

NEWS RELEASE 22-24

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CHATHAM'S REMARKABLE 2022 YEAR IN REVIEW

WELLINGTON, New Zealand – Chatham Rock Phosphate Limited (TSXV: "NZP" and NZX: "Chatham", "CRP", or the "Company") has enjoyed a year of outstanding achievements on multiple fronts with the forward momentum achieved during 2021 increasing further in 2022.

During the two years Chatham has transformed from a single project company facing an uncertain and expensive permitting hurdle to a rapidly expanding group of projects much closer to generating operating cash flows with prospects further boosted by phosphate prices at 10-year highs.

Key milestones achieved during the last year include:

- 1. The acceptance in late December 2021 by the Queensland Department of Resources of our application for an area of 196 square kilometres at Korella South (EPMA 28187). This application covers an area that has been subject to considerable past exploration for a variety of minerals and is highly prospective for both rock phosphates and rare earths;
- 2. In January 2022 we announced that we had taken another value-adding step to its phosphate production with planned manufacturing of Monocalcium Phosphate (MCP) at Korella South. This involved the commencement of a prefeasibility study for the production of MCP from the Korella South phosphate projects in Queensland. MCP is an essential ingredient in the diet for all farmed animals including poultry, beef cattle in feedlots as well as all dairy cattle in that it enables healthy bone growth. DCP is currently a fully imported product that has recently become subject to supply-chain difficulties;
- 3. In April we closed the most successful financing in our company's history with the sum being raised increased twice beyond our original target. As a result, we are in a very comfortable working capital position, particularly so given our modest present cash burn. Future development costs will be minimised as much as possible by using contract miners and are intended to be funded by joint venture partners and debt based project finance;
- 4. In May we announced that we had engaged CSIRO (the Australian Commonwealth Scientific and Industrial Research Organisation) to evaluate the potential to extract Rare Earths from our Korella South phosphate ore using biomining technology. Korella phosphate is enriched with Rare Earth Elements (REE) and CSIRO will use biomining technology, utilizing microbes, to study the potential to extract REE;
- 5. Later in May we advised that CRP subsidiary Avenir Makatea Pty, trading as **Korella Terminals**, had commenced a scoping study into a stand-alone 5Mtpa phosphate/fertilizer export facility in the Port of Townsville (Korella Terminal). The study was to be undertaken by an assembled team of well-seasoned industry specialists who bring together years of experience in logistics, major capital works construction, port operations/construction, and financing of new major port/rail facilities for bulk commodities. As the Port of Townsville is the export port for all of the minerals include phosphate and fertilizers originating in North-West and North Queensland, the need for a dedicated phosphate/fertilizer terminal has been recognised for a considerable time. With the emerging changes in the world supply chain for fertilizers and

phosphates, the low cadmium phosphate from the Georgina Basin in NW Queensland has the potential to fill the gap for low cadmium phosphate in Europe, now no longer able to be sourced from Russia;

- 6. Also, in May we provided a further update on the activities now taking place under the umbrella of our 100% owned subsidiary Pacific Rare Earths Limited (PRE). PRE was originally formed in 2018 to project-manage a Rare Earths Elements (REE) study on rock phosphate nodules and seafloor muds on the Chatham Rise. PRE is now coordinating the scoping study for concentration of Total Rare Earth Oxides (TREO) from our Korella South Exploration Area. Three Rare Earth Oxides, Yttrium, neodymium, and dysprosium, described as critical minerals and Heavy Rare Earth Elements, are found in abundance at Korella South as well as on the Chatham Rise;
- 7. In June we were pleased to provide a further update on the Dicalcium and Monocalcium Phosphate (DCP and MCP) manufacturing project we announced on 14 January 2022. DCP and derivative Monocalcium Phosphate (MCP) are essential additives to improve bone growth and structure in all farmed animals. DCP and MCP are added to the feed ration and are an important ingredient in supplemental feeding. In January we advised that we would send samples of Korella phosphate to phosphate technology specialists Prayon SA for testing to establish the parameters for production of DCP through their "GetMoreP" technology. We sent a 3kg sample of a low-grade phosphate 20% P2O5 (rather than the normal 30% P2O5 Direct Shipping Ore) to test the ability to value-add to low grade phosphate resources at the Korella Mine and Korella South. Prayon undertook tests in accordance with the standard appraisal protocols for the GetMoreP™ process. Initial test work suggests, with slight modifications using their process technology suite, low-grade Korella phosphate is a suitable feedstock for MCP production with European Union acceptable fluorine levels;
- 8. On August 17 we advised that the application for phosphate exploration area designated EPMA 28589 (Korella North) had been accepted by the Queensland Department of Resources (QDR). Korella North (EPMA 28589) covers an area of 6 square kilometres that contains a near surface phosphate deposit. The area was exhaustively explored in 2007 and 2008 with soil sampling, trenching and drilling to prove the presence of outcropping phosphate of the Beetle Creek Formation along a strike length of approximately 1.5 kilometres. The formation is highly suitable for simple open cut mining. Limited additional drilling and analysis within EPMA 28589 will enable a JORC-compliant resource estimate for phosphate and rare earth elements (REE) to be reported and transition to a Mining Lease to take place within a short time frame;
- 9. In September we continued to enlarge our resource asset base with a new selenium prospect in Queensland. Selenium has been defined by the Queensland Government as a New Economy Minerals, (NEM). The Queensland Department of Resources, when deciding to focus on NEM, has set aside \$26 million to fund their Collaborative Drilling Program in exploration areas for these new minerals. With our deep understanding of the fertilizer business and the importance of the trace mineral selenium for plant growth and animal health, we applied for and were granted an Exploration Licence over an area identified as having significant accumulations of selenium. EMPA 28606 covers an area of 196 sq km in the Tambo region of Central West Queensland. Selenium is a key requirement for many aspects of the technology we routinely use in our daily lives. Biologically, selenium is also necessary for human life. Its role is that of a cleanser or protector; it shields against cancers and other diseases by scavenging for free radical oxidants and some heavy metals;
- 10. Later in September we announced that initial testing of sensor-based ore sorting of Korella phosphate has shown particularly positive results. Chatham engaged TOMRA Sorting to establish if their sensor-based sorting systems were capable of sorting Korella phosphate ore from waste material to improve the already relatively high-grade Direct Shipping Ore. The test

work demonstrated that Korella phosphate could be upgraded from a nominal feed of 30% P_2O_5 to a product in the range of 35% to 38% P_2O_5 at acceptable recovery rates. Korella's low cadmium phosphate in the range of 35% to 38% P_2O_5 is higher grade than most internationally traded rock phosphate and is particularly suitable for use by European fertilizer producers who previously depended on Russian appetite for supplies of high-quality phosphate;

- 11. In October CRP advised research progress regarding extraction of rare earth elements from phosphate minerals by Pacific Rare Earths. Chatham's Australian company, Avenir Makatea Pty Ltd commissioned the CSIRO work program. Following encouraging results from stage 1 of culturing microbes potentially suitable for biomining, CSIRO will do more testing as part of an overall program to evaluate bioleaching to extract rare earth elements. The first step was the enrichment of natural microbes in three geologic horizons within Korella, Korella North and Korella South sites in NW Queensland. Under controlled lab conditions, the native microbes were cultured and have demonstrated three orders of magnitude cell growth (i.e., from 10⁶-10⁷ to 10⁹-10¹⁰ cells per mL) over four days. Additional subculturing of the cultures further enriched native microbes;
- 12. Also in October CRP applauded the critical minerals related initiative announced by New Zealand Petroleum & Minerals (NZPaM) a division of the Ministry for Business, Innovation and Employment. This local initiative mirrored similar developments in Australia where rare earths are now being classified as Critical Minerals and critical minerals agreements are being executed with other nations. On the Chatham Rise the Company's 820 km2 granted Mining Permit contains significant quantities of rare earth elements (REE) and other strategically valuable minerals. As reported in 2018 we established a separate corporate entity (Pacific Rare Earths Limited PRE) to develop the extraction technology to monetise these valuable resources. Three Rare Earth Oxides, yttrium, neodymium, and dysprosium, described as critical minerals and Heavy Rare Earth Elements, are also found in abundance at Korella as well as on the Chatham Rise. The Australia based rare earths and selenium projects are truly nation-building initiatives where Chatham intends to play a leading part;
- 13. On November 17 we advised that CRP has contracted with leading Australian civil and mining contracting firm NRW Holdings Limited (ASX: NWH) for its wholly-owned subsidiary Golding Contractors to provide mining services for the development of the Korella North Mine. CRP, through its Australian company Korella Fertilizers, has since earlier this year been discussing with Golding the provision of mining and exploration services in the development of its Korella North, Korella Central and Korella South phosphate projects located adjacent to Phosphate Hill, in North-West Queensland. Under the agreement Golding will provide mining services to facilitate the granting of a mining lease at Korella North (EMP 28589) and statutory services in the exploration of Korella South (EMP28187); and
- 14. Later in November we announced that we had signed an MOU with transport group Aurizon Limited to provide logistical solutions for the development of its Korella phosphate operations. Under the Memorandum of Understanding, Aurizon and CRP's wholly-owned Australian subsidiary, Avenir Makatea Pty Ltd., trading as Korella Fertilizers (Korella), have agreed to establish a framework for discussing logistical solutions and associated infrastructure investments which Aurizon could provide to support Korella getting its product to market. Aurizon is the major transport and logistics provider to companies operating in Queensland's North West Mineral Province. Working with Aurizon will optimise the matching of mine development with efficient, lower cost, flexible transport and logistic solutions.

In summary, Chatham now has one selenium and seven phosphate related initiatives underway and further additions are envisaged.

The existing phosphate projects are:

- 1. **Chatham Rise marine project in New Zealand,** planned production rate 1.5 Mtpa from 2027;
- 2. **Avenir Makatea** onshore phosphate mine/rehabilitation project, planned production rate 250,000 tpa;
- 3. **Korella Mine** production rate 250,000 tpa once the acquisition is enforced;
- 4. **Korella South** 2 Mtpa export focussed mine;
- 5. **Korella North** 250,000 tpa production rate aimed at the domestic phosphate market;
- 6. **Korella Terminals** 5Mtpa phosphate export facility to be established at the Port of Townsville. 2Mtpa rail loading facility located adjacent Korella North; and
- 7. **Korella MCP** Cloncurry based monocalcium phosphate manufacturing plant expected to produce 100,000 tpa of MCP starting in 2025.

These projects already had attractive operating margins well before the recent surge in phosphate prices. Further, all the phosphate deposits concerned are ultra-low in cadmium, a food safety attribute already essential in Europe and likely to become a universal requirement. Ultra-low cadmium rock phosphate is relatively rare and will over time become an increasingly valuable and strategic resource.

As potential icing on the cake, rare earths are present on the Chatham Rise as well as in the three Korella project areas.

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