REPORT ON KNEABBA AREA.

Geology.
See map (simplified from Geological Survey of WA, Dongara - Hill River sheet.)

Climate.
I have no information.

Hydrology.
Rain runs off the impervious sandstone and laterite capping along ephemeral streams, which may seep gradually into the sand or collect in lakes that usually dry up in summer. Most of the lakes near limestone drain into cave systems, eg Stockyard Tunnel, but at least one (Lake Indoon) does not.

Fauna.
I understand that the Museum has completed an extensive survey of Mt. Leseur, south of this map, and that the Department of Fisheries and Fauna is concerned about Rocky Spring, but I do not have any details.

Flora.
The vegetation is dominated by shrubs, seasonally damp areas such as along the river courses or around lakes being taller "scrub" elsewhere, lower "heath". The density of foliage cover varies from place to place (reflecting the length of time since the last burn?)
Trees do occur amongst the shrubs on the sand and occasionally Blackbutt, Eucalyptus todtiana, builds up to a low woodland - often on slight ridges. On the limestone, stands of Illyarrie, E. erythrocorys, are dense enough to be termed "low open-forest". Paperbarks, Melaleuca sp., occur in the swamps and floodways while a large and handsome gum, possibly E. camaldulensis (or E. camaldulensis/rudis hybrid?) grows around more permanent water, eg at Lake Indoon and the Arrowsmith River.

Although superficially the vegetation has a uniform appearance in fact it is composed of an astonishing variety of species which seem to change with the underlying soil type. The limestone slopes, for example, flame with Beaufortia squarrosa, the lake and swamp region supports the unusual Banksia elegans, while Calytrix superba is found in the sand heath to the north and west of the townsite.

Tallerack, E. tetragona, grows here and in the Stirling Region, and other interesting parallels may be found between northern and southern sandplains.

Land Use.
a. Farming. Large acrages have been cleared. There remain, however, significant areas of Crown land.

b. Mining.

i. Mineral Sands. ventures at Eneabba have commenced operations and a second company has reached the stage of erecting a town so that sub-contractors may be brought in to start production. Parts of the assay show 45% heavy minerals.

ii. Coal. The area has been extensively pegged for coal but only a few leases are currently held. The coal is in the same formation as at Coalseam on the Irwin River and its principle value is as a source of montan wax. I have no reliable information about the depth of the seams.

iii. Gravel and sand from several localities, never in significant quantities.

c. Recreation.

Lake Indoon is becoming increasingly popular as a site for barbeques, sailing, water-skiing etc. However, apart from gradual expansion of the campsite by accidentally knocking over a tree, then next year using it as fuel, people seldom leave the lake side and cannot yet be considered a pressure on the flora and fauna. But cavers may be significant because they open up areas by making new tracks. I have no information on shooting.

Future.

An extensive reserve protects the limestone area.
A small reserve protects the scrub, could this be enlarged to link up with the limestone reserve?
No reserve protects the sandplain north of Eneabba but there is vacant Crown land that could be so designated.
The laterite heath south of the town is likewise unprotected. It is here that the effect of mining will be most felt.

Sand mining involves stripping off the overburden, removing the orebody, washing to seperate the heavy minerals, then filling in the hole with the waste. It would be very unlikely that the complex heath community would ever regenerate on such ground. (The Company at present in operation intends to plant pasture.)
If regeneration were to be attempted, storage of topsoil may help (cf. Main Roads Dept.). Some plants that normally grow from seed may come back well after this treatment - Anigozanthos manglesii for example, or Banksia prionotes. But others may disappear altogether. B. elegans suckers profusly in the wild but although he has tried since 1963 Mr. E. Wittwer has not succeeded in getting cuttings to grow in Kings' Park. (Although B. elegans is not at present threatened, the reserve on which it grows has been pegged on four seperate occasions since 1969.) There may be other plants similarly in a state of delicate balance.
Perhaps a study of road verges and of the gas pipeline easement would yield useful information? A preliminary look at a roadside scrape listed 22 spp (4 unidentified) in a $10m^2$ plot.

There is yet no authoritative account of the flora and fauna of this area.

I respectfully submit that we need more facts.

Penny Hussey.

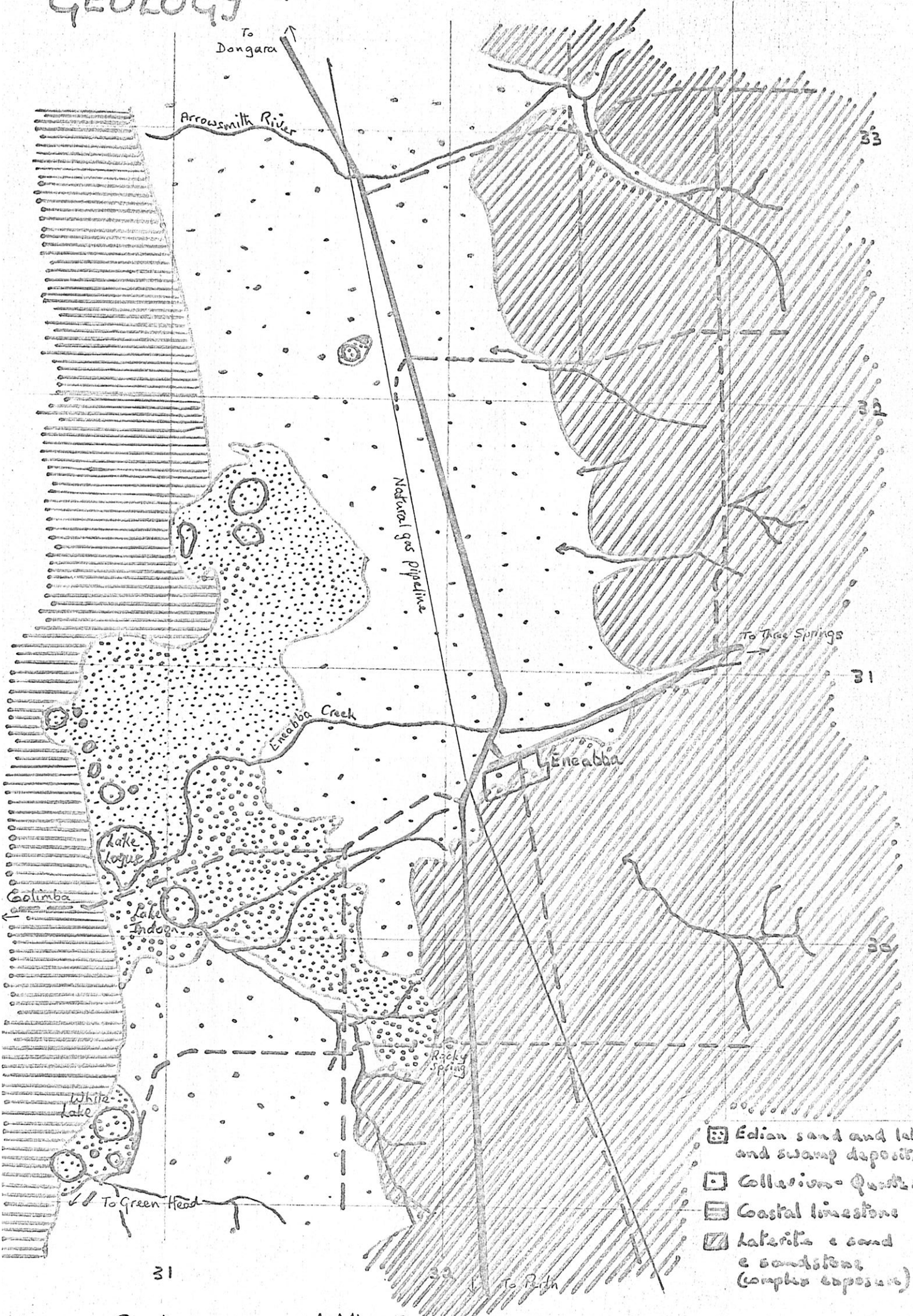
September 1974.

Includes overlays

ENEABBA

from 1:250 000 Dongara

GEOLOGY



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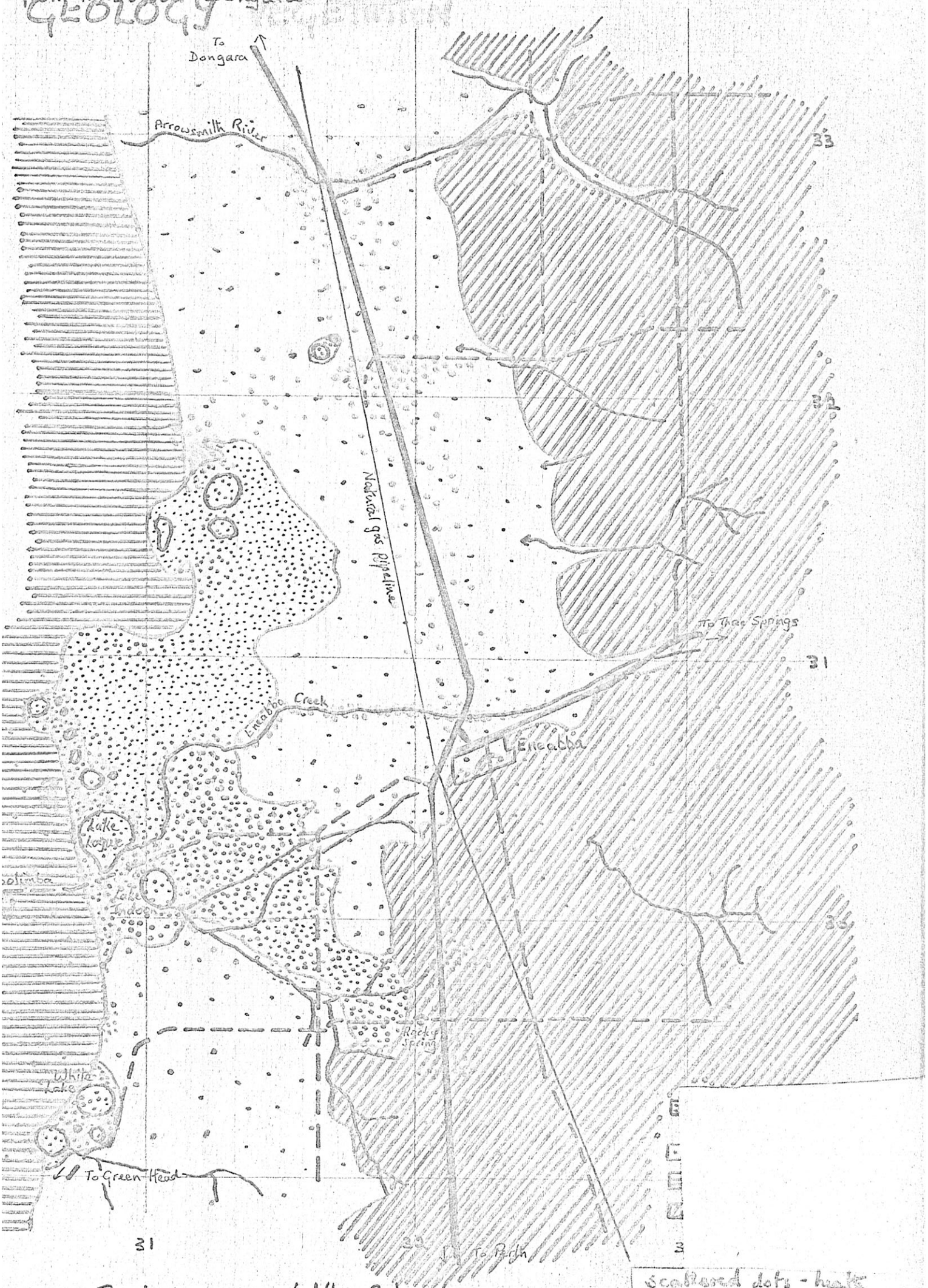
ENEABBA

Includes overlap

from: 1:250 000 Dongara GEOLOGY



Scale: approx' 1" = 2½ mls

scattered dots - heath
closer dots - scrub

INCLUDES OVERLAYS

ENEABBA

from 1:250 000 Dongara

GEOLOGY VEGETATION RESERVES

Purposes

931	Cons. of Flora
19219	Stock Route
24496	Protection of flora
26160	Forest Purps.
26001	Cons. of flora + Camping
27886	Cons Flora & Fauna

Scale: approx' 1" = 2½ mls

INCLUDES OVERLAYS.

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MINING RESERVES

Mineral Sands Claims

- Adamson & Hayes
- Allied Eneabba N.L.
- Blacksands Pty Ltd.
- Ilmenite Pty Ltd.
- Jennings Mining Ltd.
- Western Titanium

Coal Claims

Scale: approx 1" = 2½ mls

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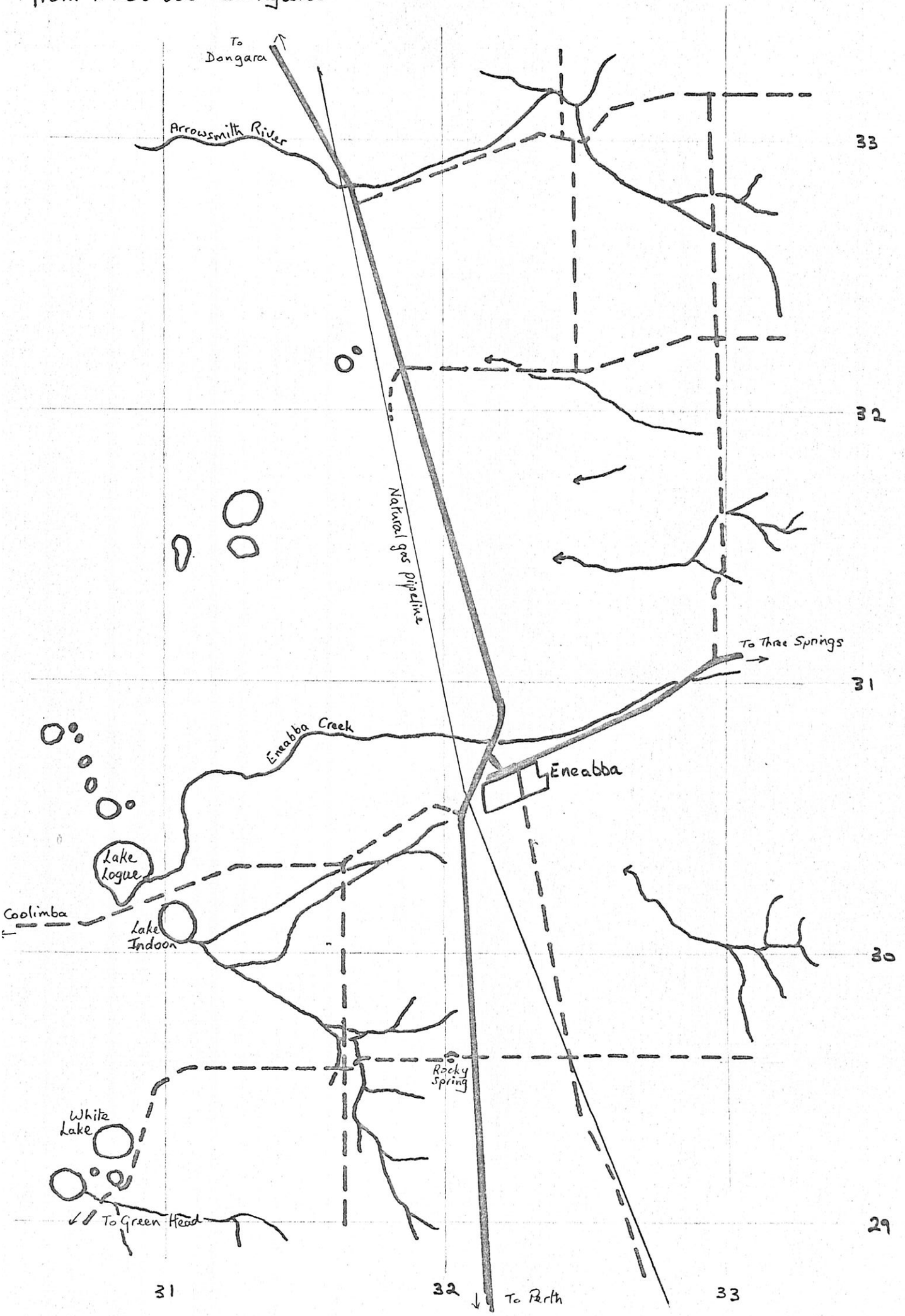

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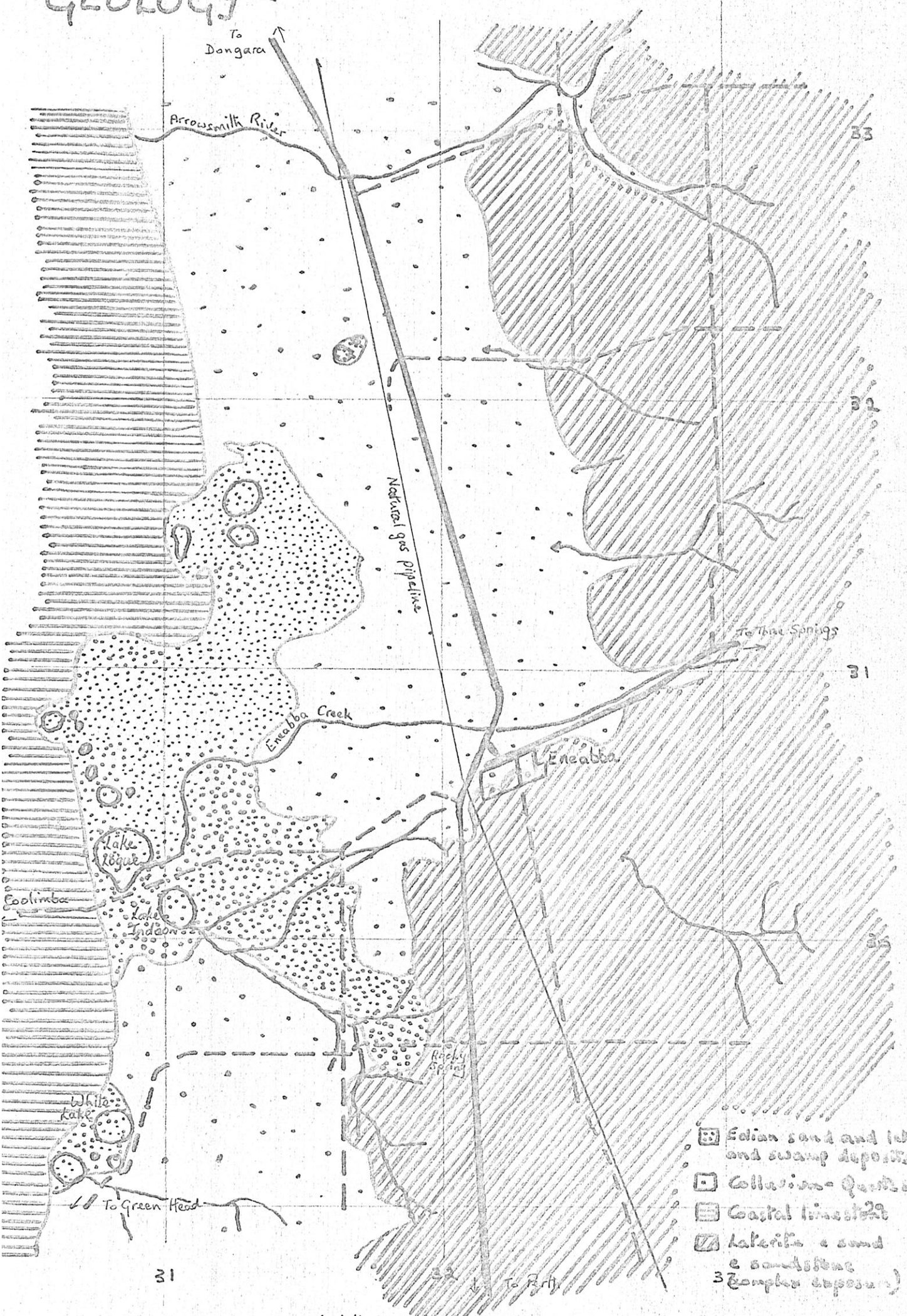
ENEABBA

from 1:250,000 GLOBE 9 Dongara



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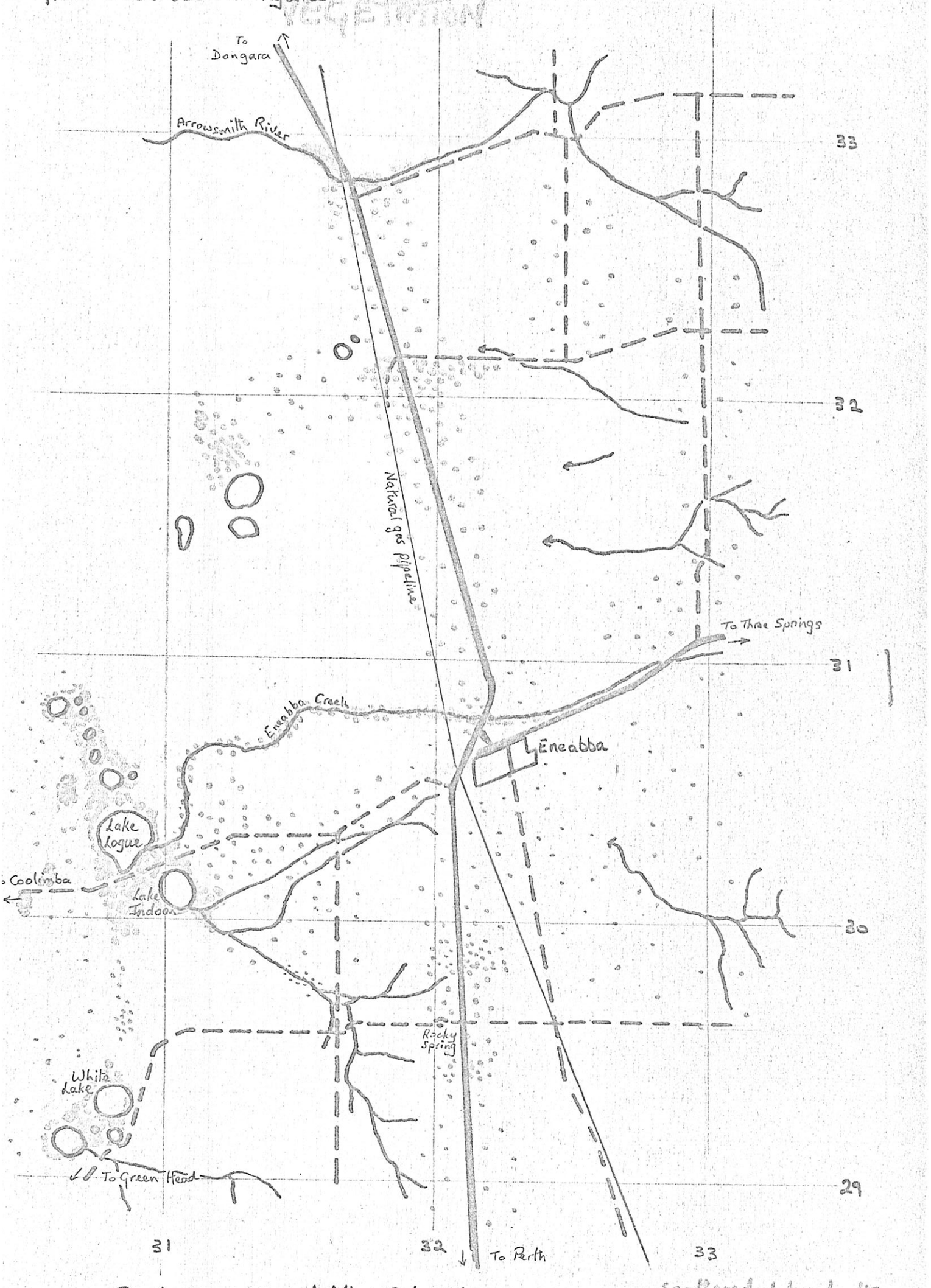
ENEABBA

from 1:250 000 Dongara



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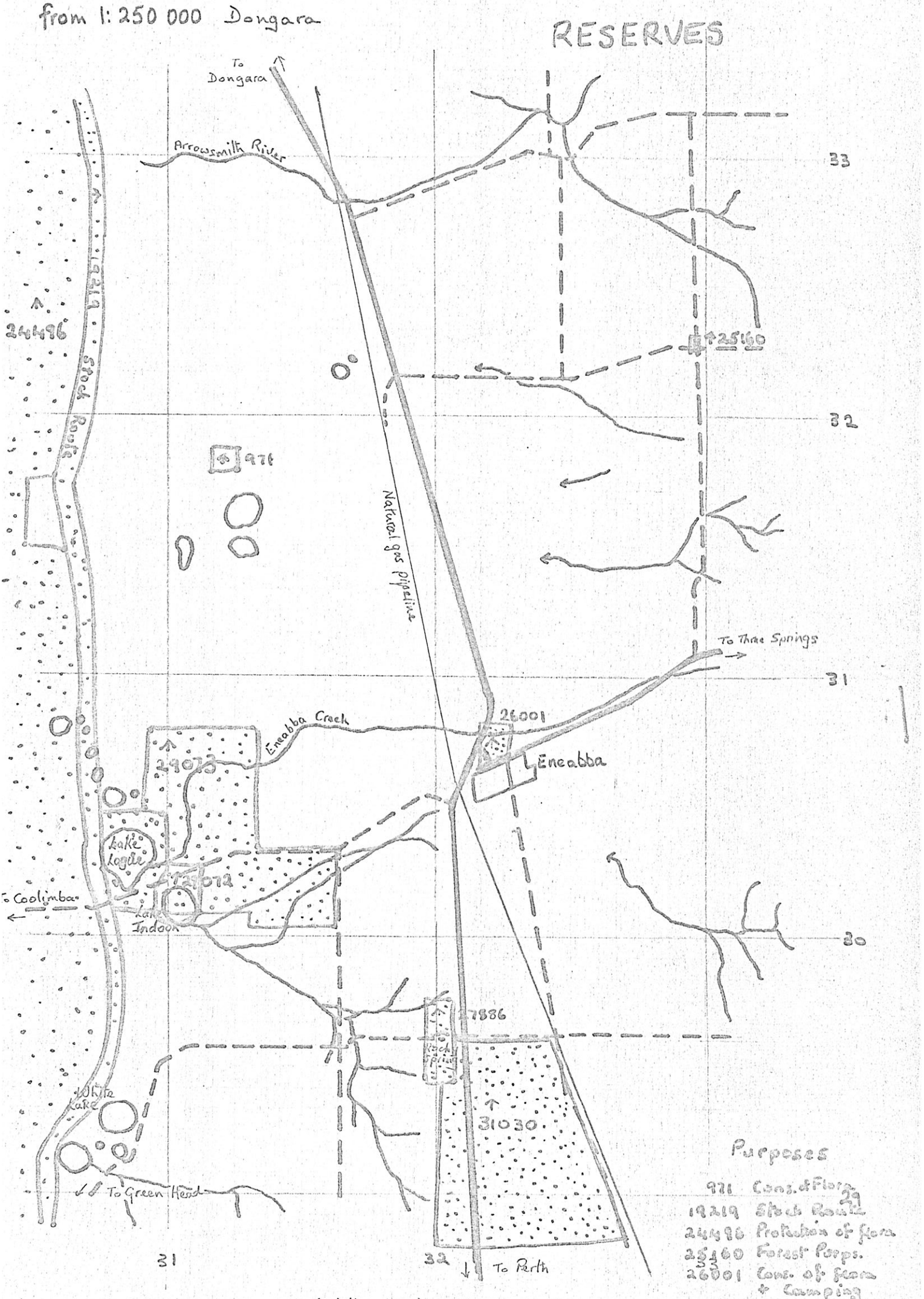


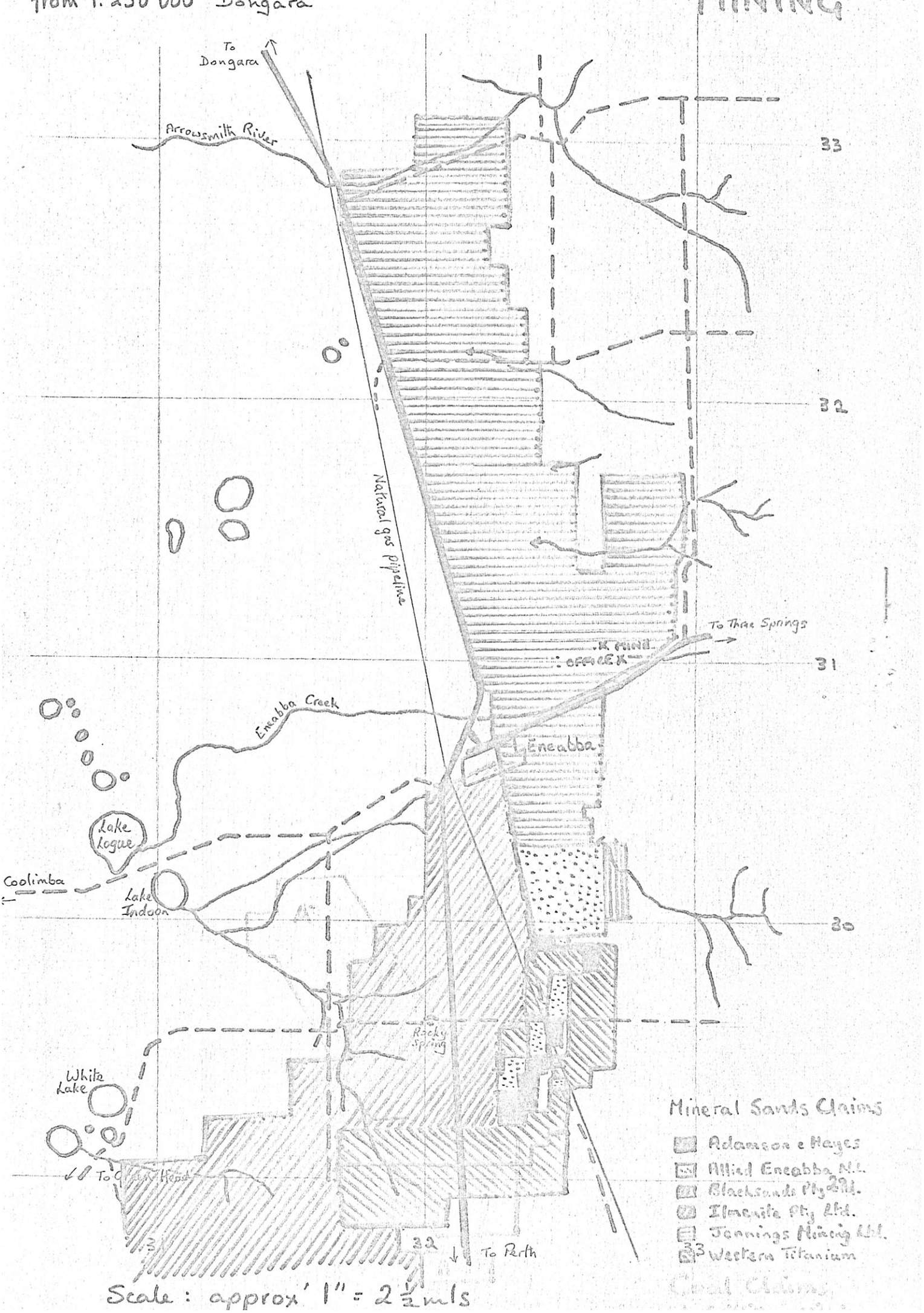
Scale: approx' 1" = 2½ mls

Purposes

971	Cons. of Flora & Fauna
19219	Stock Route
24496	Protection of flora
25160	Forest Purps.
26001	Cons. of flora & Camping
27886	Cons Flora & Fauna

ENEABBA

from 1:250 000 Dongara



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