Tronox Ltd
Form 10-K
February 27, 2014
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# UNITED STATES <br> SECURITIES AND EXCHANGE COMMISSION 

Washington, D.C. 20549

## Form 10-K

(Mark One)

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

For the Year ended December 31, 2013
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the transition period from $\qquad$ to $\qquad$ 1-35573
(Commission file number)

# Western Australia, Australia (State or Other Jurisdiction of Incorporation or Organization) <br> 263 Tresser Boulevard, Suite 1100 Stamford, Connecticut 06901 <br> 98-1026700 <br> (I.R.S. Employer <br> Identification Number) <br> 1 Brodie Hall Drive <br> Technology Park <br> Bentley, Australia 6102 <br> Registrant s telephone number, including area code: (203) 705-3800 <br> Securities Registered Pursuant to Section 12(b) of the Act: 

Title of each class
Name of each exchange on which registered
Class A Ordinary Shares, par value $\mathbf{\$ 0 . 0 1}$ 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 x No *.

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ${ }^{\text {. }}$ No x

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or $15(\mathrm{~d})$ 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 x No *.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, 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 x No *

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation $\mathrm{S}-\mathrm{K}$ ( $\$ 229.405$ of this chapter) is not contained herein, and will not be contained, to the best of 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 $12 \mathrm{~b}-2$ of the Exchange Act. (Check one):

Large accelerated filer x
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 Exchange Act). Yes ${ }^{.}$No $x$

The aggregate market value of the ordinary shares held by non-affiliates of the Registrant as of June 28, 2013 was approximately $\$ 2,286,134,531$.

Indicate by check mark whether the Registrant has filed all documents and reports required to be filed by Section 12, 13 or $15(\mathrm{~d})$ of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes x No ..

As of January 31, 2014, the Registrant had $62,369,715$ shares of Class A ordinary shares and $51,154,280$ shares of Class B ordinary shares outstanding.

## DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant s proxy statement for its 2014 annual general meeting of shareholders are incorporated by reference in this Form 10-K in response to Part III Items 10, 11, 12, 13 and 14.

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## TRONOX LIMITED

## ANNUAL REPORT ON FORM 10-K

## FOR THE FISCAL YEAR ENDED DECEMBER 31, 2013

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## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made statements under the captions Business, Risk Factors, Management s Discussion and Analysis of Financial Condition and Results of Operations , and in other sections of this Form 10-K that are forward-looking statements. In some cases, you can identify these statements by forward-looking words such as may, might, will, should, expect, plan, anticipate, believe, estimate, predict, potential, project, likely, can have negative of these terms and other comparable terminology. These forward-looking statements, which are subject to known and unknown risks, uncertainties and assumptions about us, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements. In particular, you should consider the numerous risks and uncertainties outlined in Risk Factors.

These risks and uncertainties are not exhaustive. Other sections of this Form 10-K may include additional factors, which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for our management to predict all risks and uncertainties, nor can management assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy or completeness of any of these forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. We are under no duty to update any of these forward-looking statements after the date of this Form 10-K to conform our prior statements to actual results or revised expectations and we do not intend to do so.

We are committed to providing timely and accurate information to the investing public, consistent with our legal and regulatory obligations. To that end, we use our website to convey information about our businesses, including the anticipated release of quarterly financial results, quarterly financial and statistical and business-related information. Investors can link to the Tronox Limited website through http://www.tronox.com. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this Form 10-K.

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## PART I

For the purposes of this discussion, references to we, us, and, our refer to Tronox Limited, together with its consolidated subsidiaries (collectively referred to as Tronox ), when discussing the business following the completion of the Transaction, and to Tronox Incorporated, together with its consolidated subsidiaries (collectively referred to as Tronox Incorporated ), when discussing the business prior to the completion of the Transaction.

## Item 1. Business

Tronox Limited, a public limited company registered under the laws of the State of Western Australia, Australia, and its subsidiaries is a global leader in the production and marketing of titanium bearing mineral sands and titanium dioxide pigment ( TiQ ). Our world-class, high performance TiQproducts are critical components of everyday applications such as paint and other coatings, plastics, paper and other applications. Our mineral sands business consists primarily of three product streams titanium feedstock, zircon and pig iron. Titanium feedstock is primarily used to manufacture $\mathrm{TiO}_{2}$. Zircon, a hard, glossy mineral, is used for the manufacture of ceramics, refractories, TV screen glass and a range of other industrial and chemical products. Pig iron is a metal material used in the steel and metal casting industries to create wrought iron, cast iron and steel.

On September 25, 2011, Tronox Incorporated entered into a definitive agreement (as amended, the Transaction Agreement ) with Exxaro Resources Limited ( Exxaro ) and certain of its affiliated companies, to acquire $74 \%$ of Exxaro s mineral sands operations, along with its $50 \%$ share of the Tiwest Joint Venture (the Transaction ). On June 15, 2012, the date of the Transaction (the Transaction Date ), Tronox Limited issued Class B ordinary shares to Exxaro and one of its subsidiaries in consideration for the mineral sands business, and the existing business of Tronox Incorporated was combined with the mineral sands business in an integrated series of transactions whereby Tronox Limited became the parent company.

Under the terms of the Shareholder s Deed entered into upon completion of the Transaction, Exxaro agreed that for a three-year period after the completion of the Transaction (the Standstill Period ), it would not engage in any transaction or other action that would result in its beneficial ownership of the voting shares of Tronox Limited exceeding 45\% of the total issued shares of Tronox Limited. At December 31, 2013, Exxaro held approximately $44.4 \%$ of the voting securities of Tronox Limited. In addition, except under certain circumstances, Exxaro agreed not to sell, pledge or otherwise transfer any such voting shares during the Standstill Period. After the Standstill Period, Exxaro has agreed not to acquire any voting shares of Tronox Limited if, following such acquisition, Exxaro will have a voting interest in Tronox Limited of $50 \%$ or more unless Exxaro brings any proposal to make such an acquisition to the board of directors of Tronox Limited on a confidential basis. In the event an agreement regarding the proposal is not reached, Exxaro is permitted to make a takeover offer for all the shares of Tronox Limited not held by affiliates of Exxaro provided that binding acceptances are received from a majority of the shares not held by affiliates of Exxaro.

In connection with the Transaction, Exxaro retained a $26 \%$ ownership interest in our South African operations that are part of the mineral sands business in order to comply with the Black Economic Empowerment legislation of South Africa.

## Principal Business Lines

We have two reportable operating segments, Mineral Sands and Pigment. Corporate and Other consists of our electrolytic manufacturing and marketing operations, as well as our corporate activities.

Mineral Sands

Our Mineral Sands segment includes the exploration, mining and beneficiation of mineral sands deposits, and is comprised of the following:

Our KwaZulu-Natal ( KZN ) Sands operations in the KwaZulu-Natal province of South Africa, which consist of the Hillendale mine (which ceased mining operations in December 2013), the Fairbreeze mine (which was partially permitted as

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of December 31, 2013, and the production from which will replace the Hillendale mine once it enters into commercial production), a concentration plant, a mineral separation plant and two smelters;

Our Namakwa Sands operations in the Western Cape province of South Africa, which consist of the Namakwa Sands mines, a primary concentration plant (which produces a mineral concentrate), a secondary concentration plant (which yields a magnetic and non-magnetic stream), a mineral separation plant and two smelters; and,

Our Western Australia operations, which consist of the Cooljarloo Sands mine and the Chandala processing plant, which includes a dry mill, a synthetic rutile plant and a mineral separation plant.
Our mineral sands operations have a combined annual production capacity of 753,000 metric tons of titanium feedstock and 265,000 metric tons of zircon.

To ensure we are in the best position to meet future feedstock needs and take advantage of our vertical integration, we seek to secure future mine sites through our mineral sands exploration programs in Australia and South Africa. As part of our ore optimization strategy, we proactively manage new mining projects with an eye toward the future as existing mine resources are extracted. Our most notable project is the development of the Fairbreeze mine near our KZN Sands operations in South Africa. The Fairbreeze mine will serve as a replacement source of feedstock production for our Hillendale mine, which ceased mining operations in December 2013. Depending on the timing of regulatory approval and subsequent construction, the Fairbreeze mine could begin operations in the second half of 2015, and be fully operational in 2016. The Fairbreeze mine is estimated to have a life expectancy of approximately 15 years.

## Minerals Sands Products

Mineral sands refers to concentrations of heavy minerals in an alluvial environment (sandy or sedimentary deposits near a sea, river or other water source).

## Titanium Feedstock

Titanium occurs naturally in a number of minerals. Ilmenite, rutile, leucoxene, titanium slag and synthetic rutile are all used primarily as feedstock for the production of $\mathrm{TiO}_{2}$. According to the latest data provided by TZ Minerals International Pty Ltd ( TZMI ), more than $90 \%$ of the world s consumption of titanium feedstock is used for the production of $\mathrm{TiO}_{2}$.

Titanium feedstock is considered to be a single product, although it can be segmented based on the level of titanium contained within the feedstock, with substantial overlap between each segment. Different grades of titanium feedstock have similar characteristics, and are generally suitable substitutes for one another. As such, $\mathrm{TiO}_{2}$ producers generally source and supply a variety of feedstock grades, and often blend them into one feedstock. The lower amount of titanium used in the $\mathrm{TiO}_{2}$ manufacturing process, the more feedstock required and waste material produced. Naturally occurring high-grade titanium minerals required for the production of $\mathrm{TiO}_{2}$ are limited in supply. This limited supply has prompted the mineral sands industry to develop beneficiated products to increase the titanium content in the feedstock that can be used as substitutes for, or in conjunction with, naturally occurring titanium minerals. Two processes have been developed commercially: one for the production of titanium slag and the other for the production of synthetic rutile. Both processes use ilmenite as a raw material, and involve the removal of iron oxides and other non-titanium material.

Ilmenite Ilmenite is the most abundant titanium mineral, with naturally occurring ilmenite having a titanium content ranging from approximately $35 \%$ to $65 \%$, depending on its geological history. The weathering of ilmenite in its natural environment results in oxidation of the iron, which increases titanium content.

Rutile Rutile is essentially composed of crystalline titanium and, in its pure state, would contain close to $100 \%$ titanium. Naturally occurring rutile, however, usually contains minor impurities and therefore, commercial concentrates of this mineral typically contain approximately $94 \%$ to $96 \%$ titanium.

Leucoxene Leucoxene is a natural alteration of ilmenite with a titanium content ranging from approximately $65 \%$ to more than $90 \%$. The weathering process is responsible for the alteration of ilmenite to leucoxene, which results in the removal of iron, leading to an upgrade in titanium content.

Titanium Slag The production of titanium slag involves smelting ilmenite in an electric arc furnace under reducing conditions, normally with anthracite (coal) used as a reducing agent. The slag, containing the bulk of the titanium and impurities other than iron, is tapped off the top of the furnace while a high purity pig iron is recovered from the bottom of the furnace. The final quality of the slag is highly dependent on the quality of the original ilmenite and the ash composition of the anthracite used in the furnace. Titanium slag has a titanium content of approximately $85 \%$ to $87 \%$.

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Synthetic Rutile A number of processes have been developed for the beneficiation of ilmenite into products containing between approximately $90 \%$ and $95 \%$ titanium. These products are known as synthetic rutile or upgraded ilmenite. The processes employed vary in terms of the extent to which the ilmenite grain is reduced, and the precise nature of the reducing reaction and the conditions used in the subsequent removal of iron. All of the existing commercial processes are based on the reduction of ilmenite in a rotary kiln, followed by leaching under various conditions to remove the iron from the reduced ilmenite grains. Our synthetic rutile has a titanium content of approximately $90 \%$ to $93 \%$.

## Co-products

Zircon Zircon is frequently, but not always, found in the mineral sands deposits containing ilmenite. It is extracted, alongside ilmenite and rutile, as part of the initial mineral sands beneficiation process. Zircon is a mineral which is primarily used as an additive in ceramic glazes to add hardness, which makes the ceramic glaze more water, chemical and abrasion resistant. It is also used for the production of zirconium and zirconium chemicals, in refractories, as a molding sand in foundries, and for TV screen glass, where it is noted for its structural stability at high temperatures and resistance to abrasive and corrosive conditions. Zircon typically represents a relatively low proportion of heavy mineral sands mining but has a relatively higher value compared to other heavy mineral products. Refractories containing zircon are expensive and are only used in demanding, high-wear and corrosive applications in the glass, steel and cement industries. Foundry applications use zircon when casting articles of high quality and value where accurate sizing is crucial, such as aerospace, automotive, medical, and other high-end applications.

High Purity Pig Iron The process by which ilmenite is converted into titanium slag results in the production of high purity pig iron containing low levels of manganese. When pig iron is produced in this manner, the molten iron is tapped from the ilmenite furnace during the smelting process, alloyed by adding carbon and silicon and treated to reduce the sulfur content, and is then cast into ingots, or pigs. The pig iron produced as a co-product of titanium slag production is known as nodular pig iron, ductile pig iron, low manganese pig iron, or high purity pig iron.

## Mining

The mining of mineral sands deposits is conducted either wet, by dredging or hydraulic water jets, or dry, using earth-moving equipment to excavate and transport the sands. Dredging, as used at the Cooljarloo mine, is generally the favored method of mining mineral sands, provided that the ground conditions are suitable and water is readily available. In situations involving hard ground, discontinuous ore bodies, small tonnage or very high grades, dry mining techniques are generally preferred.

Dredge Mining Dredge mining, or wet mining, is best suited to ore reserves located below the water table. A floating dredge removes the ore from the bottom of an artificial pond through a large suction pipe. The bulk sand material is fed as slurry through a primary, or wet, concentrator that is typically towed behind the dredge unit. The dredge slowly advances across the pond and deposits clean sand tailings behind the pond for subsequent revegetation and rehabilitation. Because of the capital cost involved in the manufacturing and location, dredge mining is most suitable for large, long-lived deposits. The dredging operations at Cooljarloo use two large floating dredges in a purpose-built pond. The slurry is pumped to a floating concentrator, which recovers heavy minerals from the sand and clay.

Dry Mining Dry mining is suitable where mineral deposits are shallow, contain hard bands of rock, or are in a series of unconnected ore bodies. Dry mining is performed at Namakwa Sands, which is located in an arid region on the west coast of South Africa. The ore is mined with front end loaders in a load and carry operation, dumping the mineral bearing sands onto a conveyor belt system that follows behind the mining face. The harder layers are mined using hydraulic excavators in a backhoe configuration or by trackdozer. Namakwa Sands does not use blasting in its
operations. The mined material is transported by trucks to the mineral sizers where primary reduction takes place.
Hydraulic Mining KZN Sands uses a unique hydraulic mining method for mineral sands due to the topography of the ore body and the ore characteristics. A jet of high-pressure water is aimed at a mining face, thereby cutting into and loosening the sand so that it collapses on the floor. The water acts as a carrier medium for the sand, due to the high fines content contained in the ore body. The slurry generated by the hydraulic monitors flows to a collection sump where oversize material is removed and the slurry is then pumped to the primary concentration plant.

## Processing

Both wet and dry mining techniques utilize wet concentrator plants to produce a high grade of heavy mineral concentrate (typically approximately $90 \%$ to $98 \%$ heavy mineral content). Screened ore is first deslimed, a process by which slimes (mineral particles that are too fine to be economically extracted and other materials that remain after the valuable fraction of an ore has been separated from the uneconomic fraction) are separated from larger particles of minerals, and then washed through a series of spiral separators that use gravity to separate the heavy mineral sands from lighter materials, such as quartz. Residue from the concentration process is pumped back into either the open pits or slimes dams for rehabilitation and water recovery. Water used in the process is recycled into a clean water dam with any additional water requirements made up from pit dewatering or rainfall.

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## Mineral Separation

The non-magnetic (zircon and rutile) and magnetic (ilmenite) concentrates are passed through a dry mill to separate out the minerals. Electrostatic and dry magnetic methods are used to further separate the ilmenite, rutile and zircon. Electrostatic separation relies on the difference in surface conductivity of the materials to be separated. Conductive minerals (such as ilmenite, rutile and leucoxene) behave differently from non-conductive minerals (such as zircon) when subjected to electrical forces. Magnetic separation is dependent on the iron content of a mineral. Magnetic minerals (such as ilmenite) will separate from non-magnetic minerals (such as rutile and leucoxene) when subjected to a magnetic field. A combination of gravity and magnetic separation is used to separate zircon from the non-magnetic portion of the heavy mineral concentrate. The heavy mineral concentrate at KZN Sands and Namakwa Sands is passed through wet high-intensity magnetic separation to produce a non-magnetic fraction and a magnetic fraction.

Smelting Ilmenite at KZN Sands and Namakwa Sands is processed further through direct current arc furnaces to produce titanium slag with a titanium content of approximately $86 \%$. The smelting process comprises the reduction of ilmenite to produce titanium slag and nodular pig iron. Ilmenite and as-received anthracite (dried to remove fine material before smelting) are fed in a tightly controlled ratio through a hollow electrode into an operating furnace where the endothermic reduction of ilmenite occurs. The resultant titanium slag has a lower density than the iron, and separation of the two liquid products occurs inside the furnace. The slag and iron are tapped periodically from separate sets of tapholes located around the circumference of the furnace. The tapholes for slag are on a higher elevation than those for iron. Slag is tapped into steel pots and cooled for several hours in the pots before the slag blocks are tipped out. The blocks are subsequently transported to the blockyard where they are cooled under water sprays for a number of days. They are then crushed, milled, and separated according to size fractions, as required by the customers. The tapped pig iron is re-carburized and de-sulfurized, and cast into pigs.

Synthetic Rutile Production Higher grade ilmenite may also be upgraded into synthetic rutile. Synthetic rutile, or upgraded ilmenite, is a chemically modified form of ilmenite that has the majority of the ferrous, non-titanium components removed, and is also suitable for use in the production of titanium metal or $\mathrm{TiO}_{2}$ using the chloride process. Ilmenite is converted to synthetic rutile in a two-stage pyrometallurgical and chemical process. The first stage involves heating ilmenite in a large rotary kiln. Coal is used as a heat source and, when burned in a limited air environment, it produces carbon monoxide, which promotes a reducing environment that converts the iron oxide contained in the ilmenite to metallic iron. The intermediate product, called reduced ilmenite, is a highly magnetic sand grain due to the presence of the metallic iron. The second stage involves the conversion of reduced ilmenite to synthetic rutile by removing the metallic iron from the reduced ilmenite grain. This conversion is achieved through aeration (oxidation), accelerated through the use of ammonium chloride as a catalyst, and acid leaching of the iron to dissolve it out of the reduced ilmenite. Activated carbon is also produced as a co-product of the synthetic rutile production process.

## Raw Materials

Our smelters at KZN Sands and Namakwa Sands use anthracite as a reducing agent, which although available from a variety of suppliers, is metallurgically specific in certain conditions. Namakwa Sands imports high-quality anthracite for its smelter from Vietnam. Vietnam has a large anthracite resource; however, the Vietnamese government regulates both the price and sales volumes of anthracite. Both of the KZN Sands smelters use anthracite from two local suppliers. Low ash and sulfur content are the main quality considerations. Anthracite suppliers with similar cost and availability to the Vietnamese supplier are available in Russia and Ukraine, as well as locally to our South African operations. Alternatively, char may be used as a substitute reducing agent for anthracite.

Our KZN Sands operations currently use Sasol gas, which is available only from Sasol Limited. However, Sasol gas could be replaced with furnace off-gas produced by KZN Sands, if necessary. KZN Sands is currently in the process of increasing its use of furnace off-gas. Construction of a 13.6 megawatt co-generation plant at Namakwa Sands has been completed, and its commissioning is under way. Additionally, the plant, which consumes all furnace off-gas, produces electricity that is offset against current consumption sourced from Eskom, the state-owned electricity supplier.

Our synthetic rutile operation at Chandala uses coal as a reducing agent, which is available locally from two suppliers, both of which have extensive coal resources. The synthetic rutile process relies on the quality of coal from southwest Western Australia for the efficient production of quality synthetic rutile and activated carbon from the synthetic rutile kiln. Other types of coal could be used if both of the current coal suppliers were unavailable, but some temporary adverse impact on the production and cost of synthetic rutile at Chandala would be likely.

## Sales and Marketing

We currently mine more titanium feedstock than we consume at our $\mathrm{TiO}_{2}$ production facilities. As such, feedstock not used in the production of our $\mathrm{TiO}_{2}$ is sold to third parties. The geographic market for titanium feedstock is global in scope, and $\mathrm{TiO}_{2}$ producers regularly source and transport titanium feedstock from suppliers located around the world. During 2013, $73 \%$ of feedstock revenue was derived from intercompany sales, with the remaining attributable to third-party sales. During 2013, our ten largest third-party

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mineral sands customers represented approximately $13 \%$ of total net sales, with no single customer accounting for more than $10 \%$ of total net sales.

Although we use agents and distributors for some sales in the Asia-Pacific region, direct relationship marketing is the primary technique that we employ for the marketing of titanium feedstocks. Multi-year contracts are negotiated with periodic pricing for the pigment industry, while the contract period for other industries tends to be less than one year (either per shipment, quarterly, half year or one year). Pricing for titanium feedstocks is usually adjusted either on a quarterly or half-year basis. In some instances, we use traders or agents for the sale of titanium feedstocks.

A portion of the zircon produced at Namakwa Sands is supplied pursuant to long-term multi-year contracts with some of our larger European customers. The tonnage is subject to agreement on pricing, which we negotiate at quarterly intervals or on a shipment-by-shipment basis. For customers of KZN Sands, and for smaller customers of Namakwa Sands, we contract zircon tonnage and pricing on a quarterly basis. We seek to avoid the use of agents and traders for the sale of zircon, favoring long-term relationships directly with end users.

## Seasonality

Because $\mathrm{TiO}_{2}$ is widely used in paint and other coatings, titanium feedstocks are in higher demand prior to the painting season in the Northern Hemisphere (spring and summer), and pig iron is in lower demand during the European summer holidays, when many steel plants and foundries undergo maintenance. Zircon generally is a non-seasonal product, but is negatively impacted by the winter and Chinese New Year celebrations due to reduced zircon demand from China.

## Competitive Conditions

There are a small number of large mining companies or groups that are involved in the production of titanium feedstock. According to TZMI data, we are the third-largest titanium feedstock producer with approximately $10 \%$ of global titanium feedstock production. Rio Tinto, through its ownership of Canadian-based Fer et Titane, its share in Richards Bay Minerals ( RBM ) in South Africa, and ownership of QMM Madagascar, is the largest producer of titanium feedstock in the world. Australian-based Iluka Resources Limited is the second largest manufacturer, with operations in Australia and the United States. A number of other manufacturers, such as Cristal Global (Saudi Arabia), E. I. du Pont de Nemours and Company (United States), Kenmare Resources plc (Ireland), Kronos Worldwide Inc. (Europe), Pangang Titanium Industry Co Ltd (China), VV Mineral (India), Kerala Mines and Metals Limited (India), and Ostchem Holding AG (Eastern Europe) also supply titanium feedstock to the global market.

## Pigment

Our Pigment segment primarily produces and markets $\mathrm{TiO}_{2}$, and has production facilities at the following locations: Hamilton, Mississippi; Botlek, The Netherlands; and Kwinana, Western Australia, representing an aggregate of 465,000 metric tons of annual $\mathrm{TiO}_{2}$ production capacity.
$\mathrm{TiO}_{2}$ is a critical component of everyday consumer applications due to its brightness and superior ability to cover or mask other materials effectively and efficiently relative to alternative white pigments and extenders. $\mathrm{TiO}_{2}$ is considered to be a quality of life product, and some research indicates that consumption generally increases as disposable income increases. At present, it is our belief that there is no effective mineral substitute for $\mathrm{TiO}_{2}$ because no other white pigment has the physical properties for achieving comparable opacity and brightness, or can be incorporated as cost effectively.
$\mathrm{TiO}_{2}$ is used in a wide range of products due to its ability to impart whiteness, brightness and opacity, and is designed, marketed and sold based on specific end-use applications. $\mathrm{TiO}_{2}$ is used extensively in the manufacture of paint and other coatings, plastics and paper and in a wide range of other applications, including inks, fibers, rubber, food, cosmetics and pharmaceuticals. According to TZMI data, the paint and coatings sector is the largest consumer of pigment with $56 \%$ of total pigment consumption in 2012, while the plastics sector accounted for $24 \%$ and the remaining $20 \%$ was divided between paper, inks, fibers, and other.

## $\mathrm{TiO}_{2}$ Manufacturing Process

$\mathrm{TiO}_{2}$ is produced using a combination of processes involving the manufacture of base pigment particles followed by surface treatment, drying and milling (collectively known as finishing). There are two commercial production processes in use by manufacturers: the chloride process and the sulphate process. All of our $\mathrm{TiO}_{2}$ is produced using the chloride process. We are one of a limited number of $\mathrm{TiO}_{2}$ producers in the world with chloride production technology. $\mathrm{TiO}_{2}$ produced using the chloride process is preferred for some of the largest end-use applications.

The chloride process is a newer technology, and we believe it has several advantages over the sulphate process: it generates less waste, uses less energy, is less labor intensive and permits the direct recycle of chlorine, a major process chemical, back into the production process. In the chloride process, feedstock ores (slag, synthetic rutile, natural rutile or ilmenite ores) are reacted with

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chlorine (the chlorination step) and carbon to form titanium tetrachloride ( TiGl ) in a continuous fluid bed reactor. Purification of $\mathrm{TiCl}_{4}$ to remove other chlorinated products is accomplished using a distillation process. The purified $\mathrm{TiCl}_{4}$ is then oxidized in a vapor phase form to produce base pigment particles and chlorine gas. The latter is recycled back to the chlorination step for reuse. Base pigment is then typically slurried with water and dispersants prior to entering the finishing step. The chloride process currently accounts for substantially all of the industry-wide $\mathrm{TiO}_{2}$ production capacity in North America, and approximately $49 \%$ of industry-wide capacity globally.

Commercial production of $\mathrm{TiO}_{2}$ results in one of two different crystal forms, either rutile, which is manufactured using either the chloride process or the sulphate process, or anatase, which is only produced using the sulfate process. All of our global production capacity utilizes the chloride process to produce rutile $\mathrm{TiO}_{2}$. Rutile $\mathrm{TiO}_{2}$ is preferred over anatase $\mathrm{TiO}_{2}$ for many of the largest end-use applications, such as coatings and plastics, because its higher refractive index imparts better hiding power at lower quantities than the anatase crystal form and it is more suitable for outdoor use because it is more durable. Although rutile $\mathrm{TiO}_{2}$ can be produced using either the chloride process or the sulphate process, some customers prefer rutile produced using the chloride process because it typically has a bluer undertone and greater durability.

## Raw Materials

Titanium Feedstock The primary raw materials used to process TiQare titanium feedstock, chlorine and coke. Beginning in the second quarter of 2013, 100\% of our Pigment segment feedstock purchases have been from our Mineral Sands segment. For the year ended December 31, 2013, approximately $97 \%$ of our total ore purchases were from our Mineral Sands segment. Currently, we are the only $\mathrm{TiO}_{2}$ manufacturer in the world to have $100 \%$ of our feedstock supply requirements under common ownership.

Chemicals Other chemicals used in the production of TiQ such as chlorine, oxygen, nitrogen and coke, are purchased from various companies under long-term supply contracts. In the past we have been, and we expect that we will continue to be, successful in obtaining short-term and long-term extensions to these and other existing supply contracts prior to their expiration. We expect the raw materials purchased under these contracts, and contracts that we may enter into in the near term, to meet our requirements over the next several years.

## Sales and Marketing

We supply and market $\mathrm{TiO}_{2}$ under the brand name TRONOX ${ }^{\circledR}$ to more than 1,100 customers in approximately 90 countries, including market leaders in each of the key end-use markets for $\mathrm{TiO}_{2}$, and we have supplied each of our top ten customers with $\mathrm{TiO}_{2}$ for more than 10 years. These top ten customers represented approximately $27 \%$ of our total $\mathrm{TiO}_{2}$ sales in 2013, with no single customer accounting for more than $10 \%$ of total net sales. The tables below summarize our $2013 \mathrm{TiO}_{2}$ sales volume by geography and end-use market:

| 2013 Sales Volume by Geography | $37 \%$ |
| :--- | ---: |
| North America | $6 \%$ |
| Latin America | $25 \%$ |
| Europe | $32 \%$ |
| Asia-Pacific |  |
| 2013 Sales Volume by End-Use Market | $77 \%$ |
| Paints and Coatings | $20 \%$ |

In addition to price and product quality, we compete on the basis of technical support and customer service. Our direct sales and technical service organizations execute our sales and marketing strategy, and work together to provide quality customer service. Our direct sales staff is trained in all of our products and applications. Due to the technical requirements of $\mathrm{TiO}_{2}$ applications, our technical service organization and direct sales offices are supported by a regional customer service staff located in each of our major geographic markets.

We believe our $\mathrm{TiO}_{2}$ operations, and specifically our plant in Hamilton, Mississippi, are among the lowest-cost producers of $\mathrm{TiO}_{2}$ globally. This is of particular importance as it positions us to be competitive through all facets of the $\mathrm{TiO}_{2}$ cycle. Moreover, our three $\mathrm{TiO}_{2}$ production facilities are strategically positioned in key geographies. The Hamilton facility is the third-largest $\mathrm{TiO}_{2}$ production facility in the world, and has the size and scale to service customers in North America and around the globe. Our Chandala processing plant, located in Australia, is well positioned to service the growing demand from Asia. Our Botlek facility, located in The Netherlands, services our European customers and certain specialized applications globally.

Our sales and marketing strategy focuses on effective customer management through the development of strong relationships. We develop customer relationships and manage customer contact through our sales team, technical service organization, research and development team, customer service team, plant operations personnel, supply chain specialists, and senior management visits. We believe that multiple points of customer contact facilitate efficient problem solving, supply chain support, formula optimization, and product co-development.

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## Seasonality

The demand for $\mathrm{TiO}_{2}$ during a given year is subject to seasonal fluctuations. Because $\mathrm{TiO}_{2}$ is widely used in paint and other coatings, $\mathrm{TiO}_{2}$ is in higher demand prior to the painting season in the Northern Hemisphere (spring and summer).

## Competitive Conditions

According to the latest TZMI data, industry production capacity grew to 7.2 million metric tons in 2012 from 7.0 million metric tons in 2011 . We compete in a global market that has multiple other vendors. The global market in which our $\mathrm{TiO}_{2}$ business operates is competitive. Competition is based on a number of factors such as price, product quality, and service. We face competition not only from chloride process pigment producers, but from sulfate process pigment producers as well. Moreover, because transportation costs are minor relative to the cost of our product, there is also some competition between products produced in one region versus products produced in another region.

We face competition from major international producers, including E. I. du Pont de Nemours and Company, Cristal Global, Huntsman Pigments, and Kronos Worldwide Inc., as well as regional competitors such as Sachtleben Chemie GmbH located in Germany, Ishihara Sangyo Kaisha located in Japan, and Sichuan Lomon Titanium Industry Co Ltd, Henan Billions Chemicals Co., Ltd., China National Bluestar (Group) Co., Ltd.,. Shandong Jinhong Titanium Dioxide Chemicals and Pangang Titanium Co., Ltd. located in China. We estimate that, based on nameplate capacity, these seven companies accounted for approximately $56 \%$ of the global capacity. During 2013, we had global $\mathrm{TiO}_{2}$ production capacity of 465,000 metric tons per year, which was approximately $6 \%$ of global pigment capacity. In addition to the major competitors discussed above, we compete with numerous smaller, regional producers, including producers in China that have expanded their sulphate production capacity during the previous five years.

## Corporate and Other

Corporate and Other consists of our electrolytic manufacturing and marketing operations, as well as our corporate activities.

## Electrolytic and Other Chemical Product Operations

Our electrolytic and other chemical products operations are primarily focused on advanced battery materials, specialty boron products and sodium chlorate.

Electrolytic manganese dioxide (EMD ) EMD is the active cathode material for alkaline batteries used in flashlights, electronic games, and medical and industrial devices. We believe that we are one of the largest producers of EMD for the global alkaline battery industry. EMD quality requirements for alkaline technology are much more demanding than for zinc carbon technology and, as a result, alkaline-grade EMD commands a higher price than zinc carbon-grade EMD. The United States primary battery market, predominantly based on alkaline-grade EMD, is the largest in the world followed by China and Japan according to the Freedonia Group. As such, we expect demand for alkaline-grade EMD to be sustained by the long-term growth of consumer electronics devices, partly offset by the trend toward smaller battery sizes and rechargeable batteries. The older zinc carbon technology remains in developing countries such as China and India. As the economies of China and India continue to mature, and the need for more efficient energy sources develops, we anticipate that the demand for alkaline-grade EMD will increase.

Boron Specialty boron product end-use applications include semiconductors, pharmaceuticals, high-performance fibers, specialty ceramics and epoxies, as well as igniter formulations. According to publicly available industry
reports, we are one of the leading suppliers of boron trichloride, along with JSC Aviabor, Sigma-Aldrich Corporation, and several Asian manufacturers. We anticipate demand for boron trichloride will remain positive driven primarily by the growth of the semiconductor industry. We believe we hold a similar leading position in the elemental boron market. We expect demand for elemental boron will continue to be largely flat following the trends in the defense and automotive industries in the United States.

Sodium Chlorate Sodium chlorate is used by the pulp and paper industry in bleaching applications. The pulp and paper industry accounts for more than $95 \%$ of the market demand for sodium chlorate. Although there are other methods for bleaching pulp, we believe the chlorine dioxide process is preferred for environmental reasons. The primary raw material that we use to produce sodium chlorate is salt, which we purchase under both multi-year agreements and spot contracts. During 2013, we entered into an agreement with ERCO Worldwide, a Canadian-based global chemical company ( ERCO ), to supply up to 130,000 metric tons of sodium chlorate annually from our Hamilton, Mississippi facility. The initial term of the agreement extends to December 31, 2016, and may be automatically extended in one-year increments thereafter. As part of the agreement, ERCO acquired finished inventory, and assumed certain existing railcar leases and existing customer contracts. We have entered into a strategic long-term agreement with ERCO for the supply of chloral-alkali products to service a portion of our requirements at our Hamilton plant.

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## Research and Development

We have research and development facilities that service our products, and focus on applied research and development testing of both new and existing processes. Our research and development facilities supporting our mineral sands business are located in South Africa, while the majority of scientists supporting our pigment and electrolytic research and development efforts are located in Oklahoma City, Oklahoma.

New process developments are focused on increased throughput, efficiency gains and general processing equipment-related improvements. Ongoing development of process technology contributes to cost reduction, enhanced production flexibility, increased capacity, and improved consistency of product quality. In 2013, our product development and commercialization efforts were focused on several $\mathrm{TiO}_{2}$ products that deliver added value to customers across all end use segments by way of enhanced properties of the pigment.

## Patents, Trademarks, Trade Secrets and Other Intellectual Property Rights

Proprietary protection of our intellectual property is important to our business. At December 31, 2013, we held 54 U.S. patents, 13 patent applications (including provisional patent grants), and approximately 209 patents in foreign counterparts, including both issued patents and pending patent applications. Our U.S. patents have expiration dates ranging from 2014 through 2032. Additionally, we have two trademark registrations in the U.S. and 42 trademark registrations in foreign counterparts.

We rely upon, and have taken steps to secure our unpatented proprietary technology, know-how and other trade secrets. The substantial majority of pigment business patents relate to our chloride products and production technology. Our proprietary chloride production technology is an important part of our overall technology position. However, much of the fundamental intellectual property associated with both chloride and sulfate pigment production is no longer subject to patent protection. At Namakwa Sands, we rely on intellectual property for our smelting technology, which was granted to us in perpetuity by Anglo American South Africa Limited for use on a worldwide basis, pursuant to a non-exclusive license.

We protect the trademarks that we use in connection with the products we manufacture and sell, and have developed goodwill in connection with our long-term use of our trademarks; however, there can be no assurance that the trademark registrations will provide meaningful protection against the use of similar trademarks by competitors, or that the value of our trademarks will not be diluted. We also use and rely upon unpatented proprietary knowledge, continuing technological innovation and other trade secrets to develop and maintain our competitive position. We conduct research activities and protect the confidentiality of our trade secrets through reasonable measures, including confidentiality agreements and security procedures. While certain patents held for our products and production processes are important to our long-term success, more important is the operational knowledge we possess.

## Employees

At December 31, 2013, Tronox had approximately 3,400 employees worldwide, of which 700 are located in the United States, 700 in Australia, 1,700 in South Africa, and 300 in The Netherlands and other international locations. Our employees in the United States are not represented by a union or collective bargaining agreement. In South Africa, more than $70 \%$ of our workforce belongs to a union. In Australia, our employees are not currently represented by a union, but $50 \%$ are represented by a collective bargaining agreement. In The Netherlands, $60 \%$ of our employees are represented by a collective bargaining agreement and $30 \%$ are members of a union. We consider relations with our employees and labor organizations to be good.

## Environmental, Health and Safety Authorizations

## Mineral Sands

Our facilities and operations are subject to extensive general and industry-specific environmental, health and safety regulations in South Africa and Australia. These regulations include those relating to mine rehabilitation, liability provision, water management, the handling and disposal of hazardous and non-hazardous materials, and occupational health and safety. The various legislation and regulations are subject to a number of internal and external audits. Our mineral sands operations are in compliance, in all material respects, with existing health, safety and environmental legislation and regulations.

## Fairbreeze Authorizations

In September 2012, the South African Department of Mineral Resources (the DMR ) approved our amendment application to the Environmental Management Program for Fairbreeze. This approval allowed us to commence with selected early-phase construction activities while awaiting further authorizations. In September 2013, the South African Department of Water Affairs (the DWA ) issued the Fairbreeze Mine a water-use license for an area covering the majority of the Fairbreeze ore bodies and fines dams. Construction activities on these areas commenced soon after receipt of this license. Subsequently, a local conservancy group lodged an appeal, which by law automatically suspended the water-use license. Tronox submitted a petition to the DWA in protest of the

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suspension, requesting that the suspension be lifted pending the outcome of the appeal. On February 5, 2014, the DWA approved our request to lift the suspension, and we intend to continue with planned construction activities pending the appeal. The appeal process makes provision for the appeal to be adjudicated by the Water Tribunal, which is a quasi-judicial body of government. However, the legal appointment term of the tribunal ended in 2012, and to date, this body has not been reconstituted and the appeal process has not been amended. In order to address the appeal, we have agreed with the DWA to participate in a mediation process to attempt to reach a resolution of this matter. During such mediation process, we will continue with planned construction.

## Regulation of the Mining Industry in South Africa

There are numerous mining-related laws and regulatory authorizations that may impact the performance of our business. These include but are not limited to: the Mineral and Petroleum Resources Royalty Act, which imposes a royalty on refined and unrefined minerals payable to the South African government; the Mineral and Petroleum Resources Development ACT (the MPRDA ), which governs the acquisition, use and disposal of mineral rights; the South African Minerals Act, which requires each new mine to prepare an Environmental Management Program Report for approval by the DMR; the Revised Mining Charter, effective as of September 13, 2010, which requires that mining entities achieve a $26 \%$ historically disadvantaged persons ownership of mining assets by 2014; and, the Black Economic Empowerment legislation in South Africa.

## Regulation of the Mining Industry in Australia

Mining operations in Western Australia are subject to a variety of environmental protection regulations including but not limited to: the Environmental Protection Act, the primary source of environmental regulation in Western Australia; and, the Environment Protection and Biodiversity Conservation Act 1999 (Cth), which established the federal environment protection regime and prohibits the carrying out of a controlled action that may have a significant impact on a matter of national environmental significance.

Prescriptive legislation regulates health and safety at mining workplaces in Western Australia. The principal general occupational health and safety legislation and regulations are the Occupational Safety and Health Act 1984 (WA), the Occupational Health and Safety Regulations 1996 (WA) and the guidelines. The Mines Safety and Inspection Act 1994 (WA) and Mines Safety and Inspection Regulations 1995 (WA) and guidelines provide the relevant legislation for mining operations in Western Australia. The Dangerous Goods Act 2004 (WA) applies to the safe storage, handling and transport of dangerous goods.

Each Australian state and territory has its own legislation regulating the exploration for and mining of minerals. Our operations are principally regulated by the Western Australian Mining Act 1978 (WA) and the Mining Regulations 1981 (WA).

## State Agreements

State Agreements are contracts between the State of Western Australia and the proponents of major resources projects, and are intended to foster resource development and related infrastructure investments. These agreements are approved and ratified by the Parliament of Western Australia. The State Agreement relevant to our Australian operations and our production of mineral sands is the agreement authorized by the Mineral Sands (Cooljarloo) Mining and Processing Agreement Act 1988 (WA). State Agreements may only be amended by mutual consent, which reduces the sovereign risk and increases the security of tenure, however Parliament may enact legislation that overrules or amends the particular State Agreement.

## Pigment

Our pigment business is subject to extensive regulation by federal, state, local and foreign governments. Governmental authorities regulate the generation and treatment of waste and air emissions at our operations and facilities. At many of our operations, we also comply with worldwide, voluntary standards developed by the International Organization for Standardization ( ISO ), a nongovernmental organization that promotes the development of standards and serves as a bridging organization for quality and environmental standards, such as ISO 9002 for quality management and ISO 14001 for environmental management.

## Chemical Registration

The European Union adopted a regulatory framework for chemicals in 2006 known as Registration, Evaluation and Authorization of Chemicals ( REACH ). Manufacturers and importers of chemical substances must register information regarding the properties of their existing chemical substances with the European Chemicals Agency. The timeline for existing chemical substances to be registered is based on volume and toxicity. The first group of chemical substances was required to be registered in 2010, with additional registrations due in 2013 and 2018. We registered those products requiring registration by the 2010 and 2013 deadlines. The REACH regulations also require chemical substances which are newly imported or manufactured in the European Union to be registered before being placed on the market. We are now focused on the authorization phase of the REACH process, and are making efforts to address
Substances of Very High Concern and evaluating potential business implications. As a chemical

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manufacturer with global operations, we are also actively monitoring and addressing analogous regulatory regimes being considered or implemented outside of the EU, for example, in Korea and Taiwan. We do not expect the costs of REACH compliance to be material to our operations at this time.

## Greenhouse Gas Regulation

Globally, our operations are subject to regulations that seek to reduce emissions of greenhouse gases (GHGs ). We currently report and manage GHG emissions as required by law for sites located in areas requiring such managing and reporting (European Union/Australia). While the United States has not adopted any federal climate change legislation, the EPA has introduced some GHG programs. For example, under the EPA s GHG Tailoring Rule, expansions or new construction could be subject to the Clean Air Act s Prevention of Significant Deterioration requirements. Some of our facilities are currently subject to GHG emissions monitoring and reporting. Changes or additional requirements due to GHG regulations could impact our capital and operating costs; however, it is not possible at the present time to estimate any financial impact to these U.S. operating sites. Also, some in the scientific community believe that increasing concentrations of GHGs in the atmosphere may result in climatic changes. Depending on the severity of climatic changes, our operations could be adversely affected.

## Segment and Geographic Revenue Information

Financial information by segment and geographic region is set forth in Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations and Note 25 of Notes to Consolidated Financial Statements.

## Available Information

Our public internet site is http://www.tronox.com. We make available, free of charge, on or through the investor relations section of our internet site, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and Forms 3, 4 and 5 filed on behalf of directors and executive officers, as well as any amendments to those reports filed or furnished pursuant to the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the U.S. Securities and Exchange Commission (the SEC ).

We file current, annual and quarterly reports, proxy statements and other information required by the Exchange Act with the SEC. You may read and copy any document we file at the SEC s public reference room located at 100 F Street, N.E., Washington, D.C. 20549, USA, or by calling +1-800-SEC-0330. Our SEC filings are also available to the public from the SEC s internet site at http://www.sec.gov.

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## Executive Officers of the Registrant

Set forth below is a description of the backgrounds of our executive officers. There are no family relationships between any of our officers, and there is no arrangement or understanding between any of them and any other person pursuant to which any such officer was selected as an officer.

Additional information related to our directors and nominees will be included under the caption Election of Directors in the 2014 Proxy Statement for our Annual Shareholders Meeting to be held on May 21, 2014 and is incorporated by reference herein. The information required by Items 405, 407(d)(4) and 407(d)(5) of Regulation S-K will be included under the captions Section 16(a) Beneficial Ownership Reporting Compliance and Audit Committee in the 2014 Proxy Statement, and is incorporated by reference herein.

## Thomas Casey

## Chairman of the Board and Chief Executive Officer

Mr. Casey has served as Chairman of the Board and Chief Executive Officer of Tronox Limited since June 15, 2012. Mr. Casey joined Tronox Incorporated as Chairman in February 2011 and was named as Chief Executive Officer of Tronox Incorporated effective in October 2011. Mr. Casey served as Chief Executive Officer of Integra Telecom, Inc. from February 2011 until October 2011 when Mr. Casey assumed the position of Chief Executive Officer of Tronox Incorporated. He has previously served as Chairman of the Board of Integra Telecom between December 2009 and February 2011, Chief Executive Officer and Director of Current Group LLC between September 2006 and February 2011, Chairman of the Board of Pacific Crossing Ltd., as Chief Executive Officer and Chairman of the Board of Choice One Communications, Inc., and as Chief Executive Officer and Director of One Communication Corp and of Global Crossing Ltd. Mr. Casey was a managing director of Merrill Lynch \& Co, and was a partner at Skadden, Arps, Slate, Meagher \& Flom LLP and at Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. He also had various positions in the United States Government, including in the Antitrust Division of the U.S. Department of Justice. Mr. Casey graduated with honors from Boston College and The George Washington University, National Law Center. These positions give Mr. Casey significant insight into, and understanding of, complex transactions and business operations, including with respect to the banking, legal, and operational aspects thereof. On April 11, 2005, the U.S. Securities and Exchange Commission, Global Crossing, Mr. Casey (who was at the relevant time the Chief Executive Officer of Global Crossing) and other members of Global Crossing s management reached a settlement related to a U.S. Securities and Exchange Commission investigation regarding alleged violations of the reporting provisions of Section 13(a) of the Exchange Act (and regulations thereunder), with such parties agreeing not to cause any violations of such reporting provisions. In the settlement, no party admitted liability and no other violations of securities laws were alleged. The Tronox Limited board of directors was fully aware of the settlement order and its circumstances and, in naming Mr. Casey as Chief Executive Officer, expressed its confidence in his ability to serve as Chief Executive Officer.

## Jean-François Turgeon

## Executive Vice President

Mr. Turgeon has served as Executive Vice President since joining Tronox on January 1, 2014. Mr. Turgeon oversees the combined business operations of our Mineral Sands and Pigment \& Electrolytic Divisions. Mr. Turgeon brings decades of experience in leadership positions in the global titanium dioxide business. He joined Tronox from the Rio Tinto Group, where he served for more than 24 years, most recently in London as managing director of its iron and titanium division. In that role, he had oversight over international $\mathrm{TiO}_{2}$ operations in Canada, South Africa and

Madagascar, and regional sales offices in the Americas, Europe, Africa and the Middle East, and Asia and the Pacific. Previously, Mr. Turgeon held several executive, mining operations, and chemical research engineering positions in Rio Tinto s titanium dioxide business unit. Mr. Turgeon holds a Bachelor of Science degree in chemical engineering from Université Laval in Quebec City and a master s degree in hydrometallurgy from McGill University in Montreal.

## Trevor Arran

## Senior Vice President and President, Mineral Sands Operations

Mr. Arran has served as our Senior Vice President and President, Mineral Sands Operations since June 15, 2012. Prior to joining Tronox Limited upon completion of the Transaction he served as the Executive General Manager of Exxaro s mineral sands and base metals business since April 2009. Prior to that, he served as the Executive General Manager of Corporate Affairs and Strategy for Exxaro from November 2006 until March 2009. Mr. Arran has broad experience in the mining industry, supplemented by financial experience gained in equity markets, investment banking and new business. He holds a Bachelor of Science in Geology from the University of Durban Westville and a Bachelor of Science with honors in Economic Geology from the University of Natal. Mr. Arran also completed the Advanced Management Programme at the University of Pretoria s Gordon Institute of Business Science and the Business and Environment Programme at the University of Cambridge.

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## Michael J. Foster

## Senior Vice President, General Counsel and Secretary

Mr. Foster has been our Senior Vice President, General Counsel and Secretary since June 15, 2012 and the Vice President, General Counsel and Secretary of Tronox Incorporated since January 2008. Mr. Foster was an executive officer of Tronox Incorporated during its bankruptcy proceedings from which it emerged in 2011. Before that he served as Managing Counsel of Tronox Incorporated from 2006 to January 2008; Staff Attorney of Tronox Incorporated from 2005 to 2006 and Staff Attorney for Kerr-McGee Shared Services LLC from 2003 to 2005; Corporate Counsel for CMS Field Services from 2001 to 2003; and Counsel for Enogex, Inc. from 1998 to 2001. Mr. Foster s experience also includes more than five years practicing law in the public and private sectors.

## Katherine C. Harper

## Senior Vice President and Chief Financial Officer

Ms. Harper has served as our Senior Vice President and Chief Financial Officer since September 16, 2013. She leads our global finance group, including treasury, financial planning and analysis, controllership, risk management, compliance and audit, and investor relations. Ms. Harper has a depth of experience in the chemical engineering and titanium dioxide $\left(\mathrm{TiO}_{2}\right)$ sector. She joined Tronox after serving as the chief financial and business development officer of Rio Tinto s diamonds and minerals group. She previously held finance and business transformation roles in Rio Tinto s mining and alternative energy units. Earlier in her career she worked for 12 years in senior finance posts with the Gulbrandsen Group, a privately held chemical manufacturing company, and the General Chemical Corporation. She began her career as an accountant within the power systems group of the Westinghouse Electric Corporation.

## John D. Romano

## Senior Vice President and President, Pigment and Electrolytic Operations

Mr. Romano has been our Senior Vice President and President, Pigment and Electrolytic Operations since June 15, 2012. Prior to that, he was Executive Vice President of Tronox Incorporated since January 1, 2011 and Vice President, Sales and Marketing of Tronox Incorporated since January 2008. Mr. Romano was an executive officer of Tronox Incorporated during its bankruptcy proceeding from which it emerged in 2011. Before that he served as Vice President, Sales for Tronox Incorporated from 2005 to January 2008; Vice President, Global Pigment Sales for Tronox LLC from January 2005 to November 2005; Vice President, Global Pigment Marketing for Tronox LLC from 2002 to 2005 and Regional Marketing Manager for Tronox LLC from 1998 to 2002.

## Willem Van Niekerk

## Senior Vice President, Strategic Planning and Business Development

Dr. Van Niekerk has served as our Senior Vice President, Strategic Planning and Business Development since June 15, 2012. Prior to joining Tronox Limited upon completion of the Transaction, he served as the Executive General Manager of Corporate Services for Exxaro, which includes what is now our Mineral Sands business, since May 2009, where he was responsible for Exxaro s technology, research and development, information management and supply chain management departments. Prior to that, he served as Manager of Growth for Exxaro s mineral sands and base metals business and as General Manager for Marketing and Business Development for Exxaro s mineral
sands and base metals business. Dr. Van Niekerk co-managed the Tiwest Joint Venture from 2006 to 2008. Dr. Van Niekerk has a PhD in pyrometallurgy from the University of Pretoria, and he oversaw the design and development of the titanium smelting technology for the slag furnaces at KZN Sands.

## Kevin V. Mahoney

## Vice President and Controller

Mr. Mahoney has served as our Vice President and Controller since November 12, 2012. He has responsibility over financial reporting and plays a leading role in the analysis and presentation of key financial data. Prior to joining Tronox, Mr. Mahoney was Senior Vice President and Corporate Controller for specialty chemicals producer Chemtura Corporation. Prior to joining Chemtura Corporation in October 2006, he served for 18 years with American Express Company, where his most recent position was Senior Vice President, Corporate Reporting, responsible for financial reporting globally. He joined American Express in 1988 as Vice President of Financial Reporting and Analysis for travel-related services, was appointed Senior Vice President of Global Business Management and Analysis in 1995 and Controller, Western Hemisphere, in 2000. He previously was a senior manager with KPMG LLP. Kevin holds an MBA in financial management from Pace University.

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## Item 1A. Risk Factors

You should carefully consider the risk factors set forth below, as well as the other information contained in this Form 10-K, including our consolidated financial statements and related notes. This Form 10-K contains forward-looking statements that involve risks and uncertainties. Any of the following risks could materially and adversely affect our business, financial condition or results of operations. Additional risks and uncertainties not currently known to us or those we currently view to be immaterial may also materially and adversely affect our business, financial condition or results of operations.

## Economic Factors

Market conditions, as well as global and regional economic downturns that adversely affect the demand for the end-use products that contain $\mathrm{TiO}_{2}$ or our other products, could adversely affect the profitability of our operations and the prices at which we can sell our products, negatively impacting our financial results.

Our revenue and profitability is largely dependent on the $\mathrm{TiO}_{2}$ industry either through direct sales of $\mathrm{TiO}_{2}$ by our pigment business, or to $\mathrm{TiO}_{2}$ producers by our mineral sands business sales. $\mathrm{TiO}_{2}$ is a chemical used in many quality of life products for which demand historically has been linked to global, regional and local GDP and discretionary spending, which can be negatively impacted by regional and world events or economic conditions. Such events are likely to cause a decrease in demand for our products and, as a result, may have an adverse effect on our results of operations and financial condition.

The future profitability of our operations, and cash flows generated by those operations, also will be affected by the available supply of our products in the market, such as $\mathrm{TiO}_{2}$, feedstock, and zircon.

## The markets for many of our products have seasonally affected sales patterns.

The demand for $\mathrm{TiO}_{2}$ during a given year is subject to seasonal fluctuations. Because $\mathrm{TiO}_{2}$ is widely used in paint and other coatings, titanium feedstock is in higher demand prior to the painting season in the Northern Hemisphere (spring and summer), and pig iron is in lower demand during the European summer holidays, when many steel plants and foundries undergo maintenance. Zircon generally is a non-seasonal product but is negatively impacted by the winter and Chinese New Year celebrations due to reduced zircon demand from China. We may be adversely affected by existing or future cyclical changes, and such conditions may be sustained or further aggravated by anticipated or unanticipated changes in regional weather conditions. For example, poor weather conditions in a region can lead to an abbreviated painting season, which can depress consumer sales of paint products that use $\mathrm{TiO}_{2}$.

## Our results of operations may be adversely affected by fluctuations in currency exchange rates.

The financial condition and results of operations of our operating entities outside the United States are reported in various foreign currencies, primarily South African Rand, Australian Dollars and Euros, and then converted into U.S. dollars at the applicable exchange rate for inclusion in the financial statements. As a result, any volatility of the U.S. dollar against these foreign currencies creates uncertainty for and may have a negative impact on reported sales and operating margin. We have made a U.S. dollar functional currency election for both Australian financial reporting and federal income tax purposes. On this basis, our Australian entities report their results of operations on a U.S. dollar basis. In addition, our operating entities often need to convert currencies they receive for their products into currencies in which they purchase raw materials or pay for services, which could result in a gain or loss depending on fluctuations in exchange rates.

In order to manage this risk, we have, from time to time, entered into forward contracts to buy and sell foreign currencies as economic hedges for these foreign currency transactions.

## Our operations may be negatively impacted by inflation.

Our profits and financial condition could be adversely affected when cost inflation is not offset by devaluation in operating currencies or an increase in the price of our products. Our operations have been affected by inflation in the countries in which they have operated in recent years. Working costs and wages in South Africa and Australia have increased in recent years, resulting in significant cost pressures for the mining industry.

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As an emerging market, South Africa poses a challenging array of long-term political, economic, financial and operational risks.

South Africa has been undergoing political and economic challenges. Changes to or instability in the economic or political environment in South Africa, especially if such changes create political instability, actual or potential shortages of production materials or labor unrest, could result in production delays and production shortfalls, and materially impact our production and results of operations.

In South Africa, our mining and smelting operations depend on electrical power generated by Eskom, the state-owned sole energy supplier. The contractual Notified Maximum Demand for the Namakwa Sands smelter and KZN Sands smelter sites are 72 mega volt amperes ( MVA ) and 87 MVA, respectively. South African electricity prices have risen during the past few years, and future increases are likely. Additionally, our KZN Sands operations currently use 245,277 gigajoules of Sasol gas, which is available only from Sasol Limited; however, we could replace approximately $30 \%$ to $40 \%$ of our current Sasol gas usage with furnace off-gas produced by KZN Sands, if necessary. KZN Sands is currently in the process of increasing its use of furnace off-gas.

We use significant amounts of water in our operations, which could impose significant costs. Use of water in South Africa is governed by water-use license. Our KZN mining operation in South Africa uses water to transport the slimes or sand from reclaimed areas to the processing plant and to the tailings facilities. Reduced water availability may result in rationing, which could impact production rates or result in increased water costs. However, our KZN Sands operation can use sea water, which is readily available since KZN Sands is located in a coastal region, although using sea water instead of fresh water would increase operational costs due to the desalination process, which may not be offset against lower water operating costs.

Under South African law, our South African mining operations are subject to water-use licenses that govern each operation. These licenses require, among other conditions, that mining operations achieve and maintain certain water quality limits for all water discharges, where applicable. Our South African operations that came into existence after the adoption of the National Water Act, No. 36 of 1998 have applied for and been issued the required water-use licenses. However, changes to water-use licenses could affect our operational results and financial condition.

The South African government may sharpen its focus on intervention in mining through various means including increased taxation, greater control and conditions on the distribution of mineral rights, poverty alleviation, and job creation. Such measures have not yet been defined, and the impact the measures may have on our business remains uncertain.

Changes to the revised Mineral and Petroleum Resources Developmental Act of 2002 (the
MPRDA ) have been incorporated into the 2013 MPRDA amendment, and are awaiting approval by the South African Parliament before being promulgated. Some of the proposed changes may
have an adverse effect on our business, operating results and financial condition. Although we expect the bulk of the original act to remain intact, there could be substantial changes, based on the current draft. This could have adverse effects on our business, operating results and financial condition.

South Africa s exchange control regulations require resident companies to obtain the prior approval of the South African Reserve Bank to raise capital in any currency other than the Rand, and restrict the export of capital from South Africa. While the South African government has relaxed exchange controls in recent years, it is difficult to predict whether or how it will further relax or abolish exchange control measures in the future. These exchange control restrictions could hinder our financial and strategic flexibility, particularly our ability to use South African capital to fund acquisitions, capital expenditures, and new projects outside of South Africa.

Our operations in South Africa are reliant on services provided by the State agency, Transnet, for limited rail transport services at Namakwa Sands. Furthermore, they provide extensive dock-side services at both the ports of Richards Bay and Saldanha Bay. Delays, particularly industrial actions, could have a negative impact on our business, operating results and financial condition.

South African law governs the payment of compensation and medical costs to a compensation fund against which mining employees and other people at sites where ancillary mining activities are conducted can claim for mining activity-related illnesses or injuries. Should claims against the compensation fund rise significantly due to our mining activity or if claims against us are not covered by the compensation fund, the amount of our contribution or liability to claimants may increase, which could adversely impact our financial condition. In addition, the HIV/AIDS epidemic in South Africa poses risks to our South African operations in terms of potentially reduced productivity, and increased medical and other costs. If there is

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a significant increase in the incidence of HIV/AIDS infection and related diseases among the South African workforce over the next several years, our operations, projects and financial condition may be adversely affected.
The labor and employment laws in many jurisdictions in which we operate are more onerous than those of the United States; and some of our labor force has substantial works council or trade union participation, which creates a risk of disruption from labor disputes and new laws affecting employment policies.

Labor costs constituted approximately $23 \%$ of our production costs in 2013. The majority of our employees are located outside the United States. In most of those countries, labor and employment laws are more onerous than in the United States and, in many cases, grant significant job protection to employees, including rights on termination of employment.

In South Africa, more than $70 \%$ of our workforce belongs to a union. In Australia, our employees are not currently represented by a union, but $50 \%$ are represented by a collective bargaining agreement. In The Netherlands, $60 \%$ of our employees are represented by a collective bargaining agreement and $30 \%$ are members of a union.

Our South African operations have entered into various agreements regulating wages and working conditions at our mines. There have been periods when various stakeholders have been unable to agree on dispute resolution processes, leading to threats of disruptive labor disputes, although only two strikes have ever occurred in the history of these operations. Due to the high level of employee union membership, our South African operations are at risk of production stoppages for indefinite periods due to strikes and other labor disputes. In the past five years, employees of KZN Sands went on strike once for a 22-day period, from August 23 to September 13, 2010, in a dispute over wages and employment conditions, which resulted in an average daily production loss of 20,000 metric tons and 1,398 metric tons of heavy mineral concentrate, but had no significant impact on the smelter or furnace operations. Although we believe that we have good labor relations with our South African employees, we may experience labor disputes in the future.

South African employment law, which is based on the minimum standard set by the International Labour Organization, sets out minimum terms and conditions of employment for employees. Although these may be improved by agreements between an employer and the trade unions, prescribed minimum terms and conditions form the benchmark for all employment contracts. Our South African operations are required to submit a report to the South African Department of Labour under South African employment law detailing the progress made towards achieving employment equity in the workplace. Failing to submit this report in a timely manner could result in substantial penalties. In addition, future legislative developments that affect South African employment policies may increase production costs or negatively impact relationships with employees and trade unions, which may have an adverse effect on our business, operating results and financial condition.

We are required to consult with, and seek the consent or advice of, various employee groups or works councils that represent our employees for any changes to our activities or employee benefits. This requirement could have a significant impact on our flexibility in managing costs and responding to market changes.

## Business Factors

Fluctuations in costs of our raw materials or our access to supplies of our raw materials could have an adverse effect on our results of operations and financial condition.

In 2013, raw materials used in the production of $\mathrm{TiO}_{2}$ constituted approximately $44 \%$ of our operating expenses. Fuel and energy linked to commodities, such as diesel, heavy fuel oil and coal, and other consumables, such as chlorine,
illuminating paraffin, electrodes, and anthracite, consumed in our manufacturing and mining operations form an important part of our operating costs. We have no control over the costs of these consumables, many of which are linked to some degree to the price of oil and coal, and the costs of many of these raw materials may fluctuate widely for a variety of reasons, including changes in availability, major capacity additions or reductions, or significant facility operating problems. These fluctuations could negatively affect our operating margins and our profitability. As these costs rise, our operating expenses will increase and could adversely affect our business, especially if we are unable to pass price increases in raw materials through to our customers.

Shortages or price increases by our single source suppliers, such as the suppliers of chlorine to our Australian operations or high-quality anthracite to Namakwa Sands could decrease revenue or increase production costs, reducing the profitability of operations. Fluctuations in oil and coal prices impact our operating cost and capital expenditure estimates and, in the absence of other economic fluctuations, could result in significant changes in the total expenditure estimates for our operations or new expansion projects, and when taken into account with other production costs, such as wages, equipment and machinery costs, may render certain operations nonviable.

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## Given the nature of our chemical, mining and smelting operations, we face a material risk of liability, delays and increased cash costs of production from environmental and industrial accidents and operational breakdowns.

Our business involves significant risks and hazards, including environmental hazards, industrial accidents, and breakdowns of equipment and machinery. Our business is exposed to hazards associated with chemical process manufacturing and the related storage, handling and transportation of raw materials, products and wastes, and our furnace operations that are subject to explosions, water ingress and refractory failure, and our open pit (also called open-cut) and dredge mining operations that are subject to flooding and accidents associated with rock transportation equipment and conveyor belts. Furthermore, during operational breakdowns, the relevant facility may not be fully operational within the anticipated timeframe, which could result in further business losses. The occurrence of any of these or other hazards could delay production, suspend operations, increase repair, maintenance or medical costs and, due to the integration of our facilities, could have an adverse effect on the productivity and profitability of a particular manufacturing facility or on our business as a whole. Over our operating history, we have incurred incidents of this nature.

There is also a risk that our key raw materials or our products may be found to have currently unrecognized toxicological or health-related impact on the environment or on our customers or employees. Such hazards may cause personal injury and loss of life, damage to property and contamination of the environment, which could lead to government fines or work stoppage injunctions and lawsuits by injured persons. If such actions are determined to be adverse to us, we may have inadequate insurance to cover such claims, or insufficient cash flow to pay for such claims. Such outcomes could adversely affect our financial condition and results of operations.

## We are a holding company that is dependent on cash flows from our operating subsidiaries to fund our debt obligations, capital expenditures and ongoing operations.

All of our operations are conducted and all of our assets are owned by our operating companies, which are our subsidiaries. We intend to continue to conduct our operations at the operating companies and any future subsidiaries. Consequently, our cash flow and our ability to meet our obligations or make cash distributions depends upon the cash flow of our operating companies and any future subsidiaries, and the payment of funds by our operating companies and any future subsidiaries in the form of dividends or otherwise. The ability of our operating companies and any future subsidiaries to make any payments to us depends on their earnings, the terms of their indebtedness, including the terms of any credit facilities, and legal restrictions regarding the transfer of funds.

Our ability to service our debt and fund our planned capital expenditures and ongoing operations will depend on our ability to generate and increase cash flow, and our access to additional liquidity sources. Our ability to generate and increase cash flow is dependent on many factors, including:
the impact of competition from other chemical and materials manufacturers and diversified companies;
the transfer of funds from subsidiaries in the United States to certain foreign subsidiaries;
general world business conditions, economic uncertainty or downturn and the significant downturn in housing construction and overall economies;
our ability to obtain raw materials at reasonable prices or to raise prices to offset, in whole or in part, the effects of higher raw material costs;
our ability to adequately deliver customer service and competitive product quality; and,
the effects of governmental regulation on our business.
Many of these factors are beyond our control. A general economic downturn can result in reduced spending by customers, which will impact our revenues and cash flows from operating activities. At reduced performance, if we are unable to generate sufficient cash flow or access additional liquidity sources, we may not be able to service and repay our existing debt, operate our business, respond to competitive challenges, or fund our other liquidity and capital needs.

## Our industry and the end-use markets in which we compete are highly competitive. This competition may adversely affect our results of operations and operating cash flows.

Each of our markets is highly competitive. Competition in the pigment industry is based on a number of factors such as price, product quality, and service. We face significant competition from major international and smaller regional competitors. Our most significant competitors include major chemical and materials manufacturers and diversified companies, a number of which have substantially larger financial resources, greater personnel, and larger facilities than we do. We also compete with numerous smaller, regional producers, including producers in China, that have expanded their sulphate $\mathrm{TiO}_{2}$ production capacity during the previous five years.

Zircon producers generally compete on the basis of price, quality, logistics, delivery, and payment terms and consistency of supply. Although we believe we have competitive quality, long-term relationships with customers and product range, our primary competitive disadvantage relative to our major competitors is our distance from our main consumers (i.e., Asia and Europe).

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Within the end-use markets in which we compete, competition between products is intense. We face substantial risk that certain events, such as new product development by competitors, changing customer needs, production advances for competing products, or price changes in raw materials, could cause our customers to switch to our competitors products. If we are unable to develop and produce or market our products to compete effectively against our competitors following such events, our results of operations and operating cash flows may suffer.

## We may need additional capital in the future and may not be able to obtain it on favorable terms.

Our industry is capital intensive, and our success depends to a significant degree on our ability to develop and market innovative products and to update our facilities and process technology. We may require additional capital in the future to finance our growth and development, implement further marketing and sales activities, fund ongoing research and development activities and meet general working capital needs. Our capital requirements will depend on many factors, including acceptance of, and demand for our products, the extent to which we invest in new technology and research and development projects, and the status and timing of these developments, as well as general availability of capital from debt and/or equity markets. Additional financing may not be available when needed on terms favorable to us, or at all. Further, the terms of our debt may limit our ability to incur additional indebtedness or issue additional equity. If we are unable to obtain adequate funds on acceptable terms, we may be unable to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures, which could harm our business.

The agreements and instruments governing our debt contain restrictions and limitations that could affect our ability to operate our business, as well as impact our liquidity.

As of December 31, 2013, our total principal amount of long-term debt was $\$ 2.4$ billion (including $\$ 11$ million of original issue discount in connection with the senior secured term loan (the Term Loan ), which has a face value of $\$ 1.5$ billion). Our credit facilities contain covenants that could adversely affect our ability to operate our business, our liquidity, and our results of operations. These covenants restrict, among other things, our and our subsidiaries ability to:
incur or guarantee additional indebtedness;
complete asset sales, acquisitions or mergers;
make investments and capital expenditures;
prepay other indebtedness;
enter into transactions with affiliates; and,
fund dividends or repurchase shares.

In addition, the terms of our credit facilities require us and our subsidiaries to maintain certain minimum performance levels relative to our debt. Certain of our facilities, excluding the Term Loan and Senior Notes, include requirements relating to the ratio of adjusted earnings before interest, taxes, depreciation and amortization ( EBITDA ) to indebtedness or certain fixed charges. The breach of any covenants or obligations in our credit facilities, not otherwise waived or amended, could result in a default under the applicable debt obligations (and cross-defaults to certain other debt obligations) and could trigger acceleration of those obligations, which in turn could trigger other cross defaults under other future agreements governing our long-term indebtedness. In addition, the secured lenders under the credit facilities could foreclose on their collateral, which includes equity interests in our subsidiaries, and exercise other rights of secured creditors. Any default under those credit facilities could adversely affect our growth, our financial condition, our results of operations and our ability to make payments on our credit facilities, and could force us to seek the protection of bankruptcy laws.

## Exxaro may exert substantial influence over us as a shareholder.

At December 31, 2013, Exxaro held approximately $44.4 \%$ of the voting securities of Tronox Limited, and had three nominees serving as Directors on our nine-member board. Additionally, in the future, Exxaro may exchange its retained interest in the mineral sands business for additional Class B Shares.

Due to Exxaro s significant ownership interest, it is entitled to certain rights under the Constitution and the Shareholder s Deed of Tronox Limited. For example, the Constitution provides that, for as long as the Class B voting interest is at least $10 \%$ of the total voting interest in Tronox Limited, there must be nine directors on our board; of which the holders of Class A Shares will be entitled to vote separately to elect a certain number of directors to our board (which we refer to as Class A Directors), and the holders of Class B Shares will be entitled to vote separately to elect a certain number of directors to our board (which we refer to as Class B Directors). If the Class B voting interest is greater than or equal to $30 \%$, our board will consist of six Class A Directors and three Class B Directors. If the Class B voting interest is greater than or equal to $20 \%$ but less than $30 \%$, our board of directors will consist of seven Class A Directors and two Class B Directors. If the Class B voting interest is greater than or equal to $10 \%$ but less than 20\%, our board will consist of eight Class A Directors and one Class B Director.

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The Constitution also provides that, subject to certain limitations, for as long as the Class B voting interest is at least $20 \%$, a separate vote by holders of Class A Shares and Class B Shares is required to approve certain types of merger or similar transactions that will result in a change in control or a sale of all or substantially all of our assets or any reorganization or transaction that does not treat Class A and Class B Shares equally.

As a result of Exxaro s significant ownership interest and its governance rights, Exxaro may be able to exert substantial influence over our management, operations and potential significant corporate transactions, including a change in control or the sale of all or substantially all of our assets. Exxaro s influence may have an adverse effect on the trading price of our ordinary shares.

## Our South African operations may lose the benefit of the Black Economic Empowerment ( BEE ) status under South African legislation, resulting in the need to implement a remedial solution or introduce a new minority shareholder, which could negatively impact our South African operations.

Exxaro retains a 26\% direct ownership interest in each of Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd in order for these two entities to comply with the requirements of the MPRDA and the South African Mining Charter ownership requirements under the BEE legislation. Exxaro has agreed to maintain its direct ownership for a period of the shorter of 10 years (unless it transfers the direct ownership interests to another qualified buyer under the BEE legislation) or the date on which the requirement to maintain a direct ownership stake in each of Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd no longer applies, as determined by the DMR. If either Tronox KZN Sands (Pty) Ltd or Tronox Mineral Sands (Pty) Ltd ceases to qualify under the BEE legislation, Tronox Limited and Exxaro have agreed to jointly seek a remedial solution. If Tronox Limited and Exxaro cannot successfully implement a solution and the reason for this failure is due to anything other than a change in law, then we may dispose of Exxaro s shares in the non-qualifying company to another BEE compliant, qualifying purchaser. During any period of any non-qualification, our South African operations may be in violation of their mining or prospecting rights, as well as the requirements of the MPRDA and the South African Mining Charter, which could result in a suspension or revocation of the non-qualifying company s mining and prospecting rights and could expose us to operating restrictions, lost business opportunities and delays in receiving further regulatory approvals for our South African operations and expansion activities. In addition, if Exxaro s direct ownership in Tronox KZN Sands (Pty) Ltd and Tronox Mineral Sands (Pty) Ltd is sold to another purchaser, we would be required to share ownership and control of our South African operations with a minority shareholder, which may impact our operational and financial flexibility and could impact profitability, expansion opportunities and our results of operations.

## Estimations of our ore resources and reserve estimates are based on a number of assumptions, including mining and recovery factors, future cash costs of production and ore demand and pricing. As a result, ore resources and reserve quantities actually produced may differ from current estimates.

The mineral resource and reserve estimates are estimates of the quantity and ore grades in our mines based on the interpretation of geological data obtained from drill holes and other sampling techniques, as well as from feasibility studies. The accuracy of these estimates is dependent on the assumptions and judgments made in interpreting the geological data. The assessment of geographical characteristics, such as location, quantity, quality, continuity of geology and grade, is made with varying degrees of confidence in accordance with established guidelines and standards. We use various exploration techniques, including geophysical surveys and sampling through drilling and trenching, to investigate resources and implement applicable quality assurance and quality control criteria to ensure that data is representative. Our mineral reserves represent the amount of ore that we believe can be successfully mined and processed, and are estimated based on a number of factors, which have been stated in accordance with the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves, effective July 2007 (the SAMREC Code ) and Joint Ore Reserves Committee Code (2012) (the JORC Code ).

There is significant uncertainty in any mineral reserve or mineral resource estimate. Factors that are beyond our control, such as the ability to secure mineral rights, the sufficiency of mineralization to support mining and beneficiation practices and the suitability of the market may significantly impact mineral resource and reserve estimates. The actual deposits encountered and the economic viability of mining a deposit may differ materially from our estimates. Since these mineral resources and reserves are estimates based on assumptions related to factors discussed above, we may revise these estimates in the future as we become aware of new developments. To maintain $\mathrm{TiO}_{2}$ feedstock production beyond the expected lives of our existing mines or to increase production materially above projected levels, we will need to access additional reserves through exploration or discovery.

If we are unable to innovate and successfully introduce new products, or new technologies or processes reduce the demand for our products or the price at which we can sell products, our profitability could be adversely affected.

Our industries and the end-use markets into which we sell our products experience periodic technological change and product improvement. Our future growth will depend on our ability to gauge the direction of commercial and technological progress in key end-use markets and on our ability to fund and successfully develop, manufacture and market products in such changing end-use markets. We must continue to identify, develop and market innovative products or enhance existing products on a timely basis to maintain our profit margins and our competitive position. We may be unable to develop new products or technology, either alone or with third parties, or license intellectual property rights from third parties on a commercially competitive basis. If we fail to keep pace

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with the evolving technological innovations in our end-use markets on a competitive basis, our financial condition and results of operations could be adversely affected.

In addition, new technologies or processes have the potential to replace or provide lower-cost alternatives to our products, such as new processes that reduce $\mathrm{TiO}_{2}$ in consumer products or the use of chloride slag in the production of $\mathrm{TiO}_{2}$, which could result in $\mathrm{TiO}_{2}$ producers using less chloride slag, or to reduce the need for $\mathrm{TiO}_{2}$ in consumer products, which could depress the demand and pricing for $\mathrm{TiO}_{2}$. We cannot predict whether technological innovations will, in the future, result in a lower demand for our products or affect the competitiveness of our business. We may be required to invest significant resources to adapt to changing technologies, markets and competitive environments.

## Violations or noncompliance with the extensive environmental, health and safety laws and regulations to which we are subject or changes in laws or regulations governing our operations could result in unanticipated loss or liability.

Our operations and production facilities are subject to extensive environmental and health and safety laws and regulations at national, international and local levels in numerous jurisdictions relating to use of natural resources, pollution, protection of the environment, transporting and storing raw materials and finished products, and storing and disposing of hazardous wastes among other materials. The costs of compliance with the extensive environmental, health and safety laws and regulations or the inability to obtain, update or renew permits required for operation or expansion of our business could reduce our profitability or otherwise adversely affect our business. If we fail to comply with the conditions of our permits governing the production and management of regulated materials, mineral sands mining licenses or leases or the provisions of the applicable South African or Australian law, these permits, mining licenses or leases and mining rights could be canceled or suspended, and we could be prevented from obtaining new mining and prospecting rights, which could materially and adversely affect our business, operating results and financial condition. Additionally, we could incur substantial costs, including fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations, for violations arising under these laws and regulations. In the event of a catastrophic incident involving any of the raw materials we use, or chemicals or mineral products we produce, we could incur material costs as a result of addressing the consequences of such event.

Changes to existing laws governing operations, especially changes in laws relating to transportation of mineral resources, the treatment of land and infrastructure, contaminated land, the remediation of mines, tax royalties, exchange control restrictions, environmental remediation, mineral rights, ownership of mining assets, or the rights to prospect and mine may have a material adverse effect on our future business operations and financial performance. There is risk that onerous conditions may be attached to authorizations in the form of mining rights, water-use licenses, miscellaneous licenses and environmental approvals, or that the grant of these approvals may be delayed or not granted.

Our current operations involve the production and management of regulated materials that are subject to various environmental laws and regulations and are dependent on obtaining and the periodic renewal of permits from various governmental agencies. The inability to obtain, update or renew permits related to the operation of our businesses, or the costs required in order to comply with permit standards, could have a material adverse effect on us.

## We compete with other mining and chemical businesses for key human resources in the countries in which we operate, and our business will suffer if we are unable to hire highly skilled employees or if our key officers or employees discontinue employment with us.

We compete with other chemical and mining companies, and other companies generally, in the countries in which we operate to attract and retain key human resources at all levels with the appropriate technical skills and operating and
managerial experience necessary to continue operating and expanding our businesses. These operations use modern techniques and equipment and accordingly require various types of skilled workers. The success of our business will be materially dependent upon the skills, experience and efforts of our key officers and skilled employees. The global shortage of key mining skills, including geologists, mining engineers, metallurgists, and skilled artisans, has been exacerbated by increased mining activity across the globe. Competition for skilled employees is particularly severe in Western Australia and at Namakwa Sands, which may cost us in terms of higher labor costs or reduced productivity. As a result, we may not be able to attract and retain skilled and experienced employees. Should we lose any of our key personnel or fail to attract and retain key qualified personnel or other skilled employees, our business may be harmed and our operational results and financial condition could be affected.

## There may be difficulty in effecting service of legal process and enforcing judgments against us and our directors and management.

We are registered under the laws of Western Australia, Australia, and substantial portions of our assets are located outside of the United States. In addition, certain members of our board of directors, as well as certain officers named in this Form $10-\mathrm{K}$, reside outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon

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Tronox Limited or such other persons residing outside the United States, or to enforce judgments outside the United States obtained against such persons in U.S. courts in any action, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. In addition, it may be difficult for investors to enforce rights predicated upon the U.S. federal securities laws in original actions brought in courts in jurisdictions located outside the United States.

> Third parties may develop new intellectual property rights for processes and/or products that we would want to use, but would be unable to do so; or, third parties may claim that the products we make or the processes that we use infringe their intellectual property rights, which may cause us to pay unexpected litigation costs or damages or prevent us from making, using or selling products we make or require alteration of the processes we use.

Results of our operations may also be negatively impacted if a competitor develops or has the right to use intellectual property rights for new processes or products and we cannot obtain similar rights on favorable terms or are unable to independently develop non-infringing competitive alternatives.

Although there are currently no known pending or threatened proceedings or claims relating to alleged infringement, misappropriation or violation of the intellectual property rights of others, we may be subject to legal proceedings and claims in the future in which third parties allege that their patents or other intellectual property rights are infringed, misappropriated or otherwise violated by us or our products or processes. In the event that any such infringement, misappropriation or violation of the intellectual property rights of others is found, we may need to obtain licenses from those parties or substantially re-engineer our products or processes to avoid such infringement, misappropriation or violation. We might not be able to obtain the necessary licenses on acceptable terms or be able to re-engineer our products or processes successfully. Moreover, if we are found by a court of law to infringe, misappropriate or otherwise violate the intellectual property rights of others, we could be required to pay substantial damages or be enjoined from making, using or selling the infringing products or technology. We also could be enjoined from making, using or selling the allegedly infringing products or technology pending the final outcome of the suit. Any of the foregoing could adversely affect our financial condition and results of operations.

## If our intellectual property were compromised or copied by competitors, or if competitors were to develop similar intellectual property independently, our results of operations could be negatively affected.

Our success depends to a significant degree upon our ability to protect and preserve our intellectual property rights. Although we own and have applied for numerous patents and trademarks throughout the world, we may have to rely on judicial enforcement of our patents and other proprietary rights. Our patents and other intellectual property rights may be challenged, invalidated, circumvented, and rendered unenforceable or otherwise compromised. A failure to protect, defend or enforce our intellectual property could have an adverse effect on our financial condition and results of operations.

We also rely upon unpatented proprietary technology, know-how and other trade secrets to maintain our competitive position. While we maintain policies to enter into confidentiality agreements with our employees and third parties to protect our proprietary expertise and other trade secrets, these agreements may not be enforceable or, even if legally enforceable, we may not have adequate remedies for breaches of such agreements. We also may not be able to readily detect breaches of such agreements. The failure of our patents or confidentiality agreements to protect our proprietary technology, know-how or trade secrets could result in significantly lower revenues, reduced profit margins or loss of market share.

In addition, we may be unable to determine when third parties are using our intellectual property rights without our authorization. We also have licensed certain of our intellectual property rights to third parties, and we cannot be
certain that our licensees are using our intellectual property only as authorized by the applicable license agreement. The undetected or unremedied unauthorized use of our intellectual property rights or the legitimate development or acquisition of intellectual property related to our industry by third parties could reduce or eliminate any competitive advantage we have as a result of our intellectual property, adversely affecting our financial condition and results of operations. If we must take legal action to protect, defend or enforce our intellectual property rights, any suits or proceedings could result in significant costs and diversion of our resources and our management $s$ attention, and we may not prevail in any such suits or proceedings. A failure to protect, defend or enforce our intellectual property rights could have an adverse effect on our financial condition and results of operations.

## If our intangible assets or other long-lived assets become impaired, we may be required to record a significant charge to earnings.

We have a significant amount of intangible assets and other long-lived assets on our consolidated balance sheets. Under generally accepted accounting principles in the United States ( U.S. GAAP ), we review our intangible assets and other long-lived assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Factors that may be considered a change in circumstances, indicating that the carrying value of our intangible assets and other long-lived assets may not be recoverable, include, but are not limited to, a significant decline in share price and market capitalization, changes in the industries in which we operate, particularly the impact of a downturn in the global economy, as well as competition or other factors leading to

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reduction in expected long-term sales or profitability. We may be required to record a significant non-cash charge in our financial statements during the period in which any impairment of our intangible assets and other long-lived assets is determined, negatively impacting our results of operations.

## If we fail to maintain an effective system of internal controls, we might be unable to report our financial results accurately or prevent fraud.

Effective internal controls are necessary for us to provide reliable financial reports and prevent fraud. As a public company, we are subject to the reporting requirements of Section 404 of the Sarbanes-Oxley Act of 2002, which requires us and our independent registered public accounting firm to annually evaluate and report on our internal control over financial reporting. Our efforts to maintain an effective system of internal controls may not be successful, and we may not be able to maintain adequate controls over our financial processes and reporting in the future. Even if we conclude, and our independent registered public accounting firm concurs, that our internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements in the future. Failure to maintain proper and effective internal controls could harm our results of operations or cause us to fail to meet our reporting obligations. If we or our independent registered public accounting firm discovers a material weakness in our internal controls in the future, the disclosure of that fact, even if quickly remedied, could reduce the market $s$ confidence in our financial statements.

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## Item 1B. Unresolved Staff Comments

There are no unresolved written comments that were received from the SEC staff.

## Item 2. Properties

Below are our offices and facilities at December 31, 2013. We believe our properties are in good operating condition, and are well maintained. Pursuant to separate financing agreements, substantially all of our U.S. properties are pledged or encumbered to support or otherwise provide the security for our indebtedness.

## Corporate and Other

At December 31, 2013, our corporate and other offices consisted of the following:

| Location | Square <br> Footage | Owned/Leased <br> Leased | Corporate office located at 263 Tresser <br> Soulevard, Suite 1100 |
| :--- | ---: | ---: | :--- |
| Stamford, Connecticut | 27,145 | 17,696 | Leased | | Corporate office located at 1 Brodie Hall |
| :--- |
| Bentley, Western Australia |

In addition, corporate and other includes two electrolytic manufacturing and distribution facilities located in Henderson, Nevada and Hamilton, Mississippi.

## Mineral Sands

We lease 25,892 square feet located at 115 West Street, Sandton, South Africa for our Mineral Sands division management offices.

Our KwaZulu-Natal ( KZN ) Sands operations include the Hillendale mine (which ceased mining operations in December 2013), the Fairbreeze mine, a wet plant, and the central processing complex in Empangeni. The central processing complex includes a mineral separation plant and two smelters.

Our Namakwa Sands operations include the Namakwa Sands mine, a primary concentration plant (which produces a mineral concentrate), a secondary concentration plant (which yields a magnetic and non-magnetic stream), a separation plant (where the minerals in the streams are separated to produce zircon, rutile and ilmenite), and two smelters (where the ilmenite is processed into furnaces to produce titanium dioxide slag and pig iron).

Our Western Australia operations consist of the Cooljarloo Sands mine and the Chandala complex. The Chandala complex includes a dry mill (which separates the minerals), a synthetic rutile plant (which upgrades ilmenite into high quality synthetic rutile), and a residual management plant.

## Pigment

We own 110,781 square feet at 3301 NW $150^{\text {th }}$ Street, Oklahoma City, Oklahoma, which is used for our Pigment segment management offices and research and development, and is shared with certain corporate services.

Our pigment facilities consist of the physical assets necessary and appropriate to produce, distribute and supply our $\mathrm{TiO}_{2}$, and consist mainly of manufacturing and distribution facilities. The following table summarizes our $\mathrm{TiO}_{2}$ production facilities and production capacity (in gross metric tons per year), by location:

| Facility | Production | $\mathrm{TiO}_{2}$ <br> Capacity | Process | Property <br> Owned/Leased | Facility <br> Owned/Leased |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Hamilton, Mississippi | $\mathrm{TiO}_{2}$ | 225,000 | Chloride | Owned | Owned |
| Kwinana, Western Australia | $\mathrm{TiO}_{2}$ | 150,000 | Chloride | Owned | Owned |
| Botlek, The Netherlands | $\mathrm{TiO}_{2}$ | 90,000 | Chloride | Leased | Owned |

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## Mineral Sands Licenses and Leases

In 2013, we mined valuable heavy minerals ( VHM ), including ilmenite, rutile, leucoxene, and zircon, at three separate locations; Namakwa Sands and KZN Sands (where our Hillendale mining operations ceased in December 2013) in South Africa, and Cooljarloo in Western Australia. Our three mining operations and their integrated mineral processing facilities have two principal commercial product lines: titanium feedstocks and zircon. Our titanium feedstocks include titanium oxide minerals such as ilmenite, natural rutile, and leucoxene, as well as two upgraded titanium products titanium, slag and synthetic rutile. Zircon is a zirconium silicate mineral with a diverse construction and industrial applications. The individual titanium minerals and zircon each have distinct commercial markets, and may be sold as mineral concentrates, slag or synthetic rutile; however, more than $90 \%$ of titanium raw materials are consumed in the production of titanium dioxide.

A diagram of our heavy mineral sand mining and processing TiQpigment value chain is as follows:

We market our titanium feedstocks to external customers; however a significant portion of our production is consumed internally. Most of the ilmenite mined at Namakwa Sands and KZN Sands is the feedstock for titanium slag production in South Africa, and ilmenite from Western Australia is internally consumed as synthetic rutile feed at our Chandala complex. The synthetic rutile product from our Chandala complex is either consumed at our $\mathrm{TiO}_{2}$ pigment plant in Kwinana or sold externally.

We comply with SEC Industry Guide 7, which requires us to control sufficient mineral title to have access rights for exploration, development and extraction of the minerals at the time that the determination of reserves is made. Any information that materially affects the risks associated with mineral exploitation is publicly disclosed.

Our exploration and mining activities in South Africa and Australia are governed by the legal and regulatory framework of the respective national, state, or provincial authorities. Mining applications in both countries are subject to multiple levels of review, including extensive public comment, before mineral title is granted, and are subject to environmental approvals.

## Mineral Tenure South Africa

Our South African mining rights secure our legal rights to exploit the heavy mineral reserves at Namakwa, Hillendale (mining operations ceased in December 2013), and Fairbreeze, and to explore for heavy minerals ( HM ) elsewhere in South Africa. Mineral exploration and development in South Africa is regulated by the Minerals and Petroleum Resources Development Act No. 28 (the MPRDA ), which was implemented in May 2004. The MPRDA is regulated through the Department of Mineral Resources (the DMR ), and establishes the State of South Africa as the custodian of all mineral resources, and effectively transfers privately owned mineral rights to the state. Owners and grantees of mineral rights were required to apply to the DMR for New Order Mining Rights over the previously held mineral tenements. All of our old order mining rights have been successfully converted to New Order Mining Rights, in accordance with the MPRDA.

Other South African statutes establishing government authority over mining-related activities include: the National Environmental Management Act \#107 (NEMA), the National Water Act \#36 (NWA), the Mine Health and Safety Act, and the Mining Titles Registration Amendment. In addition to the DMR, other relevant regulatory bodies include the South African Department of Environmental Affairs at the National level and provincial-level authorities, such as the

Western Cape Department of Environmental Affairs, and Development Planning and the KwaZulu-Natal Department of Environmental Affairs. Access and use authorizations for

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mining and mining-related activities in South Africa may be independent of surface rights, and land-use rentals and access rights agreements may be required in some cases.

The existing mining rights at Namakwa Sands and KZN Sands were ceded in 2008 by Anglo Operations Ltd, a unit of Anglo American plc, to Exxaro Resources Ltd. ( Exxaro ). Subsequent to the Transaction (see Item 1. Business), the Namakwa mining rights are legally owned by Tronox Mineral Sands (Pty) Ltd, a subsidiary of Tronox Limited. Under the Black Economic Empowerment legislation, our ownership of Tronox Mineral Sands is limited to 74\%, with Exxaro owning the remaining 26\%.

Old order mining rights that have been converted to new order mining rights at Namakwa cover over 13,000 hectares, including the Rietfontein, Hartebeeste Kom, Graauwduinen, Houtkraal, Goeraap and other mining rights. Several other mining and/or prospecting rights, land-use authorizations and appropriate permits are granted at various other locations in South Africa. Renewal of mining rights is permissible for terms of up to 30 years, subject to compliance with the MPRDA.

Heavy mineral production at the now-depleted Hillendale mine will be replaced by production from the Fairbreeze mine, where we control over 4,000 hectares of new mining rights. New order mining rights executed in September 2009 are valid through 2039 for the Fairbreeze C Extension deposit and through 2035 for the Fairbreeze A, B, C, and D deposits. The Hillendale mining rights are valid through 2035; however, following the exhaustion of Hillendale reserves, applications for closure certification will be filed.

In September 2013, the South African Department of Water Affairs (the DWA ) issued an Integrated Water Use License for an area covering the Fairbreeze mining operations. Construction activities on these areas commenced soon after receipt of this license. Subsequently, the Mtunzini Conservancy (the Conservancy ) lodged an appeal against the DWA, alleging textual and interpretative irregularities with the license conditions. In response, the appeals lodgment automatically suspended the license and, as a result, all construction activities were suspended. On February 5 2014, the DWA approved our request to lift the suspension and we intend to continue with planned early works construction activities pending the appeal. The appeal process makes provision for the appeal to be adjudicated by the Water Tribunal, which is a quasi-judicial body of government; however the legal appointment term of the tribunal ended in 2012 and to date, this body has not been reconstituted and the appeal process has not been amended. In order to address the appeal in the meantime, Tronox, with the DWA and the Conservancy have agreed to participate in a mediation process.

## Mineral Tenure Australia

Western Australia mineral tenure is administered by the Western Australia Department of Mines and Petroleum under the Mining Act 1978, which contains provisions for a variety of tenement categories that include prospecting, exploration, retention, and mining. Our Cooljarloo mining operations are authorized by State Agreement MSA 268, covering 9,745 hectares, ratified by the Western Australia Parliament, the Mineral Sands (Cooljarloo) Mining and Processing Agreement Act of 1988. State Agreements specify the rights, obligations, terms and conditions for the development of major resources projects, and establish a framework for ongoing relations and cooperation between the state and the proponent of the project.

Twenty mining leases, covering 17,890 hectares over the Dongara deposits have been granted to us by the State of Western Australia, and are pending approvals from federal agencies. Six of the mining licenses overlie reserves declared in the tables below, based on a positive definitive feasibility study ( DFS ).

Three mining leases cover 2,056 hectares at the Jurien deposit, where historic HM mining was conducted by others as recently as 1994. No reserves are reported for the Jurien deposit, which is under a comprehensive re-evaluation following completion of a 5,080-meter drilling program in 2013. We have active exploration projects on six of eleven exploration licenses in proximity to the Cooljarloo mine; however, there is no assurance that any of the exploration projects will generate new reserves or be developed for mining.

## Reporting of Ore Reserves and Mineral Resources

The HM reserve estimates reported below are compiled from Mineral Resource and Ore Reserve Statements ( RR Statements ) prepared annually by mineral resource professionals in South Africa and Australia to reflect the estimated mineral resources and reserves as of December 1, 2013.

Our mineral reserve estimates are guided by the mineral resource reporting standards of the South African Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves, 2007 version, as amended 2009 ( SAMREC ), and the Joint Ore Reserves Committee of The Australian Institute of Mining and Metallurgy (2012) ( JORC ). SAMREC and JORC are two standards within an international family of mineral resource codes designed to ensure data validity, standardize methodologies for estimating the size and grades of mineral deposits, guide classifications of mineral resources and reserves, and enhance the transparency of mineral resource disclosures. Our annual Mineral Resources and Reserves Statements are generated and authorized by experienced Tronox resource professionals who integrate inputs from a wide range of disciplines, and are routinely audited by external consultants.

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Individuals responsible for our estimates of ore reserves are certified by the organizations that administer their respective codes and are subject to censure if they are found to be in violation of the reporting guidelines.

As discussed above, U.S. registrants are required to report ore reserves under SEC Industry Guide 7 standards. SEC Industry Guide 7 differs from the SAMREC and JORC codes, but the methodologies for determination of mineral reserves, or ore reserves, are essentially equivalent to the methodologies endorsed under the SAMREC and JORC codes. Therefore, the Proven and Probable HM reserves stated in the table below are unmodified from the Proved and Probable HM reserves declared in the Mineral Resources and Reserves Statements submitted by our South African and Australian mines. Under SEC Industry Guide 7, SAMREC and JORC, Proven (or Proved ) reserves are the highest category of ore reserve estimates, whereby the quantity and quality have been computed from detailed sampling, while Probable reserves provide lower geologic assurance.

The estimated reserves reported by Tronox are in situ, or in-place, bodies of economically and legally extractable mineralized material as of December 31, 2013. Block modeling software and techniques differ by mining operation, but the basic approach includes validation of digitized drilling data, statistical interpolations of spatial data to create wireframe representations of mineral deposit geometry and dimensions, followed by resource modeling that divides the deposit into a myriad of individual cells and sub-cells for further evaluation. Most of our mineral sands operations utilize multiple software programs for resource and mine modeling that have been adapted to the particular geologic, mineralization and mining characteristics of their ore deposits. A defined set of realistically assumed modifying factors are required under both SAMREC and JORC for the conversion of mineral resources to ore reserves, including mining dilution, mining and metallurgical recovery, economic, marketing, legal, environmental, infrastructure, social, and governmental factors. These modifying factors are equally applicable to classifications of ore reserves under SEC Industry Guide 7, which defines an ore reserve as that part of a mineral deposit which can be economically and legally extracted or produced at the time of the reserve determination.

The reported reserves are included in a base case scenario for their exploitation, termed a life-of-mine plan ( LoMP ). A LoMP is maintained for each of our three active mining operations and routinely reviewed by professionals from a range of disciplines to ensure their validity, and the mining plans are linked to the Tronox internal mining-ilmenite beneficiation- $\mathrm{TiO}_{2}$ pigment manufacturing and marketing value chain. The LoMP are used for long-term, strategic planning and are influenced by logical mine design and economic parameters. Therefore, the LoMP include both our disclosed ore reserves as well as some portion of high-quality mineralization that has not been converted to reserves. Mine modeling imposes practical excavation boundaries for the mining methods employed, and the modified volumes and grades are applied during the conversion of resources to reserves. Extraction boundaries and production schedule scenarios are derived from models for which realistic assumptions and estimates have been applied and interpreted by our mining staffs to have reasonable prospects for economic extraction. The modifying factors and other parameters are fluid, and there is no assurance of future economic viability, or that the material in our LoMP will ever be mined. Once the mineralized material is placed into the LoMP, the tonnages envisaged to be mined ( run-of-mine ) may include dilution from a relatively small volume of poorly mineralized material, if its inclusion is necessary or practical to satisfy mine engineering parameters. Our dilution factors are negligible for dry mines but approximately $5 \%$ for dredge mining, which has lower unit costs but is less selective. Dilution factors are independent from overburden or internal waste removal and handling, costs for which, if applicable, are factored into the economic block models. Our nominal cut-off grades are included in the notations in the reserves table below, in the interest of transparency and to satisfy resource and reserves reporting requirements. The cut-off-grades disclosed may not, however, reflect the actual ore extraction boundaries at the time of exploitation.

Our reserve estimates and each LoMP are underpinned by 3-D resource block models that incorporate geospatial data such as heavy mineral grades and distributions, geological domains, and geostatistical validation. The resource models are integrated with economic modeling that involves mine scheduling, engineering parameters, removal of overburden
(if present), tailings management, internal transportation, environmental management, and rehabilitation. The economic modeling determines extraction boundaries based on positive future cash flows from commercial minerals (zircon, rutile, leucoxene, non-integrated ilmenite) and upgraded ilmenite products (Ti-slag, synthetic rutile, pig iron), net of mining and processing costs. Marketing assumptions allow for our internal consumption of $\mathrm{TiO}_{2}$ feedstocks, and future sales prices for mineral products. Mining cost assumptions are based on operating expenses for comparable extraction methods at our operating mines and heavy mineral processing experience at our three mine support products facilities and costs for conversion of ilmenite to slag and pig iron in South Africa and to synthetic rutile in Western Australia.

Commercial sales of our mineral concentrates and processed mineral products are sold under long-term and short-term private contracts, the terms of which are confidential. $\mathrm{The}^{\mathrm{TiO}}{ }_{2}$ industry is an oligopolistic market, and a public disclosure of contractual unit prices could be detrimental to our relationships with our customers. We do not believe that historic sales prices are reliable indicators for future prices, and we apply forward-looking sales price assumptions based on our long-term contract prices, internal market intelligence, and forecasts by independent industry research consultancies such as TZ Minerals International Pty Ltd ( TZMI ).

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## Mineral Reserves

At December 31, 2013, our total HM reserves were approximately 1.14 billion metric tons ( MT ) of ore containing an in-place estimate of approximately 69 million MT contained heavy minerals. Based on average total HM assemblage data, the in-place reserves contain approximately 31 million MT of ilmenite, approximately 5 million MT of combined rutile and leucoxene, and approximately 6 million MT of zircon, for a total VHM content of approximately 42 million MT.

Reported reserve estimates in the table below are in-place portions of inventories of mineralized material that have been previously classified as Measured Resources or Indicated Resources under the SAMREC or JORC codes. Valuable heavy minerals are reported as in situ, unadjusted for mining and processing recovery factors.

Reported reserve estimates in the table below are in-place portions of inventories of mineralized material that have been previously classified as Measured Resources or Indicated Resources under the SAMREC or JORC codes.
Valuable heavy minerals in the table below (ilmenite, rutile, leucoxene and zircon) are reflected as percentages of total HM, and are reported as in situ, unadjusted for mining and processing recovery factors. Minor quantities of heavy mineral byproducts other than titanium minerals or zircon are intermittently sold but are immaterial to the reserves and future revenues.

| eration or Del |  | Status / Mining | Ore Reserves | Ore Reserves (million | Ore Grade | In-Place THM (000 s | Life of Mint years) | MENIT (\% R |  |  | $\begin{aligned} & \text { NE } \\ & \text { RCON } \end{aligned}$ | Change 013-201 000 s THM) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| erating Unit | Location | Method(s) (1) | Category | MT) | HM\% | ) of MT) | (2) | THM) | THM | HM | THM) | (3) |
| makwa Sands | Western | West OC \& | Proven | 385.8 | 7.9 | 30,320 |  | 39.5 | 2.5 | 5.8 | 9.4 | +3,941 |
| makwa Sands | Cape, | East OC mines | Probable | 300.3 | 6.4 | 19,276 | 30+ | 40.4 | 2.6 | 5.8 | 10.2 | +7,853 |
|  | Africa |  | (100\%) | 686.1 | 7.2 | 49,596 |  | 40.0 | 2.6 | 5.8 | 9.7 | +11,794 |
| irbreeze | KwaZulu- | Hydraulic OC | Proven | 139.0 | 7.1 | 9,906 |  | 62.0 | 3.5 | 1.7 | 8.4 | +1,066 |
|  | Natal South | Start 2015 | Probable | 45.3 | 4.6 | 2,084 |  | 53.3 | 3.2 | 1.7 | 7.3 | +810 |
| N Sands | Africa |  | $\begin{aligned} & \text { Total } \\ & (100 \%) \end{aligned}$ | 184.3 | 6.5 | 11,990 |  | 60.5 | 3.3 | 1.7 | 8.2 | +1,876 |
| TAL SOUTH |  |  | All |  |  |  |  |  |  |  |  |  |
| RICA |  |  | Reserves | 870.4 |  | 61,586 |  |  |  |  |  | +13,670 |
| oljarloo | Western | Dredge Mine | Proven | 182.1 | 2.05 | 3,732 |  | 61.0 | 5.1 | 2.6 | 9.4 | +112 |
|  | Australia | \& OC Dry | Probable | 21.6 | 2.56 | 554 | 13 | 62.9 | 5.5 | 2.3 | 12.9 | -680 |
|  |  | Mine | Total | 203.7 | 2.10 | 4,286 |  | 61.2 | 5.1 | 2.6 | 9.9 | -568 |
| ngara | Western <br> Australia | Planned OC <br> Dry Mine | Proven | 64.6 | 5.14 | 3,325 | 15 | 48.9 | 6.1 | 2.8 | 11.2 |  |
|  |  |  | Probable |  |  |  |  |  |  |  |  |  |
|  |  |  | Total | 64.6 | 5.14 | 3,325 |  | 48.9 | 6.1 | 2.8 | 11.2 |  |
| TAL Western Australia |  |  | All |  |  |  |  |  |  |  |  |  |
|  |  |  | Reserves | 268.3 | 2.84 | 7,611 |  | 55.8 | 5.5 | 2.7 | 10.4 | -568 |
| TAL RESERVES |  |  | 1,139 |  |  | 69,197 | $+13,102$ |  |  |  |  |  |

(1)

Open Cut ( OC ) is a surface mining technique of extracting rock minerals from the earth by their removal from an open pit.
(2) Life-of-Mine ( LoM ) refers to estimated years of mine life under assumed operating rates and mine design. LoM estimates are part of a strategic Life-of-Mine Plan ( LoMP ) and include both ore reserves, as well as non-reserve material with reasonable prospects for economic exploitation.
(3) Changes greater than $10 \%$ from our December 31, 2012 reserves statement are as follows:
A. Revised resource and mining models for inclusion of Orange Feldspathic Sand (OFS ) ore at the Namakwa Sands East mine resulted in the conversion of approximately 250 million MT to ore reserve classifications.
B. Revised modeling of the Fairbreeze mine, which effectively lowered the nominal cut-off grade from $2.0 \%$ ilmenite to $1.5 \%$ ilmenite, increasing contained THM reserves by approximately 2 million MT. The Hillendale mine ceased mining operations as of December 2013, and depletion of 154,000 MT of HM at Hillendale are reflected in 2013-2012 change in Total South Africa THM reserves.
C. Mining depletion accounts for a decrease of 568,000 MT of HM from the Cooljarloo reserves in 2013. Probable reserves of approximately 1.2 million MT of HM previously reported for Jurien, Western Australia have been removed from our December 31, 2013 reserves statement, pending revision of the Jurien resource model with results from a 2013 drilling program.
Recoveries of in-place VHM are never $100 \%$, but we strive to make every reasonable effort to optimize the efficiencies of our mineral separation processes. Mining recoveries are generally very high, approaching $100 \%$. Recovery factors of valuable heavy

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minerals vary according to the characteristics of ore, heavy mineral assemblages and amenability of the individual valuable heavy minerals to physical separation techniques, and their cumulative metallurgical recoveries, from primary concentration through the respective mineral separation plants range from below $65 \%$ to above $92 \%$.

Cut-off grades are not strictly applied to reserve estimates, as economic determinations are made from detailed block modeling. Approximate, nominal cut-off grades are: KZN Sands - $1.5 \%$ ilmenite; Namakwa $0.2 \%$ zircon; Cooljarloo $1.3 \%$ THM; and Dongara up to $2 \%$ THM. Cutoff grades vary locally according to VHM assemblage, overburden or other waste removal and many other parameters.

The following table compares the HM reserves at December 31, 2013, 2012, and 2011. Reserves formerly owned by Exxaro prior to the Transaction are included at $100 \%$.

|  | December 31, |  |  |
| :--- | :---: | :---: | :---: |
|  | $\mathbf{2 0 1 3}$2012 <br> (In thousands of MT) |  |  |
| Namakwa Sands | 49,600 | 37,800 | 39,300 |
| KZN Sands | 12,000 | 10,300 | 10,500 |
|  |  |  |  |
| Total South Africa | 61,600 | 48,100 | 49,800 |
| Cooljarloo | $4,300)$ | 4,900 | 5,800 |
| Dongara | $3,300)$ | 3,300 | 2,200 |
| Jurien |  | 1,200 | 1,200 |
| Total Western Australia | 7,600 | 9,400 | 9,200 |
| Total Tronox | 69,200 | 57,500 | 59,000 |

Our three mining operations maintain active HM exploration programs, emphasizing the identification of new reserves to extend the lives or improve the output of our currently active mines. Mineralized material is identified at all three areas and classified under the respective mineral resource reporting standards of SAMREC or JORC as inferred, indicated, or measured resources. There is no assurance, however, that any of these resources will ever be exploited, and disclosure of any non-reserves material is not included in this filing.

HM and upgraded $\mathrm{TiO}_{2}$ feedstock production during 2013 (in thousands of MT) was as follows:

| Tronox Operation | Ilmenite ${ }^{(1)}$ |  <br> Leucoxene | Zircon | Synthetic Rutile | Chloride Slag | Sulfate Slag | Pig <br> Iron | Other ${ }^{(2)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Namakwa Sands | 459 | 27 | 111 |  | 145 | 23 | 118 | 76 |
| KZN Sands | 291 | 6 | 10 |  | 166 | 31 | 115 |  |
| Western Australia | 418 | 58 | 63 | 232 |  |  |  | 23 |
| TOTAL 2013 | 1,168 | 91 | 184 | 232 | 311 | 54 | 233 | 99 |

(1) Total ilmenite, including ilmenite internally integrated with slag and synthetic rutile.
(2) Other includes staurolite, activated carbon and slag fines.

## Heavy Mineral Deposit Geology and Mining Operations

Deposits of heavy mineral sands are concentrations of abrasion-resistant sand of high density (conventionally above $2.9 \mathrm{gm} / \mathrm{cm}^{3}$ ) that are commercial sources of titanium, zirconium, rare earths, chromium, garnet, magnetite, niobium-tantalum, thorium, tungsten, and gemstones. Heavy mineral sand deposits containing commercial quantities and concentrations of titanium oxide minerals, ilmenite, rutile, and zircon are a distinct class of ore deposit, inclusive of all ore deposits currently mined or contemplated for mining.

Our mineral sands mining operations are situated on three coastal plains: the Western Coastal Plain of South Africa bordering the Atlantic Ocean (Namakwa Sands); the narrow Eastern Coastal Plain bordering the Indian Ocean (KZN Sands); and the Indian Ocean of Western Australia. Our heavy mineral deposits reflect the accessory mineralogy of their respective bedrock provenances: Namaqualand Metamorphic Complex (Namakwa Sands); Natal Metamorphic Complex and Kaapvaal Craton (KZN Sands); and Yilgarn Craton (Western Australia).

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Namakwa Sands, Western Cape, South Africa
Tronox Namakwa Sands extracts HM from two open-cut mines on the semi-arid Atlantic coastal plain (Namaqualand Coastal Plain) near Brand se Baai, 92 kilometers northwest of Vredendal and approximately 380 kilometers north of Cape Town in the Western Cape Province, South Africa. The integrated mine-mineral separation-smelting operation originally commissioned by Anglo American in 1993-1994 was acquired by Exxaro Resources Ltd in 2007 and is now $74 \%$ owned by Tronox. Past mining plus current reserves total approximately 1 billion MT of ore, with over 30 years remaining in the life-of-mine plan.

The Namakwa West mine involves stripping of near-surface Red Aeolian Sand ( RAS ) ore, followed by dry mining of the deeper, internally-variable Orange Feldspathic Sand. The Namakwa East mine is a relatively shallow strip mine exclusively in the RAS ore. Current mine production combined from the West and East mines exceeds 20 million MT per annum with the West mining rate about twice that of the East mine.

The Namakwa HM reserves are hosted by paleo-dune sands and underlying, younger strandline HM placers. The general dimensions of the overall Namakwa deposit are approximately 15 kilometers in a northeasterly direction, with a width of up to four kilometers and variable thicknesses of mineralization. The bulk of the Namakwa HM reserves are hosted by a compound paleo-dune complex composed of unconsolidated sand that was re-worked from a massive amount of sediment eroded primarily from the granulite gneiss of the Namaqualand Metamorphic Complex, which bounds the southern margin of the Kaapvaal Craton. Granulite refers to extreme temperatures and pressures during metamorphism, resulting in extensive recrystallization of the original rock chemistry that at Namakwa results in a diverse assemblage of HM . The HM and their host sediments were repetitively weathered out of the source rocks, transported by fluvial systems to the coast, then concentrated along marine strandlines that favored northwest-facing J-shaped bays. A minor portion of the Namakwa deposit consists of ancient shoreline heavy mineral placers, but the bulk of the deposit accumulated in a large, heavy mineral-enriched aeolian dune complex.

The bulk of the ore mined at Namakwa Sands is from a thick accumulation of orange-yellow terrestrial facies sand known as the Orange Feldspathic Sand (OFS ), in a $14 \times 4$ kilometer zone elongate in a northeast direction from the modern Atlantic Coast. The OFS is arbitrarily subdivided into two economic domains separated by the bitumen road that separates the West and East ore bodies. The heavy mineral assemblage in the OFS is diverse and variable, with a significant percentage of non-VHM at a deposit-wide VHM: THM average of about 51:49. Total HM grades tend to be higher toward the base of the OFS, but the mineralized section matures upward with a higher VHM to THM ratio.

Ore is determined by overall VHM grades and high ratios of zircon, and the OFS is divided in the Namakwa resource model into three sub-units based on zircon grades and continuity. Mining conditions in the OFS are adversely affected by discontinuous layers of interstitial cement from silica, calcium and/or magnesium, or duripan. The duripan layers, including a single, relatively continuous layer termed Dorbank, are interpreted as paleosols or interstitial precipitates at various depths from alkali-saturated ground water, facilitated by microbial activity.

The RAS overlies the OFS, to which it is subordinate in volume, but is significantly mineralized. The RAS forms a sheet-like layer of aeolian sand over an approximate area of 17,000 hectares ( 42,000 acres), interpreted as a complex of multiple strand line deposits and a backshore dune field. It is characterized by relatively high heavy mineral grades, but with wide VHM:THM variations.

The RAS is currently the only ore unit mined in the East mine, but the LoMP involves a transition from RAS mining to OFS mining in the East mine. The combined thickness of RAS and OFS mineralization reaches up to 40 meters.

Additional heavy mineral concentrations in modern strandlines and foredunes are termed Recent Emergent Terraces ( RET ). Mineralized RET and OFS within 300-500 meters of high-tide are excluded from the Namakwa HM reserves, as they currently fall within an environmental exclusion zone.

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Composition of VHM at Namakwa is heterogeneous and complex, and the diversity of both VHM and non-VHM is a challenge to efficient mineral separation. The non-valuable HM fraction is dominated by garnet and pyroxene, with accessory kyanite, monazite, magnetite, hematite, chromite, corundum, cassiterite, hornblende, marcasite, Ce-florencite, baddeyellite, rhodonite, tourmaline, staurolite, spinel, and titanite. Namakwa ilmenite exhibits a range of titanium to iron ratios that reflect the original variability in titanium-iron oxide HM derived from the basement source rocks.

## KZN Sands, KwaZulu-Natal Province, Republic of South Africa

KZN Sands operations include the now-depleted Hillendale mine and the future Fairbreeze mine, currently under construction, 20 kilometers and 45 kilometers, respectively, southwest of Richards Bay, KwaZulu-Natal Province, South Africa. HMC from the future Fairbreeze mine will be trucked approximately 40 kilometers to the Empangeni mineral processing facility, which consists of a mineral separation plant for concentration of ilmenite, rutile and zircon, and a dual electric-arc furnace smelter for production of titanium slag and pig iron from ilmenite.

Hydraulic mining techniques employed successfully at the Hillendale mine will be used at Fairbreeze to disaggregate the ore via high-pressure hydraulic mining into a sump from which the ore slurry is pumped to a nearby land-based primary wet plant for heavy mineral concentration. HMC is de-watered by hydrocyclones prior to transport to Empangeni, where dry magnetic, electrostatic and wet gravity separation techniques will be used to produce zircon and high- $\mathrm{TiO}_{2}$ mineral concentrates, at full annual capacities of approximately 60,000 MT zircon, 30,000 MT rutile plus leucoxene, and 600,000 MT ilmenite smelter feed.

Like elsewhere on the eastern coast of South Africa, crude ilmenite concentrate from KZN Sands contains discrete grains of chromite inherited from volcanic rocks of the Karoo system. The chromite is removed from the ilmenite process stream by roasting and magnetic separation, and the ilmenite is then fed to two 36MW DC-electric arc furnaces at the Empangeni smelter. The Empangeni furnaces, commissioned in 2003-2004 by Ticor SA, a predecessor company to Exxaro Resources, are of a novel design in the titanium industry. The capacity of the Empangeni smelter at full output is approximately 220,000 MT slag and 120,000 MT low-manganese pig iron (LMPI).

The paleo-dunes that host KZN Sands mineral reserves are part of a Pliocene-Pleistocene-Holocene dune corridor developed along the Natal coastline. Local modifications from tectonic uplift, repetitive sediment deposition and erosion cycles, and eustatic sea levels have shaped the modern coastline.

The Fairbreeze heavy mineral sand deposits are hosted by a NNE-trending compound strandline/paleo-dune complex approximately two kilometers inland from the modern coastline, extending southward for about 10 kilometers from the town of Mtunzini. The deposit is hosted by fine-grained sand and silt of the Pliocene Berea Red Sands, which acquired a distinctive red coloration from oxidation and degradation of iron-bearing minerals.

Dissection of the Fairbreeze dune topography by local rivers and streams has led to division of the deposit into five discrete bodies, mapped as Fairbreeze A, B, C, C-Extension and D. The Fairbreeze heavy mineral grades average above 5\% THM, of which VHM is above 60\%. Fairbreeze grades are somewhat more heterogeneous than at Hillendale.

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Ilmenite in the heavy mineral sand deposits of the Richards Bay region of KwaZulu-Natal is believed to have been derived from basement source rocks of the Kaapvaal Craton, the Natal Metamorphic Province and the Karoo volcanic rocks of Mozambique and South Africa. Rutile and zircon are primarily liberated from the Natal Metamorphic Province. Titanium-iron oxide minerals, including ilmenite of variable chemical composition, magnetite, and hematite occur in basement rocks and younger sedimentary sequences, suggesting a complicated history of erosion, transport and selective sorting.

## KZN Sands Fairbreeze Heavy Mineral Sand Deposit and Infrastructure

## Northern Operations, Tronox Western Australia

The Cooljarloo mine, which commenced mining in 1989, is approximately 17 kilometers north of Cataby and approximately 170 kilometers north of Perth, Western Australia. HM concentrates from Cooljarloo are transported by truck to a metallurgical complex at Chandala. The combined mining-mineral processing at Cooljarloo and Chandala are the Northern Operations component of an integrated mine-to-pigment supply chain that includes our Ti Pigment plant at Kwinana, an industrial port city south of Perth. Synthetic rutile is the primary feedstock to the Kwinana pigment plant. Excess high-grade $\mathrm{TiO}_{2}$ feedstock can be stockpiled at Kwinana or exported, either to other Tronox pigment manufacturing facilities or to external customers. Zircon and titanium concentrates are exported from bulk terminals at Kwinana, Bunbury, or other ports in Western Australia.

Both dredge and dry mining methods are used to extract more than 20 million MT of ore per year from a mining lease covering over 9,700 hectares. Approximately 15 million MT of heavy mineral concentrates have been produced from the Cooljarloo mine, which is expected to be decommissioned around 2025-2030. The dredge, or south mine consists of two floating dredges of approximate capacities of 1800 and 350 MT per hour, respectively, that are connected to a common floating wet plant, from which gravity-separated heavy mineral concentrates (HMC) are pumped to a stockpile for truck transport to Chandala. Overburden from the dredge mine is mined by a contractor and stockpiled for use in our rehabilitation program. Cooljarloo North is a dry mine from which mining scrapers excavate and transport ore to a land-based primary concentration plant to produce HMC.

A site-wide expansion was implemented in 2012 to offset decreasing ore grades at Cooljarloo, where combined ore mining capacity is now approximately 3500 MT per hour. A strategic goal for Tronox Western Australia is to sustain HMC production and ilmenite feed to the Chandala SR plant beyond 2020. An exploration program has been active for several years in the vicinity of the Cooljarloo mine to identify either higher-grade, dry mineable deposits or larger, dredgeable deposits. A dry mining definitive feasibility study has been completed at the Dongara project, approximately 150 kilometers north of the Cooljarloo mining complex. The approximately 3.3 million MT of in situ heavy mineral reserves at Dongara are included in five separate Quaternary-age strandline HM deposits elongated in a north-northwesterly direction. Tronox intends to systematically develop Dongara as Cooljarloo ore is progressively depleted from 2015 onward.

The Chandala mineral separation plant has a capacity of approximately 750,000 MT per year HMC feed. The single kiln SR facility at the Chandala metallurgical complex has a current capacity of 225,000 MT per year SR, and an expansion to approximately 282,000 MT per year is under review. Cooljarloo HMC feed is of exceptional quality, with more than $75 \%$ VHM on average, and an ilmenite averaging over $60 \% \mathrm{TiO}_{2}$ and other characteristics that make it an ideal feedstock to the Becher-SR process employed at

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Chandala. Natural rutile, two grades of leucoxene, and two grades of zircon are produced at Chandala are transported to Bunbury or other Western Australia ports for export.

Our current annual product range in Western Australia includes: over 400,000 MT of ilmenite; $35,000 \mathrm{MT}$ of rutile; 20,000 MT of leucoxene; 55,000 MT of zircon; 10,000 MT of staurolite; 225,000 MT of synthetic rutile; 18,000 MT of activated carbon (a by-product of synthetic rutile production); and, $135,000 \mathrm{MT}$ of $\mathrm{TiO}_{2}$ pigment.

The Cooljarloo heavy mineral district is located on the northern Swan Coastal Plain 160-200 kilometers north of Perth. The district includes the Cooljarloo HMS mine, the Jurien HM property and several active exploration projects operated by Tronox and others to the north, south, and west of the current Cooljarloo mine. The Perth Basin is a deep trough nearly 1,000 kilometers long that averages about 65 kilometers in width, filled with sedimentary rocks. The total thickness of the Phanerozoic succession may exceed 15,000 meters. The eastern margin of the Perth Basin is bounded over most of its length by the Darling Fault, which represents the eastern edge of a rift zone that facilitated the separation of India from Australia during the break-up of Gondwana, the pre-historic super-continent. The fault separates the Yilgarn Block on the east from the Perth Basin on the west, where nearly continuous sedimentation from the Jurassic Period onward filled the rift. The Swan Coastal Plain in the Cooljarloo area is a narrow strip about 25 kilometers between the modern coastline and the Gingin Scarp, a regional escarpment in the North Perth Basin.

The general locations for the Cooljarloo and Dongara deposits are shown below:

The Gingin Scarp, like the Darling and Whicher Scarps in the South Perth Basin, was a major control for deposition of heavy mineral-rich near-shore, wave-cut terraces during transgressive, interglacial peaks in the Late Pliocene-Early Pleistocene era. The Cooljarloo deposit spans a 3 to 4 kilometers swath of about 15 northwest-trending, sub-parallel heavy mineral strands over a distance of about 40 kilometers. The HM deposits were concentrated in near-shore and shoreline deposits.

## Item 3. Legal Proceedings

Refer to Notes 18 and 27 of Notes to Consolidated Financial Statements.

## Item 4. Mine Safety Disclosures

Not applicable.

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## PART II

## Item 5. Market for Registrant s Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

## Market for our Class A ordinary shares and Holders of Record

Our Class A ordinary shares ( Class A Shares ) began trading on the New York Stock Exchange on June 18, 2012 under the symbol TROX. There is no public trading market for our Class B ordinary shares ( Class B Shares ), which are held by Exxaro. On June 26, 2012, the Board of Directors of Tronox Limited (the Board ) approved a 5-to-1 share split for holders of our Class A Shares and Class B Shares at the close of business on July 20, 2012, by issuance of four additional shares for each share of the same class by way of bonus issue. All dividends and share prices have been adjusted to reflect the 5-to-1 share split.

The following table sets forth, for the fiscal quarters indicated, the high and low sales prices per share of our Class A Shares, and the dividends declared, from June 18, 2012 through December 31, 2013.

|  | Sales Price <br> High |  | Low | Dividends |
| :--- | :---: | :---: | :---: | :---: |
| per Share |  |  |  |  |

(1) On June 26, 2012, the Board declared a quarterly dividend of $\$ 1.25$ per share, on a pre-split basis, to holders of our Class A Shares and Class B Shares, which was paid on August 13, 2012 to shareholders of record at the close of business on July 13, 2012.
As of January 31, 2014, there were approximately 495 holders of record of Tronox Limited s Class A Shares. This does not include the shareholders that hold shares in street-name through banks or broker-dealers.

## Tronox Incorporated

In connection with the Transaction, Tronox Incorporated shareholders received one Class A Share of Tronox Limited and $\$ 12.50$ in cash for each share of Tronox Incorporated common stock.

The following table sets forth, for the fiscal quarters indicated, the high and low sales prices per share of Tronox Incorporated s Class A common shares, and the dividends declared, prior to the Transaction on June 15, 2012. All share prices have been adjusted to reflect the 5-to-1 share split, effective July 26, 2012.

|  | Sales Price <br> High |  | Low |
| :--- | :---: | :---: | :---: | Dividends | per Share |
| :--- |

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## Item 6. Selected Financial Data

The following table sets forth selected historical financial data for the periods indicated. The statement of operations data and supplemental information for the year ended December 31, 2013 reflect the consolidated operating results of Tronox Limited. The statement of operations data and supplemental information for the year ended December 31, 2012 reflect the consolidated operating results of Tronox Incorporated prior to June 15, 2012, and, from June 15, 2012 through December 31, 2012, reflect the consolidated operating results of Tronox Limited. The statement of operations data and the supplemental information for the eleven months ended December 31, 2011, one month ended January 31, 2011, and years ended December 31, 2010 and 2009 reflect the consolidated operating results of Tronox Incorporated. The balance sheet data at December 31, 2013 and 2012 relate to Tronox Limited, and at December 31, 2011, 2010, and 2009 relate to Tronox Incorporated. This information should be read in conjunction with our Consolidated Financial Statements (including the notes thereto) and our Management s Discussion and Analysis of Financial Condition and Results of Operations.

Successor<br>Predecessor<br>Eleven Month囚ne Month<br>Ended Ended<br>Year Ended December Blcember 31,January 3Year Ended December 31, $20132012201120112010 \quad 2009$<br>(Millions of U.S. Dollars, except share and per share data)

## Statement of Operations Data:

| Net Sales | $\$ 1,922$ | $\$ 1,832$ | $\$$ | 1,543 | $\$$ | 108 | $\$$ | 1,218 | $\$$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gross Profit | 190 | 264 |  | 439 | 25 | 222 |  | 138 |  |
| Selling, general and administrative expenses | $(187)$ | $(239)$ | $(152)$ |  | $(5)$ | $(59)$ |  | $(72)$ |  |
| Litigation/arbitration settlement |  |  |  | 10 |  |  |  |  |  |

Provision for environmental remediation and
restoration, net of reimbursements (1) 47
Other (2)

| Income from Operations | 3 | 25 | 302 | 20 | 210 | 26 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest and debt expense (3) | $(130)$ | $(65)$ | $(30)$ | $(3)$ | $(50)$ | $(36)$ |
| Gain on bargain purchase |  | 1,055 |  |  |  |  |
| Reorganization income (expense) |  |  |  |  | 613 | $(145)$ |
| Other income (expense) | 66 | $(7)$ | $(10)$ | 2 | $(8)$ | $(11)$ |


(1)

Income (loss) attributable to noncontrolling interest

Net income (loss) attributable to Tronox
Limited \$ (126) \$ 1,134

Earnings (Loss) from Continuing Operations per Share (4):

| Basic | $\$(1.11)$ | $\$ 11.37$ | $\$$ | 3.22 | $\$ 15.28$ | $\$$ | 0.11 | $\$$ | $(0.70)$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Diluted | $\$(1.11)$ | $\$ 11.10$ | $\$$ | 3.10 | $\$ 15.25$ | $\$$ | 0.11 | $\$$ | $(0.70)$ |
| Balance Sheet Data: | $\$ 2,290$ | $\$ 1,706$ | $\$$ | 488 | $\$ 458$ | $\$$ | 483 | $\$$ | 489 |
| Working capital (5) | $\$ 5,699$ | $\$ 5,511$ | $\$$ | 1,657 | $\$ 1,091$ | $\$$ | 1,098 | $\$$ | 1,118 |
| Total assets | $\$ 2,413$ | $\$ 1,615$ | $\$$ | 421 | $\$ 421$ | $\$$ | 421 | $\$$ | 423 |
| Long-term debt (6) | $\$ 2,437$ | $\$ 2,882$ | $\$$ | 752 | $\$(654)$ | $\$$ | $(630)$ | $\$$ | $(613)$ |
| Total equity |  |  |  |  |  |  |  |  |  |

Supplemental Information:

| Depreciation, depletion and amortization |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| expense | $\$$ | 333 | $\$$ | 211 | $\$$ | 79 | $\$$ | 4 | $\$$ | 50 | $\$$ |
| Capital expenditures | $\$$ | 172 | $\$$ | 166 | $\$$ | 133 | $\$$ | 6 | $\$$ | 45 | $\$$ |
| Dividends per share | $\$ 1.00$ | $\$ 0.50$ | $\$$ |  | $\$$ |  | $\$$ |  | $\$$ | 24 |  |

(1) In 2010, Tronox Incorporated recorded receivables from its insurance carrier related to environmental clean-up obligations at the Henderson facility, for which such obligations had been recorded in 2008 and prior years.
(2) Includes restructuring charges of $\$ 17$ million primarily the result of plant idling and a net loss on deconsolidation of an operating subsidiary of $\$ 24$ million, offset by a gain on the sale of land of $\$ 1$ million in 2009.

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(3) During the one month ended January 31, 2011 and the years ended December 31, 2010 and 2009, interest expense excludes $\$ 3$ million, $\$ 33$ million and $\$ 32$ million, respectively, which would have been payable under the terms of the $\$ 350$ million $9.5 \%$ senior unsecured notes, which was not accrued while Tronox Incorporated was in bankruptcy in accordance with ASC 852, Reorganizations ( ASC 852 ).
(4) On June 26, 2012, the Board of Directors of Tronox Limited approved a 5-to-1 share split for holders of our Class A ordinary shares and Class B ordinary shares. All references to number of shares and per share data in the Successor s consolidated financial statements have been adjusted to reflect the share split, unless otherwise noted. See Note 19 of Notes to Consolidated Financial Statements.
(5) Working capital is defined as the excess (deficit) of current assets over current liabilities.
(6) In 2009, the $\$ 350$ million senior unsecured notes were reclassified to Liabilities Subject to Compromise on the Consolidated Balance Sheets.

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## Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with the information contained in Tronox Limited s audited Consolidated Financial Statements for the years ended December 31, 2013 and 2012, eleven months ended December 31, 2011, and one month ended January 31, 2011, and the related notes thereto. This discussion contains forward-looking statements that involve risks and uncertainties, and actual results could differ materially from those discussed in the forward-looking statements as a result of numerous factors. See Special Note Regarding Forward-Looking Statements.

## Executive Overview

We are a global leader in the production and marketing of titanium bearing mineral sands and titanium dioxide pigment ( TiQ ). We are the third largest global producer and marketer of $\mathrm{TiQmanufactured} \mathrm{via} \mathrm{chloride} \mathrm{technology}$, as well as the third largest global producer of titanium feedstock and a leader in global zircon production. We have operations in North America, Europe, South Africa, and the Asia-Pacific region. We operate three $\mathrm{TiO}_{2}$ facilities at the following locations: Hamilton, Mississippi; Botlek, The Netherlands; and Kwinana, Western Australia, representing approximately 465,000 metric tons of annual $\mathrm{TiO}_{2}$ production capacity. Additionally, we operate three separate mining operations: KwaZulu-Natal ( KZN ) Sands located in South Africa, Namakwa Sands located in South Africa and Cooljarloo Sands located in Western Australia, which have a combined annual production capacity of approximately 753,000 metric tons of titanium feedstock and approximately 265,000 metric tons of zircon.

We have two reportable operating segments, Mineral Sands and Pigment. Corporate and Other is comprised of our electrolytic manufacturing and marketing operations, as well as our corporate activities.

The Mineral Sands segment includes the exploration, mining, and beneficiation of mineral sands deposits. These operations produce titanium feedstock, including chloride slag, slag fines, and rutile, as well as zircon and pig iron. Titanium feedstock is used primarily to manufacture $\mathrm{TiO}_{2}$. Zircon is a mineral which is primarily used as an opacifier in ceramic glazes for tiles, plates, dishes, and industrial products. Pig iron is a metal material used in the steel and metal casting industries to create wrought iron, cast iron, and steel.

The Pigment segment primarily produces and markets $\mathrm{TiO}_{2}$, which is used in a wide range of products due to its ability to impart whiteness, brightness, and opacity. $\mathrm{TiO}_{2}$ is used extensively in the manufacture of paint and other coatings, plastics and paper, and in a wide range of other applications, including inks, fibers, rubber, food, cosmetics, and pharmaceuticals. Moreover, it is a critical component of everyday consumer applications due to its superior ability to cover or mask other materials effectively and efficiently relative to alternative white pigments and extenders. We believe that, at present, $\mathrm{TiO}_{2}$ has no effective substitute because no other white pigment has the physical properties for achieving comparable opacity and brightness or can be incorporated in a cost-effective manner.

## Acquisition of Mineral Sands Business

Because we believed that becoming vertically integrated would benefit us by assuring our access to critical supply, retaining our cash and margin, and enabling general operating flexibility, we acquired a global producer of mineral sands with production facilities and sales and marketing presence strategically positioned throughout the world. Specifically, we acquired $74 \%$ of Exxaro Resources Ltd. s ( Exxaro ) South African mineral sands operations, including its Namakwa and KZN Sands mines, separation and slag furnaces, along with its $50 \%$ share of the Tiwest Joint Venture in Western Australia (together the mineral sands business ) (the Transaction ). On June 15, 2012, the date of the Transaction (the Transaction Date ), the existing business of Tronox Incorporated was combined with the mineral sands business under Tronox Limited. As of the Transaction Date, we own $100 \%$ of the operations formerly operated
by the Tiwest Joint Venture.

## Emergence from Chapter 11

In connection with its emergence from bankruptcy, Tronox Incorporated applied fresh-start accounting under Accounting Standards Codification ( ASC ) 852, Reorganizations ( ASC 852 ) as of January 31, 2011. Accordingly, the financial information of Tronox Incorporated set forth in this Form 10-K, unless otherwise expressly set forth or as the context otherwise indicates, reflects the consolidated results of operations and financial condition on a fresh-start basis for the period beginning February 1, 2011 ( Successor ), and on a historical basis for the period through January 31, 2011 ( Predecessor ).

## Recent Developments

Dividends Declared On February 25, 2014, the Board of Directors declared a quarterly dividend of $\$ 0.25$ per share to holders of our Class A ordinary shares ( Class A Shares ) and Class B ordinary shares ( Class B Shares ) at the close of business on March 10, 2014, totaling $\$ 29$ million, which will be paid on March 24, 2014. During 2013, we paid dividends of $\$ 115$ million. See Note 19 of Notes to Consolidated Financial Statements.

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Liquidation of Non-operating Subsidiaries During 2013, we completed the liquidation of two non-operating subsidiaries: Tronox (Luxembourg) Holdings S.a.r.l., and Tronox Luxembourg S.a.r.l. As such, we recognized a net noncash gain from the realization of cumulative translation adjustments of $\$ 24$ million, which was recorded in Other income (expense) on the Consolidated Statements of Operations. See Note 5 of Notes to Consolidated Financial Statements.

## Term Loan On March 19, 2013, we entered into an Amended and Restated Credit and Guaranty Agreement (the

 Amended and Restated Credit Agreement ). Pursuant to the Amended and Restated Credit Agreement, we obtained a $\$ 1.5$ billion senior secured term loan (the Term Loan ), which matures on March 19, 2020. See Note 15 of Notes to Consolidated Financial Statements.Extinguishment of Debt On February 28, 2013, we repaid the outstanding principal balance of $\$ 149$ million, plus interest, related to the $\$ 150$ million Senior Secured Delayed Draw Term Loan (the Senior Secured Delayed Draw Term Loan ). See Note 15 of Notes to Consolidated Financial Statements.

## Business Environment

The following discussion includes trends and factors that may affect future operating results.
The price of pigment in all regions globally has shown considerable volatility over the last several years with annual global average pricing moving up more than $50 \%$ between 2010 and 2012 and down as much as $21 \%$ in 2013 . We believe this price volatility was caused largely by excessive inventory levels that were built up at various points in the supply chain, which were initially at our customers, then at ourselves and other pigment producers and finally at feedstock suppliers. Essentially no new production was introduced in the chloride pigment market in 2012 or 2013, and little new sulphate pigment was added to the market outside China in the same period. Sales volumes at the end of 2013 appeared to be back to normal levels. We expect prices to continue to be affected by surplus inventories at pigment suppliers, which we believe are almost back to normal levels, and the high-grade feedstock providers, which we believe will trend back towards normal levels through 2014.

Our integration plan is on track to deliver the material cost advantages it gives us. The vertical integration of titanium feedstock and $\mathrm{TiO}_{2}$ production provides us with a secure and cost competitive supply of high grade titanium feedstock over the long term. Our ability to supply all of the feedstock that our pigment operations require enables us to balance our consumption and sales in ways that we believe our competitors cannot. Beginning in the second quarter of 2013, all Pigment segment feedstock purchases were from the Mineral Sands segment. As a result, during 2013, we canceled , at our option and without penalty, contracts with two external ore suppliers. For the year ended December 31, 2013, approximately $97 \%$ of our total ore purchases were from our Mineral Sands segment.

We operate in highly competitive markets, and face competition not only from chloride process pigment producers, but also sulphate process pigment producers. Moreover, because transportation costs are minor relative to the cost of our product, there is also some competition between products produced in one region versus products produced in another region.

The demand for $\mathrm{TiO}_{2}$ during a given year is subject to seasonal fluctuations. Because $\mathrm{TiO}_{2}$ is widely used in paint and other coatings, titanium feedstock is in higher demand prior to the painting season in the Northern Hemisphere (spring and summer), and pig iron is in lower demand during the European summer holidays, when many steel plants and foundries undergo maintenance. Zircon generally is a non-seasonal product but is negatively impacted by the winter and Chinese New Year celebrations due to reduced zircon demand from China.

The financial condition and results of operations of our operating entities in The Netherlands and South Africa are reported in foreign currencies and then converted into U.S. dollars at the applicable exchange rates for inclusion in our consolidated financial statements. As a result, any volatility of the U.S. dollar against these foreign currencies creates uncertainty and may have a positive or negative impact on operating results and balance sheet. Foreign currency effects appear in our financial statements in a few ways. First, through translation, the impact is embedded in each line item of the financial statements, with the offsetting impact in cumulative translation adjustments in Accumulated other comprehensive income (loss) on the Consolidated Balance Sheets. Secondly, the remeasurement of non-functional currency monetary assets and liabilities are reported in Other income (expense) in the Consolidated Statements of Operations. During 2013, the U.S. dollar strengthened approximately 19\% and 15\% against the South African Rand and the Australian dollar, respectively, while weakening slightly against the Euro.

We are uniquely tax-advantaged by the following factors:

Tax loss carryforwards totaling $\$ 3$ billion of U.S. federal and state, and foreign net operating losses;

Interest expense deductions of $\$ 2$ billion over ten years resulting from U.S. borrowing activity, subject to an annual taxable income limitation; and,

Favorable ruling in December 2013 in the Anadarko litigation of from $\$ 5$ billion to $\$ 14$ billion. The ruling is subject to further revision based on damage calculations, appeal rights for Anadarko, and any future tax benefits are not realizable until environmental costs expended. As a result, subject to a final damages determination by the court and potential appeal, Tronox Limited should be entitled to tax deductions equal to the amount spent by the trusts to remediate environmental matters and to compensate the injured individuals. These deductions will accrue over the life of the trusts as the funds received by the judgment are spent. We believe that these expenditures and the accompanying tax deductions may continue for decades.

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These tax-advantaged factors are not currently recognized as assets on our balance sheet, but create opportunities for our operations to benefit for years to come.

Going forward, we will continue to review strategic opportunities both in the U.S. and in foreign jurisdictions. We believe we bring a strong set of attributes to the table in either an acquisition or a business combination. As such, we will continue to seek opportunities to realize those value creating attributes, whether it is in a single transaction with a large party, or a series of transactions to expand our portfolio.

## Consolidated Results of Operations

## Year Ended December 31, 2013 Compared to the Year Ended December 31, 2012

|  | Year Ended December 31, <br> 20132012 Change <br> (Millions of U.S. dollars) |  |  |
| :---: | :---: | :---: | :---: |
| Net Sales | \$ 1,922 | \$ 1,832 | \$ 90 |
| Cost of goods sold | 1,732 | 1,568 | 164 |
| Gross Profit | 190 | 264 | (74) |
| Selling, general and administrative expenses | (187) | (239) | 52 |
| Income from Operations | 3 | 25 | (22) |
| Interest and debt expense | (130) | (65) | (65) |
| Gain on bargain purchase |  | 1,055 | $(1,055)$ |
| Other income (expense) | 66 | (7) | 73 |
| Income (Loss) before Income Taxes | (61) | 1,008 | $(1,069)$ |
| Income tax benefit (provision) | (29) | 125 | (154) |
| Net Income (Loss) | \$ (90) | \$ 1,133 | \$ $(1,223)$ |

Net sales for 2013 increased 5\% from 2012 primarily due to the impact of the acquired businesses of $\$ 273$ million and higher volumes of $\$ 294$ million, partially offset by lower selling prices and mix of $\$ 480$ million. Substantially higher volumes were achieved in both our Mineral Sands business and our Pigment business, while selling prices were decidedly lower in both businesses. During 2013, the effect of changes in foreign currency positively impacted net sales by $\$ 3$ million.

Cost of goods sold increased $10 \%$ compared to prior year which principally reflects the impact of the acquired business of $\$ 191$ million and higher volumes in both the pigment and mineral sands businesses of $\$ 206$ million, partially offset by $\$ 184$ million due to favorable year-over-year impact of noncash amortization of inventory step-up and unfavorable ore sales contracts liability, favorable currency translation of $\$ 34$ million and other lower costs of $\$ 15$ million.

During 2013, our gross profit decreased to $10 \%$ of net sales as compared to $14 \%$ of net sales in 2012. The decrease was principally due to lower selling prices offset partially by lower ore and production costs and by a favorable change in mix. During 2013 and 2012, net noncash depreciation, depletion and amortization of $\$ 159$ million and $\$ 75$
million, respectively, as a result of purchase accounting impacted the gross profit by $8 \%$ and $4 \%$, respectively.
Selling, general and administrative expenses decreased $22 \%$ in 2013 compared to 2012. The net decrease during 2013 compared to 2012 is primarily due to one-time costs incurred in connection with the acquisition of the Mineral Sands business in 2012 of $\$ 94$ million, which were comprised of transfer taxes of $\$ 37$ million, share-based compensation expense of $\$ 21$ million, and other transaction costs and severance of $\$ 36$ million. This decrease was offset by increases of $\$ 36$ million in employee costs, professional services, and spending related to corporate initiatives during 2013. Also during 2013, the acquired business contributed an incremental $\$ 6$ million to our total selling, general and administrative costs, compared to the same period in 2012.

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The increase in interest and debt expense is primarily attributable to interest expense on the $\$ 900$ million aggregate principal amount of $6.375 \%$ senior notes due 2020 (the Notes ) and the Term Loan, as detailed below:

|  | Year Ended December 31, |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
|  | $\mathbf{2 0 1 3}$ |  | $\mathbf{2 0 1 2}$ | Change |
| (Millions of U.S. dollars) |  |  |  |  |$)$

The change in other income (expense) is primarily attributable to a gain on foreign currency exchange rates of \$39 million in 2013 compared to a loss of $\$ 8$ million in 2012 due to a strengthening U.S. dollar as compared to the South African Rand and Australian dollar, as well as a net noncash gain of $\$ 24$ million related to the realization of cumulative translation adjustments on the liquidation of two non-operating subsidiaries and increased interest income of $\$ 6$ million, partially offset by a $\$ 4$ million loss on the early extinguishment of debt.

The negative effective tax rate for 2013 differs from the Australian statutory rate of $30 \%$ primarily due to withholding tax accruals, valuation allowances in various jurisdictions, and income in foreign jurisdictions taxed at rates different than $30 \%$. The negative effective tax rate for 2012 differs from the Australian statutory tax rate of $30 \%$ as a result of the release of a valuation allowance in a foreign jurisdiction and as a consequence of re-domiciling certain subsidiaries in Australia. Additionally, 2012 was impacted by continued valuation allowances in the United States and income in foreign jurisdictions taxed at rates lower than $30 \%$, and the gain on bargain purchase which was recorded net of the financial tax impact and is not subject to income tax in any jurisdiction.

## Operations Review of Segment Revenue and Profit

## Net Sales

$\left.\begin{array}{lcccc} & \text { Year Ended December 31, } \\ \text { 2013 } & \mathbf{2 0 1 2} & \text { Change } \\ \text { (Millions of } \mathbf{U} . \text {. dollars) }\end{array}\right)$

Mineral Sands segment

Net sales during 2013 increased 45\% compared to the same periods in 2012 primarily due to the acquired business which contributed an incremental $\$ 461$ million during 2013 versus 2012. Volumes also increased by $\$ 177$ million. These factors were offset by lower selling prices of $\$ 291$ million. Minerals Sands selling prices declined across most product lines, especially zircon and titanium feedstock (which includes a portion sold to our pigments business). Minerals sales volumes were higher most notably for zircon and slag fines to external customers. Additionally, during 2013, we experienced increased shipments of titanium feedstock to our pigments business, as we achieve full internal sourcing. During 2013, the effect of changes in foreign currency negatively impacted mineral sands net sales by $\$ 4$ million.

## Pigment segment

Pigment segment net sales decreased 6\% during 2013 as compared to 2012 primarily due to a decrease in selling prices and mix of $\$ 304$ million, offset by higher volumes of $\$ 220$ million. The volume impact reflects increased shipments to the Asia-Pacific, European and North American regions. Lower prices in the pigment business primarily resulted from softening market demand in late 2011 and early 2012, which accelerated in the latter half of 2012 and into early 2013. Pricing remained relatively constant throughout 2013. During 2013, the effect of changes in foreign currency translation positively impacted pigment net sales by $\$ 7$ million.

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## Corporate and Other

Corporate and Other includes our electrolytic and other chemical products business. Net sales remained flat during 2013 as compared to 2012, as increased sales of electrolytic manganese dioxide ( EMD ) were essentially offset by lower sales of other product lines within this business.

## Eliminations

Eliminations include the impact of transactions between our segments, principally sales from our Mineral Sands business to our Pigment business. The elimination in 2013 was significantly higher than 2012 principally due to incremental sales of $\$ 188$ million from the acquired Mineral Sands business. Lower selling prices for synthetic rutile and titanium slag were essentially offset by higher volumes of the same products.

## Income (Loss) from Operations

$\left.\begin{array}{lcccc} & \text { Year Ended December 31, } \\ \text { 2013 } & \text { 2012 } & \text { Change } \\ \text { (Millions of U.S. dollars) }\end{array}\right)$

## Mineral Sands segment

During 2013, income from operations increased $53 \%$ compared to 2012 . The acquired businesses contributed an incremental $\$ 123$ million to segment income from operations during 2013. The remaining decrease of $\$ 41$ million during 2013 was primarily attributable to a $\$ 291$ million decrease in selling prices offset by lower costs of $\$ 107$ million, higher volumes of $\$ 95$ million, and favorable currency translation of $\$ 48$ million. Cost of goods sold includes a net credit of $\$ 32$ million in 2013 related to purchase accounting adjustments for inventory step-up and unfavorable contract amortization compared to a net noncash charge \$137 million in 2012.

During 2013, income from operations decreased over $100 \%$ compared to 2012, which was primarily driven by lower selling prices and mix of $\$ 303$ million, offset partially by lower ore and production costs.

## Corporate and Other

During 2013, Corporate and Other improved by $\$ 69$ million compared to prior year. The improvement is attributable to one-time costs associated with the acquisition of the Mineral Sands business of $\$ 94$ million in 2012, which are offset by increases in professional services and spending related to corporate initiatives and to a slightly higher loss from operations of the electrolytic and other chemical products business during 2013.

## Eliminations

The net impact from operations in Eliminations reflects the change of the profit in inventory sold from our Mineral Sands business that is still held in inventory by our Pigment business at the end of the period. The benefit in 2013 versus 2012 principally reflects the lower margins of our Mineral Sands products which reflect lower selling prices.

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Year Ended December 31, 2012 Compared to the Combined Twelve Month Period Ended December 31, 2011

|  | Year <br> Ended <br> December <br> 2012 | Ele | Months ded ber 31, 11 ons of $\mathbf{U}$ | $\begin{aligned} & \text { Pred } \\ & \text { One } \end{aligned}$ | $\begin{aligned} & \text { cessor } \\ & \text { Month } \\ & \text { ded } \\ & \text { ary 31, } \\ & 11 \\ & \text { ollars) } \end{aligned}$ |  | hange |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Sales | \$ 1,832 | \$ | 1,543 | \$ | 108 | \$ | 181 |
| Cost of goods sold | 1,568 |  | 1,104 |  | 83 |  | 381 |
| Gross Profit | 264 |  | 439 |  | 25 |  | (200) |
| Selling, general and administrative expenses | (239) |  | (152) |  | (5) |  | (82) |
| Litigation/arbitration settlement |  |  | 10 |  |  |  | (10) |
| Provision for environmental remediation and restoration, ne of reimbursements |  |  | 5 |  |  |  | (5) |
| Income from Operations | 25 |  | 302 |  | 20 |  | (297) |
| Interest and debt expense | (65) |  | (30) |  | (3) |  | (32) |
| Gain on bargain purchase | 1,055 |  |  |  |  |  | 1,055 |
| Reorganization income |  |  |  |  | 613 |  | (613) |
| Other income (expense) | (7) |  | (10) |  | 2 |  | 1 |
| Income before Income Taxes | 1,008 |  | 262 |  | 632 |  | 114 |
| Income tax benefit (provision) | 125 |  | (20) |  | (1) |  | 146 |
| Net Income | \$ 1,133 | \$ | 242 | \$ | 631 | \$ | 260 |

All references to 2011 refer to the combined twelve month period ended December 31, 2011, which includes the Successor period and the Predecessor period, unless otherwise indicated.

Net sales for 2012 increased $11 \%$ from 2011. During 2012 and 2011, $68 \%$ and $86 \%$, respectively, of our net sales were generated from our Pigment business. The increase in net sales for 2012 reflects the impact of the acquired businesses, higher selling prices in all of our businesses, partially offset by lower sales volumes. The acquired businesses contributed $\$ 524$ million to consolidated net sales during 2012. Higher prices resulted from a strong market in early-to-mid 2011 and the carryover of price increases from 2011. As market demand softened in late 2011 and early 2012, we began to experience price erosion which accelerated in the latter half of 2012. During 2012, sales volumes declined in both the Mineral Sands and Pigment businesses due to simultaneous market weakness in China, Europe, and North America. Foreign currency exchange rates negatively impacted net sales by $\$ 25$ million during 2012 as compared to 2011.

Cost of goods sold increased $32 \%$ compared to prior year which reflects the inclusion of the acquired business, higher Pigment costs, primarily for raw materials and chemical products, as well as higher per unit costs due to lower capacity utilization during 2012, partially offset by a decrease in sales volumes. Cost of goods sold for 2012 includes $\$ 152$ million of net non-cash amortization of inventory step-up and unfavorable ore sales contracts liability as a result of our purchase price allocation. During 2012, we reduced Pigment production volumes in response to decreased sales
volumes. Unfavorable exchange rate changes increased cost of sales by $\$ 52$ million in 2012 as compared to 2011.
Our gross profit decreased to $14 \%$ of net sales as compared to $28 \%$ of net sales in 2011. Noncash amortization of \$152 million as a result of purchase accounting impacted the 2012 gross profit by $8 \%$, with the remainder primarily due to higher costs and lower sales volumes, partially offset by higher selling prices.

Selling, general and administrative expenses increased $52 \%$ in 2012 compared to 2011. During 2012, the acquired business accounted for approximately $\$ 20$ million of our total selling, general and administrative costs. The remaining increase is primarily attributable to one-time costs incurred in connection with the acquisition of the Mineral Sands business of $\$ 94$ million, comprised of transfer taxes of $\$ 37$ million and other transaction costs and severance of $\$ 36$ million, as well as share-based compensation awards of $\$ 21$ million.

The increase in interest and debt expense is primarily attributable to interest expense on the Notes, the asset based lending facilities and the Term Facility, as well as an increase in the amortization of deferred debt issuance costs. Interest expense related to the Notes was $\$ 21$ million during 2012. Interest expense related to the Term Facility was $\$ 29$ million during 2012 versus $\$ 30$ million in 2011. Amortization of deferred debt issuance costs and discount on debt increased $\$ 9$ million during 2012 due to refinancing of the Wells Revolver. In connection with obtaining the Term Facility, we incurred debt issuance costs of $\$ 17$ million, of which $\$ 5$ million was paid in 2011 and $\$ 12$ million was paid in 2012. We also incurred $\$ 17$ million of issuance costs in connection with the Notes.

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The acquisition of the Mineral Sands business resulted in a one-time gain on bargain purchase of $\$ 1,055$ million, which was based on the estimated fair value of the assets and liabilities assumed.

We recognized reorganization income of $\$ 613$ million during 2011 relating to a $\$ 659$ million gain recognized due to implementation of fresh-start accounting and the discharge of debt and satisfaction of claims, partially offset by $\$ 46$ million of reorganization expenses including legal and professional fees, claims adjustments and other fees related to a $\$ 185$ million rights offering and debt financing.

The negative effective tax rate for 2012 differs from the Australian statutory tax rate of $30 \%$ as a result of the release of a valuation allowance in a foreign jurisdiction and as a consequence of re-domiciling certain subsidiaries in Australia. Because the Australian tax laws provide for a resetting of the tax basis of the business assets to market value, we recorded a tax benefit related to this market value basis adjustment. The overall tax benefit from this basis adjustment was partially offset by a valuation allowance established for the portion of the tax benefit which we believe will not be realized. Because this basis change did not pertain to an entity acquired in the Transaction, this net tax benefit was recorded through tax expense and did not impact our gain on bargain purchase. Additionally, 2012 was impacted by continued valuation allowances in the United States and income in foreign jurisdictions taxed at rates lower than $30 \%$, and the gain on bargain purchase which was recorded net of the financial tax impact and is not subject to income tax in any jurisdiction.

The effective tax rates for the eleven-month period ended December 31, 2011 differs from the U.S. statutory rate of $35 \%$ primarily due to valuation allowances in the United States and income in foreign jurisdictions taxed at rates lower than $35 \%$. In the one month ended January 31, 2011, the effective tax rate for the period differs from the U.S. statutory rate of $35 \%$ primarily due to fresh-start adjustments, which were recorded net of tax. Additionally, the one-month period effective tax rate was impacted by valuation allowances in multiple jurisdictions and income in foreign jurisdictions taxed at rates lower than $35 \%$.

## Operations Review of Segment Revenue and Profit

## Net Sales

|  | Suc Year Ended December 31 2012 | Pessor P Eleven Months Ended December 31, J 2011 (Millions of U. |  | $\begin{aligned} & \text { cessor } \\ & \text { e } \\ & \text { nth } \\ & \text { led } \\ & \text { ry } 31, \\ & 11 \\ & \text { lars) } \end{aligned}$ | Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mineral Sands segment | \$ 760 | \$ 160 | \$ | 8 | \$ 592 |
| Pigment segment | 1,246 | 1,327 |  | 89 | (170) |
| Corporate and Other | 128 | 133 |  | 14 | (19) |
| Eliminations | (302) | (77) |  | (3) | (222) |
| Net Sales | \$ 1,832 | \$ 1,543 | \$ | 108 | \$ 181 |

Mineral Sands segment

Net sales during 2012 increased more than $100 \%$ compared to the same periods in 2011 due to the acquired business which, on a segment basis, contributed $\$ 489$ million in revenue for the period since the acquisition. The remaining increase was primarily comprised of a $\$ 125$ million increase in sales prices, offset by a $\$ 22$ million decrease in sales volumes. Mineral Sands sales prices, primarily rutile used in the production of $\mathrm{TiO}_{2}$, increased as a result of strong global demand during the period when forward pricing was negotiated. Synthetic rutile price per metric ton increased more than $149 \%$ during 2012 as compared to 2011, while the natural rutile price per metric ton increased approximately $176 \%$ during 2012, as compared to 2011. Mineral Sands volumes decreased during 2012 due to slowing global demand for $\mathrm{TiO}_{2}$ in 2012. Rutile volumes decreased approximately $45 \%$ during 2012, while the zircon volumes decreased approximately $30 \%$ during 2012.

## Pigment segment

Pigment segment net sales decreased $12 \%$ during 2012, as compared to 2011 . The decrease is primarily due to a $\$ 295$ million in lower sales volumes, partially offset by a $\$ 152$ million increase in selling prices. Changes in foreign currency rates negatively impacted net sales by $\$ 25$ million.

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## Corporate and Other

Corporate and Other includes our Electrolytic business. Electrolytic net sales were essentially flat from year to year with higher selling prices for sodium chlorate offsetting lower volumes of the same product. The overall decrease from 2011 to 2012 is related to the transfer of the sulfuric acid business to an environmental trust upon emergence from bankruptcy.

## Eliminations

Eliminations include the impact of transactions between our segments, principally sales from our Mineral Sands business to our Pigment business. The elimination in 2012 was significantly higher than 2011 principally due to incremental sales resulting from the acquired Mineral Sands business and to a lesser extent, higher selling prices.

## Income from Operations

|  | Year <br> Ended <br> December <br> 2012 | ccessor <br> Eleven Months Ended 3December 31, 2011 <br> (Millions of U | Predecessor One <br> s Month Ended <br> January 31, 2011 <br> U.S. dollars) | Change |
| :---: | :---: | :---: | :---: | :---: |
| Mineral Sands segment | \$ 156 | \$ 42 | \$ 2 | \$ 112 |
| Pigment segment | 57 | 323 | 20 | (286) |
| Corporate and Other | (139) | (54) | (1) | (84) |
| Eliminations | (49) | (9) | (1) | (39) |
| Income from operations | 25 | 302 | 20 | \$ (297) |
| Interest and debt expense | (65) | (30) | (3) |  |
| Other income (expense) | (7) | (10) | 2 |  |
| Gain on bargain purchase | 1,055 |  |  |  |
| Reorganization income |  |  | 613 |  |
| Income before Income Taxes | 1,008 | 262 | 632 |  |
| Income tax benefit (provision) | 125 | (20) | (1) |  |
| Net Income | \$ 1,133 | \$ 242 | \$ 631 |  |

## Mineral Sands segment

During 2012, income from operations increased more than $100 \%$ compared to 2011. The increase is attributable to the acquired business which contributed $\$ 8$ million to segment income from operations during 2012. The remaining net increase of $\$ 104$ million during 2012 is primarily attributable to the $\$ 125$ million increase in selling prices, as discussed above. Cost of goods sold in the Mineral Sands segment in 2012 includes $\$ 136$ million related to noncash
amortization of inventory step-up and unfavorable ore sales contracts liability as a result of our purchase price allocation.

## Pigment segment

During 2012, income from operations decreased $83 \%$ compared to 2011, which was primarily driven by higher costs, specifically for feedstock ores and other chemicals of $\$ 352$ million, and lower sales volumes of $\$ 86$ million, partially offset by the higher pricing of $\$ 152$ million discussed above. Pigment segment cost of goods sold during 2012 includes $\$ 16$ million of noncash inventory step-up amortization due to our purchase price allocation.

## Corporate and Other

The decrease is primarily attributable to higher selling general and administrative costs of $\$ 58$ million and a litigation/arbitration settlement of $\$ 10$ million in 2011. Selling, general and administrative expenses increased primarily due to one-time costs incurred in connection with the acquisition of the Mineral Sands business of $\$ 94$ million, comprised of transfer taxes of $\$ 37$ million and other transaction costs and severance of $\$ 36$ million, as well as share-based compensation awards of $\$ 21$ million.

## Eliminations

The net impact from operations in Eliminations reflects the change of the profit in inventory sold from our Mineral Sands business that are still held in inventory by our Pigment business at the end of the period. The charge in 2012 principally reflects the increase in volumes due to the acquired Mineral Sands business, and to a lesser extent, higher margins of our Mineral Sands products which are primarily attributable to higher selling prices versus 2011.

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## Non-U.S. GAAP Financial Measures

EBITDA and Adjusted EBITDA, which are used by management to measure performance, are not presented in accordance with accounting principles generally accepted in the United States ( U.S. GAAP ). Management believes that EBITDA is useful to investors, as it is commonly used in the industry as a means of evaluating operating performance. We do not intend for these non-U.S GAAP financial measures to be a substitute for any U.S. GAAP financial information. Readers of these statements should use these non-U.S. GAAP financial measures only in conjunction with the comparable U.S. GAAP financial measures. Because other companies may calculate EBITDA and Adjusted EBITDA differently than we do, EBITDA and Adjusted EBITDA, as presented herein, may not be comparable to similarly titled measures reported by other companies.

Management believes these non-U.S. GAAP financial measures:

Reflect our ongoing business in a manner that allows for meaningful period-to-period comparison and analysis of trends in our business, as they exclude income and expense that are not reflective of ongoing operating results;

Provide useful information in understanding and evaluating our operating results and comparing financial results across periods;

Provide a normalized view of our operating performance by excluding items that are either noncash or non-recurring in nature;

Assist investors in assessing our compliance with financial covenants under our debt instruments; and,

Adjusted EBITDA is one of the primary measures management uses for planning and budgeting processes and to monitor and evaluate financial and operating results.
The following table reconciles net income to EBITDA and Adjusted EBITDA for the periods presented:


| EBITDA | 394 |  | 1,282 |  | 370 |  | 639 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Share-based compensation | 17 |  | 32 |  | 14 |  |  |
| Amortization of inventory step-up and unfavorable ore sales contracts liability | (32) |  | 152 |  |  |  |  |
| Net gain on liquidation of non-operating subsidiaries | (24) |  |  |  |  |  |  |
| Gain on bargain purchase |  |  | $(1,055)$ |  |  |  |  |
| Transaction and financial statement restatement costs (1) |  |  | 73 |  | 39 |  |  |
| Fresh-start accounting and reorganization items (2) |  |  |  |  | 36 |  | (613) |
| Unrealized and intercompany foreign currency remeasurement | (20) |  | 6 |  | 7 |  | (1) |
| Other items (3) | 27 |  | 13 |  | 2 |  | (1) |
| Adjusted EBITDA | \$ 362 | \$ | 503 | \$ | 468 | \$ | 24 |

(1) During 2012, transaction costs consist of costs associated with the acquisition of the mineral sands business, including banker fees, legal and professional fees, as well as costs associated with the preparation and amending of the registration statement on Form S-4 filed with the Securities and Exchange Commission in connection with the Transaction and costs associated with the integration of the mineral sands business that occurred after the closing of the Transaction. During the eleven months ended December 31, 2011, transaction costs and financial statement restatement costs include expenses related to the Transaction, fresh-start accounting fees, costs associated with restating Tronox Incorporated s environmental reserves, and the auditing of the historical financial statements. Costs associated with the Transaction include legal and professional fees related to due diligence and transaction advice as well as investment banking fees.
(2) Includes cash and non-cash related charges incurred related to the Chapter 11 bankruptcy proceedings such as contract termination fees, prepetition obligations, debtor-in-possession financing costs, and legal and professional fees.

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(3) Includes noncash pension and postretirement costs, accretion expense, severance expense, asset write-offs, and other non-recurring items.

## Financial Condition and Liquidity

The following table provides information for the analysis of our historical financial condition and liquidity:

| December 31, |  |  |
| :---: | :---: | :---: |
| 2013 | $\mathbf{2 0 1 2}$ |  |
| Billions of | U.S. dollars) |  |
| 1,478 | $\$$ | 716 |
| 5,699 | $\$$ | 5,511 |
| 2,413 | $\$$ | 1,615 |
| 2,290 | $\$$ | 1,706 |
| 935 | $\$$ | 929 |

(1) Represents excess of current assets over current liabilities.
(2) Represents excess of debt over cash and cash equivalents.

Our total liquidity at December 31, 2013 was $\$ 1,774$ million, which was comprised of $\$ 210$ million available under the $\$ 300$ million UBS Revolver (as defined below), $\$ 86$ million available under the ABSA Revolver (as defined below), and $\$ 1,478$ million in cash and cash equivalents. At December 31, 2013, we had $\$ 25$ million in letters of credit issued against the UBS Revolver.

At December 31, 2013, we held $\$ 1,478$ million in cash and cash equivalents in these respective jurisdictions: $\$ 775$ million in Europe, $\$ 318$ million in Australia, $\$ 218$ million in the United States, and $\$ 167$ million in South Africa. Our credit facilities limit transfers of funds from subsidiaries in the United States to certain foreign subsidiaries.

Tronox Limited has foreign subsidiaries with positive undistributed earnings at December 31, 2013. We have made no provision for deferred taxes related to these undistributed earnings because they are considered to be indefinitely reinvested in the foreign jurisdictions

The use of our cash includes servicing our interest and debt repayment obligations, making pension contributions and funding capital expenditures for innovative initiatives, productivity enhancements and maintenance and safety requirements.

## Capital Resources

## Short-Term Debt

We have a $\$ 300$ million global senior secured asset-based syndicated revolving credit facility with UBS AG (the UBS Revolver ) and a R900 million (approximately $\$ 86$ million at December 31, 2013) revolving credit facility with ABSA Bank Limited acting through its ABSA Capital Division (the ABSA Revolver ). As of December 31, 2013, we had not drawn on either revolver. At December 31, 2013, we had outstanding letters of credit, bank guarantees and performance bonds of approximately $\$ 45$ million, of which $\$ 25$ million in letters of credit were issued against the UBS Revolver and $\$ 18$ million were bank guarantees issued by ABSA.

See Note 15 of Notes to Consolidated Financial Statements for additional information related to our short-term and long-term debt.

## Debt Covenants

As of and for the year ended December 31, 2013, we were in compliance with all our debt covenants. See Note 15 of Notes to Consolidated Financial Statements for additional information related to our debt covenants.

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## Cash Flows

The following table presents cash flow for the periods indicated:

| Successor |  |  |  |  | Predecessor <br> One <br> Month <br> Ended <br> January 31, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year Ended December 31, 2013 |  | r <br> ed <br> er 31, <br> 2 <br> illions | Ele <br> De <br> f U.S | Months ed 31, 11 lars) |  |  |
| \$ 337 | \$ | 118 | \$ | 263 | \$ | (283) |
| (171) |  | (52) |  | (132) |  | (6) |
| 614 |  | 490 |  | (35) |  | 208 |
| (18) |  | 6 |  | (3) |  |  |

Net increase (decrease) in cash and $\begin{array}{lllllll}\text { cash equivalents } & \$ 762 & \$ & 562 & \$ & 93 & \$\end{array}$

Cash Flows from Operating Activities The source of funds during 2013 was primarily attributable to a decrease in inventory offset by cash used in operations. The source of funds during 2012 was primarily attributable to positive operating results and the collection of accounts receivable, partially offset by increased inventories. The source of funds in the eleven month period ended December 31, 2011 reflects the strong operating performance during 2011 as pricing increased throughout the year, while the use of funds during the one month ended January, 31, 2011, reflects our emergence from bankruptcy, including the funding of the environmental and tort trusts, the payment of claims and professional fees in cash, and clearance of our liabilities subject to compromise.

Cash Flows from Investing Activities The use of funds for all periods presented is primarily attributable to capital expenditure purchases. Capital expenditures during 2013, 2012, the eleven months ended December 31, 2011 and the one month ended January 31, 2011 were $\$ 172$ million, $\$ 166$ million, $\$ 133$ million and $\$ 6$ million, respectively. Additionally, during 2012, capital expenditures were offset by net cash received in the Transaction of $\$ 114$ million. Capital expenditures for 2014 are expected to be approximately $\$ 250$ million.

Cash Flows from Financing Activities Net cash provided by financing activities during 2013 was primarily attributable to cash proceeds from borrowings, slightly offset by cash used in the repayment of debt, payment of debt issuance costs, and dividends paid. During 2013, we refinanced our Senior Secure Term Facility with the Term Loan resulting in cash inflows of $\$ 945$ million, which was offset by a $\$ 149$ million repayment of the Senior Secured Delayed Draw Term Loan, a $\$ 29$ million repayment of the ABSA Revolver, $\$ 8$ million of principal repayments on the Term Loan, and repayments of other debt of $\$ 3$ million. Additionally, during 2013 we paid dividends of $\$ 115$ million and debt issuance costs of $\$ 29$ million.

During 2012, cash used included merger consideration paid and Class A share repurchases. Cash used in the eleven months ended December 31, 2011 is primarily attributable to the repayment of debt and payment of debt issuance costs, slightly offset by cash proceeds from borrowings. Net cash received in the one month ended January 31, 2011 is primarily attributable to proceeds from the rights offering, as well as cash proceeds from borrowings.

## Contractual Obligations

The following table sets forth information relating to our contractual obligations as of December 31, 2013:

|  | Total | Contractual Obligation Payments Due by Year (3)(4) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} 1-3 \\ \text { years } \\ \text { of U.S } \end{gathered}$ | $\begin{gathered} \text { 3-5 } \\ \text { years } \\ \text { ollars) } \end{gathered}$ |  |  |
| Long-term debt and lease financing (including interest) (1) | \$ 3,254 | \$ | 147 | \$ 290 | \$ 284 | \$ | 2,533 |
| Purchase obligations (2) | 858 |  | 253 | 263 | 182 |  | 160 |
| Operating leases | 104 |  | 43 | 39 | 16 |  | 6 |
| Asset retirement obligations | 96 |  | 7 | 11 | 5 |  | 73 |
| Total | \$4,312 | \$ | 450 | \$ 603 | \$ 487 | \$ | 2,772 |

(1) We calculated the Term Loan interest at a base rate of $1 \%$ plus a margin of $3.5 \%$. See Note 15 of Notes to Consolidated Financial Statements.
(2) Includes obligations to purchase requirements of process chemicals, supplies, utilities and services. We have various purchase commitments extending through 2028 for materials, supplies, and services entered into in the ordinary course of business.

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Included in the purchase commitments table above are contracts which require minimum volume purchases that extend beyond one year or are renewable annually and have been renewed for 2014. Certain contracts allow for changes in minimum required purchase volumes in the event of a temporary or permanent shutdown of a facility. We believe that all of our purchase obligations will be utilized in our normal operations.
(3) The table above excludes contingent obligations, as well as any possible payments for uncertain tax positions and payments pursuant to our tax receivable agreement, given the inability to estimate the possible amounts and timing of any such payments. See Note 6 of Notes to Consolidated Financial Statements.
(4) The table above excludes commitments pertaining to our pension and other postretirement obligations. See Note 22 of Notes to Consolidated Financial Statements.

## Critical Accounting Policies

The preparation of financial statements in conformity with U.S. GAAP requires management to make certain estimates and assumptions regarding matters that are inherently uncertain and that ultimately affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities. The estimates and assumptions are based on management s experience and understanding of current facts and circumstances. These estimates may differ from actual results. Certain of our accounting policies are considered critical as they are both important to reflect our financial position and results of operations and require significant or complex judgment on the part of management. The following is a summary of certain accounting policies considered critical by management.

## Inventory

Pigment inventories are stated at the lower of actual cost or market, net of allowances for obsolete and slow-moving inventory. The cost of finished goods inventories is determined using the first-in, first-out method. Carrying values include material costs, labor, and associated indirect manufacturing expenses. Costs for materials and supplies, excluding ore, are determined by average cost to acquire. Raw materials are carried at actual cost. Mineral Sands inventories are stated at a weighted-average cost of production. We periodically review the cost of our inventory in comparison to its net realizable value. We also periodically review our inventory for obsolescence (inventory that is no longer marketable for its intended use). In either case, we record any write-down equal to the difference between the cost of inventory and its estimated net realizable value based on assumptions about alternative uses, market conditions and other factors.

## Long-Lived Assets

Key estimates related to long-lived assets (property, plant and equipment, mineral leaseholds, and intangible assets) include useful lives, recoverability of carrying values, and the existence of any retirement obligations. As a result of future decisions, such estimates could be significantly modified. The estimated useful lives of property, plant and equipment range from three to forty years, and depreciation is recognized on a straight-line basis. Useful lives are estimated based upon our historical experience, engineering estimates, and industry information. These estimates include an assumption regarding periodic maintenance and an appropriate level of annual capital expenditures to maintain the assets. Mineral leaseholds are depreciated over their useful lives as determined under the units of production method. Intangible assets with finite useful lives are amortized on the straight-line basis over their estimated useful lives. The amortization methods and remaining useful lives are reviewed quarterly.

We evaluate the recoverability of the carrying value of long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Under such circumstances, we assess whether the projected undiscounted cash flows of our long-lived assets are sufficient to recover the existing unamortized cost of our long-lived assets. If the undiscounted projected cash flows are not sufficient, we calculate the impairment amount by
discounting the projected cash flows using our weighted-average cost of capital. The amount of the impairment is written off against earnings in the period in which the impairment is determined.

## Asset Retirement Obligations

To the extent a legal obligation exists, an asset retirement obligation (ARO ) is recorded at its estimated fair value and accretion expense is recognized over time as the discounted liability is accreted to its expected settlement value. Fair value is measured using expected future cash outflows discounted at our credit-adjusted risk-free interest rate. No market-risk premium has been included in our calculation of ARO balances since we can make no reliable estimate. Our consolidated financial statements classify accretion expense related to asset retirement obligations as a production cost, which is included in Cost of goods sold on the Consolidated Statements of Operations.

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We used the following assumptions in determining asset retirement obligations associated with mine closure and rehabilitation costs:
inflation rates 2.5\%-5.3\% per year;
credit adjusted risk-free interest rate of $4.52 \%-7 \%$; and,
life of mines of 11-39 years at December 31, 2013.

## Income Taxes

We have operations in several countries around the world and are subject to income and similar taxes in these countries. The estimation of the amounts of income tax involves the interpretation of complex tax laws and regulations and how foreign taxes affect domestic taxes, as well as the analysis of the realizability of deferred tax assets, tax audit findings and uncertain tax positions. Although we believe our tax accruals are adequate, differences may occur in the future, depending on the resolution of pending and new tax matters.

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance is provided against a deferred tax asset when it is more likely than not that all or some portion of the deferred tax asset will not be realized. We periodically assess the likelihood that we will be able to recover our deferred tax assets, and reflect any changes in our estimates in the valuation allowance, with a corresponding adjustment to earnings or other comprehensive income (loss) as appropriate. ASC 740, Income Taxes, requires that all available positive and negative evidence be weighted to determine whether a valuation allowance should be recorded.

The amount of income taxes we pay are subject to ongoing audits by federal, state and foreign tax authorities, which may result in proposed assessments. Our estimate for the potential outcome for any uncertain tax issue is highly judgmental. We assess our income tax positions, and record tax benefits for all years subject to examination based upon our evaluation of the facts, circumstances and information available at the reporting date. For those tax positions for which it is more likely than not that a tax benefit will be sustained, we record the amount that has a greater than $50 \%$ likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. Interest and penalties are accrued as part of tax expense, where applicable. If we do not believe that it is more likely than not that a tax benefit will be sustained, no tax benefit is recognized.

## Pension and Postretirement Benefits

We provide pension and postretirement healthcare benefits for qualifying employees worldwide. These plans are accounted for and disclosed in accordance with ASC 715, Compensation Retirement Benefits.

## U.S. Plans

The following are considered significant assumptions related to our retirement and postretirement healthcare plans, with a brief description of the methodology used by management to develop the significant assumptions included below:

Discount Rate The discount rates selected for both U.S. plans to determine 2013 and 2012 net periodic cost were $3.75 \%$ and $4.50 \%$, respectively. The discount rates selected for estimating the actuarial present value of the benefit obligations of both U.S. plans were $4.50 \%$ and $3.75 \%$ as of December 31, 2013 and 2012, respectively. These 2013 and 2012 valuation rates were selected based on the results of a cash flow matching analysis, which projected the expected cash flows of the plans using a yield curves model developed from a universe of Aa-graded U.S. currency corporate bonds (obtained from Bloomberg) with at least $\$ 50$ million outstanding. Bonds with features that imply unreliable pricing, a less than certain cash flow, or other indicators of optionality are filtered out of the universe. The remaining universe is categorized into maturity groups, and within each of the maturity groups yields are ranked into percentiles.

Expected Return on Plan Assets In forming the assumption of the U.S. retirement plan s long-term rate of return on plan assets, we took into account the expected earnings on funds already invested, earnings on contributions expected to be received in the current year, and earnings on reinvested returns. The long-term rate of return estimation methodology for U.S. plans is based on a capital asset pricing model using historical data and a forecasted earnings model. An expected return on plan assets analysis is performed which incorporates the current portfolio allocation, historical asset-class returns and an assessment of expected future performance using asset-class risk factors.

Health Care Cost Trend Rates At December 31, 2013, the assumed health care cost trend rates used to measure the expected cost of benefits covered by the U.S. postretirement healthcare plan were $8 \%$ in 2014, gradually declining to $5 \%$ in 2020 and thereafter. A $1 \%$ increase in the assumed health care cost trend rate for each future year would increase the accumulated postretirement benefit obligation at December 31, 2013 by $\$ 2$ million, while the aggregate of the service and interest cost components of the 2013 net periodic postretirement cost would increase by less than $\$ 1$ million. A 1\% decrease in the

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trend rate for each future year would reduce the accumulated benefit obligation at December 31, 2013 by $\$ 1$ million and decrease the aggregate of the service and interest cost components of the net periodic postretirement cost for 2013 by less than $\$ 1$ million.

## Foreign Benefit Plans

We currently provide a defined benefit retirement plan (funded) for qualifying employees in The Netherlands. The various assumptions used and the attribution of the costs to periods of employee service are fundamental to the measurement of net periodic cost and pension obligations associated with the retirement plans. The following are considered significant assumptions related to our Netherlands retirement plan:

Discount Rate The discount rates selected for The Netherlands plan to determine 2013 and 2012 net periodic cost were $3.5 \%$ and $5.25 \%$, respectively. The discount rates selected for estimating the actuarial present value of the benefit obligation of The Netherlands plan was 3.5\% at both December 31, 2013 and 2012, which is based on long-term Euro corporate bond index rates that correlate with anticipated cash flows associated with future benefit payments.

Expected Long-term Rate of Return The expected long-term rate of return assumptions for The Netherlands plan of $4.75 \%$ and $5.25 \%$ at December 31, 2013 and 2012, respectively, were developed considering the portfolio mix and country-specific economic data that includes the expected long-term rates of return on local government and corporate bonds.

Rate of Compensation Increases We determine our rate of compensation assumptions based on our long-term plans for compensation increases specific to employee groups covered. At both December 31, 2013 and 2012, the rate of compensation increases for The Netherlands plan was 3.5\%.

## Recent Accounting Pronouncements

See Note 4 of Notes to Consolidated Financial Statements for recently issued accounting pronouncements.

## Environmental Matters

We are subject to a broad array of international, federal, state, and local laws and regulations relating to safety, pollution, protection of the environment, and the generation, storage, handling, transportation, treatment, disposal, and remediation of hazardous substances and waste materials. In the ordinary course of business, we are subject to frequent environmental inspections and monitoring, and occasional investigations by governmental enforcement authorities. Under these laws, we are or may be required to obtain or maintain permits or licenses in connection with our operations. In addition, under these laws, we are or may be required to remove or mitigate the effects on the environment of the disposal or release of chemical, petroleum, low-level radioactive and other substances at our facilities. We may incur future costs for capital improvements and general compliance under environmental, health, and safety laws, including costs to acquire, maintain, and repair pollution control equipment. Environmental laws and regulations are becoming increasingly stringent, and compliance costs are significant and will continue to be significant in the foreseeable future. There can be no assurance that such laws and regulations or any environmental law or regulation enacted in the future is not likely to have a material effect on our business. We are in compliance with applicable environmental rules and regulations in all material respects. Currently, we do not have any outstanding notices of violations or orders from regulatory agencies.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to various market, credit, operational, and liquidity risks in the normal course of business, which are discussed below. We manage these risks through normal operating and financing activities and, when appropriate, through the use of derivative instruments. We do not invest in derivative instruments for speculative purposes, but historically have entered into, and may enter into, derivative instruments for hedging purposes in order to reduce the exposure to fluctuations in interest rates, natural gas prices and exchange rates.

## Commodity Price Risk

A substantial portion of our products and raw materials are commodities that reprice as market supply and demand fundamentals change. Accordingly, product margins and the level of our profitability tend to vary with changes in the business cycle, and may do so in the near term as ore prices and pigment prices are expected to fluctuate over the next few years. We try to protect against such instability through various business strategies. These include provisions in sales contracts allowing us to pass on higher raw material costs through timely price increases and formula price contracts to transfer or share commodity price risk.

## Credit Risk

A significant portion of our liquidity is concentrated in trade accounts receivable that arise from sales of $\mathrm{TiO}_{2}$ and titanium feedstock to customers in the $\mathrm{TiO}_{2}$ industry. The industry concentration has the potential to impact our overall exposure to credit risk,

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either positively or negatively, in that our customers may be similarly affected by changes in economic, industry or other conditions. We perform ongoing credit evaluations of our customers and use credit risk insurance policies from time to time, as deemed appropriate, to mitigate credit risk but generally do not require collateral. In addition, due to our international operations, we are subject to potential trade restrictions and sovereign risk in certain countries we operate in. We maintain allowances for potential credit losses based on historical experience. During 2013, our ten largest pigment customers and ten largest third-party mineral sands customers represented approximately $27 \%$ and $13 \%$, respectively, of net sales; however, no single customer accounted for more than $10 \%$ of total net sales.

## Interest Rate Risk

Our exposure to interest rate risk is minimized by the fact that our $\$ 1.5$ billion of floating rate debt includes a Libor floor of $1 \%$. As such, Libor would need to increase from the rate in effect at December 31, 2013 to greater than $1 \%$ before our borrowing rate would increase. Using a sensitivity analysis as of December 31, 2013, a hypothetical $1 \%$ increase in interest rates would result in an increase to pre-tax income of approximately $\$ 11$ million on an annualized basis. This is due to the fact that earnings on our floating rate financial assets of $\$ 1.5$ billion at December 31, 2013 would increase by the full $1 \%$ while the interest expense on our floating rate debt would increase by less than the full $1 \%$.

## Foreign Exchange Risk

We manufacture and market our products in a number of countries throughout the world and, as a result, are exposed to changes in foreign currency exchange rates, particularly in Australia, South Africa, and The Netherlands. The exposure is more prevalent in South Africa and Australia as the majority of revenues are earned in U.S. dollars while expenses are primarily incurred in local currencies. The foreign exchange risk in Europe however, is partially mitigated as the majority of revenues and expenses are in the same local currency creating a partially natural hedge. Since we are exposed to movements in the South African Rand and the Australian Dollar versus the U.S. dollar, we have, from time to time, entered into forward contracts to buy and sell foreign currencies as economic hedges for these foreign currency transactions. See Note 17 of Notes to Consolidated Financial Statements.

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## Item 8. Financial Statements and Supplementary Data

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## MANAGEMENT S REPORT ON INTERNAL CONTROLS OVER FINANCIAL REPORTING

Management of Tronox Limited and its subsidiaries is responsible for establishing and maintaining adequate internal controls over financial reporting. Internal controls over financial reporting is a process designed under the supervision of our principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company s financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Our internal controls over financial reporting include those policies and procedures that:
pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of the Company s management and directors; and
provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.
Management assessed the effectiveness of our internal controls over financial reporting as of December 31, 2013. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in the 1992 Internal Control-Integrated Framework. Based on management s assessment and those criteria, management believes that the Company maintained effective internal controls over financial reporting as of December 31, 2013.

Because of its inherent limitations, internal controls over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our independent registered public accounting firm, Grant Thornton LLP, audited our internal controls over financial reporting as of December 31, 2013 as stated in their report which appears under Reports of Independent Registered Public Accounting Firm.

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders

## Tronox Limited

We have audited the accompanying consolidated balance sheets of Tronox Limited and subsidiaries (the Company) as of December 31, 2013 and 2012 (Successor), and the related consolidated statements of operations, comprehensive income (loss), shareholders equity, and cash flows for the years ended December 31, 2013 and 2012 (Successor), the eleven months ended December 31, 2011 (Successor) and the one month ended January 31, 2011 (Predecessor). These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Tronox Limited and subsidiaries as of December 31, 2013 and 2012 (Successor), and the results of its operations and its cash flows for the years ended December 31, 2013 and 2012 (Successor), the eleven months ended December 31, 2011 (Successor) and the one month ended January 31, 2011 (Predecessor) in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 and 27 to the consolidated financial statements, Tronox Incorporated and certain of its subsidiaries ( Predecessor ) filed voluntary petitions for reorganization under Chapter 11 of Title 11 of the United States Bankruptcy Code on January 12, 2009. Material conditions to the Company s Plan of Reorganization were resolved on January 26, 2011 and the Company subsequently emerged from bankruptcy protection. In connection with its emergence from bankruptcy, the Company adopted the guidance for fresh start accounting in accordance with FASB Accounting Standards Codification 852, Reorganizations, as of January 31, 2011.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company s internal control over financial reporting as of December 31, 2013, based on criteria established in the 1992 Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 27, 2014 expressed an unqualified opinion.
/s/ Grant Thornton LLP
Oklahoma City, Oklahoma
February 27, 2014

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders

## Tronox Limited

We have audited the internal control over financial reporting of Tronox Limited and subsidiaries (the Company) as of December 31, 2013, based on criteria established in the 1992 Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management s Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013, based on criteria established in the 1992 Internal Control Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of the Company as of and for the year ended December 31, 2013, and our report dated February 27, 2014 expressed an unqualified opinion on those financial statements.

/s/ Grant Thornton LLP

Oklahoma City, Oklahoma
February 27, 2014

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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF OPERATIONS

(Millions of U.S. dollars, except share and per share data)

|  | YearEndedDecember 31,2013 |  | SuccessorYearEndedDecember 31,2012 |  | Eleven Months Ended December 31, 2011 |  | Predecessor One Month Ended January 31, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Sales | \$ | 1,922 | \$ | 1,832 | \$ | 1,543 | \$ | 108 |
| Cost of goods sold |  | 1,732 |  | 1,568 |  | 1,104 |  | 83 |
| Gross Profit |  | 190 |  | 264 |  | 439 |  | 25 |
| Selling, general and administrative expenses |  | (187) |  | (239) |  | (152) |  | (5) |
| Litigation/arbitration settlement |  |  |  |  |  | 10 |  |  |
| Environmental remediation and restoration reimbursements, net |  |  |  |  |  | 5 |  |  |
| Income from Operations |  | 3 |  | 25 |  | 302 |  | 20 |
| Interest and debt expense |  | (130) |  | (65) |  | (30) |  | (3) |
| Gain on bargain purchase |  |  |  | 1,055 |  |  |  |  |
| Reorganization income |  |  |  |  |  |  |  | 613 |
| Other income (expense) |  | 66 |  | (7) |  | (10) |  | 2 |
| Income (Loss) before Income Taxes |  | (61) |  | 1,008 |  | 262 |  | 632 |
| Income tax benefit (provision) |  | (29) |  | 125 |  | (20) |  | (1) |
| Net Income (Loss) |  | (90) |  | 1,133 |  | 242 |  | 631 |
| Net income (loss) attributable to noncontrolling interest |  | 36 |  | (1) |  |  |  |  |
| Net Income (Loss) attributable to Tronox Limited | \$ | (126) | \$ | 1,134 | \$ | 242 | \$ | 631 |
| Earnings (Loss) per Share, Basic and Diluted (1): |  |  |  |  |  |  |  |  |
| Basic | \$ | (1.11) | \$ | 11.37 | \$ | 3.22 | \$ | 15.28 |
| Diluted | \$ | (1.11) | \$ | 11.10 | \$ | 3.10 | \$ | 15.25 |
| Weighted Average Shares Outstanding (in thousands): |  |  |  |  |  |  |  |  |
| Basic |  | 113,416 |  | 98,985 |  | 74,905 |  | 41,311 |
| Diluted |  | 113,416 |  | 101,406 |  | 78,095 |  | 41,399 |

(1) On June 26, 2012, the Board of Directors of Tronox Limited approved a 5-to-1 share split for holders of Class A ordinary shares and Class B ordinary shares at the close of business on July 20, 2012, by issuance of four additional shares for each share of the same class by way of bonus issue. All references to number of shares and per share data in the Successor s consolidated financial statements have been adjusted to reflect the share split, unless otherwise noted. See Note 19 for additional information regarding the share split.

See notes to consolidated financial statements.

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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

## (Millions of U.S. dollars)

|  | Successor |  |  |  |  | Predecessor One <br> Month <br> Ended <br> January 31, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year Ended December 3 2013 |  | ear <br> ded <br> ber 31, <br> 12 | Eleven Months Ended December 31, 2011 |  |  |  |
| Net Income (Loss) | \$ (90) | \$ | 1,133 | \$ | 242 | \$ | 631 |
| Other Comprehensive Income (Loss): |  |  |  |  |  |  |  |
| Foreign currency translation adjustments | (289) |  | 11 |  | (6) |  | 1 |
| Retirement and postretirement plans: |  |  |  |  |  |  |  |
| Actuarial gains (losses), net of taxes of $\$ 1$ million in 2013, $\$ 7$ million in 2012 and $\$ 2$ million in 2011 | 25 |  | (48) |  | (51) |  |  |
| Amortization of unrecognized actuarial losses, net of taxes of less than $\$ 1$ million in 2013 | 2 |  |  |  |  |  |  |
| Prior service credit, net of taxes of \$1 million in 2013 | 3 |  |  |  |  |  |  |
| Amortization of prior service credit, net of taxes of less than $\$ 1$ million in 2011 |  |  |  |  |  |  | (1) |
| Other comprehensive loss | (259) |  | (37) |  | (57) |  |  |
| Total Comprehensive Income (Loss) | \$ (349) | \$ | 1,096 | \$ | 185 | \$ | 631 |
| Comprehensive Income (Loss) Attributable to Noncontrolling Interest: |  |  |  |  |  |  |  |
| Net income (loss) | 36 |  | (1) |  |  |  |  |
| Foreign currency translation adjustments | (70) |  | 1 |  |  |  |  |
| Comprehensive loss attributable to noncontrolling interest | (34) |  |  |  |  |  |  |
| Comprehensive Income (Loss) Attributable to Tronox Limited | \$ (315) | \$ | 1,096 | \$ | 185 | \$ | 631 |

See notes to consolidated financial statements.

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## TRONOX LIMITED

## CONSOLIDATED BALANCE SHEETS

## (Millions of U.S. dollars, except share and per share data)

|  | December 31, |  |
| :---: | :---: | :---: |
|  | 2013 | 2012 |
| ASSETS |  |  |
| Current Assets |  |  |
| Cash and cash equivalents | \$ 1,478 | \$ 716 |
| Accounts receivable, net of allowance for doubtful accounts | 308 | 391 |
| Inventories | 759 | 914 |
| Prepaid and other assets | 61 | 38 |
| Deferred tax assets | 47 | 114 |
| Total Current Assets | 2,653 | 2,173 |
| Noncurrent Assets |  |  |
| Property, plant and equipment, net | 1,258 | 1,423 |
| Mineral leaseholds, net | 1,216 | 1,439 |
| Intangible assets, net | 300 | 326 |
| Long-term deferred tax assets | 192 | 91 |
| Other long-term assets, net | 80 | 59 |
| Total Assets | \$ 5,699 | \$ 5,511 |
| LIABILITIES AND EQUITY |  |  |
| Current Liabilities |  |  |
| Accounts payable | \$ 164 | \$ 189 |
| Accrued liabilities | 146 | 209 |
| Short-term debt |  | 30 |
| Long-term debt due within one year | 18 | 10 |
| Income taxes payable | 28 | 24 |
| Deferred tax liabilities | 7 | 5 |
| Total Current Liabilities | 363 | 467 |
| Noncurrent Liabilities |  |  |
| Long-term debt | 2,395 | 1,605 |
| Pension and postretirement healthcare benefits | 148 | 176 |
| Asset retirement obligations | 90 | 106 |
| Long-term deferred tax liabilities | 204 | 222 |
| Other long-term liabilities | 62 | 53 |
| Total Liabilities | 3,262 | 2,629 |
| Contingencies and Commitments |  |  |
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| Shareholders Equity |  |  |
| :---: | :---: | :---: |
| Tronox Limited Class A ordinary shares, par value $\$ 0.01 \quad 64,046,647$ shares issued and 62,349,618 shares outstanding at December 31, 2013 and 63,394,298 shares issued and |  |  |
|  |  |  |
| 62,103,989 shares outstanding at December 31, 2012 | 1 | 1 |
| Tronox Limited Class B ordinary shares, par value $\$ 0.01 \quad 51,154,280$ shares issued and outstanding at December 31, 2013 and 2012 |  |  |
| Capital in excess of par value | 1,448 | 1,429 |
| Retained earnings | 1,073 | 1,314 |
| Accumulated other comprehensive loss | (284) | (95) |
| Total Shareholders Equity | 2,238 | 2,649 |
| Noncontrolling interest | 199 | 233 |
| Total Equity | 2,437 | 2,882 |
| Total Liabilities and Equity | \$ 5,699 | \$ 5,511 |

See notes to consolidated financial statements.

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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF CASH FLOWS

## (Millions of U.S. dollars)

|  | SuccessorYear EndedYear EndedDecember 3December 31,$2013 \quad 2012$ |  |  | Predecessor |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  |  |  | Ended December 31, 2011 |  | $\begin{gathered} \text { One Month } \\ \text { Ended } \\ \text { January 31, } \\ 2011 \end{gathered}$ |  |
| Cash Flows from Operating Activities: |  |  |  |  |  |  |  |
| Net income (loss) | \$ (90) | \$ | 1,133 | \$ | 242 | \$ | 631 |
| Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities: |  |  |  |  |  |  |  |
| Depreciation, depletion and amortization | 333 |  | 211 |  | 79 |  | 4 |
| Deferred income taxes | 33 |  | (162) |  | 4 |  | 1 |
| Share-based compensation expense | 17 |  | 32 |  | 14 |  |  |
| Amortization of deferred debt issuance costs and discount on debt | 9 |  | 10 |  | 1 |  |  |
| Pension and postretirement healthcare benefit expense | 9 |  | 6 |  | 5 |  |  |
| Gain on bargain purchase |  |  | $(1,055)$ |  |  |  |  |
| Other noncash items affecting net income (loss) | (57) |  | 201 |  | (7) |  |  |
| Reorganization items: |  |  |  |  |  |  |  |
| Noncash reorganization items |  |  |  |  |  |  | (637) |
| Cash paid for reorganization items |  |  |  |  |  |  | (31) |
| Environmental and tort settlement funding |  |  |  |  |  |  | (286) |
| Contributions to employee pension and postretirement plans | (6) |  | (31) |  | (8) |  |  |
| Changes in assets and liabilities (net of effects of acquisition): |  |  |  |  |  |  |  |
| (Increase) decrease in accounts receivable | 58 |  | 83 |  | (58) |  | (10) |
| (Increase) decrease in inventories | 75 |  | (222) |  | (64) |  | (15) |
| (Increase) decrease in prepaid and other assets | (17) |  | 16 |  | 28 |  | 36 |
| Increase (decrease) in accounts payable and accrued liabilities | (11) |  | (107) |  | (28) |  | 24 |
| Increase (decrease) in taxes payable | (25) |  | 2 |  | 26 |  |  |
| Other, net | 9 |  | 1 |  | 29 |  |  |
| Cash provided by (used in) operating activities | 337 |  | 118 |  | 263 |  | (283) |
| Cash Flows from Investing Activities: |  |  |  |  |  |  |  |
| Capital expenditures | (172) |  | (166) |  | (133) |  | (6) |
| Proceeds from the sale of assets | 1 |  |  |  | 1 |  |  |
| Net cash received in acquisition of minerals sands business |  |  | 114 |  |  |  |  |
| Cash used in investing activities | (171) |  | (52) |  | (132) |  | (6) |


| Cash Flows from Financing Activities: |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Repayments of debt | (189) |  | (585) |  | (45) |  |  |
| Proceeds from borrowings | 945 |  | 1,707 |  | 14 |  | 25 |
| Debt issuance costs and commitment fees | (29) |  | (38) |  | (5) |  | (2) |
| Dividends paid | (115) |  | (61) |  |  |  |  |
| Proceeds from the exercise of warrants and options | 2 |  | 1 |  | 1 |  |  |
| Merger consideration |  |  | (193) |  |  |  |  |
| Class A ordinary share repurchases |  |  | (326) |  |  |  |  |
| Class A ordinary shares purchased for the Employee Participation Plan |  |  | (15) |  |  |  |  |
| Proceeds from rights offering |  |  |  |  |  |  | 185 |
| Cash provided by (used in) financing activities | 614 |  | 490 |  | (35) |  | 208 |
| Effects of Exchange Rate Changes on Cash and Cash Equivalents | (18) |  | 6 |  | (3) |  |  |
| Net Increase (Decrease) in Cash and Cash Equivalents | 762 |  | 562 |  | 93 |  | (81) |
| Cash and Cash Equivalents at Beginning of Period | 716 |  | 154 |  | 61 |  | 142 |
| Cash and Cash Equivalents at End of Period | \$ 1,478 | \$ | 716 | \$ | 154 | \$ | 61 |
| Supplemental Cash Flow Information: |  |  |  |  |  |  |  |
| Interest paid | \$ 123 | \$ | 34 | \$ | 29 | \$ | 3 |
| Income taxes paid | \$ 25 | \$ | 26 | \$ | 8 | \$ |  |

See notes to consolidated financial statements.

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## TRONOX LIMITED

## CONSOLIDATED STATEMENTS OF EQUITY

## (Millions of U.S. dollars)

## TronoxTronox

## LimiteHimited

| Class Class | Capital in | Accumulated |
| :---: | :---: | :---: | :---: |
| A B Tronox Excess | Other | Total |

Ordinaydidacyrporated of RetainđdomprehensifeeasuishareholNens-controllingotal SharesSharesShares par Value Earnings Loss Shares Equity Interest Equity
Successor: Balance at

| February 1, 2011 | \$ | \$ | \$ | \$ | 564 | \$ | \$ |  | \$ |  | \$ | 564 | \$ | \$ | 564 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net income |  |  |  |  |  |  |  |  |  |  |  | 242 |  |  | 242 |
| Other comprehensive loss |  |  |  |  |  |  |  | (57) |  |  |  | (57) |  |  | (57) |
| Share-based compensation |  |  |  |  | 14 |  |  |  |  | (5) |  | 9 |  |  | 9 |
| Shares withheld for claims |  |  |  |  |  |  |  |  |  | (7) |  | (7) |  |  | (7) |
| Warrants exercised |  |  |  |  | 1 |  |  |  |  |  |  | 1 |  |  | 1 |


| Successor: Balance at December 31, 2011 | \$ | \$ | \$ | \$ | 579 | \$ | 242 | \$ | (57) | \$ (12) | \$ | 752 | \$ |  |  | 752 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fair Value of noncontrolling interest on Transaction Date |  |  |  |  |  |  |  |  |  |  |  |  |  | 233 |  | 233 |
| Net income (loss) |  |  |  |  |  |  | 1,134 |  |  |  |  | 1,134 |  | (1) |  | 1,133 |
| Other comprehensive income (loss) |  |  |  |  |  |  |  |  | (38) |  |  | (38) |  | 1 |  | (37) |
| Merger consideration paid |  |  |  |  | (193) |  |  |  |  |  |  | (193) |  |  |  | (193) |
| Issuance of Tronox <br> Limited shares |  |  |  |  | 1,370 |  |  |  |  |  |  | 1,370 |  |  |  | 1,370 |
| Shares-based compensation |  |  |  |  | 5 |  |  |  |  |  |  | 5 |  |  |  | 5 |
| Shares purchased for the Employee Participation Plan |  |  |  |  | (15) |  |  |  |  |  |  | (15) |  |  |  | (15) |
| Issuance of Tronox Limited shares in share-split |  |  |  |  |  |  | (1) |  |  |  |  |  |  |  |  |  |
| Class A and Class B share dividends declared |  |  |  |  |  |  | (61) |  |  |  |  | (61) |  |  |  | (61) |

[^0]

| Successor: Balance at |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| December 31, 2013 | $\$$ | 1 | $\$$ | $\$$ |  | $\$ 1,448$ | $\$ 1,073$ | $\$$ | $(284)$ | $\$$ | $\$ 2,238$ | $\$$ | 199 | $\$ 2,437$ |


|  | Tronox Class A Common Shares | Tronox Class B Common Shares | Capital in Excess |  | Accumulated Other Comprehensive |  |  |  |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | of Value | Retained <br> Earnings |  | Income <br> (Loss) |  |  |  | olders uity |
| Predecessor: Balance at January 1, 2011 | \$ | \$ | \$ | 496 | \$ (1,128) | \$ | \$ 9 | \$ | (7) | \$ | (630) |
| Net income |  |  |  |  | 631 |  |  |  |  |  | 631 |
| Fresh-start reporting adjustments: |  |  |  |  |  |  |  |  |  |  |  |
| Elimination of predecessor shares, capital in excess of par value, and accumulated deficit |  |  |  | (496) | 497 |  | (9) |  | 7 |  | (1) |
| Issuance of new shares |  |  |  | 564 |  |  |  |  |  |  | 564 |
| Predecessor: Balance at January 31, 2011 | \$ | \$ | \$ | 564 | \$ | \$ | \$ | \$ |  | \$ | 564 |

See notes to consolidated financial statements.

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## TRONOX LIMITED

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Millions of U.S. dollars, except share, per share and metric tons data or unless otherwise noted)

## 1. The Company

Tronox Limited and its subsidiaries (collectively referred to as Tronox, we, us, or our ) is a public limited company registered under the laws of the State of Western Australia, Australia. We are a global leader in the production and marketing of titanium bearing mineral sands and titanium dioxide pigment ( TiQ ). We have global operations in North America, Europe, South Africa, and Australia. We operate three $\mathrm{TiO}_{2}$ facilities at the following locations: Hamilton, Mississippi; Botlek, The Netherlands; and Kwinana, Western Australia, and we operate three separate mining operations: KwaZulu-Natal ( KZN ) Sands and Namakwa Sands both located in South Africa, and Cooljarloo located in Western Australia.

Tronox Limited was formed on September 21, 2011 for the purpose of the Transaction (defined below). Prior to the completion of the Transaction, Tronox Limited was wholly-owned by Tronox Incorporated, and had no operating assets or operations. On September 25, 2011, Tronox Incorporated, a Delaware corporation formed on May 17, 2005 ( Tronox Incorporated ), entered into a definitive agreement (as amended, the Transaction Agreement ) with Exxaro Resources Limited ( Exxaro ) and certain of its affiliated companies, to acquire $74 \%$ of Exxaro s mineral sands operations, along with its $50 \%$ share of the Tiwest Joint Venture (the Transaction ). On June 15, 2012, the date of the Transaction (the Transaction Date ), the existing business of Tronox Incorporated was combined with the mineral sands business in an integrated series of transactions whereby Tronox Limited became the parent company in a tax inversion transaction.

Under the terms of the Transaction Agreement, Exxaro agreed that for a three-year period after the completion of the Transaction, it would not engage in any transaction or other action, that would result in its beneficial ownership of the voting shares of Tronox Limited exceeding 45\% of the total issued shares of Tronox Limited. At December 31, 2013, Exxaro held approximately $44.4 \%$ of the voting securities of Tronox Limited.

## 2. Basis of Presentation

We are considered a domestic company in Australia and, as such, are required to report in Australia under International Financial Reporting Standards ( IFRS ). Additionally, as we are not considered a foreign private issuer in the United States, we are required to comply with the reporting and other requirements imposed by the U.S. securities law on U.S. domestic issuers, which, among other things, requires reporting under accounting principles generally accepted in the United States of America ( U.S. GAAP ). The consolidated financial statements included in this Form $10-\mathrm{K}$ are prepared in conformity with U.S. GAAP. We publish our consolidated financial statements, in both U.S. GAAP and IFRS, in U.S. dollars.

The Consolidated Balance Sheets at December 31, 2013 and 2012 relate to Tronox Limited. The Consolidated Statement of Operations and the Consolidated Statement of Cash Flows for the year ended December 31, 2013 reflect the consolidated operating results of Tronox Limited. The Consolidated Statement of Operations and the Consolidated Statement of Cash Flows for the year ended December 31, 2012 reflect the consolidated operating results of Tronox Incorporated prior to June 15, 2012, and, from June 15, 2012 through December 31, 2012, reflect the consolidated operating results of Tronox Limited. The Consolidated Statements of Operations and the Consolidated Statements of Cash Flows for the eleven months ended December 31, 2011 and one month ended January 31, 2011 reflect the
consolidated operating results of Tronox Incorporated.
Prior to the Transaction Date, Tronox Incorporated operated the Tiwest Joint Venture, located in Western Australia, with Exxaro Australia Sands Pty Ltd. Tronox Incorporated accounted for its share of the joint venture s assets that were jointly controlled and its share of liabilities for which it was jointly responsible on a proportionate gross basis in its Consolidated Balance Sheet. Additionally, Tronox Incorporated accounted for the revenues generated from its share of the products sold, along with its share of the expenses on a gross basis in its Consolidated Statements of Operations through June 15, 2012. As of the Transaction Date, we own $100 \%$ of the joint venture (the Western Australia operations ).

In connection with its emergence from bankruptcy, Tronox Incorporated applied fresh-start accounting under Accounting Standards Codification ( ASC ) 852, Reorganizations ( ASC 852 ) as of January 31, 2011. Accordingly, the financial information of Tronox Incorporated set forth in this Form $10-\mathrm{K}$, unless otherwise expressly set forth or as the context otherwise indicates, reflects the consolidated results of operations and financial condition on a fresh-start basis for the period beginning February 1, 2011 ( Successor ), and on a historical basis for the period through January 31, 2011 ( Predecessor ). All references to 2011 refer to the combined twelve month period ended December 31, 2011, which includes the Successor period and the Predecessor period, unless otherwise indicated.

On June 26, 2012, the Board of Directors of Tronox Limited (the Board ) approved a 5-to-1 share split for holders of Class A ordinary shares (Class A Shares ) and Class B ordinary shares (Class B Shares ) at the close of business on July 20, 2012, by

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issuance of four additional shares for each share of the same class by way of bonus issue. All references to number of shares and per share data in the Successor s consolidated financial statements have been adjusted to reflect the share split, unless otherwise noted. See Note 19.

In management s opinion, the accompanying consolidated financial statements reflect all adjustments considered necessary for a fair presentation. Our consolidated financial statements include the accounts of all majority-owned subsidiary companies. All intercompany balances and transactions have been eliminated in consolidation. Certain prior period amounts have been reclassified to conform to the manner and presentation in the current period. Such reclassifications did not have an impact on our net income or consolidated results of operations.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. It is at least reasonably possible that the effect on the financial statements of a change in estimate within one year of the date of the financial statements due to one or more future confirming events could have a material effect on the financial statements.

## 3. Significant Accounting Policies

## Foreign Currency

The U.S. dollar is the functional currency for our operations, except for our South African operations, whose function currency is the Rand, and our European operations, whose function currency is the Euro. We determine the functional currency of each subsidiary based on a number of factors, including the predominant currency for revenues, expenditures and borrowings. Adjustments from the remeasurement of non-functional currency monetary assets and liabilities are recorded in Other income (expense) on the Consolidated Statements of Operations. When the subsidiary s functional currency is not the U.S. dollar, translation adjustments resulting from translating the functional currency financial statements into U.S. dollar equivalents are recorded in Accumulated other comprehensive loss on the Consolidated Balance Sheets.

Gains and losses on intercompany foreign currency transactions that are not expected to be settled in the foreseeable future are reported in the same manner as translation adjustments.

## Revenue Recognition

Revenue is recognized when risk of loss and title to the product is transferred to the customer, pricing is fixed or determinable, and collection is reasonably assured. All amounts billed to a customer in a sales transaction related to shipping and handling represent revenues earned and are reported as net sales. Accruals are made for sales returns and other allowances based on our historical experience.

## Cost of Goods Sold

Cost of goods sold includes costs for purchasing, receiving, manufacturing, and distributing products, including raw materials, energy, labor, depreciation, shipping and handling, freight, warehousing, and other production costs.

## Research and Development

Research and development costs, which include salaries, building costs, utilities, administrative expenses, and allocations of corporate costs, were $\$ 10$ million, $\$ 9$ million, and $\$ 9$ million during 2013, 2012, and 2011, respectively, and were expensed as incurred.

## Selling, General and Administrative Expenses

Selling, general and administrative expenses include costs related to marketing, agent commissions, and legal and administrative functions such as corporate management, human resources, information technology, investor relations, accounting, treasury, and tax compliance.

## Income Taxes

We use the asset and liability method of accounting for income taxes. The estimation of the amounts of income taxes involves the interpretation of complex tax laws and regulations and how foreign taxes affect domestic taxes, as well as the analysis of the realizability of deferred tax assets, tax audit findings, and uncertain tax positions.

Deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. A valuation allowance is provided against a deferred tax asset when it is more likely than not

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that all or some portion of the deferred tax asset will not be realized. We periodically assess the likelihood that we will be able to recover our deferred tax assets, and reflect any changes in our estimates in the valuation allowance, with a corresponding adjustment to earnings or other comprehensive income (loss), as appropriate. All available positive and negative evidence is weighted to determine whether a valuation allowance should be recorded.

The amount of income taxes we pay is subject to ongoing audits by federal, state, and foreign tax authorities, which may result in proposed assessments. Our estimate for the potential outcome for any uncertain tax issue is highly judgmental. We assess our income tax positions, and record tax benefits for all years subject to examination based upon our evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions for which it is more likely than not that a tax benefit will be sustained, we record the amount that has a greater than $50 \%$ likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. Interest and penalties are accrued as part of tax expense, where applicable. If we do not believe that it is more likely than not that a tax benefit will be sustained, no tax benefit is recognized. See Note 6.

## Earnings per Share

Basic and diluted earnings per share are calculated using the two-class method. Under the two-class method, earnings used to determine basic earnings per share are reduced by an amount allocated to participating securities. Participating securities include restricted shares issued under the Tronox Management Equity Incentive Plan (see Note 21) and the T-Bucks Employee Participation Plan (see Note 21), both of which contain non-forfeitable dividend rights. Our unexercised options, unexercised Series A and Series B Warrants (see Note 19), and unvested restricted share units do not contain non-forfeitable rights to dividends and, as such, are not considered in the calculation of basic earnings per share. Our unvested restricted shares do not have a contractual obligation to share in losses; therefore, when we record a net loss, none of the loss is allocated to participating securities. Consequently, in periods of net loss, the two class method does not have an effect on basic loss per share.

Diluted earnings per share is calculated by dividing net earnings allocable to ordinary shares by the weighted-average number of ordinary shares outstanding for the period, as adjusted for the potential dilutive effect of non-participating restricted share units, options, and Series A and Series B Warrants. The options and Series A and Series B Warrants are included in the calculation of diluted earnings per ordinary share utilizing the treasury stock method. See Note 7.

## Fair Value Measurement

We measure fair value on a recurring basis utilizing valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs, to the extent possible, and consider counterparty credit risk in our assessment of fair value. The fair value hierarchy is as follows:

Level 1 Quoted prices in active markets for identical assets and liabilities;

Level 2 Quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active or other inputs that are observable or can be corroborated by observable market data; and,

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.
See Note 8.

## Cash and Cash Equivalents

We consider all investments with original maturities of three months or less to be cash equivalents. We maintain cash and cash equivalents in bank deposit and money market accounts that may exceed federally insured limits. The financial institutions where our cash and cash equivalents are held are generally highly rated and geographically dispersed, and we have a policy to limit the amount of credit exposure with any one institution. We have not experienced any losses in such accounts and believe we are not exposed to significant credit risk.

## Accounts Receivable

A significant portion of our liquidity is concentrated in trade accounts receivable that arise from sales of $\mathrm{TiO}_{2}$ and titanium feedstock to customers in the $\mathrm{TiO}_{2}$ industry. The industry concentration has the potential to impact our overall exposure to credit risk, either positively or negatively, in that our customers may be similarly affected by changes in economic, industry or other conditions. In addition, due to our international operations, we are subject to potential trade restrictions and sovereign risk in certain countries we operate in. We perform credit evaluations of our customers, and take actions deemed appropriate to mitigate credit risk. Only in certain specific occasions do we require collateral in the form of bank or parental guarantees or guarantee payments. We maintain allowances for potential credit losses based on historical experience resulting in monthly reserve positions relating to a percentage taken from the overall outstanding balances. See Note 9.

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## Inventories

Pigment inventories are stated at the lower of actual cost or market, net of allowances for obsolete and slow-moving inventory. The cost of finished goods inventories is determined using the first-in, first-out method. Carrying values include material costs, labor, and associated indirect manufacturing expenses. Costs for materials and supplies, excluding ore, are determined by average cost to acquire. Raw materials are carried at actual cost. Mineral Sands inventories are stated at a weighted-average cost of production. We periodically review the cost of our inventory in comparison to its net realizable value. We also periodically review our inventory for obsolescence (inventory that is no longer marketable for its intended use). In either case, we record any write-down equal to the difference between the cost of inventory and its estimated net realizable value based on assumptions about alternative uses, market conditions and other factors. See Note 10.

## Long Lived Assets

Property, plant and equipment, net is stated at cost less accumulated depreciation, and is depreciated over its estimated useful life using the straight-line method as follows:

| Land improvements | 10 | 20 years |
| :--- | ---: | :--- |
| Buildings | 10 | 40 years |
| Machinery and equipment | 3 | 25 years |
| Furniture and fixtures |  | 10 years |

Maintenance and repairs are expensed as incurred, except for costs of replacements or renewals that improve or extend the lives of existing properties, which are capitalized. Upon retirement or sale, the cost and related accumulated depreciation are removed from the respective account, and any resulting gain or loss is included in Cost of goods sold or Selling, general, and administrative expenses on the Consolidated Statements of Operations. See Note 11.

We capitalize interest costs on major projects that require an extended period of time to complete. See Note 15.
Mineral property acquisition costs are capitalized as tangible assets when management determines that probable future benefits consisting of a contribution to future cash inflows have been identified and adequate financial resources are available or are expected to be available as required to meet the terms of property acquisition and anticipated exploration and development expenditures. Mineral leaseholds are depleted over their useful lives as determined under the units of production method. Mineral property exploration costs are expensed as incurred. When it has been determined that a mineral property can be economically developed as a result of establishing proven and probable reserves, the costs incurred to develop such property through the commencement of production are capitalized. See Note 12.

Intangible assets are stated at cost less accumulated amortization, and are amortized on a straight-line basis over their estimated useful lives, which range from 5 to 20 years. See Note 13.

We evaluate the recoverability of the carrying value of long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Under such circumstances, we assess whether the projected undiscounted cash flows of our long-lived assets are sufficient to recover the existing unamortized cost of our long-lived assets. If the undiscounted projected cash flows are not sufficient, we calculate the impairment amount by discounting the projected cash flows using our weighted-average cost of capital. The amount of the impairment is written off against earnings in the period in which the impairment is determined.

## Long-term Debt

Long-term debt is stated net of unamortized original issue premium or discount. Premiums or discounts are amortized on the effective interest method with amortization expense recorded in Interest and debt expense on the Consolidated Statements of Operations. Deferred debt issuance costs are recorded in Other long-term assets on the Consolidated Balance Sheets, and are amortized on the effective interest method with amortization expense recorded in Interest and debt expense on the Consolidated Statements of Operations. See Note 15.

## Asset Retirement Obligations

Asset retirement obligations are recorded at their estimated fair value, and accretion expense is recognized over time as the discounted liability is accreted to its expected settlement value. Fair value is measured using expected future cash outflows discounted at our credit-adjusted risk-free interest rate, which are considered Level 2 inputs. We classify accretion expense related to asset retirement obligations as a production cost, which is included in Cost of goods sold on the Consolidated Statements of Operations. See Note 16.

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## Derivative Instruments

Derivative instruments are recorded in the Consolidated Balance Sheets at their fair values. Changes in the fair value of derivative instruments not designated for hedge accounting treatment are recorded in Other income (expense) on the Consolidated Statements of Operations. See Note 17.

## Environmental Remediation and Other Contingencies

We recognize a loss and record an undiscounted liability when litigation has commenced or a claim or assessment has been asserted, or, based on available information, commencement of litigation or assertion of a claim or assessment is probable, and the associated costs can be reasonably estimated. See Note 18.

## Self-Insurance

We are self-insured for certain levels of general and vehicle liability, property, workers compensation and health care coverage. The cost of these self-insurance programs is accrued based upon estimated fully developed settlements for known and anticipated claims. Any resulting adjustments to previously recorded reserves are reflected in current operating results. We do not accrue for general or unspecific business risks.

## Share-based Compensation

Equity Restricted Share and Restricted Share Unit Awards The fair value of equity instruments is measured based on the share price on the grant date and is recognized over the vesting period. These awards contain service, market, and/or performance conditions. For awards containing only a service or a market condition, we have elected to recognize compensation costs using the straight-line method over the requisite service period for the entire award. For awards containing a market condition, the fair value of the award is measured using the lattice model, otherwise the fair value is the grant date close price. For awards containing a performance condition, compensation expense is not recognized until we conclude that it is probable that the performance condition will be met. We reassess the probability quarterly. See Note 21.

Liability Restricted Share Awards Restricted share awards classified as liability awards contain only a service condition, and have graded vesting provisions. Liability awards are re-measured to fair value at each reporting date. See Note 21.

Option Awards The Black-Scholes option pricing model is utilized to measure the fair value of options on the grant date. The options contain only service conditions, and have graded vesting provisions. We have elected to recognize compensation costs using the straight-line method over the requisite service period for the entire award. See Note 21.

## 4. Recent Accounting Pronouncements

In March 2013, the Financial Accounting Standards Board (the FASB ) issued accounting standards update ( ASU ) 2013-5, Parent s Accounting for the Cumulative Translation Adjustment upon Derecognition of Certain Subsidiaries or Groups of Assets within a Foreign Entity or of an Investment in a Foreign Entity, which addresses the treatment of the cumulative translation adjustment into net income when a parent either sells or liquidates a part or all of its investment in a foreign entity or no longer holds a controlling financial interest in a subsidiary or group of assets within a foreign entity. This guidance is effective prospectively for periods beginning after December 15, 2013; however early adoption is permitted. The adoption of this guidance is not anticipated to have a significant impact on our consolidated financial statements.

During 2013, we adopted ASU 2013-2, Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income, which requires the presentation of the effects on the line items of net income of significant amounts reclassified out of accumulated other comprehensive income, if the item is required under U.S. GAAP to be reclassified to net income in its entirety in the same reporting period. The adoption of this guidance did not have a significant impact on our consolidated financial statements.

During 2013, we adopted ASU 2013-01, Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities, to clarify previously issued guidance related to derivatives that are either offset or subject to an enforceable master netting arrangement or similar agreement. The adoption of this guidance did not have a significant impact on our consolidated financial statements.

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## 5. Other Income (Expense)


(1) During 2013, we completed the liquidation of two non-operating subsidiaries: Tronox (Luxembourg) Holdings S.a.r.l. and Tronox Luxembourg S.a.r.l for which we recognized a net noncash gain from the realization of cumulative translation adjustments.

## 6. Income Taxes

Our operations are conducted through various subsidiaries in a number of countries throughout the world. We have provided for income taxes based upon the tax laws and rates in the countries in which operations are conducted and income is earned. For the years ended December 31, 2013 and 2012, Tronox Limited was the public parent registered under the laws of the State of Western Australia. For the eleven months ended December 31, 2011 and one month ended January 31, 2011, Tronox Incorporated was the public parent, a Delaware corporation, registered in the United States.

Income (loss) before income taxes is comprised of the following:

|  | Successor PredecessorEleven Months |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  | Year Ended December 2013 | YearEndedMecember 31,2012 |  | Ended December$\begin{gathered} 31, \\ 2011 \end{gathered}$ |  | One Month Ended January 31, 2011 |  |
| Australia | \$ (185) | \$ | 1,019 | \$ | 70 | \$ | 107 |
| United States | (285) |  | 10 |  | 120 |  | 497 |
| Other | 409 |  | (21) |  | 72 |  | 28 |
| Income (loss) before income taxes | \$ (61) | \$ | 1,008 | \$ | 262 | \$ | 632 |

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The income tax benefit (provision) is summarized below:

|  | Successor |  |  |  |  | Predecessor <br> s |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Eleven Months |  |  |  |  |  |  |
|  | Year Ended Decemberi 2013 | $\begin{gathered} \text { Year } \\ \text { Ended } \\ \text { lacember 31, } \\ 2012 \end{gathered}$ |  | EndedDecember31,2011 |  | One Month Ended January 31, 2011 |  |
| Australian: |  |  |  |  |  |  |  |
| Current | \$ (11) | \$ | (28) | \$ | (1) | \$ |  |
| Deferred | 35 |  | 124 |  | (4) |  | (1) |
| U.S. Federal \& State: |  |  |  |  |  |  |  |
| Current | (24) |  | (9) |  |  |  |  |
| Deferred | 1 |  |  |  |  |  |  |
| Other: |  |  |  |  |  |  |  |
| Current | 1 |  |  |  | (14) |  |  |
| Deferred | (31) |  | 38 |  | (1) |  |  |
| Income tax benefit (provision) | \$ (29) | \$ | 125 | \$ | (20) | \$ | (1) |

The following table reconciles the applicable statutory income tax rates to our effective income tax rates for Income tax benefit (provision) as reflected in the Consolidated Statements of Operations.

|  |  Successor <br> Year Year <br> Ended Ended <br> December 3D <br> 2013 2012 |  |  | Predecessor |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Eleven Months |  |
|  |  |  | Ended December 31, 2011 | One Month Ended January 31, 2011 |
| Statutory tax rate | 30\% | 30\% | 35\% | 35\% |
| Increases (decreases) resulting from: |  |  |  |  |
| Tax rate differences | 191 | (6) | (5) |  |
| Disallowable expenditures | (10) | (1) | 7 |  |
| Gain on bargain purchase, net of tax |  | (31) |  |  |
| Resetting of tax basis to market value |  | (7) |  |  |
| Valuation allowances | (259) | (1) | (25) | (1) |
| Withholding taxes | (59) | 2 |  |  |
| Foreign interest disallowance |  |  | 2 |  |
| Prior year accruals | 22 |  | (1) |  |
| Change in uncertain tax positions | 6 |  | (6) |  |
| U.S. state income taxes |  |  | 2 |  |
| Permanent adjustment for fresh-start, net of tax |  |  |  | (29) |
| Foreign exchange | 17 |  |  |  |
| AMT and other credits | 8 |  |  |  |


| Branch taxation | 6 |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Other, net |  |  | (1) | (5) |
|  | $(48 \%)$ | $(12 \%)$ | $8 \%$ | $0 \%$ |
| Effective tax rate |  |  |  |  |

The application of business combination accounting in connection with the Transaction resulted in the remeasurement of deferred income taxes associated with recording the assets and liabilities of the acquired entities at fair value (see Note 26). As a result, we recorded deferred income taxes of $\$ 185$ million.

Subsequent to the Transaction, certain subsidiaries re-domiciled in Australia. Because the Australian tax laws provide for a resetting of the tax basis of the business assets to market value, we recorded a tax benefit related to this market value basis adjustment. The overall tax benefit from this basis adjustment increase was partially offset by a valuation allowance. Because this basis change did not pertain to an entity acquired in the Transaction, this net tax benefit was recorded through tax expense and did not impact the gain on bargain purchase.

Upon emergence from bankruptcy in 2011, Tronox Incorporated experienced an ownership change. Another ownership change occurred during 2012, as a result of the Transaction. These ownership changes resulted in a limitation under IRC Sections 382 and 383 related to U.S. net operating losses. We do not expect that the application of these net limitations will have any material effect on our U.S. federal or state income tax liabilities.

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Net deferred tax assets (liabilities) at December 31, 2013 and 2012 were comprised of the following:

|  | $$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Deferred tax assets: |  |  |  |  |
| Net operating loss and other carryforwards | \$ | 659 |  | 664 |
| Property, plant and equipment |  | 293 |  | 197 |
| Reserves for environmental remediation and restoration |  | 28 |  | 31 |
| Obligations for pension and other employee benefits |  | 72 |  | 79 |
| Investments |  | 32 |  | 31 |
| Grantor trusts |  | 100 |  | 109 |
| Inventory |  | 9 |  | 2 |
| Interest |  | 226 |  | 76 |
| Other accrued liabilities |  | 20 |  | 50 |
| Unrealized foreign exchange losses |  | 3 |  | 10 |
| Other |  | 13 |  | 8 |
| Total deferred tax assets |  | 1,455 |  | 1,257 |
| Valuation allowance associated with deferred tax assets |  | (982) |  | (753) |
| Net deferred tax assets |  | 473 |  | 504 |
| Deferred tax liabilities: |  |  |  |  |
| Property, plant and equipment |  | (288) |  | (386) |
| Intangibles |  | (108) |  | (110) |
| Inventory |  | (19) |  | (22) |
| Unrealized foreign exchange gains |  | (22) |  | (3) |
| Other |  | (8) |  | (5) |
| Total deferred tax liabilities |  | (445) |  | (526) |
| Net deferred tax asset (liability) | \$ | 28 |  | (22) |
| Balance sheet classifications: |  |  |  |  |
| Deferred tax assets current | \$ | 47 |  | 114 |
| Deferred tax assets long-term |  | 192 |  | 91 |
| Deferred tax liabilities current |  | (7) |  | (5) |
| Deferred tax liabilities long-term |  | (204) |  | (222) |
| Net deferred tax asset (liability) | \$ | 28 |  | (22) |

The net deferred tax assets (liabilities) reflected in the above table include deferred tax assets related to grantor trusts, which were established as Tronox Incorporated emerged from bankruptcy during 2011. The balances relate to the assets contributed to such grantor trusts by Tronox Incorporated, and do not include estimates for tax benefits we may receive upon the resolution of the Anadarko Petroleum Corporation ( Anadarko ) litigation.

On December 12, 2013, the U.S. Bankruptcy Court for the Southern District of New York determined that the defendant, Anadarko, should be liable for damages in the range of $\$ 5$ billion to $\$ 14$ billion for fraudulent conveyance claims. Because the final damages to be awarded continue to be uncertain, we have not included the tax benefit we will receive when the grantor trusts receive the proceeds resulting from the resolution of the litigation. Once these benefits are determined and recognized, we expect them to be fully offset by valuation allowances. See Note 27.

During 2013 and 2012, the total change to the valuation allowance was an increase of $\$ 229$ million and an increase of $\$ 192$ million, respectively.

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The deferred tax assets generated by tax loss carryforwards have been partially offset by valuation allowances. The expiration of these carryforwards at December 31, 2013 is shown below. These expiration amounts are comprised of Australian, U.S. federal and state, and other jurisdictional losses.

|  | Australia | U.S. Federal | U.S. State | Other |  | Loss orwards tal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2014 | \$ | \$ | \$ | \$ | \$ |  |
| 2015 |  |  |  |  |  |  |
| 2016 |  |  | 11 |  |  | 11 |
| 2017 |  |  |  |  |  |  |
| 2018 |  |  | 6 |  |  | 6 |
| Thereafter | 306 | 1,241 | 1,431 | 263 |  | 3,241 |
| Total tax loss carryforwards | \$ 306 | \$ 1,241 | \$ 1,448 | \$ 263 | \$ | 3,258 |

At December 31, 2013, Tronox Limited had foreign subsidiaries with undistributed earnings. Although we would not be subject to income tax on these earnings, amounts totaling approximately $\$ 83$ million could be subject to withholding tax if distributed. Tronox Incorporated had certain foreign subsidiaries with undistributed earnings totaling approximately $\$ 148$ million. We have made no provision for deferred taxes for either Tronox Limited or Tronox Incorporated related to these undistributed earnings because they are considered to be indefinitely reinvested outside of the parents taxing jurisdictions.

We continue to maintain a valuation allowance related to the net deferred tax assets in the United States, excluding the deferred benefit for the alternative minimum tax credit. Future provisions for income taxes will include no tax benefits with respect to losses incurred and tax expense only to the extent of state tax payments until the valuation allowance in the United States is eliminated.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits for 2013 and 2012 is as follows:

|  | Year Ended December 31, |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ |  |  |
| Balance at January 1 | $\$$ | 4 | $\$$ | 2 |
| Additions for tax positions related to prior years |  | $(3)$ | 2 |  |
| Reductions for tax positions related to prior years |  |  |  |  |
| Balance at December 31 | $\$$ | 1 | $\$$ | 4 |

Included in the balance at December 31, 2013 and 2012, were tax positions of $\$ 1$ million and $\$ 1$ million, respectively, for which the ultimate deductibility is highly certain, but for which there is uncertainty about the timing of such deductibility. The net benefit associated with less than $\$ 1$ million and $\$ 3$ million of the December 31, 2013 and 2012 reserve, respectively, for unrecognized tax benefits, if recognized, would affect the effective income tax rate.

As a result of potential settlements, it is reasonably possible that our gross unrecognized tax benefits from timing differences may decrease within the next twelve months by $\$ 1$ million.

During 2013, 2012, and 2011, we recognized less than $\$ 1$ million, less than $\$ 1$ million, and $\$(10)$ million, respectively, in gross interest and penalties in Income tax benefit (provision) on the Consolidated Statements of Operations. At December 31, 2013 and 2012, we had no remaining accruals for the gross payment of interest and penalties related to unrecognized tax benefits, and the noncurrent liability section of the Consolidated Balance Sheets reflected $\$ 1$ million and $\$ 4$ million, respectively, as the reserve for uncertain tax positions.

Our Australian returns are closed through 2008. However, under Australian tax laws, transfer pricing issues have no limitation period. Our U.S. returns are closed for years through 2009, with the exception of an amendment filed for the 2007 tax year. Our Netherlands returns are closed through 2005. Our Switzerland returns are closed through 2009. In accordance with the Transaction Agreement, we are not liable for income taxes of the acquired companies with respect to periods prior to the Transaction Date.

We believe that we have made adequate provision for income taxes that may be payable with respect to years open for examination; however, the ultimate outcome is not presently known and, accordingly, additional provisions may be necessary and/or reclassifications of noncurrent tax liabilities to current may occur in the future.

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## 7. Earnings Per Share

The computation of basic and diluted earnings (loss) per share for the periods indicated is as follows:

|  |  | Successor | $\begin{array}{c}\text { Predecessor } \\ \text { Eleven Months }\end{array}$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ended |  |  |  |  |
| One Month |  |  |  |  |$)$

(1) Earnings (loss) per ordinary share amounts were calculated from exact, not rounded income (loss) and share information.
(2)

Our participating securities do not have a contractual obligation to share in losses; therefore, when we have a net loss, none of the loss is allocated to participating securities. Consequently, for 2013, the two class method does not have an effect on basic loss per share, and as such, dividends paid during the year were not included for purposes of this calculation.
In computing diluted earnings (loss) per share under the two-class method, we considered potentially dilutive shares. At December 31, 2013, 2,094,771 options with an average exercise price of $\$ 20.63,357,300$ Series A Warrants and 465,136 Class B Warrants, with exercise prices of $\$ 59.66$ and $\$ 65.84$, respectively, and 303,324 restricted share units, with an average price of $\$ 21.08$ were not recognized in the diluted earnings per share calculation as they were anti-dilutive. At December 31, 2012, 612,439 options with an average exercise price of $\$ 24.81$ and 18,990 restricted share units with an average price of $\$ 21.10$ were not recognized in the diluted earnings per share calculation as they were anti-dilutive. For the one month ended January 31, 2011, 1,152,408 options with an average exercise price of $\$ 9.54$ were anti-dilutive because they were not in the money.

## 8. Fair Value Measurement

For financial instruments that are subsequently measured at fair value, the fair value measurement is grouped into levels. See Note 3 for additional information regarding the Level 1, Level 2, and Level 3 descriptions.

At December 31, 2013 and 2012, the only financial instrument measured at fair value was the environmental rehabilitation trust. At December 31, 2013 and 2012, the environmental rehabilitation trust of $\$ 22$ million and $\$ 20$ million, respectively, was categorized as Level 1 . See Note 16 for additional information related to the environmental rehabilitation trust.

The carrying amounts for cash and cash equivalents, accounts receivable, other current assets, accounts payable, short-term debt, and other current liabilities approximate their fair value because of the short-term nature of these instruments. See Note 15 for additional information regarding the fair value of debt.

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## 9. Accounts Receivable

|  | December 31, |  |
| :--- | ---: | ---: |
| 2013 | $\mathbf{2 0 1 2}$ |  |
| Trade receivables | $\$ 304$ | $\$ 371$ |
| Other | 6 | 23 |
|  |  |  |
| Gross | 310 | 394 |
| Allowance for doubtful accounts | $(2)$ | $(3)$ |
| Net | $\$ 308$ | $\$ 391$ |

Bad debt expense recorded on the Consolidated Statements of Operations was $\$ 1$ million for each of the years ended December 31, 2013, 2012 and 2011.

## 10. Inventories

|  | December 31, <br> $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ |
| :--- | ---: | ---: |
| Raw materials | $\$ 191$ | $\$ 221$ |
| Work-in-process | 45 | 99 |
| Finished goods | 417 | 477 |
| Materials and supplies, net (1) | 106 | 117 |
| Total | $\$ 759$ | $\$ 914$ |

(1) Consists of processing chemicals, maintenance supplies, and spare parts, which will be consumed directly and indirectly in the production of our products.
Finished goods includes inventory on consignment to others of approximately $\$ 48$ million and $\$ 42$ million at December 31, 2013 and 2012, respectively. At December 31, 2013 and 2012, inventory obsolescence reserves were $\$ 13$ million and $\$ 11$ million, respectively.

## 11. Property, Plant and Equipment

|  | December 31, |  |
| :--- | ---: | ---: |
|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ |
| Land and land improvements | $\$ 79$ | $\$ 80$ |
| Buildings | 181 | 194 |
| Machinery and equipment | 1,141 | 1,158 |
| Construction-in-progress | 133 | 153 |


| Other | 43 | 13 |
| :--- | :---: | :---: |
| Total | 1,577 | 1,598 |
| Less accumulated depreciation and amortization | $(319)$ | $(175)$ |
| Net | $\$ 1,258$ | $\$ 1,423$ |

Depreciation expense related to property, plant and equipment during 2013, 2012, and 2011 was $\$ 191$ million, $\$ 127$ million, and $\$ 57$ million, respectively.

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## 12. Mineral Leaseholds

|  | December 31, |  |
| :--- | :---: | :---: |
|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ |
| Mineral leaseholds | $\$ 1,388$ | $\$ 1,502$ |
| Less accumulated depletion | $(172)$ | $(63)$ |
|  | $\$ 1,216$ | $\$ 1,439$ |

Depletion expense related to mineral leaseholds during 2013, 2012, and 2011 was $\$ 115$ million, $\$ 59$ million, and $\$ 4$ million, respectively.

## 13. Intangible Assets

|  | December 31, 2013 |  |  |  |  | December 31, 2012 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross | AccumulatedNet Carrying Amortization Amount |  |  |  | Gross <br> Cost | AccumulatedN Amortization |  | et Carrying Amount |  |
|  | Cost |  |  |  |  |  |  |  |  |  |
| Customer relationships | \$ 294 | \$ | (59) | \$ | 235 | \$ 294 | \$ | (39) | \$ | 255 |
| $\mathrm{TiO}_{2}$ technology | 32 |  | (5) |  | 27 | 32 |  | (3) |  | 29 |
| Internal-use software | 40 |  | (6) |  | 34 | 38 |  | (2) |  | 36 |
| Other | 9 |  | (5) |  | 4 | 9 |  | (3) |  | 6 |
| Total | \$ 375 | \$ | (75) | \$ | 300 | \$373 | \$ | (47) | \$ | 326 |

Amortization expense related to intangible assets during 2013, 2012, and 2011 was $\$ 27$ million, $\$ 25$ million, and $\$ 22$ million, respectively. Estimated future amortization expense related to intangible assets is $\$ 27$ million for 2014, \$27 million for 2015, $\$ 25$ million for 2016, $\$ 25$ million for 2017, $\$ 25$ million for 2018, and $\$ 171$ million thereafter.

## 14. Accrued Liabilities

|  | December 31, |  |
| :---: | :---: | :---: |
|  | 2013 | 2012 |
| Employee-related costs and benefits |  | \$ 45 |
| Taxes other than income taxes | 44 | 58 |
| Interest | 22 | 22 |
| Sales rebates | 18 | 13 |
| Unfavorable sales contracts |  | 64 |
| Other | 7 | 7 |
| Total | \$ 146 | \$ 209 |

## 15. Debt

## Short-term Debt

|  | December 31, |  |
| :--- | :---: | :---: |
|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ |
| UBS Revolver (1) | $\$$ | $\$$ |
| ABSA Revolver (2) |  | 30 |
| Short-term debt | $\$$ | $\$ 30$ |

(1) Average effective interest rate of 3.9\% during 2012.
(2) Average effective interest rate of $8.5 \%$ during both 2013 and 2012.

UBS Revolver
On June 18, 2012, in connection with the closing of the Transaction, we entered into a global senior secured asset-based syndicated revolving credit facility with UBS AG (the UBS Revolver ) with a maturity date of the fifth anniversary of the closing date. The UBS Revolver provides us with a committed source of capital with a principal borrowing amount of up to $\$ 300$ million,

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subject to a borrowing base. In connection with the Amended and Restated Credit Agreement on March 19, 2013, we amended the UBS Revolver to allow for the increased size of the Term Loan over the Term Facility (see Term Facility and Term Loan below). Obligations under the UBS Revolver are collateralized by a first priority lien on substantially all of our existing, and future deposit accounts, inventory, and account receivables, and certain related assets, excluding those held by our South African subsidiaries, Netherland s subsidiaries, and Bahamian subsidiary, and a second priority lien on all of our other assets, including capital shares. At December 31, 2013, our borrowing base was $\$ 210$ million.

The UBS Revolver bears interest at our option at either (i) the greater of (a) the lenders prime rate, (b) the Federal funds effective rate plus $0.50 \%$, and (c) the adjusted LIBOR rate for a one-month period plus $1 \%$ ) or (ii) the adjusted LIBOR rate, in each case plus the applicable margin. The applicable margin ranges from $1.5 \%$ to $2 \%$ for borrowings at the adjusted LIBOR rate, and from $0.5 \%$ to $1 \%$ for borrowings at the alternate base rate, based upon the average daily borrowing availability.

## ABSA Revolving Credit Facility

In connection with the Transaction, we entered into a R900 million (approximately $\$ 86$ million as of December 31, 2013) revolving credit facility with ABSA Bank Limited acting through its ABSA Capital Division (the ABSA Revolver ) with a maturity date of June 14,2017 . The ABSA Revolver bears interest at (i) the base rate (defined as one month JIBAR, which is the mid-market rate for deposits in South African Rand for a period equal to the relevant period which appears on the Reuters Screen SAFEY Page alongside the caption YLD) as of 11h00 Johannesburg time on the first day of the applicable period, plus (ii) the Margin, which is $3.5 \%$. At December 31, 2012, we had drawn down R250 million (approximately $\$ 30$ million), which was repaid during the first quarter of 2013. At December 31, 2013, we had no amounts drawn on the ABSA Revolver.

## Long-term Debt

Long-term debt consisted of the following:

|  | Original <br> Principal |  | Maturity Date | December 31, <br> 20132012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Term Loan, net of unamortized discount of $\$ 11$ million at December 31, 2013 (1) | \$ | 1,500 | 3/19/2020 | \$ 1,482 | \$ |
| Senior Notes | \$ | 900 | 8/15/2020 | 900 | 900 |
| Term Facility, net of unamortized discount of $\$ 6$ million at December 31, 2012 (2) | \$ | 700 | 2/8/2018 |  | 691 |
| Co-generation Unit Financing Arrangement | \$ | 16 | 2/1/2016 | 6 | 10 |
| Lease financing |  |  |  | 25 | 14 |
| Total borrowings |  |  |  | 2,413 | 1,615 |
| Less: Noncurrent borrowings due in one year |  |  |  | (18) | (10) |
| Noncurrent borrowings |  |  |  | \$ 2,395 | \$ 1,605 |

(1) Average effective interest rate of $5 \%$ during 2013.
(2) Average effective interest rate of 5\% and 5\% during 2013 and 2012, respectively.

At December 31, 2013, the scheduled maturities of our long-term debt were as follows:

|  | Total <br> Borrowings |  |
| :--- | ---: | ---: |
| 2014 | $\$$ | 18 |
| 2015 | 18 |  |
| 2016 | 16 |  |
| 2017 | 16 |  |
| 2018 | 2,340 |  |
| Thereafter |  |  |
| Total | 2,424 |  |
| Remaining accretion associated with the Term Loan | $(11)$ |  |
| Total borrowings | $\$$ | 2,413 |

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## Term Loan

On March 19, 2013, we, along with our wholly-owned subsidiary, Tronox Pigments (Netherlands) B.V., and certain of our subsidiaries named as guarantors, entered into an Amended and Restated Credit and Guaranty Agreement with Goldman Sachs Bank USA, as Administrative Agent and Collateral Agent, and Goldman Sachs Bank USA, UBS Securities LLC, Credit Suisse Securities (USA) LLC and RBC Capital Markets, as Joint Lead Arrangers, Joint Bookrunners and Co-Syndication Agents. Pursuant to the Amended and Restated Credit Agreement, we obtained a $\$ 1.5$ billion senior secured term loan (the Term Loan ), which matures in March 2020. The terms of the Amended and Restated Credit Agreement are substantially similar to our prior Term Facility (defined below). The Term Loan was issued net of an original issue discount of $\$ 7$ million, or $0.5 \%$ of the principal balance. During the year ended December 31, 2013, we made principal repayments of $\$ 8$ million.

The Term loan bears interest at the option of Tronox at either: (i) $2.5 \%$ plus the base rate defined as the greater of the prime lending rate quoted in the print edition of The Wall Street Journal or the Federal Funds Effective rate in effect on such day plus one half of $1 \%$; provided, however, that the Base Rate is not less than $2 \%$ per annum; or (ii) $3.5 \%$ plus the greater of the 3 month LIBOR Eurodollar rate or $1 \%$.

## Notes

On August 20, 2012, our wholly-owned subsidiary, Tronox Finance LLC, issued $\$ 900$ million aggregate principal amount of $6.375 \%$ senior notes due 2020 (the Existing Notes ) at par value. The Existing Notes were offered to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended (the Securities Act ), and outside the United States to non-U.S. persons pursuant to Regulation S under the Securities Act.

During the second quarter of 2013, we and certain of our subsidiaries filed a Registration Statement on Form S-4, pursuant to which we and such subsidiaries offered to exchange $\$ 900$ million in aggregate principal amount of registered $6.375 \%$ senior notes due 2020 (the New Notes ) and related guarantees for the Existing Notes and related guarantees. The New Notes are substantially identical to the Existing Notes. On September 17, 2013, Tronox Finance issued the New Notes in exchange for the Existing Notes (together the Notes ). At December 31, 2013, there was $\$ 900$ million in aggregate principal amount of New Notes outstanding and less than $\$ 1$ million in aggregate amount of Existing Notes outstanding.

The Notes bear interest semiannually at a rate equal to $6.375 \%$, and are fully and unconditionally guaranteed on a senior, unsecured basis by us and certain of our subsidiaries. The Notes are redeemable at any time at our discretion.

## Term Facility

On February 8, 2012, Tronox Incorporated s wholly-owned subsidiary, Tronox Pigments (Netherlands) B.V., entered into a term loan facility with Goldman Sachs Bank USA comprised of a $\$ 550$ million Senior Secured Term Loan (the
Senior Secured Term Loan ) and a $\$ 150$ million Senior Secured Delayed Draw Term Loan (the Senior Secured Delayed Draw together, the Term Facility ). The Term Facility was issued net of an original issue discount of $\$ 7$ million, or $1 \%$ of the initial principal amount, which was being amortized over the life of the Term Facility. On June 14, 2012, in connection with the closing of the Transaction, Tronox Pigments (Netherlands) B.V. drew down the $\$ 150$ million Senior Secured Delayed Draw. During 2012, we made principal repayments of $\$ 3$ million.

On February 28, 2013, Tronox Pigments (Netherlands) B.V. repaid the outstanding principal balance of $\$ 149$ million, plus interest, related to the $\$ 150$ million Senior Secured Delayed Draw. We accounted for such repayment as an extinguishment of debt, and recognized a $\$ 4$ million loss on the early extinguishment of debt related to the allocated
portion of the unamortized original issue discount and debt issuance costs, which is recorded in Other income (expense) on the Consolidated Statements of Operations.

We allocated these amounts between the $\$ 550$ million Senior Secured Term Loan and the $\$ 150$ million Senior Secured Delayed Draw as follows:

|  | Outstanding <br> Balance | Percentage of <br> Outstanding <br> Balance | Allocation of <br> Unamortized <br> Costs | Loss on <br> Extinguishment <br> of Debt |  |  |  |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Senior Secured Term Loan | $\$$ | 547 | $79 \%$ | $\$$ | 16 | $\$$ |  |
| Senior Secured Delayed Draw |  | 149 | $21 \%$ |  | 4 |  | 4 |
| Total | $\$$ | 696 | $100 \%$ | $\$$ | 20 | $\$$ | 4 |

The outstanding principal balance of the Senior Secured Term Loan of $\$ 547$ million became part of the Term Loan, and was accounted for as a debt modification. As such, the unamortized original issue discount of $\$ 5$ million and debt issuance costs of $\$ 11$ million related to the Term Facility are being amortized over the life of the Term Loan.

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## Co-generation Unit Financing Arrangement

In March 2011, in order to finance its share of an asset purchased for the Tiwest Joint Venture, Tronox Incorporated incurred debt totaling $\$ 8$ million. In connection with the Transaction, we acquired the remaining $50 \%$ undivided interest in the co-generation plant from Exxaro, along with its debt of $\$ 6$ million. Under the financing arrangement, monthly payments are required, and interest accrues on the outstanding balance at the rate of $6.5 \%$ per annum. During 2013 and 2012, we made principal repayments of $\$ 3$ million and $\$ 2$ million, respectively.

## Lease Financing

We have capital lease obligations in South Africa, which are payable through 2032 at a weighted average interest rate of approximately $15 \%$. At December 31, 2013 and 2012, such obligations had a net book value of assets recorded under capital leases aggregating $\$ 23$ million and $\$ 9$ million, respectively. During 2013 and 2012, we made principal payments of less than $\$ 1$ million and less than $\$ 1$ million, respectively.

## Fair Value

Our debt is recorded at historical amounts. At December 31, 2013, the fair value of the Term Loan was $\$ 1,524$ million. At December 31, 2013 and 2012, the fair value of the Notes was $\$ 924$ million and $\$ 910$ million, respectively. At December 31, 2012, the fair value of the Term Facility was $\$ 709$ million. We determined the fair value of the Term Loan, the Notes and the Term Facility using Bloomberg market prices. The fair value hierarchy for the Term Loan and the Notes is a Level 1 input.

## Debt Covenants

At December 31, 2013, we had financial covenants in the UBS Revolver, the ABSA Revolver and the Term Loan; however, only the ABSA Revolver had a financial maintenance covenant that applies to local operations and only when the ABSA Revolver is drawn upon.

The terms of the Term Loan are substantially similar to our prior Term Facility except that the Term Loan (i) eliminates financial maintenance covenants (ii) permits, subject to certain conditions, incurrence of additional senior secured debt up to a leverage ratio of $2: 1$, (iii) increases our ability to incur debt in connection with permitted acquisitions and our ability to incur unsecured debt, and (iv) allows for the payment of a $\$ 0.25$ per share dividend each fiscal quarter. Otherwise, the terms of the Term Loan provide for customary representations and warranties, affirmative and negative covenants and events of default. The terms of the covenants, subject to certain exceptions, restrict, among other things: (i) debt incurrence; (ii) lien incurrence; (iii) investments, dividends and distributions; (iv) disposition of assets and subsidiary interests; (v) acquisitions; (vi) sale and leaseback transactions; and (vii) transactions with affiliates and shareholders.

The Term Loan and the UBS Revolver are subject to an intercreditor agreement pursuant to which the lenders respective rights and interests in the security are set forth. We were in compliance with all our financial covenants as of and for the year ended December 31, 2013.

We have pledged the majority of our U.S. assets and certain assets of our non-U.S. subsidiaries in support of our outstanding debt.

## Interest and debt expense

Interest and debt expense consisted of the following:

|  | Successor |  |  |  |  | Predecessor One <br> Month <br> Ended <br> January 31, 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year Ended December 2013 |  | r 31, | Eleven Months Ended December 31, 2011 |  |  |  |
| Bank borrowings | \$ 122 | \$ | 53 | \$ | 29 | \$ | 3 |
| Amortization of deferred debt issuance costs and discounts on debt | 9 |  | 10 |  | 1 |  |  |
| Other | 4 |  | 4 |  | 1 |  |  |
| Capitalized interest | (5) |  | (2) |  | (1) |  |  |
| Total interest and debt expense | \$ 130 | \$ | 65 | \$ | 30 | \$ | 3 |

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In connection with obtaining debt, we incurred debt issuance costs, which are being amortized through the respective maturity dates using the effective interest method. At December 31, 2013 and 2012, we had $\$ 57$ million and $\$ 38$ million, respectively, of deferred debt issuance costs, which are recorded in Other long-term assets on the Consolidated Balance Sheets.

## 16. Asset Retirement Obligations

Asset retirement obligations ( AROs ) consist primarily of rehabilitation and restoration costs, landfill capping costs, decommissioning costs, and closure and post-closure costs. A summary of the changes in AROs during 2013 and 2012 is as follows:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Beginning balance | \$ | 113 | \$ | 30 |
| Additions |  |  |  | 7 |
| Accretion expense |  | 2 |  | 5 |
| Remeasurement/translation |  | (16) |  | 7 |
| Changes in estimates, including cost and timing of cash flows |  | (1) |  | 4 |
| Settlements/payments |  | (2) |  | (1) |
| AROs acquired in the Transaction |  |  |  | 61 |
| Ending balance | \$ | 96 | \$ | 113 |
| Current portion included in accrued liabilities | \$ | 6 | \$ | 7 |
| Noncurrent portion | \$ | 90 | \$ | 106 |

We used the following assumptions in determining asset retirement obligations at December 31, 2013: inflation rates between $2.5 \%-5.3 \%$ per year; credit adjusted risk-free interest rates between $4.52 \%-7 \%$; and the life of mines between 11-39 years.

## Environmental Rehabilitation Trust

In accordance with applicable regulations, we have established an environmental rehabilitation trust for the prospecting and mining operations in South Africa, which receives, holds, and invests funds for the rehabilitation or management of asset retirement obligations. The trustees of the fund are appointed by us, and consist of sufficiently qualified employees capable of fulfilling their fiduciary duties. At December 31, 2013 and 2012, the environmental rehabilitation trust assets were $\$ 22$ million and $\$ 20$ million, respectively, which were recorded in Other long-term assets on the Consolidated Balance Sheets.

## 17. Derivative Instruments

We manufacture and market our products in a number of countries throughout the world and, as a result, are exposed to changes in foreign currency exchange rates, particularly in South Africa, Australia, and The Netherlands. Costs in South Africa and Australia are primarily incurred in local currencies, while the majority of revenues are in U.S. dollars. In Europe, the majority of revenues and costs are in the local currency. This leaves us exposed to movements
in the South African Rand and the Australian dollar versus the U.S. dollar.

In order to manage this risk, we entered into currency forward contracts to buy and sell foreign currencies as economic hedges for these foreign currency transactions during 2013. Our currency forward contracts were not designated for hedge accounting treatment under ASC 815, Derivatives and Hedging, ( ASC 815 ). As such, changes in the fair value were recorded in Other income (expense) on the Consolidated Statements of Operations. During 2013, we recorded a net gain of $\$ 2$ million. At December 31, 2013 and 2012, we did not have any forward contracts in place.

## 18. Commitments and Contingencies

Leases The Company leases office space, storage, and equipment under non-cancelable lease agreements, which expire on various dates through 2023. Total rental expense related to operating leases was $\$ 42$ million, $\$ 8$ million, and $\$ 13$ million during 2013, 2012, and 2011, respectively. See Note 15 for additional information regarding lease financing.

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At December 31, 2013, minimum rental commitments under non-cancelable operating leases were as follows:

|  | Operating |  |
| :--- | ---: | ---: |
| 2014 | $\$$ | 43 |
| 2015 | 29 |  |
| 2016 |  | 10 |
| 2017 | 10 |  |
| 2018 | 6 |  |
| Thereafter | 6 |  |
|  |  |  |
| Total | $\$$ | 104 |

Purchase Commitments At December 31, 2013, purchase commitments were $\$ 253$ million for 2014, $\$ 151$ million for 2015, $\$ 112$ million for 2016, $\$ 105$ million for 2017, $\$ 77$ million for 2018, and $\$ 160$ million thereafter.

Letters of Credit At December 31, 2013, we had outstanding letters of credit, bank guarantees, and performance bonds of approximately $\$ 45$ million, of which $\$ 25$ million in letters of credit were issued under the UBS Revolver and $\$ 18$ million were bank guarantees issued by ABSA.

Other Matters From time to time, we may be party to a number of legal and administrative proceedings involving legal, environmental, and/or other matters in various courts or agencies. These proceedings, individually and in the aggregate, may have a material adverse effect on us. These proceedings may be associated with facilities currently or previously owned, operated or used by us and/or our predecessors, some of which may include claims for personal injuries, property damages, cleanup costs, and other environmental matters. Current and former operations may also involve management of regulated materials that are subject to various environmental laws and regulations including the Comprehensive Environmental Response Compensation and Liability Act, the Resource Conservation and Recovery Act or state equivalents. Similar environmental laws and regulations and other requirements exist in foreign countries in which we operate.

## 19. Shareholders Equity

## Tronox Limited

The changes in outstanding Class A Shares and Class B Shares for the years ended December 31, 2013 and 2012 were as follows:

| Class A Shares: |  |
| :--- | ---: |
| Balance at January 1, 2012 | $76,644,650$ |
| Shares issued in connection with the Transaction | 24,620 |
| Shares issued for share-based compensation | 9,353 |
| Shares issued for warrants exercised | $(548,234)$ |
| Shares purchased by the T-Bucks Trust |  |
| Class A Shares purchased by Exxaro, converted to Class B | $(1,400,000)$ |

Shares repurchased and canceled $\quad(12,626,400)$

| Balance at December 31, 2012 | $62,103,989$ |
| :--- | ---: |
| Shares issued for share-based compensation | 109,790 |
| Shares issued for warrants exercised | 84,088 |
| Shares issued for options exercised | 51,751 |

Balance at December 31, $2013 \quad 62,349,618$
Class B Shares:
Balance at January 1, 2012
Shares issued in connection with the Transaction 49,754,280
Class A Shares purchased by Exxaro, converted to Class B Shares $1,400,000$

Balance at December 31, $2012 \quad 51,154,280$
Balance at December 31, $2013 \quad 51,154,280$
In accordance with Australian law, Tronox Limited is not permitted to hold its own ordinary shares. As such, shares repurchased during 2012 were canceled.

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## Tronox Incorporated

The changes in outstanding and treasury shares for the year ended December 31, 2012 were as follows:

| Shares outstanding: | $75,383,455$ |
| :--- | ---: |
| Balance at January 1, 2012 | 570,785 |
| Shares issued for share-based compensation | 690,385 |
| Shares issued for warrants exercised | 25 |
| Shares issued for claims | $(76,644,650)$ |
| Shares exchanged in connection with the Transaction |  |
|  |  |
| Balance at December 31, 2012 | 472,565 |
|  | 239,360 |
| Shares held as treasury: | $(711,925)$ |

Balance at December 31, 2012
In accordance with Australian law, Tronox Limited is not permitted to hold its own ordinary shares. As such, Tronox Incorporated shares held in treasury on the Transaction date were canceled in connection with the Transaction.

## Warrants

Tronox Limited has outstanding Series A Warrants (the Series A Warrants ) and Series B Warrants (the Series B Warrants, and together with the Series A Warrants, the Warrants ). Holders of the Warrants are entitled to purchase five Class A Shares and receive $\$ 12.50$ in cash at an exercise prices of $\$ 59.66$ for each Series A Warrant and $\$ 65.84$ for each Series B Warrants. The Warrants have a seven-year term from the date initially issued and will expire on February 14, 2018. A holder may exercise the Warrants by paying the applicable exercise price in cash or exercising on a cashless basis. The Warrants are freely transferable by the holder. As of December 31, 2013 there were 357,300 Series A Warrants and 465,136 Series B Warrants outstanding.

## Dividends Declared

During 2013 and 2012, we declared and paid quarterly dividends to holders of our Class A Shares and Class B Shares as follows:

|  | Q3 2012 |  | Q4 2012 |  | Q1 2013 |  | Q2 2013 |  | Q3 2013 |  | Q4 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dividend per share | \$ | 0.25 | \$ | 0.25 | \$ | 0.25 | \$ | 0.25 | \$ | 0.25 | \$ | 0.25 |
| Total dividend | \$ | 32 | \$ | 29 | \$ | 29 | \$ | 28 | \$ | 29 | \$ | 29 |

Record date (close of business)

July 13 November 23 March 6 May $20 \quad$ August $19 \quad$ November 18

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## Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss were as follows:


## Share split

On June 26, 2012, the Board approved a 5-to-1 share split for holders of Class A Shares and Class B Shares at the close of business on July 20, 2012, by issuance of four additional shares for each share of the same class by way of bonus issue. As a result of the share split, we recorded an increase to Class A Shares and Class B Shares of $\$ 1$ million and a corresponding decrease to Retained earnings on the Consolidated Balance Sheets.

## Share Repurchases

On June 26, 2012, the Board authorized the repurchase of $10 \%$ of Tronox Limited voting securities in open market transactions. During 2012, we repurchased 12,626,400 Class A Shares, affected for the 5 -for- 1 share split, at an average price of $\$ 25.84$ per share, inclusive of commissions, for a total cost of $\$ 326$ million. Repurchased shares were subsequently canceled in accordance with Australian law. On September 27, 2012, we announced the successful completion of our share repurchase program.

## 20. Noncontrolling Interest

In connection with the Transaction, Exxaro retained a $26 \%$ ownership interest in each of Tronox KZN Sands (Pty) Ltd. and Tronox Mineral Sands (Pty) Ltd. in order to comply with the ownership requirements of the Black Economic Empowerment (BEE ) legislation in South Africa. Exxaro is entitled to exchange this interest for approximately $3.2 \%$ in additional Class B Shares under certain circumstances (i.e., the earlier of the termination of the Empowerment Period or the tenth anniversary of completion of the Transaction). Exxaro also retained a $26 \%$ ownership interest in certain other non-operating subsidiaries.

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A reconciliation of the beginning and ending balances of noncontrolling interest on the Consolidated Balance Sheets is as follows:

| Balance at January 1, 2012 | $\$$ |
| :--- | :---: |
| Fair value of noncontrolling interest on the Transaction Date | 233 |
| Net loss attributable to noncontrolling interest | $(1)$ |
| Effect of exchange rate changes | 1 |
| Balance at December 31, 2012 | 233 |
| Net income attributable to noncontrolling interest | 36 |
| Effect of exchange rate changes | $(70)$ |
| Balance at December 31, 2013 | $\$ 199$ |

## 21. Share-based Compensation

Compensation expense consisted of the following:


The income tax benefits associated with compensation expense for 2013 and 2012 were $\$ 2$ million and $\$ 6$ million, respectively, net of valuation allowances. The tax benefit associated with compensation expense during 2011 had a corresponding offset to the valuation allowance, yielding no overall income tax benefit.

## Tronox Limited Management Equity Incentive Plan

On the Transaction Date, we adopted the Tronox Limited Management Equity Incentive Plan (the Tronox Limited MEIP ), which permits the grant of awards that are comprised of incentive options, nonqualified options, share appreciation rights, restricted shares, restricted share units, performance awards, and other share-based awards, cash payments, and other forms as the compensation committee of the Board in its discretion deems appropriate, including any combination of the above. Subject to further adjustment, the maximum number of shares which may be the subject of awards (inclusive of incentive options) is $12,781,225$ Class A Shares.

## Restricted Shares

During 2013 and 2012, we granted 479,258 and 322,765 restricted shares, respectively, to employees, which have both time requirements and performance requirements. The time provisions are graded vesting over 3 years, while the performance provisions are cliff vesting and have a variable payout at the end of 3 years. During 2013 and 2012, we granted 45,114 and 34,740 restricted shares, respectively, with three-year graded vesting to members of the Board. All restricted share awards issued during 2013 are classified as equity awards, and are accounted for using the fair value established at the grant date.

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The following table presents a summary of activity for the years ended December 31, 2013 and 2012:

|  | Number of <br> Shares | Weighted Average <br> Grant Date <br> Fair Value |  |
| :--- | ---: | ---: | ---: |
| Outstanding, January 1, 2012 | 420,765 | $\$$ | 16.99 |
| Converted in connection with the Transaction | 357,505 | 25.18 |  |
| Granted | $(24,620)$ | 20.87 |  |
| Vested | $(11,575)$ | 29.32 |  |
| Forfeited | 742,075 | 20.61 |  |
| Outstanding, December 31, 2012 | 524,372 | 21.18 |  |
| Granted | $(100,540)$ | 22.91 |  |
| Vested | $(17,112)$ |  | 24.24 |
| Forfeited | $1,148,795$ | $\$$ | 20.61 |
| Outstanding, December 31, 2013 | $1,135,905$ | $\$$ | 20.60 |
| Expected to vest, December 31, 2013 |  |  |  |

At December 31, 2013, there was $\$ 12$ million in unrecognized compensation expense related to nonvested restricted shares, adjusted for estimated forfeitures, which is expected to be recognized over a weighted-average period of 2 years. The total fair value of restricted shares that vested during the years ended December 31, 2013 and 2012 was $\$ 2$ million and $\$ 1$ million, respectively.

## Restricted Share Units ( RSUs )

During 2013 and 2012, we granted 269,037 and 18,990 RSUs, respectively, to employees, which have both time requirements and performance requirements. The time provisions are graded vesting over a period of 3 years, while the performance provisions are cliff vesting and have a variable payout at the end of 3 years. During 2013, we granted 26,618 RSUs with 3 -year graded vesting to members of the Board. All RSUs issued during 2013 are classified as equity awards, and are accounted for using the fair value established at the grant date.

|  | Number of Shares | Weighted Average Grant Date Fair Value |
| :---: | :---: | :---: |
| Outstanding, January 1, 2012 |  | \$ |
| Granted | 18,990 | 21.10 |
| Outstanding, December 31, 2012 | 18,990 | 21.10 |
| Granted | 295,655 | 21.06 |
| Vested | $(7,775)$ | 20.43 |
| Forfeited | $(3,546)$ | 21.36 |


| Outstanding at December 31, 2013 | 303,324 | $\$$ | 21.08 |
| :--- | :--- | :--- | :--- |
| Expected to vest, December 31, 2013 | 294,542 | $\$$ | 21.07 |

At December 31, 2013, there was $\$ 3$ million unrecognized compensation expense related to nonvested RSUs, adjusted for estimated forfeitures, which is expected to be recognized over a weighted-average period of 2 years. The total fair value of RSUs that vested during the year ended December 31, 2013 was less than $\$ 1$ million.

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## Options

During 2013 and 2012, we granted options to employees to purchase Class A Shares, which vest ratably over a three-year period and have a ten-year term. The following table presents a summary of activity for the years ended December 31, 2013 and 2012:

|  | Number of Options | Weighted Average Exercise Price | Weighted Average Contractual Life (years) | Intrinsic <br> Value |
| :---: | :---: | :---: | :---: | :---: |
| Outstanding, January 1, 2012 |  | \$ |  |  |
| Converted in connection with the Transaction | 517,330 | 24.56 |  |  |
| Issued | 247,904 | 23.83 |  |  |
| Forfeited | $(152,795)$ | 22.39 |  |  |
| Outstanding, December 31, 2012 | 612,439 | 24.81 |  |  |
| Issued | 1,590,438 | 19.17 |  |  |
| Exercised | $(51,751)$ | 21.90 |  |  |
| Forfeited | $(22,861)$ | 20.54 |  |  |
| Expired | $(33,494)$ | 25.65 |  |  |
| Outstanding, December 31, 2013 | 2,094,771 | \$ 20.63 | 8.97 | \$ 7 |
| Expected to vest, December 31, 2013 | 1,822,535 | \$ 20.19 | 9.05 | \$ 6 |
| Exercisable, December 31, 2013 | 226,822 | \$ 24.32 | 8.27 | \$ |

The aggregate intrinsic values in the table represent the total pre-tax intrinsic value (the difference between our share price at December 31, 2013 and the options exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their in-the-money options at the end of the year. The amount will change based on the fair market value of our stock. Total intrinsic value of options exercised during 2013 was less than $\$ 1$ million. We issue new shares upon the exercise of options. During 2013, we received approximately $\$ 1$ million in cash for the exercise of stock options. The associated tax benefit was less than \$1 million.

At December 31, 2013, unrecognized compensation expense related to options, adjusted for estimated forfeitures, was $\$ 10$ million, which is expected to be recognized over a weighted-average period of 2 years.

Fair value is determined on the grant date using the Black-Scholes option-pricing model, and is recognized in earnings on a straight-line basis over the employee service period of three years, which is the vesting period. The assumptions used in the Black-Scholes option-pricing model were as follows:

|  | February 25, <br> $\mathbf{2 0 1 3}$ | March 11, <br> $\mathbf{2 0 1 3}$, | September 3, <br> $\mathbf{2 0 1 3}$ |  |
| :--- | :---: | :---: | :---: | :---: |
| Number of options granted | $1,544,872$ | 8,238 | 37,328 |  |
| Fair market value and exercise price | $\$$ | 19.09 | $\$$ | 21.49 |
| Risk-free interest rate | $1.04 \%$ | $1.19 \%$ | 21.94 |  |
| Expected dividend yield | $5.24 \%$ | $4.65 \%$ | $2.10 \%$ |  |
| Expected volatility | $56 \%$ | $56 \%$ | $4.56 \%$ |  |
| Maturity | 10 | 10 | $56 \%$ |  |
| Expected term (years) | 6 | 6 | 10 |  |
| Per-unit fair value of options granted | $\$$ | 6.28 | $\$$ | 7.48 |

The fair value is based on the closing price of our Class A Shares on the grant date. The risk-free interest rate is based on U.S. Treasury Strips available with maturity period consistent with expected life assumption. The expected volatility assumption is based on historical price movements of our peer group.

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## T-Bucks Employee Participation Plan ( T-Bucks EPP )

During 2012, we established the T-Bucks EPP for the benefit of certain qualifying employees of our South African subsidiaries. We funded the T-Bucks Trust (the Trust ) with R124 million (approximately $\$ 15$ million), which was used to acquire Class A Shares. Additional contributions may be made in the future at the discretion of the Board. The T-Bucks EPP is classified as an equity-settled shared-based payment plan, whereby participants were awarded share units in the Trust, which entitles them to receive Class A Shares upon completion of the vesting period on May 31, 2017. Participants are entitled to receive dividends on the shares during the vesting period. Forfeited shares are retained by the Trust, and are allocated to future participants. Compensation costs are recognized over the vesting period using the straight-line method. During 2012, the Trust purchased 548,234 Class A Shares at $\$ 25.79$ per share, which was the fair value on the date of purchase. The balance at both December 31, 2013 and 2012 was 548,234 shares.

## Tronox Incorporated Management Equity Incentive Plan

In connection with its emergence from bankruptcy, Tronox Incorporated adopted the Tronox Incorporated Management Equity Incentive Plan (the Tronox Incorporated MEIP ), which permitted the grant of awards that were comprised of incentive options, nonqualified options, share appreciation rights, restricted shares, restricted share units, performance awards, and other share-based awards and cash payments. The number of shares available for delivery pursuant to the awards granted under the Tronox Incorporated MEIP was 1.2 million shares. On the Transaction Date, 748,980 restricted shares of Tronox Incorporated vested in connection with the Transaction. The remaining restricted shares of Tronox Incorporated were converted to Tronox Limited restricted shares.

## Restricted Shares

During 2012, Tronox Incorporated granted shares to employees with graded vesting provisions over a 3 -year time period. All restricted share awards issued during 2012 were classified as equity awards and accounted for using the fair value established at the grant date. All Tronox Incorporated shares granted in 2012 that did not vest with the Transaction were converted into the Tronox Limited MEIP on the date of the Transaction.

The following table summarizes restricted shares activity during the years ended December 31, 2012 and 2011:

|  | Number <br> of <br> Shares | Weighted Average <br> Grant Date <br> Fair Value |
| :--- | ---: | ---: |
| Balance, January 1, 2011 | $1,734,090$ | 22.81 |
| Granted | $(545,675)$ | 24.50 |
| Vested | $(10,420)$ | 24.50 |
| Forfeited | $1,177,995$ | 22.01 |
| Balance, December 31, 2011 | 52,915 | 24.36 |
| Granted | $(61,165)$ | 24.50 |
| Vested | $(748,980)$ | 24.57 |
| Earned in connection with the Transaction | $(420,765)$ | 16.99 |
| Converted in connection with the Transaction |  |  |

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## Options

During 2012, Tronox Incorporated granted options to employees to purchase Class A Shares with graded vesting provisions over a 3 year time period and carrying a ten year term option. Fair value was determined on the grant date using the Black-Scholes option-pricing model, and recognized in earnings on a straight-line basis over the employee service period. All Tronox Incorporated options granted in 2012 that did not vest with the Transaction were converted to the Tronox Limited MEIP on the date of the Transaction.

The following table presents a summary of activity for the years ended December 31, 2012 and 2011:

|  |  | Weighted <br> Average <br> Exercise <br> Pumber of <br> Options | Price |
| :--- | :---: | :---: | :---: |
| Balance at January 1, 2011 | 345,000 | 22.00 |  |
| Issued | 345,000 | $\$$ | 22.00 |
| Balance at December 31, 2011 | 172,330 | 29.69 |  |
| Issued | $(517,330)$ | 24.56 |  |

Outstanding at December 31, 2012
\$

## 22. Pension and Other Postretirement Healthcare Benefits

We sponsor a noncontributory defined benefit retirement plan (qualified) in the United States, a contributory defined benefit retirement plan in The Netherlands, a U.S. contributory postretirement healthcare plan, and a South Africa postretirement healthcare plan.

## U.S. Plans

Qualified Retirement Plan We sponsor a noncontributory qualified defined benefit plan (funded) (the U.S. Qualified Plan ) in accordance with the Employee Retirement Income Security Act of 1974 ( ERISA ) and the Internal Revenue Code. We made contributions into funds managed by a third-party, and those funds are held exclusively for the benefit of the plan participants. Benefits under the U.S. Qualified Plan were generally calculated based on years of service and final average pay. The U.S. Qualified Plan was frozen and closed to new participants on June 1, 2009.

Postretirement Healthcare Plan We sponsor an unfunded U.S. postretirement healthcare plan. Under the plan, substantially all U.S. employees are eligible for postretirement healthcare benefits provided they reach retirement age while working for us. The plan provides medical and dental benefits to U.S. retirees and their eligible dependents.

## Foreign Plans

Netherlands Plan On January 1, 2007, we established the TDF-Botlek Pension Fund Foundation (the Netherlands Plan ) to provide defined pension benefits to qualifying employees of Tronox Pigments (Holland) B.V. and its related companies. The Netherlands Plan is a contributory benefit plan under which participants contribute $4 \%$ of the costs.

Contributions by us and participants are held in the fund for the sole benefit of the participants. Benefits are determined by applying the benefit formula to the pensionable salary, and are payable to participants upon retirement. Under The Netherlands Plan, a participant s surviving spouse and children are entitled to benefits subject to certain benefit thresholds.

South Africa Postretirement Healthcare Plan As part of the Transaction, we established a post-employment healthcare plan, which provides medical and dental benefits to certain Namakwa Sands employees, retired employees and their registered dependents (the South African Plan ). The South African Plan provides benefits as follows: (i) members employed before March 1, 1994 receive 100\% post-retirement and death-in-service benefits; (ii) members employed on or after March 1, 1994 but before January 1, 2002 receive $2 \%$ per year of completed service subject to a maximum of $50 \%$ post-retirement and death-in-service benefits; and, (iii) members employed on or after January 1, 2002 receive no post-retirement and death-in-service benefits.

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## Plan Financial Information

Benefit Obligations and Funded Status The following provides a reconciliation of beginning and ending benefit obligations, beginning and ending plan assets, funded status, and balance sheet classification of our pension and postretirement healthcare plans as of and for the years ended December 31, 2013 and 2012. The benefit obligations and plan assets associated with our principal benefit plans are measured on December 31.

|  |  | Retiren End 2013 | $t \mathbf{P l}$ | lans ember 2012 | str | emen End 13 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Change in benefit obligations: |  |  |  |  |  |  |  |  |
| Benefit obligation, beginning of year | \$ | 557 | \$ | 483 | \$ | 19 | \$ | 9 |
| Service cost |  | 5 |  | 3 |  | 1 |  | 1 |
| Interest cost |  | 20 |  | 22 |  | 1 |  | 1 |
| Net actuarial (gains) losses |  | (31) |  | 78 |  | 4 |  | 2 |
| Foreign currency rate changes |  | 6 |  | 2 |  | (1) |  |  |
| Contributions by plan participants |  | 1 |  | 1 |  |  |  | 1 |
| Acquired in the Transaction |  |  |  |  |  |  |  | 7 |
| Plan amendments |  | (4) |  |  |  |  |  |  |
| Benefits paid |  | (27) |  | (29) |  | (1) |  | (2) |
| Administrative expenses |  | (3) |  | (3) |  |  |  |  |
| Benefit obligation, end of year |  | 524 |  | 557 |  | 23 |  | 19 |
| Change in plan assets: |  |  |  |  |  |  |  |  |
| Fair value of plan assets, beginning of year |  | 398 |  | 350 |  |  |  |  |
| Actual return on plan assets |  | 19 |  | 47 |  |  |  |  |
| Employer contributions (1) |  | 5 |  | 30 |  | 1 |  | 1 |
| Participant contributions |  | 1 |  | 1 |  |  |  | 1 |
| Foreign currency rate changes |  | 5 |  | 2 |  |  |  |  |
| Benefits paid (1) |  | (27) |  | (29) |  | (1) |  | (2) |
| Administrative expenses |  | (3) |  | (3) |  |  |  |  |
| Fair value of plan assets, end of year |  | 398 |  | 398 |  |  |  |  |
| Net over (under) funded status of plans |  | (126) | \$ | (159) | \$ | (23) | \$ | (19) |
| Classification of amounts recognized in the Consolidated Balance Sheets: |  |  |  |  |  |  |  |  |
| Accrued liabilities | \$ |  | \$ |  | \$ | (1) | \$ | (2) |
| Pension and postretirement healthcare benefits |  | (126) |  | (159) |  | (22) |  | (17) |
| Total liabilities |  | (126) |  | (159) |  | (23) |  | (19) |
| Accumulated other comprehensive loss |  | 60 |  | 94 |  | 9 |  | 6 |
| Total |  | (66) |  | (65) | \$ | (14) | \$ | (13) |

(1) We expect 2014 contributions to be approximately $\$ 5$ million for The Netherlands plan and $\$ 17$ million for the U.S. qualified retirement plan, while net benefits paid are expected to be approximately $\$ 1$ million for the U.S. postretirement healthcare plan.
At December 31, 2013, our U.S. qualified retirement plan was in an underfunded status of $\$ 106$ million. As a result, we have a projected minimum funding requirement of $\$ 13$ million for 2013, which will be payable in 2014.

|  | December 31, 2013 |  |  | December 31, 2012 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { U.S. } \\ & \text { Qualified } \\ & \text { Plan } \end{aligned}$ |  | erlands ment n | $\begin{gathered} \text { U.S. } \\ \text { Qualified } \\ \text { Plan } \end{gathered}$ | The | erlands ment n |
| Accumulated benefit obligation | \$ 378 | \$ | 127 | \$ 420 | \$ | 117 |
| Projected benefit obligation | (378) |  | (146) | (420) |  | (137) |
| Fair value of plan assets | 272 |  | 126 | 286 |  | 112 |
| Funded status underfunded | \$ (106) | \$ | (20) | \$ (134) | \$ | (25) |

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Expected Benefit Payments The following table shows the expected cash benefit payments for the next five years and in the aggregate for the years 2019 through 2023:

|  |  |  |  |  | $\mathbf{2 0 1 9 -}$ |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: | :---: |
| Retirement Plans (1) | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 7}$ | $\mathbf{2 0 1 8}$ | $\mathbf{2 0 2 3}$ |
| Postretirement Healthcare Plan | $\$ 32$ | $\$ 31$ | $\$ 30$ | $\$ 30$ | $\$ 30$ | $\$ 150$ |

(1) Includes benefit payments expected to be paid from the U.S. qualified retirement plan of $\$ 28$ million, $\$ 27$ million, $\$ 27$ million, $\$ 26$ million and $\$ 26$ million in each year, 2014 through 2018, respectively, and $\$ 127$ million in the aggregate for the period 2019 through 2023.
Retirement and Postretirement Healthcare Expense The table below presents the components of net periodic cost (income) associated with the U.S. and foreign plans recognized in the Consolidated Statements of Operations for the years ended December 31, 2013 and 2012, eleven months ended December 31, 2011 and one month ended January 31, 2011:


Net amortization of prior
service credit
Net amortization of actuarial loss

2
1

Total net periodic cost
$\begin{array}{lllllllllllllll}\text { (income) } & \$ & 7 & \$ & 4 & \$ & 4 & \$ & 1 & \$ 2 & \$ & 2 & \$ & 1 & \$\end{array}$

Pretax amounts that are expected to be reclassified from Accumulated other comprehensive income on the Consolidated Balance Sheets to retirement expense during 2014 related to unrecognized actuarial losses are $\$ 1$ million and \$1 million for retirement and postretirement healthcare plans, respectively.

Assumptions The following weighted average assumptions were used to determine net periodic cost:

|  | 2013 |  | 2012 |  | 2011 |  |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: |
|  | United |  | United |  | United |  |
|  | States | Netherlands | States | Netherlands | States | Netherlands |
| Discount rate (1) | $3.75 \%$ | $3.50 \%$ | $4.50 \%$ | $5.25 \%$ | $5.25 \%$ | $5.25 \%$ |
| Expected return on plan assets | $5.30 \%$ | $4.75 \%$ | $5.75 \%$ | $5.25 \%$ | $6.44 \%$ | $5.25 \%$ |
| Rate of compensation increases |  | $3.50 \%$ |  | $3.50 \%$ |  | $3.50 \%$ |

The following weighted average assumptions were used in estimating the actuarial present value of the plans benefit obligations:

|  | 2013 |  | 2012 |  | 2011 |  |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: |
|  | United |  | United |  | United |  |
| States | Netherlands | States | Netherlands | States | Netherlands |  |
| Discount rate | $4.50 \%$ | $3.50 \%$ | $3.75 \%$ | $3.50 \%$ | $4.50 \%$ | $5.25 \%$ |
| Rate of compensation increases |  | $3.25 \%$ |  | $3.50 \%$ |  | $3.50 \%$ |

The following weighted average assumptions were used in determining the actuarial present value of the South African Postretirement Healthcare Plan:

|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
| :--- | :--- | :--- | :--- |
| Discount rate | $10.14 \%$ | $9.45 \%$ |  |

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Expected Return on Plan Assets In forming the assumption of the U.S. long-term rate of return on plan assets, we took into account the expected earnings on funds already invested, earnings on contributions expected to be received in the current year, and earnings on reinvested returns. The long-term rate of return estimation methodology for U.S. plans is based on a capital asset pricing model using historical data and a forecasted earnings model. An expected return on plan assets analysis is performed which incorporates the current portfolio allocation, historical asset-class returns, and an assessment of expected future performance using asset-class risk factors. Our assumption of the long-term rate of return for The Netherlands plan was developed considering the portfolio mix and country-specific economic data that includes the rates of return on local government and corporate bonds.

Discount Rate The discount rates selected for estimation of the actuarial present value of the benefit obligations for both U.S. plans were $4.50 \%$ and $3.75 \%$ as of December 31, 2013 and 2012, respectively. The 2013 and 2012 rates were selected based on the results of a cash flow matching analysis, which projected the expected cash flows of the plans using a yield curves model developed from a universe of Aa-graded U.S. currency corporate bonds (obtained from Bloomberg) with at least $\$ 50$ million outstanding. Bonds with features that imply unreliable pricing, a less than certain cash flow, or other indicators of optionality are filtered out of the universe. The remaining universe is categorized into maturity groups, and within each of the maturity groups yields are ranked into percentiles. For 2011, the discount rate for our U.S. qualified plan and postretirement healthcare plan was based on a discounted cash flow analysis performed by our independent actuaries utilizing the Citigroup Pension Discount Curve as of the end of the year.

Health Care Cost Trend Rates At December 31, 2013, the assumed health care cost trend rates used to measure the expected cost of benefits covered by the U.S. postretirement healthcare plan was $8 \%$ in 2014, gradually declining to $5 \%$ in 2020 and thereafter. A $1 \%$ increase in the assumed health care cost trend rate for each future year would increase the accumulated postretirement benefit obligation at December 31, 2013 by $\$ 2$ million, while the aggregate of the service and interest cost components of the 2013 net periodic postretirement cost would increase by less than $\$ 1$ million. A $1 \%$ decrease in the trend rate for each future year would reduce the accumulated benefit obligation at December 31, 2013 by $\$ 1$ million and decrease the aggregate of the service and interest cost components of the net periodic postretirement cost for 2013 by less than $\$ 1$ million.

Plan Assets Asset categories and associated asset allocations for our funded retirement plans at December 31, 2013 and 2012:

|  | December 31, |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Actual | Target | Actual | Target |
| United States: | $38 \%$ | $38 \%$ | $38 \%$ | $38 \%$ |
| Equity securities | 61 | 62 | 61 | 62 |
| Debt securities | 1 |  | 1 |  |
| Cash and cash equivalents |  |  |  |  |
|  | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |
| Total |  |  |  |  |
|  |  |  |  |  |
| Netherlands: | $36 \%$ | $35 \%$ | $41 \%$ | $40 \%$ |
| Equity securities | 55 | 62 | 53 | 55 |
| Debt securities | 9 | 3 | 6 | 5 |

$100 \% \quad 100 \% \quad 100 \% \quad 100 \%$
The U.S. plan is administered by a board-appointed committee that has fiduciary responsibility for the plan s management. The committee maintains an investment policy stating the guidelines for the performance and allocation of plan assets, performance review procedures and updating of the policy. At least annually, the U.S. plan s asset allocation guidelines are reviewed in light of evolving risk and return expectations.

Substantially all of the plan $s$ assets are invested with nine equity fund managers, three fixed-income fund managers and one money-market fund manager. To control risk, equity fund managers are prohibited from entering into the following transactions, (i) investing in commodities, including all futures contracts, (ii) purchasing letter stock, (iii) short selling, and (iv) option trading. In addition, equity fund managers are prohibited from purchasing on margin and are prohibited from purchasing Tronox securities. Equity managers are monitored to ensure investments are in line with their style and are generally permitted to invest in U.S. common stock, U.S. preferred stock, U.S. securities convertible into common stock, common stock of foreign companies listed on major U.S. exchanges, common stock of foreign companies listed on foreign exchanges, covered call writing, and cash and cash equivalents.

Fixed-income fund managers are prohibited from investing in (i) direct real estate mortgages or commingled real estate funds, (ii) private placements above certain portfolio thresholds, (iii) tax exempt debt of state and local governments above certain portfolio thresholds, (iv) fixed income derivatives that would cause leverage, (v) guaranteed investment contracts, and (vi) Tronox securities. They are permitted to invest in debt securities issued by the U.S. government, its agencies or instrumentalities, commercial paper rated

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A3/P3, FDIC insured certificates of deposit or bankers acceptances and corporate debt obligations. Each fund manager s portfolio has an average credit rating of A or better.

The Netherlands plan is administered by a pension committee representing the employer, the employees, and the pensioners. The pension committee has six members, whereby three members are elected by the employer, two members are elected by the employees and one member is elected by the pensioners, and each member has one vote. The pension committee meets at least quarterly to discuss regulatory changes, asset performance, and asset allocation. The plan assets are managed by one Dutch fund manager against a mandate set at least annually by the pension committee. In accordance with policies set by the pension committee, a new fund manager was appointed effective December 1, 2006. Simultaneous with the change in fund manager, the asset allocation was modified using committee policy guidelines. The plan assets are evaluated annually by a multinational benefits consultant against state defined actuarial tests to determine funding requirements.

The fair values of pension investments as of December 31, 2013 are summarized below:

|  | Fair Value Measurement at December 31, 2013, Using: <br> Quoted Prices <br> in |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Active <br> Markets for | Significant <br> Other <br> Identical AssetsObservable <br> (Level <br> Inputs | Significant <br> (Level 2) | Unobservable <br> Inputs <br> (Level 3) | Total |

(1) For commingled equity funds owned by the funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.
(2) For commingled fixed income funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.
(3) For commingled cash equivalents funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.
(4) For government debt securities that are traded on active exchanges, fair value is based on observable quoted prices, which are Level 1 inputs.
(5) For corporate, government, and mortgage related debt securities, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

Netherlands Pension
Fair Value Measurement at December 31, 2013, Using: Quoted Prices
in
Active Significant Markets Other Significant for Observable Unobservable Identical Assets Inputs Inputs (Level 1) (Level 2) (Level 3) Total
Asset category:

| Equity securities | Non-U.S. Pooled Funds | $\$$ | $\$$ | $48(1)$ | $\$$ | $\$$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Debt securities | Non-U.S. Pooled Funds |  | $70(2)$ | 48 |  |  |
| Cash |  | 8 | 70 |  |  |  |
|  |  |  | 8 | 8 |  |  |


| Total at fair value | $\$$ | $\$$ | 126 | $\$$ | $\$$ | 126 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

(1) For equity securities in the form of fund units that are redeemable at the measurement date, the unit value is deemed as a Level 2 input.

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(2) For pooled fund debt securities, the fair value is based on observable inputs, but do not solely rely on quoted market prices, and therefore are deemed Level 2 inputs.
The fair values of pension investments as of December 31, 2012 are summarized below:

## U.S. Pension

Fair Value Measurement at December 31, 2012, Using: Quoted Prices

|  | In <br> Active <br> Markets for <br> Identical AssetsObservable <br> (Level <br> Inputs | Significant <br> Other | Significant <br> Unobservable <br> Inputs <br> (Level 2) |  |  |
| :--- | :---: | ---: | ---: | ---: | ---: |
|  | (L) |  |  |  |  |

(1) For commingled equity funds owned by the funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.
(2) For commingled fixed income funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.
(3) For commingled cash equivalents funds, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.
(4) For government debt securities that are traded on active exchanges, fair value is based on observable quoted prices, which are Level 1 inputs.
(5) For corporate, government, and mortgage related debt securities, fair value is based on observable inputs of comparable market transactions, which are Level 2 inputs.

Netherlands Pension
Fair Value Measurement at December 31, 2012, Using: Quoted PricesSignificant Significant Total
in Other Unobservable
$\begin{array}{ccc}\text { Active } & \text { Observable } & \text { Inputs } \\ \text { Markets } & \text { Inputs } & \text { (Level 3) }\end{array}$
for (Level 2)

## Identical Assets

(Level 1)

| Asset category: |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Equity securities | Non-U.S. Pooled Funds | $\$$ | $\$$ | $46(1)$ | $\$$ | $\$$ | 46 |
| Debt securities | Non-U.S. Pooled Funds |  |  | $60(2)$ |  | 60 |  |
| Cash |  |  | 6 |  | 6 |  |  |
| Total at fair value | $\$$ | $\$$ | 112 | $\$$ | $\$$ | 112 |  |

(1) For equity securities in the form of fund units that are redeemable at the measurement date, the unit value is deemed as a Level 2 input.
(2) For pooled fund debt securities, the fair value is based on observable inputs, but do not solely rely on quoted market prices, and therefore are deemed Level 2 inputs.

## Defined Contribution Plans

## U.S. Savings Investment Plan

On March 30, 2006, we established the U.S. Savings Investment Plan (the SIP ), a qualified defined contribution plan under section 401 (k) of the Internal Revenue Code. Under the SIP, our regular full-time and part-time employees contribute a portion of their earnings, and we match these contributions up to a predefined threshold. During 2013, our matching contribution was $100 \%$ of

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the first $6 \%$ of employee contributions. During 2011 and 2012, our matching contribution was $100 \%$ of the first $3 \%$ of employees contribution and $50 \%$ of the next $3 \%$. Effective January 1, 2012, the Board increased the discretionary contribution to $7.5 \%$ of employee pay for 2012 from $6 \%$ during 2011. The discretionary contribution is subject to approval each year by the Board. Our matching contribution to the SIP vests immediately; however, our discretionary contribution is subject to vesting conditions that must be satisfied over a three year vesting period. Contributions under SIP, including our match, are invested in accordance with the investment options elected by plan participants. Compensation expense associated with our matching contribution to the SIP was $\$ 3$ million, $\$ 2$ million, and $\$ 2$ million during 2013, 2012, and 2011, respectively. Compensation expense associated with our discretionary contribution was $\$ 4$ million, $\$ 4$ million, and $\$ 3$ million during 2013, 2012, and 2011, respectively.

## U.S. Savings Restoration Plan

On March 30, 2006, we established the U.S. Savings Restoration Plan (the SRP ), a nonqualified defined contribution plan, for employees whose eligible compensation is expected to exceed the IRS compensation limits for qualified plans. Under the SRP, participants can contribute up to $20 \%$ of their annual compensation and incentive. Our matching contribution under the SRP is the same as the SIP. Our matching contribution under this plan vests immediately to plan participants. Contributions under the SRP, including our match, are invested in accordance with the investment options elected by plan participants. Compensation expense associated with our matching contribution to the SRP was less than $\$ 1$ million, $\$ 1$ million, and $\$ 1$ million during 2013, 2012, and 2011, respectively.

## 23. Cash Flows Statement Data

Other noncash items included in the reconciliation of net income to net cash flows from operating activities include the following:

|  | Year <br> Ended <br> December 31, <br> 2013 | Successor <br> Year <br> Ended <br> December 31, <br> 2012 | Eleven Months <br> Ended <br> December 31, <br> 2011 | Predecessor <br> One Month <br> Ended |
| :--- | :---: | :---: | :---: | :---: | :---: |
| January 31, |  |  |  |  |
| 2011 |  |  |  |  |

Cash flows from investing and financing activities for 2013 exclude $\$ 13$ million related to new lease financing in Capital expenditures and Proceeds from borrowings, respectively.

## 24. Related Party Transactions

Prior to the Transaction Date, Tronox Incorporated conducted transactions with Exxaro Australia Sands Pty Ltd, Tronox Incorporated s $50 \%$ partner in the Tiwest Joint Venture. Tronox Incorporated purchased, at open market prices, raw materials used in its production of $\mathrm{TiO}_{2}$, as well as Exxaro Australia Sands Pty Ltd s share of TiQproduced by the Tiwest Joint Venture. Tronox Incorporated also provided administrative services and product research and development activities, which were reimbursed by Exxaro. During 2012 and 2011, Tronox Incorporated made payments of $\$ 173$ million and $\$ 360$ million, respectively, and received payments of $\$ 9$ million and $\$ 8$ million, respectively. Subsequent to the Transaction Date, such transactions are considered intercompany transactions and are eliminated in consolidation.

Subsequent to the Transaction, we have service level agreements with Exxaro for services such as tax preparation, information technology services, research and development, and treasury, which amounted to $\$ 5$ million and $\$ 7$ million during 2013 and 2012, respectively.

## 25. Segment Information

The reportable segments presented below represent our operating segments for which separate financial information is available and which is utilized on a regular basis by our chief operating decision maker to assess performance and to allocate resources. In identifying our reportable segments, we also considered the nature of services provided by our operating segments. We have two reportable segments, Mineral Sands and Pigment. Our Mineral Sands segment includes the exploration, mining, and beneficiation of mineral sands deposits, as well as heavy mineral production, and produces titanium feedstock, including chloride slag, slag fines, and

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rutile, as well as pig iron and zircon. Our Pigment segment primarily produces and markets $\mathrm{TiO}_{2}$. Corporate and Other is comprised of our electrolytic manufacturing and marketing operations, all of which are located in the United States, as well as our corporate activities.

Segment performance is evaluated based on segment operating profit (loss), which represents the results of segment operations before unallocated costs, such as general corporate expenses not identified to a specific segment, environmental provisions, net of reimbursements, related to sites no longer in operation, interest expense, other income (expense), and income tax expense or benefit.

Net sales and income from operations by segment were as follows:

|  | YearEndedDecember 31,2013 | SuccessorYearEndedDecember 31,2012 |  | Eleven Months <br> Ended <br> December 31, 2011 |  | $\begin{gathered} \text { Predecessor } \\ \text { One } \\ \text { Month } \\ \text { Ended } \\ \text { January 31, } \\ 2011 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| Mineral Sands segment | \$ 1,103 | \$ | 760 | \$ | 160 | \$ | 8 |
| Pigment segment | 1,169 |  | 1,246 |  | 1,327 |  | 89 |
| Corporate and Other | 128 |  | 128 |  | 133 |  | 14 |
| Eliminations | (478) |  | (302) |  | (77) |  | (3) |
| Net Sales (1) | \$ 1,922 | \$ | 1,832 | \$ | 1,543 | \$ | 108 |
| Mineral Sands segment | \$ 238 | \$ | 156 | \$ | 42 | \$ | 2 |
| Pigment segment | (179) |  | 57 |  | 323 |  | 20 |
| Corporate and Other | (70) |  | (139) |  | (54) |  | (1) |
| Eliminations | 14 |  | (49) |  | (9) |  | (1) |
| Income from operations | 3 |  | 25 |  | 302 |  | 20 |
| Interest and debt expense | (130) |  | (65) |  | (30) |  | (3) |
| Gain on bargain purchase |  |  | 1,055 |  |  |  |  |
| Reorganization income |  |  |  |  |  |  | 613 |
| Other income (expense) | 66 |  | (7) |  | (10) |  | 2 |
| Income (loss) before income taxes | (61) |  | 1,008 |  | 262 |  | 632 |
| Income tax benefit (provision) | (29) |  | 125 |  | (20) |  | (1) |
| Net income (loss) | \$ (90) | \$ | 1,133 | \$ | 242 | \$ | 631 |

(1) Net sales to external customers, by geographic region, based on country of production, were as follows:
$\left.\begin{array}{lccccc} & \begin{array}{c}\text { Year } \\ \text { Ended } \\ \text { December 31, } \\ \mathbf{2 0 1 3}\end{array} & \begin{array}{c}\text { Successor } \\ \text { Year } \\ \text { Ended } \\ \text { December 31, } \\ \mathbf{2 0 1 2}\end{array} & \begin{array}{c}\text { Eleven Months } \\ \text { Ended } \\ \text { December 31, } \\ \text { 2011 }\end{array} & \begin{array}{c}\text { Predecessor } \\ \text { One Month } \\ \text { Ended }\end{array} \\ \text { January 31, } \\ \text { 2011 }\end{array}\right]$

During 2013, our ten largest pigment customers and our ten largest third-party mineral sands customers represented approximately $27 \%$ and $13 \%$, respectively, of net sales; however, no single customer accounted for more than $10 \%$ of total net sales.

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Depreciation, amortization and depletion by segment was as follows:

|  | Successor |  |  |  |  | $\begin{gathered} \text { Predecessor } \\ \text { One } \\ \text { Month } \\ \text { Ended } \\ \text { January 31, } \\ 2011 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year Ended December 31, 2013 |  | $\begin{aligned} & \text { ar } \\ & \text { led } \\ & \text { ber 31, } \\ & 12 \end{aligned}$ | Eleven Months <br> Ended December 31, 2011 |  |  |  |
| Mineral Sands segment | \$ 234 | \$ | 125 | \$ |  | \$ |  |
| Pigment segment | 83 |  | 71 |  | 67 |  | 3 |
| Corporate and Other | 16 |  | 15 |  | 12 |  | 1 |
| Total | \$333 | \$ | 211 | \$ | 79 | \$ | 4 |

Capital expenditures by segment were as follows:

|  | Successor |  |  |  |  | $\begin{gathered} \text { Predecessor } \\ \text { One } \\ \text { Month } \\ \text { Ended } \\ \text { January 31, } \\ 2011 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year Ended December 31, 2013 |  | $\begin{aligned} & \text { ed } \\ & \text { ed } \\ & \text { er } 31, \\ & 2 \end{aligned}$ | Elev De | Months <br> ed <br> ber <br> 1 |  |  |
| Mineral Sands segment | \$ 107 | \$ | 96 | \$ |  | \$ |  |
| Pigment segment | 49 |  | 39 |  | 117 |  | 4 |
| Corporate and Other | 16 |  | 31 |  | 16 |  | 2 |
| Total | \$ 172 | \$ | 166 | \$ | 133 | \$ | 6 |

Total assets by segment were as follows:

|  | December 31, |  |
| :--- | :---: | :---: |
|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ |
| Mineral Sands segment | $\$ 2,957$ | $\$ 3,164$ |
| Pigment segment | 1,559 | 1,680 |
| Corporate and Other | 1,227 | 725 |
| Eliminations | $(44)$ | $(58)$ |
| Total | $\$ 5,699$ | $\$ 5,511$ |

Property, plant and equipment, net and mineral leaseholds, net, by geographic region, were as follows:

|  | December 31, <br> $\mathbf{2 0 1 3}$ | December 31, <br> 2012 |  |  |
| :--- | :---: | ---: | ---: | ---: |
| U.S. operations | $\$$ | 203 | $\$$ | 196 |
| International operations: |  | 1,008 |  | 1,263 |
| South Africa | 1,208 | 1,348 |  |  |
| Australia | 55 |  | 55 |  |
| The Netherlands |  |  |  |  |
| Total | $\$$ | 2,474 | $\$$ | 2,862 |

## 26. Acquisition of the Mineral Sands Business

On September 25, 2011, Tronox Incorporated entered into the Transaction Agreement with Exxaro to acquire $74 \%$ of Exxaro s mineral sands operations. We accounted for the Transaction under ASC 805, Business Combinations, ( ASC 805 ), which requires recording assets and liabilities at fair value. Under the acquisition method of accounting, each tangible and separately identifiable intangible asset acquired and liability assumed was recorded based on their preliminary estimated fair values on the Transaction Date.

Because the total consideration transferred was less than the fair value of the net assets acquired, the excess of the fair value of the net assets acquired over the value of consideration was recorded as a bargain purchase gain. The valuations were derived from fair value assessments and assumptions used by management. The measurement period ended in June 2013. The bargain purchase gain was not taxable for income tax purposes. See Note 6 for a discussion of the tax impact of the Transaction.

|  | Valuation |  |
| :---: | :---: | :---: |
| Consideration: |  |  |
| Number of Class B Shares (1) |  | 250,856 |
| Fair value of Class B Shares on the Transaction Date |  | 137.70 |
| Fair value of equity issued (2) |  | 1,370 |
| Cash paid |  | 1 |
| Noncontrolling interest (3) |  | 233 |
|  | \$ | 1,604 |
| Fair Value of Assets Acquired and Liabilities Assumed: |  |  |
| Current Assets: |  |  |
| Cash and cash equivalents | \$ | 115 |
| Accounts receivable, net of allowance for doubtful accounts |  | 196 |
| Inventories |  | 553 |
| Prepaid and other assets |  | 20 |
| Total Current Assets |  | 884 |
| Noncurrent Assets: |  |  |
| Property, plant and equipment, net (4) |  | 880 |
| Mineral leaseholds, net (5) |  | 1,457 |
| Intangibles, net (4) |  | 12 |
| Long-term deferred tax asset |  | 30 |
| Other long-term assets, net |  | 19 |
| Total Assets | \$ | 3,282 |
| Current Liabilities: |  |  |
| Accounts payable |  | 110 |
| Accrued liabilities |  | 25 |
| Unfavorable contracts (6) |  | 85 |
| Short-term debt |  | 75 |
| Deferred tax liabilities |  | 14 |
| Income taxes payable |  | 2 |
| Total Current Liabilities |  | 311 |
| Noncurrent Liabilities: |  |  |
| Long-term debt |  | 19 |
| Long-term deferred tax liability |  | 209 |
| Asset retirement obligations |  | 57 |
| Other long-term liabilities |  | 27 |
| Total Liabilities |  | 623 |
| Net Assets | \$ | 2,659 |
| Gain on Bargain Purchase | \$ | 1,055 |

(1) The number of Class B Shares issued in connection with the Transaction has not been restated to affect for the 5-for-1 share split as discussed in Note 19.
(2) The fair value of the Class B shares issued was determined based the closing market price of Tronox Incorporated s common shares on June 142012, less a $15 \%$ discount for marketability due to a restriction that the shares cannot be sold for a period of at least three years following the Transaction Date.
(3) The fair value of the noncontrolling interest is based upon a structured arrangement with Tronox Limited, which allows the ownership interest to be exchanged for approximately 1.45 million additional Class B shares on the earlier of the 10 year anniversary of the Transaction Date or the date when the South African Department of Mineral Resources determines that ownership is no longer required under the BEE legislation.
(4) The fair value of property, plant and equipment and internal use software was determined using the cost approach, which estimates the replacement cost of each asset using current prices and labor costs, less estimates for physical, functional and technological obsolescence.
(5) The fair value of mineral rights was determined using the Discounted Cash Flow ( DCF ) method, which was based upon the present value of the estimated future cash flows for the expected life of the asset taking into account the relative risk of achieving those cash flows and the time value of money. Discount rates of $17 \%$ for South Africa and $15.5 \%$ for Australia were

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used taking into account the risks associated with such assets, as well as the economic and political environment where each asset is located.
(6) The fair value of unfavorable contracts was determined by multiplying the committed tonnage in each contract by the difference between the committed prices in the contract versus the estimated market price over the term of the contract.

## 27. Emergence from Chapter 11

On January 12, 2009, the petition date, Tronox Incorporated and certain of its subsidiaries (collectively, the Debtors ) filed voluntary petitions in the U.S. Bankruptcy Court for the Southern District of New York (the Bankruptcy Court ) seeking reorganization relief under the provisions of Chapter 11 of Title 11 of the United States Code (the Bankruptcy Code ). The Debtors Chapter 11 cases were consolidated for the purpose of joint administration.

In May 2009, we commenced an adversary proceeding in the Bankruptcy Court against Kerr-McGee and its new parent, Anadarko, related to the 2005 Spin-Off of Tronox (Tronox Inc. v. Anadarko (In re Tronox Inc.), 09-1198, U.S. Bankruptcy Court, Southern District New York (Manhattan)) (the Anadarko Litigation ). Pursuant to the Plan, we assigned the rights to any pre-tax proceeds that may be recovered in the Anadarko Litigation to our creditors.

On November 30, 2010 (the Confirmation Date ), the Bankruptcy Court entered an order confirming the Debtors First Amended Joint Plan of Reorganization pursuant to Chapter 11 of the Bankruptcy Code, dated November 5, 2010 (as amended and confirmed, the Plan ). Material conditions to the Plan were resolved during the period from the Confirmation Date until January 26, 2011, and subsequently, on February 14, 2011 (the Effective Date ), the Debtors emerged from bankruptcy and continued operations as reorganized Tronox Incorporated. On June 13, 2013, the Bankruptcy Court entered a Final Decree and ordered that the bankruptcy cases, other than the adversary proceedings with Anadarko, be closed.

On December 12, 2013, the Bankruptcy Court ruled in the case of Tronox Incorporated vs. Anadarko. Ruling in favor of the plaintiff, the Bankruptcy Court found that Kerr-McGee acted with intent to delay, and hinder Tronox s creditors when it spun off Tronox Incorporated. The court held Anadarko liable and indicated ultimate damages in the range of $\$ 5$ billion to $\$ 14$ billion, subject to a set off against claims that Anadarko filed as a creditor in Tronox Incorporated s 2009 bankruptcy filing. The value of those claims will be determined following the submission of additional court papers.

Tronox will receive no immediate or direct benefit from such ruling. Instead, $88 \%$ of the judgment will go to trusts and other governmental entities to remediate polluted sites. The remaining 12 percent of any funds ultimately received will be distributed to a tort trust to compensate individuals injured as a result of Kerr-McGee s environmental failures.

Tronox received a private letter ruling from the U.S. Internal Revenue Service confirming that the trusts that held the claims against Anadarko are grantor trusts of Tronox solely for federal income tax purposes. As a result, subject to a final damages determination by the court and potential appeal, Tronox Limited should be entitled to tax deductions equal to the amount spent by the trusts to remediate environmental matters and to compensate the injured individuals. These deductions will accrue over the life of the trusts as the funds received by the judgment are spent. Tronox believes that these expenditures and the accompanying tax deductions may continue for decades, and therefore, it expects that this tax benefit may continue for a lengthy period.

## 28. Guarantor Condensed Consolidating Financial Statements

Our obligations under the Senior Notes are fully and unconditionally guaranteed on a senior unsecured basis, jointly and severally, by each current and future U.S. restricted subsidiary, other than excluded subsidiaries that guarantee
any indebtedness of Tronox Limited or our restricted subsidiaries. Our subsidiaries that do not guarantee the Senior Notes are referred to as the Non-Guarantor Subsidiaries. The Guarantor Condensed Consolidating Financial Data presented below presents the statements of operations, statements of comprehensive income, balance sheets and statements of cash flow data for: (i) Tronox Limited (the Parent Company ), the Guarantor Subsidiaries and the Non-Guarantor Subsidiaries on a consolidated basis (which is derived from Tronox historical reported financial information); (ii) the Parent Company, alone (accounting for our Guarantor Subsidiaries and the Non-Guarantor Subsidiaries on an equity basis under which the investments are recorded by each entity owning a portion of another entity at cost, adjusted for the applicable share of the subsidiary s cumulative results of operations, capital contributions and distributions, and other equity changes); (iii) the Guarantor Subsidiaries alone; and, (iv) the Non-Guarantor Subsidiaries alone.

The guarantor condensed consolidating financial statements are presented on a legal entity basis, not on a business segment basis.

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2013
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company | Guarantor Non-Guarantor Subsidiaries Subsidiaries |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Sales | \$ | 1,922 | \$ | (330) | \$ | \$ | 1,297 | \$ | 955 |
| Cost of goods sold |  | 1,732 |  | (337) |  |  | 1,242 |  | 827 |
| Gross Profit |  | 190 |  | 7 |  |  | 55 |  | 128 |
| Selling, general and administrative expenses |  | (187) |  | 4 | (34) |  | (113) |  | (44) |
| Income (Loss) from Operations |  | 3 |  | 11 | (34) |  | (58) |  | 84 |
| Interest and debt expense |  | (130) |  |  | 547 |  | (644) |  | (33) |
| Other income (expense) |  | 66 |  | (43) | 1 |  | (14) |  | 122 |
| Equity in earnings of subsidiary |  |  |  | 473 | (473) |  |  |  |  |
| Income (Loss) before Income Taxes |  | (61) |  | 441 | 41 |  | (716) |  | 173 |
| Income tax benefit (provision) |  | (29) |  |  | (166) |  | 168 |  | (31) |
| Net Income (Loss) |  | (90) |  | 441 | (125) |  | (548) |  | 142 |
| Income attributable to noncontrolling interest |  | 36 |  |  |  |  | 36 |  |  |
| Net Income (Loss) attributable to Tronox Limited | \$ | (126) | \$ | 441 | \$ (125) | \$ | (584) | \$ | 142 |

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2012
(Millions of U.S. dollars)

|  |  |  |  | Parent | Guarantor Non-Guarantor |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Consolidated | Eliminations | Company | Subsidiaries | Subsidiaries |  |


| Other income (expense) |  | (7) |  | 432 |  | (95) |  | (337) |  | (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gain on bargain purchase |  | 1,055 |  |  |  | 1,055 |  |  |  |  |
| Equity in earnings of subsidiary |  |  |  | 1,142 |  | $(1,144)$ |  | 2 |  |  |
| Income (Loss) before Income Taxes |  | 1,008 |  | 1,529 |  | 15 |  | (523) |  | (13) |
| Income tax benefit (provision) |  | 125 |  |  |  | (60) |  | 139 |  | 46 |
| Net Income (Loss) |  | 1,133 |  | 1,529 |  | (45) |  | (384) |  | 33 |
| Loss attributable to noncontrolling interest |  | (1) |  |  |  |  |  | (1) |  |  |
| Net Income (Loss) attributable to Tronox Limited | \$ | 1,134 | \$ | 1,529 | \$ | (45) | \$ | (383) | \$ | 33 |

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Eleven Months Ended December 31, 2011
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Sales | \$ | 1,543 | \$ | 9 | \$ | \$ | 1,207 |  | 327 |
| Cost of goods sold |  | 1,104 |  | 22 |  |  | 856 |  | 226 |
| Gross Profit |  | 439 |  | (13) |  |  | 351 |  | 101 |
| Selling, general and administrative expenses |  | (152) |  | 3 |  |  | (142) |  | (13) |
| Litigation/arbitration settlement |  | 10 |  |  |  |  | 10 |  |  |
| Environmental remediation and restoration reimbursements, net |  | 5 |  |  |  |  | 5 |  |  |
| Income (Loss) from Operations |  | 302 |  | (10) |  |  | 224 |  | 88 |
| Interest and debt expense |  | (30) |  |  |  |  | (20) |  | (10) |
| Other income (expense) |  | (10) |  | 31 |  |  | (35) |  | (6) |
| Equity in earnings of subsidiary |  |  |  | (72) |  |  | 72 |  |  |
| Income (Loss) before Income Taxes |  | 262 |  | (51) |  |  | 241 |  | 72 |
| Income tax benefit (provision) |  | (20) |  |  |  |  | 6 |  | (26) |
| Net Income (Loss) | \$ | 242 | \$ | (51) | \$ | \$ | 247 | \$ | 46 |

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

One Month Ended January 31, 2011
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent Company | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Sales | \$ | 108 | \$ | (23) | \$ | \$ | 111 | \$ | 20 |
| Cost of goods sold |  | 83 |  | (22) |  |  | 89 |  | 16 |
| Gross Profit |  | 25 |  | (1) |  |  | 22 |  | 4 |
| Selling, general and administrative expenses |  | (5) |  | 1 |  |  | (5) |  | (1) |
| Income from Operations |  | 20 |  |  |  |  | 17 |  | 3 |
| Table of Contents |  |  |  |  |  |  |  |  | 185 |



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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME

Year Ended December 31, 2013
(Millions of U.S. dollars)

|  | Consolidated Eliminations |  |  |  | Parent <br> Company |  | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Income (Loss): |  |  |  |  |  |  |  |  |  |  |
| Net Income (Loss) | \$ | (90) | \$ | 441 | \$ | (125) | \$ | (548) | \$ | 142 |
| Other Comprehensive Income (Loss): |  |  |  |  |  |  |  |  |  |  |
| Foreign currency translation adjustments |  | (289) |  |  |  |  |  | 23 |  | (312) |
| Pension and postretirement plans |  | 30 |  |  |  |  |  | 26 |  | 4 |
| Other comprehensive income (loss) |  | (259) |  |  |  |  |  | 49 |  | (308) |
| Total Comprehensive Income (Loss) |  | (349) |  | 441 |  | (125) |  | (499) |  | (166) |

Comprehensive Income (Loss) Attributable
to Noncontrolling Interest:

| Net income | 36 | 36 |
| :--- | :---: | :---: |
| Foreign currency translation adjustments | $(70)$ | $(70)$ |

Comprehensive income (loss) attributable to noncontrolling interest
(34)

Comprehensive Income (Loss) Attributable
to Tronox Limited
\$ (315) \$ 441 \$ (125) \$ (465) \$
(166)

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME

Year Ended December 31, 2012
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company |  | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Income (Loss): |  |  |  |  |  |  |  |  |  |  |
| Net Income (Loss) | \$ | 1,133 | \$ | 1,529 | \$ | (45) | \$ | (384) | \$ | 33 |
| Other Comprehensive Income (Loss): |  |  |  |  |  |  |  |  |  |  |
| Foreign currency translation adjustments |  | 11 |  | 19 |  |  |  | (2) |  | (6) |
| Pension and postretirement plans |  | (48) |  |  |  |  |  | (47) |  | (1) |
| Other comprehensive income (loss) |  | (37) |  | 19 |  |  |  | (49) |  | (7) |
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Total Comprehensive Income (Loss) $1,096 \quad 1,548$ (45) (433) ..... 26
Comprehensive Income (Loss)
Attributable to Noncontrolling
Interest:
Net loss ..... (1) ..... (1)
Foreign currency translation adjustments 1 ..... 1
Comprehensive income (loss)
attributable to noncontrolling interest
Comprehensive Income (Loss)$\begin{array}{llllllllll}\text { Attributable to Tronox Limited } & \$ 1,096 & \$ & 1,548 & \$ & (45) & \$ & (433) & \$ & 26\end{array}$95

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME

Eleven Months Ended December 31, 2011
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Income (Loss): |  |  |  |  |  |  |  |  |  |
| Net Income (Loss) | \$ | 242 | \$ | (51) | \$ | \$ | 247 | \$ | 46 |
| Other Comprehensive Income (Loss): |  |  |  |  |  |  |  |  |  |
| Foreign currency translation adjustments |  | (6) |  |  |  |  | (130) |  | 124 |
| Pension and postretirement plans |  | (51) |  |  |  |  | (37) |  | (14) |
| Other comprehensive income (loss) |  | (57) |  |  |  |  | (167) |  | 110 |
| Total Comprehensive Income (Loss) | \$ | 185 | \$ | (51) | \$ | \$ | 80 | \$ | 156 |

GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME
One Month Ended January 31, 2011
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent Company | Guarantor <br> Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Income (Loss): |  |  |  |  |  |  |  |  |  |
| Net Income (Loss) | \$ | 631 | \$ | (61) | \$ | \$ | 626 | \$ | 66 |
| Other Comprehensive Income (Loss): |  |  |  |  |  |  |  |  |  |
| Foreign currency translation adjustments |  | 1 |  |  |  |  |  |  | 1 |
| Pension and postretirement plans |  | (1) |  |  |  |  |  |  | (1) |
| Other comprehensive income (loss) |  |  |  |  |  |  |  |  |  |
| Total Comprehensive Income (Loss) | \$ | 631 | \$ | (61) | \$ | \$ | 626 | \$ | 66 |

## GUARANTOR CONDENSED CONSOLIDATING BALANCE SHEETS

As of December 31, 2013
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company |  | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |  |  |  |  |  |  |
| Cash and cash equivalents | \$ | 1,478 | \$ |  | \$ | 179 | \$ | 1,094 | \$ | 205 |
| Investment in subsidiaries |  |  |  | (952) |  | $(1,095)$ |  | 1,590 |  | 457 |
| Other current assets |  | 1,175 |  | $(9,645)$ |  | 6,599 |  | 2,125 |  | 2,096 |
| Property, plant and equipment, net |  | 1,258 |  |  |  |  |  | 710 |  | 548 |
| Mineral leaseholds, net |  | 1,216 |  |  |  |  |  | 701 |  | 515 |
| Other long-term assets |  | 572 |  |  |  | 88 |  | 376 |  | 108 |
| Total Assets | \$ | 5,699 | \$ | $(10,597)$ | \$ | 5,771 | \$ | 6,596 | \$ | 3,929 |
| LIABILITIES AND EQUITY |  |  |  |  |  |  |  |  |  |  |
| Current liabilities | \$ | 363 | \$ | $(2,333)$ | \$ | 658 | \$ | 1,801 | \$ | 237 |
| Long-term debt |  | 2,395 |  | $(7,268)$ |  | 825 |  | 7,272 |  | 1,566 |
| Other long-term liabilities |  | 504 |  |  |  |  |  | 236 |  | 268 |
| Total Liabilities |  | 3,262 |  | $(9,601)$ |  | 1,483 |  | 9,309 |  | 2,071 |
| Total Equity |  | 2,437 |  | (996) |  | 4,288 |  | $(2,713)$ |  | 1,858 |
| Total Liabilities and Equity | \$ | 5,699 | \$ | $(10,597)$ | \$ | 5,771 | \$ | 6,596 | \$ | 3,929 |

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## GUARANTOR CONDENSED CONSOLIDATING BALANCE SHEETS

As of December 31, 2012
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company |  | Guarantor Subsidiaries |  | Non-Guaranto Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |  |  |  |  |  |  |
| Cash and cash equivalents | \$ | 716 | \$ |  | \$ | 533 | \$ | 85 | \$ | 98 |
| Investment in subsidiaries |  |  |  | $(1,595)$ |  | (622) |  | 1,760 |  | 457 |
| Other current assets |  | 1,457 |  | $(8,298)$ |  | 6,047 |  | 2,178 |  | 1,530 |
| Property, plant and equipment, net |  | 1,423 |  |  |  |  |  | 748 |  | 675 |
| Mineral leaseholds, net |  | 1,439 |  |  |  |  |  | 796 |  | 643 |
| Other long-term assets |  | 476 |  |  |  | (3) |  | 398 |  | 81 |
| Total Assets | \$ | 5,511 | \$ | $(9,893)$ | \$ | 5,955 | \$ | 5,965 | \$ | 3,484 |
| LIABILITIES AND EQUITY |  |  |  |  |  |  |  |  |  |  |
| Current liabilities | \$ | 467 | \$ | $(1,023)$ | \$ | 560 | \$ | 574 | \$ | 356 |
| Long-term debt |  | 1,605 |  | $(7,223)$ |  | 882 |  | 7,188 |  | 758 |
| Other long-term liabilities |  | 557 |  |  |  |  |  | 249 |  | 308 |
| Total Liabilities |  | 2,629 |  | $(8,246)$ |  | 1,442 |  | 8,011 |  | 1,422 |
| Total Equity |  | 2,882 |  | $(1,647)$ |  | 4,513 |  | $(2,046)$ |  | 2,062 |
| Total Liabilities and Equity | \$ | 5,511 | \$ | $(9,893)$ | \$ | 5,955 | \$ | 5,965 | \$ | 3,484 |

## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2013
(Millions of U.S. dollars)

|  | Consolidated | Eliminations | Parent <br> Company | Guarantor <br> Subsidiaries | Non-Guarantor <br> Subsidiaries |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Flows from Operating <br> Activities | $\$$ | $(90)$ | $\$$ | 441 | $\$$ | $(125)$ | $\$$ | $(548)$ | $\$$ |
| Net income (loss) |  | 427 |  | $(441)$ | $(116)$ | 142 |  |  |  |
| Other |  |  |  |  |  |  |  |  |  |


| Cash Flows from Investing Activities: |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capital expenditures |  | (172) |  |  |  |  | (71) |  | (101) |
| Proceeds from the sale of assets |  | 1 |  |  |  |  |  |  | 1 |
| Cash used in investing activities |  | (171) |  |  |  |  | (71) |  | (100) |
| Cash Flows from Financing Activities |  |  |  |  |  |  |  |  |  |
| Repayments of debt |  | (189) |  |  |  |  |  |  | (189) |
| Proceeds from borrowings |  | 945 |  |  |  |  |  |  | 945 |
| Debt issuance costs |  | (29) |  |  |  |  |  |  | (29) |
| Dividends paid |  | (115) |  |  | (115) |  |  |  |  |
| Proceeds from the conversion of warrants |  | 2 |  |  | 2 |  |  |  |  |
| Cash provided by (used in) financing activities |  | 614 |  |  | (113) |  |  |  | 727 |
| Effects of Exchange Rate Changes on Cash and Cash Equivalents |  | (18) |  |  |  |  |  |  | (18) |
| Net Increase (Decrease) in Cash and Cash Equivalents |  | 762 |  |  | (354) |  | 1,009 |  | 107 |
| Cash and Cash Equivalents at Beginning of Period |  | 716 |  |  | 533 |  | 85 |  | 98 |
| Cash and Cash Equivalents at End of Period | \$ | 1,478 | \$ | \$ | 179 | \$ | 1,094 | \$ | 205 |

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2012
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent Company |  | Guarantor <br> Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Flows from Operating Activities |  |  |  |  |  |  |  |  |  |  |
| Net income (loss) | \$ | 1,133 | \$ | 1,529 | \$ | (45) | \$ | (384) | \$ | 33 |
| Gain on bargain purchase |  | $(1,055)$ |  |  |  | 1,055) |  |  |  |  |
| Other |  | 40 |  | $(1,529)$ |  | 2,098 |  | (14) |  | (515) |
| Cash provided by (used in) operating activities |  | 118 |  |  |  | 998 |  | (398) |  | (482) |
| Cash Flows from Investing Activities: |  |  |  |  |  |  |  |  |  |  |
| Capital expenditures |  | (166) |  |  |  |  |  | (89) |  | (77) |
| Net cash received in acquisition of mineral sands business |  | 114 |  |  |  | 114 |  |  |  |  |
| Cash provided by (used in) investing activities |  | (52) |  |  |  | 114 |  | (89) |  | (77) |
| Cash Flows from Financing Activities |  |  |  |  |  |  |  |  |  |  |
| Repayments of debt |  | (585) |  |  |  |  |  | (481) |  | (104) |
| Proceeds from borrowings |  | 1,707 |  |  |  |  |  | 960 |  | 747 |
| Debt issuance costs |  | (38) |  |  |  |  |  | (19) |  | (19) |
| Dividends paid |  | (61) |  |  |  | (61) |  |  |  |  |
| Proceeds from the exercise of warrants |  | 1 |  |  |  | 1 |  |  |  |  |
| Merger consideration |  | (193) |  |  |  | (193) |  |  |  |  |
| Class A ordinary shares repurchased |  | (326) |  |  |  | (326) |  |  |  |  |
| Shares purchased for the Employee Participation Plan |  | (15) |  |  |  |  |  |  |  | (15) |
| Cash provided by (used in) financing activities |  | 490 |  |  |  | (579) |  | 460 |  | 609 |

Effects of Exchange Rate Changes $\begin{array}{lll}\text { on Cash and Cash Equivalents } & 6 & 8\end{array}$

| 562 | 533 | (19) | 48 |
| :--- | :--- | :--- | :--- |

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| Net Increase (Decrease) in Cash |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| and Cash Equivalents |  |  |  |  |  |  |  |  |
| Cash and Cash Equivalents at <br> Beginning of Period |  |  |  |  |  |  |  |  |

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Eleven Months Ended December 31, 2011
(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Flows from Operating Activities |  |  |  |  |  |  |  |  |  |
| Net income (loss) | \$ | 242 | \$ | (51) | \$ | \$ | 247 | \$ | 46 |
| Other |  | 21 |  | 51 |  |  | (36) |  | 6 |
| Cash provided by operating activities |  | 263 |  |  |  |  | 211 |  | 52 |
| Cash Flows from Investing Activities: |  |  |  |  |  |  |  |  |  |
| Capital expenditures |  | (133) |  |  |  |  | (125) |  | (8) |
| Proceeds from the sale of assets |  | 1 |  |  |  |  | 1 |  |  |
| Cash used in investing activities |  | (132) |  |  |  |  | (124) |  | (8) |
| Cash Flows from Financing Activities |  |  |  |  |  |  |  |  |  |
| Repayments of debt |  | (45) |  |  |  |  | (45) |  |  |
| Proceeds from borrowings |  | 14 |  |  |  |  | 14 |  |  |
| Debt issuance costs and commitment fees |  | (5) |  |  |  |  | (5) |  |  |
| Proceeds from the exercise of warrants |  | 1 |  |  |  |  | 1 |  |  |
| Cash used in financing activities |  | (35) |  |  |  |  | (35) |  |  |

## Effects of Exchange Rate Changes

on Cash and Cash Equivalents
(3)

Net Increase in Cash and Cash

| Equivalents | 93 | 52 | 41 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Cash and Cash Equivalents at <br> Beginning of Period | 61 |  | 52 | 9 |  |
| Cash and Cash Equivalents at End <br> of Period | $\$$ | 154 | $\$$ | $\$$ | $\$$ |

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## GUARANTOR CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

One Months Ended January 1, 2011

(Millions of U.S. dollars)

|  | Consolidated |  | Eliminations |  | Parent <br> Company | Guarantor Subsidiaries |  | Non-Guarantor Subsidiaries |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Flows from Operating Activities |  |  |  |  |  |  |  |  |  |
| Net income (loss) | \$ | 631 | \$ | (61) | \$ | \$ | 626 | \$ | 66 |
| Reorganization items |  | (954) |  |  |  |  | (954) |  |  |
| Other |  | 40 |  | 61 |  |  | 61 |  | (82) |
| Cash used in operating activities |  | (283) |  |  |  |  | (267) |  | (16) |
| Cash Flows from Investing Activities: |  |  |  |  |  |  |  |  |  |
| Capital expenditures |  | (6) |  |  |  |  | (6) |  |  |
| Cash used in investing activities |  | (6) |  |  |  |  | (6) |  |  |
| Cash Flows from Financing Activities |  |  |  |  |  |  |  |  |  |
| Proceeds from borrowings |  | 25 |  |  |  |  | 25 |  |  |
| Debt issuance costs |  | (2) |  |  |  |  | (2) |  |  |
| Proceeds from the rights offering |  | 185 |  |  |  |  | 185 |  |  |
| Cash provided by financing activities |  | 208 |  |  |  |  | 208 |  |  |
| Effects of Exchange Rate Changes on Cash and Cash Equivalents |  |  |  |  |  |  |  |  |  |
| Net Decrease in Cash and Cash Equivalents |  | (81) |  |  |  |  | (65) |  | (16) |
| Cash and Cash Equivalents at Beginning of Period |  | 142 |  |  |  |  | 117 |  | 25 |
| Cash and Cash Equivalents at End of Period | \$ | 61 | \$ |  | \$ | \$ | 52 | \$ | 9 |

## 29. Quarterly Results of Operations (Unaudited)

The following represents our unaudited quarterly results for the year ended December 31, 2013. These quarterly results were prepared in conformity with generally accepted accounting principles and reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results.

|  | January 1 <br> March 31 |  | April 1 |  | July 1 - <br> September 30 |  | October 1 - <br> December 31 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net sales | \$ | 470 |  | 525 | \$ | 491 | \$ | 436 |
| Cost of goods sold |  | 438 |  | 475 |  | 437 |  | 382 |
| Gross Profit |  | 32 |  | 50 |  | 54 |  | 54 |
| Net income (loss) |  | (45) |  | (1) | \$ | (41) | \$ | (3) |
| Net income (loss) attributable to noncontrolling interest |  | 12 |  | 12 |  | 8 |  | 4 |
| Net Income (Loss) attributable to Tronox Limited | \$ | (57) | \$ | (13) | \$ | (49) | \$ | (7) |
| Net income (loss) per share: |  |  |  |  |  |  |  |  |
| Basic | \$ | (0.50) | \$ | (0.11) | \$ | (0.43) | \$ | (0.06) |
| Diluted | \$ | (0.50) | \$ | (0.11) | \$ | (0.43) | \$ | (0.06) |

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The following represents our unaudited quarterly results for the year ended December 31, 2012. These quarterly results were prepared in conformity with generally accepted accounting principles and reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results. Subsequent to the Transaction, we adjusted the initial valuation, and recorded these adjustments retroactive to the second quarter. As such, the quarterly results of operations for the second and third quarter have been revised.

|  | January 1 <br> March 31 |  | April 1 <br> June 30 |  | July 1 - <br> September 30 |  | October 1 - <br> December 31 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net sales | \$ | 434 |  |  | \$ | 487 | \$ | 482 |
| Cost of goods sold |  | 277 |  | 304 |  | 444 |  | 543 |
| Gross Profit |  | 157 |  | 125 |  | 43 |  | (61) |
| Net income (loss) | \$ | 86 |  | 1,144 | \$ | (1) | \$ | (96) |
| Net income (loss) attributable to noncontrolling interest |  |  |  |  |  | 2 |  | (3) |
| Net Income (Loss) attributable to Tronox Limited | \$ | 86 |  | 1,144 | \$ | (3) | \$ | (93) |
| Net income (loss) per share: |  |  |  |  |  |  |  |  |
| Basic | \$ | 1.14 |  | 13.46 | \$ | (0.03) | \$ | (0.82) |
| Diluted | \$ | 1.10 |  | 13.00 | \$ | (0.03) | \$ | (0.82) |

The sum of the quarterly per share amounts may not equal the annual per share amounts due to relative changes in the weighted average number of shares used to calculate net income (loss) per share.

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## Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

## Item 9A. Controls and Procedures

(a) Disclosure Controls and Procedures

As of December 31, 2013, our management, including our Chief Executive Officer ( CEO ) and Chief Financial Officer ( CFO ), have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures as of December 31, 2013 were effective.
(b) Management s Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended. Under the supervision of management and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2013 based on the framework in the 1992 Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation, we concluded that our internal control over financial reporting was effective as of December 31, 2013. Grant Thornton, the independent registered public accounting firm that audited the financial statements included in this Annual Report on Form 10-K, has issued an attestation report, which is included elsewhere within this Form $10-\mathrm{K}$, on the effectiveness of our internal control over financial reporting.
(c) Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred in the quarter ended December 31, 2013 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Not Applicable.

## PAR T III

## Item 10. Directors, Executive Officers and Corporate Governance

Information regarding members of the Board of Directors, including its audit committee and audit committee financial experts, as well as information regarding our Code of Business Conduct and Ethics that applies to our Chief Executive Officer and senior financial officers, will be presented in Tronox Limited s definitive proxy statement for its 2014 annual general meeting of shareholders, which will be held May 21, 2014, and is incorporated herein by reference. Information regarding our executive officers is included in Part I of this Annual Report on Form 10-K under the caption Executive Officers of the Registrant.

The information required to be furnished pursuant to this item with respect to compliance with Section 16(a) of the Exchange Act will be set forth under the caption Section 16(a) Beneficial Ownership Reporting Compliance in Tronox Limited s definitive proxy statement for its 2014 annual general meeting of shareholders, and is incorporated herein by reference.

## Item 11. Executive Compensation

Information regarding executive officer and director compensation will be presented in Tronox Limited s definitive proxy statement for its 2014 annual general meeting of shareholders, which will be held May 21, 2014, and is incorporated herein by reference.

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters

Information regarding security ownership of certain beneficial owners and management and related shareholder matters will be presented in Tronox Limited s definitive proxy statement for its 2014 annual general meeting of shareholders, which will be held May 21, 2014, and is incorporated herein by reference.

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## Equity Compensation Plan Information

The following table provides information as of December 31, 2013 regarding securities issued under the Tronox Limited Management Equity Incentive Plan (the Tronox Limited MEIP ).

(1) Each share unit awarded under the Tronox Limited MEIP was granted at no cost to the persons receiving them and represents the contingent right to receive the equivalent number of Class A Shares.
(2) Excludes Warrants, as they were not issued under the Tronox Limited MEIP.

Item 13. Certain Relationships and Related Transactions, and Director Independence.
Information regarding certain relationships and related transactions will be presented in Tronox Limited s definitive proxy statement for its 2014 annual general meeting of shareholders, which will be held May 21, 2014, and is incorporated herein by reference.

## Item 14. Principal Accounting Fees and Services.

Information regarding certain relationships and related transactions will be presented in Tronox Limited s definitive proxy statement for its 2014 annual general meeting of shareholders, which will be held May 21, 2014, and is incorporated herein by reference.

## PART IV

## Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. Consolidated Financial Statements

Reference is made to the Index to Consolidated Financial Statements and Consolidated Financial Statement Schedules appearing at Item 8. Financial Statements and Supplementary Data in this report.

## 2. Consolidated Financial Statement Schedules

All financial statement schedules are omitted as they are inapplicable, or the required information has been included in the consolidated financial statements or notes thereto.

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3. Exhibits

## Exhibit No.

10.1 Entry into a Material Definitive Agreement, Appointment of Certain Officers; Compensatory Arrangements of Certain Officers filed on Form 8-K Current Report filed Aug 7, 2013.
10.3* Single Tenant Industrial Lease by and between Le Petomane XXVII, Inc., not individually but solely in the representative capacity as the Trustee of the Nevada Environmental Response Trust, and Tronox LLC dated February 14, 2011.
12.1* Ratio of Earnings to Fixed Charges.
14.1* Tronox Code of Business Conduct, Code of Ethics.
20.1 Form 8-K Current Report filed September 20, 2013, Other Events, Issuance of Senior Notes.
20.2 Form 8-K Current Report filed Sep 20, 2013.
20.3 Form S-4/A Registration Statement filed Aug 1, 2013.
20.4 Form S-4/A Registration Statement filed Aug 2, 2013.
$20.5 \quad$ Form S-4/A Registration Statement filed Aug 19, 2013.
20.6 Form S-4/A Registration Statement filed Aug 28, 2013.
21.1* Subsidiaries of Tronox Limited.
23.1* Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm for Tronox Limited.
31.1* Rule 13a-14(a) Certification of Thomas Casey.
31.2* Rule 13a-14(a) Certification of Katherine C. Harper.
32.1* Section 1350 Certification for Thomas Casey.
32.2* Section 1350 Certification for Katherine C. Harper.
101.INS* XBRL Instance Document
101.SCH* XBRL Taxonomy Extension Schema Document
101.CAL* XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB* XBRL Taxonomy Extension Label Linkbase Document
101.DEF* XBRL Taxonomy Extension Definition Linkbase Document
101.PRE* XBRL Taxonomy Extension Presentation Linkbase Document

* Each document marked with an asterisk is filed herewith.


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## SIGNATURES

Pursuant to the requirements of Section 13 or $15(\mathrm{~d})$ of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on this $27^{\text {th }}$ day of February 2014.

## TRONOX LIMITED

(Registrant)

| By: | $/ \mathrm{s} /$ Katherine C. Harper |
| :--- | :---: |
| Name: | $\quad$ Katherine C. Harper |
| Title: | Senior Vice President and Chief |

Title: $\quad$ Senior Vice President and Chief

Financial Officer
Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| Signature <br> /s/ Thomas Case Thomas Casey | Title | Date |
| :---: | :---: | :---: |
|  | Chairman of the Board and Chief Executive Officer | February 27, 2014 |
|  | (Principal Executive Officer) |  |
| /s/ Katherine C. Harper Katherine C. Harper | Senior Vice President and Chief Financial Officer <br> (Principal Financial Officer) | February 27, 2014 |
| /s/ Kevin V. Mahoney Kevin V. Mahoney | Vice President and Controller <br> (Principal Accounting Officer) | February 27, 2014 |
| /s/ Daniel Blue Daniel Blue | Director | February 27, 2014 |
| /s/ Wim de Klerk Wim de Klerk | Director | February 27, 2014 |
| /s/ Andrew P. Hines Andrew P. Hines | Director | February 27, 2014 |
| /s/ Wayne A. Hinman Wayne A. Hinman | Director | February 27, 2014 |

/s/ Peter JohnstonPeter JohnstonDirectorFebruary 27, 2014
/s/ Ilan Kaufthal
Ilan KaufthalDirectorFebruary 27, 2014
/s/ Sipho Nkosi
Sipho NkosiDirectorFebruary 27, 2014
/s/ Jeffry N. Quinn
Jeffry N. QuinnDirectorFebruary 27, 2014


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