Vale S.A. Form 424B2 February 06, 2017

Use these links to rapidly review the document TABLE OF CONTENTS
Table of Contents

Table of Contents

Filed Pursuant to Rule 424(b)(2) Registration Statement Nos. 333-207181 and 333-207181-01

The information in this preliminary prospectus supplement and the prospectus to which it relates is not complete and may be changed. This preliminary prospectus supplement and the prospectus to which it relates are not an offer to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION
PRELIMINARY PROSPECTUS SUPPLEMENT DATED FEBRUARY 6, 2017

PROSPECTUS SUPPLEMENT (To prospectus dated September 29, 2015)

VALE OVERSEAS LIMITED US\$ 6.250% Guaranteed Notes due 2026 UNCONDITIONALLY GUARANTEED BY Vale S.A.

Vale Overseas Limited ("Vale Overseas") is offering US\$ aggregate principal amount of its 6.250% Guaranteed Notes due 2026 (the "notes"). This offering is a reopening of Vale Overseas' US\$1,000,000,000 6.250% Guaranteed Notes due 2026 issued on August 10, 2016 (the "original notes"), and the notes offered hereby will be consolidated with and form a single series with the original notes. Vale Overseas will pay interest on the notes semi-annually on February 10 and August 10 of each year, beginning August 10, 2017. Interest on the notes will accrue from February 10, 2017. Vale Overseas will pay additional amounts related to the deduction of certain withholding taxes in respect of certain payments on the notes.

Vale Overseas may redeem the notes, in whole at any time or in part from time to time, at a redemption price equal to the greater of 100% of the principal amount of the notes to be redeemed and a "make-whole" amount described under "Description of the Notes Optional Redemption" in this prospectus supplement, plus accrued and unpaid interest on such notes to the date of redemption. Upon the imposition of certain withholding taxes, Vale Overseas may also redeem the notes in whole, but not in part, at a price equal to 100% of their principal amount plus accrued interest to the redemption date.

The notes will be unsecured obligations of Vale Overseas and will rank equally with Vale Overseas' unsecured senior indebtedness. Vale S.A. ("Vale") may assume the obligations of Vale Overseas under the notes as described under "Description of the Notes Assumption by Guarantor of Issuer's Obligations under the Notes." The guaranty will rank equally in right of payment with all other unsecured and unsubordinated debt obligations of Vale. The notes will be issued only in registered form in minimum denominations of US\$2,000 and integral multiples of US\$1,000 in excess thereof.

Vale Overseas will apply to list the notes issued hereby on the New York Stock Exchange. The original notes are listed on the New York Stock Exchange.

Investing in the notes involves risks that are described in the "Risk Factors" section beginning on page S-7 of this prospectus supplement.

	Per note	Total
Public offering price(1)	%	US\$
Underwriting discount	%	US\$
Proceeds, before expenses, to Vale Overseas	%	US\$

Plus accrued interest from February 10, 2017, if settlement occurs after that date.

Neither the Securities and Exchange Commission (the "SEC") nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense. ANY OFFER OR SALE OF THE NOTES IN ANY MEMBER STATE OF THE EUROPEAN ECONOMIC AREA WHICH HAS IMPLEMENTED DIRECTIVE 2003/71/EC (THE "PROSPECTUS DIRECTIVE") MUST BE ADDRESSED TO QUALIFIED INVESTORS (AS DEFINED IN THE PROSPECTUS DIRECTIVE).

The notes will be ready for delivery in book-entry form through The Depository Trust Company ("DTC") and its participants, including Euroclear and Clearstream, Luxembourg, on or about February , 2017.

Joint Lead Managers and Joint Bookrunners

BB Bradesco J.P.
Securities Ltd. BBI Morgan MUFG Santander

The date of this prospectus supplement is February , 2017.

TABLE OF CONTENTS

Prospectus Supplement

	Page
Enforcement of Civil Liabilities	<u>S-ii</u>
Prospectus Supplement Summary	<u>S-1</u>
Risk Factors	<u>S-7</u>
<u>Use of Proceeds</u>	<u>S-10</u>
<u>Capitalization</u>	<u>S-11</u>
<u>Description of the Notes</u>	<u>S-12</u>
<u>Certain Tax Considerations</u>	<u>S-21</u>
<u>Underwriting</u>	<u>S-26</u>
<u>Experts</u>	<u>S-32</u>
<u>Validity of the Notes</u>	<u>S-33</u>
<u>Incorporation of Certain Documents by Reference</u>	<u>S-34</u>

Prospectus

	Page
About this Prospectus	<u>1</u>
Enforcement of Civil Liabilities	<u>2</u>
Forward Looking Statements	<u>4</u>
Vale S.A.	<u>5</u>
Vale Overseas Limited	<u>5</u>
<u>Use of Proceeds</u>	<u>5</u>
<u>Legal Ownership of Debt Securities</u>	<u>6</u>
<u>Description of the Debt Securities</u>	<u>8</u>
<u>Description of the Guarantees</u>	<u>21</u>
<u>Experts</u>	<u>21</u>
Validity of the Securities	<u>22</u>
Where You Can Find More Information	<u>22</u>
Incorporation of Certain Documents by Reference	<u>23</u>

We are responsible for the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein. We have not, and the underwriters have not, authorized any person to give you any other information, and we, and the underwriters, take no responsibility for any other information that others may give you. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein is accurate as of any date other than their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates. We and the underwriters are not making an offer of these securities in any jurisdiction where the offer is not permitted.

ENFORCEMENT OF CIVIL LIABILITIES

The following amends and restates the "Enforcement of Civil Liabilities Brazil" section in the accompanying prospectus in its entirety to contemplate intervening changes in Brazilian law:

Brazil

A final conclusive judgment for the payment of money rendered by any New York State or federal court sitting in New York City in respect of the securities would be recognized in the courts of Brazil and such courts would enforce such judgment without any retrial or reexamination of the merits of the original action only if such judgment has been ratified by the Brazilian Superior Court of Justice (*Superior Tribunal de Justica*). This ratification is available only if:

the judgment fulfills all formalities required for its enforceability under the laws of the State of New York;

the judgment was issued by a competent court either after due service of process on the parties, which service of process if made in Brazil must comply with Brazilian law, or after sufficient evidence of the parties' absence has been given, as established pursuant to applicable law;

the judgment is not subject to appeal;

the judgment does not conflict with a final and unappealable decision issued by a Brazilian court;

the judgment has been authenticated by a Brazilian consulate in the State of New York or is duly apostilled in accordance with the Convention Abolishing the Requirement of Legalization for Foreign Public Documents;

the judgment has been translated into Portuguese by a certified sworn translator;

the judgment does not cover matters subject to the exclusive jurisdiction of the Brazilian courts; and

the judgment is not against Brazilian public policy, good morals or national sovereignty.

In addition:

civil actions may be brought before Brazilian courts in connection with this prospectus supplement based on the federal securities laws of the United States, and Brazilian courts may enforce such liabilities in such actions against Vale (provided that the relevant provisions of the federal securities laws of the United States do not contravene Brazilian public policy, good morals or national sovereignty and provided further that Brazilian courts can assert jurisdiction over the particular action).

the ability of a judgment creditor to satisfy a judgment by attaching certain assets of the defendant is limited by Brazilian law. In addition, a Brazilian or foreign plaintiff who resides abroad or is abroad during the course of a suit in Brazil must post a bond to cover the legal fees and court expenses of the defendant, unless there are real estate assets in Brazil to assure payment thereof, except in case of execution actions or counterclaims as established under the first paragraph of Article 83 of the Brazilian Code of Civil Procedure.

Notwithstanding the foregoing, no assurance can be given that ratification would be obtained, that the process described above could be conducted in a timely manner or that a Brazilian court would enforce a monetary judgment for violation of the U.S. securities laws with respect to the securities.

S-ii

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights key information described in greater detail elsewhere, or incorporated by reference, in this prospectus supplement and the accompanying prospectus. You should read carefully the entire prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein before making an investment decision. In this prospectus supplement, unless the context otherwise requires, references to "Vale," "we," "us" and "our" refer to Vale S.A. and its consolidated subsidiaries, taken as a whole, and references to "Vale Overseas" mean Vale Overseas Limited, a wholly owned finance subsidiary.

Vale Overseas Limited

Vale Overseas is a finance company wholly owned by Vale. Vale Overseas' business is to issue debt securities to finance Vale's activities. Vale Overseas was incorporated as a Cayman Islands exempted company with limited liability on April 3, 2001.

Vale S.A.

We are one of the largest metals and mining companies in the world, based on market capitalization. We are the world's largest producer of iron ore and iron ore pellets and the world's largest producer of nickel. We also produce manganese ore, ferroalloys, metallurgical and thermal coal, copper, platinum group metals (PGMs), gold, silver, cobalt, potash, phosphates and other fertilizer nutrients. We are engaged in greenfield mineral exploration in six countries around the globe. We operate large logistics systems in Brazil and other regions of the world, including railroads, maritime terminals and ports, which are integrated with our mining operations. In addition, we have a portfolio of maritime freight assets, floating transfer stations and distribution centers to support the distribution of iron ore worldwide. Directly and through associates and joint ventures, we also have investments in energy and steel businesses.

Table of Contents

The following table presents the breakdown of our total net operating revenues attributable to each of our main lines of business.

		Year ended December 31,					Nine months ended September 30,			
	2013		2014			2015	2015		2016	
		US\$ million						US\$ million		
Ferrous minerals:										
Iron ore	US\$	27,844	US\$	19,301	US\$	12,330	US\$	9,385	US\$	10,208
Iron ore pellets		6,000		5,263		3,600		2,820		2,611
Manganese and ferroalloys		523	392		162	162	149		185	
Other ferrous products and services		425		741		470		378		300
Subtotal ferrous minerals		34,792		25,697		16,562		12,732		13,304
Coal		1,010		739		526		418		463
		,								
Base metals:										
Nickel and other products(1)		5,839		6,241		4,693		3,586		3,209
Copper(2)		1,447		1,451		1,470		1,119		1,170
copper(2)		1,		1,151		1,.,0		1,117		1,170
Subtotal base metals		7,286		7,692		6,163		4,705		4,379
Subtotal base metals		7,280		7,092		0,105		4,703		4,379
		• • • •								
Fertilizer nutrients		2,814		2,415		2,225		1,744		1,446
Other(3)		865		996		133		111		77
Total net operating revenues from										
continued operations	US\$	46,767	US\$	37,539	US\$	25,609	US\$	19,710	US\$	19,669

Ferrous minerals:

Iron ore and iron ore pellets. We operate four systems in Brazil for producing and distributing iron ore, which we refer to as the Northern, Southeastern, Southern and Midwestern Systems. The Northern and the Southeastern Systems are fully integrated, consisting of mines, railroads, maritime terminals and a port. The Southern System consists of three mining complexes and two maritime terminals. We also have iron ore pellet operations in several locations, some of which are conducted through joint ventures. We operate 11 pellet plants in Brazil and two in Oman. The operations of three of our pellet plants in Brazil have been suspended since the fourth quarter of 2012 in response to market conditions, and their capacity was partially replaced by Tubarão VIII, a more efficient plant. We are currently considering the reopening of one or two pelletizing plants as a response to current and forecasted market conditions. We have a 50% stake in Samarco Mineração S.A. ("Samarco"), which operates an integrated system in the Brazilian states of Minas Gerais and Espírito Santo. Samarco's operations have been suspended following the failure of one of its tailings dams in November 2015. We also have 25% stakes in two pellet companies in China.

⁽¹⁾ Includes nickel co-products (copper) and by-products (precious metals, cobalt and others).

⁽²⁾ Does not include copper produced as a nickel co-product.

⁽³⁾ Includes pig iron and energy.

Manganese and ferroalloys. We conduct our manganese mining operations through Vale S.A. and subsidiaries in Brazil, and we produce manganese ore and several types of manganese ferroalloys through a wholly owned subsidiary in Brazil.

Base metals:

Nickel. Our principal nickel mines and processing operations are conducted by our wholly owned subsidiary Vale Canada Limited ("Vale Canada"), which has operations in Canada and Indonesia. We also have nickel operations in Onça Puma, in the Brazilian state of Pará. We also own and operate, or have interests in, nickel refining facilities in the United Kingdom, Japan, Taiwan, China and South Korea. We are currently ramping up nickel operations in New Caledonia.

Copper. In Brazil, we produce copper concentrates at Sossego and Salobo, in Carajás, in the Brazilian state of Pará. We are concluding the ramp-up of Salobo operations. In Canada, we produce copper concentrates, copper anodes and copper cathodes in conjunction with our nickel mining operations at Sudbury and Voisey's Bay. In Zambia, our joint venture produces copper concentrates at Lubambe, located in the Zambian Copperbelt.

Cobalt, PGMs and other precious metals. We produce cobalt as a by-product of our nickel mining and processing operations in Canada and refine the majority of it at our Port Colborne facilities, in the Province of Ontario, Canada. We also produce cobalt as a by-product of our nickel operations in New Caledonia, which we are currently ramping up. We produce PGMs as by-products of our nickel mining and processing operations in Canada. The PGMs are concentrated at our Port Colborne facilities and refined at our precious metals refinery in Acton, England. We produce gold and silver as by-products of our nickel mining and processing operations in Canada, and gold as a by-product of our copper mining in Brazil.

Coal: We conduct our coal operations primarily in Mozambique, through Vale Moçambique, S.A., where we are ramping up our metallurgical and thermal coal operations. We also have minority interests in a Chinese coal and coke producer. In November 2016, we sold our coal operation in Carborough Downs in Australia.

Fertilizer nutrients: We conduct our potash operations in Rosario do Catete, in the Brazilian state of Sergipe. We conduct our main phosphate operations through our subsidiary Vale Fertilizantes S.A. ("Vale Fertilizantes"), which holds most of our fertilizer assets in Brazil. Vale Fertilizantes is the largest Brazilian producer of phosphate rock and phosphate fertilizers and the second-largest Brazilian producer of nitrogen fertilizers. We also have a phosphate rock mine operation in Peru. In December 2016, we entered into an agreement with The Mosaic Company for the sale of our fertilizer business, which includes (i) our phosphate assets in Brazil, except for the nitrogen business located in Cubatão; (ii) our stake in the joint venture that operates the phosphate rock mine in Bayóvar, Peru; (iii) our potash assets located in Brazil; and (iv) our potash project based in Canada (Kronau).

Logistics: We are a leading operator of logistics services in Brazil and other regions of the world, with railroads, maritime terminals, distribution centers and ports. Two of our four iron ore systems include an integrated railroad network linked to port and terminal facilities. We also have an interest in MRS Logística S.A., which transports our iron ore products from the Southern System mines to our maritime terminals, and VLI S.A., which provides integrated logistics solutions to general cargo through railroads, inland and maritime terminals in Brazil. We are ramping up the logistics infrastructure to support our operations in Southeastern Africa. We own and charter dry bulk vessels to transport the products that we sell on a cost and freight basis to customers.

Recent Developments

See our report on Form 6-K furnished to the SEC on the date hereof, incorporated by reference in this prospectus supplement, and the other reports on Form 6-K listed under "Incorporation of Certain Documents by Reference," for a discussion of our results of operations for the nine-month period ended September 30, 2016 and recent material developments.

Ranking of notes

The Offering

The following summary contains basic information about the notes and is not intended to be complete. It does not contain all the information that is important to you. For a more complete understanding of the notes, please refer to the section entitled "Description of the Notes" in this prospectus supplement and the section entitled "Description of the Debt Securities" and "Description of the Guarantees" in the accompanying prospectus. In this description of the offering, references to Vale mean Vale S.A. only and do not include any of Vale's subsidiaries or associated companies.

Issuer Vale Overseas Limited

Guarantor Vale S.A.

Notes offered US\$ aggregate principal amount of Vale Overseas' 6.250% Guaranteed Notes due

2026 (the "notes"). The notes issued hereby will be fungible with the US\$1,000,000,000 6.250% Guaranteed Notes due 2026 issued on August 10, 2016 (the "original notes"), and will be consolidated with and form a single series under the indenture governing the original notes. The aggregate principal amount of the notes offered hereby and the original notes will

be US\$

Guaranty Vale will irrevocably and unconditionally guarantee the full and punctual payment of

principal, interest, additional amounts and all other amounts that may become due and

payable in respect of the notes.

Issue price % of the principal amount plus accrued interest from February 10, 2017, if settlement

occurs after that date.

Maturity date August 10, 2026.

Interest rate The notes will bear interest at the rate of 6.250% per annum, based upon a 360-day year

consisting of twelve 30-day months.

Interest payment dates Interest on the notes will be payable semi-annually on February 10 and August 10 of each

year, beginning August 10, 2017. Interest on the notes will accrue from February 10, 2017. The notes are general obligations of Vale Overseas and are not secured by any collateral.

Your right to payment under these notes will be:

junior to the rights of secured creditors of Vale Overseas to the extent of their interest in

Vale Overseas' assets; and

equal with the rights of creditors under all of Vale Overseas' other unsecured and

unsubordinated debt.

Ranking of guaranty The guaranty of the notes will be a general obligation of Vale and is not secured by any

collateral. Your right to payment under the guaranty will be:

junior to the rights of secured creditors of Vale to the extent of their interest in Vale's assets;

equal with the rights of creditors under all of Vale's other unsecured and unsubordinated

debt; and

effectively subordinated to the rights of any creditor of a subsidiary of Vale over the assets

of that subsidiary.

S-4

Table of Contents

Covenants

Further issuances

Assumption by Vale of Vale Overseas' obligations under the notes

Payment of additional amounts

Optional redemption

The amended and restated indenture governing the notes contains restrictive covenants that, among other things and subject to certain exceptions, limit Vale Overseas' ability to merge or transfer substantially all of its assets and Vale's ability to merge or transfer substantially all of its mining properties or assets and to incur liens. For a more complete description of Vale and Vale Overseas' covenants, see "Description of the Notes Covenants" in this prospectus supplement and "Description of the Debt Securities Certain Covenants" in the accompanying prospectus.

Vale Overseas reserves the right, from time to time, without the consent of the holders of the notes, to issue additional notes on terms and conditions identical to those of the notes, which additional notes shall increase the aggregate principal amount of, and shall be consolidated and form a single series with, the series of notes offered hereby; Vale Overseas may also issue other securities under the amended and restated indenture which have different terms and conditions from the notes. Likewise, Vale has the right, without the consent of the holders, to guarantee any such additional securities, to guarantee debt of its other subsidiaries and to issue its own debt.

Vale may assume, without the consent of the holders of the notes, the obligations of Vale Overseas, for the due and punctual payment of the principal of (and premium, if any), interest on and any other payments with respect to the notes and for the performance of every applicable covenant of the relevant supplemental indenture pertaining to the notes on the part of Vale Overseas to be performed or observed, as described under "Description of the Notes Assumption by the Guarantor of the Issuer's Obligations under the Notes." In the event Vale assumes the obligations of Vale Overseas, a U.S. Holder of the notes may recognize taxable gain. See "Certain Tax Considerations United States Tax Considerations Assumption by Vale of Vale Overseas' Obligations Under the Notes." Vale and Vale Overseas, as applicable, will pay additional amounts in respect of any payments under the notes so that the amount you receive after withholding tax of Brazil, the Cayman Islands or a successor jurisdiction, as applicable, will equal the amount that you would have received if no withholding tax had been applicable, subject to some exceptions as described under "Description of the Debt Securities Payment of Additional Amounts" in the accompanying prospectus.

Vale Overseas may redeem the notes, in whole at any time or in part from time to time, at a redemption price equal to the greater of 100% of the principal amount of the notes to be redeemed and a "make-whole" amount described under "Description of the Notes Optional Redemption" in this prospectus supplement plus accrued and unpaid interest on such notes to the date of redemption.

S-5

Table of Contents

Tax redemption If, due to changes in the laws of Brazil, the Cayman Islands or a successor jurisdiction, as

applicable, relating to withholding taxes applicable to payments of interest, Vale Overseas or Vale is obligated to pay additional amounts on the notes in respect of Brazilian or Cayman Islands withholding taxes at a rate in excess of 15%, Vale or Vale Overseas, as applicable, may redeem the notes in whole, but not in part, at any time, at a price equal to

100% of their principal amount plus accrued interest to the redemption date.

Use of proceeds The net proceeds from this offering are expected to be approximately US\$. We

intend to apply the net proceeds toward the redemption price of Vale's €750,000,000 4.375% notes due 2018, issued on March 17, 2010, and otherwise for general corporate purposes.

See "Use of Proceeds."

Listing Application will be made to list the notes on the New York Stock Exchange. The original

notes are listed on the New York Stock Exchange.

Form and denomination The notes will be issued only in registered form in minimum denominations of US\$2,000

and integral multiples of US\$1,000 in excess thereof.

Risk factors See "Risk Factors" and the other information included and incorporated by reference in this

prospectus supplement and the accompanying prospectus for a discussion of the factors you

should carefully consider before investing in the notes.

Governing law State of New York

Trustee The Bank of New York Mellon Registrar, transfer and paying agent The Bank of New York Mellon

Common Code The notes issued hereby will have the same Common Code as the original notes, which is

147182449.

CUSIP The notes issued hereby will have the same CUSIP as the original notes, which is

91911TAP8.

ISIN The notes issued hereby will have the same ISIN as the original notes, which is

US91911TAP84.

S-6

RISK FACTORS

The following are certain risk factors relating to the notes and risks relating to our business. The risks relating to our business are more fully set forth in our annual report on Form 20-F for the year ended December 31, 2015, which is incorporated by reference in this prospectus supplement. You should carefully consider those risks and the risks described below, as well as the other information included or incorporated by reference in this prospectus supplement or the accompanying prospectus, before making a decision to invest in the notes. For the purposes of this section on Risk Factors, references to Vale mean Vale S.A. only and do not include any of Vale's subsidiaries or associated companies.

Risks Relating to the Notes

Vale's subsidiaries, associated companies and joint ventures are not obligated under the notes or the guaranty, and these companies' obligations to their own creditors will effectively rank ahead of Vale's obligations under the guaranty.

Vale Overseas is the obligor under the notes and only its parent company, Vale, is obligated under the guaranty of the notes.

Vale Overseas has no operations or assets, other than holding unsecured obligations from other Vale subsidiaries to repay loans. These other subsidiaries are not liable under the notes or the guaranty, and they may not have the ability to repay their loans from Vale Overseas.

Vale conducts a significant amount of business through subsidiaries, associated companies and joint ventures, none of which are obligated under the notes or the guaranty. For the nine months ended September 30, 2016, the subsidiaries were responsible for 52.93% of Vale's consolidated revenues from operations and US\$455 of net cash flows from operating activities. The claims of any creditor of a subsidiary, associated company or joint venture of Vale would rank ahead of Vale's ability to receive dividends and other cash flows from these companies. As a result, claims of these creditors would rank ahead of Vale's ability to access cash from these companies in order to satisfy its obligations under the guaranty. In addition, these subsidiaries, associated companies and joint ventures may be restricted by their own loan agreements, governing instruments and other contracts from distributing cash to Vale to enable Vale to perform its obligations under its guaranty. As of September 30, 2016, 11.89% of Vale's consolidated debt was owed by consolidated subsidiaries of Vale, other than Vale Overseas.

The amended and restated indenture governing the notes contains restrictions on the conduct of business by Vale Overseas and Vale, including limits on Vale's ability to grant liens over its assets for the benefit of other creditors and Vale and Vale Overseas' ability to merge or transfer assets. These restrictions do not apply to Vale's other subsidiaries, associated companies and joint ventures, and these companies are not limited by the amended and restated indenture in their ability to pledge their assets to other creditors.

Changes in our credit ratings may adversely affect the value of the notes.

The notes are expected to be rated by credit rating agencies. Such ratings are limited in scope, and do not address all material risks relating to an investment in the notes, but rather reflect only the view of each rating agency at the time the rating is issued. An explanation of the significance of such rating may be obtained from such rating agency. There can be no assurance that such credit ratings will remain in effect for any given period of time or that such ratings will not be lowered, suspended or withdrawn entirely by the rating agencies, if, in each rating agency's judgment, circumstances so warrant. Actual or anticipated changes or downgrades