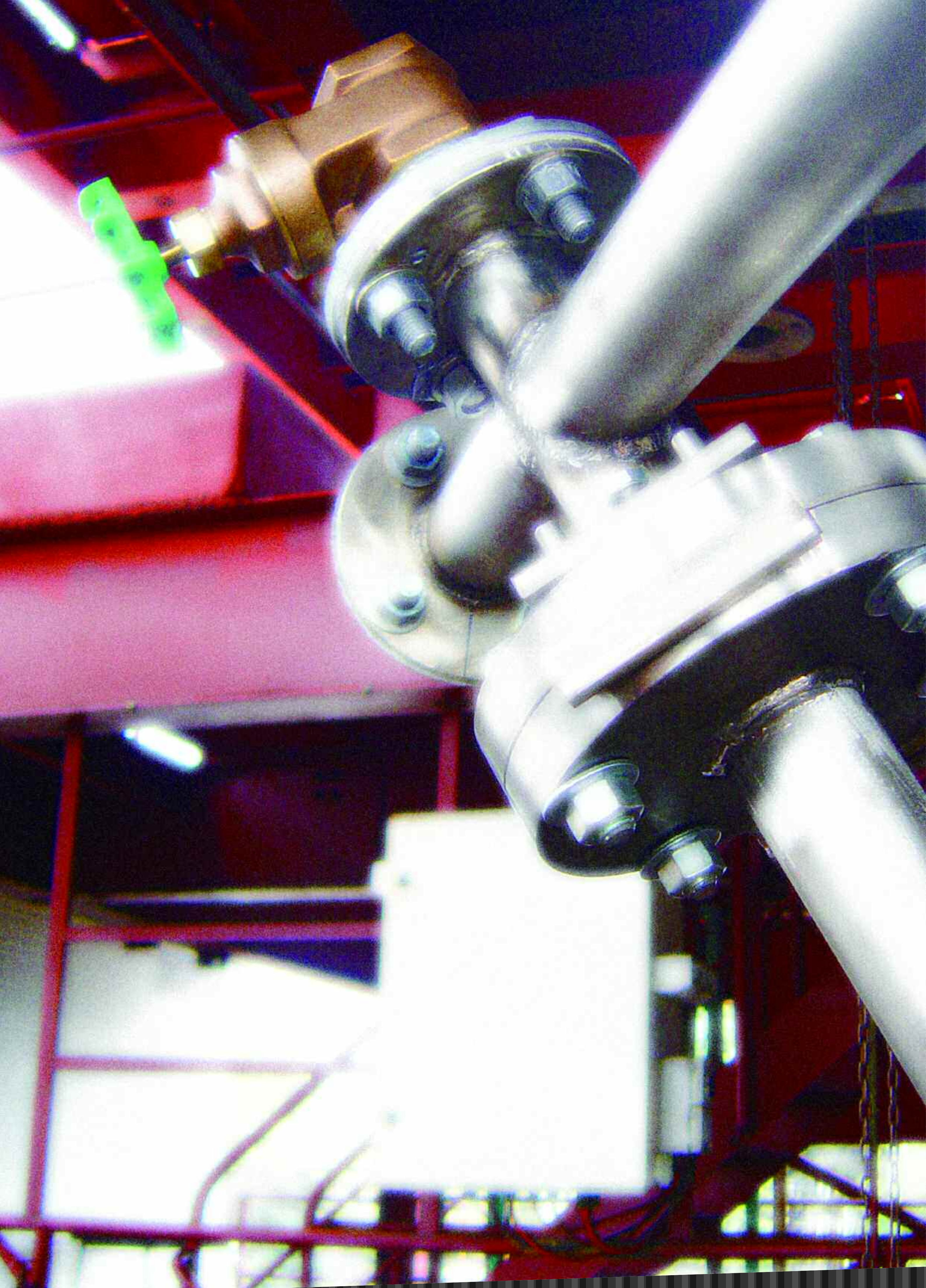
AUSTPAC
RESOURCES N.L.

Annual Report 2005



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Chairman's Review

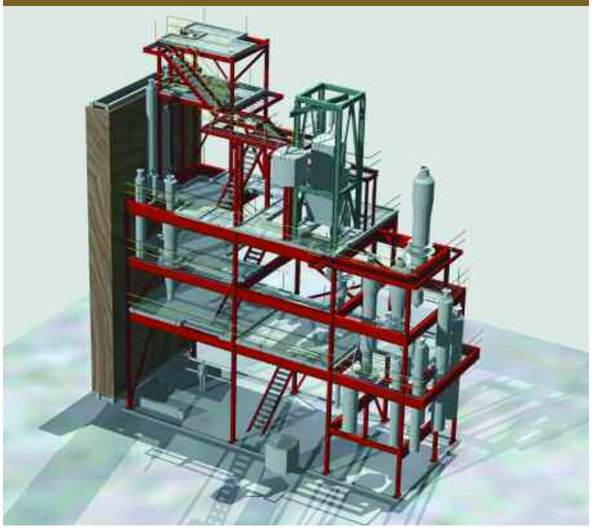
During the 2005 financial year, Austpac took the first step towards the commercialisation of our synthetic rutile technologies by commencing conversion of our test facilities at Kooragang Island, Newcastle, into an ERMS SR (synthetic rutile) Demonstration Plant.

This plant is a necessary precursor to a feasibility study for the first commercial ERMS SR plant. It has been designed for a nominal annual production capacity of 1,500 tonnes of high grade synthetic rutile, though consideration is currently being given to expanding some areas to 3,000 tpa capacity to reduce the scale-up to the commercial plant. When completed the plant will be fully integrated, and comprise an ilmenite roasting/magnetic separation section, an ilmenite leaching/SR calcining section and an EARS acid regeneration/iron metallisation section. This will allow us to validate all aspects of our technologies prior to their commercial use.

We estimate that the construction and operation of a 1,500 tpa Demonstration Plant, including the feasibility study, will cost around $5 million, though expanding the capacity could cost a further $1 million. The Board decided to commence plant construction using part of the proceeds of the Shareholder Share Purchase Plan which raised $1.27 million in September 2004, and a series of private placements throughout the year which raised a further $1.4 million, while seeking additional funds to complete the project.

I am pleased to report that our engineering team, despite working under tight budgets, has achieved good progress and the original process tower in Newcastle has been refurbished, expanded and clad, and the ilmenite roasting and magnetic separation section of the new plant is nearing completion. The work has cost $1.5 million to date and our progress is described and illustrated in the Directors' Report on Operations following this review.

3D rendering of the completed Demonstration Plant



In March this year, we arranged a five year $3 million equity finance facility with the USA investment fund, Cornell Capital Partners, to ensure the Company had future access to funds for working capital as required. The facility was activated with a preliminary placement raising $162,000, but it has not been used again so far because the Company has been enthusiastically supported by Australian investors through private placements.

Further funds are required to finish construction of our Demonstration Plant and undertake the feasibility study. Throughout the year we have continued to explore all avenues for these funds. We are in negotiations with an overseas group interested in the ERMS SR technology, with a view to obtaining finance for the feasibility study and the first commercial plant.

Once we secure the balance of the funds required for the plant and the feasibility study, we aim to embark on our first major commercial venture; an ERMS SR plant supplying high grade feedstock to the titanium pigment industry. I look forward to advising you of our progress.

T. Cuthbertson
Chairman

Austpac's New Technologies for the Titanium Industry

Directors' Report on Operations

Titanium and Austpac

Titanium is the ninth most abundant element in the earth's crust. It does not occur as free metal, generally being tightly bound with oxygen and other elements forming a range of oxides. Around 91% of the titanium used in the world is in the oxide form, titanium dioxide (TiO_2), with the balance used as metal (3%), and in other applications such as welding-rod coatings and furnace additives.

Titanium dioxide pigment is an inert white powder with high opacity, brilliant whiteness, excellent covering power and resistance to colour change. It is a valuable pigment and opacifier which is used in a broad range of paints, plastics, inks and paper. It is also used in cosmetics, sunscreens, toothpaste and some solar cells. As a quality of life product, the consumption of TiO_2 pigment increases in line with world economic growth.

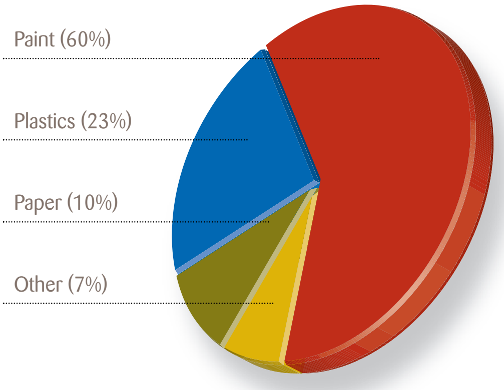
TiO_2 pigment is a US$ 8 billion industry dominated by the USA in production, consumption and pricing. There are six major pigment producers in a tight, highly competitive market. Demand for TiO_2 has grown steadily over the past 25 years at 3% per year, but in recent years demand has increased markedly in rising economies. Notably, demand in China is predicted to grow annually at 10% for the next ten years.

There are two commercial processes used to make TiO_2 pigment; the 'sulfate' and the 'chloride' processes. Around 60% of the world's pigment is produced by the chloride process, which requires a high-titanium feedstock, and accordingly the demand for such feedstock increases as consumption of pigment grows. Whilst naturally occurring minerals such as rutile and, in some cases, high-Ti ilmenite are used in the chloride process, most of the world's chloride feedstock is produced by upgrading the very common titanium mineral, ilmenite. This mineral contains about half titanium oxide and half iron oxide, and it can be upgraded by electro-smelting to form titania slag, or by chemically removing the iron to form synthetic rutile (SR). Slag can also be upgraded by leaching, one such product being termed 'UGS'.

Austpac's ERMS SR process will allow the Company to competitively enter the chloride feedstock market with one of the highest grade products available. The purity of ERMS SR also makes it an ideal feedstock for titanium metal manufacture.

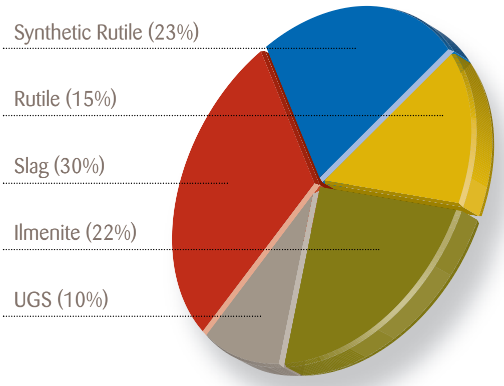
World consumption of Titanium Dioxide pigments (2004)

4.77 million tonnes of product



Chloride feedstock consumption (2004)

2.9 million tonnes of TiO_2 units



Meeting the need for high quality feedstock

Australia has been a leading producer of heavy minerals for more than fifty years, initially from the east coast of Australia, but now predominantly from Western Australia. Weathered or 'high-Ti' ilmenite is a major component of the ore assemblage of many of the WA sand mining operations, but it is not suitable for the sulfate pigment process.

Over the past thirty years, a large proportion of WA's high-Ti ilmenite has been converted into synthetic rutile using the Becher process, which was specially developed by the CSIRO to handle this type of material. Upgrading ilmenite to synthetic rutile increases the value seven fold. Australia now produces about 90% of the world's synthetic rutile, but the high-Ti resources in WA are becoming depleted and consequently that state's production will decline over the coming years.

In recent years, the heavy mineral potential of the Murray Basin has become recognised as a replacement for the mature operations in WA. Ilmenite generally comprises about half of the valuable heavy mineral assemblage, but it is unsuitable for the Becher process. Therefore, the two emerging mineral sand producers in the Basin intend, either to stockpile their ilmenite (~200,000 tpa by BeMaX Resources at Pooncarie in NSW) or bury it with their tailings (~350,000 tpa by Iluka Resources at Douglas in Victoria), after removal of the saleable rutile and zircon.

Austpac sees great potential in value-adding to ilmenite by manufacturing high grade synthetic rutile, which is an important feedstock for chloride pigment plants. The Company has been developing its processes for twelve years and has successfully processed over 70 ilmenites from heavy mineral deposits from all around the world. The Company's processes are described in detail later in this report. Austpac's ERMS SR synthetic rutile process is capable of beneficiating Murray Basin ilmenite and the technology is ready to be commercialised.

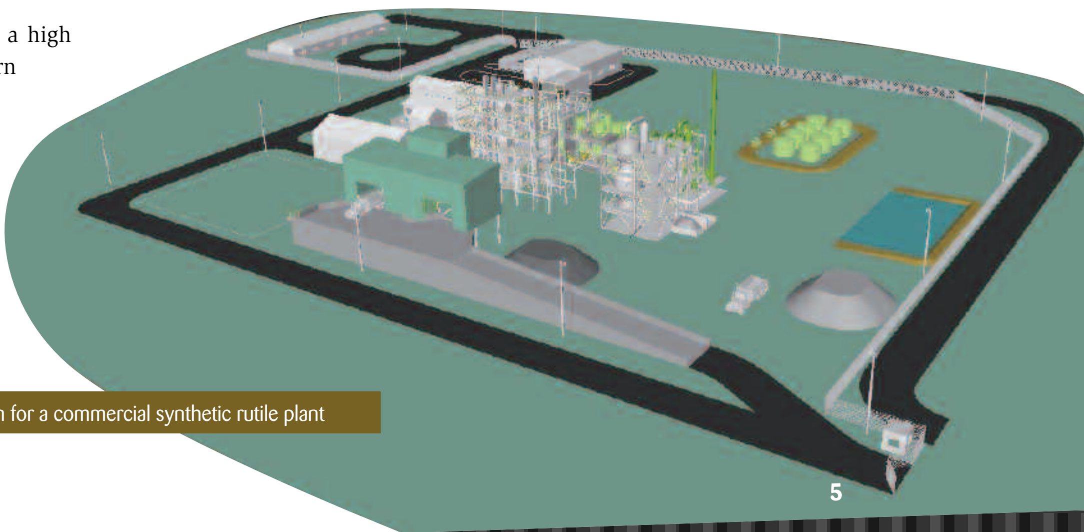
The Company's vision is to develop a high grade synthetic rutile facility in eastern Australia to meet forecast international shortfalls in titanium dioxide feedstock, so adding considerable value to the Basin's ilmenite resources.

Moving towards a commercial synthetic rutile plant

The extensive pilot plant work accomplished over the past years has shown that the ERMS SR process now warrants a detailed feasibility study to confirm the viability of a first commercial plant. The study will be based on the continuous operation of an integrated test facility, providing data for engineering design and cost estimation, with the plant located at a suitable site having easy access to raw materials, energy source and transport infrastructure to facilitate delivery to market.

Recognising the commercial necessity for both ilmenite supply and synthetic rutile off take agreements, Austpac developed the concept of building a plant in eastern Australia. In late 2003, the Company entered into a Memorandum of Understanding (MOU) to purchase ilmenite from Consolidated Rutile Limited, and a second MOU with Iluka Resources to sell ERMS SR from a conceptual plant in Queensland. The MOUs were subject to Austpac obtaining sufficient capital to complete a 'Bankable Feasibility Study', and it has not been possible to raise sufficient funds in the Australian market to complete this Study. The Company recently commenced evaluating alternative opportunities to the Queensland project.

To maintain the impetus to commercialise ERMS SR, Austpac decided to focus on the Murray Basin, which has two new heavy mineral deposits, both of which are expected to commence production in 2006. The high chrome, low value ilmenite concentrates from these operations can be readily upgraded with the ERMS SR process. Ilmenite supply and synthetic rutile sale agreements will of course need to be in place to complete a detailed feasibility study. Preliminary discussions in this regard are encouraging and are expected to develop over the coming months.



Conceptual design for a commercial synthetic rutile plant

Directors' Report on Operations

The ERMS SR Demonstration Plant

The first step toward the feasibility study for a commercial operation is an integrated plant to demonstrate the ERMS SR technology. This plant must be operated at a sufficient scale, and for a sufficient time, to satisfy engineering design requirements and to prove the risks associated with the technology and its scale-up to a commercial plant are low. Accordingly, in October 2004, Austpac committed to convert the Company's pilot plant facilities at Kooragang Island, Newcastle, to an ERMS SR Demonstration Plant.

The new plant will be fully integrated, with ilmenite roasting, leaching (using Austpac's proprietary continuous leach reactor), washing and calcining to produce high grade synthetic rutile, together with a complete EARS acid regeneration plant making super-strength (25%w/w) hydrochloric acid and iron metal pellets for market assessment. It was initially designed to produce at a nominal annualised rate of 1,500 tonnes of high grade synthetic rutile and over 1,000 tonnes of iron pellets, but consideration is being given to increasing the capacity of the leaching/washing/calcining and the EARS acid regeneration sections. The new plant and the feasibility study were estimated to cost around $5 million, however it was decided to commence the upgrade using existing cash reserves while we sourced additional funds to complete the project.

Following the preparation of the detailed design and layout of the Demonstration Plant, the upgrade commenced in November 2004 with the removal of superseded or surplus equipment from the process tower. The existing tower was then completely refurbished and painted to prevent corrosion, and steelwork was extended over several areas to enclose or support additional facilities. During the first half of 2005, critical parts of the tower were clad with coated steel sheeting to ensure operations will not be affected by weather. The magnetic separation building, the services building (the high and low pressure air compressors and the boiler) and the materials handling hoist housing were also completed. A large area between the outbuildings and the tower has been roofed, and two prefabricated buildings, which will be used as a control room and a motor control centre, were placed on the tower superstructure.

Oxidation roaster and pre-heater ready for installation

While the Demonstration Plant will be fully integrated, it has been divided into three major process areas. These are:

- **the roasting and magnetic separation section,**
- **the continuous leaching, filtering, washing and calcining section, and**
- **the EARS acid regeneration and iron metallisation section.**

The roasting/magnetic separation section forms the "front end" of the plant, and the leaching/calcining and the EARS/metallisation sections form the "back end" of the plant.

The front end of the plant has a design capacity of roasting 3,000 tonnes of ilmenite per year (equating to 1,500 tpa of synthetic rutile). It will be possible to run the front end and the back end of the plant sequentially, which will be essential if the capacity of the back end of the plant is increased. This option is an anticipated contingency in the current construction planning.

Austpac's technologies have been developed around fluid bed roasting, and the Company's engineers have extensive experience in the design, construction and operation of fluid bed roasters, the largest so far being equivalent to 20,000 tpa capacity. The roasting section consists of four fluid bed vessels; the Demonstration Plant will ultimately have a total of twelve fluid bed vessels, with a further four in each of the leaching/calcining and the EARS/metallisation sections. As a result, the completed Demonstration Plant will be one of the most extensive and instrumented fluid bed demonstration facilities in the world.

Construction of materials hoist shaft

Directors' Report on Operations

Installation of ERMS afterburner

ERMS oxidation fluid bed roaster

Installation of pre-heater

Multi-pole magnetic separator

ERMS reduction fluid bed roaster

Anaerobic cooler

The ERMS SR Demonstration Plant (continued)

The front end roasting section has been fabricated in-house at Kooragang Island and by September 2005 was nearing completion. The ilmenite pre-heater, oxidation and reduction roasters (all fluid beds), the innovative two stage anaerobic cooler (of which the second stage is also a fluid bed), the cyclone and afterburner for reduction gases, and the off gas handling systems have been constructed and installed in the process tower. The hot solids transfer lines, incorporating specially designed 'L'-valves and 'spade' valves to be used in the commercial plant, as well as the high pressure air lines and thermocouples, are now being installed.

High temperature solids isolation valve

The materials handling system consists of four bins (for ilmenite, coarse and fine coals, and roasted ilmenite), conveyors, weigh hoppers and mass flow feeders for the various roasters together with an automatic materials hoist. This equipment will be installed in a six metre high clad structure, which is being placed on top of the process tower and over the raw materials hoist shaft. Fabrication of the structure is well advanced. All that remains to complete the front end of the plant are the electrical systems, including the programmable logic controller, the blowers and modifications to the drum magnetic separators.

Installation of solids return seal

Austpac's engineers have completed the design and costing for the back end of the plant (leaching/calcining and EARS acid regeneration) and have allowed for two possible nominal production capacities; 1,500 tpa and 3,000 tpa of synthetic rutile. The larger capacity will cost an extra $1 million, but size is important from a commercial standpoint.

The scale-up (or upsizing) factor from the Demonstration Plant to the first commercial plant should be as low as possible to minimise risk. It is generally considered the factor should be less than 25:1 to be acceptable from a financing standpoint. At 1,500 tpa capacity, scale-up to a 30,000 tpa commercial plant would be 20:1; 3,000 tpa capacity would allow the commercial plant to be 60,000 tpa or larger.

The decision on final capacity and commencement of construction of the back end of the plant is dependent upon the Company's source of funds. Once these are secured it will take five months to build the back end. Thus it is anticipated the Demonstration Plant could be operational in the first half of 2006, culminating in a feasibility study and then, subject to project financing, the commencement of construction of a commercial plant later in the year.

Protecting our intellectual property

The ERMS SR process is unique among synthetic rutile processes in that it has two valuable products; high grade synthetic rutile and iron (also referred to as Direct Reduced Iron or DRI).

The iron leached from the ilmenite forms iron chloride, which is then processed through the EARS hydrochloric acid regeneration system to produce iron pellets, rather than being wasted as fine iron oxide sludge or red oxide dust, as it is in other processes. To preserve this advantage, a patent application was lodged in June 2005 to provide worldwide protection covering the conversion of iron chlorides to iron metal. Because the EARS process also has applications in steel pickling, we believe this patent will be commercially important in the future.

Austpac already holds patents over the ERMS roasting process, the EARS acid regeneration process and the innovative CLR (Continuous Leach Reactor), and maintains confidentiality over the Company's know-how in the ERMS SR production, anaerobic cooling, and other proprietary process steps.

ERMS SR >96% TiO_2

Iron metal co-product >95% Fe

Site selection for the first commercial plant

In June 2005, Austpac initiated a study of potential sites for an ERMS SR plant to process chrome-contaminated ilmenite concentrates purchased from the new mineral sand mines in the Murray Basin. These mines have the potential to supply a world class ERMS SR facility.

Important criteria being considered in assessing plant sites include access to ilmenite, proximity to rail transport, suitable port facilities, skilled labour and the availability and cost of energy. A number of sites in New South Wales, South Australia and Victoria are being evaluated. Positive discussions have already been held with the relevant Government authorities in South Australia and Victoria, and will continue over the next six months as the site selection process proceeds. The site selection study is being undertaken in conjunction with the construction of the Demonstration Plant so that the results can be used in the ERMS SR plant's feasibility study.

International interest

During the year under review, testwork was successfully undertaken at the Newcastle pilot plant for North American and other companies, generating further interest in our technologies. One of these programs resulted in Austpac preparing a formal proposal to build a roasting and calcining unit in Canada, and the client is still considering the implementation of this proposal.

There has been increasing overseas interest in the Company's achievements. The high regard for our team is reflected in Managing Director Mike Turbott's role as Co-Chairman of 'Intertech TiO_2 2005', the international titanium dioxide pigments and minerals conference held in France during March 2005. Austpac's Senior Process Engineer John Winter presented a well-received technical paper on the ERMS SR technology at this major event.

Austpac shareholders visit Kooragang Island

Overview of Austpac's technologies

Austpac has developed six innovative processes for the upgrading of the common titanium mineral ilmenite. These processes have direct application to the mineral sands, the titanium dioxide and other industries.

- **ERMS** *(Enhanced Roasting and Magnetic Separation)* is a proprietary high temperature roasting process, which selectively magnetises ilmenite so that it can be easily separated from other minerals which are deleterious contaminants, such as chromite.

  In an ERMS roast, the titanium component of ilmenite is converted into the rutile form, which is insoluble in acid, while the iron component remains soluble. ERMS-roasted ilmenite is suitable for the chloride process, for titania slag production, or the process can be modified and incorporated into the ERMS SR process for making high grade synthetic rutile.

ERMS fluid bed roasting

- **EARS** *(Enhanced Acid Regeneration System)* is a proprietary process for regenerating hydrochloric acid from spent metal chloride liquors. Leaching ilmenite produces large quantities of iron chloride liquor which are processed in an EARS plant to make strong (super-azeotropic) acid, while the iron is converted into a metallised form suitable for use in the steel industry. This latter step is also protected by Austpac's new 'iron chloride to iron metal' patent application. The DRI can be used to substitute iron ore in steel manufacture without any further greenhouse gas emissions. Recovering acid contributes significantly to reducing the costs of synthetic rutile manufacture. The EARS process has also been used to produce nickel oxide pellets from nickel chlorides, so it has a potentially valuable application in the nickel industry.

Magnetic separation of ERMS SR

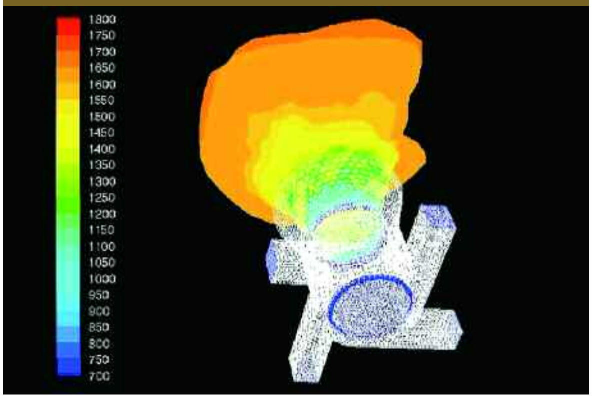
- The **ERMS SR** process combines Austpac's technologies and know-how in a number of innovative and now well-proven process steps to produce a very high grade synthetic rutile from any type of ilmenite. Ilmenite is initially conditioned with a modified ERMS roast, and then rapidly leached at atmospheric pressure with strong hydrochloric acid to remove the iron, leaving a network of rutile crystals in the former ilmenite grain. This 'synthetic' rutile is then washed, filtered and heated (calcined) to make the final saleable product.

  The ERMS SR process has the unique advantage of producing a very high grade product (typically 96% to 98% TiO_2). This grade means that ERMS SR is significantly more pure than most other commercially available synthetic rutiles. The ERMS SR process is the only continuous synthetic rutile process in the world, and it produces a saleable iron co-product rather than the waste iron oxide muds produced by other synthetic rutile processes. The ERMS SR process is the most environmentally friendly process for the production of synthetic rutile, with no solid or liquid discharge.

  An ERMS SR plant is less capital intensive than synthetic rutile plants employing other processes.

- The **CLR** *(Continuous Leach Reactor)* is a proprietary vessel designed by Austpac to continuously leach ilmenite. It replaces the batch system still used by other synthetic rutile producers. The CLR process simplifies operations and reduces the size of the equipment, which is reflected in lower capital and operating costs for the leach section of an ERMS SR plant. The CLR has applications in other industries where continuous leaching is an advantage.

Simulation of combustion in the afterburner



➔ The **LTR** *(Low Temperature Roasting)* process was developed to separate ilmenite from deleterious heavy minerals so that the ilmenite is still suitable for use in both the sulfate and the chloride pigment processes. By using a low temperature fluid bed roasting technique, the magnetic susceptibility of the ilmenite can be enhanced sufficiently to allow magnetic separation without affecting its solubility in sulfuric acid.

The LTR process has been licensed to BeMaX Resources to remove chromite from ilmenite concentrate from the Pooncarie project in the Murray Basin. The LTR process has also been used to upgrade iron minerals for the steel industry, and in 2004 Austpac designed and operated a 2.5 tonnes per hour LTR roaster for New Zealand Steel at their Glenbrook facilities near Auckland.

Assembling an LTR roaster

➔ The **BTS** *(Beneficiated Titania Slag)* process was developed in conjunction with Iscor of South Africa. BTS combines the Company's roasting, leaching and acid regeneration technologies to increase the TiO_2 content of slag and thereby enhance its market value.

Murray Basin – E.L. 4521 Horsham, Victoria

Austpac's WIM 150 deposit contains approximately five million tonnes of zircon and approximately 12.5 million tonnes of ilmenite; a very large resource of heavy minerals. Austpac demonstrated some years ago that a +95% TiO_2 synthetic rutile can be produced from the fine grained WIM 150 ilmenite, and has also successfully agglomerated this product. However, at that time the Company was concentrating on processing coarse grained ilmenite and full scale test work on WIM 150 ilmenite was deferred.

In February 2004, Austpac and Australian Zircon N.L. (formerly Southern Titanium N.L.) signed a farm-in agreement to investigate the potential for the development of Austpac's WIM 150 heavy mineral deposit. Australian Zircon will earn an 80% participating interest by completing a bankable feasibility study on WIM 150, after which Austpac may elect to maintain a 20% working interest or convert to a 10% net profit interest.

Australian Zircon commenced work with a comprehensive literature study and a field inspection of the WIM 150 resource. They initially assessed a small sample of a WHIMS non-magnetic fraction to establish the characteristics of the zircon and high-titanium products. They then collected five tonnes of the fine grained mineralisation which was shipped to Roche Mining (MT) in Queensland for concentrating and dry milling to produce mineral products for external market assessments.

Australian Zircon reported that Roche Mining has developed a multi-stage wet processing gravity flow sheet which produced an acceptable grade heavy mineral from the WIM 150 bulk sample, with a zircon recovery of 87% (high by industry standards). They stated that "this is the best test result yet achieved with the fine grained WIM 150 core mineralization and prospects for major zircon production from this resource have improved markedly".

While a number of marketing aspects need to be addressed with respect to WIM 150 zircon, Austpac will continue to work with Australian Zircon to ensure the WIM 150 deposit continues to move toward development.

Schedule of Mining Tenements in Victoria at 30 October 2005

Nature of Title	EL 4521	ELA 4532
Area	377 sq km	377 sq km
Name	Horsham	Horsham
Status	Granted 1/12/00 for 5 years	Application pending processing under the Native Title Act
Registered Holder	Austpac Resources N.L.	
Beneficial Interests of Austpac Resources N.L. Group	100%	100%

Corporate Directory

Members of the Board

Mr Terry Cuthbertson *ACA*
Chairman

Mr Michael J. Turbott *BSc (Hons), FAusIMM, MAIG*
Managing Director

Mr Robert J. Harrison *FAICD*
Director

Secretaries

Company Secretary

Mr Nicholas J. Gaston *ACIS*

General Managers

Mr John C. Downie *MIE, MAusIMM*
General Manager, Project and Technology Development

Mr Michael J. Smith *BSc, MSc, RPGeo, FAIG, MGSA, MASEG*
General Manager Exploration

Principal Office

Level 12, 23 Hunter Street
Sydney, NSW 2000
Phone: (02) 9221 3211
Fax: (02) 9223 1975
Email: apgtio2@ozemail.com.au
Website: www.austpacresources.com

Auditors

KPMG, The KPMG Centre
10 Shelley Street, King Street Wharf,
Sydney, NSW 2000

Solicitors

Gadens
77 Castlereagh Street
Sydney, NSW 2000

Share Registry

ASX Perpetual Registrars Limited
Securities Registration Services
580 George Street, Sydney, NSW 2000

Bankers

ANZ Bank
68 Pitt Street, Sydney, NSW 2000

Stock Exchange Listing

Australian Stock Exchange Limited (Melbourne)

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AUSTPAC RESOURCES N.L.

Austpac Resources N.L.

ABN: 87 002 264 057

Level 12, 23 Hunter Street
Sydney, NSW 2000

GPO Box 5297
Sydney, NSW 2001

Phone: +61 (0) 2 9221 3211
Fax: +61 (0) 2 9223 1975
Email: apgtio2@ozemail.com.au
Website: www.austpacresources.com