NUCOAL RESOURCES LTD

# ASX Announcement

2 July 2012



## Doyles Creek Pre-Feasibility Study Confirms Viability and Robust Project Economics

NuCoal Resources Ltd (ASX: NCR) is pleased to announce the Pre-Feasibility Study for the Doyles Creek Underground Mine and Training School Project (**Project**) prepared by independent consultants, Palaris Mining Pty Ltd (**Palaris**) has been completed on time and within budget.

## Highlights:

- The Project is **technically** and **economically** viable.
- A single longwall mine plan in the Whynot and Whybrow seams has been selected as the Base Case for the Project with the 3 other seams providing upside potential.
- The Base Case has a mine life of **21 years** at rates of 5Mtpa from the Whynot seam (av - 2.45m thick) and 5.3Mtpa from the Whybrow seam (av - 3.5m thick).
- Total Run of Mine Production (ROM) of **101Mt of semi soft coking coal**.
- The Project generates a substantial **NPV of A$523m** at 10% discount rate.
- Project start-up capital of A$727m.
- Average pit top ROM cash cost of A$31.44/tonne.
- Average FOB Cash costs of A$65.77 excluding Royalties, with a much lower FOB Cash Cost of A$53/t for Whynot seam mining (no washing – LW's 1-8). This would position the Project in the **lowest quartile of operating costs** for seaborne metallurgical coal projects.

**ASX:NCR • Share Information**
Issued Shares: 768.6m

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**Key Projects**
Doyles Creek Mining Pty Ltd
Hunter Valley NSW
Tenement: EL7270
Ownership: 100%

Doyles Creek Underground Mine Training School
Contact: Maree Roberts

Dellworth Pty Ltd
Hunter Valley NSW
Tenements: EL6594 & EL6812
Ownership: 100%

# 1. Overview

The Doyles Creek Underground Mine and Training School Project (**Project**) is located on EL 7270. This licence covers an area of some 27 km$^2$ with the eastern boundary being the township of Jerrys Plains.

The Project lies within a well-established mining district with adjacent open cut and underground coal mines including Wambo, United, Bulga, Beltana and Mt Thorley-Warkworth to the south-east, Narama and Hunter Valley Operations to the north-east and Ashton to the east. The Project is approximately 105 km from the port of Newcastle, New South Wales, Australia. See Figure 1.1 below.

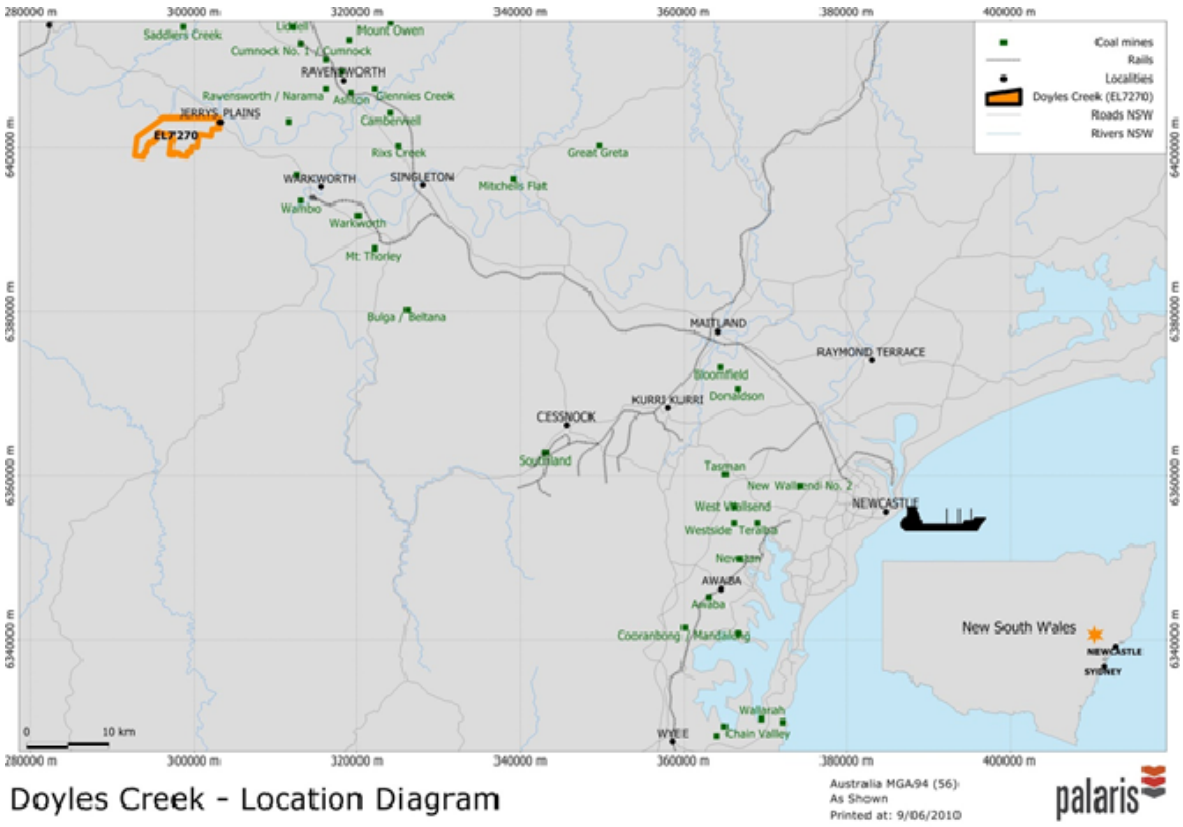


***Figure 1.1 Doyles Creek Project Location Diagram***

A Project Concept Study was completed in December 2010 with a recommendation to proceed to a Pre-Feasibility Study (**PFS**). This PFS has now been completed to an order of accuracy of +/-20%.

The objectives of the study were to:

- Select a Single Base Case for the Bankable Feasibility Stage (**BFS**) of Project development.
- Confirm further studies required to optimise the Base Case.
- Identify key project risks and measures required to mitigate these risks.
- Confirm that there were no fatal flaws with the Project.

# 2. Technical Aspects

## 2.1 Mine Layout

A total of 512Mt of JORC compliant measured, indicated and inferred resources have been identified in the Project area, including prime semi-soft product available from the Whynot Seam. The Base Case mine layout adopted for the PFS aims to extract coal from the Whynot and Whybrow seams, generally in accordance with the layout shown in Figure 1.2 below, to produce semi soft coking coal for export markets.

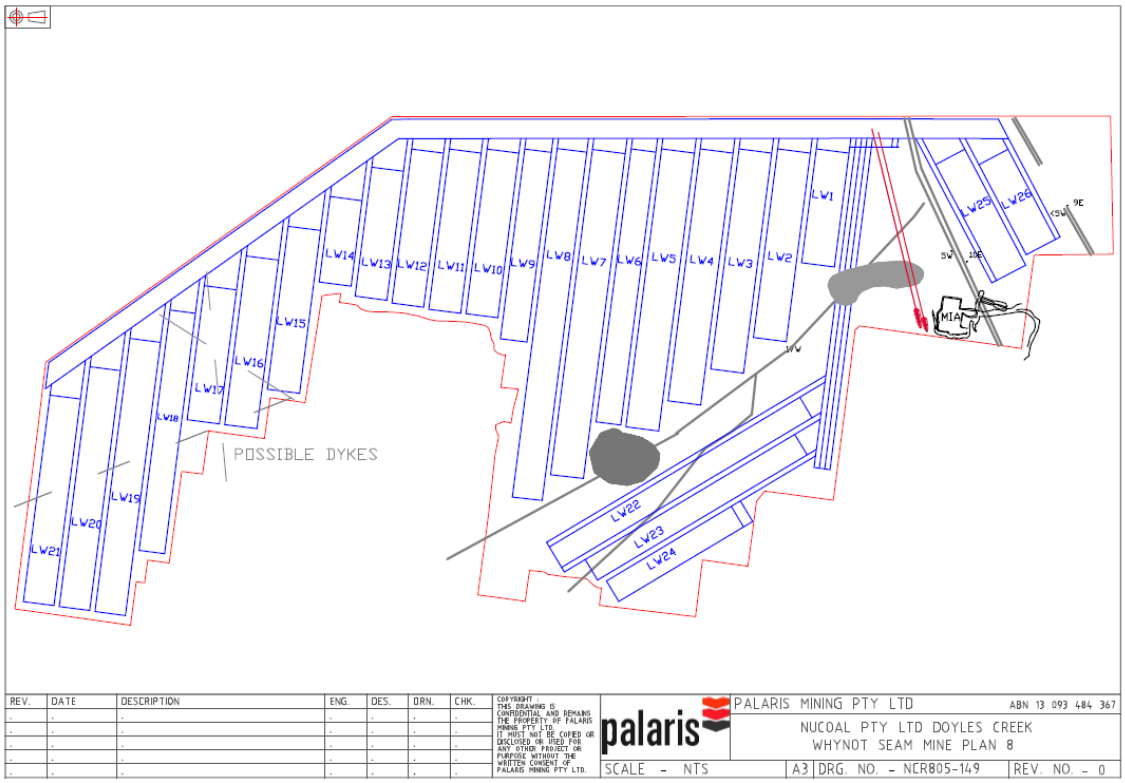


***Figure 1.2 Doyles Creek Project Whynot Seam Plan***

## 2.2 Mining

The Base Case is forecast to extract 57.2Mt of ROM coal in the Whynot Seam and 44.7Mt in the Whybrow Seam (total life of mine **101.9Mt)** on an air dried basis. The product mix for the Whynot Seam will be split into two phases:

- longwall panels 1 to 8 will produce 24.4Mt of semi-soft coking coal sold on a ROM basis (no beneficiation); and
- remaining longwall panels will be washed to produce 30.3Mt of prime semi-soft coking coal with 5.0% ash. Average dry yield for the Whynot Seam is forecast to be 87.9%.



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The Whybrow Seam will be washed at an average dry yield of 62.4% to produce 31.0Mt of semi-soft coking coal with 8.3% ash.

Total product tonnage for the life of the initial 2 seams is forecast to be 85.7Mt on an as received basis.

# 3. Doyles Creek Financial Parameters

## 3.1 Summary PFS Results

The Doyles Creek project evaluation is based on a high level discounted cash flow (**DCF**) financial model on an un-leveraged, free cash flow basis. All costs and valuations are in real terms i.e. un-escalated capital and operating cost estimates. The valuation date used in the DCF model is 1 July 2012.

Key model outputs over the life of the Project are detailed in Figure 1.3.

| Average Project Outputs | Units | |
|---|---|---|
| Pit Top ROM Cash Costs | A$/t ROM | 31.44 |
| CHPP Costs (when required) | A$/t ROM | 6.99 |
| **FOR Cash Costs** | **A$/t Product** | **45.70** |
| Ex Mine Costs (excl Royalties) | A$/t Product | 20.07 |
| C1 Cash Costs | A$/t Product | 65.77 |
| **Start Up Capital** | **A$M** | **727** |
| ROM Tonnes | Mt | 101.9 |
| Saleable Tonnes | Mt | 85.7 |
| **Average Revenue / Tonne** | **A$/t Product** | **149.01** |
| Discount Rate | % | 10.0% |
| **NPV** | **A$M** | **523** |

***Figure 1.3 Key Financial Model Outputs***

## 3.2 Capital Expenditure

Capital expenditure items have been developed on a real basis with no escalation applied to an order of accuracy of +/-20%. The basis of capital expenditure estimates ranges from OEM provided indicative quotations to estimates based on recent capital expenditure at similar operations. In some cases, allowances have been made for growth, contractor indirect costs, EPCM and contingency. The indicative project start-up capital requirement is **$727M**.



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A dissection of the Project development costs are detailed in Figure 1.4.

| Capital | $M |
|---|---|
| Surface Infrastructure | 232 |
| Underground Infrastructure | 223 |
| Underground Production Equipment | 247 |
| Training Mine | 25 |
| **Start up Capital** | **727** |

***Figure 1.4 Capital Costs Assumptions***

## 3.3 Operating Costs

The operating costs for the Project have been estimated by Palaris on the basis of internal and external benchmarking information for an owner operated underground longwall mine in the Hunter Valley region. Order of accuracy is considered to be +/-20%.

The Doyles Creek project is expected to be in the lowest quartile for operating costs as shown in Figure 1.5.

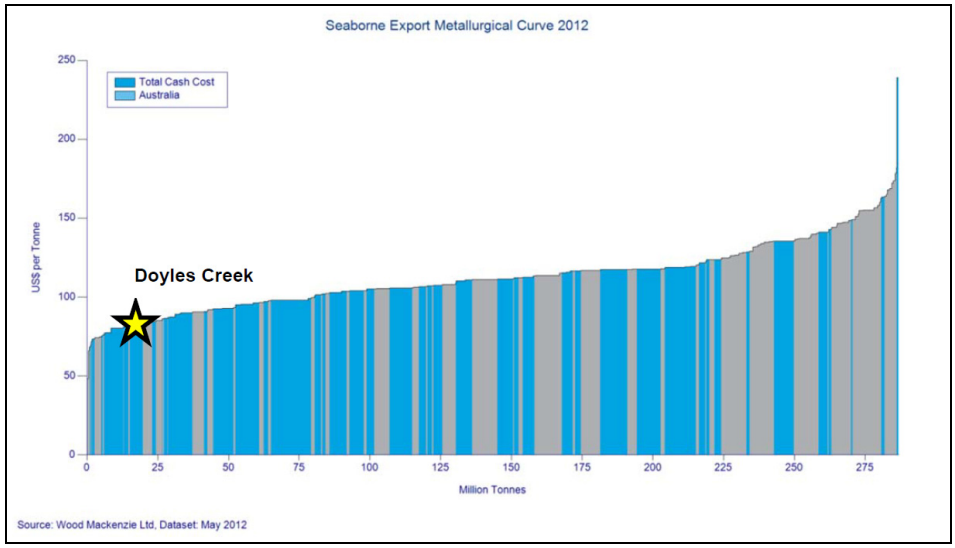


***Figure 1.5 Doyles Creek Project Competiveness***





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## 3.4 Coal Price & Foreign Exchange Rate

Coal price and foreign exchange assumptions are based on forecasts by a selection of financial brokers and investment banks. The benchmark coal price assumptions used for evaluation are outlined in Figure 1.6 as follows:

| Coal Price Assumptions | Units | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | Long Term |
|---|---|---|---|---|---|---|---|
| 6000 kcal/kg (nar) Thermal | US$/t | 120.94 | 116.34 | 109.55 | 103.17 | 98.98 | 98.58 |
| Semi-Soft Coking Coal | US$/t | 150.20 | 143.71 | 140.68 | 134.28 | 127.06 | 118.99 |
| Prime Semi-Soft Coking | US$/t | 160.20 | 153.71 | 150.68 | 144.28 | 137.06 | 128.99 |

***Figure 1.6 Coal Price Assumptions***

Foreign exchange rate assumptions for the US dollar to Australian dollar rate are outlined in Figure 1.7 below:

| FX Rate Assumptions | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | Long Term |
|---|---|---|---|---|---|---|
| AUD/USD Exchange Rate | 1.02 | 1.00 | 0.95 | 0.92 | 0.89 | 0.82 |

***Figure 1.7 Foreign Exchange Assumptions***

## 3.5 Sensitivity Analysis

Sensitivity analysis has been undertaken for all options on key asset value metrics. This illustrates that key value drivers are likely to be:

- Revenue (coal price and foreign exchange rate)
- Discount rate
- Project development capital
- Product yield



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Sensitivity analysis for the Preferred Mine Plan Case is highlighted below:

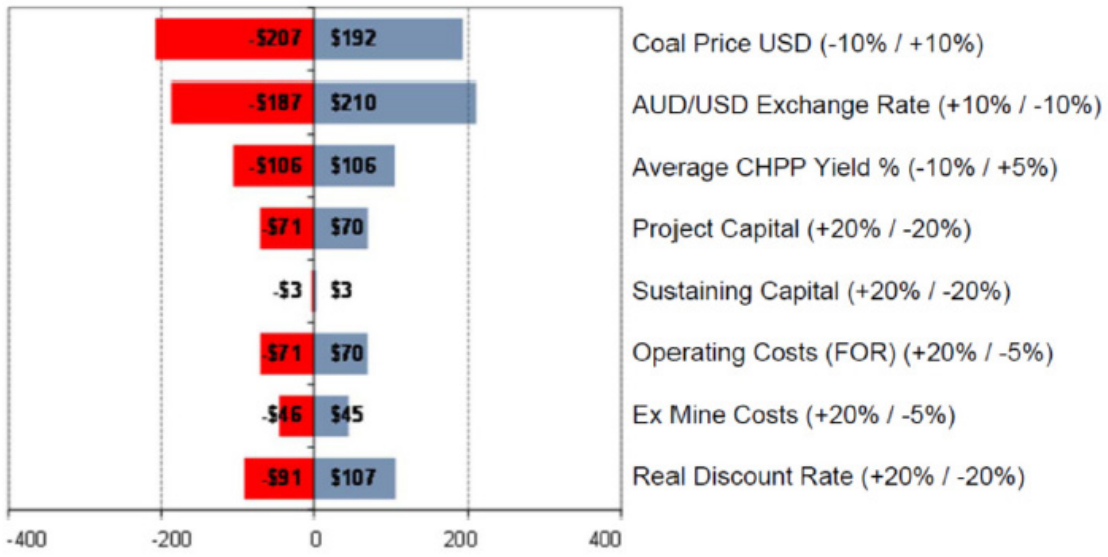


***Figure 1.8 Doyles Creek Sensitivity Analysis – Preferred Case***

## 3.6 Other Financial Assumptions

A number of key financial assumptions have been made as follows:

- MRRT has been calculated based on the latest legislation with no modeled scenarios incurring an MRRT cost.
- Impacts associated with the carbon tax have been modelled using a long term carbon price of $20/t and an emissions factor of 0.09/t. This results in an average life of mine cost of $2.30/t saleable.

# 4. Training School

The Doyles Creek Project is committed to be a specialised coal centric Training Facility, run in parallel with the mining operations. The facility is an initiative that will draw on the expertise and capabilities of The University of Newcastle, the Westpac Rescue Helicopter Services and the Hunter Valley Training Company.

The aim of the facility is to help address the critical skills shortage currently being experienced in the mining sector within the Hunter Region and the wider community.

The facility will offer training programs through organisations and groups supporting careers in the mining industry, as well as programs in a number of non-mining areas. Training in mine safety will be a key focus of the facility.



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The proposed outcome is for attendees to qualify for up to a Certificate Level IV, under the accreditation of the Coal Training Package MNC04, as endorsed by the National Training Quality Council of Australia. The on-site training facility will broaden educational experience, by providing attendees with both theoretical and practical mining experience.

There is significant opportunity with the Doyles Creek Underground Mine Training School in addition to providing training to inexperienced personnel. The facility has the potential to be utilised in the following ways:

- Skills training and practical experience for inexperienced personnel
- Training of candidates for statutory mining qualifications
- Equipment training and testing
- Introduction and testing of new equipment
- Familiarisation with new equipment
- Mines rescue training
- Introduction of new products
- Potential to expand to specialised training such as Geotechnical Engineers and Ventilation Engineers

# 5. Mineral Resources

The JORC Resource Statement for the Doyles Creek Project is detailed in Figure 1.9 below.

| Seam | Measured Resources (Mt) | Ash % (ad) | Indicated Resources (Mt) | Ash % (ad) | Inferred Resources (Mt) | Ash % (ad) | Total Resources (Mt) | Av Seam thickness (m) | Product |
|---|---|---|---|---|---|---|---|---|---|
| West Borehole | 9.4 | 33.5 | 23.5 | 34.2 | 19 | 34.9 | 51.9 | 2.35 | Thermal |
| Whybrow | 0.0 | - | 13.9 | 22.6 | 93.2 | 23.3 | 107.1 | 3.5 | Thermal / SS |
| Redbank Creek | 0.0 | - | 19.9 | 36.3 | 89 | 36.4 | 108.9 | 5.36 | Thermal |
| Whynot | 13.7 | 8.3 | 41.6 | 7.3 | 29.5 | 8.0 | 84.8 | 2.45 | SS |
| Woodlands Hill | 0.0 | - | 20.4 | 45.7 | 138.8 | 47.0 | 159.2 | 3.65 | SS |
| **TOTAL** | **23.1** | | **119.3** | | **369.5** | | **511.9** | | |

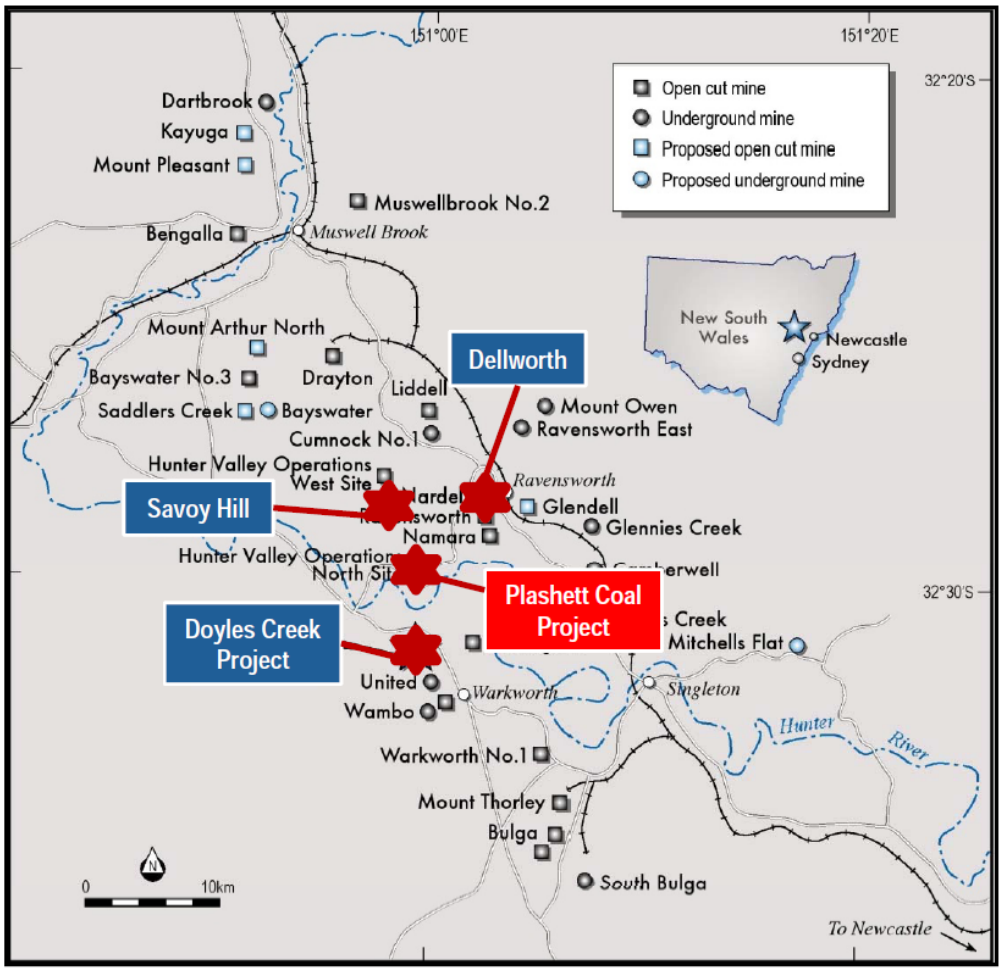
***Figure 1.9 EL 7270, Doyles Creek Measured, Indicated and Inferred Resources***

# 6. Conclusions

The PFS shows that the Project is technically and economically viable using conservative assumptions. The Project appears to have no fatal flaws and as a result, the Board has concluded that the Project should progress to the BFS.

# 7. Timetable

Planning for the BFS is well advanced and a timetable for the BFS and development stages of the Project will be published during the next quarter.



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# About NuCoal

NuCoal owns a 100% interest in the Doyles Creek Underground Mine and Training School and 100% of Dellworth Pty Ltd, which are strategically located adjacent to many world class operating coal mines in the lower Hunter Valley in New South Wales Australia. The Projects are situated near the towns of Jerrys Plains and Ravensworth respectively which are approximately 105kms from the port of Newcastle and within 20kms of several rail coal loading facilities.

The Doyles Creek tenement contains a 512 Mt JORC - compliant Measured, Indicated and Inferred Resource of premium quality semi soft coking and thermal coal. The coal seams are outlined in the latest Resource Statement dated December 2011 which details high quality, known coal brands such as "Whybrow Coal", "Whynot Coal" and "Woodlands Hill Coal". These coal brands are produced from other collieries in the Hunter Valley and are marketed for sale to overseas steel mills and both the domestic and international power generation industry.

The ultimate outcome is for the development of an underground mine and an associated world class training facility that meets the training and professional development needs of all workers in the underground coal mining industry. The Training School will include training rooms, Research and Development facilities and workshops. No other project currently exists in Australia where the actual training facility is situated within an operating coal mine.

The Dellworth tenements (EL 6594 (Dellworth) and EL 6812 (Savoy Hill)) are in advanced stages of exploration and will assist form NuCoal's project pipeline. The Dellworth project is undergoing a Concept Study and Savoy Hill is in phase 2 of exploration drilling.

In addition to the above 3 projects, NuCoal is in the process of acquiring Plashett Coal Pty Ltd, which owns 100% of EL 6705, from the Bloomfield Group. This tenement is 500m to the North of the Doyles Creek Project and offers considerable synergy with the Doyles Creek and Savoy Hill projects.

For further information please visit the NuCoal website at www.nucoal.com.au or contact:

**Glen Lewis**
Managing Director
Ph: (02) 4925 8600

*The information in this report that relates to exploration results is based on information compiled by Dr Ian Stone, who is a Member of the Australasian Institute of Mining and Metallurgy (102087). Dr Stone is Manager, Geology of Palaris Mining Pty Ltd. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person, as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Stone has over 30 years experience in exploration and mining of coal deposits. Dr Stone consents to the inclusion in this report disclosed by the Company, of the matters based on his information, in the form and context in which it appears.*