Rara Terra Resources Pty Ltd
A subsidiary of Ebony Coal Ltd

FINAL and ANNUAL REPORT
for

EL29397

HALE RIVER PROJECT

Exploration for Export Quality Thermal Coal

FOR THE YEAR 13/3/2012 to 17/3/2014

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1.0 ABSTRACT

Mineral Exploration Licence (EL) 29397 was granted to Rara Terra Resources Pty Ltd on March 13, 2012 for a term of 6 years. EL28808 was granted at the same time. These are the first two ELs granted from seven applications that together comprise the Hale River Project. During the period of tenure the total expenditure was $7,760.

Covenant expenditure for Y1 and Y2 tenure totalled $83,700. The amount spent of $41,160 was less than covenant. Additional expenditure could not be justified after a thorough analysis of the data indicated that Purni Coal Seams would not extend to EL29397.

EL29397 is located 185km southeast of Alice Springs. This tenement is comprised of 201 Blocks that cover an area of 567 square kilometres. EL29397 is located south of ELA28808. The map coordinates bounding EL29397 are shown in Figure 1. A map of Hale River Project tenements is shown in Figure 2.

During the Y-2 reporting period, the work programme was restricted to office studies. All pertinent reports publically available, were re-assessed and thoroughly analysed. The purpose of this work was to determine the likelihood that Purni Formation coal seams might sub-crop within EL29397.

In conclusion it was deemed that Purni Formation coal seams would not continue north from the Pedirka basin to EL29397. In addition, the potential for metals and industrial minerals was considered and a review of historical reporting and drilling results was undertaken, but the prospectivity for discovering other economic resources was very low. Further work not justified on a risk/reward basis and on March 17, 2014, EL29397 was relinquished.
2.0 COPYRIGHT

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3.0 TENEMENT LOCATION

Figure 1: EL29397.

Source: Northern Territory Government, Department of Resources.
Figure 2: Hale River Project Tenements. EL29397 and EL28808 have been surrendered. Other tenements shown below are held in moratorium.

Source: Global Ore Discovery.
4.0 TITLE HISTORY

Rara Terra Resources Pty Ltd is a wholly owned subsidiary of Ebony Coal Ltd. The first application for EL28808 was for 360 Blocks. In response to the Minerals Titles Act, Section 28 (November 7, 2011) that limited the size of an Exploration Licence to 250 Blocks, the 360 Blocks was divided with EL28808 comprising 159 Blocks and EL2397 comprising 201 Blocks. EL28808 and EL29397 were granted to Rara Terra Resources Pty Ltd on March 13, 2012, for a period of six years.

5.0 PHYSIOGRAPHY AND ACCESS

In terms of its regional setting, EL29397 is located on the northern edge of the Pedirka Basin, which is Permo-Carboniferous in age. The tenement is located in the northwest of the Hale River Project cluster of tenements. Geographically, EL29397 lies around 185km southeast from Alice Springs. EL29397 is on freehold land and not subject to the Aboriginal Land Rights Act.

This part of the country is devoid of any major infrastructure. All the roads are dirt tracks and there are few of these except along the eastern side of the main watercourse in the centre of the tenement. These tracks extend from the Numery homestead near the northwest corner of the tenement. Much of the tenement area is covered with northwest-southeast trending sand dunes, notably in the northeast and southeast quadrants of the licence area. Sparse outcrops of Permian sediments are mainly restricted to the western boundary of the tenement and in northwest of the tenement (see Figure 3). Vegetation is very sparse and is mainly restricted to Permian age outcrop. The only prominent topographic feature is Hale River drainage channels near the centre of the tenement.

Extensive cover of sand dunes hides the underlying geology and potentially outcrops of Permian coal measures.
Figure 3: EL29397 Google Earth Image.

Source: Ebony Coal/Google Earth
6.0 GEOLOGICAL ACTIVITIES & OFFICE STUDIES

6.1 Historical Exploration

Most of the Hale River Project has a various history of exploration for petroleum or base metals and/or uranium, precious metals, diamonds and mineral sands. Mineral explorers include BHP Billiton, Rio Tinto, CRA Exploration, Pan Continental Mining and Roebuck Resources. Historical tenure and the Hale River Project are shown in Figure 4.

The first subsurface information was probably observed from the first water bore completed in 1960. Some 43 waterbores occur within the Hale River Project. Two bores sunk in 2008; RN018519 and RN018518 intersected clay, lignite and silcrete bands over broad widths. The holes were not logged for geological information and are of little use other than to confirm that both holes intercepted coal.

Flamingo Petroleum undertook detailed exploration of the Pedirka Basin in 1964. This company completed two seismic lines that were shot along a structural high. One line was east-west and the other north-south along Hale River. The seismic sections revealed a regional dip to the southeast. The data also indicated that the Mesozoic sediments also thicken in the same direction.

The regional dip is towards the southeast at one to two degrees, steepening to five degrees towards the centre of the Pedirka Basin.

Central Petroleum Limited (CTP) completed five boreholes in the Pedirka Basin between 2007 and 2011 that intersected net coal of plus 100 metres. Blamore-1, CBM93-001, CBM93-002 and CBM93-004 were drilled in EP93, and CBM107-001 was drilled in EP107.
6.2 Rationale for Exploration

The main thrust behind the rationale for establishing the Hale River Project to explore for export quality thermal coal are thick sequences of coal reported by CTP southeast of the Project area. CTP publically announced that their Pedirka Basin tenements host an exploration target of 300 billion tonnes of coal.

CTP held EPs covering most of Rara Terra Resources Pty Ltd’s tenements. No named petroleum wells were spudded within EL 29397 however eight waterbores were. Coal was not reported from any of these bores. CTP has reported thick intersections of sub-bituminous coal in many drill holes. An example is Blamore-1 completed in 2008, drilled to a depth of 2,128 metres, intercepted net coal of 160 metres in seams greater than 0.2 metres. Elsewhere, CBM93-001 intersected net coal of 141.8 metres with seam thickness greater than one metre.

CTP’s nearest reported intercept of coal was from CBM 93-004, located 12 kilometres south of Hale River Project. Net coal of 150.2 metres with seams over one metre thick were inferred from wire line logs.

In summary the size of CTP’s coal exploration target and the thicknesses of coal intercepts in many drill holes is compelling rationale for Rara Terra Resources Pty Ltd to explore the tenements for at or near surface coal up dip from CTP’s tenements, closer to the margin of the Pedirka Basin.
Figure 4: Historical Drill Hole Locations (waterbores shown as blue coloured dots).

Source: Ebony Coal.
6.3 Regional Geology of the Hale River Project Area

The Pedirka Basin straddles the Northern Territory and South Australian border in Central Australia. Most of the basin lies in the Northern Territory. The area of the basin is around 62,500 square kilometres. This part of Australia exhibits a complex geological history that consists of a sequence of sedimentary basins superimposed one on top of another. The Pedirka Basin formed when tensional forces between thrust faults reactivated during the Mesozoic resulting in the formation of grabens and tilted horst blocks. Figure 5 shows a regional stratigraphic column.

CTP’s interpretation shows the eastern portion of the Pedirka Basin overlain by sediment of the Triassic Simpson Basin, and sediment deposited in the Mesozoic Eromanga Basin. Within the Hale River Project Jurassic to Cretaceous, sequences and recent sands overlie the Pedirka Basin. The principal target for coal exploration is the Purni Formation, which is Lower Permian in age. The Purni Formation exhibits a shallow dip of 1.5 to 5 degrees in a southeast direction.
**Figure 5:** Regional Stratigraphic Column.
6.4 Tenement Geology

It has already been reported that there is very little outcrop within Rara Terra Resources Ltd’s tenements. Underlying geology is mostly hidden by sand dunes. There are rare outcrops of Proterozoic basement and minor outcrops of Palaeozoic sandstones belonging to the Amadeus Basin. Devonian-Carboniferous conglomerate forms ridges and mesas. The Local and Regional Stratigraphy are shown in Table 1.

**TABLE 1: Local and Regional Stratigraphy**

<table>
<thead>
<tr>
<th>AGE</th>
<th>Ebony Tenures</th>
<th>Pedirka Basin (North)</th>
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<tr>
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<td></td>
<td>Winton Fm</td>
<td>MacKunda Fm</td>
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<tr>
<td></td>
<td></td>
<td>Rumbalara Shale</td>
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<td>Algebuckina Sandstone</td>
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<td>Triassic</td>
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<td></td>
<td></td>
<td></td>
<td>Walkandi Fm</td>
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<td>Stuart Range Fm Equiv.</td>
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As far as is known, the Purni Formation is the only package with potential economic significance. Locally this formation is known to have a thickness of 350 metres and consists of white sandstone, conglomerate, thinly bedded grey shale, carbonaceous shale, siltstone and coal. The thickest measures of coal occur in the upper 250 metres of the Purni Formation where coal seams are interbedded with fine grain carbonaceous sandstone, siltstone and shale.

In summary, boreholes in the Pedirka Basin intersected very thick sequences of net coal. Unfortunately most of the reported coal seams are below 500 metres depth, and known occurrences are at a depth too deep to mine.

6.5 Overview of Work Performed

During the reporting period, the work programme was restricted to re-interpretation of existing data. The purpose of this work was with a high level of confidence; determine the likelihood of Purni Formation coal seams occurring within EL29397.

After a thorough analysis of available data it was apparent that Purni Formation coal seams would not extend into EL29397.
7.0 Conclusions and Recommendation

At the time that EL29397 was granted there was sufficient data from CTP to warrant assessment of EL29397 for potential deposits of thermal coal. However, subsequent review of available data indicated that it was very unlikely that coal seams extend to EL29397. Moreover, the potential for economic resources of other industrial minerals and metals did not warrant further exploration and EL29397 was relinquished on March 17, 2014.

8.0 COMPLIANCE & PROPOSED ACTIVITIES

8.1 Statement of Resources and Reserves

No resources of coal were identified within EL 29397 during the reporting period.

8.2 Statement of Compliance

During the reporting period, the actual programme of activities undertaken within EL29397 included desk top studies and final report writing.

8.3 Statement of Proposed Activities

EL29397 was relinquished on March 17, 2014.