Vale S.A.
Form 6-K
February 18, 2016
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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 2016**

# 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.)

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(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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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 ValoresMobiliários (CVM), the French Autorité des Marchés Financiers (AMF), and The Stock Exchange of 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.

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Production highlights

Rio de Janeiro, February 18, 2016 Vale S.A. (Vale) delivered a strong operational performance in 4Q15 and in 2015, with annual and quarterly production records in iron ore, pellets, nickel, copper, cobalt and gold.

**Ferrous Minerals**

IRON ORE

- Annual supply record of 345.9 Mt(1) in 2015.
- Annual production record in Carajás of 129.6 Mt in 2015, 9.9 Mt higher than in 2014.
- Annual shipments(2) of 303.6 Mt in 2015, 18.9 Mt higher than in 2014.
- Quarterly production record in Carajás of 36.5 Mt, 2.6 Mt higher than in 3Q15 and 1.7 Mt higher than in 4Q14.
- Quarterly production at the N4WS and N5S extension mines in Carajás of 22.8 Mt in 4Q15, 4.9 Mt higher than in 3Q15.

PELLETS

- Annual production record, excluding Samarco´s output, of 46.2 Mt in 2015, 3.2 Mt higher than in 2014.

- Annual production record in Vargem Grande of 6.4 Mt in 2015, 0.6 Mt higher than in 2014, as well as annual production record in Tubarão VIII of 6.6 Mt in 2015.

**Base Metals**

NICKEL

- Annual production record of 291,000 t, 16,000 t higher than in 2014.

(1) Excluding Samarco s attributable production.

(2) Including manganese (1.9 Mt), pellets (27.4 Mt) and iron ore from third parties (0.3 Mt)

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- Annual production record at VNC of 30,800 t in 2015, 12,000 t higher than in 2014, with higher production share of Nickel Oxide (NiO) vs. Nickel Hydroxide Cake (NHC).

- Annual production record from Onça Puma of 24,000 t in 2015, 3,000 t higher than in 2014.

- Annual production record from PT Vale Indonesia Tbk of 81,200 t of nickel in matte, 3,200 t higher than in 2014.

- Quarterly overall production record of 82,700 t, 11,100 t higher than in 3Q15 and 9,100 t higher than in 4Q14.

- Quarterly production record at VNC of 9,600 t, 1,500 t higher than in 3Q15 and 2,900 t higher than in 4Q14.

COPPER

- Annual production(3) record of 423,800 t in 2015, 44,100 t higher than in 2014.

- Annual production record at Salobo of 155,000 t in 2015, 57,000 t higher than in 2014.

- Quarterly overall production(3) record of 112,500 t, 13,200 t higher than in 3Q15 and 7,800 t higher than in 4Q14.

- Quarterly production record at Salobo of 42,000 t, 1,100 t higher than in 3Q15 and 10,400 t higher than in 4Q14.

COBALT

- Annual production record of 4,533 t in 2015, 790 t higher than in 2014, driven by the increase in VNC production.

- Quarterly production record of 1,271 t, 100 t higher than in 3Q15, driven by an increase in Sudbury production and by the quarterly production record at VNC.

GOLD

- Annual production record of 420,000 oz in 2015, 99,000 oz higher than in 2014.

- Quarterly production record of 117,000 oz, 17,000 oz higher than in 3Q15 and 23,000 oz higher than in 4Q14.

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(3) Including Lubambe s attributable production

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**Coal**

- Annual production of 7.3 Mt in 2015, 1.3 Mt lower than in 2014, due to the stoppage of the Integra Coal and the Isaac Plains mines, which were placed in care and maintenance in 2Q14 and 3Q14 respectively.

- Annual production at Moatize of 4.9 Mt in 2015, in line with 2014, but with a better product mix (metallurgical coal production increased by 8.9%, while thermal coal production decreased by 12.6%).

- Annual production at Carborough Downs of 2.4 Mt in 2015, 0.5 Mt higher than in 2014.

- Quarterly overall production of 1.6 Mt, 0.5 Mt lower than in 3Q15, negatively impacted by a long wall move in Carborough Downs and by a stoppage for adjustments at the coal-handling and processing plant (CHPP) in Moatize.

**Fertilizers**

- Annual production record at Bayóvar of 3.9 Mt in 2015, 0.1 Mt higher than in 2014.

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**Production summary**

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | % change 4Q15/3Q15 | % change 4Q15/4Q14 | % change 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| Iron ore(1) | 88,411 | 90,739 | 86,297 | 345,879 | 331,556 | -2.6% | 2.4% | 4.3% |
| Pellets(1) | 10,377 | 12,196 | 11,642 | 46,198 | 42,965 | -14.9% | -10.9% | 7.5% |
| Manganese Ore | 651 | 644 | 723 | 2,441 | 2,352 | 1.0% | -10.0% | 3.8% |
| Coal | 1,585 | 2,052 | 2,310 | 7,344 | 8,645 | -22.7% | -31.4% | -15.1% |
| Nickel | 82.7 | 71.6 | 73.6 | 291 | 275 | 15.4% | 12.3% | 5.7% |
| Copper(2) | 112.5 | 99.3 | 105.4 | 423.8 | 379.7 | 13.4% | 6.7% | 11.6% |
| Cobalt | 1.271 | 1.171 | 1.266 | 4.531 | 3.743 | 8.6% | 0.4% | 21.1% |
| Gold (000 oz troy) | 117 | 100 | 94 | 420 | 321 | 17.6% | 25.6% | 30.8% |
| Potash | 137 | 125 | 147 | 481 | 492 | 10.3% | -6.5% | -2.3% |
| Phosphate rock | 2,122 | 1,935 | 2,209 | 8,163 | 8,421 | 9.7% | -4.0% | -3.1% |

(1) Excluding Samarco s attributable production.

(2) Including Lubambe s attributable production.

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Iron Ore

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | % change 4Q15/3Q15 | % change 4Q15/4Q14 | % change 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| Northern System | 36,534 | 33,889 | 34,858 | 129,554 | 119,657 | 7.8% | 4.8% | 8.3% |
| Carajás | 36,534 | 33,889 | 34,858 | 129,554 | 119,657 | 7.8% | 4.8% | 8.3% |
| Southeastern System | 26,459 | 31,246 | 26,448 | 112,626 | 107,458 | -15.3% | 0.0% | 4.8% |
| Itabira | 9,002 | 9,787 | 9,628 | 35,513 | 35,489 | -8.0% | -6.5% | 0.1% |
| Minas Centrais | 11,146 | 11,187 | 7,225 | 41,206 | 33,049 | -0.4% | 54.3% | 24.7% |
| Mariana | 6,310 | 10,272 | 9,595 | 35,908 | 38,920 | -38.6% | -34.2% | -7.7% |
| Southern System | 21,511 | 22,049 | 20,125 | 86,705 | 86,264 | -2.4% | 6.9% | 0.5% |
| Paraopeba | 5,953 | 6,648 | 6,165 | 25,827 | 28,220 | -10.3% | -3.3% | -8.4% |
| Vargem Grande | 8,487 | 7,554 | 6,159 | 29,259 | 25,032 | 12.3% | 37.8% | 16.9% |
| Minas Itabirito | 7,072 | 7,847 | 7,802 | 31,619 | 33,012 | -10.0% | -9.5% | -4.3% |
| Midwestern System | 857 | 1,041 | 1,542 | 4,514 | 5,836 | -17.7% | -44.4% | -22.6% |
| Corumbá | 408 | 627 | 1,015 | 2,819 | 3,782 | -35.0% | -59.8% | -25.5% |
| Urucum | 449 | 414 | 527 | 1,695 | 2,054 | 8.6% | -14.7% | -17.5% |
| **IRON ORE** | **85,361** | **88,225** | **82,973** | **333,399** | **319,215** | **-3.2%** | **2.9%** | **4.4%** |
| **TPP(1)** | 3,050 | 2,514 | 3,324 | 12,480 | 12,341 | 21.3% | -8.2% | 0.1% |
| **IRON ORE + TPP** | **88,411** | **90,739** | **86,297** | **345,879** | **331,556** | **-2.6%** | **2.4%** | **4.3%** |
| Samarco(2) | 1,555 | 3,884 | 3,823 | 12,683 | 13,146 | -60.0% | -59.3% | -3.5% |

(1) Third Party Purchases

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

**Production summary**

Vale s own iron ore production, excluding iron ore acquired from third parties and Samarco s attributable production, reached a record 333.4 Mt in 2015, 14.2 Mt higher than in 2014. Including third party purchases, annual supply reached 345.9 Mt.

In 2015, Carajás achieved a production record of 129.6 Mt, representing an increase of 9.9Mt in relation to 2014.

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The Southern System produced 86.7 Mt in 2015, its best annual volume since 2007. This 2015 production represents an increase of 0.5% against the 86.3 Mt produced in 2014.

The Southeastern System produced 112.6 Mt in 2015, an increase of 4.8% against the 107.5 Mt produced in 2014.

On a quarterly basis, Vale s iron ore own production ex-Samarco s attributable production was 85.4 Mt in 4Q15, an increase of 2.9% against the 83.0 Mt produced in 4Q14, despite the impact at the Mariana mining hub of the accident at Samarco s Fundão tailing dam. In order to offset the production decrease at the Mariana mining hub, immediate measures were taken to improve performance in other operations, enabling Vale to reach its 4Q15 planned production target and beat its annual supply guidance by 5.9Mt.

In addition to the above-mentioned impact at the Mariana hub and in line with the previously announced strategy of margin optimization, less efficient operations such as some of the beneficiation plants at the Feijão, Jangada, Pico and Fábrica operations, totaling annual capacity of 13Mt, were shut down in 3Q15. Productivity gains at the Brucutu, Gongo Soco, Timbopeba, Abóboras II and Mutuca mines, and at Plant 2 in Carajás, as well the ramp up of the Conceição I, Conceição II and Vargem Grande Itabirites plants offset the production loss at the closed beneficiation plants and at the Mariana hub.

Conceição I and Vargem Grande Itabirites plants concluded their ramp-up in 4Q15, while the ramp-up of the Conceição II Itabirites plant started in 2Q15 and has been progressing as planned.

Quarterly supply, including third party purchases, reached 88.4 Mt in 4Q15. All third party supply contracts were renegotiated to guarantee a positive contribution margin. Third party volumes increased in 4Q15 vs. 3Q15 taking advantage of railway capacity availability.

**Northern system**

Carajás achieved a new production record of 36.5 Mt in 4Q15, 7.8% and 4.8% higher than in 3Q15 and in 4Q14, respectively, mostly due to the ramp-up of the N4WS and N5S mines and the higher capacity utilization at Plant 2.

Production at the N4WS mine reached 14.2 Mt in 4Q15, 30% higher than in 3Q15 whilst production from the N5S extension mine reached 8.6 Mt in 4Q15.

Production at Plant 2 reached 8.0 Mt in 4Q15, 0.4 Mt higher than in 3Q15.

The average product grades from Carajás were 65.2% of iron ore, 1.8% of silica, 1.4% of alumina and 0.063% of phosphorus.

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**Southeastern system**

The Southeastern System, which encompasses the Itabira, Minas Centrais and Mariana mining hubs, produced 26.5 Mt in 4Q15, 4.8 Mt lower than in 3Q15 and in line with 4Q14.

Production at the Itabira mining hub was 9.0 Mt, 8.0% and 6.5% lower than in 3Q15 and 4Q14, respectively. The decrease in 4Q15 was mostly driven by the production halt for the tie-ins of the new beneficiation lines at the Conceição Itabirites II plant, whose ramp-up is progressing as planned. The operational performance of the Conceição I Itabirites plant, which ramp-up was concluded in 4Q15, has exceeded expectations.

Production at the Minas Centrais mining hub was 11.1 Mt in 4Q15, in line with 3Q15 and 3.9 Mt higher than in 4Q14, as a result of the ramp-up of the 5th beneficiation line at the Brucutu processing plant, which produced 1.5 Mt in 4Q15.

Production at the Mariana mining hub was 6.3 Mt, 38.6% and 34.2% lower than in 3Q15 and 4Q14, respectively, due to the accident at Samarco s Fundão tailing dam. Since then: (i) Vale´s Alegria mine is operating with a dry beneficiation process at a lower mine productivity; (ii) Vale´s Timbopeba plant stopped production due to the destruction of the conveyor belt which fed ROM from the Fabrica Nova mine; and (iii) Vale´s Fazendão mine interrupted its ROM production with the stoppage of Samarco s operations.

**Southern system**

The Southern System, composed of the Paraopeba, Vargem Grande and Minas Itabirito mining hubs, produced 21.5 Mt in 4Q15, 2.4% lower than in 3Q15 but 6.9% higher than in 4Q14.

Production at the Paraopeba mining hub was 0.7 Mt lower than in 3Q15, as a result of the end of a ROM sales contract. Production in 4Q15 was 0.2 Mt lower than in 4Q14, due to the stoppage of the Feijão and Jangada processing plants, but was partially offset by productivity gains at other plants. Both the Feijão and Jangada processing plants had higher beneficiation costs and delivered a lower quality product. The shutdown of these plants was a result of Vale´s strategy of reducing production of lower margin products.

Production at the Vargem Grande mining hub achieved a new record with an output of 8.5 Mt in 4Q15, 12.3% and 37.8% higher than in 3Q15 and in 4Q14, respectively, as a result of the ramp-up of the Vargem Grande Itabirites plant and the Abóboras II dry processing plant. The Vargem Grande Itabirites plant completed its ramp-up in 4Q15, reaching production of 2.1 Mt in 4Q15 and 5.4 Mt in 2015. The plant is currently producing high grade ore as planned. The Abóboras II dry processing plant produced 0.9 Mt in 4Q15.

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Production at the Minas Itabirito mining hub amounted to 7.1 Mt, 10% and 9.5% lower than in 3Q15 and 4Q14, respectively, as a result of our strategy to reduce production of lower quality products. Production was reduced at the Fábrica and Pico mines.

**Midwestern system**

The Midwestern System, comprising the Urucum and the Corumbá mines, produced 0.9 Mt in 4Q15, 0.2 Mt and 0.7 Mt lower than in 3Q15 and 4Q14, respectively, as a result of Vale s strategy to optimize inventory levels.

**Samarco**

In 4Q15 Samarco s pellet feed production (mostly dedicated to the production of Samarco s pellets) was 1.6 Mt, 60% lower than in 3Q15 and 4Q14, as a result of the interruption in production caused by the Samarco s Fundão tailings dam accident.

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Pellets

| | | | | | | % change | | |
|---|---|---|---|---|---|---|---|---|
| **000 metric tons** | **4Q15** | **3Q15** | **4Q14** | **2015** | **2014** | **4Q15/3Q15** | **4Q15/4Q14** | **2015/2014** |
| Southeastern System | 6,414 | 7,200 | 7,058 | 27,934 | 25,385 | -10.9% | -9.1% | 10.0% |
| Itabrasco (Tubarão 3) | 953 | 1,052 | 1,105 | 4,265 | 4,449 | -9.4% | -13.7% | -4.1% |
| Hispanobras (Tubarão 4) | 992 | 1,122 | 1,115 | 4,301 | 4,409 | -11.6% | -11.0% | -2.4% |
| Nibrasco (Tubarão 5 and 6) | 1,752 | 2,180 | 2,382 | 8,401 | 9,464 | -19.6% | -26.4% | -11.2% |
| Kobrasco (Tubarão 7) | 1,100 | 1,125 | 1,200 | 4,402 | 4,574 | -2.2% | -8.3% | -3.8% |
| Tubarão 8 | 1,616 | 1,720 | 1,257 | 6,564 | 2,490 | -6.0% | 28.6% | 163.6% |
| Southern System | 2,462 | 2,649 | 2,193 | 10,101 | 8,972 | -7.1% | 12.3% | 12.6% |
| Fabrica | 978 | 946 | 780 | 3,731 | 3,211 | 3.4% | 25.4% | 16.2% |
| Vargem Grande | 1,484 | 1,702 | 1,413 | 6,370 | 5,761 | -12.8% | 5.0% | 10.6% |
| Oman | 1,502 | 2,347 | 2,391 | 8,163 | 8,608 | -36.0% | -37.2% | -5.2% |
| **TOTAL PELLETS** | **10,377** | **12,196** | **11,642** | **46,198** | **42,965** | **-14.9%** | **-10.9%** | **7.5%** |
| Samarco (1) | 1,605 | 3,564 | 3,529 | 12,312 | 12,054 | -55.0% | -54.5% | 2.1% |

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

**Production overview**

Vale s pellet production, excluding Samarco s attributable production of 12.3 Mt, reached a record 46.2 Mt in 2015 with the ramp-up of the Tubarão 8 plant.

Vale s pellet production, excluding Samarco s attributable production of 1.6 Mt, reached 10.4 Mt in 4Q15. Production in 4Q15 was 14.9% lower than in 3Q15 and 10.9% lower than in 4Q14, mainly due to scheduled maintenance stoppages at some plants.

**Southeastern system**

Production at the Tubarão pellet plants Tubarão 3, 4, 5, 6, 7 and 8 amounted to 6.4 Mt in 4Q15, 10.9% and 9.1% lower than in 3Q15 and 4Q14, respectively, mainly due to scheduled maintenance stoppages in Plants 3, 4, 5 and 6.

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**Southern system**

Production at the Fábrica pellet plant was 1.0 Mt in 4Q15, 3.4% higher than in 3Q15 and 25.4% higher than in 4Q14, due to higher availability of pellet feed.

Production at the Vargem Grande pellet plant amounted to 1.5 Mt, 12.8% lower than in 3Q15 and 5.0% higher than in 4Q14, mainly as a result of lower feed availability.

**Oman operations**

Production at the Oman pellet plant reached 1.5 Mt in 4Q15, 36.0% lower than in 3Q15, due to a scheduled maintenance stoppage in the pellet plant.

**Samarco**

Samarco s attributable production was 1.6 Mt in 4Q15, 55.0% lower than in 3Q15 and 54.5% lower than in 4Q14, as result of the accident at Samarco s Fundão tailings dam on November 5th, 2015.

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Manganese ore and ferroalloys

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | % change 4Q15/3Q15 | % change 4Q15/4Q14 | % change 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| **MANGANESE ORE** | **651** | **644** | **723** | **2,441** | **2,352** | **1.0%** | **-10.0%** | **3.8%** |
| Azul | 485 | 468 | 513 | 1,706 | 1,695 | 3.7% | -5.4% | 0.6% |
| Urucum | 166 | 177 | 177 | 735 | 601 | -6.2% | -6.3% | 22.3% |
| Other mines | | | 33 | | 56 | n.m. | n.m. | n.m. |
| **FERROALLOYS** | **20** | **21** | **41** | **99** | **171** | **-6.2%** | **-51.3%** | **-41.8%** |
| Brazil | 20 | 21 | 41 | 99 | 171 | -6.2% | -51.3% | -41.8% |

**Production overview**

In 2015, manganese ore production increased by 3.8% and the output of ferroalloys was 41.8% lower than in 2014.

The ferroalloy plants in Minas Gerais (in Barbacena and Ouro Preto) remain shut down since 1Q15 as existing energy contracts expired and energy costs increased, impacting the economic viability of the ferroalloy operations. Production of manganese ore in the Morro da Mina mine was halted as a consequence of the stoppage of ferroalloy plants in Minas Gerais.

**Manganese ore production**

Production from the Azul manganese mine reached 485,000 t in 4Q15, 3.7% higher than in 3Q15, as a result of better productivity and greater sinter feed availability.

Production from the Urucum mine reached 166,000 t in 4Q15, 6.2% lower than in 3Q15, as a result of scheduled maintenance carried out at the main access to the underground mine.

**Ferroalloy production**

Ferroalloy production in 4Q15 was 20,000 t, 6.2% lower than in 3Q15, as one furnace in Barbacena operated to fulfill commercial contracts in July and was stopped again from August to December.

Production was comprised of 11,400 t of ferrosilicon manganese alloys (FeSiMn), 8,500 t of high-carbon manganese alloys (FeMnHC), with no production of medium-carbon manganese alloys (FeMnMC) due to lower market demand.

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Nickel

**Finished production by source**

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | 4Q15/3Q15 | % change 4Q15/4Q14 | 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| Canada | 39.7 | 38.5 | 42.1 | 160 | 156 | 3.0% | -5.8% | 2.3% |
| Sudbury | 13.0 | 18.3 | 15.1 | 54 | 64 | -28.8% | -13.4% | -15.3% |
| Thompson | 7.1 | 4.9 | 6.5 | 25 | 26 | 45.5% | 10.1% | -5.0% |
| Voisey s Bay | 14.7 | 9.6 | 12.6 | 53 | 48 | 53.5% | 16.8% | 9.8% |
| Ore from third parties(1) | 4.8 | 5.7 | 8.0 | 28 | 18 | -16.1% | -40.0% | 57.2% |
| Indonesia | 28.3 | 19.8 | 20.3 | 80 | 79 | 42.4% | 39.3% | 1.1% |
| New Caledonia(2) | 8.3 | 7.3 | 6.2 | 27 | 19 | 13.4% | 33.2% | 43.9% |
| Brazil | 6.4 | 5.9 | 5.0 | 24 | 21 | 8.4% | 28.2% | 13.9% |
| **TOTAL NICKEL** | **82.7** | **71.6** | **73.6** | **291** | **275** | **15.4%** | **12.3%** | **5.7%** |

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

(2) Production at VNC reached 9,600 t in 4Q15 and 30,800 t in 2015, whereas production of finished nickel from VNC totaled 8,300 t in 4Q15 and 27,000 t in 2015; the differences stem from the required processing time into finished nickel.

**Production overview**

Production of nickel reached a record 291,000 t in 2015. Nickel production reached 82,700 t in 4Q15, also a quarterly record, being 15.4% and 12.3% higher than in 3Q15 and in 4Q14, respectively.

**Canadian operations**

Production from the Sudbury mines reached 13,000 t in 4Q15, 28.8% and 13.4% lower than in 3Q15 and in 4Q14, respectively. Production was negatively impacted by lower than planned output at the Stobie mine, given the two seismic events that occurred in July and August. The mine operated at a lower production rate while mine redesign and remediation work were taking place. The Sudbury mill processed more feed from Voisey s Bay (Ovoid mine) to partially offset the lower production volumes from the Stobie mine.

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Production from the Thompson mines reached 7,100 t in 4Q15, being 45.5% higher than in 3Q15 as the operation carried out scheduled maintenance in August 2015 and 10.1% higher than in 4Q14.

Production from the Voisey s Bay mine reached 14,700 t in 4Q15, 53.5% higher than in 3Q15 and 16.8% higher than in 4Q14, with the resumption of the Sudbury and Thompson smelters after the planned maintenance carried out in August 2015.

Production at the Long Harbour processing plant reached 5,000 t in 4Q15, 40.8% higher than in 3Q15 as the operation continues its ramp-up. The plant operated on a blend of PTVI matte and nickel concentrate from Voisey s Bay in 2015 and began operating solely on nickel concentrate from Voisey s Bay in the beginning of 2016.

**Indonesian operation (PTVI)**

Production of finished nickel from PTVI reached 28,300 t in 4Q15, 42.4% higher than in 3Q15 as the availability of matte from PTVI was restored in 3Q15 after the maintenance shutdowns carried out in 1H15.

**New Caledonia operations (VNC)**

Production of NiO and NHC at VNC reached a record 9,600 t in 4Q15. VNC increased front end and back end operational stability in the plant and achieved a production record of 30,800 t in 2015. NiO represented 83% and NHC 17% of VNC s 4Q15 production.

**Brazilian operation (Onça Puma)**

Production from the Onça Puma operation reached 6,400 t, 8.4% and 28.2% higher than in 3Q15 and in 4Q14, respectively. In 2015, the Onça Puma operation recorded production of 24,400 t of nickel in ferronickel, a new record for that operation as it nears its nominal capacity of 25,000 t.

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Copper

**Finished production by source**

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | % change 4Q15/3Q15 | % change 4Q15/4Q14 | % change 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| **BRAZIL** | **64.8** | **65.4** | **58.4** | **260** | **208** | **-1.0%** | **10.9%** | **24.7%** |
| Sossego | 22.8 | 25.3 | 26.9 | 104 | 110 | -10.2% | -15.3% | -5.3% |
| Salobo | 42.0 | 40.1 | 31.6 | 155 | 98 | 4.9% | 33.1% | 58.2% |
| **CANADA** | **45.5** | **31.4** | **44.6** | **154** | **161** | **44.7%** | **2.0%** | **-4.2%** |
| Sudbury | 31.3 | 19.0 | 23.3 | 98 | 98 | 65.0% | 34.3% | 0.4% |
| Thompson | 0.3 | 0.1 | 0.4 | 1 | 2 | 291.4% | -26.0% | -24.0% |
| Voisey s Bay | 10.8 | 7.8 | 11.4 | 32 | 33 | 37.9% | -5.3% | -2.7% |
| Ore from third parties | 3.1 | 4.6 | 9.5 | 23 | 29 | -32.0% | -67.1% | -20.3% |
| **TOTAL EX-LUBAMBE** | **110.3** | **96.9** | **103.0** | **414** | **369** | **13.9%** | **7.1%** | **12.1%** |
| Lubambe(1) | 2.2 | 2.4 | 2.4 | 10 | 10 | -6.4% | -6.1% | -3.9% |
| **TOTAL COPPER** | **112.5** | **99.3** | **105.4** | **424** | **380** | **13.4%** | **6.7%** | **11.6%** |

(1) Attributable production.

**Production overview**

Copper production achieved a new annual record of 423,800 t in 2015. The production increase was driven primarily by the ramp-up of Salobo s second line.

Copper production reached 112,500 t in 4Q15, also a new record for our operations, being 13.4% and 6.7% higher than in 3Q15 and in 4Q14, respectively.

**Brazilian operations**

Production of copper in concentrate at Sossego totaled 22,800 t in 4Q15, 10.2% and 15.3% lower than in 3Q15 and in 4Q14, respectively, as a result of unscheduled maintenance at the crushing and grinding section of the plant.

Production of copper in concentrate at Salobo achieved a quarterly record of 42,000 t in 4Q15 and 155,400 t in 2015. Salobo s copper production was below plan in 2015 due to the lower grade ore at the Salobo mine and the lower stability at the concentration plant throughout the year. Salobo s concentration plant processed ROM at almost full capacity (24,000,000 tpy) in

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4Q15. Salobo is expected to improve copper production in 2Q16, as rain decreases and higher grade ore faces are mined. Salobo is expected to reach its full production capacity in 2H16.

**Canadian operations**

Production of copper from Sudbury reached 31,300 t in 4Q15, 65.0% higher than in 3Q15, as the operation carried out scheduled maintenance in 3Q15. Production was 34.3% higher than in 4Q14.

Production of copper from Voisey s Bay reached 10,800 t in 4Q15, 37.9% higher than in 3Q15 due to the higher supply of feed to Sudbury and Thompson after the planned maintenance carried out at the Sudbury and Thompson smelters in August 2015. Production was 5.3% lower than in 4Q14.

**African operation (Lubambe)**

Lubambe delivered 5,600 t of copper in concentrate on a 100% basis (attributable production of 2,200 t).

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Nickel and copper by-products

**Finished production by source**

| | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | 4Q15/3Q15 | % change 4Q15/4Q14 | 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| **COBALT (metric tons)** | **1,271** | **1,171** | **1,266** | **4,533** | **3,743** | **8.6%** | **0.4%** | **21.1%** |
| Sudbury | 272 | 171 | 226 | 751 | 833 | 59.3% | 20.3% | -9.8% |
| Thompson | 86 | 91 | 160 | 365 | 489 | -5.4% | -45.9% | -25.4% |
| Voisey s Bay | 90 | 263 | 242 | 849 | 952 | -65.7% | -62.6% | -10.9% |
| VNC | 780 | 611 | 629 | 2,391 | 1,384 | 27.6% | 23.9% | 72.7% |
| Others | 43 | 34 | 9 | 177 | 84 | 25.7% | 382.8% | 111.7% |
| **PLATINUM (000 oz troy)** | **37** | **29** | **52** | **154** | **182** | **30.6%** | **-28.4%** | **-15.6%** |
| Sudbury | 37 | 29 | 52 | 154 | 182 | 30.6% | -28.4% | -15.6% |
| **PALLADIUM (000 oz troy)** | **79** | **56** | **112** | **341** | **398** | **42.3%** | **-28.9%** | **-14.2%** |
| Sudbury | **79** | **56** | **112** | **341** | **398** | **42.3%** | **-28.9%** | **-14.2%** |
| **GOLD (000 oz troy)** | **117** | **100** | **94** | **420** | **321** | **17.6%** | **25.6%** | **30.8%** |
| Sudbury | 24 | 15 | 24 | 89 | 83 | 63.8% | -0.1% | 6.9% |
| Sossego | 18 | 19 | 20 | 80 | 78 | -6.7% | -11.8% | 2.7% |
| Salobo | 75 | 66 | 49 | 251 | 160 | 14.3% | 53.8% | 56.8% |
| **SILVER (000 oz troy)** | **518** | **415** | **717** | **1,669** | **1,693** | **24.8%** | **-27.7%** | **-1.4%** |
| Sudbury | 518 | 415 | 717 | 1,669 | 1,693 | 24.8% | -27.7% | -1.4% |

**Cobalt**

Cobalt production achieved a record 4,533 t in 2015 and totaled 1,271 t in 4Q15, driven by the higher production at VNC.

Cobalt production from Voisey s Bay decreased to 90 t in 4Q15 from the 263 t in 3Q15 as nickel concentrate from Voisey s Bay is being directed to Long Harbour, which did not produce any cobalt in 4Q15. Long Harbour is expected to start producing cobalt in 2016.

Cobalt production from Sudbury increased to 272 t in 4Q15, up from 171 t in 3Q15, as the Sudbury smelter resumed production after its planned maintenance in August 2015.

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**Platinum and palladium**

Platinum production was 37,000 oz and palladium production was 79,000 oz, 30.6% and 42.3% higher than in 3Q15, respectively, as Sudbury operated fully in the quarter.

**Gold**

Gold production had a record output of 420,100 oz in 2015 and a record 17,500 oz in 4Q15. Production increased with the operation of Sudbury at full capacity and the continued ramp-up of Salobo in 4Q15.

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Coal

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | % change 4Q15/3Q15 | % change 4Q15/4Q14 | % change 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| **METALLURGICAL COAL–** | 1,244 | 1,644 | 1,790 | 5,784 | 6,443 | -24.3% | -30.5% | -10.2% |
| Moatize | 873 | 914 | 987 | 3,401 | 3,124 | -4.5% | -11.5% | 8.9% |
| Carborough Downs | 371 | 730 | 573 | 2,383 | 1,857 | -49.2% | -35.3% | 28.3% |
| Integra Coal | 0 | 0 | 0 | 0 | 715 | n.m. | n.m. | n.m. |
| Isaac Plains | 0 | 0 | 230 | 0 | 746 | n.m. | n.m. | n.m. |
| **THERMAL COAL** | 341 | 408 | 520 | 1,560 | 2,202 | -16.5% | -34.5% | -29.2% |
| Moatize | 341 | 408 | 446 | 1,559 | 1,784 | -16.4% | -23.6% | -12.6% |
| Integra Coal | 0 | 0 | 0 | 0 | 92 | n.m. | n.m. | n.m. |
| Isaac Plains | 0 | 0 | 74 | 0 | 326 | n.m. | n.m. | n.m. |
| **TOTAL COAL** | 1,585 | 2,052 | 2,310 | 7,344 | 8,645 | -22.7% | -31.4% | -15.1% |

**Production overview**

Coal production reached 7.3 Mt in 2015, 15% lower than in 2014. The reduction was caused by the stoppage of the Integra Coal and Isaac Plains mines, which were placed in care and maintenance in 2Q14 and 3Q14 respectively.

Production of coal amounted to 1.6 Mt in 4Q15, 23% and 31% lower than in 3Q15 and 4Q14, respectively, as a result of a longwall move at Carborough Downs and a short stoppage at the coal handling and processing plant in Moatize.

**Australian operations**

Production in Australia reached 2.4Mt in 2015, 36% lower than in 2014, due to the stoppage of both the Integra Coal and the Isaac Plains mines in 2014.

Production at the Carborough Downs mine was 2.4 Mt in 2015, 28% higher than in 2014, due to the geological impact on the productivity of the longwall operation in 2014. Production amounted to 371,000 t in 4Q15, 49% and 35% lower than in 3Q15 and 4Q14 respectively, due to the longwall move in 4Q15.

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**Moatize operations**

Production at Moatize was 4.9 Mt in 2015, in line with 2014. Production of metallurgical coal increased by 8.9%, while production of thermal coal decreased by 12.6%. The share of metallurgical coal reached 72% in 2015.

Production at Moatize was 1.214 Mt in 4Q15, 108,000 t lower than in 3Q15, due to the lower physical availability of the plant. Operational performance was affected by preventive and corrective interventions in the coal-handling and processing plant as well as tie-ins with Moatize II. Moatize II is currently under commissioning with completion of cargo testing expected for March 2016.

Raw coal availability has also been reduced as a result of the revised mine plan, due to fire on 2 excavators in June and July 2015, which have already been replaced.

The upgrade of the whole brownfield section of the railway, connecting the Moatize site to the Nacala-à-Velha maritime terminal, was completed by the end of 2015 with four shipments delivered as of January 2016.

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Fertilizer Nutrients

**Potash**

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | 4Q15/3Q15 | % change 4Q15/4Q14 | 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| **POTASH** | **137** | **125** | **147** | **481** | **492** | **10.3%** | **-6.5%** | **-2.3%** |
| Taquari-Vassouras | 137 | 125 | 147 | 481 | 492 | 10.3% | -6.5% | -2.3% |

**Phosphates**

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | 4Q15/3Q15 | % change 4Q15/4Q14 | 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| **PHOSPHATE ROCK** | **2,122** | **1,935** | **2,209** | **8,163** | **8,421** | **9.7%** | **-4.0%** | **-3.1%** |
| Brazil | 1,102 | 977 | 1,205 | 4,282 | 4,620 | 12.9% | -8.5% | -7.3% |
| Bayóvar | 1,019 | 958 | 1,004 | 3,881 | 3,801 | 6.4% | 1.5% | 2.1% |
| **MAP(1)** | **276** | **242** | **278** | **1,097** | **1,065** | **14.1%** | **-0.7%** | **3.0%** |
| **TSP(2)** | **206** | **189** | **254** | **866** | **910** | **8.8%** | **-19.0%** | **-4.8%** |
| **SSP(3)** | **523** | **495** | **460** | **1,953** | **1,854** | **5.7%** | **13.8%** | **5.3%** |
| **DCP(4)** | **129** | **130** | **135** | **480** | **502** | **-0.6%** | **-4.5%** | **-4.4%** |

(1) Monoammonium phosphate

(2) Triple superphosphate

(3) Single superphosphate

(4) Dicalcium phosphate

**Potash**

Production of potash totaled 481,000 t in 2015, 2.3% lower than in 2014, due to the lower grades at the mine.

Potash production reached 137,000 t in 4Q15, 10.3% higher than in 3Q15 due to higher productivity at the concentration plant but 6.5% lower than in 4Q14 due to lower ore grades.

**Phosphate Rock**

Production of phosphate rock was 8.2 Mt in 2015, 3.1% lower than in 2014, as a result of a 7.3% production decline at the Brazilian operations with the stoppage of both the Araxá and Patos de Minas units in 3Q15 in order to balance supply chain demands.

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Output from the Brazilian operations was 1.1 Mt in 4Q15, 12.9% higher than in 3Q15, with the resumption of operations in Araxá. Production was 8.5% lower than in 4Q14, due to: (i) the stoppage of the Patos de Minas Unit, (ii) the maintenance stoppage in Catalão and (iii) the lower productivity at the Tapira beneficiation plant.

Bayóvar s output was 1.0 Mt in 4Q15, 6.4% higher than in 3Q15, as a result of the implementation of adjustments in the production process and the elimination of shipment constrains. Production was 1.5% higher than in 4Q14.

**MAP**

Production of MAP (monoammonium phosphate) totaled 1.1 Mt in 2015, 3% higher than in 2014, as production increased to meet stronger demand.

Production of MAP totaled 276,000 t in 4Q15, 14.1% higher and 0.7% lower than in 3Q15 and 4Q14, respectively. Production increased due to better availability of phosphoric acid.

**TSP**

Production of TSP (triple superphosphate) totaled 866,000 t in 2015, 4.8% lower than in 2014 as phosphoric acid was channeled into the production of MAP due to its better market demand.

Production of TSP totaled 206,000 t in 4Q15, 8.8% higher than in 3Q15, due to the reestablishment of the phosphoric acid supply. Production was 19.0% lower than in 4Q14 due to the prioritization of MAP production.

**SSP**

Production of SSP (single superphosphate) totaled 1.9 Mt in 2015, 5.3% higher than in 2014, due to higher production at Uberaba and absence of stoppages at the Cubatão plant.

Production of SSP totaled 523,000 t in 4Q15, 5.7% and 13.8% higher than in 3Q15 and 4Q14, respectively. Production increased on the back of the reestablishment of the Catalão and Cubatão operations.

**DCP**

DCP (dicalcium phosphate) production totaled 480,000 t in 2015, 4.4% lower than in 2014 as a result of lower production at the the Cajati plant, due to limited availability of resources, which was only partially offset by the record production in Uberaba.

DCP production totaled 129,000 t in 4Q15, 0.6% and 4.5% lower than in 3Q15 and 4Q14 respectively, due to the lack of phosphoric acid for the operation.

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Nitrogen

| 000 metric tons | 4Q15 | 3Q15 | 4Q14 | 2015 | 2014 | % change 4Q15/3Q15 | % change 4Q15/4Q14 | % change 2015/2014 |
|---|---|---|---|---|---|---|---|---|
| AMMONIA | 6 | 42 | 35 | 138 | 178 | -86.0% | -83.2% | -22.6% |
| NITRIC ACID | 116 | 127 | 120 | 475 | 469 | -8.4% | -2.8% | 1.3% |
| AMMONIUM NITRATE | 130 | 144 | 125 | 515 | 485 | -10.2% | 3.3% | 6.3% |

**Ammonia production**

Ammonia production totaled 138,000 t in 2015, 22.6% lower than in 2014, due to the maintenance stoppage at the Cubatão plant in 4Q15.

Ammonia production totaled 6,000 t in 4Q15, 86.0% and 83.2% lower than in 3Q15 and 4Q14 respectively, due to the above-mentioned maintenance stoppage.

**Nitric acid and ammonium nitrate production**

Production of nitric acid was 475,000 t in 2015, 1.3% higher than in 2014, due to the good production levels achieved in the first nine months of the year.

Nitric acid production totaled 116,000 t in 4Q15, 8.4% and 2.8% lower than in 3Q15 and 4Q14 respectively, due to the necessary maintenance stoppage at Cubatão.

Ammonium nitrate production was 515,000 t in 2015, 6.3% higher than in 2014, due to the good production volumes accumulated in the first nine months of the year.

Ammonium nitrate production totaled 130,000 t in 4Q15, 10.2% lower than in 3Q15, due to the above-mentioned stoppage at Cubatão.

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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/ Rogerio Nogueira
Director of Investor Relations

Date: February 18, 2016