



Rio Tinto Exploration Pty. Limited

ABN 76 000 057 125 / ACN 000 057 125

A member of the Rio Tinto Group

Antrim Project
EL's EL22642, 22643, 22644, 22749, 22750 & 22751,
2003 Drilling Program Report,
Birrindudu SE 211, Limbunya SE5207,
Northern Territory

Exploration Report No. 26277

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Distribution:	Ausquest Pty Limited RTE Perth Information Centre

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ANTRIM DIAMONDS DRILLING PROGRAM

Introduction

Rio Tinto Exploration reviewed Ausquest Pty Limited's Antrim Project in early 2003. Based on interpretation of airborne magnetic data over the Antrim Plateau Basalts, Ausquest had defined circular features that were magnetically discordant with the surrounding basalts and were proposed as kimberlite pipes. BHP Billiton had carried out loam sampling and ground geophysics over some of the targets in 2002 with discrete gravity, magnetic and EM responses detected, however no drilling was undertaken.

Rio Tinto Exploration (RTE) carried out a review of previous exploration by Ausquest / BHP Billiton, Ashton Mining and RTE in early 2003 examining sampling, results and exploration techniques. The results of this review led to the designing of a drill program to test the six best magnetic and coincidental gravity/EM anomalies. These targets; 6, 11, 12, 29, 30 and 33 are identified using Ausquest nomenclature.

An Option, Farm-In and Joint Venture were agreed in principle with Ausquest in July 2003.

The six anomalies are located on Birrindudu Station, which lies 50 km from the West Australian/Northern Territory border and 200 km east of Halls Creek. The station is owned by Heyetsbury Beef Pty Ltd and is accessed by the Buchanan Highway from either Halls Creek or Kalkarindji. Station tracks were used wherever possible, however some drill access tracks were prepared using plant sourced from the station.

Drilling Program

The drilling program commenced on Wednesday 17 September 2003 utilising a Wallis Mantis 300 hydraulic rig, which was capable of reverse circulation (RC) and diamond drilling (DD). The drilling program lasted for 5 days with six holes being drilled for 388m. All the holes were drilled vertically using RC, as it was deemed not necessary to drill diamond tails into the targets. The holes were not down hole surveyed. Drill hole collar details are presented in Appendix 1. All drill holes have

been capped in accordance with accepted industry practice and the drill sites and tracks have been rehabilitated (refer Appendix 5).

Reverse circulation drill chips were collected in large calico bags at 1m or 2m intervals. Geology and magnetic susceptibility (using a Geo instruments JH-8 handheld susceptibility meter) were recorded for each sample and are included as Appendices 3 and 4 respectively. Geochemical samples were collected throughout the drill hole. One to two kilograms of chips were collected using a sample spear.

These were submitted to Amdel Laboratories (Adelaide) for preparation and analysis. The samples were dried, split and pulverised with the pulps then digested in mixed acid and analysed for 29 elements using ICP-OES and ICP-MS. Elements assayed for are:

Al, As, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, Zn, Zr

In total 350 RC chip samples were submitted for geochemical analysis along with 29 geochemical check standards and 11 field duplicate samples which are part of Rio Tinto's quality assurance procedures. Duplicate assays and standards were considered acceptable. Drill hole data, geological logs, magnetic susceptibility measurements, geochemical sample ledgers and analytical results are presented as Appendix 2. Note that QA/QC data is not included in Appendix 2.

RC03BIR001

This hole was drilled to 58m on anomaly 11, and intersected 7m of lateritic profile before entering weathered basalt. The base of weathering was at 17m and fresh dark green basalt with needle-like pyroxene crystals and minor calcite and quartz veins was intersected all the way to the base of the hole. The basalt is amygdaloidal in appearance in certain sections and quite commonly displays epidote alteration. The magnetic susceptibility of the hole varies down hole with an increased magnetic section between 32m and 40m. This was slightly different in appearance and may represent a separate basalt flow.

RC03BIR002

This hole tested anomaly 12 and was drilled to 58m. The lateritic profile of this hole was much thicker than RC03BIR001 and terminated at 25m where the hole intersected weathered basalt. The laterite was made up of goethitic clay and pisolites. The weathered basalt is extremely ferruginous and has a siliceous cap. Vesicles are common along with epidote alteration within and around the vesicles. Fresh dark green basalt similar to that described in the previous hole was intersected at 44m. The magnetic signature of the hole suggests that the top of the basalt (25m) down to 39m is slightly different to that below.

RC03BIR003

This hole was drilled to test anomaly 29, which was the highest priority target with excellent gravity (low) and ground EM (high) responses. Basaltic float was evident around the hole collar. The hole intersected a 2m soil profile and then into weathered basalt. This weathered basalt was very similar to the previous hole extremely ferruginous with epidote alteration, plagioclase crystals, pyroxene crystals and vesicles filled with quartz. The slight difference within this hole was that there was significantly more manganese visible on the chips. The hole was drilled to 70m and the base of weathering was at 28m. The bottom 42m was made up fresh dark green basalt with minor calcite and quartz veining, vesicles and pyroxene crystals. The magnetic signature of the hole is significantly less than the previous holes by an order of magnitude, indicating that this maybe a non-magnetic basaltic plug.

RC03BIR004

This hole was drilled to test anomaly 30 and was drilled to 80 m. This anomaly had a strong negative gravity and positive EM response. The top 14m intersected a mixture of soil, clay and pisolites with the odd rock fragment. The next 6m are a mixture of clay and rock fragments before entering the weathered basalt at 20m. The highly ferruginous weathered basalt continues until 56m where it becomes dark green fresh basalt. Both basalts are the same as described in hole RC03BIR003. The magnetic signature for this hole is extremely low as for the previous hole and this would account for the magnetic disparity seen on the magnetic image.

RC03BIR005

This hole was drilled to test anomaly 33 and was drilled to 70m depth. The hole intersected a complex regolith profile consisting of soils and pisolites in the top 3m and then a combination of purple clays and small rock fragments to 22m. Small epidote altered clasts found in the clay. From 22m to the end of the hole was highly ferruginous weathered basalt. The basalt was veined by quartz and calcite and showed all the traits of previously drilled basalt, however it was pervasively altered by iron oxide. The hole was terminated, as it was apparent that there was no kimberlite. The magnetic susceptibilities were low as with holes BIR003 and BIR004 and this could have been caused by the oxidation of magnetite into hematite within the basalt, it may also be a non-magnetic plug of basalt.

RC03BIR006

This hole was drilled to a depth of 52m to test anomaly 6. This was the largest magnetic feature and appeared to be two plugs one sitting on top of the other. The hole intersected 30-32m of calcrete, clay and pisolites, which was variously ferruginised. The hole then went into highly ferruginised weathered basalt with pyroxene laths and plagioclase rhombs with epidote lined vesicles. Small fractures were filled with quartz and calcite. At 44m fresh basalt was intersected its appearance was very similar to that above it with no Fe staining. The magnetic susceptibility of the basalt was slightly higher than the previous holes, but not strongly magnetic.

Ground Geophysics

A ground magnetic survey was carried out over anomalies 29 and 30 to determine if we were drilling the same anomalies previously defined by BHP Billiton. The survey was carried out utilising a hand held Scintrex MP3 ground magnetometer. Two lines were surveyed one 1km long over anomaly 29 and the other 1.2km long over anomaly 30. The results of the survey show that the anomalies were replicated and the drill holes were in the correct place. The ground magnetic data are included as Appendix6.

Conclusion

The drilling program failed to intersect any kimberlitic material in any of the holes. All targets were adequately tested with the predicted depth of the bodies being surpassed. The holes were sampled and the samples sent for geochemical analysis. The results show that there is no evidence of kimberlitic material of any sort within the drill holes. The magnetic holes within the basalt may be due to less magnetic plugs of basalt within the Antrim Plateau or magnetic remnants.

Appendix 1
Drill Hole Collar Information

Appendix 2

Down Hole Surveys

Appendix 3

Assay Results

Appendix 4
Down Hole Magnetic Susceptibility Measurements

Appendix 5

Rehabilitation Report

Appendix 6

Ground Magnetic Data