

3 September 2004

## **STATUS REPORT FOR SHAREHOLDERS**

Austpac Resources N.L. is a mineral processing company and an emerging synthetic rutile producer. Austpac's processes include technology to transform ilmenite into high grade synthetic rutile, an important feedstock for titanium dioxide pigment production. They can also be used to beneficiate a range of heavy minerals, and to process waste chloride streams from a number of industrial operations. All the processes are environmentally friendly.

### **SIGNIFICANT RECENT DEVELOPMENTS**

The Company is advancing opportunities to commercialise its technologies, not only through the production of synthetic rutile but also in upgrading heavy mineral concentrates and the treatment of waste chloride streams from a number of industrial operations. We have recently been approached by three international groups interested in our technologies. One group has undertaken a detailed engineering review of our technologies with a view to assist funding the development of our projects. We are presently testing material for a second international group, and have testwork underway for several Australian groups. We have already licensed three of our technologies (LTR roasting with New Zealand Steel and BeMaX Resources; and BTS and EARS with Anglo's subsidiary, Kumba Resources), and we are confident that further commercialisation of our technologies is imminent.

### **AUSTPAC'S TECHNOLOGIES**

- The **ERMS**<sup>1</sup> high temperature roasting process magnetises ilmenite so it can be easily separated from other heavy minerals.
- The **LTR** low temperature roasting process, which is now proven, is used for conditioning and separating iron minerals, including ilmenite.
- The **ERMS SR** oxidation/reduction roast facilitates the separation of ilmenite and conditions it for rapid leaching in hydrochloric acid (HCl) to produce ultra-high grade synthetic rutile.
- The **CLR**<sup>2</sup> continuous leach vessel enhances the efficiency of the leaching process for the production of synthetic rutile.
- The **EARS**<sup>1</sup> acid regeneration system treats spent iron chloride solutions and produces strong ("super-azeotrope") HCl as well as a valuable iron metal co-product. EARS has also been proven for nickel chlorides and is applicable to other metal chlorides.
- The **BTS**<sup>1</sup> (Beneficiated Titania Slag) process, developed in conjunction with Iscor of South Africa, combines the Company's roasting, leaching and acid regeneration technologies to increase the TiO<sub>2</sub> content of slag and enhance its market value.

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<sup>1</sup> Patented

<sup>2</sup> Patent Pending

These technologies have been developed by our team of innovative engineers at our pilot plant at Kooragang Island, Newcastle. The plant is undergoing refurbishment in preparation for an extensive test program on the ERMS SR process. Austpac will soon have one of the most extensive fluid bed roasting test facilities in the world. We will also have equipment to handle and treat large volumes of hydrochloric acid, as well as a complete EARS acid regeneration plant which will allow us to test other materials. Two very significant developments over the past few years have been the invention of a continuous leach vessel and, as part of the EARS process, the development of a technique to reduce iron oxide pellets to iron metal. The ERMS SR process is now a continuous synthetic rutile process and the only one that produces iron metal as a saleable co-product. Other SR plants use less efficient batch processes and produce fine black or red iron oxide sludges that create difficult and costly disposal problems.

Austpac's most advanced projects at present are:

1. **ERMS SR Plant:** Austpac plans to establish an ERMS SR synthetic rutile plant on the east coast of Australia. This will combine the ERMS SR roast, the CLR leach vessels, and the EARS processes to produce 30,000 tpa of ultra-high grade synthetic rutile for TiO<sub>2</sub> pigment production and 21,000 tpa of co-product iron metal pellets for use in the steel industry.
2. **LTR Plant:** New Zealand Steel, a subsidiary of Bluescope Steel, has built and operated a 2.5 tph LTR test plant to recover and treat tailings at their Glenbrook steel works. This has proven the technology. New Zealand Steel is considering a larger commercial facility, and other opportunities to apply LTR technology are being assessed.

## **ERMS SR PLANT - EAST COAST AUSTRALIA**

Austpac's prime objective is to establish a commercial plant using the ERMS SR process and has plans for a 30,000 tpa plant producing the world's highest grade synthetic rutile for export. A long term supply of ilmenite feedstock and a contract for the sale of the synthetic rutile product are essential to ensure this project is bankable.

In October 2003, Austpac entered into an agreement with Consolidated Rutile Limited (CRL) for the long term supply of ilmenite to a 30,000 tpa ERMS SR plant proposed by Austpac for the eastern seaboard of Australia. This plant will produce very high grade synthetic rutile (>97% TiO<sub>2</sub>) which will be sold as feedstock for the manufacture of titanium dioxide pigment. At the same time, Austpac also signed an agreement with Iluka Resources Limited (Iluka) for the sale of synthetic rutile to Iluka from the proposed ERMS SR plant. Both contracts are subject to the successful completion of a Bankable Feasibility Study (BFS) by Austpac.

The BFS will cost \$4M and these funds are presently being sought via a Shareholder Share Purchase Plan. Of this amount, \$2.5M will be used to upgrade the Kooragang Island facility to reduce the scale-up factor from the pilot plant to the 30,000 tpa plant and to operate the plant for sufficient time to generate data for final engineering design. The remaining \$1.5M will be used to prepare the independent BFS report and cover financing costs.

The estimated cost of the 30,000 tpa plant is \$A50M. The prefeasibility study estimates indicate the project will be economically robust, with a before-tax net operating cash flow of over \$A18M p.a. and an IRR of 29%.

The BFS will take approximately six months to complete, including three months testwork at the Kooragang Island pilot plant on a bulk sample of ilmenite concentrate. This will be followed by detailed engineering, design and costing of the ERMS SR plant by an independent engineering consulting group. Project financing will follow a positive outcome and a decision to commence project construction could be made as early as the second half of 2005. Construction and commissioning will take 15 months and, provided funds are in place, production will commence in 2006.

### **LOW TEMPERATURE ROASTING (LTR) PLANT – NEW ZEALAND**

In January 2004, New Zealand Steel completed construction of a 2.5 tonnes per hour LTR plant to test the suitability of Austpac's LTR process for the treatment of tailings from the Waikato North Head iron sand mine. This technology involves low temperature fluid bed roasting to selectively enhance the magnetic and other properties of specific minerals. LTR testwork for N.Z. Steel at Austpac's pilot plant showed that iron minerals now being rejected can be recovered and conditioned for use in the steel making process. The LTR process thus has the potential to add considerable value to NZ Steel's operations.

The LTR plant, built at the Glenbrook Steel Works south of Auckland, comprises a series of two fluid bed roasters and a magnetic separator. Austpac engineers assisted with the final stages of construction and plant commissioning, which was completed during the first quarter of this year. The plant operated continuously during the second quarter in accordance with the design specifications and at or above design capacity. The trial production run was completed by the end of June, by which time the plant had processed approximately 1,500 tonnes of heavy mineral concentrate and generated large parcels of iron mineral products for assessment. The extended run time has successfully eliminated any process risk associated with the technology. Additionally, the development of operating, training and safety procedures for the LTR plant, together with the ability to prepare a proven mass and energy balance for the LTR process, has further enhanced the value of the technology.

The successful operation of an LTR plant over a significant time period has proven that the technology is sound and, as we are now in a position to give process guarantees, it can be confidently used commercially by any group that requires low temperature roasting for their projects. A representative of one group interested in using the LTR process visited the plant during the extended roasting run and was satisfied with the plant's performance. Discussions are underway with a second group also interested in using Austpac's now-proven LTR technology.

The first commercial agreement for LTR was concluded with BeMaX Resources in 2002, and fees for the use of the process are payable once the technology is used. BeMaX plans to install an 18 tph LTR roaster to beneficiate chrome-rich ilmenite as part of the second stage of the development of their Pooncarie Project, which includes the establishment of the full scale mineral separation plant at Broken Hill. The Company is confident that further applications for the technology will be recognised within the coming year and that the LTR process is on track for further commercialisation.

## **TESTWORK PROVES THAT EARS IS APPLICABLE TO NICKEL CHLORIDES**

In November 2003, Inco Limited (Inco, formerly International Nickel) commenced an evaluation of Austpac's EARS hydrochloric acid regeneration process for use in the Goro nickel project in New Caledonia.

Austpac patented the EARS process in 1992 and since that time has refined the technology, primarily for the processing of iron chloride solutions generated by leaching ilmenite in the Company's ERMS SR synthetic rutile process. Inco's aim was to use the EARS process to convert nickel chloride solutions into pure nickel oxides and hydrochloric acid, and to establish whether EARS had potential to significantly reduce the capital and operating costs of the acid regeneration section of the Goro project.

A testwork program using a nickel chloride in the EARS process was successfully completed at the Kooragang Island pilot plant early in 2004. The work proved that the EARS process is able to treat nickel chlorides and so is applicable to the nickel industry.

## **FURTHER OPPORTUNITIES FOR AUSTPAC'S TECHNOLOGIES**

Austpac's technologies were developed for upgrading ilmenite. However new applications have been recognised and are being evaluated to broaden the scope for the Company. As demonstrated by the work with Inco, the EARS process has been shown to have applications in the nickel industry. It also has broad application in the steel industry where large volumes of waste iron chlorides are generated by steel pickling plants, and in the galvanising industry, which produces iron and zinc chloride waste. Both the steel pickling and the galvanising industries could use the EARS process not only to efficiently recycle acid, but also to recover metal units now being lost with the waste chloride solutions.

## **CONCLUSION**

The Company is poised to embark on its first major commercial venture with the planned ERMS SR plant to supply high grade feedstock to the titanium pigment industry. The LTR process, which conditions iron minerals including ilmenite, has now been proven and is being commercialised. However, it is important to note that Austpac has broadened its focus and evolved over the last year from a group concentrating solely on beneficiating titanium minerals, into a company whose technologies are also proven to be applicable to the iron and nickel industries. Our innovative engineering team and our sophisticated pilot plant facilities continue to attract a diverse range of companies wishing to enhance their projects or operations, and will create new commercial applications for the benefit of our shareholders.

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