

# ***BOREALIS***

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## Borealis Exploration Limited

### 2005 Annual Report

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## About Borealis

Borealis Exploration Limited is a technology development company. Borealis imagines, invents, develops, and licenses new industrial technologies. These 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. These technologies will fundamentally change basic industries and introduce the Borealis Industrial Revolution. We anticipate that some of these technologies will enable entirely new industries and open new fields for scientific exploration and commercial development for many decades to come.

In addition, Borealis controls the Roche Bay Magnetite Project, believed to be the world's largest undeveloped resource of magnetite iron ore located on a natural harbor, and the Freuchen Bay Polymetallic Project, which sits astride an incratronic rift. Both properties are in Nunavut, Canada.

## Contents

Chairman's Letter to Members	2
The Borealis Industrial Revolution	4
Research and Development Strategy	6
Review of Technologies and Progress	7
Patents and Intellectual Property	11
Properties and Operations	12
Organizational Structure	13
Management's Discussion and Analysis	15
Directors' Report	18
Auditors' Report	20
Financial Statements and Notes	21
Officers and Directors	34
Corporate Information	35

# Chairman's Letter to Members

6 June 2005

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

We are into our 40<sup>th</sup> year of operations, our 36<sup>th</sup> year as a public company and our 27<sup>th</sup> year of operations under current management.

We continue to drive for sales and profits with our wide-ranging research and resource ventures. After 40 years in business we are showing product revenue figures along with our profit and loss figures and we will be doing so in the future. We have not given product revenue figures or other revenue figures in the past and it has been very difficult for outsiders to understand how we have financed for many years what is probably the largest exclusively privately-funded research and development house in the world.

The net result of your management's activities in the past 27 years has seen the effective number of Borealis shares reduced to 5 million from 7 million, with very large sums invested in the business. Today each share of Borealis indirectly represents over a share in each of the subsidiary companies. Borealis today trades at a discount to quoted market prices of its negotiable securities of well over 50%.

Borealis had a market value in 1978 of approximately \$100,000 when new management took over and the Borealis Family of Companies today has a market value of around \$200 million. From what your management knows, and we are all congenial optimists, 2006 could actually be a year of serious pay-offs for all our long term supporters. In a world of fast-changing allegiances and rapid-fire share trading, with long-term investing being measured in days, we have basically the same shareholders we had 25 years ago. Sure, there are changes in our shareholder lists, but those changes show less than a 5% annual turnover.

We hope we have provided our shareholders in all our companies with a long term, stable corporate home to underpin family fortunes while at the same time providing enough liquidity in the markets in our shares to allow for the inevitable share trading as times and conditions continue to change. Our current portfolio of shares and private investments, by our advisors' estimates, runs into the hundreds of millions of dollars. We have spent decades positioning your company and its operating and investment activities to make serious long-term money out of serious long-term projects and investments. We are very pleased with our current portfolio and very pleased looking at the future as we work to drive our worldwide interests forward for the benefit of our shareholders and our many worldwide stakeholders.

It must be noted that to arrive to where we are today, we have had many projects that just did not work. We have survived our many failures and have continued to move forward.

We have been ridiculed for years over holding what are probably the largest magnetite deposits in the world on tidewater. Everybody used to know that there was a permanent worldwide oversupply of iron ore. With the fundamental change in the demand for raw materials, Fe<sub>3</sub>O<sub>4</sub> is suddenly looking very interesting and Roche Bay plc ([www.rochebay.gi](http://www.rochebay.gi)) just may realize the hopes that we have had for this project through the years. 2006 sure looks like a year where we have a reasonable chance of getting long term Letters of Intent from major steel companies for the purchase of our Fe units and for getting an operating partner to help us unlock the serious value this project represents. The Roche Bay Magnetite Project has been a 40-year investment with no return. Clearly in the next 5 years we have very high hopes that we will all look prescient and brilliant holding this property for so many years.

In the same vein, Faraway plc owns 100% of the Freuchen Bay Project ([www.faraway.gi](http://www.faraway.gi)), which hosts a very large intracratonic rift, and has the potential to be a very serious polymetallic resource. There are 9 such structures that our advisors know of worldwide and 8 of them are currently in production or have been in large-scale production for many years. Again, the apparent fundamental shifts in the metal markets make this property, which we have held for decades, possibly very appealing. If the zinc, nickel and copper markets remain strong in 2006 we should see some really serious long-term value created here. Long-term value increases with low holding costs is just a great combination.

Chorus Motors plc ([www.chorusmotors.gi](http://www.chorusmotors.gi)) has been with us for well over a decade with no sign from the market that we could make any sales of product. The Chorus® WheelTug™ technology is simply, in our opinion, going to sweep the aviation market and fundamentally change the operation of airlines and airports: making them cleaner, quieter, cheaper and faster. Who would have possibly thought that our first commercial sales might well be generated by Chorus Motors plc being an aerospace integrator through its subsidiary WheelTug plc. We are amused and delighted. We expect to be selling 25% of this subsidiary in fiscal 2006 and we have received firm expressions of interest.

Cool Chips plc ([www.coolchips.gi](http://www.coolchips.gi)) and Power Chips plc ([www.powerchips.gi](http://www.powerchips.gi)) are simply wonderful business ventures. We should, as we have promised for several years, in 2006 get serious product out the door, with very respectable margins. Again, these ventures continue to humble us as we have unsuccessfully driven for production. We have now formally separated our research, development and production arms of the business. We have the best research teams in the world and they will remain research teams. Our development and production teams are being assembled and with advance orders that we seem reasonably likely to get in fiscal 2006, this should finally put us over the top in providing initial low-volume, high-value sales through Cool Chips Military Sales plc. We are also attempting to sell 25% of Cool Chips Military Sales plc, but this is dependent upon the advance orders.

Avto Metals plc ([www.avtometals.gi](http://www.avtometals.gi)) apparently will provide the needed new technology to make both Cool Chips™ and Power Chips™ an economic reality. The Avto Effect™ is simply stunning science as the ability to custom-design electron volt work functions has been a holy grail for science for a century. The science behind Avto Metals plc turns out to have wide applicability. Our interest in electron behaviour has generated much amusement through the years. We seem to have a real handle on this science. The paper describing the discovery underlying Avto Metals™ that we will present at a scientific conference in Oxford next month should have serious long-term strategic implications for the future of many of our business ventures.

Overall we are long-term players with great patience, and with the ongoing Family support and funding we expect to see our multitude of ventures to successful conclusions.

Our shareholders are the best in the world. No other company that we know of would have had shareholders allowing the company to hold a property for 40 years with no revenues and the professional investment world knowing there was no hope. Our natural resource investments sure have been a delight to hold and watch grow in value in these times. We have made investments in basic research that governments would never fund as the risk of failure was just too high. A few of these research investments should provide very attractive returns in 2006 and for many years to come. Your company has a huge pipeline of future projects that meet our goals of long-term value creation.

Our shareholders must remember that we are not looking for 10-to-one returns or even for 100-to-one returns. We are looking for 1000-to-one payoffs. These are the kind of payoffs that create real value and real wealth long term for our Family. The future sure looks exciting and all our skills and talents will be taxed to the foremost in 2006 and in future decades to come.

With warmest personal regards,

Borealis Exploration Limited  
and the Borealis Family of Companies

Rodney T. Cox

A handwritten signature in black ink, appearing to read 'Rodney T. Cox', with a stylized flourish above the name.

Chairman and Chief Executive Officer

# *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 some of the core technologies of basic industries, all of which have worldwide sales of hundreds of billions of dollars annually, and has 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 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.

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 use waste heat from the radiator and exhaust and greatly increasing the efficiency of the internal combustion engine. Eventually, electrically-driven vehicles 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 while providing a very competitive source of potable water from condensation.. 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 many decades and will, we believe, become the Borealis Industrial Revolution.

## Research and Development Strategy

Our objective is to earn exceptional profits from the fruits of our scientific research. Our method is to undertake high-risk scientific research and technology development projects in a risk-averse and frugal way. Often, these involve fundamental scientific research efforts whose apparent risk is so great that no one else—not even governments—will dare to undertake them. But by using a well-known but little-used analytical methodology for evaluating projects perceived to be risky, we concluded that our projects promised future returns vastly greater than their risks.

Borealis management constantly evaluates proposed research projects and possible new technologies, products, and science for their economic worth. We compare these proposals on the basis of their present discounted expected value—that is, the total of their potential expected returns over many years, discounted back to give us the project's present value. We seek to invest our time, scientific efforts, and our financial resources only in those projects that are most likely to produce the highest present discounted expected values. The FAQ page on our Website has an explanation of how this analysis works.

Much of the scientific research being conducted today, in all fields, is government-funded or government-sponsored, and if it can be patented the Government has a free use clause for all its high value uses. We have received no corporate or government funding for our research; all Borealis research is privately funded by our shareholders and conducted by our own scientists in our own facilities. Our projects are selected and funded not on the basis of what any government thinks has value to the government, but on the basis of what the research is worth today, in terms of its present discounted expected value, to Borealis. The consequence is that Borealis' shareholders own the resulting technologies.

Most research and development efforts conducted in companies today are applied R&D, using known science and technology to develop new products or improve existing products. Incremental improvements produce incremental returns. By contrast, Borealis has been seeking an entirely new understanding of basic sciences such as electric motors, quantum electron thermotunneling, and the behavior of elementary atomic particles. Working from the underlying (and well-established) physics and engineering, our researchers have managed to take an entirely new look at old, presumably well-understood processes. Armed with this new perspective, we seek to develop new technologies and products based on our discoveries and inventions.

Because these technologies and products are based on our own scientific discoveries and are all protected by broad patents, as well as by extensive proprietary know-how, they create opportunities to earn extraordinary returns—while also providing great benefits to the world.

For example, for nearly a century it has been universally believed among motor scientists that motors using more than three electrical phases have no real value, and for decades this belief had not been seriously challenged. But in seeking to invent a better motor, we revisited the basic physics of electric motors. We discovered that, by correctly designing a motor that uses more than three phases, we can harness the otherwise-damaging electromagnetic harmonics that degrade the performance of conventional motors. By co-opting the harmonic waves into a harmonic “chorus” that increases, rather than counteracts, the fundamental torque of the motor, we have been able to design a more powerful, more effective motor. The AC induction Chorus Motor with Meshcon produces more than a 500% improvement in startup torque, greater torque throughout the speed curve, and increased efficiency. The Chorus Meshcon motor will allow for proprietary profits. Our Chorus Motors website, [www.chorustomotors.gi](http://www.chorustomotors.gi), has a great deal of additional information.

Similarly, we were attracted to the idea of an ideal thermal-electrical converter, which could be used to generate power from waste heat, or to cool efficiently. Since 1883, when the thermoelectric effect was first noticed by Edison, scientists have been trying to make it work efficiently. Research efforts since 1956 have focused on a search for the perfect thermoelectric material – something that moves heat only in one direction. Apparently billions have been spent in research efforts trying to discover this perfect material. But our researchers did not spend years in the thermoelectric field, so they did not know that the hunt starts and ends with materials. Instead, our researchers started with the opposite notion – that the perfect material is in fact no material at all; that a vacuum would allow electricity to flow, but would block heat from flowing in the wrong direction. By restating the problem as one of physics and not materials science, our researchers were able to find a solution that is elegant, simple, and potentially inexpensive enough to dominate such mass markets as refrigeration and air conditioning.

This progression from basic scientific inquiry to a finished product is lengthy and often frustrating. We have been at this for over a decade. To go from a basic scientific theory or discovery, to imagining, building, and then marketing products, has been a long and difficult path, and we have discarded a sizable number of technologies that did not measure up. With Chorus Motors, Cool Chips, and Power Chips, we now have a good grasp of the science underlying each technology, we are working on building production prototype products, carefully protected by both issued and pending patents, and we hope soon to be earning substantial profits, initially in direct manufacturing and sales.

Our strategy is to manufacture and market products enabled by these technologies ourselves—by starting with the very high-value military and aerospace markets. It is obvious that the applications and markets are so diverse that no single company could hope to understand or address all the potential markets, which is why we are concentrating on the high value military and aerospace markets. We have tried to license each technology exclusively to existing manufacturers in each field and to end-users in defined markets. These negotiations have gone nowhere to date as everybody is used to high-end technology being free, provided by the government. We still seek to license our technologies exclusively to leading manufacturers in various markets. However, we expect our basic model for at least the next few years will be to make direct sales to customers in a few high-value, low-volume markets where it is both more practical and more profitable for our subsidiaries to be both manufacturer and vendor. This ability to invent, patent, design, build and sell is of huge value to our Family of Companies. From where we sit our first few transactions will firmly establish ourselves as just not a research house but a really first class build house.

## **Review of Technologies and Progress**

### **Chorus Motors**

This has been a year of major progress for Chorus Motors, our subsidiary that is re-inventing the electric motor. While last year we worked pulling the various components together for our motor/drive system, this year saw a marked move towards developing a complete motor and drive system that can be sold in the marketplace. We have bridged the gap between having a laboratory model and something ready to install in the real world. We have met several engineering challenges.

### **Chorus WheelTug**

By far the most exciting new project of the year is Chorus WheelTug, being developed under the direction of Dr. Robert L. Carman Jr. as Program Manager. Today, every commercial airplane requires the use of its main engines to taxi forward, and ground tugs to tow it in reverse, such as when backing away from a gate. The current system is inefficient both in terms of fuel consumption and in time; fuel consumed in taxiing and time consumed by towing are significant expenses for airlines.

Chorus WheelTug is set to change that. Because of its high torque capabilities, a Chorus Meshcon motor/drive system is able to produce the extremely high torque required to drive an aircraft on the ground. It will be able to drive an aircraft, without using the airplane's jet engines, backward from the gate and taxi forward to the end of the runway. The WheelTug system will enable airlines to reduce flight turnaround times and fuel consumption, reduce jet engine operating times and thus engine maintenance expenses, and increase aircraft utilization rates. All these savings will drop to airlines' bottom lines and improve airlines' profitability. The WheelTug system is a major advance in aviation technology.

This project has helped to advance Chorus Meshcon as a whole. In the course of this work, the Chorus team has written software to better control the motor and allow for more autonomous running. This has been a very large task, and it is a major part of our drive to move from a laboratory setting into the real world.

WheelTug is still a demonstration product, and is not yet "ready to fly". We expect that after successful demonstration for Boeing and its customers, we will need further design and engineering work to deliver an optimized WheelTug solution that meets all the requirements for an in-flight system. Chorus is confident that we have, by far, the best technical solution for this challenging product, as well as the best program management to make Chorus WheelTug a success. We see WheelTug as a very exciting and profitable product for Chorus Motors for many years to come. We expect to have development of systems for the first aircraft models, and certification approval by the Federal Aviation Administration, completed in time for initial installations by early 2008.

## **Chorus Star and Meshcon Motors**

We have also continued development work in fiscal 2005 on Chorus motors for other industrial applications. We have added more personnel, and the Chorus team has grown and improved. The FPGA work was extended, and we moved to a different processor board. Our software team is working well together in designing the software to mate the motor with the drive and have it work to meet our needs. This team has been in place for close to two years now, and as we work together for longer, the work is getting ever smoother. We intend to add additional software capability such as vector field control in the coming months.

With the motor manufacturing outsourced, the inverters being designed and built by Semikron, and the software produced by Chorus in hand, a major focus in this past year has been on computer modeling. With the number of different requirements that need to be factored in when specifying a system, and the number of quotation requests we respond to each year, it is clear why Chorus needed to use computer modeling in order to provide detailed estimates. But with the novel work that we are doing, we found that we were not able to take a motor modeling program off the shelf. While there are several programs available, few are able to handle such complex motors, especially with the number of phases in a Chorus motor. Much of this year was spent trying different programs, fine-tuning them, and attending courses on how to best use the programs for our needs. And, of course, part of this effort involved testing of the Chorus Meshcon motor in our facility in order to see how the computer simulation compared to our empirical data. This has been a very complex and lengthy task. Our simulation capabilities are now meeting our needs, but we expect to continue to fine-tune them for some time to come. In the future we should be able to specify the motor to meet a customer's exact requirements, the first time out, no matter how demanding the application. We have come a long way, but we are not quite there yet.

This is a very important part of Chorus Motors' drive to be able to supply a motor to customers. We are being asked for motor quotes from potential customers, and each quote is for a motor with different requirements. We are asked for different torque capabilities, for motors that work in different environments, as well as motors with restricted sizes and weights. All of these are opportunities to show the unique advantages of the Chorus Motor system, but for each set of different requirements the motors have to be modeled in order to see which configuration would best meet the needs of the customer. This design and model work has been taking a lot of our time and manpower, and this is expected to continue in the coming year. As information about Chorus becomes more generally available, we are getting ever more requests for motors to meet difficult requirements. We are pleased that we are able to meet these requests, and look forward to supplying these motors in the coming years.

We are now comfortable quoting on tight delivery schedules for these specifically designed Chorus systems. We are now offering different Chorus Motors systems, depending on the application. Along with the Chorus Meshcon system, the high-phase-order motor/drive system which offers five times the startup or acceleration torque of a conventional motor and drive of the same rated horsepower and base speed, we are also offering the Chorus Star Motor, which can achieve much higher torque densities than a traditional 3-phase motor, but with no cost penalty. Both Chorus systems use high-phase-order, concentrated windings that allow the beneficial use of harmonics (temporal, spatial, and overload) to enhance the main drive waveform.

Both Chorus Meshcon and Chorus Star are motor/drive combinations, harnessing the specific system benefits of harmonic drive. They are ideal for traction applications at sizes from < 1 hp ranging up to megawatt systems, with each version offering a range of competitive advantages depending on the specific size and application.

### **Future direction**

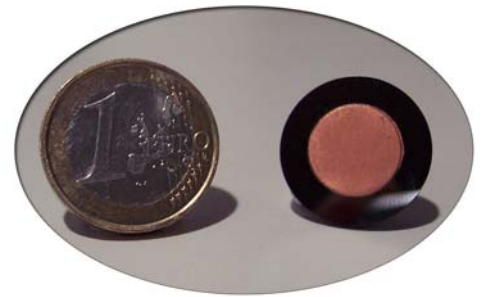
We expect that in the short term, we will be quoting motors for different applications. Chorus Motors are ideal for high-torque applications, and there are many areas where we have made progress along the road to productisation. We expect that, as happened with WheelTug, other applications for our technology will become evident as the technology proceeds. We remain open to these new avenues, while we focus on the drive to deliver Chorus motor and drive systems. Much more information about Chorus can be found at its Website, [www.chorusmotors.gi](http://www.chorusmotors.gi), and about Chorus Motors plc in its annual report on the same Website.

## Power Chips and Cool Chips

Borealis has also developed two technologies based on our research into quantum thermotunneling—the movement of excited electrons across a tiny gap between two electrodes. Both technologies have been made possible only in recent years by advances in semiconductor manufacturing capability and by new understanding of nanotechnology. Both will be among the first practical benefits from the emerging nanotechnology revolution.

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 most existing means for generating electricity and capture most of this market, while also creating new markets by making electricity almost universally available at a lower cost.



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

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.

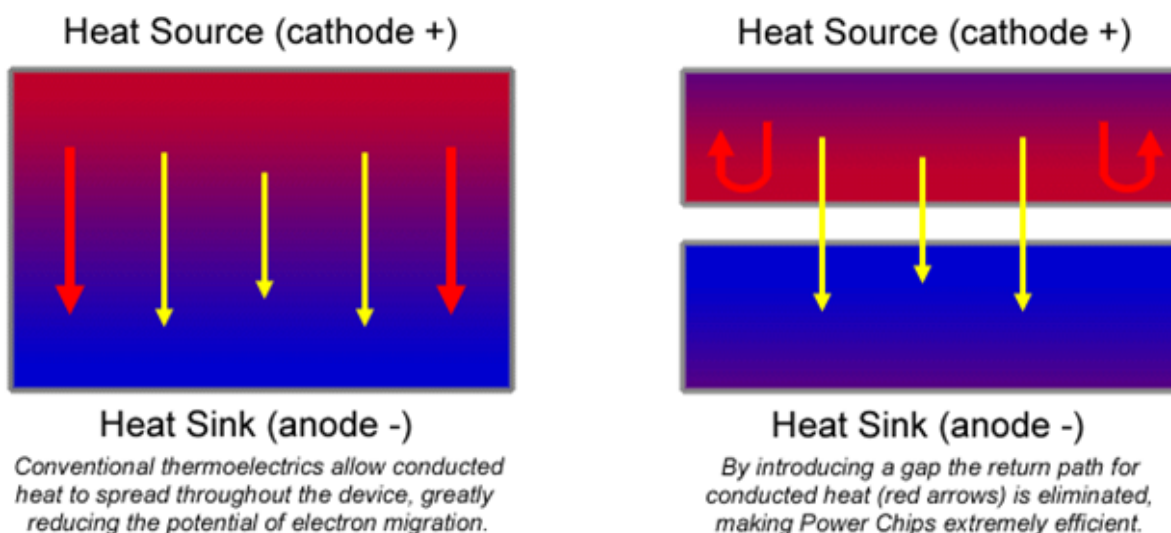
Cool Chips offer a unique cooling solution and the first viable replacement option for the century-old compressor technology that is now dominant in nearly all forms of thermal management, including air conditioning, refrigeration, chilling, freezing, and cooling. Their potential market is huge; the global cooling industry has sales of more than \$200 billion a year. 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 now have production capacity of 20 chips an hour and we have two characterization labs testing prototype devices. We are in a cycle of constantly producing and testing until we get the recipe right.



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. We are now taking orders for the future delivery of Cool Chips. 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).

## Avto Metals

After almost a decade of research and patenting work, in October 2004 Borealis formed a new subsidiary, Avto Metals plc, to develop, commercialise and license 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. Initial applications are likely to be significantly improved diodes and transistors, the building blocks of modern microelectronics. 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.

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.

We are working intensively with scientists at several universities and companies to understand the scope of the Avto Effect and to develop working Avto Metals devices. While this work will continue for many years, we believe it is possible that the technology can be developed sufficiently to be applied to certain initial products within a year. More information about Avto Metals and Avto Metals plc is available at its Website, [www.avtometals.gi](http://www.avtometals.gi).

## **Patents and Intellectual Property**

Borealis Technical Limited so far has been granted more than forty U.S. and international patents for its scientific and technological advances in materials science, electric motors, power generation, cooling and refrigeration, steelmaking, and other areas.

Many of these patents, in the opinion of our technical staff, are what the Courts might 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 subsequent 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.

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 we intend to protect it vigorously.

In fiscal 2005 we were issued eight new U.S. patents. We also filed applications in the U.S. and internationally for an additional 38 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 the 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 this sort of "game changers" that may or may not end up being of value.

## Properties and Operations

### *Principal Technologies Openly Under Development*

#### **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 may well 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 quantum tunnelling 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.

**Borealis Technical Limited**, a 98% owned subsidiary of the Company, manages the above operations along with a privately-funded research operation examining a wide range of scientific areas that potentially will challenge the presently accepted boundaries of the industrial world. This is a non-capital-intensive business where most of the expenditures are for staff and the support of the patenting and accounting work. During fiscal year 2005, Borealis Technical filed for and/or was issued a combination of 46 patents. It is anticipated that the research and development activities will remain at the current level or increase in fiscal year 2006.

## ***Mining Properties***

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

A subsidiary company, Roche Bay plc, owns 100% interest in 10,973 acres of Government of Canada long term mineral leases located near Roche Bay, Melville Peninsula, Nunavut, Canada, which contain one of the world's largest undeveloped resources of magnetite (Fe<sub>3</sub>O<sub>4</sub>). These leases require annual lease payments (at current exchange rates) of \$9,024 per year for those leases expiring in 2019, and \$9,118 per year for those leases expiring in 2021. All leases are expected to be renewed on renewal dates. The leases are located in the Baffin Mining District of Nunavut, Canada. Significant work is currently underway in an attempt to bring these properties into production.

By agreement dated 1 March 1979, the Company granted a royalty interest to a third party based on 5% of the Crown Royalty in these mineral leases. On 6 March 1979, the Company granted royalties to third parties based on 18.75% of the Crown Royalty.

### **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. These leases run for 21 years from 27 December 2001, and are expected to be renewed on the renewal dates, and will require annual payments of \$8,556 at current exchange rates.

## **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 licensed 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 Technical pays all the expenses of all the subsidiaries and all share proceeds from share sales by 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, with the understanding that the parent company will be in a position to repay the loans once profit distributions start as expected.

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

First, 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 direct 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 to 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	5,202,500	5,296,765	98%
Chorus Motors plc	5,281,853	6,493,769	81%
Cool Chips plc	5,213,081	8,245,347	63%
Faraway plc	5,202,500	6,256,685	83%
Power Chips plc	5,223,951	8,035,118	65%
Roche Bay plc	5,607,041	6,101,610	92%

Initially, it appears that most of our income will derive from the manufacture and sale of high-value products from Gibraltar. 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. We work at keeping our websites updated, and our major disclosed technologies are described on the site in detail. As patent offices worldwide 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, 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.

# Management's Discussion and Analysis of Financial Results for 2005 and Projections for 2006

Our financial statements have been prepared in accordance with Gibraltar Accounting Standards and the Gibraltar Companies Accounts Ordinance 1930, the Gibraltar (Companies Accounts) Ordinance 1999 and the Gibraltar (Consolidated Accounts) Ordinance 1999. We will refer to this as Gibraltar GAAP.

We are a Gibraltar company. Most of the companies in the Borealis Family of Companies are domiciled in Gibraltar. We must file financial returns in Gibraltar GAAP. We are under no obligation anywhere else to file financial statements though they are available on our web page at [www.borealis.com/investor/reports.shtml](http://www.borealis.com/investor/reports.shtml). All our statements are in Gibraltar GAAP, which is based upon, and similar to, United Kingdom GAAP, which will be in full compliance with the new International Accounting Standards (IAS) by next financial year. Our accounts are maintained and we report financial results in United States dollars.

We are now reporting revenue figures. In past years all revenue was netted against our operating deficit. This was our practice for the 36 years of audited books in our possession. In recent years we have been funding our work principally through sales of shares in the subsidiary companies. Much of our funding long term has come through transactions that just reduced our deficit while we were reporting no revenue. This was being very tax efficient. Because we now appear to have sustainable long-term business interests, we are reporting our first product revenue. We had \$595,000 in product sales in 2005 and reported net cash inflow from acquisitions and disposals of \$2,995,671. This \$3,590,671 went a long way to supporting our corporate activities.

Last year we reported no sales revenue and reported net cash inflow from acquisitions and disposals of \$4,863,525. We expect that in future years the reported net cash inflow from acquisitions and disposals will decrease as we are working hard to drastically restrict future sales of subsidiary shares. That said, we are looking to Cool Chips plc selling shares in Cool Chips Military Sales plc and Chorus Motors plc selling shares in WheelTug plc. We are looking for sales in each of the above cases of our subsidiaries selling shares in their subsidiaries which are basically all capital gains on sale of shares and, if the sales occur, will be reported as such. We expect Chorus Motors' subsidiary WheelTug plc to generate significant delivery slot revenue and some revenue from prototype sales in fiscal 2006. We expect that Cool Chips plc can possibly receive substantial advance sale revenue for product in 2006. On the resource side there is a good possibility that Roche Bay plc will finally see letters of intent on product and project development.

Borealis remains short of cash as it has for its entire 37 years as an incorporated company and 36 years as a public company. The expenses involved in maintaining our far-reaching and geographically diverse activities are substantial for a company our size. We have never had sufficient funds to undertake the many ambitious projects that we have taken on for decades. Our work continues and our level of activity continues to increase. We hope in 2006 to finally get sufficient funding to match our far flung operations.

We have no debt. We write off almost everything except for patent filing fees and the costs of our mineral properties. Our accounting is very conservative.

As for the money we owe, the largest figure is \$3,540,818, which is creditors' amounts falling due after one year. Last year this amount was \$2,635,158. This amount is based on the market value of our shares and is determined at each year-end. It is due for shares of Borealis Exploration Limited lent to the Family of Companies by certain directors to help finance the operations of the Company in previous years, and for share options that were exercised that are an obligation of Borealis to deliver. This amount is due to directors and related parties.

Any other company might just issue the shares and be done with the obligation. Borealis, however has a limit of 5,000,000 authorised shares, the limit of authorised shares in each of the public subsidiary companies is 10,000,000. This share limitation means that these shares of Borealis, that were sold years ago, will have to be repurchased on the market or privately, unless members see fit to attempt the almost impossible hurdle of increasing the number of authorised shares.

This item will continue to loom large in our books and can, with a strong market in BOREF, generate significant losses per share. Management is making a concerted effort to acquire sufficient Borealis shares to satisfy this obligation in 2006.

Our consolidated operating loss for 2005 was \$4,319,284 compared to \$5,034,853 in 2004. In 2006 we expect this consolidated operating loss figure to decrease or to possibly report a profit.

Our loss for the financial year was \$2,906,729 compared to \$3,229,227 for 2004. This was a negative \$0.58/share compared to a negative \$0.65/share in 2004. Please note that \$905,660 of this loss was due to the rise in the value of the Borealis Exploration Limited shares that Borealis owes to certain director who had loaned shares to the Family of Companies.

Although we now expect to move to the profit column for 2006, our level of loss has been completely sustainable for years and we would assume this level of loss, if necessary, can be sustained for many more years.

Your Company has very large holdings of free-trading shares in the public subsidiary companies which we own and which are only shown on the books at a nominal value. The market value of these shares is well in excess of \$100,000,000 as of today.

The equity minority interest increased to \$6,606,523 from \$6,296,443.

Our fixed assets grew slightly in fiscal 2005 to \$5,301,542 from \$5,194,405 while our Creditors amounts falling due in one year went to \$2,246,932 from \$2,090,044. Of this amount \$1,050,622 is due to directors and related parties compared to \$730,913 in 2003. We are planning on reducing the amount due to outside parties for 2006 to well under \$250,000.

Our Total Equity decreased in fiscal 2004 to \$173,866 in 2005 from \$2,770,515 in 2004.

Total shareholder funds for 2005 went to a negative \$6,432,657 from a negative \$3,525,928 in 2004.

The non-consolidated balance sheet shows a net deficit in shareholder funds of \$24,459,744 from \$19,123,264 in 2004. The non-consolidated balance sheet shows a negative profit and loss account of \$48,750,774 compared to \$43,414,294 in 2004. This is a net figure after all our other income figures have been subtracted from this figure which has happened through the years.

Again, please note that we carry our large negotiable share portfolio at book value or cost and not at market value or at the values at which we are selling shares to fund the operations. In fiscal 2005 two more of our companies became quoted on [www.pinksheets.com](http://www.pinksheets.com) though these companies have yet to attract any market interest at all. It will probably be 2008 before WheelTug plc and Cool Chips Military Sales plc are quoted though it might happen earlier. All of Borealis' extensive intellectual property assets are also carried on the books at a nominal value.

We are capitalizing only patent office filing fees which amounted at year-end to an amortized value of \$402,485 for 2005 compared \$340,085 for 2004. These capitalized fees will increase as the patent base grows.

The subsidiary companies currently show no debt and no liabilities, though they do show a small cumulative loss from the management fees charged by their direct parent. Their assets are their very broad-based technology licenses from Borealis Technical Limited and the substantial earning potential that flows from these licenses. Please note again that the subsidiary technical companies pay 50% of their license revenue to Borealis Technical Limited and an 8% royalty on all other revenue for the license to the technologies.

All of our subsidiary companies, we expect, will eventually have a decent market develop for their shares. We do have now 7 traded companies in the Family of Companies. It should be noted that, as each of the subsidiary companies is in a radically different business, your management felt the only rational operating model was to run the businesses as separate entities.

Most of our extensive mineral processing equipment from our former Fat Lake mining camp in Nunavut remains in Rankin Inlet. The equipment is for sale. To the right buyer this equipment has a replacement cost in Rankin Inlet of several millions of dollars. The equipment is carried at zero on our books and we may eventually get nothing for it.

Borealis has always followed conservative accounting policies. Our liabilities are fully reported while our share portfolio and most all our extensive intellectual property assets under Gibraltar GAAP are valued at nominal amounts on our financial statements.

## **Borealis Legal Matters**

The Company is a plaintiff in some cases and a defendant in several other legal actions relating to its former mining businesses in Canada. None of these actions involves its current businesses and none is material.

## **Projections for Fiscal 2006**

Fiscal 2006 could yield significant operating revenue. Projections are notoriously dangerous, but we would be surprised if we did not have some actual net earnings for fiscal 2006. We projected significant earnings for 2004 and 2005 and were decisively proven wrong.

WheelTug plc and Cool Chips Military Sales plc should lead the way to some sales and possibly some earnings in 2006 and 2007, with significant earnings in 2008.

## **Investor Information**

Extensive information for investors can be found on our Website at [www.borealis.gi](http://www.borealis.gi). Our annual and quarterly reports for the past several 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).

## **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.

## **Directors' Report**

The directors submit their report and the audited financial statements for the Company and the Borealis Family of Companies for the year ended 31 March 2005.

### **Borealis Family of Companies Profile**

The Borealis Family of Companies "Family" is comprised of those companies listed in Note 10 of the financial statements.

The Company was primarily a mining company prior to 1992. While the Borealis Family of Companies retains its mining properties for future development, it has also added to its operations the business of conducting basic industrial research for which it has patents issued, approved for issue and pending. Since 1995, most of the Borealis Family of Companies' expenses relate to expenses incurred whilst carrying out its research and development activities. These R&D costs have all been written off in the year incurred, and most costs are funded by the issue of shares in subsidiary undertakings.

On 19 October 1998, the Company successfully completed a redomiciliation out of Canada into Gibraltar. Accordingly, Borealis Exploration Limited received a Certificate of Discontinuance from Industry Canada and a Certificate of Redomiciliation of a Company from the Registrar of Companies in Gibraltar. This move was consistent with the fact that most of the Borealis Family of Companies' technology research was already being managed in Europe.

### **Financial Review**

Results for the Borealis Family of Companies for the year are shown in the Consolidated Profit and Loss Account on page 21.

As of 31 March 2005, the Family of Companies had retained losses of \$30,723,687 (2004 - \$27,816,958) and a working capital deficit of \$1,586,858 (Surplus in 2004 - \$211,268). The net assets, as at 31 March 2005, amounted to \$173,866 (2004 - \$2,770,515).

There can be no assurance that the Company or its Subsidiaries' efforts to generate further financing and achieve profitable operations will be successful.

As explained in Note 1(f), all costs relating to the Borealis Family of Companies' Government of Canada mineral leases have been capitalised and these costs are accordingly reflected in the consolidated balance sheet. The directors are confident that the current market value of the leases is very substantial, and well in excess of their cost. The commercial potentials of certain of the technology investments, as evidenced by the recent market valuations of the public shares issued, also justifies the use of the going-concern basis as appropriate for the preparation of these financial statements.

These consolidated financial statements have been prepared under the historical cost convention, and in accordance with the going concern concept, which assumes that the Borealis Family of Companies will be able to realise its assets and discharge its liabilities in the normal course of business rather than through a process of forced liquidation.

### **Dividends**

There were no dividends declared during the year.

## Directors and their Interests

The interest of the directors in the shares of the Company were as follows:

	Number of shares held at 31 March 2005	Number of shares held at 31 March 2004
Rodney T. Cox	20,549	71,600
Wayne S. Marshall	100,540	114,040
Arnold A. Turin	100	100
Donald N. Jones	55,548	55,548
Isaiah W. Cox	158,048	243,165
David M. Goldenberg	100	100
Joseph J. Cox	31,729	31,729
Peter Vanderwicken	35,500	35,500
Iris Oren Cox (Resigned 15 Sept 2004)	2,000	2,000
Nechama J. Cox	16,700	16,700
Benjamin J. Cox	35,490	39,353
Rebecca D. Cox (Resigned 18 May 2004)	2,000	2,000
Giulio Pontecorvo	16,000	16,000
Robert T. Bauer	100	100
Stuart Harbron	1	N/A

## Share Options

As of 31 March 2005, there were no share options outstanding.

## Directors' Responsibilities

The directors are responsible for preparing financial statements for each financial year which give a true and fair view of the state of affairs of the Company at the end of the financial year and of the profit or loss for that year and which comply with the Gibraltar Companies Ordinance 1930, the Gibraltar Companies (Accounts) Ordinance 1999 and the Gibraltar Companies (Consolidated Accounts) Ordinance 1999. In preparing the financial statements, appropriate accounting policies have been used and applied consistently, reasonable and prudent judgements and estimates have been made, and applicable accounting standards have been followed. The directors are responsible for maintaining adequate accounting records, for safeguarding the assets of the Company, and for preventing and detecting fraud and other irregularities.

## Auditor

A resolution to reappoint Moore Stephens will be proposed at the Annual General Meeting.

By order of the Board on 3 June 2005.



Isaiah W. Cox  
Director



Rodney T. Cox  
Director

# Report of the Auditors

## To the members of Borealis Exploration Limited

We have audited the financial statements on pages 21 to 33, which have been prepared under the historical cost convention and the accounting policies set out on pages 26 through 27.

This report is made solely to the Company's members as a body, in accordance with the Companies Ordinance 1930. 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.

## Respective responsibilities of directors and auditors

As described in the report of the Directors, the Company's Directors and management are responsible for the preparation of financial statements. It is our responsibility to form an independent opinion, based on our audit, on those statements and to report our opinion to you.

## Basis of opinion

We conducted our audit in accordance with Auditing Standards issued by the Auditing Practices Board in the United Kingdom. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the directors in the preparation of the financial statements and of whether the accounting policies are appropriate to the Company's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

In forming our opinion, we have considered the disclosures made in Note 2 of the financial statements in connection with the application of the going concern basis and the uncertainty with regards to securing continued financial support. In view of the significance of these matters we consider they should be drawn to your attention but our opinion is not qualified in these respects.

## Opinion

In our opinion the financial statements give a true and fair view of the state of affairs of the Company and Family of Companies as at 31 March 2005, and of the loss for the year then ended in accordance with Gibraltar Accounting Standards and have been properly prepared in accordance with Gibraltar Companies Ordinance 1930, the Gibraltar Companies (Accounts) Ordinance 1999, and the Gibraltar Companies (Consolidated Accounts) Ordinance 1999.

Gibraltar  
3 June 2005

  
**Moore Stephens**  
CHARTERED ACCOUNTANTS

## Consolidated Profit and Loss Account

for the year ended 31 March 2005

	Notes	2005 \$	2004 \$
<b>Revenue</b>	1	595,000	–
<b>Expenditure</b>		(4,914,284)	(5,034,853)
<b>Operating loss</b>	4	(4,319,284)	(5,034,853)
Financing gain/ (costs)		(944,407)	(1,293,284)
Interest		(20,629)	(20,803)
<b>Loss on ordinary activities before taxation</b>		(5,284,320)	(6,348,940)
Exceptional Item	5	(308,000)	–
Loss after exceptional item		(5,592,320)	(6,348,940)
Taxation	9	–	–
<b>Loss on ordinary activities after taxation</b>		(5,592,320)	(6,348,940)
Gain on decrease in stake in subsidiaries		2,995,671	4,863,525
Equity Minority interest		(310,080)	(1,743,812)
<b>Loss for the financial year</b>		\$ (2,906,729)	\$ (3,229,227)
<b>Loss per share</b>	11	\$ (0.58)	\$ (0.65)

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

There is no difference between the loss on ordinary activities before taxation and the loss for the financial year stated above and their historical cost equivalents.

No statement of recognised gains and losses has been produced as the only recognised gains and losses occurring in the year are those disclosed in the Profit and Loss Account.

The notes on pages 26 to 33 form part of these Financial Statements.

# Consolidated Balance Sheet

as at 31 March 2005

	Notes	2005 \$	2004 \$
<b>Fixed Assets</b>			
Intangible assets	12	402,485	340,085
Tangible assets	13	41,292	14,167
Investments – mining properties	14	4,857,765	4,840,153
		<u>5,301,542</u>	<u>5,194,405</u>
<b>Current assets</b>			
Cash at bank and in hand		51,923	52,196
Accounts Receivable	15	626,151	2,249,116
		<u>678,074</u>	<u>2,301,312</u>
<b>Creditors: amounts falling due within one year</b>	16	<u>2,264,932</u>	<u>2,090,044</u>
<b>Net current (liabilities) / assets</b>		<u>(1,586,858)</u>	<u>211,268</u>
<b>Total assets less current liabilities</b>		<u>3,714,684</u>	<u>5,405,673</u>
<b>Creditors: amounts falling due after more than one year</b>	17	<u>3,540,818</u>	<u>2,635,158</u>
<b>Net Assets</b>		<u>\$ 173,866</u>	<u>\$ 2,770,515</u>
<b>Capital and Reserves</b>			
Called up Share Capital	18,19	50,000	50,000
Share Premium Account	18,19	24,241,030	24,241,030
Profit and Loss Account	19	(30,723,687)	(27,816,958)
<b>Total shareholders' funds</b>		<u>(6,432,657)</u>	<u>(3,525,928)</u>
Minority interests - equity	10	<u>6,606,523</u>	<u>6,296,443</u>
<b>Total Equity</b>		<u>\$ 173,866</u>	<u>\$ 2,770,515</u>

The financial statements on pages 21 to 33 were approved by the Board of Directors on 3 June 2005 and signed on their behalf by:



Isaiah W. Cox  
Director Director



Rodney T. Cox

The notes on pages 26 to 33 form part of these Financial Statements.

# Company Balance Sheet

as at 31 March 2005

	Notes	2005 \$	2004 \$
<b>Fixed Assets</b>			
Intangible Assets	12	402,485	340,085
Tangible Assets	13	41,292	14,167
		<u>443,777</u>	<u>354,252</u>
Investments in subsidiary undertakings	10	83,990	83,940
		<u>527,767</u>	<u>438,192</u>
<b>Current Assets</b>			
Cash at bank and in hand		51,923	52,196
Debtors	15	784,762	2,301,116
		<u>836,685</u>	<u>2,353,312</u>
<b>Creditors: amounts falling due within one year</b>	16	<u>22,283,378</u>	<u>19,279,610</u>
<b>Net current liabilities</b>		<u>(21,446,693)</u>	<u>(16,926,298)</u>
<b>Total assets less current liabilities</b>		<u>(20,918,926)</u>	<u>(16,488,106)</u>
<b>Creditors: amounts falling due after more than one year</b>	17	<u>3,540,818</u>	<u>2,635,158</u>
<b>Total net liabilities</b>		<u>\$ (24,459,744)</u>	<u>\$ (19,123,264)</u>
<b>Deficiency in assets</b>			
Called up Share Capital	18,19	50,000	50,000
Share Premium Account	18,19	24,241,030	24,241,030
Profit and Loss Account	19	(48,750,774)	(43,414,294)
<b>Total deficit in shareholders funds</b>		<u>\$ (24,459,744)</u>	<u>\$ (19,123,264)</u>

The financial statements on pages 21 to 33 were approved by the Board of Directors on 3 June 2005 and signed on their behalf by:



Isaiah W. Cox  
Director



Rodney T. Cox  
Director

The notes on pages 26 to 33 form part of these Financial Statements.

## Consolidated Cash Flow Statement

for the year ended 31 March 2005

	<b>2005</b>	<b>2004</b>
	<b>\$</b>	<b>\$</b>
<b>Net cash outflow from operating activities</b>	(2,488,899)	(4,597,403)
<b>Exceptional payment</b>	(308,000)	–
<b>Returns on investments and servicing of finance</b>		
Interest paid	(20,629)	(20,803)
<b>Net cash outflow from returns on investments and servicing of finance</b>	(2,817,528)	(4,618,206)
<b>Capital expenditure and financial investment</b>		
Patent additions	(82,129)	(25,182)
Purchase of tangible fixed assets	(39,928)	(4,867)
Lease costs of mining properties	(17,612)	(16,586)
<b>Net cash (outflow) from capital expenditure and financial investment</b>	(139,669)	(46,635)
<b>Acquisitions and disposals</b>		
Cash received for issuance of shares by subsidiaries	962,762	1,401,773
Compensation for services provided by deposits	2,032,909	3,461,752
<b>Net cash inflow from acquisitions and disposals</b>	2,995,671	4,863,525
<b>Net cash inflow before financing</b>	38,474	198,684
<b>Financing</b>		
Funds repaid for purchase of shares advanced by Directors	(38,747)	(138,747)
<b>Net cash (outflow) from financing</b>	(38,747)	(138,747)
<b>(Decrease) / Increase in cash</b>	\$ (273)	\$ 59,937

The notes on pages 26 to 33 form part of these Financial Statements.

## Consolidated Cash Flow Statement (Continued)

for the year ended 31 March 2005

### RECONCILIATION OF OPERATING LOSS TO NET CASH OUTFLOW FROM OPERATING ACTIVITIES

	2005 \$	2004 \$
Operating loss	(4,319,284)	(5,034,853)
Depreciation of tangible fixed assets	12,803	5,400
Amortisation of patents	19,729	15,600
Decrease / (Increase) in trade receivables	1,622,965	(512,285)
Increase in trade creditors	174,888	928,735
<b>Net cash outflow from operating activities</b>	<u>\$ (2,488,899)</u>	<u>\$ (4,597,403)</u>

### MOVEMENT IN CASH AND ANALYSIS OF CASH BALANCES

	2005 \$	2004 \$
<b>Changes in net cash</b>		
At 1 April 2004	52,196	(7,741)
Increase / (Decrease) in cash in the year	(273)	59,937
<b>At 31 March 2005</b>	<u>\$ 51,923</u>	<u>\$ 52,196</u>

	2005 \$	2004 \$
<b>Analysis of cash balances</b>		
Cash at bank	51,923	52,196
Bank overdrafts	—	—
<b>Net cash at 31 March</b>	<u>\$ 51,923</u>	<u>\$ 52,196</u>

The notes on pages 26 to 33 form part of these Financial Statements.

## Notes to the Financial Statements for the year ended 31 March 2005

### 1. PRINCIPAL ACCOUNTING POLICIES

The financial statements have been prepared in accordance with Gibraltar Accounting Standards and the Gibraltar Companies Ordinance 1930, the Gibraltar (Companies Accounts) Ordinance 1999 and the Gibraltar (Consolidated Accounts) Ordinance 1999 (together, 'Gibraltar GAAP')

**a. Basis of Accounting**

The financial statements are prepared in accordance with the historical cost convention.

**b. Revenue**

Revenue comprises contract payments received for delivery of WheelTug™ prototype products for end user testing by The Boeing Company and a contract payment received for delivery of prototype Cool Chips™.

**c. Basis of Consolidation**

The consolidated accounts include the Company and its subsidiary undertakings. Intra-“Family” balances and transactions are eliminated fully on consolidation.

**d. Fixed Assets**

Tangible fixed assets and intangible fixed 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 Family 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 the profit and loss account in accordance with FRS 11. To the extent that such diminution in value is subsequently reversed, this reversal is credited to the profit and loss account.

**e. Fixed Assets Investments**

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

**f. 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. Under Gibraltar GAAP 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.

**g. Research and Development**

Research and Development costs are written off in the year they are incurred.

**h. Reporting currency**

The Family of Companies' financial statements are presented in US dollars, which is the functional currency for operations.

## Notes to the Financial Statements for the year ended 31 March 2005 (Continued)

### i. Foreign currency translation

Transactions in currencies other than US Dollar are recorded at the rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in such currencies are translated at the rate of exchange ruling at the balance sheet date.

### j. 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 18 to 19 and within Note 2 below.

### k. Taxation including deferred tax.

No provision is made for corporation tax, or for deferred tax, as the Company and the majority of its subsidiaries are exempt from paying corporation tax on their profits.

## 2. 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. Shares of 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.

## 3. SEGMENTAL REPORTING

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.

## 4. OPERATING LOSS

	2005	2004
<b>Operating profit is stated after charging</b>	<b>\$</b>	<b>\$</b>
Depreciation	12,803	5,400
Amortisation	19,729	15,600

## 5. EXCEPTIONAL ITEM

In 1994, Shiloh Limited International, Inc. ('Shiloh'), a related party, granted an unrelated third party a 12.5% interest in Shiloh's entitlement to payments it would receive in connection with the development of the Borealis Electric Motor. Shiloh's entitlement was subsequently formalised under the terms of the Agreement dated 10 May 1999, details of which are disclosed in Note 20. Consideration for the granting of this interest was US\$50,000, which Shiloh passed to the Borealis Family of Companies. During the current year, the Borealis Family has agreed with the third party to settle all present and future rights to this interest in return for an allotment of 22,000 shares in Chorus Motors plc, valued at US\$308,000, which represents the US\$14 per share market value of these shares at the date of the allotment.

**Notes to the Financial Statements**  
for the year ended 31 March 2005 (Continued)

**6. DIRECTORS' EMOLUMENTS**

The total amount of emoluments paid to directors during the year was \$1,210,700 (2004 - \$1,541,172).

In addition, rent totalling approximately \$95,400 (2004 - \$115,572) has been charged to the Family of Companies by certain directors, for the provision of office space.

**7. EMPLOYEE INFORMATION**

The Company has no employees during the current or preceding period. Services to the Company are provided by way of consultancy agreements.

**8. PROFITS OF HOLDING COMPANY**

Of the loss for the financial year a deficit of \$ (5,336,480) (2004 - \$ (5,942,740)) 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) Ordinance 1999 and not presented a profit and loss account for the Company alone.

**9. TAXATION**

The Company and the majority of its subsidiaries have been granted exempt status under the Gibraltar Companies (Taxation and Concessions) Ordinance. Providing the Company continues to satisfy the criteria for such status, including the payment of an annual government charge of £225 it will not be subject to Gibraltar Corporation Tax until 2010, the date at which the status of all Gibraltar exempt companies will be subject to new legislation.

**10. 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 USA) are registered in Gibraltar:

Directly held by the Company	Ownership Interest		Investments	
	2005 %	2004 %	2005 \$	2004 \$
Borealis Technical Limited	98%	98%	158	158
Borealis Exploration Incorporated	100%	100%	100	100
Credits Holdings Limited	99%	99%	160	160
Faraway Holdings Limited	100%	100%	83,362	2
Faraway Public Limited Company	0%	99.7%	50	83,360
Roche Bay Holdings Limited	99%	99%	160	160
Total investments			<b>\$ 83,990</b>	<b>\$ 83,940</b>

**Notes to the Financial Statements**  
for the year ended 31 March 2005 (Continued)

**10. INVESTMENTS IN SUBSIDIARY UNDERTAKINGS (Continued)**

Indirectly held by the Company	Ownership Interest	
	2005 %	2004 %
Avto Metals Public Limited Company	98.2%	New
Chorus Motors Public Limited Company	81.1%	81.7%
Cool Chips Public Limited Company	63.1%	63.8%
Faraway Holdings (Barbados) Limited	100%	100%
Faraway Public Limited Company	83.2%	--
Photon Power Public Limited Company	99.8%	99.8%
Power Chips Public Limited Company	65.0%	65.1%
Roche Bay Holdings (Barbados) Limited	99%	99%
Roche Bay Public Limited Company	91.6%	92.1%
Borealis Roche Bay Limited	99%	99%
Wheeltug Public Limited Company	100%	--
Cool Chips Military Sales plc	100%	--

On 17 March 2005, the 5,200,000 shares of Faraway plc that were held directly by Borealis Exploration Limited, were transferred to Faraway Holdings (Barbados) Limited, which is 100% owned by Faraway Holdings Limited, and therefore the investment in Faraway plc has been moved from Directly held to Indirectly held. Subsequently, the Company acquired a further 2,500 shares directly in Faraway plc at a cost of \$50.

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.

The Family of Companies has in the past 5 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.

In 2005, further funds were raised by the issue of shares at a premium by Avto Metals plc, Chorus Motors plc, Cool Chips plc, Faraway plc, Power Chips plc and Roche Bay plc. A minority interest of \$6,606,523 (2004 - \$6,296,443) in the subsidiaries is presented on the balance sheet effective 31 March 2005. The increase 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 Equity of the Borealis Family of Companies in the share premiums paid by third parties during the year of \$2,995,671 (2004 - \$4,863,525) is shown as a gain in the profit and loss account.

**Notes to the Financial Statements**  
for the year ended 31 March 2005 (Continued)

**11. EARNINGS PER SHARE**

Earnings/(losses) per share is calculated by dividing the earnings/(losses) attributable to ordinary shareholders by the weighted average number of ordinary shares in issue during the year. Diluted earnings/(losses) per share is calculated by adjusting basic earnings/(losses) and the weighted average number of shares for the effects of all dilutive potential shares.

	<b>2005</b>	<b>Per</b>		<b>2004</b>	<b>Per</b>
	<b>Earnings</b>	<b>Share</b>		<b>Weighted</b>	<b>Share</b>
	<b>\$</b>	<b>Amount</b>		<b>Average</b>	<b>Amount</b>
	<b>\$</b>	<b>\$</b>		<b>Number of</b>	<b>\$</b>
	<b>\$</b>	<b>\$</b>		<b>Shares</b>	<b>\$</b>
	<b>\$</b>	<b>\$</b>		<b>of Shares</b>	<b>\$</b>
<b>Basic EPS</b>					
(Losses) /Earnings					
attributable to ordinary					
shareholders	(2,906,729)	5,000,000	(0.58)	(3,229,227)	5,000,000
					(0.65)

**12. INTANGIBLE FIXED ASSETS – PATENT FILING FEE**

	<b>Cost</b>	<b>Amortisation</b>	<b>Total</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>
At 1 April 2004	411,102	71,017	340,085
Additions / Charge in year	82,129	19,729	62,400
<b>At 31 March 2005</b>	<u>\$ 493,231</u>	<u>\$ 90,746</u>	<u>\$ 402,485</u>

**13. TANGIBLE FIXED ASSETS**

	<b>Mining, Drilling</b>	<b>Office</b>	<b>Total</b>
	<b>and Camp</b>	<b>Equipment</b>	<b>\$</b>
	<b>Equipment</b>	<b>\$</b>	<b>\$</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>
<b>Cost</b>			
At 1 April 2004	655,808	55,345	711,153
Additions	–	39,928	39,928
<b>At 31 March 2005</b>	<u>655,808</u>	<u>95,273</u>	<u>751,081</u>
<b>Depreciation</b>			
At 1 April 2004	653,447	43,539	696,986
Charge for year	2,361	10,442	12,803
<b>At 31 March 2005</b>	<u>655,808</u>	<u>53,981</u>	<u>709,789</u>
<b>Net book value</b>			
<b>At 31 March 2005</b>	<u>\$ –</u>	<u>\$ 41,292</u>	<u>\$ 41,292</u>
<b>At 31 March 2004</b>	<u>\$ 2,361</u>	<u>\$ 11,806</u>	<u>\$ 14,167</u>

**Notes to the Financial Statements**  
for the year ended 31 March 2005 (Continued)

**14. INVESTMENT – MINING PROPERTIES**

	<b>2005</b>	<b>2004</b>
	\$	\$
Mining Properties	\$ 4,857,765	\$ 4,840,153
	<u>                    </u>	<u>                    </u>

The investment in the mining properties located at Roche Bay and Freuchen Bay are in the renewable long term Government of Canada Leases. To date costs for the maintenance of these leases and claims along with expenses in preliminary studies of the properties have been capitalised. The directors are confident that substantial mineral resources have been established on the Roche Bay properties.

The Roche Bay mineral resources were considered ‘proven reserves’ by the Ontario Securities Commission for decades. The definitions have now changed for these mineral resources, however with the current state of knowledge it is the opinion of our consultants that there are sufficient known resources today to place the Roche Bay Magnetite Project properties into production. Significant work is currently underway in an attempt to bring these properties into production.

**15. DEBTORS**

	<b>Family</b>		<b>Company</b>	
	<b>2005</b>	<b>2004</b>	<b>2005</b>	<b>2004</b>
	\$	\$	\$	\$
Advances to suppliers and consultants	626,151	2,249,116	626,151	2,249,116
Amounts due from Family undertakings			158,611	52,000
Total accounts receivable	<u>\$ 626,151</u>	<u>\$ 2,249,116</u>	<u>\$ 784,762</u>	<u>\$ 2,301,116</u>

Of the amounts shown as advances to suppliers and consultants, there are included a total amount of \$343,707 (2004 - \$1,215,664) which are owed from directors and related parties.

**16. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR**

	<b>Family</b>		<b>Company</b>	
	<b>2005</b>	<b>2004</b>	<b>2005</b>	<b>2004</b>
	\$	\$	\$	\$
Trade creditors	2,264,932	2,090,044	2,264,932	2,090,044
Amounts due to Family undertakings	–	–	20,018,446	17,189,566
	<u>\$ 2,264,932</u>	<u>\$ 2,090,044</u>	<u>\$ 22,283,378</u>	<u>\$ 19,279,610</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 \$1,050,622 (2004 - \$730,913)

**Notes to the Financial Statements**  
for the year ended 31 March 2005 (Continued)

**17. CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR**

	<b>Family 2005 \$</b>	<b>2004 \$</b>	<b>Company 2005 \$</b>	<b>2004 \$</b>
Other creditors	\$ 3,540,818	\$ 2,635,158	\$ 3,540,818	\$ 2,635,158

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) 172,044 shares (2004 – 178,600) 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 172,044 shares on the open market. The amount due to directors is determined at each year-end. In 2005, there were 6,556 shares repurchased. In addition, 239,679 options were exercised in previous years and the shares were not 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.

**18. CALLED UP SHARE CAPITAL**

		<b>2005 \$</b>	<b>2004 \$</b>
Authorised share capital 5,000,000 ordinary shares @ \$0.01 each		\$ 50,000	\$ 50,000

	<b>Number of Shares</b>	<b>Share Capital \$</b>	<b>Share Premium Account \$</b>	<b>Total \$</b>
<b>Issued share capital</b>				
<b>At 31 March 2003</b>	4,982,605	\$ 49,826	\$ 24,241,153	\$ 24,290,979
Shares issued during the year	17,395	174	(123)	51
<b>At 31 March 2004</b>	5,000,000	\$ 50,000	\$ 24,241,030	\$ 24,291,030
Shares issued during the year	–	–	–	–
<b>At 31 March 2005</b>	5,000,000	\$ 50,000	\$ 24,241,030	\$ 24,291,030

**Notes to the Financial Statements**  
for the year ended 31 March 2005 (Continued)

**19. RECONCILIATION OF MOVEMENTS IN SHAREHOLDERS FUNDS**

	Share Capital \$	Share Premium Account \$	Consolidated Profit & Loss Account \$	Total \$
<b>At 31 March 2004</b>	50,000	24,241,030	(27,816,958)	(3,525,928)
Shares issued during the year	–	–	–	–
Loss for the year	–	–	(2,906,729)	(2,906,729)
<b>At 31 March 2005</b>	<u>\$ 50,000</u>	<u>\$ 24,241,030</u>	<u>\$ (30,723,687)</u>	<u>\$ (6,432,657)</u>

**20. RELATED PARTY TRANSACTIONS**

The Borealis Family of Companies is party to an agreement with Shiloh Limited International, Inc. ('Shiloh') dated 10 May 1999, the terms of which provide for Shiloh to receive 4 percent of gross revenues earned by Borealis, including funds raised by way of shares issue, in return for Borealis assigning responsibility for the payment of fees and other obligations in connection with the earning of such Revenues. During the year ended 31 March 2005, \$ 71,567 (2004 - \$138,703) was paid by Borealis to Shiloh in accordance with the terms of this agreement. The agreement is binding upon the parties for a period of 18 years and may be automatically renewed. The CEO is an agent for Shiloh Limited International, Inc. and Shiloh Limited International, Inc. is owned by the Jeremiah Toyam Cox Foundation Limited of which the CEO is a member of the Council.

The Parmenides Group receives fees of \$432,000 per year for management services. The Parmenides Group is owned by the Jeremiah Toyam Cox Foundation Limited of which the CEO is a member of the Council. There are no other related party transactions except those described elsewhere in these financial statements (see Note 5, 16 and 17).

**21. CONTINGENT LIABILITIES**

**Royalty payment**

In 1993, Borealis renegotiated its loan with Mr. G. Gillet, which had been assigned to Boston Safe Deposit & Trust Company (Boston Safe). Under the agreement with Boston Safe, the loan was converted into 10,000 common shares of Borealis and a \$1,874,675 royalty. The royalty is to be paid from 25% of the net proceeds, as and when they are received, from the lease, sale or other disposition, or production on or from its mineral properties. To date, \$2,625 has been paid to Boston Safe. In 1995, Boston Safe assigned its interest to its nominee, Mitlock Limited Partnership. This liability only becomes payable if the Company sells, disposes of, or commences production on, the mineral properties. Consequently under Gibraltar GAAP, this liability has been reported as a contingent liability.

# Borealis Exploration Limited Officers and Directors

## OFFICERS

Rodney T. Cox, Chairman and Chief Executive Officer  
and Acting Chief Financial Officer

Isaiah W. Cox, President and Chief Operating Officer

Stuart Harbron, Chief Patent Officer

James S. Magdych, Chief Information Officer

Fidecs Management Limited, Secretary

## BOARD OF DIRECTORS

Rodney T. Cox <sup>1,2,3</sup>	(Appointed 27 December 1978)
Wayne S. Marshall <sup>1*,2*,3*</sup>	(Appointed 11 September 1985)
Arnold A. Turin <sup>2</sup>	(Appointed 6 April 1988)
Donald N. Jones	(Appointed 19 December 1991)
Isaiah W. Cox <sup>1,3</sup>	(Appointed 15 February 1994)
David M. Goldenberg	(Appointed 18 September 1996)
Joseph J. Cox	(Appointed 16 September 1998)
Peter Vanderwicken <sup>2</sup>	(Appointed 3 August 1999)
Nechama J. Cox	(Appointed 1 August 2001)
Benjamin J. Cox	(Appointed 31 March 2003)
Giulio Pontecorvo	(Appointed 28 August 2003)
Robert T. Bauer	(Appointed 17 May 2004)
Stuart Harbron	(Appointed 03 January 2005)

Committees: <sup>1</sup> Executive <sup>2</sup> Audit <sup>3</sup> Compensation \* Chairman

# Corporate Information

## Corporate Headquarters

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

## Senior Corporate Financial Advisor

Morris J. Pinto

## Corporate Counsel

Antonio Garrigues Walker  
Garrigues, Abogados y Asesores Tributarios  
Madrid, Spain

## Public Relations

Chris Bourne, Head  
Tel: (London) +44-(0)208-571-5216  
pr@borealis.gi

## Auditors

Moore Stephens  
Suite 5 Watergardens 4  
Waterport  
Gibraltar

## Stock Trading Information

Quoted in the United States over-the-counter market on the Pink Sheets, at [www.pinksheets.com](http://www.pinksheets.com)  
Symbol: **BOREF**  
CUSIP # 099720104

## Registrar and Transfer Agent

OTR, Inc.  
Securities Transfer Agent & Registrar  
1000 SW Broadway, Suite 920  
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Fax: +1.503.273.9168

## Incorporated

Gibraltar Company Number 66632  
19 October 1998