

Introduction to Business Review

Providing industry leading growth

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- Record Production in Aluminium, Iron Ore, Zinc Businesses.
- Successful project commissioning. Achieved significant cost savings.
- Further improving low cost position.

Summary

Operating performance was strong, driven by record production in our Aluminium, Zinc and Iron Ore businesses and cost reduction measures. This helped us to mitigate the impact of a sharp fall in commodity prices in the second half ('H2 FY 2009') of the year ended 31 March 2009 ('FY 2009'). We also took proactive steps to temporarily shut down high cost operations at our MALCO aluminium smelter, Nkana copper smelter at KCM and partially shut down the BALCO Plant I aluminium smelter. Surplus power has been sold in a power deficient state in order to maximise returns.

Despite a tough business environment and a drop in commodities prices of our products, we continue to remain confident about the future based on our low-cost position and track record of low capital cost project development.

This allows us to continue to deliver profits and growth even at depressed commodity prices. We have made excellent progress during the year with our expansion programme. We commissioned a zinc concentrator at the Rampura Agucha mine, de-bottlenecked operations at our Chanderiya and Debari zinc smelters, achieved full capacity at the first line of the 1.4 million tonne per annum ('mtpa') Lanjigarh alumina refinery and progressively commissioned the first 250,000 tonne per annum ('tpa') phase of the new 500,000 tpa aluminium smelter at Jharsuguda. These were achieved in line with our expected capex plan at just over US\$3 billion in FY 2009. With very modest net debt, strong cash flow and significant non-recourse project finance secured, our project expansion programme is well funded. We expect to commission most of our projects within budget and at, or ahead of schedule.

Our ongoing and rigorous cost reduction measures, coupled with our fast response to the commodity cycle correction, has brought positive results in reducing operating costs in the third ('Q3 FY 2009') and fourth ('Q4 FY 2009') quarters of FY 2009, the benefits of which we expect will continue to be seen next year. Higher volumes and various improvements to enhance operational efficiencies have also reduced unit operating costs. For instance, at our Copper - Zambia operations we have achieved a sharp reduction in production costs from 292.8 US cents per lb in the first half ('H1 FY 2009') of FY 2009 to approximately 140 US cents per lb in the month of March 2009. Our approach to costs has always been to optimise productivity, increase efficiencies and achieve better recoveries, without sacrificing the longer-term growth potential of our operations. Our strong operational management teams are incentivised to implement the innovative initiatives to enhance efficiency and achieve savings.

Despite increased contribution from higher volumes and stable costs of production, EBITDA was US\$1,612.2 million in FY 2009, including non-cash inventory write-downs of US\$79 million.



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Excluding inventory write-down, EBITDA was US\$1,691.2 million which was 43.8% lower compared with FY 2008, primarily due to the sharp fall in the commodity prices of aluminium by 15%, copper by 22%, zinc by 48%, lead by 42% and lower TC-RC realisations.

The key reasons for the movement in EBITDA between FY 2009 and FY 2008 are set out below.

- Lower average LME prices of all metals reduced EBITDA by US\$1,422 million.
- Higher sales volumes resulted in higher EBITDA of US\$244 million.
- Sharp fall in LME prices resulted in inventory write-downs of US\$79 million.
- Industry-wise escalations in input costs in H1 FY 2009 were partly offset by positive cost

efficiency initiatives across most of our operations in H2 FY 2009. Total operating costs negatively impacted EBITDA by US\$276 million, during the year.

- During the year, the Indian rupee depreciated against the US dollar by 14.1%, increasing EBITDA by US\$58 million, net of translation losses.
- A 25% decrease in TC-RC realisations during FY 2009 resulted in lower operating margins for the business, reducing EBITDA by US\$27 million.
- Surplus power sales in FY 2009, primarily at MALCO and BALCO contributed US\$24 million to EBITDA.
- Our allied businesses ie phosphoric acid, met coke, pig iron, etc, benefited from record prices in H1 FY 2009 and contributed positively to EBITDA by US\$88 million.

In addition to the initiatives to increase volumes and reduce costs, the Group also has made progress in consolidating minorities, selectively acquiring assets and increasing the resource base through exploration.

Following the sharp fall in the price of copper, we arrived at a revised agreement with Asarco for acquiring substantially all of its operating assets for a reduced consideration of US\$1.7 billion down from US\$2.6 billion comprising of US\$1.1 billion in cash and US\$0.6 billion of deferred payments over nine years. The agreement is subject to the approval of the US Bankruptcy Court for the Southern District of Texas, Corpus Christi Division and is also likely to require the approval of the Company's shareholders.

Continued focus on exploration has yielded significant success during the year, with gross addition of 46.3 million tonnes to reserves and resources in the Zinc business and a gross addition of 57.8 million tonnes in the Iron Ore business, adding approximately four years of mine life in each of these businesses.

EBITDA recorded by the individual businesses is set out below.

(in US\$ million, except otherwise stated)	FY 2009	FY 2008	% change
Aluminium	196.1	380.7	(48.5)
Copper	222.9	667.3	(66.6)
Zinc	605.4	1,380.1	(56.1)
Iron ore	557.1	585.6	-
Others	30.7	(3.3)	-
Total	1,612.2	3,010.4	(46.5)

Market Overview

A majority of the metal production from our Indian operations is sold in the Indian market – about 60% presently and the rest is exported to growing countries in proximity to our operations, such as Far East, South East Asia, Middle East, China, Africa and Europe. We produce globally required commodities and our focus on target markets is largely driven by optimisation of freight cost,

market size and growth potential. Iron ore exported out of India caters to several steel plants spread across China, Japan, Korea and South East Asia. The locations of our plants provide us with easy access and the advantage of low freight cost to the fastest growing markets including India, the home market for our Indian operations.

India

India's GDP in FY2009 was 7.5% and is expected to be between 6% –7% in FY 2010 and 2011. The acceleration of growth in recent years was driven by favourable domestic structural factors coupled with strong foreign capital inflows and global cyclical uplift. The structural foundation of India's economic growth remains intact. The sharp acceleration in infrastructure spending has been a key driver of elevated GDP growth in recent years.

While India has become more integrated with the rest of the world, its export-to-GDP ratio remains lower than those of other Asian countries. India's total exports account for around 20% –22% of GDP compared with anywhere between 40% –60% for other Asian economies including China, Korea and Taiwan. India is therefore less exposed to the slump in external demand. The 11th Five Year plan of the Government of India provides for

a total infrastructure spend of nearly US\$500 billion in several areas including power, roads, railways and telecom. India's per capita metal consumption is comparatively much lower than developed countries and coupled with a huge infrastructure spend plan indicate a strong growth potential.

We believe these positive factors will enable us to continue to sell a majority of our metal production in India.

Aluminium

Following six years of strong growth in aluminium, led by the emergence of China, growth in demand in 2008 is estimated to have barely been positive. Global aluminium consumption was 38.2Mt in CY2008, expected to decrease 3.4% to 36.9Mt in CY2009. The effect of the global financial crisis which began in late 2007 and the impact of the fall in the US housing market have been sharp. Chinese aluminium consumption in CY2009 is forecast to grow only 2.5%, because of falling exports and lower domestic growth.

Brookhant predicts that although demand is expected to be muted in

CY2009/2010, demand is expected to grow by 6% in 2011 and by 6.5% in 2012. The production curtailments, large stock drawdown and strengthening demand growth in 2011 and 2012 are also expected to precipitate a positive price response going forward.

A factor that will support prices is the fact that the industry cannot operate for an extended period with ~40% of the industry currently cash negative on an ingot basis. Prices in CY2009 are expected to rise gradually as production curtailments bring supply more in line with demand.



Copper

Global copper consumption was 18.0Mt in CY2008, expected to decrease 4.4% to 17.2Mt in CY2009. The increase in copper consumption in CY2009 is expected to be driven mainly by China and other Asian countries and more than offset by mature copper consuming regions which are expected to show either minimal or negative growth in demand during this period. Chinese demand growth is expected to be ~5% with Western World demand contracting almost 8-9% year on year.

On the supply side, global refined copper production (including production from scrap) was 18.4Mt in CY2008 and it is expected that production capability will reach 19.2Mt in CY2009, up 3.7%. The industry has responded well to the sharp fall in the copper price by ramping down the marginal cost operations, both mines and smelters.



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Zinc

The initial recession in the US and the subsequent fall in global manufacturing in Q2/Q3 CY2008 resulted in global zinc consumption falling to 11.2Mt in 2008. In CY2009, global consumption is forecast to contract further, falling by 5.4% to 10.6Mt.

Smelters have responded to deteriorating market conditions by exercising a degree of market discipline as they began to trim production by ramping down of high cost operations. Supply was 11.5Mt in CY2008 and is expected to reduce to 11.2Mt in CY2009.



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Iron Ore

Consequent to global slowdown witnessed since the second half of CY2008, the world steel demand reduced substantially and as a result, all major steel producers of the world announced production cuts between 30 – 50%. China, which is the biggest producer and consumer of steel, was also not an exception and as a result, the demand for iron ore was significantly affected. After steep rise in prices in the previous years, iron ore prices sharply fell in CY2008 and shown volatile signs in the first few months of CY2009.

At current price levels, it is estimated that several iron ore miners, particularly those high-cost low grade projects that have come into operation in the last couple of years are uncompetitive. Globally, destocking of steel inventories is also expected to complete by mid-CY2009. We believe that iron ore price has bottomed out and with the gradual recovery of economy in China and globally, the demand-supply balance in the seaborne iron ore market would be restored in the near term.



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Aluminium



Aluminium ktpa
Production and proposed capacity



Description

Vedanta is one of the largest Aluminium producers in India with mining and processing facilities located in India.

120.5 million tonnes of Reserves and Resources of bauxite.

Key locations

India - Bauxite Mines

- Niyamgiri
- Mainpat
- Bodai-Daldali
- Pandrapat
- Jamirapat
- Yercaud
- Kolli Hills
- Poondi

Aluminium smelters

- Korba
- Jharsuguda

Alumina refinery

- Lanjigarh
- Korba

The performance of our Aluminium Business in FY 2009 is set out in the table below.

(in US\$ millions, except as stated)	FY 2009	FY 2008	% change
Production volumes (in kt)			
Alumina – Lanjigarh	586	267	119.5
Alumina – Korba and Mettur	241	291	(17.2)
Aluminium – Jharsuguda	82		
Aluminium – Korba	357	359	(0.6)
Aluminium – Mettur	23	37	(37.8)
Sale of commercial power (in million units)	545	199	173.9
Average LME cash settlement prices (US\$ per tonne)	2,234	2,620	(14.7)
Average exchange rate (INR per US\$)	45.91	40.24	14.1
Unit costs			
Aluminium Business (US\$ per tonne) ²	1,702	1,771	(3.9)
Aluminium Business (INR per tonne) ²	78,139	71,258	9.6
BALCO Plant II – Production cost (US\$ per tonne)	1,623	1,674	(3.0)
BALCO Plant II – Production cost (INR per tonne)	74,517	67,362	10.6
BALCO Plant II – Smelting cost ¹ (US\$ per tonne)	859	805	6.7
BALCO Plant II – Smelting cost ¹ (INR per tonne)	39,436	32,385	21.8
Revenue ²	937.1	1,140.2	(17.8)
EBITDA ²	196.1	380.7	(48.5)
EBITDA margin	20.9%	33.4%	
Operating profit	117.2	307.0	(61.8)

1 Smelting cost comprises production cost excluding alumina cost.

2 Excluding Jharsuguda operations as smelter is under trial runs.

Production Performance

Record production of 462,000 tonnes of aluminium in FY 2009 was an increase of 16.7% compared with FY 2008. This increase in production is attributable to the first time production contribution of 82,000 tonnes from the new Jharsuguda aluminium smelter in FY 2009, which was offset to some extent by the ramp down of the MALCO smelter in mid December 2008 and a shutdown of a part of the BALCO Plant I smelter in Q4 FY 2009, due to higher operational costs. Consequently, we are selling surplus power to maximise returns.

The production of wire rods, a value added product, was 150,000 tonnes in FY 2009, up 10% compared with FY 2008.

The Lanjigarh refinery produced 586,000 tonnes of alumina from the first stream, feeding our captive requirements. The second stream commenced commissioning activities in April 2009. We expect to start progressive feeding of the refinery with our own Niyamgiri bauxite by mid FY 2010.

We commenced progressive commissioning of the 250,000 tonne Phase 1 of the Jharsuguda aluminium smelter where 264 pots out of 304 pots have been brought on-line to date. The first phase of 250,000 tpa is expected to be fully operational in the first quarter of FY 2010.

Unit Costs

FY 2009 witnessed two divergent halves with H1 FY 2009 driven by the buoyancy in the global markets leading to higher input costs. This contrasted with the deteriorating economic conditions in H2 FY 2009 as a result of which input costs of commodities started softening.

Unit CoP at BALCO Plant II was US\$1,623 per tonne (INR 74,517 per tonne) in FY 2009 compared with US\$1,674 per tonne (INR 67,362 per tonne) in FY 2008. Smelting costs at BALCO Plant II were US\$859 (INR 39,436 per tonne) per tonne in FY 2009 compared with costs of US\$805 (INR 32,385 per tonne) per tonne in FY 2008, primarily due to higher input costs including carbon and coal, despite improved operational efficiencies. Continued focus on reducing costs helped in achieving an exit smelting cost of US\$637 per tonne at BALCO Plant II at end of FY 2009.

Sales

We improved our penetration of the domestic market, selling 353,000 tonnes in FY 2009, up 17.1% compared with FY 2008. Domestic sales represented 77% of total sales, which provided a benefit vis-a-vis exports due to import tariffs.

Financial Performance

Despite an increase in annual volumes and lower input costs in H2 FY 2009, EBITDA in FY 2009 was US\$196.1 million, down 48.5% compared with FY 2008, primarily due to the 14.8% reduction in LME prices and higher input costs for the full year which negatively impacted EBITDA by US\$120.4 million and US\$105.1 million respectively, partially offset by the sale of surplus power commercially which contributed US\$15.9 million to EBITDA in FY 2009.

Projects

Jharsuguda I Aluminium Smelter

The first 250,000 tpa phase of the 500,000 tpa Jharsuguda I aluminium smelter is progressing well and is expected to be fully operational by the first quarter of FY 2010, six months ahead of the original schedule. Work on the second 250,000 tpa phase is on schedule with phased commissioning expected to commence from June 2009 and full operations by end FY 2010.

Jharsuguda II Aluminium Smelter

The new 1.25 mtpa Jharsuguda II aluminium smelter project is progressing well with civil construction activities in progress in all major areas of the four pot lines and associated plants. All major packages have been ordered and the project is on schedule for phased commissioning from March 2010 and full operations by September 2012.

Balco Aluminium Smelter

Work on the new 325,000 tpa aluminium smelter at BALCO has commenced, long lead-time equipment ordered and construction commenced. Construction of the 1,200 MW captive power plant is in full swing, main plant foundation completed and equipment erection started. The first metal tapping from October 2010, as previously announced.

Lanjigarh Alumina Refinery

The first stream of the 1.4 mtpa alumina refinery at Lanjigarh is fully operational and produced 171,000 tonnes in Q4 FY 2009, close to its rated capacity. The refinery produced 586,000 tonnes of alumina in FY 2009. The second stream of the alumina refinery has also recently commenced operations. Currently, bauxite feed for this refinery is being sourced from BALCO, nearby bauxite



Case study

Balco Fuse Technology

Aluminium is produced through electrolysis process. In Balco, all the pots in the pot line are connected in a series and 320 KA current is passed through each pot using risers and shorted joints, to produce aluminium metal. To put pots online, insulation plates are inserted at the shorted joints of the riser to avoid any bypass of current to the next pot. So, to take any pot into line, the power of whole pot line was to be switched off to 0 KA for about 6 to 10 minutes which led to disturbance to operating pots, production losses and increased PFC (per-fluro carbon) emissions.

To tackle this operational issue, BALCO invented a fuse, with which 320 KA current could be bypassed to the next pot through the fuse, instead of the shorted joint for about

ten minutes. As the fuse operation depends on the self-generation of heat under conditions of excessive current by means of the fuse's own electrical resistance, it is designed to withstand ten minutes of the shortened riser current safely. During this period the pot was brought into the circuit by inserting insulation plates between the shorted joints and after ten minutes the fuse melts and the pot is put on power. So by using the fuse technology, pots could be powered on at 320 KA without reducing the power to 0 KA.

Balco has won the Ideas UK Technology Trophy, 2008 and Special prize for "Production Technics" in the European Aluminium Award for the "Balco Fuse Technology".

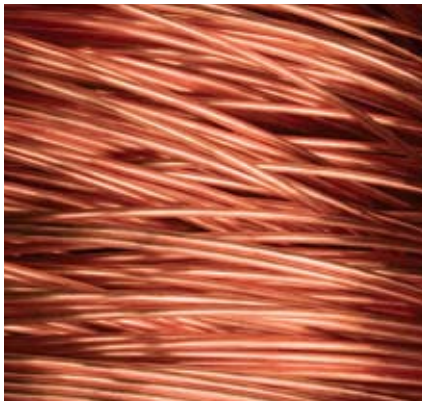
mines and from central India. We expect to start progressive feeding of the Lanjigarh alumina refinery with our own Niyamgiri bauxite by mid FY 2010, which will reduce unit operating costs.

Work on the 600,000 tpa debottlenecking project at our Lanjigarh alumina refinery is progressing on schedule for completion by March 2010, as earlier announced.

Ordering of critical items has commenced for the new 3 mtpa Lanjigarh alumina refinery expansion project and work is in full swing. The project is expected to be commissioned, in phases, by Mid 2011.

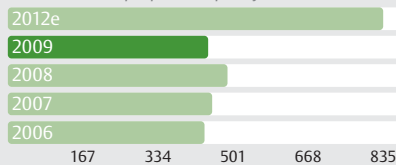
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Copper



Copper ktpa

Production and proposed capacity



Description

Vedanta is one of the largest copper producers in Asia and Africa, with mining and processing facilities located in Zambia, Australia and India.

506.8 million tonnes of Reserves and Resources of ore.

Key locations

Zambia

- Konkola Mine
- Nchanga Mine
- Tailing Leach Plant
- Nchanga smelter

Australia

- Tasmania – Mt Lyell Mine

India

- Tuticorin – Copper smelter & refinery
- Silvassa – Copper refinery



India/Australia

The performance of our Copper India/Australia business in FY 2009 is set out below.

(in US\$ millions, except as stated)	FY 2009	FY 2008	% Change
Production volumes (in kt)			
Mined metal content	27	28	(3.6)
Cathode	313	339	(7.7)
Rod	220	225	(2.2)
Average LME cash settlement prices (US\$ per tonne)	5,885	7,588	(22.4)
Average exchange rate (INR per US\$)	45.91	40.24	14.1
Unit conversion costs (US cents per lb)	3.1	1.8	72.2
Unit conversion costs (INR per tonne)	3,138	1,563	100.8
Realised TC-RCs (US cents per lb)	11.7	15.7	(25.5)
Revenue	2,537.9	3,118.8	(18.6)
EBITDA	293.7	327.2	(10.2)
EBITDA margin	11.5%	10.5%	-
Operating profit	242.9	284.9	(14.7)

Production Performance

Production of cathodes at our Copper-India business was 313,000 tonnes in FY 2009, down 7.7% compared with FY 2008 due to planned bi-annual maintenance in the first quarter of FY 2009 and an unplanned shut-down to repair damage in the cooling tower structure in Q3 FY 2009.

Mined metal production at our Australian mines was broadly in line at 27,000 tonnes in FY 2009. CMT supplies c.9% of our total concentrate requirements at the Indian copper smelting operations.

Unit Costs

Net cost of 3.1 US cents per lb (INR 3,138 per tonne) in FY 2009 was higher than 1.8 US cents/lb (INR 1,563 per tonne) in FY 2008, largely due to higher power costs in H1 FY 2009 and a decline in by-product realisations during H2 FY 2009.

Unit CoP at our Australian operations in FY 2009 was 140 US cents per lb down from 160 US cents per lb in FY 2008, primarily on account of lower TC-RC paid to the smelter and a reduction in royalty which is LME linked.

TC-RC

Realised TC-RCs for FY 2009 were 11.7 US cents per lb, down 25.5% compared with FY 2008. We were largely insulated from the volatility in the spot market as a large part of our total concentrate requirement was sourced through long-term contracts with mines as well as through captive supplies from our Australian mines. Based on long-term settlements at better terms and current market conditions, we expect TC-RCs to improve in FY 2010.

Sales

Sales in the domestic market was 198,000 tonnes in FY 2009, a substantial increase of 26.1% compared with FY 2008, giving us better contribution vis-à-vis exports. This increase was primarily due to growth in the domestic electrical and power sector. Exports correspondingly fell to 114,000 tonnes.

Financial Performance

EBITDA for FY 2009 was US\$293.7 million, down 10.2% compared with FY 2008 due to lower by-product realisations in H2 FY 2009 and weaker TC-RC realisations during the year. However, EBITDA from allied businesses including phosphoric acid and precious metals contributed US\$65 million to EBITDA, in line with FY 2008.

Case study



Sulphuric Acid Plant Cooling Tower Erection

Sulphuric Acid Plant cooling tower is one of the critical equipments of the plant, primarily used for supplying cooling water to Sulphuric acid plant for maintaining the acid temperatures and also in Gas cleaning Plant (GCP) heat exchangers.

In November 2008, four decks of the cooling tower collapsed and consequently brought the smelter to a halt. The initial time estimates to rebuild the cooling tower were 7-8 months. The cooling tower water flow is 11000 m³. None of the suppliers were willing to supply for the total circulation rate in a short period of time.

The copper maintenance team took initiative to look for a model based on the operating factors.

The packaged cooling towers of smaller capacities of FRP material were available in the market with maximum capacity of 625 cum/hr circulation rate. An idea of separating cooling water requirements to the plant was then devised, whereby each small capacity cooling towers could be located nearer to the equipments, as plant does not have place to keep series of smaller cooling towers. Also laying piping to greater distances was a difficult and time consuming option.

Based on this idea, three sets of packaged cooling towers were fixed - 4100 cum/hr for Gas cleaning plant and 1875 cum/hr for Sulphuric acid plant I and also 1850 cum/hr for Sulphuric acid plant II

The procurement of these cooling towers was done within two weeks. Structural foundation and pedestals for these mobile cooling towers were made prior to the erection activities. Also structural materials, valves, piping materials, inclusive of cable, cable trays and MCC panel structures were arranged concurrently. Erection of the Cooling towers, MCC panels, Cable erection and cable tray erection were planned accordingly and the entire activities of 180 tons of structural fabrication and 2 Km of pipe line laying and also separate tanks for plant I and II was fabricated and erected within 15 days. Within 10 hrs of shutdown, these mobile cooling towers in GCP area, SAP-1 and 2 were dovetailed and the entire plant was taken on line without any trouble.

With this arrangement, a major disaster has been averted and the production started immediately within four weeks of the incident as compared to 15 to 20 weeks required in the normal course. The cooling towers are working satisfactorily.

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Copper (continued)



Zambia

The performance of our Copper- Zambia business in FY 2009 is set out below.

(in US\$ millions, except as stated)	FY 2009	FY 2008	% change
Production volumes (in kt)			
Mined metal content	81	76	6.6
Cathode	133	150	(11.3)
Average LME cash settlement prices (US\$ per tonne)	5,585	7,588	(26.4)
Unit costs (US cents per lb)	258.3	191.5	34.9
Revenue	773.1	1,103.1	(29.9)
EBITDA	(70.8)	340.1	(120.8)
EBITDA margin	(9.2%)	30.8%	-
Operating (loss)/profit	(165.9)	250.6	(166.2)

Production Performance

Cathode production at our Copper-Zambia business was 133,000 tonnes in FY 2009 compared with 150,000 tonnes in FY 2008, lower by 11.3% primarily due to organic contamination in the tailings leach plant in the first quarter of FY 2009 and the gradual ramp down of the Nkana smelter in Q3 FY 2009 where operating costs are high, in order to facilitate feed to the new Nchanga smelter.

The new Nchanga smelter performed well in February and March 2009. Recovery of sulphur and cobalt in the new smelting process helped to significantly reduce net CoP. In April 2009, there was a leakage in the furnace leading to production disruption. Our technology provider and brick supplier have been engaged in assessing the root cause of the problem to provide a robust technical solution. The plant is expected to restart in the first week of May 2009.

Mining output is being increased and sustained in the open pits with pit optimisation and adequate plant to dewater/desilt the mines during the monsoon. External contracting of water removal for certain sections of the mine has played a vital role in the turnaround. Mined metal production in FY 2009 was 81,000 tonnes, up 6.6% compared with FY 2008 due to a series of measures including pre-stripping of open-pit mines, improved underground mine development and better plant availability/refurbishment of equipment. These measures provide increased confidence that we will achieve better production from our mines and consequently from our smelting facilities. We have also identified new areas at Chingola Open Pit A to be mined in FY 2010. Further, cobalt mining has started from the Nchanga Open Pit at Cut II. We are optimistic about further enhancing value from this cobalt stream.

Unit Costs

Unit CoP was 258.3 US cents per lb in FY 2009, up 33% compared with FY 2008. Costs in H1 FY 2009 were at a historical high on account of higher input costs, higher manpower costs, lower production and a strong Zambian kwacha.

At Konkola, measures including replacement of old compressed air lines and electrical lines have yielded significant improvements in mining operations. Our continued efforts to curtail costs, optimise assets, ramp down high cost operations, renegotiate all contracts for supplies, commodities and logistics and enhance recoveries of cobalt and sulphuric acid, were helped by cost deflation in major inputs. All these steps were further supported by the depreciation of the Zambian kwacha against the US dollar in H2 FY 2009. As part of our measures to reduce costs, we have shut down the high cost Nkana smelter and have also reduced manpower at this operation by 2,000 people to date.

These initiatives helped us in achieving a significant reduction in unit CoP in H2 FY 2009 to 222.3 US cents per lb. We exited FY 2009 with substantially lower unit CoP of approximately 140.0 US cents per lb in March 2009.

Financial Performance

We incurred EBITDA losses of US\$70.8 million in FY 2009 compared with EBITDA profits of US\$340.1 million in FY 2008, primarily due to increased operating costs in FY 2009 (US\$69 million), a 26.4% drop in LME prices (US\$275 million), lower volumes (US\$48 million) and one time inventory write-downs (US\$79 million).

Exploration

We have rich deposits at our copper mines, with current reserves and resources of 470 million tonnes of ore at an average grade of 2.5%, equivalent to c.12 million tonnes of copper content. In line with our approach to ensure

Case study

long mine life in our operations, we plan to soon commence extensive exploration work at KCM and expect to add significant reserves and resources through brown field exploration.

Projects

The new Nchanga smelter is commissioned and is now ramping up. We expect the smelter to achieve its rated capacity by Q2 FY 2010. Abundant availability of copper concentrate within the proximity of our plants provides us with an opportunity to engage in custom smelting to supplement the production from our integrated operations.

Construction activity at the Konkola Deeps mine expansion project is progressing well. We achieved a major milestone in Q4 FY 2009 by sinking the production shaft to a depth of c.950 metres, supported by a satisfactory orientation between the two sub-shafts. We are on course for mid-shaft commissioning by mid FY 2010 by which additional hoisting capacity of about 3 mtpa of ore will become available with the use of one rock winder in one compartment of the shaft. Sinking of the Number 4 shaft to its final depth of 1,490 metres will continue through the other compartment. The remaining infrastructure, including the bottom crusher, loading station, deepening of Number 1 shaft, and the 1,390 metre level pump chamber will be completed by end CY2011.



Cobalt Alloy Production at KCM- Breaking New Grounds

As a standard practice, from the copper mining reserves, the copper concentrate is made and from that the copper metal is produced with other minerals being lost in the form of tailings / slag.

The ore at Zambia, besides being rich in copper also has cobalt in it. In a bid to drive change through innovation, KCM emerged with a new development in the metallurgical complex by recovering cobalt from the process molten slag in form of an alloy of copper, iron and cobalt. This is achieved through the adoption of a two stage electric slag-cleaning furnace system - the first of its kind. The cobalt in the concentrates is fixed in the slag from the flash furnace after smelting. The slag also contains an appreciable amount of copper. The primary slag-cleaning furnace utilizes carbothermic reduction using metallurgical coke as a reducing agent to recover copper only in the first electric furnace.

Cobalt is recovered in the second stage electric furnace (also called the Cobalt Recovery Furnace (CRF)), which handles slag from first slag-cleaning furnace. Apart from the molten slag, a bone dry concentrate feed mixture is injected to induce sulfur, which helps in the adjustment of the liquidus temperature. The metal droplets in the SCF slag and the reduction products settle through the slag layer and form the CRF metallic alloy. The highly reduced slag from the CRF is tapped from the slag tapping holes via launders into the granulation pond. The cobalt alloy design spec of 63% Cu, 23.6%Fe, 6.3%Co and the rest sulphur is tapped through launders directly for granulation. The cobalt alloy production at peak rate is expected to be 70tpd.

We expect to have a cobalt recovery of 37% and produce about 4.4 tonnes per day of cobalt in the form of cobalt copper alloy.

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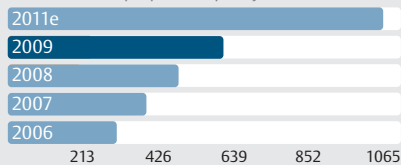
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Zinc – Lead



Zinc and Lead ktpa
Production and proposed capacity



Description

Vedanta is the world's second largest integrated Zinc-Lead producer. Zinc and Lead operations include various mines and smelting facilities in India.

272 million tonnes of Reserves and Resources of ore.

Key locations

India

Zinc and Lead Mines

Rampura-Agucha
Rajpura Dariba
Sindesar Khurd
Zawar

Smelters and Refinery

Chanderiya
– Zinc & Lead smelters
– Silver refinery
Debari – Zinc smelter
Vizag – Zinc smelter

The performance of our Zinc business in FY 2009 is set out in the table below.

(in US\$ millions, except as stated)	FY 2009	FY 2008	% change
Production volumes – Zinc (in kt)			
Mined metal content	651	551	18.1
Refined metal	552	426	29.6
Production volumes – Lead (in kt)			
Mined metal content	84	78	7.7
Refined metal	60	58	3.5
Production volumes – Saleable silver (in m. oz)	3.38	2.58	31.0
Sale of commercial power, including wind power (in million units)	297	112	165.2
Average LME zinc cash settlement prices (US\$ per tonne)	1,563	2,992	(47.8)
Average LME lead cash settlement prices (US\$ per tonne)	1,660	2,875	(42.3)
Average exchange rate (INR per US\$)	45.91	40.24	14.1
Unit costs			
Zinc (US\$ per tonne)	710	884	(19.7)
Zinc (INR per tonne)	32,621	35,590	(8.3)
Zinc excluding royalties (US\$ per tonne)	609	686	(11.2)
Zinc excluding royalties (INR per tonne)	27,973	27,625	1.3
Revenue	1209.1	1,941.4	(37.7)
EBITDA	605.4	1,380.1	(56.1)
EBITDA margin	50.1%	71.1%	–
Operating profit	548.3	1,333.0	(58.9)

Production Performance

Mined metal production for zinc and lead from all our mines was 735,000 tonnes in FY 2009, up 16.9% over FY 2008, primarily as a result of commissioning of the stream III concentrator at the Rampura Agucha mine.

We delivered record refined zinc metal production in FY 2009 of 552,000 tonnes, up 29.6% compared with FY 2008. Production was higher primarily on account of commissioning the new zinc smelter at Chanderiya in December 2007 and the 88 ktpa de-bottlenecking project. The production of lead during FY 2009 was 60,000 tonnes, up 3.5% compared with FY 2008.

Production of saleable silver in FY 2009 was our highest ever at 3.38 million troy ounces, up 31% compared with FY 2008.

Unit Costs

Unit costs of production in FY 2009 excluding royalties were lower at US\$609 per tonne (INR 27,973 per tonne) compared with US\$686 per

tonne (INR 27,625 per tonne) in FY 2008. Cost performance in Indian rupee terms during the year was impacted by higher input costs, benefit of increased volumes, volatile acid credits and higher coal cost used for captive power plant. The underlying operating performance showed an improving trend with exit CoP (excluding royalties) in March 2009 of US\$593 per tonne (INR 30,380 per tonne) despite lower by-product credits.

Sales

We sold 332,000 tonnes of zinc metal in the domestic markets during FY 2009, broadly in line with domestic sales in FY 2008. Zinc export sales were 221,000 tonnes in FY 2009, up 151.1% from 88,000 tonnes in FY 2008. In addition to refined zinc metal, we also sold 76,000 dry metric tonnes of surplus zinc concentrate and 56,000 dry metric tonnes of lead concentrate, in FY 2009.

Financial Performance

Despite a 26.4% increase in production volumes and stable operating costs, EBITDA in FY 2009 was US\$605.4 million, down 56% compared with FY 2008

EBITDA of US\$1,380.1 million, primarily due to the significant reduction in LME zinc and lead prices by 47.8% and 42.3%, respectively. Higher volumes contributed positively to EBITDA by c.US\$130 million whilst lower LME prices reduced EBITDA by c.US\$850 million.

Exploration

Ongoing exploration activities at HZL have yielded significant success with the gross addition of 46.3 million tonnes to reserves and resources prior to a depletion of 6.7 million tonnes in FY 2009. Contained zinc-lead metal has increased by 4.7 million tonnes, prior to a depletion of 0.7 million tonnes during the same period. Total reserves and resources at 31 March 2009 were 272.0 million tonnes containing 31.5 million tonnes of zinc-lead metal and 713.3 million ounces of silver. The reserves and resources position has been independently reviewed and certified as per the JORC standard.

In FY 2009, record annual drilling of 70,300 metres was completed. The success of our exploration efforts has been primarily at the Rampura Agucha and Sindesar Khurd mines. The success of exploration efforts during the year is signified by additions at the Rampura Agucha and Sindesar Khurd mines where we now have a reserve and resource base of 118.7 million tonnes (FY 2008: 107.3 million tonnes) and 56.6 million tonnes respectively (FY 2008: 37.1 million tonnes).

Projects

We successfully commissioned our 1.0 mtpa stream III concentrator at Rampura Agucha and captive power plant of 80 MW at Zawar during the year.

Construction activities at the 210,000 tpa zinc smelter and 100,000 tpa lead smelter at Rajpura Dariba is progressing well and on schedule for completion by mid 2010. Work at the mining projects at Rampura Agucha, Sindesar Khurd and Kayar are also progressing on schedule for progressive commissioning from mid 2010. At Sindesar Khurd the ramp portal is nearing completion and resources have been mobilised to achieve accelerated mine development.

In line with the Group's philosophy of being a fully self reliant producer of power, a 160 MW captive thermal power plant is also being built at Rajpura Dariba. The project is progressing well on schedule.

Case study



Bulk Concentrate

The conventional technology for flotation of lead-zinc ores is differential flotation to produce separate concentrates of lead and zinc. The separate concentrates are then fed to respective smelters of lead and zinc for recovery of metals. In this process, misplaced metals (Zinc in Lead concentrates and Lead in Zinc concentrates) are lost and conventionally not accounted for in recovery, either at mines or at smelters. These losses range between 2% to 10%, depending upon concentration and tonnages of different concentrates for different mines.

The Imperial Smelting Process (ISP) existing at CLZS, enjoys the advantages of being able to use 'Dirty' feed i.e. both lead and zinc in the feed to the furnace without affecting its performance. Historically, bulk concentrates (concentrates containing both lead and zinc produced by bulk flotation at mines) should be fed to the furnace giving advantages of correspondingly higher recovery at mines and without affecting performance of ISF.

Two underground mines – namely Rajpura Dariba (RDM) & Zawar Mines(ZM) – earlier produced separate (zinc and lead) concentrates. The recoveries of zinc, lead and silver were relatively lower from RDM. Bulk flotation was carried out after a lot of R&D and plant trials at both the mines and after modifying the flow sheets to suit the requirements of the smelter and significant better overall recoveries were achieved at both the mines for all the metals. Zawar now produces all its output in the form of bulk concentrate while RDM produces bulk concentrate for a portion of its output depending on the grade mix and requirement of the ISF smelter. The innovativeness of this project lies in the use of Zawar bulk concentrate to blend with RDM bulk concentrate to make it acceptable to the smelter. In this process, zinc, lead and silver recoveries have improved by 0.5%, 2% and 1% respectively in ZM and by 2.5%, 6% and 4% respectively in RDM. Besides helping in better management of mineral resources, substantial financial savings are generated through this effort.

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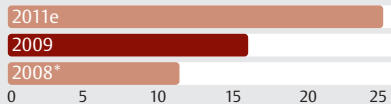
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Iron Ore



Iron ore mtpa

Production and proposed capacity



* Information for post acquisition period of 11 months through 31 March 2008

Description

Vedanta is the largest Iron ore producer-exporter in Asia, with mining and processing facilities at various locations in India.

239.8 million tonnes of Reserves and Resources of ore.

Key locations

India

Goa

Orissa

Karnataka

Iron ore

The performance of our Iron Ore business in FY 2009 is set out in the table below.

(in US\$ millions, except as stated)	FY 2009	FY 2008 ¹
Production volumes (kt)		
Saleable ore	15,986	11,469
Pig iron	217	248
Sales volumes (kt)		
Iron ore	15,103	11,287
Pig iron	224	244
Revenue	1,070.4	888.9
EBITDA	557.1	585.6
EBITDA Margin	52.1%	65.9%
Operating Profit	348.0	420.0

¹ Information is presented for the post acquisition period of 11 months through 31 March 2008 and is not directly comparable with the current period.

Sesa Goa has set itself an ambitious growth vision and has taken several initiatives towards implementing this plan through an accelerated debottlenecking programme, performance improvement measures and capability building with active support from our other Group companies.

Production Performance

Saleable iron ore produced in FY 2009 was 15.99 million tonnes, a record for Sesa Goa and an increase of 28.5% over full year production of 12.44 million tonnes in FY 2008, primarily attributable to a comprehensive improvement programme to increase the operational efficiencies.

Production of pig iron was 217,000 tonnes in FY 2009, lower by 19.9% compared with full year production in FY 2008. The fall in production was primarily on account of low offtake and consequently only one line was in operation in Q3 FY 2009.

Sales

The iron ore market achieved record highs in the early part of the year. There was a steep fall in demand in Q3 FY 2009 due to the subdued performance of the global steel industry, with no evidence of a sustained recovery.

Iron ore shipments during the full year FY 2009 were 15.10 million tonnes, consistent with the significantly higher production. Due to the impact of the seasonal monsoon in the Goa region, shipments of approximately 10.46 million tonnes were made in the second half of FY 2009, consistent with typical shipment patterns. During FY 2009, a majority of the production was sold in the spot market due to increased volumes in the year and lower offtake by long-term contract buyers.

We sell in global markets with exports to China, Japan, Pakistan and other Asian and European countries. Exports account for nearly 95% of total sales, with the remainder being sold in the domestic market primarily from Orissa. China accounts for nearly 80% of our total exports. The global market for iron ore is expected to remain in surplus in

Case study

the short- to medium-term, primarily due to steel mills being operated at reduced capacity. As a result of these market conditions, spot prices of iron ore are expected to remain soft in the short- to medium-term term while long-term benchmark price is expected to reduce significantly.

We sold 224,000 tonnes of pig iron in FY 2009, consistent with our production, primarily in the domestic market.

Financial Performance

Revenues in FY 2009 were US\$1,070.4 million with EBITDA of US\$557.1 million. Met coke and pig iron businesses contributed EBITDA of US\$67.1 million in FY 2009. Revenues were higher due to record sales volumes. EBITDA was lower on account of higher costs, lower realisation and hedging losses which more than offset the benefits of higher volumes.

Exploration

In line with the Group's focus on augmenting its resource base, 28,000 metres drilling was carried out at Sesa Goa. We had significant success and increased gross reserves and resources by 57.8 million tonnes, prior to a depletion of 15.8 million tonnes and reduction of 4.7 million tonnes on account of non-renewal of third party mining leases in FY 2009. Total reserves and resources at 31 March 2009 were 239.8 million tonnes.



Maximising transportation of ore

As a part of Business Excellence initiatives and capability building for higher and higher volumes, Sesa Team looked at maximizing transportation of ore from its Goa mines within the constraint of limited capacity of public roads.

It was realized that the existing routes of transportation need to be supplemented by new routes. Considering the time frame and difficulties for establishing a new route very quickly to achieve the higher volume of transportation, the Sesa team came out with an idea as to crossing of a small river on one side of one mine so as to utilize the road on other side of the river which was not having any iron ore traffic. In view of the time frame and the statutory approvals required for a normal bridge with pillars and spans, the team found out that a Bailey bridge which are fabricated at a different place and just erected wherever required,

very commonly used by the army, would be the right solution. Accordingly a supplier of such bridge was located and the bridge was erected within a short time frame of six months.

As a second initiative, where there was local restriction for night transport for a portion of one end of the route, the team decided to maximize the transport during day time by creating a transfer point in between from where the transportation for the balance route would be done for 24 hours a day.

The above two initiatives enhanced the capability of transportation from a particular mine by 3.0 million tons per annum.

During the year Sesa team took various such initiatives in Goa and Karnataka while aspiring to reach the stretched business goals and could achieve 22% increase in sales volume.

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Other Business



Commercial Energy

Work on the 2,400 MW (600 MW x 4) green field coal based independent thermal power plant at Jharsuguda, Orissa is progressing well. Design and detailed engineering is completed and most of the equipment for the first unit has been received on site. The boiler drums have been erected and construction of turbine generator decks is complete. The cooling tower and chimney construction to support the first unit are nearing completion. The project is on schedule progressive commissioning from Q4 2009.

In respect of our green energy initiative projects, we have commissioned entire 123.2 MW wind power plants and they are working satisfactorily.

Outlook

FY 2009 was a tumultuous year for the mining sector which witnessed a period of unprecedented buoyancy in commodity prices in the first half, followed by their sharp fall in the second half. The world witnessed several mine closures, production cutbacks and deferral of projects. Despite such negative market sentiments and a depressed outlook for demand, we remain focused on our basic objectives of achieving a least-cost position and developing low capital cost projects. Our focus, as in the past, has always been to continuously strengthen our competitive position through aggressive

cost management, excellent operational efficiencies without sacrificing the long-term growth potential of our business. We expect to deliver higher volumes in all our businesses in FY 2010 on the back of our expansions, ongoing debottlenecking initiatives and continuous improvement in our operational efficiencies. We expect the situation witnessed in the last six months of many high cost operations globally incurring cash losses to get corrected and also expect the market to stabilise in the near future.

We further expect that our intensified focus on cost control will yield results and that we will derive additional benefits from our ongoing programmes to reduce our operating costs. We also see incremental benefits accruing from higher commercial power sales from our operations at BALCO and MALCO.

We aim to complete our ongoing projects on or ahead of schedule and within budgets. A large part of our production is sold in India, where we see continuous growth in consumption in line with a positive GDP outlook. As is typical of all developing economies, the growth rate of metal consumption in India is expected to be ~1.5 times the GDP growth rate.

All these augur well for us and are confident of delivering a good performance in the coming year.



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