

Billiton Exploration Canada Ltd.
Diamond Drill Log

DRILLED BY: Petro Drilling LOCATION: Grid Coordinate approx. L0+00 1+67N on Millertown Grid Grid Map Reference: 12A / 15 *Claim #: 6375M, 7519M
Location: UTM NAD 27, Zone 21 532946.59E, 5405987.91N (Chained from Handheld GPS point) PROPERTY: Millertown LOGGED BY: Trevor Rice DATE STARTED: 05/28/00
DATE COMPLETED: 05/30/00 TOTAL Meterage: 186.84 m AZIMUTH: 315° Collar Elevation: ~ 175 m Dip of Hole at: Collar -51° → 315° at: 112.78m -49° → 314°
Tropari (True N)

FROM	TO	DESCRIPTION
0	8.97 m	Overburden
8.97	42.85	Fault Zone - Large fault zone consisting of 80% broken core. - Rock is altered ; consisting of patchy silicification and local pervasive sericitization - Protolith may be mafic. Pinkish red and greenish in colour. - Fault breccia noted all along unit. Groundmass is either sericite or a light tan fine grained sand-like fill (this tan sand-like material can be very competent – not gouge). - Faults are subparallel to c.a. and are noted with gouge material at interval 24.88 – 37.5 m. - Lost core 34.75 – 36.88 m - Dark green mafic dyke-like material noted at 31.2 – 31.8 m, 32.7 – 33.1 m (infilling faults?). - Lower contact is graditional. No significant lithological change but increased alteration.
42.85	91.9	Alteration Zone - Pervasively strong silicification and moderate to strong sericitization. - Core is light lime green to locally greyish pink in colour. Core is overall competent (unlike upper broken section) - From 42.85 – 53.74 alteration is confined to silicification with sericitic veinlets filling fractures and brecciating core. From 53.31 to bottom of unit both silica and sericite are pervasive; although a gradual decrease in the amount of sericite is evident in the bottom 3 – 4 m. Pervasively altered material occasionally contain bright light emerald green fuchsite alteration : often associated with quartz infilling. - Minor quartz veinlets cutting unit. - 53.74 – 57.31 Fault zone containing fault breccia and local gouge (56.91 – 57.31) Upper contact at 70° to c.a. Lower contact at 20° to c.a. Upper contact has smeared graphite along contact. - Minor graphite noted at 59.4 m along fracture. Not conductive with ohmmeter. - Calcite fracture at 72.6 m at 50° to c.a. - No mineralization noted in unit. - Lower contact bounded by fault. Significant lithological change across fault. 2 cm calcite veining at 30° at c.a. along structural boundary.
91.9	101.0	Fault Zone - Brecciated Fault Zone. 30° to c.a. - Breccia consists of oblong fragments of clear to white siliceous material and occasional jasper. - Infilling mafic dyke material. Mafic minerals altered to chlorite. Local calcite amygdules. - Lower contact lost in broken core.

- 101.1 118.75 Mafic Tuff
- Fine to medium grained light to dark green mafic tuff?
 - Unit is weakly altered. Plagioclase are sericitized and mafic minerals chloritized.
 - Fine grained magnetite is locally disseminated in interval
 - Trace to locally 1% disseminated fg pyrite mineralization at 100.9 m and. At 108.21 m up to 2% blebby py in 2 cm chlorite-rich zones.
 - Unit cut by many calcite veinlets at varying degrees to c.a.
 - Unit probably related to gossan (Millertown Gossan) noted along Red Indian Lake.
 - Lower contact bounded by fault at 45° to c.a.
- 118.75 119.65 Fault Zone
- Fault zone consists of 40 – 50 % well-rounded to oblong silicified fragments (1 mm – 6 cm). Gouge is black to tan coloured.
 - Visible fabric at 50° to c.a.
 - Lower contact sharp at 30° to c.a.
- 119.65 136.54 Clastic Sediment
- Coarse grained grey-green black speckled clastic sediment. Unit looks granitoid in nature.
 - Clast consists of quartz (40 – 50 %) feldspar and potassic altered fragments. Size range 1-15 mm. They are rounded to oblong shaped.
 - Groundmass is siliceous, chloritic (giving speckled look) and locally sercitic.
 - Weak layering at 45° to c.a. and may be fining downhole.
 - Mafic dykes at 124.7 – 125.0, 131.89 – 132.59, 135.94 – 136.54, 4 cm gouge seam atop dyke at 131.89 (10° to c.a.).
 - Lower contact at 25° to c.a. fault bounded.
- 136.54 142.02 Fault Zone
- Brecciated Fault Zone. 25° to c.a.
 - 30% fragments consist of rounded to oblong white and potassic siliceous fragments (1 – 3 cm).
 - Groundmass consists of tan colour sand-like gouge and greenish altered mafic?
 - Fabric visible at 25° - 45° to c.a.
- 142.02 146.0 Mafic?
- Light green altered mafic
 - Rock consist of sercitized plag and chloritized mafic minerals
 - Intensely quartz and calcite flooded. Chaotic distribution throughout unit.
 - Fault breccia at 145.4 – 145.45, 146.2 – 146.4
 - Lower contact lost in broken core.
- 146.0 175.65 Clastic Sediment
- Coarse grained grey clastic sediment
 - Similar to sediment noted above. Looked granitoid at first glance. Upon inspection fragments appear rounded or oblong as opposite to crystals.
 - Cut by many mafic dykes

149.66 – 155.66 m Fine grained bleached green appearance. Altered mafic (chl) and sericitized plag. Contacts are sharp at 70° and 40° respectively.

158.42 – 162.57 m– as above

174.3 – 174.95 – as above.

167.22 – 174.35 Fault breccia

- 80% fragments consisting of host rock and siliceous material
- Ground mass soft green grey gouge – gouge seams are at 30 – 40 ° to c.a.

- Lower contact sharp at 15° to c.a.

175.65 186.84 Mafic Dyke

- Dark green fine grained weakly magnetic mafic dyke or a fg tuff?
- 5% chaotic thin calcite/carbonate flooding
- Locally speckled with leucoxine.

186.84 End of Hole