KING RIVER RESOURCES LIMITED

HPA PURITY VERIFICATION

Australian Securities Exchange Announcement **30 April 2021**

Highlights

❖ Verification of >4N High Purity Alumina (HPA) purity obtained in repeat assays.

King River Resources Limited (ASX:KRR) has completed additional internal and external High Purity Alumina (HPA) purity assay checks to verify the previously reported production of HPA at ≥4N (99.99%) purity (KRR ASX release 25 March 2021). To help ensure quality control and quality assurance three sets of assay checks were undertaken on the HPA samples:

- Source Certain International (SCI) produced a new HPA Batch (HPA 7) which was assayed by SCI using the Microwave digest ICP-MS and ICP-AES[1] method.
- SCI completed multiple repeat assays of HPA Batches 2-7 by the Microwave digest ICP-MS and ICP-AES[1] method.
- An independent laboratory assayed HPA Batches 2-6 by the fusion-X-ray Fluorescence Spectrometry (XRF) and fusion-Laser Ablation (LA) Mass Spectrometry (MS) methods.

HPA Batch 7 Results

SCI produced another 4N purity HPA result from HPA Batch 7 using a new sample of high purity Precursor (KRR ASX release on 11 November 2020) that was calcined then washed by a simplified process designed to reduce costs. HPA 7 was analysed using the Microwave digest ICP-MS and ICP-AES[1] assay method (see Table 1). The 4N purity result was calculated by the addition of all the assayed element impurities that reported above the detection limit then subtracting this result from 100%. The 4N purity value was 99.9934% containing 66ppm of impurities which is below the 100ppm impurity threshold for 4N HPA. The main contaminants in HPA Batch 7 are silicon (Si), potassium (K), sodium (Na) and iron (Fe), plus low levels of niobium (Nb) and chromium (Cr) which, together with some of the Fe, may be the result of contamination from the furnace heating elements.

Batch 7 HPA powder product (>99.99% purity) produced from an industrial chemical feedstock

[1] ICP = Inductively Coupled Plasma; MS = Mass Spectrometry; AES = Atomic Emission Spectroscopy

Repeat Assays

SCI completed repeat assays using the Microwave digest ICP-MS and ICP-AES[1] method on separate aliquots selected from HPA Batches 2 to 6 previously reported (KRR ASX release 25 March 2021) and the new HPA 7 reported in this announcement. Five to eight analytical duplicates per HPA sample were completed giving a total of 40 analyses.

The HPA purity in all the subsamples is ≥4N, with impurities summing to less than 100ppm. Variability in the results is due to differences in the test sample and the analytical precision. The main impurities are Si, K, Na and Fe.

The HPA purity results for each analytical duplicate for all six HPA batches tested are presented in Figure 1. The graph shows the impurities are less than or equal to 100ppm and the purity above the 99.99% threshold line for 4N purity HPA.

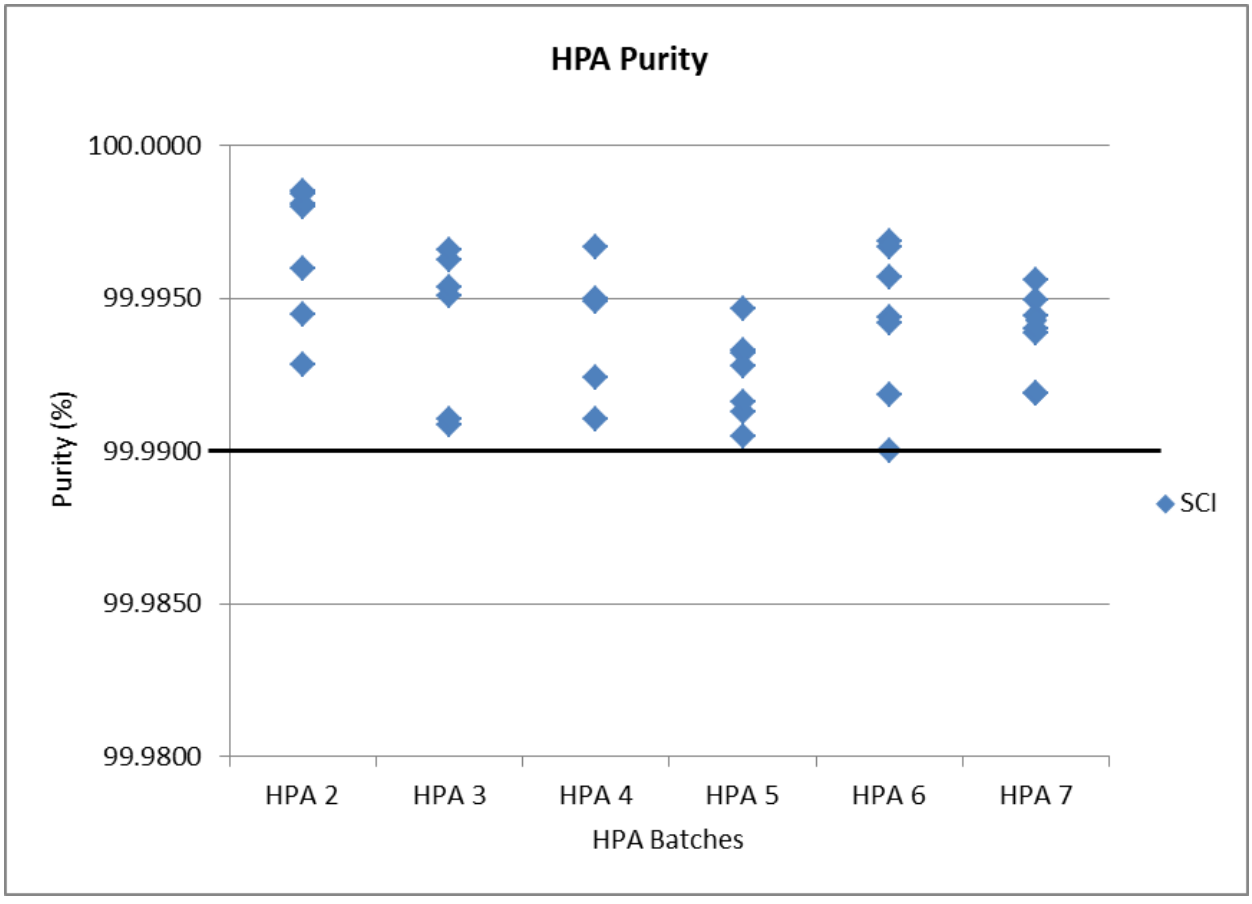

Figure 1: Repeat assays for HPA Batches 2-7.

Independent Laboratory Assays

HPA Batches 2 to 6 were analysed by an independent laboratory using the fusion-XRF and fusion-Laser Ablation assay methods. The results reported >4N purity in Batches 2 to 5 with Batch 6 under 4N. Most of the major element impurity levels, determined using the XRF method, were higher especially silicon (Si), but potassium (K) was lower, in the independent check assays when compared with the SCI Microwave ICP-AES results. In general, the XRF method reports lower accuracy and precision and more variability at these low analyte concentrations than the ICP methods. The other minor elements assays determined, using the Laser Ablation-MS method, compared very closely with the SCI Microwave digestion ICP-MS results.

Alpha Alumina Phase Analysis

A phase analysis on HPA Batch 4 to confirm the crystal structure is still pending due to workloads by the independent consultant.

Prefeasibility Study (PFS) Updates

Kwinana Industrial Site

KRR has continued investigations with government agencies and private owners for an appropriate industrial site in the Kwinana area located 30-40 km south of Perth in Western Australia. There are a number of opportunities. This industrial estate is close to a skilled and productive workforce, hosts specialist centres for chemical and resource-based processing, marine engineering and ship-building, and has industrial land areas specifically set aside for companies wishing to invest in downstream processing and other heavy or strategic industrial activities, including the Lithium Valley concept plan.

Engineering Studies

Como Engineers' Capex and Opex estimates are pending some final modifications of the HPA washing circuit. On completion, the PFS documentation will be finalised for release to the market.

Mini-Pilot Plant

KRR has named its HPA refining process the ARC HPA process route, to highlight the Aluminium chemical feedstock, the use of only Recrystallisation steps in purification, and final Calcination. Work has commenced on the development of a Mini-Pilot Plant to demonstrate the ARC HPA process works at a larger scale for the Definitive Feasibility Study (DFS) and to produce market samples.

The process flowsheet and mass balances have been used to scale the mini-pilot plant and enquiries with vessel vendors are underway. The 1500°C rotary tube furnace, used for the calcination stage of the process, is currently undergoing checks by the supplier in Australia and is expected to be delivered shortly.

Other Metallurgical Developments

Metallurgical HPA testwork will be ongoing to further refine the ARC HPA process for the DFS with the current focus on further improving the Precursor product to simplify the final calcination stage.

Testwork is also ongoing into extracting high purity vanadium and titanium products from the Speewah vanadium deposit suitable as intermediate products for battery and master alloy applications.

This announcement was authorised by the Chairman of the Company.

Anthony Barton
Chairman
King River Resources Limited
Email: info@kingriverresources.com.au
Phone: +61 8 92218055

Table 1: Impurities in HPA Batch 7

HPA Batch		HPA 7
Na	ppm	8.59
Mg	ppm	0.603
Si	ppm	15.8
P	ppm	1.74
K	ppm	17.4
Ca	ppm	<0.06
Ti	ppm	0.695
V	ppm	<0.02
Cr	ppm	2.76
Mn	ppm	0.138
Fe	ppm	6.20
Co	ppm	0.046
Ni	ppm	0.377
Cu	ppm	<0.04
Zn	ppm	0.488
Ga	ppm	0.809
Rb	ppm	<0.01
Sr	ppm	0.053
Zr	ppm	0.086
Nb	ppm	3.01
Mo	ppm	0.052
Cs	ppm	<0.01
Ba	ppm	0.516
Pb	ppm	<0.01

Note: 1. Results shown are for elemental concentrations and not a molecular compound (oxide) of that element.
2. Another thirty five elements were also assayed that are present at concentrations below detection limits for the HPA batch sample and the sum of the concentrations for these other elements is <1 ppm.
3. The volatile anion element has been excluded from the HPA purity estimate as this would be removed in a furnace that more efficiently allows the evolution of the off-gas.
4. HPA purity of 99.9934% was calculated by summing all the impurity elements > detection limit and subtracting from 100%.
5. Assayed using Microwave digest ICP-MS and ICP-AES method.

Statement by Competent Person

The information in this report that relates to Metallurgy and Chemical Analyses is based on information compiled by Mr Ken Rogers (BSc Hons) and Dr John Watling (PhD) and fairly represents this information. Mr Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG) and The Institute of Materials Minerals and Mining (IMMM), and a Chartered Engineer of the IMMM. Dr Watling is the Chief Scientist at Source Certain International Pty Ltd, and former Professor of Forensic Chemistry at the University of Western Australia, he is a Fellow of both the Royal Australian Chemical Institute (RACI) and the Royal Society of Chemistry (RSC) (London), he is a Chartered Scientist and Chartered Chemist and a Registered Analytical Chemist with the Royal Society of Chemistry, he supervised the hydrometallurgical test work, analytical procedures and chemical studies reported in this announcement. Mr Rogers has sufficient experience in the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rogers and Dr Watling consent to the inclusion in this report of the matters based on information in the form and context in which it appears.

254 Adelaide Tce
Perth WA 6000

PO Box Z5518, Perth WA 6831

PHONE: +61 (0)8 9221 8055
FAX: +61 (0)8 9325 8088
WEB: www.kingriverresources.com.au

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Appendix 1: King River Resources Limited HPA Project JORC 2012 Table 1

SECTION 1 : SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *Aspects of the determination of mineralisation that are Material to the Public Report.* *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	This ASX Release dated 30 April 2021 provides an update on KRR HPA Project, including hydrometallurgical processes involved in the production of high purity alumina (HPA) from alternative Aluminium feedstocks produced from other industrial chemical processes. Chemical precipitation and recrystallisation purification methods have been used in the separation and precipitation of the high purity Aluminium precursor compound reported in this announcement. The Precursor compound is then calcined at 1250°C to the high purity alumina product. The process and reagents used are commercial-in-confidence. The six HPA products reported in this announcement were made from a crystalline powder sample of an industrial Aluminium chemical feedstock. Two samples of the Aluminium chemical feedstock were initially used to make two batches of the high purity Precursor compound by the KRR process. HPA batches 2, 3 and 4 were replicate tests from a 423.48g sample of the industrial chemical feedstock. HPA batches 5, 6 and 7 were replicate tests from a 423.45g sample of the industrial chemical feedstock. All these HPA batches were produced by the KRR ARC HPA process to initially make a high purity Precursor. Analytical duplicate subsamples of the Precursor samples were then calcined and washed to make the HPA products, producing similar ≥4N (≥99.99%) purity results.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	Not Applicable. The samples were generated from a feedstock of an industrial chemical.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Not Applicable.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not Applicable.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Not Applicable.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	Not Applicable.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Not Applicable.

	The total length and percentage of the relevant intersections logged.	Not Applicable.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Not Applicable.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not Applicable.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Not Applicable.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Not Applicable.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Not Applicable.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Source Certain International (SCI), previously TSW Analytical, Testwork Testwork on the Aluminium chemical feedstock includes chemical precipitation, solid liquid separations, purification steps and calcination and washing processes, that produce purified intermediate Precursor precipitates and final high purity alumina (HPA) calcine products. Assays are conducted on solutions and solid precipitates and calcines. SCI is an established analytical service provider that has developed a reputation for providing accurate analyses of complex samples. The company's expertise has assisted with the development of hydrometallurgical flow-sheets for multi-element ore concentrates. The Aluminium Precursor and High Purity Alumina products have been assayed using ICP-AES and ICP-MS. Samples are either: 1) Fused using a lithium metaborate/lithium tetraborate flux and the resultant glass bead dissolved in hydrochloric acid and suitably diluted prior to either ICP-AES or ICP-MS analysis; or 2) Dissolved in acid directly using a high pressure microwave digestion system. The latter method is extremely useful when dealing with high purity samples as the chance of introducing contaminants during dissolution is significantly reduced and the concentration of contaminants in the blank is almost negligible resulting in greater analytical accuracy. This latter method was used to assay the HPA samples reported in this announcement. Loss on Ignition (LOI) at 1000 ^{O}C was performed for completeness of the analytical data and to give a better indication of the total analytical percentage approximation to 100%. The leach solutions and wash liquors have been analysed using ICP-AES and ICP-MS. The samples were diluted suitably for the appropriate ICP based analysis. Dilutions are used to bring the analyte concentration into the optimum analytical range of the ICP instrument used and to reduce matrix interference complications during quantification. Precipitation efficiency has been determined using the mass of the total analyte in the leach residue divided by the mass of the total analyte in the initial leach solution used. The resulting fraction is multiplied by 100 to give a percent precipitation efficiency.

		SCI uses in-house standards and Certified Reference Materials (CRMs) to ensure data are "Fit-For-Purpose". Bureau Veritas Minerals (BV) analytical method The HPA samples HPA 2-6 have been cast using a 12:22 flux to form a glass bead which has been analysed by XRF. Major and Minor elements were determined by X-Ray Fluorescence Spectrometry on oven dry (105°C) sample unless otherwise stated. Minor and Trace elements were determined by Laser Ablation Inductively Coupled Plasma Mass Spectrometry on the fused bead.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not Applicable.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Source Certain International (SCI) SCI reports concentrations as micrograms per gram (µg/g) in the solid (unless otherwise stated). Instrumental response is measured against AccuTrace High Purity multi-element standards (Choice Analytical) to achieve quantitation. Data are subjected to in-house QA and QC procedures where an independent analyst recalculates instrumental output and compares the newly generated data set with the original. Lack of equivalence between the two data sets triggers an internal review and if necessary re-analysis of the entire data set. Under these circumstances a third independent analyst will assess all generated data prior to sign off. Initial equivalence between the two data sets, generated by the analyst and reviewer, will clear data for remittance to the customer. In addition to these procedures, samples are regularly sent to selected analytical laboratories in Western Australia for confirmation of the analytical data obtained. Once completed, all reports are then reviewed by an independent analyst prior to submission to the customer and where necessary, relevant changes such as wording that may give rise to possible ambiguity in interpretation will be modified prior to the final report being sent to the customer. In order to validate analytical data, SCI circulates duplicate samples to selected analytical laboratories in Western Australia for confirmation of their results.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Assay results have been verified by alternative SCI laboratory company personnel. SCI has completed analytical duplicate analyses on all HPA batches produced. HPA sample assays have been verified by an independent assay laboratory.
	The use of twinned holes.	Not applicable - no drilling. Multiple samples have been produced and assayed.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Not applicable
	Discuss any adjustment to assay data.	Not applicable.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Not Applicable.
	Specification of the grid system used.	Not Applicable.
	Quality and adequacy of topographic control.	Not Applicable.

Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Not Applicable.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Not Applicable.
	Whether sample compositing has been applied.	Not Applicable.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Not Applicable.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Not Applicable.
Sample security	*The measures taken to ensure sample security.*	Chain of Custody is managed by the Company until feedstock samples pass to Source Certain International, for subsampling, assaying, and hydrometallurgical test work. The Aluminium feedstock sample was delivered to the metallurgical laboratory by the Company or a competent agent. The chain of custody passes upon delivery of the samples to the metallurgical laboratory. Products, Residues and Duplicates of all samples are retained at the Company's Perth laboratory to insure against any sample loss
Audits or Reviews	*The results of any audits or reviews of sampling techniques and data.*	No external audits have been completed.

SECTION 2 : REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	Not Applicable.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Not Applicable.
Geology	*Deposit type, geological setting and style of mineralisation.*	Not Applicable.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*	Not Applicable.

Criteria	JORC Code explanation	Commentary
	○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* ○ *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Not Applicable.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not Applicable.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not Applicable.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Not Applicable.
Diagrams	*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.*	Not Applicable.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Reports on previous metallurgical and study results can be found in ASX Releases that are available on our website, including announcements 1 April 2010, 15 July 2010, 9 November 2010, 8 February 2012, 21 April 2017, 21 August 2017, 9 October 2017, 4 December 2017, 30 January 2018, 27 February 2018, 21 March 2018, 25 June 2018, 23 July 2018, 15 October 2018,19 November 2018, 18 January 2019, 1 March 2019, 21 March 2019, 22 March 2019, 9 May 2019, 7 June 2019, 27 September 2019, 26 November 2019, 6 December 2019, 22 January 2020, 24 March 2020, 23 April 2020, 13 May 2020, 17 June 2020, 7 September 2020 and 13 October 2020, 11 November 2020, 19 November 2020, 26 November 2020, 15 December 2020 and 25 March 21.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Not Applicable.

Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Further metallurgical tests are planned to produce HPA by the Company's process.