

Billiton Exploration Canada Ltd.
Diamond Drill Log

PROJECT: Celtic-Billiton JV	DRILLED BY: Petro Drilling	DATE STARTED: Sept. 28 th .99	AZIMUTH:	LOCATION: L12+00S, 9 +00E	HOLE #: LB 99-05
PROPERTY: Lake Bond	LOGGED BY: Barry Greene	DATE COMPLETED: Oct. 1, 1999	DIP: -65°	UTM: 559396.02E, 5427755.33N	SHEET #: 1
LICENCE:	CORE SIZE: NQ	TOTAL DEPTH: 392.0m			

[illegible]

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51.52	100.74	Mafic Flow Flow brecciation	Med. to dark green, weakly to moderately hematized to 65.0m. Pervasive and ubiquitous sil-epid –calcite stockwork veining occupying 10-15% and locally up to 50% of host. - upper contact @45 degees TCA with intrusive - glassy hyoclastic quench texture evident where brecciated. 70.20 – 71.06m - late amygdular (calcite) diabase dyke. contacts @ 30 degrees TCA. 89.94 – 91.85m - late amygdular diabase akin to 70.20 – 71.06m. 91.85 – 100.74m medium olive green, bleached looking interval that arguably has features resembling both a flow and bleached intrusive? - ubiquitous fracturing @ 10-20 degrees TCA with cloudy silica infill.
100.74	110.51m	Mafic Intrusives	Dark green, medium grained, plag phyric diabase / gabbro. - numerous 1-2mm black chlorite altered specks - ocaasional epidote and pink potassic veinlet. 106.60 – 107.85 - Healed fault breccia @ 10 degrees TCA with pale green, very f.ig. dyke?
110.51	131.00	Mafic Flow & breccia	Light green to greenish-white mod. to good silica – epid-chlorite alteration.....veinlets / stockwork and pervasive alteration - good hyalo clastic quench texture. eg. 127.6 – 128.6m - unmineralised. 124.05 – 124.74m late diabase . contacts 45 degrees TCA
131.0	141.10m	Mafic dyke	black fine to medium grained (Phameritic) with visible tiny plag.
141.10	149.28m	Mafic flow breccia.	Akin to interval a base last mafic intrusive between 110.51 – 131.0m

149.28	154.10m		Porphyritic mafic intrusive (plag and pink kspar?)
154.0	308.89m	Mafic flow	Dark green fine grained mafic flow (basalt) as above (141.10 – 149.88 etc) locally well developed and hyaloclastic breccia with well preserved quench textures throughout interval. - 1% calcite –epidote microveinlets to 1cm . - minor late mafic dykes from 252-256m @ 70 degrees TCA - 270.95 – 280.12m - variolitic texture - 296.73 – 301.71m - isolated 2-3cm pink feldspar rich quartz veins. - 303 – 308.89m – minor clot po. Good 2cm shear at basal contact with mineralized zone below.
308.89	354.56m	Mineralized Mafic Volc.	Dark to light green with mottled alteration pattern.... areas of light green siliceous alt in and locally chloritic likely progressing along easily hyaloclastically prepared mafic breccia. - 2 -3% stringer zones to 1cm with po-cpy-sph-py 347.4 – 348.63m - up to 1% zn over first 10m of zone.
354.56	371.45m	Mafic flow breccia	Akin to 141.1 – 149.28m higher in hole - to 358.60m still weakly mineralized as a continuation of mineralized zone above (ie. mineralized zone is hosted by thin mafic breccia. broken core at basal contact with a mafic dyke.
371.45	372.30m	Mafic dyke	Dark grey fine grained non descript. - evidence of open folding (F,A – 5 degrees TCA) over last 15cm – folding truncated at basal contact (unconformity).
372.30	373.90m	Intercalated laminated Siltstone and Basalt	- Basalt as above - laminated siltstone is light green with 2-0mm finely laminated beds at 60-70 degrees TCA

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373.90	383.13m	Quartz phyric felsic. volc.	Light greenish – yellow sericitic , 2-4mm quartz with 2-5mm lithic grains () sericite chlorite-silica veinlets throughout to 3% of interval. Hematitic tu 374.10m - sharp upper contact @ 60 degrees TCA and finer grained less chloritic looking (more rhyolitic) over initial few meters. - basal contact @ 45 degrees E mafic interval below.
383.13	392.0	Mafic Intrusive	Light to dark green - chilled and fine grained at top tu 382.5m - 387.5 tu 392m plag and px phyric tu 2mm

END OF HOLE @ 392.0m