



# **Erdene Resource Development Corp.**

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**ENERGY**

**METALS**

**INDUSTRIAL MINERALS**

**Donkin Coking Coal Project**  
Highlights of the Independent  
Technical Report, June 30<sup>th</sup> 2011

# Forward Looking Statements



This presentation contains or refers to "forward-looking information" within the meaning of applicable Canadian securities legislation. All statements in this presentation, other than statements of historical fact, which address activities, events or developments that Erdene believes, expects or anticipates will or may occur in the future are forward-looking information.

The forward-looking information in this presentation is based on certain assumptions that Erdene believes are reasonable, including with respect to mineral reserves and resource estimates, the key assumptions and parameters on which such estimates are based, as set out in the Report, that the general business and economic conditions will not change in a material adverse manner, that financing will be available if and when needed and that Donkin will not experience any material accident, labour dispute or failure of plant or equipment.

The assumptions, estimates, expectations, analysis and opinions used in the Report are based on the information available to Xstrata, Erdene and Marston as of the date of this news release. Marston's assumptions and estimates are based on experience and perceptions of trends, current conditions and expected development as well as other factors that Marston believes are relevant and reasonable in the circumstances, but which may prove to be incorrect. In particular, assumptions have been made regarding a number of variables that impact Donkin and include, among other things, market prices for coal, exchange rates, estimated resource tonnages and coal quality, processing techniques, through-put rates, transportation charges, operating costs (including mining, processing and general administrative costs), capital costs and assumptions that all the necessary regulatory (including environmental) permits will be issued in respect of the project.

Readers are cautioned that the foregoing list is not exhaustive of all factors, variables and assumptions which may have been used in the Report. Although Erdene believes the expectations expressed in the Report and other forward looking statements are based on reasonable assumptions, there is no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, such statements should not in any way be construed as guarantees of future performance as actual results or developments may differ materially from those forward-looking statements and readers should not place undue reliance on this information.

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# Highlights of Marston Technical Report

## Marine Case



- Confirms the technical & economic viability of the Donkin Project and demonstrates its capacity to generate strong cash flow
- NPV of \$1.06 billion (8% discount rate) with an IRR of 36 %
- EBITDA of \$294 million in first year of full production
- Peak project funding of \$331 million
- Low average FOB operating cash costs loaded on a vessel of \$52 per saleable tonne, average over life of mine
- Excellent washed coking coal properties including low ash, low phosphorus, high vitrinite and crucible swell number, high fluidity, and elevated sulphur
- Saleable reserves of 48 Mt for the targeted Harbour & Hub coal seams have been included in the economic analysis, equating to a mine life of 20 years at a production rate of 2.75 Mtpa saleable coal
- Inferred resources of 115 Mt have not been included in the reserve estimate
- The Marston Report recommends proceeding into Feasibility Stage

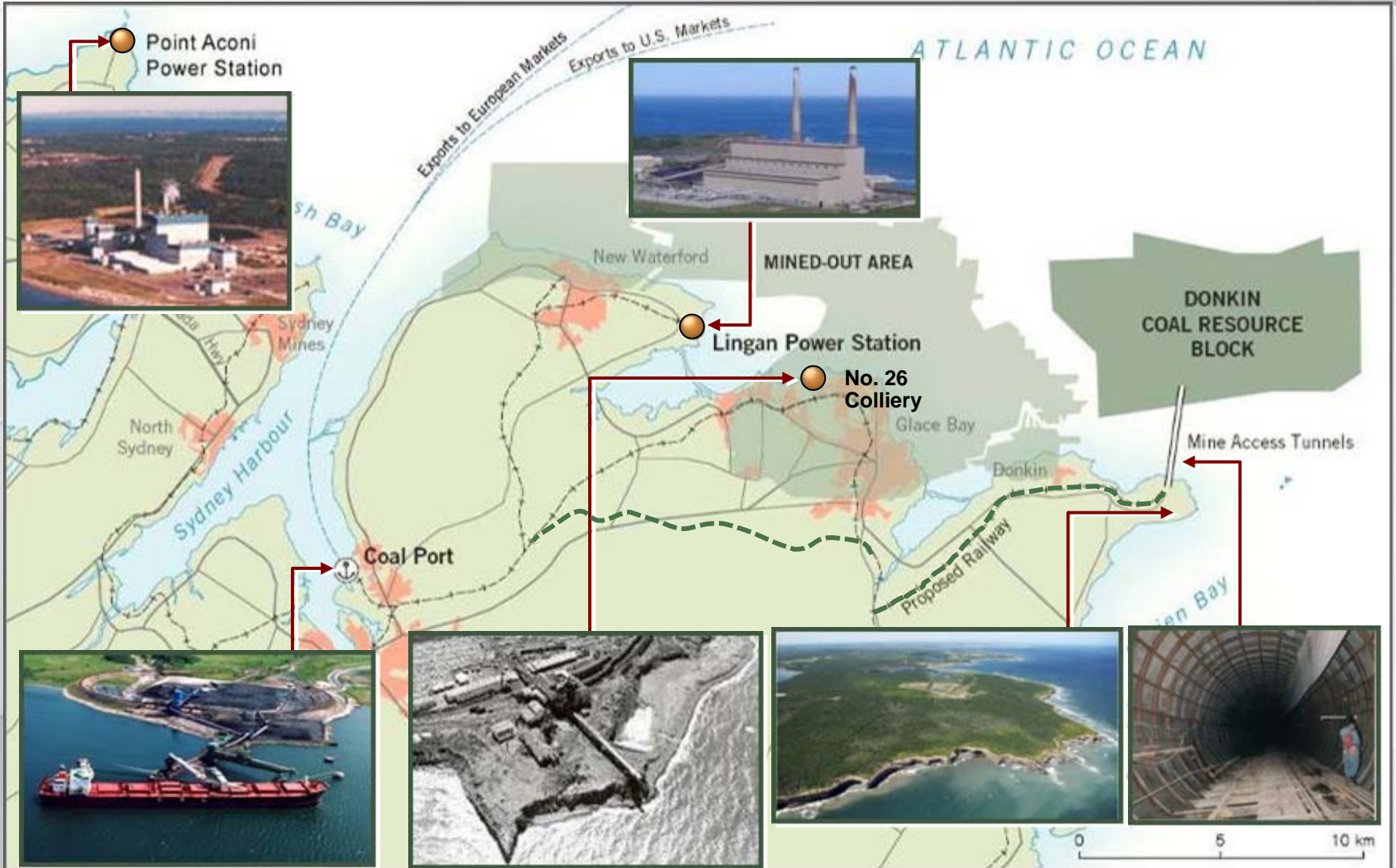
# DONKIN COAL PROJECT

25% Erdene / 75% Xstrata Coal (Manager)



- Large – Long Life Resource
- High Quality (Coking and Thermal)
- Proximal to Deep Water
- Exclusive Port Access
- Significant Infrastructure
- Low Operating & Transportation Costs
- Experienced Workforce

# Local Infrastructure



# Coal Quality

## Typical Product Specifications



| Quality Parameter      | Washed Coal      |
|------------------------|------------------|
| Total Moisture (%)     | 8                |
| Ash (% ad)             | 4                |
| Volatile Matter (% ad) | 39               |
| Total Sulphur (% ad)   | 3.0 <sup>1</sup> |
| CV (BTU/lb gar)        | 13,250           |
| CSN                    | 8.5              |
| Fluidity (mddm)        | 10,000 – 25,000  |

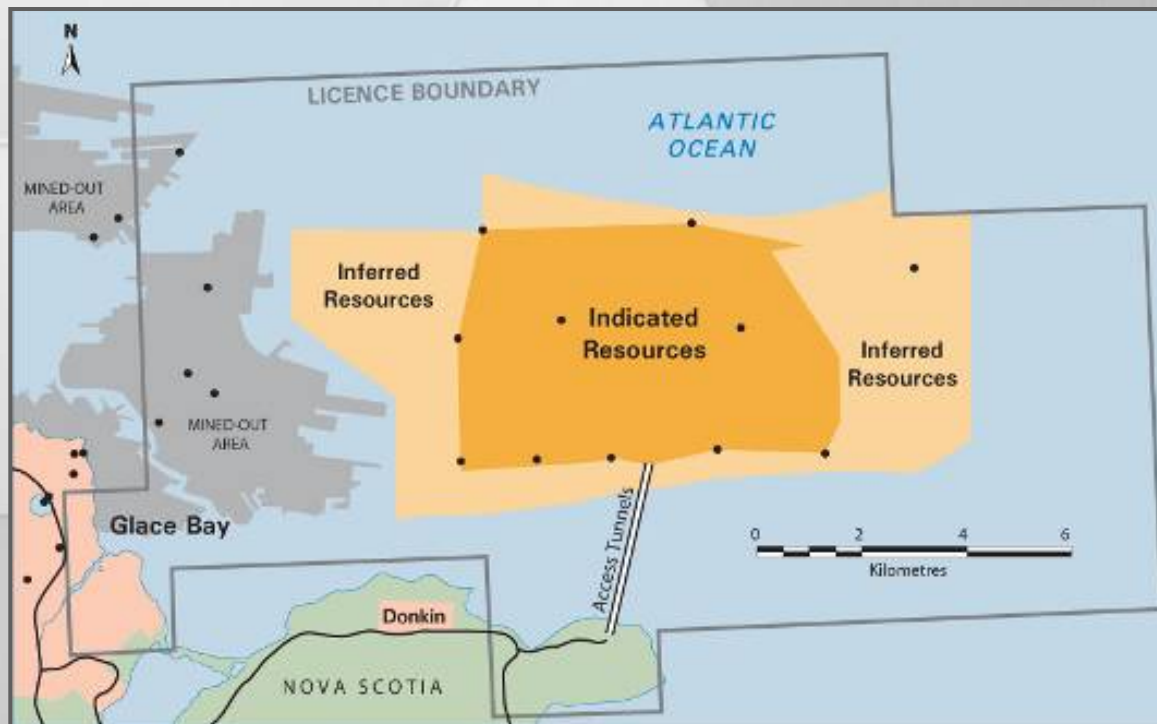


<sup>1</sup> Based on the higher results collected to date rather than an average

# Coal Resource Blocks



| Seam       | Indicated Resource (Mt) | Inferred Reserve (Mt) |
|------------|-------------------------|-----------------------|
| Lloyd Cove | 53                      | 82                    |
| Hub        | 73                      | 57                    |
| Harbour    | 101                     | 115                   |
| Total      | 227                     | 254                   |



# Resource & Reserve Estimates

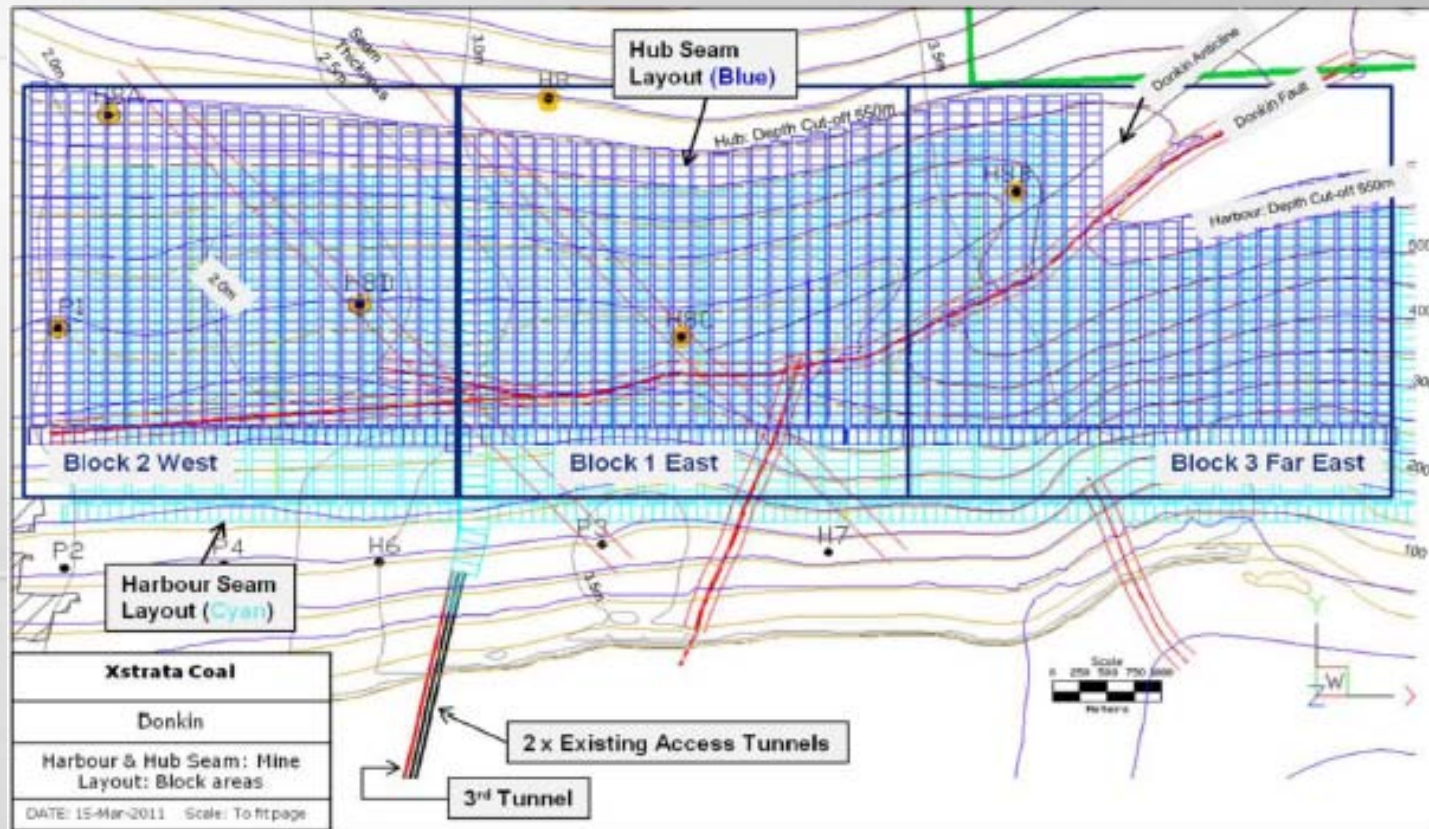


| Seam    | Indicated In situ Resource (Mt) | Probable Mineable Reserve (Mt) | Probable Saleable Reserve (Mt) |
|---------|---------------------------------|--------------------------------|--------------------------------|
| Hub     | 73                              | 28                             | 23                             |
| Harbour | 101                             | 30                             | 25                             |
| Total   | 174                             | 58                             | 48                             |

*Note: the project economics are based on Indicated reserves only*

- The mine plan includes an extension into Inferred resources once additional coal thickness, coal quality, and geotechnical data are acquired
- Based on the proposed room-and-pillar mine method, additional Inferred resources of 115 Mt may extend the mine life to 2041 for the Harbour seam and 2046 for the Hub seam
- Potential exists for greater expansion of additional Harbour seam resources to the East

# Harbour & Hub Seam Mine Layout



- The room-and-pillar mining method utilizing “place change” continuous miners is a reasonable and cost effective method of extracting the resource. The mine plan can be easily modified to take advantage of longwall mining if the mining conditions are suitable and the coal market supports the increased production.

# Coal Handling and Preparation Plant



- A CHPP Study, prepared by Sedgmen Ltd, incorporates a 650 tonne per hour processing plant that supports a throughput of 3.5 Mtpy ROM, producing 2.75 Mtpy of saleable coal at a product split of approximately 75% coking coal and 25% thermal coal
- The CHPP yield has been calculated at 81% (test range 76% to 92%)
- Washability characteristics are considered excellent



# Transportation Options



## Rail versus Marine

- Both cases are common up until the point at which the product coal is reclaimed from the product coal stockpile;
- RAIL OPTION
  - Product coal is reclaimed to a rail load-out bin that loads coal wagons for transportation of coal by rail from the mine site to the international coal terminal at Sydney Port, a distance of approximately 34 kilometres.
- MARINE OPTION
  - Product coal is reclaimed to an overland conveyor that transports coal overland and offshore to a loading berth for direct loading to 3,000 tonne coastal barges that transport the coal to a near shore transshipment location where the barge will load the coal via crane to ocean-going vessels up to Cape Size.
- Both cases are currently being evaluated and are pending further discussions with joint-venture partner Xstrata Coal.
- Capital cost estimates have been developed for both options.
- Regulatory filings on June 21<sup>st</sup> reflect the lower capex & opex marine option

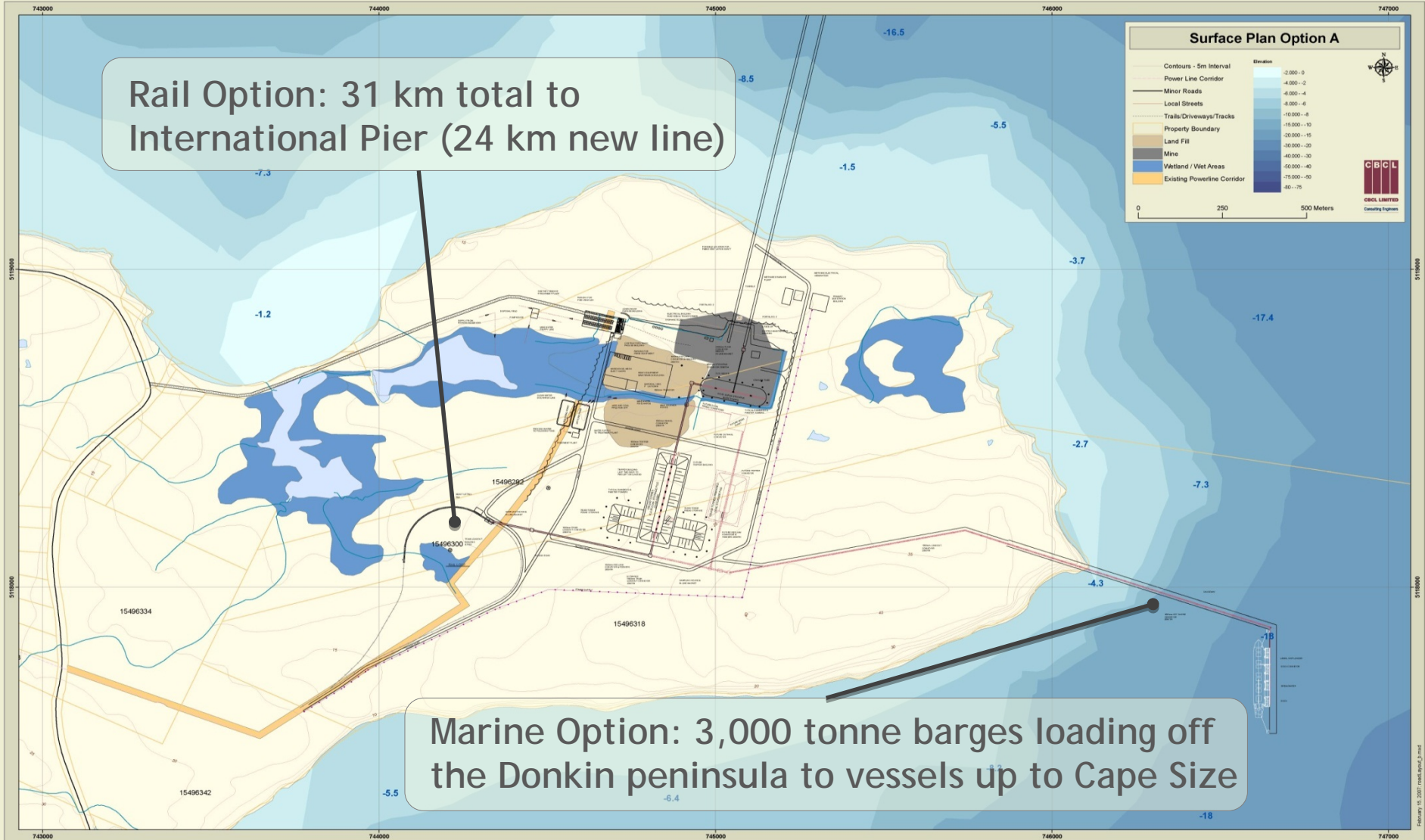
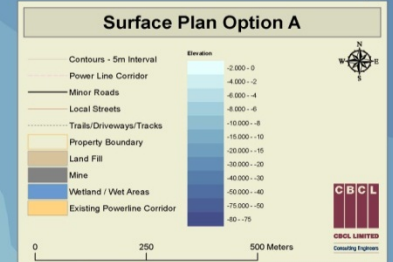
# Transportation Options

## Rail versus Marine

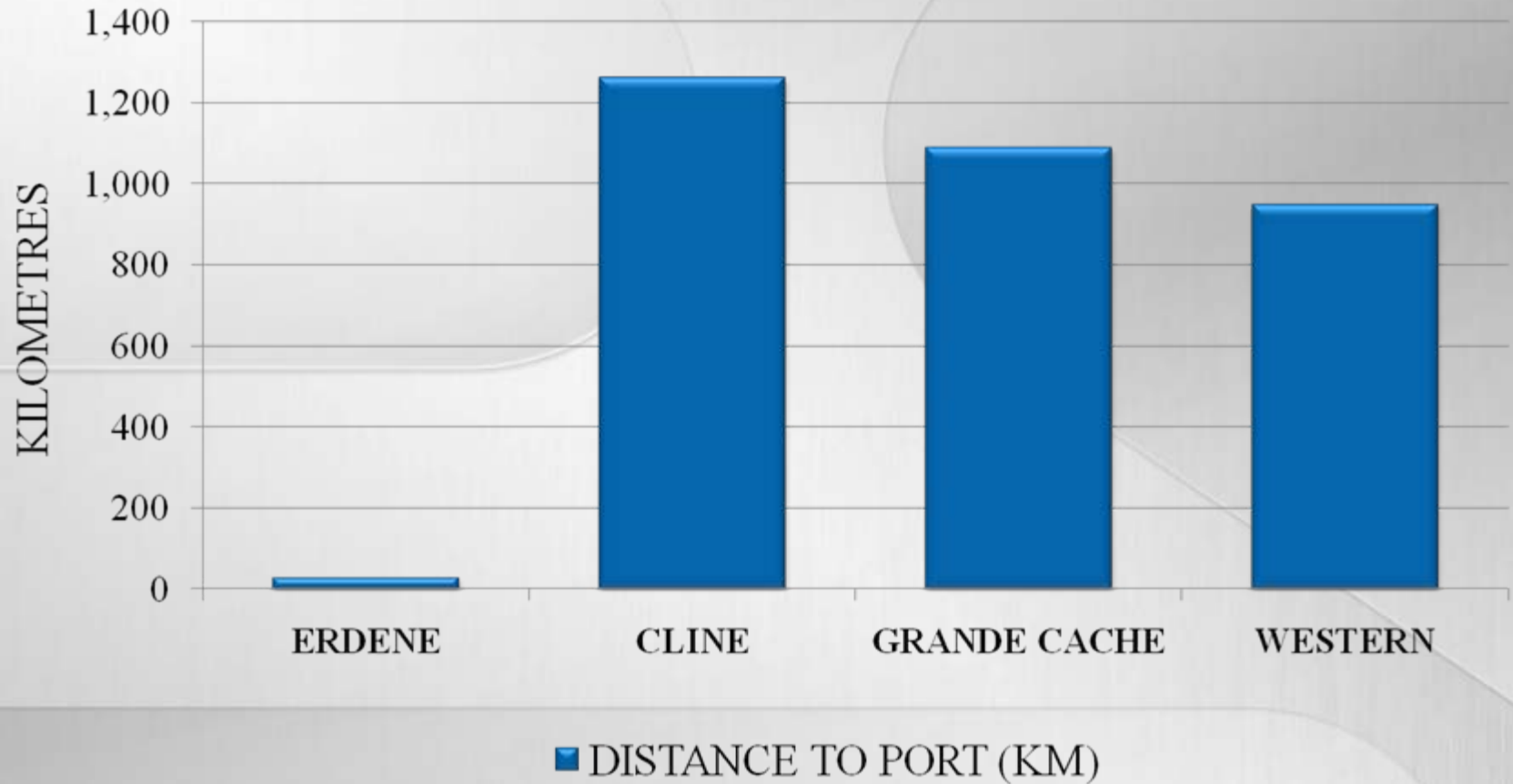


Rail Option: 31 km total to International Pier (24 km new line)

Marine Option: 3,000 tonne barges loading off the Donkin peninsula to vessels up to Cape Size



# Distance to Port Comparison



# FOB Cash Cost Comparison



**Average  
Global  
Cash Cost  
Comparison  
FOB US\$/t**  
(Major Exporting Countries)



**Peer Group  
Cash Cost  
Comparison  
FOB US\$/t**

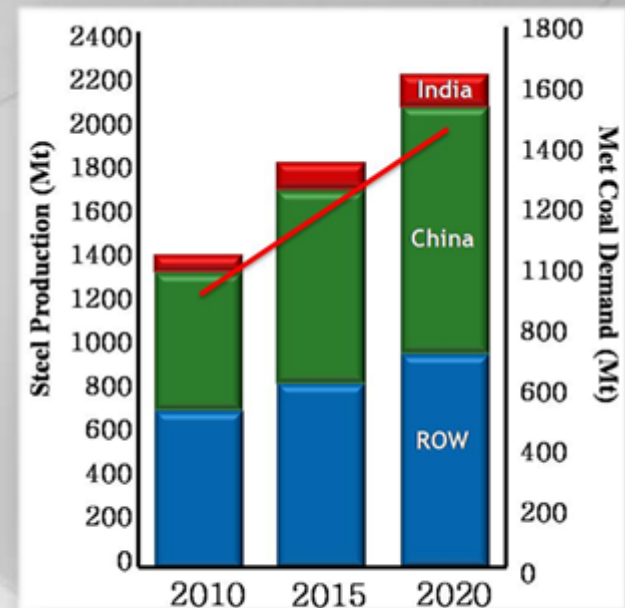


<sup>1</sup> assumes Norwest 2007 opex inflated 5% annually, 30% increase for CM vs. longwall and 30% increase as study was +/- 30%

# Markets



- Roughly 75% of product coal will be marketed as a blend coking coal into international markets, with the remaining balance (thermal coal) being sold to domestic and export customers.
- During the feasibility phase, coal will be marketed as a ROM thermal product.
- The geographic location of Donkin makes Europe and Brazil the most likely target markets, and to a lesser extent Asia.
- The forecast for long-term realization has been projected at US\$156.7 per tonne for semi-hard coking coal and US\$122.2 per tonne for thermal coal.



# Markets

## Key Features of the Donkin Coking Coal Product



### Low Ash

The expected level of 4% air-dried (“ad”) is well below the typical range for hard coking coal of 7% to 10.5% and would attract a pricing premium.

### Caking Properties

The average CSN of 8.5 places it within the range for premium hard coking coals of 8 to 9 CSN.

### Plasticity

Donkin is a high fluidity coal, ranging from 10,000 to 25,000 dial divisions per minute (“ddpm”), with an expected maximum fluidity of greater than 10,000 ddpm. This characteristic enables its use as a coke blend component with lower fluidity coals and enhances its marketability.

### Sulphur

The expected product sulphur content of 3% ad is above the typical range for hard coking coal which ranges to a maximum of 0.8%. While the sulphur content will attract a pricing penalty, which has been incorporated into the valuation model, it does not preclude the use of this coal in coking coal blends for the manufacturing of coke.

# Project Valuation & Economics

CDN\$



| <b>Financial Parameters</b>                   | <b>Marine Case</b> | <b>Rail Case</b> |
|---|--------------------|------------------|
| NPV @ 8% (after tax)                          | \$1.06 B           | \$952 M          |
| Internal Rate of Return                       | 36.0 %             | 32.5 %           |
| Payback Period                                | 7 years            | 7 years          |
| Peak Funding                                  | \$331 M            | \$374 M          |
| EBITDA (1 <sup>st</sup> full year production) | \$294 M            | \$280 M          |
| Capital Expenditure                           | \$497 M            | \$550 M          |
| FOB Cash Cost (ave. over LOM)                 | \$51.8             | \$58.0           |

# Project Plans



- Draft Project Description document was filed on June 21<sup>st</sup>, 2011 with Federal and Provincial regulators
- Environmental Assessment consultation period underway prior to filing final document for approval
- Feasibility stage will include the initial phase of mining, referred to as the exploration and evaluation phase.
- Plan includes one CM section in the Harbour Seam one year after securing an off-take agreement for the ROM coal
- Discussions with potential customers underway
- Project approvals in place for production and transportation of approximately 620ktpa ROM
- The Feasibility Study is estimated to cost \$94.21 million and is forecast to be conducted over a 24-month period