

FREEPORT-MCMORAN INC
Form 10-K
February 26, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2015

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: 001-11307-01

Freeport-McMoRan Inc.

(Exact name of registrant as specified in its charter)

Delaware

74-2480931

(State or other jurisdiction of
incorporation or organization)

(I.R.S. Employer Identification No.)

333 North Central Avenue

Phoenix, Arizona

85004-2189

(Address of principal executive offices)

(Zip Code)

(602) 366-8100

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which registered

Common Stock, par value \$0.10 per share

New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act
☐ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☐ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☐ Yes ☐ No

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. ☐ Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

☐ Yes ☐ No

The aggregate market value of common stock held by non-affiliates of the registrant was \$8.6 billion on February 19, 2016, and \$19.1 billion on June 30, 2015.

Common stock issued and outstanding was 1,251,849,800 shares on February 19, 2016, and 1,040,217,108 shares on June 30, 2015.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of our proxy statement for our 2016 annual meeting of stockholders are incorporated by reference into Part III (Items 10, 11, 12, 13 and 14) of this report.

FREEPORT-McMoRan INC.

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PART I

Items 1. and 2. Business and Properties.

All of our periodic reports filed with the United States (U.S.) Securities and Exchange Commission (SEC) pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available, free of charge, through our website, www.fcx.com, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports. These reports and amendments are available through our website as soon as reasonably practicable after we electronically file or furnish such material to the SEC.

References to “we,” “us” and “our” refer to Freeport-McMoRan Inc. (FCX) and its consolidated subsidiaries. References to “Notes” refer to the Notes to Consolidated Financial Statements included herein (refer to Item 8), and references to “MD&A” refer to Management's Discussion and Analysis of Financial Condition and Results of Operations included herein (refer to Item 7).

GENERAL

We are a premier U.S.-based natural resources company with an industry-leading global portfolio of mineral assets and significant oil and natural gas resources. Our portfolio of assets includes the Grasberg minerals district in Indonesia, one of the world's largest copper and gold deposits; significant mining operations in North and South America; the Tenke Fungurume (Tenke) minerals district in the Democratic Republic of Congo (DRC) in Africa; and significant U.S. oil and natural gas assets. Our principal executive offices are in Phoenix, Arizona, and our company was incorporated under the laws of the state of Delaware on November 10, 1987.

During 2015, in response to weak market conditions, we took actions to enhance our financial position, including significant reductions in capital spending, production curtailments at certain North and South America mines and actions to reduce operating, exploration and administrative costs. We are also taking continuing actions to reduce oil and gas costs and capital expenditures. Our oil and gas business (FCX Oil & Gas Inc., or FM O&G) is undertaking a near-term deferral of exploration and development expenditures by idling the three Deepwater Gulf of Mexico (GOM) drillships it has under contract. Refer to "Mining Operations" and "Oil and Gas Operations" for further discussion of revised operating plans.

Concerns about the global economy, and particularly the weakening of the Chinese economy, have dominated financial market sentiment and negatively impacted commodity prices, including copper. Oil prices have weakened to multi-year lows in response to excess global supplies and relatively weak economic conditions. Current market conditions and uncertainty about the timing of economic and commodity price recovery require us to continue taking actions to strengthen our financial position, reduce debt and re-focus our portfolio of assets. Our business strategy is focused on our position as a leading global copper producer. We will continue to manage our production activities, spending on capital projects and the administration of our business to enhance cash flows, and intend to complete asset sales to reduce debt. Several initiatives are currently being advanced, including an evaluation of alternatives for the oil and gas business as well as several potential transactions involving certain of our mining assets. In February 2016, we announced that we have entered into a definitive agreement to sell a 13 percent undivided interest in the Morenci unincorporated joint venture to Sumitomo Metal Mining Co., Ltd. for \$1.0 billion in cash (refer to Note 18 for further discussion).

We are confident about the longer term outlook for copper prices based on the global demand and supply fundamentals. With our established reserves and large-scale current production base, our significant portfolio of undeveloped resources, and our global organization of highly qualified and dedicated workers and management, we believe we are well positioned to generate significant asset sale proceeds while retaining an attractive portfolio of

high-quality assets.

Our Board of Directors is undertaking a strategic review of alternatives for FM O&G. We and our advisors are actively engaged with interested participants in a process to evaluate opportunities that include asset sales and joint venture arrangements to generate cash proceeds for debt repayment. We expect to advance the evaluation of these alternatives during the first half of 2016.

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Following are our ownership interests at December 31, 2015, in operating mines through our subsidiaries, Freeport Minerals Corporation (FMC) and PT Freeport Indonesia (PT-FI), and in our oil and gas business through our subsidiary, FM O&G:

FMC has an 85 percent undivided interest in Morenci via an unincorporated joint venture (as further discussed in Note 18, we have entered into a definitive agreement to sell a 13 percent undivided interest in Morenci; the transaction is expected to close in mid-2016). Additionally, PT-FI has established an unincorporated joint venture with Rio Tinto plc (Rio Tinto) related to our Indonesia operations. Refer to Note 3 for further discussion of our ownership in subsidiaries and joint ventures.

As further discussed in Note 2, in November 2014, we completed the sale of our 80 percent ownership interests in the Candelaria and Ojos del Salado copper mining operations in Chile. During 2014, we also completed the sale of our Eagle Ford shale assets in Texas and acquired additional oil and gas interests in the GOM.

Mining

At December 31, 2015, our estimated consolidated recoverable proven and probable mineral reserves totaled 99.5 billion pounds of copper, 27.1 million ounces of gold, 3.05 billion pounds of molybdenum, 271.2 million ounces of silver and 0.87 billion pounds of cobalt. Following is a summary of our consolidated recoverable proven and probable mineral reserves at December 31, 2015, by geographic location (refer to “Mining Operations” for further discussion):

	Copper		Gold		Molybdenum		Silver		Cobalt	
North America	34	%	1	%	78	%	29	%	—	%
South America	31		—		22		32		—	
Indonesia	28		99		—		39		—	
Africa	7		—		—		—		100	
	100	%	100	%	100	%	100	%	100	%

In North America, we operate seven copper mines – Morenci, Bagdad, Safford, Sierrita and Miami in Arizona, and Chino and Tyrone in New Mexico, and two molybdenum mines – Henderson and Climax in Colorado. In addition to copper, certain of our North America copper mines also produce molybdenum concentrate and silver. In South America, we operate two copper mines – Cerro Verde in Peru and El Abra in Chile. In addition to copper, the Cerro Verde mine also produces molybdenum concentrate and silver. In Indonesia, our subsidiary PT-FI operates the mines in the Grasberg minerals district. In addition to copper, the Grasberg minerals district also produces significant quantities of gold and silver. In Africa, our subsidiary Tenke Fungurume Mining S.A. (TFM) operates the mines in the Tenke minerals district. In addition to copper, the Tenke minerals district also produces cobalt hydroxide.

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Following is a summary of our consolidated copper, gold and molybdenum production for the year 2015 by geographic location (refer to "Mining Operations" for further information):

	Copper		Gold		Molybdenum	
North America	48	%	2	%	92	% ^a
South America	22		—		8	
Indonesia	19		98		—	
Africa	11		—		—	
	100	%	100	%	100	%

^a Our Henderson and Climax molybdenum mines produced 52 percent of consolidated molybdenum production, and our North America copper mines produced 40 percent.

The locations of our operating mines are shown on the world map below.

Oil and Gas

At December 31, 2015, our estimated proved oil and natural gas reserves (all of which are located in the U.S.) totaled 252 million barrels of oil equivalents (MMBOE), with 82 percent comprised of oil (including natural gas liquids, or NGLs) and 67 percent represented by proved developed reserves. Refer to "Oil and Gas Operations" for further discussion.

Our portfolio of oil and gas assets include significant oil production facilities and growth potential in the Deepwater GOM, established oil production onshore and offshore California, large onshore natural gas resources in the Haynesville shale in Louisiana, natural gas production from the Madden area in central Wyoming, and a position in the Inboard Lower Tertiary/Cretaceous natural gas trend onshore in South Louisiana.

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The locations of our U.S. oil and gas operations are shown on the map below:

COPPER, GOLD, MOLYBDENUM AND OIL

Following provides a brief discussion of our primary natural resources – copper, gold, molybdenum and oil. For further discussion of historical and current market prices of these commodities refer to MD&A and Item 1A. "Risk Factors."

Copper

Copper is an internationally traded commodity, and its prices are determined by the major metals exchanges – the London Metal Exchange (LME), New York Mercantile Exchange (NYMEX) and Shanghai Futures Exchange. Prices on these exchanges generally reflect the worldwide balance of copper supply and demand, and can be volatile and cyclical. During 2015, the LME spot copper price averaged \$2.49 per pound, ranging from a low of \$2.05 per pound to a high of \$2.92 per pound, and was \$2.13 per pound at December 31, 2015.

In general, demand for copper reflects the rate of underlying world economic growth, particularly in industrial production and construction. According to Wood Mackenzie, a widely followed independent metals market consultant, copper's end-use markets (and their estimated shares of total consumption) are construction (30 percent), consumer products (28 percent), electrical applications (19 percent), transportation (12 percent) and industrial machinery (11 percent).

Gold

Gold is used for jewelry, coinage and bullion as well as various industrial and electronic applications. Gold can be readily sold on numerous markets throughout the world. Benchmark prices are generally based on London Bullion Market Association (London) PM quotations. During 2015, the London PM gold price averaged \$1,160 per ounce, ranging from a low of \$1,049 per ounce to a high of \$1,296 per ounce, and was \$1,062 per ounce at December 31, 2015.

Molybdenum

Molybdenum is a key alloying element in steel and the raw material for several chemical-grade products used in catalysts, lubrication, smoke suppression, corrosion inhibition and pigmentation. Molybdenum, as a high-purity metal, is also used in electronics such as flat-panel displays and in super alloys used in aerospace. Reference prices for molybdenum are available in several publications, including Metals Week, Ryan's Notes and Metal Bulletin. During 2015, the weekly average price of molybdenum quoted by Metals Week averaged \$6.66 per pound, ranging from a low of \$4.46 per pound to a high of \$9.35 per pound, and was \$5.23 per pound at December 31, 2015.

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Oil

Oil products include transportation fuels, fuel oils for heating and electricity generation, asphalt and road oil, and the feedstocks used to make chemicals, plastics and synthetic materials. The price of crude oil is set in the global marketplace, with prices largely determined by regional benchmarks, including Brent, West Texas Intermediate (WTI) and Heavy Louisiana Sweet. Prices generally reflect the worldwide supply and demand balance, and can be volatile. During 2015, the Brent crude oil price averaged \$53.64 per barrel, ranging from a low of \$36.11 per barrel to a high of \$67.77 per barrel, and was \$37.28 per barrel at December 31, 2015.

PRODUCTS AND SALES

FCX's consolidated revenues for 2015 primarily included sales of copper (67 percent), oil (11 percent), gold (10 percent) and molybdenum (5 percent). Oil and gas sales to Phillips 66 Company represented 7 percent of our consolidated revenues in 2015 and 12 percent in 2014; no other customer accounted for more than 10 percent of our consolidated revenues in any of the past three years. Refer to Note 16 for a summary of our consolidated revenues and operating income (loss) by business segment and geographic area.

Copper Products

We are one of the world's leading producers of copper concentrate, cathode and continuous cast copper rod. During 2015, 43 percent of our mined copper was sold in concentrate, 33 percent as cathode and 24 percent as rod from North America operations.

Our copper ore is generally processed either by smelting and refining or by solution extraction and electrowinning (SX/EW). Before being subject to the smelting and refining process, ore is crushed and treated to produce a copper concentrate with copper content of approximately 20 to 30 percent. Copper concentrate is then smelted (i.e., subjected to extreme heat) to produce copper anode, which weighs between 800 and 900 pounds each and has an average copper content of 99.5 percent. The anode is further treated by electrolytic refining to produce copper cathode, which weighs between 100 and 350 pounds each and has an average copper content of 99.99 percent. For ore subject to the SX/EW process, copper is extracted from the ore by dissolving it with a weak sulphuric acid solution. The copper content of the solution is increased in two additional solution-extraction stages, and then the copper-bearing solution undergoes an electrowinning process to produce cathode that is, on average, 99.99 percent copper. Our copper cathode is used as the raw material input for copper rod, brass mill products and for other uses.

Copper Concentrate. We produce copper concentrate at six of our mines. In North America, copper concentrate is produced at the Morenci, Bagdad, Sierrita and Chino mines, and a significant portion is shipped to our Miami smelter in Arizona. Copper concentrate is also produced at the Cerro Verde mine in Peru and the Grasberg minerals district in Indonesia.

Copper Cathode. We produce copper cathode at our electrolytic refinery located in El Paso, Texas, and at 10 of our mines. SX/EW cathode is produced from the Morenci, Bagdad, Safford, Sierrita, Miami, Chino and Tyrone mines in North America; from the Cerro Verde and El Abra mines in South America; and from the Tenke minerals district in Africa. Copper cathode is also produced at Atlantic Copper (our wholly owned copper smelting and refining unit in Spain) and PT Smelting (PT-FI's 25 percent owned copper smelter and refinery in Indonesia). Refer to "Mining Operations - Smelting Facilities and Other Mining Properties" for further discussion of Atlantic Copper and PT Smelting.

Continuous Cast Copper Rod. We manufacture continuous cast copper rod at our facilities in El Paso, Texas; Norwich, Connecticut; and Miami, Arizona, primarily using copper cathode produced at our North America copper mines.

Copper Sales

North America. The majority of the copper produced at our North America copper mines and refined in our El Paso, Texas, refinery is consumed at our rod plants. The remainder of our North America copper production is sold in the form of copper cathode or copper concentrate under U.S. dollar-denominated annual contracts. Cathode and rod contract prices are generally based on the prevailing Commodity Exchange Inc. (COMEX - a division of NYMEX) monthly average spot price for the month of shipment and include a premium. Generally, copper rod is sold to wire and cable manufacturers, while cathode is sold to rod, brass or tube fabricators. During 2015, 15 percent of our North America mines' copper sales volumes were shipped to Atlantic Copper in the form of copper concentrate.

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South America. Production from our South America mines is sold as copper concentrate or copper cathode under U.S. dollar-denominated, annual and multi-year contracts. During 2015, our South America mines sold half of their copper production in concentrate and half as cathode.

Substantially all of South America's copper concentrate and cathode sales contracts provide final copper pricing in a specified future month (generally one to four months from the shipment date) primarily based on quoted LME monthly average spot copper prices. Revenues from South America's concentrate sales are recorded net of treatment and refining charges (i.e., fees paid to smelters and refiners that are generally negotiated annually). In addition, because a portion of the metals contained in copper concentrate is unrecoverable from the smelting process, revenues from South America's concentrate sales are also recorded net of allowances for unrecoverable metals, which are a negotiated term of the contracts and vary by customer.

Indonesia. PT-FI sells its production in the form of copper concentrate, which contains significant quantities of gold and silver, under U.S. dollar-denominated, long-term contracts. PT-FI also sells a small amount of copper concentrate in the spot market. Following is a summary of PT-FI's aggregate percentage concentrate sales to third parties, PT Smelting and Atlantic Copper for the years ended December 31:

	2015	2014	2013	
Third parties	61	% 36	% 50	%
PT Smelting	37	58	41	
Atlantic Copper	2	6	9	
	100	% 100	% 100	%

Substantially all of PT-FI's concentrate sales contracts provide final copper pricing in a specified future month (generally one to four months from the shipment date) primarily based on quoted LME monthly average spot copper prices. Revenues from PT-FI's concentrate sales are recorded net of royalties, export duties, treatment charges and allowances for unrecoverable metals.

Africa. TFM sells its production in the form of copper cathode under U.S. dollar-denominated contracts. Substantially all of TFM's cathode sales provide final copper pricing in the month after the shipment date based on quoted LME monthly average spot copper prices. Revenues from TFM's cathode sales are recorded net of royalties and also include adjustments for point-of-sale transportation costs that are negotiated in customer contracts.

Gold Products and Sales

We produce gold mostly from the Grasberg minerals district. Gold is primarily sold as a component of our copper concentrate or in slimes, which are a product of the smelting and refining process at Atlantic Copper. Gold generally is priced at the average London price for a specified month near the month of shipment. Revenues from gold sold as a component of our copper concentrate are recorded net of treatment and refining charges. Revenues from gold sold in slimes are recorded net of refining charges.

Molybdenum Products and Sales

We are the world's largest producer of molybdenum and molybdenum-based chemicals. In addition to production from the Henderson and Climax molybdenum mines, we produce molybdenum concentrate at certain of the North America copper mines and the Cerro Verde copper mine in Peru. The majority of our molybdenum concentrate is processed in our own conversion facilities. During 2015, our molybdenum sales were generally priced based on the average Metals Week price for the month prior to the month of shipment. We have incorporated changes in the commercial pricing structure for our chemicals products to promote continuation of chemical-grade production.

Cobalt and Silver Products and Sales

We produce cobalt hydroxide at the Tenke minerals district. Cobalt hydroxide is priced at a discount to the average monthly low price as published by Metal Bulletin or using LME-based pricing for a specified month near the month of shipment. We also produce silver as a component of our copper concentrate or in slimes. Silver generally is priced at the average London price for a specified month near the month of shipment.

Oil and Gas Products and Sales

We produce and sell oil and gas in the U.S. Our oil production is primarily sold under contracts with prices based upon regional benchmarks, and approximately 30 percent of our gas sales is priced monthly using industry-recognized, published index pricing, and the remainder is priced daily on the spot market.

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Approximately 70 percent of our California production is attributable to heavy crude oil, which is primarily sold under a long-term contract with prices based upon regional benchmarks. In the GOM, our share of oil and gas production is sold under a series of contracts pursuant to which crude oil is sold directly to refineries in the Gulf Coast regions of Texas and Louisiana at prices based on widely used industry benchmarks.

LABOR MATTERS

At December 31, 2015, we employed approximately 34,500 people (12,400 in the U.S., 12,100 in Indonesia, 5,200 in South America, 3,400 in Africa, and 1,400 in Europe and other locations), and also had contractors with personnel at many of our operations, including approximately 20,600 at the Grasberg minerals district, 6,300 at our South America mining operations, 6,000 at the Tenke minerals district, 4,100 in the U.S., and 500 in Europe and other locations. The number of employees represented by unions at December 31, 2015, and the expiration date of the applicable union agreements are listed below.

Location	Number of Unions	Number of Union-Represented Employees	Expiration Date	
PT-FI – Indonesia	2	9,058	September 2017	
TFM – DRC	11	3,326	N/A	a
Cerro Verde – Peru	3	2,735	August 2018	
El Abra – Chile	2	612	April 2016	b
Atlantic Copper – Spain	2	423	December 2015	c
Kokkola - Finland	3	414	November 2016	
Rotterdam – The Netherlands	2	60	March 2015	c
Stowmarket – United Kingdom	1	40	May 2017	
Bayway – New Jersey	1	36	April 2016	

The Collective Labor Agreement (CLA) between TFM and its workers' unions has no expiration date, but can be a. amended at any time in accordance with an established process. In September 2012, TFM negotiated a four-year salary scale with union-represented employees.

b. In February 2016, El Abra and one of its workers' unions (representing approximately one-third of El Abra's union-represented employees) signed a new four-year CLA agreement, which expires April 2020.

c. The CLA between Atlantic Copper and its workers' unions expired in December 2015, and the CLA between Rotterdam and its workers' unions expired in March 2015; new agreements are currently being negotiated.

Refer to Item 1A. "Risk Factors" for further information on labor matters.

ENVIRONMENTAL AND RECLAMATION MATTERS

The cost of complying with environmental laws is fundamental to and a substantial cost of our business. For information about environmental regulation, litigation and related costs, refer to Item 1A. "Risk Factors" and Notes 1 and 12.

COMPETITION

The top 10 producers of copper comprise approximately half of total worldwide mined copper production. We currently rank second among those producers, with approximately eight percent of estimated total worldwide mined copper production. Our competitive position is based on the size, quality and grade of our ore bodies and our ability to

manage costs compared with other producers. We have a diverse portfolio of mining operations with varying ore grades and cost structures. Our costs are driven by the location, grade and nature of our ore bodies, and the level of input costs, including energy, labor and equipment. The metals markets are cyclical, and our ability to maintain our competitive position over the long term is based on our ability to acquire and develop quality deposits, hire and retain a skilled workforce, and to manage our costs.

Within the oil and gas industry, our competitors include national and international oil companies, major integrated oil and gas companies, numerous independent oil and gas companies and others. There is substantial competition in the oil and gas industry. Our ability to identify and successfully develop additional prospects and to discover oil and

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gas reserves in the future will depend on capital availability and our ability to evaluate and select suitable properties, consummate transactions and manage our operations in a cost-efficient and effective manner in a highly competitive environment.

MINING OPERATIONS

Revised Operating Plans

During 2015, in response to weak market conditions, we took actions to enhance our financial position, including significant reductions in capital spending, production curtailments at certain North and South America mines (which resulted in aggregate annual reductions of 350 million pounds of copper and 34 million pounds of molybdenum) and actions to reduce operating, exploration and administrative costs. We continue to evaluate our mining operating plans and additional adjustments may be made as market conditions warrant.

Revised operating plans for the North America copper mines incorporate reductions in mining rates to reduce operating and capital costs, including the suspension of mining operations at the Miami mine, the suspension of production at the Sierrita mine, a 50 percent reduction in mining rates at the Tyrone mine and adjustments to mining rates at other North America mines. The revised plans at each of the operations also incorporated the impacts of lower energy, acid and other consumables, reduced labor costs and a significant reduction in capital spending plans.

The revised operating plan for our Henderson molybdenum mine incorporates lower operating rates, resulting in an approximate 65 percent reduction in annual production volumes. We have also incorporated changes in the commercial pricing structure for our chemical products to promote continuation of chemical-grade production.

Revised operating plans for the South America mines principally reflect adjustments at El Abra to reduce mining and stacking rates by approximately 50 percent to achieve lower operating and labor costs, defer capital expenditures and extend the life of the existing operation.

The revised operating plan for PT-FI incorporates improved operational efficiencies, reductions in input costs, supplies and contractor costs, and a deferral of 15 percent of capital expenditures that had been planned for 2016.

The revised operating plan for the Tenke mine incorporates a 50 percent reduction in capital spending that had been planned for 2016 and various initiatives to reduce operating, administrative and exploration costs.

Following are maps and descriptions of our mining operations in North America (including both copper and molybdenum operations), South America, Indonesia and Africa.

North America

In the U.S., most of the land occupied by our copper and molybdenum mines, concentrators, SX/EW facilities, smelter, refinery, rod mills, molybdenum roasters and processing facilities is generally owned by us or is located on unpatented mining claims owned by us. Certain portions of our Bagdad, Sierrita, Miami, Chino, Tyrone, Henderson and Climax operations are located on government-owned land and are operated under a Mine Plan of Operations or other use permit. Various federal and state permits or leases on government land are held for purposes incidental to mine operations.

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Morenci

We own an 85 percent undivided interest in Morenci, with the remaining 15 percent owned by Sumitomo Metal Mining Arizona, Inc. Each partner takes in kind its share of Morenci's production.

As further discussed in Note 18, we have entered into a definitive agreement to sell a 13 percent undivided interest in Morenci. Following completion of the transaction, we will own a 72 percent undivided interest in Morenci.

Morenci is an open-pit copper mining complex that has been in continuous operation since 1939 and previously was mined through underground workings. Morenci is located in Greenlee County, Arizona, approximately 50 miles northeast of Safford on U.S. Highway 191. The site is accessible by a paved highway and a railway spur.

The Morenci mine is a porphyry copper deposit that has oxide, secondary sulfide and primary sulfide mineralization. The predominant oxide copper mineral is chrysocolla. Chalcocite is the most important secondary copper sulfide mineral, with chalcopyrite as the dominant primary copper sulfide.

The Morenci operation consists of two concentrators capable of milling 115,000 metric tons of ore per day, which produce copper and molybdenum concentrate; a 68,000 metric ton-per-day, crushed-ore leach pad and stacking system; a low-grade run-of-mine (ROM) leaching system; four SX plants; and three EW tank houses that produce copper cathode. Total EW tank house capacity is approximately 900 million pounds of copper per year. During second-quarter 2015, Morenci's concentrate leach, direct-electrowinning facility (which was placed on care-and-maintenance status in early 2009) resumed operation. Morenci's available mining fleet consists of one hundred and eleven 236-metric ton haul trucks loaded by 12 shovels with bucket sizes ranging from 47 to 57 cubic meters, which are capable of moving an average of 815,000 metric tons of material per day.

The Morenci mill expansion project, which commenced operations in May 2014, successfully achieved full rates in second-quarter 2015. The project expanded mill capacity from 50,000 metric tons of ore per day to approximately 115,000 metric tons of ore per day, which results in incremental annual production of approximately 225 million pounds of copper and an improvement in Morenci's cost structure. Over the next five years, Morenci's copper production, including our joint venture partner share, is expected to average approximately one billion pounds per year.

Morenci's production, including our joint venture partner's share, totaled 1.06 billion pounds of copper and 8 million pounds of molybdenum in 2015, 812 million pounds of copper and less than 1 million pounds of molybdenum in 2014, and 664 million pounds of copper and 2 million pounds of molybdenum in 2013.

Morenci is located in a desert environment with rainfall averaging 13 inches per year. The highest bench elevation is 2,000 meters above sea level, and the ultimate pit bottom is expected to have an elevation of 840 meters above sea level. The Morenci operation encompasses approximately 68,250 acres, comprising 51,150 acres of patented mining claims and other fee lands, 14,050 acres of unpatented mining claims and 3,050 acres of land held by state or federal permits, easements and rights-of-way.

The Morenci operation's electrical power is primarily sourced from Tucson Electric Power Company, Arizona Public Service Company and the Luna Energy facility in Deming, New Mexico. Although we believe the Morenci operation has sufficient water sources to support current operations, we are a party to litigation that may impact our water rights claims or rights to continued use of currently available water supplies, which could adversely affect our water

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supply for the Morenci operation. Refer to Item 1A. "Risk Factors" and Item 3. "Legal Proceedings" for further discussion.

Bagdad

Our wholly owned Bagdad mine is an open-pit copper and molybdenum mining complex located in Yavapai County in west-central Arizona. It is approximately 60 miles west of Prescott and 100 miles northwest of Phoenix. The property can be reached by Arizona Highway 96, which ends at the town of Bagdad. The closest railroad is at Hillside, Arizona, approximately 24 miles southeast on Arizona Highway 96. The open-pit mining operation has been ongoing since 1945, and prior mining was conducted through underground workings.

The Bagdad mine is a porphyry copper deposit containing both sulfide and oxide mineralization. Chalcopyrite and molybdenite are the dominant primary sulfides and are the primary economic minerals in the mine. Chalcocite is the most common secondary copper sulfide mineral, and the predominant oxide copper minerals are chrysocolla, malachite and azurite.

The Bagdad operation consists of a 75,000 metric ton-per-day concentrator that produces copper and molybdenum concentrate, an SX/EW plant that can produce up to 32 million pounds per year of copper cathode from solution generated by low-grade stockpile leaching, and a pressure-leach plant to process molybdenum concentrate. The available mining fleet consists of thirty 235-metric ton haul trucks loaded by six shovels with bucket sizes ranging from 30 to 48 cubic meters, which are capable of moving an average of 250,000 metric tons of material per day.

Bagdad's production totaled 210 million pounds of copper and 9 million pounds of molybdenum in 2015, 237 million pounds of copper and 9 million pounds of molybdenum in 2014, and 216 million pounds of copper and 8 million pounds of molybdenum in 2013.

Bagdad is located in a desert environment with rainfall averaging 15 inches per year. The highest bench elevation is 1,200 meters above sea level, and the ultimate pit bottom is expected to be 310 meters above sea level. The Bagdad operation encompasses approximately 21,750 acres, comprising 21,150 acres of patented mining claims and other fee lands and 600 acres of unpatented mining claims.

Bagdad receives electrical power from Arizona Public Service Company. We believe the Bagdad operation has sufficient water sources to support current operations.

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Safford

Our wholly owned Safford mine has been in operation since 2007 and is an open-pit copper mining complex located in Graham County, Arizona, approximately 8 miles north of the town of Safford and 170 miles east of Phoenix. The site is accessible by paved county road off U.S. Highway 70.

The Safford mine includes two copper deposits that have oxide mineralization overlaying primary copper sulfide mineralization. The predominant oxide copper minerals are chrysocolla and copper-bearing iron oxides with the predominant copper sulfide material being chalcopyrite.

The property is a mine-for-leach project and produces copper cathode. The operation consists of two open pits feeding a crushing facility with a capacity of 103,000 metric tons per day. The crushed ore is delivered to leach pads by a series of overland and portable conveyors. Leach solutions feed a SX/EW facility with a capacity of 240 million pounds of copper per year. A sulfur burner plant is also in operation at Safford, providing a cost-effective source of sulphuric acid used in SX/EW operations. The available mining fleet consists of sixteen 235-metric ton haul trucks loaded by four shovels with bucket sizes ranging from 31 to 34 cubic meters, which are capable of moving an average of 225,000 metric tons of material per day.

Safford's copper production totaled 202 million pounds in 2015, 139 million pounds in 2014 and 146 million pounds in 2013.

Safford is located in a desert environment with rainfall averaging 10 inches per year. The highest bench elevation is 1,250 meters above sea level, and the ultimate pit bottom is expected to have an elevation of 750 meters above sea level. The Safford operation encompasses approximately 25,000 acres, comprising 21,000 acres of patented lands, 3,950 acres of unpatented lands and 50 acres of land held by federal permit.

The Safford operation's electrical power is primarily sourced from Tucson Electric Power Company, Arizona Public Service Company and the Luna Energy facility. Although we believe the Safford operation has sufficient water sources to support current operations, we are a party to litigation that may impact our water right claims or rights to continued use of currently available water supplies, which could adversely affect our water supply for the Safford operation. Refer to Item 1A. "Risk Factors" and Item 3. "Legal Proceedings" for further discussion.

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Sierrita

Our wholly owned Sierrita mine has been in operation since 1959 and is an open-pit copper and molybdenum mining complex located in Pima County, Arizona, approximately 20 miles southwest of Tucson and 7 miles west of the town of Green Valley and Interstate Highway 19. The site is accessible by a paved highway and by rail.

The Sierrita mine is a porphyry copper deposit that has oxide, secondary sulfide and primary sulfide mineralization. The predominant oxide copper minerals are malachite, azurite and chrysocolla. Chalcocite is the most important secondary copper sulfide mineral, and chalcopyrite and molybdenite are the dominant primary sulfides.

The Sierrita operation includes a 102,000 metric ton-per-day concentrator that produces copper and molybdenum concentrate. Sierrita also produces copper from a ROM oxide-leaching system. Cathode copper is plated at the Twin Buttes EW facility, which has a design capacity of approximately 50 million pounds of copper per year. The Sierrita operation also has molybdenum facilities consisting of a leaching circuit, two molybdenum roasters and a packaging facility. The molybdenum facilities process molybdenum concentrate produced by Sierrita, from our other mines and from third-party sources. The available mining fleet consists of twenty-five 235-metric ton haul trucks loaded by four shovels with bucket sizes ranging from 34 to 56 cubic meters, which are capable of moving an average of 200,000 metric tons of material per day.

In response to low copper and molybdenum prices, during December 2015, we announced plans to suspend production at the Sierrita mine. The plan consists of putting the mine and concentrator operations on care-and-maintenance status and producing copper through the oxide-leaching system. Additionally, Sierrita's molybdenum processing facility will continue to process material from our other mines. Sierrita's production totaled 189 million pounds of copper and 21 million pounds of molybdenum in 2015, 195 million pounds of copper and 24 million pounds of molybdenum in 2014, and 171 million pounds of copper and 20 million pounds of molybdenum in 2013.

Sierrita is located in a desert environment with rainfall averaging 12 inches per year. The highest bench elevation is 1,160 meters above sea level, and the ultimate pit bottom is expected to be 440 meters above sea level. The Sierrita operation, including the adjacent Twin Buttes site (refer to "Smelting Facilities and Other Mining Properties" for further discussion), encompasses approximately 37,650 acres, comprising 13,300 acres of patented mining claims and 24,350 acres of split-estate lands.

Sierrita receives electrical power through long-term contracts with the Tucson Electric Power Company. Although we believe the Sierrita operation has sufficient water sources to support current operations, we are a party to litigation that may impact our water rights claims or rights to continued use of currently available water supplies, which could adversely affect our water supply for the Sierrita operation. Refer to Item 1A. "Risk Factors" and Item 3. "Legal Proceedings" for further discussion.

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Miami

Our wholly owned Miami mine is an open-pit copper mining complex located in Gila County, Arizona, approximately 90 miles east of Phoenix and 6 miles west of the city of Globe on U.S. Highway 60. The site is accessible by a paved highway and by rail.

The Miami mine is a porphyry copper deposit that has leachable oxide and secondary sulfide mineralization. The predominant oxide copper minerals are chrysocolla, copper-bearing clays, malachite and azurite. Chalcocite and covellite are the most important secondary copper sulfide minerals.

Since about 1915, the Miami mining operation had processed copper ore using both flotation and leaching technologies.

As a result of current economic conditions, we have revised operating plans to suspend mining operations at the Miami mine and produce copper through leaching material already placed on stockpiles. The design capacity of the SX/EW plant is 200 million pounds of copper per year.

Miami's copper production totaled 43 million pounds in 2015, 57 million pounds in 2014 and 61 million pounds in 2013.

Miami is located in a desert environment with rainfall averaging 18 inches per year. The highest bench elevation is 1,390 meters above sea level, and the ultimate pit bottom will have an elevation of 810 meters above sea level. The Miami operation encompasses approximately 9,100 acres, comprising 8,750 acres of patented mining claims and other fee lands and 350 acres of unpatented mining claims.

Miami receives electrical power through long-term contracts with the Salt River Project and natural gas through long-term contracts with El Paso Natural Gas as the transporter. Although we believe the Miami operation has sufficient water sources to support current operations, we are a party to litigation that may impact our water right claims or rights to continued use of currently available water supplies, which could adversely affect our water supply for the Miami operation. Refer to Item 1A. "Risk Factors" and Item 3. "Legal Proceedings" for further discussion.

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Chino and Tyrone

Chino

Our wholly owned Chino mine is an open-pit copper mining complex located in Grant County, New Mexico, approximately 15 miles east of the town of Silver City off of State Highway 180. The mine is accessible by paved roads and by rail. Chino has been in operation since 1910.

The Chino mine is a porphyry copper deposit with adjacent copper skarn deposits. There is leachable oxide, secondary sulfide and millable primary sulfide mineralization. The predominant oxide copper mineral is chrysocolla. Chalcocite is the most important secondary copper sulfide mineral, and chalcopyrite and molybdenite the dominant primary sulfides.

The Chino operation consists of a 36,000 metric ton-per-day concentrator that produces copper and molybdenum concentrate, and a 150 million pound-per-year SX/EW plant that produces copper cathode from solution generated by ROM leaching. The available mining fleet consists of thirty-seven 240-metric ton haul trucks loaded by four shovels with bucket sizes ranging from 42 to 48 cubic meters, which are capable of moving an average of 235,000 metric tons of material per day.

Chino's production totaled 314 million pounds of copper in 2015, 250 million pounds of copper and less than 1 million pounds of molybdenum in 2014, and 171 million pounds of copper and 2 million pounds of molybdenum in 2013.

Chino is located in a desert environment with rainfall averaging 16 inches per year. The highest bench elevation is 2,250 meters above sea level, and the ultimate pit bottom is expected to be 1,500 meters above sea level. The Chino operation encompasses approximately 118,600 acres, comprising 113,200 acres of patented mining claims and other fee lands and 5,400 acres of unpatented mining claims.

Chino receives power from the Luna Energy facility and from the open market. We believe Chino has sufficient water resources to support current operations.

Tyrone

Our wholly owned Tyrone mine is an open-pit copper mining complex which has been in operation since 1967. It is located in Grant County, New Mexico, approximately 10 miles south of Silver City, New Mexico, along State Highway 90. The site is accessible by paved road and by rail.

The Tyrone mine is a porphyry copper deposit. Mineralization is predominantly secondary sulfide consisting of chalcocite, with leachable oxide mineralization consisting of chrysocolla.

Copper processing facilities consist of a SX/EW operation with a maximum capacity of approximately 100 million pounds of copper cathode per year. The available mining fleet consists of seven 240-metric ton haul trucks loaded by one shovel with a bucket size of 47 cubic meters, which is capable of moving an average of 49,000 metric tons of material per day.

The revised operating plans include a 50 percent reduction in mining rates at the Tyrone mine. Tyrone's copper production totaled 84 million pounds in 2015, 94 million pounds in 2014 and 96 million pounds in 2013.

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Tyrone is located in a desert environment with rainfall averaging 16 inches per year. The highest bench elevation is 2,000 meters above sea level, and the ultimate pit bottom is expected to have an elevation of 1,500 meters above sea level. The Tyrone operation encompasses approximately 35,200 acres, comprising 18,750 acres of patented mining claims and other fee lands and 16,450 acres of unpatented mining claims.

Tyrone receives electrical power from the Luna Energy facility and from the open market. We believe the Tyrone operation has sufficient water resources to support current operations.

Henderson and Climax

Henderson

Our wholly owned Henderson molybdenum mine has been in operation since 1976 and is located approximately 42 miles west of Denver, Colorado, off U.S. Highway 40. Nearby communities include the towns of Empire, Georgetown and Idaho Springs. The Henderson mill site is located approximately 15 miles west of the mine and is accessible from Colorado State Highway 9. The Henderson mine and mill are connected by a 10-mile conveyor tunnel under the Continental Divide and an additional five-mile surface conveyor. The tunnel portal is located five miles east of the mill.

The Henderson mine is a porphyry molybdenum deposit, with molybdenite as the primary sulfide mineral.

The Henderson operation consists of a large block-cave underground mining complex feeding a concentrator with a current capacity of approximately 32,000 metric tons per day. Henderson has the capacity to produce approximately 40 million pounds of molybdenum per year. The majority of the molybdenum concentrate produced is shipped to our Fort Madison, Iowa, processing facility. The available underground mining equipment fleet consists of fifteen 9-metric ton load-haul-dump (LHD) units and seven 73-metric ton haul trucks, which deliver ore to a gyratory crusher feeding a series of three overland conveyors to the mill stockpiles.

The revised operating plans for the Henderson mine incorporate an approximate 65 percent reduction in operating rates. Henderson's molybdenum production totaled 25 million pounds in 2015, and 30 million pounds in both 2014 and 2013.

The Henderson mine is located in a mountainous region with the main access shaft at 3,180 meters above sea level. The main production levels are currently at elevations of 2,200 and 2,350 meters above sea level. This region experiences significant snowfall during the winter months.

The Henderson mine and mill operations encompass approximately 11,900 acres, comprising 11,850 acres of patented mining claims and other fee lands and a 50-acre easement with the U.S. Forest Service for the surface portion of the conveyor corridor.

Henderson operations receive electrical power through long-term contracts with Xcel Energy and natural gas through long-term contracts with BP Energy Company (with Xcel Energy as the transporter). We believe the Henderson operation has sufficient water resources to support current operations.

Climax

Our wholly owned Climax mine is located 13 miles northeast of Leadville, Colorado, off Colorado State Highway 91 at the top of Fremont Pass. The mine is accessible by paved roads.

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The Climax ore body is a porphyry molybdenum deposit, with molybdenite as the primary sulfide mineral.

The Climax open-pit mine includes a 25,000 metric ton-per-day mill facility. Climax has the capacity to produce approximately 30 million pounds of molybdenum per year. The available mining fleet consists of nine 177-metric ton haul trucks loaded by two hydraulic shovels with bucket sizes of 34 cubic meters, which are capable of moving an average of 90,000 metric tons of material per day.

Molybdenum production from Climax totaled 23 million pounds in 2015, 21 million pounds in 2014 and 19 million pounds in 2013.

The Climax mine is located in a mountainous region. The highest bench elevation is approximately 4,050 meters above sea level, and the ultimate pit bottom is expected to have an elevation of approximately 3,100 meters above sea level. This region experiences significant snowfall during the winter months.

The operations encompass approximately 14,350 acres, consisting primarily of patented mining claims and other fee lands.

Climax operations receive electrical power through long-term contracts with Xcel Energy and natural gas through long-term contracts with Andarko Energy and BP Energy Company (with Xcel Energy as the transporter). We believe the Climax operation has sufficient water resources to support current operations.

South America

At our operations in South America, mine properties and facilities are controlled through mining claims or concessions under the general mining laws of the relevant country. The claims or concessions are owned or controlled by the operating companies in which we or our subsidiaries have a controlling ownership interest. Roads, power lines and aqueducts are controlled by easements.

Cerro Verde

We have a 53.56 percent ownership interest in Cerro Verde, with the remaining 46.44 percent held by SMM Cerro Verde Netherlands B.V. (21.0 percent), Compañia de Minas Buenaventura S.A.A. (19.58 percent) and other stockholders whose shares are publicly traded on the Lima Stock Exchange (5.86 percent).

Cerro Verde is an open-pit copper and molybdenum mining complex that has been in operation since 1976 and is located 20 miles southwest of Arequipa, Peru. The site is accessible by paved highway. A majority of Cerro Verde's copper cathode production is sold locally, and the remaining copper cathode and concentrate production are transported approximately 70 miles by truck and by rail to the Port of Matarani for shipment to international markets.

The Cerro Verde mine is a porphyry copper deposit that has oxide, secondary sulfide and primary sulfide mineralization. The predominant oxide copper minerals are brochantite, chrysocolla, malachite and copper "pitch." Chalcocite and covellite are the most important secondary copper sulfide minerals. Chalcopyrite and molybdenite are the dominant primary sulfides.

Cerro Verde's operation consists of an open-pit copper mine, a 360,000 metric ton-per-day concentrator and SX/EW leaching facilities. Leach copper production is derived from a 39,000 metric ton-per-day crushed leach facility

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and a ROM leach system. This SX/EW leaching operation has a capacity of approximately 200 million pounds of copper per year.

The Cerro Verde expansion project commenced operations in September 2015 and is currently operating at full rates. Cerro Verde's expanded operations will benefit from its large-scale, long-lived reserves and cost efficiencies. The project expanded the concentrator facilities from 120,000 metric tons of ore per day to 360,000 metric tons of ore per day and is expected to provide incremental annual production of approximately 600 million pounds of copper and 15 million pounds of molybdenum.

The available fleet consists of six 290-metric ton haul trucks and eighty-two 230-metric ton haul trucks loaded by nine electric shovels with bucket sizes ranging in size from 33 to 57 cubic meters and two hydraulic shovels with a bucket size of 21 cubic meters. This fleet is capable of moving an average of approximately 725,000 metric tons of material per day.

Cerro Verde's production totaled 545 million pounds of copper and 7 million pounds of molybdenum in 2015, 500 million pounds of copper and 11 million pounds of molybdenum in 2014, and 558 million pounds of copper and 13 million pounds of molybdenum in 2013.

Cerro Verde is located in a desert environment with rainfall averaging 1.5 inches per year and is in an active seismic zone. The highest bench elevation is 2,750 meters above sea level, and the ultimate pit bottom is expected to be 1,570 meters above sea level. The Peruvian general mining law and Cerro Verde's mining stability agreement grants the surface rights of mining concessions located on government land. Additional government land if obtained prior to 1997, must be leased or purchased. Cerro Verde has a mining concession covering approximately 157,000 acres, including 14,500 acres rented from the Regional Government of Arequipa, plus 71 acres of owned property, and 80 acres of rights-of-way outside the mining concession area.

Cerro Verde receives electrical power under long-term contracts with Kallpa Generación SA and ElectroPeru to supply energy to the expanded facilities.

Water for our Cerro Verde processing operations comes from renewable sources through a series of storage reservoirs on the Rio Chili watershed that collect water primarily from seasonal precipitation. In 2015, Cerro Verde completed the construction of a wastewater treatment plant that intercepts raw sewage that would otherwise be discharged into the Rio Chile and processes it for both use at the Cerro Verde mine and for recharge of treated water into the Rio Chile. Prior to construction of the wastewater treatment plant, Cerro Verde reached agreement with the Regional Government of Arequipa, the National Government, the local water utility company, Servicio de Agua Potable y Alcantarillado de Arequipa S.A. (SEDAPAR), and other local institutions to allow it to reuse an annual average of one cubic meter per second of the treated water to support the recently completed concentrator expansion. For further discussion of risks associated with the availability of water, see Item 1A. "Risk Factors."

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El Abra

We own a 51 percent interest in El Abra, and the remaining 49 percent interest is held by the state-owned copper enterprise Corporación Nacional del Cobre de Chile (CODELCO).

El Abra is an open-pit copper mining complex that has been in operation since 1996 and is located 47 miles north of Calama in Chile's El Loa province, Region II. The site is accessible by paved highway and by rail.

The El Abra mine is a porphyry copper deposit that has sulfide and oxide mineralization. The predominant primary sulfide copper minerals are bornite and chalcopyrite. There is a minor amount of secondary sulfide mineralization as chalcocite. The oxide copper minerals are chrysocolla and pseudomalachite. There are lesser amounts of copper-bearing clays and tenorite.

The El Abra operation consists of an open-pit copper mine and a SX/EW facility with a capacity of 500 million pounds of copper cathode per year from a 125,000 metric ton-per-day crushed leach circuit and a similar-sized ROM leaching operation. The available fleet consists of forty-one 220-metric ton haul trucks loaded by four shovels with buckets ranging in size from 34 to 63 cubic meters, which are capable of moving an average of 214,000 metric tons of material per day.

The revised operating plans for El Abra reduce mining and stacking rates by approximately 50 percent to achieve lower operating and labor costs, defer capital expenditures and extend the life of the existing operations. El Abra's copper production totaled 324 million pounds in 2015, 367 million pounds in 2014 and 343 million pounds in 2013.

Exploration results in recent years at El Abra indicate a significant sulfide resource, which could potentially support a major mill project. Future investments will be dependent on technical studies, economic factors and global copper market conditions.

El Abra is located in a desert environment with rainfall averaging less than one inch per year and is in an active seismic zone. The highest bench elevation is 4,180 meters above sea level, and the ultimate pit bottom is expected to be 3,430 meters above sea level. El Abra controls a total of approximately 151,300 acres of mining claims covering the ore deposit, stockpiles, process plant, and water wellfield and pipeline. In addition, El Abra has land surface rights for the road between the processing plant and the mine, the water wellfield, power transmission lines and for the water pipeline from the Salar de Ascotán aquifer.

El Abra currently receives electrical power under a long-term contract with E-Cl. Water for our El Abra processing operations comes from the continued pumping of groundwater from the Salar de Ascotán aquifer pursuant to regulatory approval. We believe El Abra has sufficient water rights and regulatory approvals to support current operations. El Abra is conducting studies to assess the feasibility of constructing a desalination plant near the Pacific Ocean to treat seawater for possible increased sulfide ore production through ore mill processing. For a discussion of risks associated with the availability of water, refer to Item 1A. "Risk Factors."

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Indonesia

Ownership. PT-FI is a limited liability company organized under the laws of the Republic of Indonesia. We directly own 81.28 percent of the outstanding common stock of PT-FI and indirectly own 9.36 percent through our wholly owned subsidiary, PT Indocopper Investama; the Indonesian government owns the remaining 9.36 percent.

PT-FI has established an unincorporated joint venture with Rio Tinto, under which Rio Tinto has a 40 percent interest in certain assets and future production exceeding specified annual amounts of copper, gold and silver through 2021 in Block A of PT-FI's Contract of Work (COW), and after 2021, a 40 percent interest in all production from Block A. Refer to Note 3 for further discussion of the joint venture agreement.

Contract of Work. PT-FI conducts its current exploration and mining operations in Indonesia through a COW with the Indonesian government. The COW governs our rights and obligations relating to taxes, exchange controls, royalties, repatriation and other matters, and was concluded pursuant to the 1967 Foreign Capital Investment Law, which expresses Indonesia's foreign investment policy and provides basic guarantees of remittance rights and protection against nationalization, a framework for economic incentives and basic rules regarding other rights and obligations of foreign investors. Specifically, the COW provides that the Indonesian government will not nationalize or expropriate PT-FI's mining operations. Any disputes regarding the provisions of the COW are subject to international arbitration; however, we have not had an arbitration during the more than 40 years we have operated in Indonesia.

PT-FI's original COW was entered into in 1967 and was replaced by the current COW in 1991. The initial term of the current COW expires in 2021, but the COW explicitly provides that it can be extended for two 10-year periods subject to Indonesian government approval, which pursuant to the COW cannot be withheld or delayed unreasonably. The COW allows us to conduct exploration, mining and production activities in the 24,700-acre Block A area, which is where all of PT-FI's proven and probable mineral reserves and all its current mining operations are located. Under the COW, PT-FI also conducts exploration activities in the Block B area currently covering 502,000 acres. Ongoing negotiations for an amended COW, discussed below and in Note 13, may result in relinquishments of the Block B acreage.

Under the COW, PT-FI pays royalties on copper, gold and silver in the concentrate it sells (refer to Note 13 for further discussion of the royalty rates and the "Regulatory Matters" discussion below regarding the modifications resulting from the July 2014 Memorandum of Understanding (MOU) entered into with Indonesian government). A large part of the mineral royalties under Indonesian government regulations is designated to the provinces from which the minerals are extracted. In connection with its fourth concentrator mill expansion completed in 1998, PT-FI agreed to pay the Indonesian government additional royalties, which were not required by the COW, to provide further support to the local governments and to the people of the Indonesian province of Papua. PT-FI's royalties totaled \$114 million in 2015, \$115 million in 2014 and \$109 million in 2013.

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Regulatory Matters. In January 2014, the Indonesian government published regulations that among other things imposed a progressive export duty on copper concentrate and restricts concentrate exports after January 12, 2017. Despite PT-FI's rights under its COW to export concentrate without the payment of duties, PT-FI was unable to obtain administrative approval for exports and operated at approximately half of its capacity from mid-January 2014 through July 2014.

In July 2014, PT-FI entered into a MOU with the Indonesian government. Under the MOU, PT-FI provided a \$115 million assurance bond to support its commitment for smelter development, agreed to increase royalty rates and agreed to pay export duties (which were set at 7.5 percent, declining to 5.0 percent when smelter development progress exceeds 7.5 percent and are eliminated when development progress exceeds 30 percent). The MOU also anticipated an amendment of the COW within six months to address other matters; however, no terms of the COW other than those relating to the smelter bond, increased royalties and export duties were changed. In January 2015, the MOU was extended to July 25, 2015, and it expired on that date. The increased royalty rates, export duties and smelter assurance bond remain in effect. PT-FI paid export duties totaling \$109 million in 2015 and \$77 million in 2014.

PT-FI is required to apply for renewal of export permits at six-month intervals. On July 29, 2015, PT-FI's export permit was renewed through January 28, 2016. In connection with the renewal, export duties were reduced to 5.0 percent as a result of smelter development progress. On February 9, 2016, PT-FI's export permit was renewed through August 8, 2016. PT-FI will continue to pay a 5.0 percent export duty on concentrate while it reviews its smelter progress with the Indonesian government.

PT-FI continues to engage in discussions with the Indonesian government regarding its COW and long-term operating rights. In October 2015, the Indonesian government provided a letter of assurance to PT-FI indicating that it will approve the extension of PT-FI's operations beyond 2021, and provide the same rights and the same level of legal and fiscal certainty provided under its current COW.

In connection with its COW negotiations and subject to concluding the agreement to extend PT-FI's operations beyond 2021 on acceptable terms, PT-FI has agreed to construct new smelter capacity in Indonesia and to divest an additional 20.64 percent in PT-FI at fair market value. PT-FI continues to advance plans for the smelter in parallel with completing its COW negotiations.

We cannot predict whether PT-FI will be successful in reaching a satisfactory agreement on the terms of its long-term mining rights. If PT-FI is unable to reach agreement with the Indonesian government on its long-term rights, we may be required to reduce or defer investments in underground development projects, which could have a material adverse effect on PT-FI's future production and reserves. In addition, PT-FI would intend to pursue any and all claims against the Indonesian government for breach of contract through international arbitration. Refer to Item 1A. "Risk Factors" for further discussion of risks associated with operations in Indonesia.

Grasberg Minerals District. PT-FI operates in the remote highlands of the Sudirman Mountain Range in the province of Papua, Indonesia, which is on the western half of the island of New Guinea. We and our predecessors have been the only operator of exploration and mining activities in Block A since 1967.

The Grasberg minerals district has three operating mines: the Grasberg open pit, the Deep Ore Zone (DOZ) underground mine and the Deep Mill Level Zone (DMLZ) underground mine. The Grasberg minerals district also includes the developed Big Gossan underground mine where operations are currently suspended and are expected to restart in the first half of 2017. PT-FI also has several projects in progress in the Grasberg minerals district related to the development of the large-scale, long-lived, high-grade underground ore bodies located beneath and nearby the Grasberg open pit. In aggregate, these underground ore bodies are expected to produce large-scale quantities of copper

and gold following the transition from the Grasberg open pit, currently anticipated to occur in late 2017. Refer to MD&A for further discussion of these projects.

PT-FI's production, including our joint venture partner's share, totaled 752 million pounds of copper and 1.23 million ounces of gold in 2015, 651 million pounds of copper and 1.13 million ounces of gold in 2014 and 928 million pounds of copper and 1.14 million ounces of gold in 2013.

Our principal source of power for all our Indonesian operations is a coal-fired power plant that we built in 1998. Diesel generators supply peaking and backup electrical power generating capacity. A combination of naturally occurring mountain streams and water derived from our underground operations provides water for our operations.

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Although we typically have sufficient water for our Indonesian operations, lower rainfall resulting from El Niño weather conditions in the second half of 2015 has impacted operations, and may continue to impact operations in 2016. Our Indonesian operations are in an active seismic zone and experience average annual rainfall of approximately 200 inches.

Grasberg Open Pit

PT-FI began open-pit mining of the Grasberg ore body in 1990. Mining operations are expected to continue through the end of 2017, and production from the ore stockpiles, which are located outside of the pit limits, are expected to continue until early 2019. Production in the open pit is currently at the 3,160- to 3,715-meter elevation level and totaled 42 million metric tons of ore in 2015, which provided 70 percent of PT-FI's 2015 mill feed.

The current open-pit equipment fleet consists of over 500 units. The larger mining equipment directly associated with production includes an available fleet of 141 haul trucks with payloads ranging from 218 to 276 metric tons and 16 shovels with bucket sizes ranging from 17 to 42 cubic meters, which mined an average of 250,400 metric tons of material per day in 2015, 298,400 metric tons per day in 2014 and 381,000 metric tons per day in 2013.

Crushing and conveying systems are integral to the Grasberg mine and provide the capacity to transport more than 250,000 metric tons of ore per day. For the year 2015, Grasberg's crushing and conveying systems delivered an average of 116,000 metric tons of ore per day to the mill. Grasberg's overburden handling system is capable of delivering 175,000 metric tons per day. For the year 2015, the Grasberg overburden handling system delivered an average of 43,000 metric tons per day of overburden to the overburden stockpiles. The remaining overburden moved by haul trucks averaged 72,000 metric tons per day in 2015. Ore milled from the Grasberg open pit averaged 115,900 metric tons of ore per day in 2015, 69,100 metric tons of ore per day in 2014 and 127,700 metric tons of ore per day in 2013.

DOZ Underground Mine

The DOZ ore body lies vertically below the now depleted Intermediate Ore Zone. PT-FI began production from the DOZ ore body in 1989 using open-stope mining methods, but suspended production in 1991 in favor of production from the Grasberg open pit. Production resumed in September 2000 using the block-cave method and is at the 3,110-meter elevation level.

The DOZ is a mature block-cave mine that previously operated at 80,000 metric tons of ore per day. Current operating rates from the DOZ underground mine, which range from 35,000 to 65,000 metric tons of ore per day, are driven by the value of the incremental DOZ ore grade compared to the ore from the Grasberg open pit and ore grade material from the development of the DMLZ and Grasberg Block Cave underground mines. During 2015, ore milled from the DOZ underground mine averaged 43,700 metric tons of ore per day. Production at the DOZ underground mine is expected to continue through 2021.

The DOZ mine fleet consists of over 250 pieces of mobile equipment. The primary mining equipment directly associated with production and development includes an available fleet of 52 LHD units and 21 haul trucks. Each production LHD unit typically carries approximately 11 metric tons of ore. Using ore passes and chutes, the LHD units transfer ore into 55-metric ton capacity haul trucks. The trucks dump into two gyratory crushers, and the ore is then conveyed to the surface stockpiles for processing.

The success of the development of the DOZ mine, one of the world's largest underground mines, provides confidence in the future development of PT-FI's large-scale, underground ore bodies.

DMLZ Underground Mine

The DMLZ ore body lies below the DOZ underground mine at the 2,590-meter elevation and represents the downward continuation of mineralization in the Ertsberg East Skarn system and neighboring Ertsberg porphyry. PT-FI began production from the DMLZ ore body in September 2015 using the block-cave method. Ore milled from the DMLZ underground mine averaged 2,900 metric tons of ore per day for the year 2015 (3,500 metric tons per day in fourth-quarter 2015). Targeted production rates once the DMLZ underground mine reaches full capacity are expected to approximate 80,000 metric tons of ore per day in 2021. Production at the DMLZ underground mine is expected to continue through 2040.

The DMLZ mine fleet consists of over 277 pieces of mobile equipment, which includes 33 LHD units and 19 haul trucks used in production and development activities.

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Big Gossan Underground Mine

Production from the Big Gossan ore body, which is currently suspended, is expected to restart in the first half of 2017 and ramp up to 7,000 metric tons of ore per day in 2019. The Big Gossan mine lies underground and adjacent to the current mill site. It is a tabular, near vertical ore body with approximate dimensions of 1,200 meters along strike and 800 meters down dip with varying thicknesses from 20 meters to 120 meters. The mine utilizes a blasthole stoping method with delayed paste backfill. Stopes of varying sizes are mined and the ore dropped down passes to a truck haulage level. Trucks are chute loaded and transport the ore to a jaw crusher. The crushed ore is then hoisted vertically via a two-skip production shaft to a level where it is loaded onto a conveyor belt. The belt carries the ore to one of the main underground conveyors where the ore is transferred and conveyed to the surface stockpiles for processing.

The Big Gossan mine fleet consists of over 135 pieces of mobile equipment, which includes five LHD units and three haul trucks used in development and production activities.

Description of Ore Bodies. Our Indonesia ore bodies are located within and around two main igneous intrusions, the Grasberg monzodiorite and the Ertzberg diorite. The host rocks of these ore bodies include both carbonate and clastic rocks that form the ridge crests and upper flanks of the Sudirman Range, and the igneous rocks of monzonitic to dioritic composition that intrude them. The igneous-hosted ore bodies (the Grasberg open pit and block cave, and portions of the DOZ block cave) occur as vein stockworks and disseminations of copper sulfides, dominated by chalcopyrite and, to a lesser extent, bornite. The sedimentary-rock hosted ore bodies (portions of the DOZ and all of the Big Gossan) occur as “magnetite-rich, calcium/magnesian skarn” replacements, whose location and orientation are strongly influenced by major faults and by the chemistry of the carbonate rocks along the margins of the intrusions.

The copper mineralization in these skarn deposits is dominated by chalcopyrite, but higher bornite concentrations are common. Moreover, gold occurs in significant concentrations in all of the district's ore bodies, though rarely visible to the naked eye. These gold concentrations usually occur as inclusions within the copper sulfide minerals, though, in some deposits, these concentrations can also be strongly associated with pyrite.

The following diagram indicates the relative elevations (in meters) of our reported Indonesia ore bodies.

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The following map, which encompasses an area of approximately 42 square kilometers (approximately 16 square miles), indicates the relative positions and sizes of our reported Indonesia ore bodies and their locations.

Africa

TFM is organized under the laws of the DRC. We own an effective 56 percent interest in TFM, with the remaining ownership interests held by Lundin Mining Corporation (Lundin) (an effective 24 percent interest) and La Générale des Carrières et des Mines (Gécamines), which is wholly owned by the DRC government (a 20 percent non-dilutable interest).

TFM is entitled to mine in the DRC under an Amended and Restated Mining Convention (ARMC) with the DRC government. The original Mining Convention entered into in 1996 was replaced with the ARMC in 2005 and was further amended in 2010 (approved in 2011). The current ARMC will remain in effect for as long as the Tenke concessions are exploitable.

TFM pays a royalty of two percent of net revenues under the ARMC, which totaled \$25 million in 2015 and \$29 million in both 2014 and 2013.

The Tenke minerals district is located in the Southeast region of the DRC approximately 110 miles northwest of Lubumbashi and is accessible by paved roads and by rail. The deposits are sediment-hosted copper and cobalt

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deposits with oxide, mixed oxide-sulfide and sulfide mineralization. The dominant oxide minerals are malachite, pseudomalachite and heterogenite. Important sulfide minerals consist of bornite, carrollite, chalcocite and chalcopyrite.

The Tenke minerals district contains an open-pit copper and cobalt mining complex, which commenced initial copper production in March 2009. TFM completed its second phase expansion project in early 2013, which included increasing mine, mill and processing capacity. Construction of a second sulphuric acid plant is under way, with completion expected in the first half of 2016. We continue to engage in exploration activities and metallurgical testing to evaluate the potential of the highly prospective minerals district at Tenke. Future development and expansion opportunities are being deferred pending improved market conditions.

The current equipment fleet includes three 17-cubic meter mass excavators, five 12-cubic meter front-end loaders, thirteen 7-cubic meter front-end loaders, thirty-six 91-metric ton haul trucks and six 80-metric ton haul trucks.

Copper and cobalt are recovered through an agitation-leach plant. Production from the Tenke minerals district totaled 449 million pounds of copper and 35 million pounds of cobalt in 2015, 447 million pounds of copper and 29 million pounds of cobalt in 2014, and 462 million pounds of copper and 28 million pounds of cobalt in 2013.

The Tenke minerals district is located in a tropical region; however, temperatures are moderated by its higher altitudes. Weather in this region is characterized by a dry season and a wet season, each lasting about six months with average rainfall of 47 inches per year. The highest bench elevation is expected to be 1,520 meters above sea level, and the ultimate pit bottom is expected to be 1,110 meters above sea level. The Tenke deposits are covered by six exploitation permits totaling approximately 394,450 acres.

TFM has long-term power supply and infrastructure funding agreements with La Société Nationale d'Electricité, the state-owned electric utility company serving the region. The results of a recent water exploration program, as well as the regional geological and hydro-geological conditions, indicate that adequate water is available during the expected life of the operation.

Smelting Facilities and Other Mining Properties

Atlantic Copper. Our wholly owned Atlantic Copper smelter and refinery is located on land concessions from the Huelva, Spain, port authorities, which are scheduled to expire in 2027.

The design capacity of the smelter is approximately 300,000 metric tons of copper per year, and the refinery has a capacity of 285,000 metric tons of copper per year. During 2015, Atlantic Copper treated 1.05 million metric tons of concentrate and scrap, and produced 293,100 metric tons of copper anode from its smelter and 284,800 metric tons of copper cathode from its refinery.

Following is a summary of Atlantic Copper's concentrate purchases from our copper mining operations and third parties for the years ended December 31:

	2015		2014		2013	
North America copper mines	23	%	21	%	13	%
South America mining	3	a	21		32	
Indonesia mining	3		8		16	
Third parties	71		50		39	
	100	%	100	%	100	%

a. The decrease in purchases from the South America mines, compared to the years 2014 and 2013, primarily reflects the impact of the November 2014 sale of the Candelaria and Ojos del Salado mines.

Atlantic Copper's major maintenance turnarounds typically occur approximately every eight years, with shorter-term maintenance turnarounds in the interim. Atlantic Copper completed a 68-day major maintenance turnaround in 2013 and the next short-term maintenance turnaround is scheduled for 2017.

PT Smelting. PT-FI's COW required us to construct, or cause to be constructed, a smelter in Indonesia if we and the Indonesian government determined that such a project would be economically viable. In 1995, following the completion of a feasibility study, we entered into agreements relating to the formation of PT Smelting, an Indonesian company, and the construction of the copper smelter and refinery in Gresik, Indonesia. PT Smelting owns and operates the smelter and refinery. PT-FI owns 25 percent of PT Smelting, with the remainder owned by Mitsubishi

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Materials Corporation (60.5 percent), Mitsubishi Corporation Unimetals Ltd. (9.5 percent) and JX Nippon Mining & Metals Corporation (5 percent).

PT-FI's contract with PT Smelting requires PT-FI to supply 100 percent of the copper concentrate requirements (at market rates subject to a minimum or maximum rate) necessary for PT Smelting to produce 205,000 metric tons of copper annually on a priority basis. PT-FI may also sell copper concentrate to PT Smelting at market rates for quantities in excess of 205,000 metric tons of copper annually.

During 2015, PT Smelting treated 744,800 metric tons of concentrate and produced 199,700 metric tons of copper anode from its smelter and 198,400 metric tons of copper cathode from its refinery. PT Smelting resumed operations in September 2015, following a temporary suspension in July 2015, and operated at approximately 80 percent capacity until November 2015 when required repairs of an acid plant cooling tower that was damaged during the suspension were completed.

PT Smelting's maintenance turnarounds (which range from two weeks to a month to complete) typically are expected to occur approximately every two years, with short-term maintenance turnarounds in the interim. PT Smelting completed a 23-day maintenance turnaround during 2014, and the next major maintenance turnaround is scheduled for third-quarter 2016.

Miami Smelter. We own and operate a smelter at our Miami mining operation in Arizona. The smelter has been operating for approximately 100 years and has been upgraded numerous times during that period to implement new technologies, to improve production and to comply with air quality requirements. The Miami smelter is installing emission control equipment that will allow it to operate in compliance with recently adopted enhanced air quality standards (refer to Item 1A. "Risk Factors" for further discussion).

The Miami smelter processes copper concentrate primarily from our North America copper mines. Concentrate processed through the smelter totaled 686,700 metric tons in 2015. In addition, because sulphuric acid is a by-product of smelting concentrate, the Miami smelter is also the most significant source of sulphuric acid for our North America leaching operations (refer to Item 1A. "Risk Factors" for further discussion).

Major maintenance turnarounds (which take approximately three weeks to complete) typically occur approximately every 14 months for the Miami smelter, with short-term maintenance turnarounds in the interim. The Miami Smelter completed a major maintenance turnaround in third-quarter 2015, and the next major maintenance turnaround is scheduled for fourth-quarter 2016.

Rod & Refining Operations. Our Rod & Refining operations consist of conversion facilities located in North America, including a refinery in El Paso, Texas; rod mills in El Paso, Texas, Norwich, Connecticut, and Miami, Arizona; and a specialty copper products facility in Bayway, New Jersey. We refine our copper anode production from our Miami smelter at our El Paso refinery. The El Paso refinery has the potential to operate at an annual production capacity of about 900 million pounds of copper cathode, which is sufficient to refine all of the copper anode we produce at our Miami smelter. Our El Paso refinery also produces nickel carbonate, copper telluride and autoclaved slimes material containing gold, silver, platinum and palladium.

Molybdenum Conversion Facilities. We process molybdenum concentrate at our conversion plants in the U.S. and Europe into such products as technical-grade molybdic oxide, ferromolybdenum, pure molybdic oxide, ammonium molybdates and molybdenum disulfide. We operate molybdenum roasters in Sierrita, Arizona; Fort Madison, Iowa; and Rotterdam, the Netherlands, and we operate a molybdenum pressure-leach plant in Bagdad, Arizona. We also produce ferromolybdenum for customers worldwide at our conversion plant located in Stowmarket, United Kingdom.

Freeport Cobalt. In March 2013, we acquired a cobalt chemical refinery in Kokkola, Finland, and the related sales and marketing business. The acquisition provided direct end-market access for the cobalt hydroxide production at the Tenke minerals district. The joint venture operates under the name Freeport Cobalt, and we are the operator with an effective 56 percent ownership interest. The remaining effective ownership interest is held by our partners in TFM, including 24 percent by Lundin and 20 percent by Gécamines. The Kokkola refinery has an annual refining capacity of approximately 15,000 metric tons of cobalt, sufficient to refine the majority of the cobalt we produce in the Tenke minerals district.

Other North America Copper Mines. We also have five non-operating copper mines in North America – Ajo, Bisbee, Twin Buttes and Tohono in Arizona, and Cobre in New Mexico – that have been on care-and-maintenance status for

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several years and would require new or updated environmental studies, new permits, and additional capital investment, which could be significant, to return them to operating status.

Mining Development Projects and Exploration

We have several projects and potential opportunities to expand production volumes, extend mine lives and develop large-scale underground ore bodies. Our near-term major development projects include the underground development activities in Grasberg (refer to MD&A for further discussion). Considering the long-term nature and large size of our development projects, actual costs and timing could vary from estimates. We continue to review our mine development and processing plans to maximize the value of our mineral reserves.

Capital expenditures for mining operations totaled \$3.3 billion (including \$2.4 billion for major projects) in 2015, \$4.0 billion (including \$2.9 billion for major projects) in 2014 and \$3.8 billion (including \$2.3 billion for major projects) in 2013. Capital expenditures for major projects during the three years ended December 31, 2015, were primarily associated with the expansion projects at Morenci and Cerro Verde, and underground development activities at Grasberg. Capital expenditures for major projects at mining operations in the year 2016 are expected to approximate \$1.4 billion and are primarily associated with underground development activities at Grasberg and remaining costs for the Cerro Verde expansion.

PT-FI is advancing plans for the construction of new smelter capacity in Indonesia in parallel with completing negotiations on its COW and long-term operating rights. PT-FI has identified sites, and project definition studies and early engineering are being advanced. We are also engaged in discussions with potential partners for the project. The preliminary scope of the facilities involves smelting and refining capacity of one to two million metric tons per year of copper concentrate from the Grasberg mine.

We also have an additional long-term underground mine development project in the Grasberg minerals district for the Kucing Liar ore body, which lies on the southern flank of and underneath the southern portion of the Grasberg open pit at the 2,605-meter elevation level. We expect to mine the Kucing Liar ore body using the block-cave method; aggregate capital cost estimates for development of the Kucing Liar ore body are projected to approximate \$2.4 billion (which are expected to be made between 2019 and 2031). Additionally, our current mine development plans include approximately \$5 billion of capital expenditures at our processing facilities to optimize the handling of underground ore types once the Grasberg open-pit operations cease. We expect substantially all of these expenditures to be made between 2018 and 2035.

Our mining exploration activities are generally near our existing mines, with a focus on opportunities to expand reserves and resources to support development of additional future production capacity in the large minerals districts where we currently operate. Exploration results continue to indicate opportunities for what we believe could be significant future potential reserve additions in North and South America, and in the Tenke minerals district. The drilling data in North America also indicates the potential for significantly expanded sulfide production. Drilling results and exploration modeling provide a long-term pipeline for future growth in reserves and production capacity in established minerals districts. Exploration spending associated with mining operations totaled \$102 million in 2015, \$96 million in 2014 and \$182 million in 2013. Exploration spending continues to be reduced from historical levels as a result of market conditions and is expected to approximate \$52 million for the year 2016.

Sources and Availability of Energy, Natural Resources and Raw Materials

Our copper mining operations require significant energy, principally diesel, electricity, coal and natural gas, most of which is obtained from third parties under long-term contracts. Energy represented 17 percent of our 2015 consolidated copper production costs and included purchases of approximately 250 million gallons of diesel fuel; 7,600 gigawatt hours of electricity at our North America, South America and Africa copper mining operations (we

generate all of our power at our Indonesia mining operation); 800 thousand metric tons of coal for our coal power plant in Indonesia; and 1 million British thermal units (MMBtu) of natural gas at certain of our North America mines. Based on current cost estimates, we estimate energy will approximate 20 percent of our consolidated copper production costs for 2016.

Our mining operations also require significant quantities of water for mining, ore processing and related support facilities. The loss of water rights for any of our mines, in whole or in part, or shortages of water to which we have rights, could require us to curtail or shut down mining operations. For a further discussion of risks and legal proceedings associated with the availability of water, refer to Item 1A. "Risk Factors" and Item 3. "Legal Proceedings."

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Sulphuric acid is used in the SX/EW process and is produced as a by-product of the smelting process at our smelters and from our sulfur burners at the Safford and Tenke mines. Sulphuric acid needs in excess of the sulphuric acid produced by our operations are purchased from third parties. As further discussed in Item 1A. "Risk Factors," if production were to be curtailed at the Miami Smelter, we would be required to export concentrate rather than process it ourselves and to purchase sulphuric acid from third parties, thereby increasing our operating costs.

Community and Human Rights

We have adopted policies that govern our working relationships with the communities where we operate and are designed to guide our practices and programs in a manner that respects human rights and the culture of the local people impacted by our operations. We continue to make significant expenditures on community development, education, training and cultural programs, which include:

- comprehensive job training programs
 - basic education programs
- public health programs, including malaria control and HIV
- agricultural assistance programs
- small and medium enterprise development programs
- cultural promotion and preservation programs
- clean water and sanitation projects
- community infrastructure development
- charitable donations

In December 2000, we endorsed the joint U.S. State Department-British Foreign Office Voluntary Principles on Human Rights and Security (Voluntary Principles). We participated in developing these Voluntary Principles with other major natural resource companies and international human rights organizations and they are incorporated into our human rights policy.

We completed a corporate level human rights impact assessment in 2014, the results of which were used to evaluate our human rights program, including a review of our human rights policy. In February 2015, we updated our human rights policy to, among other things, reflect our commitment to integrating the United Nations Guiding Principles on Business and Human Rights into our human rights program. We also participate in a multi-industry human rights working group to gain insight from peer companies and are integrating human rights due diligence into our business practices.

We believe that our social and economic development programs are responsive to the issues raised by the local communities near our areas of operation and should help us maintain good relations with the surrounding communities and avoid disruptions of mining operations. As part of our ongoing, annual commitment to sustainable community development, we have made significant investments in social programs, including in-kind support and administration, across our global operations. Over the last five years, these investments have averaged \$180 million per year. Nevertheless, social and political instability in the areas of our operations may adversely impact our mining operations. Refer to Item 1A. "Risk Factors" for further discussion.

South America. Cerro Verde has provided a variety of community support projects over the years. Following engagements with regional and local governments, civic leaders and development agencies, in 2006, Cerro Verde committed to support the costs for a new potable water treatment plant to serve Arequipa. In addition, an agreement was reached with the Peruvian government for development of a water storage and distribution network, which was financed by the Cerro Verde Civil Association (the Association). The Association manages contributions made by

Cerro Verde for projects that focus on education, training, health, cultural preservation and basic infrastructure.

Cerro Verde reached an agreement with the Regional Government of Arequipa, the National Government, SEDAPAR and other local institutions to allow it to finance, engineer and construct a wastewater treatment plant for the city of Arequipa, which is being used to supplement existing water supplies to support Cerro Verde's concentrator expansion. Treating this water will also improve the regional water quality, enhance agriculture products grown in the area and reduce waterborne illnesses. In addition to these projects, Cerro Verde annually makes significant community development investments in the Arequipa region.

Indonesia. In 1996, PT-FI established the Freeport Partnership Fund for Community Development (the Partnership Fund) through which PT-FI has made available funding and technical assistance to support community development initiatives in the areas of health, education and economic development of the area. PT-FI has

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committed through 2016 to provide one percent of its annual revenue for the development of the local people in its area of operations through the Partnership Fund. PT-FI recognized \$27 million in 2015, \$31 million in 2014 and \$41 million in 2013 for this commitment.

The Amungme and Kamoro Community Development Organization (Lembaga Pengembangan Masyarakat Amungme dan Kamoro or LPMAM) oversees disbursement of the program funds we contribute to the Partnership Fund. LPMAM is governed by a board of commissioners and a board of directors, which are comprised of representatives from the local Amungme and Kamoro tribal communities, government leaders, church leaders, and one representative of PT-FI on each board. The Amungme and Kamoro people are original inhabitants of the land in our area of operations. In addition to the Partnership Fund, PT-FI annually makes significant investments in public health, education, community infrastructure and economic development.

Security Matters. Consistent with our COW in Indonesia and our commitment to protect our employees and property, we have taken steps to provide a safe and secure working environment. As part of its security program, PT-FI maintains its own internal security department. Both employees and contractors are unarmed and perform functions such as protecting company facilities, monitoring shipments of supplies and products, assisting in traffic control and aiding in emergency response operations. The security department receives human rights training annually.

PT-FI's share of costs for its internal civilian security department totaled \$58 million for 2015, \$57 million for 2014 and \$51 million for 2013.

PT-FI, and all businesses and residents of Indonesia, rely on the Indonesian government for the maintenance of public order, upholding the rule of law and the protection of personnel and property. The Grasberg minerals district has been designated by the Indonesian government as one of Indonesia's vital national assets. This designation results in the police, and to a lesser extent, the military, playing a significant role in protecting the area of our operations. The Indonesian government is responsible for employing police and military personnel and directing their operations.

From the outset of PT-FI's operations, the Indonesian government has looked to PT-FI to provide logistical and infrastructure support and assistance for these necessary services because of the limited resources of the Indonesian government and the remote location of and lack of development in Papua. PT-FI's financial support for the Indonesian government security institutions assigned to the operations area represents a prudent response to its requirements to protect its workforce and property, better ensuring that personnel are properly fed and lodged, and have the logistical resources to patrol PT-FI's roads and secure its operating area. In addition, the provision of such support is consistent with PT-FI's obligations under the COW, reflects our philosophy of responsible corporate citizenship, and is in keeping with our commitment to pursue practices that will promote human rights.

PT-FI's share of support costs for the government-provided security was \$21 million in 2015, \$27 million in 2014 and \$25 million in 2013. This supplemental support consists of various infrastructure and other costs, such as food, housing, fuel, travel, vehicle repairs, allowances to cover incidental and administrative costs, and community assistance programs conducted by the military and police.

Refer to Item 1A. "Risk Factors" for further discussion of security risks in Indonesia.

Africa. TFM has committed to assist the communities living within its concession area in the Southeast region of the DRC. Initiatives include an integrated malaria control program; construction, renovation and building of local health facilities; construction and renovation of local schools; installation of over 115 clean water wells in rural villages as well as construction of urban water distribution systems; and economic development programs supporting development and training of local entrepreneurs, contractors and farmers. We have also made significant investments

in infrastructure in the region that will have lasting benefits to the country, including upgrading a portion of a national road and the regional power generation and transmission systems.

Through the ARMC, TFM also contributes 0.3 percent of its net sales revenue to a community development fund to assist the local communities with development of local infrastructure and related services including health, education and agriculture. The TFM Social Community Fund is managed by a board of directors comprised of two local community representatives, one representative nominated by the provincial governor, four TFM representatives and an observer representative from Gecamines. A stakeholder forum comprised of 40 community leaders provides for increased community participation and input regarding project priorities, community needs, and

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transparency of fund management. The TFM Social Community Fund contributions totaled \$4 million in each of the years in 2015, 2014 and 2013.

Security Matters. TFM maintains an unarmed internal security department composed of both employees and contractors. The national government also has assigned Mines Police to the TFM concession areas. The Mines Police are a division of the Congolese National Police and are responsible for maintaining security in mining concessions throughout the DRC. TFM provides food, housing, medical services, supervised transportation, non-lethal equipment and monetary allowances as well as direct payments to the government for the provision of the security assigned to the concession areas. The total cost to TFM for this support, including in-kind support, approximated \$1 million in 2015, \$2 million in 2014 and \$1 million in 2013.

TFM also participates in monthly security coordination meetings with host country security personnel, other mining companies, non-governmental organizations and representatives from the United Nations to discuss security issues and concerns. As an outcome of the coordination meetings, TFM has partnered with MONUSCO (United Nations Stabilization Mission in the DRC) to conduct human rights training in the TFM concessions for host government security personnel, local representatives and TFM security employees.

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Mining Production Data

	Years Ended December 31,				
(FCX's net interest in %)	2015	2014	2013	2012	2011
COPPER (millions of recoverable pounds)					
North America					
Morenci (85%) ^a	902	691	564	537	522
Bagdad (100%)	210	237	216	197	194
Safford (100%)	202	139	146	175	151
Sierrita (100%)	189	195	171	157	177
Miami (100%)	43	57	61	66	66
Chino (100%)	314	250	171	144	69
Tyrone (100%)	84	94	96	83	76
Other (100%)	3	7	6	4	3
Total North America	1,947	1,670	1,431	1,363	1,258
South America					
Cerro Verde (53.56%)	545	500	558	595	647
El Abra (51%)	324	367	343	338	274
Candelaria/Ojos del Salado (80%) ^b	—	284	422	324	385
Total South America	869	1,151	1,323	1,257	1,306
Indonesia					
Grasberg (90.64%) ^c	752	636	915	695	846
Africa					
Tenke Fungurume (56%) ^d	449	447	462	348	281
Consolidated	4,017	3,904	4,131	3,663	3,691
Less noncontrolling interests	680	725	801	723	710
Net	3,337	3,179	3,330	2,940	2,981
GOLD (thousands of recoverable ounces)					
North America (100%) ^a	25	12	7	13	10
South America (80%) ^b	—	72	101	83	101
Indonesia (90.64%) ^c	1,232	1,130	1,142	862	1,272
Consolidated	1,257	1,214	1,250	958	1,383
Less noncontrolling interests	115	120	127	98	139
Net	1,142	1,094	1,123	860	1,244
MOLYBDENUM (millions of recoverable pounds)					
Henderson (100%)	25	30	30	34	38
Climax (100%) ^e	23	21	19	7	—
North America copper mines (100%) ^a	37	33	32	36	35
Cerro Verde (53.56%)	7	11	13	8	10
Consolidated	92	95	94	85	83
Less noncontrolling interest	3	5	6	4	5
Net	89	90	88	81	78
COBALT (millions of contained pounds)					
Consolidated - Tenke Fungurume (56%) ^d	35	29	28	26	25
Less noncontrolling interests	15	13	12	11	11
Net	20	16	16	15	14

Amounts are net of Morenci's 15 percent joint venture partner interest. As further discussed in Note 18, we have
a. entered into a definitive agreement to sell a 13 percent undivided interest in Morenci; the transaction is expected to close in mid-2016.

b. On November 3, 2014, we completed the sale of our 80 percent interests in the Candelaria and Ojos del Salado mines.

Amounts are net of Grasberg's joint venture partner interest, which varies in accordance with terms of the joint venture agreement (refer to Note 3). Under the joint venture agreement, PT-FI's share of copper production was 100
c. percent in 2015, 98 percent in 2014, 99 percent in 2013, 100 percent in 2012 and 95 percent in 2011; PT-FI's share of gold production was 100 percent in 2015, 2014, 2013 and 2012, and 88 percent in 2011.

d. Effective March 26, 2012, FCX's effective ownership interest in TFM was prospectively reduced from 57.75 percent to 56 percent.

e. The Climax molybdenum mine began commercial operations in May 2012.

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Mining Sales Data

	Years Ended December 31,				
(FCX's net interest in %)	2015	2014	2013	2012	2011
COPPER (millions of recoverable pounds)					
North America					
Morenci (85%) ^a	915	680	561	532	521
Bagdad (100%)	222	240	212	196	201
Safford (100%)	198	142	151	175	147
Sierrita (100%)	196	196	170	162	175
Miami (100%)	46	60	60	68	59
Chino (100%)	319	243	168	132	62
Tyrone (100%)	89	96	94	82	79
Other (100%)	3	7	6	4	3
Total North America	1,988	1,664	1,422	1,351	1,247
South America					
Cerro Verde (53.56%)	544	501	560	589	657
El Abra (51%)	327	366	341	338	276
Candelaria/Ojos del Salado (80%) ^b	—	268	424	318	389
Total South America	871	1,135	1,325	1,245	1,322
Indonesia					
Grasberg (90.64%) ^c	744	664	885	716	846
Africa					
Tenke Fungurume (56%) ^d	467	425	454	336	283
Consolidated sales from mines	4,070	3,888	4,086	3,648	3,698
Less noncontrolling interests	688	715	795	717	717
Net	3,382	3,173	3,291	2,931	2,981
Consolidated sales from mines	4,070	3,888	4,086	3,648	3,698
Purchased copper	121	125	223	125	223
Total copper sales, including purchases	4,191	4,013	4,309	3,773	3,921
Average realized price per pound	\$2.42	\$3.09	\$3.30	\$3.60	\$3.86
GOLD (thousands of recoverable ounces)					
North America (100%) ^a	23	13	6	13	7
South America (80%) ^b	—	67	102	82	101
Indonesia (90.64%) ^c	1,224	1,168	1,096	915	1,270
Consolidated sales from mines	1,247	1,248	1,204	1,010	1,378
Less noncontrolling interests	115	123	123	102	139
Net	1,132	1,125	1,081	908	1,239
Average realized price per ounce	\$1,129	\$1,231	\$1,315	\$1,665	\$1,583
MOLYBDENUM (millions of recoverable pounds)					
Consolidated sales from mines	89	95	93	83	79
Less noncontrolling interests	4	5	5	4	4
Net	85	90	88	79	75
Average realized price per pound	\$8.70	\$12.74	\$11.85	\$14.26	\$16.98
COBALT (millions of contained pounds)					
Consolidated - Tenke Fungurume (56%) ^d	35	30	25	25	25

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Less noncontrolling interests	15	13	11	11	10
Net	20	17	14	14	15
Average realized price per pound	\$8.21	\$9.66	\$8.02	\$7.83	\$9.99

Amounts are net of Morenci's 15 percent joint venture partner interest. As further discussed in Note 18, we have entered into a definitive agreement to sell a 13 percent undivided interest in Morenci; the transaction is expected to close in mid-2016.

On November 3, 2014, we completed the sale of our 80 percent interests in the Candelaria and Ojos del Salado mines.

Amounts are net of Grasberg's joint venture partner interest, which varies in accordance with terms of the joint venture agreement (refer to Note 3). Under the joint venture agreement, PT-FI's share of copper sales was 100 percent in 2015, 98 percent in 2014, 99 percent in 2013, 100 percent in 2012 and 96 percent in 2011; PT-FI's share of gold sales was 100 percent in 2015, 2014, 2013 and 2012, and 88 percent in 2011.

Effective March 26, 2012, FCX's effective ownership interest in TFM was prospectively reduced from 57.75 percent to 56 percent.

Table of Contents**Mineral Reserves**

Recoverable proven and probable reserves have been calculated in accordance with Industry Guide 7 as required by the Securities Exchange Act of 1934. Proven and probable reserves may not be comparable to similar information regarding mineral reserves disclosed in accordance with the guidance in other countries. Proven and probable reserves were determined by the use of mapping, drilling, sampling, assaying and evaluation methods generally applied in the mining industry, as more fully discussed below. The term “reserve,” as used in the reserve data presented here, means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserve determination. The term “proven reserves” means reserves for which (i) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; (ii) grade and/or quality are computed from the results of detailed sampling; and (iii) the sites for inspection, sampling and measurements are spaced so closely and the geologic character is sufficiently defined that size, shape, depth and mineral content of reserves are well established. The term “probable reserves” means reserves for which quantity and grade are computed from information similar to that used for proven reserves but the sites for sampling are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.

Our mineral reserve estimates are based on the latest available geological and geotechnical studies. We conduct ongoing studies of our ore bodies to optimize economic values and to manage risk. We revise our mine plans and estimates of recoverable proven and probable mineral reserves as required in accordance with the latest available studies.

Estimated recoverable proven and probable reserves at December 31, 2015, were determined using long-term average prices of \$2.00 per pound for copper, \$1,000 per ounce for gold and \$10 per pound for molybdenum. For the three-year period ended December 31, 2015, LME spot copper prices averaged \$2.97 per pound, London PM gold prices averaged \$1,276 per ounce and the weekly average price for molybdenum quoted by Metals Week averaged \$9.45 per pound.

The recoverable proven and probable reserves presented in the table below represent the estimated metal quantities from which we expect to be paid after application of estimated metallurgical recovery rates and smelter recovery rates, where applicable. Recoverable reserves are that part of a mineral deposit that we estimate can be economically and legally extracted or produced at the time of the reserve determination.

Recoverable Proven and Probable Mineral Reserves Estimated at December 31, 2015					
	Copper ^a (billion pounds)	Gold (million ounces)	Molybdenum (billion pounds)	Silver ^b (million ounces)	Cobalt ^b (billion pounds)
North America	33.5	0.3	2.38	79.3	—
South America	30.8	—	0.67	85.2	—
Indonesia ^c	28.0	26.8	—	106.7	—
Africa	7.2	—	—	—	0.87
Consolidated basis ^d	99.5	27.1	3.05	271.2	0.87
Net equity interest ^c	79.3	24.6	2.73	221.6	0.49

^a Consolidated recoverable copper reserves include 3.8 billion pounds in leach stockpiles and 1.0 billion pounds in mill stockpiles (refer to “Mill and Leach Stockpiles” for further discussion).

^b Determined using long-term average prices of \$15 per ounce for silver and \$10 per pound for cobalt.

^c Recoverable proven and probable reserves from Indonesia reflect estimates of minerals that can be recovered through the end of 2041 (refer to Note 13 for discussion of PT-FI's COW).

^d Consolidated reserves represent estimated metal quantities after reduction for joint venture partner interests at the Morenci mine in North America and the Grasberg minerals district in Indonesia. Refer to Notes 3 and 18 for further

discussion of our joint ventures.

^e Net equity interest reserves represent estimated consolidated metal quantities further reduced for noncontrolling interest ownership. Refer to Note 3 for further discussion of our ownership in subsidiaries.

Table of ContentsRecoverable Proven and Probable Mineral Reserves
Estimated at December 31, 2015

		Proven Reserves						Probable Reserves					
	Processing	Million	Average Ore Grade					Million	Average Ore Grade				
	Method	metric tons	Copper %	Gold g/t	Moly %	Silver g/t	Cobalt %	metric tons	Copper %	Gold g/t	Moly %	Silver g/t	Cobalt %
North America													
Morenci	Mill	636	0.43	—	0.02	—	—	116	0.40	—	0.02	—	—
	Crushed leach	313	0.56	—	—	—	—	72	0.46	—	—	—	—
Bagdad	ROM leach	1,862	0.18	—	—	—	—	575	0.16	—	—	—	—
	Mill	997	0.34	—	^a 0.02	1.45	—	152	0.32	—	^a 0.02	1.36	—
	ROM leach	78	0.22	—	—	—	—	26	0.20	—	—	—	—
Safford	Crushed leach	57	0.44	—	—	—	—	27	0.42	—	—	—	—
Sierrita	Mill	2,135	0.24	—	^a 0.03	1.42	—	184	0.19	—	^a 0.02	1.14	—
Chino	Mill	93	0.56	0.04	0.01	0.51	—	56	0.52	0.04	—	^a 0.47	—
	ROM leach	73	0.30	—	—	—	—	15	0.26	—	—	—	—
Tyrone	ROM leach	13	0.42	—	—	—	—	^a 0.40	—	—	—	—	—
Henderson	Mill	65	—	—	0.18	—	—	16	—	—	0.14	—	—
Climax	Mill	155	—	—	0.16	—	—	23	—	—	0.08	—	—
Cobre ^b	Mill	16	0.53	—	—	—	—	^a 0.53	—	—	—	—	—
	ROM leach	62	0.31	—	—	—	—	1	0.40	—	—	—	—
		6,555							1,263				
South America													
Cerro Verde	Mill	925	0.39	—	0.02	1.61	—	2,778	0.37	—	0.01	1.53	—
	Crushed leach	34	0.51	—	—	—	—	51	0.41	—	—	—	—
	ROM leach	14	0.23	—	—	—	—	54	0.22	—	—	—	—
El Abra	Crushed leach	268	0.49	—	—	—	—	68	0.44	—	—	—	—
	ROM leach	47	0.19	—	—	—	—	16	0.21	—	—	—	—
		1,288							2,967				
Indonesia													
DMLZ	Mill	68	0.94	0.77	—	4.60	—	392	0.89	0.73	—	4.36	—
Grasberg open pit	Mill	50	1.52	2.02	—	3.93	—	79	0.80	0.82	—	2.20	—
DOZ	Mill	39	0.57	0.68	—	2.42	—	77	0.55	0.70	—	2.30	—
Big Gossan	Mill	17	2.39	1.02	—	15.15	—	37	2.20	0.98	—	13.22	—
Grasberg Block Cave ^b	Mill	444	1.20	0.96	—	3.73	—	518	0.88	0.62	—	3.29	—
Kucing Liar ^b	Mill	144	1.36	1.15	—	7.59	—	251	1.21	1.05	—	6.56	—
		762							1,354				
Africa													

Tenke	Agitation	57	3.45	—	—	—	0.39	42	2.85	—	—	—	0.35
Fungurume	leach												
Total FCX -		8,662						5,626					
100% Basis													

a. Grade not shown because of rounding.

b. Undeveloped reserves that would require additional capital investment, which could be significant, to bring into production.

The reserve table above and the tables on the following pages utilize the abbreviations described below:

g/t – grams per metric ton

Moly – Molybdenum

ROM – Run of Mine

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Recoverable Proven and Probable Mineral Reserves
 Estimated at December 31, 2015
 (continued)

	Processing Method	Proven and Probable	Average Ore Grade					Recoveries ^a		Moly	Silver	Cobalt
		Million	Copper	Gold	Moly	Silver	Cobalt	Copper	Gold			
		metric tons	%	g/t	%	g/t	%	%	%			
North America												
Morenci	Mill	752	0.42	—	0.02	—	—	81.2	—	50.4	—	—
	Crushed leach	385	0.54	—	—	—	—	78.5	—	—	—	—
	ROM leach	2,437	0.18	—	—	—	—	43.3	—	—	—	—
Bagdad	Mill	1,149	0.34	—	^b 0.02	1.43	—	86.2	59.1	70.8	49.3	—
	ROM leach	104	0.21	—	—	—	—	24.6	—	—	—	—
Safford	Crushed leach	84	0.43	—	—	—	—	63.9	—	—	—	—
Sierrita	Mill	2,319	0.23	—	^b 0.03	1.40	—	83.2	59.9	79.9	49.3	—
Chino	Mill	149	0.55	0.04	0.01	0.50	—	79.4	77.9	33.7	78.5	—
	ROM leach	88	0.29	—	—	—	—	39.4	—	—	—	—
Tyrone	ROM leach	13	0.42	—	—	—	—	68.4	—	—	—	—
Henderson	Mill	81	—	—	0.17	—	—	—	—	84.3	—	—
Climax	Mill	178	—	—	0.15	—	—	—	—	89.7	—	—
Cobre ^c	Mill	16	0.53	—	—	—	—	80.2	—	—	—	—
	ROM leach	63	0.31	—	—	—	—	49.5	—	—	—	—
		7,818										
South America												
Cerro Verde	Mill	3,703	0.37	—	0.01	1.55	—	86.3	—	54.3	44.7	—
	Crushed leach	85	0.45	—	—	—	—	79.9	—	—	—	—
	ROM leach	68	0.22	—	—	—	—	53.5	—	—	—	—
El Abra	Crushed leach	336	0.48	—	—	—	—	58.2	—	—	—	—
	ROM leach	63	0.20	—	—	—	—	39.6	—	—	—	—
		4,255										
Indonesia												
DMLZ	Mill	460	0.89	0.74	—	4.39	—	87.1	79.4	—	64.9	—
Grasberg open pit	Mill	129	1.08	1.29	—	2.87	—	85.2	82.0	—	44.2	—
DOZ	Mill	116	0.56	0.69	—	2.34	—	86.2	78.0	—	64.9	—
Big Gossan	Mill	54	2.26	0.99	—	13.82	—	91.6	65.8	—	63.8	—
Grasberg Block Cave ^c	Mill	962	1.03	0.78	—	3.50	—	84.4	64.7	—	57.2	—
Kucing Liar ^c	Mill	395	1.27	1.09	—	6.93	—	85.2	46.3	—	39.6	—
		2,116										

Africa												
Tenke	Agitation	99	3.19	—	—	—	0.37	86.6	—	—	—	75.7
Fungurume	leach											
Total FCX -		14,288										
100% Basis												

a. Recoveries are net of estimated mill and smelter losses.

b. Grade not shown because of rounding.

c. Undeveloped reserves that would require additional capital investment, which could be significant, to bring into production.

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Recoverable Proven and Probable Mineral Reserves
Estimated at December 31, 2015
(continued)

			Recoverable Reserves				
	FCX's Interest	Processing Method	Copper billion lbs.	Gold million ozs.	Moly billion lbs.	Silver million ozs.	Cobalt billion lbs.
North America							
Morenci	85%	Mill	5.7	—	0.17	—	—
		Crushed leach	3.6	—	—	—	—
		ROM leach	4.1	—	—	—	—
Bagdad	100%	Mill	7.5	0.1	0.38	26.1	—
		ROM leach	0.1	—	—	—	—
Safford	100%	Crushed leach	0.5	—	—	—	—
Sierrita	100%	Mill	9.9	0.1	1.04	51.3	—
Chino	100%	Mill	1.5	0.1	0.01	1.9	—
		ROM leach	0.2	—	—	—	—
Tyrone	100%	ROM leach	0.1	—	—	—	—
Henderson	100%	Mill	—	—	0.25	—	—
Climax	100%	Mill	—	—	0.53	—	—
Cobre	100%	Mill	0.1	—	—	—	—
		ROM leach	0.2	—	—	—	—
			33.5	0.3	2.38	79.3	—
Recoverable metal in stockpiles ^a			2.1	—	0.02	—	—
100% operations			35.6	0.3	2.40	79.3	—
Consolidated ^b			33.5	0.3	2.38	79.3	—
Net equity interest ^c			33.5	0.3	2.38	79.3	—
South America							
Cerro Verde	53.56%	Mill	26.2	—	0.65	82.3	—
		Crushed leach	0.7	—	—	—	—
		ROM leach	0.2	—	—	—	—
El Abra	51%	Crushed leach	2.1	—	—	—	—
		ROM leach	0.1	—	—	—	—
			29.3	—	0.65	82.3	—
Recoverable metal in stockpiles ^a			1.5	—	0.02	2.9	—
100% operations			30.8	—	0.67	85.2	—
Consolidated ^b			30.8	—	0.67	85.2	—
Net equity interest ^c			16.4	—	0.35	45.6	—
Indonesia							
DMLZ	d	Mill	7.9	8.7	—	42.2	—
Grasberg open pit	d	Mill	2.6	4.4	—	5.3	—
DOZ	d	Mill	1.2	2.0	—	5.6	—
Big Gossan	d	Mill	2.5	1.1	—	15.3	—
Grasberg Block Cave	d	Mill	18.4	15.6	—	61.9	—
Kucing Liar	d	Mill	9.4	6.4	—	34.9	—
			42.0	38.2	—	165.2	—
Recoverable metal in stockpiles ^a			0.1	0.1	—	0.2	—
100% operations			42.1	38.3	—	165.4	—

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Consolidated ^b		28.0	26.8	—	106.7	—
Net equity interest ^c		25.3	24.3	—	96.7	—
Africa						
Tenke Fungurume	56%	Agitation leach	6.0	—	—	0.61
Recoverable metal in stockpiles ^a			1.2	—	—	0.26
100% operations			7.2	—	—	0.87
Consolidated ^b			7.2	—	—	0.87
Net equity interest ^c			4.1	—	—	0.49
Total FCX – 100% basis			115.7	38.6	3.07	329.9
Total FCX – Consolidated basis			99.5	27.1	3.05	271.2
Total FCX – Net equity interest			79.3	24.6	2.73	221.6

a. Refer to "Mill and Leach Stockpiles" for additional information.

Consolidated reserves represent estimated metal quantities after reduction for joint venture partner interests at the

b. Morenci mine in North America and the Grasberg minerals district in Indonesia. Refer to Notes 3 and 18 for further discussion of our joint ventures.

Net equity interest represents estimated consolidated metal quantities further reduced for noncontrolling interest

c. ownership. Refer to Note 3 for further discussion of our ownership in subsidiaries.

Our joint venture agreement with Rio Tinto provides that PT-FI will receive cash flow from specified annual
d. amounts of copper, gold and silver through 2021, calculated by reference to its proven and probable reserves as of December 31, 1994, and 60 percent of all remaining cash flow.

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In defining our open-pit reserves, we apply a “variable cutoff grade” strategy. The objective of this strategy is to maximize the net present value of our operations. We use a “break-even cutoff grade” to define the in-situ reserves for our underground ore bodies. The break-even cutoff grade is defined for a metric ton of ore as that equivalent copper grade, once produced and sold, that generates sufficient revenue to cover all operating and administrative costs associated with our production.

Our copper mines may contain other commercially recoverable metals, such as gold, molybdenum, silver and cobalt. We value all commercially recoverable metals in terms of a copper equivalent percentage to determine a single cutoff grade. Copper equivalent percentage is used to express the relative value of multi-metal ores in terms of one metal. The calculation expresses the relative value of the ore using estimates of contained metal quantities, metals prices as used for reserve determination, recovery rates, treatment charges and royalties. Our molybdenum properties use a molybdenum cutoff grade.

The table below shows the minimum cutoff grade by process for each of our existing ore bodies as of December 31, 2015:

	Copper Equivalent Cutoff Grade (Percent)			Molybdenum Cutoff Grade (Percent)
	Mill	Crushed or Agitation Leach	ROM Leach	Mill
North America				
Morenci	0.26	0.18	0.03	—
Bagdad	0.20	—	0.06	—
Safford	—	0.12	—	—
Sierrita	0.18	—	—	—
Chino	0.24	—	0.08	—
Tyrone	—	—	0.10	—
Henderson	—	—	—	0.12
Climax	—	—	—	0.05
Cobre	0.26	—	0.06	—
South America				
Cerro Verde	0.17	0.19	0.14	—
El Abra	—	0.10	0.06	—
Indonesia				
DMLZ	0.81	—	—	—
Grasberg open pit	0.25	—	—	—
DOZ	0.88	—	—	—
Big Gossan	1.88	—	—	—
Grasberg Block Cave	0.78	—	—	—
Kucing Liar	0.94	—	—	—
Africa				
Tenke Fungurume	—	1.37	—	—

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Drill hole spacing data is used by mining professionals, such as geologists and geological engineers, in determining the suitability of data coverage (on a relative basis) in a given deposit type and mining method scenario so as to achieve a given level of confidence in the resource estimate. Drill hole spacing is only one of several criteria necessary to establish resource classification. Drilling programs are typically designed to achieve an optimum sample spacing to support the level of confidence in results that apply to a particular stage of development of a mineral deposit.

The following table sets forth the average drill hole spacing based on average sample distance or drill pattern spacing for proven and probable ore reserves by process type:

	Mining Unit	Average Drill Hole Spacing (in Meters)			
		Proven Mill	Leach	Probable Mill	Leach
North America					
Morenci	Open Pit	86	86	122	122
Bagdad	Open Pit	86	86	122	122
Safford	Open Pit	—	86	—	122
Sierrita	Open Pit	73	—	104	—
Miami	Open Pit	—	61	—	91
Chino	Open Pit	43	86	86	122
Tyrone	Open Pit	—	86	—	86
Henderson	Block Cave	47	—	96	—
Climax	Open Pit	61	—	91	—
Cobre	Open Pit	61	61	91	91
South America					
Cerro Verde	Open Pit	50	50	100	100
El Abra	Open Pit	—	75	—	120
Indonesia					
DMLZ	Block Cave	16	—	58	—
Grasberg open pit	Open Pit	35	—	75	—
DOZ	Block Cave	23	—	57	—
Big Gossan	Open Stope	12	—	36	—
Grasberg Block Cave	Block Cave	34	—	81	—
Kucing Liar	Block Cave	39	—	98	—
Africa					
Tenke Fungurume	Open Pit	—	50	—	100

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Production Sequencing

The following chart illustrates our current plans for sequencing and producing our proven and probable reserves at each of our ore bodies and the years in which we currently expect production from each ore body and from related stockpiles. The chart also shows the term of PT-FI's COW. Production volumes are typically lower in the first few years for each ore body as development activities are ongoing and as the mine ramps up to full production and production volumes may also be lower as the mine reaches the end of its life. The sequencing dates shown in the chart below include development activity that results in metal production. The ultimate timing of the start of production from our undeveloped mines is dependent upon a number of factors, including the results of our exploration and development efforts, and may vary from the dates shown below. In addition, we develop our mine plans based on maximizing the net present value from the ore bodies. Significant additional capital expenditures will be required at many of these mines in order to achieve the life-of-mine plans reflected below.

Mill and Leach Stockpiles

Mill and leach stockpiles generally contain lower grade ores that have been extracted from an ore body and are available for copper recovery. Mill stockpiles contain sulfide ores and recovery of metal is through milling, concentrating, smelting and refining or, alternatively, by concentrate leaching. Leach stockpiles contain oxide ores and certain secondary sulfide ores and recovery of metal is through exposure to acidic solutions that dissolve contained copper and deliver it in solution to extraction processing facilities.

Because it is generally impracticable to determine copper contained in mill and leach stockpiles by physical count, reasonable estimation methods are employed. The quantity of material delivered to mill and leach stockpiles is based on surveyed volumes of mined material and daily production records. Sampling and assaying of blasthole cuttings determine the estimated copper grades of material delivered to mill and leach stockpiles.

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Expected copper recovery rates for mill stockpiles are determined by metallurgical testing. The recoverable copper in mill stockpiles, once entered into the production process, can be produced into copper concentrate almost immediately.

Expected copper recovery rates for leach stockpiles are determined using small-scale laboratory tests, small- to large-scale column testing (which simulates the production process), historical trends and other factors, including mineralogy of the ore and rock type. Total copper recovery in leach stockpiles can vary significantly from a low percentage to more than 90 percent depending on several variables, including processing methodology, processing variables, mineralogy and particle size of the rock. For newly placed material on active stockpiles, as much as 80 percent of total copper recovery may be extracted during the first year, and the remaining copper may be recovered over many years.

Processes and recovery rates are monitored regularly, and recovery rate estimates are adjusted periodically as additional information becomes available and as related technology changes.

Following are our stockpiles and the estimated recoverable copper contained within those stockpiles as of December 31, 2015:

	Million Metric Tons	Average Ore Grade (%)	Recovery Rate (%)	Recoverable Copper (billion pounds)
Mill stockpiles				
Cerro Verde	159	0.32	81.8	0.9
Grasberg minerals district	14	0.44	74.9	0.1
	173			1.0
Leach stockpiles				
Morenci	5,982	0.24	2.2	0.7
Bagdad	499	0.24	1.5	—
Safford	213	0.44	14.3	0.3
Sierrita	650	0.15	11.0	0.3
Miami	498	0.39	2.9	0.1
Chino	1,695	0.26	5.3	0.5
Tyrone	1,121	0.28	2.3	0.2
Cerro Verde	388	0.52	5.0	0.2
El Abra	644	0.43	5.9	0.4
Tenke Fungurume	45	1.31	90.9	1.2
	11,735			3.9
Total FCX - 100% basis				4.9
Total FCX - Consolidated basis ^b				4.8
Total FCX - Net equity interest ^c				3.5

a. Amounts not shown because of rounding.

Consolidated stockpiles represent estimated metal quantities after reduction for joint venture partner interests at the b. Morenci mine in North America and the Grasberg minerals district in Indonesia. Refer to Notes 3 and 18 for further discussion of our joint ventures.

c. Net equity interest represents estimated consolidated metal quantities further reduced for noncontrolling interest ownership. Refer to Note 3 for further discussion of our ownership in subsidiaries.

Mineralized Material

We hold various properties containing mineralized material that we believe could be brought into production should market conditions warrant. However, permitting and significant capital expenditures would be required before operations could commence at these properties. Mineralized material is a mineralized body that has been delineated by appropriately spaced drilling and/or underground sampling to support the reported tonnage and average metal grades. Such a deposit cannot qualify as recoverable proven and probable reserves until legal and economic feasibility are confirmed based upon a comprehensive evaluation of development costs, unit costs, grades, recoveries and other material factors. Estimated mineralized materials as presented on the following page were assessed using prices of \$2.20 per pound for copper, \$1,000 per ounce for gold, \$12 per pound for molybdenum and \$20 per ounce for silver.

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Mineralized Material

Estimated at December 31, 2015

		Milling Material					Leaching Material		Total Mineralized Material
	FCX's Interest	Million metric tons	Copper %	Gold g/t	Moly %	Silver g/t	Million metric tons	Copper %	Million metric tons
North America									
Morenci	85%	598	0.28	—	0.02	—	921	0.21	1,519
Bagdad	100%	746	0.27	—	^a 0.02	1.2	3	0.22	749
Safford	100%	188	0.65	0.12	—	2.4	60	0.31	248
Sierrita	100%	1,370	0.19	—	^a 0.02	1.1	—	—	1,370
Chino	100%	180	0.47	0.03	0.01	0.4	37	0.26	217
Tyrone	100%	—	—	—	—	—	11	0.43	11
Henderson	100%	78	—	—	0.14	—	—	—	78
Climax	100%	337	—	—	0.13	—	—	—	337
Cobre	100%	34	0.50	0.09	—	1.3	—	—	34
Ajo	100%	437	0.40	0.06	0.01	0.8	—	—	437
Cochise/Bisbee	100%	—	—	—	—	—	250	0.46	250
Lone Star	100%	—	—	—	—	—	679	0.47	679
Sanchez	100%	—	—	—	—	—	148	0.29	148
Tohono	100%	220	0.72	—	—	—	270	0.67	490
Twin Buttes	100%	73	0.62	—	0.04	6.4	44	0.23	117
Christmas	100%	201	0.39	0.05	—	^a 1.0	—	—	201
South America									
Cerro Verde	53.56%	250	0.35	—	0.01	1.4	33	0.48	283
El Abra	51%	2,024	0.45	0.02	0.01	1.4	199	0.30	2,223
Indonesia									
Grasberg minerals district	54.38% ^b	2,207	0.72	0.63	—	3.5	—	—	2,207
Africa									
Tenke Fungurume ^c	56%	52	4.10	—	—	—	31	2.88	83
Kisanfu ^c	95%	49	2.48	—	—	—	47	3.16	96
Total FCX - 100% basis		9,044					2,733		11,777
Total FCX - Consolidated basis ^d		8,071					2,595		10,666
Total FCX - Net equity interest ^e		6,814					2,466		9,280

a. Amounts not shown because of rounding.

b. FCX's interest in the Grasberg minerals district reflects our 60 percent joint venture ownership further reduced by noncontrolling interest ownership.

c. Stated tonnage also includes cobalt at Tenke Fungurume (0.31 percent) and Kisanfu (1.15 percent).

d. Consolidated basis represents estimated mineralized materials after reduction for joint venture partner interests in the Morenci mine in North America and the Grasberg minerals district in Indonesia. Refer to Notes 3 and 18 for further discussion of our joint ventures.

Net equity interest represents estimated consolidated mineralized material further reduced for noncontrolling interest ownership. Refer to Note 3 for further discussion of our ownership in subsidiaries.

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OIL AND GAS OPERATIONS

Through our wholly owned oil and gas subsidiary, FM O&G, our portfolio of oil and gas assets includes significant oil production facilities and growth potential in the Deepwater GOM, established oil production onshore and offshore California, large onshore natural gas resources in the Haynesville shale in Louisiana, natural gas production from the Madden area in central Wyoming, and a position in the Inboard Lower Tertiary/Cretaceous natural gas trend onshore in South Louisiana. For the year 2015, 88 percent of our oil and gas revenues, excluding the impact of derivative contracts, were from sales of oil and NGLs.

Revised Operating Plans

We are taking continuing actions to reduce oil and gas costs and capital expenditures. FM O&G is undertaking a near-term deferral of exploration and development expenditures by idling the three Deepwater GOM drillships it has under contract. Refer to MD&A for further discussion.

Acreage

At December 31, 2015, we owned interests in oil and gas leases covering 4.4 million gross acres (2.5 million acres net to our interest). Developed acres are acres spaced or assigned to productive wells and do not include undrilled acreage held by production under the terms of the lease. Undeveloped acres are acres on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of oil or gas, regardless of whether such acreage contains proved reserves. The following table summarizes, by geographic area, the developed and undeveloped oil and gas acreage in which we held interests at December 31, 2015:

	Developed Gross Acres	Net Acres	Undeveloped Gross Acres	Net Acres
U.S.:				
Louisiana:				
Onshore	388,392	79,141	105,257	80,074
Offshore	328,014	189,197	655,874	491,830
Texas:				
Onshore	16,865	3,621	209	653
Offshore	28,800	15,906	—	—
California:				
Onshore	60,898	60,406	65,259	40,847
Offshore	44,049	39,618	712	712
Wyoming	78,007	11,018	31,968	18,394
Nevada	—	—	246,073	246,073
Other states	1,324	368	181,342	137,293
	946,349	399,275	1,286,694	1,015,876
Morocco	—	—	2,154,014	1,120,087
	946,349	399,275	3,440,708	2,135,963

As of December 31, 2015, 84 percent of our total net leasehold acreage is undeveloped. Many of our oil and gas leases require us to drill wells that are commercially productive, and if we are unsuccessful, we could lose our rights under such leases.

At December 31, 2015, 24 percent of our total U.S. net undeveloped acres was covered by leases that expire from 2016 through 2018. As a result of declining crude oil prices, FM O&G's current plans anticipate that the majority of expiring acreage will not be retained by drilling operations or other means.

Currently, FM O&G has a commitment to drill a second well in Morocco in 2016. However, FM O&G is actively negotiating with its partners to modify the work program, which, if successful, would result in changes in the timing, amount or type of future commitment. The exploration permits covering FM O&G's Morocco acreage expire at the end of 2016; however, FM O&G has the ability, under certain circumstances, to extend the exploration permits through 2019.

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Properties

Our oil and gas properties are subject to customary royalty interests, liens incident to operating agreements, liens for current taxes and other burdens, including other mineral encumbrances and restrictions. We do not believe that any of these burdens materially interfere with our use of the properties in the operation of our business.

We believe that we have satisfactory title to or rights in all of our producing properties. As is customary in the oil and gas industry, we conduct minimal investigation of title at the time we acquire undeveloped properties. We conduct title investigations and receive title opinions of local counsel only before we commence drilling operations. We believe that we have satisfactory title to all of our other assets. Although title to our properties is subject to encumbrances in certain cases, we believe that none of these burdens will materially detract from the value of our properties or from our interest therein or will materially interfere with our use in the operation of our business.

Gulf of Mexico.

Deepwater GOM. FM O&G has a large strategic position in the Deepwater GOM with significant current oil production, strong cash margins and existing infrastructure with excess production and handling capacity. FM O&G's Deepwater GOM properties and activities are principally located in four focus areas, which we refer to as Atwater Valley, Green Canyon, Mississippi Canyon and Keathley Canyon.

Following is a summary of FM O&G's Deepwater GOM platforms at December 31, 2015:

Platform	Working Interest	Field Location	Type of Platform	Production Commenced	Water Depth (feet)	Capacity per Day	
						Oil (MBbls)	Gas (MMcf)
Holstein ^a	100%	Green Canyon Blocks 644, 645 and 688	Truss Spar	2004	4,300	113	142
Horn Mountain ^a	100%	Mississippi Canyon Blocks 126 and 127	Truss Spar	2002	5,400	75	72
Marlin Hub ^a	100%	Several ^b Keathley Canyon	Tension Leg	2000	3,200	60	235
Lucius	25.1%	^c Blocks 874, 875, 918 and 919	Truss Spar	2015	7,200	80	450
Heidelberg	12.5%	Green Canyon Blocks 859, 903, 904 and 948	Truss Spar	2016 ^d	5,300	80	80
Ram Powell	31.0%	Viosca Knoll Blocks 911 to 913 and 955 to 957	Tension Leg	1997	3,200	70	310
Hoover	33.3%	Several ^e	Deep Draft Caisson Vessel	2000	4,800	100	325

a. We are the operator of the Holstein, Horn Mountain and Marlin Hub platforms.

The Marlin Hub is the production facility for the Marlin field (S/2 Viosca Knoll Block 871 and N/2 Viosca Knoll Block 915), the Dorado field (S/2 Viosca Knoll Block 915) and the King field (Mississippi Canyon Blocks 84, 85, and 129). The Marlin field currently produces via a combination of platform and subsea tie-back wells, while the Dorado and King fields currently produce exclusively via subsea wells and tie-back infrastructure.

b. and 129). The Marlin field currently produces via a combination of platform and subsea tie-back wells, while the Dorado and King fields currently produce exclusively via subsea wells and tie-back infrastructure.

c. FM O&G's consolidated subsidiary Plains Offshore Operations Inc. (Plains Offshore), holds a 20 percent working interest in the Lucius development. FM O&G's combined ownership in the Lucius development, including the 20

percent held by Plains Offshore, is 25.1 percent. Refer to Note 2 for further discussion of Plains Offshore.
d. In January 2016, first oil production commenced from three wells in the Heidelberg oil field.

The Hoover platform is located in Alaminos Canyon Block 25. The Hoover field is located in Alaminos Canyon
e. Blocks 25 and 26.

FM O&G has a 100-percent interest in the Holstein Deep development, which is located in Green Canyon Block 643, west of the 100-percent owned Holstein platform, in 3,890 feet of water. Completion activities for the initial three-well subsea tieback development program are progressing, with first production expected in mid-2016.

FM O&G also owns working interests in several oil discoveries in the Atwater Valley focus area, including Vito and Power Nap. FM O&G has an 18.67 percent interest in Vito, which is a deep subsalt Miocene oil discovery made in

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2009, located in 4,000 feet of water in the Mississippi Canyon area (Blocks 940, 941, 984 and 985) and a 50 percent interest in Power Nap, which is located in close proximity to Vito.

FM O&G's Deepwater GOM exploration portfolio consists of interests in 136 blocks containing 55 prospects in the Pliocene, Miocene and Lower Tertiary reservoirs.

GOM Shelf. The GOM Shelf properties are primarily located on the outer continental shelf in the shallow waters (less than 500 feet of water) of the GOM and onshore in the Gulf Coast area of Louisiana, with drilling depths not exceeding 15,000 feet considered to be traditional shelf prospects.

Inboard Lower Tertiary/Cretaceous. Prospects with drilling depths below the salt weld (generally at depths exceeding 25,000 feet) are considered Inboard Lower Tertiary/Cretaceous prospects. FM O&G is the operator and has a 72 percent working interest (an approximate 49 percent net revenue interest) in Highlander, located onshore in South Louisiana. In December 2015, gross rates from the Highlander well averaged 44 MMcf per day (21 MMcf per day net to FM O&G).

California. FM O&G's California assets provide an established oil production base with low-decline production profiles and long-lived reserves.

Onshore California. FM O&G's onshore properties are located in the Los Angeles Basin and San Joaquin Basin. FM O&G holds a 100 percent working interest in the majority of its onshore positions including the Inglewood, Las Cienegas, Montebello, Packard and San Vicente fields in the Los Angeles Basin, and the Cymric, Midway Sunset, South Belridge, and North Belridge fields in the San Joaquin Basin. The Los Angeles Basin properties are characterized by light crude oil (21 to 32 degree American Petroleum Institute (API) gravity), have well depths ranging from 2,000 feet to over 10,000 feet and include both primary production and secondary recovery using waterflood methods (whereby water is injected into the reservoir formation to displace residual oil), where producing wells have a high ratio of water produced compared to total liquids produced (high water cuts). The San Joaquin Basin properties are characterized by heavier oil (12 to 16 degree API gravity) and shallow wells (generally less than 2,000 feet) that require enhanced oil recovery techniques, including steam injection.

FM O&G also holds a 100 percent working interest in the Arroyo Grande Field located in San Luis Obispo County, which is characterized by heavier oil (12 to 16 degree API gravity) and well depths averaging 1,700 feet requiring continuous steam injection.

Offshore California. All of the offshore California properties are located in federal waters approximately three to seven miles offshore in the Santa Maria Basin. FM O&G holds a 69.3 percent working interest in the Point Arguello Unit, composed of the Hidalgo, Hermosa and Harvest platforms, and the various partnerships owning the related transportation, processing and marketing infrastructure. Since second-quarter 2015, production from Point Arguello platforms has been shut in following the shutdowns of a third-party operated pipeline system that transports oil to various California refineries. FM O&G also holds a 100 percent working interest in the Point Pedernales field, which includes the Irene platform, that is utilized to access the Federal Outer Continental Shelf Monterey Reservoir by extended reach directional wells and support facilities which lie within the onshore Lompoc field.

Haynesville. As of December 31, 2015, in the Haynesville shale, FM O&G has a non-operated interest in over 1,450 producing wells with an average working interest of 8.6 percent and leases covering 72,000 net acres. The Haynesville shale is characterized by dry gas production from the Jurassic-aged Haynesville shale formation in Louisiana and eastern Texas, and typical well depth is 10,500 feet. The area has historically been developed with horizontal wells more than 4,000 feet at a measured total depth of 16,000 feet.

Madden. FM O&G owns a non-operated 14 percent working interest in the Madden Deep Unit and Lost Cabin Gas Plant located in central Wyoming. The Madden Deep Unit is a federal unit operated by a third party and consists of acreage in the Wind River Basin. The Madden area is characterized by gas production from multiple stratigraphic horizons of the Lower Fort Union, Lance, Mesaverde and Cody sands and the Madison Dolomite. Production from the Madden Deep Unit is typically found at depths ranging from 5,500 to 25,000 feet.

Exploration and Development Activities

FM O&G has significant proved, probable and possible reserves, with valuable infrastructure and associated resources with attractive long-term production and development potential.

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Since commencing development activities in 2014 at its three 100-percent-owned production platforms in the Deepwater GOM, FM O&G has drilled 14 wells in producing fields with positive results, including the King D-10 well in fourth-quarter 2015. Four of these wells have been brought on production, including the King D-12 well in November 2015. FM O&G plans to complete and place six additional wells on production in 2016.

Capital expenditures for our oil and gas operations totaled \$3.0 billion in 2015 (including \$2.5 billion incurred for Deepwater GOM and \$0.2 billion for the Inboard Lower Tertiary/Cretaceous natural gas trend), \$3.2 billion for the year 2014 (including \$2.1 billion incurred for the Deepwater GOM and \$0.7 billion for the Inboard Lower Tertiary/Cretaceous natural gas trend) and \$1.45 billion for the seven-month period ending December 31, 2013 (including \$0.4 billion incurred for Deepwater GOM and \$0.2 billion for the Inboard Lower Tertiary/Cretaceous natural gas trend).

In response to market conditions, FM O&G is undertaking a near-term deferral of exploration and development expenditures by idling the three Deepwater GOM drillships it has under contract. FM O&G expects to incur idle rig costs associated with its drillship contracts totaling \$0.6 billion in 2016 and \$0.4 billion in 2017. Excluding amounts for idle rig costs, capital expenditures for oil and gas operations for the year 2016 are estimated to total \$1.5 billion, with approximately 85 percent of the capital budget expected to be directed to the GOM. Refer to MD&A for further discussion of FM O&G's current exploration and development activities.

Production and Sales Data

Following presents summary oil and gas production and sales data for the years ended December 31, 2015 and 2014, and the seven-month period ending December 31, 2013:

	Years Ended December 31,		Seven Months Ended
	2015	2014	December 31, 2013
GOM ^{a,b}			
Oil (MBbls)	22,161	19,681	11,364
Natural gas (MMcf)	35,878	^c 28,700	17,231
NGLs (MBbls)	2,209	2,027	1,049
MBOE	30,350	26,491	15,286
California			
Oil (MBbls)	12,935	13,732	7,977
Natural gas (MMcf)	2,154	^c 2,368	^c 1,318
NGLs (MBbls)	166	171	97
MBOE	13,460	14,298	8,293
Haynesville/Madden/Other			
Oil (MBbls)	158	222	83
Natural gas (MMcf)	51,626	42,364	26,782
NGLs (MBbls)	50	35	27
MBOE	8,812	7,318	4,574
Eagle Ford ^d			
Oil (MBbls)	—	6,481	7,206
Natural gas (MMcf)	—	7,410	8,844
NGLs (MBbls)	—	978	1,244
MBOE	—	8,694	9,924

Total U.S. oil and gas operations

Oil (MMbbls)	35,254	40,116	26,630
Natural gas (MMcf)	89,658	80,842	54,175
NGLs (MMbbls)	2,425	3,211	2,417
MBOE	52,622	56,801	38,077
Average cost per BOE:			
Production costs ^e	\$17.14	\$18.00	\$15.18
Production and ad valorem taxes	1.45	2.08	1.96
Cash production costs ^f	\$18.59	\$20.08	\$17.14

a. Includes properties in the Deepwater GOM and on the Shelf, including the Inboard Lower Tertiary /Cretaceous natural gas trend.

Horn Mountain represented 17 percent of our proved oil and gas reserves at December 31, 2015. During 2015, production and sales from Horn Mountain totaled 3.2 MMBOE (consisting of 2.9 MMBbls of oil, 1.1 Bcf of natural gas and 0.1 MMBbls

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of NGLs). No individual fields represented 15 percent or more of our proved oil and gas reserves at December 31, 2014 and 2013.

Natural gas sales from GOM are net of fuel used in operations totaling 1,125 MMcf in 2015. Natural gas sales from c. California are net of fuel used in operations totaling 588 MMcf in 2015, 1,190 MMcf in 2014 and 780 MMcf for the seven-month period ending December 31, 2013.

d. In June 2014, we completed the sale of Eagle Ford.

e. Reflects costs incurred to operate and maintain wells and related equipment and facilities.

f. Refer to MD&A for further discussion of cash production costs per BOE and for a reconciliation to production costs reported in our consolidated financial statements.

Oil and Gas Reserves

All of our estimated proved and probable reserves are based upon reserve reports prepared by Netherland, Sewell, & Associates, Inc. (NSAI) and Ryder Scott Company, L.P. (Ryder Scott), independent petroleum engineering firms. A copy of the independent petroleum engineering firms' reserve reports are filed as exhibits to this annual report on Form 10-K. Our reserve estimates are prepared in accordance with guidelines established by the SEC as prescribed by Regulation S-X, Rule 4-10. FM O&G's technical staff estimates, with reasonable certainty, the economically producible oil and gas. The practices for estimating hydrocarbons in place include, but are not limited to, mapping, seismic interpretation of two-dimensional and/or three-dimensional data, core analysis, mechanical properties of formations, thermal maturity, well logs of existing penetrations, correlation of known penetrations, decline curve analysis of producing locations with significant production history, well testing, static bottom hole testing, flowing bottom hole pressure analysis and pressure and rate transient analysis.

Internal Control and Qualifications of Third Party Engineers and Internal Staff. The technical personnel responsible for preparing the reserve estimates at NSAI and Ryder Scott meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers. Both NSAI and Ryder Scott are independent firms of petroleum engineers, geologists, geophysicists and petrophysicists; neither firm owns an interest in our properties nor are employed on a contingent fee basis. FM O&G's internal staff of petroleum engineers and geoscience professionals work closely with our independent reserve engineers to ensure the integrity, accuracy and timeliness of data furnished to NSAI and Ryder Scott in their reserves estimation process. Throughout each fiscal year, FM O&G internal technical staff meets with representatives of the independent reserve engineers to review properties and discuss methods and assumptions used in preparation of the proved reserves estimates. FM O&G provides historical information to the independent reserve engineers, including ownership interest, oil and gas production, well test data, commodity prices and operating and development costs. The NSAI and Ryder Scott reserve reports are reviewed with representatives of NSAI and Ryder Scott and FM O&G's internal technical staff before dissemination of the information. Additionally, FM O&G's senior management reviews the NSAI and Ryder Scott reserve reports.

The internal reservoir engineering staff are supervised by FM O&G's Vice President of Engineering, who has 39 years of technical experience in petroleum engineering and reservoir evaluation and analysis. This individual directs the activities of our internal reservoir engineering staff for the internal reserve estimation process and also to provide the appropriate data to NSAI and Ryder Scott for the year-end oil and gas reserves estimation process. The preparation of proved oil and gas reserve estimates are completed in accordance with our internal control procedures. These procedures, which are intended to ensure reliability of reserve estimations, include (i) the review and verification of historical production data; (ii) the review by FMO&G's Vice President of Engineering of annually reported proved reserves, including the review of significant reserve changes and new proved undeveloped (PUD) reserves additions; (iii) the direct reporting responsibilities by FM O&G's Vice President of Engineering to FM O&G's President and Chief Operating Officer; (iv) the verification of property ownership by FM O&G's land department; and (v) no

employee's compensation is tied to the amount of reserves reported.

Proved Reserves. Our proved reserve volumes have been determined in accordance with SEC guidelines, which require the use of an average price, calculated as the twelve-month historical average of the first-day-of-the-month historical reference price as adjusted for location and quality differentials, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions and the impact of derivatives. Our reference prices for reserve determination are the WTI spot price for crude oil and the Henry Hub price for natural gas, which were \$50.28 per barrel of oil and \$2.59 per MMBtu of natural gas at December 31, 2015. These prices are held constant throughout the life of the oil and gas properties, except where such guidelines permit alternate treatment, including the use of fixed and determinable contractual escalations. In accordance with the guidelines and

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excluding the impact of derivative instruments, the average realized prices used in our reserve reports as of December 31, 2015, were \$47.80 per barrel of oil and \$2.55 per Mcf of natural gas.

The scope and results of procedures employed by NSAI and Ryder Scott are summarized in their reserve reports. For purposes of reserve estimation, we and the independent petroleum engineers use technical and economic data including well logs, geologic maps, seismic data, well test data, production data, historical price and cost information, and property ownership interests. Our reserves have been estimated using deterministic methods. Standard engineering and geoscience methods were used, or a combination of methods, including performance analysis, volumetric analysis and analogy, which we and the independent petroleum engineers considered to be appropriate and necessary to categorize and estimate reserves in accordance with SEC definitions and regulations. A significant portion of these reserves are for undeveloped locations and are based on estimates of reserve volumes and recovery efficiencies along with analogy to properties with similar geologic and reservoir characteristics. Because these estimates depend on many assumptions, any or all of which may differ substantially from actual results, reserve estimates may differ from the quantities of oil and gas that FM O&G ultimately recovers.

Proved reserves represent quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions, operating methods and government regulations. The term “reasonable certainty” implies a high degree of confidence that the quantities of oil and gas actually recovered will equal or exceed the estimate.

The following table presents our estimated proved oil and gas reserves as of December 31, 2015, all of which are located in the U.S.:

	Proved Oil and Gas Reserves Estimated at December 31, 2015		
	Oil ^a (MMBbls)	Gas (Bcf)	Total (MMBOE)
Proved Developed:			
GOM	59	116	78
California	69	12	71
Haynesville/Madden/Other	1	117	20
	129	245	169
Proved Undeveloped:			
GOM	65	29	70
California	13	—	13
	78	29	83
Total Proved Reserves	207	274	252

a. Includes 9 MMBbls of NGL proved reserves, consisting of 6 MMBbls of proved developed and 3 MMBbls of proved undeveloped.

At December 31, 2015, we have an estimated total proved reserve life of 4.7 years and a proved developed reserve life of 3.2 years.

At December 31, 2015, total proved oil and gas reserves were 252 MMBOE, including 83 MMBOE of PUD reserves. With the exception of one planned sidetrack development well in one of our Deepwater GOM properties that cannot be executed until the current producing well depletes, 98 percent of our PUD reserves are scheduled for development within five years, and \$1.6 billion (or 97 percent) of our estimated future PUD capital is associated with the development of those reserves.

Total estimated PUD reserves of 83 MMBOE at December 31, 2015, decreased from estimated PUD reserves of 144 MMBOE at December 31, 2014, reflecting downward revisions of 72 MMBOE primarily related to lower oil and gas price realizations. These revisions were partly offset by increases of 11 MMBOE primarily associated with the continued development of our Deepwater GOM properties.

At December 31, 2014, FM O&G had 1,176 PUD locations, including 132 injector wells, of which 122 PUD locations (with associated proved reserves of 28 MMBOE) were scheduled to be drilled during 2015. During 2015, FM O&G invested \$0.6 billion to drill and complete 35 PUD locations, which resulted in converting 1 MMBOE from PUD reserves to proved developed reserves. Of the remaining 87 PUD locations scheduled to be drilled in 2015, 81 locations (with associated proved reserves of 3 MMBOE) were eliminated based on the current price environment,

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4 locations (with associated proved reserves of 17 MMBOE) were drilled and are expected to be completed in 2016 and 2017, and 2 locations (with associated proved reserves of 7 MMBOE) were delayed to future periods.

At December 31, 2015, FM O&G had 186 PUD locations, including 4 injector wells. During 2016, 33 of these PUD locations (including 2 injector wells) with associated proved reserves of 35 MMBOE are scheduled to be developed.

During 2015, FM O&G participated in 37 gross exploratory wells, of which 33 were successful, and 26 gross development wells, of which 24 were successful (refer to "Drilling Activities").

The following table reflects the present value of estimated future net cash flows before income taxes from the production and sale of our estimated proved reserves reconciled to the standardized measure of discounted net cash flows (standardized measure) at December 31, 2015 (in millions):

Estimated undiscounted future net cash flows before income taxes	\$ 1,638
Present value of estimated future net cash flows before income taxes (PV-10) ^{a,b}	\$ 1,392
Discounted future income taxes ^c	—
Standardized measure (refer to Note 21)	\$ 1,392

a. In accordance with SEC guidelines, estimates of future net cash flows from our proved reserves and the present value thereof are made using the twelve-month average of the first-day-of-the-month historical reference prices as adjusted for location and quality differentials. Refer to discussion above for pricing used in our reserve reports at December 31, 2015.

b. The present value of estimated future net cash flows before income taxes (PV-10) is not considered a U.S. generally accepted accounting principle (GAAP) financial measure. We believe that our PV-10 presentation is an important measure and useful to our investors because it presents the discounted future net cash flows attributable to our proved reserves before taking into account the related future income taxes, as such taxes may differ among companies because of differences in the amounts and timing of deductible basis, net operating loss carryforwards and other factors. We believe investors use our PV-10 as a basis for comparison of the relative size and value of our proved reserves to the reserve estimates of other companies. PV-10 is not a measure of financial or operating performance under U.S. GAAP and is not intended to represent the current market value of our estimated oil and gas reserves. PV-10 should not be considered in isolation or as a substitute for the standardized measure of discounted future net cash flows as defined under U.S. GAAP.

c. Future tax deductions are expected to be sufficient to fully offset future taxable income, resulting in no future income tax obligation at December 31, 2015.

Refer to Note 21 for further discussion of our proved reserves.

Probable Reserves. All of our probable oil and gas reserves at December 31, 2015, are based upon reserve reports prepared by the independent petroleum engineering firm of NSAI. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves, but which, together with proved reserves, are as likely as not to be recovered. In addition to the uncertainties inherent in estimating quantities and values of proved reserves, probable reserves may be assigned to areas where data control or interpretations of available data are less certain even if the interpreted reservoir continuity of structure or productivity does not meet the reasonably certain criterion. Probable reserves may be assigned to areas that are structurally higher than the proved area if these areas are in communication with the proved reservoir. Probable reserve estimates also include potential incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than assumed for proved reserves. Undeveloped reserves that meet the reasonably certain, economic and other requirements to be classified as proved undeveloped, except that they are not expected to be developed within five years, are classified as probable reserves.

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The following table presents our estimated probable oil and gas reserves at December 31, 2015:

	Probable Oil and Gas Reserves Estimated at December 31, 2015		
	Oil ^a (MMBbls)	Gas (Bcf)	Total (MMBOE)
Probable Developed ^b :			
GOM	20	45	27
California	5	—	5
	25	45	32
Probable Undeveloped:			
GOM	65	29	70
California	27	2	27
	92	31	97
Total Probable Reserves	117	76	129

a. Includes 5 MMBbls of NGL probable reserves, consisting of 2 MMBbls of probable developed and 3 MMBbls of probable undeveloped.

b. Reflects reserves associated with incremental recovery from existing production/injection wells that require minimal to no future development costs and reserves associated with work performed on existing producers/injectors that do not meet the reasonable certainty requirements to be classified as proved reserves.

Drilling Activities

The following table provides the total number of wells that we drilled during the years ended December 31, 2015 and 2014, and the seven-month period ending December 31, 2013:

	Years Ended December 31,				Seven Months Ended	
	2015	2014			December 31, 2013	
	Gross	Net	Gross	Net	Gross	Net
Exploratory						
Productive:						
Oil	2	1	25	21	40	35
Gas	31	5	21	2	25	2
Dry	4	3	10	7	1	1
	37	9	56	30	66	38
Development						
Productive:						
Oil	7	3	184	174	71	66
Gas	17	2	75	10	23	8
Dry	2	2	2	—	1	1
	26	7	261	184	95	75
	63	16	317	214	161	113

In addition to the wells drilled, there were 9 gross exploratory and 19 gross development wells (5 net exploratory and 7 net development wells) in progress at December 31, 2015.

Productive Wells

We had working interests in 3,060 gross (2,976 net) active producing oil wells and 1,759 gross (213 net) active producing natural gas wells at December 31, 2015; 3,069 gross (2,991 net) active producing oil wells and 1,710 gross (211 net) active producing natural gas wells at December 31, 2014; and 3,310 gross (3,153 net) active producing oil

wells and 1,651 gross (238 net) active producing natural gas wells at December 31, 2013. One or more completions in the same well bore are considered one well. If any well in which one of the multiple completions is an oil completion, such well is classified as an oil well. At December 31, 2015, we owned interests in five gross wells containing multiple completions.

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Item 1A. Risk Factors.

This report contains "forward-looking statements" within the meaning of United States (U.S.) federal securities laws. Forward-looking statements are all statements other than statements of historical facts, such as projections or expectations relating to ore grades and milling rates; production and sales volumes; unit net cash costs; cash production costs per barrel of oil equivalent (BOE); operating cash flows; capital expenditures; debt reduction initiatives; exploration efforts and results; development and production activities and costs; liquidity; tax rates; the impact of copper, gold, molybdenum, cobalt, crude oil and natural gas price changes; the impact of deferred intercompany profits on earnings; reserve estimates; future dividend payments; and share purchases and sales.

We undertake no obligation to update any forward-looking statements. We caution readers that forward-looking statements are not guarantees of future performance and our actual results may differ materially from those anticipated, projected or assumed in the forward-looking statements. Important factors that can cause our actual results to differ materially from those anticipated in the forward-looking statements include the following:

Financial risks

Declines in the market prices of copper, gold and oil have adversely affected our earnings, cash flows and asset values and, if sustained or intensified, may adversely affect our ability to repay debt. Fluctuations in the market prices of copper, gold and oil have caused and may continue to cause significant volatility in our financial performance and in the trading prices of our debt and common stock.

Our financial results vary with fluctuations in the market prices of the commodities we produce, primarily copper, gold and oil, and to a lesser extent molybdenum, silver, cobalt and natural gas. As described below, during 2015 and in early 2016, copper and oil prices declined significantly. If low prices persist or decline further, they may continue to have a material adverse effect on our financial results, the value of our assets and/or our ability to repay our debt and meet our other fixed obligations; and may continue to depress the trading prices of our common stock and of our publicly traded debt securities.

In response to lower commodities prices, we have announced revised operating plans that incorporate significant reductions in capital spending, production curtailments at certain North and South America mines and actions to reduce operating, exploration and administrative costs, which may not achieve all the results we anticipate. If market prices for our primary commodities continue to decline or persist at low levels, we may have to further revise our operating plans, including curtailing production further, reducing operating costs and capital expenditures and discontinuing certain exploration and development programs. We may be unable to decrease our costs in an amount sufficient to offset reductions in revenues, in which case we may incur additional losses, and those losses may be material. We are also pursuing asset sales and joint venture arrangements to raise proceeds for debt reduction. We may be unable to receive favorable terms for asset sales or joint venture arrangements in the current market environment, which may prevent us from achieving our desired debt reduction levels.

Fluctuations in commodities prices are caused by varied and complex factors beyond our control, including global supply and demand balances and inventory levels; global economic and political conditions; international regulatory, trade and tax policies; commodities investment activity and speculation; the price and availability of substitute products; and changes in technology.

In particular, copper prices may be affected by demand from China, which has become the largest consumer of refined copper in the world, and by changes in demand for industrial, commercial and residential products containing copper. Copper prices have declined significantly during 2015, with London Metal Exchange (LME) spot copper prices

averaging \$3.11 per pound in 2014 and \$2.49 per pound in 2015. On December 31, 2015, the LME spot copper price was \$2.13 per pound. Copper prices weakened further in early 2016 with the LME spot copper price ranging from \$1.96 per pound to \$2.13 per pound from January 1, 2016, to February 19, 2016. The decline in prices during 2015 resulted in non-cash charges for copper and molybdenum inventory adjustments (\$338 million) and long-lived mining asset impairments (\$37 million), as more fully discussed in Notes 4 and 5. Copper prices at or below the December 31, 2015, level could result in additional inventory adjustments and impairment charges for our long-lived mining assets. Other events that could result in impairment of our long-lived mining assets include, but are not limited to, decreases in estimated proven and probable mineral reserves and any event that might otherwise have a material adverse effect on mine production costs.

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Factors affecting gold prices may include the relative strength of the U.S. dollar to other currencies, inflation and interest rate expectations, purchases and sales of gold by governments and central banks, demand from China and India, two of the world's largest consumers of gold, and global demand for jewelry containing gold. The London PM gold price averaged \$1,160 per ounce in 2015 and \$1,266 per ounce in 2014, and was \$1,062 per ounce on December 31, 2015.

Crude oil prices have been and could be affected in the future by continued development of shale reserves through hydraulic fracturing, actions of the Organization of the Petroleum Exporting Countries and other major oil producing nations, political and weather conditions in oil producing regions, transportation and refinery capacity, the amount of foreign imports of oil into the U.S., and the impact of legislation adopted in December 2015 lifting 40-year old restrictions on exporting U.S. oil. Oil prices have declined significantly since mid-2014, with Brent crude oil prices averaging \$99.45 per barrel in 2014 and \$53.64 per barrel in 2015. On December 31, 2015, the Brent crude oil price was \$37.28. In early 2016, oil prices weakened further to multi-year lows in response to excess global supplies and relatively weak economic conditions with Brent crude oil prices ranging from \$27.88 per barrel to \$37.22 per barrel from January 1, 2016, to February 19, 2016. As further discussed in Note 1 and in Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A), lower oil prices, and to a lesser extent natural gas prices, were a significant contributing factor to the non-cash impairment charges totaling \$13.1 billion