AUSTRALIAN BAUXITE LIMITED
ASX:ABZ

Pit Rehabilitation for the Bald Hill Bauxite Project, Tasmania

EL7/2010 Conara, ML 1961 Bald Hill Bauxite Project, Near Campbell Town, Tasmania

Summary by Tamara Coyte
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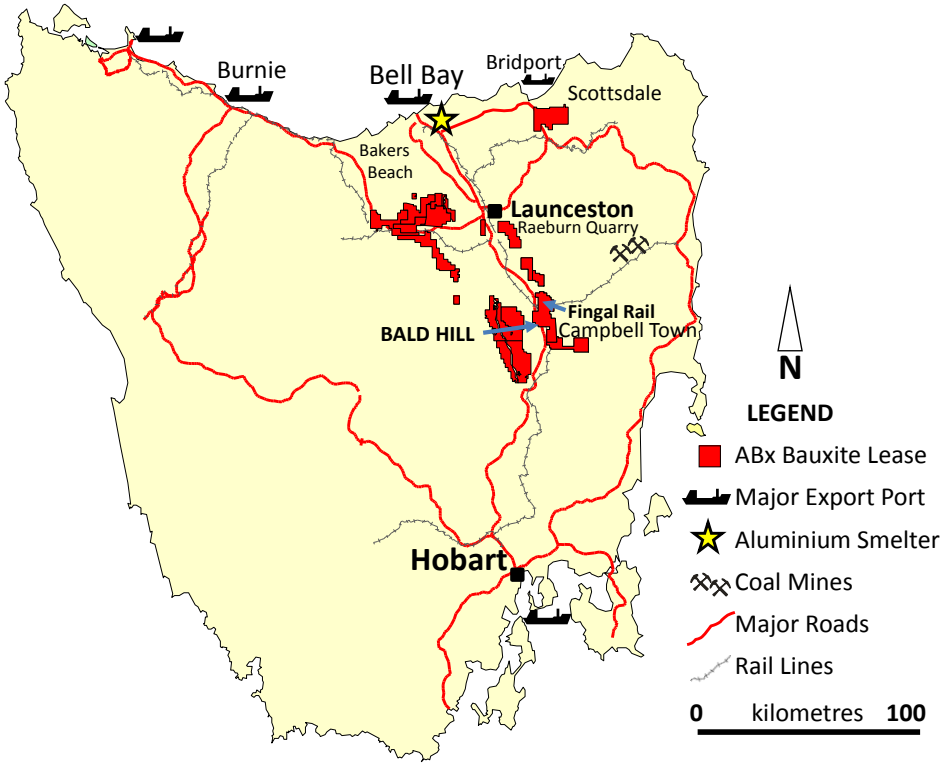
Aim

To excavate large samples of bauxite from pits on ML 1961 of the Bald Hill Bauxite Project for screening testwork and rehabilitate the land back to at least as good as we found it.

Procedure

After obtain government approval, three bauxite test pits were excavated and evaluated at Bald Hill Bauxite Project in late July 2013.

Figure 1: Locations

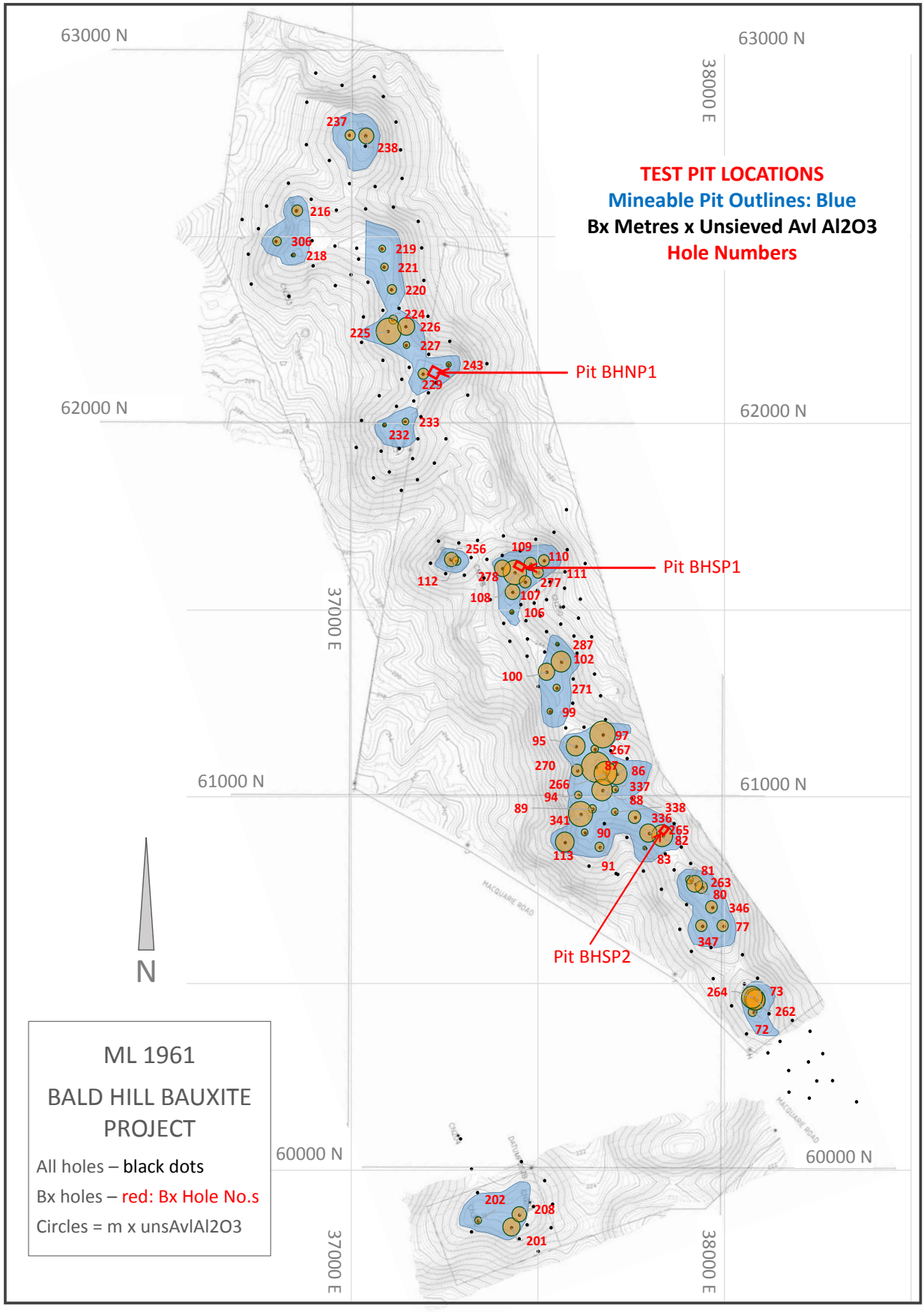


Stornoway Quarries agreed process the large sample at their Raeburn Quarry near Launceston.

Stornoway organised a 12 tonne excavator and three trucks to dig and transport the large (50 tonne) bauxite samples from each pit to Raeburn Quarry.

Bret Hoyle, Quarry Manager for Stornoway supervised the contractors on ABx's tenements to ensure all work was done in accordance with industry standards.

Figure 2: Test Pit Locations at Bald Hill Bauxite Project ML 1961



Weed and Fungus Controls

The excavator was transported using a semi-trailer and was washed down before entering properties to reduce the risk of spreading phytophthora fungus and noxious weeds. The three trucks are washed-down daily for the same reasons.

The Excavator and Trucks were also double-checked by an experienced Australian bauxite employee before entering each property, in accordance with ABx's standard operating policies and procedures.

Broken basalt used for back-fill was certified phytophthora-free material (discussed separately below).

Photo 1: Excavator being washed down between properties

The Excavator was then unloaded at the front gate and walked to the pit locations along farm tracks.

Pit Geology – Summary

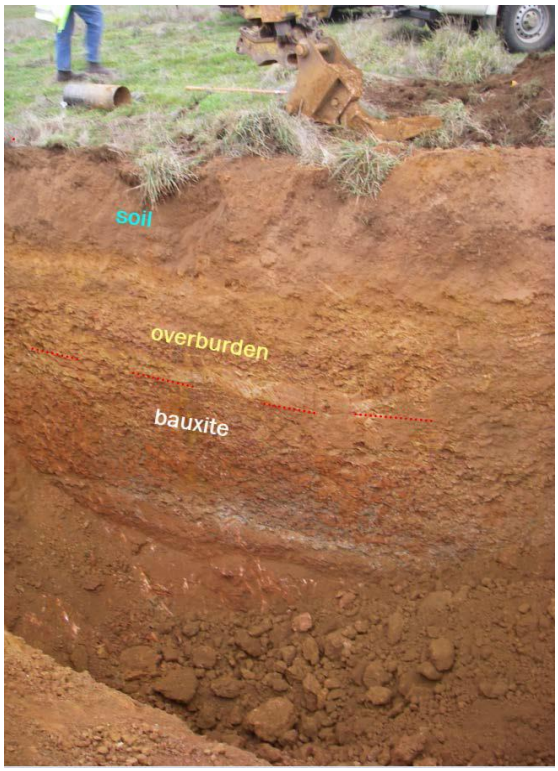


Photo 2 (left): Geology Section: Pit BHSP1

Bald Hill geology can be categorised as:

(1) Soil 0m to 0.5m thick

(2) Overburden-transitional bauxite

(3) Bauxite

(4) Clay-rock base.

Sequential Extraction To Preserve Soil Structure

The excavator used a bucket to scrape-off the 'A' soil horizon and stockpiled it near the pit in a cone shaped pile. The Excavator then dug the 'B' soil horizon and stockpiled it separately.

Photo 3: 'A' & 'B' Soil horizons removed & stockpiled separately beside the pit before bauxite is extracted

Photos 4, 5 & 6: Excavating & loading the 50 tonne bauxite sample

Pits were excavated to a maximum depth of 4.5 metres. Channels 15cm wide were cut in the pit walls and sampled at 0.5 metre intervals.

Some three truckloads of bauxite from each pit were sent to Stornoway's Raeburn quarry for dry screening.

Replacing Bauxite Extracted From Each Pit

The trucks hauled bauxite to the screen plant at Raeburn Quarry and returned with raw basalt rock aggregate as back-fill to replace the material removed from the pits. This backfilling was done before the soil horizons and any overburden material were replaced.

Basalt material from Raeburn quarry has been certified as phytophthora free.

Photo 7: Fresh clean broken basalt from Raeburn quarry, certified phytophthora-free.

Photo 8: refilling pit with basalt aggregate before reinstating soil Photo from Fingal Rail Prospect (Bald Hill was not photographed)

Reforming the Subsoil Horizons

Rehabilitation commenced with placing the basalt rock into the pit first and tamped-down to replace the hard bauxite that had been removed for screening at Raeburn Quarry.

This fresh basaltic material is foreign to the area and may change the soil composition if placed too close to the surface, so it is buried deep beneath the bauxite and overburden material. Once all the all the basalt has been used as backfill the remaining bauxite and overburden is placed back into the pit in an even layer.

During mining operations, no foreign material will be used – the land will be reshaped at a lower height to ensure that foreign fill and soil is not introduced onto the property.

Replacing Soil

The 'B' soil horizon is carefully reclaimed from the soil stockpile area and reinstated over the top of the overburden.

After the 'B' horizon has been fully reinstated, the 'A' soil horizon is carefully spread over the top of the disturbed area along with any previously removed vegetation.

Photos from Fingal Rail Prospect (not Bald Hill): At Bald Hill, the only vegetation affected was grasses but at the nearby Fingal Rail prospect area, scrub vegetation had been removed and was spread across the rehabilitated pit area – as shown in the following photos.

Photo 9: Replacing the 'B' Soil Horizon

Photo 10: Replacing the 'A' Soil Horizon

Compaction & Vegetation Redistribution

After all stock piles have been replaced then the excavator track rolls the pit area for compaction of any possible smaller softer areas and leaving the ground with the same irregularity as before.

The branches and surface debris initially cleared from the site were then redistributed over the site to aid rehabilitation and habitat retention.

Photo11: Excavator track rolling pit area

Photo 12: Plant matter & debris redistributed over site

Initial Completion & Monitoring

Photo 13: Completed initial rehab-ilitation at Fingal Rail Prospect.

Photo 14: Completed initial rehab-ilitation at Bald Hill Bauxite Project, Pit BHSP2

All sites have been photographed and will be audited so that subsidence can be checked and regrowth monitored to ensure a high standard of rehabilitation.

Discussion

Site rehabilitation was completed in a timely manner, within days of excavation so that no degradation of soils from duration in stockpile areas has occurred. During mining, stockpiles will be kept thin to retain soil viability.

Bauxite is an inert material, often used to build public roads. It is expected that the bauxite content of the soil horizons will re-cement on its own so that soil erosion will not occur.

Biodiversity at ML 1961 of the Bald Hill Project is limited, due to long-term pasture use. If re-seeding is required this can be easily addressed.

All sites will be checked periodically and re-photographed to monitor for any subsidence or abnormal vegetation regrowth. A spring botanical survey will be completed at the Fingal Rail prospect in late 2013 and again in February 2014.

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