

POTASH CORP OF SASKATCHEWAN INC

Form 10-K

February 28, 2014

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)

OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2013

Commission file number 1-10351

Potash Corporation of Saskatchewan Inc.

(Exact name of the registrant as specified in its charter)

Canada <i>(State or other jurisdiction of incorporation or organization)</i>	Suite 500, 122 1 Avenue South Saskatoon, Saskatchewan, Canada S7K 7G3 306-933-8500	N/A <i>(I.R.S. employer identification no.)</i>
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(Address and telephone number of the registrant's principal executive offices)

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

Title of each class	Name of exchange on which registered
Common Shares, No Par Value	New York Stock Exchange
The Common Shares are also listed on the Toronto Stock Exchange in Canada	

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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 during the preceding 12 months (or such shorter period that the registrant was required to submit and post such files).

Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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*. (Check one):

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

At June 30, 2013, the aggregate market value of the 862,239,874 Common Shares held by non-affiliates of the registrant was approximately \$32,877,206,397.26. At February 20, 2014, the registrant had 852,517,231 Common Shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Annual Integrated Report for the fiscal year ended December 31, 2013 (the "2013 Annual Integrated Report"), attached as Exhibit 13, are incorporated by reference into Part II.

Portions of the registrant's Proxy Circular for its Annual and Special Meeting of Shareholders to be held on May 15, 2014 (the "2014 Proxy Circular"), attached as Exhibit 99(a), are incorporated by reference into Part III.

ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2013

Table of Contents

<u>Forward-Looking Statements</u>	1
<u>Part I</u>	2
<u>Item 1.</u> Business	2
<u>General</u>	2
<u>Potash Operations</u>	3
<u>Nitrogen Operations</u>	6
<u>Phosphate Operations</u>	7
<u>Marketing</u>	10
<u>Transportation and Distribution</u>	12
<u>Competition</u>	13
<u>Employees</u>	14
<u>Royalties and Taxes</u>	14
<u>Environmental Matters</u>	15
<u>Our Executive Officers</u>	17
<u>Presentation of Financial Information</u>	18
<u>Where You Can Find More Information</u>	18
<u>Item 1A.</u> Risk Factors	18
<u>Item 1B.</u> Unresolved Staff Comments	21
<u>Item 2.</u> Properties	21
<u>Item 3.</u> Legal Proceedings	21
<u>Item 4.</u> Mine Safety Disclosures	22
<u>Part II</u>	23
<u>Item 5.</u> Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	23
<u>Item 6.</u> Selected Financial Data	23
<u>Item 7.</u> Management's Discussion and Analysis of Financial Condition and Results of Operations	24
<u>Item 7A.</u> Quantitative and Qualitative Disclosures About Market Risk	24
<u>Item 8.</u> Financial Statements and Supplementary Data	24
<u>Item 9.</u> Changes In and Disagreements With Accountants on Accounting and Financial Disclosure	24
<u>Item 9A.</u> Controls and Procedures	24
<u>Item 9B.</u> Other Information	24
<u>Part III</u>	25
<u>Item 10.</u> Directors, Executive Officers and Corporate Governance	25
<u>Item 11.</u> Executive Compensation	25
<u>Item 12.</u> Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	25
<u>Item 13.</u> Certain Relationships and Related Transactions, and Director Independence	25
<u>Item 14.</u> Principal Accountant Fees and Services	25
<u>Part IV</u>	26
<u>Item 15.</u> Exhibits and Financial Statement Schedules	26
<u>List of Documents Filed as Part of this Report</u>	26
<u>Signatures</u>	31

Forward-Looking Statements

This document, including the documents incorporated by reference, contains forward-looking statements (within the meaning of the *US Private Securities Litigation Reform Act of 1995*) or forward-looking information (within the meaning of applicable Canadian securities legislation) that relate to future events or our future financial performance. These statements can be identified by expressions of belief, expectation or intention, as well as those statements that are not historical fact. These statements often contain words such as should, could, expect, may, anticipate, believe, intend, estimates, plans and similar expressions. These statements are based on certain factors and assumptions as set forth in this document and the documents incorporated by reference herein, including with respect to: foreign exchange rates, expected growth, results of operations, performance, business prospects and opportunities, and effective tax rates. While we consider these factors and assumptions to be reasonable based on information currently available, they may prove to be incorrect.

Forward-looking statements are subject to risks and uncertainties that are difficult to predict. The results or events set forth in forward-looking statements may differ materially from actual results or events. Several factors could cause actual results or events to differ materially from those expressed in forward-looking statements including, but not limited to, the following:

variations from our assumptions with respect to foreign exchange rates, expected growth, results of operations, performance, business prospects and opportunities, and effective tax rates;

risks and uncertainties related to operating and workforce changes made in response to our industry and the markets we serve;

changes in competitive pressures, including pricing pressures;

risks and uncertainties related to our international operations and assets;

fluctuations in supply and demand in the fertilizer, sulfur, transportation and petrochemical markets;

costs and availability of transportation and distribution for our raw materials and products, including railcars and ocean freight;

adverse or uncertain economic conditions and changes in credit and financial markets;
the results of sales contract negotiations within major markets;

unexpected geological or environmental conditions, including water inflows;

economic and political uncertainty around the world;

risks associated with natural gas and other hedging activities;

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changes in capital markets;

unexpected or adverse weather conditions;

changes in currency and exchange rates;

imprecision in reserve estimates;

adverse developments in new and pending legal proceedings or government investigations;

acquisitions we may undertake;

increases in the price or reduced availability of the raw materials that we use;

strikes or other forms of work stoppage or slowdowns;

timing and impact of capital expenditures;

rates of return on, and the risks associated with, our investments and capital expenditures;

changes in, and the effects of, government policies and regulations;

security risks related to our information technology systems;

risks related to reputational loss; and

earnings and the decisions of taxing authorities which could affect our effective tax rates.

In addition to the factors mentioned above, see **Risk Factors** under Item 1A for a description of other factors affecting forward-looking statements. As a result of these and other factors, there is no assurance that any of the events, circumstances or results anticipated by forward-looking statements included or incorporated by reference into this document will occur or, if they do, of what impact they will have on our business or on our results of operations and financial condition.

Forward-looking statements are given only as of the date hereof and we disclaim any obligation to update or revise any forward-looking statements in this report, whether as a result of new information, future events or otherwise, except as required by law.

Part I

Item 1. Business

General

Potash Corporation of Saskatchewan Inc. is a corporation organized under the laws of Canada. As used in this document, the term "PCS" refers to Potash Corporation of Saskatchewan Inc. and, unless the context requires otherwise, the terms "we," "us," "our," "PotashCorp" and the "Company" refer to PCS and its direct and indirect subsidiaries, individually or in any combination, as applicable. Additional information relating to the company can be found on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml. The company is a foreign private issuer under the rules and regulations of the US Securities and Exchange Commission (the "SEC"); however, it currently files voluntarily on the SEC's domestic forms.

We are the world's largest integrated fertilizer and related industrial and feed products company by capacity. We are the largest producer of potash worldwide by capacity. In 2013, we estimate our potash operations represented 15% of global production and 19% of global potash capacity¹. In 2013, we estimate our nitrogen operations produced 2% of the world's ammonia production. In 2013, we estimate our phosphate operations produced 5% of world phosphoric acid production.

We own and operate five potash mines in Saskatchewan and one in New Brunswick.

Our nitrogen operations involve the production of nitrogen fertilizers and nitrogen feed and industrial products, including ammonia, urea, nitrogen solutions, ammonium nitrate and nitric acid. We have nitrogen facilities in Georgia, Louisiana, Ohio and Trinidad.

Our phosphate operations include the manufacture and sale of solid and liquid phosphate fertilizers, phosphate feed and industrial acid, which is used in food products and industrial processes. We have phosphate mines and mineral processing plant complexes in northern Florida and North Carolina. We also have five phosphate feed plants in the United States and produce phosphoric acid at our Geismar, Louisiana facility.

We are organized under the laws of Canada. Our principal executive offices are located at Suite 500, 122 1st Avenue South, Saskatoon, Saskatchewan, Canada S7K 7G3, and our telephone number is (306) 933-8500.

History

PCS is a corporation continued under the *Canada Business Corporations Act* and is the successor to a corporation without share capital established by the Province of Saskatchewan in 1975. Between 1976 and 1989 substantial interests in the Saskatchewan potash industry were acquired. These acquisitions included the purchase of the Cory mine in 1976 and the Rocanville and Lanigan mines in 1977.

In 1989, the Province of Saskatchewan privatized PCS. While the Province initially retained an ownership interest in PCS, this interest was reduced to zero by the end of 1993. Since the privatization of PCS, we have made the following significant acquisitions:

the Allan mine through the acquisition of all of the outstanding shares of Saskterra Fertilizers Ltd. in 1990;

the New Brunswick potash mine and port facilities and our Patience Lake solution mine in Saskatchewan in 1993;

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PCS Phosphate Company, Inc. (formerly Texasgulf Inc.) and White Springs Agricultural Chemicals, Inc., phosphate fertilizer and feed producers, in 1995;

Arcadian Corporation, a producer of nitrogen fertilizer, industrial and feed products, in 1997;

PCS Cassidy Lake, a potash mill facility located at Clover Hill, New Brunswick, in 1998;

approximately 9% of the shares of Israel Chemicals Ltd. (ICL) pursuant to a public offering by the State of Israel in 1998; additional shares were acquired in transactions between 2005 and 2010, increasing our ownership interest to approximately 14%;

PCS Purified Phosphates (formerly a joint venture we had with Albright & Wilson Americas Inc.), a phosphoric acid joint venture, in 2000;

approximately 20% of the shares of Sociedad Química y Minera de Chile S.A. (SQM), a Chilean specialty fertilizer, iodine and lithium company, in transactions in 2001 and 2002; we acquired additional shares in various transactions from 2004 through 2007, increasing our ownership interest to approximately 32%;

approximately 26% of the shares of Arab Potash Company (APC) from Jordan Investment Corporation, an arm of the Jordanian government, in 2003; in transactions in 2005 and 2006, we acquired additional shares in APC, increasing our ownership interest to approximately 28%;
and

¹ Based on our nameplate capacity at December 31, 2013. See table under Potash Operations Production for further information.

² PotashCorp 2013 Annual Report on Form 10-K

approximately 10% of the shares of Sinofert Holdings Limited (Sinofert), a fertilizer company and a subsidiary of Sinochem Corporation, in 2005. In various transactions from 2006 through 2011, we increased our ownership interest to approximately 22%.

Potash Operations

Our potash operations include the mining and processing of potash, which is predominantly used as fertilizer.

Properties

All potash produced by the Company in Saskatchewan is in the southern half of the Province, where extensive potash deposits, or Members , are found. The potash ore is contained in a predominantly rock salt formation known as the Prairie Evaporite, which lies about 1,000 metres below the surface. The evaporite deposits, which are bounded by limestone formations, contain potash beds of approximately 2.4 to 5.1 metres of thickness. Three potash deposits of economic importance occur in the Province: the Esterhazy, Belle Plaine and Patience Lake Members. The Patience Lake Member is mined at the Lanigan, Allan, Patience Lake and Cory mines, and the Esterhazy Member is mined at the Rocanville mine.

Under a mining and processing agreement, Mosaic Potash Esterhazy Limited Partnership (Mosaic) previously mined and processed our mineral rights at the Esterhazy mine.

The Company, having been unable to agree with Mosaic on the amount of potash that the Company was entitled to receive from

Mosaic pursuant to the mining and processing agreement, commenced a legal action against Mosaic in May 2009 seeking an order declaring the amount of potash which the Company had the right to receive.

In December 2011, the Company and Mosaic settled the litigation. The settlement provided for the amount and timing of deliveries of potash owed to the Company, and also provided that the mining and processing agreement would terminate on December 31, 2012. The mining and processing agreement has terminated and there are no remaining delivery obligations thereunder. The parties continue to dispute certain costs related to the tonnes covered by the settlement agreement.

Near Sussex, New Brunswick, at our Penobscus facility, we have been producing potash from the flank of an elongated salt structure. In December 2013, we announced the cessation of production of the existing underground operation at Penobscus, which we currently expect to occur in the first half of 2014. We have been incurring costs at the Penobscus underground operation in relation to management of a brine inflow and will continue to incur these costs after the cessation of operations in order to preserve mine infrastructure. In July 2007, we announced plans for a new potash mine and an expanded milling facility at the New Brunswick site (Picadilly). Construction of this new Picadilly mining facility is ongoing and is expected to be largely

completed in 2014. Once construction is complete, the facility is expected to begin ramping up production in 2015. Once fully ramped up, the new mine is expected to have an annual operational capability of 1.8 million tonnes. The capital budget for the project is CDN \$2.2 billion. As of December 31, 2013, we have incurred approximately CDN \$1.8 billion in expansion costs for this project. We also hold an interest in certain oil and gas rights in the vicinity of the New Brunswick mine. We, in conjunction with Corridor Resources Inc., have supplied the Penobscus facility with natural gas to meet its fuel needs since 2003.

We have the right to mine 769,260 acres of land in Saskatchewan. Included in these holdings are mineral rights to 662,549 acres contained in blocks around our potash mines, of which we own approximately 27% of the acres, approximately 54% are under lease from the Province of Saskatchewan and approximately 19% are leased from other parties. Our remaining 106,711 acres are located elsewhere in Saskatchewan. Our leases with the Province of Saskatchewan are for 21-year terms, renewable at our option. Our significant leases with other parties are also for 21-year terms. Such other leases are renewable at our option, providing generally that production is continuing and that there is continuation of the applicable lease with the Province of Saskatchewan. In New Brunswick, we mine pursuant to a mining lease with the Province of New Brunswick. The lease is for a term of 21 years from 1978 with renewal provisions for three additional 21 year periods. This lease was renewed effective June 13, 1999 and amended in 2005 to add additional land. We have the right to mine 58,263 acres of land in New Brunswick.

The following map shows the location of our Canadian mining operations.

Production

We produce potash using both conventional and solution mining methods. In conventional operations, shafts are sunk to the ore body and mining machines cut out the ore, which is lifted to the surface for processing. In solution mining, the potash is dissolved in warm brine and pumped to the surface for processing. Eleven grades of potash are produced to suit different preferences of the various markets.

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In 2013, our conventional potash operations mined 24.9 million tonnes of ore at an average mineral grade of 22.4% potassium oxide (K_2O). In 2013, our potash production from all our operations consisted of 7.8 million tonnes of potash (KCl or finished product) with an average grade of 61.0% K_2O , representing 44% of North American production.

In 2013, our capacity represented an estimated 52% of the North American total capacity (based on our nameplate capacity, see table below for further information). We allocate production among our mines on the basis of various factors, including cost

efficiency and the grades of product that can be produced. The Patience Lake mine, which was originally a conventional underground mine, began employing a solution mining method in 1989. The other Saskatchewan mines we own employ conventional underground mining methods.

Our operations in New Brunswick are conventional cut and fill underground mining. In addition to potash production, our New Brunswick operations also produced 0.6 million tonnes of sodium chloride (salt) in 2013.

The following table sets forth, for each of the past three years, the production of ore, grade and finished product for each of our mines.

	Annual	Annual	2013 Production					2012 Production			2011 Production	
	Nameplate	Operational	Average					Average			Average	
	Capacity ⁽¹⁾	Capacity ⁽²⁾	Capacity ⁽²⁾	Ore	Grade % K_2O	Finished Product	Ore	Grade % K_2O	Finished Product	Ore	Grade % K_2O	Finished Product
	(Millions of tonnes)	(Millions of tonnes)	(Millions of tonnes)	(Millions of tonnes)	(Eq. of tonnes)	(Millions of tonnes)	(Millions of tonnes)	(Eq. of tonnes)	(Millions of tonnes)	(Millions of tonnes)	(Eq. of tonnes)	(Millions of tonnes)
Lanigan ⁽³⁾	3.8	1.7	3.4	7.6	21.0	2.2	5.7	20.8	1.6	10.5	21.2	3.0
Rocanville	3.0	2.6	2.8	6.4	23.1	2.0	4.8	23.9	1.6	7.1	24.2	2.4
Allan	3.0	2.5	2.5	3.5	24.0	1.2	3.5	24.1	1.2	3.2	23.6	1.0
Cory ⁽³⁾	3.0	1.7	2.6	5.4	22.6	1.5	4.7	23.6	1.3	3.1	23.1	0.8
Patience Lake ⁽⁴⁾	0.3	0.3	0.3			0.3			0.3			0.4
New Brunswick ⁽⁵⁾	0.8	0.2	0.8	2.0	22.5	0.6	2.3	22.6	0.7	2.3	22.7	0.7
Esterhazy ⁽⁶⁾									1.0			1.0
Total	13.9	9.0	12.4	24.9		7.8	21.0		7.7	26.2		9.3

(1) Represents estimates of capacity as of December 31, 2013. Estimates based on capacity as per design specifications for those projects constructed or Canpotex entitlement runs once complete. In the case of Patience Lake, amount reflects current operational capability. Estimates for all other facilities do not necessarily represent operational capability.

(2) Estimated annual achievable production level at current staffing and operational readiness (estimated at beginning of year). Estimates do not include inventory-related shutdowns and unplanned downtime.

(3) Operational capability significantly lower than prior year estimates (and nameplate capacity) due to operational and workforce changes announced in December 2013. Potential exists to reach 2013 estimated operational capability with increased staffing and operational ramp-up, although timing is uncertain.

(4) Solution mine.

(5) Operational capability significantly lower than prior year estimates (and nameplate capacity) due to operational and workforce changes announced in December 2013. Potential exists to reach 2013 estimated operational capability upon completion and ramp-up of new mine (Picadilly).

(6) Product tonnes received at Esterhazy were based on a mining and processing agreement with Mosaic and a related settlement agreement. Under the settlement agreement, the mining and processing agreement terminated on December 31, 2012. For further information, see Potash Operations Properties on page 3 in Item 1 of this report.

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The mining of potash is a capital-intensive business subject to the normal risks and capital expenditure requirements associated with mining operations. The processing of ore may be subject to delays and costs resulting from mechanical failures and such hazards as unusual or unexpected geological conditions, subsidence, water inflows, and other conditions involved in mining ore.

Reserves

The Company's estimates for its conventional mining operations in Saskatchewan are based on exploration drill hole data, seismic data and actual mining results during the past 43 to 45 years. In

Saskatchewan reserves are estimated by identifying material in place that is delineated on at least two sides and material in place within one mile from an existing sampled mine entry or borehole.

The Company's estimates for its conventional mining operations in New Brunswick are based on exploration drill hole data, seismic data and actual mining results during the past 30 years. In New Brunswick, reserves are estimated by identifying material in place that is delineated by drilling or mining with results projected conservatively from these intersections.

Generally, we distinguish between proven and probable reserves in respect of our potash operations based on the level of certainty and established continuity of the mineralization in the potash deposits and reserves described. For our Saskatchewan potash operations, we distinguish proven reserves from probable reserves

based on greater delineation of the reserve, which is estimated through drilling and mine entry sampling. For our New Brunswick potash operations, we distinguish proven reserves from probable reserves based on the extent of exploration coverage.

A historical extraction ratio from the 30 to 45 years of mining results is applied to estimate the mineable reserves. The Company's estimated recoverable ore (reserve tonnage only) as of December 31, 2013 for each of our potash mines is as follows:

	Proven Mineral Reserves (Millions of tonnes recoverable ore)	Probable Mineral Reserves (Millions of tonnes recoverable ore)	Total Mineral Reserves (Millions of tonnes recoverable ore) ⁽¹⁾⁽²⁾⁽³⁾	Average Grade % K ₂ O Eq ⁽⁴⁾⁽⁵⁾	Years of Remaining Mine Life ⁽⁶⁾
Allan ⁽⁷⁾	75	202	277	25.0	80
Cory ⁽⁷⁾	64	183	247	24.7	56
Lanigan ⁽⁷⁾	91	467	558	21.5	71
Rocanville	138	343	481	23.5	79
Patience Lake ⁽⁸⁾					
New Brunswick ⁽⁹⁾	184		184	24.6	84

(1) There has been no third party review of reserve estimates within the last three years.

(2) The extraction ratio of recoverable ore to in-place material for each mine is as follows: Allan 0.33, Cory 0.27, Lanigan 0.26, Rocanville 0.31 and New Brunswick 0.46.

(3) The concentration of recoverable ore tonnes to finished product (KCl) for each of the divisions is as follows (three-year running average): Allan 3.07, Cory 3.73, Lanigan 3.42, Rocanville 3.06 and New Brunswick 3.13.

(4) From in-mine samples.

(5) While the term potash refers to a wide variety of potassium-bearing minerals, at our deposits the predominant potash mineralization is sylvinite, which is comprised mainly of the minerals sylvite (KCl/potassium salt) and halite (NaCl/rock salt) with minor amounts of carnallite (KCl MgCl₂ · 6H₂O) and water insolubles. Potash fertilizer is concentrated, nearly pure KCl (i.e. with a purity greater than 95%), but ore-grade is traditionally reported on a % K₂O basis. The % K₂O equivalent gives a standard measurement of the nutrient value of different potassium-bearing rocks and minerals. To convert from K₂O equivalent tonnes to actual KCl tonnes, multiply by 1.583.

(6) Estimates are based upon proven and probable reserves and average annual mining rates (million tonnes of ore hoisted per year) equal to the three-year running average for each of the divisions as follows: Allan 3.44, Cory 4.38, Lanigan 7.91, Rocanville 6.10 and New Brunswick 2.19. Mining rates are constrained by the equipment and manpower utilized at each mine so that our production capacity at each mine depends, in part, on the ore concentration encountered at each mine. Years of remaining mine life are based on applying the average annual mining rate to reported reserves.

(7) At each of the Allan, Cory and Lanigan operations, potash mineralization occurs in two separate horizons (A Zone and B Zone). To date, at each of Allan, Cory and Lanigan we have defined mineral reserves in only one zone (where most mining has occurred at that operation). At Allan and Cory the mineral reserves are in A Zone, and at Lanigan the mineral reserves are in B Zone.

(8) Given the characteristics of the solution mining method employed at the Patience Lake mine, it is not possible to estimate reliably the recoverable ore reserve from this operation. In solution mining, the potash is dissolved in warm brine and pumped to the surface for processing. Chemical compositions and volumes of brine pumped into and out of the underground mineralized zone are known, but the precise nature of the solution mining process is not. Estimates are made utilizing the surfaces available for dissolution in the abandoned mine workings, the concentration of the circulated brine recovered from the mine, annual crystallization rates in the ponds and the annual volume of KCl recovered from the ponds. The Patience Lake operation accounted for only 3.9% of the Company's potash production in 2013.

(9) The Penobscot portion of our New Brunswick operations (which represents 25 millions of tonnes of Proven Mineral Reserves and 11 Years of Remaining Mine Life at our New Brunswick operations) will cease production in the first half of 2014, but we will continue to manage brine inflows to preserve underground mine infrastructure.

Resources

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Mineral resources, which are exclusive of the mineral reserves reported above, are contained within the lands for which a mining lease is held at each mine. These resources are reported as mineralization in-place while the reserves are reported as recoverable ore.

In Saskatchewan, where geological correlations are straightforward, the mineral resource categories are generally characterized by the Company as follows:

areas of detailed, physical exploration through actual drilling or mine sampling, near existing underground workings, and within a mining lease are reported in the measured mineral resource category;

areas of sparse exploration, such as areas with 3D surface seismic coverage, little or no drilling, and at some distance from underground workings, and within a mining lease are reported in the indicated mineral resource category; and

areas of limited exploration, such as areas that have been investigated through regional geological studies, or areas with 2D regional surface seismic coverage, little or no drilling, and at some distance from underground workings, and still within a mining lease or exploration permit area are reported in the inferred mineral resource category.

Exploration information used to infer and compute resource tonnage estimates for Saskatchewan consists of physical sampling (boreholes) and surface seismic data (3D and 2D).

In New Brunswick, where geology is complex, mineral resource categories are generally characterized by the Company as follows:

areas with many drillhole intersections within a seismically defined area and with consistent stratigraphy, mineralogy and potash quality are reported in the measured mineral resource category;

areas with few drill intersections within a seismically defined area, or with structurally modified (folded) and less consistent mineralogy, but still exhibiting good quality potash intersections, are reported in the indicated mineral resource category; and

areas with little or no drilling, complex geology, partial seismic coverage and/or inconsistent potash quality in drill intersections are reported in the inferred mineral resource category.

Exploration information used to infer and compute resource tonnage estimates in New Brunswick consists of physical sampling (boreholes and regional surface mapping), surface seismic data (3D and 2D), and airborne electromagnetic and regional gravity data.

The Company's estimated mineral resource tonnage as of December 31, 2013 for each of our mines is as follows:

	Mineral Resource			Average Grade %K ₂ O Eq ⁽¹⁾
	Measured Resource (Millions of tonnes in-place)	Indicated Resource (Millions of tonnes in-place)	Inferred Resource (Millions of tonnes in-place)	
Allan ⁽²⁾ (A Zone)	232	250	1,389	25.0
(B Zone)	1,197	253	1,406	21.5
Cory ⁽²⁾ (A Zone)	258	293	970	24.7
(B Zone)	1,284	297	982	21.5
Lanigan ⁽²⁾ (A Zone)	2,037	1,644	365	25.2
(B Zone)	461	2,219	493	21.5
Rocanville	428	701	1,631	23.5
Patience Lake ⁽³⁾				
New Brunswick ⁽⁴⁾		153	319	24.6

(1) See footnote 5 to the table under Potash Operations Reserves.

(2) See footnote 7 to the table under Potash Operations Reserves.

(3) Given the characteristics of the solution mining method employed at the Patience Lake mine as described in footnote 8 to the table under Potash Operations Reserves, it is not possible to estimate reliably the resource tonnage from this operation at present.

(4) The Penobsquis portion of our New Brunswick operations (which represents 95 millions of tonnes of Indicated Resources and 0 tonnes of Inferred Resources at our New Brunswick operations) will cease production in the first half of 2014, but we will continue to manage brine inflows to preserve underground mine infrastructure.

The scientific and technical information included in the Potash Operations section of this annual report on Form 10-K has been prepared by or under the supervision of persons who are qualified persons under Canadian National Instrument 43-101. For our Saskatchewan and New Brunswick operations, Michael Hogan, P. Eng. (President, PCS Potash) is the qualified person who supervised the preparation of the information and who verified the data disclosed herein.

Data for the mineral reserve and mineral resource estimates for our Saskatchewan mines reported herein were verified by PotashCorp staff as follows:

annual review of underground potash sample information (boreholes and in-mine ore samples);

annual review of surface geophysical exploration results (3D and 2D seismic data);

annual cross-checking of mined tonnages reported by minesite technical staff with tonnages estimated from mine survey information; and

annual cross-checking of reserve and resource computations carried out by technical staff.

This approach to data verification of potash mineral grade and surface seismic information is in accordance with generally accepted industry practice for areas adjacent and contiguous to an existing operating potash mine.

Nitrogen Operations

Our nitrogen operations include production of nitrogen fertilizers and nitrogen chemicals. These products are used for agricultural, industrial and animal nutrition purposes.

Properties

We have four nitrogen production facilities, of which three are located in the United States and one is located in Trinidad. The following table sets forth the facility locations and products produced.

Plant Locations	Nitrogen Products Produced
Augusta, GA	Ammonia, urea, nitric acid, ammonium nitrate and nitrogen solutions
Geismar, LA ⁽¹⁾	Ammonia, urea, nitric acid and nitrogen solutions
Lima, OH	Ammonia, urea, nitric acid and nitrogen solutions
Point Lisas, Trinidad	Ammonia and urea

(1) In 2013, we resumed ammonia production at Geismar.

Production

Unlike potash and phosphate, nitrogen is not mined. It is taken from the air and reacted with a hydrogen source, usually natural gas reformed with steam, to produce ammonia. The ammonia is used to produce a full line of upgraded nitrogen products, including urea, nitrogen solutions, ammonium nitrate and nitric acid. Ammonia, urea and nitrogen solutions are sold as fertilizers to agricultural customers and to industrial customers for various applications. Nitric acid and ammonium nitrate are sold to industrial customers for various applications. Urea is also sold for feed applications.

The following table sets forth the annual capacity and, for each of the last three years, the Company's production of ammonia.

	Ammonia ⁽¹⁾			
	Annual Capacity	2013 Production	2012 Production	2011 Production
Trinidad	2.2	1.9	2.0	2.1
Augusta, GA	0.8	0.7	0.6	0.7
Lima, OH	0.6	0.6	0.6	0.6
Geismar, LA	0.5	0.4		
Total	4.1	3.6	3.2	3.4

(1) A substantial portion is upgraded to value-added products.

Raw Materials

Natural gas is the primary raw material used for the production of nearly all of our nitrogen products. In the United States, we may enter into natural gas hedging transactions with the goal of minimizing risk from volatile gas prices. In Trinidad, natural gas is purchased pursuant to long-term contracts using pricing formulas related to the market price of ammonia. In Trinidad, we have multiple long-term gas contracts in place. These contracts, which include minimum take or pay requirements, can provide the entire ammonia complex with 100% of its requirements in 2014 and 2015, and 95% from 2016 to 2018. With the exception of the Trinidad facility, we purchase most of our natural gas from producers or marketers at the point of delivery of the natural gas into the pipeline system, then pay the pipeline company and, where applicable, the local distribution company to transport the natural gas to our nitrogen facilities. Approximately 83% of our US consumption of natural gas by our nitrogen operations is delivered pursuant to firm transportation contracts, which do not permit the pipeline or local distribution company to interrupt service to, or divert natural gas from, the plant.

Phosphate Operations

We mine phosphate ore and manufacture phosphoric acid, solid and liquid fertilizers, animal feed supplements, purified phosphoric acid which is used in food products and industrial processes, hydrofluosilicic acid (HFSA) and silicon tetrafluoride (STF).

Properties

We conduct our phosphate operations primarily at two facilities, one a 75,198-acre facility near Aurora, North Carolina and the other a 99,588-acre facility near White Springs in northern Florida. The Aurora facility includes a 6.0 million tonne per-year mining operation, three sulfuric acid plants, four phosphoric acid plants, four purified acid plants, a liquid fertilizer plant, four superphosphoric acid (SPA) plants, a defluorinated phosphate (DFP) or animal feed plant, two granulation plants capable of producing diammonium phosphate (DAP) or monoammonium phosphate (MAP) and four STF plants.

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Our White Springs facility is the third largest phosphoric acid producer, by capacity, in the United States. The White Springs facility includes a mine and two production facilities, Suwannee River and Swift Creek, with two sulfuric acid plants, one phosphoric acid plant, two MAP plants, a SPA plant, a dicalcium phosphate plant and a DFP plant located at the Suwannee River complex and two sulfuric acid plants and a SPA plant located at the Swift Creek complex. In December 2013, we announced the shutdown of the Suwannee River chemical plant, except the granulation plant, in the second half of 2014.

The location of our Aurora and White Springs mining operations are shown on the following map.

At our Geismar, Louisiana facility, we manufacture phosphoric acid. The Geismar facility has a sulfuric acid plant, a phosphoric acid plant and a liquid fertilizer plant. A significant portion of the phosphoric acid produced at the Geismar facility is sold as feedstock to Innophos Holdings, Inc. for use in its neighboring purified acid plant. Our other phosphate properties include:

animal feed plants in Marseilles, Illinois; Weeping Water, Nebraska; and Joplin, Missouri;

a technical and food grade phosphate plant in Cincinnati, Ohio; and

a terminal facility at Morehead City, North Carolina.

Plant Locations	Primary Products Produced
Aurora, NC	DAP, MAP, SPA, animal feed, liquid fertilizer, purified acid, merchant grade phosphoric acid (MGA), STF, HFSA
White Springs, FL ⁽¹⁾	SPA, MAP, MGA ⁽²⁾ , animal feed
Cincinnati, OH	Blended purified acid products, potassium phosphates
Geismar, LA ⁽³⁾	MGA
Marseilles, IL	Animal feed
Weeping Water, NE	Animal feed
Joplin, MO	Animal feed

(1) In 2005, production of DFP at this location was suspended indefinitely.

(2) All of the MGA is consumed internally in the production of downstream products.

(3) In 2006, production of superphosphoric acid and ammonium polyphosphate products at this location was suspended indefinitely.

Production

We extract phosphate ore using surface mining techniques. At each mine site, the ore is mixed with recycled water to form a slurry, which is pumped from the mine site to our processing facilities. The ore is then screened to remove coarse materials, washed to remove clay and floated to remove limestone and matrix to produce phosphate rock. The annual production capacity of our mines is currently 9.6 million tonnes of phosphate rock. During 2013, the Aurora facility's total production of phosphate rock was 4.9 million tonnes and the White Springs facility's total production of phosphate rock was 2.8 million tonnes. The sequence for mining portions of the Aurora property has been identified in the permit issued by the US Army Corps of Engineers in June 2009. The permit authorizes mining in excess of 30 years.

Phosphate rock is the major input in our phosphorus processing operations. Substantially all of the phosphate rock produced is used internally for the production of phosphoric acid, SPA, chemical fertilizers, purified phosphoric acid and animal feed products. Unlike the Aurora and White Springs operations, the Geismar facility does not mine phosphate rock. Presently, the Geismar facility purchases phosphate rock from Morocco.

In addition to phosphate ore, the principal raw materials we require are sulfur and ammonia. The production of phosphoric

acid requires substantial quantities of sulfur, which we purchase from third parties. Any significant disruption in our sulfur supply to the phosphate facilities could adversely impact our financial results. We produce sulfuric acid at the Aurora, White Springs and Geismar facilities.

Our phosphate operations purchase all of their ammonia at market rates from or through our nitrogen and sales subsidiaries. Phosphoric acid is reacted with ammonia to produce purified phosphoric acid, DAP and MAP as well as liquid fertilizers. In addition, ammonia operations include the purchase, sale and terminalling of anhydrous ammonia and much of this ammonia is purchased from third parties. Ammonia to White Springs and Aurora is primarily supplied through an ammonia tank lease in Tampa, Florida. Ammonia to Aurora is also supplied through rail deliveries from our Lima, Ohio production facility and our Geismar, Louisiana storage facility.

We produce MGA at our Aurora, White Springs and Geismar facilities. Some MGA is sold to foreign and domestic fertilizer producers and industrial customers. We further process the balance of the MGA to make solid fertilizer (DAP and MAP); liquid fertilizers; animal feed supplements for the poultry and livestock markets; and purified phosphoric acid for use in a wide variety of food, technical and industrial applications.

The following tables set forth, for each of the last three years, the Company's production of phosphate rock (including tonnage and grade) and the production of phosphoric acid.

Phosphate Rock

	(Millions of tonnes)			2012 Production	2012 % P ₂ O ₅	2011	
	Annual Capacity	2013 Production	2013 % P ₂ O ₅			Production	% P ₂ O ₅
Aurora, NC	6.0	4.9	26.79	4.1	26.96	4.6	27.28
White Springs, FL	3.6	2.8	30.32	2.7	30.34	2.7	29.73
Total	9.6	7.7		6.8		7.3	

Phosphoric Acid

(Millions of tonnes P₂O₅)

Annual Capacity	2013 Production
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