Material to be Delivered at Annual General Meeting

31 May 2023 – 11:00 am Sydney Time

ABx Group (ASX: ABX) ("ABx" or "the Company") provides the attached material in compliance with Listing Rule 13.13.3.

Documents Attached

- Chairman's address
- Director Presentation – Ionic Adsorption Clay Rare Earth Deposits in Tasmania
- Managing Director and CEO Presentation – Aluminium Fluoride Recycled from Industrial Waste

Paul Lennon, Chairman of ABx opens his address by saying, "ABx Group is driven to deliver projects with substantial commercial upside while also making a significant, positive ESG contribution. This strategy sits at the heart of everything we do. I think it is instructive to discuss the Company's overall strategy and why your board sees so much exciting potential."

Meeting Notes

1. If you wish to attend the virtual AGM which starts at 11:00 am, 31 May 2023, you must register at:

https://us02web.zoom.us/meeting/register/tZAlfu-vpzssEtd6a3-jve1ScyQtRWOnR5AO

You will then be sent a link to the meeting webcast;

2. We will provide an opportunity to ask questions at the meeting however there may be connectivity and other issues during the video conference. Therefore, we recommend that any questions concerning the business of the meeting are submitted during registration or corporate@abxgroup.com.au in advance of the meeting;
3. Please mute your microphone unless you wish to ask a question; and
4. All resolutions will be determined by way of a poll. The poll will be conducted based on votes submitted by proxy and by Shareholders at the meeting.

ASX Release authorised by Mark Cooksey, Managing Director and CEO.

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CHAIRMAN'S REVIEW OF 2022 DEVELOPMENTS

ABx Group is driven to deliver projects with substantial commercial upside while also making a significant, positive ESG contribution. This strategy sits at the heart of everything we do. I think it is instructive to discuss the Company's overall strategy and why your board sees so much exciting potential.

At Alcore, the business is developing industry-leading technology that processes aluminium smelter waste, known as 'excess bath', into high-value products such as aluminium fluoride. The only meaningful market for excess bath is new smelters, which require bath to commence operations. Aluminium industry forecasts suggest the global bath market will increasingly be in surplus, because far fewer new smelters are being constructed. All of the major global aluminium producers are eager for alternative applications for excess bath, to avoid the unpalatable options of on-site storage or landfill. Alcore has the potential to be the missing piece of this puzzle.

I mentioned ABx is not just focussed on ESG contributions, it is also dedicated to delivering financial returns. For Alcore, the aluminium fluoride market is very favourable with 1.2 million tonnes produced per annum, valued at US$1.5 billion. With a sizable addressable market, the next critical task for Alcore is to firmly understand the process performance at larger scale. This is why the pilot plant is so important. Its completion will provide valuable engineering data and better indications of capital and operating costs, ahead of a full-scale commercial facility. The pilot plant is expected to be completed in 2023 and I urge all shareholders to watch this story closely.

Meanwhile, the developments at our Deep Leads – Rubble Mound rare earths deposit are also closely aligned with our strategy. In November, ABx defined a maiden JORC compliant rare earths resource which provided an initial indication of the potential size and scope of our deposit. Since then, ABx has had the rig turning almost non-stop with plenty of targets to further expand the channel. We recently announced an upgrade to 21 million tonnes.

Looking deeper into the total rare earth oxide (TREO) grades, Deep Leads' mineralisation is relatively rich in heavy rare earths, like dysprosium and terbium. These, along with neodymium and praseodymium, are used in permanent magnet technologies and are in high demand, fetching higher prices. There is a major financial and ESG opportunity to be realised at the project – and this is before we even consider that the mineralisation style is an ionic adsorption clay (IAC).

Not all clays are created equal and, in ABx's case, its ionic adsorption clay is very special. At Deep Leads we are seeing rare earths attached ('adsorbed') to the surface of clay particles. Why is this important? The Australian Nuclear Science and Technology Organisation (ANSTO) have run desorption tests, where the rare earths are extracted from the clay into a solution. This process achieves high rare earth recoveries using a relatively benign salt solution with a pH of 4, which is less acidic than apple juice. This compares favourably to many other rare earth deposits, which need more aggressive and expensive acid processing. Due to this unique mineralisation, the potential for low-cost rare earths production at Deep Leads is phenomenal.

Finally, ABx Group continues to pursue the excellent potential at its bauxite projects in Queensland and Tasmania. These projects offer fantastic opportunity to advance towards the production phase. Our previous bauxite mining operations were conducted in close conjunction with the landholders, establishing a reputation for quality environmental management. I see no reason why ABx cannot continue to maintain this reputation into the future.

When looking at the strategy which ABx is pursuing and the track record of execution, I am exceptionally proud of the work completed to date and an excited for what the future may bring.

Thank you again to all shareholders and I look forward to updating you all on future progress.

Paul Lennon
Chairman

Level 5 52 Phillip St
Sydney 2000

ASX : ABX

ABx Group

ABx's ionic adsorption clay rare earth deposits in Tasmania, Australia

Ian Levy, Director

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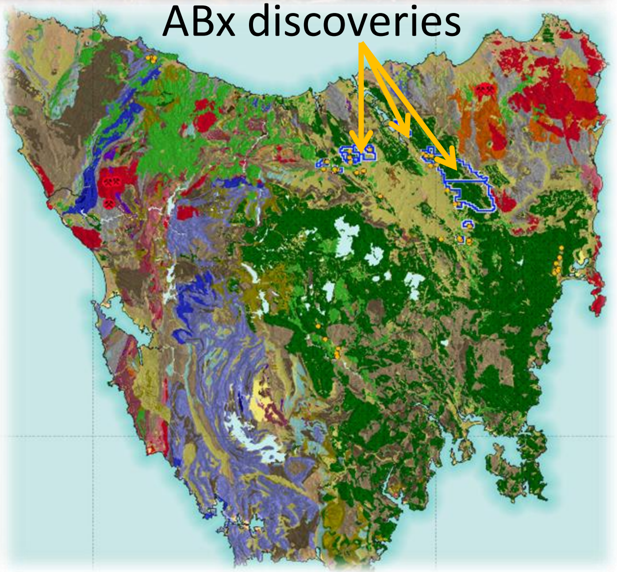


31 May 2023

Qualifying statements

Disclaimer Regarding Forward Looking Statements

This ASX announcement (Announcement) contains various forward-looking statements. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are inherently subject to uncertainties in that they may be affected by a variety of known and unknown risks, variables and factors which could cause actual values or results, performance, or achievements to differ materially from the expectations described in such forward-looking statements.

ABx does not give any assurance that the anticipated results, performance, or achievements expressed or implied in those forward-looking statements will be achieved.

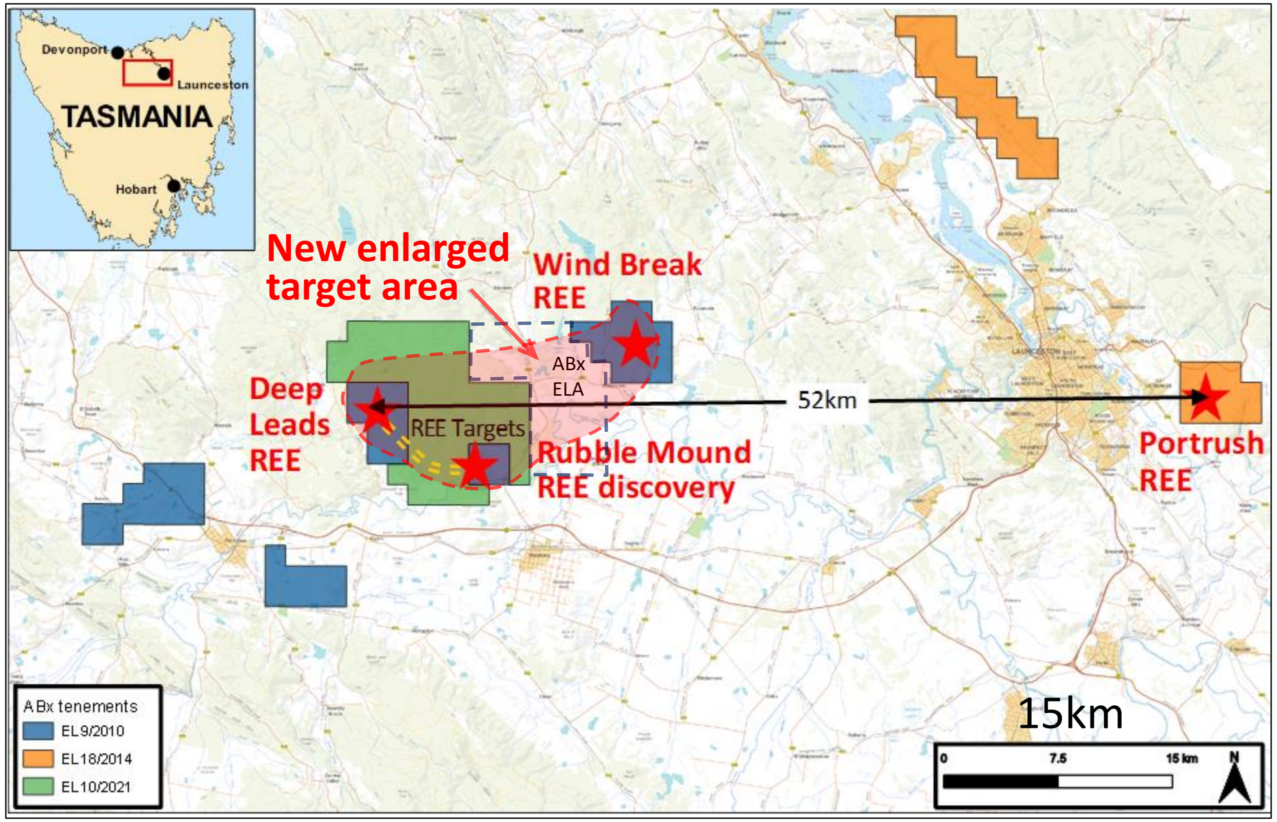
General

The information in this report that relate to Exploration Information and Mineral Resources are based on information compiled by Ian Levy who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Levy is a qualified geologists and a director of ABx Group Limited.

Mr Levy has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which they are 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 Levy has consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

ABx rare earth discoveries in Tasmania contain the most critical REEs

- ❑ True ionic adsorption clay IAC REE deposits * **
  - ❖ Rich in critical permanent magnet REEs
  - ❖ Highest proportion of important REEs Dy & Tb
  - ❖ Can be developed quickly at low cost
  - ❖ Located in easily accessible pine plantations
- ❑ Shallow 5m from surface, 6 to 8m thick REE zone
- ❑ Testing by ANSTO confirmed IAC REE type **
- ❑ Deep Leads & Rubble Mound have joined
- ❑ Extension to Wind Break REE next step
- ❑ **Resources exceeded 20M tonnes** in 12 months**



** Only ionic adsorption clay REE deposits (IAC REE) achieve high extraction rates at low cost, delivering extraction rates of 50% to 75% of REE using benign, low-cost processing. ABx has discovered the **only true IAC REE** deposit in Australia, in Tasmania.*

*** See ASX announcements dated 8 May 2023 (resource update) & 31 May 2022 (ANSTO tests confirm high ionic extraction rates)*

ABx rare earth resources exceed 20Mt*

* See ASX release 8 May 2023

								Permanent Magnet REOs														
Resource Category	**Million Tonnes**	From (m)	To (m)	Thick-ness (m)	TREO ppm	TREO-CeO_2 ppm	Perm Mag ppm	Nd_2O_3 ppm	Pr_6O_{11} ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	CeO_2 ppm	Er_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Ho_2O_3 ppm	La_2O_3 ppm	Lu_2O_3 ppm	Sm_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Y_2O_3 ppm
Inferred	17	5	12	6.7	746	565	192	128	32	4.4	27	181	15	7.8	29	5.4	111	2.0	29	2.2	13	159
Indicated	4	4	17	12.5	880	677	216	142	35	5.5	33	203	19	9.3	35	6.6	128	2.3	33	2.5	15	210
Total	**21**	**5**	**13**	**7.7**	**770**	**585**	**196**	**130**	**33**	**4.6**	**28**	**185**	**16**	**8.1**	**30**	**5.6**	**114**	**2.1**	**29**	**2.2**	**14**	**168**

Parameters Cut-off grade = 250ppm TREO-CeO_2 Minimum thickness = 2 metres Maximum extrapolation = 80 metres Density = 1.9 tonnes/cubic metre

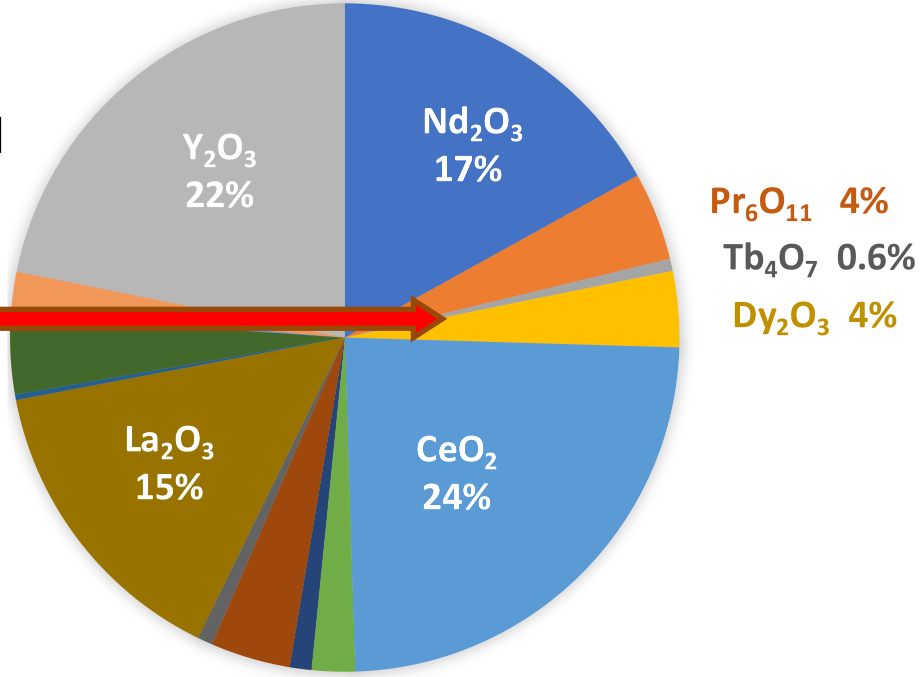
TREO = total rare earth elements as oxides. TREO-CeO2 = TREO minus cerium oxide

From less than 20% of 36 km^2 target area at Deep Leads-Rubble Mound

High extraction rates 30% to 83% in ANSTO desorption tests

GOOD MIX OF REE

- ❖ High content of permanent magnet REEs (Nd, Pr, Tb & Dy)
- ❖ Very high proportions of Dy & Tb (4.6% of Total Rare Earths)
- ❖ Non-radioactive: Free of Uranium & Thorium. :. Easily traded



Deep Leads–Rubble Mound (1st project)

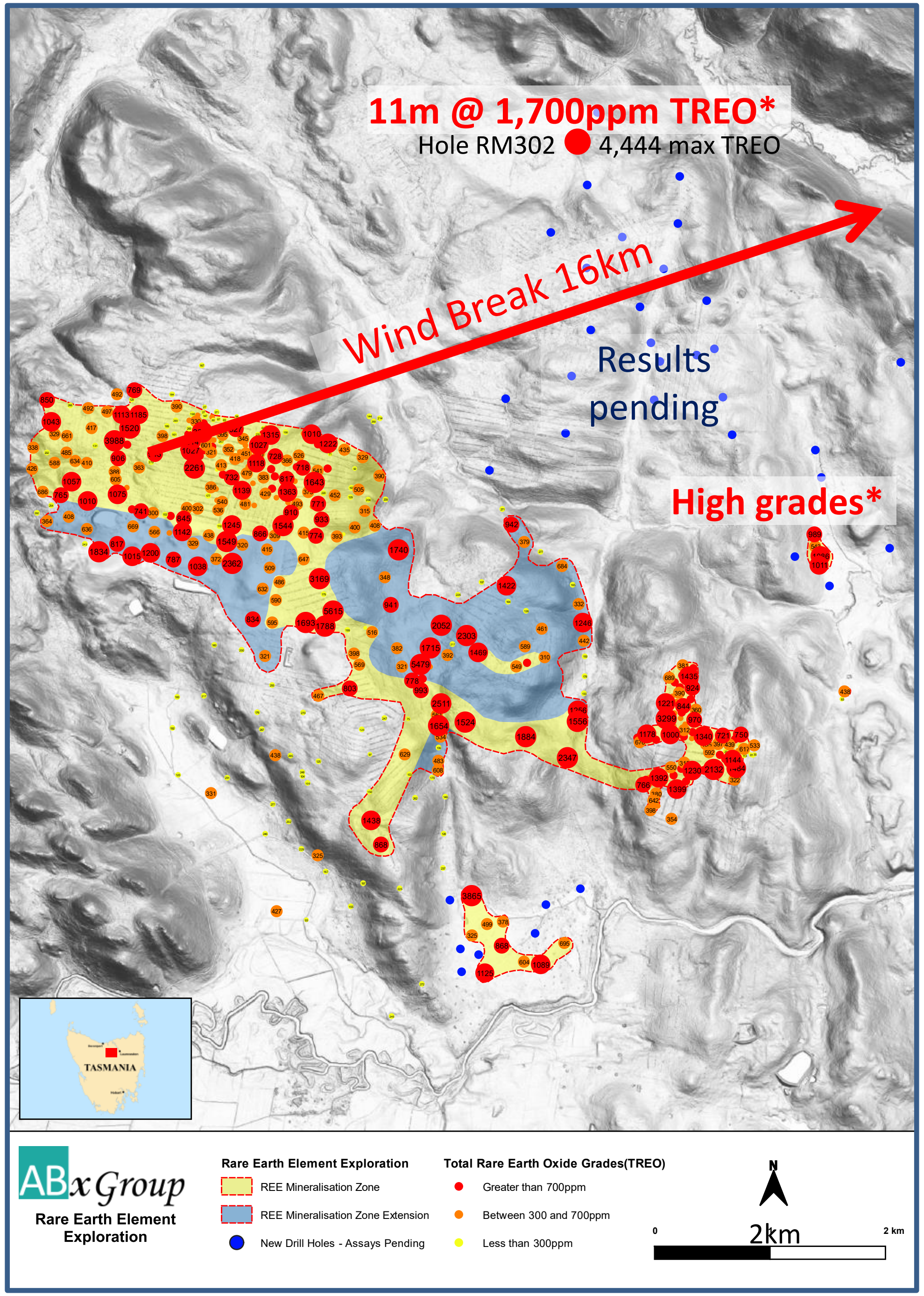
REE prospect is significantly enlarged to NE

- Current REE drilling target is 6.5km x 7km = 36km^2
- ABx has a lease application to cover gap to Wind Break
- NE holes high grade REE include 11m @ 4,400ppm TREO*
- **New drilling target to Wind Break exceeds 100km^2**

Thicker mineralisation identified

- Thick REE zones discovered up to 30m thick
- Economic assessment of thickened zones begun
- Overburden depth averages 5m
- REE horizon averages 7.7m thickness

= **shallow orebody, easily developed**



* See Qualifying statements & Appendix JORC information

Deep Leads–Rubble Mound business concepts (for minimum exploration targets)

Mine

- Dredge & pump
- Hydraulic mine & slurry
- Dig & truck?
- **In-situ leaching may be possible?**

Concentrate

- Simple, low-cost leachate
- Clay only?
- Tank leach
- Vat leach
- Heap leach?

Sell bulk REE concentrates to downstream processors

Australia or overseas

Rehabilitate

- Water treated
- Clays dewatered
- Reinstated to usable land
- Replanting

Improve

- Contour land
- Infrastructure
- Better drainage
- Pasture, plantations, offsets, forests?

Concentrate project achieves ~50% of the revenue for ~25% of the costs

Fastest, lowest-cost start-up

Deep Leads – Rubble Mound Land-Use Setting

Open land on recently harvested hardwood plantations and farmland

Supportive landholders

Forico-Mitsui plantations

Good access on highway and all-weather logging roads

Appendix: All assay results for hole RM302 highlighted on slide 5

Hole RM302 assays

								Permanent Magnet REOs													
From (m)	To (m)	Thickness (m)	TREO ppm	TREO-CeO_2 ppm	Perm Mag ppm	Dy+TB / TREO %	Nd_2O_3 ppm	Pr_6O_{11} ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	CeO_2 ppm	Er_2O_3 ppm	Eu_2O_3 ppm	Gd_2O_3 ppm	Ho_2O_3 ppm	La_2O_3 ppm	Lu_2O_3 ppm	Sm_2O_3 ppm	Tm_2O_3 ppm	Yb_2O_3 ppm	Y_2O_3 ppm
2	3	1	724	300	104	2.4%	70	17	2.3	15	424	9	3.6	13	3.0	60	1.4	16	1.3	9	78
3	4	1	1,648	628	245	2.1%	167	43	4.7	31	1,020	18	9.0	28	5.7	128	2.4	38	2.6	19	133
4	5	1	2,932	1,660	773	2.5%	545	155	11.0	63	1,271	30	24.5	67	10.8	378	4.1	118	4.6	33	218
5	6	1	1,222	805	334	3.4%	230	63	5.5	36	416	19	11.4	33	6.3	176	2.9	54	3.0	21	144
6	**7**	**1**	**1,723**	**1,422**	**460**	**5.7%**	**286**	**76**	**12.9**	**85**	301	47	19.0	69	16.5	232	5.9	72	7.0	46	448
7	**8**	**1**	**4,444**	**4,014**	**902**	**6.3%**	**496**	**124**	**36.2**	**246**	430	153	41.3	197	53.0	452	17.7	146	20.3	121	1,911
8	**9**	**1**	**3,269**	**2,893**	**742**	**5.7%**	**442**	**112**	**24.7**	**162**	376	98	30.6	140	34.7	446	11.7	113	13.6	82	1,182
9	**10**	**1**	**1,408**	**1,219**	**320**	**5.3%**	**195**	**50**	**10.0**	**65**	189	39	13.3	57	13.8	212	4.7	47	5.4	33	474
10	11	1	640	540	150	4.9%	95	24	4.2	27	100	15	5.7	26	5.7	107	2.1	23	2.3	14	189
11	12	1	421	348	95	4.9%	59	15	2.6	18	73	11	3.6	16	3.7	61	1.4	15	1.5	10	131
12	13	1	453	375	103	4.8%	65	16	2.9	19	77	12	3.8	18	4.1	68	1.5	16	1.6	10	137
2	**13**	**11**	**1,717**	**1,291**	**385**	4.7%	**241**	**63**	**10.6**	**70**	**425**	**41**	**15.1**	**60**	**14.3**	**211**	**5.1**	**60**	**5.7**	**36**	**459**

Hole location

Hole ID	Northing	Easting	Latitude	Longitude	Elevation GPS
RM302	5412740	481722	-41.4367	146.7812	230

Appendix: Summary of exploration results information in accordance with LR 5.8.1

Geology and geological interpretation	Clay layers overlying Jurassic age dolerite basement and an area with Tertiary age alkali basalt, Jurassic age tholeiitic dolerite and Tertiary age bauxite-laterite are the main geological units. Paleochannels host thicker clay zones which host the rare earth element mineralisation.
Sampling and sub-sampling techniques	Sampling was at 1 metre intervals. Subsampling for assaying is by quartering the clay samples twice and each time, mixing diagonally opposite quarters. Assay results from resampling corresponded satisfactorily.
Drilling techniques	RC aircore and push-tube coring used.
Sample analytical method	Assay samples are analysed by standard NATA-approved induction coupled plasma analytical methods for rare earth elements at ALS labs in Brisbane (method ME-MS81) and at LabWest in Perth (method MMA04). Interlab comparisons proved satisfactory.

APPENDIX : JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data ***(Criteria in this section apply to all succeeding sections.)***

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Drill hole samples from reverse circulation aircore and pushtube core drilling to 37.5 metres maximum depth but typically to 12 metres depth
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• Reverse circulation aircore chip sampling and push-tube coring. Grades of core samples correspond well with aircore sample grades.
Drill sample recovery	• *Method of recording & assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery & ensure representative nature of the samples.* • *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.*	• Weight tests indicated reliable sample recovery except for first metre in soils (not used in resource estimates) • No relationship between sample recovery and grade has been observed but some evidence of washing out clay in wet zones which will undersample the REE in places.
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.* • *Whether logging is qualitative or quantitative. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geologically logged by senior geologists. Every sample photographed, with photos, logs and assays entered into ABx's proprietary ABacus database.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Chips are subsampled using bauxite shovel and quartering method in accordance with ISO standards for fine damp clay material. Reassaying corresponds well
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.* • *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.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external lab checks) & whether*	• Assaying done at NATA-registered commercial labs of ALS Brisbane Australia and Labwest Minerals Analysis in Western Australia. Duplicate interlab assays corresponded well. • Desorption extraction tests were conducted by ANSTO at Lucas Heights, Sydney NSW with ANSTO's assays done at ALS Brisbane.

APPENDIX : JORC Code, 2012 Edition – Table 1 report (continued)

Criteria	JORC Code explanation	Commentary
	acceptable levels of accuracy (ie lack of bias) & precision have been established.	
Verification of sampling and assaying	• *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 (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• All assaying done at NATA-registered commercial laboratories of ALS Brisbane Australia and Labwest Minerals Analysis Pty Ltd in Western Australia. • Duplicated and redrilled holes correlated closely • Duplicate interlab assays corresponded well. • No adjustment of assay data done.
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• GPS hole locations have been tested for accuracy on many prospects, all satisfactorily – usually within 1m. • Grid Coordinates are GDA94 • Topographic control by Lidar topography when needed
Data spacing and distribution	• *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 and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drilling typically at 50 to 75 metre spacing on mineralised prospects • Geological continuity is established by drill pattern • Grade continuity is not yet established beyond 50m • Sample compositing not applied
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.* • *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.*	• Vertical holes through horizontal clay is appropriate • Clay layer drapes over topography and accumulates in gullies. Vertical holes is the appropriate orientation.
Sample security	• *The measures taken to ensure sample security.*	• Samples collected and bagged at every hole site and assembled onto pallets daily, shipped to lab weekly.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Several audits confirmed reliability

Section 2 Reporting of Exploration Results *(Criteria listed in the preceding section also apply to this section.)*

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.*	• Satisfactory to excellent. All tenements are in force, unencumbered and securely held by ABx • All drilling is on freehold land with access approvals by landholders
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• ABx is the first company to explore for Rare Earth Elements in northern Tasmania. No prior work has been done by other parties
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Bauxite deposit formed on Lower Tertiary basalts overlying Jurassic dolerite
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*	• GPS location. • Airborne Radar RL and LiDAR topography • Lidar topography contoured at 1m height intervals

APPENDIX : JORC Code, 2012 Edition – Table 1 report (concluded)

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.*	• All holes are short straight vertical holes
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• All data are presented as received from labs • Intercept summaries, if and when presented, are length-weighted arithmetic averages • Total Rare Earth Oxides (TREO) are an aggregate of all rare earth oxides. TREO-CeO_2 is TREO minus Cerium oxide values.
Relationship between miner-alisation widths & 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 (eg 'down hole length, true width not known').*	• Mineralisation typically 3 to 6 metres thick and Drillholes are sampled at 1 metre intervals • Horizontal layers drilled by vertical holes means intercept thickness is true thickness
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.*	• N.A. Diagrams presented give appropriate information
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.*	• All new results are reported in this report and reference made to previous tabulation of data
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.*	• N.A. Information provided is appropriate.
Further work	• *The nature and scale of planned further work (eg 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.*	• Step-out drilling over a wider area has been planned, work plans submitted and new drill rig configurations have been developed.

For JORC Code information relating to resource estimation, refer ASX Announcement 8 May 2023

ABx Group

(ASX:ABX)

ALCORE

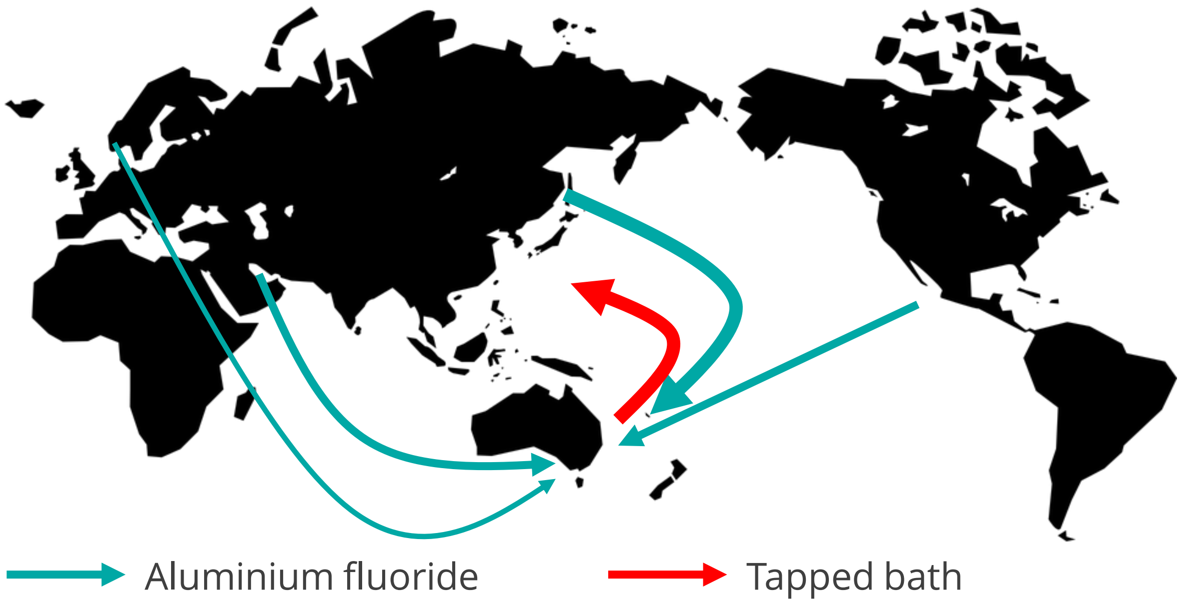
Aluminium fluoride recycled from industrial waste

31 May 2023

Aluminium fluoride from aluminium smelter waste

Aluminium fluoride (AlF_3): essential for aluminium smelting

- 1.2 million tonnes produced globally per year worth US$1.5 billion (US$1,000-1,800 per tonne)
- 50% produced in China, mainly for Chinese smelters
- Australia imports 100% of requirements, mostly from China



Current imports/exports

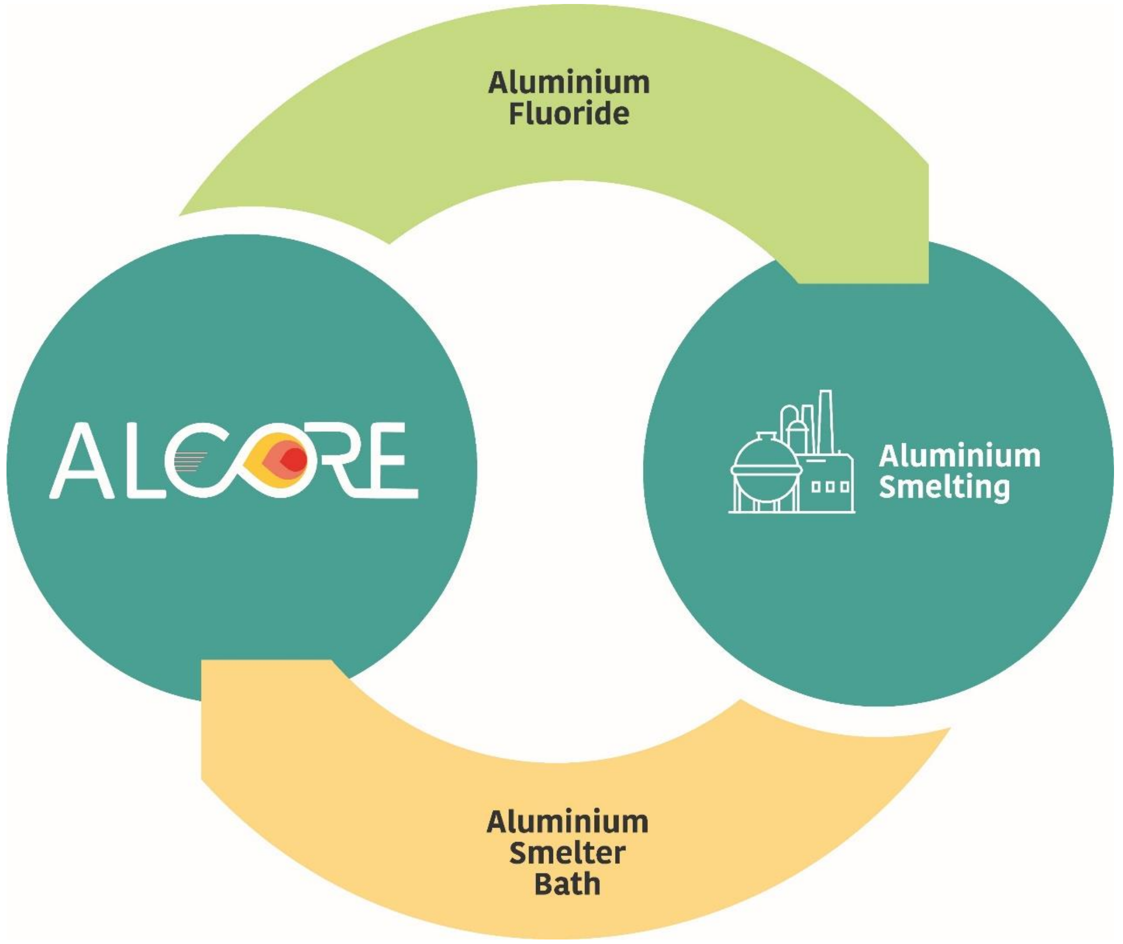
- Traditionally produced from high-cost aluminium hydroxide and fluorspar
- Achievable specification – product purity risk is low
- Mature market – dozens of customers globally

'Tapped bath': an aluminium smelter waste

- Fluorine is lost from smelter in 'tapped bath'
- Only attractive market is new smelter construction; none in Australia
- Global market for tapped bath has moved into oversupply
- Tapped bath is a low-cost source of fluorine

ALCORE Process to produce aluminium fluoride

- Exemplary illustration of circular economy



- ABx's 83%-owned refining technology subsidiary
- Developing processes to produce aluminium fluoride using:
  - Fluorine from tapped bath (an aluminium smelter waste)
  - Aluminium from dross (an aluminium smelter waste) or bauxite

ALCORE Process economics

- Based on long term aluminium fluoride prices and exchange rates, and estimated costs
- For 20,000 t/y aluminium fluoride
- Attractive margins under all scenarios

Aluminium source	Scenario	AlF_3 price (US$/t)	FX rate USD:AUD	AlF_3 price (A$/t)	Operating cost (A$/t AlF_3)	Operating margin* (A$/t AlF_3)	EBITDA* (A$m)
Aluminium hydroxide	Baseline	$1,220	0.75	$1,630	$1,250	$730	$15m
Dross	Baseline	$1,220	0.75	$1,630	$1,050	$930	$19m
Aluminium hydroxide	Optimistic	$1,400	0.70	$2,000	$930	$1,450	$29m
Dross	Optimistic	$1,400	0.70	$2,000	$770	$1,600	$32m

*Includes revenue from co-products

ALCORE Technical progress

- Critical processing steps have been demonstrated in laboratory
- Initial operating conditions for the pilot plant reactor have been selected[1]
- Basic engineering design for pilot plant reactor completed, and detailed design being finalised

Bath lab reactor MkI for recovery of fluorine from aluminium smelter bath

Oleum lab reactor

ABx Group

ALCORE Process scale-up

- Rigorous scale-up to reduce technical risk
- First aluminium fluoride plant planned for Bell Bay, Tasmania, near existing hydro-powered aluminium smelter. Planned production 20,000 t/y
- High potential for plants in other major aluminium smelting regions
- Potential expansion into other markets, including fluorine chemicals

Laboratory
0.3 kg/h bath
NSW
2019-22

→

Pilot
20 kg/h bath
NSW
$2m
2022-24

→

Commercial Stage 1
200 kg/h bath
1,300 t/y AlF_3
Tasmania
$16m
2024-

→

Commercial Stage 2
3,000 kg/h bath
20,000 t/y AlF_3
Tasmania
$80m

$7.5m grant awarded[2] and $3.3m instalment received[3]

ALCORE Technical plan

Reactor	Purpose	Commissioning
Bath lab reactor MkII	• Confirm preferred reactor design • Demonstrate that can achieve high fluorine yield from bath • Produce metal sulfate residue suitable for further process development	August 2023
Bath pilot plant reactor	• Demonstrate quality of hydrogen fluoride produced at pilot scale • Determine design and operating parameters for commercial plant	Early 2024

Illustrative images

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Reference Information

References

[1]ASX release 24 October 2022

[2]ASX release 29 April 2022

[3]ASX release 18 Jan 2023