

Vale S.A.  
Form 6-K  
February 27, 2014  
[Table of Contents](#)

**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 2014**

**Vale S.A.**

**Avenida Graça Aranha, No. 26  
20030-900 Rio de Janeiro, RJ, Brazil**

(Address of principal executive office)

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Table of Contents

Table of Contents:

Press Release  
Signature Page

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Table of Contents

*2013 and 4Q13 Production Report*

Production Highlights

Rio de Janeiro, February 26, 2014 Vale S.A. (Vale) registered a new quarterly production record in Carajás in 4Q13 of 31.6 Mt. The quarter was marked by the start-up of the +40 Mtpy project in the beginning of December. In 2013, iron ore production reached 299.8 Mt, 98% of our guidance for the year.

Coal output reached a new production mark at 8.8 Mt in 2013, mostly due to the good operational performance of Carborough Downs which reached a new annual production record at 2.5 Mt, 76.0% higher than the previous record registered in 2011. Nonetheless, production is still short of our 2013 target due to Moatize's performance.

Production of nickel reached 260,000 t, the highest annual mark since 2008. Onça Puma successfully restarted operations in 4Q13 and produced 1.900 t of nickel contained in ferronickel. In December 2013, the output of Onça Puma was 1.300 t, about 62% of its nominal capacity of 25,000 t per year for one single furnace.

Copper output reached 370,000 t, also a new annual record, 18.8% above the previous highest production mark in 2008 due to the performance of Sudbury and the successful ramp-up of Salobo, which operated close to nominal capacity in December 2013 and produced 21,100 t of copper in concentrates.

As a result of the increase in Salobo's output, the production of gold achieved the all-time high figure of 88,000 oz in 4Q13, 15.9% higher than 3Q13.

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Total production of phosphate rock achieved a new annual record due to the ramp-up of Bayóvar and the good operational performance of the Brazilian mines. In 4Q13, Bayóvar produced 1.1 Mt, also a new record, being 20.2% higher than 3Q13.

### Production Summary

| <b>000 metric tons</b> | <b>4Q13</b> | <b>3Q13</b> | <b>4Q12</b> | <b>2013</b> | <b>2012</b> | <b>4Q13/3Q13</b><br><b>% change</b> | <b>4Q13/4Q12</b><br><b>% change</b> | <b>2013/2012</b><br><b>% change</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Iron ore (1)           | 81,251      | 83,118      | 82,708      | 299,795     | 309,048     | -2.2%                               | -1.8%                               | -3.0%                               |
| Pellets(1)             | 10,409      | 9,731       | 9,373       | 38,995      | 44,415      | 7.0%                                | 11.1%                               | -12.2%                              |
| Manganese              | 638         | 621         | 668         | 2,378       | 2,365       | 2.8%                                | -4.4%                               | 0.5%                                |
| Coal                   | 2,258       | 2,377       | 1,951       | 8,763       | 7,082       | -5.0%                               | 15.7%                               | 23.7%                               |
| Nickel                 | 68          | 62          | 64          | 260         | 237         | 9.6%                                | 6.1%                                | 9.9%                                |
| Copper(2)              | 95          | 95          | 81          | 370         | 292         | 0.0%                                | 16.8%                               | 26.9%                               |
| Potash                 | 126         | 132         | 161         | 492         | 549         | -4.7%                               | -21.6%                              | -10.3%                              |
| Phosphate rock         | 2,286       | 2,104       | 2,060       | 8,277       | 7,982       | 8.6%                                | 10.9%                               | 3.7%                                |

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(1) Excluding Samarco's attributable production.

(2) Including Lubambe's attributable production.

Table of Contents*Iron ore*

| 000 metric tons            | 4Q13          | 3Q13          | 4Q12          | 2013           | 2012           | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|----------------------------|---------------|---------------|---------------|----------------|----------------|-----------------------|-----------------------|-----------------------|
| <b>Northern System</b>     | <b>31,584</b> | <b>29,793</b> | <b>30,078</b> | <b>104,885</b> | <b>106,786</b> | <b>6.0%</b>           | <b>5.0%</b>           | <b>-1.8%</b>          |
| Carajás                    | 31,584        | 29,793        | 30,078        | 104,885        | 106,786        | 6.0%                  | 5.0%                  | -1.8%                 |
| <b>Southeastern System</b> | <b>28,205</b> | <b>29,743</b> | <b>30,389</b> | <b>109,453</b> | <b>115,587</b> | <b>-5.2%</b>          | <b>-7.2%</b>          | <b>-5.3%</b>          |
| Itabira                    | 9,147         | 10,139        | 10,041        | 34,001         | 37,682         | -9.8%                 | -8.9%                 | -9.8%                 |
| Mariana                    | 9,928         | 10,062        | 9,706         | 37,700         | 37,224         | -1.3%                 | 2.3%                  | 1.3%                  |
| Minas Centrais             | 9,130         | 9,542         | 10,642        | 37,752         | 40,681         | -4.3%                 | -14.2%                | -7.2%                 |
| <b>Southern System</b>     | <b>19,732</b> | <b>21,713</b> | <b>20,405</b> | <b>78,954</b>  | <b>80,300</b>  | <b>-9.1%</b>          | <b>-3.3%</b>          | <b>-1.7%</b>          |
| Minas Itabirito            | 7,825         | 8,430         | 8,497         | 30,971         | 31,774         | -7.2%                 | -7.9%                 | -2.5%                 |
| Vargem Grande              | 5,031         | 6,061         | 5,551         | 21,941         | 22,609         | -17.0%                | -9.4%                 | -3.0%                 |
| Paraopebas                 | 6,877         | 7,222         | 6,357         | 26,042         | 25,917         | -4.8%                 | 8.2%                  | 0.5%                  |
| <b>Midwestern System</b>   | <b>1,729</b>  | <b>1,869</b>  | <b>1,836</b>  | <b>6,503</b>   | <b>6,376</b>   | <b>-7.5%</b>          | <b>-5.8%</b>          | <b>2.0%</b>           |
| Corumbá                    | 1,208         | 1,306         | 1,345         | 4,496          | 4,611          | -7.5%                 | -10.2%                | -2.5%                 |
| Urucum                     | 521           | 563           | 491           | 2,007          | 1,765          | -7.4%                 | 6.1%                  | 13.7%                 |
| <b>TOTAL IRON ORE</b>      | <b>81,251</b> | <b>83,118</b> | <b>82,708</b> | <b>299,795</b> | <b>309,048</b> | <b>-2.2%</b>          | <b>-1.8%</b>          | <b>-3.0%</b>          |
| Samarco(1)                 | 2,780         | 2,772         | 2,791         | 10,887         | 10,912         | 0.3%                  | -0.4%                 | -0.2%                 |

(1) Vale's attributable production capacity of 50%.

#### Annual performance

Despite the good performance of the fourth quarter mainly in the Northern System, which registered a new quarterly record, Vale's iron ore production of 299.8 Mt excluding Samarco's attributable production represents 98.0% of the company's 2013 target of 306 Mt.

The 6 Mt net production gap in relation to the 2013 target is a result of lower production in Carajás due to reduced operational flexibility by the end of the year (2.7 Mt), abnormal rainfalls in the Southeastern System which resulted in declaration of Force Majeure (FM) in late December (1.3 Mt) and the ramp-up and licensing challenges in the Conceição Itabiritos and Fábrica Nova mines (2.0 Mt).

All those production setbacks have been addressed as of January 2014 (detailed below), supporting our confidence on the delivery of our growth plans.

#### Quarterly performance

In 4Q13, iron ore output was 81.3 Mt, being respectively, 2.2% and 1.8% lower than 3Q13 and 4Q12. This decrease in production was mostly due to lack the of operational flexibility in the

Table of Contents

Northern System and the heavy rainfalls in the Southeastern System during the quarter.

Northern System

Production reached a record mark at 31.6 Mt in 4Q13, mostly due to the good operational performance of N5S and the ramp-up of Plant 2 (+40Mt project). If not for the lack of operational flexibility by the end of the year, production would have been even higher.

The end of year rains which restrained Vale's flexibility to exploit its full array of mine sections coupled with the delay in receiving environmental authorizations to mine specific mine sections had a negative impact in Carajás' production.

The operational license (LO) for the Plant 2 was obtained on December 2nd, 2013. Vale has been actively engaged in classifying the relevance of and seeking approval for the suppression or reduction of the area of influence of critical caves mapped in the Carajás region. As a result, we obtained authorization from the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) for mining in the N4E mine areas. This authorization will support the accomplishment of the 2014 production plan of 120 Mt in Carajás, 312 Mt production in the year (321 Mt with purchases of thirdparty ore).

Southeastern System

The Southeastern System, which encompasses the Itabira, Mariana and Minas Centrais mining sites, produced 28.2 Mt in 4Q13, 5.2% lower than 3Q13 and 7.2% lower than 4Q12, mostly due to weather conditions.

Production of the Itabira mining hub was 1.0 Mt lower than last quarter and 0.9 Mt lower than production in the same period of last year due to the heavy rainfall which led to the declaration of Force Majeure in December (lifted in January 2014) and the delay in the start-up of the Conceição Itabiritos project which occurred only in late December, 2013. Conceição Itabiritos will extend mine life, improve quality of the final product with nominal capacity of 12 Mtpy.

The output of the Mariana mining hub was 0.1 Mt lower than in 3Q13 mostly due to weather conditions. However, production was 0.2 Mt above the same period of last year and a new record for a fourth quarter - as a result of a new license being granted in May 2013 to exploit new mine



sections at Fábrica Nova.

The production of the Minas Centrais mining hub was 9.1 Mt in 4Q13, 4.3% below last quarter due to the rainfall and 1.5 Mt lower than 4Q12 due to the declining production of the Gongo Soco mine, which is scheduled to close in 2014.

#### Southern System

The Southern System, composed of the Itabirito, Vargem Grande and Paraopeba mining hubs, produced 19.7 Mt in 4Q13, 9.1% lower than in 3Q13 and 3.3% lower than in the 4Q12.

The output of the Minas Itabirito mining hub was 0.6 Mt lower than last quarter due to the beginning of the rainy season.

Production of the Vargem Grande and Paraopeba mining hubs was 1.4 Mt lower than last quarter due to scheduled maintenance stoppage.

#### Midwestern System

The Midwestern System mining hub, comprising Urucum and Corumbá, produced 1.7 Mt in 4Q13, 7.5% below last quarter due to the beginning of the rainy season.

#### Samarco

The attributable production from the three Samarco plants was in line with 3Q13 and 4Q12.

Table of Contents*Pellets*

| 000 metric tons            | 4Q13          | 3Q13         | 4Q12         | 2013          | 2012          | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|----------------------------|---------------|--------------|--------------|---------------|---------------|-----------------------|-----------------------|-----------------------|
| <b>Southeastern System</b> | <b>5,692</b>  | <b>5,088</b> | <b>5,709</b> | <b>21,620</b> | <b>26,144</b> | <b>11.9%</b>          | <b>-0.3%</b>          | <b>-17.3%</b>         |
| Nibrasco                   | 2,412         | 1,953        | 2,260        | 8,953         | 8,829         | 23.5%                 | 6.7%                  | 1.4%                  |
| Kobrasco                   | 1,179         | 921          | 803          | 4,349         | 4,398         | 28.1%                 | 46.8%                 | -1.1%                 |
| Hispanobras(1)             | 989           | 1,112        | 1,067        | 3,913         | 4,261         | -11.1%                | -7.3%                 | -8.2%                 |
| Itabrasco                  | 1,112         | 1,103        | 983          | 4,406         | 4,007         | 0.8%                  | 13.2%                 | 10.0%                 |
| Tubarão I and II           | 0             | 0            | 597          | 0             | 4,650         | n.m.                  | n.m.                  | n.m.                  |
| <b>Southern System</b>     | <b>2,413</b>  | <b>2,392</b> | <b>1,855</b> | <b>9,095</b>  | <b>8,144</b>  | <b>0.9%</b>           | <b>30.1%</b>          | <b>11.7%</b>          |
| Fabrica                    | 955           | 896          | 826          | 3,772         | 3,634         | 6.6%                  | 15.5%                 | 3.8%                  |
| Vargem Grande              | 1,458         | 1,496        | 1,028        | 5,322         | 4,510         | -2.5%                 | 41.8%                 | 18.0%                 |
| São Luís                   | 0             | 0            | 46           | 0             | 3,511         | n.m.                  | n.m.                  | n.m.                  |
| Oman                       | 2,304         | 2,250        | 1,763        | 8,280         | 6,616         | 2.4%                  | 30.7%                 | 25.1%                 |
| <b>TOTAL PELLETS</b>       | <b>10,409</b> | <b>9,731</b> | <b>9,373</b> | <b>38,995</b> | <b>44,415</b> | <b>7.0%</b>           | <b>11.1%</b>          | <b>-12.2%</b>         |
| Samarco(2)                 | 2,755         | 2,655        | 2,717        | 10,563        | 10,652        | 3.8%                  | 1.4%                  | -0.8%                 |

(1) Production attributable to Vale on a pro forma basis. In July 2012, we entered into a leasing contract for the Hispanobras pelletizing operation. As a consequence, their production is being consolidated 100% on a pro forma basis.

(2) Vale's attributable production capacity of 50%.

#### Production overview

Excluding Samarco's attributable production of 10.6 Mt, Vale's pellets production was 39.0 Mt in 2013. Comparing to 2012, output was 12.2% lower reflecting the shutdown of the Tubarão I and II and the São Luis pellet plants.

Pellet production reached 10.4 Mt, a new record for a fourth quarter, 7.0% and 11.1% higher than in 3Q13 and 4Q12, respectively, mostly due to the good operational performance of Oman and the recovery from maintenance stoppage in the Southeastern System. The share of direct reduction pellets in our production amounted to 36% in 4Q13, in line with last quarter.

#### Southeastern System

Production volumes at the Tubarão operating plants – Nibrasco, Kobrasco, Hispanobras and Itabrasco – increased to 5.7 Mt in 4Q13 from 5.1 Mt in 3Q13, due to the recovery from scheduled maintenance stoppages at Nibrasco and Kobrasco during last quarter.

Table of Contents

Southern System

Fábrica produced 0.96 Mt, 6.6% and 15.5% higher than 3Q13 and 4Q12, respectively, due to the recovery from the impact of shortage of pellet feed in the Southern System mines in 3Q13. In 4Q13, Vargem Grande output was 1.5 Mt, slightly below the previous quarter, but 41.8% above 4Q12, given weak demand in that period.

Oman operations

The Oman operations produced 2.3 Mt of direct reduction pellets in 4Q13, in line with last quarter.

Samarco

Attributable production from the three Samarco plants was in line with 3Q13 and 4Q12.

The start-up of Samarco's fourth pellet plant, and expansion of mine, pipeline and maritime terminal infrastructure is expected for 2Q14. Samarco IV pellet plant has a nominal capacity of 8.3 Mtpy.

*Manganese ore and ferroalloys*

| 000 metric tons      | 4Q13       | 3Q13       | 4Q12       | 2013         | 2012         | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|----------------------|------------|------------|------------|--------------|--------------|-----------------------|-----------------------|-----------------------|
| <b>MANGANESE ORE</b> | <b>638</b> | <b>621</b> | <b>668</b> | <b>2,378</b> | <b>2,365</b> | <b>2.8%</b>           | <b>-4.4%</b>          | <b>0.5%</b>           |
| Azul                 | 490        | 508        | 523        | 1,850        | 1,863        | -3.5%                 | -6.4%                 | -0.7%                 |
| Urucum               | 117        | 82         | 92         | 411          | 327          | 42.9%                 | 26.8%                 | 25.9%                 |
| Other mines          | 31         | 31         | 52         | 116          | 176          | -0.1%                 | -39.7%                | -33.8%                |
| <b>FERROALLOYS</b>   | <b>50</b>  | <b>52</b>  | <b>59</b>  | <b>176</b>   | <b>390</b>   | <b>-4.0%</b>          | <b>-14.5%</b>         | <b>-54.9%</b>         |

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|           |    |    |    |     |     |       |        |        |
|-----------|----|----|----|-----|-----|-------|--------|--------|
| Brazil    | 50 | 52 | 59 | 176 | 206 | -4.0% | -14.5% | -14.9% |
| Dunkerque | 0  | 0  | 0  | 0   | 104 | n.m.  | n.m.   | n.m.   |
| Mo I Rana | 0  | 0  | 0  | 0   | 79  | n.m.  | n.m.   | n.m.   |

### Production overview

In 2013, manganese ore production was in line with 2012. The output of ferroalloys was 54.9% lower than in 2012, due to the sale of the European operations – Dunkerque and Mo I Rana – concluded at the end of 2012.

The production of manganese ore, on a quarter-on-quarter basis, reached 638,000 t against 621,000 t in 3Q13.

### Manganese ore production

Output from the Carajás Azul manganese mine decreased by 3.5% and 6.4% against 3Q13 and 4Q12, respectively, reaching 490,000 t as a result of stoppages for corrective maintenance.

In 4Q13, production from Urucum increased by 42.9% against the previous quarter, recovering from scheduled maintenance in 3Q13. We are working in a mine expansion, which will allow significant production increases as of next year.

### Ferroalloy production

Production of ferroalloy was 4.0% and 14.5% lower than in 3Q13 and 4Q12, respectively, due to scheduled maintenance stoppage in 4Q13.

Ferroalloy quarterly production was comprised of 32,000 t of ferrosilicon manganese alloys (FeSiMn), 11,000 t of high-carbon manganese alloys (FeMnHc) and 7,000 t of medium-carbon manganese alloys (FeMnMC).

As previously mentioned, on October 31st 2012, we concluded the sale of our manganese ferroalloys operations in Europe, Vale Manganèse France, located in Dunkerque, and Vale Manganese Norway, located in Mo I Rana.

Table of Contents*Coal*

| 000 metric tons           | 4Q13         | 3Q13         | 4Q12         | 2013         | 2012         | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|---------------------------|--------------|--------------|--------------|--------------|--------------|-----------------------|-----------------------|-----------------------|
| <b>METALLURGICAL COAL</b> | <b>1,850</b> | <b>1,823</b> | <b>1,471</b> | <b>6,885</b> | <b>5,083</b> | <b>1.5%</b>           | <b>25.8%</b>          | <b>35.5%</b>          |
| Moatize                   | 401          | 706          | 648          | 2,373        | 2,501        | -43.2%                | -38.2%                | -5.1%                 |
| Carborough Downs          | 814          | 409          | 373          | 2,447        | 911          | 99.0%                 | 117.9%                | 168.6%                |
| Integra Coal              | 433          | 561          | 286          | 1,410        | 962          | -22.8%                | 51.4%                 | 46.6%                 |
| Others                    | 202          | 147          | 163          | 656          | 709          | 37.5%                 | 24.2%                 | -7.5%                 |
| <b>THERMAL COAL</b>       | <b>408</b>   | <b>553</b>   | <b>480</b>   | <b>1,878</b> | <b>1,999</b> | <b>-26.2%</b>         | <b>-15.0%</b>         | <b>-6.1%</b>          |
| Moatize                   | 277          | 462          | 319          | 1,444        | 1,267        | -40.0%                | -13.0%                | 14.0%                 |
| Integra Coal              | 34           | 24           | 71           | 87           | 351          | 41.1%                 | -52.4%                | -75.1%                |
| Others                    | 97           | 67           | 91           | 347          | 381          | 45.1%                 | 7.3%                  | -9.0%                 |
| <b>TOTAL COAL</b>         | <b>2,258</b> | <b>2,377</b> | <b>1,951</b> | <b>8,763</b> | <b>7,082</b> | <b>-5.0%</b>          | <b>15.7%</b>          | <b>23.7%</b>          |

Production overview

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Vale achieved 8.8 Mt of coal production in 2013, 23.7% above the 2012 figure but 3.6 Mt below our 2013 annual guidance for coal. Production of metallurgical and thermal coal was 6.9 Mt and 1.9 Mt, respectively. This was a result of Moatize's ramp-up and of a significant improvement in the performance of Carborough Downs (CD).

Total coal output in 4Q13 reached 2.3 Mt, 15.7% above 4Q12, mostly due to the performance of CD.

### Australian operations

CD reached a new annual record at 2.447 Mt in 2013, 76.0% above the 2011 output.

In 4Q13, CD, which is a 100% metallurgical coal underground mining operation, obtained a new quarterly record, at 814,000 t, showing good performance after the longwall move in 3Q13.

In 2013, Integra Coal production of semi-soft metallurgical coal was 1.410 Mt and thermal coal was 87,000 t. Met coal was prioritized over thermal coal, resulting in lower production of thermal coal during the year.

In 4Q13, we had operational problems with the longwall cutting mechanism at Integra Coal, which impacted our underground operation. Additionally, adverse weather conditions impacted production from our open pit operations. These two factors affected Integra

Table of Contents

coal production in 4Q13, which included 433,000 t of metallurgical and 34,000 t of thermal coal.

Production from our other Australian mines was 299,000 t in 4Q13, an increase of 39.7% from the 214,000 t in 3Q13, due to good operational performance.

Moatize operations

Moatize produced 3.816 Mt, of which 2.373 Mt of met coal and 1.444 Mt of thermal coal.

The ramp-up of the first phase of the Moatize coal project is being temporarily restricted by the existing limitations of the logistics infrastructure railway and port which do not allow for total utilization of the mine nominal capacity of 11 Mtpy. Additionally, lack of availability of explosives constrained blasting operations and impacted production volumes.

The conclusion of the Nacala corridor project will eliminate the above mentioned logistics bottleneck. Availability of explosives on site has been fully restored.



Table of Contents*Nickel*

| 000 metric tons           | 4Q13      | 3Q13      | 4Q12      | 2013       | 2012       | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|---------------------------|-----------|-----------|-----------|------------|------------|-----------------------|-----------------------|-----------------------|
| <b>Canada</b>             | <b>43</b> | <b>35</b> | <b>41</b> | <b>163</b> | <b>157</b> | <b>22.5%</b>          | <b>5.0%</b>           | <b>3.7%</b>           |
| Sudbury                   | 18        | 16        | 15        | 69         | 65         | 9.7%                  | 16.0%                 | 5.9%                  |
| Thompson                  | 6         | 5         | 6         | 24         | 24         | 30.9%                 | -1.3%                 | 1.0%                  |
| Voisey's Bay              | 17        | 12        | 18        | 63         | 62         | 36.6%                 | -8.7%                 | 1.8%                  |
| Ore from third parties(1) | 2         | 2         | 1         | 6          | 6          | 18.1%                 | 201.8%                | 8.7%                  |
| <b>Indonesia</b>          | <b>21</b> | <b>22</b> | <b>23</b> | <b>79</b>  | <b>69</b>  | <b>-5.5%</b>          | <b>-9.1%</b>          | <b>14.1%</b>          |
| <b>New Caledonia</b>      | <b>2</b>  | <b>5</b>  | <b>0</b>  | <b>16</b>  | <b>4</b>   | <b>-56.2%</b>         | <b>n.m.</b>           | <b>262.9%</b>         |
| <b>Brazil</b>             | <b>2</b>  | <b>0</b>  | <b>0</b>  | <b>2</b>   | <b>6</b>   | <b>n.m.</b>           | <b>n.m.</b>           | <b>-67.3%</b>         |
| <b>TOTAL NICKEL</b>       | <b>68</b> | <b>62</b> | <b>64</b> | <b>260</b> | <b>237</b> | <b>9.6%</b>           | <b>6.1%</b>           | <b>9.9%</b>           |

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(1) External feed purchased from third parties and processed into finished nickel in our operations

Production overview

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Production of nickel reached 260,000 t in 2013, setting the highest annual mark since 2008.

Total nickel production in 4Q13 was 68,000 t, 9.6% higher than in 3Q13.

### Canadian Operations

In 4Q13, production from the Sudbury mine feed reached 18,000 t, 9.7% higher than in 3Q13 and 16.0% higher than in 4Q12. Sudbury mines and mill completed their annual scheduled maintenance in 3Q13 and operated fully in 4Q13.

Production from Thompson mine feed in 4Q13 was 6,300 t, 30.9% higher than in 3Q13. Thompson operation underwent annual scheduled maintenance in the mines, mill, smelter and refinery in 3Q13 and operated fully in 4Q13.

Production sourced from Voisey's Bay Nickel concentrates amounted to 16,900 t in 4Q13, an increase of 36.6% in relation to 3Q13. Voisey's Bay feed was processed by the Copper Cliff smelter at Sudbury while Thompson was undergoing annual maintenance.

### Indonesian Operations

In 4Q13, production of nickel in matte from our Indonesian Sorowako operations totaled 18,300 t. In November, the operation suffered failures leading to matte run-outs in two of its four operating furnaces. Shutdown and containment procedures protected the operation. The furnaces were repaired and are now fully operational.

Table of Contents

New Caledonia Operations

In 2013, VNC produced 16,300 t of nickel contained in NiO and NHC and 1,117 t of cobalt.

Quarterly output was 2,054 t of nickel, comprised of 777 t of utility nickel sourced from NHC (934 t) and NiO (343 t). VNC underwent maintenance at the beginning of 4Q13, but when operations recommenced in November, VNC experienced a failure of its effluent placement and dispersion line. There were no environmental impacts from the incident. The operation was shutdown and the repair took 6 weeks. The repair work was completed successfully and the plant began a sequential restart on January 1, 2014. By January 22, all phases of the plant (2 HPAL s, the refinery and fluid bed reactor - FBR) were in operation. The mine continued to operate during the plant outage.

Brazilian Operation

Production at Onça Puma was 1,900 t of nickel contained in ferronickel. Onça Puma restarted operations in 4Q13 after shutdown in mid-2012 to repair one of its furnaces. In December 2013, the output of Onça Puma was 1,300 t, about 62% of its nominal capacity of 25,000 t per year for one single furnace.

Table of Contents*Copper*

| 000 metric tons        | 4Q13      | 3Q13      | 4Q12      | 2013       | 2012       | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|------------------------|-----------|-----------|-----------|------------|------------|-----------------------|-----------------------|-----------------------|
| <b>Brazil</b>          | <b>53</b> | <b>48</b> | <b>36</b> | <b>184</b> | <b>123</b> | <b>8.9%</b>           | <b>47.9%</b>          | <b>49.5%</b>          |
| Sossego                | 32        | 31        | 28        | 119        | 110        | 2.6%                  | 13.9%                 | 8.2%                  |
| Salobo                 | 21        | 18        | 8         | 65         | 13         | 19.9%                 | 167.3%                | 396.1%                |
| <b>Canada</b>          | <b>39</b> | <b>41</b> | <b>40</b> | <b>166</b> | <b>153</b> | <b>-5.7%</b>          | <b>-3.5%</b>          | <b>8.5%</b>           |
| Sudbury                | 24        | 27        | 19        | 103        | 79         | -9.3%                 | 28.5%                 | 31.1%                 |
| Thompson               | 1         | 1         | 0         | 2          | 3          | 28.2%                 | 53.0%                 | -16.9%                |
| Voisey s Bay           | 9         | 9         | 14        | 36         | 42         | 0.1%                  | -37.0%                | -14.8%                |
| Ore from thrid parties | 5         | 5         | 7         | 24         | 29         | -0.3%                 | -27.3%                | -16.6%                |
| <b>Chile</b>           | <b>1</b>  | <b>3</b>  | <b>4</b>  | <b>11</b>  | <b>14</b>  | <b>-71.2%</b>         | <b>-77.7%</b>         | <b>-21.1%</b>         |
| <b>Zambia</b>          | <b>2</b>  | <b>2</b>  | <b>1</b>  | <b>9</b>   | <b>1</b>   | <b>5.7%</b>           | <b>68.8%</b>          | <b>583.4%</b>         |
| <b>TOTAL COPPER</b>    | <b>95</b> | <b>95</b> | <b>81</b> | <b>370</b> | <b>292</b> | <b>0.0%</b>           | <b>16.8%</b>          | <b>26.9%</b>          |

(1) Vale s attributable production capacity of 40%.

Production overview

Copper production achieved an annual record of 370,000 t in 2013, 5,000 t more than our guidance for the year. The good performance was mainly a result of Salobo's ramp-up, which was responsible for 18% of the 2013 production.

In 4Q13, copper output was 94,600 t, matching the previous quarterly production record.

#### Brazilian Operations

Production of copper in 4Q13 at the Sossego mine totaled 31,700 t in the form of copper in concentrates, in line with the previous quarter.

Along with a successful ramp-up, Salobo I produced 21,100 t of copper in concentrates and achieved 84% of its nominal capacity. It also produced 40,300 troy ounces (oz) of gold as by-products. In December, Salobo achieved output of 8,148 t of copper in concentrates, which is only slightly lower than the plant's nominal capacity.

#### Canadian Operations

Sudbury production was 24,200 t, 9.3% lower than 3Q13. In early 4Q13, the Clarabelle mill experienced a series of minor operational breakdowns after maintenance in 3Q13, reducing production of copper concentrate.

Voisey's Bay production was 8,600 t in line with 3Q13, but 37% lower than 4Q12 due to lower

Table of Contents

copper grades in the ore mined and scheduled maintenance completed in December 2013.

African Operation

Lubambe, our Zambian JV, is ramping up and delivering 5,500 t of copper in concentrates on a 100% basis (attributable production of 2,200 t). Lubambe has a nominal capacity of 45,000 t per year.

Chile Operation *discontinued operation*

Output at Tres Valles, in Chile, was 800 t of copper cathodes up to October 31st, 2013, at which time we entered into a process to sell this operation. As previously announced, Vale completed the sale of the operation on December 9th, 2013.

*Nickel and copper by-products*

|                                | 4Q13       | 3Q13       | 4Q12       | 2013         | 2012         | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|--------------------------------|------------|------------|------------|--------------|--------------|-----------------------|-----------------------|-----------------------|
| <b>COBALT (metric tons)</b>    | <b>711</b> | <b>950</b> | <b>579</b> | <b>3,532</b> | <b>2,273</b> | <b>-25.1%</b>         | <b>22.8%</b>          | <b>55.4%</b>          |
| Sudbury                        | 206        | 176        | 105        | 845          | 589          | 16.8%                 | 96.8%                 | 43.4%                 |
| Thompson                       | 84         | 121        | 22         | 292          | 96           | -30.9%                | 272.6%                | 205.2%                |
| Voisey's Bay                   | 286        | 231        | 343        | 1,256        | 1,221        | 23.6%                 | -16.6%                | 2.9%                  |
| VNC                            | 136        | 413        | 98         | 1,117        | 315          | -67.1%                | 38.6%                 | 254.3%                |
| Others                         | 0          | 8          | 11         | 22           | 52           | n.m.                  | n.m.                  | -57.9%                |
| <b>PLATINUM (000 oz troy)</b>  | <b>43</b>  | <b>35</b>  | <b>22</b>  | <b>145</b>   | <b>134</b>   | <b>21.1%</b>          | <b>99.1%</b>          | <b>8.4%</b>           |
| Sudbury                        | 43         | 35         | 22         | 145          | 134          | 21.1%                 | 99.1%                 | 8.4%                  |
| <b>PALLADIUM (000 oz troy)</b> | <b>96</b>  | <b>86</b>  | <b>55</b>  | <b>352</b>   | <b>251</b>   | <b>11.3%</b>          | <b>75.8%</b>          | <b>40.2%</b>          |
| Sudbury                        | 96         | 86         | 55         | 352          | 251          | 11.3%                 | 75.8%                 | 40.2%                 |
| <b>GOLD (000 oz troy)</b>      | <b>88</b>  | <b>76</b>  | <b>47</b>  | <b>286</b>   | <b>165</b>   | <b>15.9%</b>          | <b>86.2%</b>          | <b>73.3%</b>          |
| Sudbury                        | 27         | 22         | 14         | 91           | 69           | 23.5%                 | 97.9%                 | 33.1%                 |
| Sossego                        | 21         | 22         | 20         | 78           | 75           | -4.4%                 | 4.0%                  | 3.5%                  |

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|                             |            |            |            |              |              |              |              |              |
|-----------------------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|
| Salobo                      | 40         | 32         | 13         | 117          | 21           | 24.9%        | 199.4%       | 451.1%       |
| <b>SILVER (000 oz troy)</b> | <b>514</b> | <b>429</b> | <b>390</b> | <b>1,915</b> | <b>2,012</b> | <b>20.0%</b> | <b>31.8%</b> | <b>-4.8%</b> |
| Sudbury                     | 514        | 429        | 390        | 1,915        | 2,012        | 20.0%        | 31.8%        | -4.8%        |

Cobalt

2013 cobalt production of 3,532 t was the highest yearly production.

Output of cobalt reached 711 t in 4Q13, 25.1% lower than 3Q13, mainly reflecting the decrease in VNC production, which totaled 136 t in 4Q13, due to the failure of the effluent placement line.

Platinum and palladium

Platinum output was 43,000 oz and palladium was 96,000 oz, 21.1% and 11.3% above 3Q13, respectively.

Gold

In 2013, gold achieved a record output of 286,000 oz.

Gold achieved the all-time high production figure of 88,000 oz in 4Q13, 15.9% higher than 3Q13, due to the increase in Salobo's output.

Table of Contents*Potash*

| 000 metric tons   | 4Q13       | 3Q13       | 4Q12       | 2013       | 2012       | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|-------------------|------------|------------|------------|------------|------------|-----------------------|-----------------------|-----------------------|
| <b>POTASH</b>     | <b>126</b> | <b>132</b> | <b>161</b> | <b>492</b> | <b>549</b> | <b>-4.7%</b>          | <b>-21.6%</b>         | <b>-10.3%</b>         |
| Taquari-Vassouras | 126        | 132        | 161        | 492        | 549        | -4.7%                 | -21.6%                | -10.3%                |

*Phosphates*

| 000 metric tons       | 4Q13         | 3Q13         | 4Q12         | 2013         | 2012         | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|-----------------------|--------------|--------------|--------------|--------------|--------------|-----------------------|-----------------------|-----------------------|
| <b>PHOSPHATE ROCK</b> | <b>2,286</b> | <b>2,104</b> | <b>2,060</b> | <b>8,277</b> | <b>7,982</b> | <b>8.6%</b>           | <b>10.9%</b>          | <b>3.7%</b>           |
| Brazil                | 1,234        | 1,229        | 1,188        | 4,731        | 4,772        | 0.4%                  | 3.9%                  | -0.9%                 |
| Bayóvar               | 1,051        | 875          | 872          | 3,546        | 3,209        | 20.2%                 | 20.5%                 | 10.5%                 |
| <b>MAP(1)</b>         | <b>305</b>   | <b>229</b>   | <b>307</b>   | <b>1,128</b> | <b>1,201</b> | <b>33.0%</b>          | <b>-0.7%</b>          | <b>-6.1%</b>          |
| <b>TSP(2)</b>         | <b>252</b>   | <b>187</b>   | <b>247</b>   | <b>905</b>   | <b>913</b>   | <b>34.4%</b>          | <b>1.9%</b>           | <b>-0.8%</b>          |
| <b>SSP(3)</b>         | <b>459</b>   | <b>595</b>   | <b>587</b>   | <b>2,102</b> | <b>2,226</b> | <b>-22.9%</b>         | <b>-21.8%</b>         | <b>-5.6%</b>          |
| <b>DCP(4)</b>         | <b>127</b>   | <b>85</b>    | <b>113</b>   | <b>444</b>   | <b>511</b>   | <b>49.5%</b>          | <b>13.1%</b>          | <b>-13.2%</b>         |

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(1) Monoammonium phosphate



(2) Triple superphosphate

(3) Single superphosphate

(4) Dicalcium phosphate

#### Production overview

Production of potash totaled 492,000 t in 2013, 58,000 t below our guidance for the period.

Phosphate rock output was 8.3 Mt in 2013, 0.2 Mt below our guidance for 2013, due to the performance of the Brazilian operations.

#### Potash

Production of potash totaled 126,000 t in 4Q13, 4.7% and 21.6% lower than in 3Q13 and in 4Q12, respectively, due to a maintenance stoppage of Taquari-Vassouras in 4Q13.

#### Phosphate Rock

Total production of phosphate rock achieved a new record, due to the ramp-up of Bayóvar and the good operational performance of the Brazilian mines. Output was 8.6% higher in 4Q13 than in 3Q13.

In 4Q13, Bayóvar produced 1.1 Mt, a new record, being 20.2% higher than 3Q13 due to the

Table of Contents

recovery from maintenance stoppage in last quarter.

MAP

In 4Q13, the production of MAP (monoammonium phosphate) totaled 305,000 t, 33.0% higher on a quarter-over-quarter basis as a consequence of the recovery from annual scheduled maintenance stoppages in 3Q13.

TSP

The output of TSP also increased against 3Q13, 34.4%, due to the recovery from a maintenance stoppage at Uberaba.

SSP

Production of SSP (single superphosphate) was 22.9% lower than in 3Q13, due to the annual maintenance stoppage during 4Q13.

DCP

DCP (dicalcium phosphate) production was 127,000 t, 49.5% higher than in 3Q13, due to the recovery from a scheduled maintenance stoppage.

*Nitrogen*

| 000 metric tons | 4Q13 | 3Q13 | 4Q12 | 2013 | 2012 | 4Q13/3Q13<br>% Change | 4Q13/4Q12<br>% Change | 2013/2012<br>% Change |
|-----------------|------|------|------|------|------|-----------------------|-----------------------|-----------------------|
|-----------------|------|------|------|------|------|-----------------------|-----------------------|-----------------------|

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|                         |     |     |     |     |     |        |        |        |
|-------------------------|-----|-----|-----|-----|-----|--------|--------|--------|
| <b>AMMONIA</b>          | 39  | 55  | 143 | 347 | 475 | -28.3% | -72.5% | -27.0% |
| <b>UREA</b>             | 0   | 0   | 143 | 219 | 483 | n.m.   | n.m.   | -54.6% |
| <b>NITRIC ACID</b>      | 117 | 110 | 117 | 416 | 478 | 6.3%   | -0.4%  | -12.9% |
| <b>AMMONIUM NITRATE</b> | 123 | 112 | 120 | 419 | 490 | 9.8%   | 2.4%   | -14.5% |

### Ammonia and Urea Production

In 4Q13, ammonia production decreased by 72.5% compared to production in 4Q12 due to the sale of Araucária on June 1st, 2013. Araucária operation produced nitrogens, with an annual production capacity of approximately 1.1 million tons of ammonia and urea.

As mentioned previously, we no longer produce urea and ammonia is being produced exclusively in Cubatão.

### Nitric Acid and Ammonium Production

The output of nitric acid and ammonium nitrate was in line with 3Q13.

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This press release may include statements that present Vale's expectations about future events or results. All statements, when based upon expectations about the future and not on historical facts, involve various risks and uncertainties. Vale cannot guarantee that such statements will prove correct. These risks and uncertainties include factors related to the following: (a) the countries where we operate, especially Brazil and Canada; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; and (e) global competition in the markets in which Vale operates. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM), the French Autorité des Marchés Financiers (AMF), and The Stock Exchange of

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Hong Kong Limited, and in particular the factors discussed under [Forward-Looking Statements](#) and [Risk Factors](#) in Vale's annual report on Form 20-F.

Table of Contents

**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.

Date: February 26, 2014

By: Vale S.A.  
(Registrant)

/s/ Rogerio T. Nogueira  
Rogerio T. Nogueira  
Director of Investor Relations

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