RFC Ambrian

Communication to Clients, Co-investors and Supporters

Dear Friends and Colleagues

2017 in Review

I am writing this newsletter to thank you, our clients, co-investors and the supporters of our business, and provide you with an update on some of the exciting developments that have taken place at RFC Ambrian over the past 12 months.

For many of us operating in the natural resources space, the last few years have been a grind. In our own business the revenue line has been flat for the past four years, and it has often felt that it required a significantly greater effort to close transactions and win business. In talking to colleagues in the sector, the typical response I have received is that we have done well relative to our competitors, many of which have experienced significant downturns or, indeed, ceased operating completely.

Early in 2017 RFC Ambrian formed the view that the mining cycle had bottomed in late 2016, and that green shoots were emerging. In May we published a paper setting out the reasons why we thought the resources market had turned. It can be viewed here.

This led us, together with a number of entrepreneurial friends and co-investors, to devote our attention to identifying opportunities in our sector, subsequently leading to investments in Panthera Resources, Montem Resources and Wave Swell Energy.

A consequence of the changing market conditions has been that the nature of the advisory business moved from being predominantly sell-side mandates for major miners to buy-side mandates and capital raisings in the latter part of the year. Our completed transactions over 2017 included:

- **Base Resources** — A$100m capital raising by way of a placement and accelerated rights issue, and advice on the acquisition of Ranobe
- **Panthera Resources** — Capital raisings and listing on AIM
- **West Cumbria Mining** — Secondary capital raising to complete a BFS
- **Elk Petroleum** — Capital raising by way of the issue of convertible notes
- **Mariana Resources** — Sale of the company to Sandstorm (the largest M&A transaction on AIM for the year)
- **Anglo American Corporation** — Sale of the Dartbrook coal mine

RFC Ambrian has also facilitated a number of partnerships to commercialise disruptive technologies in our sector developed by CSIRO[1], and these have already led to the formation of (and investment in) Chrysos Corporation and NextOre. Following is a summary of some our investment partnerships and developments of the past 12 months.

Investments Partnerships

WEST CUMBRIA MINES

West Cumbria Mines is a private company RFC Ambrian partnered with in late 2013 to assist in the formation of the business and the introduction of EMR capital. It is now finalising a feasibility study. The company is looking to produce 2-3Mtpa of high-quality metallurgical coal from an underground operation for both the domestic UK and export markets.

It is expected to be a very long-life operation, with exploration licences covering some 200km^2, with estimated resources at around 750Mt.

Development of the mine is planned to start later this year.

PANTHERA RESOURCES

Panthera Resources is focused on the exploration and development of gold projects in India and West Africa. **The company has a 70% interest in the Bhukia Project, which is a world-class asset**. While not JORC-compliant, the Geological Survey of India has estimated a resource of 6.7Moz at a grade of 2 g/t; this makes it **one of the largest, relatively high-grade, shallow, open-pittable discoveries made globally in the past 15 years**. Mineralisation is open in all directions, and regional exploration points to a very large mineralised endowment.

Primary mineralisation extends from near-surface and suggests that Bhukia has **the potential to develop into a large, bulk mineable open-pit mining operation**. Preliminary metallurgical test-work indicates that the deposit is non-refractory and that recoveries of 85-90% can be expected.

Prospecting Licence approval expected — New laws, positive moves by the Central Government and helpful discussions with the State Government over the past year have all created momentum in the approvals process, which had previously been stalled. While timing remains uncertain, Panthera now believes that a final approval could be achieved within the next 6-18 months.

RFC Ambrian partnered with Panthera to raise seed and subsequent capital, leading to the company listing on AIM in December.

CHRYSOS CORPORATION

Chrysos Corporation is set to make gold-fire assays a thing of the past as it commercialises its *PhotonAssay*™ technology, which provides 'assays at the speed of light'. It is estimated that approximately US$1bn pa is spent by gold producers around the world on fire assay services. However, due to lengthy delays, explorers and producers are unable to incorporate assay results into their real-time operations. Chrysos could be about to change all that.

[1] CSIRO is a world-leading research body for innovation and the development of scientific ideas. Funded by the Australian Government, CSIRO has been responsible for many inventions, including WiFi, plastic bank notes and extended wear contact lenses

RFC Ambrian has acted as business incubator and provided advisory and fundraising assistance to Chrysos since its inception in 2016. We raised the initial seed capital in early 2017. Since then, Chrysos has made remarkable progress; just ten months after that fund raising, the first PhotonAssay Max unit has completed Factory Acceptance Testing (FAT) at Nuctech's manufacturing plant in China, and is now being packed up to be shipped to the first customer (and development partner), Ausdrill's MinAnalytical in Perth. The FAT process involved the analysis of 1,600 samples and used certified reference materials that were used for calibration and performance validation, along with materials supplied by several clients, and proved that the technology works in practice.

The first unit is expected to be commissioned in early March, with Ausdrill then planning to offer *PhotonAssay* as part of its grade control drilling service for client mines. It has garnered huge interest from the mining industry, with corporates accounting for around 20% of the world's gold production having sent samples for testing as the first unit underwent FAT.

Assaying of mineral samples to determine their gold content is a fundamental step in gold exploration, mining and processing. While fire assay is currently the industry standard method for determining gold content in ore samples, this is a laborious and time-consuming manual process. It has a slow turnaround, requires the complete destruction of the samples, produces lead-contaminated waste and has OH&S risks for fire assay technicians.

Chrysos has a truly disruptive technology. The unique *PhotonAssay* method (this is not XRF) has been developed over the past 15 years by CSIRO. The Chrysos technology provides rapid, accurate, non-destructive and fully automated analysis of ore grade. It takes a few minutes from sample presentation to result, at a rate of up to 80 samples per hour. It is sensitive, has 2-3x improved accuracy on fire assays, requires minimal sample preparation (crushed rock) and no toxic or caustic reagents are required. Fire assays cost mining companies considerable time and money, and lead to an information lag between what is actually going on in the mining and processing operations at any given moment.

In effect, this is real-time assaying. The productivity and efficiency benefits for mining companies will be enormous. At the moment Chrysos can assay for gold only, but additional elements, including silver, copper, lead and zinc, could be added during 2018. Chrysos is planning to provide assay units to larger mine sites and regional mining centres on a cost per sample basis.

PhotonAssay unit as seen from the front. The sample input and output are located on the left- and right-hand sides respectively

NEXTORE

NextOre's unique Magnetic Resonance (MR) technology, developed over the past 12 years by CSIRO, measures the grade of primary crushed ore in real time as it passes through the sensor on any conventional conveyor belt. The sensor directs a downstream diverter selectively to reject 'pods' of barren material. The result is lower tonnage feed at a higher grade and an increased overall recovery.

The technology:

- delivers a measurement of weight percentage grade rather than grade estimates based on ore characteristics;
- is a genuine bulk-sorting technology, capable of sensing at rates of 5,000tph on a single belt;
- gives real-time measurements delivered in seconds;
- requires no ongoing calibration;
- analyses primary crushed ore — no further preparation is needed;
- is able to target multiple minerals using a single sensor; and
- is easily installed onto existing belts.

The MR sensor delivers highly accurate, real-time grade measurements and instructs a diverter to remove material below a cut-off grade as opposed to estimating whether material should be rejected or not based on characteristics of the sensed material combined with statistical analysis.

The technology can materially enhance the value of operations. Examples of this include:

- Reducing processing plant size by:
  - lowering the overall capital cost to achieve the same metal production; or
  - eliminating or reducing the requirement for capital expansion projects to maintain output when an orebody has a declining grade profile.
- Reducing energy and water consumption as:
  - comminution, flotation and leaching account for the vast majority of energy and water usage at mine sites; and
  - feed tonne reductions deliver proportionate reductions in energy and fresh water requirements.
- Enabling the use of smaller tailings footprints.

NextOre is currently working with several mining companies to install MR sensor units on two Tier 1 copper mines and a high-grade underground operation that has hoisting constraints. The plan is to have these installations in place by mid-2018 and the technology has the potential to improve the economics on each of these operations materially.

WAVE SWELL ENERGY

Wave Swell Energy Limited (WSE) is an unlisted Australian company that has developed the *UniWave*™, a wave energy converter (WEC) unit (patent pending) that employs a proprietary, unidirectional airflow design to convert wave energy into electric power.

The *UniWave*™ device is forecast to achieve **sector-leading power output following evaluation conducted at the University of Tasmania's Australian Maritime College (AMC), at costs competitive with current wind and solar installations**. The design of the unit is simple, effective and scalable. Importantly, the *UniWave*™ device has no moving parts beneath the water.

WSE has entered into a Memorandum of Understanding and is in the process of finalising a Power Purchase Agreement with Hydro Tasmania to install an energy converter unit off the south-west coast of King Island (Bass Strait, Tasmania, Australia). RFC Ambrian has invested in WSE and partnered with the company to raise funds to develop this pilot plant.

This unit will be integrated with the existing King Island Advanced Hybrid Power Station (KIAHPS), which combines energy produced by wind, solar and biodiesel sources with battery storage and grid stabilisation software. The installation and subsequent data collection through the KIAHPS will demonstrate the full-scale commercial viability of the *UniWave*™ energy conversion device.

WSE is targeting the installation of the *UniWave*™ energy conversion unit at King Island prior to the end of 2018.

MONTEM RESOURCES

Montem Resources is a private company that owns six metallurgical coal properties in Alberta, Canada, with a combined in-place resource of around 220Mt. RFC Ambrian assisted with Montem's formation, is an investor, and raised seed capital to prepare the company for an ASX IPO in 2018.

Funds raised will be used to complete a feasibility study during 2018 on the development of the Tent Mountain Project, Montem Resources' most advanced coking coal asset.

The project is a very exciting development; it already **has an active coal mine and Environmental Permits**, and **coal quality, is very similar to the medium-to-higher volatile hard coking coals currently being produced from the Elk Valley region**. The company is moving towards production of this asset in 2HCY18.

If any of these developments are of interest to you, please feel free to contact me.

Again, to our partners, clients and friends, thank you for the support we received in 2017, and we look forward to working with you in 2018.

Thank you and regards,

Rob Adamson
Managing Director