

Vale S.A.
Form 6-K
April 24, 2012
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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

April 2012

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

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(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))

(Check One) Yes No

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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.)

(Check One) Yes No

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Production Report

Vale 1Q12 Production Report

DEALING WITH SEASONALITY

Rio de Janeiro, April 17, 2012 Vale S.A. (Vale) had a good operational performance in 1Q12, despite the challenges posed by severe weather conditions.

The summer season in the Southern Hemisphere was extremely rainy, hitting Brazilian mining districts such as the Iron Quadrangle in the southeast and Carajás in the north of the country, where our iron ore operations are concentrated.

We continued to ramp-up a group of new operations diversified by business bulk materials, base metals and fertilizers and by geography South America, the Middle East and Africa which includes Moatize, Oman, Tres Valles, Onça Puma and Bayóvar, new platforms of value creation.

For instance, Moatize, a world-class asset, produced 501,000 t(1) of high quality hard coking coal and 193,000 t of thermal coal in 1Q12.

The ramping up of these operations was instrumental in reaching quarterly record output levels for pellets, metallurgical coal and phosphate rock.

The tests conducted at VNC through integrated refinery operations were successful and we were able to produce 1,100 t of nickel oxide. An important by-product was the knowledge provided by this experience, which will be very useful to further improve the production process.

Despite the risks ahead of us, the production of nickel oxide at VNC is a major achievement, to the extent that it is an important step towards the operation of a large nickel limonite lateritic project for the first time in the industry.

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Quarterly production

000 metric tons	1Q11	4Q11	1Q12
Iron ore(a)	71,540	82,944	69,994
Pellets(b)	12,516	11,936	12,692
Manganese	498	757	484
Coal	1,421	2,698	2,350
Nickel	59	69	63
Copper	70	85	73
Potash	134	180	118
Phosphate rock	1,743	1,833	1,826

(a) Including Samarco's attributable production.

(b) Including Samarco's and Hispanobras's attributable production.

(1) Mt = million metric tons

t = metric tons

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- *Iron ore*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
IRON ORE	71,540	82,944	69,994	-15.6%	-2.2%
Northern System	22,651	30,232	21,711	-28.2%	-4.2%
Carajás	22,651	30,232	21,711	-28.2%	-4.2%
Southeastern System	28,694	29,635	26,759	-9.7%	-6.7%
Itabira	9,081	9,508	8,154	-14.2%	-10.2%
Mariana	9,374	9,838	9,340	-5.1%	-0.4%
Minas Centrais	10,239	10,289	9,265	-9.9%	-9.5%
Southern System	16,779	18,778	17,667	-5.9%	5.3%
Minas Itabirito	7,177	7,635	7,345	-3.8%	2.3%
Vargem Grande	4,459	5,015	4,800	-4.3%	7.7%
Paraopebas	5,144	6,128	5,521	-9.9%	7.3%
Midwestern System	914	1,610	1,302	-19.1%	42.4%
Corumbá	609	1,234	975	-21.0%	60.2%
Urucum	305	376	327	-13.2%	7.0%
Samarco(1)	2,501	2,689	2,556	-5.0%	2.2%

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

Vale's iron ore production reached 70.0 Mt in 1Q12, slightly below 1Q11 and a decrease of 15.6% quarter-over-quarter, basically due to the intense rainy season in Brazil.

The production of Carajás and the Southeastern System fell in relation to 1Q11, while the Southern and Midwestern Systems and Samarco had a better performance than the same quarter of last year.

Rainfall at Carajás was even heavier than last summer. Precipitation levels were 57% higher than in 1Q11, reaching a peak in January, when it reached 966.6 mm.

Due to the weather challenges, we produced 21.7 Mt at the Carajás mining site in 1Q12, which was 28.2% and 4.2%, respectively, below the previous quarter and 1Q11. In addition to the heavy rainfall, we experienced operational issues due to the low availability of loading equipment.

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As mentioned in a release on January 11, 2012, we declared force majeure because of heavy rainfall, which caused negative effects on the Southeastern and Southern Systems as it led to stoppages on mining and railroad operations.

The accident with a structure at the Carajás railway bridge, which happened on March 16, affected shipments but had no effect on output.

The Southeastern System, which encompasses the Itabira, Mariana and Minas Centrais mining sites, produced 26.8 Mt, 9.7% lower than 4Q11 and 6.7% less than 1Q11. The severe rainfall mainly affected the Itabira site. At Minas Centrais, output decreased influenced by the performance of the Gongo Soco mine. Due to the impoverishment of its resources, Gongo Soco production has been declining.

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Iron ore output from the Southern System reached 17.7 Mt, 5.9% below 4Q11, but 5.3% higher than 1Q11 due to operational improvements, related to preventive maintenance actions to mitigate the damage caused by the rainy season.

The Midwestern System, comprised of Urucum and Corumbá, produced 1.3 Mt, 19.1% lower than 4Q11 but 42.4% higher than 1Q11. Alongside seasonal underperformance of the plant operation, delays in the arrival of mine equipment contributed to the decrease in production vis-à-vis 4Q11.

- *Pellets*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
PELLETS	12,516	11,936	12,692	6.3%	1.4%
Tubarão I and II	1,336	1,393	1,062	-23.8%	-20.6%
Fábrica	947	971	907	-6.6%	-4.2%
São Luís	1,337	1,046	962	-8.1%	-28.0%
Vargem Grande	1,276	504	823	63.1%	-35.5%
Oman	0	607	1,415	133.2%	n.m.
Nibrasco	2,408	2,123	2,257	6.3%	-6.3%
Kobrasco	1,222	1,168	1,139	-2.5%	-6.8%
Hispanobras(1)	542	423	540	27.6%	-0.4%
Itabrasco	1,020	974	1,019	4.7%	-0.1%
Samarco(2)	2,428	2,726	2,570	-5.7%	5.8%

(1) Vale's attributable production capacity of 50.89%.

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

Pellet production was 12.7 Mt in 1Q12, an increase of 6.3% compared to the previous quarter and slightly higher than 1Q11, being the highest production mark achieved in a first quarter.

The ramp-up of the Oman plants was the main determinant of the good performance. The Oman operations delivered 1.4 Mt of direct reduction pellets in 1Q12 against 607,000 t in 4Q11.

In 1Q12, output of Tubarão I & II plants reached 1.1 Mt, a decrease of 23.8% over 4Q11, reflecting the effects of preventive maintenance stoppage during the first two months of the year. Their performance was also affected by the insufficient supply of pellet feed, caused by the heavy rainfall.

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The production of Fábrica was down 6.6% from 4Q11, also reflecting shortage in pellet feed availability.

Vargem Grande production had an increase of 63.1% on a quarter-over-quarter basis, recovering from the operational problems faced by mills #1 and #2. Nevertheless, its output was 35.5% lower than 1Q11, due to the longer than expected normalization of mill #1, which took place only in early March.

In order to accommodate some weakness in the demand for pellets, the pace of production of São Luís was slowed, entailing an 8.1% drop in its output compared to 4Q11 and 28.0% against 1Q11.

In 1Q12, Nibrasco and Itabasco had an increase of 6.3% and 4.7%, respectively, on a quarter-over-quarter basis, recovering from the maintenance stoppages in both operations in the previous quarter.

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Kobrasco production was down 2.5%, when compared to the previous quarter, reflecting a lower supply of pellet feed and preventive maintenance in the mills.

The attributable production of the three pellet plants of the 50%-owned Samarco JV, was 2.6 Mt in 1Q12, the highest level achieved in a first quarter, 5.7% lower than 4Q11, as plant #1 was forced to stop operations in January due to the shortage of pellet feed.

- *Manganese ore and ferroalloys*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
MANGANESE ORE	498	757	484	-36.1%	-2.9%
Azul	417	628	379	-39.6%	-9.0%
Urucum	52	80	67	-16.4%	27.1%
Other mines	29	50	38	-23.2%	30.3%
FERROALLOYS	113	106	106	0.1%	-6.5%
Brazil	52	49	50	1.0%	-3.9%
Dunkerque	37	30	30	-0.5%	-19.8%
Mo I Rana	25	27	27	-1.0%	8.1%

In 1Q12, the output of the Carajás manganese mine Azul was 39.6% lower than the previous quarter, amounting to 379,000 t. The performance was impacted by the rainy season and also by a preventive maintenance stoppage in the plant.

Urucum output decreased 16.4% on a quarter-over-quarter basis, due to the effects of the rainy season. On the other hand, our production increased 27.1% when compared to 1Q11, due to some transportation problems at that time.

Morro da Mina, which is part of the other mines, also suffered from heavy rainfalls; output was 23.2% lower than 4Q11. However, Morro da Mina performance was 30.3% higher than 1Q11, since in January 2011 the mine was operating with spare capacity.

Ferroalloy quarterly production was comprised of 54,900 t of ferrosilicon manganese alloys (FeSiMn), 44,900 t of high-carbon manganese alloys (FeMnHc) and 6,300 t of medium-carbon manganese alloys (FeMnMC).

In 1Q12, Brazilian output of ferroalloys was in line with the previous quarter. The production from operations at Dunkerque, France, was slightly lower than the previous quarter and down 19.8% on a year-over-year basis, reflecting lower demand for FeMnHC in 1Q12. Additionally, production from Norwegian operations of Mo I Rana was slightly lower on a quarterly basis.

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- *Coal*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
METALLURGICAL COAL	488	1,174	1,127	-4.0%	130.8%
Moatize	0	275	501	n.m.	n.m.
Carborough Downs	231	514	325	-36.8%	40.6%
Integra Coal	186	169	124	-26.9%	-33.4%
Others	71	216	177	-18.1%	147.9%
THERMAL COAL	933	1,524	1,223	-19.7%	31.1%
Moatize	0	212	193	-9.0%	n.m.
El Hatillo	835	1,090	848	-22.2%	1.5%
Integra Coal	71	122	81	-34.0%	14.2%
Others	28	99	102	2.3%	268.7%

In 1Q12, coal output was 2.4 Mt, versus 2.7 Mt in the previous quarter, reflecting the effects of the rainy season and geological problems in Australia. However, production rose 65.4% on a year-on-year basis, mostly due to the ramp up of Moatize.

Metallurgical coal production was 4.0% lower than 4Q11, but achieved the best performance ever for a first quarter. Thermal coal output decreased 19.7% quarter-on-quarter while expanding 31.1% year-on-year.

Moatize, the first phase of the Moatize coal project, in Tete, Mozambique, is ramping up production. In 1Q12, 501,000 t of hard coking coal and 193,000 t of thermal coal were produced. Output composition is converging to the normal planned mining split of 80% metallurgical coal and 20% thermal.

Production of metallurgical and thermal coal at Integra Coal, in Australia, was 124,000 t and 81,000 t, respectively, in 1Q12. Metallurgical coal output was negatively impacted by geological failure issues throughout the quarter. Open cut mining operations were restricted by above average seasonal rainfall in New South Wales.

Carborough Downs, whose production is 100% metallurgical coal, decreased its output to 325,000 t in 1Q12 from 514,000 t in 4Q11. The performance was a consequence of poor geological conditions during most of the quarter in the section where the longwall mining was taking place.

However, when compared to 1Q11 Carborough Downs production increased by 40.6%, achieving the best performance for a first quarter.

El Hatillo, our thermal coal mine, reached a production of 848,000 t, 22.2% lower than 4Q11, due to the coal seams and geological conditions.

Table of Contents**BASE METALS**• *Nickel*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
NICKEL	59	69	63	-7.8%	7.5%
Sudbury	14	19	23	15.7%	57.8%
Thompson	8	6	6	-1.7%	-26.4%
Voisey s Bay	16	21	14	-32.5%	-10.1%
Sorowako	18	15	12	-19.1%	-30.4%
VNC	0	1	2	73.9%	n.m.
Onça Puma	0	3	4	21.5%	n.m.
Others(1)	2	2	2	-7.1%	-15.6%

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

Nickel production was 63,200 t in 1Q12, 5,300 t lower than the previous quarter, but 7.5% higher than 1Q11. The performance of this quarter was influenced by weaker production at Voisey s Bay and Sorowako, which more than offset the increases at Sudbury, VNC and Onça Puma.

Finished nickel production from Sudbury was 15.7% higher than 4Q11. The temporary suspension of mining operations in February did not affect the output of finished nickel, as it was supported by the drawdown of feed inventory.

In 1Q12 production at Thompson was 6,000 t, in line with the previous quarter but 2,200 t down on a year-over-year basis due to lower physical availability of equipment and manpower.

Voisey s Bay production was 14,400 t in 1Q12, a decrease of 6,900 t from 4Q11. The 1Q12 production, running at an above capacity annualized level, was normal for the quarter. The basis for comparison, 4Q11, was inflated by the decision to produce and sell nickel in nickel concentrates instead of shipping it to be refined at Sudbury, which involves a much longer period of time.

Finished nickel production sourced from Sorowako, Indonesia, was 12,300 t, down 19.1% from the previous quarter and 30.4% lower than 1Q11. The decrease in production from Sorowako was related to the downtime hours for the required furnace repair after the metal cut-out that occurred in 4Q11.

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VNC produced 2,300 t of nickel in nickel hydroxide cake, 1,000 t higher than 4Q11. Tests in the integrated refinery operations were conducted and production also ramped up. The tests were successful and we managed to produce 1,100 t of nickel oxide. It is not accounted for as production until it is processed into utility nickel and sold.

Lines #1 and #2 of Onça Puma were operating and produced 4,000 t of nickel in ferronickel, increasing 21.5% on a quarter-on-quarter basis.

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- Copper*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
COPPER	70	85	73	-14.1%	4.5%
Sossego	23	32	25	-22.6%	10.8%
Sudbury	25	27	24	-12.4%	-6.6%
Thompson	1	0	1	n.m.	130.5%
Voisey's Bay	13	14	11	-17.1%	-13.3%
Tres Valles	1	3	4	8.3%	n.m.
Others	7	8	8	-4.8%	11.0%

In 1Q12, copper production was 72,900 t, decreasing 12,000 t from the previous quarter.

The weaker performance was caused by a maintenance shutdown of the Sossego operations and the temporary stoppage of mining at Sudbury. Unlike the production of finished nickel, which not only involves a longer cycle but could rely on feed inventories, the output of copper concentrates, which accounts for a large part of our copper production, was directly affected by the shutdown of the Sudbury mines.

Production of copper in concentrates in 1Q12 from the Sossego mine at Carajás decreased 22.6% on a quarter-over-quarter basis

Output from our Canadian operations reached 44,200 t in 1Q12, down 4,900 t from 4Q11, given the fall of Sudbury production.

Operations at Tres Valles, in Chile, continued to ramp-up to nominal capacity reaching 3,600 t of copper cathodes in 1Q12.

Tres Valles is a small operation but it is relevant as it is our first experience with a SX-EW operation after the start-up of our first copper sulphide greenfield project, Sossego, in 2004.

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- Nickel by-products*

	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
COBALT (metric tons)	580	787	592	-24.8%	2.0%
Sudbury	41	247	206	-16.6%	n.m.
Thompson	51	31	22	-29.9%	-57.1%
Voisey's Bay	427	448	310	-30.8%	-27.5%
VNC	22	51	40	-21.6%	81.8%
Others	38	10	14	43.4%	-63.2%
PLATINUM (000 oz troy)	57	41	38	-7.4%	-33.4%
Sudbury	57	41	38	-7.4%	-33.4%
PALLADIUM (000 oz troy)	72	64	59	-7.7%	-18.6%
Sudbury	72	64	59	-7.7%	-18.6%
GOLD (000 oz troy)	30	34	19	-43.9%	-36.9%
Sudbury	30	34	19	-43.9%	-36.9%
SILVER (000 oz troy)	595	683	595	-12.9%	0.0%
Sudbury	595	683	595	-12.9%	0.0%

Cobalt production in 1Q12 amounted to 592 t, down 195 t from 4Q11, mostly due to lower production in Sudbury as a result of the temporary stoppage to deal with safety issues.

In 1Q12, production of platinum and palladium was 97,000 troy ounces, 8,000 troy ounces lower than 4Q11, also reflecting production downtime at our Sudbury mining operations.

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000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
POTASH	134	180	118	-34.5%	-12.0%
Taquari-Vassouras	134	180	118	-34.5%	-12.0%

• *Phosphates*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
PHOSPHATE ROCK	1,743	1,833	1,826	-0.4%	4.8%
Brazil	1,148	1,120	1,112	-0.7%	-3.1%
Bayóvar	595	713	714	0.1%	20.0%
MAP(1)	210	266	311	17.1%	48.5%
TSP(2)	233	205	241	17.6%	3.2%
SSP(3)	545	649	484	-25.5%	-11.2%
DCP(4)	157	111	144	30.2%	-8.1%

(1) Monoammonium phosphate

(2) Triple superphosphate

(3) Single superphosphate

(4) Dicalcium phosphate

As our sales are primarily destined to the Brazilian market, where the demand for nutrients is more concentrated in the second half of the year, our production tends to be weaker in the first half of the year.

Production of potash was 118,000 t in 1Q12, decreasing 34.5% quarter-over-quarter and 12.0% year-over-year.

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The output reduction was caused by the geological conditions of the mine. We are implementing improvements in infrastructure and conducting maintenance works to deal with these issues.

In 1Q12, total production of phosphate rock, which is used to feed the output of phosphate nutrients, was slightly lower than 4Q11, but achieved a record high for a first quarter, reflecting the ramp-up of Bayóvar.

Total production of phosphate rock in 1Q12 was 4.8% higher than 1Q11. Output from Brazilian operations decreased 0.7% on a quarter-over-quarter basis due to maintenance stoppages and the beginning of the rainy season in Brazil. The decrease was offset by production from Bayóvar, which is ramping up and increased 20% over 1Q11.

The production of MAP (monoammonium phosphate) amounted to 311,000 t, up 17.1% on a quarter-over-quarter basis, due to the start-up of phase III in Uberaba. This brownfield project consists of investments in the production stages of phosphate rock, sulfuric acid and phosphoric acid, and the adaptation of the MAP plant that will be

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able to granulate TSP, allowing greater operational flexibility.

TSP (Triple superphosphate) production was 17.6% higher on a quarter-over-quarter basis, showing a recovery after stoppages in the sulfuric acid plant in 4Q11.

In 1Q12, the production of SSP (single superphosphate) was 25.5% lower than 4Q11, as a result of stoppages for maintenance equipment and the shutting down process at the Cubatão plant.

DCP (dicalcium phosphate) production was 30.2% higher than 4Q11 showing a recovery after the annual scheduled maintenance stoppage, which occurred during November and December.

- Nitrogen*

000 metric tons	1Q11	4Q11	1Q12	% Change 1Q12/4Q11	% Change 1Q12/1Q11
AMMONIA	157	157	132	-15.7%	-16.0%
UREA	159	159	107	-32.4%	-32.6%
NITRIC ACID	107	122	118	-3.3%	9.9%
AMMONIUM NITRATE	103	127	119	-6.9%	15.4%

In 1Q12, ammonia and urea production decreased 15.7% and 32.4%, respectively, when compared to 4Q11, as a result of a scheduled stoppage for maintenance.

The output of nitric acid and ammonium nitrate was 3.3% and 6.9%, respectively, lower than last quarter.

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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 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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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)

Date: April 17, 2012

By:

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