

SMEDG Technical Meeting - Thursday April 23, 5.30 pm for 6.00 pm, Club York and Zoom.

Ian Levy will present "The geological setting of ABx's genuine Ionic Rare Earth Deposits in Tasmania. Australia-wide lessons to be learnt."

The third meeting for 2026, in which Ian Levy will be presenting, will be held on Thursday, April 23, at Club York, and on Zoom. The meeting is at 6 pm, with the bar open, and pizzas from 5.30 pm. We will be raffling geological field equipment for students who attend, and there will be a casual dinner with the speaker after the meeting.

We encourage you to attend what should be a very interesting and informative presentation.

Zoom registration is required, and can be done through [this link](#).

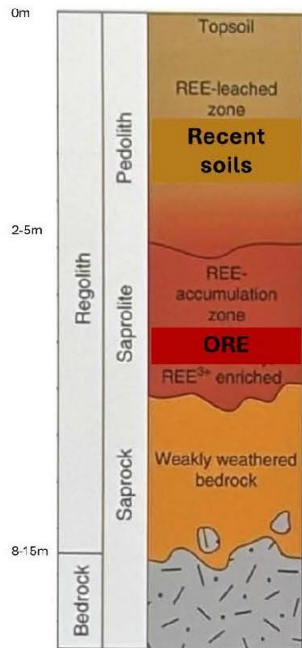
Biography

ABx Group Director Ian Levy has been a senior mining executive for more than 40 years, an 11-year member of the Joint Ore Reserves Committee (JORC) (including 4 years as Vice Chairman) and a former Federal President of the AIG. During Covid lockdowns in 2020 that prompted Ian to contemplate a dignified retirement, Ian and another ABx employee discovered several genuine Ionic Adsorption Clay rare earth deposits in Tasmania. Quoting the Godfather, Ian's response was; "Just when I thought I was out, they pull me back in!" and loving it.

**Ian Levy, Director
ABx Group Limited**



Abstract (this can also be downloaded in pdf format [here](#)).



Geology

Rare earth elements (REE) are not rare but in very rare locations, REE can be weakly adsorbed onto clays in soils by electrostatic attraction, thus forming Ionic Adsorption Clay REE (IAC REE) deposits. The geology of ABx’s deposit is summarised in the diagram (left).

ABx is finding REE over a wide area in northern Tasmania in poorer quality, non-cropping soils that have developed on Tasmania’s dolerite. ABx’s REE are concealed by the “recent soils” horizon that is usually REE-poor. The REE mineralised horizon (“ORE” in the diagram) occurs at depth, usually at the dolerite contact. Drilling is very difficult due to boulders and damp/wet ground. Is this why the REE are ionic?

Uses of REE

REE are used for permanent magnets which are essential in electronics, mobile phones, wind turbines, electric vehicles and military applications. Many modern technologies depend on REE.

Processing metallurgy – the challenge for most Australian REE

True ionic IAC REE are easily leached by benign ionic exchange solutions (eg. ammonium sulphate) at pH 4 at relatively low-cost. However most mainland Australian clay-hosted REE deposits do not leach well at pH4.

ABx’s ionic REE achieves high leach extraction rates at pH4 of 50% to 89% of the REE extracted into the pregnant liquor solution (PLS). In production, the PLS is filtered, purified, and ammonium carbonate is added to precipitate a mixed rare earth carbonate (MREC) product for sale to downstream REE processors. ABx has conducted large-scale column leach tests on bulk samples at the Australian Nuclear Science Technology Organisation (ANSTO) and produced a high purity, high quality MREC that has tested very well with several potential customers. ABx’s MREC is the highest value of all its peers.

Tasmanian IAC REE are especially enriched in the 4 permanent magnet REE species, namely Neodymium Nd, Praseodymium Pr, Terbium Tb and Dysprosium Dy. They differ from all other Australian REE mineralisation in that they are genuine IAC REE type and exceptionally enriched in Dy & Tb – the two REE species in greatest short supply and highest-priced.

REE discovery:

During the Covid-19 lockdown period in 2020, ABx’s Ian Levy and Nathan Towns collaborated via emails to create a geochemical index using ABx’s older bauxite assay suite, which did not include REE, to highlight drillholes that may be prospective for Rare Earth Elements (REE). This identified ABx’s old DL130 bauxite deposit located within pine plantations north of Exton in northern Tasmania.

Resampling and re-assaying in December 2020 of clay zones in drill samples stored at the ABx bauxite laboratory near Launceston airport led to a batch of REE assays being received from ALS Laboratories on 12 February 2021 which included several high-grade REE assay results. Subsequent drilling confirmed that the REE mineralisation extends well beyond the DL130 bauxite. Consequently, ABx named the REE exploration area “DEEP LEADS” so that new drillholes would continue to have the DL prefix. ABx has established a JORC-compliant REE resource of 89 million tonnes averaging 844 ppm (g/t) total rare earth oxides (TREO) that are highly enriched in Dy, Tb, Nd & Pr. More details are available on ABx’s website: www.abxgroup.com.au

Ian’s talk investigates how and why clay-hosted ionic REE formed in Tasmania and discusses how Australia could become a major producer of REE from its large mainland clay-hosted REE deposits.

Upcoming events (may be changed or extra events may arise - keep an eye on the website, as well as emails):

Regular meetings (4th Thursday of the month, may be changed if necessary) - See website (under the "Events" tab) for meeting dates and details.

Cruises - Mid Year - Friday June 19, Christmas - Friday December 11. The boat is booked.

[SMEDG website](#)

- **A treasure trove of current and historic information, including updated events schedules - well worth exploring!**

Club York and Regular Meetings

- **Regular SMEDG meetings are held in the Club York Function Centre, located on Level 2 of the Club, 95-99 York Street, just north of the Market Street intersection.**
- **These are also broadcast through Zoom, for which registration is required, with details on the notice of meeting email.**
- **Entry is usually through the lifts located in the building foyer immediately to the left (south) of the Club entrance, however if for some reason the lifts are locked, entry can be gained through the Club - just let the concierge know that you are attending a function, and you will be let through.**
- **The bar is open at meetings, and we shout each attendee one drink upon arrival, and pizzas are provided from 5.30 pm.**
The new bistro, "Meza" at the Club, is the venue for the traditional after talk dinner.

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