

Vale S.A.  
Form 6-K  
February 25, 2011

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**United States  
Securities and Exchange Commission  
Washington, D.C. 20549  
FORM 6-K  
Report of Foreign Private Issuer  
Pursuant to Rule 13a-16 or 15d-16  
of the  
Securities Exchange Act of 1934  
For the month of  
February 2011  
Vale S.A.**

Avenida Graça Aranha, No. 26  
20030-900 Rio de Janeiro, RJ, Brazil  
(Address of principal executive office)

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.)

(Check One) Form 20-F  Form 40-F

(Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1))

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(Check One) Yes  No

(Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.)

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(If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b). 82- .)

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**Table of Contents***Production Report***Vale 2010 Production Report****A YEAR OF STRONG RECOVERY**

Rio de Janeiro, February 24, 2011 – Vale S.A. (Vale) operations had an outstanding performance in 2010. After facing the challenges stemming from the global recession of 2008/2009, one of the deepest in modern economic history, there was a strong recovery of the output of most of our products.

The production of iron ore of 308 Mt<sup>1</sup> in 2010 achieved an all-time high figure. It was 29.4% above 2009 and 1.5% higher than the previous record level of 303 Mt attained in 2007, a year of fast global demand growth and full capacity operation. Carajás, which has the best iron ore deposits in the world, produced 101 Mt in this year, establishing a new record mark. At the same time, pellet production was 49 Mt, another all-time figure, surpassing the previous record of 45 Mt of 2007. In addition, new records were reached in the production of bauxite, at 14 Mt, and coal, 6.9 Mt.

The bulk of our Canadian nickel operations, encompassing the Sudbury and Voisey Bay sites, were negatively affected by a long strike, which started in 3Q09. Despite the labor interruption, we managed to keep the operations running, albeit at low levels of capacity utilization. With the end of the strike in Sudbury, the output of refined nickel began to increase in 3Q10 and in the last quarter of the year climbed to an annualized rate of 260,000 metric tons, an almost normal level of activity, even higher than the production number for 2007, of 248,000 metric tons.

The move towards normalization of our base metals production and its minor and precious metals by-products is taking place against a backdrop of high and rising prices, contributing to a significant enhancement of our financial performance.

In the first weeks of this year there were heavy rains and flooding in some parts of Brazil – where we have 100% of our iron ore operations – and in the state of Queensland, Australia – where our central Australian office, in Brisbane, and some of our coal mines are located. Although the rainfall was far heavier than the seasonal standard, the preemptive actions taken by our bulk materials operations were able to minimize output losses.

In the case of iron ore, so far losses have been minimal, estimated to reach only 600,000 metric tons (200,000 in the Southern System and 400,000 in the Southeastern System), which are in accordance with the seasonality pattern for the first quarter of each year and represent only a minimal portion of the total production target for 2011, 311 Mt<sup>2</sup>, thus being easily recoverable over the year. On the other hand, the estimated losses for our coal production in Queensland, at 500,000 metric tons, are relevant given the still small scale of Vale's Australian operations.

Given the strong global demand for minerals and metals and the positive expectations for the near term, the excellence of our current operations and the upcoming capacity additions from soon to be delivered new projects, as well as those which are already being commissioned and ramped up, we expect the continuation of the outstanding operational performance and a significant contribution to shareholder value creation.

**Annual production**

| <b>000 metric tons</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> |
|------------------------|-------------|-------------|-------------|
| Iron ore <sup>a</sup>  | 301,696     | 237,953     | 307,795     |
| Pellets <sup>a</sup>   | 44,763      | 23,856      | 48,993      |
| Coal                   | 4,094       | 5,420       | 6,893       |
| Nickel                 | 275         | 187         | 179         |
| Copper                 | 312         | 198         | 207         |
| Bauxite                | 11,628      | 12,461      | 14,332      |
| Alumina                | 3,431       | 5,910       | 5,805       |
| Aluminum               | 542         | 459         | 447         |
| Potash                 | 607         | 717         | 662         |

<sup>a</sup> Including Samarco's attributable production.

<sup>1</sup> Mt = million metric tons

Kt = thousand metric tons

mt = metric tons

<sup>2</sup> Without Samarco's attributable production.

**Table of Contents***Production Report***BULK MATERIALS***Iron ore*

| <b>000 metric tons</b>              | <b>4Q09</b>   | <b>3Q10</b>   | <b>4Q10</b>   | <b>2009</b>    | <b>2010</b>    | <b>%<br/>Change<br/>4Q10/3Q10</b> | <b>%<br/>Change<br/>4Q10/4Q09</b> | <b>%<br/>Change<br/>2010/2009</b> |
|-------------------------------------|---------------|---------------|---------------|----------------|----------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>IRON ORE</b>                     | <b>63,443</b> | <b>82,614</b> | <b>80,262</b> | <b>237,953</b> | <b>307,795</b> | <b>-2.8%</b>                      | <b>26.5%</b>                      | <b>29.4%</b>                      |
| Southeastern System                 | 24,554        | 31,530        | 30,028        | 88,503         | 116,913        | -4.8%                             | 22.3%                             | 32.1%                             |
| Itabira                             | 8,009         | 10,621        | 10,036        | 31,136         | 38,704         | -5.5%                             | 25.3%                             | 24.3%                             |
| Mariana                             | 7,921         | 9,697         | 8,933         | 28,922         | 36,635         | -7.9%                             | 12.8%                             | 26.7%                             |
| Minas Centrais<br>Midwestern System | 8,624         | 11,212        | 11,058        | 28,444         | 41,574         | -1.4%                             | 28.2%                             | 46.2%                             |
| Corumbá                             | 683           | 1,088         | 1,268         | 956            | 4,208          | 16.5%                             | 85.6%                             | 340.2%                            |
| Urucum                              | 423           | 749           | 876           | 423            | 2,829          | 16.9%                             | 107.0%                            | 568.7%                            |
| Southern System                     | 260           | 339           | 392           | 533            | 1,379          | 15.5%                             | 50.8%                             | 158.8%                            |
| Minas Itabiritos                    | 14,599        | 20,258        | 18,214        | 55,242         | 74,703         | -10.1%                            | 24.8%                             | 35.2%                             |
| Vargem Grande                       | 5,241         | 8,275         | 7,470         | 18,124         | 30,050         | -9.7%                             | 42.5%                             | 65.8%                             |
| Paraopeba                           | 5,234         | 5,938         | 5,127         | 20,578         | 22,065         | -13.7%                            | -2.0%                             | 7.2%                              |
| Northern System                     | 4,124         | 6,044         | 5,617         | 16,539         | 22,587         | -7.1%                             | 36.2%                             | 36.6%                             |
| Carajás                             | 20,940        | 26,997        | 28,007        | 84,638         | 101,171        | 3.7%                              | 33.7%                             | 19.5%                             |
| Samarco <sup>1</sup>                | 20,940        | 26,997        | 28,007        | 84,638         | 101,171        | 3.7%                              | 33.7%                             | 19.5%                             |
|                                     | 2,667         | 2,741         | 2,746         | 8,614          | 10,800         | 0.2%                              | 3.0%                              | 25.4%                             |

<sup>1</sup> Vale's attributable production capacity of 50%.

Vale's iron ore production reached a new record in 2010, namely 307.8 Mt, with a year-over-year increase of 29.4%, thus surpassing the 2007 record of 303.2 Mt.

Production was 80.3 Mt in 4Q10, 2.8% below 3Q10, which in light of seasonality is a very slight decrease (4Q of each year tends to have a lower production than 3Q due to the beginning of the rainy season in the last months of the year, while the third quarter is the seasonally strongest quarter of the year for iron ore production).

Following its recovery in 3Q10, iron ore production in Carajás reached 28 Mt in 4Q10, expanding by 3.7% on a quarter-on-quarter basis and 33.7% year-on-year. Given its outstanding performance in the second half of the year, the 2010 output level of 101.2 Mt surpassed the previous record for Carajás, achieved in 2008, at 96.5 Mt.

The Southeastern System, which encompasses the Itabira, Mariana and Minas Centrais mining sites, reached a production of 30.0 Mt, decreasing 4.8% over 3Q10 due to seasonal factors and rising 22.3% over 4Q09.

The Southern System produced 18.2 Mt in 4Q10 against 20.2Mt in 3Q10, but increased 24.8% on a year-on-year basis.

Our iron ore mines, Urucum and Corumbá, located in state of Mato Grosso do Sul, Brazil, near the border with Bolivia and Paraguay, were aggregated under the newly created Midwestern System. It is the smallest of our Systems, with a production of 1.3 Mt in 4Q10 and a quarter-on-quarter increase of 16.5% and 85.6% year-on-year.

**Table of Contents***Production Report**Pellets*

| <b>000 metric tons</b>   | <b>4Q09</b>  | <b>3Q10</b>   | <b>4Q10</b>   | <b>2009</b>   | <b>2010</b>   | <b>%<br/>Change<br/>4Q10/3Q10</b> | <b>%<br/>Change<br/>4Q10/4Q09</b> | <b>%<br/>Change<br/>2010/2009</b> |
|--------------------------|--------------|---------------|---------------|---------------|---------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>PELLETS</b>           | <b>8,750</b> | <b>13,638</b> | <b>12,210</b> | <b>23,856</b> | <b>48,993</b> | <b>-10.5%</b>                     | <b>39.5%</b>                      | <b>105.4%</b>                     |
| Tubarão I and II         | 783          | 1,434         | 1,189         | 3,942         | 5,435         | -17.1%                            | 51.9%                             | 37.9%                             |
| Fábrica                  | 0            | 1,058         | 1,016         | 235           | 3,809         | -4.0%                             | n.m.                              | 1521.6%                           |
| São Luís                 | 0            | 1,656         | 1,154         | 3             | 4,545         | -30.3%                            | n.m.                              | 177004.6%                         |
| Vargem Grande            | 1,125        | 1,425         | 1,061         | 2,159         | 5,174         | -25.5%                            | -5.7%                             | 139.6%                            |
| Nibrasco                 | 2,150        | 2,395         | 2,493         | 5,791         | 8,958         | 4.1%                              | 16.0%                             | 54.7%                             |
| Kobrasco                 | 764          | 1,163         | 1,201         | 1,653         | 4,748         | 3.3%                              | 57.2%                             | 187.3%                            |
| Hispanobras <sup>1</sup> | 452          | 560           | 493           | 577           | 1,948         | -11.9%                            | 9.1%                              | 237.7%                            |
| Itabrasco                | 815          | 1,049         | 769           | 1,471         | 3,621         | -26.7%                            | -5.7%                             | 146.1%                            |
| Samarco <sup>2</sup>     | 2,662        | 2,897         | 2,833         | 8,025         | 10,754        | -2.2%                             | 6.5%                              | 34.0%                             |

<sup>1</sup> Vale's attributable production capacity of 50.89%.

<sup>2</sup> Vale's attributable production capacity of 50%.

In 4Q10, pellet production was 12.2 Mt, 10.5% lower than the previous quarter but 39.5% higher than 4Q09. The total volume produced in 2010 reached 49 Mt – a new all-time high, 9.3% higher than the 44.8 Mt record achieved in 2007. There were some scheduled maintenance stoppages in 4Q10, which affected negatively output performance. The plants were under maintenance in October, São Luis in November, and Tubarão I and II in December while some Hispanobras equipment was under maintenance during November.

Vargem Grande also had some operational issues, arising from the supply and quality of feed received.

The three pellet plants of the 50%-owned Samarco JV, which have a nominal capacity of 21.0 Mtpy, were operating at full capacity. Our attributable production was 2,833 Mt in 4Q10, 2.2% lower than 3Q10.

The Oman operations, in the industrial site of Sohar, Oman, are coming on stream. It has two pellets plants, each with a capacity to produce 4.5 Mtpy, thus adding 9.0 Mtpy to our production capacity. The two plants will produce direct reduction pellets.

Oman's plant 1 is under commissioning and furnace heating, and is expected to start up production in March. Plant 2 is being assembled and is expected to reach the ramp up stage by the end of the first half of this year.

**Table of Contents***Production Report**Manganese ore and ferroalloys*

| <b>000 metric tons</b> | <b>4Q09</b> | <b>3Q10</b> | <b>4Q10</b> | <b>2009</b>  | <b>2010</b>  | <b>%<br/>Change<br/>4Q10/3Q10</b> | <b>%<br/>Change<br/>4Q10/4Q09</b> | <b>%<br/>Change<br/>2010/2009</b> |
|------------------------|-------------|-------------|-------------|--------------|--------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>MANGANESE</b>       |             |             |             |              |              |                                   |                                   |                                   |
| <b>ORE</b>             | <b>545</b>  | <b>472</b>  | <b>477</b>  | <b>1,657</b> | <b>1,841</b> | <b>1.0%</b>                       | <b>-12.5%</b>                     | <b>11.1%</b>                      |
| Azul                   | 513         | 372         | 391         | 1,382        | 1,550        | 5.1%                              | -23.8%                            | 12.1%                             |
| Urucum                 | 32          | 55          | 41          | 169          | 184          | -25.0%                            | 27.2%                             | 9.0%                              |
| Other mines            | 0           | 46          | 46          | 105          | 106          | -0.4%                             | n.m.                              | 0.8%                              |
| <b>FERROALLOYS</b>     |             |             |             |              |              |                                   |                                   |                                   |
| <b>Brazil</b>          | <b>34</b>   | <b>50</b>   | <b>55</b>   | <b>99</b>    | <b>207</b>   | <b>9.0%</b>                       | <b>62.3%</b>                      | <b>109.2%</b>                     |
| Dunkerque              | 35          | 35          | 36          | 45           | 138          | 1.1%                              | 2.6%                              | 209.5%                            |
| Mo I Rana              | 19          | 26          | 26          | 79           | 106          | -2.5%                             | 32.8%                             | 33.6%                             |

In 4Q10, manganese ore production was slightly higher than the previous quarter, coming to 477,000 t against 472,000 t in 3Q10. The annual output increased 11.1% when compared to 2009, reaching 1.8 Mt.

The production of Azul – our largest manganese mine – increased 5.1% on a quarter-on-quarter basis, reaching 391,000t. The use of new equipment has contributed to improve mining performance. The total production in 2010 was 12.1% above 2009.

Ferroalloy quarterly production was comprised of 51,000t of ferrosilicon manganese alloys (FeSiMn), 60,000t of high-carbon manganese alloys (FeMnHc) and 5,000 t of medium-carbon manganese alloys (FeMnMC). The total output was slightly higher than previous quarter, increasing by 3.8%.

Production for 2010 was 451,000t, more than doubling relatively to 2009, but still lower than the previous peak of 542,000t reached in 2007.



**Table of Contents***Production Report**Coal*

| <b>000 metric tons</b> | <b>4Q09</b> | <b>3Q10</b>  | <b>4Q10</b> | <b>2009</b>  | <b>2010</b>  | <b>%<br/>Change<br/>4Q10/3Q10</b> | <b>%<br/>Change<br/>4Q10/4Q09</b> | <b>%<br/>Change<br/>2010/2009</b> |
|------------------------|-------------|--------------|-------------|--------------|--------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>METALLURGICAL</b>   |             |              |             |              |              |                                   |                                   |                                   |
| <b>COAL</b>            | <b>659</b>  | <b>814</b>   | <b>770</b>  | <b>2,527</b> | <b>3,057</b> | <b>-5.4%</b>                      | <b>16.9%</b>                      | <b>21.0%</b>                      |
| Integra Coal           | 198         | 296          | 279         | 1,184        | 1,151        | -5.7%                             | 41.0%                             | -3.1%                             |
| Broadlea               | 25          | 0            | 0           | 252          | 101          | n.m.                              | n.m.                              | -59.8%                            |
| Carborough Downs       | 245         | 289          | 367         | 604          | 1,216        | 27.0%                             | 50.0%                             | 101.3%                            |
| Others                 | 191         | 229          | 124         | 487          | 590          | -45.9%                            | -35.2%                            | 21.1%                             |
| <b>THERMAL COAL</b>    | <b>607</b>  | <b>1,057</b> | <b>976</b>  | <b>2,892</b> | <b>3,832</b> | <b>-7.6%</b>                      | <b>60.7%</b>                      | <b>32.5%</b>                      |
| El Hatillo             | 368         | 830          | 830         | 1,143        | 2,991        | 0.0%                              | 125.7%                            | 161.8%                            |
| Integra Coal           | 103         | 114          | 74          | 702          | 305          | -35.1%                            | -28.0%                            | -55.8%                            |
| Broadlea               | 27          | 0            | 0           | 497          | 165          | n.m.                              | n.m.                              | -66.7%                            |
| Others                 | 110         | 113          | 72          | 551          | 371          | -36.3%                            | -34.3%                            | -32.7%                            |

Despite the adverse weather conditions in Australia and some operational issues, 2010 was our best year for coal operations, with all-time high levels of production for both metallurgical and thermal coal, 3.057 Mt and 3.832 Mt, respectively, totaling 6.9 Mt.

In 4Q10 Vale's coal production reached 1.75 Mt, which was comprised of 770,000 t of metallurgical coal and 976,000 t of thermal coal.

Production of metallurgical and thermal coal at Integra Coal, in New South Wales, was 279,000 t and 74,000t, respectively, in 4Q10. Both metallurgical and thermal coal output were lower than in 3Q10.

Production at Carborough Downs, in Queensland, was 367,000 t in 4Q10, versus 289,000 t in 3Q10. Although Carborough Downs completed a long wall move in 4Q10, the increase in its yield on this quarter contributed to a higher output and its best ever quarterly performance.

Heavy and consistent rainfall during the fourth quarter resulted in 42 days of lost production at all other mines in the state of Queensland.

The thermal coal mine of El Hatillo, an open pit coal mine in Colombia, is ramping up and was also affected by bad weather conditions in the 4Q10 producing 830,000 t in 4Q10, in line with 3Q10.

**Table of Contents***Production Report***BASE METALS***Nickel*

| <b>000 metric tons</b> | <b>4Q09</b> | <b>3Q10</b> | <b>4Q10</b> | <b>2009</b> | <b>2010</b> | <b>%<br/>Change<br/>4Q10/3Q10</b> | <b>%<br/>Change<br/>4Q10/4Q09</b> | <b>%<br/>Change<br/>2010/2009</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>NICKEL</b>          | <b>30</b>   | <b>44</b>   | <b>65</b>   | <b>187</b>  | <b>179</b>  | <b>45.7%</b>                      | <b>117.8%</b>                     | <b>-4.2%</b>                      |
| Sudbury                | 2           | 6           | 8           | 43          | 22          | 35.7%                             | 450.1%                            | -48.5%                            |
| Thompson               | 10          | 5           | 8           | 29          | 30          | 75.2%                             | -14.4%                            | 3.5%                              |
| Voisey Bay             | 4           | 10          | 25          | 40          | 42          | 160.7%                            | 571.6%                            | 6.6%                              |
| Sorowako               | 15          | 22          | 20          | 69          | 78          | -9.7%                             | 34.7%                             | 13.9%                             |
| Others*                | 0           | 2           | 3           | 6           | 6           | 47.5%                             | n.m.                              | 0.0%                              |

\* External feed purchased from third parties and processed into finished nickel in our operations

Total finished nickel production was 65,000 t in 4Q10, 45.7% up on a quarter-on-quarter basis, being our highest quarterly output since 1Q09. Most of this increase about 15,000 t was due to the significant contribution of Voisey Bay feed to refined nickel.

Voisey Bay mining and processing has been operating at full capacity for some time focusing on high grade feed to supply the Clydach and Thompson refineries. At the same time, Sudbury mining was more focused on high grade copper and was operating at levels much below capacity. Mining was ramped up only after the end of the strike and given the relatively long production cycle, from mined nickel to refined nickel, the fourth quarter still saw the numbers for refined nickel sourced from Sudbury at low levels, increasing to only 8,000 t from 6,000 t in 3Q10.

During 1H11, one of the two furnaces of our Copper Cliff smelter in Sudbury will remain shutdown for a minimum of 16 weeks, entailing an estimated output loss of 15,000 metric tons of finished nickel.

Production at Thompson in 4Q10 was 8,300 t, 75.2% up from the previous quarter as the operations had a one-month annual maintenance shutdown in 3Q10.

Finished nickel production sourced from Sorowako, Indonesia, was 19,600 t, down 9.7% from 3Q10 due to a maintenance shutdown in October at the Matsuzaka refinery in Japan. It was up 34.7% on a year-on-year basis as at 4Q09 the Sorowako matte was being diverted to the Clydach refinery to meet demand requirements which contributed to lengthen the production cycle at that time.

The commissioning of the Onça Puma ferronickel project is completed, with the production of the first metal was in the last week of January. The operation has a nominal production capacity of 58,000 t of nickel in ferronickel.

**Table of Contents***Production Report**Copper*

| 000 metric tons | 4Q09      | 3Q10      | 4Q10      | 2009       | 2010       | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-----------------|-----------|-----------|-----------|------------|------------|--------------------------|--------------------------|--------------------------|
| <b>COPPER</b>   | <b>32</b> | <b>58</b> | <b>76</b> | <b>198</b> | <b>207</b> | <b>30.3%</b>             | <b>132.8%</b>            | <b>4.4%</b>              |
| Sossego         | 28        | 32        | 30        | 117        | 117        | -6.0%                    | 8.8%                     | -0.1%                    |
| Sudbury         | 2         | 14        | 14        | 42         | 34         | -2.2%                    | 477.6%                   | -19.9%                   |
| Thompson        | 0         | 0         | 1         | 1          | 1          | n.m.                     | n.m.                     | 0.0%                     |
| Voisey s Bay    | 0         | 11        | 16        | 24         | 33         | 52.7%                    | n.m.                     | 36.1%                    |
| Others          | 2         | 1         | 15        | 14         | 22         | 925.6%                   | 668.3%                   | 61.8%                    |

Vale's copper production was 76,000t in 4Q10, an increase of 30.3% on a quarter-on-quarter basis.

Production of copper in concentrates from the Sossego mine at Carajás was 6% lower than in the previous quarter due to the smaller volumes of feed received by the plant during this quarter.

Our Canadian operations delivered 46,000 t in 4Q10, 20,000t higher than 3Q10. In addition to the better performance of Voisey s Bay, there was a contribution of copper ores purchased from third parties in previous quarters and processed into copper concentrates and anodes in Sudbury in 4Q10. These purchases allowed us to increase copper shipments in an environment of rising prices.

*Nickel by-products*

|                                | 4Q09       | 3Q10       | 4Q10       | 2009         | 2010         | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|--------------------------------|------------|------------|------------|--------------|--------------|--------------------------|--------------------------|--------------------------|
| <b>COBALT (metric tons)</b>    | <b>133</b> | <b>133</b> | <b>624</b> | <b>1,575</b> | <b>1,066</b> | <b>367.9%</b>            | <b>368.0%</b>            | <b>-32.3%</b>            |
| Sudbury                        | 0          | 39         | 258        | 359          | 302          | 563.4%                   | n.m.                     | -15.8%                   |
| Thompson                       | 70         | 34         | 30         | 181          | 189          | -11.2%                   | -57.3%                   | 4.3%                     |
| Voisey Bay                     | 63         | 60         | 288        | 971          | 524          | 378.7%                   | 358.6%                   | -46.1%                   |
| Others                         | 0          | 1          | 48         | 64           | 51           | n.m.                     | n.m.                     | -20.2%                   |
| <b>PLATINUM (000 oz troy)</b>  | <b>2</b>   | <b>3</b>   | <b>26</b>  | <b>103</b>   | <b>35</b>    | <b>756.7%</b>            | <b>1446.6%</b>           | <b>-65.8%</b>            |
| Sudbury                        | 2          | 3          | 26         | 103          | 35           | 756.7%                   | 1446.6%                  | -65.8%                   |
| <b>PALLADIUM (000 oz troy)</b> | <b>4</b>   | <b>7</b>   | <b>35</b>  | <b>152</b>   | <b>60</b>    | <b>378.1%</b>            | <b>721.0%</b>            | <b>-60.5%</b>            |
| Sudbury                        | 4          | 7          | 35         | 152          | 60           | 378.1%                   | 721.0%                   | -60.5%                   |
| <b>GOLD (000 oz troy)</b>      | <b>3</b>   | <b>5</b>   | <b>27</b>  | <b>50</b>    | <b>42</b>    | <b>481.4%</b>            | <b>864.6%</b>            | <b>-15.8%</b>            |
| Sudbury                        | 3          | 5          | 27         | 50           | 42           | 481.4%                   | 864.6%                   | -15.8%                   |
| <b>SILVER (000 oz troy)</b>    | <b>26</b>  | <b>194</b> | <b>443</b> | <b>1,245</b> | <b>1,492</b> | <b>127.8%</b>            | <b>1582.8%</b>           | <b>19.9%</b>             |

|         |    |     |     |       |       |        |         |       |
|---------|----|-----|-----|-------|-------|--------|---------|-------|
| Sudbury | 26 | 194 | 443 | 1,245 | 1,492 | 127.8% | 1582.8% | 19.9% |
|---------|----|-----|-----|-------|-------|--------|---------|-------|

**Table of Contents***Production Report*

Similarly to nickel, there was a sharp increase in the production of cobalt, platinum group metals and precious metals in 4Q10.

Cobalt production in 4Q10 was 624,000 t, up 491,000 t from 3Q10 due to the ramping up of operations in Sudbury after the end of the labor interruption.

Production of platinum and palladium in 4Q10 was 61,000 troy ounces, which was 51,000 troy ounces higher than in 3Q10 and 55,000 troy ounces higher than 4Q09.

***Bauxite***

| 000 metric tons | 4Q09         | 3Q10         | 4Q10         | 2009          | 2010          | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-----------------|--------------|--------------|--------------|---------------|---------------|--------------------------|--------------------------|--------------------------|
| <b>BAUXITE</b>  | <b>3,318</b> | <b>3,801</b> | <b>3,851</b> | <b>12,461</b> | <b>14,332</b> | <b>1.3%</b>              | <b>16.0%</b>             | <b>15.0%</b>             |
| Trombetas       | 1,738        | 1,883        | 1,834        | 6,258         | 6,808         | -2.6%                    | 5.5%                     | 8.8%                     |
| Paragominas     | 1,580        | 1,918        | 2,017        | 6,203         | 7,524         | 5.2%                     | 27.6%                    | 21.3%                    |

Our production of bauxite in 2010 achieved an all-time high at 14.332 Mt, showing a significant growth against the mark 12.461 Mt in 2009. Due to the conclusion and further expansion of the Paragominas mining operations our bauxite production has more than doubled over the last five years, coming from 6.884 Mt in 2005 to 14.332 Mt in 2010.

A record quarterly output was reached in 4Q10, when Vale's bauxite production totaled 3.851 Mt, 1.3% higher on a quarter-on-quarter basis and 15% year-on-year.

Vale's production at Trombetas was slightly lower than during the previous quarter. But, on the other hand, Paragominas output reached an all-time high production of 2.0 Mt, 5.2% higher than 3Q10.

***Alumina***

| 000 metric tons | 4Q09         | 3Q10         | 4Q10         | 2009         | 2010         | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------------------|--------------------------|--------------------------|
| <b>ALUMINA</b>  | <b>1,477</b> | <b>1,442</b> | <b>1,448</b> | <b>5,910</b> | <b>5,805</b> | <b>0.4%</b>              | <b>-2.0%</b>             | <b>-1.8%</b>             |
| Alunorte        | 1,477        | 1,442        | 1,448        | 5,910        | 5,805        | 0.4%                     | -2.0%                    | -1.8%                    |

The production of alumina at the Barcarena refinery totaled 1.4 Mt in 4Q10, in line with its capacity.

***Aluminum***

| 000 metric tons | 4Q09       | 3Q10       | 4Q10       | 2009       | 2010       | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-----------------|------------|------------|------------|------------|------------|--------------------------|--------------------------|--------------------------|
| <b>ALUMINUM</b> | <b>112</b> | <b>114</b> | <b>114</b> | <b>459</b> | <b>447</b> | <b>0.4%</b>              | <b>1.8%</b>              | <b>-2.6%</b>             |
| Albrás          | 112        | 114        | 114        | 450        | 447        | 0.4%                     | 1.8%                     | -0.6%                    |
| Valesul         | 0          |            |            | 9          | 0          | n.m.                     | n.m.                     | n.m.                     |

The production of aluminum totaled 114,000 t in 4Q10, in line with quarterly and annual bases.

**Table of Contents***Production Report***FERTILIZER NUTRIENTS***Potash*

| 000 metric tons   | 4Q09       | 3Q10       | 4Q10       | 2009       | 2010       | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-------------------|------------|------------|------------|------------|------------|--------------------------|--------------------------|--------------------------|
| <b>POTASH</b>     | <b>185</b> | <b>155</b> | <b>169</b> | <b>717</b> | <b>662</b> | <b>9.0%</b>              | <b>-8.8%</b>             | <b>-7.6%</b>             |
| Taquari-Vassouras | 185        | 155        | 169        | 717        | 662        | 9.0%                     | -8.8%                    | -7.6%                    |

In 4Q10, production of potash was 169,000 t, a volume 14,000 t higher than 3Q10. The rise in output is explained by an improvement in asset utilization in mining.

*Phosphates*

| 000 metric tons       | 4Q09        | 3Q10         | 4Q10         | 2009        | 2010         | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-----------------------|-------------|--------------|--------------|-------------|--------------|--------------------------|--------------------------|--------------------------|
| <b>Phosphate Rock</b> | <b>n.a.</b> | <b>1,198</b> | <b>1,787</b> | <b>n.a.</b> | <b>5,255</b> | <b>49.1%</b>             | <b>n.m.</b>              | <b>n.m.</b>              |
| Vale Fertilizantes    | n.a.        | 721          | 725          | n.a.        | 2,737        | 0.6%                     | n.m.                     | n.m.                     |
| Vale Fosfatados       | n.a.        | 477          | 480          | n.a.        | 1,727        | 1.8%                     | n.m.                     | n.m.                     |
| Bayóvar               | n.a.        | 209          | 582          | n.a.        | 791          | n.m.                     | n.m.                     | n.m.                     |

**MAP****Monoammonium**

|                    |             |            |            |             |            |             |             |             |
|--------------------|-------------|------------|------------|-------------|------------|-------------|-------------|-------------|
| <b>phosphate</b>   | <b>n.a.</b> | <b>229</b> | <b>245</b> | <b>n.a.</b> | <b>898</b> | <b>7.1%</b> | <b>n.m.</b> | <b>n.m.</b> |
| Vale Fertilizantes | n.a.        | 229        | 245        | n.a.        | 898        | 7.1%        | n.m.        | n.m.        |

**TSP Triple**

|                       |             |            |            |             |            |               |             |             |
|-----------------------|-------------|------------|------------|-------------|------------|---------------|-------------|-------------|
| <b>superphosphate</b> | <b>n.a.</b> | <b>229</b> | <b>162</b> | <b>n.a.</b> | <b>788</b> | <b>-29.4%</b> | <b>n.m.</b> | <b>n.m.</b> |
| Vale Fertilizantes    | n.a.        | 229        | 162        | n.a.        | 788        | -29.4%        | n.m.        | n.m.        |

**SSP -Single**

|                       |             |            |            |             |              |               |             |             |
|-----------------------|-------------|------------|------------|-------------|--------------|---------------|-------------|-------------|
| <b>superphosphate</b> | <b>n.a.</b> | <b>687</b> | <b>586</b> | <b>n.a.</b> | <b>2,240</b> | <b>-14.7%</b> | <b>n.m.</b> | <b>n.m.</b> |
| Vale Fosfatados       | n.a.        | 637        | 545        | n.a.        | 2,147        | -14.5%        | n.m.        | n.m.        |
| Vale Fertilizantes    | n.a.        | 50         | 41         | n.a.        | 92           | -18.1%        | n.m.        | n.m.        |

**DCP Dicalcium**

|                  |             |            |            |             |            |               |             |             |
|------------------|-------------|------------|------------|-------------|------------|---------------|-------------|-------------|
| <b>Phosphate</b> | <b>n.a.</b> | <b>144</b> | <b>101</b> | <b>n.a.</b> | <b>491</b> | <b>-29.8%</b> | <b>n.m.</b> | <b>n.m.</b> |
| Vale Fosfatados  | n.a.        | 144        | 101        | n.a.        | 491        | -29.8%        | n.m.        | n.m.        |

Vale Fosfatados owns two phosphate rock mines, Araxá, in the state of Minas Gerais, and Cajati, in the state of São Paulo, Brazil. Alongside the mining operations, the assets also comprise four processing plants for the production of phosphates fertilizers located at: (a) Araxá, state of Minas Gerais; (b) Cajati, state of São Paulo; (c) Cubatão, state of São Paulo; (d) Guará, state of São Paulo.

Total production of phosphate rock, which is used to feed the output of phosphate nutrients, rose 49.1% compared to 3Q10. Vale Fertilizantes and Vale Fosfatados had an output performance in line with 3Q10. Bayóvar, our Peruvian phosphate rock mine, started to ramp up production in July and produced 582,000 metric tons in 4Q10.

The production of MAP (monoammonium phosphate) was 245,000 t, up 7.1% quarter-on-quarter, in response to the stronger demand in the Brazilian market.

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TSP (triple superphosphate) production decreased 29.4% compared to 3Q10, due to a maintenance stoppage in 4Q10. The production of SSP (single superphosphate) from Vale Fosfatados reduced 14.5% from 3Q10 due to the maintenance stoppage in the Cubatão plant. Production of Vale Fertilizantes was 18.1% lower than in previous quarter due to a maintenance stoppage at the Catalão plant.

DCP (dicalcium phosphate) decreased by 29.8% on a quarter-on-quarter basis due to a maintenance stoppage at the Araucária plant.

***Nitrogen***

| 000 metric tons         | 4Q09        | 3Q10       | 4Q10       | 2009        | 2010       | %<br>Change<br>4Q10/3Q10 | %<br>Change<br>4Q10/4Q09 | %<br>Change<br>2010/2009 |
|-------------------------|-------------|------------|------------|-------------|------------|--------------------------|--------------------------|--------------------------|
| <b>Ammonia</b>          | <b>n.a.</b> | <b>108</b> | <b>140</b> | <b>n.a.</b> | <b>508</b> | <b>29.3%</b>             | n.m.                     | <b>n.m.</b>              |
| Vale Fertilizantes      | n.a.        | 108        | 140        | n.a.        | 508        | 29.3%                    | n.m.                     | n.m.                     |
| <b>Urea</b>             | <b>n.a.</b> | <b>77</b>  | <b>146</b> | <b>n.a.</b> | <b>511</b> | <b>90.1%</b>             | n.m.                     | <b>n.m.</b>              |
| Vale Fertilizantes      | n.a.        | 77         | 146        | n.a.        | 511        | 90.1%                    | n.m.                     | n.m.                     |
| <b>Nitric Acid</b>      | <b>n.a.</b> | <b>119</b> | <b>120</b> | <b>n.a.</b> | <b>454</b> | <b>1.0%</b>              | n.m.                     | <b>n.m.</b>              |
| Vale Fertilizantes      | n.a.        | 119        | 120        | n.a.        | 454        | 1.0%                     | n.m.                     | n.m.                     |
| <b>Ammonium Nitrate</b> | <b>n.a.</b> | <b>115</b> | <b>115</b> | <b>n.a.</b> | <b>447</b> | <b>0.1%</b>              | n.m.                     | <b>n.m.</b>              |
| Vale Fertilizantes      | n.a.        | 115        | 115        | n.a.        | 447        | 0.1%                     | n.m.                     | n.m.                     |

In 4Q10 ammonia production increased 29.3% compared to 3Q10 due to the scheduled maintenance stoppage in the Araucária unit in 3Q10.

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**Signatures**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Vale S.A.  
(Registrant)

By: /s/ Roberto Castello Branco  
Roberto Castello Branco  
Director of Investor Relations

Date: February 24, 2011