# PILBARA IRON PROJECT – POSITIVE SCOPING STUDY RESULTS

**ASX Announcement** **20 January 2012**

## HIGHLIGHTS

- **Scoping Study considers 2 development scenarios of Dragon's Pilbara Iron Project:**
  - **Case 1: Rocklea Project - 2 Mtpa output**
  - **Case 2: Rocklea and Nameless Projects - 10 Mtpa output**
- **Confirms the technical and financial viability of both development cases**
- **Open cut mining with a low strip ratio and overall low mining costs**
- **Mining and transportation costs for Case 1 indicate FOB OPEX of $45.82/tonne and CFR (north China) OPEX of $64.89/tonne**
- **Mining and transportation costs for Case 2 indicate FOB OPEX of $33.59/tonne and CFR (north china) OPEX of $50.15/tonne**
- **Case 1 presents a NPV of $344.8m with a 31% IRR**
- **Case 2 presents a NPV of $2.49b with a 64% IRR**
- **No significant approval impediment to project development**

Dragon Energy Limited ("Dragon", **ASX:DLE**) is pleased to announce the positive results of a Scoping Study conducted by GHD Limited on Dragon's Pilbara Iron Project. The Pilbara Iron Project (the "Project") consists of the Rocklea and Nameless projects, located in the Central Pilbara, Western Australia. The projects are in close vicinity to Rio Tinto's Tom Price and Paraburdoo iron ore mines (see Figure 1).

The Scoping Study considered two development scenarios for the Project:

### Case 1: Early Start Scenario

- Production rate of 2 million tonnes per annum
- Ore transported to port by 110 tonne capacity multi-trailer trucks along public roads
- Potential port locations along the Pilbara coast shortlisted for detailed evaluation
- Dragon retains control of ore transportation operation for road and port, to maximise self determination
- Mining development limited to the Rocklea Project at this output level

### Case 2: High Output Scenario

- Production rate of 10 million tonnes per annum
- Ore transported to port via third party rail line and port infrastructure
- Production commences at Rocklea as per Case 1, reaching full production when both Rocklea and Nameless are each producing 5 million tonne per annum

A C N 1 1 9 9 9 2 1 7 5

Suite 8 1297 Hay Street, West Perth, Western Australia, 6005
T: (61-8) 9322 6009 F: (61-8) 9322 6128

The Study concludes that the Project is both technically and economically viable and has a robust business case. It would deliver a significant financial return to Dragon even at its most basic configuration. A summary of key results and assumptions are listed in the table below:

**Table 1: Scoping Study Parameters and Results**

| | **Case 1** | **Case 2** |
|---|---|---|
| Production | **2Mtpa**<br>Rocklea Only | **2Mtpa ramping to 10Mtpa**<br>Rocklea and Nameless |
| Total Production | **62.7 Mt** | **203.7 Mt** |
| Mine Life | **33 years** | **24 years** |
| Capital Expenditure | **$46.4 million** | **$201.9 million** |
| Operating Costs ($/tonne) | | |
| FOB Component | | |
| - Mining and Processing | $11.34 | $10.72 |
| - Transportation to Port | $25.23 | $18.87 |
| - Port and Loading | $9.25 | $4.00 |
| Total FOB Costs | **$45.82/tonne** | **$33.59/tonne** |
| - Shipping Costs (Pilbara to north China) | $19.07 | $16.56 |
| Total CFR Costs | **$64.89/tonne** | **$50.15/tonne** |
| NPV | **$344.8 million** | **$2,492.1 million** |
| IRR | **31%** | **64%** |

***Key Assumptions:***

| | |
|---|---|
| Iron Ore Price (CFR): | US$120 per tonne (CFR north China), constant over mine life |
| Exchange Rate: | US$1 = AU$1, constant over mine life |
| Discount Rate: | 10% real |
| Capital Expenditure | Capex excludes items which may be provided by contractors;<br>Full capex for Case 1 is $115.7m and for Case 2 is $287.0m |
| NPV includes: | 7.5% royalties, 30% corporate tax |
| NPV excludes: | Native Title costs, carbon tax impact, MRRT considerations |

In addition to the favourable financial outcomes, the Study also confirms the following Project characteristics:

- **Early start up potential**: Subject to mining approval and the establishment of a suitable port facility for Case 1, initial ore shipment may commence as early as the second half of 2013.
- **Low capital investment**: Mining and processing at the Project are simple operations and can be constructed with readily available, field proven, off the shelf equipment modules. Upfront capital expenditure is low compared with other potential iron ore projects.
- **Contracting services further reduces capital requirement:** The Project's capital expenditure may be further reduced by adopting contractor mining, transportation and other services.
- **Low Strip Ratio**: Overall waste to ore strip ratio at Rocklea is around 1.2:1.0 for the current JORC resource; furthermore, the strip ratio for the initial 66% of the current JORC resource is even more favourable at 0.7:1.0

- **Minimal Processing**: Rocklea ore is direct shippable and requires minimal processing beyond normal crushing and screening - reducing both capital expenditure and operating costs.
- **Scalability**: Once the anticipated third party rail infrastructure is established near the Project, Dragon may increase output to 10Mtpa through the development of the Nameless project (on the assumption that Dragon enters into suitable commercial arrangements with the infrastructure owners)
- **Defined Approval Process:** Initial review of environmental, regulatory and approval processes has identified no significant impediment to project development

Dragon's Managing Director, Mr Gang Xu said today that the Company was delighted with the outcome of the scoping study and was committed to pursuing the realisation of our early development objective.

"The Scoping Study confirms that our flagship Pilbara Iron Project has an extremely robust business case with the potential to deliver significant long term economic benefits to our shareholders."

Mr Xu said that 2012 will be an important year for Dragon as it continues to confidently pursue the realisation of our early development objective, focusing on issues relating to transportation, approval and financing.

"Our current major RC drilling programmes at Rocklea and Nameless are progressing well. We expect full results for the Rocklea drilling programme and new JORC estimates to be available at the end of this Quarter. We will stick to our objective of achieving our first shipment in 2013 and have already commenced a number of long lead project approval items including environmental surveys, mining lease applications and port access negotiations.

2012 is the Chinese year of the Dragon. We look forward to 2012 being an exceptionally rewarding year for Dragon Energy and our shareholders."

## Key Components of Scoping Study

### 1. Pilbara Iron Project – Resources and Exploration Target*

Dragon's Pilbara Iron Project consists of two advanced iron ore exploration projects (Rocklea and Nameless) located in the Central Pilbara. These projects are in close vicinity to Rio Tinto's Tom Price and Paraburdoo mines (see Figure 1).

Both Rocklea and Nameless host near surface channel iron style mineralisation, which is typically found and mined in the Pilbara. Drilling by the previous owner defined the iron mineralisation on both projects.

Dragon is currently embarking on two RC drilling programmes at the Project. The first programme aims to extend Rocklea's resource and increase its confidence level from inferred to indicated. The second programme aims to establish a maiden inferred resource at Nameless.

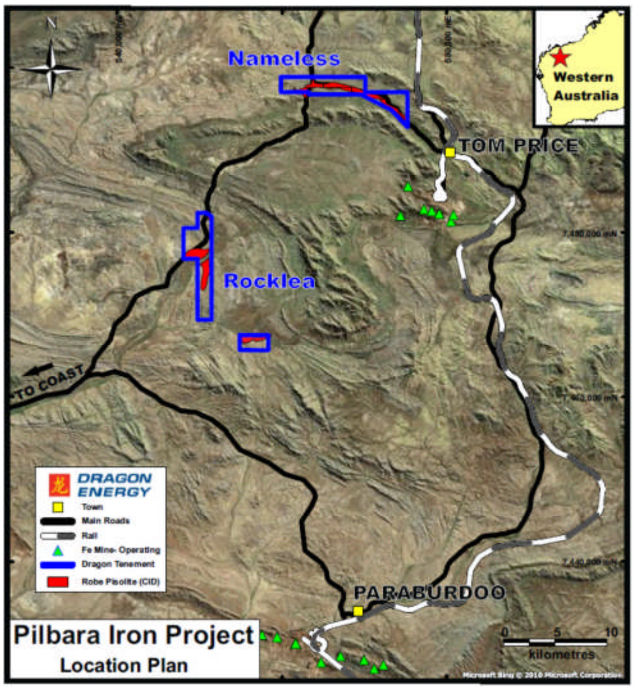


**Figure 1: Location Plan**

At Rocklea, current JORC inferred resource is 62.7Mt @ 53.4% Fe (60.4% caFe), which includes 28.0Mt of higher grade @ 55.6% (62.7% caFe) as shown in the following table. In addition to Rocklea's JORC resource, Dragon has calculated an additional Exploration Target* of 40 to 51Mt at a grade of 50-55% Fe (56-62% caFe).

At Nameless, Dragon defined an Exploration Target* of 140 to 190Mt @ 48-52% Fe (54–56% caFe), see Table 2.

**Table 2: Rocklea and Nameless: JORC Resources and Exploration Target**

| | Million tonnes | Fe (%) | caFe (%) | $SiO_2$ (%) | $Al_2O_3$ (%) | P (%) | LOI (%) | Cut-off grade |
|---|---|---|---|---|---|---|---|---|
| **Rocklea** | | | | | | | | |
| Inferred Resource (JORC)[1] | 62.7 | 53.41 | 60.39 | 7.73 | 2.80 | 0.034 | 11.56 | 50% |
| Including high grade: Inferred Resource (JORC)[2] | 28.0 | 55.62 | 62.71 | 6.03 | 2.06 | 0.034 | 11.31 | 54% |
| Exploration Target[3] | 40 - 51 | 50 - 55 | 56 - 62 | | | | | |
| **Nameless** | | | | | | | | |
| Exploration Target[4] | 140 - 190 | 48 - 52 | 54 - 56 | | | | | |

[1] The Inferred Mineral Resource was estimated in accordance with the guidelines of the Australasian Code for reporting Exploration Results, Mineral Resources and Ore reserves (JORC Code 2004) using a 50% and a 54% Fe lower cut-off grade, and a specific gravity of 2.7. No mining parameters were applied to the model.
[2] Refer Note 1 above.
[3] Exploration Targets are reported according to Clause 18 of the JORC Code. This means that the potential quantity and grade is conceptual in nature and that further exploration is required in order to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource.
[4] Refer Note 3 above.

## 2. Mining

The Study concluded that both the Rocklea and Nameless projects may be exploited through simple truck and shovel mining operations. The Study focused on mine planning for the Rocklea project as its iron mineralisation is currently better defined.

It is concluded that the open cut mining operation at Rocklea may support 5 million tonnes per annum output. Simple economic parameters were applied to derive a pit shell, which was then sub-divided into 7 mining areas. The analysis shows that Rocklea has a low overall strip ratio of 1.2:1.0 (waste to ore). Moreover, the strip ratio of the initial 66% of the JORC resource is 0.7:1.0

## 3. Processing and Final Products

The Study assumes that the output from the Rocklea mining operation requires simple crushing and screening to convert into an all fines final product. Target product from Rocklea is assumed to share the same characteristics as its current JORC orebody average. This product is direct shippable – needing no additional processing before shipment to steel industry consumers.

For the Nameless Project, the study assumes minimal beneficiation of the run of mine output.

## 4. Transportation

The Study assumes that Dragon manages the shipping operation and that iron ore is sold on a CFR basis at northern China ports.

The Study considers two scenarios for transportation of products from mine to port, being:

### *(A) Road Transportation*

Product from the mine site taken to an export port via 110 tonne multi carriage trucks along public roads. This method for transporting ore is well established in the Pilbara by other miners. Its feasibility is dependent on the availability of suitable roads and ports. Both Rocklea and Nameless are situated near major public highways and is well suited to this mode of ore transportation. Dragon is currently investigating a number of potential sites for a suitable export port.

The Study investigated two port configurations:

- Dragon establishing a new transhipment port at a suitable location along the West Pilbara coast; and
- Dragon making use of existing multi-user port facilities.

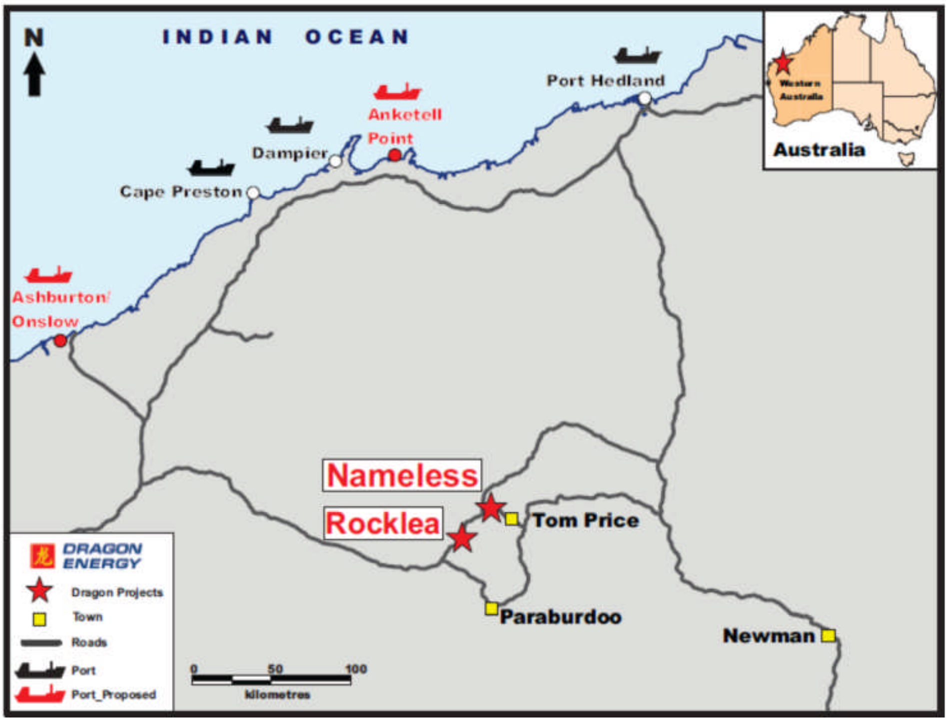



**Figure 2: Road Transport Options**

## *(B) Rail Transportation*

The Project is situated near existing and future rail infrastructure. The study considers developing a 10 million tonnes per annum output operation (Rocklea 5Mtpa, Nameless 5Mtpa) where the ore is road transported to a suitable loading point along these rails. It is assumed that Dragon pays an appropriate third party access charges for the use of the rail and port facilities.

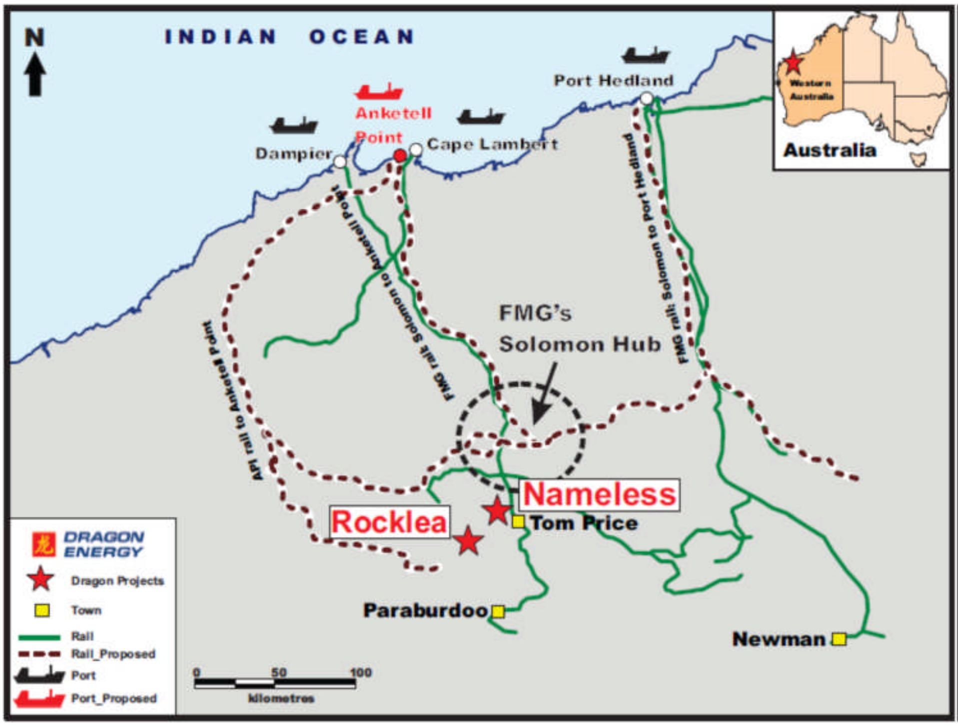
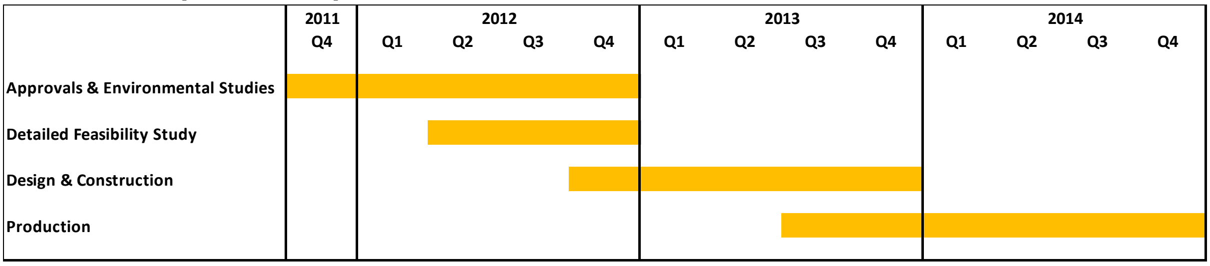



**Figure 3: Rail Transport Options**

## 5. Environmental / Approvals

The Study highlighted the relevant environmental and approval issues associated with the development of the Project. It concluded that, subject to the identification and establishment of a suitable port operation (ie Case 1), the Project may commence production through road transportation as early as the end of 2013. A conceptual timetable is shown below:

**Table 3: Conceptual Development Timetable**




### Future Plan

The Study identified a number of immediate priorities for Dragon in developing the Project, the most important near term priorities are:

- Detailed resource drilling at Rocklea and Nameless;
- Identifying and securing approvals for an export port suited to road transportation;
- Launch and complete long lead time approval items, ie environmental studies, heritage agreements, mining lease approvals; and
- Identifying and securing financial resources for project development.

**Authorised by:**

**Gang Xu**
**Managing Director**

For further information please contact:

Gang Xu
*Managing Director*
Telephone: +61 8 9322 6009
Mobile: +61 411 039 645

**Competent Persons' Statement**

The information in the report to which this statement is attached that relates to Exploration Results is based on information compiled by Mr Mark Hafer, who is a Member of The Australian Institute of Geoscientists. Mr Hafer is a full-time employee of the company. The information that relates to the Mineral Resources Estimate has been compiled by Mr Stephen Godfrey who is a Member of the Australasian Institute of Mining and Metallurgy and The Australian Institute of Geoscientists and an employee of Golder Associates Pty Ltd.

Mr Hafer and Mr Godfrey have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which 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'. Mr Hafer and Mr Godfrey consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## About Dragon Energy

Dragon Energy Limited ("Dragon") listed on the Australian Securities Exchange (ASX) in February 2009 (**ASX: DLE**).

Dragon's flagship projects are Rocklea and Nameless iron projects in the Pilbara with a sizeable JORC Resource defined at the Rocklea Project and significant CID exploration targets at the Nameless Project. Dragon Energy's portfolio of tenements has numerous multi-commodity targets, including Fe, Mn, Au, base metals and U in Western Australia.