

# Avto Metals plc 2007 Annual Report



## About Avto Metals plc

Avto Metals plc was formed in October 2004 to develop, commercialize, and licence the Avto Metals<sup>TM</sup> 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. We consider Avto Metals an enabling factor for Power Chips<sup>TM</sup> and Cool Chips<sup>TM</sup>. Other 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 plc is a majority owned subsidiary of Borealis Exploration Limited (BOREF-OTC-US).

## Contents

Chairman's Letter to Members	2
Management's Discussion and Analysis	3
Officers and Directors	6
Directors' Report	8
Auditors' Report	10
Financial Statements and Notes	12

#### Chairman's Letter to Members

#### Fellow Members:

20 June 2007

Patent filings this year have proceeded apace. In addition to the five patents issued in previous years, two more patents were issued this year, and five more applications have been filed. As we are the only entity working in this area of nanotechnology, the patents are correspondingly broad and strong. We believe that our patent position is superb.

We have dedicated management capable of bringing Avto Metals to the next level. Hans J. Walitzki, who has decades of experience in administration, technology management and mass manufacturing, has become our Chief Development Officer. Dr. Walitzki has worked extensively in thin film and wafer technologies, spending many years with Wacker Chemitronic and later Wacker Siltronic, where he was Director of Technology. He founded his own company, soiTronic, Inc. in 1999 to bring new wafer technologies to the market, and successfully integrated his company into Isonics Corporation, becoming Vice President for Advanced Wafer Technology. Dr. Walitzki is expected to manage the final development stages and commercialization of Avto Metals.

On the marketing side, we have spent considerable time over the past year talking with potential customers for Avto Metal cathodes, and we have a much better understanding of the marketplace and where, if all goes well, we expect our first sales.

In the laboratory, progress has been sporadic over the past year, primarily because we have had very limited funding to advance our technical efforts. Work has continued, however, and the results have been encouraging. Our experimental results have consistently supported the theory, which makes theoretical physicists very happy. Current and ongoing work is focusing on increasing the magnitude of the effect to widen its range of commercial application, Theories are a very good place to start, but the results will tell us the limits of the theoretical foundation of Avto Metals. In other words, we do not yet know whether Avto Metals will be a blockbuster or just a scientific curiosity. Within the coming year, this question should be settled once and for all.

We thank you for your continued support.

Avto Metals plc



Rodney T. Cox Chairman and Chief Executive Officer

Isaiah W. Cox President and Chief Operating Officer

## AVTO METALS PUBLIC LIMITED COMPANY

Gibraltar Registered No. 92964

#### Management's Discussion and Analysis of 2007 Results

Avto Metals plc lost \$202,845 last year as compared to \$64,800 in fiscal 2006. Our cumulative loss carried forward is now \$283,845 compared to \$81,000 in 2006.

Our parent company, Borealis Technical Limited, owes us \$942,974 compared to \$1,060,820 in the previous year.

Until this year all of our bills to date were paid by Borealis Technical Limited and we have no debt or accounts payable. We are now responsible for our own obligations through to product.

While development continues, we are identifying ideal markets and customers so that as soon as we have the product in hand, we'll be able to sell it. It appears that we will be the direct manufacturer and seller of Avto Metal cathodes to most of our markets.

#### **Investor Information**

Extensive information for investors can be found on our website at www.avtometals.gi. Our annual and quarterly reports 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 Avto Metals, please write to us at pr@avtometals.gi.

#### Background: What are Avto Metals all about?

Materials are important.

While we take them for granted today, unique materials have defined the age in which they were prevalent. We know of the Stone Age, the Bronze Age, the Iron Age. The 19th century was driven by steel, a material which made it possible for railroads and engines and a host of other transformative technologies to rise to the fore. It looks like the 21<sup>st</sup> century will also be driven by steel along with the new technologies.

Materials are now more important than ever. We use custom-engineered materials in everything from roofing materials to prosthetics, from probes in deep space to those under the sea. But arguably the most critical new material technologies today are found within electronics. As others have said, we now live in the electronics age, and so much of what we are technologically capable of depends on the capabilities and limitations of the electronic materials at our disposal. Massive research budgets are devoted to finding ways to maximize what can be achieved with the materials we have, and indeed, to try to find new materials.

One key problem is that there are a finite number of possibilities. The periodic table gives us all of the elements there are, and for well over a hundred years technology has sustained itself by learning about the elements, and novel ways in which they can be combined with other elements to form alloys, electronic junctions, or any number of other things.

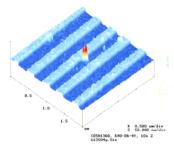
The search continues. There are lots of things we would like materials to do that we cannot do today. For example, there is always interest in finding a harder or stronger or lighter or cheaper material to replace the ones we now have. Within electronics, there is a hunt for better electronic materials to replace silicon. We'd like electrons to be able to move with less resistance, making electronics run both cooler and with less waste. There are so very many things that we can imagine but cannot yet build because we lack the material. Within the technical world, there is a name for the material which would be perfect, if only it existed: Unobtanium.

## AVTO METALS PUBLIC LIMITED COMPANY

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Today's materials explorers have a new landscape to explore: the nanoscale. It turns out that while a bulk material has a mechanical strength of X, or an electrical conductivity of Y, those very same atoms in clusters of just a few atoms, or spread very thinly across another surface, can demonstrate very different properties. Gold is an excellent conductor. But nanoclusters of gold can be insulators. Soot is a nuisance which we try to eliminate, but if you look closely, the nanotubes and nanorods and graphene contained within soot have astonishing material properties. The mind boggles, for example, at the technical and economic potential of nanotube fibers forming a single foot-thick cable which stretches from the earth's surface to an anchor in orbit.

While nanotechnology is undeniably attractive, we think that most of the interest around nanoelectronics is hype. Nanomaterials today are not found in electronics, but in products which use nanopowders, such as golf clubs or sunscreen. Nanoelectronics are much harder to build, because they are quite complex and extremely difficult to fabricate. The more complicated a nanomaterial or structure is, the more unlikely it is that it will ever get out of a laboratory.

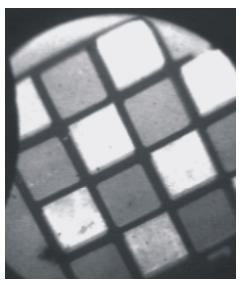


This problem with nanotechnology is completely sidestepped with Avto Metals, a nanotechnology which is both extremely useful and can be mass-produced.

An Avto Metal is a thin film of material, which has a simple corrugated pattern on it. Our theory predicts that the pattern alters the electronic energy levels within the material, and as a result, electrons are emitted more easily. This is known as a reduced work function, and it is quite useful. It means that a material can emit electrons at a lower temperature and/or with a lower applied voltage.

This may seem like arcane trivia, but the fact is we already know where Avto Metals should come in handy because we know where today's cathodes are used. The list includes:

Technology	Application
Cathode Ray Tubes	TVs and monitors
Cold cathode displays	Flat-panel displays
Vacuum fluorescent	Displays on laptops, others
Power Tubes	Triodes, rectifiers, pentodes, tetrodes, etc.
Field Effect Transistor	For FETs and MOSFETS – Power electronics
Klystron: convert electron beam energy into radio frequency waves, often with significant amplification	Radar, satellite and wideband high-power communication (very common in television broadcasting and EHF satellite terminals), and high-energy physics (particle accelerators and experimental reactors)
Travelling Wave Tubes	Space communications
X-Ray generation	Imaging, including for industrial analysis
Microscopy: SEM, TEM, Surface Analysis and Metrology	Scientific and industrial instruments
Lithography	Semiconductor manufacture
Electron Beam welders	Advanced fabrication
Free Electron Lasers	Experimental laser
Thyratron	Pulse drivers for pulsed radar equipment, high-energy gas lasers, radiotherapy devices.
Krytron (not to be confused with	Igniting exploding-bridgewire detonators and slapper detonators in
Klystron)	nuclear weapons, either directly or by triggering the higher-power spark gap switches. They are also used to trigger large flashlamps in photocopiers, lasers and scientific apparatus, as well as firing ignitors for industrial explosives
Magnetrons: Radio waves at high power.	Used in low power applications like microwave ovens, as well as specialized high power applications such as military radars



Demonstration of the Avto-Effect in the Photo Electron Microscope (PEM). Light shines onto a "Checkerboard" field of corrugated (Avto) and plain pads pf gold. Avto Metal squares are the lighter ones, demonstrating the effect of the lower work function.

For each of these markets, an improved cathode would be welcome. And this is just a short list of markets which already exist – history has shown us that when a new material is discovered it is put to work in a host of markets and applications which the initial inventors had not considered.

After Dr. Avto Tavkhelidze first conceived of Avto Metals, it was a back burner project within Borealis for a number of years. The biggest reason for this was that we were not entirely sure how to make them; the small structures required have dimensions which were not easily achieved using conventional techniques in the late 1990s. We did some work which showed enough results to keep us interested, and looking for potential partners who had the technology and expertise to make the structures Avto Metals requires. And we started finding them in 2004; we are working with some select suppliers and consultants within the nanotechnology sphere. We have also teamed with leading physicists at three universities to consult with us on our Avto Metals, Power, and Cool Chips (AMPCC) research efforts.

After considerable work, our team was sufficiently confident of the early results to submit a paper for presentation at the 2005 International Vacuum Nanoelectronics Conference (IVNC) at Oxford University two summers ago (this paper can be found on our web page). The results showed that the idea of wave interference for electrons had experimental support, and we could

indeed modify the work function of a metal (in this case, gold). These results proved the concept, and we have been working since then on optimizing the effect in order to have a commercially valuable product.

#### **Forward-Looking Statement**

The discussion of the Company's business and operations in this report includes in several instances forwardlooking 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 AND OFFICERS**

#### Directors Appointed

Rodney T. Cox6 October 2004Director, Chairman of the Board and Chief Executive OfficerIsaiah W. Cox6 October 2004Director, President and Chief Operating OfficerStuart Harbron6 October 2004Director and Chief Patent OfficerWayne S. Marshall6 October 2004DirectorPeter Vanderwicken6 October 2004Director

#### Secretary

STM Fidecs Management (Gibraltar) Limited (formerly known as Fidecs Management Limited)

#### **Registered Office**

Suite 3G, Eurolife Building 1 Corral Road Gibraltar

#### Auditors

Moore Stephens Suite 5 Watergardens 4 Waterport Gibraltar

## **AVTO METALS**

PUBLIC LIMITED COMPANY Gibraltar Registered No. 92964

## **Financial Statements**

for the period ended 31 March 2007

#### DIRECTORS' REPORT

The directors submit their report and the audited financial statements for the period ended 31 March 2007.

#### **Corporate Profile**

The Company was incorporated on 6 October 2004 in Gibraltar. The trading symbol for Avto Metals plc is AMPTF.

#### Activities

The principal activity of the Company is that of researching and developing the Avto Metals<sup>TM</sup> Technology. The Avto Metals Technology is for the reduction and custom designing of the electronic properties of materials, especially the electron-volt work function. Avto Metals owns the rights to all applications of this technology except thermal management (cooling) and power generation. The applications of Avto Metals are ubiquitous throughout much of science and applications will range from Military Applications to industrial and consumer applications. We are working towards delivering commercial product and we have several teams world-wide working at making Avto Metals a commercial reality.

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

The results for the period are shown in the Profit and Loss Account on page 12.

Borealis Technical Limited ("Technical"), the parent company, has conducted basic industrial research on its Avto Metals technology since 1997, for which it has patents issued and pending. All of the research expenditures to 2007 were undertaken by Technical and funded by Borealis Exploration Limited, the ultimate parent of the Company. The Company is now being charged for some over-head and for its research work.

An Intellectual Property Agreement was signed effective 6 October 2004, whereby Technical has granted the Company the exclusive worldwide rights for sublicensing the Avto Metals 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 sub-licence income. To date the Avto Metals technology is still under development such that the Company has not made any related sub-licence sales.

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 March 2006, the Company lent money raised on its behalf to Technical and Borealis Exploration Limited, who are also in a development stage. For fiscal 2007 and forward Avto Metals plc is being charged for some over-heads and for its research and development work. The present circumstances therefore raise certain doubts about the ability of the Company to continue as a going concern. Management of the Company has indicated they have no intention to demand repayment of the amounts owing from Technical until the Avto Metals technology is being sold in the marketplace. The Company and Technical are 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 and through the sale of product. However, there can be no assurance that the Company will be successful in its actions. The financial statements do not contain any adjustments that 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 period.

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

The directors who served during the period were as stated on page 6.

The interest of the directors in the shares of the Company in the period were as follows.

	Shares held at 31 March 2007	Shares held at 31 March 2006	Options held at 31 March 2007
Rodney T. Cox	1	1	30,000
Isaiah W. Cox	11,501	11,501	15,500
Stuart Harbron	1	1	5,000
Wayne S. Marshall	2,401	2,401	0
Peter Vanderwicken	6,186	3,886	7,500

#### **Share Options**

The Company created 750,000 share options on 31 December 2004, and granted 700,000 to option holders, reserving 50,000 options which can be granted by the directors prior to the options expiration on 31 December 2009. The exercise price of those options is \$10.00 per share. The options are for a five-year term, and are subject to terms and conditions on the part of the option holder. During Fiscal Year 2007, no options were exercised. As of 31 March 2007, 735,500 options remained.

#### **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 and the Gibraltar Companies (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 20 June 2007

Isaiah W. Cox Director



Rodney T. Cox Director

#### INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF AVTO METALS PUBLIC LIMITED COMPANY

We have audited the financial statements of Avto Metals plc for the year ended 31 March 2007 set out on pages 12 to 16. These financial statements have been prepared under the historical cost convention and the accounting policies set out on page 14.

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 are responsible for the preparation of financial statements in accordance with applicable law and Gibraltar Accounting Standards (Gibraltar Generally Accepted Accounting Practice).

Our responsibility is to audit the financial statements in accordance with relevant Gibraltar legal and regulatory requirements and International Standards on Auditing (UK and Ireland).

We report to you our opinion as to whether the financial statements give a true and fair view and are properly prepared in accordance with the relevant financial reporting framework and are properly prepared in accordance with Gibraltar Law. We also report to you if, in our opinion, the Directors' Report is not consistent with the financial statements, if the company has not kept proper accounting records, or if we have not received all the information and explanations we require for our audit.

We read the Directors' Report and other information contained in the Annual Report and consider the implications for our report if we become aware of any apparent misstatements within it or material inconsistencies with the financial statements.

#### **Basis of opinion**

We conducted our audit in accordance with International Standards on Auditing (UK and Ireland). 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 1 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 connection with the other information contained in the Annual Report we also draw attention to the content of the Forward-Looking Statement on page 5.

#### **AUDITORS' REPORT (Continued)**

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 March 2007, 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.

loore Stephens

Gibraltar 20 June 2007

Moore Stephens CHARTERED ACCOUNTANTS

#### PROFIT AND LOSS ACCOUNT for the period ended 31 March 2007

	Notes	2007 \$	2006 \$
Expenditure	Totes	ψ	φ
Administrative fees	5	64,800	64,800
Development Expenses	5	138,045	
Retained loss for the period		(202,845)	(64,800)
Retained losses brought forward		(81,000)	(16,200)
Retained losses carried forward		\$ (283,845)	\$ (81,000)

The Company has had no discontinued activities during the period, 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 period are those disclosed in the Profit and Loss Account.

The notes on pages 14 to 16 form part of these Financial Statements.

#### BALANCE SHEET as at 31 March 2007

	Notes	2007 \$	2006 \$
Current Assets	110005	·	·
Debtors	2	942,975	1,060,820
Total Net Assets		\$ 942,975	\$ 1,060,820
Capital and Reserves			
Called up Share Capital Share Premium Account Profit and Loss account	3,4 3,4 4	53,671 1,173,149 (283,845)	53,586 1,088,234 (81,000)
Total Shareholders' Funds		\$ 942,975	\$ 1,060,820

Signed on behalf of the Board of Directors on 20 June 2007

Isaiah W. Cox Director

Rodney T. Cox Director

The notes on pages 14 to 16 form part of these Financial Statements.

#### NOTES TO THE FINANCIAL STATEMENTS for the period ended 31 March 2007

#### 1. PRINCIPAL ACCOUNTING POLICIES

The financial statements have been prepared in accordance with Gibraltar Accounting Standards and the Gibraltar Companies Ordinance 1930 and the Gibraltar (Companies 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 8 to 9.

#### e. Cash Flow Statements

The Company meets the size criteria for a small company set by the Gibraltar (Companies Accounts) Ordinance 1999, and therefore, in accordance with FRS1: Cash Flow Statements, it has not prepared a cash flow statement.

#### **NOTES TO THE FINANCIAL STATEMENTS** for the period ended 31 March 2007 (Continued)

#### 2. **DEBTORS**

	2007 \$	2006 \$
Loan to parent company	\$ 942,975	\$ 1,060,820

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

	2007 \$
Authorised share capital 10,000,000 ordinary shares @ \$0.01 each	\$ 100,000

	Number of Shares	Share Capital \$	Share Premium Account \$
At 31March 2005	5,296,765	52,968	470,352
Shares issued in the period	61,850	618	617,882
At 31 March 2006	5,358,615	53,586	1,088,234
Shares issued in the period	8,500	85	84,915
At 31 March 2007	5,367,115	\$ 53,671	\$ 1,173,149

#### **NOTES TO THE FINANCIAL STATEMENTS** for the period ended 31 March 2007 (Continued)

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

	Share Capital \$	Share Premium Account \$	Profit & Loss Account \$	Total \$
At 31 March 2005	52,968	470,352	(16,200)	507,120
Shares issued in the period Loss for the period	618	617,882	(64,800)	618,500 (64,800)
At 31 March 2006	\$ 53,586	\$ 1,088,234	\$ (81,000)	\$ 1,060,820
Shares issued during the period Loss for the period	85	84,915	(202,845)	85,000 (202,845)
At 31 March 2007	\$ 53,671	\$ 1,173,149	\$ (283,845)	\$ 942,975

#### 5. RELATED PARTY TRANSACTIONS

In addition to related party transactions disclosed elsewhere in these financial statements, during the period ended 31 March 2007, the Company was charged \$ 202,845 (2006 - \$64,800) in fees for administrative services and development fees provided by the ultimate Parent Company.

#### 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.