | .000        | 3          |
|              |            |   | 69421         | 2525.9       | 2529.0     | 3.1         | TR      | tr         | .000        | 2          |
|              |            |   | 69422         | 2529.0       | 2532.0     | 3.0         | TR      | tr         | .000        | 5          |
|              |            |   | 69423         | 2532.0       | 2535.0     | 3.0         | TR      | tr         | .000        | 9          |
|              |            |   | 69424         | 2535.0       | 2538.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69425         | 2538.0       | 2541.0     | 3.0         | TR      | .001       | .000        | 24         |
|              |            |   | 69426         | 2541.0       | 2544.0     | 3.0         | TR      | .006       | .000        | 209        |
|              |            |   | 69427         | 2544.0       | 2547.0     | 3.0         | TR      | tr         | .000        | 10         |
|              |            |   | 69428         | 2547.0       | 2550.0     | 3.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69429         | 2550.0       | 2553.0     | 3.0         | TR-1    | .004       | .000        | 136        |
|              |            |   | 69430         | 2553.0       | 2556.0     | 3.0         | TR-1    | .002       | .000        | 81         |
|              |            |   | 69431         | 2556.0       | 2558.0     | 2.0         | TR-1    | tr         | .000        | 2          |
|              |            |   | 69432         | 2558.0       | 2560.1     | 2.1         | TR-1    | tr         | .000        | 2          |
|              |            |   | 69433         | 2560.1       | 2563.0     | 2.9         | TR-1    | .001       | .000        | 24         |
|              |            |   | 69434         | 2563.0       | 2566.0     | 3.0         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69435         | 2566.0       | 2569.0     | 3.0         | TR      | nil        | .000        | nil        |

| From<br>(ft) | To<br>(ft) | Geology  | Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|--------------|------------|--|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
|              |            | these features from 2292.4 2292.7 at 61/67 degrees. The carbonate replacement locally grades into more ankerite streaked rocks suggesting the replacement is a more extreme form of the streaky alteration.  | 69436         | 2569.0       | 2571.0     | 2.0         | TR      | tr         | .000        | 3          |
|              |            |  | 69437         | 2571.0       | 2573.4     | 2.4         | TR      | .008       | .000        | 266        |
|              |            |  | 69438         | 2573.4       | 2576.0     | 2.6         | 1-2     | .021       | .000        | 735        |
|              |            |  | 69439         | 2576.0       | 2577.6     | 1.6         | TR-1    | nil        | .000        | nil        |
| 2273.0       | 2331.8     | Volcaniclastic coarse (continued). The ankerite streaking at the top of the system is partly reddish toned and the rocks are again erratically magnetic down to 2301.2 with susceptibilities from 0.41 to 30.7. More weakly magnetic rocks, with susceptibilities from 0.09 to 0.33, are encountered from 2301.2 to the lower contact - the change in the magnetism occurs at the base of a cleaner looking coarse fragmental section from 2292.7-2301.2 with well defined polymict fragments (unit is the first member, footwall to the last of the carbonate replaced sections). Quartz ankerite veining continues to account for less than 5% of the rocks. Pyrite mineralization reaches up to 2-3% disseminated to streaky material over a few cms. Given that there is an increase in intercalated granular textured material approaching the base of the section, the lower contact placement is tentative at a silty/granular interface where there is a 2.8 cm quartz fragment - layering to foliation at the contact is at 82 degrees. | 69440         | 2577.6       | 2580.0     | 2.4         | TR-1    | nil        | .000        | nil        |
|              |            |  | 69441         | 2580.0       | 2583.0     | 3.0         | 1-2     | .001       | .000        | 26         |
|              |            |  | 69442         | 2583.0       | 2586.0     | 3.0         | 1-2     | .001       | .000        | 36         |
|              |            |  | 69443         | 2586.0       | 2589.0     | 3.0         | TR-1    | .001       | .000        | 51         |
|              |            |  | 69444         | 2589.0       | 2592.0     | 3.0         | TR      | .001       | .000        | 39         |
|              |            |  | 69445         | 2592.0       | 2594.0     | 2.0         | TR-1    | .003       | .000        | 111        |
|              |            |  | 69446         | 2594.0       | 2597.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |  | 69447         | 2597.0       | 2599.0     | 2.0         | TR      | tr         | .000        | 7          |
|              |            |  | 69448         | 2599.0       | 2601.5     | 2.5         | TR      | tr         | .000        | 10         |
|              |            |  | 69449         | 2601.5       | 2604.0     | 2.5         | TR-1    | .003       | .000        | 105        |
|              |            |  | 69450         | 2604.0       | 2607.0     | 3.0         | 1-2     | .024       | .000        | 824        |
|              |            |  | 69451         | 2607.0       | 2609.6     | 2.6         | TR-1    | .016       | .000        | 555        |
|              |            |  | 69452         | 2609.6       | 2613.0     | 3.4         | 1-2     | .073       | .000        | 2491       |
|              |            |  | 69453         | 2613.0       | 2616.0     | 3.0         | TR-1    | .027       | .000        | 931        |
|              |            |  | 69454         | 2616.0       | 2619.0     | 3.0         | TR      | .001       | .000        | 34         |
|              |            |  | 69455         | 2619.0       | 2622.0     | 3.0         | TR      | .002       | .000        | 79         |
|              |            |  | 69456         | 2622.0       | 2625.0     | 3.0         | TR-1    | nil        | .000        | nil        |
|              |            |  | 69457         | 2625.0       | 2628.0     | 3.0         | TR      | .018       | .000        | 605        |
|              |            |  | 69458         | 2628.0       | 2631.0     | 3.0         | TR-1    | .001       | .000        | 43         |
| 2331.8       | 2358.9     | Volcaniclastic - return to a more granular textured package of volcaniclastic rocks with a minor amount of silty to ashy material. The core varies from medium to dark grey green and green in colour with local paler sections in the presence of accessory ankerite +/- sericite. The gritty textures are not developed in this section - textures are commonly granular to mottled from the strong alteration. There are scattered fragments in the system to 2 cms in size but fragments are generally at a premium. Magnetic susceptibilities range from 0.13 to 0.24. The core is irregularly streaked to fractured with 10 to 15% quartz-ankerite stringers, in addition to a strong ankerite component of streaks to blebs. The veining is commonly contorted to disrupted. Pyrite mineralization is weaker in this interval with up to trace to 1% finely disseminated material. The lower contact is along a 9 cm section of carbonate invaded volcaniclastic with a more silty to chloritic matrix at 73/71 degrees.                  | 69459         | 2631.0       | 2634.0     | 3.0         | TR      | .002       | .000        | 81         |
|              |            |  | 69460         | 2634.0       | 2637.0     | 3.0         | TR-1    | .120       | .000        | 4112       |
|              |            |  | 69461         | 2637.0       | 2640.0     | 3.0         | 2-3     | .019       | .000        | 651        |
|              |            |  | 69462         | 2640.0       | 2643.0     | 3.0         | TR-1    | .005       | .000        | 183        |
|              |            |  | 69463         | 2643.0       | 2646.0     | 3.0         | TR-1    | .003       | .000        | 110        |
|              |            |  | 69464         | 2646.0       | 2649.0     | 3.0         | 2-3     | .017       | .000        | 593        |
|              |            |  | 69465         | 2649.0       | 2652.0     | 3.0         | 1-2     | .010       | .000        | 360        |
|              |            |  | 69466         | 2652.0       | 2655.0     | 3.0         | 3-5     | .046       | .000        | 1577       |
|              |            |  | 69467         | 2655.0       | 2658.0     | 3.0         | 3-5     | .014       | .000        | 478        |
|              |            |  | 69468         | 2658.0       | 2660.0     | 2.0         | 3-5     | .050       | .000        | 1715       |
|              |            |  | 69469         | 2660.0       | 2662.0     | 2.0         | 2-3     | .016       | .000        | 542        |
|              |            |  | 69470         | 2662.0       | 2664.5     | 2.5         | 2-3     | .005       | .000        | 171        |
|              |            |  | 69471         | 2664.5       | 2667.0     | 2.5         | 1-2     | .002       | .000        | 62         |
|              |            |  | 69472         | 2667.0       | 2670.0     | 3.0         | 1-3     | .005       | .000        | 163        |
|              |            |  | 69473         | 2670.0       | 2673.0     | 3.0         | 2-3     | .009       | .000        | 295        |
|              |            |  | 69474         | 2673.0       | 2675.6     | 2.6         | 2-3     | .004       | .000        | 137        |
|              |            |  | 69475         | 2675.6       | 2677.7     | 2.1         | 1-2     | .003       | .000        | 93         |
|              |            |  | 69476         | 2677.7       | 2681.0     | 3.3         | TR      | .002       | .000        | 62         |
| 2358.9       | 2406.1     | Volcaniclastic - contact into a medium to dark green, very fine grained silty to ashy segment. The core exhibits a weakly to moderately developed foliation at 70 to 80 degrees to the core axis. The rock is very fine grained with a wispy to streaky alteration from chlorite and sericite. Magnetic susceptibilities are less than 0.25 over most of the zone, grading higher to 0.84 after 2404 feet - range is 0.17 to 0.84. The first calcite appears in the system below a narrow mud slip at 2471.6 at 77 degrees - the protolith remains moderate to strongly ankeritic with the calcite occurring as a  | 69477         | 2681.0       | 2684.0     | 3.0         | TR-1    | .001       | .000        | 24         |
|              |            |  | 69478         | 2684.0       | 2687.0     | 3.0         | TR-1    | tr         | .000        | 17         |
|              |            |  | 69479         | 2687.0       | 2690.0     | 3.0         | TR-1    | .001       | .000        | 22         |
|              |            |  | 69480         | 2690.0       | 2693.0     | 3.0         | TR      | .001       | .000        | 31         |
|              |            |  | 69481         | 2693.0       | 2695.6     | 2.6         | TR      | tr         | .000        | 3          |
|              |            |  | 69482         | 2695.6       | 2698.0     | 2.4         | TR      | nil        | .000        | nil        |
|              |            |  | 69483         | 2698.0       | 2701.0     | 3.0         | TR-1    | .001       | .000        | 26         |
|              |            |  | 69484         | 2727.0       | 2730.3     | 3.3         | TR-1    | tr         | .000        | 14         |
|              |            |  | 69485         | 2730.3       | 2733.5     | 3.2         | 1-2     | .001       | .000        | 19         |
|              |            |  | 69486         | 2733.5       | 2736.2     | 2.7         | 2-3     | .007       | .000        | 231        |



| From<br>(ft) | To<br>(ft) | Geology  | Sample<br>No.  | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |     |
|--------------|------------|--|--|--------------|------------|-------------|---------|------------|-------------|------------|-----|
|              |            | weak refracturing of some of the quartz veins. The slightly more magnetic portion at the end of the zone is noncalclitic. Veining is weak with an average of 5% quartz +/- ankerite and calcite. There is trace only disseminated pyrite in the system. These rocks are quite strongly chloritic although they are fresher in appearance than previous. There are isolated more strongly carbonated to carbonate invaded sections with close-packed blebs to streaks of ankerite that essentially obliterate the rock the widest is at 2364.0-2366.0 at 75/69 degrees. The lower contact is with a wider zone that is invaded with ankerite at 72 degrees.   | 69487  | 2736.2       | 2739.0     | 2.8         | 2 4     | .012       | .000        | 423        |     |
|              |            |  | 69488  | 2739.0       | 2741.0     | 2.0         | 3-5     | .021       | .000        | 713        |     |
|              |            |  | 69489  | 2741.0       | 2743.0     | 2.0         | 2-4     | tr         | .000        | 7          |     |
|              |            |  | 69490  | 2743.0       | 2745.0     | 2.0         | 2-3     | .001       | .000        | 38         |     |
|              |            |  | 69491  | 2745.0       | 2748.0     | 3.0         | 2-3     | tr         | .000        | 2          |     |
|              |            |  | 69492  | 2748.0       | 2751.0     | 3.0         | 2-3     | .001       | .000        | 39         |     |
|              |            |  | 69493  | 2751.0       | 2754.0     | 3.0         | 2-4     | .001       | .000        | 33         |     |
|              |            |  | 69494  | 2754.0       | 2756.9     | 2.9         | 2-4     | .001       | .000        | 36         |     |
|              |            |  | 69495  | 2756.9       | 2760.0     | 3.1         | TR      | tr         | .000        | 7          |     |
|              |            |  | 69496  | 2760.0       | 2762.0     | 2.0         | TR      | nil        | .000        | nil        |     |
|              |            |  | 69497  | 2762.0       | 2765.0     | 3.0         | TR      | tr         | .000        | 9          |     |
|              |            |  | 69498  | 2765.0       | 2768.0     | 3.0         | TR      | .001       | .000        | 27         |     |
| 2406.1       | 2435.2     |  | Ankeritic magnetic - contact into a wider zone where the volcanoclastics are invaded by ankerite. The ankerite occurs as close packed blebs that will coalesce into streaks subparallel to a moderately developed foliation at 45 to 80 degrees - average foliation at 75 degrees. The protolith appears to be a dark green to very dark green silty to ashy volcanoclastic with streaky chlorite +/- sericite alteration that has been nearly obliterated by the strong ankerite alteration. Magnetic susceptibilities are elevated in this corridor from 0.45 to 35.2, with most of the readings in the central part of the zone (2409 to 2433) greater than 20. While ankerite alteration is strong, there is only 5-10% true quartz-ankerite veining in the system. Mineralization consists of trace disseminated pyrite and pyrite aggregates. The lower contact marks a return to chloritic volcanoclastics at 77 degrees. | 69499        | 2768.0     | 2771.0      | 3.0     | TR         | tr          | .000       | 10  |
|              |            |  |  | 69500        | 2771.0     | 2774.0      | 3.0     | TR         | tr          | .000       | 5   |
|              |            |  |  | 69501        | 2774.0     | 2777.0      | 3.0     | TR         | nil         | .000       | nil |
|              |            |  |  | 69502        | 2777.0     | 2780.0      | 3.0     | TR         | tr          | .000       | 3   |
|              |            |  |  | 69503        | 2780.0     | 2782.0      | 2.0     | TR-1       | tr          | .000       | 5   |
|              |            |  |  | 69504        | 2782.0     | 2784.2      | 2.2     | TR         | tr          | .000       | 2   |
|              |            |  |  | 69505        | 2784.2     | 2787.0      | 2.8     | TR         | nil         | .000       | nil |
|              |            | 69506  |  | 2787.0       | 2790.0     | 3.0         | TR      | tr         | .000        | 7          |     |
|              |            | 69507  |  | 2790.0       | 2793.3     | 3.3         | TR-1    | tr         | .000        | 10         |     |
|              |            | 69508  |  | 2793.3       | 2796.0     | 2.7         | 2-3     | .001       | .000        | 26         |     |
|              |            | 69509  |  | 2796.0       | 2799.0     | 3.0         | 2-3     | .001       | .000        | 27         |     |
|              |            | 69510  |  | 2799.0       | 2802.0     | 3.0         | 2-3     | .001       | .000        | 34         |     |
|              |            | 69511  |  | 2802.0       | 2805.0     | 3.0         | 2-3     | .001       | .000        | 41         |     |
|              |            | 69512  |  | 2805.0       | 2808.0     | 3.0         | 2-3     | .001       | .000        | 21         |     |
|              |            | 69513  |  | 2808.0       | 2811.0     | 3.0         | TR      | tr         | .000        | 2          |     |
|              |            | 69514  |  | 2811.0       | 2814.0     | 3.0         | TR      | nil        | .000        | nil        |     |
|              |            | 69515  |  | 2814.0       | 2817.1     | 3.1         | TR-1    | tr         | .000        | 9          |     |
| 2435.2       | 2480.3     | Volcanoclastic - return to medium to dark green, very fine grained, silty to ashy volcanoclastics. A moderately contorted nature is more evident in the volcanoclastics here with a dominant foliation from 65 to 75 degrees. The rocks commonly have a fine mottled texture from the strong alteration with chlorite plus a local granular texture that develops more from carb alteration than granular to gritty textured rocks. Calcite is again noted in the system with a weak speckling to refracturing between 2450 and 2478.5 - the protolith remains weakly to moderately ankeritic throughout. Magnetic susceptibilities are elevated at the top of the zone to 2437.5 from 0.86 to 2.01, and, in a more magnetic interval from 2446.9-2448.2 (at 77 degrees) where the rocks are more strongly streaked with ankerite - susceptibilities of 0.29 to 13.4, versus 0.25 to 0.42 in the balance of the system. Quartz-ankerite veining averages about 5% irregular veins. Mineralization is weak with up to trace to 1% disseminated pyrite and pyrite aggregates. The lower contact is tentative into a zone with greyer quartz-ankerite veining - the first discontinuous veins noted at the base of this section after 2477.7. The tentative lower contact is at 63 degrees. | 69516  | 2817.1       | 2820.0     | 2.9         | 1-2     | .001       | .000        | 21         |     |
|              |            |  | 69517  | 2820.0       | 2823.0     | 3.0         | 1-2     | .001       | .000        | 26         |     |
|              |            |  | 69518  | 2823.0       | 2826.0     | 3.0         | TR-1    | .001       | .000        | 23         |     |
|              |            |  | 69519  | 2826.0       | 2829.0     | 3.0         | TR      | tr         | .000        | 14         |     |
|              |            |  | 69520  | 2829.0       | 2832.0     | 3.0         | TR      | tr         | .000        | 9          |     |
|              |            |  | 69521  | 2832.0       | 2835.0     | 3.0         | TR-1    | tr         | .000        | 17         |     |
|              |            |  | 69522  | 2835.0       | 2838.0     | 3.0         | TR-1    | .001       | .000        | 33         |     |
|              |            |  | 69523  | 2838.0       | 2841.0     | 3.0         | TR-1    | .001       | .000        | 27         |     |
|              |            |  | 69524  | 2841.0       | 2844.0     | 3.0         | 1-2     | .002       | .000        | 57         |     |
|              |            |  | 69525  | 2844.0       | 2847.0     | 3.0         | TR-1    | .001       | .000        | 38         |     |
|              |            |  | 69526  | 2847.0       | 2849.0     | 2.0         | TR-1    | .001       | .000        | 41         |     |
|              |            |  | 69527  | 2849.0       | 2852.0     | 3.0         | TR      | tr         | .000        | 14         |     |
|              |            |  | 69528  | 2875.0       | 2878.0     | 3.0         | TR      | tr         | .000        | 9          |     |
|              |            |  | 69529  | 2878.0       | 2881.0     | 3.0         | TR      | tr         | .000        | 5          |     |
|              |            |  | 69530  | 2881.0       | 2884.0     | 3.0         | TR      | nil        | .000        | nil        |     |
|              |            |  | 69531  | 2884.0       | 2887.0     | 3.0         | 1-2     | tr         | .000        | 10         |     |
|              |            |  | 69532  | 2887.0       | 2890.0     | 3.0         | TR-1    | tr         | .000        | 12         |     |
|              |            |  | 69533  | 2890.0       | 2893.0     | 3.0         | TR-1    | .001       | .000        | 38         |     |
|              |            |  | 69534  | 2893.0       | 2895.1     | 2.1         | 1-2     | .008       | .000        | 290        |     |
|              |            | 69535  | 2895.1   | 2897.3       | 2.2        | 1-2         | nil     | .000       | nil         |            |     |
|              |            | 69536  | 2897.3   | 2899.0       | 1.7        | TR-1        | .007    | .000       | 255         |            |     |
|              |            | 69537  | 2899.0   | 2902.0       | 3.0        | TR-2        | .001    | .000       | 31          |            |     |



From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

section of volcanoclastic. The rocks are medium grey green in colour with more beige toned ankeritic streaks to layers. There is a minor amount of fine grained, silty to ashy material with mottled textures intercalated with the granular textured rocks. The core is wispy to streaky altered with sericite and chlorite. Magnetic susceptibilities are low from 0.17 to 0.21. The rocks are poorly veined with about 5% ankerite and greyer quartz ankerite and are sparsely mineralized with up to trace to 1% disseminated to streaky pyrite. The foliation to layering in the system is at 75 to 85 degrees to the core axis. The lower contact is streaky altered at 69 degrees in contact with a bleached zone.

2573.4 2677.7 Carbonated Zone Volcanoclastic - contact into a much more highly bleached and carbonated corridor of volcanoclastics. The rocks vary from medium to pale grey green and greenish beige in colour with darker grey green to green portions, and, variable reddish to orangish staining. The protolith appears to be largely granular textured rocks that are very highly carbonated, with only minor silty material. There is one, soft, chloritic, very fine grained section of dull green altered silty to ashy material at the top of the section from 2577.6-2580.0 at 62/63 degrees. Most of the rocks in the system are highly overprinted to nearly obliterated by the strong alteration +/- staining. The rocks at the top of the section are soft aside from some dull orangish beige alteration and silicification associated with isolated quartz-ankerite veining. A patchy silicification is first noted in the system at 2594.3, with a semicontinuous zone of silicification to silica flooding from 2601.5 to 2609.6, and, more focussed silicification to silica flooding related to quartz-ankerite veining after 2637.3. The silicification to silica flooding appears directly related to accessory fracturing with ankerite and quartz. It is dull orangish to beige in colour with a variable input from sericite. The more reddish staining tends to occur adjacent to the silica flooded parts and is more strongly magnetic.

2573.4 2677.7 Carbonated Zone Volcanoclastic (continued). Local traces of disseminated magnetite are found in the reddish stained sections. Magnetic susceptibilities range from 0.07 to 37.1 - most of the lower values cue with the bleached and altered rocks (less than 0.50), with values up to 9.01 in the reddish toned rocks. There is one isolated reading of 37.1 at 2645.6 in dark green, fractured volcanoclastics sitting between orangish stained and silica flooded patches, and, one reading of 17.2 at 2676.5 in streaky altered volcanoclastics with magnetite, just above the lower contact. Veining is highly variable but most of the veins in the more focussed, silica flooded zone, after 2637.3, are at shallow (less than 40 degrees) angles to the core axis. Veins are grey to milky quartz-ankerite. The silica flooded patches are also the more

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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|------------|-----------|---------|----------|------|---------|----------|---------|

strongly mineralized parts of the system with up to 5-7% disseminated to fracture controlled pyrite over a few cms. The stronger, focussed silicification and staining around veining deteriorates after 2664.5 although the rocks remain relatively siliceous down to 2675.6. The lower contact zone is variably bleached with patchy silicification from 2675.6-2677.7. The lower contact placement is tentative at 69 degrees, given patchy silicification in the lower contact zone and, although more weakly expressed, in the adjacent rocks.

2677.7 2695.6 Volcaniclastic - return to more granular textured volcaniclastics that are medium to dark grey green in colour. The package is not as strongly bleached and silicified as the prior corridor but patchy silicification does persist into this sequence. The rocks are wispy to streaky altered with sericite and chlorite, and, there is a local crudely developed gritty texture. Fragments are at a premium but isolated foreign fragments to 5 mms in size are noted in addition to blebs and boudins(?)/ fragments of vein material. The patchy silicification is accompanied by weak reddish to orangish staining, and, an erratic distribution of disseminated magnetite such that susceptibilities are erratic from 0.11 to 92.3 - most readings are less than 0.50. The foliation to layering is more consistent in this sector at 70 to 80 degrees to the core axis. Veining averages less than 5% quartz-ankerite stringers that are irregular but roughly subparallel to the foliation although the associated staining and alteration is patchy and irregular. Mineralization is best developed in the altered sections next to veining with up to 2-3% disseminated to fracture controlled material over a few cms. The lower contact is streaky altered and a little irregular at 73 degrees.

2695.6 2712.9 Volcaniclastic - contact into a short section of paler coloured volcaniclastics with fairly numerous fragments to a cm in size. The volcaniclastic is medium grey green to grey in colour with a well developed granular to gritty texture. The core is wispy to streaky altered with sericite +/- chlorite. Fragments are relatively common but the vast majority are either sericitic or vein material (with or without calcite) such that the fragmental character may be more tectonic than primary. The wispy to streaky character of the alteration is at variable angles to the core axis - most are shallow and less than 40 degrees. The core is weakly to moderately ankeritic but some of the fractures and vein fragments are calcitic in this sector. Magnetic susceptibilities are low and consistent from 0.11 to 0.18. The section is weakly fractured to veined with less than 5% calcite +/- quartz, and, the rocks are mineralized with up to trace to 1% streaky to disseminated cubic pyrite. The lower contact is sharp with streaky alteration (in the the adjacent unit) at 39 degrees.



From To  
(ft) (ft)

Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

lower contact is infractured with ankerite and carbonated ultramafic material along the core axis over 13 cms - the foliation in the silicified lower contact varies from 55 to 70 degrees.

2756.9 2762.0 Carbonated Zone Carbonated Ultramafics - contact into a short, highly contorted section of ankeritic carb rocks with an ultramafic component. The ankerite occurs in numerous close-packed blebs that will coalesce into discontinuous streaks to layers in a dark bluish green to blue black, soft matrix/gangue of ultramafic material. The ankerite is off-white to a pale earthy grey beige colour. The ultramafic component is more obscure after 2760.7 feet where the matrix component is greener to brownish in tone with only a couple of softer, dark bluish green fractures - the protolith in this segment is more indicative of some of the highly carbonated to carbonate invaded silty to ashy units. The lower contact is not as highly contorted after 2761.5 and is moderately foliated at 60 to 70 degrees. Magnetic susceptibilities in the section are low from 0.22 to 0.36. There is 5 to 10% irregular quartz-ankerite veining in the system, but trace only fine points of pyrite. The lower contact is sharp and foliated at 67 degrees.

2762.0 2793.3 Volcaniclastic - contact into fine grained volcaniclastics once more. In this sector, the rocks range from having a very fine, granular texture to more mottled in nature from the chlorite and ankerite alteration. Adjacent to the carb zone, the rocks are weakly silicified over 20 cms, becoming softer and more strongly chloritic by 2765 feet. The core varies from medium to dark grey green in colour and has a weakly developed foliation at 60 to 70 degrees to the core axis. At 2784.2 (at 28 degrees), the core becomes more highly mottled with ankerite and becomes marginal to a carb rock in appearance with fine, granular textured blebs to patches that can coalesce into streaks to crude layers, surrounded by dull greenish to brownish chlorite alteration - no ultramafic material is noted in this passage. The strongly carbonated rock ends along an irregularly fractured and partly bleached zone with ankerite and quartz between 2790.0 and 2791.3 at 71/68 degrees. It is followed by chloritic, foliated, silty volcaniclastics to 2791.5. A siliceous, foliated, granular textured volcaniclastic inclusion is found from 2791.5 to 2792.0 at 74/63 degrees above a chloritic, brecciated to sheared and highly disrupted zone of silty volcaniclastic amongst broken core at the lower contact. Only a trace of mud is noted amongst the broken core at 2793.2 at 54 degrees - a wider mud seam is found in the unit that follows.

2762.0 2793.3 Volcaniclastic (continued). Aside from the siliceous, granular textured, volcaniclastic inclusion (?) from 2791.5 to 2792.0 where there is 2-3% disseminated to fractured controlled

From To  
(ft) (ft)

Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

pyrite, the rocks are sparsely mineralized with up to trace to 1% disseminated pyrite and coarser pyrite aggregates. The irregularly veined section from 2790.0 to 2791.3 hosts about 70% quartz-ankerite, otherwise, the sequence is rather poorly veined with 5 to 10% quartz ankerite, with some calcite noted in the system from 2777.7-2783.2. Magnetic susceptibilities are low, from 0.14 to 0.36. The lower contact is poorly defined amongst the blocky to broken core but appears to be at 65 degrees.

2793.3 2950.9 Volcaniclastic - contact into another segment of the paler grey, more siliceous volcaniclastics. The rocks vary from medium to pale grey and grey beige in colour and are sericitic in wisps to streaks and isolated fractures. There are scattered fragments in the system to a cm in size with a mix of sericite altered, vein material and foreign fragments - fragments are at a premium. The matrix component is granular to gritty textured and is variably speckled with quartz grains. The upper part of this section is darker in colour with stronger chlorite alteration and blocky to broken core up to a 5 mm mud seam at 2794.7 at 49 degrees. The core is also blocky to broken from 2808 to 2813.4 ending along 30 cms of badly broken core with traces of mud at 35 degrees to the core axis (orientation is unclear). The first silty material occurs in the system after the broken core from 2813.4-2814.0 - upper contact broken, lower contact irregular and broken averaging 25 (??) degrees. The silt to ashy component is very fine grained and varies from dull grey green to dull yellowish grey green and putty coloured with local more yellowish tones. After this first silty component at 2813.4, the paler siliceous volcaniclastics are intercalated with silty horizons from a few cms to a couple of meters in core length. The largest corridor with more continuous silty to ashy material extends from 2865.8 to 2872.7 at 18/36 degrees, with intercalated silty material from 2863.2-2865.8 at 18 degrees, and, silts threading the core axis from 2872.7-2876.4 at 36/11 degrees.

2793.3 2950.9 Volcaniclastic (continued). There is no clear indication of top directions from the intercalated material although the character of the two units is distinctly different. With the appearance of the silty units core angles become better defined, varying from 10 to 65 degrees - average about 55 degrees, but with numerous shallow angle contacts and some undulating to contorted layering. No fragments are noted in the silty to ashy segments and fragments are very much at a premium in the siliceous volcaniclastics after 2813.4. The volcaniclastics are weakly to moderately ankeritic with the first calcite appearing in the system at 2799.3. Between 2819.6 and 2860.2, the rocks are more strongly calcitic with calcite +/- quartz also as the dominant vein material. Veining in the system averages less than 5% grey to smoky quartz +/-

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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|------------|-----------|---------|----------|------|---------|----------|---------|

either ankerite or calcite. By far the largest vein/veining in the system is from 2897.9 to 2898.7 at 62/66 degrees - milky to smoky quartz with internal, grungy grey to off-white patches of fracture controlled ankerite with dull yellow sericite and traces of pyrite. Mineralization is best developed at the top of the unit and in the granular textured volcaniclastics with up to 23% disseminated to streaky and fracture controlled material. Only four splashes of chalcopyrite are noted- all in a 2 mm calcite vein at 2848.5, at 65 degrees. Magnetic susceptibilities are low from 0.05 to 0.28 with generally weaker values in the siliceous volcaniclastics.

2793.3 2950.9 Volcaniclastic (continued). Just above the wider than average veined section from 2897.9-2898.7, the core is blocky to broken with a trace of grit to potential gouge from 2893.8-2895.1. Hanging wall to the section with broken core and gouge, there is accessory sericite alteration and veining from 2893.2 to 2893.5 with irregular contacts at 66/69 degrees. Accessory veining is also found in two sections in the lower part of this package from 2918.6-2920.2 at 65 degrees (50% veining), and, 2935.0-2939.6 at 58/52 degrees (40-50% veining). The upper zone is bleached and sericitic, while the lower zone has a greyer section with grungy ankerite alteration to 2937.2 before the rocks become more bleached and sericitic. Pyrite mineralization is slightly elevated in the sericitic to bleached segments. There are further traces of mud at 2927.7 - 2 mms at 67 degrees, and, at the base of a section of blocky core from 2942.1-2943.4 - mud slip at 72 degrees. Approaching the lower contact, the volcaniclastics grade darker in colour and more chloritic after 2947, becoming more sericitic and fractured with quartz from 2949.4, hanging wall to a brecciated to sheared section with a trace of gouge at the lower contact from 2950.4 to 2950.9 - lowest part along a 2.5 cm ankerite-quartz vein with a trace of mud at the lower contact at 51 degrees.

2950.9 2981.6 Volcaniclastic - footwall to the narrow fault breccia, the volcaniclastics are darker in colour again, varying from dark grey green to dark green with erratic dull yellow ochre wisps of sericite and some lighter beige toned rocks with a stronger ankerite component. The rocks are fine grained to finely granular textured with none of the gritty or mosaic textures developed. There are also some of the more strongly streaked to foliated ankeritic sections again in this zone, where numerous close-packed blebs of off white ankerite can coalesce into streaks over narrow corridors with a well developed foliation that is locally contorted - average foliation at 55-65 degrees. The matrix to the ankeritic corridors is dark and chloritic - no ultramafic noted. Sections include: 2963.9-2964.9 at 62/55 degrees (lower contact contorted); 2972.2-2974.0 at 57/69 degrees, and; 2976.4-2977.8 at 58



| From<br>(ft) | To<br>(ft) | Geology   | Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|--------------|------------|---|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
|              |            | degrees. There is some blocky to broken core in the system from 2974.6-2976.0 (no gouge noted), at 2981.3 over 2 cms with a trace of mud, plus there is a narrow mud slip at the lower contact at 61 degrees. Veining averages about 10% ankerite +/- quartz at variable angles to the core axis - several veins are contorted with the host rocks. Mineralization is weak, averaging trace pyrite with up to trace to 1% disseminated material in the wallrocks to some of the contorted veins. Magnetic susceptibilities are low from 0.16 to 0.27. The lower contact is along a mud slip into more granular textured rocks at 61 degrees.  |               |              |            |             |         |            |             |            |
| 2981.6       | 3010.9     | Volcaniclastic - contact into granular textured volcaniclastics once more. The granular to gritty texture is moderately well developed at the top of the section but the rocks become more strongly mottled with depth approaching a fault zone at the lower contact. The rocks vary from medium to pale grey green in colour with more yellowish to beige casts related to the presence of accessory sericite and ankerite. There is one of the foliated and ankerite streaked zones with a chloritic matrix from 2991.3-2992.7 at 44/40 degrees. This section has some soft, dark bluish green, potential ultramafic along fractures in the basal 20 cms, and, there is accessory sericite, bleaching and silicification over 12 cms in the footwall volcaniclastic. A trace of grit to gouge is noted within 7 cms of broken core at 3000.0 (orientation unclear), and, along a 2 mm mud slip at 3005.0 at 65 degrees. No other gouge is noted until the lower contact, although the core is blocky to broken after 3000 feet. The volcaniclastics contain up to 2-3% disseminated to streaky and fracture controlled pyrite over a few mms. Veining averages less than 5% ankerite +/- quartz. Magnetic susceptibilities are low from 0.09 to 0.20. The lower contact is broken with gouge - orientation unclear. |               |              |            |             |         |            |             |            |
| 3010.9       | 3027.1     | FAULT ZONE CARBONATED ULTRAMAFICS   |               |              |            |             |         |            |             |            |
|              |            | Contact into a fault zone with associated ultramafic rocks and, at the top of the system, a bleached and highly fractured felsic dyke to 3015.0. The rocks are broken to 3016, followed by blocky to broken core to 3018.7. There does not appear to be any lost core in this interval, although footages are difficult to validate in the broken core. Strong gouge is noted at the upper contact over 9 cms at 46 (??) degrees (orientation uncertain), at 3013.5 - 2 cms at 49 degrees, and, amongst broken core from 3015.0 to 3016.0 where the orientation is again unclear. There are four, dark green to brownish green, foliated to brecciated sections of probable relict volcaniclastics in the system at 3019.2-3020.0 at 74/79 degrees; 3022.3-3022.7 at 63/58 degrees; 3023.0-3024.8 at 48/62 degrees, and; at 3026.8 - 5 cms at 52 degrees. The ultramafic component is black to blue black in colour. It becomes highly carbonated to carbonate invaded after 3020.0 with off-white to earthy, beige toned ankerite. The carbonated ultramafic to carb rock is streaked to   | 69576         | 3010.9       | 3013.0     | 2.1         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69577         | 3013.0       | 3015.0     | 2.0         | TR      | tr         | .000        | 3          |
|              |            |   | 69578         | 3015.0       | 3018.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69579         | 3018.0       | 3020.0     | 2.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69580         | 3020.0       | 3022.3     | 2.3         | NIL     | nil        | .000        | nil        |
|              |            |   | 69581         | 3022.3       | 3024.8     | 2.5         | TR      | nil        | .000        | nil        |
|              |            |   | 69582         | 3024.8       | 3027.1     | 2.3         | NIL     | nil        | .000        | nil        |





From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

with more beige to orangish sections) granular textured sections are the better mineralized parts of the system with up to 1-2% disseminated to streaky and fracture controlled pyrite, versus trace amounts in the finely granular and silty sections. Veining averages 5-10% irregular quartz-ankerite and tends to prefer the fine grained, silty members. The rocks are variably contorted with a dominant foliation at 50 to 65 degrees. The lower contact is subtle into more strongly magnetic rocks at 55 degrees.

3184.7 3230.6 Volcaniclastic Contact Zone - the contact zone of this volcaniclastic package is more highly altered with chlorite and is variably carbonated with ankerite and calcite. The protolith appears to be the same as previous with intercalated granular textured and silty to ashy units but the rocks are more strongly altered with chlorite, are more deformed, and, commonly have mottled textures from the strong alteration such that the definition of units is much more obscure in this sector. The rocks vary from dark grey green to dark green in colour with some of the more granular textured sections being dull grey beige to brownish beige in colour with variable brick red to orangish tones. The rocks are moderately foliated with local undulating to more contorted sections at 20 to 55 degrees to the core axis. Magnetic susceptibilities are strongest in the contact zones with readings of 0.14 to 31.3 from 3184.7 to 3192.8, and, 6.08 to 16.7 from 3229.6 to 3230.6 at the lower contact, versus 0.12 to 4.41 (with most under 0.30), over the balance of the zone. The initial part of the sequence is ankeritic with the last of the strongly foliated and ankeritic style of silty member from 3187.6 to 3188.7 at 41/74 degrees. Calcite first appears in the system at 3192.8 with more pervasive calcite noted between 3199 and 3121 feet. The rocks are weakly to moderately reactive to the presence of ankerite after 3121 feet, with a weak to moderate speckling from calcite.

3184.7 3230.6 Volcaniclastic Contact Zone (continued). Approaching the lower contact with ultramafic, a sporadic fracturing with ultramafic material is first noted at 3221.4 feet. Veining in the system is weak, averaging less than 5%, often discontinuous, quartz-carbonate veins. Mineralization is strongest again in the more granular textured portions (with/without quartz grains), reaching up to 1.2% disseminated to streaky and fracture controlled material. At 3204.6 feet, there is a 7 cm fragment/dykelet of coarse grained feldspar porphyry just cutting the core axis. Isolated chloritic lenses to fragments and fragments/boudins of vein material are found in the system but fragments are at a premium and foreign fragments appear to be absent. The lower contact is foliated and partly amphibolitized at 45 degrees.



| From<br>(ft) | To<br>(ft) | Geology   | Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|--------------|------------|---|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
| 3294.1       | 3333.5     | <b>ULTRAMAFIC</b>   |               |              |            |             |         |            |             |            |
|              |            | Contact into a wider package of ultramafic rocks. The protolith is black to blue black, very fine grained, soft, soapy and unctuous, and, contains some patchy brownish alteration and amphibolitization in addition to a few remnants of volcanics. There is only a minor amount of faulting in the ultramafic at 3296.3 3 cms broken and gouged at 73 degrees; 3308.2 1 cm gouged and broken at 64 degrees, and; at 3309.2 5 mms gouge at 71 degrees. The ultramafic is highly streaked to brecciated and contorted with ankerite streaks to lenses and patches. In the upper part of the system, to 3305.6, the ultramafic is more highly streaked to fractured with off-white to pinkish calcite over a seemingly older (??) ankerite component. Calcite weakens with depth as streaks to a weak refracturing, and, is essentially absent after 3329.5.   | 69660         | 3294.1       | 3297.0     | 2.9         | NIL     | nil        | .000        | nil        |
|              |            |   | 69661         | 3297.0       | 3300.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69662         | 3300.0       | 3303.0     | 3.0         | TR      | tr         | .000        | 15         |
|              |            |   | 69663         | 3303.0       | 3306.0     | 3.0         | NIL     | tr         | .000        | 2          |
|              |            |   | 69664         | 3306.0       | 3309.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69665         | 3309.0       | 3312.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69666         | 3312.0       | 3313.8     | 1.8         | TR      | .001       | .000        | 31         |
|              |            |   | 69667         | 3313.8       | 3317.0     | 3.2         | TR-1    | .001       | .000        | 23         |
|              |            |   | 69668         | 3317.0       | 3319.6     | 2.6         | TR-1    | .001       | .000        | 21         |
|              |            |   | 69669         | 3319.6       | 3322.0     | 2.4         | NIL     | nil        | .000        | nil        |
|              |            |   | 69670         | 3322.0       | 3325.0     | 3.0         | TR      | tr         | .000        | 5          |
|              |            |   | 69671         | 3325.0       | 3328.0     | 3.0         | NIL     | tr         | .000        | 5          |
|              |            |   | 69672         | 3328.0       | 3331.0     | 3.0         | TR      | .001       | .000        | 29         |
|              |            |   | 69673         | 3331.0       | 3333.5     | 2.5         | TR      | .003       | .000        | 96         |
|              |            | There is one wider inclusion / remnant of volcanics in the sequence from 3313.8-3319.6 with irregular contacts at 64/33 degrees, along with a handful of smaller inclusions with irregular contacts at 3312.6-3313.3 at 71/79 degrees; 3329.0-3329.6 at 43/47 degrees, contacts converging, and, this unit is more orange stained and siliceous; at 3330.4 - a 6 cm patch averaging 72 degrees; 3331.1-3332.1 at 43/49 degrees, and; an 8 cm fragment of volcanics at 3333.3 in the brecciated lower contact. The volcanoclastic remnants are dull brownish green to dull green in colour with weak reddish casts. Aside from the members below 3330.4, the volcanics are moderately streaked to fractured with calcite and are mineralized with up to 1-2% finely disseminated to fracture controlled pyrite. Magnetic susceptibilities in the volcanics are elevated from 1.60 to 24.1 versus 0.20 to 3.67 in the ultramafics. The ultramafics are much more sparsely mineralized with trace only pyrite. The lower contact of the ultramafic package is irregular and partly brecciated, averaging 68 degrees to the core axis.  |               |              |            |             |         |            |             |            |
| 3333.5       | 3557.0     | <b>VOLCANICLASTIC</b>   |               |              |            |             |         |            |             |            |
|              |            | Footwall to the ultramafic package, the volcanics are quite strongly overprinted with carbonate and chlorite such that textures are commonly mottled and the protolith is somewhat obscured. The protolith is weakly to moderately reactive to the presence of ankerite but calcite is the dominant carbonate mineral as discontinuous streaks to fractures, lenses and gashes that are usually stained pinkish to orange in the top of the section (to roughly 3383.1). Calcite fractures to streaks are at all angles to the core axis and are locally contorted as the variable foliation. The rocks are dull brownish green to reddish green in colour at the top of the system, grading to medium green and grey green across the interval 3380.0-3383.1. The greener coloured rocks after 3383.1, exhibit a more consistent foliation at 55 to 65 degrees to the core axis but the rocks remain highly deformed and strongly overprinted with chlorite and calcite to 3408.4. The rocks are not reactive to the presence of calcite over 18 cms at the upper contact - first calcite noted at 3334.1 feet. The reddish to brownish toned volcanics at the top of the system are also more erratically magnetic with susceptibilities from 0.29 to 40.3 versus 0.11 to 0.91 after 3383.1 (most under 0.30). Mineralization is generally weak with up to trace to 1% finely | 69674         | 3333.5       | 3336.0     | 2.5         | TR-1    | tr         | .000        | 12         |
|              |            |   | 69675         | 3336.0       | 3339.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69676         | 3339.0       | 3342.0     | 3.0         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69677         | 3342.0       | 3345.0     | 3.0         | TR-1    | nil        | .000        | nil        |
|              |            |   | 69678         | 3345.0       | 3348.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69679         | 3404.0       | 3407.0     | 3.0         | NIL     | nil        | .000        | nil        |
|              |            |   | 69680         | 3407.0       | 3409.5     | 2.5         | TR      | tr         | .000        | 9          |
|              |            |   | 69681         | 3409.5       | 3412.0     | 2.5         | 1-2     | .002       | .000        | 65         |
|              |            |   | 69682         | 3412.0       | 3415.0     | 3.0         | TR      | tr         | .000        | 9          |
|              |            |   | 69683         | 3415.0       | 3418.0     | 3.0         | TR      | tr         | .000        | 7          |
|              |            |   | 69684         | 3418.0       | 3420.0     | 2.0         | TR      | tr         | .000        | 9          |
|              |            |   | 69685         | 3420.0       | 3422.0     | 2.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69686         | 3422.0       | 3425.0     | 3.0         | TR      | nil        | .000        | nil        |
|              |            |   | 69687         | 3462.0       | 3465.0     | 3.0         | NIL     | tr         | .000        | 4          |
|              |            |   | 69688         | 3465.0       | 3467.0     | 2.0         | TR      | tr         | .000        | 2          |
|              |            |   | 69689         | 3467.0       | 3470.0     | 3.0         | TR      | tr         | .000        | 3          |
|              |            |   | 69690         | 3470.0       | 3473.0     | 3.0         | TR      | tr         | .000        | 3          |
|              |            |   | 69691         | 3502.0       | 3505.0     | 3.0         | TR      | tr         | .000        | 9          |



From To  
(ft) (ft)

Geology

| Sample<br>No. | From<br>(ft) | To<br>(ft) | Len<br>(ft) | PY<br>% | AU<br>OZ/T | AU1<br>OZ/T | AU2<br>PPB |
|---------------|--------------|------------|-------------|---------|------------|-------------|------------|
|---------------|--------------|------------|-------------|---------|------------|-------------|------------|

3557.0 (1084.5 m) End of Hole.



QUEENSTON MINING INC

Drill Hole: AN-03 47  
 Property: ANOKI  
 Northing: 17500.00  
 Easting: 7200.00  
 Elevation: 11000.00

DIAMOND DRILL HOLE RECORD

Collar Azimuth (Grid) .0  
 Collar Dip: -64.0  
 (0 Degrees Grid equals 017 degrees True)  
 Hole Length: 1777.8  
 Date Printed: 16 Apr, 2004

| *** Dip Tests *** |      |       | *** Dip Tests *** |      |       |
|-------------------|------|-------|-------------------|------|-------|
| Depth             | Azi. | Dip   | Depth             | Azi. | Dip   |
| 85.3              |      | -64.0 | 892.2             |      | -62.0 |
| 301.8             |      | -63.0 | 1187.4            |      | -62.0 |
| 597.0             |      | -63.0 | 1482.6            |      | -62.0 |

Date Started: June 5, 2003  
 Date Completed: June 26, 2003  
 Drilled by: Heath and Sherwood  
 Core Size: NQ  
 Material left in hole: NX CASING  
 Core Location: Upper Canada Site 1  
 Logged by: Dale R. Alexander

*Dale R Alexander*

| From (ft) | To (ft) | Geology | Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|-----------|---------|---------|------------|-----------|---------|----------|------|---------|----------|---------|
|-----------|---------|---------|------------|-----------|---------|----------|------|---------|----------|---------|

SUMMARY LOG

|       |        |                      |  |  |  |  |  |  |  |  |
|-------|--------|----------------------|--|--|--|--|--|--|--|--|
| .0    | 62.8   | OVERBURDEN           |  |  |  |  |  |  |  |  |
| 62.8  | 72.2   | FELDSPAR PORPHYRY    |  |  |  |  |  |  |  |  |
| 72.2  | 837.0  | BASALT GABBRO        |  |  |  |  |  |  |  |  |
| 837.0 | 1777.8 | ULTRAMAFIC KOMATIITE |  |  |  |  |  |  |  |  |





From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

feldspathic alteration. The rock is irregularly fractured with 5 to 10% calcite stringers and is mineralized with up to 1-2% pyrite over a few mms - generally within the more highly altered to fractured sections. Magnetic susceptibilities are erratic from 0.20 to 51.5. The section is cut by a narrow, dull grey green mafic intrusive with a weak reddish cast from 127.1-129.1 at 43/62 degrees. The dyke is flecked with amphibole +/- biotite, and, it contains some amphibolitized fragments to 2 cms in size. The dyke also appears to cut off some pitted to vuggy calcite veining with epidote - magnetic susceptibilities in the dyke range from 0.92 to 1.45. The lower contact with the small feldspar porphyry is sharp at 64 degrees.

150.3 151.4 Feldspar Porphyry - contact into a narrow dyke of feldspar porphyry that is hanging wall to the first of the amphibolitic corridors the lower contact being broken. The dyke is dull grey in colour with weak reddish tones and reddish staining next to fine fractures with calcite. The unit contains numerous, relatively close-packed phenocrysts of feldspar to 5 mms in size in a dull grey, siliceous matrix that is weakly altered with chlorite. The dyke is weakly fractured with locally pitted to vuggy fine calcitic fractures, and, is mineralized with traces of fine pyrite. Magnetic susceptibilities range from 3.21 to 4.44.

151.4 178.6 Amphibolitic fault gouge - return to the medium to dark green, granular to finely gabbroic textured basalts with erratic magnetic susceptibilities from 0.48 to 48.4. In this corridor there are three main amphibolitic corridors cut with narrow sections of broken core and gouge to grit at: 151.4-152.5, 10 cms of gouge to grit from 152.0 to 152.3, and weaker amphibolitization at the base from 152.3-152.5; 158.2-159.4 around broken core with grit over 3 cms at 158.6, and; 174.8-178.6, the largest amphibolitic section with 3 mms gouge at 177.7 at 48 degrees, 177.9-178.2 broken with 4 cms of gouge at 53 degrees, and, 2 mms of gouge at 178.6 at 55 degrees. The amphibolitic sections are black in colour with dark green and brownish streaks and a weak reddish cast. The sections are finely fractured to pervasively altered with calcite and are sparsely mineralized with pyrite. There are also some pitted to vuggy fractures with calcite +/- hematite in both the amphibolitic parts and the greener basalts. Contacts with the amphibolitic sections are sharply gradational. The lower contact is foliated at 57 degrees.

178.6 274.4 Basalt - continue in basaltic flows that are somewhat finer grained than previous and the gabbroic texture is not as well developed. The rocks vary from medium to dark green and dark grey green in colour and continue to be variably altered with chlorite, epidote, calcite and hematite plus a weaker component of the grungy feldspathic style of alteration. There are erratic

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

pitted to vuggy fractures with calcite. Overall, the rocks are weakly fractured with less than 5% calcite +/- hematite stringers, and, are sparsely mineralized with pyrite. Flow features are somewhat better developed in this section but tops are unclear. Magnetic susceptibilities range from 0.30 to 26.5 - most are less than 1.0. This section is also cut by a mafic intrusive from 230.5-235.9 at 27/19 degrees - lower contact somewhat threading the core axis after 234.7 feet. The dyke is dull grey green in colour with a weak reddish cast. It is pervasively calcitic, flecked to speckled with amphibole and is magnetic with susceptibilities from 21.1 to 46.9. The lower contact with a feldspar porphyry dyke is a little irregular at 39 degrees - the dyke cutting a brecciated flow top (??).

274.4 278.2 Feldspar Porphyry - contact into another dyke of feldspar porphyry. Both contacts of this dyke are a little irregular to ragged at 39/33 degrees - the dyke appears to cut a flow margin zone in the basalt. The feldspar porphyry is dull grey in colour with variable pinkish tones. It is finer grained than the earlier dykes with close packed phenocrysts of feldspar to 4 mms in size in a fine grained matrix with a weak chlorite and epidote component. The dyke is irregularly cut by fine reddish stained fractures with calcite +/- hematite and there is a weak fine speckling with calcite. Magnetic susceptibilities are low from 0.08 to 0.14. There is trace only pyrite in the unit.

278.2 524.0 Basalt - return to basaltic flows. The rocks vary from medium to dark green and grey green in colour and fine gabbroic textures are noted once more in this interval. At the top of the section to roughly 298 feet, the package is dark green in colour with a number of brecciated to ropey and variably foliated sections. Magnetic susceptibilities in this portion are erratic and range from 0.31 to 38.3. The rocks become more uniform in appearance overall after 298 feet. Susceptibilities after 298 are generally more uniform from 0.18 to 8.61, but there are isolated sections with magnetite in the system yielding readings up to 369. The strongest magnetics are related to a 6 cm, flow-top breccia with magnetite streaks to contorted layers from 308.0 to 308.7 at 19 degrees to the core axis and readings from 34.3 to 369 (tops are suggested to be downhole). A second flow top breccia from 355.0-355.5 at 42 degrees has readings from 73.5 to 130 where the magnetite is more patchy to streaky and fracture controlled. Footwall to a 2 mm mud seam and a 4.5 cm calcite vein (both at 61 degrees) at 350.0 feet, the adjacent basalt is partly amphibolitized, pervasively calcitic and also contains patchy magnetite - susceptibilities from 98.8 to 111 up to 350.6 feet. There is also some patchy magnetite at 356.9 feet - reading of 63.7 just below the flow top interval from 355.0 to 355.5, with patchy magnetics as 1.00 to 63.7 from 355.5 to 358.5.

278.2 524.0 Basalt (continued). There are several flow margin sections, however, without elevated magnetics - for example between 358.5

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

and 468, fractured to brecciated and ropey flow margins are common in the system but magnetics are consistently low from 0.23 to 0.80. Magnetics rise slightly again from 0.38 to 5.47 after 468, prior to another of the strongly magnetic flow top (??) breccias with patchy magnetite over 3.5 cms from 471.9 472.1 at 43/39 degrees readings of 175 to 215. From 472.1 to 517.5, susceptibilities range from 0.18 to 8.61 (most under 0.50) with readings rising again in the lower contact zone after 517.5, from 0.70 to 38.1. The basalt is weakly fractured with calcite +/- quartz at generally shallow angles to the core axis. Mineralization is weak but will reach up to 1-2% disseminated to fracture controlled pyrite over a few mms - tending to cue with the fractures, or, some of the flow margin zones. As noted above, the basalt is more erratically magnetic after 517.5 approaching the lower contact. The rock also grades more strongly and pervasively calcitic and chloritic below 520.6 prior to the contact with a foliated zone at 524.0 at 69 degrees.

278.2 524.0 Basalt (continued). The system is also cut by a number of mafic intrusives, that are typically fine grained, flecked to speckled with amphibole, weakly to moderately calcitic, and generally more weakly magnetic than the adjacent host. Mafic intrusives include: 282.4-284.8 at 64/58 degrees, susceptibilities (MS) at 0.31 to 0.53; 292.6-294.4 at 44 degrees with moderately foliated contacts over 7 cms and 10 cms respectively, MS 0.41 to 0.84 - the adjacent basalt is partly amphibolitized with susceptibilities from 4.10 to 38.3; 340.6-341.1 at 19/26 degrees, MS 0.44 to 0.46, and; 363.7-364.6 at 53/62 degrees, MS 0.33 to 0.38. The lower contact of this basalt section is gradational into more strongly foliated material at 69 degrees.

524.0 536.9 Foliated ankeritic calcite - contact into a highly foliated to contorted segment that has a moderate to strong reaction to the presence of ankerite between 524.8 and 530.1, hanging wall to a narrow, 7 cm, pinkish red dykelet of feldspar porphyry from 530.1-530.4 at 48/14 degrees. There is a weaker reaction to ankerite from 531.4-533.6 at 24/32 degrees, where the rocks are speckled with ankerite and are streaked to incipient altered in appearance. In the main ankeritic corridor, from 524.8-530.1, the rocks are irregularly veined with about 10% quartz-ankerite stringers in addition to having highly contorted ankeritic streaks and more uniform alteration striped to incipient altered ankeritic sections that are foliated at 25 to 50 degrees to the core axis. The protolith is suggested to be an altered, reddish to brownish basalt but there are numerous streaks to fractures of dark bluish green, soft, ultramafic (??) material in the main zone and, lesser so, at the base of the system from 535.2 to 536.9. The ankeritic segments are weakly streaked to refractured (??) with calcite, and, the enclosing rocks are very strongly calcitic. The upper contact zone, from 524.0 to 524.8 is a dull reddish green, foliated, calcitic basalt - foliation at 60 to 70 degrees. The lower contact zone, from 535.2-536.9, is dull

From To  
(ft) (ft)

## Geology

Sample From To Len PY AU AU1 AU2  
No. (ft) (ft) (ft) % OZ/T OZ/T PPB

reddish brown in colour and is streaked to fractured with ultramafic material at 45 to 60 degrees - lower contact at 58 degrees.

524.0 536.9 Foliated ankeritic calcite (continued). Magnetic susceptibilities are highly variable across the section from 20.7-28.5 in the upper contact zone; 0.38-26.8 in the main ankeritic corridor; 32.0 58.2 from 530.4 to 535.2 with disseminated magnetite common, and; 0.70-15.7 in the lower contact zone. Aside from the main ankeritic zone, veining is largely expressed as streaks to alteration-healed fractures. Typical to the incipient alteration style, the rocks are moderately hard, and, are mineralized with up to 1-2% disseminated pyrite over a few cms (no sustained mineralization). There is no distinct structure or gouge noted in the section. The lower contact is foliated at 58 degrees with streaky ultramafic material.

536.9 666.4 Basalt pillowed massive - contact below the foliated corridor into a sequence of massive to pillowed lavas. The top of the section, to 605.2 feet, is the pillowed portion with erratically distributed chloritic selvages on a scale of a few cms to less than a meter in core length. After 605.2 feet, the rocks are more massive to fractured and brecciated with only a minor amount of material that could be construed as selvage zones. Both the pillowed and the massive flows are fine grained with a granular to very fine gabbroic texture. The rocks vary from medium to dark green in colour - pillow margins are commonly paler in colour, and amygdaloidal next to the dark, chloritic selvage zones that often have disseminated magnetite. In the massive to brecciated flow segment, the breccias are usually paler in colour with accessory epidote +/- grungy feldspathic alteration and scattered amygdules. There is a minor amount of amphibolitization in the pillowed segment but amphibolitization is stronger in the massive flows after 645.8 in two main corridors: from 645.8-649.2 at 24/45 degrees, and 657.6-658.5 at 60/62 degrees. The top amphibolitized section is related to strong fracturing at the top of the section (645.8-646.5 at 24/44 degrees) with a soft, amphibolitized ultramafic component. The lower section contains some accessory calcite fracturing, silicification and orangish staining prior to 3 cms of softer, foliated, amphibolitized ultramafic at its base.

536.9 666.4 Basalt pillowed massive (continued). Beneath the lower amphibolitized zone, the basalt is foliated, siliceous, strongly calcitic, and pinkish to orangish stained to 658.8 at 62/76 degrees - it is hanging wall to a dyke of feldspar porphyry that threads the core axis (or contains coarse fragments to inclusions of basalt) to 660.0 at 76/66 degrees. The irregular dyke is followed by a coarsely granular, calcitic, soft amphibolitized ultramafic from 660.0-660.8 at 66/38 degrees. From this last amphibolitized ultramafic, the rock is a dark green, fine to medium, grained gabbroic textured basalt of the

From To  
(ft) (ft)

## Geology

Sample From To Len PY AU AU1 AU2  
No. (ft) (ft) (ft) % OZ/T OZ/T PPB

- hornblende spotted type down to the lower contact with another dyke of feldspar porphyry at 666.4 at 19 degrees.
- 536.9 666.4 Basalt pillowed massive (continued). At the upper contact of the system, the pillowed basalt is pinkish toned and pervasively calcitic to 538.9 feet. The core is also blocky to broken from 538.0 to 538.9 due to a pitted to vuggy calcite fracture nearly along the core axis. There is also a narrow shear to foliated section in the pillow lave at 565.0 feet - 7 cms at 39 degrees, with a trace of reddish hematitic mud. Just inside the section of massive flows, there is an 8 mm to 3 cm calcite vein breccia with coarse needles of hematite at 19 degrees to the core axis from 605.4 606.2. Magnetic susceptibilities are variable. In the pillowed corridor, selvage zones are invariably more magnetic than the pillow centers with susceptibilities ranging from 0.62 to 110. In the massive flows, readings range from 0.82 to 15.0 (from 605.2-645.8). The lower contact zone is more magnetic again with susceptibilities from 1.00 to 56.8 in the basalts and amphibolitized basalt, 1.61 to 6.45 in the feldspar porphyry, and, 0.28 to 0.50 in the coarsely granular, more definite ultramafic from 660.0-660.8. Overall, the rocks are weakly fractured with 5-10% calcite +/- quartz stringers at variable angles to the core axis. Pyrite mineralization is weak but will reach 1-2% disseminated to fracture controlled material in some of the selvage zones and around a few of the fractures. The lower contact is clean and sharp at 19 degrees.
- 666.4 682.2 Feldspar Porphyry - contact into a dyke, or series of dykes, of feldspar porphyry at very shallow angles to the core axis cutting basalt. Dykes are found at 666.4-675.6 at 19/7 degrees; 676.6-677.4 at 45/52 degrees; 678.0-678.5 running along but not entirely cutting across the core axis, and; 679.1-682.2 both contacts irregular at 38/39 degrees. The dykes vary from grey to grey beige and grey red in colour with variable red to orangish staining around fine open fractures with calcite +/- chlorite. The dykes are hard and siliceous and are peppered with phenocrysts of feldspar to a cm in size (most under 3 mms) along with much more scattered blebs to patches of greyish quartz to a cm in size. The phenocrysts are relatively close packed such that there is only a minor amount of chlorite, epidote, biotite and amphibole noted in the siliceous matrix. Aside from the fine open fractures with staining, the dykes are essentially unveined, and, are very sparsely mineralized with trace only fine points of pyrite. Magnetic susceptibilities are low from 0.03 to 0.62. The basaltic host is fine grained and siliceous between the first two dykes (675.6-676.6). It is dull green in colour with beige toned patches. It is irregularly fractured with calcite with some pinkish to red staining - susceptibilities of 0.02 to 0.08, trace only fine pyrite. The section from 677.4-679.1 is a brecciated basalt with a possible dark green mafic intrusive (speckled with acicular amphibole) from 677.4-677.8 at 52/59 degrees.





From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

basalt is weakly fractured to streaked with calcite and is very weakly to nonmagnetic with susceptibilities from 0.08 to 0.34. There is no true chert in the section. The rocks are very sparsely mineralized with trace only pyrite accompanying some of the fine calcite stringers. The basalt is fine grained to finely granular textured. The lower contact with more chloritic rocks is sharp at 61 degrees.

773.8 811.3 Basalt Gabbro - contact into a much more chloritic section of basalt. The basalt is fine to medium grained with a well developed granular to gabbroic texture that is of the hornblende spotted variety. It is medium green in colour, weakly fractured with calcite, and, sparsely mineralized with pyrite. The core is locally mottled in appearance from the strong chlorite alteration. Flow features are relatively poorly defined until the lower contact zone - the basalt is increasingly foliated and calcitic with streaks to lozenges and discontinuous stringers of pitted to vuggy calcite from 807.0 to 811.3, capped by a 6.5 cm, very fine grained siliceous section at the base at 50/47 degrees. The foliated section is foliated at 35 to 60 degrees to the core axis. The top of this overall zone is weakly magnetic with susceptibilities from 0.15 to 0.57. A change to magnetic rocks appears to occur after a dyke of feldspar porphyry from 799.3-802.7 - contacts irregular at 58/60 degrees (upper contact varies from 0 to 58 degrees from 799.1 to 799.7). Susceptibilities in the dyke range from 0.10 to 0.31; in the basalt beneath the dyke readings vary from 2.93 to 80.6 - strongest in the foliated corridor from 23.0 to 80.6. The feldspar porphyry is typically reddish grey in colour with close packed phenocrysts of feldspar to 4 mms, isolated spots of quartz to 1 cm, and, traces of amphibole, chlorite and epidote +/- biotite noted in the matrix. The lower contact of the sequence is sharp at 47 degrees.

811.3 837.0 Contact Zone Basalt Basaltic Komatiite - the contact zone package of the basalt sequence is dark in colour and much richer in ferromagnesian minerals than the vast majority of the basalt sequence. The rocks are dark green in colour with a weak bluish cast, moderate to strongly chloritic, and, are softer than the normal basalt but harder than the ultramafic rocks that follow. The section appears to be transitional between the basalts and ultramafics. There is no megascopically visible feldspar in this corridor. The matrix component is finely felted with flecks to spots of hornblende. Magnetic susceptibilities are low from 0.22 to 2.78 up to the lower contact zone from 835.6-837.0 where readings are 1.35 to 33.0. The lower contact zone is siliceous and much harder than the adjacent rocks - it is also greyer in colour with orange staining and partial amphibolitization. The initial part of the lower contact zone is cut by a narrow mafic intrusive from 835.6-836.0 at 49/38 degrees - susceptibilities of 16.0 to 23.4. A second mafic intrusive is found at



From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
|------------|-----------|---------|----------|------|---------|----------|---------|
|------------|-----------|---------|----------|------|---------|----------|---------|

appears most related to a 1.3 cm gouge section at 880.6 feet at 37 degrees, with granulated to sheared rocks to 880.3 above the zone, and, blocky to broken and strongly amphibolitized core in the footwall to 882.3 feet. There is a second, sheared to granulated section at 887.2 feet - 1 cm at 52 degrees, but with minimal effects in the adjacent rocks. The ultramafic is streaked to foliated, fractured and veined with 10-20% calcite at normally very shallow angles to the core axis. The core is sparsely mineralized with up to trace to 1% disseminated cubic pyrite and pyrite aggregates. All of the rocks are soft and soapy except for a narrow, brownish, calcitic section over 8.6 cms from 886.6-886.9 at 42/39 degrees that may be a relict mafic intrusive. The lower contact is sharp and foliated at 34 degrees into harder, brownish altered rocks.

897.7 929.0 Amphibolitic Ultramafic Komatiite Feldspar Porphyry - contact into an interesting corridor of ultramafic rocks with some dykes of feldspar porphyry and amphibolitic sections that may represent relict basalts. There are two, clear dykes of feldspar porphyry with very irregular contacts from 913.6-914.6 at 56/52 degrees, and, 928.6-929.0 at 49/45 degrees. These two dykes are dull grey in colour with pinkish to beige tones and well developed feldspar phenocrysts to 4 mms in size. There is also a dull grey, siliceous corridor with weak pinkish tones around fracturing and a couple of patches of amphibolitized ultramafic from 899.5-904.2 at 60/49 degrees; a highly fractured siliceous section with irregular contacts from 898.2 to 898.7 at 34/44 degrees, and; a highly fractured siliceous patch just cutting the core axis from 923.5-924.8, that may represent relict feldspar porphyry dykes although the more altered members have much higher magnetic susceptibilities from 15.5 to 39.7, versus 0.32 to 1.62 in the porphyritic members. In addition to the feldspar porphyry dykes and potential dykes, the core is harder, variably amphibolitized, and striped with calcite streaks and stringers to 3 cms in size at 35 to 45 degrees to the core axis between 921.3 and 928.0 at 41/29 degrees. The protolith in this corridor is more basaltic in appearance, and, there is a unit of banded chert in this section from 925.4-926.1 at 44/31 degrees.

897.7 929.0 Amphibolitic Ultramafic Komatiite Feldspar Porphyry (continued). Two further corridors that look more like a basaltic protolith, are strongly calcitic, amphibolitized, and duller green in colour are found at 907.5-909.0 at 49/21 degrees, and, 918.5-919.2 at 37/39 degrees. Magnetic susceptibilities tend to be the strongest of the system in the basalts but are erratic from 1.83 to 88.5 - most over 20, chert up to 16.4. Also cutting this system is one of the dull brownish to black, calcitic sections that may be a relict mafic intrusive from 911.4-913.0 with undulating contacts at 14/10 degrees - susceptibilities of 15.5 to 16.2. The balance of the rocks in this system, and, the dominant rock type is ultramafic. It is black to blue black and dark bluish green in colour with local more brownish

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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|------------|-----------|---------|----------|------|---------|----------|---------|

amphibolitization around the dyke contacts. The ultramafic is soft and highly streaked to foliated with calcite at 20 to 45 degrees. Magnetic susceptibilities range from 1.34 to 30.7. The ultramafic is sparsely mineralized with up to trace to 1% disseminated pyrite - the basaltic section with chert contains up to 3-5% disseminated to streaky and fracture controlled pyrite, and, the porphyries host up to 2-3% disseminated pyrite with a rare splash of chalcopyrite. The altered feldspar porphyry also contains some shallow angle fractures with gypsum. The lower contact of this system is along a feldspar porphyry dyke at 45 degrees - contact irregular and partly absorbed.

929.0 1329.2 Ultramafic Komatiite - return to more uniform dark bluish green to black and blue black ultramafic flows with well developed flow breccia sections. The first spinifex is noted in the system at 987.4 with some stunning examples below that point (to 1033). Where there is a sufficient contrast between the flows, tops appear to be downhole - flows have brecciated margins with or without spinifex textured tops. The rock is fine grained with a variable massive to granular and mottled texture. The ultramafic is more weakly fractured with only 5-10% irregular calcite +/- magnesite stringers in this sector (magnesite is common) - pervasive alteration with calcite is minimal. The rocks are sparsely mineralized with traces of disseminated cubic pyrite. Magnetic susceptibilities are elevated again from 18.9 to 73.2. Near the top of the section, there is a narrow, brownish, strongly amphibolitic, calcitic mafic intrusive from 959.4 to 960.5 at 42/44 degrees - susceptibilities from 1.15 to 3.07. The unit also contains a trace of gouge at 1029.8 - 1 cm broken at 30-40 degrees. From 1155.5-1161.6 there are three thin flows with brecciated margins at 15 to 40 degrees to the core axis, and, weaker magnetic susceptibilities from 1.05 to 18.7 - tops appear to be downhole. A second, more weakly magnetic, zone is associated with a more brownish altered and spinifex textured flow top from 1249.1-1253.1 at 8/21 degrees with susceptibilities from 9.68 to 25.7 (tops downhole).

929.0 1329.2 Ultramafic Komatiite (continued). Magnetic susceptibilities are strong again below this section from 18.9 to 53.6 up to the next brownish altered flow top from 1291.4-1294.8 at 40/22 degrees. This flow top section has a brownish altered, calcite speckled, segment at the base, from 1293.0 to 1294.8 at 29/22 degrees with susceptibilities of 0.33 to 0.90 (susceptibilities in the balance of this section from 0.75 to 14.8). The calcite speckled section is strongly amphibolitic and resembles some of the relict mafic intrusives although this corridor remains very soft. Susceptibilities are more erratic below 1294.8 with readings from 0.40 to 62.7. The rocks are greener in colour, to dark green and black, soft ultramafic from 1314.4 to the lower contact at 1329.2 - susceptibilities in this lower contact corridor range from 0.40 to 9.16. Contacts of the greener

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## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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corridor are at 49/45 degrees. There is one further, highly fractured to weakly granulated section in the ultramafics from 1254.0-1255.9 - no mud, but some very soft granulated parts at 35 to 50 degrees to the core axis. The lower contact of the ultramafic section is irregular, averaging 45 degrees to the core axis.

1329.2 1363.7 Mafic Intrusive Basalt contact into a section that could be either a mafic intrusive or a section of basalt (mafic intrusive appears the preferred designation). The unit is dull dark grey to dark grey green in colour with a granular texture and very scattered amphibolitic spots to a cm in size. It is moderately fractured with about 10% irregular calcite stringers and mineralized with trace to 1-2% disseminated cubic pyrite. The unit is moderately hard. Its relatively uniform texture and mineralization is suggestive of a mafic intrusive, combined with partial amphibolitization of the adjacent, and internal, ultramafic rocks. Internally, there are sections of ultramafic from 1355.0-1356.1 at 35/60 degrees, 1361.9-1362.5 at 31/49 degrees, and, at 1363.5 - 4 cms at 49/44 degrees. Below the appearance of the first ultramafic, the mafic intrusive is more chloritic, partly amphibolitized and mottled in texture. Magnetic susceptibilities range from 5.88 to 23.2 in the main dyke, 0.55 to 19.5 in the more mottled lower contact area, and, 0.33 to 3.13 in the ultramafics. The lower contact of this section is sharp at 53 degrees with strong brownish alteration and amphibolitization over 5 cms in the adjacent ultramafic.

1363.7 1434.5 Ultramafic Ultramafic Komatiite - return to ultramafic rocks. The top of this section is dark green to bluish green and black in colour with variable brownish alteration down to 1367.5 (contact at 71 degrees) before more continuous blue black ultramafic is reached. The upper contact is also more weakly magnetic with susceptibilities from 1.06 to 22.0, versus the much stronger readings in the blue black ultramafic from 14.3 to 62.0. One further, greenish to black brecciated potential flow top zone with weaker magnetics and strong amphibolitization is found between 1377.0 and 1380.1 - susceptibilities from 1.32 to 3.15. This section is accompanied by blocky to broken core with gouge over 30 cms at the upper contact (1 gouge at 73 degrees ??), and, 19 cms at the lower contact. Broken to granulated core +/- gouge is also found in the top of the system at 1381.0-1381.9 ending on 6 mms of gouge at 9 degrees, and, 1386.8 to 1387.3, granulated, orientation unclear. In this corridor, flow features are not well developed - most of the rocks are fine grained to massive with a finely granular to mottled texture. The core is weakly fractured with 5-10% calcite +/- magnesite stringers, and, is very sparsely to unmineralized. Magnetic susceptibilities weaken once more over the basal 30 cms, approaching the



From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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corridor sitting between two ultramafic members. The basalt is dark grey green to dark green in colour with a finely granular texture that becomes more mottled after 1707.2. The rocks are quite ferromagnesian rich and, once the mottled nature to the core occurs at 1707.2, the core is softer, more strongly chloritic, and, appears marginal to ultramafic in composition. The ultimate lower contact chosen, however, is both a flow margin and a magnetic contact at 1715.0 at 43 degrees. Magnetic susceptibilities are quite uniformly low and less than 0.40, with a range of 0.11 to 2.33 including two isolated readings that are greater than 0.83. Just inside the upper contact, the basalt is well fractured with calcite to the point of being a calcitic vein breccia with fragments of basalt from 1686.9-1695.2 at 22/41 degrees. A second, weaker, fractured to calcitic vein breccia zone extends from 1700.9-1701.7 at 50/47 degrees. Outside of the two vein breccias, calcite (with rare quartz) fractures and stringers make up about 10% of the rock. Flow features are not well developed until the lower, mottled corridor where there are foliated to contorted and crudely brecciated sections at variable angles to the core axis. Pyrite mineralization is weak, with trace only disseminated cubic pyrite and pyrite aggregates. The lower contact is sharp at 43 degrees.

1715.0 1754.1 Ultramafic Komatiite Ultramafic - return to an ultramafic package of rocks. In this sector, the rocks are fine grained to very fine grained with a massive to locally mottled texture. The ultramafics are highly foliated to contorted at shallow angles to the core axis and are irregularly fractured to streaked with calcite +/- magnesite. The foliated to contorted nature precludes much potential definition of the flows. Magnetics are strongest in the central portion of this zone with susceptibilities from 3.77 to 36.7 - there are weaker readings at the upper contact (to 1716.2) from 1.33 to 5.47, and, weaker readings from 1743.9-1748.5 of 0.57 to 2.38 prior to one of the calcite fractured to vein breccia styles of occurrence at the base of the zone from 1748.5-1754.1 where susceptibilities are 0.72 to 12.7. The vein breccia zone is at 23/44 degrees - the lower contact is gradational into foliated, streaky calcitic ultramafics that are much more weakly magnetic. Some of the fragments in the vein breccia zone are greener in colour and look marginal to basalt to basaltic komatiite in composition, but most are clearly ultramafic with a variable mottling from carbonate +/- amphibolitization. The rocks continue to be sparsely mineralized with disseminated pyrite but a few streaks with fine pyrite and calcite are noted at the top of the system down to 1722.6 feet. There is a narrow granulated section with a trace of mud over 1.2 cms at 1735.6 at 52 degrees. The lower contact is at 44 degrees.

From To  
(ft) (ft)

## Geology

| Sample No. | From (ft) | To (ft) | Len (ft) | PY % | AU OZ/T | AU1 OZ/T | AU2 PPB |
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1754.1 1777.8 Ultramafic Komatiite as noted above, the calcitic vein breccia from 1748.5 to 1754.1, deteriorates into a foliated to streaky calcitic ultramafic that is also more weakly magnetic after 1754.1. The rock is dark green to black in colour and locally appears marginal to basalt especially in the presence of accessory streaking to fracturing with calcite but the protolith is moderately soft across the zone. Susceptibilities range from 0.32 to 2.89. The rocks are foliated to streaky altered and fractured at generally shallow (less than 30 degree) angles to the core axis. The core is more strongly streaked with calcite after 1772.1 to the point where the primary hole was lost at 1777.8 - the rocks are competent and core very well. The zone is sparsely mineralized with trace to 1-2% disseminated to crudely fracture-controlled pyrite.

The hole was wedged at 1741.68 feet (531 m) - logged as AN03 47W.

1777.8 (542 m) End of primary hole.





Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines



Date: 2004-JUN-28

GEOSCIENCE ASSESSMENT OFFICE  
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TORONTO, ONTARIO  
M5H 2G4 CANADA

Tel: (888) 415-9845  
Fax: (877) 670-1555

**Submission Number:** 2.27871  
**Transaction Number(s):** W0480.00932

Dear Sir or Madam

**Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact STEVEN BENETEAU by email at [steve.beneteau@ndm.gov.on.ca](mailto:steve.beneteau@ndm.gov.on.ca) or by phone at (705) 670-5855.

Yours Sincerely,

A handwritten signature in black ink that reads "Ron C. Gashinski".

Ron C. Gashinski  
Senior Manager, Mining Lands Section

**Cc:** Resident Geologist

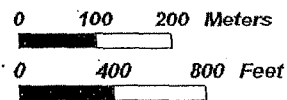
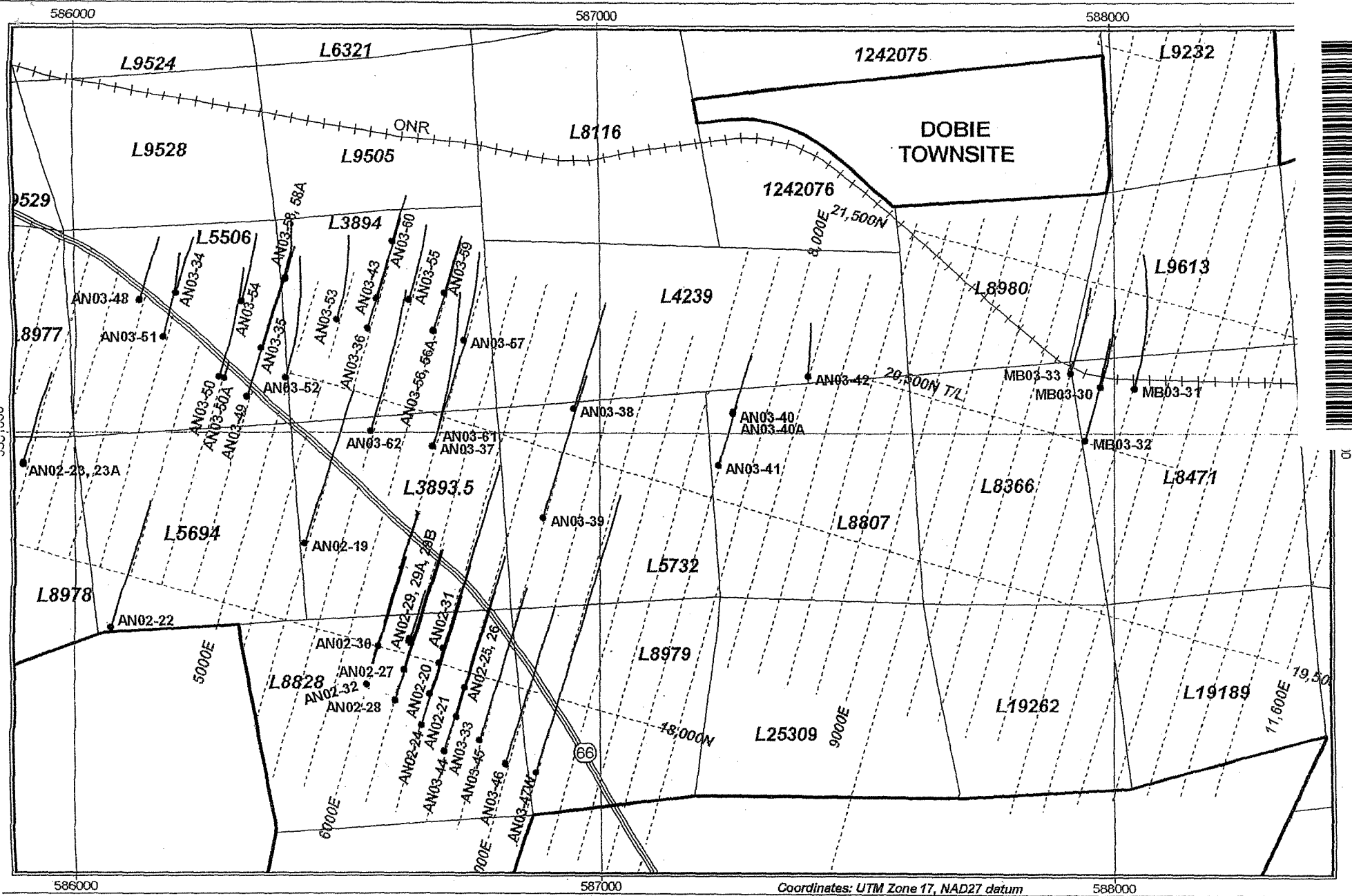
Queenston Mining Inc.  
(Claim Holder)

Wayne Russell Benham  
(Agent)

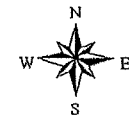
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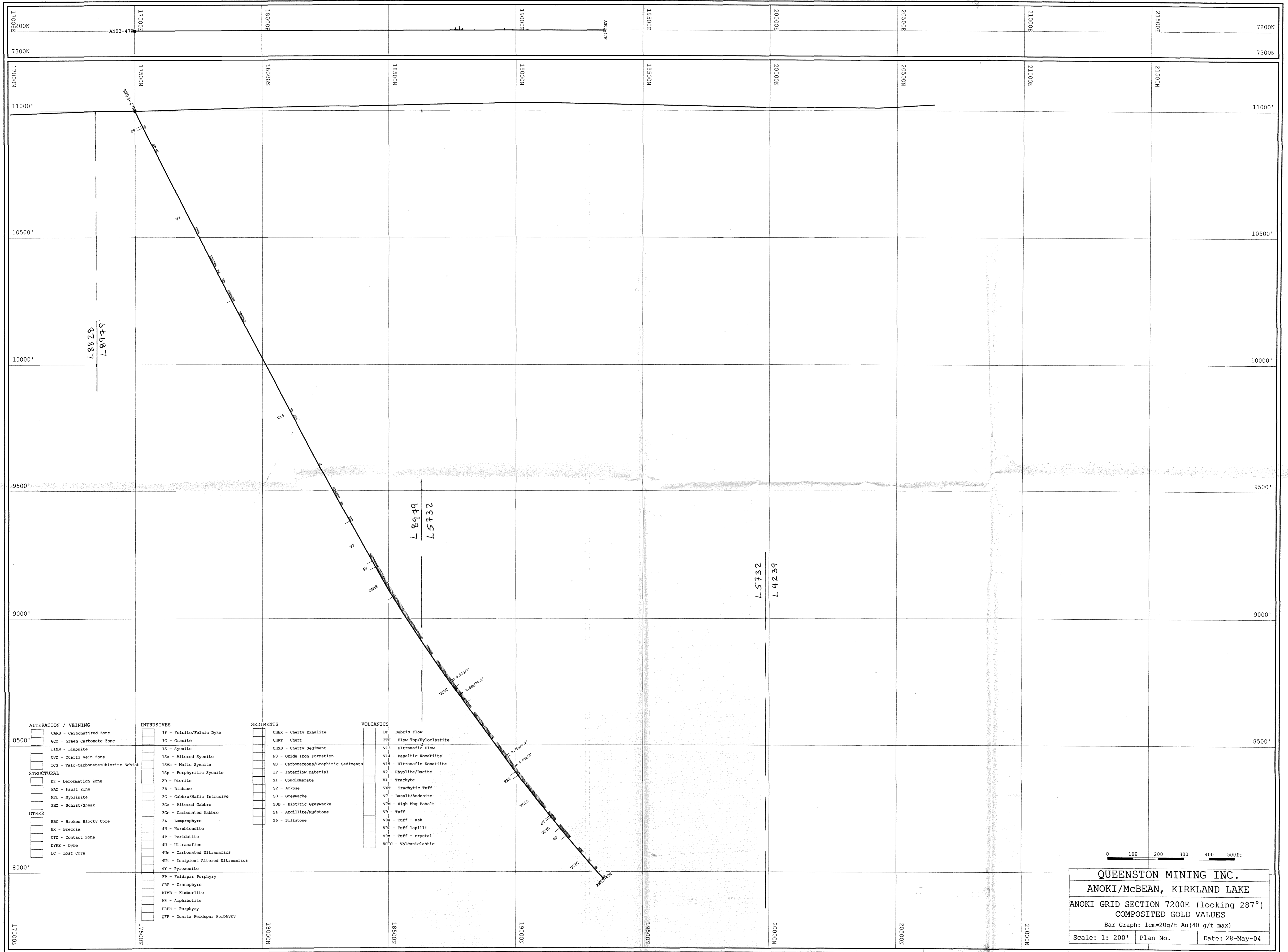




QUEENSTON MINING INC.  
 ANOKI - McBEAN PROJECT  
 Kirkland Lake Area, Larder Lake Mining District  
 DRILL HOLE LOCATION MAP



March 2004



- |                                       |                                     |                                       |                             |
|---------------------------------------|-------------------------------------|---------------------------------------|-----------------------------|
| <b>ALTERATION / VEINING</b>           | <b>INTRUSIVES</b>                   | <b>SEDIMENTS</b>                      | <b>VOLCANICS</b>            |
| CARB - Carbonatized Zone              | 1F - Felsite/Felsic Dyke            | CHEX - Cherty Exhalite                | DF - Debris Flow            |
| GCZ - Green Carbonate Zone            | 1G - Granite                        | CHRT - Chert                          | FTH - Flow Top/Hyloclastite |
| LIMN - Limonite                       | 1S - Syenite                        | CHSD - Cherty Sediment                | V13 - Ultramafic Flow       |
| QVZ - Quartz Vein Zone                | 1Sa - Altered Syenite               | F3 - Oxide Iron Formation             | V14 - Basaltic Komatiite    |
| TCS - Talc-Carbonates/Chlorite Schist | 1Sm - Mafic Syenite                 | GS - Carbonaceous/Graphitic Sediments | V15 - Ultramafic Komatiite  |
|                                       | 1Sp - Porphyritic Syenite           | IF - Interflow material               | V2 - Rhyolite/Dacite        |
| <b>STRUCTURAL</b>                     | 2D - Diorite                        | S1 - Conglomerate                     | V4 - Trachyte               |
| DZ - Deformation Zone                 | 3D - Diabase                        | S2 - Arkose                           | V47 - Trachytic Tuff        |
| FAZ - Fault Zone                      | 3G - Gabbro/Mafic Intrusive         | S3 - Gneiss                           | V7 - Basalt/Andesite        |
| MYL - Mylonite                        | 3Ga - Altered Gabbro                | S3B - Biotitic Gneiss                 | V7M - High Mag Basalt       |
| SHZ - Schist/Shear                    | 3Gc - Carbonated Gabbro             | S4 - Argillite/Mudstone               | V9 - Tuff                   |
|                                       | 3L - Lamprophyre                    | S6 - Siltstone                        | V9a - Tuff - ash            |
| <b>OTHER</b>                          | 4H - Hornblende                     |                                       | V9i - Tuff lapilli          |
| BBC - Broken Blocky Core              | 4P - Peridotite                     |                                       | V9c - Tuff - crystal        |
| BK - Breccia                          | 4U - Ultramafics                    |                                       | V10 - Volcaniclastic        |
| CTZ - Contact Zone                    | 4Dc - Carbonated Ultramafics        |                                       |                             |
| DYKE - Dyke                           | 4DI - Incipient Altered Ultramafics |                                       |                             |
| LC - Lost Core                        | 4Y - Pyroxenite                     |                                       |                             |
|                                       | FF - Feldspar Porphyry              |                                       |                             |
|                                       | GRP - Granophyre                    |                                       |                             |
|                                       | KIMB - Kimberlite                   |                                       |                             |
|                                       | MB - Amphibolite                    |                                       |                             |
|                                       | PRPH - Porphyry                     |                                       |                             |
|                                       | QFP - Quartz Feldspar Porphyry      |                                       |                             |

0 100 200 300 400 500ft

**QUEENSTON MINING INC.**  
**ANOKI/McBEAN, KIRKLAND LAKE**  
 ANOKI GRID SECTION 7200E (looking 287°)  
 COMPOSITED GOLD VALUES  
 Bar Graph: 1cm=20g/t Au(40 g/t max)  
 Scale: 1: 200' Plan No. Date: 28-May-04

32004582039 2.27871 GAUTHIER

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fp.ctaechp