

**Chatham Rock Phosphate Limited**  
**Final Announcement/Annual Report for the Year ended 31 March 2012**

**Financial Result**

Your directors submit the audited financial statements of Chatham Rock Phosphate Limited (CRPL) for the year to 31 March 2012. The trading result for the period was a loss of \$741,000 (2011 loss \$629,000).

An analysis of the result is provided in the table below

	Year to 31 March 2012 (\$,000)	Year to 31 March 2011 (\$,000)
Income	20	84
Administrative expenses	761	630
Exploration costs written down		83
Impairment on investments		
Net Profit (loss) before income tax	(741)	(629)
Income tax		
Net profit (loss) after tax	(741)	(629)

The increased reported deficit for the year to 31 March 2012 reflected a higher level of corporate activity.

Issued capital during the period increased from 34,526,660 to 64,710,179 shares.

Shareholders' Funds increased during the period from \$4,603,000 to \$8,245,000.

**Operating highlights**

For Chatham Rock Phosphate the past year has been one of major milestones in progressing our rock phosphate development project.

We achieved considerable success in raising further equity to finance the work programme and made enormous advances towards our key objective of starting to mine the deposit in 2014.

Our two main areas of focus this year have been the significant interaction with Boskalis on their detailed designs of the phosphate recovery system, and preliminary work required before we apply for a mining licence and a marine consent.

Very complex information is required for these two approvals and it involves highly technical scientific and engineering evaluation as well as widespread ongoing consultation with a range of government and non government organisations including the trade, resource, primary industry, environmental, conservation, iwi and community sectors.

In addition we have been building our public profile in the investment and industry sectors, both in New Zealand and internationally.

The progress achieved demonstrates the determination and enthusiasm of a highly skilled project team with a wealth of technical and commercial experience.

### **Capital Raising**

In June 2011 we raised a further \$1.6 million from the exercise of all the June 2011 options.

In late 2011 we decided to delay an Initial Public Offering on an international stock exchange because of poor market conditions and a decision was also made to fund ongoing activities by seeking existing shareholder support by means of a share purchase plan. This raised approximately \$325,000 and in addition placements of 986,110 shares were made to qualified investors at 20c per share.

In February 2012 agreement was reached with United States-based private equity fund Subsea Investments to progressively invest \$USD 6 million in the company. At the time of writing US\$5.3 million of this had been invested.

As part of that investment, Subsea also holds 30 million options which, if all exercised, would generate an additional \$US9 million in new capital for CRP.

Although it remains a priority to secure full funding for the project, we are considering alternative ways of financing this progressively through to the start of mining. These options still include an IPO on an international market when market conditions improve. Whichever option we select, we can act quickly because the documentation is well advanced, having prepared a draft prospectus and a project technical report.

As part of building the company's presence in international capital markets, CRP has entered an arrangement with Edison Investment Research to produce independent research over the next year. Edison is one of the largest companies of its type worldwide with more than 300 corporate clients, including a big focus on mining research with nine dedicated analysts and coverage of 75 mining companies on major exchanges around the world.

CRP decided to invest in the research as investors and share brokers often ignore our company as an investment opportunity because regulations governing financial

advisers tend to discourage them from making recommendations because no third party research on the company presently exists.

### **Research cruises**

Scientists and engineers are now in the midst of the mammoth job of studying the wealth of data gathered during 48 days of surveying on the Chatham Rise.

CRP used the 100 m *Dorado Discovery*, based in New Zealand over the summer, to conduct four research surveys, using a range of high tech equipment and collected 35 tonnes of phosphate rock and sandy silt as well as a wealth of technological data. Equipment used include a remote operated vehicle (ROV), as well as box coring, vibrocoring and grab sampling equipment.

The data and samples acquired by the four cruises will be used for:

- The application for the mining licence
- The environmental impact assessment report required to accompany the application for a marine (environmental) consent
- Refinement of the design of the phosphate recovery and on-board separation systems
- Acceleration of the rock phosphate beneficiation studies presently under way
- Further design work in respect of the on-board glauconite separation systems
- New fertiliser market development.

The information also contributes significantly to the store of public good information used by scientists to understand New Zealand's oceanic environment.

The surveys collected geophysical data in December, bottom samples in February, environmental data in March and geotechnical data in April. The project team involved scientists, engineers and other technical staff gathered from the United States, Netherlands, Germany and New Zealand who put together the trip plans in just a few weeks.

Joining the last cruise was Dr Hermann Kudrass, who 30 years ago explored the seabed of the Chatham Rise. Dr Kudrass led a joint New Zealand-German government expedition on the German government research vessel *Sonne* in 1981 to explore the extent of phosphorite deposits distributed on the Rise seabed and then wrote a book discussing his findings.

### **December cruise:**

The survey mapped 715 km<sup>2</sup> of the sea floor with multi-beam swath bathymetry (seafloor topography) data and 199 km<sup>2</sup> with side-scan sonar data. It collected 263 km of sub-bottom seismic reflection data and magnetic data.

The survey collected information about the shape and character of the sea floor and the properties of the shallow sediments that will help understand the distribution of the phosphate resource.

The data guided planning for subsequent surveys, assisted the development of mining technology and strategy, and contributed to the identification of priority areas for the first few years of mining. The ship recovered two oceanographic moorings that had collected current and turbidity data, now downloaded for processing and analysis.

The new detailed bathymetry data show the irregularity is primarily the result of underlying geology and iceberg scours up to 15 m deep, 400 m wide and tens of km long. The data obtained are valuable for the detailed design of the dredging operations.

#### **February cruise:**

The survey collected 50 precisely located grab samples, bringing more than 35 tonnes of sediment back to analyse nodule content and distribution and test separation techniques. The bulk sediment also brought in considerable environmental data that contributed to the March environmental survey.

The project team conducted four ROV dives (the first ever on the Chatham Rise) to inspect the sea floor before and after grab sampling and to test the physical properties of the sediment, as well as expanding the geophysical mapping of the sea floor.

#### **March cruise:**

The team surveyed 13 of the environmental areas identified by NIWA (eight target mining areas and five reference areas outside mining zones) and collected more than 77 km of ROV video transects, recording more than 150 hours (or 700 Gb) of video and 62,000 observations from the video transects as well as 17,000 still photos.

In addition, the cruise collected 130 box cores from 38 sites, 3 km<sup>2</sup> of high-resolution bathymetry and backscatter data and more than 500 km<sup>2</sup> of regional bathymetry data. The ROV stopped on 12 occasions to take biology samples or close-up photos. The sampling and photography will enable detailed assessment of animals that live on the seafloor.

#### **April cruise:**

The cruise, with Boskalis engineers on board, involved the first investigation that

specifically focused on properties of the seafloor as they relate to design and construction of a mining machine. Four ROV dives tested the geotechnical properties of the sand and chalk, including how hydraulic jets could loosen the sediment without creating high turbidity before the phosphate and associated sediment can be pumped on board for separation.

Cone Penetration Test (CPT) measurements were done at 129 sites, collecting information about sediment strength, hardness, friction and porewater pressure. Fifteen short vibrocores returned 12.6 m of sediment. A vibrocorer uses vibration to work the core tube into the seabed as distinct to a corer that relies on gravity alone for penetration into the sediments. The cruise took four box core samples for environmental and geotechnical analysis.

### **Boskalis partnershp**

Central to the project is our partnership with the world's largest integrated dredging company, Royal Boskalis Westminster. Boskalis is undertaking a number of projects that collectively comprise phase one of the planned work programme, including design engineering, logistics studies and preliminary design work and environmental studies including turbidity assessments. These projects will lead to phase two activities incorporating final design, detailed engineering, construction and testing.

All of the data being analysed will be used in the design of the mining system bringing together technologies already used in a wide variety of extraction systems. Considerations range from evaluating the nature of the material and where it is deposited, to how it is lifted, separated and returned, the vessel design, and off-loading port selection.

The design process also includes developing a model to assess the environmental impacts of each stage of extraction. The research is looking at the potential impact of extraction and sediment deposition on local ecosystems and identifying sensitive species and areas of special environmental conservation, as part of habitat mapping.

The modelling and analysis will consider the natural dynamics of the area – the variation of water flow speed and direction over depth, turbidity, light attenuation in the water column, occurrence of upwelling events, natural settlement behaviour of fines, possible density currents and ecosystem resilience.

The research Boskalis has conducted has identified four main elements relating to the extraction of phosphate that will contribute to environmental changes. These are:

- Removal of the top layer from the seabed
- Turbidity generated by the extraction and sediment return process
- Deposit of returned sediment, mainly on just mined areas of the seabed
- Possible changes to and mixing of the water column, due to the outflow of water at a slightly different depth than the intake.

Boskalis environmental expert Gerard Van Raalte visited New Zealand in November to meet a range of government and other stakeholders. Mr Van Raalte is a senior Boskalis manager with a special focus on the environmental aspects of dredging and marine infrastructure design.

He is team leader of the Building With Nature research programme, initiated by Boskalis to gain an industry-wide insight into the impact hydraulic engineering projects have on ecosystems, with the aim of achieving a sound balance between ecological, economic and social sustainability. The Boskalis approach has been very successful in managing potentially contentious projects in environmentally sensitive locations and it was one of the key reasons CRP selected the company as its partner.

### **Environmental focus**

All of the work being done to advance the project has environmental considerations as a key focus. One of our first steps was to undertake a full review of the existing environmental knowledge of the area and any other related information of use.

We commissioned NIWA to study the wider Chatham Rise ecosystem, as part of the work that will contribute to the Environmental Impact Report being coordinated by consultants Golder Associates as part of the planned application for a marine consent.

NIWA has already completed a number of reports for us concerning various aspects of the Chatham Rise seabed environment. These are available to interested groups to ensure there can be an informed discussion about what actually exists on and above the Chatham Rise and can put into context our planned activities there.

### **EEZ legislation**

In June the Government confirmed it would enact legislation to manage the environmental impacts covering the Exclusive Economic Zone and extended Continental Shelf. We believe it will remove a lot of uncertainty and provide a framework to allow all of those with an interest to contribute to decisions about how the environmental effects of resources are administered. If the timeframe is achieved we expect to be among the first companies to use the new law.

CRP submitted on the Bill to provide the Local Government and Environment Select Committee with an early example to consider when evaluating the proposed new legislation.

We wanted to give the Select Committee an insight into how companies such as ours will be affected by the legislation and how we are practically planning to manage our environmental responsibilities. CRP is providing the Environmental Protection Agency,

the Ministry for the Environment and New Zealand Petroleum and Minerals with the opportunity to consider facets of the proposed regime as a “live” case study.

We are pleased the Bill paid heed to the balance between environmental considerations. Even within an environmental context there are offsets such as between the environmental benefits of our product and any impacts caused by the extraction of rock nodules. Chatham Rock Phosphate can offer benefits that include a reduced carbon footprint through much lower transport costs, fewer run-off effects on farmland when using it as a direct-application product and the low cadmium content of the product.

### **Market development**

We have had an ongoing dialogue with both local and international fertiliser sector companies. Market development work has been undertaken in Australia and throughout South-East Asia. Responses to initial contacts made have been encouraging and we are confident we will have a healthy forward order book well before we are in full production.

We are encouraged by the interest of potential buyers in the merits of our initiative. As concerns grow over the certainty of supply of phosphate rock from the Middle East, its high cadmium levels, and the carbon emissions required to transport to this part of the world, the strategic value of the Chatham Rise rock phosphate resource asset can only continue to rise.

The scoping study underway will determine the feasibility and economics of beneficiating our rock phosphate (effectively raising the level of contained phosphorous). If successful the indications are that we will be able to sell more product and for a better unit price.

### **Glauconite deposits**

CRP has undertaken a preliminary analysis that shows there are significant quantities of glauconite contained within the seabed sandy silt layer that also contains the phosphate nodules. Boskalis is considering a possible recovery system to gather both the phosphate nodules and the glauconite.

Glauconite is a mica-type clay mineral containing potassium, which makes it (like the Chatham Rise rock phosphate) an ideal slow release direct application fertiliser. It can also be used in glass manufacture and for paint pigments. Recent technological advances suggest that it's now possible to separate potassium from glauconite, which could create another market opportunity as the demand for potassium (also known as potash) is substantial.

Some of the samples gathered in two areas within our licence not previously explored and which had not previously been tested for the presence of rock phosphate nodules. The good news is that rock phosphate nodules were found to be present in both areas.

### **Licence progress**

In January, CRP formally advised NZPM of its plans for the second term of its prospecting licence. The four-year licence was granted in February 2010 for two two-year terms and we more than met all the conditions of the work programme for the first term of the licence. Among the highlights of work achieved were:

- Forming a strong business alliance with engineering design and logistics company Royal Boskalis Westminster
- Commissioning a study (with the support of New Zealand Trade and Enterprise) by Bateman Advanced Technologies and Mintek to assess whether beneficiation (to raise phosphorous and lower calcium carbonate levels) is feasible, thus reducing transport costs and improving processing versatility
- Extensive stakeholder engagement and consultation
- Literature review and data compilation
- Digitising relevant technical data and developing a database
- Underwater radiometric geophysical evaluation
- Sediment sampling
- Environmental baseline data collection
- Current and turbidity sensor data collection
- Environmental planning.

### **New neighbour**

Earlier this year, L&M Group, which has a wide range of petroleum exploration and onshore mining interests, was granted a permit by New Zealand Petroleum and Minerals to explore seafloor phosphate deposits over a wide area to the west, south and east of the permit held by CRP. We welcomed the move, noting it reinforced the enormous potential value we see in the area, constantly being confirmed as we gather new technical data. L&M Group holds a large area surrounding CRP's licence area, which has more unknowns but which could have real prospectivity for both rock phosphate and glauconite. We are keen to explore ways we can cooperate and share knowledge.

### **Post balance date**

On 15 May the EEZ Bill was referred back from the Select Committee and is still expected to be enacted later this year. Of particular relevance to CRPL is the date on which the related regulations come into effect, as our Marine Consent application



cannot be submitted until then. This could also affect the timing of the mining licence application.

**Outlook**

The project continues to maintain momentum. We have a strong focus on setting objectives and achieving ongoing milestones, have met all our key deadlines so far and we are determined to keep delivering on our goals.

**For and on behalf of the Board,**

**Keith T Hindle  
Chairman**

**Chris D Castle  
Director**

**Onekaka**

**25 May 2012**

<b>Chatham Rock Phosphate – the economic, environmental and market benefits</b>	
Economic benefits	<ul style="list-style-type: none"> <li>• Import substitution of up to \$300 million annually</li> <li>• Possible exports to nearby markets</li> <li>• Reduced commodity risk for fertiliser manufacturers and farmers</li> <li>• Reduced foreign exchange risk for fertiliser manufacturers and farmers</li> <li>• Development of a new industry</li> <li>• Generation of additional income tax, GST and royalty income for the local economy</li> <li>• Security of supply (most rock phosphate is imported from potentially unstable regimes in North Africa and the Middle East)</li> </ul>
Environmental benefits	<ul style="list-style-type: none"> <li>▪ CRP product is significantly lower in cadmium and uranium than imported product</li> <li>• Much lower carbon footprint than imported product</li> <li>• If applied as a direct application fertiliser CRP has less run off than super-phosphate, is applied once every three years, and is a more effective, slower acting product</li> <li>• Extraction will affect only 1/1000<sup>th</sup> of the Chatham Rise total area and will be intermittent</li> <li>• Extraction will occur in accordance with International Marine Mining environmental guidelines</li> </ul>

Market benefits	<ul style="list-style-type: none"> <li>▪ Much cheaper source than Morocco</li> <li>• 25+ years security of supply</li> <li>• Known extraction costs will allow fixed price contracts over several years which will benefit New Zealand fertiliser companies, farmers and agriculture outputs generally as fertiliser pricing will be less of a lottery</li> </ul>
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**Results for announcement to the market**

Reporting Period	Year ended 31 March 2012
Previous Reporting Period	Year ended 31 March 2011

	Amount (000s)	Percentage change
Revenue from ordinary activities	\$20, 84	(76%)
Profit (loss) from ordinary activities after tax attributable to security holder.	\$(741), (629)	(17.8%)
Net profit (loss) attributable to security holders.	\$(741), (629)	(17.8%)

Interim/Final Dividend	Amount per security	Imputed amount per security
It is not proposed to pay a dividend for the reporting period.	N/A	N/A

Record Date	Not Applicable
Dividend Payment Date	Not Applicable

Comments:	<p>Chatham Rock Phosphate has had decreased investment income this year as it is investing in further developing the phosphate deposit. It has subsequent to Balance Date had shareholder approval to issue capital to a shareholder who will financially support the development.</p> <p>The Company has also incurred substantial pre-IPO and travel costs associated with an IPO.</p> <p>Chatham Rock Phosphate does not operate any dividend or distribution re investment plan.</p>
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