

# *BOREALIS*

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## Borealis Exploration Limited

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### 2013 Annual Report



## ***About Borealis***

Borealis Exploration Limited is a technology development company. Borealis invents, patents, develops and acquires new technologies that we consider major technological innovations which, we believe, have high probabilities of generating patented and proprietary products that Borealis can own and exploit for the benefit of both their users and our shareholders. The Borealis technologies include new materials and technologies for more efficient and lower-cost generation of electrical power, more powerful and effective electric motors, and silent, non-polluting cooling and refrigeration systems. The first of these technologies to come to market is the WheelTug® aircraft electric drive system (shown on the cover), which will provide major economic and environmental benefits to both airlines and airports. All of our wide-ranging technologies should fundamentally change basic industries and introduce the Borealis Industrial Revolution. We anticipate that many of our patented and proprietary industrial advances will enable entirely new industries and open new fields for scientific exploration and commercial development for many decades to come.

In addition, Borealis owns significant interests in large undeveloped deposits of iron ore at Roche Bay and Fraser Bay, and in polymetallic deposits at Freuchen Bay, all located in on Melville Peninsula, Nunavut, Canada.

## ***Forward Looking Statement***

The discussion of the Company's business and operations in this report includes in several instances forward-looking statements, which are based upon management's good faith assumptions relating to the financial, market, operating and other relevant environments that will exist and affect the Company's business and operations in the future. All technical, scientific, and commercial statements regarding technologies and their impacts are based on the educated judgment of the Company's technical and scientific staff. No assurance can be made that the assumptions upon which management based its forward-looking statements will prove to be correct, or that the Company's business and operations will not be affected in any substantial manner by other factors not currently foreseeable by management or beyond the Company's control.

All forward-looking statements involve risks and uncertainty. The Company undertakes no obligation to publicly release the result of any revisions to these forward-looking statements that might be made to reflect the events or circumstances after the date hereof, or to reflect the occurrence of unanticipated events; including those described in this report, and such statements shall be deemed in the future to be modified in their entirety by the Company's public pronouncements, including those contained in all future reports and other documents filed by the Company with the relevant Securities Commissions.

## ***Corporate Information***

### **Corporate Headquarters**

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8-10 Queensway  
Gibraltar  
Tel: +350.59995 or +350.586.99000  
Fax: + 44-(0)20-7504-3593

## Auditors

Moore Stephens  
Suite 5 Watergardens 4  
Waterport  
Gibraltar

## Stock Trading Information

Borealis Exploration Limited common shares are traded on the Prague Stock Exchange under the symbol **BOREY**.

The shares' ISIN Number is GI000A1J9JJ0.

Borealis shares are also quoted in the United States over-the-counter market on the Pink Sheets, at [www.pinksheets.com](http://www.pinksheets.com) under the symbol **BOREF**.

CUSIP # X6919W 10 0.

## Registrar and Transfer Agent

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Securities Transfer Agent & Registrar  
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Portland, Oregon 97205-3061, USA  
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## On the Cover

Shown at a test series at Vaclav Havel Prague Airport in June 2012 is a Germania Airlines Boeing 737NG aircraft equipped with a complete, operational WheelTug<sup>®</sup> aircraft electric drive system. The WheelTug electric drive system uses high-performance Chorus<sup>®</sup> electric motors, installed in the nosegear wheels of an aircraft, to provide the aircraft with full mobility while on the ground, without the use of the aircraft's jet engines or tow-tugs for both pushback and taxi operations.

WheelTug enables aircraft to be electrically driven from the terminal gate to the takeoff runway, and upon landing from runway exit to the gate. The resulting improvements in efficiency, flexibility, fuel savings, and reduced engine foreign object damage (FOD) yield projected savings of more than \$600,000 per aircraft per year, plus substantial reductions in CO<sub>2</sub> and other greenhouse gas emissions.

We are developing the WheelTug system initially for the Boeing 737NG and Airbus A320, the world's most widely flown aircraft.

# ***Chairman's Letter to Members***

26 June 2013

## **To Members of Borealis and Friends of the Borealis Family:**

We continue to drive for sales and profits with our wide-ranging research and resource ventures. First in line is WheelTug, our revolutionary application of our proprietary Chorus Motors technology, to make possible a goal that has eluded the aerospace industry for 100 years: Enabling airplanes to drive themselves on the ground. We now have 549 Letters of Intent for production slots from 10 airlines with many thousands of additional airplanes and dozens of airline companies in active negotiations for delivery priority.

Proving to motor engineers that two small motors embedded in an airplane wheel can generate the tremendous torque needed to move a 300,000-pound airplane might encourage them to ask us about other, easier, applications for the Chorus Motor. As the unprecedented capabilities of Chorus become evident with WheelTug, we expect that engineers will imagine further uses for this wonderful technology, and that Chorus will start to produce revenues and income from additional applications of its technology. Remember, WheelTug was a technology looking for a "killer application" which The Boeing Company led us to and supported and helped our first demonstration in 2005 at the Evergreen Air Center at Pinal Air Park in Marana, Arizona.

And we are making progress with the technology we call AMPCC: Avto Metals, Power Chips, and Cool Chips, three related technologies based on a new discovery in quantum mechanics (we describe it briefly later in this report). For nearly a year, we have been working with nanoelectronic and nanophysics experts at a major university laboratory to learn how to optimize the performance of and efficiently build these devices, and we are making good progress. We can now build the structures needed for the devices which is a major advance. With luck, we could have demonstration, working Power Chips by the end of calendar 2013. Then we could begin to show potential licensees and customers in multiple industries how they can use our technology to transform many products and services, from transistors and electronic equipment to power generation in fossil or nuclear power stations.

We are delighted that our shares have been called to trading on the Prague Stock Exchange beginning on 10 June 2013. It is an honour to have Borealis shares trading on the Prague Stock Exchange.

Our shareholders are the best in the world.

We thank you all for your support and help, assistance and counsel through the decades.

With warmest personal regards,

Borealis Exploration Limited  
and the Borealis Family of Companies

Signed  
Rodney T. Cox  
Chairman and Chief Executive Officer

Signed  
Isaiah W. Cox  
President

# ***Directors' Report***

The directors of Borealis Exploration Limited present their report for the year ended 31 March 2013 together with the financial statements of the company and the compilation report to the members.

## ***1. RESULTS***

The results for the year ended 31 March 2013 are shown on page 21. The profit for the period has been carried forward. No dividends have been proposed for the period.

## ***2. PRINCIPAL ACTIVITIES AND BUSINESS REVIEW***

The Company was incorporated on 26 August 1968 by Canadian Dominion Charter. On 19 October 1998 the Company changed its domicile to Gibraltar. The Company holds a number of undeveloped mining resources and is involved in the development of various innovative technologies.

## ***3. DIRECTORS***

The Directors who served during the year were as follows:

Rodney T. Cox	Appointed 27 December 1978
Wayne S. Marshall	Appointed 11 September 1985
Donald N. Jones	Appointed 19 December 1971
Isaiah W. Cox	Appointed 15 February 1994
David M. Goldenberg	Appointed 11 September 1996
Nechama J. Cox	Appointed 1 August 2001

## ***4. BUSINESS REVIEW***

Borealis was a Canadian mineral exploration company until 1992, when we established a subsidiary, Borealis Technical Limited, to develop and improve existing technologies. At that time, we felt that, no matter how valuable our Canadian mining assets were and would be over time, the potential of the technologies to be developed by Technical, which are described in more detail below, would be more important and more likely to produce sustained long-term profits than mineral exploration and development.

Borealis Technical is now the parent holding company for all of the Borealis scientific research and technology development programs. Technical develops and owns technologies that are designed to fundamentally change basic industries. Borealis has invested heavily for two decades now in basic scientific research in several fields, developing new solutions that are patented and proprietary to Borealis and are intended to provide significant technological, economic and environmental advantages over existing competitive products and technologies.

All our technology investment decisions are driven by the concept of present discounted expected value. This is standard Columbia Business School thinking, circa 1960, where several of our current and past directors and advisors either taught, were deans or graduated.

Borealis continually investigates business opportunities in fields that our management estimates have the potential to produce substantial profits. We are especially interested in "mature" markets that have had generally no fundamental scientific advances in decades.

Almost 20 years ago, our Chief Scientist, Jonathan S. Edelson, claimed he could build a better electric motor than then-existing technology and made a simple demonstration of the power of a multiphase motor. We then started Chorus Motors plc, which has developed that multiphase motor technology to where it is now a key enabling technology for the WheelTug system.

## WheelTug

WheelTug is the most advanced among Borealis' technology development programs. Work began in 2004, when The Boeing Company proposed a test project to determine whether something the aerospace industry had never before been able to achieve was possible: whether an electric motor, designed to fit within the small nosegear wheels of an aircraft, could produce sufficient torque to drive an airplane, and thus enable forward and backward mobility at airports, without using either jet engines or a tow tug. The tests, conducted on a Boeing 767 in the summer of 2005 in Marana, Arizona with Chorus Meshcon™ motors, were successful, and we then launched a multiyear effort to develop, certify, and market the WheelTug aircraft electric drive system.

WheelTug is the first technology that enables most commercial and military aircraft to taxi around airports without using their main engines and without the assistance of tow tugs. It is owned by WheelTug plc, a majority-owned subsidiary of Chorus Motors plc, which in turn is a majority-owned subsidiary of Borealis.

The WheelTug system operates using highly-efficient, environmentally friendly, ultra-high-torque Chorus electrical motors. As a result, airlines (and other aircraft operators) will enjoy reduced fuel consumption, reduced engine damage, reduced maintenance costs and improved ground operations with improved schedule efficiencies. A WheelTug installation is comprised of two electric motors installed in the nosegear wheels of an aircraft, a motor drive electronics package and cockpit controls. WheelTug is powered by the aircraft's auxiliary power unit ("APU"). WheelTug can be fitted onto existing and new commercial airplanes, private executive jets, and helicopters, as well as onto military aircraft. WheelTug can also be easily installed and uninstalled on aircraft, which provides flexibility to airlines and aircraft leasing companies.

Commercial airlines currently rely on tow tugs for pushback from terminal gates and on jet engines for ground taxiing. WheelTug eliminates the need for a tug and leaves the engines off until the pilot is at the runway and ready for takeoff. Turnaround time will be reduced by replacing the tow tugs with WheelTug, using the aircraft's onboard electricity from the auxiliary power unit to drive the aircraft on the ramp, tarmac and taxiways to and from the gate. After landing, main engines can be turned off and WheelTug can then drive the aircraft from the runway directly to the gate. Actual tests show that WheelTug works in rain, on snow, and in hot, desert-like conditions. WheelTug Twist™, or using the system to turn an aircraft 90° at the gate and thus enabling parallel parking, makes for even greater airport efficiencies than originally envisioned.

For a typical Boeing 737NG aircraft or Airbus A320 aircraft, WheelTug is expected to initially deliver agreed-upon operating cost reductions from at least \$400,000 to well over \$800,000 per airplane per year, subject to its degree of utilization by the particular airline and agreements on savings items. Along with such financial benefits, there are expected to be sharp reductions in greenhouse gas emissions, engine noise and safety risks in terminal areas. WheelTug, with the WheelTug Twist, is expected to provide the most extensive efficiency improvements in ground handling of aircraft in decades. WheelTug plc's business model is based on leasing the WheelTug system to airlines and to aircraft leasing companies. WheelTug expects to initially lease each system to airlines for \$25,000 to \$35,000 per month, which will be approximately 50% of the agreed monthly cash savings of the airlines using WheelTug, although given our current information on probable savings, these numbers appear very conservative.

WheelTug now has letters of intent to lease the systems from 10 airlines, representing more than 549 aircraft, including several national "flag carrier" airlines such as Alitalia, KLM Royal Dutch Airlines, El Al Israel Airlines, and India's Jet Airlines. WheelTug plc projects being cash flow positive in the current fiscal year 2014, during which we expect to complete specifications for WheelTug for the 737-800 or the Airbus A320, and we will make the filings necessary to achieve Federal Aviation Administration ("FAA") certification. WheelTug expects to be profitable within 6-9 months after FAA certification. Going cash flow positive will result from the sale of production slots, a long used revenue generator in aerospace. Profitability is expected to occur after actual deliveries begin and we are generating monthly lease revenue.

## **Chorus Motors**

The Chorus Motors technology is designed to enable extremely high-torque, high-efficiency AC induction motors especially suitable for traction applications, such as WheelTug, but also including cars, trucks, trains and ships. Borealis formally introduced the Chorus Motor to market in September 1999. Because of the tremendous need and demand for WheelTug by airlines, we have decided to focus a disproportionate amount of our internal resources on WheelTug until such time as it has been commercialized, which is expected to be no later than 2014; we will then focus more sharply on some of the many other applications for the Chorus motor technology.

The Chorus technology is very different from the universally-used three-phase motor technology (and, as a result, difficult for most electrical and motor engineers to grasp). The Chorus Motor's patented employment of electrical drive harmonics unlocks a power-to-weight ratio of almost 10:1 over conventional AC induction motors. This incredible power density, and the use of patented control logic, allows the motor to function efficiently in both low-speed/high-torque and high-speed/low-torque configurations. In other words Chorus handles very fast starts and "power jumps" as well as smooth, continuous high-speed operation with equal elegance.

Chorus has multiple other applications that will emerge when motor engineers eventually understand its benefits. For example, farm implements: typically needing high traction at low speeds, agricultural vehicles are excellent candidates for a Chorus drivetrain solution. Able to deliver exactly as much or as little traction and acceleration as needed, a Chorus drivetrain can eliminate the inefficient, low-RPM operation of traditional agricultural engines. Instead locomotion is provided by a Chorus motor, with electricity supplied from a battery and/or provided by an efficient onboard generator. Combines, tractors, mowers and other agricultural machines gain the benefit of near-continuous speed operation without requiring complex CVTs or large, inefficient engines.

Chorus is an ideal motor for driving electric or hybrid automobiles and trucks. Chorus can improve dual hybrid vehicles in several ways. We can provide an electric motor that can propel the car across the entire operating profile. Chorus can also simplify the system by removing the need for specialized cooling solutions. In pure electric cars, Chorus cannot solve the battery problems with these vehicles, but Chorus Meshcon offers significant power density and efficiency improvements over the three-phase motors currently in use. Permanent magnet machines are not viable for pure electric cars because of the cooling problems. In addition, Chorus Meshcon offers high efficiencies at low torques -- increasing the range and/or reducing the battery-size requirements of existing solutions.

The Chorus technology also is applicable for generators, such as those used by wind turbines, and for use in challenging applications, such as mining or remote petroleum production operations. In such challenging environments, harsh conditions and high-value applications users to know that their electric motor will do the job without complaints and without stopping. Chorus Motors provide the highest AC induction torque density in the smallest footprint, and does it without the temperature sensitivity or exotic materials of permanent magnet-based machines.

## **Avto Metals, Power Chips, and Cool Chips**

Borealis is also currently developing several other new concepts invented or discovered by our scientists. Among these are new technologies using quantum interference effects in devices for the efficient and clean generation of electric power and for environmentally benign cooling and refrigeration. These devices, called Power Chips™ and Cool Chips™, are small, lightweight, durable, versatile, silent and non-polluting without moving parts. Power Chips are expected to make possible the generation of electricity anywhere there is a source of heat, while Cool Chips are an entirely new system for cooling, refrigeration and climate control. Because of their innovative design, these technologies are projected to be more efficient than any competing technology. Avto Metals™, which allows for the custom design of electron volt work functions, we believe makes these projects both realistic and price competitive and includes many other areas of work, such as the Avto Quantum Transistor™ and multiple applications in medicine, pesticides and catalysts.

### **Avto Metals**

Avto Metals plc aims to develop, commercialize, and licence the Avto Metals technology, a revolutionary new technology for changing the fundamental physical properties of materials. The science of Avto Metals is still very young, and most of its potential applications are not yet known, while some will not be discovered for decades. Products fabricated using the Avto Metals technology are likely to drive the next phase of evolution in electronic devices of all kinds, as well as make possible far-reaching transformations in the products of many other industries.

Avto Metals are new materials that can be custom-designed to achieve desired electrical or physical properties. They use a new method of changing the distribution of electrons within a material, thus changing the electrical properties of that material. All materials thus can now be made electrically conducting.

Avto Metals are a result of the discovery of a new quantum interference effect, which we have called the Avto Effect. The Avto Effect will enable the transformation of existing materials into new materials with precisely-defined properties for almost any electronic application. These new materials will give scientists, engineers, and product designers an entirely new range of options in creating new technologies and products. In effect, they form entirely new materials with variable electrical properties.



While the full range of applications will not be known for decades, as scientists and engineers find new ways to use them, initial applications will be simpler and cheaper diodes and transistors, which are the basic building blocks for all microelectronic devices—such as computers, cellphones, and multifunction digital tools—and for flat-panel displays. Future applications will include new technologies for efficient electrical power generation (such as Power Chips), and cooling and refrigeration (such as Cool Chips).

Because the Avto Effect is a new scientific discovery, and Avto Metals an entirely new form of materials, few academics or scientists yet understand what they are or how they work. Broadly, Avto Metals are materials designed so that their electron emission can be regulated and their electrical properties thereby changed as desired. The scientific principle is similar to that used in theatres and concert halls to reduce echo effects.

Echo effects are caused by the reflection of sound waves from the theatre's walls. In modern theatres and concert halls, patterns are built into the walls to reduce echoes. By modifying the shape of the walls, the reflection of the sound waves can be changed and echoes can be reduced or eliminated.

The Avto Effect is the same principle, in this case altering the reflection of electrons from the surface of a material using the wave properties of the electrons. Until now, scientists have not exploited the wave properties of electrons because those properties become useful only when the dimensions of a structure are reduced to nanoscales.

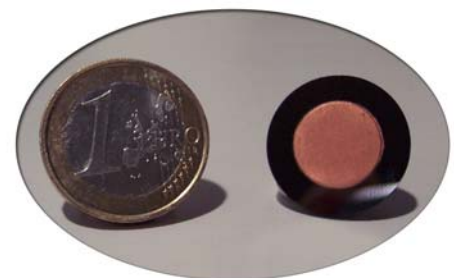
It is well known in quantum mechanics that electrons have wave properties. But this knowledge has had no practical application in microelectronics because until now the dimensions of microelectronic components were too large to exploit electron wave properties. With today's achievements in nanoelectronics it becomes possible to fabricate objects having dimensions small enough to exploit the wave properties of electrons.

Using the wave properties of electrons to alter the characteristics of a material makes it possible to fabricate new classes of devices. For example, smaller, cooler-operating, more-effective and less expensive diodes, transistors, and flat-panel displays can be built. In addition, more-powerful semiconductor lasers and more-sensitive infrared detectors will be possible. And there are many more potential applications.

In all these devices, the work function of the material—the energy required to remove an electron from a solid material—defines its quality and complexity of production. The Avto Effect allows us to regulate precisely the work function of a material without changing its chemical composition. For example, the work function of a material such as silicon can be easily varied. The Avto Effect operates by modifying the geometry of the surface of the material in such a way that the wave properties of electrons become considerable. The end result of the ability to regulate electron wave properties is that the work function of a material can be changed and thus—for the first time—the electrical characteristics of the material can be changed at will.

## **Power Chips and Cool Chips**

Borealis has also developed two technologies based on our research into thermionics—the emission of excited electrons from an electrode. Both technologies have been made possible only in recent years by advances in semiconductor manufacturing capability and by new understanding of both quantum physics and nanotechnology. Both will be among the first practical benefits from the emerging nanotechnology revolution.



*Prototype Chip shown with a 1-Euro coin for size comparison*

The first is Power Chips, which produce electricity directly from heat, with high efficiency. Power Chips are small, lightweight, durable, versatile, silent, nonpolluting, and can operate without any moving parts. They will make it possible to generate electricity anywhere there is a source of heat.

Major potential applications include power generation in electric or hybrid-electric vehicles, reclaiming and converting waste heat in conventional power plants, and stand-alone power generation systems for individual buildings, thus avoiding all the problems of infrastructure cost and potential brownouts associated with area grid-based power systems. For these and many other applications we expect Power Chips to be superior not only to all established technologies, but also to emerging technologies such as fuel cells. The worldwide market for electric power exceeds \$1 trillion a year, and we expect that Power Chips will over the next few decades replace many existing means for generating electricity and capture much of this market, while also creating new markets by making electricity almost universally available at a lower cost.

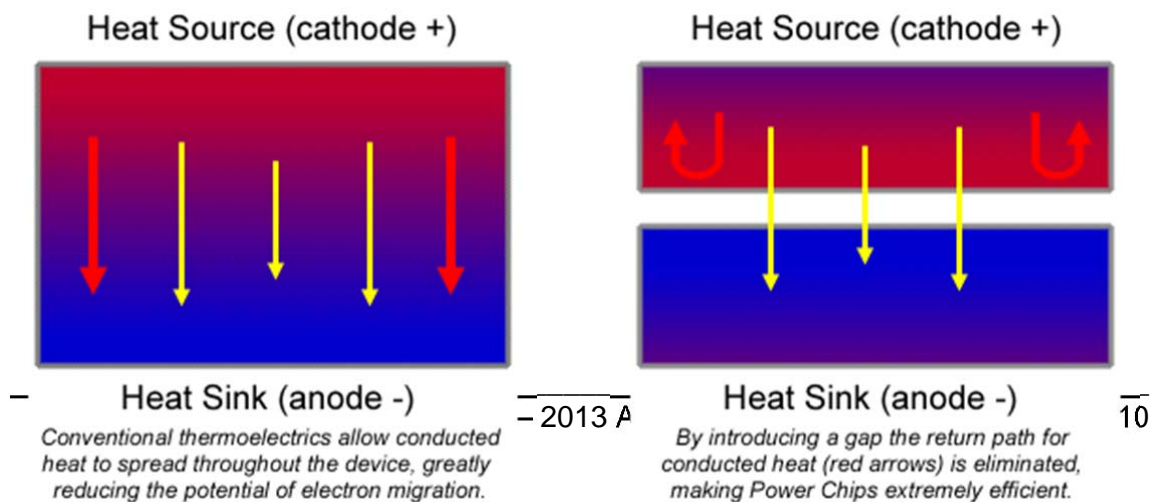
Alternatively, the chips can be operated as Cool Chips to pump heat to provide cooling, refrigeration, and climate control. Because of the inherent advantages in cooling across a nanometer-scale gap between two electrodes, Cool Chips are projected to attain efficiencies higher than those previously available in cooling systems, and far greater cooling performance than compressors of the same size and weight. The devices are small, silent, lightweight diodes that are scalable in arrays to meet any thermal management need from cooling a single microprocessor to air-conditioning a factory or home. They can produce cooling for any heat load from hundreds of degrees to below freezing temperatures, at projected efficiencies of 55% (conventional compressor systems operate at 40-50% efficiencies).

Cool Chips will have thousands of applications, from refrigerating cargo ships and air-conditioning cars to cooling X-ray machines, desktop and laptop computers, containers for land and sea and telecommunications equipment. We expect that our first sales will be for military use, for cooling a wide range of equipment, devices, and sensors.

Cool Chips offer a unique cooling solution and the first viable replacement option for the century-old compressor technology that is now dominant in nearly all forms of thermal management, including air conditioning, refrigeration, chilling, freezing, and cooling. Their potential market is huge. Cool Chips offer a number of benefits over traditional systems that will give them a significant competitive advantage in capturing this large and mature market. In addition to their size, weight, and efficiency advantages, Cool Chips have no moving parts, operate silently, require little or no maintenance, and use no environmentally harmful refrigerants.

How can the same effect of quantum physics produce both electric power and cooling? The heart of a Power Chip or Cool Chip is an electrode capable of emitting electrons very freely. This can be triggered either by applying heat, or by applying an electric current.

If heat is applied, the resulting electron flow forms an electric current.



If electricity is applied, the electrons carry heat with them as they move. By ensuring that the electrons are passing across a tiny vacuum gap, the direction of heat flow is predominantly one-way, and thus one side of the chip becomes cooler while the other side becomes warmer.

In both forms, the chips can operate within all normal ambient temperatures, and, we expect, from cryogenic temperatures up to the temperature of typical engine exhaust gases (900° Celsius). Thus they have a wide range of potential applications both in day-to-day life and in many industrial processes.

We expect that initial production Power Chips will generate 10 to 100 Watts per square centimeter, depending upon the operating regime, while Cool Chips will produce 3 to 5 Watts (equivalent to 10 to 17 BTUs) per square centimeter of cooling. Both these outputs are far higher, and are projected to be produced at higher efficiencies, than those possible with any existing technology for power generation or cooling. Further development should substantially increase the chips' respective power generation or cooling capacities.

The demand for these devices is intense, from dozens of industries and for thousands of applications. As a result, we anticipate that Cool Chips plc and Power Chips plc, our majority-owned subsidiaries developing and licensing these technologies, will experience perhaps the fastest demand-growth curves in industrial history. The largest constraint to growth will be manufacturing capacity. We plan to complete the first 18 months of production solely out of our own facilities; additional capacity will then be provided by additional facilities or by manufacturing partner licensees. Much more information is available on both these technologies and companies on their respective Websites at [www.coolchips.gi](http://www.coolchips.gi) and [www.powerchips.gi](http://www.powerchips.gi).

## **Mineral Properties: Roche Bay and Faraway**

We have developed certain of our Roche Bay iron ore mining properties to the point where we have transferred direct management and operations thereof to third parties: (i) in 2007 to Advanced Explorations Limited (AXI) with respect to the eastern Roche Bay iron ore deposits and (ii) in 2012 to West Melville Metals Inc. with respect to part of the Fraser Bay iron property. It is expected that the next step in respect of the property being developed by AXI will be the continuation of mineral exploration work in respect of adjacent zones of mineral deposits and in respect of the property being developed by West Melville will be commencement of further exploration work with a view toward completing a feasibility study. Roche Bay plc is cooperating with its co-joint-venturers, in each case, to facilitate the taking of such steps in the nearest practicable future.

We believe that our Faraway property sits on an intracratonic rift of which there are nine such known intracratonic rifts in the world, eight of which (i.e. all intracratonic rifts other than the one owned by Faraway at Freuchen Bay, Canada) is producing polymetallics (e.g., gold, platinum, copper, nickel, tungsten, iron, zinc, and other minerals), in some cases, for over 100 years. We intend to raise at least C\$10,000,000 to conduct a feasibility study. If the results are satisfactory, we intend to use internally generated funds or raise outside funds to develop this property. If the work does not show the potential mineral deposits we expect, we will abandon this project.

## The Borealis Industrial Revolution

Many of the core technologies that provide the foundations for modern industrial economies were invented in the last half of the 19th Century. These include steelmaking, electric motors, electrical power generation, internal-combustion automobile engines, and refrigeration and air conditioning. While all these first-generation technologies have been significantly improved over the past century, none has been fundamentally changed or replaced by a better technology. Yet in the past century there have been enormous advances in basic sciences, in engineering, and in manufacturing capabilities. These scientific and technological advances have been applied to invent new products and create new industries, but none of those advances has significantly changed the core industrial technologies.

Borealis has re-examined the core technologies of basic industries—all of which have worldwide sales of hundreds of billions of dollars annually—and applied the 20th Century's scientific and technical discoveries—notably recent advances in microengineering and nanotechnology—to re-invent these 19th Century technologies. The result is a number of entirely new technologies for basic industries that will advance them into the 21st Century and launch a decades-long wave of renewal, regeneration, and economic growth worldwide—what we call the Borealis Industrial Revolution.

These renewed fundamental technologies, in our patented proprietary packages, will be smaller, simpler, more efficient, and much less expensive. They will permit the benefits of modern technology to be spread much more widely around the world and spark economic growth everywhere. They will also respond to 21st Century concern about the Earth's environment by sharply reducing the need to burn fossil fuels and by greatly reducing or even eliminating air pollution caused by many industrial processes and consumer products.

These new Borealis technologies will provide profound benefits for the entire world, and they will produce far-reaching changes in many industries and in regional and national economies with the products that will be developed. Everybody should benefit, notably including our shareholders.

The widest-ranging of these, Avto Metals, represents a fundamental change in all solid-state physics. The Avto Metals technology will enable scientists and engineers to change at will the electrical and some physical properties of all metals and some other materials, such as silicon. It enables any metal, for example, to be made electrically conducting to the extent desired.

The full impact of Avto Metals will not be known for decades, as scientists and engineers learn how to use it and apply the Avto Effect to invent new materials, technologies, and products. Among the first applications will be improved diodes and transistors, the basic building blocks of electronics. Better flat-panel displays, lasers, and sensors will be other early applications. Avto Metals will also be the core technology underlying two other Borealis inventions, Power Chips and Cool Chips.

Power Chips should revolutionize electrical power generation across virtually all applications. In present large generating stations, adding Power Chips to capture heat that is now wasted will enable power plants to produce at least 20% more power with no increase in fuel consumption or emissions. In automobiles and other vehicles, Power Chips initially are likely to replace the starter-alternator, using waste heat from the radiator and exhaust and greatly increasing the efficiency of the internal combustion engine. Eventually, vehicles driven by electricity produced onboard will become feasible, with power generated by Power Chips—burning gasoline, natural gas, methane or hydrogen as fuel to produce heat—and driving a super-efficient Chorus Motor. Such an automobile would achieve several times the fuel efficiency of current models and produce a fraction of the emissions.

Power Chips will make it possible to efficiently generate power in a wide range of portable devices, thus increasing their utility. They will make it possible to bring plentiful electric power to regions of the world whose peoples and economies now suffer from inadequate electric power, at a fraction of the cost to do so using current generating technologies. Power Chips will be among the first economically and environmentally transformative fruits of the emerging nanotechnology revolution.

Cool Chips will also produce wide-ranging benefits for many industries and people worldwide. They will sharply reduce the costs of cooling, refrigeration, and air conditioning, thus making these amenities available to more of the world's people. Just as the southern United States began a decades-long surge of economic growth when air conditioning became widely available, so Cool Chips will enable economic development in all the world's tropical regions, at a much lower cost than current compressor-based air conditioning. Because Cool Chips use no compressors or gases, they produce no emissions, and thus will reduce any threat posed by global warming.

They will also make possible a vast array of new products in many industries, from non-melting picnic coolers to quieter, less expensive air conditioning to Cool Chips built into clothing to provide personal climate control. Because Cool Chips will make possible precise temperature control in small areas, they will enable refrigerators to keep each food at its optimal storage temperature, thus keeping foods fresh longer. In a car, they will allow each passenger to be as warm or as cool as he chooses.

And the Chorus Motor will enable many products, from large industrial machines to tiny servomotors, to be smaller, lighter, more efficient, more powerful, and less expensive. It will open the path to a multitude of new products, and enable manufacturers in many industries to redesign existing products to reduce their size and weight and improve their performance, efficiency, and appearance. The first such application is Chorus WheelTug, which will increase the efficiency and reduce the operating costs of commercial airplanes.

Combined with Power Chips to produce electricity, the Chorus Motor will make possible more efficient and non-polluting automobiles and other vehicles, from trucks to trains to ships. A Chorus Motor used to drive an automobile, for example, will be smaller, lighter weight, virtually silent, and less expensive to build and operate than an internal-combustion engine, while producing as much or greater torque for startup and acceleration. And Avto Metals creates an entirely new class of materials, making possible new technologies and products as yet unknown.

Together, these technologies have the potential to reinvigorate and transform some of the world's largest and oldest industries, giving their engineers new design options and making their products more useful, less expensive, and more environmentally friendly. This transformation process will, we expect, drive worldwide economic growth for several decades and will, we believe, become the Borealis Industrial Revolution.

## **Borealis Patents and Intellectual Property**

All of these technologies, and others, are currently in active development. Our technologies are protected by numerous patents issued and pending and by proprietary knowledge of the fields of study. In furtherance of its strategy to develop and own technologies that are designed to fundamentally change basic industries, Borealis now has well over a hundred patents either issued, approved for issue or pending covering wide ranging scientific endeavors. These patents provide our legal framework for our sales of our proprietary patented proprietary products, beginning with WheelTug.

Many of our patents, in the opinion of our technical staff, are what the courts label “pioneer” patents, reflecting the fact that they are the first patents to be issued in an entirely new field of technology, or represent a technical revolution in a previously-defined field. Pioneer patents are those to which most later patents in a field make reference, or on which later patents build by adding new improvements to the field. Because pioneer patents represent the result of groundbreaking scientific discoveries or development, the courts have found that they merit a wide breadth of protection in construing their claims and specifications.

Our patents generally fall into three main categories. The first category of issued patents includes Chorus Motors plc and WheelTug plc patents. Such patents give us exclusivity over the high-phase-order motor world with the first application being the use of WheelTug for aircraft worldwide. The second category of patents covers patents with applications in physics, relating mostly to thermionics and the custom design of eV (electron volt work functions), which we believe will make thermionic devices economically viable, for example, in production of electrical power. The third category includes basic operational patents on items like generators and gen-sets and how to operate them efficiently. We are working on patenting a wide range of other items that are still under development all of which should provide proprietary and patent-protected products.

Because our scientific discoveries and technical advances are the core of our business, we are very careful about protecting these assets. Patenting and otherwise protecting our technologies is an important activity at Borealis and consumes a considerable portion of our resources. We have developed an extensive library of intellectual property and families of patented proprietary products and we intend to protect all of them vigorously. Patented proprietary products are the key to long-term economic health.

In fiscal 2013 we were issued 11 new U.S. patents (identified on the Technology pages of our website). We also filed applications in the U.S. and internationally for many additional patents, and now have a considerable number of applied-for, in-process, and pending patent applications. Many of our recent applications have covered improvements to or additional claims for the technologies we have already announced, but some were provisional or initial patent applications for new technologies that we have not yet disclosed. Our scientific teams build what they invent and patent and stay at their basic scientific work year in and year out without researchers’ usual grant proposal problems.

We are always examining, under our present discounted expected value metric, our scientists’ ideas for wholly new or radically improved technologies, and we are always working on the development of some of these ideas. But because many of these ideas are “game changers”—either a fundamental advance in what is generally presumed to be a mature technology or an altogether undeveloped field—we keep our work confidential until after the primary patents on a technology have issued. We have several projects that appear to be just these sort of “game changers” that may or may not ending up being of value.

## Borealis Properties and Operations

### Principal Technologies

**Avto Metals:** [www.avtometals.gi](http://www.avtometals.gi)

Avto Metals plc was incorporated on 6 October 2004. Avto Metals technology apparently provides the necessary means to custom-design electron-volt work functions in metals and other materials. Avto Metals plc is continuing to research new applications and technologies in related scientific fields. This science should find applications in many areas.

**Chorus Meshcon & WheelTug:** [www.chorusmotors.gi](http://www.chorusmotors.gi)

The Chorus Meshcon technology is a novel electric motor/drive combination that uses electromagnetic harmonics to greatly increase the motor's torque. A Chorus system is smaller, lighter, and is expected to sell for a premium over a conventional motor with the same output. It is ideal for traction applications such as electric cars and trains.

WheelTug plc was incorporated on 9 February 2005, as a subsidiary of Chorus Motors plc, and is the assignee of the WheelTug programme announced with Boeing Phantom Works on 8 November 2004. The WheelTug technology will be the first of our technologies brought to market.

**Cool Chips:** [www.coolchips.gi](http://www.coolchips.gi)

Cool Chips are solid-state devices based on thermionics that pump heat to produce cooling, refrigeration, or air conditioning. They are small, lightweight, non-polluting and non-corrosive, and are projected to be more efficient than any existing thermal management technology. Cool Chips plc continues to drive towards production, and is negotiating for the acquisition of fabricating facilities.

Cool Chips Military Sales plc was incorporated on 8 February 2005, as a subsidiary of Cool Chips plc, as it is expected that our first sales of Cool Chips technology will be delivery of products to U.S. military contractors.

**Power Chips:** [www.powerchips.gi](http://www.powerchips.gi)

Power Chips are devices that absorb heat to produce electrical power. They are silent, non-polluting, scalable, portable, and can operate anywhere there is a source of heat. We expect them to replace many existing technologies for generating electricity. Power Chips devices are being developed in parallel with Cool Chips.

### Mining Properties

**Roche Bay:** [www.rochebay.com](http://www.rochebay.com)

A subsidiary company, Roche Bay plc, owns interests varying from 25% to 100% in several iron ore deposits located on the Melville Peninsula, Nunavut, Canada, which contain one of the world's largest undeveloped resources of magnetite iron ore ( $\text{Fe}_3\text{O}_4$ ). Significant work is currently underway in an attempt to bring some of these properties into production.

**Freuchen Bay Intracratonic Rift Project: [www.faraway.gi](http://www.faraway.gi)**

Faraway plc, a subsidiary company, owns 100% of 10,350 acres of Government of Canada long term renewable leases near Freuchen Bay, Melville Peninsula, Nunavut, Canada. These leases cover a series of geophysical/geochemical anomalies that our consultants tell us sit astride an intracratonic rift.

## **Organizational Structure**

Borealis Exploration Limited, the parent of the Borealis Family of Companies, is a holding company and owns indirectly a majority of all our operating subsidiaries. Borealis owns 98% of Borealis Technical Limited, which conducts all our research and itself owns a majority interest in each of the operating companies. Borealis Technical owns all our patents and has licenced all rights to them to the respective operating subsidiaries. Borealis Technical receives 50% of all sublicense revenue and 8% of all other revenue from its operating subsidiaries. For now Borealis Exploration pays all the expenses of all the subsidiaries and all share proceeds from sales of the subsidiary companies are loaned by the subsidiary to the parent company and are due back 100% to the subsidiary. This means that the subsidiaries have no liabilities, as the parent company has assumed them all and as such the balance sheets of the operating plc subsidiary companies are very strong.

In addition, we see the additional following benefits for our corporate structure.

The plc's have provided a vehicle for raising capital during our development phase. Second, each of our technologies appeals to different markets, and having each managed separately makes possible greater focus. And third, many investors may prefer investing in a company concentrating on a specific technology. As additional technologies are disclosed, we will establish new companies to operate these in the same manner. Borealis and all of our operating plc companies are incorporated in Gibraltar.

Borealis Exploration Limited has 5,000,000 shares authorized and outstanding. Each operating subsidiary has 10,000,000 shares authorized, of which Borealis Technical owns at least 5,200,000 shares. We do not intend to propose that shareholders authorize any additional shares in Borealis or any subsidiary. Given the strict limits on share issuance contained in our Memorandums and Articles of Association (which may be found in the Corporate Information sections of our websites), our shares will not be increased from the present authorized levels without enormous difficulty. We have issued no additional Borealis Exploration Limited shares since before our move to Gibraltar in 1998. This shows the commitment of management to make Borealis Exploration Limited shares valuable and shows the determined restraint of management in not issuing new shares. Virtually all public companies issue new shares all the time. Your company is one of the few exceptions to this rule.



The following table shows the shares owned by Borealis in each major subsidiary, the total shares outstanding in each company, and the proportion of the total owned by Borealis, at fiscal year-end.

### Ownership of Borealis Publicly Traded Subsidiaries

Company	Borealis shares	Total shares outstanding	% Borealis
Avto Metals plc	5,200,810	5,377,115	97%
Chorus Motors plc	5,214,841	6,689,965	78%
Cool Chips plc	5,203,377	8,251,947	63%
Faraway plc	5,200,000	6,312,874	82%
Power Chips plc	5,211,483	8,035,118	65%
Roche Bay plc	5,203,000	7,373,953	71%

Initially, it appears that most of our income will derive from the manufacture and sale of high-value products from Gibraltar. We expect this to continue for at least several years. This will mean that we will do our best to become manufacturers of high-value products in Gibraltar in order to make sure that we are always current with our science and technologies and manufacturing processes.

Our headquarters and legal domicile are in Gibraltar. Borealis operates as a virtual company, and the Internet plays a dominant role in our day-to-day work. It is the means by which we manage our businesses, discuss new ideas, and promote ourselves to the outside world. Modern communications technology has allowed us to circumvent the traditional problems associated with working on four continents and twenty time zones. Because of this, we have access to facilities and personnel about which a company of our size would normally only be able to dream.

Borealis has consultants around the world, all of whom work over e-mail. Management and technical discussions take place over the Net. Borealis runs a continual Board of Directors meeting 24 x 365, with an annual traffic of over 10,000 messages to each board member and members of management now receive well over 100,000 e-mails per year. Borealis has intense direct participatory management, and many consultants to the Company sit in on the board meetings and provide input although they are not voting members.

Our Website, [www.borealis.gi](http://www.borealis.gi), makes information about our technology available, and informs shareholders, other companies, and the general public about Borealis. The Website is always being updated, and our major disclosed technologies are described on the site in detail. As patent offices issue more patents to Borealis, a more complete picture of our extensive research efforts will become publicly available on the Website. Additionally, Borealis sends out a weekly update (as well as daily share trades with prices) to shareholders and to all the major news organizations and other interested parties, detailing our ongoing work and progress (please e-mail [pr@borealis.gi](mailto:pr@borealis.gi) if you would like to receive these updates). Through this wide distribution, we are able to keep people better informed than through traditional channels. Your management uses this technology to maintain a close relationship with our shareholders.

This virtual company structure is great to work with and allows us to have many people directly involved in the decision-making processes at Borealis. This approach may not be conventional, but the results to date have validated the business structure.

## **Investor Information**

Extensive information for investors can be found on our Website at <http://www.borealis.gi>. Our annual and quarterly reports for more than the past five years are posted there, as well as full information about the Company and our technologies. The site also has links to quotation systems that report our current stock prices.

If you have a question about Borealis, please write to us at [pr@borealis.gi](mailto:pr@borealis.gi).

## **5. STATEMENT OF DIRECTOR'S RESPONSIBILITIES**

Company law requires the directors to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the company for that period. In preparing those financial statements, the directors are required to:

- a) select suitable accounting policies and then apply them consistently
- b) make judgements and estimates that are reasonable and prudent
- c) state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements
- d) prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business

The directors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the financial statements comply with the Gibraltar Companies Act and the Gibraltar Companies (Accounts) Act 1999. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

## **6. ACCOUNTANTS**

Moore Stephens Limited have expressed their willingness to continue in office. A resolution for their reappointment will be proposed at the next annual general meeting.

By order of the Board 26 June 2013

Signed  
Rodney T. Cox

Chairman and Chief Executive Officer

Signed  
Wayne S. Marshall

Director

**BOREALIS EXPLORATION LIMITED  
INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS**

We have audited the Consolidated and Company financial statements of Borealis Exploration Limited for the year ended 31 March 2013 which comprise the Consolidated Profit and Loss Account, the Consolidated and Company Balance Sheets, the Consolidated Cash Flow Statement and the related notes. These financial statements have been prepared under the accounting policies set out therein.

This report is made solely to the Company's members, as a body, in accordance with section 182 of the Gibraltar Companies Act. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

**Directors' responsibilities for the financial statements**

The directors are responsible for the preparation and true and fair representation of these financial statements in accordance with applicable law and International Financial Reporting Standards. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

**Auditor's responsibilities**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and true and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

In forming our opinion, we considered the disclosures in Note 3 of the Financial Statements in connection with the application of the going concern basis and the uncertainty with regard to securing continued financial support.

**Emphasis of matter**

Without modifying our opinion, we draw attention to Note 3 in the consolidated financial statements which describes material uncertainty that raises substantial doubt about the Company's ability to continue as a going concern.

**BOREALIS EXPLORATION LIMITED  
INDEPENDENT AUDITOR'S REPORT TO THE SHAREHOLDERS (CONTINUED)**

**Report on other legal and regulatory matters**

In addition to reporting on the financial statements, Gibraltar legal and regulatory requirements also require us to:

- (a) Report to you our opinion as to whether the financial statements have been properly prepared in accordance with the Gibraltar Companies Act, the Gibraltar Companies (Accounts) Act 1999, the Gibraltar Companies (Consolidated Accounts) Act 1999, and other applicable legislation.
- (b) State in our report whether in our opinion the information given in the directors' report is consistent with the financial statements.
- (c) Report to you if, in our opinion, the Company has not kept proper accounting records, if we have not received all the information and explanations we require for our audit, or if information specified by law regarding directors' remuneration and other transactions is not disclosed.

**Opinion**

In our opinion the financial statements have been properly prepared in accordance with the Gibraltar Companies Act, the Gibraltar Companies (Accounts) Act 1999, the Gibraltar Companies (Consolidated Accounts) Act 1999, and other applicable legislation; and the information given in the directors' report is consistent with the financial statements.

We have nothing to report to you in respect of our responsibility set out in (c) above.

Signed

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**Kieran Power**

**Statutory Auditor  
For and on behalf of  
MOORE STEPHENS LIMITED**

Suite 5  
Watergardens 4  
Waterport  
Gibraltar

Date \_\_\_\_\_

## BOREALIS EXPLORATION LIMITED

### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2013

	Note	31 March 2013 \$	31 March 2012 \$
<b>EXPENDITURE</b>		(5,671,074)	(2,293,439)
<b>OPERATING LOSS</b>	6	(5,671,074)	(2,293,439)
Profit on disposal of marketable investments		(26,160)	277,103
Unrealised loss on revaluation of marketable securities		-	(159,644)
Financing loss		-	(359,516)
Impairment of development costs		-	(2,345,916)
Non current asset write-off		-	(20,500)
Interest received		-	51
Interest paid		(3,393)	(8,895)
Foreign exchange gain		8,718	-
<b>LOSS ON ORDINARY ACTIVITIES BEFORE TAX</b>		(5,691,909)	(4,910,756)
Tax - Canada capital tax		-	(2,355)
<b>LOSS ON ORDINARY ACTIVITIES AFTER TAX</b>		(5,691,909)	(4,913,111)
Profit on sale of shares in subsidiary companies		8,415,955	5,115,851
Loss on decrease/(increase) in stake in business		(28,974)	(213,430)
Equity non-controlling interest		(599,206)	(3,874,449)
Post year end adjustment		-	5,661,470
<b>TOTAL COMPREHENSIVE INCOME FOR THE PERIOD</b>		\$ 2,095,866	\$ 1,776,331
<b>EARNING PER SHARE ATTRIBUTABLE</b>	12	\$ 0.42	\$ 0.36

The Borealis Family of Companies has had no discontinued activities during the year, accordingly, the above result relates solely to continuing activities.

There is no difference between the loss on ordinary activities before taxation and the total comprehensive income stated above and their historical cost equivalents. There are no other recognised gains or losses other than those stated above.

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.

**BOREALIS EXPLORATION LIMITED**

Registered number: 66632

**CONSOLIDATED STATEMENT OF FINANCIAL POSITION****31 March 2013**

	Notes	31 March 2013 \$	31 March 2012 \$
<b>ASSETS</b>			
<b>NON-CURRENT ASSETS</b>			
Intangible assets	13	9,356,165	3,169,092
Property, plant and machinery	14	20,730	25,913
Mining resources	15	1,985,729	2,706,583
Marketable securities	16	396,577	801,009
		<b>11,759,201</b>	<b>6,702,597</b>
<b>CURRENT ASSETS</b>			
Trade and other receivables	17	-	342,523
Cash and cash equivalents		287,740	473,711
		<b>287,740</b>	<b>816,234</b>
<b>TOTAL ASSETS</b>		<b>\$ 12,046,941</b>	<b>\$ 7,518,831</b>
<b>EQUITY AND LIABILITIES</b>			
<b>CAPITAL AND RESERVES ATTRIBUTABLE TO THE OWNERS OF THE COMPANY</b>			
Called up share capital	20	50,000	50,000
Share premium account		24,241,030	24,241,030
Non distributable reserve		-	-
Non-controlling interest		9,157,010	8,557,804
Retained earnings		(29,102,309)	(31,198,175)
		<b>4,345,731</b>	<b>1,650,659</b>
<b>LIABILITIES</b>			
<b>NON-CURRENT LIABILITIES</b>			
	19	1,784,948	1,216,851
<b>CURRENT LIABILITIES</b>			
Trade and other payables	18	5,916,262	4,651,321
		<b>\$ 12,046,941</b>	<b>\$ 7,518,831</b>

Approved by the directors

Signed  
Rodney T. Cox  
DirectorSigned  
Wayne S. Marshall  
Director

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.

**BOREALIS EXPLORATION LIMITED**

Registered number: 66632

**COMPANY STATEMENT OF FINANCIAL POSITION****31 March 2013**

	Notes	31 March 2013 \$	31 March 2012 \$
<b>ASSETS</b>			
<b>NON-CURRENT ASSETS</b>			
Intangible assets	13	705,775	603,928
Property, plant and machinery	14	20,730	25,913
Investments in subsidiaries	11	83,950	83,950
		810,455	713,791
<b>CURRENT ASSETS</b>			
Trade and other receivables	17	1,527,796	1,359,923
Cash and cash equivalents		108,326	234,883
		1,636,122	1,594,806
<b>TOTAL ASSETS</b>		<b>\$ 2,446,577</b>	<b>\$ 2,308,597</b>
<b>EQUITY AND LIABILITIES</b>			
<b>CAPITAL AND RESERVES ATTRIBUTABLE TO THE OWNERS OF THE COMPANY</b>			
Called up share capital	20	50,000	50,000
Share premium account		24,241,030	24,241,030
Retained earnings		(56,457,647)	(55,107,263)
<b>NET ASSETS</b>		<b>(32,166,617)</b>	<b>(30,816,233)</b>
<b>LIABILITIES</b>			
<b>NON-CURRENT LIABILITIES</b>			
	19	1,784,948	1,216,851
<b>CURRENT LIABILITIES</b>			
Trade and other payables	18	32,828,246	31,907,979
		\$ 2,446,577	\$ 2,308,597

Approved by the directors

Signed  
Rodney T. Cox  
*Director*Signed  
Wayne S. Marshall  
*Director*

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.

## BOREALIS EXPLORATION LIMITED

### CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year ended 31 March 2013

	Called up Share Capital \$	Share Premium Account \$	Non distributable reserve \$	Non- controlling interest \$	Retained earnings \$	Total \$
Balance at 1 April 2011	50,000	24,241,030	10,318,968	14,533,085	(32,974,506)	16,168,577
Total comprehensive income for the year	-	-	-	-	(3,885,139)	(3,885,139)
Impairment	-	-	(10,318,968)	-	-	(10,318,968)
Minority interest	-	-	-	(313,811)	-	(313,811)
Post year-end adjustment	-	-	-	(5,661,470)	5,661,470	-
Balance at 1 April 2012	\$50,000	\$24,241,030	-	\$8,557,804	\$(31,198,175)	\$1,650,659
Total comprehensive income for the period	-	-	-	-	2,095,866	2,095,866
Minority interest	-	-	-	599,206	-	599,206
Balance at 31 March 2013	\$50,000	\$24,241,030	-	\$9,157,010	\$(29,102,309)	\$4,345,731

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.



## BOREALIS EXPLORATION LIMITED

### COMPANY STATEMENT OF CHANGES IN EQUITY

Year ended 31 March 2013

	Called up Share Capital \$	Share Premium Account \$	Retained earnings \$	Total \$
Balance at 1 April 2010	50,000	24,241,030	(55,110,347)	(30,819,317)
Total comprehensive income for the year	-	-	3,084	3,084
Balance at 1 April 2011	\$50,000	\$24,241,030	\$(55,107,263)	\$(30,816,233)
Total comprehensive income for the period	-	-	(1,350,384)	(1,350,384)
Balance at 31 March 2012	\$50,000	\$24,241,030	\$(56,457,647)	\$(32,166,617)

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.

## BOREALIS EXPLORATION LIMITED

### CONSOLIDATED STATEMENT OF CASH FLOW

Year ended 31 March 2013

	31 March 2013 \$	31 March 2012 \$
<b>Cash flows from operating activities</b>		
Cash generated from operations	(4,007,615)	(3,424,128)
Interest received	-	51
Interest paid	(3,393)	(8,895)
<b>Net cash generated from operating activities</b>	<b>(4,011,008)</b>	<b>(3,432,972)</b>
<b>Cash flows from investing activities</b>		
Marketable securities acquired	-	-
Patent acquisitions	(143,941)	(94,420)
Research and development expenditure	(6,085,226)	(2,565,164)
Non-current asset acquisitions	-	(12,000)
Proceeds on disposal of marketable securities	378,272	1,200,041
Lease costs of mining resources	-	(21,406)
Development costs of mining resources	720,854	-
<b>Net cash used in investing activities</b>	<b>(5,130,041)</b>	<b>(1,492,949)</b>
<b>Cash flows from financing activities</b>		
Shares repurchased	568,097	(60,000)
Shares issued in subsidiaries for services	(28,974)	(213,430)
Realised profits from sales of subsidiary shares	8,415,955	5,115,851
Taxation	-	(2,355)
<b>Net cash inflow from financing activities</b>	<b>8,955,078</b>	<b>4,840,066</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(185,971)</b>	<b>(85,855)</b>
Cash and cash equivalents at the beginning of the year	473,711	559,566
<b>Cash and cash equivalents at the end of the year</b>	<b>\$ 287,740</b>	<b>\$ 473,711</b>

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.

## BOREALIS EXPLORATION LIMITED

### CONSOLIDATED STATEMENT OF CASH FLOW (Continued)

Year ended 31 March 2013

#### Cash generated from operations

	31 March 2013 \$	31 March 2012 \$
Operating profit for the year	(5,671,074)	(2,293,439)
Deferred compensation adjustment	-	(407,810)
Depreciation of fixed assets	5,183	5,979
Amortisation of patents	42,094	36,337
Decrease in accounts receivable	342,523	31,529
Increase/(decrease) in accounts payable	1,264,941	(1,079,782)
Decrease in deferred compensation	-	283,058
Foreign exchange gain	8,718	-
Net cash outflow from operating activities	<u>\$ (4,007,615)</u>	<u>\$ (3,424,128)</u>

The notes on pages 28 to 51 form an integral part of these consolidated financial statements.

# BOREALIS EXPLORATION LIMITED

## NOTES TO THE FINANCIAL STATEMENTS

*Year ended 31 March 2013*

### 1. PRINCIPAL ACCOUNTING POLICIES

These financial statements have been prepared in accordance with International Financial Reporting Standards, International Accounting Standards and Interpretations (collectively IFRSs) issued by the International Accounting Standards Board (IASB) as adopted by the European Union ("adopted IFRSs"), the Gibraltar Companies Act, the Gibraltar (Companies Accounts) Act 1999 and the Gibraltar (Consolidated Accounts) Act 1999.

#### **a. Basis of accounting**

The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied, unless otherwise stated.

The preparation of financial statements in compliance with adopted IFRS requires the use of certain critical accounting estimates. It also requires Family management to exercise judgment in applying the Family's accounting policies. The areas where significant judgments and estimates have been made in preparing the financial statements and their effect are disclosed in note 5.

#### **b. Basis of consolidation**

From 1 January 2010, the total comprehensive income of non-wholly owned subsidiaries is attributed to owners of the parent and to the non-controlling interests in proportion to their relative ownership interests. Before this date, unfunded losses in such subsidiaries were attributed entirely to the family. In accordance with the transitional requirements of IAS 27 (2008), the carrying value of non-controlling interests at the effective date of the amendment has not been restated.

The acquisition method of accounting is used by the Family when it undertakes a business combination. The fair value of consideration transferred at the acquisition date includes the fair value of assets transferred, liabilities incurred by the owners and equity instruments issued by the Family. Consideration can include cash, contingent consideration and options. Acquisition related costs are expensed as incurred unless they relate to the issue of financial instruments in which case they are accounted for in accordance with accounting policies relating to that specific type of financial instrument. The fair value of assets acquired and liabilities assumed are recognised at the acquisition date. At the acquisition date any equity interest held prior to the acquisition date is recognised at fair value with a resulting gain or loss recognised in profit or loss. The family has an option on a combination by combination basis on how to recognise non-controlling interest at the acquisition date either at fair value or proportionate share of net assets.

Goodwill is measured as the excess of the consideration transferred, plus any non-controlling interest and the fair value of any previously held interest in the acquiree over the fair value of assets acquired and liabilities assumed. If the goodwill is negative (bargain purchase) this is recognised immediately in the income statement. Any changes in contingent consideration after the measurement period are recognised in profit or loss.

The results of subsidiaries acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the effective date of acquisition, or up to the effective date of disposal, as appropriate. Entities which are acquired and are controlled, but which will be held for a period less than twelve months, are recorded as assets held for sale.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### **b. Basis of consolidation (continued)**

The consolidated financial statements are based on the financial statements of the individual companies drawn up using the standard Family accounting policies. Accounting policies applied by individual subsidiaries have been revised where necessary to ensure consistency with Family policies for consolidation purposes. All companies in the Family have the same reporting date of 31 March.

All significant transactions and balances between Family entities are eliminated on consolidation. The Family applies a policy of treating transactions with a non-controlling interest as transactions with equity holder when control is not lost of the subsidiary, and therefore recognised in equity.

#### **c. Segment information**

The Borealis Family of Companies has two reportable operating segments. The Family's mining exploration operations are conducted on properties in Canada. The only assets utilised in this business segment are the mining and other equipment. All other assets relate to the Family's other reportable operating segment, which is the business of conducting basic industrial research with the intent to commercialise these technologies. While the technical rights and/or patents are owned by a company registered in Gibraltar, the research activities are currently mainly carried out outside Gibraltar.

#### **d. Foreign currency translation**

The Family has determined the USD \$ as its functional currency, as this is the currency of the economic environment in which the Family predominantly operates.

Transactions in currencies other than USD \$ are recorded at the rates of exchange prevailing on the dates of the transactions. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing on the reporting date. Non-monetary assets and liabilities carried at fair value that are denominated in foreign currencies are translated at the rates prevailing at the date when the fair value was determined. Gains and losses arising on exchange are included in profit or loss. No Family entity has an operational currency of a hyper-inflationary economy.

Foreign currency differences arising on retranslation are recognised in profit or loss, except for differences arising on the retranslation of available-for-sale equity instruments, financial liabilities that are designated as hedges of the net investment in a foreign operation and qualifying cash flow hedges, each of which are recognised directly in equity within the translation reserve.

In the case of foreign entities the financial statements of the Family's overseas operations are translated as follows on consolidation: assets and liabilities, at exchange rates ruling on the reporting date, income and expense items at the average rate of exchange for the period and equity at exchange rates ruling on the dates of the transactions. Exchange differences arising are classified as equity and transferred to a separate translation reserve. Such translation differences are recognised in the statement of comprehensive income in the period in which the operation is disposed of. Foreign exchange gains and losses arising from monetary item receivable from or payable to a foreign operation, the settlement of which is neither planned nor likely within the foreseeable future, are considered to form part of a net investment in a foreign operation and are recognised directly in equity.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### d. Foreign currency translation (continued)

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Foreign currency gains and losses are reported on a net basis.

#### e. Revenue

At present all Family companies are engaged in development of various products and projects which have not yet reached the point of revenue generation. Once revenue commences, it will be accounted for on the basis of the accounting period in which the work was carried out or invoiced.

#### f. Non-controlling interests

For business combinations completed on or after 1 January 2010 the Family has the choice, on a business combination by business combination basis, to initially recognise any non-controlling interest in the acquiree at either acquisition date fair value or, as was required prior to 1 January 2010, at the non-controlling interest's proportionate share of the acquiree's net assets. The family has not elected to take the option to use fair value in acquisitions completed to date.

From 1 January 2010, the total comprehensive income of non-wholly owned subsidiaries is attributed to owners of the parent and to the non-controlling interests in proportion to their relative ownership interests. Before this date, unfunded losses in such subsidiaries were attributed entirely to the family. In accordance with the transitional requirements of IAS 27 (2008), the carrying value of non-controlling interests at the effective date of the amendment has not been restated.

#### g. Non-current assets

Non-current assets are stated in the statement of financial position at their revalued amounts, being the fair value on the basis of their existing use at the date of revaluation, less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations are performed with sufficient regularity such that the carrying amount does not differ materially from that which would be determined using fair values at the reporting date.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Family and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

Any revaluation increase arising on the revaluation of such non-current assets are credited to the revaluation reserve, except to the extent that it reverses a revaluation decrease for the same asset previously recognised as an expense, in which case the increase is credited to the income statement to the extent of the decrease previously charged. A decrease in carrying amount arising on the revaluation of such non-current assets are charged as an expense to the extent that it exceeds the balance, if any, held in the properties revaluation reserve relating to a previous revaluation of that asset.

When revalued assets are sold, the amounts included in the revaluation reserve are transferred to retained earnings.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### g. Non-current assets (continued)

Tangible non-current assets and intangible non-current assets are stated at their purchase cost, together with any incidental expenses of acquisition.

Depreciation is provided on all fixed assets to write off their cost less residual value over their estimated useful lives. The rates in use on a reducing balance method are as follows:

Mining and geological equipment	30%
Other equipment	20%

Patents are accounted for on the basis of the costs of registering the worldwide rights. All costs of development and legal works of the products have been written off in the year incurred. These patents are depreciated on the straight-line method at a rate of 4% per year. The carrying value of patents is reviewed annually by the Group of Companies. If, as a result of such a review, it is determined that the value has been permanently impaired, any diminution in value is taken to statement of comprehensive income account in accordance with IAS 36. To the extent that such diminution in value is subsequently reversed, this reversal is credited to the statement of comprehensive income.

#### h. Intangible assets - Research and development expenditure

Research costs are expensed in the year in which they are incurred. Development costs are reviewed annually and are expensed if they do not qualify for capitalisation. Development costs that are directly attributable to the design and testing of identifiable and unique products controlled by the Family are capitalised as intangible assets only when the following criteria are

- (i) it is technically feasible to complete the product so that it will be available for use;
- (ii) management intends to complete the product and use or sell it;
- (iii) there is an ability to use or sell the product;
- (iv) it can be demonstrated how the product will generate probable future economic benefits;
- (v) adequate technical, financial and other resources to complete the development and to use or sell the product are available; and
- (vi) the expenditure attributable to the product during its development can be measured reliably.

The depreciable amount of an intangible asset with a finite useful life, will be distributed on a systematic basis over its useful life. Capitalised development costs are amortised on a straight line basis over their twenty five year useful estimated life once the asset is available for use.

#### i. Financial instruments

Financial instruments, other than derivative financial instruments, are recognised on the Family's statement of financial position when the Family becomes a party to the contractual provisions of the instrument. Financial instruments are initially measured at fair value, which generally equates to acquisition cost, which includes transaction costs for financial instruments not subsequently measured at fair value. Subsequent to initial recognition, they are measured as set out below.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

**j. Non-current asset investments**

Non-current asset investments are stated at their historical cost less any provision for permanent diminution in value.

**k. Mining properties**

These are stated at cost, less any provision for diminution in value that may, in the opinion of the directors, have taken place. These costs include developing and maintaining the property. The policy on amortisation is that this will be charged on a straight-line basis over the period over which commercial mining operations are expected to continue. At present no amortisation is being charged until exploitation begins.

**l. Going concern**

These financial statements have been prepared under the going concern concept that assumes that the Family of Companies will continue in operational existence for the foreseeable future having adequate funds to meet its obligations as they fall due. Further information is set out in the Directors' Report on pages 4 to 11 and within Note 3.

**m. Taxation including deferred tax**

From January 2011, all Gibraltar companies are subject to the Gibraltar Tax Act 2010 whereby companies with businesses managed and controlled in Gibraltar, are required to pay 10% Gibraltar Corporation Tax on revenue profits provided these are accrued in or derived from Gibraltar. No provision has however been made for this tax, nor for deferred tax, as no taxable revenue was earned by the Family.

**n. Marketable securities**

These are carried at the closing quoted prices of securities and instruments held. Any revaluation, gains or losses are dealt with through the profit and loss account.

**o. Impairment**

At each reporting date, the Family reviews the carrying amounts of its tangible and intangible assets, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Family estimates the recoverable amount of the cash-generating unit to which the asset belongs.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease. Where an impairment loss subsequently reverses (except for goodwill), the carrying amount of the asset (cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (cash-generating unit) in prior years. A reversal of an impairment loss is recognised as income immediately, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.



## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

**p. Trade receivables**

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business. Trade receivables are stated at their amortised cost less any allowances for doubtful receivables. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

**q. Cash and cash equivalents**

Cash and cash equivalents consist of cash on hand and balances with banks, and investments in money market instruments which are readily convertible, being those with original maturities of three months or less. Cash and cash equivalents are measured at fair value, based on the relevant exchange rates at the reporting date.

**r. Trade payables**

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

**s. Provisions**

Provisions are recognised when the Family has a present legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will be required to settle the obligation, and a reliable estimate can be made of the obligation.

Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

**t. Share-based payments**

*Equity instruments granted for services received*

When the Family issues equity instruments for goods or services received, the fair value of the goods or services received is recognised as the cost of the goods or services received with a corresponding increase in equity. However, if the fair value of the equity instrument granted is greater than the fair value of the goods or services received the difference is recognised in the income statement as unidentified consideration.

# BOREALIS EXPLORATION LIMITED

## NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

### 2. ADOPTION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS

#### *New and amended standards adopted by the Family*

The Family has adopted the following new and amended IFRSs as of 1 April 2012. There are other amendments to standards not listed in this note as they do not have a material effect on the Family

- IAS 12 (amendment), 'Deferred Tax: Recovery of Underlying Assets', is effective from 1 January 2012.

#### *Standards, amendments and interpretations to existing standards that are not yet effective and have not been adopted early by the Family*

The following standards and amendments to existing standards have been published and are mandatory for accounting periods of the Family beginning after 1 April 2011, but which have not been adopted early by the Family:

- IFRS 9, 'Financial Instruments', is effective for accounting periods beginning on or after 1 January 2015.
- IFRS 7 (amendment), 'Financial Instruments: Disclosures'. The amendment addresses the disclosures surrounding the derecognition of financial assets.
- IFRS 7 (amendment), 'Disclosures – Offsetting Financial Assets and Financial Liabilities' and IAS 32 'Offsetting Financial Assets and Financial Liabilities'.
- IFRS 10, 'Consolidated Financial Statements', is effective for accounting periods beginning on or after 1 January 2013.
- IFRS 11, 'Joint Arrangements', is effective for accounting periods beginning on or after 1 January 2013.
- IFRS 12, 'Disclosures of Interests in Other Entities', is effective for accounting periods beginning on or after 1 January 2013.
- IFRS 13, 'Fair Value Measurement', is effective for accounting periods beginning on or after 1 January 2013.
- IAS 1 (amendment), 'Presentation of Items of Other Comprehensive Income', is effective for accounting periods beginning on or after 1 July 2012.
- IAS 16 (amendment), 'Property, Plant and Equipment', is effective for accounting periods beginning on or after 1 January 2013.
- IAS 19 (revised), 'Employee Benefits', is effective for accounting periods beginning on or after 1 January 2013.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 3. GOING CONCERN

The continued operation of the Borealis Family of Companies is dependent on its ability to receive continued financial support from its shareholders and creditors, to obtain sufficient equity financing or generate sufficient profits in the future. The directors are confident that sufficient support will be secured and accordingly the going concern basis of preparation of the financial statements is appropriate. The Company's shareholdings in its subsidiary companies, both direct and indirect, are carried at nominal value, and not at market value. Six of those companies are publicly traded in the United States over-the-counter (OTC) market and quoted on the Pink Sheets at [www.pinksheets.com](http://www.pinksheets.com). However, there can be no assurance that the Company or its Subsidiaries' efforts to generate further financing, profitable operations, asset sales, or product sales will be successful. The financial statements do not contain any adjustments that might be necessary if the Borealis Family of Companies is unable to continue as a going concern.

#### 4. FINANCIAL INSTRUMENTS

Financial instruments, other than derivative financial instruments, are recognised on the Family's statement of financial position when the Family becomes a party to the contractual provisions of the instrument. Financial instruments are initially measured at fair value, which generally equates to acquisition cost, which includes transaction costs for financial instruments not subsequently measured at fair value. Subsequent to initial recognition, they are measured as set out below.

##### ***i) Loans and receivables***

Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables comprise trade and other receivables and are recognised initially at fair value and subsequently at amortised cost. Generally, this results in their recognition at nominal value less any allowance for any doubtful debts.

##### ***ii) Available for sale financial assets***

Family investments in strategic investments in entities not qualifying as subsidiaries, associates or jointly controlled entities are classified as available-for-sale financial assets

##### ***iii) Other financial liabilities***

Other financial liabilities include trade payables, related party loans and other short-term monetary liabilities, which are initially recognised at fair value and the carried at amortised cost.

Subsequent to initial recognition, they are measured at fair value and changes therein, other than impairment losses and foreign exchange gains and losses on available-for-sale monetary items that are recognised in profit or loss, are recognised as part of other comprehensive income. When an investment is derecognised, the cumulative gain or loss previously recognised as other comprehensive income is transferred to profit or loss.

The Company's subsidiaries are listed in note 11 to the consolidated financial statements and are held at cost less provision for any impairment.

##### ***iv) Cash and cash equivalents***

Cash and cash equivalents in the balance sheet comprise cash at banks and in hand with an original maturity of three months or less.

# BOREALIS EXPLORATION LIMITED

## NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

### 4. FINANCIAL INSTRUMENTS (continued)

#### v) *Share capital*

Ordinary shares are classified as equity. Costs directly attributable to the issue of the shares are recognised as a deduction from equity.

### 5. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

In preparing the financial statements, management is required to make estimates and assumptions which affect reported income, expenses, assets, liabilities and disclosure of contingent assets and liabilities. Use of available information and application of judgement are inherent in the formation of estimates, together with past experience and expectations of future events that are believed to be reasonable under the circumstances. Actual results in the future could differ from such estimates.

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed as follows:

#### i) *Taxation*

The Family is subject to income taxes in numerous jurisdictions. Significant judgement is required in determining the worldwide provision for income taxes. There are transactions and calculations for which the ultimate tax determination is uncertain; such determination being made by the relevant taxing authorities. The Family recognises liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be found to be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income tax assets and liabilities in the period in which such determination is made. Where considered necessary estimates are developed by management based on external specialist advice.

There are no other judgemental areas identified by management that could have a material effect on the provisions made at the reporting date.

#### ii) *Fair value of derivatives and other financial instruments*

The fair value of financial instruments that are not traded in an active market (e.g. unquoted debt instrument) is determined by using valuation techniques. Family management uses its judgement to select a variety of methods, and make assumptions that are mainly based on market conditions existing at the end of each reporting period.

### 6. OPERATING LOSS

	31 March 2013	31 March 2012
<i>Operating loss is stated after charging</i>	\$	\$
Depreciation	5,183	5,979
Amortisation	42,094	36,337
Family audit fees	118,310	125,951

## **BOREALIS EXPLORATION LIMITED**

### **NOTES TO THE FINANCIAL STATEMENTS (Continued)**

*Year ended 31 March 2013*

#### **7. DIRECTORS' EMOLUMENTS**

The total amount of emoluments paid to directors during the year was \$1,072,800 (2012 - \$1,119,000).

In addition, rent totalling approximately \$111,151 (2012 - \$100,800) has been charged to the Family of Companies by certain directors, for the provision of office space.

#### **8. EMPLOYEE INFORMATION**

The Company employed a number of clerical staff during the current period. All other services to the Company are provided by way of consultancy agreements.

#### **9. PROFITS OF HOLDING COMPANY**

Included in the profits for the financial year is a loss of \$1,350,384 (2012 - \$3,084) which is dealt with in the financial statements of the parent company. The directors have taken advantage of the exemption available under section 10 of the Gibraltar Companies (Consolidated Accounts) Act 1999 and not presented a profit and loss account for the Company alone.

#### **10. TAXATION**

From January 2011, all Gibraltar companies are subject to the Gibraltar Tax Act which requires companies with businesses managed and controlled in Gibraltar, to pay 10% Gibraltar Corporation Tax on profits provided they are accrued in or derived from Gibraltar. No provision has however been made for this tax, nor for deferred tax, as no taxable revenue was earned by the Family

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 11. INVESTMENTS IN SUBSIDIARY UNDERTAKINGS

The Company has the following principal ownership interests and invested amounts in its subsidiaries, all of which (other than Faraway Holdings (Barbados) Limited and Roche Bay Holdings (Barbados) Limited, which are registered in Barbados, and Borealis Exploration Incorporated, which is registered in Oregon, USA) are registered in Gibraltar:

<i>Directly held by the Company</i>	<i>Ownership Interest</i>		<i>Investments</i>	
	2013	2012	2013	2012
	%	%	\$	\$
Borealis Technical Limited	99%	99%	158	158
Borealis Exploration Inc.	100%	100%	100	100
Credits Holdings Limited	99%	99%	160	160
Faraway Public Limited Company	82%	82%	83,372	83,372
Roche Bay Holdings Limited	99%	99%	160	160
Total investments			<b>83,950</b>	<b>83,950</b>

<i>Indirectly held by the Company</i>	<i>Ownership Interest</i>	
	2013	2012
	%	%
Avto Metals Public Limited Company	96.72%	96.72%
Chorus Motors Public Limited Company	77.95%	77.90%
Cool Chips Public Limited Company	63.04%	63.04%
Faraway Holdings (Barbados) Limited	99.00%	99.00%
Photon Power Public Limited Company	99.59%	99.59%
Power Chips Public Limited Company	64.86%	64.86%
Roche Bay Holdings (Barbados) Limited	99.00%	99.00%
Roche Bay Public Limited Company	71.13%	71.13%
Borealis Roche Bay Limited	99.00%	99.00%
Wheeltug Public Limited Company	65.09%	66.91%
Cool Chips Military Sales Public Limited Company	63.06%	63.04%
Asamera Limited	64.86%	64.86%
Roche Bay East Limited	71.13%	71.13%
Fraser Bay Public Limited Company	71.13%	71.13%

WheelTug plc is 83.90% owned by Chorus Motors plc, which is 77.95% owned by Borealis Exploration Limited. Cool Chips Military Sales plc is owned 100% by Cool Chips plc which is 63.04% owned by Borealis Exploration Limited. Roche Bay East Ltd and Fraser Bay plc are both 100% owned by Roche Bay plc, which is 71.13% owned by Borealis Exploration Limited. Asamera Ltd is 100% owned by Power Chips plc which is 64.86% owned by Borealis Exploration Limited.

Of the above companies, shares of Avto Metals plc, Cool Chips plc, Chorus Motors plc, Faraway plc, Power Chips plc and Roche Bay plc are publicly traded in the United States over-the-counter (OTC) market and quoted on the Pink Sheets at [www.pinksheets.com](http://www.pinksheets.com).

The investment in quoted subsidiary undertakings has been valued at historical cost taking no account of unrealised gains based on market value.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 11. INVESTMENTS IN SUBSIDIARY UNDERTAKINGS (Continued)

The Family of Companies has in the past 9 years principally funded itself with the proceeds of the issue of shares in its subsidiaries, which has resulted in the dilution of the Company's holdings in these subsidiaries though the transactions were anti-dilutive in absolute terms. The issue of these shares is either for a cash consideration or payment for goods and services received by agreement with the creditor.

A minority interest of \$9,157,010 (2012 - \$8,557,804) in the subsidiaries is presented on the balance sheet effective 31 March 2013. The increase of \$599,206 is due to a higher percentage of the net assets of the subsidiaries being attributable to outside shareholders as a result of the dilution. The minority interest. The equity of the Borealis Family of Companies in the share premiums paid by third parties during the year of \$28,974 (2012 - \$213,430) is shown as a gain in the statement of comprehensive income.

#### 12. EARNINGS PER SHARE

Losses per share is calculated by dividing the losses attributable to ordinary shareholders by the weighted average number of ordinary shares in issue during the year.

<i>Basic EPS</i>	Earnings / (loss) \$	Weighted average number of shares	Per share amount \$
Profit attributable to ordinary shareholders	2,095,866	5,000,000	0.42
Profit attributable to ordinary shareholders	1,776,331	5,000,000	0.36

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 13. INTANGIBLE ASSETS

##### *Family & Company*

	Patent filing fee \$	Development costs \$	Total \$
<b>Cost</b>			
At 1 April 2012	908,434	2,565,164	3,473,598
Additions	143,941	6,085,226	6,229,167
At 31 March 2013	<u>1,052,375</u>	<u>8,650,390</u>	<u>9,702,765</u>
<b>Depreciation</b>			
At 1 April 2012	304,506	-	304,506
Charge for the year	42,094		42,094
At 31 March 2013	<u>346,600</u>	<u>-</u>	<u>346,600</u>
<b>Net book value</b>			
<b>31 March 2013</b>	<u>705,775</u>	<u>8,650,390</u>	<u>9,356,165</u>
<b>31 March 2012</b>	<u>603,928</u>	<u>2,565,164</u>	<u>3,169,092</u>

##### *Family & Company*

	Patent filing fee \$	Development costs \$	Total \$
<b>Cost</b>			
At 1 April 2011	814,014	-	814,014
Additions	94,420	2,565,164	2,659,584
At 31 March 2012	<u>908,434</u>	<u>2,565,164</u>	<u>3,473,598</u>
<b>Depreciation</b>			
At 1 April 2011	268,169	-	268,169
Charge for the year	36,337		36,337
At 31 March 2012	<u>304,506</u>	<u>-</u>	<u>304,506</u>
<b>Net book value</b>			
<b>31 March 2012</b>	<u>603,928</u>	<u>2,565,164</u>	<u>3,169,092</u>
<b>31 March 2011</b>	<u>545,845</u>	<u>-</u>	<u>545,845</u>



## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued) Year ended 31 March 2013

#### 14. PROPERTY, PLANT AND EQUIPMENT

<i>Family &amp; Company</i>	Mining, drilling and camp \$	Moveable non-current assets \$	Total \$
<b>Cost</b>			
At 1 April 2012	655,808	143,042	798,850
Additions	-	-	-
At 31 March 2013	655,808	143,042	798,850
<b>Depreciation</b>			
At 1 April 2012	655,808	117,129	772,937
Charge for the year	-	5,183	5,183
At 31 March 2013	655,808	122,312	778,120
<b>Net book value</b>			
<b>31 March 2013</b>	-	20,730	20,730
<b>31 March 2012</b>	-	25,913	25,913
<i>Family &amp; Company</i>	Mining, drilling and camp \$	Moveable non-current assets \$	Total \$
<b>Cost</b>			
At 1 April 2011	655,808	131,042	786,850
Additions	-	12,000	12,000
At 31 March 2012	655,808	143,042	798,850
<b>Depreciation</b>			
At 1 April 2011	655,808	111,150	766,958
Charge for the year	-	5,979	5,979
At 31 March 2012	655,808	117,129	772,937
<b>Net book value</b>			
<b>31 March 2012</b>	-	25,913	25,913
<b>31 March 2011</b>	-	19,892	19,892

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

15. FAMILY INVESTMENT - MINING PROPERTIES	31 March 2013	31 March 2012
	\$	\$
<b><i>Roche Bay plc Government of Canada</i></b>		
<i>21 Year renewal mining leases</i>		
Acquisition costs	2,375,434	2,375,434
Development costs	89,891	69,355
Lease payments	79,432	68,596
Recovery	(762,885)	-
	<b>1,781,872</b>	<b>2,513,095</b>
Increase in carrying value	-	-
Disposal at cost	-	-
	<b>1,781,872</b>	<b>2,513,095</b>
<b><i>Faraway plc Government of Canada</i></b>		
<i>21 Year renewal mining leases</i>		
Lease payments	193,488	183,137
	10,369	10,351
	<b>203,857</b>	<b>193,488</b>
<b><i>Total Government of Canada</i></b>		
<i>21 Year renewal mining leases</i>	<b>\$ 1,985,729</b>	<b>\$ 2,706,583</b>

Mining resources consist of Roche Bay's ownership of Fraser Bay 1-5. The Roche Bay Magnetite Project is no longer being held on our books as mining resources. The valuation of \$1,781,872 is based on historical value at the transfer from Borealis to Roche Bay plc. This value is annually adjusted by development costs and lease payments.

#### ***Eastern project***

During fiscal 2007, pursuant to the terms Option and Farm-Out Agreement (the "Option Agreement"), the Company sold the right to acquire a 50.1% interest in the Company's Roche Bay Magnetite Project on the Eastern Melville Peninsula, Nunavut Territory (the "Eastern Project"), to Advanced Explorations Inc. ("AXI"). Under the Buy-Out Option, AXI paid Roche Bay \$250,000 and issued the 8,000,000 Rights which expired in 2011.

During 2008, the original Buy-Out Option was amended and then replaced by a signed Memorandum of Understanding ("MOU"). During 2009 the MOU was then memorialized in a Definitive Royalty Agreement (the "Definitive Agreement") that entitled AXI to purchase up to 85% of the Eastern Project in exchange for the payment of \$275,000 on December 15 of 2010, 2011 and 2012, and the issuance of either 4,000,000 common shares or 6,000,000 rights at \$0.20, along with scheduled annual payments. Upon the approval of the Definitive Agreement by the TSX Venture Exchange, AXI issued the Company 4,000,000 common shares.

These rights were initially valued at \$7,954,493, using a Black-Scholes valuation model, with the following inputs: expected life - 3 years; expected volatility - 75%; and risk-free interest rate - 4.63%.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 15. FAMILY INVESTMENT - MINING PROPERTIES (Continued)

##### *Eastern project (continued)*

As a result of the valuation assigned to the Rights, the Company recorded a recovery of the full carrying value of the Eastern Project and a gain equal to the excess of the value of the consideration received over the carrying value of the asset. As a result, although the Company still maintains a direct interest in the Eastern Project, due to the previously recorded recovery the carrying value is \$Nil for all periods presented. The payments received under the Definitive Agreement have been recorded as other income for the years ended March, 31, 2013 and 2012, and as of March 31, 2013, the Company has received all scheduled payments.

As noted above, through the amendments to the original Buy-Out Option and Definitive Agreement the Company has granted AXI two specific options to increase its equity interest in the Eastern Project up to 100%, namely the Earn-In Option and the Buy-Out Option. The Earn-In Option provided for milestones by which AXI could increase its ownership interest, up to 100%, upon a public announcement of a decision to place the Eastern Project into production. The Buy-Out Option enabled AXI to acquire 100% of Roche Bay's royalty interest in the Eastern Project, subject to a perpetual iron-ore and precious metals royalty, for certain interim payments and a final payment of \$30,000,000 CDN before March 15, 2011.

The Buy-Out Option was not exercised by AXI, and on April 1, 2011, a New Buy-Out Option was agreed upon, in terms of which a one-time payment by AXI of \$22,500,000 CDN on or before August 5, 2011, would give AXI 100% title to the Project subject to a reduced perpetual royalty of 3.9% for precious metals and 1.875% for all other mineral products. As the New Buy-Out Option was also not exercised by AXI, the Buy-Out option as amended on March 23, 2009 (the "Half Buy-Out Option") will remain in effect.

The Half Buy-Out Option permits AXI to purchase 50% of Roche Bay's royalty interest in the Project for \$35,000,000 CDN any time prior to March 31, 2020, subject to Roche Bay retaining one half the iron-products royalty and the entire precious metals royalty, and certain other conditions. Should AXI not take up any buy-out option, Roche Bay will have the right to receive in perpetuity, royalties on gross proceeds of mineral products, at the rate of 6% for product <90% iron weight, and 4% for product >90% iron weight, plus the full precious metals royalty of 10%.

In September 2012, AXI earned an additional 25.1% interest in the Mining Property by the filing on SEDAR of a NI 43-101 Feasibility Study, bringing AXI's current ownership in the Mining Property to 75%. The Company retains a 25% ownership in the Mining Property.

The remaining 25% interest in the Mining Property may be earned by AXI upon AXI's publicly announcing its decision to put the Mining Property into production, in accordance with the terms of the Definitive Agreement.

In accordance with provisions in the Definitive Agreement regarding an "Area of Mutual Interest", AXI recorded the Company's 25% interest in 81 new claims in early 2013, including all of the Tuktu claims, which include an inferred resource of 465 million tonnes.

# BOREALIS EXPLORATION LIMITED

## NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

### 15. FAMILY INVESTMENT - MINING PROPERTIES (Continued)

#### *Western project*

During 2010, the Company did some investigative work on the Western Project which yielded encouraging results. On May 4, 2011, the Company entered into an Option Agreement with principals of the Discovery Group, a Canadian mining development group, through West Melville Mining Company Ltd ("WMM"), for the development of lease number 2826 (the "WMM Option Agreement"). According to the terms of the WMM Option Agreement, WMM can earn up to a 70% interest in the lease through the exercise of successive options subject to fulfilling certain drilling and development milestones.

The requirements to render the first option exercisable were not achieved by WMM within the contracted deadline of 10 months from the date of the agreement, or approximately March 4, 2012, and consequently the Company entered into an amendment dated December 29, 2011 that extended this deadline to 13 months, or approximately June 4, 2012.

On May 31, 2012 the Company agreed to another amendment extending the deadline of the first option to September 30, 2012 and the second option to December 31, 2015. As well, the amendment modified the terms of the consideration to be received. On October 3, 2012 the Company agreed to extend the amendment to October 31, 2012 in exchange for \$75,000 CDN in cash and the share payment due on the first option was reduced by 150,000 common shares.

On October 31, 2012 WMM issued to the Company 1,563,374 common shares as part of the first option, which was 5% of WMM's issued and outstanding common shares less 150,000 common shares. To complete the first option and acquire a 30% interest in the lease, as of March 31, 2013, WMM was required to issue another 5% of their issued and outstanding common shares to the Company and incur an aggregate of \$2,500,000 in exploration expenditures on or before September 30, 2013. Subsequent to March 31, 2013, the Company and WMM have agreed to another amendment to the WMM Option Agreement (note 14). As of December 31, 2012, WMM had incurred \$2,148,000 in exploration expenditures. The fair value of the WMM shares received has been included as a recovery in the mineral property.

### 16. MARKETABLE SECURITIES

	31 March 2013	31 March 2012
<i>Family</i>	\$	\$

*Shares and warrants in Advanced Explorations Inc.*

Common shares	396,577	801,009
Series A 1 warrants	-	-
	<u>\$ 396,577</u>	<u>\$ 801,009</u>

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued) Year ended 31 March 2013

#### 17. TRADE AND OTHER RECEIVABLES

	31 March 2013	31 March 2012
<i>Family</i>	\$	\$
Advances to suppliers and consultants	-	342,523
	<u>\$ -</u>	<u>\$ 342,523</u>

Amounts due to Family undertakings are unsecured, interest free and repayable on demand.

	31 March 2013	31 March 2012
<i>Company</i>	\$	\$
Advances to suppliers and consultants	-	77,045
Current portion of deferred compensation receivable	-	-
Amounts due from family undertakings	1,527,796	1,282,878
	<u>\$ 1,527,796</u>	<u>\$ 1,359,923</u>

#### 18. TRADE AND OTHER PAYABLES

	31 March 2013	31 March 2012
<i>Family</i>	\$	\$
Trade creditors	5,916,262	4,651,321
Amounts due to Family undertakings	-	-
	<u>\$ 5,916,262</u>	<u>\$ 4,651,321</u>

Amounts due to Family undertakings are unsecured, interest free and repayable on demand. Of the amount included under trade creditors, there are outstanding trade balances with directors and related parties of \$1,630,093 (2012 - \$1,713,661)

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 18. TRADE AND OTHER PAYABLES (Continued)

<i>Company</i>	31 March 2013 \$	31 March 2012 \$
Trade creditors	5,025,043	5,155,258
Amounts due to Family undertakings	27,803,203	26,752,721
	<b>\$ 32,828,246</b>	<b>\$ 31,907,979</b>

#### 19. NON CURRENT LIABILITIES

<i>Family</i>	31 March 2012 \$	31 March 2010 \$
Other payables	1,784,948	1,216,851
	<b>\$ 1,784,948</b>	<b>\$ 1,216,851</b>

<i>Company</i>	31 March 2012 \$	31 March 2010 \$
Other payables	1,784,948	1,216,851
	<b>\$ 1,784,948</b>	<b>\$ 1,216,851</b>

Other Creditors represent loans made to the Company by certain directors with regards to helping to finance the operations of the Company in previous years. In order to be in a position to make these loans the directors sold on the market (net of returns to date) 120,290 shares (2012 - 120,290) of Borealis Exploration Limited. The Family is obliged to return the loan once it is in a position to do so, by repaying to the directors sufficient funds to allow the directors to re-purchase 120,290 shares on the open market. The amount due to directors is determined at each year-end. In 2013 there were 116,230 shares repurchased but not yet transferred to them. In addition, 225,874 options were exercised in previous years and the shares had not yet been delivered to the purchasers as the exercise exceeded the number of shares that the Company is authorized to issue. The total amount is considered due to other creditors and carried at a value that approximates to the market value of the shares and options.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 20. CALLED UP SHARE CAPITAL

	31 March 2013 \$	31 March 2012 \$
<i>Authorised share capital</i>		
5,000,000 ordinary shares @ \$0.01 each	\$ 50,000	\$ 50,000
<i>Called up share capital</i>		
5,000,000 ordinary shares @ \$0.01 each	\$ 50,000	\$ 50,000

#### 21. SHARE OPTIONS

During the year ended 31 March 2011, certain Family companies issued a total of 22,000 share options. Conversion prices of these options are \$5 for 11,000 and \$10 for the remaining 11,000. These options expire on 1 June 2013. It is most unlikely that these options will be exercised prior to their expiry as their fair value is negligible. As such, no adjustment has been made in the Financial Statements.

#### 22. SHARE BASED PAYMENTS

The Company issued shares in consideration for services received in the period. The fair value of shares issued in such circumstances is determined by reference to the market value of the relevant services provided.

	31 March 2013 \$	31 March 2012 \$
Value of consideration	\$ 4,064,770	\$ 740,414

#### 23. FINANCIAL RISK ANALYSIS

The Family has exposure to the following risks from its use of financial instruments:

- Liquidity risk
- Foreign currency risk
- Credit risk
- Market risk

This note presents information about the Family's exposure to each of the above risks, the Family's objectives, policies and processes for measuring and managing risk, and the Family's management of capital. Further quantitative disclosures are included throughout these consolidated financial statements.

## **BOREALIS EXPLORATION LIMITED**

### **NOTES TO THE FINANCIAL STATEMENTS (Continued)**

*Year ended 31 March 2013*

#### **23. FINANCIAL RISK ANALYSIS (continued)**

The Family's risk management policies are established to identify and analyse the risks faced by the Family to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market condition and the Family's activities. The Family through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

##### ***a) Liquidity risk***

Liquidity risk is the risk that the Family will not be able to meet its financial obligations as they fall due. The Family's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions.

The Family manages liquidity risk by monitoring forecast cash flows and ensuring that adequate unutilised borrowing facilities are maintained.

The Family has not made any significant guarantees of third party or related party actual or potential obligations.

##### ***b) Foreign currency risk***

The Family does not have any material loans designated in foreign currencies that are covered under forward exchange contracts.

The Family's policy is to cover forward all trade commitments. Each subsidiary manages its own trade exposure by reference to its functional currency.

The Family's financial risk arising from exchange rate fluctuations is mainly attributed to the fact that some receipts are received in other currencies such as Euro (EUR) and Canadian Dollar (USD) and Sterling (GBP).

The Family continually monitors the foreign currency risk and takes steps, where practical, to ensure that the net exposure is kept to an acceptable level.



## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 23. FINANCIAL RISK ANALYSIS (continued)

The Family's significant exposures to foreign currency risk at the reporting date stated at currency amounts were as follows:

	31 March 2013	31 March 2012
	\$	\$
<i>Cash and cash receivables</i>		
Euro (EUR)	1,696	484
Canadian Dollar (CAD)	1,154	142,102
Sterling (GBP)	438	10,077
	<b>\$ 3,288</b>	<b>\$ 152,663</b>

##### ***c) Credit risk***

Credit risk is the risk of financial loss to the Family if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Family's receivables from clients.

##### ***i) Trade and other receivables***

The Family's exposure to credit risk is influenced mainly by the individual characteristics of each client. The demographics of the Family's client base, including the default risk of the country in which the clients operate, has less of an influence on credit risk. There is no one client to which a significant percentage of the Family's revenue can be attributed.

Potential material areas of credit risk consist of trade accounts receivable. Trade accounts receivable consist mainly of a widespread customer base.

The Family has no significant concentration of credit risk, with exposure spread over a large number of counterparties and customers. It is Family policy to deposit short term cash investments with major institutions.

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 23. FINANCIAL RISK ANALYSIS (continued)

The carrying amount of financial instruments represents the maximum credit exposure. The Family's maximum exposure to credit risk at the reporting date was:

	31 March 2013 \$	31 March 2012 \$
Trade and other receivables	-	342,523
Cash and cash equivalents	287,740	473,711
	<b>\$ 287,740</b>	<b>\$ 816,234</b>

#### *d) Market risk*

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Family's income or the value of its holdings of financial instruments. The object of market risk management is to manage and control market risk expenses within acceptable parameters, while optimising the return.

The Family is exposed to equity securities price risk in respect of investments held by the family. The potential impact is not material to the affairs of the Family.

#### *e) Capital management*

The Board's policy is to maintain a strong capital base, which is defined as share capital and retained earnings, so as to maintain investor, creditor and market confidence and to sustain future development of the business.

The principal financial instruments used by the Family, from which financial instrument risk arises, are as follows:

- Trade receivables
- Cash and cash equivalents
- Trade and other payables

## BOREALIS EXPLORATION LIMITED

### NOTES TO THE FINANCIAL STATEMENTS (Continued)

Year ended 31 March 2013

#### 23. FINANCIAL RISK ANALYSIS (continued)

A summary of the financial instruments held by category is provided below:

##### *Financial assets*

	31 March 2013 \$	31 March 2012 \$
Trade and other receivables	-	342,523
Cash and cash equivalents	287,740	473,711
	<u>\$ 287,740</u>	<u>\$ 816,234</u>

##### *Financial liabilities*

	31 March 2013 \$	31 March 2012 \$
Trade creditors	5,916,262	4,651,321
Other payables	1,784,948	1,216,851
	<u>\$ 7,701,210</u>	<u>\$ 5,868,172</u>

#### 24. RELATED PARTY TRANSACTIONS

The Parmenides Group received fees of \$432,000 for management services in 2012, including compensation to key members of the executive team, as well as general office services.

The Parmenides Group is owned by Shiloh Limited International, Inc., ('Shiloh'), of which three of its Directors, Rodney T. Cox, Isaiah W. Cox and Wayne S. Marshall, are also directors of the Company. Shiloh is owned by The Jeremiah Toyam Cox Foundation Limited, ('Foundation'), whose Council Members include Rodney T. Cox, Isaiah W. Cox and Nechama J. Cox, who are also directors of the Company. The Council Members have no direct or indirect beneficial interest in the Foundation.

#### 25. ULTIMATE CONTROLLING PARTY

The Board of Directors, as per the Director's Report, are the ultimate controlling party.