OUEENSTON MINING INC

Drill Hole:	AN99-17						
		DIAN	NOND DRIL	L HOLE RECORD		P	age: 1 of 32
Property:	ANOKI Collar loc from #1	. Post L-9433; 16	50' S, 73	5'W			
Northing:	16950.00						
Easting:	6600.00						
Elevation:	11000.00	*** Dip Tea	sts ***	*** Dip Te	sts ***	Date Started:	June 3, 1999
		Depth Azi.	Dip	Depth Azi.	Dip	Date Completed:	June 18, 1999
Collar Azimuth (Grid) .0						
Collar Dip:	-75.0	88.6	-74.0	1180.8	-72.0	Drilled by:	BENOIT
(0 Degrees Grid	equals 017 degrees True)	295.2	~75.5	1476.0	-71.5	Core Size:	NQ
Hole Length:	2125.4	590.4	-74.0	1771.2	-73.0	Material left in hol	e NX CASING
		885.6	-74.0	2066.4	-73.0	Core Location:	Upper Canada
Date Printed:	8 Jan, 2001					Logged by:	MMc, D. Alexa

Ł

то

(ft)

(ft)

From

(ft)

Sample

No.

ole NX CASING Upper Canada Site 1 MMc, D. Alexander

OZ/T

PPB

June 3, 1999 June 18, 1999

ΡY AU AU1 AU2 Len

OZ/T

то From (ft) (ft)

•

Geology

SUMMARY LOG

- 84.3 OVERBURDEN .0
- 84.3 87.7 BASALT
- 87.7 449.7 FELDSPAR PORPHYRY FELSIC DYKE
- 777.1 BASALT 449.7
- 809.9 CARBONATED ZONE CARBONATED ULTRAMAFICS 777.1
- 809.9 990.0 BASALT
- 990.0 1020.1 FELDSPAR PORPHYRY FELSIC DYKE
- 1020.1 1146.9 HIGH MAG BASALT
- 1146.9 1346.4 ULTRAMAFIC MAFIC INTRUSIVE
- 1346.4 1996.8 BASALT GABBRO
- 1996.8 2125.4 ULTRAMAFIC ULTRAMAFIC KOMATIITE



32D04SW2021 2.20881 GAUTHIER

010

2.20881





				Drill Ho	le AN99	Pa	of 32			
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

84.3 OVERBURDEN .0

0.0 to 39.4- loonshit/sand; 309.4 to 87.7- boulders. Casing left in hole.

84.3 87.7 BASALT

A rubbly and broken interval, probably cored from a boulder or boulders. The section consists of a very pale green-grey, Mg basalt with flow breccia down to about 86.2 feet. Below this is a very dark green grey, mafic dyke? which is amphibolitic for about 6 inches and then becomes slightly cleaner and strongly chloritic. The bottom contact is broken and slightly ground; it probably lies at a high core angle.

87.7 449.7 FELDSPAR PORPHYRY FELSIC DYKE

Opening into a dark purple grey to brown coloured intrusive, with a prominent speckled texture. Generally a fresh rock with some locally cloudy zones where carbonate, epidote, silica and hematite are beginning to overprint the otherwise fairly pristine matrix. A phase very much like that logged in AN16- a fairly clean feldspar porphyry which lies somewhere between rocks previously logged as FP's and FD's. This example consists of a weakly bimodal assortment of small milky white feldspar phenos supported in a very fine grained feldspathic groundmass. The phenos are generally clean and sharp with a smaller population of slightly larger and more anhedral to subhedral grains in the 3-5 mm range. These are set amongst a larger number of 2-3 mm lath-like crystals. The smaller grains are mostly plagioclase, whereas some of the larger grains may be K-feldspar. The matrix is fairly homogeneous and featureless, except where fine dusty epidote alteration has begun to grow. Fine chloritic flecks also occur in some of the more strongly altered areas. A weakly magnetic and slightly calcitic unit; the carbonate is generally confined to very fine stringers or threads cutting randomly through the rocks.

A blocky and very hard phase; this has produced a good deal of crushed and broken core. Cut by a few pale to grass green mafic dykes. Locally washed with hematite (more fracture induced) and or epidote (fracture controlled and pervasive). Traces amounts of fine pyrite, chalcopyrite and specular hematite are found on fracture faces and in a few scattered tiny gtz stringers, as well as in the matrix of the intrusive. Jointed and broken along low, moderate and high angle stringers. More details follow:.

87.7 130.1 Feldspar Porphyry.

A mostly bownish to purple toned section. Fairly fresh with some local hematite alteration in the matrix. Cut by a pale green, weakly speckled basaltic/mafic dyke at 91.2 to 92.5. The dyke is oriented at about 20 degrees to the CA and has spindly to wispy extremities. Contacts are sharp and have a saw-tooth texture developed. A blocky section with some more severely broken areas at 108.5, 110-112, and 121 to 123. Flecked with chlorite below about 120. Weakly mineralised with fine grainy pyrite on fracture faces.

130.1 133.0 Feldspar Porphyry.

A more strongly altered zone where the primary phenocrysts are obliterated. 26 Patchy/cloudy epidote, carbonate and silica/hematite fluids have saturated 99 the rock turning it more purplish or beige to greenish. Little sulphide is 26

26501	127.9	130.1	2.2	TR	nil	.000	14
26502	130.1	133.0	2.9	TR	nil	.000	nil
26503	133.0	136.0	3.0	TR	nil	.000	2
26504	155.0	157.4	2.4	TR	nil	.000	nil
26505	157.4	160.6	3.2	TR	nil	.000	nil
26506	160.6	163.7	3.1	TR	nil	.000	nil
26507	163.7	166.0	2.3	TR	nil	.000	nil
26508	166.0	166.9	. 9	TR	nil	.000	nil
26509	166.9	167.9	1.0	1.0%	nil	.000	3
26510	167.9	170.0	2.1	TR	nil	.000	nil
26511	203.9	206.6	2.7	TR	nil	.000	nil
26512	206.6	209.0	2.4	TR	nil	.000	nil
26513	209.0	212.0	3.0	TR	nil	.000	nil
26514	212.0	215.0	3.0	TR	nil	.000	nil
26515	215.0	218.0	3.0	0.5%	nil	.000	5
26516	218.0	220.4	2.4	TR	nil	.000	9
26517	220.4	222.3	1.9	TR	nil	.000	2
26518	222.3	225.0	2.7	TR	nil	.000	nil
26519	222.3	226.1	3.8	TR	nil	.000	nil
26520	226.1	227.7	1.6	0.5%	nil	.000	7
26521	227.7	229.6	1.9	TR	nil	.000	nil
26522	229.6	233.0	3.4	TR	nil	.000	nil
26523	233.0	234.9	1.9	TR	nil	.000	nil
26524	234.9	236.2	1.3	TR	nil	.000	nil
26525	236.2	239.1	2.9	TR	nil	.000	nil
26526	254.0	256.2	2.2	TR	.001	.000	20
26527	256.2	258.4	2.2	TR	nil	.000	nil
26528	258.4	261.0	2.6	TR	nil	.000	nil
26529	261.0	264.1	3.1	TR	nil	.000	nil
99999	264.1	265.0	. 9	LC	.000	.000	0
26530	265.0	267.6	2.6	TR	nil	.000	nil
26531	267.6	270.0	2.4	TR	nil	.000	3
26532	270.0	273.0	3.0	TR	nil	.000	2
26533	273.0	275.5	2.5	TR	nil	.000	nil
26534	275.5	277.1	1.6	TR	nil	.000	11
26535	277.1	279.7	2.6	TR	nil	.000	nil
26536	279.7	283.3	3.6	TR	nil	.000	nil
99999	283.3	285.4	2.1	LC	.000	.000	0
26537	285.4	288.9	3.5	TR	nil	.000	nil

				Drill Ho	Le AN99-	-17	Pá	age: 3	of 32	
From (ft)	To (ft)	Geology	Sample No.	From (ft)	To (ft)	Len (ft)	PY %	AU OZ/T	AU1 OZ/T	AU2 PPB
		present. Calcitic in small fractures and to a limited extent in the	26538	288.9	291.7	2.8	TR	nil	.000	nil
		groundmass. Slightly more magnetic at 133.	26539	291.7	292.0	. 3	TR	nil	-000	nil
			26540	292.0	294.0	2.0	0.5%	nil	.000	nil
		133.0 138.9 Feldspar Porphyry.	26541	294.0	295.3	1.3	0.5%	nil	.000	nil
		Much as described above at 87.7.	26542	295.3	297.1	1.8	TR	nil	.000	nil
			26543	297.1	298.1	1.0	0.5%	nil	.000	nil
		138.9 143.0 Matic Intrusive.	26544	298.1	300.0	1.9	TR	nil	.000	3
		A pale grass green, very finely mottled matic/basaltic dykelet cuts the core	26545	300.0	302.0	2.0	TR	nil	.000	2
		at a very low core angle. The dyke appears at a low angle and by 140	26546	302.0	303.4	1.4	TR	nil	.000	nil
		occupies all of the core. The phase has sharp, slightly undulating contacts	26547	303.4	304.5	1.1	0.5%	nil	.000	nil
		and a lew tiny branches that invade the nost hear the extreme contacts. A	26548	304.5	306.5	2.0	0.5%	nil	.000	nil
		chloritic, felted groundmass characterises the mail phase. It is fairly	26549	306.5	309.0	2.5	TR	n11	.000	nil
		nomogeneous and does not respond to the pen magnet. Little in the way of	26550	309.0	312.0	3.0	TR	nil	.000	nii
		venning or supplide mineralisation is present in the dyke. The rock has a	26551	345.0	347.9	2.9	TR	n11	.000	n11
		subtle infrusive texture suggestive of a diabase of fine gabbro; close	20552	347.9	349.0	1.1	TR	n11 mil	.000	nii nii
		inspection reveals gnostly marks in parts of the groundmass; these and the	26553	349.0	352.0	3.0	TR	n11 ~1	.000	nil
		with a lighter components appear to have been almost completely overprinted	20004	367.0	271 1	2.8	TR TR	nil nil	.000	nil
		with a fighter coloured children.	20555	303.0	371.1	1.3	TD	nil	.000	10
		143 0 147 6 Broken Blocky Core	26557	372 0	372.0	1 1	ידג מייס	nil	000	nil
		A totally crushed and broken zone with no annarent faulting Fragments are	26558	372.0	374 3	1 2	TD	nil	.000	1111
		slightly benatised to more number but not any more so than the surrounding	26559	374 3	377 0	27	ጥዎ	nil	000	nil
		host rocks.	26560	393.6	396.0	2.4	TR	nil	000	nil
		147.6 166.0 Feldspar Porphyry.	26561	396.0	399.0	3.0	TR	nil	000	2
		Returning to the purplish-red host. Slightly more veined and altered locally	26562	399.0	400.0	1.0	TR	nil	.000	nil
		with hematite in this area. Locally guite blocky and crushed over several	99999	400.0	401.0	1.0	LC	.000	.000	0
		inch wide zones. Some grinding is present. Locally dusted with epidote.	26563	401.0	403.4	2.4	TR	nil	.000	nil
			26564	424.0	426.9	2.9	TR	nil	.000	nil
		166.0 167.7 Mafic Intrusive.	26565	426.9	428.6	1.7	0.5%	nil	.000	5
		A dark green to more olive-toned section with a slightly greater amount of	26566	428.6	431.4	2.8	0.5%	nil	.000	nil
		fine pyrite in parts of the matrix and in a few tiny qtz stringers. The unit	26567	431.4	433.1	1.7	0.5%	nil	.000	nil
		opens along a sharp contact at approx 30 DTCA into a dark green, finely	26568	433.1	435.4	2.3	TR	nil	.000	nil
		speckled zone. Tiny dark green amphiboles? are growing on a very fine	26569	435.4	436.4	1.0	TR	nil	.000	nil
		grained slightly lighter coloured matrix. This part of the unit is	26570	436.4	439.2	2.8	TR	nil	.000	nil
		essentially non-magnetic and contains negligible sulphide or veining. At	26571	439.2	441.4	2.2	0.5%	nil	.000	nil
		166.9 a sharp, nearly 90 degree (?intrusive) contact occurs; the remainder	26572	441.4	443.8	2.4	0.5%	nil	.000	nil
		of the interval is a much finer grained, olive green material with a weak	26573	443.8	446.0	2.2	0.5%	nil	.000	nil
		hematitic wash developing in the matrix. This latter area is hard, slightly	26574	446.0	447.8	1.8	1.5%	nil	.000	3
		magnetic and weakly mineralised with very fine disseminated matrix bound and	99999	447.8	448.3	.5	LC	.000	.000	0
		slightly coarser veinlet pyrite. Fine epidote and a slightly greater	26575	448.3	448.8	.5	1.0%	nil	.000	nil
		concentration of calcite are also present. The unit concludes along a sharp (ground) high angle contact.	26576	448.8	449.7	.9	1.0%	nil	.000	nil
		167.7 194.0 Feldspar Porphyry. A slightly more altered section with a cloudy and slightly greenish/dusty aspect due to an increasing amount of fine epidote and carbonate alteration. Quite broken and crushed from 181 to 183 approx. Parts of the section are broken along weakly mineralised joints which lie parallel to the CA.								

Slightly more hematite associated with fine fractures in parts of this

joints.

.

section. Slightly more fine pyrite is visible, mostly along fractures and

			Drill Hole AN99-17 Page:							
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	Ŷ	OZ/T	OZ/T	PPB

90.0 90.1 Ms 0.68. 98.5 98.6 Ms 3.72. 118.0 118.1 Ms 10.1. 133.0 133.1 Ms 4.95. 141.0 141.1 Ms 0.37. 157.6 157.7 Ms 7.40. 167.0 167.1 Ms 7.05. 180.0 180.1 Ms 0.23.

194.0 195.0 Mafic Intrusive.

A very fine-grained, dark green mafic dyke. Sharp, blocky/broken contacts at 45/35 DTCA. Flecked with very fine, widely scattered 1 mm biotite grains. A chloritic and non-magnetic unit with a very few ghostly angular xenoliths which resemble the host rock but which are slightly more amphibolitic. Devoid of sulphide mineralisation and veining. Weakly calcitic in the matrix and very slightly hematised away from the upper contact.

195.0 222.3 Feldspar Porphyry.

Returning to the host intrusive. A purple to slightly reddish section with slightly cloudy to muddy zones where dusty epidote/carbonate and stringer introduced hematite have been added to the system. Slightly more hairline fracturing is present; epidote, specular hematite and carbonate (calcite) are the main alteration products present. Weakly magnetic. Blocky throughout with some finely broken areas- ex 205 to 208.

222.3 226.1 Mafic Intrusive.

A dark grey-green phase, finely mottled to finely felted in the groundmass. A chlorite-rich, weakly calcitic mafic intrusive or possibly a narrow basaltic dykelet. Opening along a sharp, 5 to 10 degree contact; slightly speckled with fine amphibole for about 2 feet and then becoming more uniform. Slightly darker in colour with a fine amphibole overprint appraoching the lower contact. Sharp, 75 degree lower contact. Very weakly foliated in the lowermost parts of the unit at approx 40 DTCA. Weakly mineralised with disseminated pyrite. Very little veining is present; a few tiny stringers of calcite and or qtz xcut the unit at moderate angles.

226.1 279.7 Feldspar Porphyry.

Resuming in the host phase. Variably grey to purplish to slightly greenish locally. Fresh to slightly cloudy with scattered very fine carb and epidote stringers. Continuing blocky with some finely crushed zones. Slightly more scrappy pale white qtz veining is developing; both fine pyrite and chalcopyrite are present in one small, high angle example at 227.3. A very low angle qtz stringer at approx 236 carries minor brassy pyrite. The rocks become slightly more hematised approaching 279. Broken at the lower contact. 253.8 255.0 Broken Blocky Core. 264.3 268.0 Broken Blocky Core.

206.5 206.6 Ms 11.4. 224.0 224.1 Ms 0.83. 236.3 236.4 Ms 0.38.

		Drill Hole AN99-17			Pa	of 32		
Geology	Sample No.	From (ft)	TO (ft)	Len (ft)	PY *	AU OZ/T	AU1 OZ/T	AU2

265.6 265.7 Ms 6.44. 279.0 279.1 Ms 6.07.

From

(ft)

то

(ft)

279.7 288.9 Amphibolitic.

Opening into a very dark grey-green, weakly speckled to mottled zone of amphibolitic material. Sharply bounded along high angle? broken up contacts. A calcitic area with 2-3 mm euhedral carb metacrysts and pervasive alteration in the matrix. Overprinted with very fine amphibole and weakly hematised in the groundmass. Weakly foliated in part at approx 30 degrees. Fine wispy, dark green chlorite is growing on top of the matrix and beginning to accentuate the fabric. Parts of this interval appear to be highly altered host, while other areas may have been a mafic dyke of unknown primary composition. The carbonate and amphibole have effectively destroyed most of the primary mineralogy and textures in much of the section. Not magnetic. Weakly mineralised with fine matrix bound particularly disseminated pyrite. Veining is absent. Blocky and broken with a ground zone at 285.4.

283.3 285.4 Lost core.

288.9 292.0 Quartz Feldspar Porphyry.

Sharp contact into a pale pink, coarsely speckled unit, which resembles some of the aplites logged in the McBean holes. The upper contact is lying at a very low core angle whereas the trailing boundary is occupied by a 3-4 inch thick pale milky qtz vein. The vein concludes along a 60 degree contact. A fairly fresh, blocky intrusive, which consists of subhedral to rounded pale milky feldspars (K feldspar?) 2-4 mm across, and anhedral, slightly cloudy qtz grains in the 2-5 mm size range. These components are barely supported in a pale flesh toned, aphanitic groundmass. Very few mafics are present; small flecks and plates of dark green chlorite (some after amphibole?) are interstitial to the other components. The rocks are very hard and non-magnetic. Traces of very fine pyrite are sprinkled throughout the interval. The trailing qtz vein is essentially unmineralised and carries a few small wallrock rafts. Slightly calcitic in fine qtz-carb fractures.

292.0 295.3 Feldspar Porphyry.

A short section of reddish brown (hematised) host rock with a slightly cloudy/muddy aspect. Weakly silicified and slightly more strongly mineralised with very fine diss pyrite. The rocks are xcut by a crude set of 30-40 degree qtz-calcite-chlorite filled fractures, the largest of which carry anhedral, spotty 1-2 mm pyrite crystals. Becoming redder and more hematitic towards the lower contact. Bounded at 15 degrees along an intrusive contact a 295.3.

295.3 302.0 Mafic Intrusive.

Sharp contact into a dark green, fine grained and homogeneous intrusive with a very subtle dark green speckling. Fine angular amphiboles and small plates of biotite are barely visible in the groundmass. These are supported in a finer mafic matrix which has now been carbonated/hematised and dusted with fine gritty epidote. Magnetic in the lower half or so of the unit. Slightly more strongly carbonated/hematised in a few areas- pervasive calcite

			1	Drill Ho	le AN99	-17	Pa	ige: 6	of 32	
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		NO.	(ft)	(ft)	(ft)	8	07/T	0Z/T	PPB

alteration in these areas reacts well to cold HCl. Sparsely veined with a few carb threads. Very little mineralisation is developed; a bit of dissemianted pyrite becomes apparent in the more strongly hematised/carbonated zones. Sharp lower contact at approx 15-20 degrees to CA.

302.0 323.5 Feldspar Porphyry.

Resuming in the host intrusive. Slightly reddened in the upper few feet, and then becoming more typically greyish. Slightly clouded in part and cut by low angle chloritic fractures. Blocky with a few crushed up areas. Locally more carbonated and epidote-rich which obliterates the feldspar phenos. Continuing weakly magnetic and calcitic in fine fractures. Weakly mineralised with traces of diss pyrite in the groundmass.

323.5 324.4 Mafic Intrusive.

Contact into a dark grass green, weakly speckled section. Chloritic and littered with 1-2 mm needles and plates of amphibole. Weakly calcitic in a pale pinkish, low angle stringer. Negligible sulphide is present. Non magnetic and bounded by high angle, fairly sharp contacts.

324.4 336.7 Feldspar Porphyry.

Continuing in the host. Pale purple-red to more greyish with a narrow section of more intense silicification and hematite addition at about 326. Blocky and broken with some ground and broken areas. Slightly more silica/albite in the system here.

336.7 340.4 Mafic Intrusive.

Sharp contact at approx 30 degrees into a dark green, fine grained intrusive. Slightly offset and very weakly brecciated at the upper contact. A homogeneous, very finely felted groundmass with minimal variations in texture is characteristic. The unit is cut by a few scrappy calcite stringers, and reacts in both the groundmass and stringers to cold HCl. Negligible sulphide. Sharp basal contact at 35 DTCA.

284.0 284.1 Ms 0.48. 291.0 291.1 Ms 1.22. 295.0 295.1 Ms 0.80. 300.0 300.1 Ms 11.0. 305.0 305.1 Ms 8.74. 314.8 314.9 Ms 10.1. 324.0 324.1 Ms 0.49. 333.0 333.1 Ms 8.98. 338.0 338.1 Ms 0.39.

340.4 371.1 Feldspar Porphyry.

Continuing in the host porphyry. Predominantly purplish to slightly greyish in colour and quite broken up for much of the interval. A few muddy, more strongly altered (silica and hematite) zones are developed here and there. These are typically 3 to 6 inches wide and tend to have few or no phenocrysts present. One example at around 349 is associated with a slightly pitted/weathered chloritic/epidotic shear, lying at 20 DTCA. Slightly more

				Drill Hole AN99-17				Page: 7 of 32			
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2	
(ft)	(ft)		No.	(ft)	(ft)	(ft)	¥	OZ/T	OZ/T	PPE	

....

magnetic here than in areas logged above. Calcitic in fine threads and locally in the matrix. Little significant veining or sulphide mineralisation.

371.1 372.0 Amphibolitic.

Contact along a sharp, 30 degree contact into a black coloured, medium grained interval of problematic origin. The interval consists of a fine aggregate of black amphibole needles and small plates intergrown with pale pink to white interstitial calcite. Possibly a blasted mafic dyke? Primary textures and mineralogy are lacking. Slightly mineralised with some very fine diss pyrite in the matrix. No veining per se. Sharp lower contact at approx 50 DTCA. This feature appears to have contributed to strong alteration in the host unit- for 12-18 inches beyond the contacts, the host is slightly muddy and lacking in phenos and it has an elevated amount of silica and hematite.

372.0 426.9 Feldspar Porphyry.

Resuming in the pale purple toned host rock. A section of fairly fresh porphyry with a slightly increasing amount of fine mafic flecks and tiny rafts; these are generally chloritic/calcitic. A slightly better cored interval with a broken/crushed section at approx 406 to 413. Weakly calcitic in fine carb filled fractures. Weakly mineralised with small amounts of diss pyrite in the matrix. Weakly magnetic throughout.

426.9 446.0 Feldspar Porphyry.

A more altered and cloudy section of host rock with less conspicuous feldspar phenos. Weakly hematised and epidotised in part. Cut by a weak set of 30 degree carb threads and stringers with small amounts of epidote and traces of pyrite. Weakly to non-magnetic in the more altered areas. Weakly pyritic in the matrix. Still weakly calcitic.

446.0 448.8 Cherty Exhalite.

A dark purplish coloured, cherty section with a wispy/patchy carbonate overprint. Possibly a small cherty exhalite zone which was intruded by the edge of the FP. The carbonate alteration/stringers lie at approx 40 DTCA; this appears to be roughly concordant with a subtle laminar texture developed in the matrix. Strongly magnetic with a few narrow magnetite-rich horizons. Fairly well mineralised with diss and fine spotty pyrite; some of the sulphide is aligned with the laminar structure/carbonate overprint. High angle? upper contact and sharp, 45 degree lower contact.

448.8 449.7 Feldspar Porphyry.

A short interval of the host porphyry. Riddled with moderate and high angle calcite threads. Weakly mineralised with diss pyrite. Sharp, scalloped to convoluted lower contact at approx 50 degrees.

 354.3
 354.4
 Ms
 9.27.

 359.0
 359.1
 Ms
 7.57.

 371.5
 371.6
 Ms
 1.77.

 373.0
 373.1
 Ms
 0.16.

 383.7
 383.8
 Ms
 9.58.

 403.0
 403.1
 Ms
 7.88.

			Drill Hole AN99-17 Pag								
From	To	Geology	Sample	From	TO	Len	PY	AU	AU1	AU2	
(ft)	(ft)		No.	(ft)	(ft)	(ft)	%	OZ/T	OZ/T	PPE	

423.1 423.2 Ms 5.61. 438.0 438.1 Ms 0.45. 446.0 446.1 Ms 68.3. 449.0 449.1 Ms 9.04.

449.7 777.1 BASALT

Contact into a system of dark grass green to more pale pistachio green coloured mafic flows and intercalated cherty exhalite/interflow horizons. Xcutting these primary phases are a variety of mafic dykes. The volcanic rocks are probably iron tholeiites and they exhibit a number of well developed flowy textures; frothy and slightly variolitic tops, amygdaloidal and weakly developed flow breccias are relatively common. Less typical are fine hvaloclastite layers and definitive pillow margins, although there is some textural evidence for small pillows in a few spots. Initially a calcitic system where modest amounts of fine scrappy carbonate stringers and threads cut the unit in a random fashion. Wispy and dusty epidote occurs in some of the frothy top materials. Variably magnetic, but quite strongly so where evident. Weakly mineralised with disseminated and anhedral spotty pyrite; trace amounts are sprinkled throughout the system with slightly greater concentrations in the exhalite units and in some of the more porcus and frothy/vesicular/variolitic areas. A sequence of relatively tops undeformed thin flows and associated interflow materials. Some of the dykes have weak foliations developing; presumably these rocks were relatively more ductile than the host basalts and have taken up much of stress in the system. More details follow in the breakout.

449.7 459.1 Basalt.

A dark grey-green section with weak amphibolitic alteration developed away from the contact above. Medium to medium-fine grained with a felted texture in the matrix. Moderately magnetic and essentially massive. Riddled with fine scrappy carb stringers at moderate to high core angles. Well mineralised with fine cubic/spotty pyrite against the dyke contact for about 2 feet. Calcitic and weakly foliated at about 45 degrees in the uppermost 12 inches of the unit.

459.1 465.0 Mafic Intrusive.

A pale grey to slightly purple toned dyke with a weakly speckled appearance and a broken/blocky aspect. A weakly porphyritic phase with a finer granular groundmass. 1-2 mm subhedral pale white feldspar phenos, slightly smaller ragged plates of amphibole and a few tiny angular mafic fragments are supported in a dirty feldspathic matrix. The groundmass is very slightly hematised and pervasively carbonated after the original feldspar components. Calcitic in the matrix and slightly mineralised with fine diss pyrite. Fine amphibole and chlorite are fogging up the matrix; more so towards the lower contact. Sharp upper contact @ 45 DTCA. Convoluted, interpenetrating lower contact. Possibly related to the FP mass above.

465.0 466.5 Basalt.

A narrow sliver of flowy/frothy basalt with a spotty/patchy amygdaloidal texture. Dark green with lighter green patches and bubbles(epidote), typically around amygs and small angular qtz-carb patches. Weakly

26577	449.7	452.6	2.9	2.0%	nil	.000	nil
26578	452.6	454.5	1.9	TR	nil	.000	nil
26579	454.5	457.0	2.5	TR	nil	.000	nil
26580	457.0	459.1	2.1	TR	nil	.000	nil
26581	459.1	462.0	2.9	TR	nil	.000	nil
26582	462.0	465.0	3.0	TR	nil	.000	nil
26583	465.0	466.5	1.5	0.5%	nil	.000	7
26584	466.5	467.7	1.2	TR	nil	.000	2
26585	467.7	470.0	2.3	0.5%	nil	.000	9
26586	470.0	472.3	2.3	0.5%	nil	.000	5
26587	472.3	475.0	2.7	0.5%	nil	.000	nil
26588	480.0	482.2	2.2	TR	nil	.000	nil
26589	482.2	484.4	2.2	0.5%	nil	.000	nil
26590	484.4	487.0	2.6	1.0%	nil	.000	nil
26591	487.0	489.1	2.1	2.5%	nil	.000	8
26592	489.1	491.6	2.5	1.0%	nil	.000	5
26593	491.6	494.4	2.8	1.5%	nil	.000	nil
26594	494.4	497.3	2.9	1.0%	nil	.000	nil
26595	497.3	500.0	2.7	1.5%	nil	.000	nil
26596	500.0	501.8	1.8	2.0%	nil	.000	nil
26597	501.8	503.5	1.7	1.5%	.001	.000	17
26598	503.5	505.0	1.5	TR	nil	.000	níl
26599	505.0	506.3	1.3	0.5%	nil	.000	nil
26600	506.3	508.0	1.7	1.5%	nil	.000	7
26601	508.0	510.0	2.0	2.0%	nil	.000	3
26602	510.0	512.3	2.3	0.5%	nil	.000	nil
26603	512.3	515.0	2.7	1.0%	nil	.000	nil
26604	515.0	517.8	2.8	1.0%	nil	.000	nil
26605	517.8	521.0	3.2	0.5%	nil	.000	nil
26606	521.0	523.5	2.5	1.5%	nil	.000	nil
26607	523.5	525.1	1.6	0.5%	nil	.000	nil
26608	525.1	526.9	1.8	1.0%	nil	.000	nil
26609	526.9	530.0	3.1	0.5%	nil	.000	10
26610	530.0	533.0	3.0	0.5%	.002	.000	47
26611	533.0	534.7	1.7	1.0%	nil	.000	nil
26612	534.7	536.4	1.7	2.0%	nil	.000	nil
26613	536.4	537.3	. 9	ŤR	nil	.000	12
26614	537.3	538.3	1.0	TR	.008	.000	254
26615	538.3	539.1	. 8	TR	.002	.000	82
26616	539.1	540.9	1.8	0.5%	nil	.000	5
26617	540.9	543.4	2.5	0.5%	nil	.000	5
26618	543.4	545.3	1.9	1.0%	nil	.000	nil
26619	545.3	547.3	2.0	TR	nil	.000	2
26620	547.3	549.1	1.8	0.5%	.002	.000	62
26621	549.1	550.9	1.8	0.5%	nil	.000	2

.

					Drill Hole AN99-17			Page: 9 of 32		
From (ft)	To (ft)	Geology	Sample No.	From (ft)	To (ft)	Len (ft)	PY %	AU OZ/T	AU1 OZ/T	AU2 PPB
		mineralised with fine spotty pyrite. Slightly foliated/layered against the	26622	550.9	553.0	2.1	TR	nil	.000	nil
		underrying dyke. Sciongry magnetic throughout.	20023	555.0	555.5	2.5	TD	.001	.000	15
		AGE 5 AG7 7 Mafic Intrusive	26625	557 7	560 0	2.2	0 5%	001	.000	20
		Another narrow weakly speckled, grevish coloured dyke with some	26625	560 0	561.8	1 8	90.00 TR	nil	000	15
		similarities to the rocks at 459.1. This example has sharp contacts at 30/30	26627	561.8	563.3	1.5	TR	nil	.000	nil
		DTCA and a central core region which resembles the preceding mafic dyke. The	26628	615.0	618.0	3.0	TR	nil	.000	nil
		margins are strongly altered and have a pale green finer grained, bleached	26629	618.0	621.0	3.0	1-2	.001	.000	19
		appearance. These areas are also lightly speckled with very fine amphibole	26630	621.0	624.3	3.3	TR-1	nil	.000	9
		(fresher) and tend to be slightly harder than the darker core area. The core	26631	624.3	625.9	1.6	TR-1	nil	.000	2
		has a more pervasive amphibole overprint as opposed to the margins.	26632	625.9	627.7	1.8	TR	nil	.000	3
		Essentially non-magnetic and weakly mineralised with very fine diss pyrite.	26633	627.7	629.0	1.3	NIL	nil	.000	nil
		The dyke is weakly calcitic throughout the matrix and in a few small carb	26634	629.0	632.0	3.0	TR	nil	.000	nil
		threads.	26635	632.0	634.2	2.2	TR-1	.001	.000	43
			26636	634.2	636.0	1.8	TR-1	nil	.000	nil
		467.7 487.0 Basalt.	26637	636.0	637.8	1.8	2 - 3	nil	.000	14
		Opening into a dark green fairly fine grained and massive section with a	26638	637.8	639.7	1.9	TR	nil	.000	nil
		flowy/frothy top developing below approx 482 feet(tops may be downhole in	26639	639.7	643.0	3.3	1-2	nil	.000	nil
		this area). Very slightly veined with small scrappy calcite stringers in the	26640	643.0	646.0	3.0	TR-1	nil	.000	nil
		more massive zone. Developing into a weak flow breccia and altered with pale	26641	646.0	648.7	2.7	TR	nil	.000	1
		green epidote in the flowy area. Fine amygs and variolites are common in a	26642	648.7	649.7	1.0	TR-1	nil	.000	nil
		finely laminated, flowy, slightly ropey top zone. Variably magnetic with	26643	649.7	653.0	3.3	TR-1	nil	.000	2
		strong responses at the boltom and top of the sequence. Weakly mineralised	20044	653.0	656.0	3.0	TR	nil	.000	/ nil
		with disk and spotty/fracture-fifting pyfice, especially in the flowy top	20045	656.0	659.0	3.0	1 K 77 D	1111 nil	.000	nil
		area. Ground Tower contract, probably a might angle incertace.	20040	653.0	664 0	2.4	1_2	nil	.000	nil
		487 0 4 0 491 6 Cherty Exhalite martz	26648	664 0	667 0	3.0	1-2 TR	nil	.000	nil
		A chaotic coarsely brecciated zone of nale grey, patchy gtz, a few basaltic	26649	703 0	706 0	3.0	TR	nil	000	nil
		bits and sub-angular fragments and rafts of a dark purple grey cherty	26650	706.0	709.0	3.0	2-3	nil	.000	
		material. Ouite strongly magnetic in the exhalite component. Calcitic in	26651	709.0	712.0	3.0	1-2	nil	.000	nil
		fine fractures and around some of the 'fragments'. Crudely layered/foliated	26652	712.0	715.0	3.0	TR-1	nil	.000	nil
		at approx 40 DTCA. Well mineralised in the upper half of the unit with	26653	715.0	718.0	3.0	3 - 5	nil	.000	10
		disseminated, dusty and fine anhedral pyrite. Xcut by very fine calcitic and	26654	718.0	721.0	3.0	TR - 1	nil	.000	2
		epidote-bearing threads. Becoming more qtz-rich below 490, with less	26655	721.0	724.0	3.0	TR	nil	.000	nil
		sulphide. Fairly sharp lower contact at approx 55 DTCA.	26656	724.0	725.6	1.6	TR - 1	nil	.000	2
			26657	725.6	727.0	1.4	5-7	nil	.000	3
		491.6 503.5 Basalt.	26658	727.0	728.6	1.6	NIL	nil	.000	nil
		Returning to a dark green to grey to lime green, lightly spotted interval of	26659	728.6	731.0	2.4	TR-1	nil	.000	2
		flowy basalt. An area of amygdaloidal and locally frothy/shardy flow top	26660	731.0	734.0	3.0	TR	nil	.000	nil
		material. The upper 3 feet is strongly altered with fine epidote and a few	26661	745.0	748.4	3.4	TR	nil	.000	2
		scrappy/gritty carbonate stringers. Below this the rocks become greyer and	26662	748.4	751.0	2.6	TR-1	nil	.000	nil
		fine grained; 2-3 mm darker grey amygs? and small glassy shards are	26663	751.0	754.0	3.0	TR	.001	.000	31
		sprinkled throughout much of the remainder of the interval, along with	26664	754.0	757.0	3.0	TR	.004	.000	132
		sporty and fine integral fracture firing pyrite, many of the	20005	757.0	760.0	3.0	TK TD	nil	.000	nil
		deformation plane at about 30.35 DTCA Fine parches of enidote are developed	20000	763.0	765.0	3.0	TP_1	nil	.000	
		around very fine fractures or patches of grevish carbonate Continuing	26668	765.0	769 0	3.0	TR-1	nil	.000	15
		calcitic and generally strongly magnetic in the interval. Sharp lower	26669	769.0	771.5	2.5	TR-1	.003	.000	117
		contact at 60 DTCA.	26670	771.5	774.0	2.5	2-3	.025	.000	857
			26671	774.0	775.6	1.6	1-2	.003	.000	117
		503.5 506.3 Carbonate-quartz veining.	26672	775.6	777.1	1.5	5-8	.006	.000	205

.

То			Pa	Page: 10 of 32					
	Geology	Sample	From	то	Len	PY	AU	AU1	AU2
(ft)		No.	(ft)	(ft.)	(ft)	*	07/T	07/T	PPB

A pale grey white, gritty/granular zone of predominantly calcite enclosing small rafts of basalt and cm scale plates of slightly paler angular qtz. Slightly pink in part and not especially well mineralised in the carbonate proper. Instead, small amounts of pyrite are found in and around the rock fragments. Weakly epidotitic in part. A recrystallised tensional zone with a sharp, 35-40 degree lower contact.

506.3 508.0 Cherty Exhalite.

A very dark grey to earthy black toned section of brecciated and crudely laminated chert. Strongly magnetic and riddled with pale grey stringers and threads of calcite; these lie at roughly 40-45 DTCA and promote the 'laminated texture'. Small amounts of wispy sericite and more greenish epidote are found in the matrix and around the carbonate stringers. Fairly well mineralised with diss and subhedral pyrite; some of this is slightly deformed and appears to mimic the carb stringers. Sharp lower contact at 40-45 DTCA.

508.0 526.9 Basalt.

From (ft)

Continuing in dark green, fine grained flowy to semi-massive basalt. Weakly speckled and altered with cloudy carbonate and epidote in the interval down to 523. Slightly more massive to subtly brecciated below 523. Small darker amygs? shards or possibly variolites are scattered through the upper portion; as in the overlying examples a weak deformation fabric is visible lying at about 40 DTCA. Some stretching/elongation/flattening of the amygs is evident. Not well veined except for an irregular scrappy/angular zone of infilling carbonate at 524 to 526. Not very magnetic down to 518 and then becoming strongly so for the rest of the interval. Weakly mineralised with spotty, patchy and cubic pyrite to 3 mm across. Tops may be downhole here. Contains small bluish qtz eyes?? ex at approx 515. Sharp lower contact at approx 45 DTCA.

526.9 537.3 Cherty Exhalite Oxide Iron Formation.

Entering at very dark grey to slightly purple toned section of predominantly massive to subtly layered chert and subordinate pale grey patchy and linear veinlike qtz-carbonate. The interval is locally weakly hematised and can be roughly divided into crude layers or bands, some of which are cherty and others which are strongly magnetic and rich in magnetite and possibly a fine mafic tuff component. These layers lie at approx 30 DTCA and are sub-cm to many cm's thick.

A chloritic/epidote/sericitic lens or layer about 1 inch thick rolls through the interval at about 531 to 532.5- this feature sits at about 10 DTCA and might represent a strong shear. Below 533 is a very low angle, pale grey qtz-carb vein? which similarly runs along the core until about 536. A well mineralised section in part; diss and spotty/patchy and streaky or cubic pyrite up to 5 mm across is scattered throughout the interval. Slightly greater concentrations lie near the flat veining noted above. Calcitic in threads and heavier veining throughout the unit. A crude oxide facies iron formation of sorts with an irregular, deformed character. The unit is invaded by pale grey qtz towards 537; the last 7 inches of the interval is weakly clouded with epidote and carbonate and is probably basalt. Sharp lower contact at 50 DTCA.

То			9-17	Page: 11 of 32					
	Geology	Sample	From	То	Len	РҮ	AU	AU1	AU2
(ft)		No.	(ft)	(ft)	(ft)	8	OZ/T	OZ/T	PPB

537.3 538.3 Mafic Intrusive.

A narrow, dark green, finely mottled intrusive, bounded by very sharp contacts at 50/60 DTCA. A homogeneous, fine grained dyke with a felted matrix texture. Essentialy non-magnetic and lacking in veining and sulphides. Consists of a fine intergrown assemblage of chlorite, carbonate and slightly sharper needles of amphibole. Also contains small plates of biotite.

538.3 545.3 Basalt.

From (ft)

Returning to a section of slightly speckled to streaky, flowy/amygdaloidal basalt. Invaded/brecciated by several pale grey siliceous and cherty tongues which may be related to nearby slightly larger cherty zones. Continuing calcitic and generally strongly magnetic. An amphibolitic flow bottom may be present at 539.7; it is sharply bounded against an underlying pale cherty layer at 55 DTCA. Tops may be downhole at this point. Weakly cooked and epidotised against the overlying dyke. Moderately mineralised with diss and fine spotty pyrite, mostly in the matrix. A crude alignment of the amygs occurs at about 40-50 DTCA. Irregular, sharp basal contact at approx 30 DTCA.

545.3 550.9 Cherty Exhalite.

Opening into another dark grey, brecciated and chaotic zone of mostly chert with a small amount of strongly magnetic material. Textures, veining and alteration seen in this area are very similar to that seen in the preceding units. This example has more of the cloudy, wipsy and thread-like carbonate seen at 506 for example and generally less sulphide. Portions of the unit are slightly redder(hematised), while other areas have subtle layers of chert and darker magnetite-rich material. One area has a very fine laminated structure suggestive of primary layering; this sits at about 548. The layering lies at 25-30 DTCA. The unit concludes along a sharp, 25 degree lower contact.

550.9 561.8 Basalt.

Continuing in a dark grey-green, fine grained and mostly massive host basalt. Slightly coarser grained in part with minimal veining or strong sulphide mineralisation. A narrow zone of weak flow breccia/variolitic flow top sits at approx 559 at 40 DTCA. Weakly magnetic and calcitic in a few tiny stringers and patches of carbonate alteration. Very finely speckled in part- these mm sized sub-angular features might be small glassy shards or possibly very small variolites? Sharp lower contact at 20 DTCA.

561.8 564.5 Mafic Intrusive.

Low angle, slightly undulating contact into a pale grey, finely speckled mafic intrusive. Similar to dykes logged in other McBean and Anoki holes with a characteristic microporphyritic texture. This dyke consists of a coarsely felted matrix of interwoven pale green chlorite and carbonate supporting numerous acicular amphiboles and scattered 1-2 mm plates of biotite. The latter phases are fairly fresh and contrast with the paler matrix. The dyke is massive and homogeneous with virtually no fractures or other veining. Sulphides are similarly lacking. Slightly coarser biotite characterises the center of the dyke. Sharp lower contact at approx 10

From To				Pa						
	То	Geology	Sample	From	то	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPE

degrees. Some alignment of fine amphibole parallel to the contact is visible.

564.5 569.9 Basalt.

A short, fairly anonymous section of basalt. Fine grained with a slightly amphibolitic zone developing at around 568- a sub-flow boundary? Xcut by a few high angle carb stringers. Barely magnetic using the pen magnet. Calcitic in stringers and to some extent in the matrix. Very little sulphide is present. Sharp lower contact at 25 DTCA.

569.9 573.9 Mafic Intrusive.

Contact into a medium grey toned dyke with a weak salt and pepper texture. Medium-fine grained and massive with a very few high angle carb threads. This small intrusive may be related to the dyke at 561; it has a pale grey-green matrix, but consists of a crowded aggregate of fine mafics and tiny pale white feldspars barely supported in a slightly muddy feldspathic groundmass. Acicular and lath-like amphiboles and subhedral feldspar grains range up to 3 mm across. Fairly homogeneous with a very few scattered fine pyrite grains. Becoming slightly more rich in mafics moving downhole. Weakly calcitic in the carbonate threads. Non magnetic. High angle? lower contact.

573.9 585.5 Basalt.

Returning to the host basalt. A fairly massive to slightly speckled interval with some minor patchy carbonate/epidote alteration. Very fine quench texture/skinny ropey flow texture is present at about 582; this lies at approx 30 DTCA. Calcitic in the patchy carb alteration and in the few scrappy carbontae stringers scattered throughout the unit. Weakly mineralised with fine pyrite; this typically occurs in or around carb stringers or patchy alteration. Darker toned and presumably more amphibolitic at and below the upper contact. Bounded at 585 along a sharp, roughly 60 degree contact.

585.5 588.4 Amphibolitic.

Opening into a dirty beige, coarsely speckled to mottled section of moderately amphibolitised dyke? rock. This interval consists of a very fine aggregate of carbonate grains and interstitial matted and slightly foliated amphibole. Possibly cataclastic at a microscopic scale. The weak fabric lies at 50-60 degrees and becomes more definitive down to about 588 where it rolls flat and is then truncated by a high angle carb stringer. The protolith here is unknown; all primary texture and mineralogy appears to have been destroyed. The rocks are xcut by a series of 50-60 degree carb stringers which in turn are cut by a slightly later conjugate set of pale qtz stringers. Neither of these systems carry any significant sulphide. Ankerite has replaced calcite in this interval. A weakly mineralised section with some spotty pyrite in and around veining low in the section- the sulphide is generally confined to the matrix however. Sharp lower contact at approx 70 degrees.

452.6 452.7 Ms 18.4. 462.5 462.6 Ms 3.11. 467.0 467.1 Ms 0.23. 472.3 472.4 Ms 5.33.

			Drill Hole AN99-17 Page:							
From	To	Geology	Sample	From	To	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	%	OZ/T	OZ/T	PPB

482.1 482.2 Ms 3.35. 490.0 490.1 Ms 0.55. 502.0 502.1 Ms 82.5. 505.0 505.1 Ms 0.67. 509.0 509.1 Ms 37.6. 522.0 522.1 Ms 69.8. 531.0 531.1 Ms 37.0. 537.0 537.1 Ms 0.20. 540.0 540.1 Ms 98.2. 550.0 550.1 Ms 14.1. 554.1 554.2 Ms 2.83. 563.0 563.1 Ms 0.37. 568.0 568.1 Ms 0.88. 572.0 572.1 Ms 0.45. 580.0 580.1 Ms 3.88. 587.0 587.1 Ms 0.41. 592.0 592.1 Ms 1.05. 600.0 600.1 Ms 1.93. 610.0 610.1 Ms 0.61. 619.9 620.0 Ms 1.65. 625.0 625.1 Ms 1.41.

588.4 627.7 Basalt.

Return to dull to dark green and grey green basaltic flows with epidote and to a lesser extent calcite altered patches where chlorite to carbonate filled amygdules and/or variolites are most evident. Carb alteration is normally calcite in late fractures with negligible pervasive calcite except in the more bleached sections. The rock is weakly to moderately magnetic and is sparsely mineralized with pyrite that similarly tends to more abundant in the epidote altered +/- calcitic sections - up to 1-2% locally in fine grained to coarser recrystallized blebs. Near the base of this section there is a more siliceous to veined section that is finely fractured with calcite from 624.3 to 625.9 at 44/42 degrees - lower contact irregular. This section is a potential flow top - tops appear to be down the hole.

627.7 629.0 Amphibolitic Mafic Intrusive.

Contact into another of the dirty amphibolitic sections that are ankeritic rather than calcitic, and, unlike most of the package is nonmagnetic. The rock is a dark grey brown colour and is weakly foliated at the upper contact at 45 to 55 degrees. It varies from coarsely intergrown carbonate and amphibole to much finer grained and flecked with amphibole much like some mi's. The section contains about 15% quartz-ankerite veining and is essentially unmineralized. Contacts are at 47/71 degrees.

628.0 628.1 Ms 0.01.

629.0 661.4 Basalt.

Continue in a section of basaltic flows as described above for the most part. Here, the package includes a variety of narrow cherty interflow to cherty flow tops amongst mid to dark green and grey green basaltic flows with a local patchy development of epidote +/- calcite alteration where the

			Drill Hole AN99-17 Page: 14 c							
From	То	Geology	Sample	From	то	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

better defined amygdules are also present... Similarly suggesting tops of flows. Tops would appear to be down-hole although that is not always clear. The rocks are weakly to moderately magnetic - the strength of the magnetism appearing to depend on the individual flow as opposed to having a central section that is differently magnetic than the margin. Most of the cherty flow top to interflow material is also variably magnetic from the presence of iron which tends to colour the rock a dark grey. The lower contact is gradationally more siliceous over 1.4 feet before apparently intersecting a brownish, more amphibolitic, foliated, and much more strongly magnetic flow at 661.4 at 60 degrees. Mineralization is a mix of pyrite and pyrrhotite up to 2-3% on a very local scale, with pyrrhotite being more common in the cherty sections. Veining to fracturing is minor in amount and is largely confined to late calcite fractures. The cherty sections include.

- 634.2 639.7 Cherty interval with erratic patches of chert to 637.8 where the most prominent section of chert exists from 637.8 to 639.7 at 35/45 degrees. Outside upper contact at 28 degrees.
- 648.7 649.7 Cherty interval at 47/44 degrees this is the only other prominent cherty section in this package aside from some accessory silicification from 660.0 to 661.4 at 24/60 degrees with weak amphibolitization at the very base of this area.

630.0 630.1 Ms 6.01. 639.0 639.1 Ms 0.01. 642.8 642.9 Ms 32.4 - with pyrrhotite. 649.4 649.5 Ms 16.4. 656.0 656.1 Ms 1.31. 659.9 660.0 Ms 0.57. 662.0 662.1 Ms 108.0.

661.4 727.0 Basalt.

Continue in the sequence of basaltic rocks as previous, varying from dark green to dark grey green in colour with erratic sections where chlorite to calcite-filled amygdules and more rarely variolites are common. As noted before accessory epidote and calcite alteration tend to accompany the patches where amygdules are better developed - i.e. Possible flow margin areas, although tops are unclear. The rocks also continue to be variably magnetic from weak to strong and pyrite mineralization tends to focus in the more calcite-epidote altered sections ranging up to 5-7% on a very local scale as very fine grained to coarser recrystallized blebs and fracture-parallel streaks. Silicification is minor here although there are some greyer siliceous patches also suggestive of tops. The lower contact is along a siliceous, strongly magnetic flow top from 725.6 to 727.0 at 50/40 degrees with 5-7% accessory pyrite.

 669.0
 669.1
 Ms
 54.6.

 677.9
 678.0
 Ms
 1.38.

 688.9
 689.0
 Ms
 62.8.

 698.9
 699.0
 Ms
 1.00.

 708.0
 708.1
 Ms
 12.6.

Drill	Hole	AN99-17	Page :	15 of	32

Geology

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

 718.0
 718.1
 Ms
 69.3.

 724.0
 724.1
 Ms
 37.8.

 726.4
 726.5
 Ms
 751.0.

 728.0
 728.1
 Ms
 2.67.

 734.0
 734.1
 Ms
 21.3.

727.0 728.6 Carbonated Ultramafics.

Contact into a very narrow section of ultramafic that, unlike the adjacent basaltic rocks, is ankeritic and nonmagnetic. The rock is foliated at 23 to 40 degrees to the core axis, is weakly fractured with ankerite-quartz stringers and is unmineralized. Due to the alteration with chlorite, ankerite and amphibole the original protolith is certainly not pristine but the ultramafic character is relatively clear. Contacts are at 40/38 degrees.

728.6 777.1 Basalt.

Return to the basaltic package of rocks as seen above the narrow unit of ultramafic with patchy bleached and altered sections (as tops ?) where amygdules are best developed. This represents the basal package of the basaltic suite here and the alteration begins to vary at 748.4 where there is a local switch from calcite to ankerite. Between 748.4 and 769.5, the rocks are alternately bleached and ankeritic to paler grey green and beige tones; and, darker green to grey green and calcitic with variable epidote alteration. Below 769.5, the rocks are all ankeritic leading up to the lower contact. The lower contact is marked by the start of a grey siliceous flow at 771.5 at 57 degrees which becomes more highly fractured and brecciated with cherty material (a ropey flow top ?) after 775.6. The lower contact is at 35 degrees, accompanied by some accessory veining and ankerite +/- silica flooding plus 5-8% pyrite in blebs and streaks. There is accessory hematite in the basal flow unit as well as yellowish to beige sericite alteration.

745.0 745.1 Ms 68.8. 748.5 748.6 Ms 35.3. 751.0 751.1 Ms 26.6. 758.0 758.1 Ms 34.9 calcitic. 769.0 769.1 Ms 57.4 calcitic. 771.6 771.7 Ms 12.0. 775.7 775.8 Ms 17.6. 777.0 777.1 Ms 24.2.

777.1 809.9 CARBONATED ZONE CARBONATED ULTRAMAFICS

Contact into a very interesting package of carb rocks that vary from mid grey green to grey, grey beige and black in colour. The sequence is sufficiently blasted with ankerite that the original protolith is unclear. Fingerprints suggesting a dominant ultramafic protolith include traces of fuchsite very locally, and some dark grey to black foliated and amphibolitic rocks with an ultramafic character / chemistry. Some of the carbonated, amphibolitized ultramafic patches have reddish alteration suggestive of prior or contemporaneous incipient alteration. The more massive carb sections are essentially anonymous although some reddish traces also suggest

26673	777.1	780.0	2.9	TR	.003	.000	93
26674	780.0	783.0	3.0	TR	.001	.000	19
26675	783.0	786.0	3.0	TR	nil	.000	nil
26676	786.0	789.0	3.0	TR	nil	.000	2
26677	789.0	792.0	3.0	TR	nil	.000	5
26678	792.0	795.0	3.0	TR	nil	.000	12
26679	795.0	798.0	3.0	TR	.001	.000	45
26680	798.0	801.0	3.0	TR	nil	.000	9
26681	801.0	804.2	3.2	TR	nil	.000	10

From To (ft) (ft)

				Page: 16 of 32						
From To (ft) (ft)	Geology	Sample No.	From (ft)	To (ft)	Len (ft)	PY %	AU OZ/T	AU1 OZ/T	AU2 PPB	
		an incipient alteration component. One section from 801.0 to 804.2 at 47/40	26682	804.2	807.0	2.8	TR	nil	.000	2
		The lower contact with basalt at 809.9 is also slightly problematic with the basal 8 cms being strongly calcitic and featureless before any true basalt is seen further on. The rocks vary from relatively massive with a weakly developed foliation in the carb sections to more highly foliated at 30 to 50 degrees in the ultramafic passages. Magnetism is moderate to strong throughout and exsolved magnetite is common. The rocks are thoroughly flooded with ankerite +/- very local silica, well fractured to brecciated with ankerite +/- quartz stringers and fractures but is generally very sparsely mineralized with fine pyrite. As mentioned above the lower contact is a tentative placement at 809.9 at 50 degrees. At 795.6 there is a 3 cm hematite band at 65 degrees with a trace of chalcopyrite and some tiny ankerite fragments - nonmagnetic.	20083	807.0	609.9	2.9	1ĸ			nii
		778.0 778.1 Ms 1.08 carb.								
		783.0 783.1 Ms 16.2 carb.								
		787.7 787.8 Ms 1.38 carb ultramafic.								
		791.9 792.0 Ms 4.31 carb + incipient.								
		796.7 796.8 Ms – 950 carb with traces fuchsite.								
		802.0 802.1 Ms 11.2 basalt ??.								

809.9 990.0 BASALT

806.0 806.1 Ms 41.8 4Ui.

809.0 809.1 Ms 42.5 carb altered.

Contact into a much fresher package of basaltic rocks once the sequence is clear of the carb alteration of the overlying unit. At the outset, the rocks are moderate to strongly foliated at 55 to 60 degrees to the core axis, are magnetic, well fractured with pitted to vuggy calcite stringers subparallel to the foliation and variably reddened from calcite and hematite alteration. This style of alteration and foliation diminishes around 816.3 but starts up again from 818.6 to 820.7 as an envelope around a narrow foliated/sheared ultramafic from 819.6 to 820.4 at 50/43 degrees. Magnetism diminishes rapidly after 820.7 to 822 and the sequence then consists of relatively massive basalts.

The massive basalts that follow the foliated and magnetic section are mid to dark green and grey green in colour, very fine grained, relatively fresh, nonmagnetic and weakly altered. Little pervasive calcite or carb alteration is in evidence other than variable epidote and chlorite associated with late calcite +/- quartz stringers. Pyrite mineralization is minor but tends to cue around some of these late fractures as disseminated cubes to recrystallized blebs. There is only a very local weak development of amygdules and no clear sense of flow tops.

Circa 882.8 some crudely developed quench textures combined with much darker, foliated, magnetic potential selvage material suggest that the sequence is pillowed. This crudely developed pillowed nature continues to 925.0 where there is again a switch to more massive and, at this point, magnetic flows. The sequence breakdown within this package includes :.

26684	809.9	813.0	3.1	TR-1	nil	.000	3
26685	813.0	816.0	3.0	TR	nil	.000	3
26686	816.0	818.6	2.6	TR	nil	.000	3
26687	818.6	820.7	2.1	TR-1	nil	.000	2
26688	820.7	823.0	2.3	NIL	nil	.000	5
26689	823.0	826.0	3.0	NIL	nil	.000	3
26690	826.0	829.0	3.0	NIL	nil	.000	2
26691	900.0	903.0	3.0	NIL	nil	.000	12
26692	903.0	905.5	2.5	TR	.001	.000	26
26693	905.5	908.0	2.5	TR	nil	.000	7
26694	926.0	928.8	2.8	NIL	nil	.000	5
26695	928.8	931.0	2.2	TR	.002	.000	74
26696	931.0	933.0	2.0	TR	.006	.000	210
26697	933.0	936.0	3.0	TR	-004	.000	132
26698	969.0	971.6	2.6	NIL	nil	.000	3
26699	971.6	974.0	2.4	TR	nil	.000	nil
26700	974.0	976.2	2.2	NIL	nil	.000	12
26701	976.2	979.7	3.5	TR	.001	.000	17
26702	979.7	983.0	3.3	TR	nil	.000	3
26703	983.0	985.9	2.9	TR	nil	.000	7
26704	985.9	988.8	2.9	TR	nil	.000	nil
26705	988.8	990.0	1.2	TR	nil	.000	3

				Drill Hole AN99-17						
From	To	Geology	Sample	From	To	Len	РҮ	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

809.9 819.6 Basalt foliated.

The start of the package as described above that is foliated, fractured, calcitic and reddened from 809.9 to 816.3, and, 818.6 to 819.6 (eventually to 820.7).

819.6 820.4 Ultramafic.

The narrow, foliated, sheared ultramafic described in the opening overview.

820.4 882.8 Basalt.

A section of nonmagnetic, massive flow with some accessory reddening, calcite alteration and magnetism adjacent to the narrow sheared ultramafic unit (to 820.7). Most of this unit is not pervasively altered with calcite - only scattered late calcite fractures are present with variable chlorite and epidote alteration. Magnetic susceptibilities to this point include :.

812.0 812.1 Ms 41.2. 816.0 816.1 Ms 41.5. 818.0 818.1 Ms -960. 819.5 819.6 Ms 37.1. 820.3 820.4 Ms 0.33 Ultramafic. 820.9 821.0 Ms 38.7. 829.0 829.1 Ms 0.47. 836.0 836.1 Ms 0.41. 845.0 845.1 Ms 0.83. 857.0 857.1 Ms 0.45. 865.0 865.1 Ms 0.35. 875.0 875.1 Ms 0.28. 882.0 882.1 Ms 0.37.

882.8 925.0 Pillowed.

Contact into the pillowed basalts as described above. The sequence is represented by mid to pale green and grey green massive rocks interspersed with irregularly spaced selvage zones that are characterized by streaky dark, chlorite-altered zones with crudely developed quench textures. The pillows are essentially nonmagnetic with local amygdules at the margins while the selvage zones are dark, chlorite-altered, magnetic, and, generally at shallow angles to the core axis. Selvage zones also tend to be the sites of accessory calcite and epidote alteration, and, are better mineralized with pyrite than the more massive pillows. Veining is minor.

There is some accessory ankerite in this package between 903.0 and 905.5 associated with minor quartz-ankerite veining, traces of pyrite and some blocky to broken core from 904.9 and 905.4.

Magnetic susceptibilities tend to bear out the more magnetic selvage material as :.

884.0 884.1 Ms 1.18 weakly magnetic selvage material / contact zone. 888.0 888.1 Ms 0.29 pillow. 894.1 894.2 Ms 41.8 selvage. 902.0 902.1 Ms 0.86 pillow. 903.0 903.1 Ms -957.0 pillow. 915.0 915.1 Ms 36.9 selvage. From To (ft) (ft) Geology

Sample	From	То	Len	PY	AU	AU1	AU2
NO.	(ft)	(ft)	(ft)	¥	OZ/T	OZ/T	PPB

920.1 920.2 Ms 184.0 selvage. 924.0 924.1 Ms 0.68 pillow.

925.0 990.0 High Mag Basalt.

Contact along a weakly foliated section over a few cms at 40 degrees to the core axis into a package of massive basalt again. The contact is very subtle to some extent but the increase in magnetism is dramatic - certainly after 925.4 (925.0 to 925.4 being a transition that could relate to either adjacent package). This package is characterized by massive, strongly magnetic rocks with a crude suggestion of flow margins by fine grained, weakly foliated material, or, accessory fracturing with calcite chlorite and epidote in fine grained sections, or, much finer grained rocks that may or may not be interflow related. The basalt varies from medium to dark green and grey green, is strongly magnetic, and has a local, crudely developed gabbroic texture. Chlorite, calcite and epidote are the main alteration minerals with pervasive calcite alteration being quite common. The rock is poorly veined with late calcite fractures, some of which show reddish hematite alteration at the margins. Pyrite mineralization is sparse and tends to cue with the calcite +/- epidote fractures - preferring those with reddish alteration.

The areas of note in this package include some quartz veining with limited ankerite alteration, some very thin fine grained flows to interflow material, and, a narrow flow breccia section as :.

928.8 933.0 Quartz Vein Zone.

The basalt in this area is bleached to pale grey beige and beige in colour adjacent to the strongest irregular veining with quartz +/- carb from 930.2 to 930.5 and 931.0 to 933.0. The only apparent ankerite in the system is from 929.8 to 930.2 just above the first vein to vein breccia. Otherwise, the rocks in this area are strongly overprinted with calcite, and sparsely mineralized with pyrite - magnetism persists with fine exsolved magnetite.

971.6 979.7 Interflow Material.

Contact into a narrow section of thin flows to interflow material within the basaltic package. Outside contacts of the system are at 26/13 degrees with the internal contacts running essentially along the core axis. This short system is divisible into an upper bleached section to 976.2 and a lower section of dark grey green very fine grained flows to 979.9. The upper part is pale grey green to beige in colour with reddish tones. It is weakly to nonmagnetic but does carry fine exsolved magnetite in the granular to somewhat gritty calcite bands that potentially represent interflow to tuffaceous material. The lower section is very fine grained and is at least partly silicified. This lower unit is also more typical of the overall package being moderate to strongly magnetic, variably calcitic and altered with chlorite and epidote. The upper contact of the overall system is strongly calcitic and reddish altered from hematite, the lower contact is fine grained and lime green from epidote alteration. The contact between the two internal members is along the core axis but is cut by a 3 cm quartz vein with traces of pyrite at 66 degrees. The pyrite content is elevated in this area but is still in only trace amounts.

From To				Pe	OI 32					
	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		NO.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

985.9 988.8 Flow breccia. Contact into a relatively fresh looking flow breccia characterized by basaltic and to a lesser extent cherty interflow fragments in a fine grained, dark green, basaltic matrix. Fragments are up to 1 cm in size and are various shapes although subovoid is most common. The rock is not carbonated, is weakly to nonmagnetic, poorly veined and unmineralized. At both contacts the breccia section is moderately foliated - contacts at 43/40 degrees.

The very base of this section is a calcitic, weakly magnetic, epidote altered flow leading up to a contact with feldspar porphyry. Magnetic susceptibilities follow for the magnetic basalt :.

926.0 926.1 Ms 26.9. 929.0 929.1 Ms 0.70 ankeritic section above veining. 935.0 935.1 Ms 76.3. 945.0 945.1 Ms 10.5. 955.0 955.1 Ms 10.8. 965.0 965.1 Ms 29.2. 970.0 970.1 Ms 15.3. 973.0 973.1 Ms -959.0 bleached, fine grained flow. 978.0 978.1 Ms 24.6 fine grained flow. 987.0 987.1 Ms 0.84 breccia.

990.0 1020.1 FELDSPAR PORPHYRY FELSIC DYKE

Contact into a zone with two felsic dykes separated by a section of dark green, chloritic, calcitic basalt with a hint of flow breccia between 999.8 and 1008.4. Contacts of the upper dyke are at 42/33 degrees, with the lower dyke at 66/10 degrees. Both dykes are nonmagnetic and consist of close-packed ovoid to subrectangular phenocrysts of plagioclase and minor quartz to 3 mms in size. The upper dyke is wine to purple grey in colour and is similar to the rocks at the collar of the hole down to 996.5 where the rock grades greener to slightly brownish in colour with increasing epidote +/- chlorite and hematite alteration. Trace only very fine pyrite, and the lower contact is more limey green and eidote altered.

The intervening basalt is typical to the previous system with moderate magnetism and some reddening around calcite fractures but otherwise fine grained, massive, chloritic with few flow features, minor veining and only trace amounts of sulphide.

999.8 1008.4 Basalt.

The lower dyke is more highly altered than the first feldspar porphyry. It varies from dull pinkish brown to reddish grey and orangish in colour due to hematite, chlorite and, to a lesser extent, calcite alteration. This dyke is also partly veined with quartz below 1013, although pyrite mineralization remains very minor in amount. While both contacts are sharp, the upper contact is at 66 degrees with little contact effects in the adjacent rock, while the lower contact is at 10 degrees with the adjacent basalt being strongly calcitic and streaky altered with epidote and chlorite.

5	.000	nil	TR	3.0	993.0	990.0	26706
nil	.000	nil	TR	3.0	996.0	993.0	26707
5	.000	nil	TR	2.0	998.0	996.0	26708
3	.000	nil	TR	1.8	999.8	998.0	26709
nil	.000	nil	TR	3.2	1003.0	999.8	26710
7	.000	nil	TR	3.0	1006.0	1003.0	26711
nil	.000	nil	TR	2.4	1008.4	1006.0	26712
5	.000	nil	TR	2.6	1011.0	1008.4	26713
3	.000	nil	TR	2.0	1013.0	1011.0	26714
10	.000	nil	TR	3.0	1016.0	1013.0	26715
3	.000	nil	TR	2.0	1018.0	1016.0	26716
5	.000	nil	TR	2.1	1020.1	1018.0	26717

n 111 w 1 hwas an

			Deres inc		, 1,		Age: 20	01 52		
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

993.0 993.1 Ms 0.31. 998.0 998.1 Ms 0.11. 1003.0 1003.1 Ms 17.3 basalt. 1006.0 1006.1 Ms 9.77 basalt. 1011.0 1011.1 Ms 1.75. 1016.0 1016.1 Ms 0.17. 1018.0 1018.1 Ms 0.33.

1020.1 1146.9 HIGH MAG BASALT

Return to magnetic basalts as before the sequence with the feldspar porphyry dykes. There are a wide variety of flow features within this package as opposed to the more massive magnetic basalts seen earlier between 925.0 and 990.0. Typical to this system the rocks are moderately magnetic, chloritic and often pervasively calcitic with variations in the amount of epidote alteration and reddening of the core from hematite. The package is normally dark green to dark grey green in colour with other variations noted separately in the system breakdown. The core is cut by fine late calcite fractures and is sparsely mineralized with disseminated pyrite. While a number of flow features are evident in this area there is no clear sense that all of the individual flows can be logged separately. The breakdown includes :.

1020.1 1025.6 Breccia.

This is a weakly brecciated zone that may represent a single flow top, or, there could be a couple of narrow flows here +/- a brecciated top and bottom. At any rate, this brecciated interval grades into a more massive flow at the base.

1025.6 1041.2 Basalt.

This unit appears to be a single massive flow with a more siliceous top zone in the down-hole direction that is at 37 degrees. The eventual top is cut by a 5 mm, pinkish quartz calcite vein. The signal for the top of the flow is at 1035.2 where the rock becomes foliated and reddish to brownish altered with calcite and hematite. A very subtle increase in silica is noted circa 1038.5 with a corresponding decrease in calcite and a weak reaction to the presence of ankerite. The rock continues to be moderately magnetic across this progression with a slight increase in fracturing and pyrite toward the top (trace to 1%). The base of the next flow is then moderately foliated reddish to brownish altered and strongly calcitic over about 6 cms.

1041.2 1048.7 Basalt.

This section appears to be a single massive flow beginning with a reddish to brownish, foliated (30 degrees), strongly calcitic bottom grading rapidly to a dark green chloritic, magnetic basalt by 1041.7. Again the top of the flow is signalled by an increased foliation at 45 to 55 degrees after 1046.4, followed by brownish to reddish alteration where there is a weak reaction to the presence of both ankerite and calcite after 1046.9, and, capped by a narrow orangish to grey cherty interflow from 1048.4 to 1048.7 at 55/60 degrees. Pyrite is slightly elevated in the trace to 1% range within the

26718	1020.1 10)23.0	2.9	TR	nil	.000	12
26719	1023.0 10	026.0	3.0	TR	nil	.000	nil
26720	1033.0 10	35.2	2.2	TR	nil	.000	nil
26721	1035.2 10	38.5	3.3	TR	nil	.000	7
26722	1038.5 10	041.2	2.7	TR-1	nil	.000	7
26723	1041.2 10	044.0	2.8	TR	.001	.000	22
26724	1044.0 10)46.4	2.4	TR	nil	.000	3
26725	1046.4 10)48.4	2.0	TR-1	nil	.000	10
26726	1048.4 10)48.7	.3	TR-1	.002	.000	63
26727	1048.7 10)51.0	2.3	TR	nil	.000	7
26728	1065.0 10	67.7	2.7	TR	nil	.000	9
26729	1067.7 10	070.0	2.3	TR-1	.001	.000	21
26730	1070.0 10	073.0	3.0	TR	nil	.000	nil
26731	1073.0 10	076.0	3.0	TR	nil	.000	nil
26732	1076.0 10)79.0	3.0	1-2	nil	.000	nil
26733	1079.0 10	0.280	3.0	TR	nil	.000	5
26734	1082.0 10	0.85	3.0	TR-1	nil	.000	12
26735	1085.0 10	0.88	3.0	TR	nil	.000	nil
26736	1088.0 10	91.0	3.0	TR	nil	.000	5
26737	1091.0 10	94.0	3.0	TR	nil	.000	nil
26738	1094.0 10	0.790	3.0	TR	nil	.000	5
26739	1097.0 11	100.0	3.0	TR	nil	.000	nil
26740	1100.0 11	102.0	2.0	TR	nil	.000	nil
26741	1102.0 11	L04.1	2.1	TR	nil	.000	3
26742	1104.1 11	L07.0	2.9	TR	nil	.000	5
26743	1107.0 11	110.2	3.2	NIL	nil	.000	7
26744	1110.2 11	L13.0	2.8	TR-1	.002	.000	63
26745	1113.0 11	116.0	3.0	TR	nil	.000	7
26746	1116.0 11	L18.9	2.9	TR	nil	.000	12
26747	1118.9 11	119.7	.8	TR	.001	.000	19
26748	1119.7 11	L22.0	2.3	TR	nil	.000	5
26749	1122.0 11	L24.0	2.0	TR	nil	.000	2
26750	1124.0 11	L26.5	2.5	TR	nil	.000	9
26751	1126.5 11	L28.0	1.5	TR	.007	.000	239
26752	1128.0 11	L31.0	3.0	TR-1	.002	.000	57
26753	1131.0 11	L33.0	2.0	TR-1	nil	.000	nil
26754	1133.0 11	135.1	2.1	TR	nil	.000	5
26755	1135.1 11	L38.0	2.9	TR	nil	.000	2
26756	1138.0 11	L 40 .1	2.1	TR	nil	.000	3
26757	1140.1 11	142.3	2.2	TR	nil	.000	2

Drill Hole AN99-17

Baro. 20 of 22

				Drill Ho	le AN99-	17	Page: 21 of 32				
From To (ft) (f	To (ft)		Geology	Sample No.	From (ft)	To (ft)	Len (ft)	PY %	AU OZ/T	AU1 OZ/T	AU2 PPB
		interflow.		26758	1142.3	1144.0	1.7	NIL	nil	.000	2
		1048 7 1057 6 Basalt		26759	1144.0	1146.9	2.9	TR	nil	.000	3

This basaltic flow is slightly different than those above grading from a weakly foliated, strongly calcitic basalt to more massive basalt at 1050.3 and thence into ropey flow to flow top material with grungy calcite-epidote alteration after 1051.3. The eventual top here appears to be intruded by a narrow mafic intrusive.

1057.6 1059.6 Mafic Intrusive.

Contact into a narrow mafic dyke. While the contact zones at 42/29 degrees are reddish altered and calcitic, the central part of the dyke is neither calcitic nor ankeritic. The rock is dull grey green in colour with a weak bluish cast, is finely flecked with needles of amphibole, is nonmagnetic, very weakly fractured and unmineralized.

1059.6 1088.4 Basalt.

In this package of massive basalts there are two areas with potential as flow-top material - accessory reddish staining and calcite fracturing from 1067.7 to 1072.2; and, 1082.8 to 1083.8. There are no definite fingerprints of flow top in the upper section which may be a consequence of alteration associated with the accessory fracturing. In the lower interval the rocks are very fine grained, bleached, calcitic and reddish stained with contacts at 36/13 degrees - upper contact defined by a 3 mm calcite fracture. Pyrite mineralization in this corridor is quite site-specific to the reddish wallrock adjacent to some calcite +/- quartz veins... Not all veins altering the adjacent basalt. Pyrite is up to 2-3% but only on a very local scale.

1088.4 1104.1 Flow top flow breccia.

Contact at 10 degrees into a section of ropey flow to flow top material with quenched to poorly developed hyaloclastite textures. There is scattered pyrite in this section as streaks, disseminations and occasional nodules. The rock continues to be magnetic and is more weakly fractured with calcite here. Epidote and chlorite alteration dominate with minor pervasive calcite. A few slivers of more massive basalt also occur in the system - a couple of thin flows in the order of 10 to 30 cms. The apparent cap to this section is along a 15 cm, foliated to layered, partly bleached, granular to gritty calcitic section that appears to be interflow to a crudely developed tuff, from 1103.6 to 1104.1 at 60 degrees to the core axis.

1104.1 1110.2 Basalt.

Contact into a similar package of chlorite and epidote-altered flows with grey, granular, fine grained, partly calcitic sections at 55 to 60 degrees to the core axis that probably represent tops to narrow flows or interflow material (after 1108.7). The ropey to brecciated nature to this section is not as well developed due to the thinner flows (?) and blockiness to the core itself. Local, patchy pervasive calcite alteration, minor pyrite. The lower contact is broken along the blocky core - contact with a foliated flow bottom.

1110.2 1118.9 Basalt.

				Drill Ho	ole AN99	9-17	Pa	age: 22	of 32	
From	То	Geology	Sample	From	то	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	ક	OZ/T	OZ/T	PPB

Contact into a dark green to medium grey green massive flow with a foliated, partly reddish stained, calcitic lower contact to 1111.9, and, similarly a foliated, calcitic top after 1117.8, ending along 9 cms of more siliceous flow top material. The foliation at the base of the flow averages 55 to 60 degrees, while the foliation at the upper contact is shallower at 30 to 40 degrees - lower contact sharp at 27 degrees. The flow is very fine grained to massive, weakly to moderately magnetic, chloritic, weakly epidote altered, pervasively calcitic, moderately fractured with calcite +/- quartz and sparsely mineralized with pyrite.

1118.9 1140.1 Interflow Material altered.

Contact into an interesting package of interflow rocks that are near the base of the basaltic sequence. The package is framed by two zones of cherty interflow from 1119.7 to 1125.9 at 27/42 degrees, and, 1135.1 to 1140.1 at 35/42 degrees surrounding a zone that is best described as variably siliceous, incipient altered basaltic flows. The package is also cut by two, narrow, orange-stained felsic dykes at 1118.9 to 1119.7 at 27/20 degrees, and, 1126.5 to 1128.0 at 30/25 degrees - lower contact irregular. These dykes are assumed to promote the siliceous to incipient altered nature of the central zone of basalt. All of the rocks are moderate to strongly siliceous, noncalcitic with a weak reaction to the presence of ankerite, poorly veined to fractured with carb +/- quartz and sparsely mineralized with pyrite.

The cherty interflow members +/- minor intercalated basaltic material, vary from pale to medium grey in colour with variable orange staining. Portions of the zone are weakly to moderately magnetic with exsolved magnetite, with much less magnetite noted in the lower zone due to a lack of intercalated basaltic material - the lower zone being weakly streaked with chloritic to basaltic material.

The central zone of incipient altered basalt is similarly hard and siliceous - consisting of typical reddish incipient style alteration that is streaked with chlorite alteration to chloritic basalt plus some greyer toned siliceous flows. The pyrite content is elevated in the better incipient altered sections at the apparent expense of magnetite. Pyrite contents on average, however, are low.

The two felsic dykes range from dull yellow brown to orangish. They are essentially a granular mosaic of quartz and feldspar in a very fine grained, siliceous and variably stained matrix. They are close in chemistry and appearance to the earlier feldspar porphyry dykes except that the alteration is stronger here and more quartz grains are present. The dykes are mineralized with trace only very fine pyrite.

Since the individual breakdowns are very narrow, only the overview interflow is coded for plotting.

1140.1 1142.3 Basalt.

Contact into a narrow basaltic flow that appears to mark a transition into into a contact zone. The flow is dull to dark grey green in colour, moderately magnetic, weakly ankeritic, noncalcitic, and is weakly siliceous at the contacts over 7 cms and 8 cms. Both contacts are also weakly to moderately foliated at 42/39 degrees. The rock is moderately veined and very sparsely mineralized. The lower contact is clear albeit a little subtle to

				Drill Ho	ole AN99	-17	Pa	age: 23	of 32	
From	To	Geology	Sample	From	To	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	%	OZ/T	OZ/T	PPB

diffuse at 39 degrees.

1142.3 1146.9 Contact Zone.

Contact zone of apparent basalt marking the transition with ultramafic rocks at depth. Below the subtle contact with the last recognizable flow the the rock grades greener in colour, is more strongly mottled with ankerite, flecked with biotite and is not as strongly magnetic. Circa 1144, the rock grades brownish in colour and subsequently grades coarser grained with ankerite, amphibole, biotite and chlorite down to the lower contact with a 6 cm, orange stained, cherty interflow / flow top at 41 degrees. Portions of the section have an ultramafic appearance but this may be related to the presence of the adjacent ultramafic suite. This section is effectively unmineralized. Lower contact with ultramafic at 41 degrees.

Magnetic susceptibilities within the sequence include :.

1023.0 1023.1 Ms 9.54. 1027.0 1027.1 Ms 22.1. 1035.1 1035.2 Ms 23.5. 1038.4 1038.5 Ms 27.0. 1041.0 1041.1 Ms 23.5. 1043.0 1043.1 Ms 16.0. 1048.0 1048.1 Ms 16.6. 1048.4 1048.5 Ms -968 chert. 1050.0 1050.1 Ms 16.2. 1054.0 1054.1 Ms 12.3 ropey. 1056.0 1056.1 Ms 20.8. 1058.0 1058.1 Ms 0.59 mi. 1063.0 1063.1 Ms 10.2. 1072.0 1072.1 Ms 23.1. 1082.0 1082.1 Ms 12.4. 1091.0 1091.3 Ms 5.43 ropey flow. 1092.0 1092.1 Ms 2.93 ropey flow. 1093.0 1093.1 Ms 17.0 ropey flow. 1097.0 1097.1 Ms 25.3 ropey flow. 1104.0 1104.1 Ms 5.56 flow top. 1107.0 1107.1 Ms 41.4. 1110.0 1110.1 Ms 21.2 flow top. 1112.0 1112.1 Ms 35.1. 1117.0 1117.1 Ms 17.5. 1119.3 1119.4 Ms 0.64 dyke. 1122.0 1122.1 Ms 52.5 intercalated basalt. 1124.0 1124.1 Ms -957 chert. 1127.0 1127.1 Ms 0.61 dyke. 1131.0 1131.1 Ms 0.81 incipient altered. 1133.0 1133.1 Ms 35.7. 1136.0 1136.1 Ms 2.97 chert. 1139.0 1139.1 Ms 1.88 chert. 1142.0 1142.1 Ms 48.1. 1143.0 1143.1 Ms 0.77 carbonated. 1146.0 1146.1 Ms 2.44 carbonated, amphibolitic.

From (ft)	To (ft)	Geology	Sample No.	From (ft)	TO (ft)	Len (ft)	PY *	AU OZ/T	AU1	AU2 PPB
(==)	(==)			((20)	(=0)	•	027.2	02/1	

1146.8 1146.9 Ms 4.61 cherty, stained interflow.

1146.9 1346.4 ULTRAMAFIC MAFIC INTRUSIVE

Contact into an ultramafic sequence of rocks marked by a rapid change to calcite alteration over the upper 11 cms of the sequence, followed by an unusual series of mafic to ultramafic intrusive rocks. At the outset, a narrow (11 cm) section of dull blue grey to greenish ultramafic is followed by patchy brownish to reddish strongly calcitic alteration to crudely developed incipient alteration down to 1148.9 where the first blue black, foliated ultramafic is encountered - trace gouge at contact - 2 mms at 50 degrees. Additional brownish alteration with calcite is found at 1151.0 to 1151.9 also framed by gouge - 2mms at the upper contact at 24 degrees with blocky to broken core with gouge for 10 cms below the lower contact. The package then continues with minor patchy brownish alteration up to 1157.2 at the first contact with a mafic dyke. The ultramafic is soft, moderate to strongly foliated at 40 to 55 degrees, variably calcitic, weakly to moderately magnetic, poorly veined and sparsely mineralized with disseminated pyrite. Gouge sections for plotting include :.

1148.9 1149.0 Fault gouge. 1151.0 1151.1 Fault gouge. 1151.9 1152.4 Fault gouge.

A single dyke with scattered xenoliths or a complex of dykes first enters the ultramafic system at 1157.2. The dyke material is very dark grey green to dark green in colour, fine grained to very fine grained, magnetic, and normally pervasively calcitic. The dykes are unusual in that they are flecked with erratic phenocrysts / metacrysts of amphibole and pyroxene +/relict olivine to a cm in size, in addition to containing a number of fragments up to 23 cms in size - of a wide variety of types. Fragment types include porphyry and sygnite as well as mafic, ultramafic and carbonate fragments - i.e. Not all fragments are from the adjacent host. Fragment shapes also vary from rounded to very irregular with both sharp and partly absorbed margins, and, a few of the fragments are mineralized with pyrite. Surprisingly these dykes are present across the system and are primarily constrained by the ultramafic package. The breakdown includes :.

- 1146.9 1157.2 Ultramafic Start of the ultramafic package as described above.
- 1157.2 1160.1 Mafic Intrusive contacts at 48/38 degrees.
- 1160.1 1165.5 Ultramafic Blue black to blue grey ultramafic with weak brownish alteration +/- amphibolitization.
- 1165.5 1181.0 Mafic Intrusive contacts at 26/31 degrees lower contact with traces of gouge.
- 1181.0 1185.0 Ultramafic Blue grey to blue black, weakly foliated ultramafic. The upper contact contains traces of gouge - lower contact partly diffused.
- 1185.0 1231.8 Mafic Intrusive contacts at 27/13 degrees and somewhat diffuse.
- 1231.8 1252.9 Ultramafic Blue grey to blue black and slightly greenish ultramafic with some potential relict spinifex circa 1243.0 to

4	.000	nil	1-2	2.1	1149.0	1146.9	26760
0	.000	.000	TR-1	3.0	1152.0	1149.0	26761
7	.000	nil	TR	3.0	1155.0	1152.0	26762
7	.000	nil	TR-1	3.0	1250.0	1247.0	26763
5	.000	nil	TR-1	2.9	1252.9	1250.0	26764
nil	.000	nil	TR	2.1	1255.0	1252.9	26765
2	.000	nil	TR	2.6	1319.6	1317.0	26766
7	.000	nil	TR-1	2.9	1322.5	1319.6	26767
2	.000	nil	TR	3.0	1325.5	1322.5	26768
nil	.000	nil	NIL	3.4	1328.9	1325.5	26769
nil	.000	nil	NIL	2.1	1331.0	1328.9	26770
3	.000	nil	NIL	2.6	1333.6	1331.0	26771
2	.000	nil	TR	2.4	1336.0	1333.6	26772
2	.000	nil	TR	3.0	1339.0	1336.0	26773
2	.000	nil	TR	3.0	1342.0	1339.0	26774
11	.000	nil	TR	3.0	1345.0	1342.0	26775
3	.000	nil	NIL	1.4	1346.4	1345.0	26776

Page, 24 of 72

Drill Hole ANGG-17

						/-1/	Pa	ige: 25	SE 32	
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

1244.0. This section is weakly ankeritic with no reaction to the presence of calcite. Veining is minimal, mineralization is trace to 1% disseminated pyrite.

- 1252.9 1262.9 Mafic Intrusive Contacts at 38/31 degrees and diffuse this unit is calcitic once more.
- 1262.9 1279.4 Ultramafic Blue grey to greenish ultramafic that is variably chloritized to locally partly amphibolitized - particularly in a lower flow ?? after 1271.5. The rock also grades calcitic in the lower flow and is only weakly magnetic. The contact between flows ?? is at 22 degrees with veining.
- 1279.4 1319.6 Mafic Intrusive What appears to be the last dyke of the system with a shallow lower contact zone over roughly 5 feet that ends at a steeper angle of 40 degrees. The lower contact zone appears to have inrafted bits of ultramafic - foliation averaging 20 degrees.
- 1319.6 1346.4 Ultramafic This basal package of the ultramafic sequence is divisible into several types of alteration - reddish to brownish, calcitic, partly amphibolitic style alteration that looks like the forerunner to incipient alteration at the dyke contact from 1319.6 to 1322.5 (lower contact at 22 degrees), and at the base of the zone from 1333.6 to 1346.4 at 44/47 degrees - lower contact with veining. These rocks are weakly to moderately magnetic and are sparsely mineralized with trace amounts of fine pyrite.

The central part of this basal sequence consists of blue black, foliated ultramafic with traces of gouge from 1322.5 to 1328.9, followed by more chloritic, foliated, calcitic ultramafic from 1328.9 up to the basal brownish altered rocks. The foliation varies from 20 to 40 degrees in the area, mineralization is minor to negligible. The chloritic section contains numerous streaks and blebs of calcite subparallel to the foliation - upper contact at 24 degrees. Gouge sections include :.

1322.6 1322.8 Broken Blocky Core w/ Gouge orientation unclear due to broken core, and,.

1325.6 1325.8 Broken Blocky Core w/ Gouge again no clear orientation.

The lower contact of the ultramafic sequence is sharp with veining at 47 degrees.

Magnetic susceptibilities across this corridor include :.

1148.2 1148.3 Ms 11.2 brownish and calcitic. 1150.0 1150.1 Ms 14.9. 1151.2 1151.3 Ms 13.8 brown altered. 1156.0 1156.1 Ms 17.5. 1158.0 1158.1 Ms 15.4 mi. 1162.0 1162.1 Ms 27.1. 1166.0 1166.1 Ms 13.4 mi. 1171.0 1171.1 Ms 22.3 mi. 1180.0 1180.1 Ms 24.8 mi. 1182.0 1182.1 Ms 30.6.

				Drill Ho	ole AN99	9-17	Pa	age: 26	of 32	
From (ft)	To (ft)	Geology	Sample No.	From (ft)	To (ft)	Len (ft)	PY ¥	AU OZ/T	AU1 OZ/T	AU2 PPB

1190.0 1190.1 Ms 11.4 mi. 1199.5 1199.6 Ms 12.2 mi. 1210.5 1210.6 Ms 12.7 mi. 1220.0 1220.1 Ms 25.3 mi. 1230.0 1230.1 Ms 3.34 contact area mi. 1235.0 1235.1 Ms 44.9. 1250.0 1250.1 Ms 49.2. 1260.0 1260.1 Ms 25.0 mi. 1270.0 1270.1 Ms 10.8. 1279.0 1279.1 Ms 0.81 more weakly to nonmagnetic flow. 1289.0 1289.1 Ms 14.2 mi. 1299.0 1299.1 Ms 26.5 mi. 1309.0 1309.1 Ms 33.2 mi. 1319.0 1319.1 Ms 0.95 mi contact zone. 1322.0 1322.1 Ms 1.23. 1325.5 1325.6 Ms 44.4. 1328.0 1328.1 Ms 29.8. 1331.0 1331.1 Ms 1.45. 1333.0 1333.1 Ms 2.20. 1336.0 1336.1 Ms 32.6. 1339.0 1339.1 Ms 19.9. 1345.0 1345.1 Ms 20.6.

1346.4 1996.8 BASALT GABBRO

Contact into a sequence of either coarse basaltic flow or gabbro with a minimal contact effect from the adjacent ultramafic expressed by chlorite alteration, some local pervasive calcite and patchy magnetism over the top 5 feet - strongest to 1347.3 feet.

Below the weakly developed contact effects, the coarse flow is rather uniform in appearance, fresh in nature, medium to dark grey green in colour, weakly to nonmagnetic, poorly veined to fractured with quartz calcite and epidote +/- chlorite fractures and very sparsely to unmineralized. The rock has a gabbroic texture with intergrown plagioclase and mafic minerals and there are no specific features to determine if the package is intrusive or extrusive. Veining averages less than 5% calcite and quartz often with associated epidote or chlorite at vein margins. The sequence is also cut by fine, apparently late alteration healed fractures with or without calcite. The pyrite content is minimal and tends to cue with the quartz +/- calcite veins - the best example of this is from 1391.5 to 1394.0 where there is 1-2% pyrite in an area with 10 to 15% guartz veining.

Magnetic susceptibilities tend to be low in the sequence as :.

1348.0 1348.1 Ms 5.21 in weakly magnetic contact zone. 1358.0 1358.1 Ms 0.36. 1368.0 1368.1 Ms 0.28. 1388.0 1388.1 Ms 0.31. 1392.0 1392.1 Ms 0.12 veined area. 1398.0 1398.1 Ms 0.34. 1418.0 1418.1 Ms 0.36.

22	.000	.001	NIL	2.6	1349.0	1346.4	26777
3	.000	nil	TR	3.0	1391.0	1388.0	26778
7	.000	nil	1-2	3.0	1394.0	1391.0	26779
5	.000	nil	NIL	3.0	1397.0	1394.0	26780
nil	.000	nil	NIL	2.0	1551.7	1549.7	26781
3	.000	nil	TR	2.3	1554.0	1551.7	26782
5	.000	nil	1-2	2.0	1556.0	1554.0	26783
3	.000	nil	TR-1	1.5	1557.5	1556.0	26784
7	.000	nil	NIL	2.5	1560.0	1557.5	26785
7	.000	nil	TR	3.0	1581.0	1578.0	26786
2	.000	nil	TR	3.0	1584.0	1581.0	26787
nil	.000	nil	1-2	3.0	1587.0	1584.0	26788
16	.000	nil	TR	3.0	1590.0	1587.0	26789
2	.000	nil	TR	3.0	1593.0	1590.0	26790
5	.000	nil	TR	3.0	1596.0	1593.0	26791
nil	.000	nil	TR	2.0	1598.0	1596.0	26792
3	.000	nil	TR	2.5	1600.5	1598.0	26793
1	.000	nil	TR	2.5	1603.0	1600.5	26794
3	.000	nil	TR	3.0	1606.0	1603.0	26795
nil	.000	nil	TR-1	3.0	1609.0	1606.0	26796
2	.000	nil	TR-1	3.0	1612.0	1609.0	26797
2	.000	níl	TR	3.0	1615.0	1612.0	26798
nil	.000	nil	NIL	3.0	1673.0	1670.0	26799
5	.000	nil	TR	3.0	1676.0	1673.0	26800
13	.000	nil	TR	2.0	1678.0	1676.0	26801
3	.000	nil	TR	3.0	1681.0	1678.0	26802

				Drill Ho	le AN99	-17	Pa	age: 27	of 32	
From	To (ft)	Geology	Sample	From (ft)	To (ft)	Len (ft)	PY %	AU OZ/T	AU1	AU2
(20)	(20)		101	(10)	(10)	(10)	ŭ	02,1	0271	
		1436.0 1436.1 Ms 0.35.	26803	1715.0	1718.0	3.0	TR	.001	.000	17
		1456.0 1456.1 Ms 0.39.	26804	1718.0	1720.0	2.0	1 - 2	.001	.000	22
		1476.0 1476.1 Ms 0.33.	26805	1720.0	1723.0	3.0	2-3	nil	.000	3
		1496.0 1496.1 Ms 0.32.	26806	1723.0	1726.0	3.0	TR	nil	.000	9
		1516.0 1516.1 Ms 0.41.	26807	1745.0	1748.0	3.0	TR	nil	.000	nil
		1521.5 1521.6 Ms 0.52.	26808	1748.0	1751.0	3.0	TR-1	nil	.000	3
		1540.6 1540.7 Ms 0.36.	26809	1751.0	1754.0	3.0	TR	nil	.000	7
		1546.4 1546.5 Ms 0.39.	26810	1884.0	1887.0	3.0	TR	nil	.000	3
			26811	1887.0	1890.0	3.0	1-2	nil	.000	15
		Commencing at 1549.7 there is some 'grungy' epidote and chlorite alteration	26812	1890.0	1893.0	3.0	TR	nil	.000	nil
		typical of altered flow to flow margin material. This is the first inference	26813	1893.0	1896.0	3.0	TR	- 003	.000	94
		of flow within the package and the magnetic susceptibilities are elevated in	26814	1896.0	1899.0	3.0	TR	nil	.000	nil
		this area as well. Erratic flow margin style alteration is common in the	26815	1953.0	1956.0	3.0	TR	nil	.000	5
		package until 1622.2 where the rocks become the more uniform gabbroic	26816	1956.0	1958.0	2.0	NIL	nil	.000	2
		textured to speckled flows as above. This area includes :.	26817	1958.0	1961.0	3.0	TR	nil	.000	5
			26818	1961.0	1964.0	3.0	TR	nil	.000	3
		1549.7 1551.7 Altered flow.	26819	1964.0	1966.0	2.0	TR	nil	.000	5
		A grungy altered flow at 37/42 degrees ending along a 3 cm poorly defined	26820	1966.0	1969.0	3.0	TR	nil	.000	5
		breccia at the top of the flow (i.e. Downhole). Magnetic susceptibilities	26821	1988.0	1991.0	3.0	TR	nil	.000	7
		range from 1.02 to 2.77.	26822	1991.0	1994.0	3.0	TR	nil	.000	5
		1551.0 1551.1 Ms 1.02.	26823	1994.0	1996.8	2.8	TR	nil	.000	2
		1551.7 1557.5 High Mag Basalt.								

Contact into a dark green much more strongly magnetic flow with the lower flow margin defined by a streaky, epidote-altered, calcitic section over 9.5 cms at 35/51 degrees. There is little distinction in the contact area regarding top / bottom of the adjacent flows. Magnetic susceptibilities range from 0.79 to 1.17 up-hole to 6.11 at the lower contact with the central part of the flow ranging from 53.2 to 78.8 - moderate to strongly magnetic except at the contacts. There is also some reddish calcite alteration and 1-2% pyrite associated with quartz- calcite veining between 1554.1 and 1555.7. 1554.3 1554.4 Ms 73.0.

1557.5 1581.0 Basalt.

Contact into a section of dark grey green to dark green, more massive to speckled basaltic flows. There are local, weakly foliated to streaky altered, fine grained parts that may represent flow margins but definition is at best obscure. One area from 1576.2 to 1579.9 has elevated magnetism from MS's of 14.8 to 48.5 but there are no flow features constraining this section - margins tending to be more weakly magnetic in most of the flows and, in this corridor, poorly defined. Outside contacts are at 70/66 degrees. Pyrite is very minor. Magnetic susceptibilities elsewhere range from 0.49 to 3.33.

1560.0 1560.1 Ms 2.32. 1567.2 1567.3 Ms 0.49. 1575.0 1575.1 Ms 1.43.

1581.0 1600.5 Altered flow.

Contact into another of the 'grungy', chlorite and epidote altered flows with erratic calcite, elevated pyrite to 1-2% on a very local scale, and,

From To			Drill Hole AN99-17					Page: 28 of 32			
	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2	
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB	

```
quite variable magnetic susceptibilities from 0.21 to 51.7 - averaging in
the 3 to 7 range. The down-hole contact is foliated to streaky altered at 60
to 65 degrees over 27 cms.
1581.6 1581.7 Ms 7.45.
1584.4 1585.5 Ms 33.7.
1590.9 1591.0 Ms 1.87.
```

1600.5 1622.2 Basalt.

Continue in dark grey green (to locally almost black from amphibolitization) basaltic flows with irregularly spaced streaky altered to foliated, fine grained sections that probably represent flow margins. Pyrite mineralization is locally better, to trace to 1%, in the more amphibolitized parts, calcite and epidote alteration are variable. This section is also cut by a narrow mafic dyke from 1616.0 to 1618.3 at 28/5 degrees, and, the lower contact appears to be along a 4 cm dyke at 37 degrees that has been intruded next to a foliated flow top. The main dyke is dull grey green to brownish grey green in colour, very fine grained but flecked with coarser amphibole to 3 mms, variably calcitic, nonmagnetic, poorly veined to fractured and sparsely mineralized. Magnetic susceptibilities are more stable across this section from 0.43 to 1.47 - even in the mafic intrusive.

1603.0 1603.1 Ms 1.47. 1608.6 1608.7 Ms 0.43. 1617.0 1617.1 Ms 0.52 mi.

1616.0 1618.3 Mafic Intrusive.

1622.2 1744.0 Basalt.

Return to the coarse flow style of assemblage as seen above 1549.7 with the exception that the rocks are slightly darker in colour than before. Otherwise, the rocks are nearly identical with a gabbroic texture, weak veining and alteration, very minor sulphides, and, relatively uniform magnetic susceptibilities from weakly to nonmagnetic rocks. There is some grungy epidote +/- calcite alteration locally in the system but nothing that appears to be clearly flow top style of material until 1742.4 to 1744.0 at 27/34 degrees. Between 1673.8 and 1677.7 there are three irregular veins at 0 to 25 degrees to the core axis with a very hard, massive, black mineral that may be tourmaline - some accessory epidote, calcite and chlorite alteration here but the sulphide association is weak. There is, however, some accessory pyrite in the order of 2-3% between 1718.6 and 1722.6 associated with quartz calcite fractures, a pervasive overprinting calcite, accessory chlorite and epidote, and, weak amphibolitization.

1742.4 1744.0 Flow top.

1622.7 1622.8 Ms 0.40. 1632.0 1632.1 Ms 0.36. 1643.9 1644.0 Ms 0.40. 1659.0 1659.1 Ms 0.38. 1673.0 1673.1 Ms 0.32. 1674.0 1674.1 Ms 0.35 with veining and tourmaline. 1683.0 1683.1 Ms 0.38.

	Drill Ho	le AN99	9-17	Pa	age: 2	9 of 32	
Sample	From	To	t.en	DV	וזא	ריזא	

Geology

From To (ft) (ft) SampleFromToLenPYAUAU1AU2No.(ft)(ft)(ft)%OZ/TOZ/TPPB

1700.0 1700.1 Ms 0.35. 1713.0 1713.1 Ms 0.35. 1719.0 1719.1 Ms 0.36 with calcite, pyrite.. 1731.0 1731.1 Ms 0.37. 1743.0 1743.1 Ms 0.40 flow top.

1744.0 1754.1 Foliated flow.

Contact into a section of 5 or 6 thin, massive to foliated +/- brecciated flows with streaky altered and foliated flow top material. Tops are north downhole. The rocks are lighter in colour here to a mid grey green with variable streaky epidote and chlorite alteration, minor bleaching, crudely developed quench textures, and, an alteration layering to foliation at 35 to 40 degrees to the core axis. There is minor irregular quartz veining and trace only levels of pyrite. The lower contact is somewhat arbitrarily placed but appears to be at 40 degrees with the bottom of the adjacent flow being fine grained and weakly foliated over the next 25 cms.

1745.0 1745.1 Ms 0.39. 1752.0 1752.1 Ms 0.42.

1754.1 1871.4 Basalt.

Return to a package of massive flow once more, characterized by fine to medium grained rocks with barely a hint of flow features. This section varies from medium to dark grey green and green in colour, is very weakly altered, veined, and mineralized. Calcite is essentially confined to individual stringers and fractures but there appears to be a weak, local reaction to the presence of ankerite. There is a suggestion of flow top material in the sequence from 1759.3 to 1759.5 at 23 degrees to the core axis but this area is confused by blocky to broken core from 1756.5 to 1759.3. There is a very subtle increase in the chlorite content circa 1858 which continues to the end of the zone. The lower contact is along a fine grained, streaky altered to foliated flow top from 1868.7 to 1871.4 contacts at 37/35 degrees with most of the internal layering at 0 to 10 degrees to the core axis.

 1754.0
 1754.1
 MB
 0.40.

 1761.4
 1761.5
 MS
 0.42.

 1781.0
 1781.1
 MS
 0.35.

 1800.0
 1800.1
 MS
 0.39.

 1820.0
 1820.1
 MS
 0.42.

 1840.0
 1840.1
 MS
 0.39.

 1860.0
 1860.1
 MS
 0.39.

 1860.5
 1868.6
 MS
 0.52.

 1870.0
 1870.1
 MS
 0.28.

1874.1 1882.6 Basalt.

This short package of basalt appears to mark a transition from nonmagnetic to magnetic rocks with quite variable magnetic susceptibilities from 0.40 6.87 plus some local dipole effects. The upper contact is relatively well defined by the previous flow top interval, while the lower contact is much more subtle - it is defined by some fine grained streaky alteration and a

	Drill Ho	le AN99	-17	Pa	age: 30	of 32	
Sample	From	То	Len	PY	AU	AU1	AU2
No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

(ft) (ft)

То

From

rapid change in magnetic susceptibility amongst some blocky core. The basalt is dark green in colour, chloritic, variably calcitic, weakly to locally moderately magnetic, and is variably foliated at 0 to 45 degrees. Pervasive calcite alteration is most often associated with the foliated sections. Some tiny white earthy flecks of possible leucoxene are also noted in this area. Both veining and mineralization are poor. The core is locally blocky to broken which confuses the definition of the lower contact. Magnetic

Geology

1872.0 1872.1 Ms -955. 1873.2 1873.3 Ms 6.87. 1875.5 1875.6 Ms 0.40. 1879.3 1879.4 Ms 1.31. 1880.7 1880.8 Ms 3.41. 1882.2 1882.3 Ms 4.92.

susceptibilities include :.

1882.6 1996.8 High Mag Basalt amphibolitic.

Contact into magnetic basalts / iron tholeiite alluded to above. This system is the basal package prior to contact with an ultramafic sequence that seems to mark an entrance into the Anoki Deep Wedge. As a result the basalts are variably altered and deformed, and exhibit a moderate to well developed foliation from 10 to 60 degrees to the core axis - shallow core angles dominate. At the outset, this package consists of dark green, chloritic massive to weakly foliated basalts with isolated flecks of leucoxene and irregular, patchy amphibolitization. With depth, particularly after 1916, the basalts are more strongly (albeit not uniformly) amphibolitic and strongly calcitic to the base of the system. There is minor accessory pyrite in this area - elevated pyrite contents tending to be most closely allied with the strongest amphibolitization. The rocks are moderate to strongly magnetic, moderately to well veined and fractured with calcite and sparsely mineralized with pyrite.

Within this lower basalt package there are a couple of interesting units as : irregular quartz-calcite veining running along the core axis from 1887.2 with 1-2% disseminated pyrite; a very fine grained, to 1889.3 amphibole-speckled, calcite fractured, reddish brown mafic intrusive from 1928.3 to 1929.1 at 42/44 degrees; a highly fractured to brecciated, grey to pinkish remnant of a felsic dyke from 1956.8 to 1957.6; a second, pale greyish potential felsic dyke remnant from 1964.3 to 1965.3 at 55/17 degrees; and, another mi - grey, calcitic, 4.5 cms, at 24 degrees at 1978.3. The two possible felsic dykes are very fine grained with only a hint of a porphyritic texture - both occur within highly amphibolitized rocks and are fractured to brecciated from the deformation. Mineralization in the dykes is very minor. The lower contact of the basalt is sharp at 36 degrees. Magnetic susceptibilities include :.

1883.0 1883.1 Ms 13.3. 1888.0 1888.1 Ms 24.7. 1895.3 1895.4 Ms 53.9. 1910.0 1910.1 Ms 45.2. 1919.4 1919.5 Ms 102.0. 1928.9 1929.0 Ms 8.20 mi.

From	То	Geology	Sample	From	То	Len	РҮ	AU	AU1	AU2		
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB		

1938.0 1938.1 Ms 47.8. 1952.0 1952.1 Ms 29.2. 1957.2 1957.3 Ms 3.46 1F. 1962.5 1962.6 Ms 12.6. 1964.5 1964.6 Ms 15.6 1F. 1966.0 1966.1 Ms 28.4. 1980.4 1980.5 Ms 31.4. 1994.0 1994.1 Ms 21.5.

1996.8 2125.4 ULTRAMAFIC ULTRAMAFIC KOMATIITE

Contact into a package of ultramafic rocks that extend to the end of the drillhole. The ultramafic is not extraordinarily deformed but the strong deformation and alteration above plus local gouging below the ultramafic contact lead to the conclusion that the rock change is at the Anoki Deep Wedge margin. The ultramafic varies from blue grey to blue black in colour with local greenish to brownish tones and erratically spaced brownish altered patches from 45 to 200 cms in length. Weakly brecciated sections and scattered foliated zones at 30 to 50 degrees to the core axis suggest the sequence to be komatiitic. Relict textures within and adjacent to most of the brownish altered sections similarly suggest that the brown alteration is a reflection of flow tops as seen elsewhere in more pristine Anoki core where flow margins are finer grained, greenish to brownish in colour and less magnetic than the blue black, flow centers - while brownish and amphibolitic, those features are present in this more altered version. The flow centers here are moderate to strongly magnetic with more weakly magnetic margins. The rocks are fractured to veined and streaked with calcite, but are very sparsely mineralized with pyrite. There is some blocky core in the system +/- gouge as :.

2021.8 2022.2 Fault gouge orientation unclear.
2036.2 2041.7 Broken.
2066.6 2066.7 Fault gouge trace of mud at 66 degrees.
2106.7 2107.2 Broken Blocky Core w/ Gouge.
2125.0 2125.4 Broken Blocky Core w/ Gouge.

Another section of interest in the package is a very 'dirty' felsite dyke from 2048.6 to 2063.5 with irregular, partly assimilated contacts at 20/14 degrees. Definition of original mineralogy is very difficult here due to strong, pervasive chlorite and calcite alteration giving the rock a dull grey green colour. The dyke is harder than any of the typical mafic intrusives, is variably magnetic and cooks the adjacent ultramafic to brownish in colour. The dyke is poorly fractured with calcite but is mineralized with 2-3% pyrite in fine blebs to cubes. Coding as :.

2048.6 2063.5 Felsite.

Magnetic susceptibilities in the ultramafic package include :.

1997.3 1997.4 Ms 6.36. 1999.5 Ms 2.05 flow top.

26824	1996.8	1999.0	2.2	TR	nil	.000	5
26825	2043.0	2046.0	3.0	TR-1	nil	.000	3
26826	2046.0	2048.6	2.6	TR	nil	.000	5
26827	2048.6	2051.0	2.4	3-5	nil	.000	15
26828	2051.0	2054.0	3.0	1-2	nil	.000	12
26829	2054.0	2057.0	3.0	2-3	nil	.000	10
26830	2057.0	2060.0	3.0	2 - 3	nil	.000	9
26831	2060.0	2062.0	2.0	3-5	nil	.000	9
26832	2062.0	2063.5	1.5	2 - 3	nil	.000	10
26833	2063.5	2066.0	2.5	TR-1	nil	.000	2
26834	2066.0	2069.0	3.0	NIL	nil	.000	2
26835	2094.0	2097.0	3.0	TR-1	nil	.000	2
26836	2097.0	2100.0	3.0	TR	nil	.000	9
26837	2100.0	2103.0	3.0	TR-1	nil	.000	3
26838	2103.0	2106.0	3.0	1-2	.001	.000	27

Page: 31 of 32

Drill Hole AN99-17

			Drill Hole AN99-17 P							
From (ft)	To (ft)	Geology	Sample No.	From (ft)	To (ft)	Len (ft)	Р Ү %	AU OZ/T	AU1 OZ/T	AU2 PPI

2003.0 2003.1 Ms 44.4. 2012.5 2012.6 Ms 56.2. 2022.0 2022.1 Ms 36.4. 2036.0 2036.1 Ms 28.0. 2047.0 2047.1 Ms 24.2 flow top. 2049.4 2049.5 Ms 26.3 altd 1F. 2059.5 2059.6 Ms 27.1 altd 1F. 2065.0 2065.1 Ms 9.95 flow top. 2076.0 2076.1 Ms 27.4. 2083.6 2083.7 Ms 29.9. 2098.2 2098.3 Ms 0.46 flow top. 2101.0 2101.1 Ms 1.30 flow top. 2106.0 2106.1 Ms 23.5. 2116.0 2116.1 Ms 18.1. 2124.1 2124.2 Ms 22.9.

2125.4 End of Hole.





	Drill Hole:	AN99-18	Q	UEENSTON N	MINING INC								
	Property: Northing: Easting:	ANOKI Collar loc from #3 17500.00 7400.00	DIA post L-8979: 1.	MOND DRILI 30'N, 185'	L HOLE RECOR	D				1	Page: 1	of 11	
	Elevation:	11000.00	*** Dip Tes	sts ***	*** Din (Posto ttt							
	Collar Azimuth (Grid Collar Dip:).0 -55.0	Depth Azi.	Dip	Depth Az	Lests *** L. Dip		Date Date	Started: Complete	: ed :	June 1 June 2	8, 1999 9, 1999	
	(0 Degrees Grid equal	ls 017 degrees True)	32.8 295.2	-54.0 -56.0	590.4 885 6	-54.5		Drill	ed by:		Benoit	Diamond	Drillin
From	Date Printed:	980.4 8 Jan, 2001				~53.5		Core Mater Core Logge	Size: ial left Location d by:	R in hol	NQ e NX CAS Upper o Dale R	ING Canada S: Alexand	ite #1 der
(ft)	(ft)	Ge	eology			Sample	From	To	-uc		vu/	una	
						No.	(ft)	(ft)	Len (ft)	PY *	AU OZ/T	AU1	AU2
	SUMMARY LOG								(,	ŭ	02/1	02/T	PPB
.0	19.7 OVERBURDEN												
19.7	382.0 BASALT			~	$h \cap q$	3							
382.0	427.1 INTERFLOW MAY	FERIAL	2	. 2	0								
427.1	537.1 BASALT												
537.1	553.8 INCIPIENT ALT	ERED ULTRAMAFICS SHEAR ZON	NE										
553.8	803.4 BASALT												
803.4	829.3 CONTACT ZONE												
829.3	980.4 BASALT		-										
		RECEIVED											
		FED 01 2001											
		GEOSCIENCE ASSESSMEN	Т										
	PROVINCIAL RE OFFICE - SU RECEI												
	FFR II 7	2001											
		2001									i fi fi (i d at		
	A.M. 7:50												
						32D04SW2021	2 200	₩₩₩₩₩₩₩₩ ○ 1					

1

32D04SW2021 2.20881 GAUTHIER

			Drill Hole AN99-18							
From	To	Geology	Sample	From	To	Len	РҮ	au	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	%	Oz/t	OZ/T	PPB

.0 19.7 OVERBURDEN

19.7 382.0 BASALT

Collar into a sequence of very fine grained massive to pillowed basalt. At the start of the drillhole the flows are massive with weakly to moderately foliated flow tops. Circa 96.5 the massive flows appear to be intercalated with pillowed sections defined by erratically distributed selvage material, and, after 129.9 the package is largely pillowed. The foliated tops in the first part of the hole are not extraordinarily well defined but tend to indicate that tops are in the down-hole direction with a massive to weakly fractured bottom to the next unit - foliated zones are at 50 to 65 degrees to the core axis. Within the pillowed members, irregularly spaced, dark, grungy to weakly foliated selvage material is found at variable angles to the core axis.

The rocks vary from medium to dark grey green and green in colour with a dark grey green, very fine grained, siliceous style of unit dominating. In general the basalts are nonmagnetic with magnetic susceptibilities in the order of 0.5 to 1.0 but a patchy magnetism is noted in some of the flow tops in addition to some of the veined and altered sections. Magnetic susceptibilities in the pillowed rocks are lower and tend to be around or less than 0.50 - the highest value is at 133.5 at 278.0 from a calcitic, magnetite-sprinkled fragment in a selvage zone. Elsewhere, patchy magnetism varies from slightly greater than 1 to 38.0.

For the most part, the core is very fine grained to massive and hard from an elevated silica content. The core is cut by a variety of calcite and more rarely quartz veins at all angles and is moderately fractured with calcite and epidote +/- chlorite alteration-healed fractures. Selvage zones are usually more chloritic than the alteration fractures. Pyrite content is slightly elevated in flow tops and, to a lesser extent, in the selvage zones but overall the package is very sparsely mineralized.

There are also a couple of scattered dykes within the package - some dykelets of feldspar porphyry between 88.4 and 99.9, and, two calcitic mafic intrusives at 136.0 to 137.3 and 171.7 to 172.7.

The feldspar porphyry dykes vary from pale grey brown to orangish with variable pink to grey tones. In the largest dykelet - 4.5cms at 99.2, there is a bimodal sense to the feldspar suggesting a FD. Otherwise the dykes are fine grained, cm-sized, speckled with feldspar, unveined and unmineralized. Dykelets include : 88.4 to 88.6 - 2 dykes, 8 mms at 65 degrees, and 1.5 cms at 60 degrees (irregular); at 93.7 - 3.3 cms at 51 degrees; and, 99.1 to 99.9 - 4 dykes at 4.5 cms, 5 mms, 2cms, 8 mms at 50 to 65 degrees.

The two mafic intrusive dykes have essentially been metamorphosed to calcite and amphibole +/- biotite (??) and chlorite. Both units have magnetic susceptibilities less than the adjacent basalt at 0.33 and 0.30 respectively. The upper dyke is more strongly metamorphosed - the lower contact being leached to granulated and gouged over 9 cms, followed by blocky and broken core with gouge from 137.3 to 137.9 (contact at 137.9 with gouge at 47 degrees - upper contact of dyke at 40 degrees. The lower dyke is less altered to metamorphosed with sharp, veined to fractured contacts at 62/77 degrees. The upper dyke is weakly sprinkled with pyrite, the lower dyke is unmineralized.

26839	36.0	39.0	3.0	TR	nil	.000	12
26840	39.0	42.0	3.0	TR-1	nil	.000	10
26841	99.0	102.0	3.0	TR	nil	.000	nil
26842	102.0	105.0	3.0	TR-1	nil	.000	9
26843	133.0	136.0	3.0	TR	nil	.000	nil
26844	136.0	137.3	1.3	TR	nil	.000	nil
26845	137.3	140.0	2.7	TR	nil	.000	nil
26846	140.0	143.0	3.0	NIL	nil	.000	nil
26847	198.0	200.8	2.8	TR	nil	.000	nil
26848	200.8	203.4	2.6	TR-1	.001	.000	36
26849	203.4	206.0	2.6	TR-1	nil	.000	9
26850	253.0	256.0	3.0	TR	.002	.000	69
26851	256.0	258.0	2.0	1-2	nil	.000	nil
26852	258.0	259.6	1.6	10	.001	.000	26
26853	259.6	262.0	2.4	2-3	.001	.000	19
26854	262.0	265.0	3.0	ŤR	nil	.000	5
26855	376.0	378.6	2.6	NIL	nil	.000	2
26856	378.6	381.0	2.4	NIL	nil	.000	nil
26857	381.0	382.0	1.0	TR	nil	.000	nil

		Drill Hole AN99-18				Page: 3 of 13			
Geology	Sample	From	To	Len	PY	AU	AU1	AU2	
	No.	(ft)	(ft)	(ft)	%	OZ/T	OZ/T	PPB	

A breakdown within the system includes :.

From

То (ft) (ft)

> 19.7 96.5 Basalt massive flows. 96.5 129.9 Basalt massive to pillowed. 129.9 293.2 Pillowed.

With depth, the pillowed package appears to grade more magnetic with magnetic susceptibilities in the 0.50 to 1.00 range as compared against less than 0.50 at the start of the system. This phenomenon is partly a function of the amount of selvage material which is invariably magnetic. Magnetic susceptibilities in the order of 100 to in excess of 300 are readily encountered in selvage material with finely granular calcite, magnetite and chlorite +/- pyrite. Also within the more magnetic rocks there is more chlorite at the apparent expense of epidote. The rocks remain guite siliceous. Lower contact at 61 degrees. Areas of interest within the pillowed sequence include :.

137.3 137.9 Broken Blocky Core w/ Gouge.

At 200.8 to 201.3 and 202.0 to 203.4, there are two wider than average irregular guartz calcite veins at 57/65 and 38/35 degrees respectively. The pyrite content is slightly elevated here but that is largely due to selvage material rather than the veins themselves.

At 207.1. contact into a strongly magnetic flow bottom ?? or interflow material with magnetic susceptibilities to 325 - this section appearing to mark the start of much more strongly magnetic selvage to interpillow material. Section from 207.1 to 207.5 at 61/65 degrees.

At 227.5, a 1.7 cm, guartz-calcite vein at 38 degrees with traces of chalcopyrite.

- 247.9 250.8 Mafic Intrusive Contact into another of the dark brownish to black, calcitic, amphibolitic, metamorphosed dykes seen earlier in the drillhole. As before, the rock is nonmagnetic (MS 0.30 to weakly fractured with calcite and very sparsely 0.41). mineralized with pyrite. Contacts are at 28/70 degrees.
- 258.0 259.6 Pyritic A narrow section averaging about 10% pyrite in a selvage area to interpillow material. There is some accessory silica here, and some vuggy calcitic fracturing, otherwise the section is typically calcitic and magnetic. The lead into this section similarly contains a mix of selvage material from 256.3 to past 261 - magnetic susceptibilities are in the range of 8.5 to 98.9 with a value of 65.3 in the pyritic section, and, 0.87 plus 1.98 in the more central parts of pillows above and below the zone respectively. There is also accessory fracturing with calcite to almost a vein breccia just before the pyritic section from 256.6 to 258.0 - MS 22.4. Outside contacts of the pyritic section are at 34/12 degrees.

	Drill Ho	le AN99	-18	Pa	age: 4	of 11	
Sample	From	То	Len	PY	AU	AU1	AU2
NO.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

286.2 288.4 Mafic Intrusive Contact into a bit fresher mafic dyke. This unit is dark brownish green in colour, very fine grained with a weak granular texture, and is finely flecked with acicular crystals of amphibole. Unlike prior dykes this one is very weakly magnetic with susceptibilities of 0.77 to 1.52. The rock is weakly overprinted with calcite, and is neither veined nor mineralized. Contacts are at 57/56 degrees with little to no chilling.

Geology

293.2 319.5 Basalt massive to pillowed.

Within this package of basalt there is a transition from pillowed to massive flows. As a result, magnetic susceptibilities are more uniform in the massive flows from 0.71 to 1.20, with more erratic values from 3.0 to 72.4 in the selvage style material (72.4 at lower contact). Definition of individual flows is not totally clear but, in addition to some selvage to interpillow material, there are local crudely developed quench textures and foliated to weakly brecciated flow margins in the order of 30 cms to 1 meter apart. The lower contact is well defined along a pillowed flow or flow top at 24 degrees.

319.5 382.0 Basalt massive flows.

Return to a package of massive flows as noted at the collar of the drillhole. In the upper half of this section flow margins are highlighted by weakly brecciated and foliated zones +/- a local crude suggestion of quench textures. In the lower part of this package flows are interrupted by three mafic dykes that confuse the flow sequence. In general the massive flows are more uniform magnetically than the pillowed zones with magnetic susceptibilities in the 0.38 to 1.22 range except around flow margins where accessory magnetite continues to exist with susceptibilities from 2.65 to 15.9. Veining and fracturing with calcite +/- epidote and chlorite continue but the pyrite contents are less substantial than in the pillow selvage zones seen earlier. The lower contact of the basalt is surprisingly subtle amongst blocky core at 26 degrees. The mafic intrusives within the lower part of the system include :.

358.3 369.1 Mafic Intrusive The largest dyke in the system here, this mafic intrusive is brownish altered and partly amphibolitized up to 361.0 to 361.5 where the rock grades to more of a brownish green and fresher mafic intrusive that is fine grained to granular textured and flecked with amphibole. The dyke is weakly to moderately overprinted with calcite and is moderately magnetic with susceptibilities from 8.88 to 24.8 (higher in the amphibolitized area). At the shallow contacts magnetism is more erratic with some seeming dipole effects - contacts are at 15/6 degrees. The amphibolitized part of the dyke is fractured to veined with calcite and is sparsely mineralized with fine pyrite - the fresher part of the dyke is weakly fractured with calcite and is essentially unmineralized. Due to the very shallow contacts of this dyke, the next intersections may well be part of the same unit just threading the core axis.

From To (ft) (ft)

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

- 373.2 376.4 Mafic Intrusive A dull grey green to slightly brownish toned mafic intrusive at 18/10 degrees with patches and streaks of mafic intrusive in the basalt up to the next dyke at 378.6. This dyke is of the fresher variety, and is weakly to nonmagnetic with magnetic susceptibilities in the 0.38 to 2.69 range - the lowest dyke is all in the -967 to -953 range. Both dykes are weakly to moderately fractured and overprinted with calcite but are effectively unmineralized.
- 378.6 381.0 Mafic Intrusive The lowest dyke in the package as described above with contacts at 23/54 degrees.

The lower contact of the basalt package is relatively sharp but subtle at 26 degrees - core is partly blocky in this area.

382.0 427.1 INTERFLOW MATERIAL

From (ft)

Contact into a package of interflow material that sits between two basaltic suites. The system is characterized by cherts to cherty interflow and thin basaltic flows - an upper part to 397.8 is dominated by chert and very fine grained, pale grey, siliceous flows while thereafter the sequence is roughly a 50/50 mix of chert and darker green to grey and brownish, albeit still siliceous, basaltic flows. Core angles in the upper part of the system range from 0 to 25 degrees and are locally contorted producing a local brecciated appearance to the core. In the lower sector, core angles range from 20 to 55 degrees - averaging 35 degrees. The system is weakly to moderately fractured and overprinted with calcite and is variably mineralized with up to 5-7% pyrite on a very local scale. Most of the zone is quite blocky due to the hardness of the rock and there are four feet lost between 419.0 and 423.1 no faulting perceived.

The chert members vary from milky to greyish and porcelainous in appearance and tend to have an earthy look when overprinted with calcite. After the section of lost core (below 423.1) the cherts range from grey to black, pale green and locally orangish stained. The basalts are similarly variable in colour and, due to their very fine grain size and siliceous nature, are sometimes difficult to distinguish at the chert contacts - contact discrimination is further obscured by the blocky nature of the core. All of the magnetic susceptibilities in the main part of the sequence are low from 0.15 to 0.25, with an elevated reading at the upper contact of 0.60 and some negative values in the -950 to -974 range. The only other magnetic variation is from a mafic dyke between 392.2 and 395.4 at 0.35 to 0.38 on the meter.

The mafic intrusive is brownish grey green to brown in colour and is partly amphibolitized. Other than some streaks of calcite at the contact the dyke is unveined and unmineralized. It is nonmagnetic and strongly overprinted with calcite. Contacts are at 42/31 degrees. Coded as :.

392.2 395.4 Mafic Intrusive.

9	.000	nil	1-2	3.0	385.0	382.0	26858
nil	.000	nìl	TR-1	3.0	388.0	385.0	26859
14	.000	nil	2-3	2.0	390.0	388.0	26860
3	.000	nil	2-3	2.2	392.2	390.0	26861
5	.000	nil	NIL	3.2	395.4	392.2	26862
nil	.000	nil	1-2	2.4	397.8	395.4	26863
45	.000	.001	TR	3.2	401.0	397.8	26864
19	.000	.001	2-3	3.0	404.0	401.0	26865
nil	.000	nil	TR-1	3.0	407.0	404.0	26866
14	.000	nil	NIL	3.0	410.0	407.0	26867
5	.000	nil	NIL	3.0	413.0	410.0	26868
2	.000	nil	1-2	3.0	416.0	413.0	26869
nil	.000	nil	TR	3.0	419.0	416.0	26870
7	.000	nil	2-3	1.9	425.0	423.1	26871
31	.000	.001	TR	2.1	427.1	425.0	26872

Page: 5 of 11

Drill Hole AN99-18

^{419.0 423.1} Lost core.

			1	Jrili Ho	TE AN99	-18	Pe	ige: 6	DE II	
From	To	Geology	Sample	From	To	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	%	OZ/T	OZ/T	PPB

The outside contacts of the interflow package are at 26/55 degrees - upper contact bleached a pale grey beige colour over 25 cms, lower contact sharp but a little irregular.

427.1 537.1 BASALT

Return to a basaltic suite of rocks consisting of medium to very dark grey green and green massive flows with rather poorly defined flow tops. The suite varies from dark, very fine grained, siliceous flows to more granular textured massive flows that tend to be lighter in colour. Flow margins are represented by weakly brecciated sections wherein it is unclear where the top of one flow stops and the bottom of the next begins. Flow margins are further fogged by the presence of variable calcite and epidote veining and fracturing - from weak to moderate. Sulphide mineralization is very minor. At the start of the system, up to a contact with a mafic dyke at 433.7, the basalt is variably magnetic with magnetic susceptibilities in the range of 1.30 to 17.1. Thereafter, the sequence is largely nonmagnetic with susceptibilities in the 0.50 to 0.74 corridor except in the flow top locales where readings vary from 1.33 to 3.70. Two areas with accessory limy epidote and calcite alteration along with vuggy calcite stringers are deficient in magnetite with readings of 0.45 and 0.38, and there is a dramatic increase in alteration and magnetism across the lower contact zone after 534.5 with erratic susceptibilities from 11.7 to 41.8.

433.7 435.1 Mafic Intrusive Contact into the mafic intrusive noted above. The dyke is of the strongly calcitic, amphibolitic and nonmagnetic type with magnetic susceptibilities of 0.45 and 0.47. As normal the dyke is brownish in colour and granular textured, is weakly fractured with calcite and is essentially unmineralized. Contacts are weakly foliated and are along veining at 60/65 degrees.

The lower contact of the basaltic package appears to start along more of an alteration front rather than a change in rock type. Beginning at 534.5 there is a subtle increase in calcite, chlorite and magnetism after a thin calcitic fracture at 72 degrees. By 535.4 the rock becomes very fine grained, is strongly calcitic and becomes more brownish to reddish toned leading up to the lower contact also at 72 degrees.

537.1 553.8 INCIPIENT ALTERED ULTRAMAFICS SHEAR ZONE

Contact into a package of sheared, incipient altered ultramafic rocks although, due to the strong alteration, the protolith is not totally clear. The package can probably be better described as a chlorite schist with numerous grey to off-white and pinkish streaks of carb +/- quartz intercalated with brownish to reddish toned amphibolitized streaks - as relatively typical incipient alteration. Hints of an ultramafic chemistry are present throughout the section but other rock types are present as well. Also typical to incipient alteration is the moderate hardness of the rock, moderate to locally strong magnetism, the presence of ankerite, and fine,

26873	427.1	430.0	2.9	NIL	.001	.000	19
26874	496.0	499.0	3.0	TR-1	.002	.000	69
26875	520.0	523.0	3.0	NIL	nil	.000	2
26876	532.0	534.5	2.5	TR	nil	.000	5
26877	534.5	537.1	2.6	TR	nil	.000	3

- ----

26878	537.1	539.2	2.1	TR-1	nil	.000	2
26879	541.2	542.3	1.1	TR	nil	.000	0
26880	542.3	544.0	1.7	TR	nil	.000	2
26881	544.0	545.8	1.8	TR	nil	.000	7
26882	545.8	548.0	2.2	TR	nil	.000	5
26883	548.0	550.6	2.6	TR-1	nil	.000	9
26884	550.6	553.0	2.4	TR	.001	.000	29
26885	553.0	553.8	. 8	TR	nil	.000	17

								_		
From	То	Geology	Sample	From	то	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	*	OZ/T	OZ/T	PPB

disseminated pyrite. The rock is moderate to well foliated at 50 to 65 degrees to the core axis with local contorted material.

The existence of a shear zone is largely defined from the foliation combined with the presence of lost core from 539.2 to 541.2 although no gouge is noted in the package.

539.2 541.2 Lost core.

The other rock types within the system include an apparent in-rafted wedge of brownish green, very fine grained, strongly calcitic, magnetic basalt from 538.4 to 539.2 - contacts broken; a reddish brown, magnetic, amphibolitic, calcitic, granular to finely speckled unit of probable mafic intrusive origin from 545.8 to 550.6 - contacts at 55/50 degrees with veining, and; a narrow, calcitic, orange stained cherty interflow unit at the very base of the system from 553.2 to 553.8 at 60/65 degrees.

545.8 550.6 Mafic Intrusive.

553.2 553.8 Interflow Material.

Carbonate in the system is a mixture of both calcite and ankerite - the rocks up to 542.3 being very strongly calcitic, grading to ankeritic with late calcite fractures below that point aside from a central core of the mafic intrusive which is calcitic, and, the cherty interflow section at the end of the zone which is similarly calcitic. Aside from the cherty interflow at the lower contact with a reading of 0.45, all of the rocks in this corridor are moderate to strongly magnetic with magnetic susceptibilities in the order of 13.3 to 45.2. The lower contact of the system is at 56 degrees.

553.8 803.4 BASALT

Contact into a package of medium to pale grey green and grey basalts that are much lighter in colour and less magnetic than any of the basaltic rocks seen to date - an Mg tholeiite ?? The basalt is fine grained to very fine grained with a local mottled texture that appears to reflect a variable alteration with calcite. Magnetic susceptibilities seem to occupy a rather narrow range from 0.10 to 0.20. The core is very weakly fractured with calcite +/- chlorite and is essentially unmineralized.

From 578.6 to 579.3, the light coloured basalt is cut by a narrow mafic dyke at 51/54 degrees. The dyke has a crudely developed gabbroic to granular texture with plagioclase, mafic minerals and minor calcite. Unlike most of the mafic dykes, the rock is dull to dark grey green in colour and is not speckled with amphibole. The dyke is weakly fractured with calcite and is mineralized with fine traces of pyrite. Both contacts are sharp and slightly chilled. Magnetic susceptibilities are slightly elevated over the adjacent basalt at 0.63 and 0.66.

At 607.2 the first of the flow features in the sequence begin to emerge here brecciated margins to adjacent flows with a weakly bleached, siliceous, irregular top averaging 46 degrees to the core axis. Flow features are

26886	553.8	556.0	2.2	NIL	nil	.000	2
26887	556.0	559.0	3.0	NIL	nil	.000	0
26888	612.0	615.0	3.0	TR-1	nil	.000	7
26889	615.0	618.0	3.0	TR	.001	.000	34
26890	618.0	620.0	2.0	TR	.001	.000	31
26891	620.0	621.7	1.7	TR	nil	.000	3
26892	621.7	624.7	3.0	NIL	nil	.000	3
26893	624.7	627.0	2.3	TR	nil	.000	7
26894	627.0	630.0	3.0	TR	nil	.000	14
26895	722.0	725.0	3.0	TR	nil	.000	10
26896	725.0	728.0	3.0	TR-1	nil	.000	7
26897	728.0	729.2	1.2	2-3	nil	.000	15
26898	729.2	730.6	1.4	TR	nil	.000	0
26899	730.6	733.0	2.4	TR	nil	.000	0
26900	733.0	736.0	3.0	NIL	nil	.000	5
26901	736.0	739.0	3.0	NIL	.001	.000	24
26902	739.0	741.4	2.4	TR	.001	.000	19
26903	741.4	744.0	2.6	NIL	nil	.000	5
26904	775.0	778.0	3.0	TR	nil	.000	3
26905	778.0	781.0	3.0	TR-1	.001	.000	26

Drill Hole AN99-18

Page: 7 of 11

		Drill Hol	.e AN99-	18	Pa	ge: 8	of 11	
Geology	Sample No.	From (ft)	TO (ft)	Len (ft)	РҮ ¥	AU OZ/T	AU1 OZ/T	AU2 PPB
relatively well defined in the corridor 607 to 678 - enhanced by the	26906	781.0	784.0	3.0	TR	.001	.000	29
presence of chert as siliceous tops and as cherty interflow before more	26907	784.0	786.7	2.7	TR	nil	.000	10
featureless basalt is again encountered. Flow margins vary from brecciated	26908	786.7	789.8	3.1	TR	nil	.000	9
to foliated, to cherty with local sections where a crudely developed quench	26909	789.8	792.0	2.2	NIL	nil	.000	7

26910

26911

26912

26913

792.0 795.0

795.0 798.0

798.0 801.0

801.0 803.4

3.0

3.0

3.0

2.4

NIL

NIL

TR

TR

.000

.000

.000

.000

10

10

7

5

nil

nil

nil

nil

fine grained and siliceous at the top that it is difficult to pinpoint the precise change to chert. Tops are definitely downhole. Interestingly, the flow tops generate little in the sense of accessory sulphide mineralization and the rocks remain rather weakly fractured with late calcite +/- guartz stringers. Magnetic susceptibilities also remain consistent from 0.07 to 0.15 with only a couple of slight bumps to 0.33 and 0.40 in some more chloritic flows. The rocks are medium to pale grey green and green in colour with the cherty sections ranging from grey and grey green to brownish toned and locally very dark grey. Some of the cherts are pale greenish in colour around alteration-healed calcitic fractures and quartz-calcite veins. Sections of interest include:.

texture is developed. In a few circumstances the flows grade sufficiently

608.6 609.2 Chert to cherty flow top at 47 degrees.

From

(ft)

TO

(ft)

- 615.0 616.5 Chert a very fine grained siliceous top over 9 cms grading to a chert at 615.0. Contacts are at 42/48 degrees - lower contact quite subtle.
- 621.7 624.7 Cherty Interflow Material a brownish to grey and pale greenish cherty interflow in contact with a 3.5 cm bleached flow top at 621.7, and, a brecciated, more chloritic flow bottom at 624.7 (to 627.0). Contacts at 54 degrees.
- 624.7 640.2 A section with a variety of brecciated to cherty and foliated flow tops to thin basaltic flows. Contacts vary from 30 to 45 degrees but are obscured in the more cherty portion of the section by blocky core below 635 feet. Contacts average 35 degrees.
- 640.2 648.4 Chert a grey to brownish and pale green section of chert. Contacts are at 56/57 degrees - lower contact broken. Unmineralized.
- 654.5 655.0 Chert to cherty interfow grey to brownish in colour with irregular fractured contacts at 66/42 degrees.
- 659.3 659.4 An interflow chert to cherty flow top at 56 degrees.
- 660.5 668.7 Chert a dull brownish to dark grey chert with some pale greenish alteration adjacent to fractures and veining. There is some crude layering in this section running almost along the core axis. Contacts are at 27/51 degrees - upper contact clean but slightly undulating, lower contact irregular with bleaching and fracturing with some fragments to streaks of the chert in the adjacent basalt.
- 677.0 677.3 A cherty flow top with irregular contacts at 42/45 degrees. Just below this section is an irregular bleached interval with pinkish quartz-calcite veining at 17 degrees after which the flow sequence is more massive once more (after 678.0).
- 678.0 708.1 Basalt a return to the more massive basalts as seen at the top of this package i.e. Medium to pale grey green and green in colour with few flow features, weakly fractured to pervasively

		Drill Ho	ole AN99	-18	Page :		9 of 11	
Geology	Sample	From	То	Len	PY	AU	AU1	
	No.	(ft)	(ft)	(ft)	¥	OZ/T	OZ/T	

AU2

PPB

altered with calcite, sparsely mineralized with pyrite, and, magnetic susceptibilities in the 0.10 to 0.21 range. The rocks are moderately hard from local elevated silica and there are some weakly bleached sections with potential fine variolites otherwise flow features are absent. The lower contact is along a streaky altered to foliated flow top at 21 degrees.

708.1 730.6 Basalt chloritic - contact into chloritic basalt that appears to mark a transition zone into another package of pale basalts with sections of cherty interflow. The couple of flows in this corridor are dark green and chloritic with a speckled to crudely developed gabbroic texture - some fine grained material suggesting flow margins. Magnetic susceptibilities are elevated over the adjacent flows with readings greater than 0.45, and there is a weak reaction to the presence of ankerite. At 724.8 the basalt is strongly flooded with calcite and becomes more strongly magnetic with susceptibilities of 7.38 and 9.90. The core then becomes increasingly amphibolitic after 727.7 with some incipient style alteration above a narrow chloritic, amphibolitic shear from 729.2 to 730.3 at 60 to 70 degrees. Susceptibilities in this area range from 14.8 to 38.2 but drop off rapidly in the shear to 12.8 then 0.79 and 0.86 by the lower contact at 52 degrees. Elevated pyrite is found in the incipient altered style of material just above the shear but otherwise occurs in only trace amounts. The lower contact is sharp with the adjacent flow being weakly foliated at its base at 50 to 60 degrees.

729.2 730.3 Shear Zone.

- 730.6 741.4 Basalt cherty a section of pale, thin, siliceous basaltic flows with gradational contacts into cherty tops as some of the flows in the package from 607.2 to 678.0. As before the rocks are weakly fractured with calcite and very sparsely mineralized with pyrite. The flows are pale to medium grey and grey green in colour grading to pale greenish and brownish in some of the cherty tops. Magnetic susceptibilities are in the range of 0.10 to 0.12 with up to 0.46 adjacent to the prior shear. Layering in the cherts and the flow tops is at 55 to 60 degrees - lower contact broken but appears to be at 62 degrees.
- 741.4 773.8 Basalt a section of pale grey green to grey, speckled to massive flows of probable Mg tholeiite composition with foliated to brecciated flow margins at 45 to 60 degrees. Flows appear to range from just over a foot to 17 feet (the first flow), with flow discrimination becoming a bit more obscure at depth. The rocks are weakly fractured with calcite and very sparsely mineralized with pyrite. Magnetic susceptibilities are in the range of 0.12 to 0.24. The lower contact is along a brecciated flow top with accessory silica over 17 cms at 46 degrees, marking a return to more cherty material in the system.

From То (ft) (**f**t)

					JIE AN99	-10	FC	ige: IU		
From	To	Geology	Sample	From	To	Len	РҮ	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	%	OZ/T	OZ/T	PPB

773.8 803.4 Basalt cherty - return to a package of fine grained flows with strongly siliceous to cherty flow tops in addition to variably bleached to foliated margins in some flows - foliation / contacts average 55 to 60 degrees. From 775.8 to 776.3 one flow top is streaked with chert at 49/58 degrees. The largest cherty section sits downhole from a bleached and foliated flow top chert from 786.7 to 789.8 at 51/67 degrees. Pyrite contents are slightly elevated locally in this sector - normally adjacent to late calcite veins. Magnetic susceptibilities range from 0.09 to 0.18. The lower contact is sharp and siliceous to cherty over 3 cms at 59 degrees. The chert section is coded as :.

786.7 789.8 Chert.

803.4 829.3 CONTACT ZONE

Contact into a transition zone that consists of intercalated chloritic flows and chert. This package is different than the chloritic section with a narrow shear between 708.1 and 730.6 although the flows are similarly chloritic, locally partly amphibolitized and quite variable in their magnetic susceptibilities. This contact zone is suggestive of a volcanic hiatus between the light coloured basalts above and the more chloritic passage that follows. Chert dominates.

The basaltic member varies from dark green to dark brownish green in colour and tends to be most brownish and amphibolitic next to the chert contacts. Individual flows are thin, under 60 cms, with streaky to foliated and locally brecciated tops with or without cherty material. Magnetic suscetibilities are highly variable from 0.34 to 1.28 in some of the more massive parts of flows and flow tops up to 39.7 in the amphibolitized sections. The basalts are variably flecked to fractured and pervasively altered with calcite - strongest reactions in the amphibolitized areas where the pyrite is also slightly elevated up to trace to 1%.

The chert members exhibit a wide variation in colour from off white to grey beige, pale to medium grey, pinkish grey and dull reddish brown. The cherts are foliated to laminated at an average of 60 degrees and variably fractured to overprinted with calcite but sparsely mineralized with pyrite. Magnetic susceptibilities range from lows of 0.11 to 0.16, but are usually in the 0.60 to 1.21 area with a variation of 25.3 at 808.2 feet where there is some amphibolitization and exsolved magnetite in the chert. Chert sections include :.

806.7 813.2 Chert - contacts at 53 degrees.

- 814.5 817.7 Chert contacts at 54/61 degrees, minor intercalated basalt ?? and bleaching to pinkish tones.
- 817.7 825.0 Basalt with 9 cms chert at: 818.7 to 818.9 at 55/63 degrees, and; 20 cms of streaky chert from 823.3 to 823.9 at 51/63 degrees, and;.
- 825.0 829.3 Chert contacts at 51/57 degrees. This is the darkest reddish brown section of chert at the end of the zone with a strongly amphibolitized patch and a weak brecciation over the basal 20

10	.000	nil	TR	3.3	800.7	803.4	26914
0	.000	nil	TR	2.3	809.0	806.7	26915
3	.000	nil	TR	3.0	812.0	809.0	26916
10	.000	nil	TR	1.2	813.2	812.0	26917
9	.000	nil	TR-1	1.3	814.5	813.2	26918
5	.000	nil	TR	3.2	817.7	814.5	26919
2	.000	nil	TR	2.3	820.0	817.7	26920
0	.000	nil	TR	3.0	823.0	820.0	26921
10	.000	nil	TR	2.0	825.0	823.0	26922
9	.000	nil	TR	2.0	827.0	825.0	26923
14	.000	nil	TR	2.3	829.3	827.0	26924

Dece 10 of 11

Desill Mala ANOO 10

				10						
From	То	Geology	Sample	From	То	Len	PY	AU	AU1	AU2
(ft)	(ft)		No.	(ft)	(ft)	(ft)	¥	OZ/T	OZ/T	PPB

cms.

980.4 End of Hole.

The lower contact of the zone is moderately fractured to brecciated, calcite overprinted and is relatively sharp at 57 degrees.

829.3 980.4 BASALT

Contact into a package of dark green to dark grey green basaltic flows. This sequence of flows is quite different from the massive flows at the start of the hole in that flow centers vary from fine to medium grained and are speckled to flecked with hornblende producing a local mottled appearance. These are more typical Anoki Main Zone basalts or coarse flows and are different again from the gabbroic textured units which tend to be flecked to speckled with plagioclase. Flow margins are defined by fine grained to very fine grained rocks with or without fractured to streaky altered and foliated, to brecciated tops / bottoms - i.e. The gradation to finer grained rocks at flow margins hampers precise definition of individual flows. The only chert in the system appears toward the end of the hole after 953.6, where some flow tops are streaked with cherty material at an average of 60 degrees to the core axis. Indications from the cherty tops at the end of the hole is that tops are north.

The rocks are rather weakly fractured to pervasively altered with calcite, and mineralization is sparse. Pyrite is most common in some of the calcite fractured to partly amphibolitized flow margins - up to 2-3% but only on a cm scale. The flow margins also tend to be the more magnetic parts of the flows with susceptibilities in the 1.02 to 2.0 range with a local spike to 8.65 in the presence of magnetite. Flow centers occupy a narrow susceptibility range from 0.43 to 0.57 - other variations are found at the upper contact which grades rapidly from a high of 31.5 at the contact to uniformly less than 1.0 over the first 6 feet, and, in the cherty tops to interflow at the end of the hole which range from 0.13 to 0.37. The main alteration minerals are chlorite and calcite with lesser epidote and amphibole.

The chert component approaching the end of the hole is best defined as flow top material with streaks of chert rather that a true cherty interflow member. The occurrences consist of foliated to brecciated and possibly ropey flows with chert that are constrained in two corridors coded as :.

953.6 957.7 Flow top cherty - a mix of thin flows with several of the tops accompanied by chert, and;.

974.0 976.3 Flow top cherty - with 11 cms of chert and granular carb at the lower contact at 59 degrees.

26925 829.3 832.0 27 TR .001 .000 17 26926 877.0 880.0 3.0 NIL .001 .000 21 26927 880.0 883.0 3.0 TR-1 nil .000 5 26928 883.0 886.0 3.0 TR-1 nil .000 5 26929 953.0 956.0 3.0 TR nil .000 10 26930 956.0 959.0 3.0 TR nil .000 9 26931 974.0 977.0 3.0 TR nil .000 19

Daga 11 - 6 11

Drill Hole AN99-19







Declaration of Assessment Work Performed on Mining Land

Transaction Number (office use)

WOI80. 00050 Assessment Files Research Imaging

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990



tions 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, this work and correspond with the mining land holder. Questions about this collection and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 685.

Instructions: - For work performed on Crown Lands before **recording** a claim, use form 0240. - Please type or print in ink. **2. 20 8 1**

1. Recorded holder(s) (Attach a list if necessary)	
Name	Client Number
QUEENSTON MINING INC.	185109
Address SUITE 1116, 111 RICHMOND ST. W.	Telephone Number 416 364-0001
TORONTO, ONTARIO M5H 2G4	Fax Number 416 364-5098
Name	Client Number
Address	Telephone Number
	Fax Number

2. Type of work performed: Check (\checkmark) and report on only ONE of the following groups for this declaration.

Geotechnical: prospecting, s assays and work under section	surveys, X on 18 (regs)	Physical: drilling stripp trenching and associa	bing, Rehabilitation
Work Type			Office Use
DIAMOND DRILLING		1	Commodity
		1	Total \$ Value of Work Claimed 75, 950
Dates Work From Performed Day 3 Month 06	To Year 99 Day 31	Month 08 Year 99	NTS Reference
Global Positioning System Data (if available)	Township/Area GAUTHIER	TWP.	Mining Division Larder Lake
	M or G-Plan Number G-3211		Resident Geologist District Kirklandhake

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;

- provide proper notice to surface rights holders before starting work;

- complete and attach a Statement of Costs, form 0212;

- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name DALE ALEXANDER KIRKLAND LAKE EXPLORATION MANAGER, MURRAY McGILL,, PROJECT GEOLGIST, TERRY PLAYFORD, CORE GRABBER	Telephone Number (705) 567-4377	
Address c/o QUEENSTON MINING INC, PO Box 996, Kirkland Lake, Ontario P2N 3L1	Fax Number (705) 567-4426	
Name BENOIT DIAMOND DRILLING LTD.	Telephone Number (819) 824-9107	
Address 1701, RUE L'HYDRO, C.P. 815, VAL D'DOR, QUEBEC	Fax Number (819) 825-0784	
Name SWASTIKA ASSAY LABORATORIES	Telephone Number (705) 642-3244	
Address P.O. Box 10, SWASTIKA, ONT. P0K 1T0	Fax Number (705) 642-3300	

4. Certification by Recorded Holder or AGENT

this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent	NF	Date 6/2/01
Agent's Address QUEENSTON MINING INC., TORONTO, ONTARIO	Telephone Number (416) 364-0001	Fax Number (416) 364-5098
0241 (03/97)		
RE	CEIVED	
FE	B 0 7 CCC	
GEOSCIE	NCE ASSESSMENT	3242

Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining 5. land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form

WOI 80.00050						
Minir work minir colurr indic	ng Claim Number. Or if was done on other eligible ng land, show in this an the location number ated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date
	TB 7827	16 ha	\$26,825	N/A	\$24,000	\$2,825
1	G.751 L. 8828	10.5 ha	\$32,891	0	\$15,750	\$17,141
2	G.968 L. 8979	7.3 ha	\$25,348	0	\$10,9500	\$14,398
3	G.969. L. 9433	9.5 ha	\$17,711	0	\$14,100	\$3,611
4	1225507	6	0	\$2,400	0	0
5	1227221	1	0	\$400	0	0
6	1227222	1	0	\$400	0	0
7	1227223	1	0	\$400	0	0
8	1225731	3	0	\$1,200	0	0
9	1227326	1	0	\$400	0	0
10	1203540	2	0	\$800	0	. 0
11 /	1226075	1	0	\$2,400	0	0
12	1226196	2	0	\$4,800	0.	0
13	√ 1226197	2	0	\$4,800	0	0
14	J 1226198	2	0	\$4,800	0	0
15 ,	949740	1	0	\$400	0	0
16 /	949781	1	0	\$400	0	0
17 /	949827	1	0	\$400	0	0
	Column Totals	25	\$75,950	\$24,000	\$40,800	\$35,150

WAYNE BENHAM ____, do hereby certify that the above work credits are eligible under

subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

I.

Signature of Recorded Holder or Agent Authorized in Writing Date 6/2/01

Instructions for cutting back credits that are not approved. 6.

Some of the credits claimed in this declaration may be cut back. Please check (1) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated. X
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only			
Received Stamp		Deemed Approved Date	Date Notification Sent
	RECEIVED	Date Approved	Total Value of Credit Approved
0241 (03/97)	FEB 0 7 COM GEOSCIENCE ASSESSMENT OFFICE	Approved for Recording by Mining Record	ler (Signature)



GEOSCIENCE ASSESSMENT OFFICE

W. Bala/01

Ĉ

Dontario Ministry of Northern Development and Mines

Schedule for Declaration of Assessment Work on Mining Land

Transaction Number (office use)

lining Cial vork was do nining land, ne location n the claim	in Number. Or if ne on other eligible show in this column number indicated map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.	
54	802410	11	0	\$400	0	0	
55	802411	11	0	\$400	0	0	
56	802412	11	0	\$400	00	0	
57	983348	11	0	\$400	0	0 ,	
58	983349	1	0	\$400	0	0	
59	1214034	1	0	\$400	0	0	
60	1219966	1	0	\$400	0	0	
61							
62	<u> </u>						
63							
64							
65					-		
66							
67					_		
68							
69							
70							
71							
72							
73							
74						· · · · · · · · · · · · · · · · · · ·	
75							
76							
77							
78							
79	<u></u>						
30							
31							
32	· <u> </u>						
33						<u> </u>	
34	• *******						
35						<u> </u>	
36							
37						<u> </u>	
88				·····	1		
Co	olumn TotalsRE	CEIVED	\$75,950	\$40,800	\$40,800	\$35,150	
0 (02/96)	FE	B 0 7 2001 ENCE ASSESSMENT			IN For		

ntario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use)

NO180,00050

Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

	2.208	381	
Work Type	Units of work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
DIAMOND DRILLING	3,108 feet	\$16.09/ft.	\$50,008
SUPERVISION	12 days	\$300/day	\$3,600
CORE LOGGING, DRILL LOGS, SECTIONS	42 days	\$282/day	\$11,850
GEOTECHNICIAN-CORE GRAB & SPLIT	28 days	\$150/day	\$4,200
ASSAYING	431 samples Au	\$12/sample	\$5,172
Associated Costs (e.g. supplie	es, mobilization and demobilization).		
Transpo	ortation Costs		
	TRUCK 28 days	\$30/day	\$840
	Fuel		\$280
Food and	Lodging Costs		
		<u> </u>	\$75,950

Total Value of Assessment Work

⊅10,900

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.

2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK	x 0.50 =	Total \$ value of worked claimed.

Note:

0212 (03/97)

- Work older than 5 years is not eligible for credit.

A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a
request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the
Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, <u>WAYNE BENHAM</u>, do hereby certify, that the amounts shown are as accurate as may reasonably

be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying

Declaration of Work form as AGENT I am authorized to make this certification. (recorded holder, agent, or state company position with signing authority)

Signature Date hers 612/01

Ministry of Northern Development and Mines Ministère du Développement du Nord et des Mines

February 26, 2001

Wayne Benham QUEENSTON MINING INC. 1116-111 RICHMOND STREET WEST TORONTO, ONTARIO M5H-2G4 😵 Ontario

Geoscience Assessment Office 933 Ramsey Lake Road 6th Floor Sudbury, Ontario P3E 6B5

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

Dear Sir or Madam:

Submission Number: 2.20881

 Subject: Transaction Number(s):
 W0180.00050
 Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact LUCILLE JEROME by e-mail at lucille.jerome@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

fucille Jerome

ORIGINAL SIGNED BY Lucille Jerome Acting Supervisor, Geoscience Assessment Office Mining Lands Section

Correspondence ID: 15727 Copy for: Assessment Library

Work Report Assessment Results

Submission Nun	nber: 2.2088			
Date Correspond	lence Sent: Februar	y 26, 2001	Assessor:LUCIL	LE JEROME
Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W0180.00050	8828	GAUTHIER	Approval	February 21, 2001
Section: 16 Drilling PDRILI	L			
At the discretion of at any time.	of the Ministry, the as	sessment work performed on the min	ing lands noted in this work re	eport may be subject to inspection and/or investigat
Correspondence	to:		Recorded Hold	ler(s) and/or Agent(s):
Resident Geologist		Wayne Benham		
Kirkland Lake, ON	N		QUEENSTON M TORONTO, ON	MINING INC. ITARIO
Assessment Files	Library			
Sudbury, ON				

.

Ministry of Ministry of Natural Northern Development Resources and Mines	
INDEX TO LAND DISPOSITION	
	M N.R. ADMINISTRATIVE DISTRICT
PLAN	KIRKI AND LAKE
G-3211	
TOWNSHIP	
GAUTHIER	
	LIMISKAMING
Sca 1999	le 1 20 d00
tadit di 1µmm 2000 Juan 4000 Fuji <u>di Hiti kana kana kana kana kana</u>	sace écris 7:050 3:000 million i il cam Fort
Cantour Ir	ularvak 10 Matrum
	AREAS WITHDRAWN FROM DISPOST M.R.O MINING RIGHTS ONLY S.R.O SURFACE RIGHTS ONLY M.+S MINING AND SURFACE RIG
SYMBOLS	Description Order No. Date Disposition
loundary	TOWNSITE STAKING RESTRICTED S,S 30(B) MIN
Township, Meridian, Baseline	
Road allowance; surveyed	
Lot/Concession; surveyed	
Parcel; surveyed	
Right-of-way; road	
railway	
Reservation	
Cliff. Pit. Pila	
Contour	
Approximate	
Depression	
Control point (horizontal)	
Flooded land	
Pipeline (above ground)	

DISPOSITION OF CROWN LANDS

..........

double track -

Road; highway, county, township

trail, bush

Shoreline (priginal)

Transmission line

Wooded area

abandoned

access -

Patent	
Surface & Mining Rights	
Surface Rights Only	
Mining Rights Only	
Lease	
Surface & Mining Rights	
Surface Rights Only	
Mining Rights Only	
Licence of Occupation	
Order-In-Council OC	
Cancelled	
Reservation	
Sand & Gravel	
LAND USE PERMIT	
	۲
a	
ARCHIVED JULY 28, 1995	
ARCHIVED AUGUST 26/97.	
CIRCULATED JANUARY 25, 1995 ML	
CIRCULATED JANUARY 25, 1995 ML	

Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources

HTS ING ACT Statistics ----

> THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER WITH THE MINING RECORDER MINISTRY OF NORTHERN DEVELOPMENT AND MINES. FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

NOTICE OF FORESTRY ACTIVITY THIS TOWNSHIP / AREA FALLS WITHIN THE AND NAY BE SUBJECT TO FORESTRY OPERATIONS THE NINR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT: P 0 80X 129 SWASTIF 4, ONT POF TO 7**05-64**2-32**2**2

The disposition of land, location of lot fabric and parcel boundaries on this index was compiled for administrative purposes only

