

# **Positive Scoping Study for Spearhole Detrital Iron Project**

Dynasty Metals Limited (ASX: DMA) is an Australian exploration company focused on developing its iron ore projects in the Pilbara region of Western Australia.

As at release date of 15<sup>th</sup> December 2011:

Issued Shares: 104.4M

• Options: 17.4M @ \$0.20

• Share Price: \$0.14

• Market Cap: \$14.5M

Debt: Nil

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## **Key Points**

- Study confirms the technical and commercial viability of the Spearhole Detrital Iron Project based on a plant <u>producing 5.25Mtpa of iron</u> concentrates.
- Conceptual high level estimates for mining and transport costs indicate FOB opex costs of \$59.25/tonne at the 15% yield (current spot price in China for 61% Fe is about US\$139/ton).
- A mine life of 25 years would be viable at these production rates based on the current inferred resources, as beneficiation studies show the Spearhole project is capable of producing 120Mt 167Mt of iron concentrates.
- > Potential for more positive economics for upgrading to a 10Mtpa plant and project.
- Operating expenses will be dramatically reduced with an increase both in yield and beneficiation. Further testing will concentrate on improving the yield and raising Fe grade in the next quarter.
- The study does not include the DSO available at the Marra Mamba resource, and exploration is continuing on targeting DSO resources, and to increase the global iron resources.



#### **Scoping Study**

MSP Engineering was commissioned in November 2011 to complete a high level scoping study on Dynasty's Spearhole detrital ironstone gravel project (the Project). The results of this study have indicated the Project is technically and financially viable to produce a Fe concentrate containing 57-58% Fe, 6-7.5%  $SiO_2$ , 5.5 - 6.5 %  $Al_2O_3$ , based on the current beneficiation testing results and resource figures. A conservative yield of 15% was assumed for the purposes of the study as this has consistently been achieved in testing. The study does not include the Marra Mamba DSO resource or any other potential DSO in the area.

The study was finalised on the 12th of December and was designed to provide high level estimates of operating expenses (OPEX) and capital expenditure (CAPEX) for the Project based on current knowledge. The study included options for a modular 1Mpta product plant as well as a larger 5.25Mtpa plant and was separated into two areas:

- · Beneficiation plant and operation; and
- Mining and transport costs.

The beneficiation studies are at an advanced stage allowing for a rigorous definition of beneficiation costs. Estimates of rail transportation, port and mining costs were made based on known costs for other similar operations but a study has not been completed on the various options available.

The estimated cost of the beneficiation plant included all construction and accommodation costs, workshop, laboratory, and administration buildings, bore fields, consumables, waste disposal, rail loading and power costs. Power was assumed to be provided by a third party with capacity available from Newman.

The mining cost assumptions were based on the costs for mining comparable unconsolidated material using a stripping ratio of 0.1:1, as the ore body starts from the surface and is made up of unconsolidated ironstone gravels and alluvial. Port and rail cost estimates were based on operations of other companies in the Pilbara with 450km of rail transport to port assumed.  $\underline{A}$  50km rail spur and all rolling stock has been included in the full CAPEX.

The study found that the economics of the Project were enhanced with the larger plant, and all figures here are based on this larger plant producing 5.25Mtpa of concentrate. It is possible that the economics will be further enhanced in an even larger plant.

The initial mining cost estimate is \$10.75/tonne and total operating costs for this beneficiation plant are estimated at \$28.25/tonne, resulting in a mine gate cost of \$39.00/tonne of iron concentrate. Cost estimates of \$15.75/tonne for transport and \$4.50/tonne for port costs combine with the estimated mine gate cost to result in an **FOB price of \$59.25/tonne**.

	Operating Costs per Tonne of Product
Beneficiation	\$28.25
Mine Gate (Mining and Beneficiation)	\$39.00
FOB (includes rail and port costs)	\$59.25



These values are based on a yield of 15%. This is a conservative estimate based on our preliminary beneficiation testing. <u>Some testing has returned over 17% yield and it is hoped</u> with further refinement that this yield can be increased while maintaining the Fe Grade.

CAPEX estimates were completed both for costs to the mine gate and full CAPEX costs to port.

35Mtpa plant for 5.25Mtpa concentrates:	Estimate Capital Cost \$Millions
Mine gate	\$446
Mine gate plus transport infrastructure including rolling stock	\$957

Based on the processing of 35 Mtpa and using the resource figures of 932Mt @ 27% Fe would indicate there is at least 25 years of mine life at these levels without further expansion of the current resource base. Future studies will look at 10Mtpa and higher production to ascertain the most financially viable model.

Improvements in yield will reduce the mining and beneficiation costs proportionally. An increase in yield of 1% will reduce beneficiation and mining costs by 6% as per the following table:

Yield	15% <sup>1</sup>	16%	17%	18%	19%	20%
Beneficiation only	\$28.25	\$26.48	\$24.93	\$23.54	\$22.30	\$21.19
Mining and Beneficiation	\$39.00	\$36.56	\$34.41	\$32.50	\$30.79	\$29.25
FOB <sup>2</sup>	\$59.25	\$56.81	\$54.66	\$52.75	\$51.04	\$49.50

- 1. Current scoping study figures
- 2. Includes the assumed costs per tonne for transport and port.

Managing Director Lewis Tay commented: "This report is a major milestone for Dynasty. The results show that the Spearhole project is economically viable and represents a major asset to shareholders. The assumptions made in the report highlight the possibility for the Company to earn profits exceeding \$2bn assuming a long term \$100-\$110/ton CNF price once in production. With further exploration being already planned, Dynasty has the potential to be a major player in the development of infrastructure for this part of the Pilbara, the Company is exploring a variety of infrastructure solutions for the project. In my opinion the market has undervalued Dynasty and this study shows the potential of our iron ore project."

He also said "We are confident that with further testing we can improve the processing and increase the project's value. In addition to this, Dynasty is continuing to explore for DSO and further detrital deposits across our extensive landholdings."



# **Prairie Downs – Current Resource**

On 27 October 2010, Dynasty announced a **1.4 billion tonne JORC-Compliant inferred Resource including <u>932 million tonnes at 27.4% Fe</u> at a cut-off grade of 20% Fe for the Company's Spearhole Detrital Iron Deposit ("ironstone gravel") at Prairie Downs in the Pilbara region of Western Australia.** 

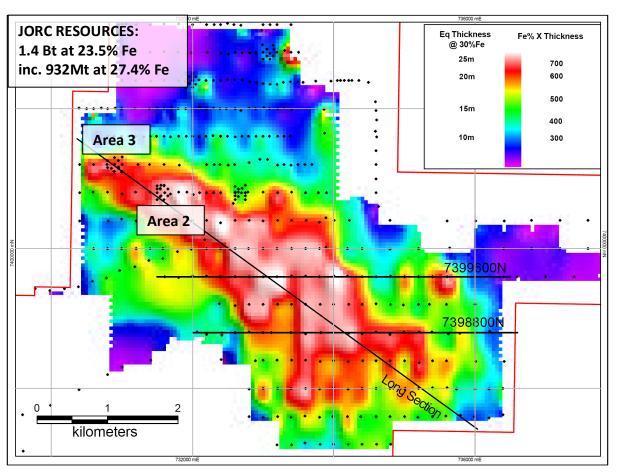


Figure 1 – distribution (Fe grade x thickness) of the iron mineralisation at the Spearhole Detrital Iron Deposit showing Areas 2 and 3.

The Resources defined to date are set out in Table 1 below.

Table 1 – Inferred Resources for Spearhole Detrital Iron Deposit (October 2010 Estimate)

Tonnes Mt	Fe %	Calcined Fe* "CaFe" %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub>	P %	LOI %	Cut-Off Grade % Fe
449	31.5	34.0	30.2	13.6	0.04	7.5	>27% Fe
586	30.2	32.7	31.6	13.9	0.04	7.6	>25% Fe
800	28.4	30.8	33.5	14.4	0.04	7.7	>22% Fe
932	27.4	29.7	34.6	14.7	0.04	7.8	>20% Fe
1,118	25.9	28.1	36.1	15.0	0.04	7.9	>17% Fe
1,400	23.5	25.5	38.6	15.5	0.03	8.1	Total Resource

<sup>\*</sup>Calcined Fe ("CaFe") = Fe/((100-LOI)/100)



### **Competent Person**

Qualifying Statement: The information in this report that relates to exploration results has been complied by Mr David Jenkins a full time employee of Terra Search Pty Ltd, geological consultants employed by Dynasty Metals Australia. Mr Jenkins is a Member of the Australian Institute of Geoscientists and has sufficient experience in the style of mineralisation and type of deposit under consideration and the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results ("JORC Code"). Mr Jenkins consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

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### **Forward Looking Statements**

Certain statements contained in this presentation, including information as to the future financial or operating performance of Dynasty Metals and its projects, are forward-looking statements. Such forward-looking statements:

- are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Dynasty Metals, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies;
- involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements;
- may include, among other things, statements regarding targets, estimates; and
- assumptions in respect of metal production and prices, operating costs and results, capital expenditures, mineral reserves and mineral resources and anticipated grades and recovery rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, taxation, social and other conditions.

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