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BELTANA PROJECT

PLANNING, AMENITY AND RESTORATION REPORTS

Submitted by
Electrolytic Zinc Co. of Australasia Ltd
1974

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PRIMARY INDUSTRIES AND RESOURCES SA

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

EXPLORATION DEPARTMENT

BELTANA PROJECT

IMPACT STATEMENT

by

R. D. PRATTEN,
Manager,
Exploration Department.

January, 1974

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GENERAL

Details of the environment of the mine area are set out in this report. The active impact zone will have an area of approximately 130 ha and is the area on which there will be construction, excavation, stockpiles, waste dumps, living quarters and movement of people and machinery. The mine is approximately 10 km from the nearest private residence (North Moolooloo Homestead) and is also remote from any area of scenic attraction.

Due to the undulating to low hilly nature of the topography in the vicinity of the mine, the operations will have very little visual impact on the area as a whole. Portions of the camp complex will be visible from a point on the main north-south road (National Route No. 83) which passes some 3 km to the west of the mine area. No new road construction will be required for the operation. No stands of native trees will be affected by the operation although it will be necessary to remove some scattered Black Oak and Mulga trees. The area surrounding the existing camp complex has already been planted with lawns, trees and shrubs. This vegetation is now well established and the varieties of shrubs and trees were selected on the advice of Mr R. A. E. Whitehill - Tree Advisory Officer, Botanic Garden, Adelaide. This policy of good housekeeping will continue in future operations.

The impact of mining in the area on native animal life will be very small. The conditions of the lease on which the camp is situated forbids the presence of firearms, and restricts the presence of dogs at the discretion of the surrounding pastoral lessee.

Initial production of the mine will be at the rate of 30,000 tonnes to 40,000 tonnes per annum. Mining will be by open cut and the attached plan (Figure 2) shows the proposed layout of the operation. The ore is direct shipping and hence there will be no treatment residue requiring disposal. The only waste from the mining operation will be natural rock which will be dumped in a valley area in a systematic manner consistent with the requirements of the Mines and Works Inspection Act (see Figure 2).

The current land usage of the subject area is sheep grazing and the average carrying capacity of the active impact zone is ten sheep. The South Australian State Planning Authority has recommended (1972) that the area in which the mine is situated be classified as "Class C".

At the completion of mining activities, all buildings and equipment will be removed from the area and the exhausted pit rendered safe by fencing. It will not be feasible, for reasons of climate and lack of local soil cover to revegetate the waste rock dump; however, because of the siting of the dump and reasons mentioned previously, there will be a minimum of visual impact.

LOCATION

The Beltana mine is situated at latitude 30°40'40"S and longitude 138°26'10"E, to the west of the North Flinders Ranges of South Australia.

The deserted township of Beltana is situated 16 km to the south, and Copley 14 km to the north.

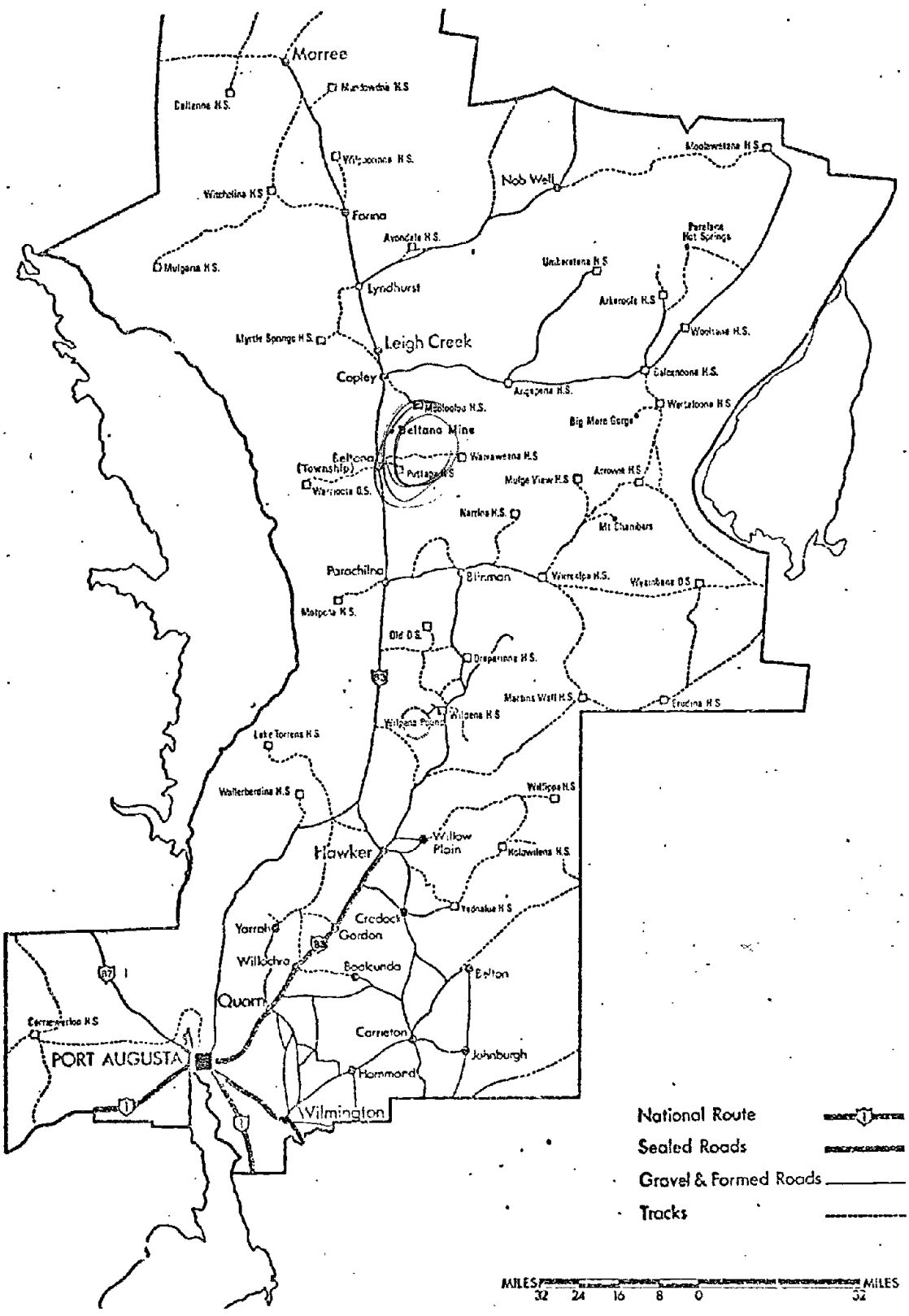
To the west, a plain extends some 8 km to the Mt Deception Ranges. Low hills form the landscape of the immediate environment.

The North Flinders Ranges are bounded by chains of salt lakes from Lake Torrens in the west, north to Lake Eyre, to Lake Blanch, and Lake Frome in the east.

See location map Figure 1.

Figure 1

LOCATION MAP



SERVICES, TOWNSHIPS AND SETTLEMENTS

Copley

A small township is situated around the railway station of Copley. Facilities include one service station, one hotel, two filling sitations, two roadhouses, one general store. The total permanent population is less than 200.

Beltana township

The deserted township of Beltana, 1.6 km to the south, has a permanent population of less than ten. A store and filling station caters mainly for tourist traffic.

Pastoral properties

The mine is situated within the boundaries of Puttapa Station, leased by members of the Ragless family, and managed by Mr Richard W. Ragless. To the north of the orebody, the boundary of Puttapa and North Mooloolo is marked by a vermin-proof fence. Mr Albie Wilhelm manages the North Mooloolo Station.

NATURAL HISTORY

Climate

The Beltana mine is situated in an area of semi-aridity. The average rainfall of nearby Copley is 190.5 mm.

Periods of drought are common throughout the North Flinders Ranges and, due to the sparse soil and vegetation cover, rain water drains rapidly into the surrounding salt lakes. Flash floods are common and dry creeks may hold rivers in excess of 3 m deep and 61 m wide.

Temperatures vary from around 0°C in winter to a maximum in excess of 40°C in summer.

Vegetation of the area in general

The banks of larger creeks support a variety of gum trees. Eucalyptus camaldulensis and E. intertexta are common throughout the Flinders Ranges.

On the hill slopes, species of Acacia, Cassia and Eremophila are abundant.

The bulk of the vegetation is provided by the family Cheropodiaceae which includes the genera Atriplex (saltbush), Kochia (bluebush), Bassia (bindyi) and Rhagodia.

The yellow daisy Senecio magnefous is a distinctive flower in the well-watered creek below the Aroona Dam.

Insects

The insects of the area are similar to those found throughout the hinterland of Australia.

Perhaps the most conspicuous species are the bushfly, blowfly and housefly, which cause considerable discomfort, apart from their disease-carrying capacity. The indigenous bushfly, Musca vetustissima, and the housefly, Musca domestica, which was introduced from Europe, both breed several generations in one year.

Hygienic disposal of organic waste reduces the abundance of these flies and the risk of disease-transmission.

Reptiles

Snakes noted in the North Flinders Ranges include the venemous brown snake, the non-venemous desert whip snake and the rare carpet snake.

Lizards are abundant, particularly after high rainfalls. Goannas, sleepy lizards (Tiligua), various Amphibolourus spp., geckos and the curiously-named Cunningham skink have been observed in the area.

Birds

Galahs and correllas are very abundant around water. Crows, wedge tailed eagles, ring necked and mulga parrots are also common.

Mammals

Among the marsupials, Macropus rufus, the red kangaroo, and Macropus robustus reubescens, the euro, are the most conspicuous.

Smithopsis crassicondata, the fat-tailed marsupial mouse, has been recorded.

The rare yellow-footed wallaby, Petrogale xanthopsus, is restricted to the Flinders Ranges.

Bats are abundant and include the western little mastiff bat, Goulds wattled bat and the lesser long-eared bat.

Introduced mammals include the rabbit, brown hare, fox and the feral cat.

GEOMORPHOLOGY

The hills to the north of the mine, running parallel to the access road, are formed from Pound Quartzite. This formation runs approximately south-east towards the present camp-site and then turns almost due south and passes to the west of the orebody. Pound Quartzite becomes increasing thick to the south of the mine, and forms prominent hills.

Low ridges adjacent to the Pound Quartzite hills are formed from Lower Cambrian Ajax Limestone, and the Upper Proterozoic Wonoka Limestone. Low lying areas to the east and west of the mine are occupied by Willouran siltstones and shales, the oldest exposed rocks in the area.

EARLY EUROPEAN ACTIVITIES

Pastoral

The present area of Beltana was probably first stocked in the early 1850s by John Chambers of Oratunga, later known as Mooloolooo.

Sheep grazing continued as the major activity of the area, and remains so to the present day, though cattle ranching is becoming increasingly popular.

In 1872, the telegraph extended into the far north, and the narrow gauge railway followed in 1881.

Mining

Interest in mineral exploration followed upon the northern advance of pastoralists in the 1840s. Claims were being pegged in the early 1850s. The lessee of Puttapa Station, J. Haines, prospected an area near Beltana township in 1856, and attempted to register claims in that year.

A brief report on the existence of coal at Leigh Creek was presented to the State Government in 1860. Mining reached its zenith in the late 19th century, largely due to small copper workings. In the early 20th century there was an increasing trend towards amalgamation of companies. The South Australian Copper Corporation was formed in 1900 from an amalgamation of several claims surrounding the Mountain of Light Mine, 3 km south-east of Copley.

The most ambitious venture was launched by the Tasmanian Copper Company, the owners of the Rosebery Mine. Under the management of C. M. Henrie, several of the most successful mines in the North Flinders Ranges were bought up, including Blinman, Sliding Rock, the Mountain of Light, Nicholls Nob and Mt Lyndhurst. A smelter was built at the Mountain of Light, preparatory to the start of what Henrie and his Tasmanian-based employers hoped would be an unprecedented production of copper in the State.

Unfortunately for what has been the only concerted effort to rationalise copper production in the North Flinders Ranges, world demand fell off drastically and, in 1908, the Tasmania Copper Company abandoned their venture after an expenditure of £500,000.

The workings of the old Ajax Copper Mine near the Aristotle willemite prospect are still accessible. Work probably commenced in the 1870s and the total recorded production was less than 500 tons.

Major production of copper ore was also made at the Copper King Mine, some 3 km east of the Beltana orebody; work ceased around the year 1907. Some ochre mined at Copper King was used in the manufacture of paint in the first World War.

No significant base metal mining has been undertaken in the Ranges since the decline in the early 20th century, and from this time there was a gradual depopulation so that the total number of permanent residents now is probably less than one-half of J. B. Austin's estimate of 6,000 in 1862 for the area north of Port August.

Apart from the Tasmanian Copper Company's copper mines, a significant producer from 1887 to the 1890s was the Ediacara Company which was mining a stratabound lead body on the flats between the Flinders Ranges and Lake Torrens.

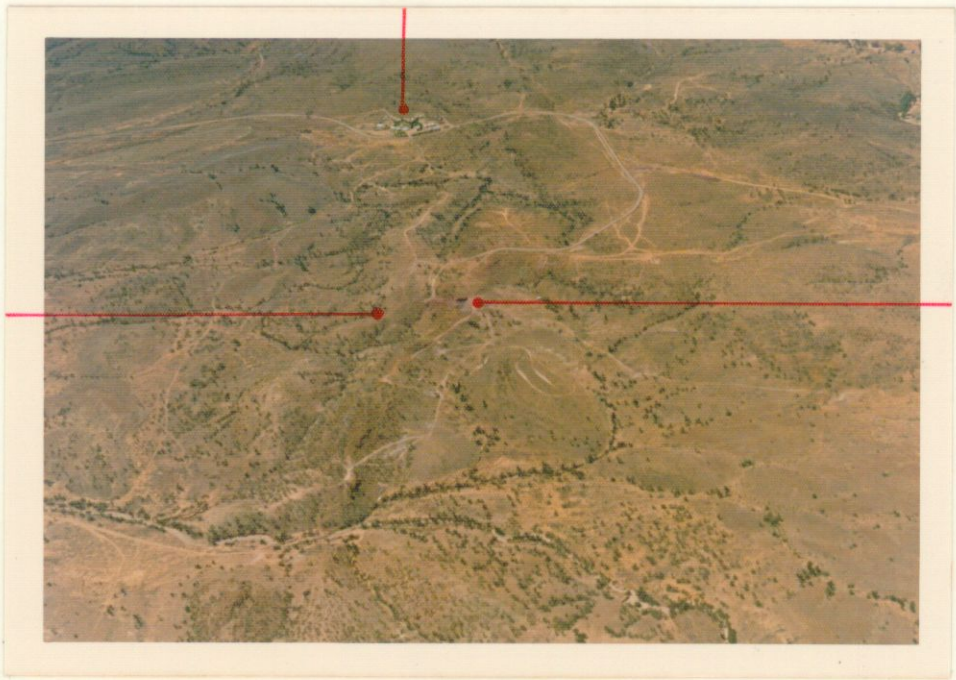
Recent Mining

Only one major mine has commenced production since 1940, this being the Leigh Creek Colliery.

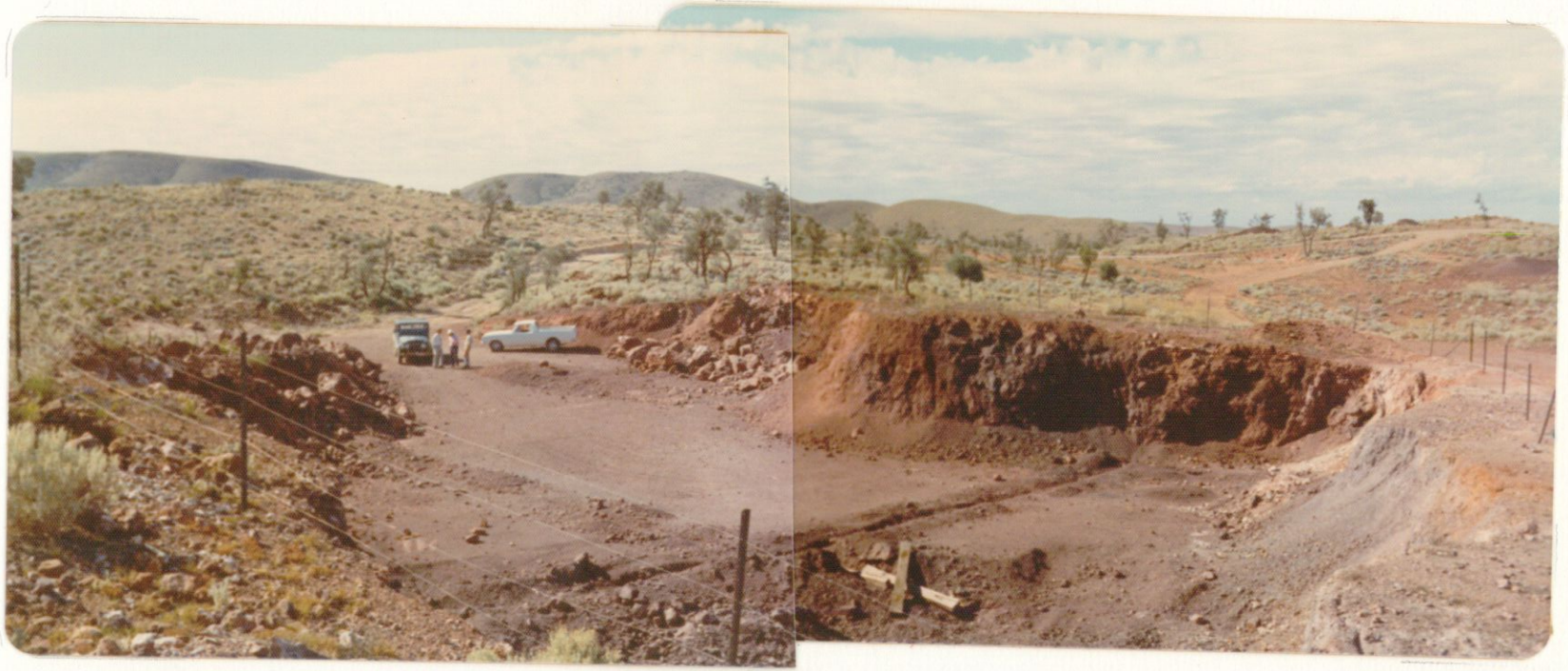
Extracted from 'Bellanca Project - Impact Statement' DM 212/74.
by E.Z. Industries.

APPENDIX I

PART OF CAMP COMPLEX



AERIAL VIEW



Puttapa Zinc Mine

Extent of open cut 13th. Feb. 1974

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Grid is in plane rectangular co-ordinates, origin based on TM co-ordinates of construction T.S viz 653, 447.06 yds E., 1,202, 429.12 yds N

Grid Bearing: Construction T.S to Flat Top T.S. = 11° 55' 26"

Grid North is 1° 10' East of True North (1.5')

Contour Interval 10 feet

Level Datum Mean Sea Level at Port Adelaide

Photogrammetric Control Survey by P.B. Simmons

Photogrammétric Plotting by AUSTRALIAN AERIAL MAPPING PTY. LTD.

ELECTROLYTIC ZINC CO. OF AASIA LTD.

PROJECT BELTANA | SOUTH AUSTRALIA

FIG. 2

MINE AREA

SCALE 1" = 400' | Survey

Reference

Date Jan 1974 | Drawn A.R.M. | Checked

REF No. DI00-25

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