

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge

HOLE No.: GB-154

Collar Eastings: 900.00

Collar Northings: 5500.00

Collar Elevation: 0.00

Grid: Main 1988

INTERSECTED IN GB-148

Collar Inclination: -60.00

Grid Bearing: 270.00

Final Depth: 1204.28 metres

TO TEST THE DEPTH AND NORTHERLY EXTENSION OF THE MINERALIZATION AND ALTERATION

Logged by: MGM

Date: March 2, 1992

Down-hole Survey: TROPARI

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
0.00	16.76	CASING - lce, water, overburden.								
16.76	339.26	MAFIC VOLCANIC WITH INTERFLOW SEDIMENTS / CHERT / DYKES	30063	70.25	70.57	0.32	16	6	11	10
			30064	93.00	95.00	2.00	51	4	47	23
			30065	324.00	325.00	1.00	19	7	70	10
		Mafic volcanic: - Dark grey-green colour; fine-grained. - Massive to weakly-developed foliation, generally @ 25-30° CA (range 18-50 CA). - Veins: average 2% calcite-quartz-epidote-garnet-diopside veins (irregular to conformable with foliation), 2mm-2cm wide, generally, range 30-50° CA. - Composition: amphibole-chlorite-feldspar; locally, 1% calcite anhydrides (109.35-110.95m). - Indurated - generally does not scratch with steel, except where most altered. - Alteration: pervasive, moderate to strong magnetite occurs as fine disseminations to irregular bands; variable, weak to strong chlorite; locally, cordierite spots occur: 2% from 28.28-28.80m, 3% from 159.13-160.60m. - Sulphide mineralization consists of pyrite: finely disseminated in trace amounts; with occasional slightly enriched zones: 0.5% @ 71.35-71.63m, 1% @ 83.05-83.35m, minor amounts @ 92.10-95.40m, 98.49-99.57m. - Competent core (average 25cm core length); 100% core recovery; few blocky zones: 16.76-17.60m (rubbly), 25.32-26.98m, 42.45-42.60m, 116.55-116.70m, 131.30-131.55m, 157.40-157.65m, 171.20-171.60m, 174.04-174.24m. - Upper contact is unobserved due to overburden; lower contact is rubbly due to fault contact.								
		Interflow sediments: - Medium-dark green-grey colour; fine-grained.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 2

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Well-foliated (25-40 CA). - Minor fragments are subrounded to subangular, 1-5cm diameter; could be breccia (float?) - Weak to moderate magnetism; scratches with steel. - Similar alteration to mafic volcanic, but strong biotite alteration is banded to patchy, fine disseminations; moderate cordierite spotting, locally. - Trace amounts of disseminated pyrite. - Sediments occur: 68.90-70.20m, 70.58-77.40m, 91.14-93.66m, 107.40-108.25m. - Generally, subtle contacts or dyke contacts.								
		Interflow chert:								
		- Light-medium green colour; fine-grained; massive. - Non-magnetic. - Occur at: 70.20-70.58m, 77.40-77.80m, 83.96-84.31m, 107.03-107.20m, 159.85-159.95m. - Contacts are generally sharp, conformable.								
16.76	37.90	Mafic Volcanic								
		- As described above.								
37.90	60.90	Mafic Dyke								
		- Dark, grey-green colour; fine- to medium-grained; massive. - 1% quartz-epidote-calcite-garnet veins/veinlets (irregular). - Moderate to strong magnetism; indurated - Trace amounts of disseminated pyrite blebs. - Contacts are sharp: upper @ 40° CA, lower @ 30° CA. - Other dykes/dykelets: 30.16-30.28m, 64.05-68.90m, 78.25-79.94m, 84.31-91.14m, 95.55-96.30m, 119.67-119.69m, 121.11-121.12m, 122.65-123.87m, 125.26-125.27m, 132.31-133.06m, 142.50-146.12m (upper contact @ 40° CA, lower contact @ 30° CA), 167.03-175.32m, 192.53-192.94m.								
60.90	64.05	Dacitic Porphyritic Dyke								
		- Light, salmon-brown colour; massive. - Intermediate to felsic composition; 5% feldspar phenocrysts. - Non- to weakly magnetic. - Both contacts @ 30° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 3

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Other dacitic dyke @ 165.92-167.03m (both contacts @ 50° CA). 20.48m: Foliation @ 45° CA. 69.60m: Foliation @ 25° CA. 74.55m: Foliation @ 50° CA. 80.45m: Foliation @ 25° CA. 106.13m: Foliation @ 40° CA. 129.73m: Foliation @ 30° CA.								
68.90	147.20	Mafic Volcanic - as described above.								
147.20	155.90	Interflow Sediment - Zones with biotite-rich bands/patches (disseminated, fine-grained biotite) which look similar to the mafic volcanics, but are more granular in appearance. - Massive to weakly laminated. - Other zones: 131.13-131.30m, 160.65-163.40m, 188.30-185.30m. 137.58-137.66m: Quartz-calcite-epidote vein (2.5cm) @ 30° CA. 149.42m: Foliation @ 40° CA. 157.25-158.45m: Zone of strong foliation @ 40 CA ("mylonitic"), which is locally cross-cut by later foliation @ 15° CA.								
155.90	167.03	Mafic Volcanic - as described above.								
167.03	175.32	Mafic Dyke - as described above (37.90-60.90m). - Pervasive, strong chlorite.								
175.32	204.94	Mafic Volcanic - as described above. 175.32-176.88m: Zone of brecciation exhibits green-pink colour alteration (siliceous-hematitic/potassic?); non-magnetic. 188.09-188.14m: Calcite vein (3.5cm) @ 45° CA. 190.07m: Foliation @ 30° CA. 192.15-192.53m: Minor fault zone (recemented); alteration includes silicification, calcite and epidote; contains two light grey, mafic dykelets. 192.94-193.35m: Intense siliceous-epidote alteration. 193.58-193.82m: Interbed of felsic (cherty?) with quartz eyes; upper contact @ 25° CA, lower contact @ 35° CA. 193.86m: Foliation @ 25° CA. 203.74-204.94m: Intense epidote-siliceous alteration may have								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 4

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		affected both mafic volcanic and dyke (contact is obliterated). 263.84-263.98m: Blocky zone.								
		264.94-252.70 Composite Dyke 264.94-266.43m: Felsic, light grey colour, felsic-ar-phyric. 266.43-252.70m: Mafic dyke - as described @ 37.50-60.90m. - Medium-grained; 2-3% quartz-calcite-epidote-garnet-diopside veins/veinlets with light, green-white colour alteration haloes; veins generally @ high angle to CA, but range from 30° to 80° CA. - Locally, weak foliation. - Trace amounts (up to 0.5% locally) of pyrite; disseminated blebs to stringers. 223.80m: Calcite-quartz-garnet-diopside vein (1.5cm) @ 45° CA. 220.98m: Calcite-quartz vein (1.0cm) @ 30° CA. 234.55m: Weakly-developed foliation @ 50° CA. 244.04-244.13m: Calcite-diopside veins @ 40° CA.								
		252.70-262.40 Mafic Volcanic - as described above. - Both contacts are sharp @ 40° CA. 254.14m: Foliation @ 40° CA.								
		262.40-270.55 Felsic Agglomerate - Medium, brown-green colour; fine-grained groundmass with quartz and feldspar crystals (1-3mm diameter), and fragments up to 1x4cm dimension; well-foliated (range 30-45° CA); minor quartz veining. - Composition: 75% groundmass (siliceous with biotite-rich bands, up to 1mm wide, along foliation); 15% quartz crystals, including blue quartz eyes; 5% feldspar crystals; 5% lithic fragments (cherty sediment/ash tuff?); also, one pyrite-rich (40% pyrite) fragment (0.5x3cm) observed @ 269.27m. - Non-magnetic; harder than steel. - Minor disseminated pyrite blebs/grains. - Very competent core (40cm core); 100% core recovery. - Contacts are sharp, planar - upper @ 40° CA, lower @ 30° CA. 265.76m: Foliation @ 45° CA. 266.33-266.38m: Green chert fragment (interbed?); approximately conformable to foliation @ 45° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 5

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	%	Fe	Ba
		269.44m: Foliation @ 30° CA.								
		278.55 322.85 Mafic volcanic - as described above. - Fine- to medium-grained; generally, weak foliation @ 40° CA, to massive. - 2% quartz-calcite-garnet-diopside veins (planar to irreg.). - massive zones, with relatively few veins (0.5%), may be dykes/dykelets: 275.91-276.96m, 284.88-286.60m, 289.27-290.55m, 297.34-299.33m. - Generally, competent core in upper section (278.55-301.80m); lower section has more blocky zones: 302.50-304.00m, 305.80-306.35m, 308.80-308.98m, 309.45-309.65m, 311.75-312.20m, 321.96-322.18m. - Moderate to strong chlorite (pervasive to banded): 304.70-306.40m, 314.47-322.85m (contains banded biotite-magnetite). - Lower contact is unobserved due to rubbly core. 272.59m: Foliation @ 40° CA. 278.33-278.36m: Quartz-calcite-diopside vein (2.5cm) @ 60° CA. 287.16-289.27m: Zone of abundant (8%) quartz-epidote-garnet veins (irregular-shaped). 295.57m: Foliation @ 30° CA. 314.47m: Foliation @ 40° CA.								
		322.85 339.02 Mafic dyke - as described @ 37.90-60.90m. - Fine-grained, chilled margins; medium-grained, uniform central portion. - Minor calcite-quartz veinlets. - Moderate to strong magnetism. - Locally, trace chalcopyrite grains in strong chl alteration. - Blocky zones: 322.85-322.90m, 323.70-323.94m, 325.10-325.25m. - Lower contact is sharp, sub-planar @ 25° CA.								
		339.62 339.26 Mafic volcanic - as described above.								
339.26	1173.15	GULLBRIDGE BIMODAL SUITE	30066	354.52	356.52	2.00	89	2	8	10
			30067	366.00	368.00	2.00	69	2	7	17
		339.26 344.25 Felsic breccia/Silicified mafic volcanic (?) - Dark green colour; fine-grained.	30068	519.45	521.45	2.00	63	2	17	10
			30069	521.45	523.30	1.85	54	2	18	39

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 6

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Indurated.	38070	523.30	524.00	0.70	547	1637	2200	124
		- Dominantly, "ghosted" fragments (average 3cm diameter; range 1-10cm); matrix/bands of magnetite-biotite-chlorite.	38071	524.00	524.70	0.70	79	24	101	187
		- Minor disseminated pyrite blebs/grains.	199015	607.36	609.36	2.00	62	7	47	56
		- Contacts are quite vague - gradual change in composition;	199016	611.50	613.50	2.00	5	3	42	18
		disappearance of fragments/mt-bt-chl matrix bands.	199017	632.54	633.47	0.93	156	859	1561	35
			199018	633.47	633.97	0.50	274	40	151	64
			199019	775.30	781.30	2.00	10	15	10	NIL
		339.35-340.80m: Fault zone (Hidden Fault?); blocky to rubbly to gouge (recemented and loose).	199020	876.45	877.55	1.20	50	36	37	37
			199021	938.70	939.50	0.80	32	6	33	118
		342.38m: Foliation @ 40° CA.	199022	961.70	963.74	2.00	303	3	84	133
			199023	963.70	966.00	2.30	52	4	122	26
		344.25 346.65 Mafic volcanic - as described above.	199024	966.00	968.00	2.00	14	12	111	38
		- 3% feldspar phenocrysts.	199025	968.00	978.50	2.50	69	10	172	10
		- Hornfelsed.	199026	970.50	973.00	2.50	220	24	83	62
		- Contacts are unobserved.	199027	973.00	975.00	2.00	733	9	83	20
			199028	975.00	977.50	2.50	673	10	162	22
		346.65 349.40 felsic breccia - as described above from	199029	977.50	980.00	2.50	820	25	118	44
		339.26-344.25m.	199030	980.00	982.00	2.00	1518	8	144	11
			199031	982.00	984.00	2.00	392	9	91	12
		349.40 386.25 Mafic volcanic - as described above.	199032	991.50	994.00	2.50	1156	30	65	10
		- Fine-grained; massive to weak foliation; locally brecciated.	199033	994.00	996.50	2.50	558	11	40	34
		- Non-magnetic to locally weakly magnetic.	199034	996.50	999.00	2.50	3638	8	47	12
		- Trace, to locally minor, disseminated pyrite; subhedral to anhedral grains; locally, 0.5% needle-shaped pyrite grains within strong chl-mt bands/zones @ 358.39-358.45m.	199035	999.00	1001.50	2.50	1045	11	50	10
			199036	1001.50	1004.00	2.50	104	2	48	19
		- Specks of chalcopyrite, associated with irregular calcite veinlets, occur @ 366.76m, 369.77m.	199037	1004.00	1006.00	2.00	879	7	52	20
		- po-ep within quartz-chl vein @ 367.09-367.13m.	199038	1006.00	1006.77	0.77	1729	13	50	15
		- Contacts: Lower contact is subtle, irregular, subparallel CA; irregular calcite-garnet-quartz veining along contact.	199039	1006.77	1007.37	0.60	13300	6	60	12
			199040	1007.37	1010.00	2.63	5667	12	70	29
		360.00m: Foliation @ 30° CA.	199041	1010.00	1012.50	2.50	264	10	140	14
		364.51m: Foliation @ 55° CA.	199042	1012.50	1015.00	2.50	1029	10	137	10
		367.09-367.13m: Qtz-chl-po-ep vein (irregular thickness from 2mm-1cm); subplanar @ 25° CA; 3% po, minor ep within vein; subhedral to anhedral grains.	199043	1015.00	1017.00	2.00	3020	10	106	10
			199044	1017.00	1019.12	2.12	1185	8	145	10
		379.80-380.06m: Zone of strong sil-ep-hem alteration; pink-green colour; "felsic-looking"; 0.5% diss py grains - euhedral cubic grains up to 2.5mm, smaller subhedral grains.	199045	1022.00	1024.50	2.50	721	4	93	19
			199046	1026.00	1028.60	2.60	149	68	1340	NIL

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 7

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
386.25	399.35	Mafic dyke - as described @ 37.90-60.90m. - Massive; aphanitic. - Non- to mod-magnetic. - 0.5% calcite veins/veinlets (mostly planar @ 30-45° CA); very minor qtz veinlets (barely visible). - Trace, to locally minor, py; diss to associated with fractures/qtz veinlets. - Upper contact is irregular, sub-parallel CA; lower contact is subtle, irregular @ 20° CA.								
399.35	420.75	Mafic volcanic - as described above. - Massive to very weak foliation @ 30° CA; several zones of brecciated (flowtop?) texture. - 3% garnet-hematite-calcite-quartz veins; irregular-shaped; up to 5cm wide. - Wk-mod magnetitism; local mod-str chlorite. - Trace finely diss py; locally needle-shaped py grains within interflow (interpillow?), chl-nt rich zones @ 407.10-407.25m; 1% euhedral to anhedral py grains @ 411.51-411.53m, 411.68-411.77m; locally specks of cp observed @ 404.17m, 404.85m. - Interflow cherty sections: 403.04-403.78m (with irregular banding @ 20° CA), 410.90-411.15m. - Lower contact is sharp, subtle @ 30° CA.								
420.75	422.85	Felsic volcanic - Med-light green-grey colour; massive to locally weak foliation (poorly defined) to minor brecciation. - Zones of chlorite porphyroblasts @ 421.57-422.03m, 422.35-422.55m; average 3% over entire unit; average 2mm diameter; up to 3mm diameter; vague margins, but generally lath shaped. - Non-magnetic; barely scratches with steel. - Pervasive, moderate chlorite. - Trace diss py. - Competent core (average 30cm core); upper contact is sharp, subtle @ 30° CA; lower contact is slightly irregular, subtle @ 25° CA.								
422.85	425.21	Mafic volcanic - as described above @ 399.35-420.75m; lower contact is sharp, irregular @ 45° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 8

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
425.21	431.89	Mafic dyke - as described @ 37.90-60.90m. - Massive; medium-fine-grained. - Wk-mod magnetism. - Trace diss py; local minor patchy py. - Moderately competent core; blocky - rubbly zones @ 427.05-428.25m, 430.70-430.80m. - Lower contact is sharp, subtle @ 20° CA. - Dykelet occurs @ 430.90-431.01m; light green-grey colour; massive to "flow-banded"; non-magnetic; upper contact is sharp, planar @ 60° CA; irregular lower margin.								
431.89	516.50	Mafic volcanic - as described above. - Massive; local wk fol; locally feldspar-phyrlic; minor zones of brecciation/fracturing where chl increases from mod to strong; 2% Qtz-cc veins - irreg to planar. - Wk-mod mt; locally non-mt; several zones of silicification: 436.62-436.85m, 438.53-439.05m (cherty section @ 438.72-438.92m; 2% chl porphyroblasts; 0.5% euhedral-anhedra py), 445.65-445.81m (interflow chert?), 450.05-450.80m, 451.15-451.32m @ 25 CA, 458.90-459.12m (Qtz-cc-ep vein; irreg margins), 464.85-464.98m (green interflow chert), 465.95-466.10m, 466.16-466.41m. - Trace diss py throughout. - Upper etc is sharp, subtle @ 20° CA; lower etc is planar, subtle @ 45° CA. - Several minor subunits of felsic tuff: 473.05-473.33m, 473.65-473.95m, 475.30-476.90m, 523.35-523.90m, 534.88-535.70m; light-med green-grey colour; massive to well-fol; variable non-mod mt; often mod chl; trace-minor diss py. 476.42-476.90m: Zone with strong chl; minor chert; fragmented to minor brecciation. 488.01-488.18m: Zone of 50% cc-Qtz veining; also occurs @ 488.30-488.55m. 490.34-490.52m: Qtz-cc-ep vein; irreg shaped. 497.55-497.60m: Qtz-ep vein @ 60° CA. 513.69m: Pol @ 40° CA.								
516.50	518.56	Sediment ("mafic-derived")								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge

HOLE No.: GB-154

Page 9

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Fine-gr (silt-size); bt-rich; banded to laminated @ 45° CA. - Both ctc's are planar, subtle @ 45° CA. - These sediments occur: 521.47-523.39m, 523.90-524.70m.								
518.56	521.47	Banded chert								
		- Light-med grey colour; banded to chert frags; non-uk mt; dark grey chl bands/matrix. - Trace diss py. - Ctc's are sharp, planar: upper @ 45° CA; lower @ 35° CA.								
520.14m		laminar @ 40° CA.								
520.75m		laminar @ 50° CA.								
523.39	523.90	Felsic tuff								
		- Light-med green-grey colour; fine-gr. - Mod-str chl-bt. - 2% diss py-po; 1% sph (diss to banded); minor cp-gal (diss subhedral grains assoc with sil-bt zones).								
523.75-523.85m		Zone of 10% sph (red-brown colour), 1-2% p-gal, 15% py-po.								
524.25m		fol @ 35° CA.								
524.70	544.18	Mafic volcanic - as described above @ 431.89-516.50m; massive to mod fol @ 35° CA; wk-str mt; trace diss py.								
		- Upper ctc is sharp @ 45° CA; lower ctc is slightly irreg @ 20° CA.								
528.80-528.90m		Interflow green-purple chert; irreg upper margin; lower margin @ 25° CA.								
543.35m		fol @ 35° CA.								
544.18	544.42	Interflow cherty unit								
		- Light-med green-grey colour; banded to massive; mod-str mt; trace diss py; banding (laminar?) @ 20° CA; both ctc's are slightly irreg @ 20° CA.								
544.42	544.90	Felsic tuff - as described above @ 523.39-523.90m; "mafic-looking" due to mod-str chl; mod-uk fol @ 35° CA; wk-mod mt; up to 0.5% qtz-cc veinlets.								
		- trace diss py. - Upper ctc is irreg @ 20° CA; lower ctc is sharp, subtle @								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 10

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		40° CA.								
		549.55m: fol @ 35° CA.								
		554.90 570.09 Mafic volcanic - as described above @ 431.89-516.58m; non-wk nt; massive to mod fol; wk-mod chl.								
		- Trace diss py.								
		- Upper etc is sharp, subtle @ 40° CA; lower etc is sharp, planar @ 30° CA.								
		558.95m: fol @ 30° CA.								
		564.60-564.82m: Fault zone - @ 40° CA; clay and sand-size gouge.								
		564.82-565.03m: Intense sil-ep; recemented portion of fault.								
		603.80 609.37 Sediment (mafic-derived?)								
		- Med brown-green colour; fine-med-gr; well-laminated @ 40-50° CA; 2% cc(+/qtz) veins, irreg to subplanar, generally along foliation.								
		- Composition: generally difficult to determine due to grain-size, but does appear to be rich in bt-chl-fsp; non-wk nt; scratches with steel.								
		- Pervasive, mod chl; patchy/banded mod-str bt.								
		- Minor py grains (euhedral-subhedral) generally occur along foliation; competent core (40cm); 100% core recovery; lower etc is sharp @ 40° CA.								
		605.28m: fol @ 50° CA.								
		607.35-609.37m: Str bt alteration; non-nt; minor-0.5% py.								
		608.84m: fol @ 40° CA.								
		609.37 614.48 Quartz-crystal tuff - as described above @ 590.69-593.68m; wk-mod bt; wk ser; med grey colour; 0.5% diss py throughout; lower etc is sharp @ 30° CA; well-developed crenulation foliation (locally chaotic).								
		614.48 618.73 Interbedded sediment and felsic tuff								
		Sediment: mafic-derived, as above @ 603.80-609.37m; mod nt; 0.5% py, generally along fol; sediments occur @ 614.48-615.02m, 615.32-616.56m, 616.76-616.95m, 618.00-618.61m.								
		Felsic tuff: similar to qtz-xtal tuff, except qtz stals seen								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 11

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		to be annealed; well-developed crenulation foliation; non-wk nt; trace py; tuffs occur @ 615.82-615.32m, 616.56-616.76m, 616.95-618.00m, 618.61-618.73m; lower etc is sharp, slightly irreg @ 70° CA. 614.90m: laminae @ 56° CA. 616.95m: fol @ 60° CA. 617.20m: fol @ 50° CA, crenulated; later fol @ 25° CA. 618.36m: fol @ 35° CA.								
		618.73 628.18 Mafic (intermediate?) tuff (mafic volcanic?) - Med green colour; fine-med gr; granular texture; massive to wk fol; 3% Qtz-ep (±gt-cc) veins/veinlets - generally planar veins @ 60° CA; hairline anastomosing veinlets. - Composition: generally too f-gr to determine; mafic-intermed; locally minor amounts of fsp-phenocrysts; non-wk nt; generally scratches with steel; pervasive, mod chl; local patchy wk bt; trace diss py; competent core (30cm); 100% core recovery; lower etc is subtle - based on change in grain-size and less granular 622.12m: fol @ 50° CA.								
		628.18 632.54 Sediment (mafic volcanic?) - as described above @ 603.80-609.37m; dark green colour; well-foliated; 3% cc (±Qtz) veins/veinlets - generally planar, along foliation; non-nt; scratches with steel; patchy, pervasive, wk bt; pervasive, wk-mod chl; nil-trace diss py, except 0.5% py @ 631.22-632.54m; competent core (30cm); 100% core recovery; lower etc is sharp, irreg. - pyritiferous (2% py), felsic agglomerate interbed @ 632.54- 633.47m; mod ser-chl.								
		633.47 652.74 Mafic volcanic - dark green colour; fine-gr upper section, @ 633.47-634.57m, is str chl; 1% diss py; 2-5mm cc vein (850 CA) carrying 50% Qtz, 20% py, 10% cp (occurs @ 633.90-633.91m). - Coarse-gr (up to 3mm), gabbroic section of flow @ 644.00- 648.50m; grain-size decreases toward fine-med-gr flow margins @ 638.40-644.00m and 648.50-652.74m; pervasive, mod chl; wk- mod nt; 2% Qtz-ep-hem veins, planar @ 40-60° CA; wk-mod fol in flow margins to massive gabbroic sections; nil-trace py.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 12

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Contains dacitic dyke @ 634.55-638.40m; light green-salmon pink colour; intensely brecciated; recrystallized; str sil-ep; wk carb; mod hem; lower etc is gradual, subtle (wk bt alteration in lower zone of mafic - could be sediment) 634.22-634.26m: Fault - clay/gouge; @ 45° CA. 640.35m: fol @ 55° CA.								
		652.74 656.13 Sediment - as described above (603.80-609.37m); mod-str bt; well-foliated (locally, warping foliation due to later cross-cutting fol); trace py; lower etc is sharp, planar, @ 40° CA. 652.97m: fol @ 40° CA. 654.84m: warped fol; cross-cutting fol subparallel CA. 655.32m: fol @ 35° CA.								
		656.13 660.34 Qtz-stal agglomerate; similar to qtz-stal tuff, except 10% lithic frags (shear-fol felsic volc, up to 5cm length, avg 1cm); frags are elongated/sheared along fol; trace py diss; lower etc is sharp, planar @ 35° CA. 658.98m: fol @ 30° CA.								
		660.34 660.95 Sediment - as described above @ 603.80-603.97m.								
		660.95 670.65 Felsic tuff - med grey-green colour; fine-gr; mod-well-fol @ 30° CA; 1.5% cc-qtz veins/veinlets, irreg. - Non-wk wt; scratches with steel; wk patchy bt; pervasive, mod - str chl; trace diss py. - Competent core (40cm); 100% core recovery; lower etc is sharp @ 45° CA. 662.54m: fol @ 30° CA. 664.28-665.47m: Mafic dyke - dark green colour; massive; mod wt; 0.5% py (diss + in fractures + at both margins); upper etc @ 30° CA; lower etc @ 40° CA. 668.07-668.51m: Zone of str sil; patchy/veins. 670.44-670.65m: Interbed of qtz-stal tuff, as above (590.69-593.68m).								
		670.65 686.27 Mafic volcanic - as described above (431.89-516.50m); dark green colour; fine-gr; massive to wk fol;								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 13

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		variable non-mod nt; mod chl; local tr py. - Generally competent core, except blocky zone @ 674.85-675.16m; lower etc is subtle (lower 1m section of unit may be sec'd) @ 45° CA. - Mafic dyke @ 673.12-674.28m; upper etc @ 40° CA; lower etc @ 45° CA. 680.45m: fol @ 50° CA.								
		686.27 694.43 Felsic tuff - as described above (660.95-670.65m); med green-grey colour (purplish tint due to Fe alt; @ 691.58-694.43m); non-nt with mod nt zone @ 692.46-692.64m; trace diss py. - Lower etc is subtle (based on appearance of cd spots in lower unit); several str sil zones: 688.86-688.94m, 692.68-692.78m, 693.15-693.35m, 694.23-694.43m. - Interbed of sediment (as above @ 603.80-609.37m) @ 686.35-687.46m; med green-brown colour; patchy - pervasive, str bt; minor py (occurs as diss + along fol at base). - Argillaceous sediment @ 687.46-687.71m; dark brown colour; laminated @ 35° CA; non-nt; 0.5% py (diss + along fol). 687.15m: fol @ 40° CA. 687.46m: laminae @ 50° CA. 691.28m: fol @ 30° CA. 693.52m: fol @ 40° CA.								
		694.43 700.28 Felsic Agglomerate - Med brown-green-grey colour (med purple-grey colour @ 697.38-700.28m); fine-gr matrix; frags avg 1cm diam (up to 10cm); well-fol; lt irreg shaped to patchy qtz veins. - Composition: matrix is too fine-gr to determine; qtz-eyes present; frags are generally massive, cherty sed (green to red-purple colour) or felsic volc; non-nt, except where banded frags occur @ 696.18-697.02m; scratches with steel. - Pervasive, mod chl; patchy, mod-str (avg 10%) cd spotting; trace diss py; very competent core (avg 50cm); lower etc is sharp, slightly irreg @ 35° CA. 694.66m: fol @ 30° CA.								
		700.28 711.77 Sediment - Light-med cream-green colour; to med								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 14

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		grey-green colour; fine-gr; planar - irreg laminations (locally disturbed/reworked @ 705.20-705.90m), generally @ 30-45° CA; wk fol subparallel to laminae; 2% irreg-patchy qtz veins; non-nt to locally wk-mod nt; variable hardness - harder than steel, except where str chl-ser. - Pervasive-patchy, mod-str chl-ser (occurs throughout, as well as retrograde pseudomorphs of cd porphyroblasts); wk-mod cd; locally trace diss py; competent core (avg 40cm); 100% core recovery; lower etc is sharp, planar @ 35° CA. - Interbeds/bands of cherty sed occur @ 701.20-701.30m, 710.01-710.66m, 710.65-711.01m, 711.23-711.27m, 711.57-711.77m; green-red colour; massive to finely-laminated. - Argillaceous sediment interband @ 710.20-710.26m; red-purple colour; finely-laminated @ 30° CA. - Mafic dykes occur @ 702.35-705.10m (fine-med gr; mod-str nt; massive; med-dark green colour; upper etc @ 25° CA; lower etc @ 30° CA), 708.70-709.37m (med-dark green colour; fine-gr; massive to wk fol; could be sed(?); upper etc @ 45° CA; lower etc @ 35° CA). 700.76m: laminae @ 45° CA. 707.82m: laminae @ 35° CA.								
		711.77 733.11 Qtz-stal tuff - Med green colour; fine-gr matrix with stals avg 1mm diam (up to 3mm); wk-mod fol @ 30-45° CA; 1% qtz-ep veins. - Composition: variable 10-40% qtz-stals; bt-sil-rich matrix; variable non-mod nt; harder than steel; pervasive, mod chl; tr to locally minor diss py. - Very competent core (avg 50cm); 100 % core rec; lower etc is sharp, slightly irreg @ 25° CA. - Interbed of fine-gr sed ("mafic-derived"); med-dark green colour; massive to wk fol. 718.38m: fol @ 40° CA. 726.18m: fol @ 30° CA. 732.19m: fol @ 45° CA.								
		733.11 735.68 Mafic dyke - as above @ 37.90-60.90m; med-dark green colour; fine-gr; massive; mod-str nt; lower etc is sharp, planar @ 20° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 15

		LITHOLOGICAL DESCRIPTION	ASSAYS								
FROM	TO		SAMPLE No.	FROM	TO	WIDTH	Cu	Pb	Zn	Ba	
735.08	772.48	Shear-fol felsic volcanic - Light-med grey-green colour; fine-gr; aphanitic with qtz-eyes; mod-well developed fol @ 25-65° CA (locally crenulated; cross-cutting fol @ 20-30° CA); 0.5% qtz veining. - Composition: too fine-gr to determine, but almost entirely silica; non-nt; wk-mod nt (756.98-772.48m); harder than steel; pervasive, mod chl-ser; local wk (3%) cd @ 741.32-746.50m; - Nil to tr diss py; very competent core (avg 50cm; up to 1.2m) 100% core rec; lower etc is gradual (based upon appearance of clay-rich ash tuff). 736.45m: fol @ 40° CA. 740.77m: fol @ 30° CA. 748.08m: fol @ 35° CA. 751.53m: fol @ 30° CA; crenulated @ 20° CA. 757.56m: fol @ 65° CA. 770.07m: fol @ 25° CA.									
772.48	779.19	Felsic tuff - Light grey-green colour; fine-med gr; mod-well fol (planar @ 35° CA; often disrupted by patchy, str sil, resulting in distorted to chaotic appearance of fol - occurs @ 772.99-773.80m, 775.46-775.75m, 776.10-776.54m, 778.14-778.62m). - Composition: too fine-gr to determine, except 10% ghosted remnants of itals (frags?) of saussuritized fsp(?), avg 0.5mm diam, up to 1mm; non-nt; scratches with steel easily. - Pervasive, str ser (intense ser @ 777.65-778.14m); pervasive, wk-mod chl; nil-tr finely diss py. - Competent core (40cm); 100% core rec; lower etc is sharp, planar @ 30° CA. - Minor interbands of red chert @ 777.26-777.31m, 778.62-778.65m, 778.99-779.06m. 774.88m: fol @ 35° CA. 775.20m: Minor fault displacement shown by planar ep veinlet (@ 45° CA); offset of 5mm on each of two faults; faults @ 25° CA; fol @ 35° CA; thrusting towards east (see illustration in log). 778.85m: Bedding/cleavage relationship indicates synformal closure to the east; fine laminae of chert @ 30° CA; fol @ 50°									

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 16

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		CA (see illustration in log).								
779.19	789.02	Red chert with interbedded sediments (tuff?)								
		Chert: Red-dark brown-red colour, laminated (laminæ thickness avg 1cm, range 1mm-2cm); laminations alternate med red colour to dark red-brown colour; planar to irreg laminæ (40-50° CA, locally subparallel to 65° CA); chert becomes more uniform in lower section (laminæ 3-4cm thick; dark red-brown colour); brecciated zone @ 781.44-783.25m (angular-subangular frags; frags avg 1cm diam; 50% matrix + 50% frags; matrix is dark red-brown colour; fine-gr; 1% qtz-PeCarb (light yellow colour; cerussite?) veins/veinlets - irreg-network-anastomosing. - Composition: high sil-Fe content; non-st (locally wk-st); harder than steel, except matrix of brecciated zone; no visible sulphides; competent core (30cm); 100% core rec; lower etc is sharp, planar @ 45° CA.								
		Sediments (felsic tuff?) occur @ 783.25-783.29m, 784.12-784.55m, 785.68-787.81m, 787.34-787.70m (gradational etc); med grey-green colour; fine-med gr; mod fol @ 20-30° CA; 1% irreg qtz-cc veinlets/veins. - Composition: matrix is too fine-gr to determine; 10% frags (subang-subrounded; avg 1mm diam, range up to 2cm; consist of red chert and felsic volcanic). - Non-st; scratches with steel, locally scratches with finger-nail; pervasive, mod-str chl-ser; locally tr diss py. - Competent core (30cm); 100% core rec; etc's are generally sharp, planar, conformable, except lower etc @ 787.70m, which is gradational into chert horizon. 780.02m: laminæ @ 40° CA. 781.10m: laminæ @ 20° CA. 781.32m: laminæ @ 65° CA. 784.55m: fol @ 50° CA. 785.20m: fracture @ 10° CA; along fol. 786.10m: fol @ 25° CA. 787.10m: laminæ @ 40° CA. 787.34-787.70m: graded bedding (fining downhole); soft-sediment loading feature @ 787.34m, indicates younging downhole (see								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 17

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		illustration in log).								
		788.10m: laminae @ 10° CA.								
		789.82 791.79 Felsic Tuff								
		- Med grey-green colour; fine-gr with minor (5%) frags of felsic volc and chert (subang-subrounded; avg 3mm diam, up to 5mm diam); wk-mod fol @ 30° CA; 2% qtz veins/veinlets.								
		- Composition: too fine-gr to determine; non-nt; scratches easily with steel; pervasive, mod chl, str ser; tr diss py.								
		- Competent core (30cm); 100% core rec; lower etc @ 50° CA.								
		- Interbed of green chert @ 791.66-791.79m.								
		789.87m: fol @ 30° CA.								
		791.79 809.13 Mafic volcanic (sediment?)								
		- Med-dark green colour; massive to wk fol @ 35° CA; fine-gr; 1% qtz-ep veins/veinlets.								
		- Composition: too fine-gr to determine; wk-mod nt; scratches with steel; pervasive, variable, mod-str chl; tr diss py; mod competent core (20cm); blocky zone @ 798.88-799.15m; lower etc sharp, subplanar @ 20° CA.								
		- Dacitic dykes: 796.45-797.35m (upper etc @ 50° CA, lower etc @ 55° CA), 799.97-800.67m (upper etc @ 30° CA; lower etc is irreg @ 40° CA); light green-salmon colour; massive; med-gr; ghosted (vague xtals); abundant (5%) qtz-ep veinlets - irreg, anastomosing.								
		809.13 813.60 Red chert - Dark brown-red colour; massive; locally fine laminations (avg 2mm thick) @ 809.95-810.34m, 813.15-813.30m; qtz(5%)-FeCarb(2%) veins/veinlets - patchy to irreg; silica (30%) dumping @ 810.61-811.86m, 812.66-813.02m.								
		- Non-nt; harder than steel; no visible sulphides; competent core (40cm); 100% core rec; lower etc is sharp, planar @ 30° CA.								
		809.95m: laminae @ 25° CA.								
		813.25m: laminae @ 50° CA.								
		813.60 824.22 Felsic volcanic								
		- Light-med grey-green colour; fine-gr; mod-fol; tuffaceous to shear-fol; massive rhyolitic sections @ 815.30-815.85m, 818.02-818.30m; 3% qtz veins (locally qtz-dumping, up to 10%).								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge

HOLE No.: GB-154

Page 18

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Composition: too fine-gr to determine; non-qt (wk-mod at @ 817.20-824.22m); harder than steel. - Pervasive, wk-mod chl, wk ser; nil-tr diss py, minor py blebs/grains @ lower etc with dyke. - Competent core (30cm); 100% core rec; lower etc is sharp, subplanar @ 30° CA. - Mafic dyke @ 822.34-822.67m; dark green colour; fine-gr; massive; mod-str mt; etc's are sharp, subplanar @ 45° CA. 813.93m: fol @ 30° CA. 818.68m: fol @ 40° CA. 820.85m: crenulated fol; latest fol @ 20° CA.								
		824.22 837.56 Composite dyke - Med green colour; dominantly med-gr diorite (with chilled margins); f-gr, mafic dyke @ 827.76-828.05m (margins @ 30° CA); massive; 0.5% qtz-cc-ep veinlets/veins; mod-str mt; harder than steel; tr diss py; competent core (30cm); blocky zones @ 825.75-826.50m, 827.54-828.02m; lower etc is sharp, subplanar @ 50° CA.								
		837.56 877.70 Felsic volcanic - interbeds of sediments, qtz-stal tufts, and minor red chert								
		Felsic volcanics: Med-light green-grey colour; f-gr; massive to wk fol sections @ 837.56-842.55m, 848.65-850.25m; mod fol sections @ 842.55-846.22m, 847.10-848.19m, 856.10-868.40m, 872.85-873.85m, 876.40-877.10m, 877.31-877.70m; well fol section @ 858.40-858.74m; banded/brecciated section @ 851.51-856.10m; massive to brecciated rhyolitic section @ 869.83-872.85m; agglomerate @ 848.19-848.42m (30% chert frags, avg 2cm diam). Qtz-stal tufts: Occur @ 846.87-847.10m (coarse-gr; 25% qtz stals, up to 3mm diam; upper etc @ 30° CA; lower etc @ 35° CA), 848.42-848.65m & 851.19-851.51m (med-gr; 30% qtz stals, up to 2mm diam; etc's @ 35° CA); matrix is chl-bt rich. - Alteration: variable wk-str chl-ser; str chl-ser (pervasive to pseudomorphed cd spots) @ 850.01-854.10m, 856.10-862.53m; str ser @ 854.10-856.10m; str chl @ 862.53-868.40m, 873.85-874.56m.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 19

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		- Non-qtz; generally scratches with steel; nil-tr diss py, except, 0.5% py blebs + diss @ 876.40-877.70m. - Mod competent to blocky core (avg 15cm); blocky zones @ 843.10-843.13m, 851.76-851.93m, 852.80-853.28m, 854.53-854.98m, 859.00-860.15m, 863.70-864.12m, 877.35-877.45m; lower etc is subtle, subplanar @ 30° CA. Red chert interbands @ 846.22-846.24m, 846.33-846.48m, 846.70-846.87m, 863.36-863.37m. Sediments: Occur @ 869.34-869.83m, 874.56-876.40m; light-med grey colour; fine-gr; laminated (avg 5m laminae; range lam-2cm) @ 30-35° CA; minor hem-qtz rich laminae locally @ 874.90m, 875.30m; 3% irreg qtz veins; mod-str wt; scratches with steel; pervasive, mod chl; tr-minor diss py; competent core (30cm); lower etc is sharp, planar @ 30° CA. Mafic dykelets: Occur @ 841.42-841.46m (etc's @ 50° CA), 876.66-876.67m (etc's @ 35° CA); dark grey colour; f-gr; massive. 839.02m: fol @ 25° CA. 842.34m: fol @ 45° CA. 845.42m: fol @ 35° CA. 853.73m: fol @ 25° CA. 863.36m: chert interband @ 20° CA. 868.74m: fol @ 10° CA. 869.42m: laminae @ 20° CA. 874.96m: laminae @ 35° CA. 877.70 919.34 Shear-fol felsic volcanic - Light-med green-grey colour; fine-med-gr; aphanitic; generally, mod-well fol (ie. shear-fol, @ 10-30° CA) with minor massive/brecciated sections which look rhyolitic @ 877.70-878.05m, 884.00-884.86m, 894.26-895.03m (gradational etc's), 896.25-898.16m (gradational etc's); locally, qtz-eyes in the lower portion of the unit (qtz-stal tuffs); 1% qtz-ep veinlets (planar to irreg @ 10-60° CA); 0.5% irreg veins of qtz-hem? (salmon colour). - Composition: too f-gr to determine, but highly sil (felsic); non-qtz; generally harder than steel; pervasive to variable, wk-mod chl-ser; tr diss py. - competent core (40cm); 100% core rec; lower etc is , planar (qtz-ep filled) @ 30° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 20

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ra
878.28m		fol @ 30° CA.								
887.96m		fol @ 25° CA.								
890.85m		fol @ 10° CA.								
896.15m		fol @ 20° CA.								
898.85m		fol @ 30° CA.								
900.97-901.17m		qtz-hem vein; irreg; 5cm thick.								
901.92-902.08m		qtz vein subparallel CA; irreg; 3cm thick.								
905.03-905.89m		Bleached zone - pale cream-grey colour; sil; diffuse margins.								
908.92-909.07m		qtz vein @ 20° CA; irreg; 5cm thick.								
909.30m		fol @ 10° CA.								
916.43-916.47m		qtz-ep-chl vein @ 25° CA.								
919.34	937.75	Felsic agglomerate with interbeds of felsic volcanic & red chert.								
Felsic agglomerate: light-med grey-green colour; fine-gr matrix with variable amount (10-60%, avg 35%) of poorly sorted (1mm-28cm, avg 2cm diam) frags; generally wk fol to chaotic; 5% irreg to "wormy" qtz veins throughout; 1% ep veinlets assoc with qtz; minor salmon colour (hem?) veinlets occur with qtz. - Composition: matrix is too f-gr to determine; 25% red chert frags; 10% felsic volc frags (massive, light grey colour); frags are angular-subangular; locally, chl-ser porphyroblasts have pseudomorphed cd @ 927.10-927.14m, 929.52-929.76m, 936.09-936.98m, 937.41-937.65m. - Var wt (non-wt with str wt banded chert frags/interbeds); scratches with steel; pervasive, str ser-chl; tr-locally minor py (diss to infilling fractures). - Competent core (35cm); 100% core rec; minor blocky zones @ 920.50-920.55m, 928.13-928.16m; lower etc is sharp, planar, qtz-ep coated fracture @ 25° CA.										
Felsic volcanic: occurs @ 926.88-926.98m, 932.78-933.20m, 934.80-936.89m; light-med grey-green colour; f-med-gr; massive to wk fol; minor qtz-ep-hem(?) veinlets. - Composition: too f-gr to determine; local qtz-eyes @ 932.78-933.20m (qtz-rtal tuff); non-wt; scratches with steel; pervasive, str chl-ser; tr diss py; competent core.										

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
 HOLE No.: GB-154

Page 21

FROM TO		LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		Red chert interbeds (frags?) occur @ 922.60-922.99m, 926.98-929.52m, 930.40-930.76m, 932.66-932.78m, 933.40-933.51m; dark red colour; laminated (grey-black laminae) to massive; laminae subparallel to 26° CA; laminae avg 2mm thick, range 1mm-1cm; 3% irreg qtz veins; str mt (grey-black laminae); competent core (44cm); etc's are generally brecciated to diffuse. 922.46m: ep-chl annealed, minor fault @ 35° CA. 923.41-925.38m: Mafic dyke - dark green colour; fine-gr; massive; 3% qtz-ep veinlets/veins; mod mt; upper etc is ragged @ 56° CA, with 10% py blebs (1cm width); lower etc is sharp, planar @ 38° CA. 926.98m: fol @ 45° CA.								
937.75 943.58		Qtz-stal tuff with minor agglomerate (breccia?) Qtz-stal tuff: Light-med green-grey colour; mod fol @ 35° CA; f-gr with qtz-stals up to 2mm diam; 3% qtz-ep-hem? veinlets, irreg to anastomosing. - Composition: too f-gr to determine; 10% qtz stals; non-mt; harder than steel; pervasive, mod chl-ser; tr-minor diss py; competent core (35cm); lower etc is sharp, slightly irreg @ 78° CA. - Contains section of agglomerate (breccia?) @ 938.70-939.50m; angular frags of red chert, qtz-stal tuff, felsic volc; frags avg 1cm diam, range 2mm-2cm; 3% irreg qtz veining; 1% ep veinlets; 5% py infilling fractures; py dominantly in lower section @ 939.10-939.50m; etc's are irreg. 942.75m: fol @ 35° CA.								
943.58 946.00		Felsic agglomerate - Red grey-green colour; f-gr matrix; frags avg 4mm diam, range 1mm-2cm; well fol @ 35-45° CA; 2% qtz-ep veins/veinlets (irreg to wormy). - Composition: matrix is too f-gr to determine; 70% matrix which appears similar to felsic volc; 10% red chert frags; 10% felsic volc frags; 5% chl-ser porphyroblasts (cd pseudomorphs); non-mt; scratches with steel; pervasive, str chl-ser; nil-tr diss py; competent core; blocky @ 945.10-945.40m; lower etc is								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 22

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		sharp, planar @ 40° CA.								
946.00	948.70	Felsic volcanic - Light-med grey-green colour; fine-gr; massive to banded (flow-banded rhyolite?); 1% qtz-ep veinlets (planar to anastomosing). - Composition: too fine-gr to determine; minor qtz-eyes; non-mt; harder than steel; pervasive, mod ser-chl; nil-tr diss py. - Competent core (40cm); 100% core rec; lower etc is slightly brecciated @ 45° CA with minor py. 946.16m: flow-banding @ 35° CA.								
948.70	956.79	Composite dyke Mafic: occurs @ 948.70-954.11m; as described above @ 923.41-925.38m; minor pink etc veinlet @ 950.20m; lower etc is sharp, subplanar @ 55° CA. Felsic ("rhyolitic"): @ 954.11-956.79m; patchy colouration; salmon-pink-grey-green colour; fine-gr; aphanitic; massive to micro-brecciation; 5% ep-qtz-ben veinlets (irreg - anastomosing - ladder style); non-mt; variable hardness (softer to harder than steel); pervasive, mod ser; nil sulphides observed; competent core (40cm); lower etc is irreg.								
956.79	958.88	Felsic volcanic (tuff) - as above @ 837.56-842.55m; mod shear-fol; fine-gr section @ 956.79-957.65m; mod ser-chl; local tr py; lower etc is sharp, subplanar @ 45° CA. Felsic agglomerate @ 957.65-958.00m; as above @ 943.58-946.00m; 20% frags of red chert and felsic volcanic, avg lcs diam, range 2mm-3cm; mod chl-ser; lower etc is faulted @ 25° CA. 957.40m: fol @ 35° CA. 958.00m: fol @ 25° CA.								
958.88	1019.12	Intensely chloritic altered rock (felsic volc?) - Dark green colour; fine-gr; massive (muddy green chl sections) to mod fol @ 20-50° CA; 2% irreg qtz veins / veinlets; protolith is difficult to determine, but seems to be felsic volcanic (tuff - agglow?); variable, wk-mod mt; scratches								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 23

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		easily with steel, locally, softer than fingernail (muddy green chl sections); pervasive, intense chl varies from dominantly black to muddy green colour.								
		- Mineralization: Sulphides (stockwork-style) generally - py as diss anhedral grains + stringers; cp assoc with qtz veins + stringers + diss anhedral grains; po as stringers + diss anhedral grains; @ 958.88-984.09m: 1% py (range tr-3%), anhedral grains; minor cp (range nil-1%); @ 988.38-1005.55m: 2% py (range tr-3%); minor-1% cp (range tr-2%); minor po (range nil-1%); @ 1005.55-1010.02m: 2.5% cp (range tr-5%); 4% po (range tr-10%); 2% py (range 1-4%); stringers up to 2cm thick; py mostly diss subhedral-anhedral grains; @ 1010.02-1019.12m: 2% py; minor (0.2%) cp; minor po; up to 2%cp, 3%po, 2%py @ 1015.00-1017.30m.								
		- Core is blocky (10cm); lower etc is subtle.								
		958.87-959.40m: Fault zone @ 25° CA; clay/gouge @ 958.87-958.98m; remainder is blocky-rubbly.								
		960.35m: fol @ 35° CA.								
		962.95m: fol @ 20° CA.								
		965.20-965.60m: Rubbly zone of core.								
		970.87m: fol @ 30° CA.								
		980.70m: fol @ 45° CA.								
		984.09-988.30m: Mafic - intermediate dyke; med-coarse gr; light to med grey-green colour; massive; fsp-phyric; 3% qtz-ep veins/veinlets.								
		- Composition: 20% fsp phenocrysts (saussuritized with reaction rims) up to 4mm diam, avg 2mm; 5% asph/chl? phenocrysts up to 2mm, avg 1mm; 75% fine-gr groundmass; non-wk at; harder than steel; tr diss py; both etc's are sharp, planar @ 65° CA.								
		990.65m: fol @ 50° CA.								
		1002.33m: fol @ 25° CA.								
		1005.01-1006.08m: tuffaceous(?) section; felsic volcanic frags (up to 3mm diam) observed; this is one of the few sections where protolith is distinguishable.								
		1010.25-1010.42m: Blocky-rubbly core.								
		1012.96m: fol @ 45° CA.								
		1019.12 1028.63 Quartz-rtal tuff								
		- Light-med grey-green colour; med-well fol @ 10-50° CA; fine-								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 24

		LITHOLOGICAL DESCRIPTION	ASSAYS							
FROM	TO		SAMPLE No.	FROM	TO	WIDTH	Cu	Pb	Zn	Ba
		med gr with minor (5%) fragments (avg 3mm length, up to 6mm) of felsic volcanic; 2% irreg qtz veining ("flooding"). - Composition: Often too fine-gr to determine; med-gr sections contain 30% qtz-stals, 20% fsp-stals, 3% qtz-eyes, 5% frags, 5% chl porphyroblasts (1-2mm diam), 4% cd porphyroblasts (avg 4mm diam, cp to 1cm) are ragged to sheared; non-uk wt; scratches easily with steel; pervasive, str chl; mod cd-ser. - Mineralization: sulphides are diss to locally stringer; 1% py occurs as diss anhedral (locally needle-shaped) grains, up to 3mm diam, avg 1.5mm, locally stringers; tr cp occurs mostly as stringers/grains within qtz veinlets/veins (cp composes 1-20% of the vein); 3% po occurs locally @ 1019.40-1019.55m, 1025.95-1026.10m, as diss to concentrated blebs (assoc with py); minor red-brown colour sph occurs @ 1026.00-1028.60m as wispy stringers (avg 1mm wide); also, 0.5% diss grains of light to med honey colour clay?/bt?/sph? with reaction rims (avg 1mm diam). - Competent core (30cm); 100% core rec; lower etc is mod irreg @ 30° CA; silicified; mineralized (30% py grains, minor cp, over 2cm width). 1022.55m: fol @ 50° CA. 1025.15m: fol @ 10° CA. 1026.52m: fol @ 70° CA. 1027.85m: fol @ 40° CA. 1028.15m: fol @ 50° CA.								
		1028.63 1135.34 Deformed/alterd mafic volc (chl felsic volc?) - Med green colour remnants within light green matrix/gneiss; generally fine-gr; "worn", porphyritic(?) appearance (may be due to cataclastic deformation and alteration - resulting in remnants of less-altered 'islands' of original mafic volc; or anph/chl? phenocrysts); wk-mod fol @ 20-50° CA; 1.5% qtz-cc-ep-hem veinlets/veins (irreg-anastomosing); minor interbands (interflow?) of dark purple chert @ 1049.30m (5mm wide; @ 30° CA), 1066.35m (3mm wide; @ 50° CA). - Composition: too fine-gr to determine, except, avg 10% fsp-phenocrysts (up to 1mm diam); 5% "remnant islands" (range minor -30%, 1-4mm diam); "gabbroic" section @ 1040.67-1043.75m (med-gr; 15% anph phenocrysts(?), avg 2.5mm diam); non-uk wt;								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 25

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		scratches with steel; matrix is pervasively, mod-str chl-ser-sil; str chl remnants (phenocrysts?); see illustration in log. - 1.5% py diss @ 1028.62-1029.95m; tr-minor diss py @ 1029.95-1135.34m; locally tr ep on chl slips. - Generally, mod competent-blocky core; blocky zones @ 1029.60-1030.10m, 1032.95-1034.95m, 1037.40-1037.55m, 1042.23-1042.73m, 1043.60-1044.10m, 1045.45-1045.78m, 1046.50-1046.78m, 1049.30-1050.95m, 1065.65-1067.45m, 1069.55-1069.88m, 1071.90-1072.30m, 1073.65-1073.75m, 1121.30-1123.30m, 1127.02-1127.38m, 1133.85-1134.85m; lower etc is sharp, subplanar @ 15° CA. 1029.11m: fol @ 40° CA. 1032.62m: fol @ 50° CA. 1043.52m: fol @ 40° CA. Granodiorite dyke: @ 1050.75-1057.65m; (dykelets @ 1049.95-1050.05m, 1050.20-1050.25m, 1050.35-1050.40m; all contained within very blocky-rubbly zone; etc's are approximate, rarely observed, @ 40-50° CA; light grey colour; fine-gr); - Med calmon-grey colour; med-gr; massive; 1% qtz-ep veinlets, planar to network at upper margin. - Composition: 40% qtz; 30% amph/pr; 20% fsp; 10% other (bl?); non-nt; harder than steel; wk chl; tr-minor diss py. - Competent core (40cx); 100% core rec; both etc's are chilled, sharp, planar; upper etc @ 50° CA, lower etc @ 70° CA. Mafic dykes/dykelets: @ 1057.65-1058.08m, 1059.31-1059.89m, 1065.70-1066.58m; dark green colour; fine-gr; massive; 1% ep-qtz/-cc veinlets; mod nt (locally, wk-str); etc's are generally subtle (locally sharp) @ 40-80° CA. Composite dyke: @ 1094.18-1101.35m; dioritic central portion @ 1095.77-1099.87m; fine-med-gr; fsp-phyric; mod-str nt; margins are fine-gr; chilled (mafic?); @ 1094.18-1095.77m, 1099.87-1101.35m; mod-str nt; similar to other mafic dykes in this unit; upper etc is sharp, planar @ 60° CA; lower etc is irreg. 1060.25-1064.32m: fine-gr volcanic (dyke? - but etc's are not sharp); mod nt; massive. 1065.43m: fol @ 50° CA. 1070.75m: fol @ 25° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 26

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		1072.01-1072.20m: Minor fault zone @ 20° CA; recemented to rubble; int chl (schistose).								
		1076.18m: fol @ 35° CA.								
		1078.36-1078.41m: qtz-cc vein @ 55° CA; 4cm thick.								
		1078.60m: fol subparallel to CA.								
		1085.85-1086.40m: Bleached zone; pale green-cream colour; int sil,cc; str ep; brecciated, irreg margins.								
		1090.95m: fol @ 35° CA.								
		1103.75m: fol @ 30° CA.								
		1106.40-1106.43m: ep-qtz vein @ 55° CA; 3cm thick.								
		1109.19-1116.16m: "felsic-looking" section (ie. generally, fine gr; still contains minor (2%) amph/chl(?) phenocrysts or remnant unaltered "islands"; harder than steel); ctc's are very subtle (may not be ctc's at all); similar zone @ 1125.78-1128.30m (very subtle margins).								
		1110.71m: fol @ 20° CA.								
		1114.26m: fol @ 35° CA.								
		1120.85-1120.89m: cc-qtz-FeCarb(?) patchy/irreg vein.								
		1122.10-1122.62m: Minor fault zone; blocky-rubby core; gouge @ 1122.45-1122.47m; recemented / silicified zone @ 1122.48-1122.58m (qtz vein with frags included).								
		1125.40-1125.70m: str sil-chl-ep zone; 30% cc-qtz veins @ 20-30° CA.								
		1129.38m: fol @ 25° CA.								
		1133.88-1135.34m: Very blocky - rubby zone (fault zone); contains offshoot dykelets/veinlets of med salmon-pink colour sections of unit immediately downhole.								
		1135.34-1157.70 Interbedded tuffs/sediments								
		- Dominantly crystal tuffs (could be sediment) - med salmon-pink colour; occur @ 1135.34-1139.89m, 1140.48-1141.32m, 1141.43-1141.58m, 1141.81-1143.90m, 1144.19-1144.25m, 1145.18-1145.19m, 1146.25-1146.50m (subparallel CA), 1148.50-1148.75m, 1148.90-1152.50m (upper etc subparallel CA), 1152.95-1153.05m; fine-gr matrix with qtz-fsp xtals up to 3mm diam, avg 1.5mm; mod fol @ 30-40° CA; 2% qtz-ep-hem veinlets/veins (planar-irreg); highly fractured (generally, planar @ 45-60° CA);								
		- Composition: matrix is too fine-gr to determine; 10% qtz xtals; 5% fsp xtals; 3% chl porphyroblasts; non- locally wk wt;								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 27

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		harder than steel; pervasive, str hes; patchy, wk-mod chl; locally, tr diss py; - incompetent to blocky core (10cm); etc's are sharp, but vary from subplanar to irreg, subparallel to 85° CA; blocky zones of the entire unit occur @ 1136.00-1136.50m, 1143.62-1143.70m, 1143.53- 1144.63m, 1145.15-1146.05m, 1146.60-1146.98m, 1148.75-1148.76m, 1152.67-1152.78m, 1153.45-1153.90m (fault: clay, gouge @ 1153.45-1153.50m @ 40 CA), 1154.10-1154.29m.								
		Interbedded argillaceous sediments occur @ 1139.09-1140.48m, 1141.32-1141.43m, 1141.58-1141.81m, 1143.90-1144.19m, 1144.25-1146.25m, 1146.50-1146.98m, 1147.90-1148.50m, 1148.75-1148.90m; med grey-green colour; fine-gr; massive to finely laminated (1mm-1cm thick, avg 3-4mm) @ subparallel to 40° CA; locally, @ 1147.91-1148.50m, contains 20% frags of salmon-pink stal-tuff (similar to previous unit), up to 5cm diam, avg 2cm; ang-subang frags; 1-5% qtz-hex-cc veinlets, irreg; - Composition: too fine-gr to determine; non-locally wk mt; scratches easily with steel; pervasive, mod chl; patchy, fracture-controlled hex alt; locally tr diss py; mod comp to blocky core; etc's are sharp, planar to irreg.								
		Sediment occurs @ 1152.50-1157.70m; med grey-green colour (locally, flesh colour; finely laminated; fine-gr sed @ 1157.46-1157.76m); chaotic, disrupted, to planar-laminated/foliated @ 35-45° CA; locally brecciated; 3% qtz-flooding (wormy-irreg); 2% ep-qtz-cc veinlets, irreg-anastomosing; 1% hex veinlets. - Composition: too fine-gr to determine; pervasive, mod-str chl-ser; tr diss py; mod comp core (15cm) to blocky.								
		Interbeds of red chert @ 1154.34-1154.45m (laminated @ 25° CA); 1156.94-1157.00m (laminated @ 20° CA).								
		Interbed of mafic volc/tuff(?) @ 1146.98-1147.85m; med grey-green colour; similar to rock described @ 1028.63-1135.34m; locally much softer than steel @ 1147.44-1147.85m. 1135.55m: fol @ 30° CA. 1139.41m: fol @ 40° CA. 1143.80m: fol @ 35° CA.								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 28

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		1156.70m: fol @ 45° CA. 1157.57m: fol @ 20° CA. 1157.68m: laminae @ 55° CA.								
		1157.75-1172.24 Mafic - intermediate dyke (volc?) - Med grey-green colour; fine-gr, mafic margins @ 1157.70-1161.95m, 1169.00-1172.24m; massive to mod fol @ 35° CA; 2% qtz-ep veinlets; 1% hem veinlets (planar @ 45-60° CA); med-gr, intermediate @ 1161.95-1169.00m; pale, cream-green colour; mod fol @ 30-40° CA; tr diss py; comp core (30cm); blocky zones @ 1158.80-1159.00m, 1165.70-1166.15m, 1171.40-1171.80m; upper etc is sharp, subplanar @ 55° CA; lower etc is sharp, irreg. 1160.26m: fol @ 35° CA. 1168.60m: fol @ 45° CA.								
		1172.24-1173.15 Cherty Sediment - Med grey-green colour; fine-gr; massive-finely laminated; interbedded with light green-cream colour cherty sed @ 1172.24-1172.37m (micro-brecciated with ep-infilled fractures), 1172.72-1172.93m (planar-lam, tilted @ 15-20° CA; laminae avg 2mm thick; range 1-10mm); 1% ep-qtz veinlets (50% ep-qtz zone @ 1172.43-1172.54m; minor host rock frags included; occurs @ 20° CA). - Composition: too fine-gr to determine; siliceous-cherty; non-mt; harder than steel, except @ 1172.93-1173.15m where int chl; tr diss py. - Mod comp core (20cm); lower etc is sharp, irreg @ low angle, approx 20° CA.								
		1173.15-1264.28 PELTIC VOLCANICS								
		1173.15-1184.17 Quartz-Feldspar Xtal-Tuff (QFP?) - Med cream-green colour @ 1173.15-1178.33m; light salmon-cream colour @ 1178.33-1184.17m; med-gr; massive-wk fol @ 1173.15-1178.33m; mod fol to banded @ 30-40° CA (1178.33-1184.17m); 2% ep-qtz-hem veinlets, irreg to planar. - Compos.: on: 20% fsp stals/frags(?) - pink-white colour; avg 2mm diam; up to 3mm; ang-subang; 10% qtz stal/frags (smoky grey								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 29

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		to white colour; avg 2mm diam, up to 3mm; 10% felsic volc frags (light-red grey colour; avg 3mm; up to 4mm); 60% fine-gr, siliceous matrix; non-xt; harder than steel; upper section wk chl; lower section wk ser-hem (results in colour variation); tr diss py. - Comp core (135cm); 100% core rec; lower etc is subtle, sharp @ 60' CA. 1177.28m: fol @ 35' CA. 1179.85m: fol @ 35' CA. 1181.43m: fol @ 45' CA.								
1184.17	1204.28	Rhyolite (Gal: Fill Rhyolite) - Light-med salmon colour to light-med grey-green colour sections @ 1199.40-1204.28m; pale cream-green section @ 1184.80-1188.10m; med salmon-grey colour section (brecciated-chaotic-massive-qtz flooded) @ 1190.92-1196.55m; generally, fine-gr with qtz-eyes; massive/brecciated (local flow-banding) @ 1184.17-1199.82m; intense brecciation/int clay-chl or @ 1184.40-1184.81m, 1185.20-1188.10m (could be due to fault @ 1186.90m @ 10' CA); predominantly flow-banded to massive @ 1199.40-1204.28m; 3% ep-qtz-cc veinlets/veins - irreg to planar to anastomosing, generally infilling fractures; 1% qtz-flooding throughout; abundant fractures, planar-subplanar @ 40-70' CA. - Minor red-purple chert interband @ 1184.81-1184.90m; str at; @ 50' CA. - Composition: felsic; 5% qtz-eyes; non-xt; harder than steel; pervasive, mod hem (resulting in salmon colour); local int clay-chl-ser, as described; nil-locally tr diss py. - Blocky-mod comp core (10cm); blocky zones @ 1165.45-1185.80m, 1186.50-1186.91m, 1187.30-1190.56m, 1193.40-1193.61m, 1194.70-1194.75m, 1196.26-1196.35m, 1198.40-1198.80m; lower etc is unobserved. 1192.05m: flow-banding @ 45' CA. 1200.60m: flow-banding @ 25' CA. 1201.00m: flow-banding @ 40' CA. 1201.70m: flow-banding @ 20' CA.								
	1204.28m:	EOH								

HOLE No: GB-154

RIO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: Gullbridge
HOLE No.: GB-154

Page 30

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS	Cu	Pb	Zn	Ba
------	----	--------------------------	------------	------	----	-------	--------	----	----	----	----

DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
228.60	-57.00	266.50
475.49	-55.00	278.50
566.93	-54.00	278.50
655.33	-52.00	280.50
755.91	-50.00	285.00
871.74	-48.00	291.00
971.10	-44.00	311.50
1075.35	-42.00	302.00
1202.76	-41.00	
1204.28	-41.00	

HOLE No: GB-154

PAGE NO.: 1
 HOLE NO.: CB-154
 SAMPLED BY: MCM

PROJECT: ROBERT'S ARM - GULLAGHORE (8807)

SAMPLE NUMBER	SAMPLE INTERVAL			Cu ppm	Pb ppm	Zn ppm	Ba ppm	SULPHIDES	DESCRIPTION
	From	To	Length						
30063	70.25	70.57	0.32m	16	6	11	10	trace py diss	Interflow chert, green, non-wk mt
30064	93.00	95.00	2.00m	51	4	47	23	minor py diss	Interflow sediment, biotite-rich
30065	324.00	325.00	1.00m	19	7	70	10	trace py-cp	Mafic dyke (volc?), massive, str chl
30066	354.52	356.52	2.00m	89	2	8	10	minor py, trace cp	Mafic volcanic, wk-mod chl, 3% qtz-cp-chl veins.
30067	366.00	368.00	2.00m	69	2	7	17	trace py-cp-no	Mafic volcanic, 3% qtz-cp veins, massive
30068	519.45	521.45	2.00m	63	2	17	10	nil - trace diss py	Banded chert, chl bands/matrix, mod mt.
30069	521.45	523.30	1.85m	54	2	18	39	trace diss py	Matrix-derived sediment, mod mt, str bt.
30070	523.30	524.00	0.70m	547	1637	>2200	124	1% sph, 1% py-pc, 1% cp	sal - Felsic tuff, mod mt, mod-str chl-bt
30071	524.00	524.70	0.70m	79	24	101	187	trace-minor py	Matrix-derived sediment, mod mt-chl str bt.
199015	607.36	609.36	2.00m	62	7	47	56	minor py diss	Sediment; bt-rich; mod chl; well-laminated
199016	611.50	613.50	2.00m	5	3	42	18	0.5% diss. py	ltz-xtal tuff; wk-mod H-chl; non-mt.
199017	632.54	633.47	0.93m	156	859	1561	35	2% diss py	Felsic agglomerate; mod ser chl.
199018	633.47	633.97	0.50m	274	40	151	64	12% py, minor cp	Mafic volcanic; mod-str chl;
199019	779.30	781.30	2.00m	10	15	10	>550	nil sulphides	Red banded chert; 3% qtz-Fo (ltz?) veins
199020	876.45	877.65	1.20m	50	36	37	37	0.5% diss + blks py	Felsic volcanic; mod. chl.
199021	938.70	939.50	0.80m	32	6	33	118	5% py infill fract.	Felsic agglom (breccia?); 3% qtz veins.
199022	961.70	963.70	2.00m	303	3	84	133	0.5% py; minor cp; diss.	Intensely chl rock (felsic volc?)
199023	963.70	966.00	2.30m	52	4	122	26	minor py; diss-stringer	" " " " "
199024	966.00	968.00	2.00m	14	12	111	38	minor py; "	" " " " "

PAGE NO. 2
HOLE NO. CB-154
SAMPLED BY: NEM

PROJECT: ROBERTS ARM - GULLBRIDGE (8307)

SAMPLE NUMBER	SAMPLE INTERVAL			Cu ppm	Pb ppm	Zn ppm	Ba ppm	SULPHIDES	DESCRIPTION
	From	To	Length						
199025	968.00	970.50	2.50	69	10	172	10	1% py; minor cp	Intense chl felsic; diss-stringer sulphides.
199026	970.50	973.00	2.50	220	24	83	62	1% py; minor cp	" " " " " "
199027	973.00	975.00	2.00	733	9	83	20	1% py; minor cp	" " " " " "
199028	975.00	977.50	2.50	673	10	162	22	0.5% py; minor cp	" " felsic agglom(?)
199029	977.50	980.00	2.50	820	25	118	44	0.5% py; minor cp	Str-int chl felsic tuff/agglom(?)
199030	980.00	982.00	2.00	1518	8	144	11	1.5% py; minor cp	Int. chl felsic (tuff?); diss-string sulph
199031	982.00	984.09	2.09	392	9	91	12	minor py; tr cp	Int. chl felsic; diss-stringer sulphides
199032	991.50	994.00	2.50	1156	30	65	10	0.5% py; 0.5% cp	str. chl felsic; " " "
199033	994.00	996.50	2.50	558	11	40	34	1.5% py; 1% cp	Int. chl felsic; " " "
199034	996.50	999.00	2.50	3638	8	47	12	2% py; 1% cp; 1% po	" " " ; stringer - diss "
199035	999.00	1001.50	2.50	1045	11	58	10	2% py; 1% cp; 0.5% po	" " " " " "
199036	1001.50	1004.00	2.50	104	2	48	19	1% py; diss-string	str-int chl felsic; 2% cp-gtz veinlets
199037	1004.00	1006.00	2.00	879	7	52	20	2% py; 1% cp; tr po	int. chl felsic (tuff?); py diss throughout; local cp.
199038	1006.00	1006.77	0.77	1729	13	50	15	4% po; 2% py; 0.5% cp	int. chl felsic; stringer sulphides
199039	1006.77	1007.37	0.60	13300	6	60	12	4% cp; 7% po; 2% py	" " " " "
199040	1007.37	1010.00	2.63	5867	12	70	29	2% cp; 4% po; 3% py	" " " " " ; 1.5 m lost core.
199041	1010.00	1012.50	2.50	264	10	140	14	1.5% py; minor cp	str-int chl felsic; diss sulphides; local needle py.
199042	1012.50	1015.00	2.50	1029	10	137	10	2% py; tr cp	int. chl felsic; diss-stringer sulphides.
199043	1015.00	1017.00	2.00	3020	10	106	10	1.5% cp; 1% po; 1% py	" " " ; cp-po with irreg. gtz veins.

GB-154

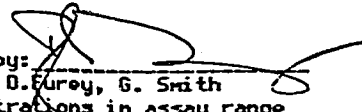
Client: Rio Algom Exploration
 Geo: M. Pudifin
 Project: 8807
 Sample: Core
 DskFile: 171-6751.mk1

ICP Geochemistry Certificate

Eastern Analytical Limited
 P.O. Box 107,
 Little Bay Road,
 Springdale,
 Newfoundland.

DateIn: February 13/92
 DateOut: February 16/92

Phone: 709-673-3909
 Fax: 709-673-3408

Signed by: 
 D. Furey, G. Smith
 (Concentrations in assay range
 may cause interferences in
 associated elements.)

SAMPLE #	Ce ppm	Sr ppm	Ba ppm	Fe %	P %	Hg ppm	Hg %	As ppm	V ppm	Na %	Mo ppm	Al %	Be ppm	Ca %	Zn ppm	Cu ppm	Sb ppm	Ag ppm	Pb ppm	Bi ppm	Ti %	Cd ppm	Co ppm	Ni ppm	H ppm	La ppm	K %	Mn ppm	Rb ppm	Cr ppm
199015	10	15	56	2.51	0.04	1	1.45	5	110	0.11	3	2.16	0.6	1.36	47	62	5	0.2	7	2	0.05	0.5	20	28	10	10	0.49	372	20	112
199016	10	2	18	1.85	0.02	1	0.77	5	13	0.06	1	0.97	0.5	0.18	42	5	5	0.2	3	2	0.03	0.5	3	3	10	10	0.36	663	20	117
199017	10	2	35	3.51	0.03	1	1.96	5	78	0.04	1	1.80	0.5	0.20	1561	156	5	0.6	859	2	0.02	4.9	13	20	10	10	0.08	1553	20	116
199018	10	7	64	3.60	0.05	1	2.25	5	102	0.07	1	2.25	0.5	0.73	151	274	5	0.4	40	2	0.02	0.5	20	31	10	10	0.04	682	20	146
30063	10	6	10	2.12	0.01	1	0.68	5	24	0.07	1	0.75	0.5	0.57	11	16	5	0.3	6	2	0.02	0.5	4	8	10	10	0.06	157	20	255
30064	10	14	23	3.97	0.08	1	1.39	5	216	0.10	1	2.02	1.0	0.99	47	51	5	0.2	4	2	0.08	0.5	21	14	10	10	0.45	145	20	51
30065	43	38	10	5.99	0.47	1	1.84	5	154	0.09	1	2.31	1.2	3.56	70	19	5	0.2	7	2	0.05	0.5	19	2	10	10	0.04	549	20	64
30066	10	13	10	0.93	0.02	1	0.33	5	26	0.10	1	0.83	0.5	0.50	8	89	5	0.2	2	2	0.02	0.5	9	11	10	10	0.07	73	20	49
30067	10	25	17	0.78	0.02	1	0.40	5	25	0.15	1	1.62	0.5	1.36	7	69	5	0.2	2	2	0.02	0.5	6	10	10	10	0.13	90	20	66
30068	10	3	10	1.98	0.02	1	1.94	5	70	0.05	1	1.80	0.5	0.43	17	63	5	0.2	2	2	0.03	0.5	12	28	10	10	0.17	123	20	165
30069	10	16	39	1.65	0.05	1	0.51	5	65	0.09	1	1.14	0.5	0.60	18	54	5	0.2	2	2	0.03	0.5	13	12	10	10	0.28	74	20	63
30070	10	4	124	4.22	0.05	1	1.53	11	202	0.10	1	1.90	0.8	0.73	>2200	547	5	2.0	1637	2	0.07	13.5	27	30	10	10	0.81	269	20	83
30071	10	9	187	2.31	0.05	1	1.06	5	153	0.14	1	2.40	0.8	1.15	101	79	5	0.2	24	2	0.05	0.5	14	20	10	10	0.63	120	20	65

CS-154

Client: Rio Algom Exploration
 Geo: M. Pudifin
 Project: 8807
 Sample: Core

DskFile: 171-6757.uk1

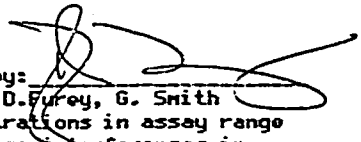
DateIn: February 18/92
 DateOut: February 21/92 Rec'd Feb 22

ICP Geochemistry Certificate

Eastern Analytical Limited
 P.O. Box 187,
 Little Bay Road,
 Springdale,
 Newfoundland.

Fone: 709-673-3909
 Fax: 709-673-3408

Signed by:


 D. Furey, G. Smith

(Concentrations in assay range
 may cause interferences in
 associated elements.)

SAMPLE #	Ce ppm	Sr ppm	Ba ppm	Fe Z	P Z	Hg ppm	Hg Z	As ppm	V ppm	Na Z	Mo ppm	Al Z	Be ppm	Ca Z	Zn ppm	Cu ppm	Sb ppm	Ag ppm	Pb ppm	Bi ppm	Ti Z	Cd ppm	Co ppm	Ni ppm	H ppm	La ppm	K Z	Mn ppm	Rb ppm	Cr ppm
199019	10	33	>550	1.05	0.04	1	0.26	89	6	0.03	1	0.21	0.5	0.33	10	10	5	0.2	15	2	0.01	0.5	5	12	10	10	0.06	1918	20	102
199020	10	4	37	3.10	0.06	1	1.01	5	19	0.02	1	1.15	0.5	0.19	37	50	5	0.2	36	2	0.02	1.7	13	20	10	10	0.24	1175	20	94

G13-15-4

Client: Rio Algom Exploration
 Geo: M. Pudifin
 Project: 8807
 Sample: Core

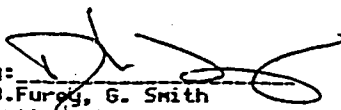
DskFile: 171-6759.wk1

DateIn: February 25/92
 DateOut: February 28/92 *Rec'd Feb 28/92*

ICP Geochemistry Certificate

Eastern Analytical Limited
 P.O. Box 187,
 Little Bay Road,
 Springdale,
 Newfoundland.

Phone: 709-673-3909
 Fax: 709-673-3408

Signed by: 
 D. Furey, G. Smith
 (Concentrations in assay range
 may cause interferences in
 associated elements.)

SAMPLE #	Ce ppm	Sr ppm	Ba ppm	Fe %	P %	Hg ppm	Hg ppm	As ppm	V ppm	Na %	Mo ppm	Al ppm	Be ppm	Ca %	Zn ppm	Cu ppm	Sb ppm	Ag ppm	Pb ppm	Bi ppm	Ti %	Cd ppm	Co ppm	Ni ppm	H ppm	La ppm	K %	Mn ppm	Rb ppm	Cr ppm
199021	10	7	118	2.68	0.04	1	0.94	5	16	0.03	1	1.05	0.5	0.09	33	32	5	0.2	6	2	0.01	1.7	10	14	10	10	0.10	450	20	73
199022	10	3	133	6.38	0.05	1	2.73	5	121	0.03	4	3.88	0.5	0.11	84	303	5	0.2	3	2	0.03	3.6	40	19	10	10	0.02	780	20	71
199023	10	3	26	7.86	0.07	1	3.27	5	177	0.02	4	5.00	0.6	0.16	122	52	5	0.2	4	2	0.03	4.8	47	23	10	10	0.02	986	20	79
199024	10	2	38	8.13	0.04	1	2.98	5	168	0.02	1	4.95	0.6	0.09	111	14	5	0.2	12	2	0.02	4.1	52	31	10	10	0.02	904	20	124
199025	10	1	10	8.40	0.04	1	2.89	5	167	0.02	2	5.05	0.6	0.07	172	69	5	0.2	10	2	0.01	5.8	54	32	10	10	0.01	669	20	124
199026	20	3	62	9.33	0.04	1	2.68	5	166	0.02	2	5.12	0.6	0.08	83	220	5	1.0	24	2	0.01	5.2	58	33	10	10	0.02	684	20	123
199027	10	2	20	9.77	0.04	1	2.61	5	178	0.02	1	5.38	0.6	0.08	83	733	5	0.2	9	2	0.01	4.7	53	34	10	10	0.02	778	20	134
199028	10	3	22	9.26	0.05	1	2.97	5	181	0.02	1	5.39	0.7	0.11	162	673	5	0.2	10	2	0.02	5.2	44	41	10	10	0.03	951	20	144
199029	10	3	44	7.78	0.04	1	2.45	5	131	0.03	27	4.47	0.5	0.12	118	820	5	0.5	25	2	0.02	5.4	37	27	10	10	0.06	739	20	121
199030	10	3	11	9.52	0.04	1	3.15	8	182	0.04	1	5.43	0.6	0.13	144	1518	5	0.4	8	2	0.02	5.3	47	34	10	10	0.02	940	20	128
199031	10	15	12	6.44	0.05	1	2.87	5	145	0.08	1	4.41	0.5	0.62	91	392	5	0.2	9	2	0.03	4.2	33	27	10	10	0.02	796	20	92
199032	10	3	10	8.60	0.04	1	3.35	5	159	0.03	1	5.06	0.5	0.13	65	1156	5	0.5	30	2	0.03	6.2	44	48	10	10	0.01	787	20	153
199033	10	1	34	6.85	0.03	1	2.23	5	99	0.02	1	3.95	0.5	0.06	40	558	5	0.2	11	2	0.02	4.9	35	27	10	10	0.05	465	20	105
199034	10	1	12	>10.00	0.07	1	2.46	5	255	0.02	2	5.16	0.9	0.13	47	3638	5	0.7	8	3	0.02	6.0	76	21	10	10	0.01	465	20	46
199035	10	2	10	6.54	0.06	1	2.47	5	211	0.02	1	4.25	0.8	0.17	58	1045	5	0.2	11	2	0.03	4.8	49	20	10	10	0.01	556	20	52
199036	10	8	19	3.57	0.06	1	1.66	5	129	0.07	1	2.22	0.5	0.32	48	104	5	0.2	2	2	0.04	2.3	18	16	10	10	0.01	365	20	54
199037	10	2	20	6.43	0.04	1	1.76	5	109	0.03	1	3.11	0.5	0.08	52	879	5	0.4	7	2	0.01	4.2	40	13	10	10	0.02	525	20	60
199038	10	2	15	>10.00	0.07	1	3.06	9	189	0.03	1	5.27	0.6	0.11	50	1729	5	0.3	12	2	0.02	9.0	186	17	10	10	0.01	509	20	37
199039	10	2	12	>10.00	0.07	1	2.57	5	188	0.03	1	4.32	0.6	0.12	60	>10000	5	3.2	6	10	0.01	8.3								

GB-154

Client: Rio Algom Exploration
Geo: M. Pudifin
Project: 8807
Sample: Core

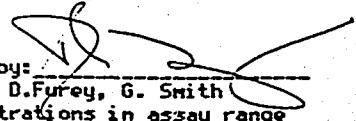
DskFile: 171-6760.wk1

DateIn: February 25/92
DateOut: February 28/92 *Feb 25 1992*

AA Assay Certificate

Eastern Analytical Limited
P.O. Box 187,
Little Bay Road,
Springdale,
Newfoundland.

Phone: 709-673-3909
Fax: 709-673-3408

Signed by: 
D. Furey, G. Smith
(Concentrations in assay range
may cause interferences in
associated elements.)

SAMPLE #	Cu(CCP) ppm	Cu(AA) %
199039	>10000	1.33