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ASX Announcement

9th July 2018

Ardmore Phosphate Rock Project

Excellent Results of Single Superphosphate Test Work



CAPTION: Run of mine Ardmore phosphate rock ore at customer bunker ready for large-scale SSP plant trial.

Highlights

- ▶ KemWorks completes further fertiliser conversion test work to independently determine the quality of Ardmore phosphate rock concentrate
- ▶ Single superphosphate ("SSP") test work trials show excellent results, at or exceeding the upper end of industry quality standards
- ▶ Australia and New Zealand import around 1 million tonnes of phosphate rock per annum for the production of SSP
- ▶ Imported phosphate rock for SSP coming mainly from North Africa, with Ardmore having a major freight advantage over these suppliers and orders of magnitude lower cadmium levels in the Ardmore product making it a cleaner feedstock
- ▶ Cadmium is a toxic metal that can be taken up into the food production chain through fertiliser use
- ▶ First of two 400 tonne paid customer trials for SSP production using Ardmore run of mine ore to be undertaken this week

Summary

Centrex Metals Limited ("Centrex") has received further fertiliser conversion test work results from KemWorks in the US on phosphate rock concentrate samples from the Ardmore Phosphate Rock Project ("Ardmore"). Centrex intends to ship premium-grade phosphate rock with ultra-low cadmium levels from the Port of Townsville for sale in Australia and to other customers within the region. Fertiliser conversion test work by KemWorks was undertaken to provide the market with an independent analysis of the performance of the Ardmore phosphate rock product. Centrex intends to use the results of the KemWorks test work for marketing the phosphate rock to potential customers so as to provide an assessment of the quality of the rock as a feedstock to their fertiliser plants.

Centrex previously reported test work results by KemWorks on the production of phosphoric acid using the dihydrate process route (primary production method). Phosphoric acid production is the main end use of phosphate rock, and the focus for potential customers for Ardmore throughout Asia. Phosphoric acid is utilised in further manufacture of multi-nutrient fertilisers such as diammonium phosphate ("DAP").

A secondary end use of phosphate rock is for the direct manufacture of single superphosphate ("SSP"). Australia and New Zealand import around 1 million tonnes of phosphate rock mostly from North Africa for the production of SSP. Centrex is targeting substitution of these imports given the premium grade of the Ardmore phosphate rock concentrate, its ultra-low cadmium levels, and its major freight advantage over the current exporters. Cadmium is a toxic metal that can be absorbed by plants through fertiliser use and introduced into the food production chain. Ardmore has almost no cadmium, with levels several orders of magnitude lower than exports from North Africa.

SSP test work by KemWorks just completed has shown SSP produced from the Ardmore phosphate rock concentrate achieved or exceeded the required specifications for the key industry benchmark parameters, making it an excellent potential feedstock.

The first of two previously announced 400 tonne paid customer trials of Ardmore run of mine phosphate rock ore in an industrial scale SSP plant is to be run this week. The second of the two trials at the second potential customer's plant is expected to be run soon thereafter.

Single Superphosphate Test Work

A 10 kg sub-sample of phosphate rock concentrate from previously reported bulk beneficiation pilot plant runs in Adelaide, and from the same concentrate sample used in previous phosphoric acid pilot trials, was provided to KemWorks in the US for the SSP test work.

For full details of the beneficiation pilot runs and phosphoric acid pilot trials see the announcements of 27th March 2018 and 4th July 2018:

<https://www.asx.com.au/asxpdf/20180327/pdf/43srn9ton41y3m.pdf>

<https://www.asx.com.au/asxpdf/20180704/pdf/43w8v7d173z550.pdf>

The results were all reported in accordance with the provisions of the JORC Code 2012 and Centrex is not aware of any new information or data that materially affects the information contained within the previous releases. All material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.

TABLE: Major element chemistry of the 10kg sub-sample of phosphate rock concentrate by KemWorks.

Element	Value (mass %)
P ₂ O ₅	35.0
CaO	48.6
Al ₂ O ₃	0.91
Fe ₂ O ₃	2.30
SO ₄	1.84
MgO	0.13

KemWorks ground the concentrate to 80% passing 74µm (200 mesh), the industry standard in SSP plants for sedimentary phosphate rock. A small portion of the ground sample was further ground to 90% passing 74µm to provide samples to determine if additional grinding had a net benefit on the reaction process. Ground material was sub-sampled into 100g lots for the test work program. A series of SSP trials were undertaken on a matrix of conditions as shown below.

TABLE: Test work condition ranges.

Condition	Units	Target
Sulphuric Acid Concentration	%	60-65
Acid/Rock Ratio		0.55-0.65
Rock Grind	% passing 74µm	80-90
Curing Time	Days	7-14 (typical for industrial plants is 14)

The main conclusions from the test work by KemWorks were;

- The rock should be excellent for producing high-grade SSP and should be able to achieve all the typical specifications;
- Available P_2O_5 – Ability to consistently achieve >20% which should be favourable for any SSP market in the world (typical required customer minimums 16-20%);
- Water soluble P_2O_5 – Ability to consistently achieve >16% which should be favourable for any SSP market in the world (typical required customer minimums 13.5-16%);
- Optimal acid/rock ratio was 0.575 (typical industry operating range 0.5-0.7);
- Optimal acid concentration was 60-65% (typical industry operating range 60-70%);
- Optimal curing time was the typical industry standard 14 days;
- All specifications were achieved on the standard industry grind for sedimentary rocks, meaning no justification for finer grinding in the customer's plants.

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Competent Persons Statement

The information in this report relating to Exploration Results is based on information compiled by Mr Steve Klose who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Klose is the GM Projects of Centrex Metals Limited. Mr Klose has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Klose consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Ardmore Phosphate Rock Project JORC Table 1 Report

SECTION 1: Sampling techniques and data.

Criteria	JORC Code explanation	Commentary
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<i>Sampling techniques</i>	<ul style="list-style-type: none"> • <i>Nature and quality of sampling.</i> • <i>Sample representivity.</i> • <i>Determination of mineralisation.</i> 	<p>Sampling for beneficiation pilot runs has been previously reported. For full details of the beneficiation pilot runs see the announcement 27th March 2018:</p> <p>https://www.asx.com.au/asxpdf/20180327/pdf/43srnqton41y3m.pdf</p> <p>The results were all reported in accordance with the provisions of the JORC Code 2012 and Centrex is not aware of any new information or data that materially affects the information contained within the previous releases. All material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.</p> <p>A 10kg sub-sample of homogenised concentrate (cone and quartered) from the second beneficiation pilot run was sent to KemWorks in the US for the SSP trial. The material was 100% - 2mm and 100% +38µm, targeting average nominated customer sizing specifications for phosphate rock exports. The as supplied material was ground by KemWorks to 80% passing 74µm, with a portion further ground to 90% passing 74 µm . 100g sub-samples were taken for SSP trials at varying conditions.</p>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> • <i>Drill type.</i> 	<p>The bulk composite used for the beneficiation pilot trials to produce the phosphate rock concentrate was from three excavations across the Southern Zone of the deposit.</p> <p>For full details of the beneficiation pilot runs see the announcement 27th March 2018:</p> <p>https://www.asx.com.au/asxpdf/20180327/pdf/43srnqton41y3m.pdf</p> <p>The results were all reported in accordance with the provisions of the JORC Code 2012 and Centrex is not aware of any new information or data that materially affects the information contained within the previous releases. All material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.</p>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> • <i>Method of recording and assessing sample recoveries.</i> 	<p>No drilling undertaken, only excavations with all material taken.</p>

	<ul style="list-style-type: none"> Measures taken to maximise sample recovery. 	
Logging	<ul style="list-style-type: none"> Geological and geotechnical logging. Whether logging is qualitative or quantitative. Total length and percentage of the relevant intersections logged. 	Excavations were qualitatively logged in the field, using nearby drill hole logs as a guide. Flitch samples were taken from the top contact of the phosphorite seam.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> Nature, quality and appropriateness of the sample preparation technique. Quality control. Sample representivity. Sample sizes. 	<p>Sampling for beneficiation pilot runs has been previously reported. For full details of the beneficiation pilot runs see the announcement 27th March 2018:</p> <p>https://www.asx.com.au/asxpdf/20180327/pdf/43srn9ton41y3m.pdf</p> <p>The results were all reported in accordance with the provisions of the JORC Code 2012 and Centrex is not aware of any new information or data that materially affects the information contained within the previous releases. All material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.</p> <p>A 10kg sub-sample of homogenised concentrate (cone and quartered) from the second beneficiation pilot run was sent to KemWorks in the US for the SSP trial. The material was 100% - 2mm and 100% +38µm, targeting average nominated customer sizing specifications for phosphate rock exports. The as supplied material was ground by KemWorks to 80% passing 74µm, with a portion further ground to 90% passing 74µm. 100g sub-samples were taken for SSP trials at varying conditions.</p>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> Nature of quality control procedures. 	<p>Major element assays reported were undertaken by KemWorks using the following methods for major elements;</p> <ul style="list-style-type: none"> P₂O₅ <ul style="list-style-type: none"> Total - Gravimetric using standard AFPC – IX.3.B Water soluble – Ext + Spectrophotometric AFPC – XI.6.C SO₄ – Gravimetric AFPC – IX.19.A

		<ul style="list-style-type: none"> • CaO, MgO, Al₂O₃, Fe₂O₃ – Digestion/ICP AFPC – IX.3.D.2 <p>1-10kg sub-samples of the same phosphate rock concentrate were sent to numerous customers for testing, with similar results reported to KemWorks, as well as Centrex's own analysis at Bureau Veritas in Adelaide.</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage protocols. • Any adjustment to assay data. 	Summary results are reported only from a series of 9 tests using varying conditions. The test work was for the purposes of aiding in marketing activities only.
Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys. • Specification of the grid system used. • Quality and adequacy of topographic control. 	Bulk excavation locations were recorded by handheld GPS.
Data spacing and distribution	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource. • Whether sample compositing has been applied. 	Three bulk excavations were completed using a 23t excavator to provide further material for additional pilot plant optimisation. The excavations were planned close to existing resource drill holes with the intention to provide a range of ore types and grades in order to be able to form varying composite grades as required. The flitches were used to form a bulk composite approximating the modelled selectively mined feed grade of the Southern Zone.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling. 	Excavations were completed vertically, roughly perpendicular to the flat lying phosphorite ore seam.
Sample security	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	Phosphate rock concentrate samples were transported from Bureau Veritas in Adelaide to KemWorks in the US in sealed containers.

<i>Audits or reviews</i>	<ul style="list-style-type: none"><i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews beyond those by KemWorks have been undertaken on the results reported.
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Ardmore Phosphate Rock Project JORC Table 1 Report

SECTION 2: Reporting of Exploration Results.

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <i>Type, reference name/number, location and ownership including agreements.</i> <i>The security of the tenure held at the time of reporting.</i> 	<p>The project is held on Mining Lease ML5542 held by Centrex Phosphate Pty Ltd, a 100% subsidiary of Centrex Metals Limited. A 21 year renewal terms was granted in 2017. Southern Cross Fertilisers Pty Ltd holds a 3% revenue royalty on production.</p> <p>Compensation agreements for exploration and mining with all relevant landowners over the Mining Lease are in place.</p>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <i>Exploration by other parties.</i> 	All exploration was by Centrex.
<i>Geology</i>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<p>The Ardmore phosphate deposit was discovered in September 1966 and is located within the 'Ardmore Outlier' of the Georgina Basin.</p> <p>The Cambrian aged sedimentary phosphate deposit consists predominantly of pelletal phosphorites with small bands of collophane mudstone. The small (approx. 100-200 micron) sized pellets of carbonate-fluorapatite probably formed in a shallow shelf environment.</p> <p>Within the Ardmore Outlier the single phosphate bed occurs within the Simpson Creek Phosphorite Member (SCPM) of the Beetle Creek Formation.</p> <p>The SCPM is essentially flat lying with a gentle to moderate dip (<20 degrees) to the east and occurs spatially within two main separate areas: the Northern Zone and the Southern Zone.</p> <p>The SCPM has an approximate average thickness of 5 m in the Southern Zone and is located from surface to greater than 15 m depth.</p> <p>The Northern Zone has an approximate average thickness of 3 m and is deeper than the Southern Zone, with depths starting from near-surface in the west before dipping away to the east and extending to depths greater than 20 m.</p>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <i>A summary of all information material to the understanding of the exploration results.</i> 	No drilling results are reported, the results relate to product metallurgical test work only.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <i>Weighting averaging techniques and grade cuts.</i> <i>Aggregation procedure.</i> <i>The assumptions used for</i> 	Summary results are reported only from a series of 9 tests using varying conditions. The test work was for the purposes of aiding in marketing activities only.

	<i>any reporting of metal equivalent values should be clearly stated.</i>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <i>Geometry of the mineralisation with respect to the drill hole angle.</i> 	All excavations were vertical and roughly perpendicular to the ore seam.
<i>Diagrams</i>	<ul style="list-style-type: none"> <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<p>See previously reported results for the bulk composite formation in the announcement 27th March 2018:</p> <p>https://www.asx.com.au/asxpdf/20180327/pdf/43srn9ton41y3m.pdf</p> <p>The results were all reported in accordance with the provisions of the JORC Code 2012 and Centrex is not aware of any new information or data that materially affects the information contained within the previous releases. All material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.</p>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <i>Representative reporting of both low and high grades and/or widths.</i> 	The reporting of results is considered to be balanced and all relevant results have been reported.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <i>Other exploration data.</i> 	Results reported are for test work for aid in marketing activities. No other exploration data is available at this time.
<i>Further work</i>	<ul style="list-style-type: none"> <i>The nature and scale of planned further work.</i> 	Two 400 tonne trials of run of mine Ardmore ore are currently being tested by customers in two commercial SSP plants.