

RTO ALGOM EXPLORATION INC.

DIAMOND DRILL LOG

PROPERTY: GULLBRIDGE

HOLE No.: GB-153

Collar Eastings: 790.00

Collar Northings: 4880.00

Collar Elevation: 0.00

Grid: MAIN 1988

Collar Inclination: -60.50

Grid Bearing: 274.00

Final Depth: 135.64 metres

TO TEST BENEATH MINERALIZATION/ALTERATION DRILLED IN GB-148 AND BENEATH THE MINE

Logged by: S. M. PUDIFIN

Date: JAN. 31, 1992

Down-hole Survey: TROPARJ

FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
0	6.30	CASING Ice, Water, Overburden								
6.30	18.75	MAFIC GABBROIC DYKE								
		-Dark grey-green; medium-grained gradually fining to a chilled interval over lowermost 35 cm								
		-unfoliated; uniform "speckled" texture of interlocking subhedral crystals								
		-composition: mafic, 30-35% subhedral amphiboles; 60-65% fs; minor chlorite and calcite; amphiboles are the coarsest, up to 1 mm								
		-alteration is weak consisting mainly of minor to 1% planar cc ± qz veinlets with trace-minor epidote								
		-veinlets vary (1 mm to 1 cm wide; variably oriented								
		-uniform weak to moderate magnetism; hard except for chloritic ± cc slips which are easily scratched								
		-mineralization: minor to trace fine-grained disseminated py								
		-competent but fractured, pieces vary in length from 2-25 cm; average breakage is 10 cm								
		-gradual lower contact is chilled over 35 cm								
18.75	135.48	MAFIC VOLCANIC (WITH INTERFLOW SEDIMENTS/CHERT)	193165	50.00	52.00	2.00	95	3	33	10
		-Dark grey to grey-green; very fine-grained								
		-poorly developed to non-existent foliation; only subintervals of interflow sediments or cherty tuffs show distinct foliation								
		-composition: too fine-grained to determine but high chlorite content								
		-variable weak to locally stronger magnetism; core is indurated and can't be scratched with steel								
		-alteration: mainly as minor to 1% cc ± qz veinlets ± epidote (brecciated sections are more strongly veined); variable silicified lighter grey-green irreg "bl.ay" patches commonly with minor cc and variable minor amounts of reddish-brown gt;								

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FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS				
							Cu	Pb	Zn	Ba	
		cc; commonly coats fractures -mineralization: mainly trace to minor locally disseminated fine-grained py; trace cp in cc veins (50.25 m)									
21.53	28.04	QUARTZ EYE-CRISTAL/LAPILLI TUFF -light grey; fine-grained to lapilli size; fragmental texture -massive; no foliation except where lapilli are elongated -siliceous aphanitic groundmass with polyolithic fragments -siliceous light grey lapilli are subhedral to anhedral, up to 4 - 5 mm; coarser lapilli are elongated at 48 - 50 CA (ie: @ 25.75 - 28.04 m); diffuse lapilli give core a mottled appearance to 26.40 m -some fragments are very fine-grained and dark brown, what appears to be biotitic, in upper 1 m 26.40 - 28.04 m core shows well developed foliation along which elongated lapilli occur; this zone is biotitic (5% <0.5mm specks as well as subrounded brownish concentrations (frags?) up to 1 cm diameter and 2.5 cm x 1 cm; up to 1% rounded quartz eyes -alteration: minor qz-cs-cp veinlets, <0.5% particularly from 26.40-28.04 m -non-magnetic; very hard -no mineralization gradual lower contact into mafic volcanics									
28.04	39.60	MAFIC VOLCANIC -as described above but with stronger fracturing; core broken on average 3 - 6 cm at high angle to CA -variable discontinuous white cc wisps/patches varying in size from subrounded vesicles 1 mm diam. to waxy irregular patches, some are occasionally folded (1-2%); carbonate cement commonly coats fractures									
34.76	34.90	INTERFLOW SEDIMENTS -light grey, f.gr., siliceous showing well developed foliation @ 56° CA; upper etc @ 50° CA; lower etc @ 40° CA									
35.68	40.20	FAULT ZONE -Brecciated mafic volcanic; core broken @ 50-70° CA; main part of fault where cc/clay - rich gouge is most abundant @ 47.30 m; core is blocky and hosts irreg qtz-cc-ep; brownish gt veins and									

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FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		discontinuous patches (2-3%); chl commonly coats fractures which are 35-40" CA; core pieces are 4 - 5 cm long								
49.20	45.00	MAFIC VOLCANIC								
		-as at 28.04 - 39.60m								
45.00	47.75	FAULT ZONE								
		-strongly fractured mafic volcanic; core broken @ 50-70" CA; main part of fault where cc/clay-rich gouge is most abundant @ 47.30 m; core is blocky and hosts irregular qtz-cc-ep-gt veins and discontinuous patches (2-3%); chl commonly coats fractures								
45.75	71.10	MAFIC VOLCANIC								
		-as previously described but strongly cc veined; up to 5 - 6% discontinuous, irregular and occasionally planar cc veins and patches; 1 - 2% brownish gt concentrations generally within calcite domains and associated with epidote (1 - 2%); 1 - 2% qtz veins commonly within central part of cc domains								
		-crystals of qtz present in cc lined vugs @ 57.25 m; weak at								
		-minor dissem. f. gr. py; trace ep associated with qtz-ep patch								
		-lower contact @ 55 CA is faulted; core is strongly carbonatized and crosscut by a multitude of thin irregular cc veinlets; minor carbonate-clay gouge along fractures as well as chlorite from 69.50 - 71.10 m								
71.10	85.90	MAFIC DYKE								
		-fine-grained @ the contacts over 45 cm to med. gr.; medium grey with a speckled equigranular uniform texture; massive								
		-composition: 35% mafics; 65% felsics-mainly feldspar; dissem. mt, up to 1% (strong to moderately magnetic core)								
		-alteration consists of thin anastomosing rtt-ep veinlets (<0.5%) and minor planar cc veinlets								
		-trace dissem. f. gr. py								
		-competent core; locally fractured; breakage is 7 cm - 50 cm; average 10 cm @ high angle to CA (on average @ 65° CA)								
		82.00 - 82.10 m: rubbly core - chloritic fracture surfaces								
		-sharp lower ctc defined by 0.6 cm wide cc vein @ 35° CA								
85.90	90.90	ELIOTIC VOLCANIC/INTERFLOW SEDIMENT								

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FROM	TO	LITHOLOGICAL DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH	ASSAYS			
							Cu	Pb	Zn	Ba
		-mottled brown and dark grey-green; f. gr. -strongly developed "chaotic" foliation defined by brown biotitic patches or laminations, calcite veins and patches as well as felsic siliceous bands; core has a somewhat sedimentary appearance -foliations: 86.16 m = 58° CA; 86.50 m = 26° CA; 87.25 m = 11° CA; 88.50 m = 36° CA; 89.20 m = 22° CA -composition: too f.gr. to determine for certain quantitatively but 30 % brown f.gr. biotitic domains; 50 - 60 % indurated siliceous mafic volcanic; 5% cc veins, veinlets and patches; @ 87.20 m darker grey ovoid spots 1 mm - 0.6 cm diam. could be cordierite (3% over 10 cm); 45% light grey, very f.gr. siliceous felsic volcanic bands < 2 cm to 4 cm wide ie. @ 88.50 m -magnetism is variable to non-magnetic or moderately to strongly magnetic; core is very hard and can not generally be scratched with steel -mineralization: ubiquitous traces of subhedral f.gr. dissem. py -core is usually competent and breakage, on average, is 12 cm -86.40 m: rubbly core; minor fault with chl-clay-cc gouge coating fractures -lower contacts grade into poorly foliated mafic volcanic 90.90 135.82 MAFIC VOLCANIC -as previously described-f. gr. uniformly textured, massive to moderately foliated locally; minor thin light grey, v. f. gr. to aphanitic felsic volcanic with cc bands define a foliation: ie. 94.40 - 94.84 m : 40° CA upper etc, 60° CA lower etc 98.54 - 98.66 m : 32° CA 102.60 - 102.72 m : 15° CA upper etc, 40° CA lower etc 115.06 - 115.16 m : 35° CA upper etc, 40° CA lower etc 124.20 - 124.45 m : 22° CA upper etc, 30° CA lower etc (sil-ep) -narrow, sheared and recemented with cc @ 120.80-121.10 m @ 40° CA rubbly, fractured core @ 121.10-122.45 m -134.50 - 135.82 m: light grey siliceous fracture subparallel to CA; very weak foliation @ 45-55° CA. -alteration consists mainly of irreg elongated bleached patches or bands, 2 mm - 5 cm wide of cc-gtz-diop(?) -gt (comprises 1-2% of interval); minor silicified, cc'd zones have associated ep								

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

-@ 122.53 m pinkish cc with greenish cc
-mineralization: trace to minor disse. py; local specks po.

EDH: 135.62 m
Hole terminated due to excessive steepening.

DOWN-HOLE SURVEY DATA

DEPTH	INCLINATION	BEARING
5.75	-60.50	
54.60	-61.00	266.50
135.64	-63.00	269.50

HOLE No: GB-153

PROJECT: ROBERT'S ARM 8807

[illegible]

GB-153

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

DskFile: 171-6751.uk1

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

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	Sr	Ba	Fe	P	Hg	Hg	As	V	Na	Mo	Al	Be	Ca	Zn	Cu	Sb	Ag	Pb	Bi	Ti	Cd	Co	Ni	W	La	K	Mn	Rb	Cr
#	ppm	ppm	ppm	%	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
193165	13	11	10	2.39	0.03	1	1.17	5	63	0.09	1	1.50	0.6	2.49	33	95	5	0.2	3	2	0.03	0.5	21	32	10	10	0.04	243	20	66