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COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS

RECORDS:

1946/37

NOTES ON PROSPECTING LEASES HELD BY THE AUSTRALIAN ALUMINIUM
PRODUCTION COMMISSION IN SOUTH GIPPSLAND, VICTORIA

by

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NOTES
On Prospecting Leases held by The
Australian Aluminium Production Commission
in South Gippsland, Victoria.

1946/37

1. Five leases have been taken up by the Commission in the Parishes of Jeeralang, Traralgon, Budgerie and Yinnar in the County of Buln Buln.

The following notes give brief descriptions of three of these leases and also contain some recommendations relative to prospecting on them.

2. (a) The First Lease, P.L.No.1 lies in the Parish of Jeeralang 8 miles South from Morwell. The lease encloses parts of Allotments 1, 3, 4 and 7, and most of the area is unimproved - land covered with scrub and fairly heavily timbered.

The accompanying plan, on a scale of 200 feet to 1 inch, shows the topography by contours at a vertical interval of ten feet. Drainage from the area flows West to Billy's Creek -- which runs in a North-Westerly direction to join the Morwell River.

The Eastern boundary of the lease approximately coincides with the contact between basalt and the underlying sandstone of Jurassic age.

Basalt, mainly represented by red or brown clayey soil, but by fresh rock in places, occupies a substantial area of the lease, particularly in the South-East corner (all that portion of the lease within Allotment 3) and along the Western boundary.

It is believed that the basalt mapped near the centre of the Western end of the lease extends South under very shallow cover to the fence between Allotments 1 and 4.

Exposures of bauxite are poor and consist of fragments on the surface or in the soil at about the boundary between basalt and the overlying Tertiary sediments. This is in keeping with past experience in Gippsland where it has been found that large bodies of bauxite may exist with only poor surface indications.

Points at which bauxite has been found are shown on the plan and it is encouraging to note that bauxite has been observed at so many points around the periphery of the area occupied by post-basaltic sediments.

As far as can be ascertained the overburden consists of coarse quartz sand with minor bands of finer sand with a little mica and minor amount of clay.

There is a strong suggestion of a fault crossing the South West corner of the lease with the down-throw to the South or South West. A body of bauxite may have been preserved on the down-thrown side.

2. (b) Prospecting - It is apparent that the Eastern half of the lease affords a greater chance of the discovery of a large occurrence of bauxite than the more Westerly portion where the underlying basalt is exposed over much of the area. Nevertheless, it is possible that a useful quantity of bauxite occurs under sand and clay on the Southern flank of a low ridge near the Northern boundary of Allotment 4. Some sites for testing this part of the lease by hand-boring have been

marked out on lines 1000 N and 900 N.

For development of the Eastern half of the lease future prospecting must be guided by the results of trials at the sites shown on the plan on lines 100 W and 600 S, but in any event the 600 S line must be extended in an Easterly direction over the crest of the hill to the basalt on the Northern slope.

It will also be necessary to test by hand-bores in a Northerly direction from the South-West corner peg along the track for 200 feet and then from the gate along the road for a further 400 feet. Approximate positions for testing are marked in red on the accompanying plan.

3. (a) The Second Lease described in these notes is P.L.No.3, in the Parish of Budgerie about 6 miles South-West from P.L.No.1. The Lease embraces parts of Allotments 10^H and 10^G. (See accompanying plan and sketch map)

The whole of the lease is timbered and scrub-covered country of low value.

The plan on a scale of 200 feet to 1 inch covers a portion of the North-East quarter of the lease and is sufficient to show the deeply incised nature of the gullies. The area is drained by a creek flowing in a deep gully from the South East to the North-West corner.

Lateral creeks also have deep gullies. The main creek, apparently unnamed, flows North-Easterly into Middle Creek, tributary to the Morwell River.

Basalt is exposed at the North-East and North-West corners of the lease and the remainder of the area is occupied by post-basaltic sediments.

Bauxite is exposed near the North-East corner peg but outside the lease and at three points within the lease along the Creek. Two of these exposures, both in allotment 10^H, which are shown on the 200 feet plan are of solid bauxite outcropping in situ exposed in the banks of the main creek. The third, in Allotment 10^G, and shown on the sketch at a junction with the main creek, is represented merely by a few scattered fragments of bauxite in the soil.

3. (b) Prospecting - Rapid increase of overburden may impose a severe limit on volume of bauxite which may be economically recovered and initial prospecting should aim to establish the attitude of any bodies of bauxite which may lie on either side of the creek in the North-East part of the lease.

Hand bores should be sunk along the Southern bank of the creek and from plane-table station "C" in an East-South-Easterly direction as indicated on the plan.

An area between the North-East corner peg and the second occurrence of bauxite on the main creek channel should also be tested by hand-boring.

These areas for initial testing are indicated on the plan in red.

4. (a) P.L.4 lies in the Parish of Yinnar and includes parts of Allotments 9 (of A) and 11. See accompanying sketch. Allotment 11 is cleared grazing land and that part of Allotment 9 which lies within the lease is covered with scrub, bracken and timber.

Allotment 11 has recently changed hands and the new owner is reluctant to agree to mining on his property. It will be apparent from the following notes that little bauxite is likely

to be present on that part of Allotment 11 which lies within the lease and consequently the lease could be repegged to utilize the western boundary of Allotment 11 as its Eastern limit.

The lease is deeply dissected by a creek flowing West which has cut a broad valley with steep walls well into the basalt.

The sketch herewith shows that the area of the lease is occupied by the following succession:-

Sand and clay of Upper Tertiary age -
Basalt - Lower Miocene or Oligocene -
Sandstone - Jurassic.

The lease lies on the Western margin of a considerable area of Jurassic rocks and includes a narrow strip of these sedimentaries within its Eastern boundary.

Basalt represented by red soil occupies most of the Eastern half of the lease and also forms a wide strip flanking each side of the Westerly flowing creek where it crosses the lease.

Later Tertiary sediments have been preserved on the high ground on each side of the creek in Allotment 9 (i.e. the Western half of the lease) and bauxite is exposed at several points distributed about the margins of these areas of sediments.

4. (b) Prospecting:- Near the South-Western corner peg a road running East-South-East forms part of the lease boundary.

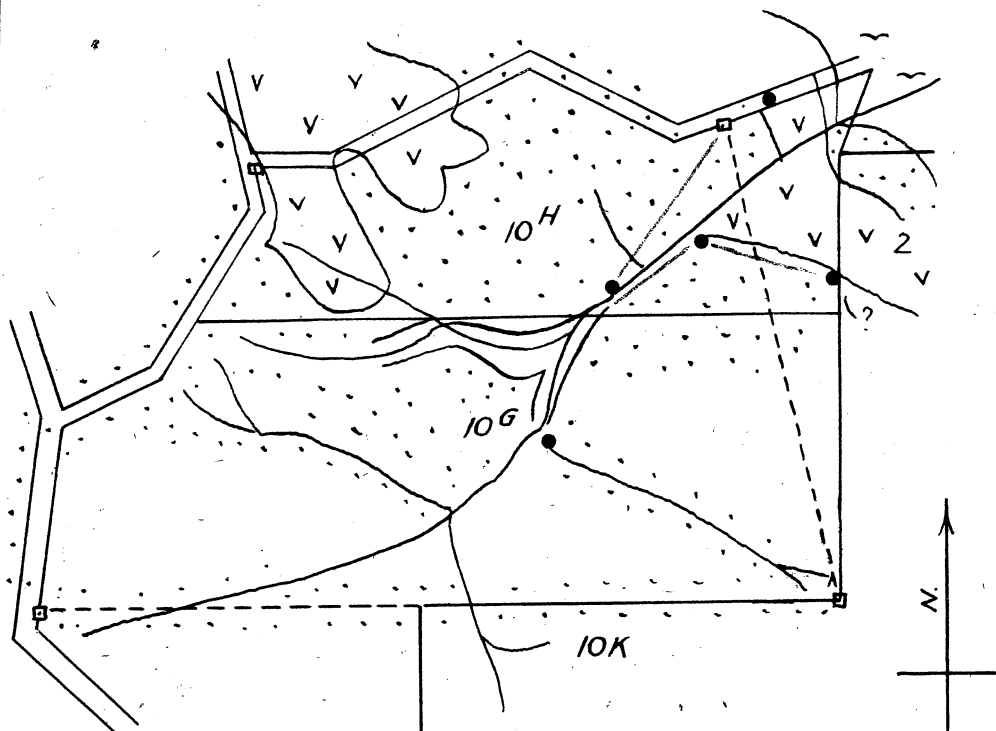
This road follows the contact between basalt and the later Tertiary cover. Bauxite occurs along this geological boundary which would be a favourable place to start initial prospecting.

On the Northern side of the lease bauxite is exposed in corresponding positions which also afford convenient starting points for probing the area by hand-boring.

Lines to be tested are marked on the sketch map in red.

Launceston,
Tasmania
27/9/46.

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Geological Sketch Map of P.L. 3.

Ph. Budgerie Co Buln Buln

Scale 1" = 20 Chs

Reference

Alluvium ~

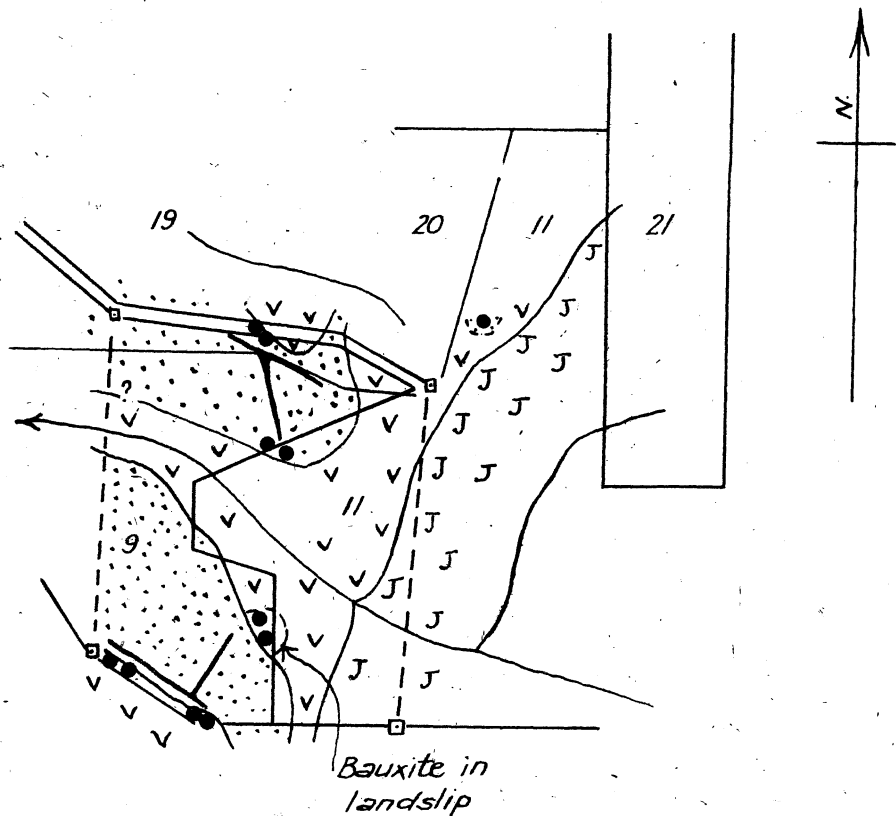
Post-bauxite sediments . . .

Basalt V

Lines to be tested —

Bauxite occurrences •

Lease corner pegs □



Geological Sketch Map of P.L. 4, Ph. Yinnar, Co. Buln Buln.
Scale 1" = 20 Chs.

Reference

- Post - bauxite sediments :::::
 Basalt v v
 Felspathic sandstone J. (Jurassic)
 Bauxite occurrences •
 Lease corner pegs □
 Lines to be tested. —