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Preliminary observations of Diamond Drill Hole LBD03

For Proto Resources Ltd

INTRODUCTION

A preliminary log on the first seven trays of diamond drill hole LBD03 was conducted at the author's private residence in Darwin. It is understood that the hole was collared vertically to intersect a magnetic anomaly with a depth to top of ~300-350m.

On the first attempt of drilling in December 2011 a total depth of 108 metres were drilled with slow penetration rates and the onset of the wet season prematurely postponing the rest of the drilling until weather and a suitable drilling contractor are aligned.

A log of the hole is attached as Appendix 1.

OBSERVATIONS

A large part of the first 50m have not been recovered with heavily oxidised and broken metasediment either being washed away with the drilling and or somehow not picked up. This is not unusual in heavily weathered regolith where coring becomes difficult and RC or Rotary mud drilling is more effective until competent rock is intersected.

All the rocks intersected are sediments of the Limbunya Group which have near flat shallow dips <10 degrees and are carbonate rich. Small rip up clasts and wavy convoluted organic rich beds are present in those less laminated sediments in the more oxidised section the hole. Minor sandstone is also present often with chlorite rich clots throughout.

From 97metres to end of drilling at 108, typical flat laminated carbonate rich sediments exist.

In summary the hole is still within rocks of the Limbunya group with at this stage exhibiting no real alteration either hydrothermally or metasommatically. With the depth to target being at around 300-350m vertical depth, this also corresponds with the approximate depth of black shales of the Birrindudu Group. These shales are highly conductive and could be the source of the anomaly targeted so careful geophysical advice is warranted.

APPENDIX 1 – LBD03 DRILL LOG

0 - 52.5m	Broken heavily oxidised ferruginous metasediment with cherty siliceous rubble in places that could be contamination from up hole. Large sections of the hole not recovered.
52.5 – 59.4m	Pale brown oxidised laminated mudstones (possibly Mallabah Dolostone), with bedding flat lying and at 90 degrees to the core axis.
59.4 – 60m	Dark red brown ferruginous mudstone, quite massive with no discernible internal foliation.
60 – 65.4m	Brown/pink pale oxidised fine grained sediment. (BQ size core 61.7-62.6m)
65.4 – 65.57m	Brown ferruginous brecciated fault zone at ~50 degrees to core axis. Broken brecciated fragments of sediment cemented by pug. As per Figure 1 below.

Figure 1 Broken fault Zone

65.57 – 73m	Dark Brown broken zone probably as a result of the above fault. Broken siliceous cherty fragments as well as finer grained mudstones.

73 – 84m	Pale brown leached metasediment with siliceous grey bands of siliceous chert.
84-85m	More competent rocks as above although still highly oxidised.
85-94.5m	Broken cavity ridden metasediment. Significant loss of core maybe due to dissolution of carbonate rich sections of the sequence. Wavy interbeds of darker purple organic rich sediments that have significant chlorite associated with them.

End of Oxidised Zone

94.5 – 95.6m	Very fine grained buff dolomite that is carbonate rich. Rip up clasts and wavy interbeds of coarser grained material present. Figure 2 below.

Figure 2 – Buff Dolomite – note rip up clasts in lower third of core

95.6 – 95.61m	Small 1cm quartz vein, milky white in appearance and non-mineralised.
95.61- 99.7m	Broken Interbedded laminated sediments of the Mallahbah Dolostone. Intermediately oxidised

End of Intermediate oxidised zone

Top of Fresh Rock

99.7 – 108m   Fresh laminated very fine grained sedimentary dolostone / mudstone of the
                   Mallahbah Dolostone. Grey green in colour and moderately carbonate rich.
                   Figure 3 Below.

Figure 3 - Fine grained laminated carbonate rich sediments of the Mallabah Dolostone

End of current drilling