

Corporate analysis of bhp billiton management essay



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BHP Billiton is a global leader in the resources industry. Formed from a merger between BHP and Billiton, it brings together an exceptional mix of quality, low-cost resource assets, complemented by a strong management team determined to operate the assets in an efficient manner.

BHP Billiton commenced a feasibility study in 2002 into opening a nickel and cobalt mine and processing plant at the cost of A\$1.4 billion 35 km East of the Ravensthorpe. The project was approved in 2004 and construction commenced shortly afterward. The plant known as the Ravensthorpe Nickel Project was commissioned in late 2007 with first production occurring in October and the first 5,000 tonnes being produced by December 2007. The plant was officially opened in 2008, after massive cost blow outs and delays. Production was expected to total 50,000 tonnes of nickel per year.

In January 2009, BHP Billiton announced that it was suspending production at the Ravensthorpe nickel mine indefinitely, due to the reduction in world nickel prices caused by the global economic crisis. Nickel prices, having reached a high of US\$50,000 per tonne in May 2007, had fallen to under \$11,000 per tonne by the time of the mines closure.

Our report focuses on the strategic decisions which led BHP Billiton to invest in the Ravensthorpe nickel project. An analysis has been conducted on the mines operation starting from the business strategy adopted by BHP Billiton down to the operational decisions at the site level. We intend to predict scenarios which might have resulted in mines closure despite a strikingly detailed front loaded design.

Scope of the report

Our analysis is based entirely upon the information available on internet. The primary sources include BHP Billiton's annual communications, industry analysis reports from leading researchers, news paper and magazine articles.

The investigation focuses mainly on strategic decisions at different levels.

No attempt has been made to analyze the company's performance in other sectors of its business.

This report is taken up only as an academic project and no attempt has been made to judge the performance of any of the stakeholders involved in the project.

Chapter 1: Corporate analysis of BHP Billiton

Introduction

BHP Billiton Group (BHP Billiton) is a diversified natural resources group engaged in mineral exploration and production. The group's primary focus areas include oil and gas, aluminum, copper, nickel, iron ore, manganese, metallurgical coal, and energy coal, with additional exposures to uranium, gold, zinc, lead, silver, and diamonds. BHP Billiton comprises BHP Billiton Limited and BHP Billiton Plc. The group has a global presence with more than 100 operations in 25 countries. It is headquartered in Melbourne, Australia and employs about 41, 000 people.

BHP Billiton-History

BHP Billiton Group was formed in 2001 with the merger of Australian firm BHP and British firm Billiton.

BHP

BHP was founded in 1885. The company grew to become a global natural resources company, with a diversified commodity suite that included minerals, oil, gas, and steel. In 1899, BHP leased an iron ore mine at Iron Knob in South Australia. The company forayed into steel making in 1915, commissioning its first steelworks at Newcastle, New South Wales. After World War I, BHP continued to diversify, forming a shipping fleet, as well as acquiring coal mines and additional reserves of iron ore and limestone. Furthermore, BHP acquired companies that manufactured finished steel products.

BHP expanded its steel production in 1935 by acquiring Australian Iron and Steel and its Port Kembla steelworks. A few years later, BHP established blast furnace and shipbuilding facilities at Whyalla, South Australia.

In 1967, BHP entered the petroleum industry with a major oil discovery in Bass Strait, off the southeastern coast of Australia. Through the 1970s and 1980s, BHP enhanced its offshore operations by acquiring Utah International, comprising coal mines in New Mexico and Queensland, as well as discovering copper in Chile.

In the 1990s, BHP acquired several companies, opened new mines, commenced new petroleum production, and strengthened its steel operations.

Billiton

Billiton was formed in 1860. It became a global mining company with a portfolio of mining and metals assets. In 1860, the company acquired the concession to a tin-rich island in the Indonesian archipelago near Sumatra. The island was called Billiton (now Belitung).

Billiton initially ventured into tin and lead smelting in The Netherlands, followed by bauxite mining in Indonesia and Suriname, in the 1940s.

In 1970, the Royal Dutch/Shell group of companies acquired Billiton. Throughout the 1990s and beyond, Billiton experienced considerable growth. In 1997, Billiton became a constituent of the FTSE 100 Index.

BHP and Billiton merged to form BHP Billiton Group (BHP Billiton) in 2001. In the same year, the group announced its intentions to establish an energy business to complement its mining activities. In 2002, BHP Steel commenced trading on the Australian Stock Exchange as a separate listed company after the de-merger was approved by shareholders and the courts.

Business Description

BHP Billiton operates nine customer sector groups (CSGs) aligned with the commodities which it extracts and markets. They are base metals, petroleum, iron ore, energy coal, aluminum, stainless steel materials, metallurgical coal, manganese, and diamonds and specialty products.

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Figure 1: Customer Sector Groups(CSG) at BHP Billiton Ltd

The base metal's CSG produces copper, silver, lead, uranium, and zinc. It provides copper, lead, and zinc concentrates to smelters worldwide.

The petroleum CSG comprises oil and natural gas exploration, production, and development in Australia, the US, Algeria, Trinidad and Tobago, Pakistan, and the Gulf of Mexico. It also conducts an international exploration and development program as well as markets crude oil, condensate, liquefied petroleum gases, natural gas, and liquefied natural gas to customers globally.

The iron ore CSG is one of the leading suppliers of seaborne iron ore globally. Its operations comprise Western Australia Iron Ore (WAIO) business and a 50% interest in the Samarco joint venture with Vale in Brazil.

BHP Billiton's energy coal CSG produces, markets, and exports thermal coal (steaming coal). The group operates three sets of assets: a group of mines and associated infrastructure collectively known as BHP Billiton Energy Coal South Africa (BECSA), New Mexico Coal operations in the US, and Hunter Valley Energy Coal operations in New South Wales, Australia.

The aluminum CSG is engaged in the production of aluminum, bauxite, and alumina. It has four aluminum smelters in South Africa, Mozambique, and Brazil; and three alumina refineries and three bauxite mining operations in Australia, Suriname, and Brazil. BHP Billiton is one of the largest producers of primary aluminum.

The stainless steel materials CSG supplies a variety of nickel products to the global steel industry. In addition, it also supplies nickel and cobalt to other markets including the specialty alloy, foundry, chemicals, and refractory material industries. The segment produces nickel and cobalt at Yabulu and Nickle West in Australia and Cerro Matoso in Columbia.

BHP Billiton's manganese operations produce a combination of ores, alloys, and metal from sites in South Africa and Australia. The group owns and manages all of its manganese mining assets and alloy plants through 60-40 joint ventures with an Anglo-American joint venture known as Samancor Manganese.

The diamonds and specialty products CSG comprises the businesses of diamonds and titanium minerals, and the exploration and development of a potash business. The group's Ekati Diamond Mine, of which it owns 80%, is located in the Canadian Northwest Territories and produces over 3million carats of rough diamonds annually.

SWOT Analysis

Strengths

Weaknesses

Strong market position

Diversified revenue stream

Centralized marketing activities

Safety concerns at Western Australia Iron Ore (WAIO) operations

Opportunities

Threats

Expansion of potash operations in Canada

Consolidation of Western Australian iron ore assets of BHP Billiton and Rio

Tinto

Proposed joint venture with PT Adaro Energy for Indonesian coal project

Reduction in demand from China

Environmental issues

Intense competition

Strengths

Strong market position

BHP Billiton enjoys a dominant position in the metal and mining industry. The group has a global presence with more than 100 operations in 25 countries.

The group's CSG organization structure has enabled the group to own and operate significantly profitable mineral resources across the globe.

BHP Billiton's strong presence and leadership position in a number of significant markets gives the group a substantial competitive advantage and also increases its cross selling opportunities.

Diversified revenue stream

BHP Billiton's revenue stream is diversified in terms of business lines and geographies. The group generates revenues through nine business segments. In FY2009, the iron ore segment accounted for 20.5% of the total revenues, metallurgical coal accounted for 16.6%, petroleum 14.6%, base metals 14.6%, and energy coal 13.4%. Aluminium accounted for 8.5% of the total revenues in FY2009, manganese accounted for 5.2%, and stainless steel materials 4.8%. The diamonds and specialty products segment accounted for the remaining 1.8% of the revenues in FY2009.

The group's diversified business lines give it competitive advantage over its competitors by insulating the group against adverse market conditions in any one of the metal markets. Further, its worldwide presence reduces exposure to economic conditions or political stability in any single country or region.

Centralized marketing activities

The customer-centric marketing operations of BHP Billiton are centralized in Singapore, The Hague and Antwerp. The Singapore office focuses on the Asian energy market, base metals, stainless steel materials and carbon steelmaking raw materials. The Hague office focuses on aluminium, petroleum, energy marketing and freight, while the Antwerp office serves diamonds customers globally. These three marketing offices incorporate all the functions encompassing product marketing and distribution from the point of production to final customer delivery. In addition, specialized marketers are located in 20 regional offices worldwide.

The group's centralized marketing operations increase the efficiency of the marketing activities with each office managing end to end marketing activities of certain CSGs. Therefore, efficient logistics capability and expertise in trading and transaction structuring through centralized marketing activities enhance the group's product offerings.

Weaknesses

Safety concerns at Western Australia Iron Ore (WAIO) operations

The group has been facing safety issues at its Western Australia Iron Ore (WAIO) operations. There were five fatalities at the group's operations in the Pilbara from July 2008 to April 2009. Addressing the concerns BHP Billiton Iron Ore announced some actions that include reducing site access, improving contractor management, enhancing existing strategies to prevent excess working hours, moving rail operations from the Mine Safety and Inspection Act to the Rail Safety Act, enhancing traffic management standards and suspending all non-essential work outside daylight hours. It had also ordered an extensive independent expert investigation of safety systems at all WAIO's operations. Such incidents could negatively impact the group's reputation or license to operate.

Opportunities

Expansion of potash operations in Canada

Building a strong potash resource position is one of the key strategies of BHP Billiton. The group has been pursuing opportunities to acquire operations that are a strategic fit with its potash operations in Canada and are aligned

with its strategy of developing Tier 1, long life, low-cost, expandable assets. The rising demand for fertilizers coupled with the capital-intensive nature of greenfield potash developments makes potash a viable addition to the group's portfolio.

Consolidation of Western Australian iron ore (WAIO) assets of BHP Billiton and Rio Tinto

BHP Billiton and Rio Tinto signed a non-binding agreement to establish a production joint venture covering the entirety of both companies' Western Australian iron ore (WAIO) assets, in June 2009. The joint venture would combine adjacent mines into single operations and reduce costs through shorter rail hauls and more efficient allocations of port capacity. In addition, it will blend opportunities which will maximize product recovery and provide further operating efficiencies. It will also optimize future growth opportunities through the development of consolidated, larger and more capital efficient expansion projects. These will result in substantial synergies for both the groups. The net present value of these unique production and development synergies is expected to be in excess of \$10 billion.

Proposed joint venture with PT Adaro Energy for Indonesian coal project

BHP Billiton entered into binding agreements to create a new joint venture for its Indonesian Coal Project (ICP) with a subsidiary of PT Adaro Energy TBK (Adaro), in March 2010. Adaro will acquire a 25% interest in the ICP joint venture. BHP Billiton holds the remaining 75%. The ICP covers seven Coal Contracts of Work located in East and Central Kalimantan in Indonesia. Adaro is Indonesia's second largest thermal coal producer and has operations near

the ICP. Through this joint venture, the group can leverage the expertise of a strong local player for the successful development of the metallurgical coal interests in Indonesia.

Threats

Reduction in demand from China

The global commodity market is driven by Chinese demand and a slowdown in the Chinese economy could adversely affect the prices of commodities.

China is a significant consumer of commodities like iron ore and copper.

China's demand for these commodities has been driving global materials demand over the past decade. Though the increase in commodity demand is a significant business opportunity to the group, BHP Billiton's exposure to China's economic fortunes and economic policies has increased. China contributed 19.7% (\$9.9 billion) to the group's total revenues in FY2009.

Environmental issues

BHP Billiton is one of the major producers of energy-related products such as energy coal, oil, gas, liquefied natural gas, and uranium. Energy is also a significant input in the group's mining and processing operations. The carbon dioxide (CO₂) emissions from fossil fuel-based energy consumption contribute to global warming, greenhouse effects, and climate change. Many governments have introduced regulatory changes to address the impacts of climate change. BHP Billiton's petroleum assets in the UK are currently subject to the EU ETS. To address climate change, the Australian Government has announced the introduction of a national emissions trading scheme by 2010 and a mandatory renewable energy target of 20% by the

year 2020. In other regions, the current and emerging climate change regulation could affect energy prices, and demand and margins for carbon intensive products. The compliance costs and in some cases remedial costs could increase the group's operational costs which in turn could affect its operating margins. Consequently, these regulatory mechanisms could adversely impact the cost, production and financial performance of the group's operations.

Intense competition

BHP Billiton faces intense competition in the metals and mining industry. The metals and mining industry tends towards concentration. Within each segment, large multinational companies dominate. Moreover, this is a cyclical industry, which suggests that the current high growth rate is unlikely to be sustained. Industry margins are susceptible to changes in raw material prices, with iron ore prices expected to rise in the next few years, and the industry is also vulnerable to rises in the price of energy, one of its main costs. The group faces competition from Newmont Mining, a US based gold producer and Xstrata, a UK-based natural resources company with presence in coal, copper, zinc, alloys, and other businesses. The group also faces competition from UK-based ThyssenKrupp. Intense competition in the industry could lead to loss of market share and put pressure on the group's margins.

Chapter 2: Prospective Analysis of Ravensthorpe Nickel mine

Ravensthorpe

Ravensthorpe Nickel mine is located 35 Km from the town of Ravensthorpe. The mine is a combination of three ore bodies located close to the surface in the form of limonite and saprolite deposits of Nickel and Cobalt. The three ore bodies have a proven reserve of 125. 3Mt at 0. 73% nickel and 0. 032% cobalt, and a probable reserve 137. 9Mt at 0. 57% nickel and 0. 026% cobalt, giving a total of 263. 3Mt at 0. 65% Ni and 0. 029% Co. The reserves ensured a project life of 21 years[1].

BHP Billiton commenced a feasibility study in 2002 into opening a nickel and cobalt mine and processing plant. The project was approved in 2004 and construction commenced shortly afterward. The project involved open-pit mining from three nickel deposits, and a hydrometallurgical process plant to produce up to 50, 000t of contained nickel and 1, 400t of contained cobalt per annum in a mixed hydroxide intermediate product (MHP) for further processing at BHP Billiton's Yabulu Nickel Refinery in Queensland[1]. The plant known as the Ravensthorpe Nickel Project was commissioned in late 2007 with first production occurring in October and the first 5000 tonnes being produced by December 2007.

What made Ravensthorpe Nickel Project particularly attractive?

Market Price of Nickel

Figure 1 shows the Nickel price distribution over a 4 year period from 2000 to 2004. As seen, the price of Nickel showed a steady upward trend over the <https://assignbuster.com/corporate-analysis-of-bhp-billiton-management-essay/>

4 year period. With then metals market still in boom coupled with the heavy demand from China, the Nickel price would have been a major driver for BHP Billiton to move ahead with the project at Ravensthorpe. Nickel

Price_2000to2004. jpg

—————1. <http://www.mining-technology.com/projects/bhp-ravensthorpe/> accessed on 20-5-2010

Yabulu Refinery at Townville, Queensland

QNI Yabulu Refinery is located 25 kilometres northwest of Townsville. The ore is shipped to the Port of Townsville where QNI has its own materials handling facility, and then transported by rail to Yabulu Refinery. Yabulu has an annual processing capacity of around 3.6 million wet tonnes of lateritic ore. Its annual production in 2003 was 31,200 tonnes of nickel and 1900 tonnes of cobalt. The refinery is one of the largest nickel/cobalt processing plants in the world and a leader in nickel hydrometallurgy. Yabulu Refinery carries-out two major functions – ore processing and ore refining to produce products for sale in the global market [1].

Chinese growth story

Needless to say that Chinese growth has been driving most of the World's demand markets. Steel being a primary component of construction, China's thrust for Steel has been essentially insatiable over the past decade. Chart 1 below shows the Steel supplier's distribution of China. As seen, 90% of the imports come from Asia. Nickel forms an important component of stainless

steel manufacturing and the location of Ravensthorpe and Yabulu refineries provided a strategic advantage to BHP Billiton.

Distribution of chinese stainless steel suppliers. jpg

Chart : China's Steel supplier distribution

1. ' The Ravensthorpe Nickel Project and Yabulu refinery expansion'

Overview 2004, BHP Billiton.

PESTEL Framework Analysis of Ravensthorpe – BHP Billiton Ltd

Political

Support from Government of Western Australia

Economic

Market price of Nickel

Cost price of production of Nickel from Ravensthorpe

Available cost of capital for BHP Billiton

Profitability from the mine over a long term

Social

Establishment of infrastructure for the town of Ravensthorpe to attract skilled staff

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Maintaining good relations with the local communities

Technological

Combination of Pressure acid leach and atmospheric leach extraction techniques to optimize Nickel extraction

Environmental

NA

Legal

NA

A PESTEL analysis is used to analyze the macro environment of a firm. Factors contributing for Ravensthorpe's success have been tabulated in the table 1. As seen, the economic and social factors form the key drivers for BHP Billiton. The firm is focused to gain a significant market share in Nickel business and the strategic advantage of Ravensthorpe acts as a silver lining for this market. Though the Pressure leach and atmospheric leach have been tried and tested in Zinc industry, the application of that process in Ravensthorpe will provide BHP Billiton with a strategic advantage to cut down on Yabulu's processing costs.

PESTEL analysis has revealed that economy of production and strategic location of Ravensthorpe form key drivers for BHP Billiton in Nickel industry and will help the firm focus on attaining its market share in Nickel industry.

5 force analysis

Michael's 5 force analysis is a very powerful tool which helps in analysing the environment of an industry. It depicts the levels of competition, attractiveness of the industry and also details pertaining to suppliers, buyer and substitutes.

Analysing a competitive environment is a systematic examination of all the levels of the environment:

Figure : 5 Forces of a Competitive Environment

Threat of competition

Competition is very high in the Nickel industry as there is very low product differentiation among the various rivals. The focus of major companies has been to be competitive on the basis of their unit price and the profits they make, because of the fact that only the company that can be cheapest in the market place can survive. BHP Billiton over the years has developed a successful reputation which gives it a clear edge over the others.

The chart below gives an idea about the competitors in the market. The chart or graph is scaled based on the amount of nickel extracted. It is also clear that the top 5 organisations produce 70% of world nickel production.

By considering a broader scenario it is possible to analyse the companies in terms of the strategic space occupies in the global market. The more crowded a spot becomes the competition becomes cut throat.

NORILSK

VALE INCO

XSTRATA

BHP BILLITON

JINCHUAN

COST

LOW

LOW

HIGH

HIGH

Performance

CUSTOMER BARGAINING POWER

Information is widely available to the customers and thus has made the customers quite powerful and in the end, the customer is the only person who puts money into the supply chain. In today's world it is very hard to find an entity called loyal customer as the customers frequently shift loyalty based on circumstances making life harder for companies. Customers normally refers to the global demand for nickel. If the demand is high then the profitability would be high or else vice versa. As a result it leads to :

Lack of differentiation in the market

Cut throat competition

Low switching costs

Supplier Bargaining Power

In the nickel industry, the companies have their own nickel mines. The outputs are processed to produce the respective nickel products as a result of which the supply chain reduces the unit cost and culminates the supplier's bargaining power. Supplier here refers to the supply of raw materials for the production of nickel products.

Threat of substitution:

In most cases, substitutes for nickel would result in increased cost or a tradeoff in performance of the product. Aluminium, coated steels, plain chromium steels, and plastics are some of the substitutes which can replace nickel in some places but not effectively. Nickel-free specialty steels are used instead of stainless steel in some cases but have proven to be expensive. As long as there is high demand for stainless steel there would be demand for nickel as it is a major constituent. As a result of this, the threat of substitution is low.

THREAT OF NEW ENTRANTS

For maintaining the profitability, a company needs to develop economies of scale. Increased competition makes it difficult for new entrants to achieve the levels of economies of scale for sustainable and viable operation in a market. High capital required for the setting up of the industry also prevents investment. Thereby resulting in destructive rivalry among the competitors.

Infrastructure setup cost- High

Rapid change in technology

High entry barriers.

The following chart depicts the results of the 5 force analysis:

Chapter 3: What went wrong at Ravensthorpe?

Methodology of analysis

An analysis of the company reports over the last 3 years of the mine's establishment will be reviewed and excerpts from the same will be used to come up with the reason for closure of the mine.