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COMMODITY Insights Bulletin

JULY 2014

Cm
METALLURGICAL COAL

Metallurgical Coal (Q4, 2013 and Q1, 2014)

Insight: Difficult in the short term but long-term optimism in the industry

The market for metallurgical coal remains difficult in the short term, with long-term optimism on the industry's outlook. Out of necessity, miners are looking at operational costs and finding ways to stabilize or reduce costs, while maintaining production with these lower market prices. While some operations have been closed, generally companies are choosing to keep mines open so that they can continue to ship to the market and spread out fixed costs over more tons, even if it is at a loss.

A question asked frequently is whether the supply and demand model currently in place is the "new normal." From a broad standpoint, the cost optimization initiatives of companies will be key for not only weathering the short-term storm, but also in re-gaining margins now and over the long term. While long-term optimism remains, the results of those optimistic actions will materialize for those that can find margin enhancement within their operations.

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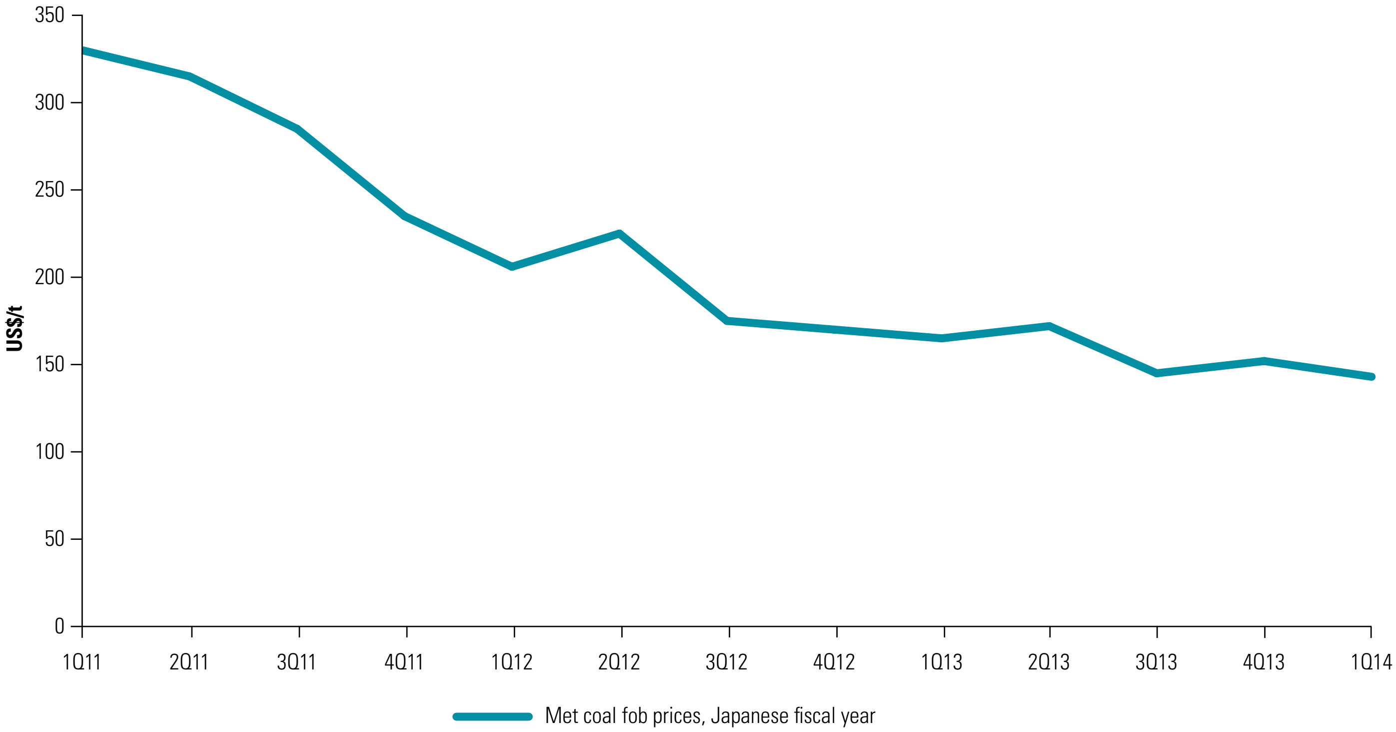
>
> **Roy Hinkamper**
> KPMG in the US

Factors that will affect a change to the overall market will include a commitment by both developed countries and developing countries to keep moving forward on projects that expand or replace their infrastructure and grow their economies. That growth drives the demand for multiple commodities, and an environment where the 'high tides raise all ships.'

Figure 1: Met coal prices (Q1, 2011–2014)



Source: "Japanese steel mill sets Q4 met coal price with Australian miners at $152/mt FOB, up $7/mt", Platts, 20 September 2013; "Anglo American settles Q1 coking coal with Asian steel mills at $143/mt", Platts, 19 December 2013.

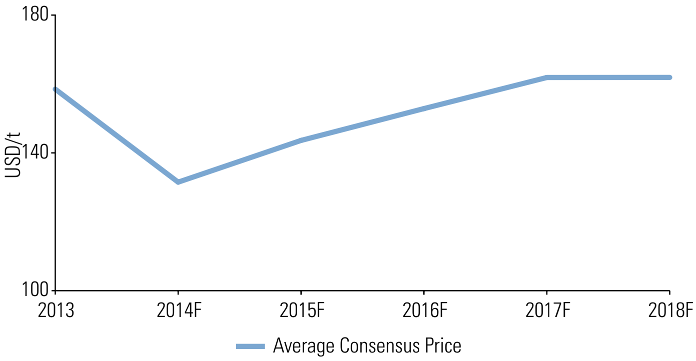
1 "Resources and Energy Quarterly, March 2014", Bureau of Resources and Energy Economics, Australian Government; Barclays – Data and Trend Restock No. 114: Record low met coal settlement price; relief at lower end of quality spectrum, 8 April 2014; Cowen And Company – Stress Tests and Selectivity Amid Another Leg Down in Coking Coal, 4 April 2014; via Thomson Research/Investext accessed June 2014

Price outlook

Contract prices for hard metallurgical coal (met coal) for delivery in Q1, 2014 settled at about $143/ton (US dollars) (US$), down from US$152/ton in Q4, 2013, a decline of almost 6 percent. Spot prices for met coal have continued to decline since September 2013 and were trading at about US$107/ton Free on Board (FOB) Australia during March 2014. At these prices, a major portion of global coal production, especially small-scale miners, are believed to be operating at very low margins, if not at a loss. Without marked cost reductions in mine operations, the prevailing price is not likely to be sustainable for current demand over the medium term, which could even lead to idling of mines.[1]

For the remainder of 2014, contract prices are forecast to decrease further as loose market supply conditions continue. Hard met coal contract prices for Q2, 2014 between Nippon Steel and Anglo American settled at US$120/ton, down 16.1 percent quarter-on-quarter and average at about US$132/ton for 2014. Spot prices are expected to trade about US$5–10/ton below the contract prices. In the future, consensus met coal contract prices are forecast to rebound in 2015 as the period of oversupply comes to an end through demand catching up and the closure of higher-cost mines reducing global supply. Prices are forecast to reach about US$144/ton in 2015 and reach US$162/ton in 2018.[2]

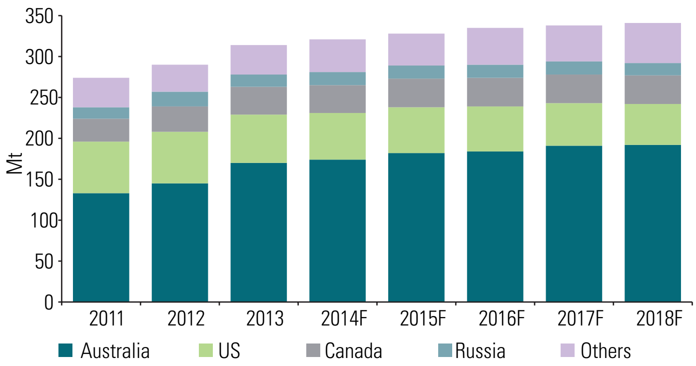
Figure 2: Met coal prices (2013–2018F)



Sources: "Resources and Energy Quarterly, March 2014", Bureau of Resources and Energy Economics, Australian Government; BMO Capital Markets – Mining and Commodities Roundup, 26 May 2014; Morgan Stanley – Europe Metals & Mining: Metals and Mining Tracker, 14 May 2014; RBC Capital Markets – Bulking up: Iron ore Prices Retreat to a 20 Month Low, 13 May 2014; J.P. Morgan – European Metals and Mining: Equity Strategy Colleagues Upgrading Mining to Ow, 12 May 2014; Barclays – UK Mining: Update: Base over Bulk; It's Working, 29 April 2014; Jefferies & Company Inc. – What Happens if Gas Returns to Below $4 This Time, 25 March 2014; via Thomson Research/Investext, accessed June 2014; KPMG analysis.

Supply and demand

Figure 3: Global met coal exports (2011–2018F)



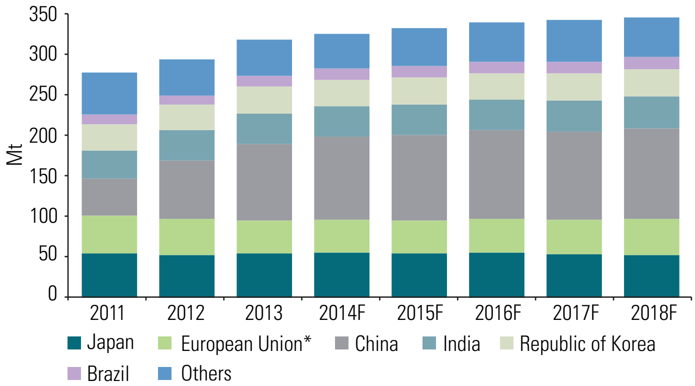
Source: "Resources and Energy Quarterly, March 2014", Bureau of Resources and Energy Economics, Australian Government; KPMG analysis.

- Global met coal trade is expected to have increased about 8.3 percent year-over-year to reach 314Mt in 2013. The large increase in supply is due to a significant amount of investment that occurred in the high-price met coal markets post the Global Financial Crisis (GFC). Australia continued as the largest exporter of met coal contributing over 50 percent of the global met coal production and about 25Mt to the additional supply in 2013.
- Australian met coal exports are expected to increase 2.4 percent to 174Mt in 2014 and at a compound annual growth rate (CAGR) of 2.5 percent during 2015–2018 to reach 192Mt in 2018. This growth will be supported by new expansion projects at BHP Billiton Mitsubishi Alliance's (BMA) Caval Ridge and Daunia projects and Anglo American's Grosvenor underground mine. Some of this growth will be offset due to the expected end-of-mine life at BMA's West Cliff mine from about 2016.

2 "Resources and Energy Quarterly, March 2014", Bureau of Resources and Energy Economics, Australian Government; Barclays – Data and Trend Restock No. 114: Record low met coal settlement price; relief at lower end of quality spectrum, 8 April 2014; Cowen And Company – Stress Tests and Selectivity Amid Another Leg Down in Coking Coal, 4 April 2014; via Thomson Research/Investext accessed June 2014

- Met coal exports from Canada are expected to increase marginally at a CAGR of 0.6 percent from 2013 to reach 35Mt in 2018, while those from Russia are projected to remain at the 2013 level of 15Mt. Exports from the US are projected to decline at a CAGR of 3.3 percent from 2013. Due to a market surplus over the last 18 months lower met coal prices have made investments in met coal projects unattractive, leading to a comparatively lower increase in global met coal supply. Global met coal exports are expected to increase at a CAGR of 1.7 percent from 2013 to 341Mt in 2018.
- Hard coking coal contract prices for Q2, 2014 between Nippon Steel and Anglo American settled at US$120/ton (down US$23/ton from Q1, 2013), which is one of the lowest levels since 2008. Marginal producers, who were adopting cost reductions during the lower price market conditions, would therefore find it difficult to operate at further diminished margins if this price remains over a prolonged period.[4]

Figure 4: Global imports of met coal (2011–2018F)



Source: "Resources and Energy Quarterly, March 2014", Bureau of Resources and Energy Economics, Australian Government; KPMG analysis.

*Met coal production by the European Union (EU) starting 2013 includes production from Croatia as well which was included as the 28th country in the EU on 1 July 2013.

- Global met coal imports are expected to grow at 2.2 percent year-over-year in 2014, primarily driven by China where imports are expected to increase by 8.6 percent year-over-year to 101Mt in 2014. Going ahead, imports by China are expected to increase at a CAGR of 2.2 percent to 110Mt in 2018 from 101Mt in 2014.
- A major factor driving import demand growth in China is that domestically produced coal in China is lower quality compared to major exporting nations. In addition, it costs more than imports mainly due to high inland transportation costs for domestic coal. Furthermore, the Chinese Government has a metallurgical coal reservation policy that encourages the use of imports in an attempt to increase the longevity of its domestic reserves.[5]
- Met coal imports by the European Union (EU) are expected to increase at a CAGR of 1.9 percent from 40Mt in 2013 to 44Mt in 2018. India's met coal imports are expected to increase at a CAGR of 1.1 percent from 37Mt in 2013 to 39Mt in 2018 and imports into Brazil are projected to increase at a CAGR of 2.9 percent from 13Mt in 2013 to 15Mt in 2018. This growth in imports can be attributed to projected increase in steel production and, in the case of the EU, a flat domestic met coal production.
- China's steel Positive Material Identification (PMI) rose to 44.2 points in March, compared to 39.9 in February 2014, according to data released by the China Federation of Logistics & Purchasing (CFLP). The steel PMI has been below the critical threshold of 50 points for 7 months, which indicates that the industry is still under pressure. However, the pickup in steel PMI in March suggests that there could be an opportunity for steel demand to pick up, in turn indicating an opportunity for higher demand of met coal from China.[6]

[4] Barclays – Data and Trend Restock No. 114: Record low met coal settlement price; relief at lower end of quality spectrum, 8 April 2014; Cowen And Company – Stress Tests and Selectivity Amid Another Leg Down in Coking Coal, 4 April 2014; via Thomson Research/Investext accessed June 2014

[5] Kevin Jianjun Tu "Understanding China's Rising Coal Imports", Carnegie Endowment for International Peace, 16 February 2012

[6] Barclays – Data and Trend Restock No. 114: Record low met coal settlement price; relief at lower end of quality spectrum, 8 April 2014, via Thomson Research/Investext accessed June 2014

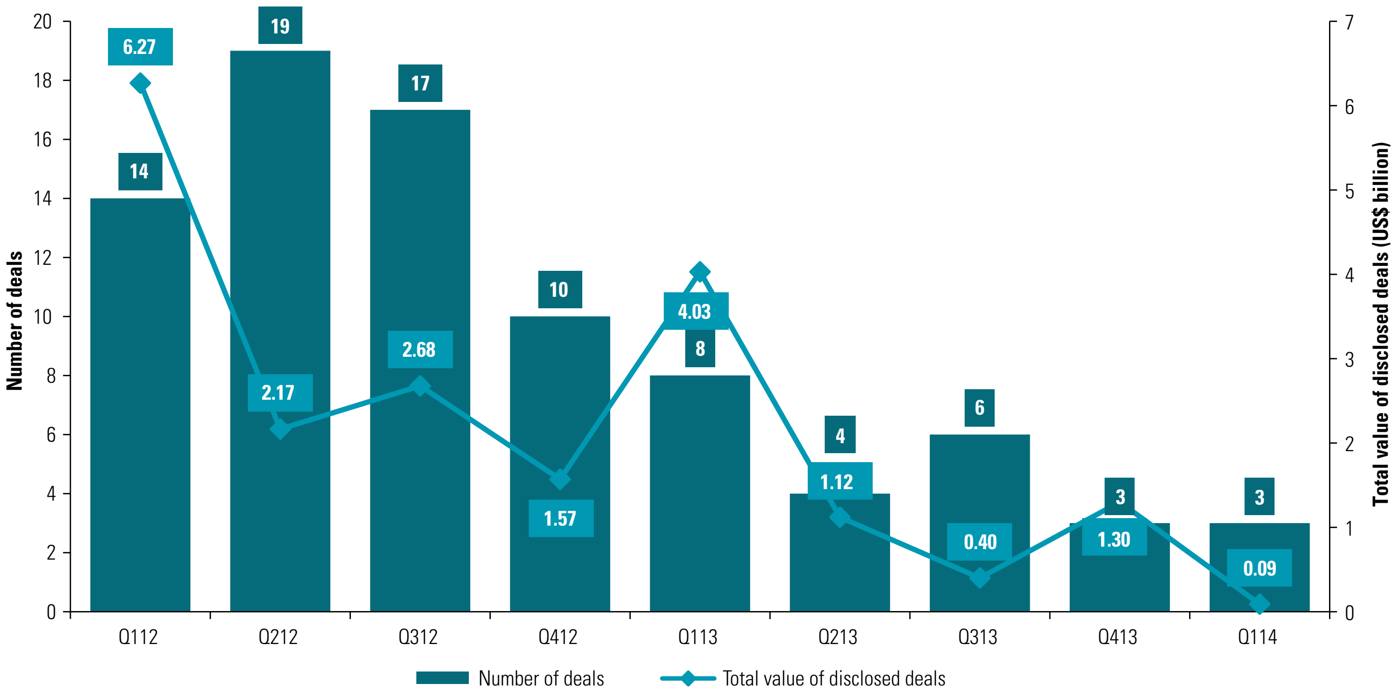
Key developments

Ownership changes[7]

During Q4 2013, the total valuation of major deals announced in the met coal industry increased 225 percent quarter-on-quarter to US$1.30 billion from US$0.40 billion in Q3 2013.

The total valuation of M&A then declined 93.1 percent quarter-on-quarter to reach US$0.09 billion in Q1 2014. The number of deals announced during Q4 2013 and Q1 2014 fell to 3 in each of the 2 quarters from 6 in Q3 2013.

Figure 5: Value of major deals announced in the coal industry



Source: Deals: Search, Mergermarket; KPMG analysis.

Table 1: Top met coal deals announced in Q4 2013 and Q1 2014

Date announced	Target nation	Acquirer (Nation)	Status	Value of transaction (US$ million)	Stake (%)
24 Mar 14	Lincang Jiucai Dam Coal Industry Co Ltd (China)	Yunnan Lincang Xinyuan Germanium Industrial Co Ltd (China)	Announced	11	40
19 Jan 14	Peabody Budjero Pty Ltd (Australia)	Wesfarmers Resources Limited (Australia)	Closed	61	100
07 Jan 14	Panzhihua City Huixing Industry and Commercial Co. Ltd (China)	Panzhihua Hidili Mining Co. Ltd (China)	Announced	18	100
31 Dec 13	Feishang Anthracite Resources Limited (China)	China Natural Resources Inc Shareholders (China)	Closed	272	100
02 Dec 13	NuCoal Mining (Pty) Limited (South Africa)	Blue Falcon 212 Trading Proprietary Limited (South Africa)	Closed	8	100
25 Oct 13	Clermont Mine (Australia)	Glencore plc (Switzerland); Sumitomo Corporation (China)	Closed	1015	50.1

Source: Deals: Search, Mergermarket, accessed 04 June 2014.

7 Mergermarket database, accessed 04 June 2014

Regulatory updates

The regulations introduced during Q4, 2013 and Q1, 2014 aimed at streamlining coal mining operations to aid in the optimal utilization of the available domestic resources and assuring coal supplies for the local and export markets.

Table 2: List of recent regulations in the met coal industry during Q4 2013 and Q1 2014

Country/region	Regulation/topic	Description
India	Coal Regulatory Authority[8]	• The Government of India has decided to set up a Coal Regulatory Authority (CRA), which will function under the administrative control of the Union Coal Ministry in March 2014. • The primary function of the CRA is to advise the Central Government on the formulation of the principles and methodologies for determining the price of raw coal, washed coal and on the procedure for automatic coal sampling.
US	Regulatory approval[9]	• Walter Energy Inc. won approval from the Mobile Planning Commission for its proposed Blue Creek Coal Terminal in Mobile, Alabama in March 2014.

Project updates

Table 3: Cross-section of global met coal projects*#

Project	Country	Owners/ operators	Capex (US$ million)	Potential start year	Full capacity (Mtpa)	Progress and updates
Appin Area 9	Australia	BHP Billiton	845	2016	3.5	On schedule and on budget. The overall project is 63 percent complete as of 31 March 2014.
Belvedere underground	Australia	Vale	2,400[1]	2016	7	Vale has completed the acquisition of 24.5 percent interest held by Aquila Resources in the project. The project is still in an early stage of development.

1 Excluding the EPCM and contingency costs
2 Excludes announced pre-commitment funding
3 As per BHP Billiton 2013 Annual Report, the actual capex incurred by BHP Billiton is about US$483 million (subject to finalization). US$966 million is derived on the basis that the capex is equally shared by BHP Billiton and Mitsubishi who both own a 50 percent share each in the project
4 As per BHP Billiton 2013 Annual Report, the actual capex incurred by BHP Billiton is about US$676 million (subject to finalization). US$1,352 million is derived on the basis that the capex is equally shared by BHP Billiton and Mitsubishi who both own a 50 percent share each in the project
5 Australian dollar
6 As per BHP Billiton operational review for quarter ended September 2013, the actual capex incurred by BHP Billiton is about US$1,505 million (subject to finalization). US$3,010 million is derived on the basis that the capex is equally shared by BHP Billiton and Mitsubishi who both own a 50 percent share each in the project
7 Canadian dollars
8 Capital costs to achieve full production is C$ 788.6 million during the first three years of the project and includes the mine, process plant and all required on-site and railway infrastructure
9 Start-up capital requirement for a single longwall operation
10 ROM production
11 Capital cost expenditure for owner operations. Includes capex for surface infrastructure and related costs, coal handling and preparation plant and mining equipment
12 As per ASX release " Ovoot Coking Coal Project Confirmed as one of the Lowest Cost Potential Exporters of Coking Coal into China" dated 6 December 2012. Capex excluding capital contingencies
13 Following the completion of two Pre-Feasibility Studies completed in 2012, the Company has adopted a plan to develop the Ovoot Project in line with the commissioning of the Erdenet to Ovoot Project Railway. The Ovoot Development Plan (ODP) relies on the use of contractors, and production of bypass coal which does not need to be washed. The ODP estimates a capital expenditure requirement of US$144 million including contingencies to commence mine production in 2017 with an initial production of 5 Mtpa saleable high quality coking coal.
The above table includes projects with capex exceeding US$750 million
* The list is not exhaustive and contains only a limited number of projects.

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8 Indrani Dutta "Coal Regulatory Authority little more than eye-wash", The Hindu, 28 March 2014

9 "Walter Energy receives approval for new Ala. coal export terminal", via Factiva, accessed 04 June 2014

Table 3: Cross-section of global met coal projects*# (continued)

Project	Country	Owners/ operators	Capex (US$ million)	Potential start year	Full capacity (Mtpa)	Progress and updates
Broadmeadows (mine life extension)	Australia	BHP Billiton Mitsubishi Alliance (BMA)	966[3]	2013	0.4	Mine life extension at Broadmeadow was completed in 2013 and the first coal was mined in March 2013. A longwall move at the Broadmeadow mine is scheduled during Q2 2014.
Caval Ridge	Australia	BHP Billiton Mitsubishi Alliance (BMA)	3,740[2]	2014	5.5	Commissioning commenced in Q1 2014, ahead of schedule. The final cost is expected to be under budget. The overall project is 98 percent complete.
Daunia	Australia	BHP Billiton Mitsubishi Alliance (BMA)	1,352[4]	2013	4.5	The project was completed in Q3 2013. The mine has been successfully ramped up now. It produced 2.1Mt from March 2013–2014.
Eagle Downs hard coking coal	Australia	Aquila Resources/Vale	1,130[1,5]	2017	5.9	Work commenced under the drifts contract, with facilities and equipment being mobilized at the site. Settlement of all legal proceedings and claims made between Aquila and Vale relating to Eagle Downs.
Hay point stage three expansion	Australia	BHP Billiton Mitsubishi Alliance (BMA)	3,010[2,6]	2015	Increased port capacity by 11Mtpa and reduces storm vulnerability	On revised schedule and budget. The overall project is 82 percent complete as on 31 March 2014.
Moatize II	Mozambique	Vale	2,068	2015	11	Civil engineering work at the primary crusher, conveyor belt and processing plant concluded. Civil engineering work on the rail loop initiated. Project is 61 percent complete as on 31 March 2014.
Arctos coal projects	Canada	Fortune Minerals Limited/POSCO	787[7,8]	NA	5.4	Fortune has concluded its 2013 summer field work. Fortune will voluntarily cease its summer field program activities and withdrawn from the project site while the Tahltan people and British Columbia Government to continue their talks.
Belview coal deposit	Australia	Stanmore Coal Limited	869[9]	2017	N/A	Coal quality results to date confirm attractive coking properties across multiple seams.

Project	Country	Owners/ operators	Capex (US$ million)	Potential start year	Full capacity (Mtpa)	Progress and updates
Clyde Park Coal deposit	Australia	Guildford Coal Limited/Tiaro Coal Limited	~750	2015	10	A further upgrade of the inferred resource to 677Mt was announced in February 2013, and a maiden indicated resource of 50Mt. Zhejiang Provincial Energy Group Co. Ltd continued its due diligence process to acquire Tiaro's interest in the property.
Grosvenor West Coal deposit	Australia	Carabella Resources Limited	905[5,11]	2016	5.5[10]	Grosvenor West was progressed into bankable feasibility study in September 2012 as a large scale open cut mining operation. As per a feasibility study in August 2012, capex could be reduced to AUD500 million if contractor operations are employed.
Ovoot Coal project	Mongolia	Aspire Mining Limited	1,205[12]	2017[13]	5[13]	The company has identified a method for the lowest capital intensive start-up. This method employs contractors wherever possible. The development plan outlines a strategy for a potentially fully funded low capital cost development for an initial 5 Mtpa of saleable coking coal production by 2017.
Ravensworth North colliery	Australia	Glencore plc/ Itochu Corp.	1,360	2012	8	The first stage of the 8 Mtpa Ravensworth North thermal coal operation was completed in 2012.

Source: Intierra; Company Reports.

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