# **Power Chips plc** 2003 Annual Report



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## **Management's Review of Progress**

30 May 2003

Fellow Members:

In fiscal 2003 our Company made major progress toward completing development of working Power Chips and, finally, toward achieving revenues and profits. We are not there yet, but we are close. We expect in fiscal 2004 to complete working Power Chips and to report revenues and earnings for the first time.

Power Chips plc was formed in 1997, as a member of the Borealis Family of Companies, to develop and market the Power Chip, a solid-state device capable of generating electrical power when energetic electrons move across a nanometer-scale gap between two diodes. Because of the inherently high efficiency of this effect, Power Chips offer a unique primary power generation solution and a beneficial means of enhancing the efficiency of all existing power generation systems that rely on heat energy to produce electrical power.

Power Chips are small, lightweight, durable, versatile, silent, nonpolluting, and 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 hybridelectric vehicles, reclaiming and converting waste heat in conventional power plants, and standalone power generation systems for individual buildings, thus avoiding all the problems of infrastructure cost and potential brownouts associated with area grid-based power systems.



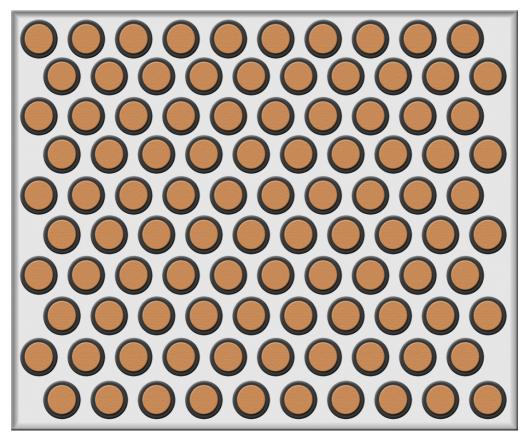
Power Chip 1 cm/sq prototype (shown with a 1 Euro coin for comparison)

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 as well as less expensive.

We anticipate that over the next few decades Power Chips will revolutionize electrical power generation across virtually all applications. In existing power stations, adding Power Chips to capture heat that is now wasted will enable these generating stations 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 initially to replace the starter-alternator, using waste heat from the radiator and exhaust and greatly increasing the efficiency of the internal combustion engine. Eventually, all-electric 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 (developed by our sister company, Chorus Motors plc). Such an automobile would achieve several times the fuel efficiency of current models and produce only a fraction of the emissions.

# This Panel of Power Chips Could Generate 10 Kilowatts

This graphic represents a panel of 100 Power Chips, each 1 cm2 in active area. Operating at 70% of maximum Carnot efficiency, with a hot side of 3000 F and a cold side at 1000 F, and provided with sufficient heat flux (which will require fluid loops), each Power Chip could produce 100 Watts and a panel this size could generate 10,000 Watts of electricity.



Power Chips will also 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 of doing so using current generating technologies.

We have been working on our proprietary, patented thermotunneling technology since 1997. There is a widespread belief that fuel cells, which generate power through a chemical reaction of oxygen and hydrogen, will be the next major power-generation technology. But despite more than a decade and billions of dollars spent on research and development efforts, fuel cells remain relatively inefficient, uneconomically expensive, and environmentally dangerous.

Power Chips, which rely simply on a flow of electrons rather than steam turning a turbine, as in conventional power plants, or a chemical reaction, as in fuel cells, will produce electricity at a high efficiency. While conventional technologies generate power at 40-45% of the maximum theoretical (Carnot) efficiency for a heat pump, Power Chips are projected to operate at 70-80% of Carnot efficiency. And the cost of producing power with Power Chips will be far less than the capital and operating costs of conventional generation methods.

Much more information about our Company and our technology, including our complete current business plan including financial projections, full texts of issued patents, and extensive descriptions of our Power Chips technology, is available on our Website at <u>www.powerchips.gi</u>.

## **Organization and Operations**

Power Chips plc is a member of the Borealis Family of Companies and is a private indirect majority-owned subsidiary of Borealis Exploration Limited. We anticipate that the shares of Power Chips plc will be opened to public trading in the near future, and we are working to make this happen. Borealis Technical Limited, our direct parent company, owns 5,217,022 of our 7,751,589 outstanding shares, or 67% of our shares. Like our parent and associated companies, Power Chips plc is incorporated in Gibraltar.

While our headquarters and legal domicile are in Gibraltar, Power Chips 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.

Power Chips has consultants around the world, all of whom work over e-mail. Management and technical discussions take place over the Net. We have a continual Board of Directors meeting 24 x 365, with an annual traffic of over 2,000 messages to each board member. Power Chips has intense direct participatory management, and many consultants to the Company sit in on the board meetings and provide input even while they are not voting members.

Our Website, <u>www.powerchips.gi</u>, makes information about our technology available, and informs shareholders, other companies, and the general public about Power Chips. As patent offices issue more patents, a more complete picture of our extensive research efforts will become publicly available on the Website. Additionally, our parent company, Borealis, sends out a weekly update (as well as daily share trades with Borealis' prices) to shareholders and to all the major news organizations and other interested parties, detailing our ongoing work and progress (please e-mail <u>pr@powerchips.gi</u> 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 Power Chips. This approach may not be conventional, but the results to date have validated the business structure.

## **Patents and Intellectual Property**

All patents relating to the Power Chips technology are held by our parent, Borealis Technical Limited, which has granted Power Chips plc an exclusive, perpetual, worldwide license to them for all power generation applications. Borealis Technical Limited so far has been granted more than 18 U.S. and international patents for its scientific and technological advances in thermotunneling and power generation.

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

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 Power Chips 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 2003 Borealis Technical was granted three new U.S. patents for improvements related to our Power Chips technology. It also filed applications for additional power-related patents, and now has a considerable number of applied-for, in-process, and pending patent applications.

## **Financial Report**

## Management's Discussion and Analysis of 2003 Results

Our loss for financial year 2003 was \$43,200 which is the amount of our management fee to our parent company.

The cumulative loss to date is \$262,800 as compared to \$219,600 for fiscal year-end 2002.

Your company has no liabilities and only a receivable from its parent company which at financial year-end 2003 totaled \$4,302,365 compared to \$2,140,739 for financial year 2002.

All proceeds from share sales by Power Chips plc are lent to Borealis Technical Limited, and in return Borealis Technical Limited pays all the bills of Power chips plc, while Power Chips plc owes Borealis Technical Limited an 8% royalty on all revenue, except 50% royalty on all sublicensing revenue.

Your Company is financially very strong. Having the parent company assume all liabilities creates the strength.

At financial year-end 2003 we had 7,751,589 shares outstanding compared to 7,348,487 for financial year-end 2002.

Please note that the total number of shares outstanding is limited to 10 million shares. We expect to be fully funded and cash flow positive with less than the 10 million authorized shares actually issued.

We are very high on Power Chips<sup>™</sup>.

The future looks incredibly bright.

Our patent position and scientific advances continue apace.

We thank our members for their help and assistance as we drive this wonderful technology to hopefully the domination of the world's electric power generation.

## **Power Chips plc**

Rodney T. Cox Chairman and CEO

Isaiah W. Cox President and COO

## **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 forwardlooking 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 may 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 given to shareholders, the investing public and the Government of Gibraltar.

## Power Chips plc Directors and Officers

#### **Board of Directors**

Iris Oren Cox, J.D. Joseph J. Cox, B.A. Rodney T. Cox, Ph.D. Wayne S. Marshall, Ph.D. Isaiah W. Cox, A.B. Nechama J. Cox, Ph.D. Stuart Harbron, Ph.D. Peter Vanderwicken, A.B.

## Officers

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

Isaiah W. Cox, President and Chief Operating Officer

Stuart Harbron, Chief Patent Officer

James Magdych, Chief Information Officer

## **Investor Information**

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

If you have a question about Power Chips, please write to us at pr@powerchips.gi.

Financial Statements for the year ended 31 March 2003

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Registered No (Gibraltar) 60528

#### **DIRECTORS AND OFFICERS**

#### Directors

Isaiah W Cox	
Rodney T Cox	
Wayne S Marshall	
Benjamin J Cox	(resigned 30 <sup>th</sup> August 2002)
Peter Vanderwicken	
Nechama C Cox	
Iris O Cox	
Joseph J Cox	
Stuart Harbron	(appointed 23rd July 2002)
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#### Secretary

BDO Fidecs Management Limited

## **Registered Office**

Suite 3G, Eurolife Building 1 Corral Road Gibraltar

#### Auditors

Moore Stephens Suite 5 Watergardens 4 Waterport Gibraltar

#### **DIRECTORS' REPORT**

The directors submit their report and the audited financial statements for the year ended 31 March 2003.

#### **Corporate Profile**

The Company was incorporated on 11<sup>th</sup> February 1997 in Gibraltar.

#### Activities

The principal activity of the Company is that of researching and developing the "Power Chips" technology, which uses quantum tunnelling to produce electricity.

#### **Results and Review of Business**

The results for the year are shown in the profit and loss account on page 6.

Borealis Technical Limited ("Technical"), the parent company, has conducted basic industrial research on its "Power Chips" technology since 1996 for which it has patents issued and pending. All of the research expenditures to date have been undertaken by Technical and funded by Borealis Exploration Limited, the ultimate parent of the Company, and by the sale of company shares with the proceeds being loaned to Borealis Technical Limited. Technical had received deposits in the current and prior years on behalf of the Company towards the issue of shares in the Company.

An Intellectual Property Agreement was signed effective 1<sup>st</sup> January 1999, whereby Technical has granted the Company the exclusive worldwide rights for sublicensing the "Power Chips" technology. In consideration for the rights granted to the Company, the Company shall pay Technical an 8% royalty based on net sales of licensed products and services sold by the Company and 50% of all sublicence income. To date the "Power Chips" technology is still under development such that the Company has not made any related sublicence sales.

#### **Results and Review of Business (Continued)**

The Company has been in the development stage since its inception. The Company intends to retain its sublicence rights granted by Technical. These financial statements have been prepared in accordance with generally accepted accounting principles with the assumption that the Company will be able to realize its assets and discharge its liabilities in the normal course of business rather than through a process of forced liquidation. From inception to 31<sup>st</sup> March, 2003, the Company has lent money raised on its behalf to Technical and Borealis Exploration Limited, who are also in a development stage and have conditions subject to raising substantial doubt about their ability to continue as a going concern. These conditions also raise substantial doubt about the ability of the Company to continue as a going concern. Technical has a portfolio of shares in subsidiary companies, one of which is currently quoted on the public market with 3 others expected to follow in 2003. Management of the Company has indicated they have no intention to demand repayment of the amounts owing from Technical until the "Power Chips" technology is being licensed in the marketplace and the company is cash flow positive. The Company and Technical are actively working together to negotiate sales or further sublicensing of its technology to various parties, which is expected to generate profitable operations in the future. To the extent additional funds are required, the Company will attempt to raise these funds through future sales of its own shares. However, there can be no assurance that the Company will be successful in its actions. The financial statements do not contain any adjustments which might be necessary if the Company is unable to continue as a going concern.

#### **DIRECTORS' REPORT (Continued)**

#### Dividends

There were no dividends declared during the year.

#### **Directors and their Interests**

The directors who served during the year were as stated on page 1.

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

	Shares held
	at 31 March 2003
Isaiah W Cox	21,750
Rodney T Cox	278,280
Wayne S Marshall	58,900
Peter Vanderwicken	11,849
Joseph J Cox	15,250
Nechama C Cox	16,275
Stuart Harbron	4,000
Iris O Cox	1,600

#### **Share Options**

During the year 404,237 options were exercised. There are now no options outstanding. There are no further plans to issue options in the immediate future.

#### **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

Isaiah W Cox Director 10 June 2003

Rodney T Cox Director

#### **REPORT OF THE AUDITORS** To the members of Power Chips Public Limited Company

We have audited the financial statements on pages 5 to 9 which have been prepared under the historical cost convention and the accounting policies set out on page 7.

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 as at 31<sup>st</sup> March 2003 and of the loss for the year then ended in accordance with Gibraltar Accounting Standards and have been properly prepared in accordance with the Gibraltar Ordinance 1930 and the Gibraltar Companies (Accounts) Ordinance 1999.

Hoore Idef

Moore Stephens CHARTERED ACCOUNTANTS

Gibraltar 2 June 2003

#### **PROFIT AND LOSS ACCOUNT** For the year ended 31 March 2003

	Note	2003 \$	2002 \$
Expenditure	Title	Ψ	ψ
Administration fees	5	(43,200)	43,200
Retained loss for the year		(43,200)	(43,200)
Retained losses brought forward		(219,600)	(176,400)
Retained losses carried forward		\$ (262,800)	\$ (219,600)

The company has had no discontinued activities during the year, accordingly, the above result for the company relates solely to continuing activities.

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 7 to 9 form part of these Financial Statements.

#### BALANCE SHEET as at 31 March 2003

	Notes	2003 \$	2002 \$
Current Assets			
Debtors	2	4,302,365	2,140,739
Total Net Assets		\$ 4,302,365	\$ 2,140,739
Capital and Reserves			
Called up Share Capital	3,4	120,788	116,745
Share Premium Account	3,4	4,444,377	2,243,594 (219,600)
Profit and Loss account	4	(262,800)	(219,000)
Total Shareholders' Funds		\$ 4,302,365	\$ 2,140,739

The notes on pages 7 to 9 form part of these Financial Statements.

#### NOTES TO THE FINANCIAL STATEMENTS For the year ended 31 March 2003

#### **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. Reporting currency

The Company's financial statements are presented in US dollars, which is the functional currency for operations.

#### c. Foreign currency translation

Transactions in foreign currency are recorded at the rate at the date of the transaction. Any monetary assets or liabilities denominated in foreign currencies are retranslated at the rate of exchange ruling at the balance sheet date.

#### d. Going Concern

These financial statements have been prepared under the going concern concept which assumes that the Company will continue in operational existence for the foreseeable future having adequate funds to meet their obligations as they fall due. Further information is set out in the Directors' Report on pages 2 to 4.

#### e. Cash Flow Statements

The company meets the size criteria for a small company set by the Companies Act 1985 and therefore, in accordance with FRS1: Cash Flow Statements, it has not prepared a cash flow statement.

#### f. Taxation

The company and 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 for a period of twenty-five years from 24 August 1999, the date on which it was granted such status. There is proposed legislation now pending approval that may change the tax status of the company in the foreseeable future, although it appears likely that a low or zero rate of taxation will apply under the proposed new structure

#### NOTES TO THE FINANCIAL STATEMENTS For the year ended 31 March 2003

#### 2. DEBTORS

	2003 \$	2002 \$
Loan to related party	\$ 4,302,365	\$ 2,140,739

Amounts due from the Company's parent company are non-interest bearing, unsecured, and with no fixed terms of repayment

#### 3. CALLED UP SHARE CAPITAL

. CALLED OF SHARE CAFITA			2003 \$	2002 \$
Authorised share capital 10,000,000 ordinary shares $@$ £0.01 each			\$ 160,000	\$ 160,000
	Number of Shares	Share Capital S	Share Premium Account \$	Total S
At 31 March 2000	7,152,319	114,437	1,060,740	1,175,177
Shares issued during the year	57,648	922	341,861	342,783
At 31 March 2001	7,209,967	115,359	1,402,601	1,517,960
Shares issued during the year	138,520	1,386	805,329	806,712
At 31 March 2002	7,348,487	116,745	2,243,594	2,360,339
Shares issued during the year	403,102	4,043	2,200,782	2,204,825
At 31 March 2003	7,751,589	\$ 120,788	\$ 4,444,377	\$ 4,565,165

The shares issued were partly to raise additional finance (cash received in Technical) and partly to settle amounts owing to creditors by Technical.

#### NOTES TO THE FINANCIAL STATEMENTS For the year ended 31 March 2003

#### 4. RECONCILIATION OF MOVEMENTS IN SHAREHOLDERS FUNDS

		Share Premium Account	Profit & Loss	
	Share Capital \$	\$	Account \$	Total \$
At 31 March 2000	114,437	1,060,740	(133,200)	1,041,977
Shares issued during the year Loss for the year	922	341,861	(43,200)	342,783 (43,200)
At 31 March 2001	115,359	1,402,601	(176,400)	1,341,560
Shares issued during the year Loss for the year	1,383	805,329	(43,200)	806,712 (43,200)
At 31 March 2002	116,745	2,243,594	(219,600)	2,140,739
Shares issued during the year Loss for the year	4,043	2,200,782	(43,200)	2,204,825 (43,200)
At 31 March 2003	\$ 120,788	\$ 4,444,377	\$ (262,800)	\$4,302,365

#### 5. RELATED PARTY TRANSACTIONS

In addition to related party transactions disclosed elsewhere in these financial statements, during the year ended 31 March 2003, the Company was charged \$43,200 (2002 - \$43,200) in fees for administrative services provided by Technical.

#### 6. ULTIMATE PARENT COMPANY

The ultimate parent company is Borealis Exploration Limited, a company incorporated in Gibraltar whose registered office is at Suite 3G, Eurolife Building, 1 Corral Road, Gibraltar.