Vale S.A.
Form 6-K
April 30, 2014
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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 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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1Q14ProductionReport

Production Highlights

Rio de Janeiro, April 30, 2014 Vale S.A. (Vale) reached 71.1 Mt of iron ore production, the best performance for a first quarter since 1Q08, with gains in the Northern, Southeastern and Southern Systems compared to 1Q13, helped by better weather conditions in 1Q14 and the ramp-ups of the Plant 2 (Additional 40 Mtpy) and the Conceição Itabiritos projects. In particular, Carajás production increased by 8.1%. Output decreased compared to 4Q13 due to scheduled maintenance stoppages that normally occur in the first half of the year.

In the beginning of the year, 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 third party ore).

Pellets production was 9.9 Mt in 1Q14, 8.6% higher than in 1Q13 basically due to better weather conditions.

Production of nickel reached 67,500 t in 1Q14, also a new record for a first quarter. Negative impacts from a longer and colder winter in our Canadian operations were offset by increased production from Onça Puma and Vale New Caledonia.

VNC resumed its operations on January 1st, 2014, following repairs to the effluent placement and dispersion line. Total nickel production in the form of nickel oxide and nickel hydroxide cake was 5,600 t (3,300 of NHC and 2,300 of NiO) in 1Q14, matching its best quarter to date, including 2,688 t produced in March, which was a record month for the operation.

Salobo I continued its ramp-up, producing 21,100 t of copper in concentrates in 1Q14, reaching 84.4% of its nominal capacity.

Coal production in 1Q14 reached 1.8 Mt, the best first quarter ever due to Moatizes s ramp-up but 21.0% lower than in 4Q13 mostly due to the weak performance of Carborough Downs.

Moatize produced 1.009 Mt in 1Q14, a new record for a first quarter, of which 0.595 Mt of metallurgical coal and 0.414 Mt of thermal coal. Metallurgical and thermal coal output increased by 48.4% and 49.2%, respectively, when compared to 4Q13.

In 1Q14 fertilizer output fell when compared to 4Q13, reflecting maintenance stoppages, which are concentrated in the first half of the year. The ramp-up of Bayóvar was interrupted to modify the source of energy for two dryers with the objective of reducing operating costs.

Production Summary

				1Q14/4Q13	1Q14/1Q13
000 metric tons	**1Q14**	**4Q13**	**1Q13**	**% change**	**% change**
Iron ore (1)	71,064	81,251	64,851	-12.5%	9.6%
Pellets(1)	9,928	10,409	9,141	-4.6%	8.6%
Nickel	67.5	67.9	65.1	-0.6%	3.7%
Copper(2)	88.4	94.6	89.5	-6.5%	-1.2%
Coal	1,785	2,258	1,752	-21.0%	1.9%
Manganese	470	638	501	-26.4%	-6.2%
Potash	109	126	120	-13.4%	-8.9%
Phosphate rock	1,932	2,286	1,991	-15.5%	-3.0%

(1)Excluding Samarco s attributable production.

(2) Including Lubambe s attributable production.

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Iron ore

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
Northern System	**23,365**	**31,584**	**21,605**	**-26.0%**	**8.1%**
Carajás	23,365	31,584	21,605	-26.0%	8.1%
Southeastern System	**25,822**	**28,205**	**24,782**	**-8.4%**	**4.2%**
Itabira	7,827	9,147	6,780	-14.4%	15.4%
Minas Centrais	8,434	9,130	9,146	-7.6%	-7.8%
Mariana	9,561	9,928	8,856	-3.7%	8.0%
Southern System	**20,592**	**19,732**	**17,039**	**4.4%**	**20.9%**
Paraopebas	6,916	6,877	5,524	0.6%	25.2%
Vargem Grande	5,474	5,031	4,891	8.8%	11.9%
Minas Itabirito	8,202	7,825	6,624	4.8%	23.8%
Midwestern System	**1,285**	**1,729**	**1,425**	**-25.7%**	**-9.9%**
Corumbá	774	1,208	988	-35.9%	-21.6%
Urucum	511	521	437	-2.1%	16.8%
TOTAL IRON ORE	**71,064**	**81,251**	**64,851**	**-12.5%**	**9.6%**
Samarco(1)	**2,414**	**2,780**	**2,685**	**-13.2%**	**-10.1%**

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

Production overview

In 1Q14, iron ore output was 71.1 Mt, excluding Samarco s attributable production, being the best performance for a first quarter since 1Q08 and 9.6% better than the same period last year with gains in the Northern, Southeastern and Southern Systems.

Production in the first quarter of the year tends to be weak due to weather-related seasonality. In 1Q14, we had better weather conditions which helped us improve production compared to the same period in previous years. Output decreased compared to 4Q13 due to scheduled maintenance stoppages.

Northern System

Production reached 23.4 Mt in 1Q14, 8.1% higher than in 1Q13 due to better weather conditions and the successful ramp-up of Plant 2 which produced 3.3 Mt in 1Q14. Output was 26.0% lower than in the previous quarter due to scheduled maintenance and lower mine productivity as a result the traditional fog in Carajás during this time of the year.

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We are activating new trucks which will be used to transport the additional ore we will produce this year in Carajás.

Southeastern System

The Southeastern System, which encompasses the Itabira, Minas Centrais and Mariana mining hubs, produced 25.8 Mt in 1Q14, 4.2% more than in 1Q13 and 8.4% less than in 4Q13, mostly due to scheduled maintenance stoppages.

Production of the Itabira mining hub was 1.0 Mt higher than in 1Q13 due to the successful ramp-up of Conceição Itabiritos. Output was 1.3 Mt lower than in 4Q13 due to scheduled maintenance.

Production of the Minas Centrais mining hub was 8.4 Mt in 1Q14, 7.6% lower than last quarter and 7.8% lower than production in the same period of last year due to the rundown of the Gongo Soco mine, which is scheduled to close in 2014.

Output of the Mariana mining hub of 9.6 Mt was a new record for a first quarter due to the exploitation of new mine sections at Fábrica Nova, as a result of a mining license granted at the end of May, 2013. The better weather conditions also supported the good performance. Production was 0.4 Mt lower than in 4Q13 due to scheduled maintenance.

Southern System

The Southern System, composed of the Paraopeba, Vargem Grande and Minas Itabirito mining hubs, produced 20.6 Mt in 1Q14, a new record for a first quarter, with gains across all mine hubs when compared to 4Q13 and 1Q13.

Production was 4.4% higher than in 4Q13 due to the recovery from the rainfalls at the end of December, 2013.

Output was 20.9% higher than in 1Q13, being a new record for a first quarter, due to the good weather conditions.

Midwestern System

The Midwestern System mining hub, comprising Urucum and Corumbá, produced 1.3 Mt in 1Q14, 9.9% less than in the same period of last year due to a managerial decision to reduce inventory. In 2014, production will be slightly lower than in 2013 without any impact on sales.

Samarco

Attributable production from the three pellet plants in 1Q14 was lower than in 4Q13 and in 1Q13 due to scheduled and corrective maintenance in of one of Samarco´s iron ore pipelines.

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Pellets

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
Southeastern System	**5,809**	**5,692**	**5,169**	**2.0%**	**12.4%**
Nibrasco	2,402	2,412	2,191	-0.4%	9.6%
Kobrasco	1,170	1,179	1,133	-0.8%	3.2%
Hispanobras(1)	1,119	989	755	13.1%	48.2%
Itabrasco	1,118	1,112	1,090	0.6%	2.5%
Southern System	**2,278**	**2,413**	**2,007**	**-5.6%**	**13.5%**
Fabrica	802	955	954	-16.0%	-15.9%
Vargem Grande	1,476	1,458	1,053	1.2%	40.1%
Oman	**1,842**	**2,304**	**1,965**	**-20.1%**	**-6.3%**
TOTAL PELLETS	**9,928**	**10,409**	**9,141**	**-4.6%**	**8.6%**
Samarco(2)	**2,219**	**2,755**	**2,530**	**-19.5%**	**-12.3%**

(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 2.2 Mt, Vale s pellets production was 9.9 Mt in 1Q14, 8.6% higher than in 1Q13 and 4.6% lower than in 4Q13.

Better weather conditions in 1Q14 supported the increase in pellet production. Output was still lower than in 4Q13 due to scheduled maintenance stoppages which are concentrated in the first half of the year.

Southeastern System

Production volumes at the Tubarão operating plants Nibrasco, Kobrasco, Hispanobras and Itabrasco increased to 5.8 Mt in 1Q14 from 5.7 Mt in 4Q13 and 5.2 Mt in 1Q13.

The quarter-on-quarter improvement was partially due to the intense rainfall at the end of December 2013 and the bringing forward of the scheduled maintenance stoppage of Nibrasco and Itabrasco to December 2013. The increase in output compared to 1Q13 was mostly due to the maintenance stoppage in Hispanobras for 2 months at the beginning of 2013.

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Southern System

Fábrica produced 0.8 Mt of pellets, 16.0% and 15.9% less than in 4Q13 and in 1Q13 respectively, due to a scheduled maintenance stoppage in 1Q14.

Vargem Grande pellet output was 1.5 Mt, slightly above the previous quarter and 40.1% higher than in 1Q13, given Vale´s decision to increase capacity utilization of Vargem Grande´s pellet plant.

Oman operations

The Oman operations produced 1.8 Mt of direct reduction pellets in 1Q14, less than in 4Q13 and in 1Q13 due to a scheduled maintenance stoppage in 1Q14. The Oman pellet plant did not undergo scheduled preventive maintenance in 1Q13 because the operation was in ramp-up at that time.

Samarco

Attributable production from Samarco´s three plants was 19.5% and 12.3% lower than in 4Q13 and in 1Q13, respectively, due to a scheduled maintenance stoppage of pellet plant I in 1Q14.

The start-up of Samarco s fourth pellet plant (pellet plant IV), together with the expansion of its mine, construction of a new slurry pipeline and improvements to its maritime terminal infrastructure is expected for 2Q14. Samarco´s pellet plant IV has a nominal capacity of 8.3 Mtpy.

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Manganese ore and ferroalloys

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
MANGANESE ORE	**470**	**638**	**501**	**-26.4%**	**-6.2%**
Azul	332	490	381	-32.3%	-12.9%
Urucum	130	117	98	11.1%	33.1%
Other mines	8	31	23	-74.3%	-64.2%
FERROALLOYS	**46**	**50**	**32**	**-8.7%**	**42.1%**
Brazil	46	50	32	-8.7%	42.1%

Production overview

In 1Q14, production of manganese ore reached 470,000 t against 638,000 t in 4Q13 and 501,000 t in 1Q13.

Manganese ore production

Output from the Carajás Azul manganese mine decreased by 32.3% and 12.9% against 4Q13 and 1Q13, respectively, reaching 332,000 t. The production decreased due to low feed availability for the plant.

In 1Q14, production from Urucum reached the historical record of 130,000 t, increasing by 11.1% against 4Q13 and 33.1% against 1Q13. This production increase was a result of operational improvements carried out in the beneficiation plant in 4Q13, which improved productivity and the physical availability of the plant in 1Q14.

A mine expansion project, which will allow significant production increases as of next year is currently ongoing and in 2H14 we will build the infrastructure in the underground mine to access high quality ore bodies.

Production at Morro da Mina was 8,000 t in 1Q14, a decrease of 74.3% and 64.2% respectively when compared to 4Q13 and 1Q13. The weak performance was caused by interruption of production in the north section of the mine, due to geological conditions. In 2Q14, we will improve

production in the south section to deal with this restriction.

Ferroalloys production

Production of ferroalloys was 8.7% lower than in 4Q13, due to a decision to shut down furnaces and to sell excess energy to the Brazilian national grid.

Ferroalloy quarterly production was comprised of 28,000 t of ferrosilicon manganese alloys (FeSiMn), 13,000 t of high-carbon manganese alloys (FeMnHc) and 5,000 t of medium-carbon manganese alloys (FeMnMC).

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Nickel

Finished production by source

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
Canada	**41.6**	**43.0**	**44.8**	**-3.4%**	**-7.3%**
Sudbury	17.6	18.0	17.1	-1.8%	3.1%
Thompson	7.6	6.3	7.2	20.7%	6.4%
Voisey s Bay	14.5	16.9	18.7	-14.4%	-22.5%
Ore from third parties(1)	1.9	1.9	1.9	-1.8%	-1.8%
Indonesia(2)	**16.4**	**20.9**	**17.4**	**-21.5%**	**-5.5%**
New Caledonia(3)	**4.1**	**2.1**	**2.9**	**99.8%**	**41.1%**
Brazil (Onça Puma)	**5.4**	**1.9**	**0.0**	**186.8%**	**n.m.**
TOTAL NICKEL	**67.5**	**67.9**	**65.1**	**-0.6%**	**3.7%**

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

(2) Nickel in matte at Sorowako totaled 19,600 t in 1Q14 lower than 16,400 t, due to material in transit and work in progress in other refineries.

(3) VNC quarterly output was 5,600 t of NiO and NHC lower than 4,100 t, due to material in transit and work in progress in other refineries.

Production overview

Nickel production reached 67,500 t in 1Q14, in line with 4Q13 and 3.7% higher than 1Q13, reaching an historic mark for a first quarter. Negative impacts from a longer and colder winter in our Canadian operations were offset by increased production from Onça Puma and Vale New Caledonia.

Canadian Operations

In 1Q14, Sudbury production reached 17,600 t, 3.1% higher than in 1Q13, but 1.8% lower than in 4Q13. Colder than average winter temperatures impacted our power systems, particularly at the Clarabelle Mill, resulting in a series of unplanned outages.

In May, we will carry out a major maintenance on our Sudbury operations, lasting approximately 4 weeks and impacting our 2Q14 production. The Sudbury operation executes major maintenance, particularly on the acid plant and furnaces, approximately every 18 months.

Thompson production in 1Q14 was 7,600 t, 20.7% higher than in 4Q13 and 6.4% higher than1Q13, as we have prioritized the use of Thompson feed in the mix.

Voisey s Bay nickel in concentrate production amounted to 14,500 t in 1Q14, a decrease of 14.4% and 22.5% in relation to 4Q13 and 1Q13, respectively. In January, we experienced a failure

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in the grinding section of the mill, resulting in a loss of three weeks of milling time. The mill resumed normal operations on February 1st, 2014. Additionally, extremely thick ice in the coastal area near our port has created minor delays in the shipping of concentrates from the facility.

Long Harbour is being commissioned. We are anticipating the first nickel out of the plant at the end of 2Q14. Initially Long Harbour will process nickel in matte from PTVI, processing nickel from Voisey´s Bay at a later stage.

Indonesian Operations

In 1Q14, production of nickel in matte from our Indonesian operations at Sorowako totaled 19,600 t.

Finished nickel production sourced from PTVI was 16,400 t. Production was 5.5% lower than 1Q13 and 21.5% lower than in 4Q13 mainly because we have sent matte from PTVI to our Long Harbour processing facility in Newfoundland and Labrador to support the start-up of that plant.

New Caledonia Operations

On January 1st, 2014, VNC resumed operations, following repairs to the effluent placement and dispersion line that failed in November 2013. The second autoclave and the fluid bed reactor (FBR) section subsequently commenced operation on January 22nd. The plant has continued to operate stably with two and at times three autoclaves in operation. Debottlenecking of the integrated operation continues to improve throughput.

With an output of 5,600 t, VNC production of NiO and NHC was on par with its best quarter to date. This included 2,688 t produced in March, which was a record month for the operation.

Production of finished products (NHC and Utility Nickel from VNC sourced NiO) totaled 4,100 t in 1Q14 as we rebuilt the supply pipeline after the stoppage in 4Q13.

Brazilian Operation (Onça Puma)

Production at Onça Puma was 5,400 t of nickel contained in ferronickel, reaching 86% of its nominal capacity for a single furnace operation in 1Q14.

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Copper

Finished production by source

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
Brazil	**47.3**	**52.8**	**38.8**	**-10.4%**	**22.0%**
Sossego	26.3	31.7	27.7	-17.1%	-5.3%
Salobo	21.1	21.1	11.0	-0.3%	90.7%
Canada	**38.6**	**38.8**	**45.2**	**-0.5%**	**-14.6%**
Sudbury	24.5	24.2	26.0	1.1%	-5.7%
Thompson	0.3	0.7	0.4	-54.0%	-25.0%
Voisey s Bay	6.9	8.6	11.0	-19.4%	-37.3%
Ore from third parties	6.8	5.3	7.7	30.0%	-11.4%
Zambia (Lubambe)	**2.5**	**2.2**	**1.8**	**16.2%**	**36.7%**
Chile	**0.0**	**0.8**	**3.7**	**n.m.**	**n.m.**
TOTAL COPPER	**88.4**	**94.6**	**89.5**	**-6.5%**	**-1.2%**

Production overview

In 1Q14, copper output was 88,400 t, 6.5% and 1.2% lower respectively than in 4Q13 and 1Q13,.

Brazilian Operations

Production of copper in 1Q14 at the Sossego mine totaled 26,300 t in the form of copper in concentrates, 5.3% and 17.1% lower respectively than in 1Q13 and 4Q13. During January and February, the mine operated in a lower than average grade section of the ore body. Grades increased later in the quarter, but rains delayed access to certain areas of the pit.

Salobo I continued its ramp-up, producing 21,100 t of copper in concentrates in 1Q14, 90.7% higher than in 1Q13. Production was in line with 4Q13, the best quarter to date, despite the impact of the fog. The Salobo operation has begun commissioning some of the components of phase 2 as that project nears completion

Canadian Operations

Sudbury production reached 24,500 t, 1.1% higher than in 4Q13 but 5.7% lower than in 1Q13. Colder than average winter temperatures resulted in failures in our power systems,

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particularly at our Clarabelle Mill, resulting in a series of unplanned outages.

Voisey s Bay production was 6,900 t, 37.3% and 19.4% lower than in 1Q13and 4Q13, respectively. As mentioned earlier, in January we experienced a failure in the grinding section of the mill, which resulted in a loss of three weeks of milling time. The mill resumed operations on February 1st, 2014.

African Operation (Lubambe)

Lubambe, our Zambian JV, is ramping up and delivering 6,250 t of copper in concentrates on a 100% basis (attributable production of 2,500 t). Lubambe has a nominal capacity of 45,000 t per year.

Chile Operation discontinued operation

As previously announced, Vale completed the sale of Tres Valles, in Chile on December 9th, 2013.

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Nickel and copper by-products

Finished production by source

	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
COBALT (metric tons)	**856.7**	**711.4**	**992.8**	20.4%	-13.7%
Ontario	402.1	435.6	441.0	-7.7%	-8.8%
Manitoba	167.4	139.9	179.8	19.7%	-6.9%
Vale Newfoundland and Labrador	0.0	0.0	0.0	n.m.	n.m.
VNC	287.2	136.0	372.0	111.2%	-22.8%
PLATINUM (000 oz troy)	**49.2**	**42.9**	**34.2**	**14.8%**	**43.3%**
Ontario	49.2	42.9	34.2	14.8%	43.3%
PALLADIUM (000 oz troy)	**109.2**	**96.2**	**88.7**	**13.5%**	**23.1%**
Ontario	109.2	96.2	88.7	13.5%	23.1%
GOLD (000 oz troy)	**73.7**	**88.3**	**57.9**	**-16.5%**	**27.2%**
Ontario	20.1	26.7	21.9	-24.7%	-8.1%
Sossego	18.0	21.3	17.4	-15.5%	3.5%

Salobo	35.6	40.3	18.7	-11.5%	90.6%
SILVER (000 oz troy)	**433**	**514**	**425**	**-15.8%**	**1.8%**
Ontario	433	514	425	-15.8%	1.8%

Cobalt

Output of cobalt reached 857 t in 1Q14, 20.4% higher than in 4Q13, mainly reflecting the increase in VNC production, which totaled 287 t in 1Q14.

Platinum and palladium

Platinum output was 49,200 oz and palladium was 109,200 oz, 14.8% and 13.5% higher than in 4Q13, respectively.

Gold

Gold production amounted to 73,700 oz in 1Q14, 16.5% lower than in 4Q13, due to the decrease in Salobo s gold output.

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Coal

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
METALLURGICAL COAL	**1,223**	**1,850**	**1,373**	**-33.9%**	**-10.9%**
Moatize	595	401	417	48.4%	42.7%
Carborough Downs	73	814	554	-91.0%	-86.8%
Integra Coal	379	433	218	-12.5%	73.8%
Others	176	202	184	-12.9%	-4.3%
THERMAL COAL	**561**	**408**	**379**	**37.5%**	**48.1%**
Moatize	414	277	256	49.2%	61.6%
Integra Coal	48	34	24	41.2%	99.3%
Others	100	97	99	2.6%	0.8%
TOTAL COAL	**1,785**	**2,258**	**1,752**	**-21.0%**	**1.9%**

Production overview

Total coal output in 1Q14 reached 1.8 Mt, 21.0% lower than in 4Q13, mostly due to the weak performance of Carborough Downs (CD). Production was slightly higher than 1Q13 due to Moatize s ramp-up.

Australian operations

CD output was 73,000t in 1Q14, 91.0% less than in 4Q13 due to the longer than expected longwall move, which began in the middle of December and finished only in mid-March as a result of a roof fall at the beginning of January.

In 1Q14, Integra Coal output was 8.6% lower than in 4Q13, but 76.4% higher than in 1Q13. In 4Q13 we accessed better geological sections of the mine. Integra coal production totaled 379,000 t of metallurgical and 48,000 t of thermal coal.

Production from our other Australian mines was 276,000 t in 1Q14, a decrease of 7.7% from the 299,000 t registered in 4Q13, due to higher strip ratios.

Moatize operations

In 1Q14, Moatize produced 1.009 Mt, of which 0.595 Mt of met coal and 0.414 Mt of thermal

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coal. Met and thermal coal output increased by 48.4% and 49.2%, respectively, when compared to 4Q13, due to a normalization of the supply of explosives. The lack of availability of explosives limited our production flexibility in 4Q13 and affected the production mix, resulting in only 49% of met coal output in1 Q14.

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 s nominal capacity of 11 Mtpy.

The start-up of the Nacala corridor project, expected by 2H14, will eliminate the above-mentioned logistics bottleneck.

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Potash

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
POTASH	**109**	**126**	**120**	**-13.4%**	**-8.9%**
Taquari-Vassouras	109	126	120	-13.4%	-8.9%

Phosphates

000 metric tons	1Q14	4Q13	1Q13	1Q14/4Q13 % Change	1Q14/1Q13 % Change
PHOSPHATE ROCK	**1,932**	**2,286**	**1,991**	**-15.5%**	**-3.0%**
Brazil	1,026	1,234	1,137	-16.9%	-9.7%
Bayóvar	906	1,051	855	-13.9%	6.0%
MAP(1)	276	305	288	-9.3%	-4.1%
TSP(2)	207	252	251	-17.8%	-17.5%
SSP(3)	357	459	554	-22.1%	-35.5%
DCP(4)	118	127	121	-7.3%	-2.2%

(1) Monoammonium phosphate

(2) Triple superphosphate

(3) Single superphosphate

(4)Dicalcium phosphate

Potash

In 1Q14, potash production totaled 109,000 t, 13.4% and 8.9% lower than in 4Q13 and in 1Q13, respectively. In 1Q14, we accessed lower quality ore and faced lower availability of the concentration plant due to maintenance stoppages .

Phosphate Rock

Total production of phosphate rock reached 1.9 Mt in line with 1Q13, but 15.5% lower than in 4Q13, driven by a decrease in production in our Brazilian operations. We have also reduced production in the Brazilian mines to draw down inventory in our Araxá plant in 1Q14.

In 1Q14, Bayóvar output was affected by a stoppage to modify the source of energy to supply two dryers, changing from liquefied petroleum gas (LPG) to liquefied natural gas (LNG). The change will result in a cost reduction in the Bayóvar operation.

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MAP

In 1Q14, the production of MAP (monoammonium phosphate) totaled 276,000 t, 9.3% lower on a quarter-on-quarter basis as a result of operational adjustments for the use of Bayóvar phosphate rock instead of phosphate rock from Catalão, due to its low availability, which impacted the production of Cubatão plant 2.

The Catalão mining and chemical complex, located in Minas Gerais, produces phosphate rock, SSP and TSP.

TSP

The output of TSP (Triple superphosphate) decreased against 4Q13 and 1Q13, by 17.8% and 17.5%, respectively, due to the prioritization of MAP production in the Uberaba plant.

SSP

Production of SSP (single superphosphate) was 22.1% and 35.5% lower than in 4Q13 and 1Q13, respectively, due to the maintenance stoppage in Catalão in 1Q14.

DCP

DCP (dicalcium phosphate) production was 118,000 t, 7.3% lower than in 4Q13, reflecting weaker demand.

Nitrogen

000 metric tons	**1Q14**	**4Q13**	**1Q13**

				1Q14/4Q13 % Change	1Q14/1Q13 % Change
AMMONIA	49	39	141	23.2%	-65.7%
UREA	0	0	128	n.m.	n.m.
NITRIC ACID	113	117	115	-3.4%	-1.6%
AMMONIUM NITRATE	114	123	120	-7.4%	-5.4%

Ammonia and Urea Production

In 1Q14, ammonia production increased by 23.2% compared to 4Q13, recovering from the low availability of gas at Cubatão 2.

Cubatão plant 2 is part of Cubatão s four plant complex, and it produces ammonia, nitric acid and ammonium nitrate.

The decrease in production when compared to 1Q13 is explained by the sale of the Araucária operation on June 1st, 2013. Araucária 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, while ammonia is being produced exclusively in Cubatão.

Nitric Acid and Ammonium Production

The output of nitric acid and ammonium nitrate was lower than in 4Q13. Nitric acid output was impacted by equipment problems at Cubatão 2, which will be replaced by August 2014.

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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 T. Nogueira
Rogerio T. Nogueira
Director of Investor Relations

Date: April 30, 2014