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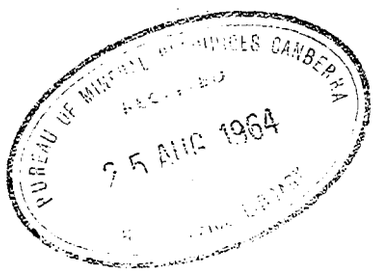

PROGRESS REPORT, 1963, ON THE GEOLOGY OF PART OF THE NORTH-EASTERN EROMANGA BASIN, QUEENSLAND.

by

R.R.Vine, D.J. Casey, and N.E.A.Johnson.

The information contained in this report has been obtained by the Department of National Development, as part of the policy of the Commonwealth Government, to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus without the permission in writing of the Director, Bureau of Mineral Resources, Geology and Geophysics.

PROGRESS REPORT, 1963, ON THE GEOLOGY OF THE NORTH-EASTERN EROMANGA BASIN.

by

R.R. Vine, D.J. Casey* and N.E.A. Johnson

*(Queensland Geological Survey)

RECORDS 1964/39

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PROGRESS REPORT, 1963, ON THE GEOLOGY OF THE NORTH-EASTERN EROMANGA BASIN.

SUMMARY

During 1963 the Winton, Muttaburra, Tangorin, and part of the Hughenden Sheet areas, in the north-east of the Eromanga Basin, were mapped. Thin Tertiary and Quaternary sediments and basalt overlie a sedimentary sequence with a composite thickness of approximately 6000 feet.

New stratigraphic names are proposed for the pre-Cretaceous sequence of Boonderoo Beds (Upper Carboniferous or Lower Permian) Betts Creek Beds (Upper Permian) Warang Sandstone (Lower Triassic) and Blantyre Sandstone (Jurassic); all these units are separated by unconformities or disconformities. The Blantyre Sandstone was originally mapped as the lower part of the Gilbert River Formation, but it has now been shown to be separated by an unconformity. The term "Gilbert River Formation" is now restricted to a thin Cretaceous arenaceous unit which is basal to a conformable Cretaceous sequence of the Wilgunya Formation, Mackunda Beds and Winton Formation.

Structures in the area mapped are very gentle, and mainly reflect basement irregularities. The presence is suggested of a trough of sediments extending south-east from Hughenden.

Abundant underground water is obtainable from aquifers in the pre-Wilgunya sequence, and lesser supplies from the Winton Formation and Mackunda Beds. Less reliable supplies have been obtained from Cainozoic sediments, including the Tertiary Glendower Formation, in the Hughenden area, and from the Tertiary Werite Beds south of Winton.

Marine Cretaceous sediments provide potential source beds for petroleum; but reservoirs in the sequence are limited to thin sandstone of uncertain extent near the base . The older Mesozoic arenaceous sequence has abundant permeability, but source beds can only be suggested as occurring within the inferred trough.

Coal is known in Permian and Cretaceous sediments. A manganese prospect was discovered south of Winton. All deposits are considered to be too remote from potential markets to justify development unless very large reserves can be proved.

INTRODUCTION

Mapping by the Great Artesian Basin Party during the 1963 field season was part of a long-term project to map the whole of the Queensland portion of the Great Artesian Basin. The work is being done by a joint field party of the Bureau of Mineral Resources and the Geological Survey of Queensland. The 1963 field season lasted from early June to the end of September; much time was spent plotting accurately the position of bores and new major roads. The party consisted of R.R. Vine, N.E.A. Johnson and I. Chertok (draftsman) of the Bureau of Mineral Resources, and D.J. Casey of the Geological Survey of Queensland.

The whole of the Winton, Muttaburra and Tangorin 1:250,000 Sheet areas, and the parts of the Hughenden and Charters Towers Sheet areas which include the Eromanga Basin, were mapped. Mapping of the Hughenden Sheet area had been started in 1962 (Vine, Bastian & Casey, 1963). Location of the sheet areas and main access routes within the area are shown on Plate 1. All highways and main road are formed but mostly unsrufaced, although short stretches of some roads on the outskirts of Hughenden and Winton are sealed. All unsealed roads are impassable for a few days after heavy rain, but drainage is facilitated by the high crowns which have been formed on all the major roads.

Regular air services from Townsville and Mount Isa to Hughenden, and from Brisbane to Winton, are provided by T.A.A. Rail routes are shown on Plate 1. Access by road is principally by the Landsborough Highway from Brisbane to Winton, and by the Flinders Highway to Hughenden from Mount Isa and Townsville. (On the accompanying Preliminary Edition of the Winton 1:250,000 Geological Sheet the Landsborough Highway is shown by its old name, the North-western Highway).

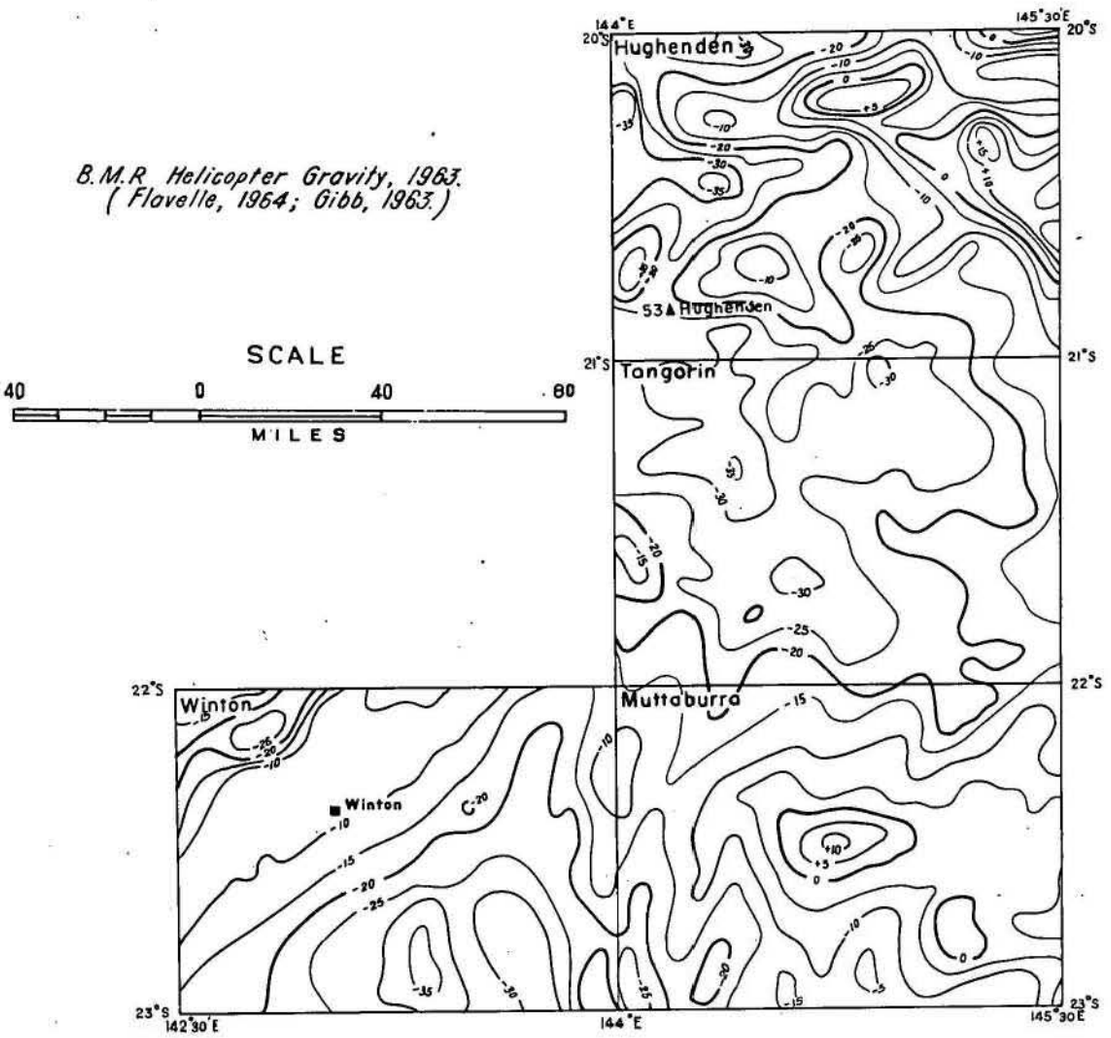
Air photos at an approximate scale of 1:48,000, taken by the R.A.A.F. in 1951, provide a complete coverage of the area. Planimetric maps at 4-miles to 1 inch are available from the Queensland Department of Public Lands, Brisbane. The Hughenden 1:250,000 Topographic Sheet, produced by the Royal Australian Survey Corps, and Provisional Editions of Tangorin, Muttaburra and Winton 1:250,000 Planimetric Sheets are available from the Division of National Mapping, Canberra.

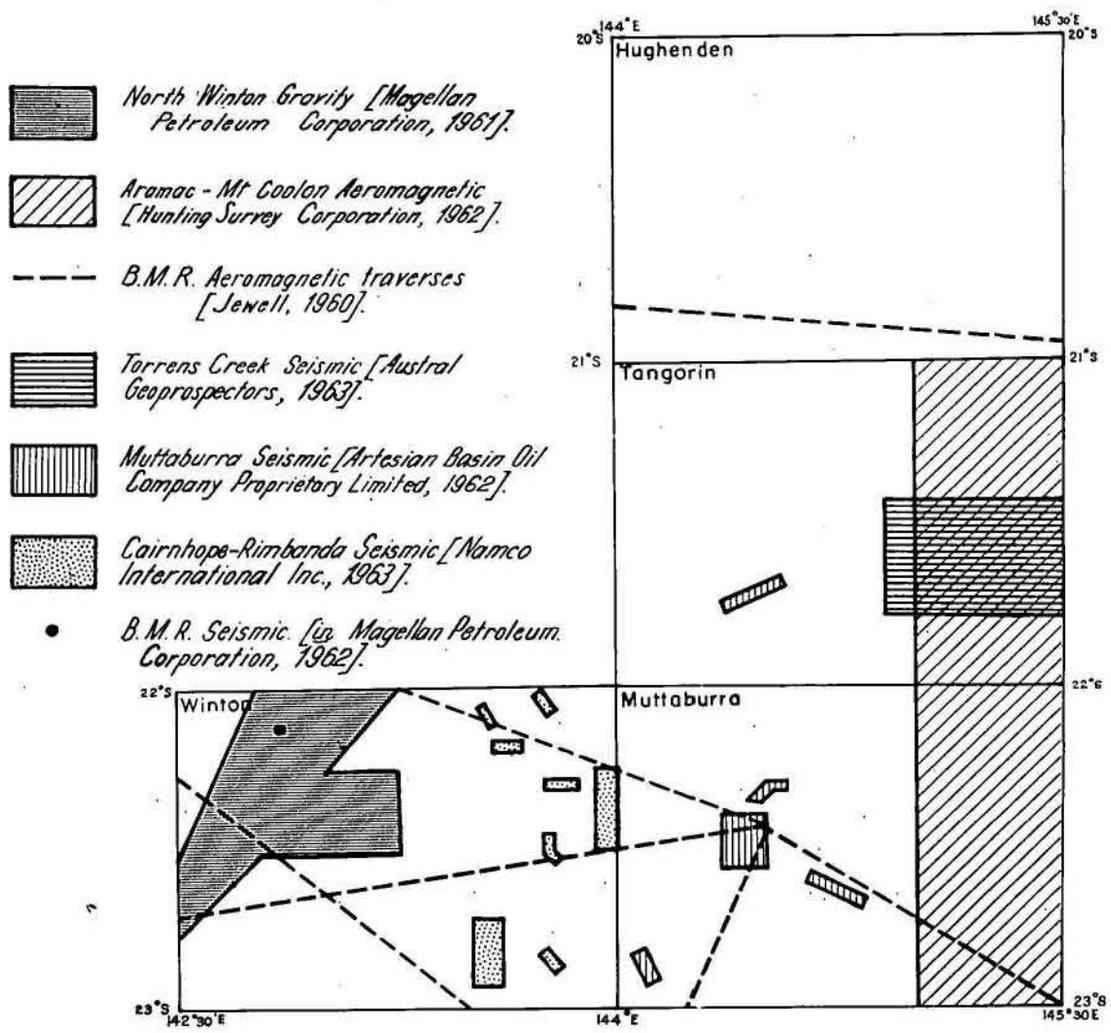
A large part of the area, particularly in the south and west, is grassland in the form of rolling downs or plains, and is used almost exclusively for sheep grazing. Most of the sheep properties are small (20,000 to 40,000 acres) and all are divided into small paddocks with an abundance of vehicle tracks which provide excellent access. The Alice Tableland (Plate 1), in the east of the area, and a plateau south of Winton are sandy with an open forest vegetation. These areas are used for both sheep and cattle grazing but the carrying capacity for stock is much lower than on the downs. Properties are considerably larger and station tracks are fewer but are sufficiently numerous to provide good access.

Areas of basalt outcrop on the Sturgeon Plateau (Plate 1) are impassable for vehicles, except where the station owner has gone to considerable trouble and expense to construct an access track for his own purposes. However, large areas of the Sturgeon Plateau now have a discontinuous veneer of sandy soil which conceals much of the basalt and enables access by vehicle. These sandy areas are open forest and contain large cattle properties.

Fig. 1.

GEOPHYSICAL SURVEYS





The rugged sandstone hills of the White Mountains are practically inaccessible and have virtually no pastoral value.

Water supplies in the area are obtained mainly from bores, some of which are flowing. Waterholes are mainly small and temporary unless fed by a bore drain. Within the Hughenden and Charters Towers Sheet areas water is available within a few feet of the surface in the sandy beds of the larger rivers. Porcupine Creek is a permanent stream for about ten miles in Galah Gorge.

The climate is tropical-continental, characterised by large temperature ranges (annual 50° to 55°, diurnal 30°) and with averages of 40 to 60 days with century temperatures each year. Rainfall averages are between 15 and 20 inches annually, increasing from south-west to north-east, but the rainfall has poor reliability (average deviation from normal, 30%). Nearly all the rain falls during the summer.

During the field season two shallow core holes were drilled at locations approximately 20 miles west of Hughenden. The purpose was to provide fresh material for micropalaeontological (including palynological) examination in order to be able to relate microfaunas and microfloras to the lithological divisions of the Cretaceous sequence. The palaeontological examination has not yet been done. The core is stored at the B.M.R. Core and Cuttings Laboratory, Canberra.

PREVIOUS INVESTIGATIONS

Before the 1962 and 1963 surveys there had been little systematic geological work in the area and early observations were made mainly by transient geologists. It was from such observations, both in the map area and elsewhere in the Great Artesian Basin, that an understanding of the stratigraphy and structural setting of the basin developed. Whitehouse (1954) was the first to attempt to map the Great Artesian Basin as a whole and co-ordinate recorded observation and stratigraphic nomenclature. The most complete accounts of the geology of the whole Basin, with comprehensive bibliographies, were compiled by Whitehouse (1954) and Hill and Denmead (eds., 1960).

Previous detailed geological work in the area was restricted to investigations of small outcrops of coal in the Hughenden Sheet area (Marks, 1910, 1911; Reid 1916, 1918; Hall, 1946; Ridgway, 1947, Carter, 1948).

Photo-interpretations have been made of a small area south of Pentland (Trexler, 1960) and of the Hughenden and Tangorin Sheet areas (Scanvic, de Lassus St Genies, & Perry, 1962).

Geophysical work includes a complete reconnaissance gravity coverage of the area, detailed gravity work near Winton, parts of some regional aeromagnetic surveys, and seismic surveys of small areas. Locations of these surveys are shown on Fig. 1; the results are discussed under "Structure".

Plate 1

PHYSIOGRAPHY
And Access

Plateaus:

duricrust – capped

volcanic, with "window"

Dissected sandstone hills

Rolling Downs

Plain

Limit of mapping

Main divides

CAPE River systems

WINTON Index to 1:250,000 sheets

SCALE

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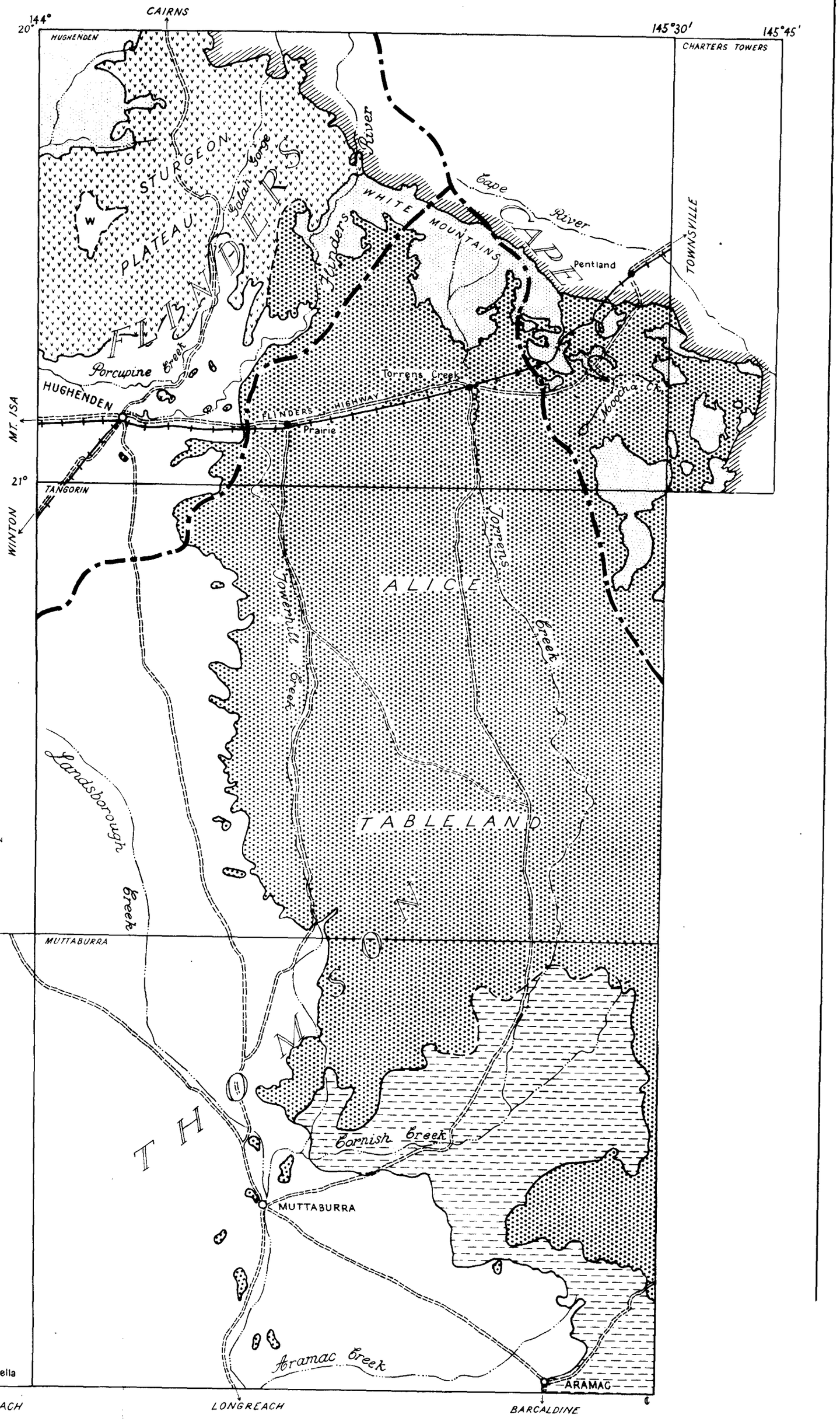

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PHYSIOGRAPHY

In the area are parts of the headwaters of four major river systems; the Cape, the Flinders, the Diamantina, and the Thomson (Plate 1). The Cape River is a tributary of the Burdekin River, which flows into the Pacific Ocean. The Flinders flows into the Gulf of Carpentaria, and the Thompson and the Diamantina form part of the Lake Eyre internal drainage basin.

Most of the watersheds are difficult to delineate on the ground; they are mainly slight topographic culminations in areas of rolling downs or on plateaus. The only divides with a well developed topographic expression are those between the Thomson and Flinders systems and the Great Dividing Range in the White Mountains. South-east of Torrens Creek the Great Dividing Range is a flat sand plain at about 1500 feet above sea level.

Virtually all of the streams in the area are intermittent. They flow only after heavy rain, then shrink to chains of water-holes, most of which dry up during the winter. The most notable exception is Porcupine Creek which is a permanent stream for a distance of about ten miles in Galah Gorge. Here it flows through part of the intake area of the Eromanga Basin and eventually the water enters Mesozoic sandstone aquifers. Valleys in the basalt plateau north of Hughenden contain numerous springs which issue from arenites below the basalt and feed short running streams. Most of this water is lost by evaporation.

Two erosion surfaces influence topography within the area. A Tertiary to early Quaternary surface has been extensively dissected and is now preserved on plateaus. The present day surface is mainly an extensive undulating grassland, called "rolling downs". Between the two surfaces are areas of active erosion, represented either by simple scarps or wide belts of deeply dissected sandstone hills. Both erosion surfaces are locally modified by deposition, either by basalt or superficial sediments. The most extensive superficial sediments form plains. The various landforms are described in the following sections.

PLATEAUS

The term "plateau" is used for an elevated surface with very low internal relief. Within the area mapped, this landform owes its existence to the presence of flat lying resistant duricrust or basalt, which protect the underlying rocks from all except lateral erosion.

Alice Tableland

Whitehouse (1940) defined the Alice Tableland as "A plateau region a little over 1,000 feet above sea level, forming part of the Great Divide between latitude 20°30' and 24°S." Only a small part of the Tableland is within the area mapped, but it occupies a large part of the Tangorin Sheet area and smaller parts of the Hughenden and Muttaburra Sheet areas.

The protective cap of the Alice Tableland is duricrust, developed mainly on Tertiary and Cretaceous sediments. It has a thin cover of Quaternary unconsolidated deposits.

Although Whitehouse (1940) stated that the plateau was a little over 1000 feet above sea level, more recent surveys have shown that the highest parts, on the northern margin, are at an elevation of approximately 2500 feet. The surface slopes

PLATE 2

Fig. 1 Galah Gorge, 38 miles NNE of Hughenden, looking north. Present stream in narrow cleft cut into rock platform of Warang Sandstone with old course preserved as chain of rockholes on west side. Old alluvial terrace 10 feet above, and on west wide of platform. Trees in foreground approximately 35 feet tall. BMR. Neg. M326.

Fig. 2 Galah Gorge, ¼ mile south of Fig. 1. Old alluvium preserved on rock platform approximately 25 feet above present valley floor. Scale given by figure left of centre. BMR. Neg. M326

to approximately 1500 feet between Prairie and Torrens Creek and thence to 800 feet near Muttaburra. In the north the surface gradient is only slightly less than the regional dip of the underlying Mesozoic sediments.

The western edge of the tableland is a scarp, west of the scarp erosional residuals form mesas and buttes, e.g. Mt. Walker, Mt. Devlin, Mt. Hollowback, Mt. Hopwood, Tower Hill, The Fort Hill and the Alma Range. The tableland is bordered on the north by deeply dissected sandstone hill country. Elsewhere the boundaries of the Alice Tableland are indefinite; north-east of Muttaburra overlying sediments merge with those of a large alluvial plain; north-east of Hughenden it merges with a basalt plateau; south-east of Pentland the dissected margin is concealed by superficial deposits and merges into a dissected plain (described by Wyatt, Paine, Harding and Clarke, 1964).

South of Winton

An un-named plateau south of Winton has many points of similarity with the Alice Tableland. It has a protective cap of duricrust formed on Cretaceous and Tertiary sediments, and large areas are thinly covered with Quaternary unconsolidated deposits. Margins of the plateau are a well defined scarp: the Allen's and Cory's Ranges and, in the adjacent Mackunda Sheet area to the west, the Tully Range. Outlying erosional residuals in front of the main scarp form mesas and buttes, including the Vindex Range. The most remote are 10 miles north of Winton.

The Forsyth Range forms a higher plateau within the main plateau area; both plateau levels have a duricrust cap. The Forsyth Range is a remnant of a large area of Tertiary sediments which were being removed during Tertiary to early Quaternary.

Sturgeon Plateau

A basalt capped plateau, named the Sturgeon Plateau by Twidale (1956), slopes gently from 3,000 feet in the extreme north to 1,200 feet above sea level just north of Hughenden. The only significant relief on the plateau are original volcanic landforms. Low scarps with relief of only a few feet are common and approximate the original limit of individual basalt flows. Vents are mainly at the culminations of wide, low domes, occurring either as small rubbly mounds (e.g. Mount Desolation) or as steep cones, more or less dissected (e.g. Mount Emu).

Mechanical erosion of the plateau has been principally by scarp retreat. Where streams have succeeded in breaching the resistant basalt cap they have cut rapidly downwards to form deep gorges. Some of the most spectacular are in the headwaters of the Flinders River and its tributaries north of Hughenden, particularly Galah Gorge. Whitehouse (1940, p.60) noted that some now have only narrow watercourses cut in wide rock-bottoms of the gorge; and suggested that the wide bottoms are terraces, formed during an earlier more pluvial time. The authors support Whitehouse's conclusions. Plate 2, Figs. 1 & 2, illustrate the nature and scale of the rock platforms and alluvial terraces, and show the grade of the old alluvium, most of which is much coarser than the present alluvium.

Within the Sturgeon Plateau are areas which Twidale (1956) referred to as "windows". They are inliers of older rock occurring as broad valleys with narrow outlets. Possibly these "windows" were originally low hills by-passed by lava flows. Being less resistant than the basalt, they were eroded more

PLATE 3

Fig. 1 Gorge of un-named tributary of the Flinders River in the White Mountains approximately 5 miles E. of Clyde Park Homestead. Cliffs of Warang Sandstone with under cuts produced by wind-fretting of friable sandstone. Trees on top of cliff at right approximately 15 feet tall. BMR. Neg. M325

Fig. 2 White Mountains, approximately 20 miles N. of Torrens Creek, Hughenden Sheet area. Warang Sandstone with preferential erosion along joints. Trees in main gorge approximately 35 feet tall. BMR. Neg. M325

rapidly and are now seen in a reversed role. Sandstone hills east and south-east of Mt. Emu, generally above the basalt surface, which are now being marginally eroded to below the basalt surface clearly indicate the way in which the "windows" were formed.

Erosional residuals of the Sturgeon Plateau occur as basalt-capped mesas north of the railway line near Hughenden, e.g. Mount Beckford, Mount Wongalee, and the Burraway Hills.

DISSECTED SANDSTONE HILLS

Marginal to the Alice Tableland and Sturgeon Plateau are areas of active erosion in sandstone sequences. The topography is sufficiently distinctive to justify description as a separate topographic unit.

North of the Sturgeon Plateau in the north-west of the Hughenden Sheet area the sediments belong to the Blantyre Sandstone and the Gilbert River Formation. These units consist of well bedded sandstones of widely varying resistance. Erosion has produced deep gorges with benched sides and isolated benched hills. This area was never covered by basalt although there is one young basalt flow down the valley of Pine Tree Creek. Relics of the Tertiary erosion surface, now covered by superficial deposits, are preserved as isolated plateau remnants.

Dissected sandstone country of the White Mountains north and north-east of the Alice Tableland is formed mainly of Warang Sandstone. This unit is massive and has eroded to form bare sandstone hills (Plate 3, Fig.1). Streams are deeply entrenched in numerous narrow gorges eroded along joints (Plate 3, Fig.2). Above the Warang Sandstone north of Prairie and Torrens Creek, on the edge of the Alice Tableland outliers of Blantyre Sandstone are benched.

Inliers of Warang Sandstone south, and south-east of Pentland have a similar topography but with less relief.

ROLLING DOWNS

The present day erosion cycle has reached maturity only in areas of outcropping Cretaceous rocks; where a "rolling downs" topography of undulating grassland has been formed.

The rolling downs topography is locally masked by superficial deposits, including sand and gravel derived from the Glendower Formation, and rubble from completely reduced erosional residuals.

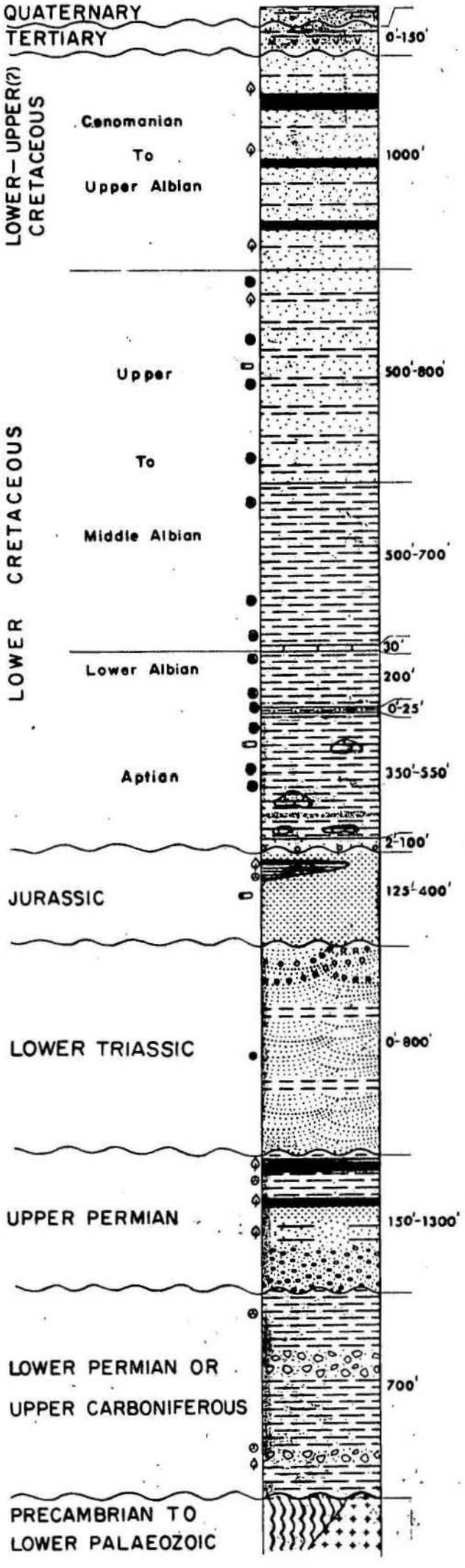
Resistant calcareous beds, mainly in the Mackunda Beds and Winton Formation, crop out sporadically in low rubble covered rises with a sparse tree cover. In large areas of the rolling downs such rises provide the only appreciable relief and the only shade trees.

PLAIN

East of Muttaburra superficial sediments extend beyond and mask the edge of the Alice Tableland. They overlap flat-lying Cretaceous sediments to form an extensive alluvial plain of sand, silt and clay. Sandy superficial sediments support open forest; the finer sediments are grass-covered.

Fig. 2

GENERALISED COMPOSITE STRATIGRAPHIC COLUMN



Werite Beds : *Mudstone, quartz sandstone*
Sturgeon Basalt : *Olivine basalt.*
Glendower Formation: *Sandstone, conglomerate, mudstone.*

Winton Formation : *Fine grained lithic sandstone and calcareous lithic sandstone, mudstone, coal.*

Mackunda Beds : *Very fine grained lithic sandstone and calcareous lithic sandstone, with thinly interbedded mudstone.*

Wilgunya Formation

Allaru Member: *Mudstone, with calcareous siltstone grading to very fine grained sandstone near top and bottom of unit.*

Toolebuc Member: *Nodular limestone, coquinite, platy limestone, calcareous shale.*

Ranmoor Member: *Mudstone, with local development of calcareous siltstone and sandstone.*

Jones Valley Member: *Coarse grained siltstone, calcareous siltstone.*

Doncaster Member : *Mudstone, concretionary limestone, glauconitic mudstone, and with interbeds of glauconitic and quartz sandstone near base.*

ROLLING DOWNS GROUP

Gilbert River Formation: *Poorly sorted sandstone and polymictic conglomerate.*

Blantyre Sandstone : *Medium-grained quartz sandstone, strongly planer cross-bedded; lenticular carbonaceous shale and coal near top.*

Warang Sandstone: *Poorly sorted kaolinitic quartz sandstone, commonly pebbly or gritty and with large scale trough cross-bedding; thick and thin lenses of red and green siltstone grading to very fine grained sandstone; pebbly and with beds of conglomerate near top.*

Betts Creek Beds : *Kaolinitic lithic sandstone, conglomerate mudstone, quartz sandstone, carbonaceous shale and coal. Includes 8 feet coal seam at Oxley Creek.*

Boonderoo Beds : *Varves, unbedded lithic sandstone and mudstone, tillite.*

Metamorphic and igneous basement

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STRATIGRAPHY

A comprehensive account of the geology of the Eromanga Basin adjacent to the area mapped during 1963 and including part of the Hughenden 1:250,000 Sheet area is given by Vine, Bastian and Casey (1963). To avoid needless repetition of the descriptions of units present in both areas this report only includes new stratigraphic information. A comprehensive report on the northern part of the Eromanga Basin will be prepared in 1965.

The stratigraphic succession in the area mapped during 1963 is summarized in Fig. 2.

PRE-PERMIAN

Within the area mapped the only pre-Permian rocks known are crystalline and regarded as basement to the Eromanga Beds. However, Devonian and Carboniferous sediments crop out in the Drummond Basin to the east, and seismic surveys indicate that they are present below the Eromanga Basin sequence in the east of the mapped area. The significance of the inferred presence of these sediments is discussed below under 'Structure'.

Crystalline basement on the north-east margin of the Eromanga Basin crops out in the north and north-east of the Hughenden Sheet area, and as inliers in the bottoms of gorges close to the northern margin in the north-west of the Hughenden area. Most of the outcrops were mapped in 1963 by the combined B.M.R. - Q.G.S Charters Towers Party and are described by Wyatt, Paine, Harding and Clarke (1964). Outcrops in the north-west of the Hughenden area, mapped in 1962 as undifferentiated Precambrian metamorphics (Vine, Bastian and Casey, 1963), are now included in the Cape River Metamorphics (Wyatt, et. al. loc. cit). Full descriptions of these rocks are not repeated here; they are mainly granite, gneiss, schist and quartzite.

Basement was drilled in Brookwood No.1 between 4,796 feet and Total Depth of 4,806 feet, (Pemberton, 1963). The basement core is a pinkish-grey porphyritic adamellite (Houston in Pemberton, 1963); it is unsuitable for age determination.

Subsurface crystalline basement has also been recorded from shallow water bores in the north-west of the Hughenden Sheet area near the present margin of the Eromanga Basin.

The log of Pauralos Park Homestead Bore, 44 miles ESE of Winton, (Registered Number 3842) includes 'brown quartz' and 'crystalline rock' between 3,880 feet and Total Depth of 4071 feet (Appendix E, Part 1). This is possibly crystalline basement, but several other logs from bores within 25 miles record sediments to greater depths. However, this is a structurally high region where seismic results indicate local folding over basement highs, so the possibility that the bore did intersect basement should not be ignored.

BOONDEROO BEDS (new name)

Boonderoo Beds were recognized during the 1963 mapping. They are named from Boonderoo Station, a cattle property approximately 35 miles NNE of Hughenden. The type section is at the eastern boundary of the Station, in Galah Gorge (Porcupine Creek) at Lat. 20°18'S, Long. 144°30'E. Outcrops of the unit are restricted to a single inlier in the bottom of Galah Gorge at the type section.

PLATE 4

Fig. 1 Galah Gorge 43 miles NNE of Hughenden. Tillite at base of Type Section (x16) of Boonderoo Beds.
BMR. Neg. G6130

Fig. 2 Massive conglomerate of lower part of Betts Creek Beds, at Betts Creek, 11 miles W. of Pentland, Hughenden Sheet area. Interval 0-65 feet of Section x18, part A.
BMR. Neg. G6132

Lithologies in the type section, X16, are recorded in Appendix A and Plate 5. Briefly, the sequence is blue-grey to grey-green mudstone, in part varved, and with some lithic sandstone, sandy mudstone and rare tillite. The varves are identified by very finely interlaminated (up to very fine sand grade), graded bedded and contain rare rafted pebbles and granules including some which are striated or facetted. The tillite is an illsorted rudaceous deposit (Plate 4, Fig.1), with both sandy and argillaceous matrix, containing numerous striated and facetted cobbles and pebbles, some with snubbed edges. Erratics in the tillite are mainly igneous and metamorphic rocks, generally fresh but include some cobbles of granite too weathered to withstand transport other than by ice. A clear indication of a glacial origin of the unit is given by the presence of both varves and tillite.

At the type section, the Boonderoo Beds are unconformably overlain by the Upper Permian Betts Creek Beds. The base of the unit is not exposed, but it probably rests unconformably on crystalline basement. Approximately 1 mile north of the type section the Betts Creek Beds overlap the Boonderoo Beds on to crystalline basement.

Some poorly preserved plant fragments in clasts of carbonaceous shale (Specimen GAB 1034P) incorporated in the lowest tillite in the type section have a Glossopteris type venation, and are regarded as of Permian age by White (1964). Samples GAB 1034 P, S and T from the type section were also submitted for palynological examination. GAB 1034 T is barren, GAB 1034 P had few spores, but GAB 1034 S has a good assemblage which Evans (1964) regards as Upper Carboniferous or Lower Permian in age. GAB 1034S is 440 feet above GAB 1034 P in the measured section. The differences between the assigned ages is due to different criteria being used for identifying the Carboniferous - Permian boundary; this problem is discussed by Evans (loc.cit.).

Although the inlier of Boonderoo Beds is the only known outcrop of the unit in the northern Eromanga Basin a sequence of comparable age (Evans, Appendix D in Pemberton, 1963) was intersected by Brookwood No.1 Well between 4120 and 4740 feet. Pemberton (1963) described the interval as a sandstone, shale and siltstone sequence with minor coal seams.

BETTS CREEK BEDS

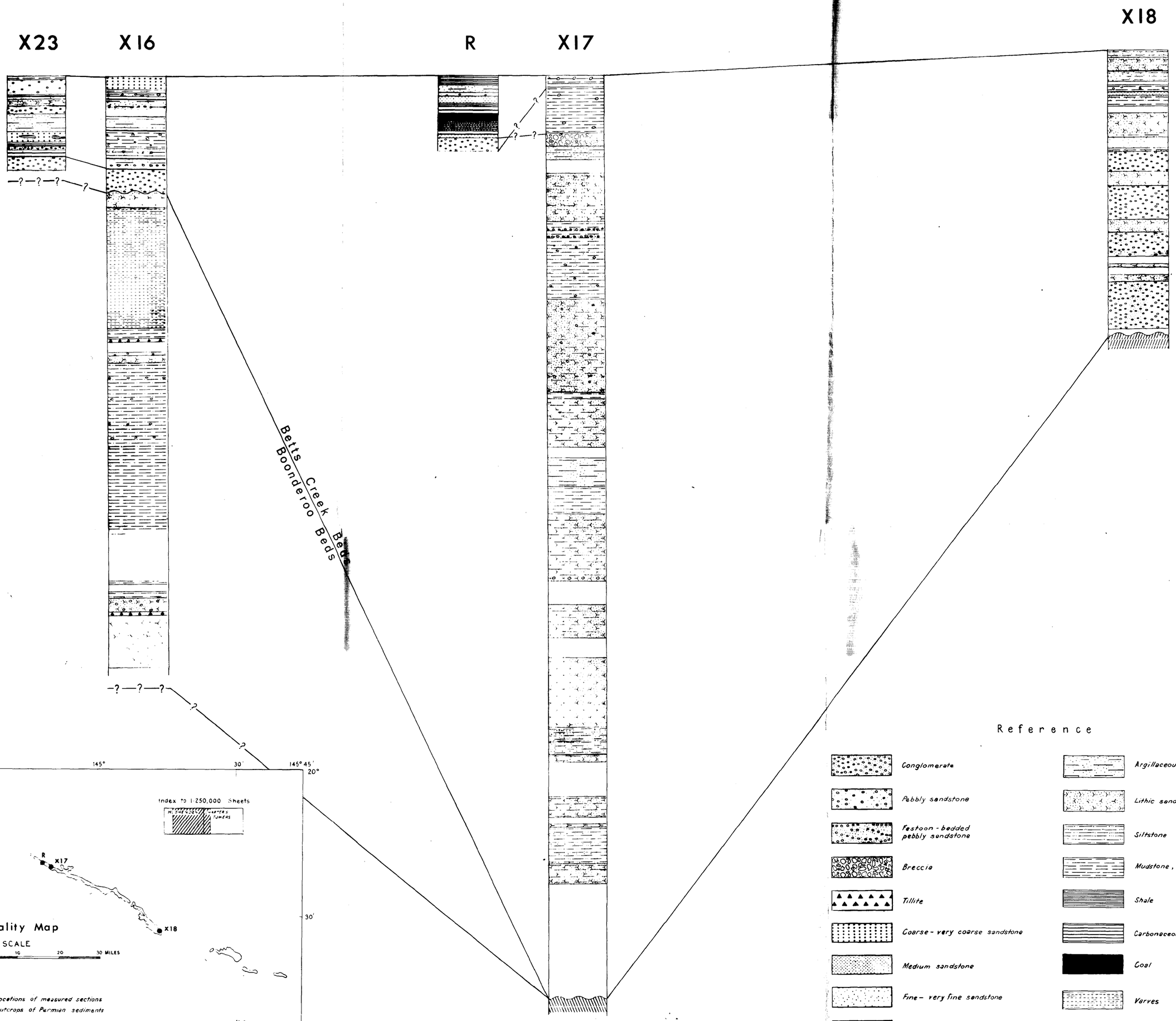
Upper Permian sediments, including either carbonaceous beds or coal seams have been described from several localities north and east of Hughenden. Rands (1891) referred to Calamite Beds near Oxley Creek; Marks (1911) to "Permo-Carboniferous beds at Galah Gorge"; Reid (1916) described the "Betts Creek Series" and (1918) "Coal measures at Oxley Creek"; and Ridgway (1947) described briefly "Permian coal measures at the head of Torrens Creek". Smith (undated), in the International Stratigraphic Lexicon, refers to these descriptions under the heading of the previously unused term "Betts Creek Beds". None of these names is both formal and valid under the Australian Code of Stratigraphic Nomenclature. The unit is here redefined with the name "Betts Creek Beds". The type locality is nominated as the small cliff (Plate 6, Figure 2) at the junction of the two main branches of Betts Creek, at Lat. 20°34'S, Long. 145°15'E. At this locality, conglomerate, typical of the lower part of the Betts Creek Beds, is overlain by Glossopteris-bearing mudstone and sandstone, typical of the upper part of the unit.

PLATE 5

MEASURED SECTIONS OF PERMIAN SEQUENCES

(For detailed lithological descriptions see Appendix A; Section R is taken from Reid, 1918)

Vertical Scale 1 inch : 100 feet



Reference

- Conglomerate
- Pebbly sandstone
- Festoon-bedded pebbly sandstone
- Breccia
- Tillite
- Coarse-very coarse sandstone
- Medium sandstone
- Fine-very fine sandstone
- Festoon-bedded sandstone
- Argillaceous sandstone
- Lithic sandstone
- Siltstone
- Mudstone, claystone
- Shale
- Carbonaceous shale
- Coal
- Varves
- Crystalline basement
- Unconformity.

To accompany **Records 1964/39**

Bureau of Mineral Resources, Geology & Geophysics June, 1964.

F55/29

Betts Creek Beds were mapped overlying or faulted against Cape River Metamorphics on the present north-eastern margin of the Eromanga Basin in the Hughenden and Charters Towers Sheet areas, and overlying Boonderoo Beds in Galah Gorge. Subsurface occurrences are recorded from a coal prospecting shaft at Blantyre Homestead, from the interval 3417 to 4120 feet in Brookwood No.1 Well (recorded by Pemberton (1963) as Upper Permian, and with similar lithologies), and are inferred from the presence of coal recorded from near the bottom of several deep water bores (aligned roughly SSE from the abandoned Hughenden No.1 Town Bore to west of Aramac).

An important characteristic of the unit is the variability of the lithological sequences, and of the thickness. The range of lithologies is evident from the measured sections, x16, x17, x18, and x23 (Appendix A & Plate 5). Broadly, coal and carbonaceous shale appear to be more or less restricted to where the Beds are thin (Plate 7, Fig.1) or to the upper part where the Beds are thick; conglomerate beds (Plate 4, Fig.2) are most common in the lower part of the unit; while the bulk of the unit consists of interbedded kaolinitic lithic sandstone and micaceous siltstone. Tuff interbeds were recorded at two localities.

In describing the measured sections the term "pebbly mudstone" was used for varicoloured unsorted sediments with an earthy texture and consisting of a mass of jumbled fragments, varying in size up to large slumped blocks, set in a fine matrix of mudstone, sandstone or sandy mudstone (Plate 6, Fig.1). Fragments vary from angular to sub-rounded and consist of quartz, metamorphics, acid volcanics, carbonaceous material, sandstone and mudstone. All these rock types crop out nearby. It is suggested that the pebbly mudstones are the deposits of terrestrial mud flows. Apart from the lack of sorting there is no evidence to suggest a glacial origin.

Measured thicknesses range from approximately 150 feet in Galah Gorge to over 1200 feet near Oxley Creek. Between Oxley Creek and Betts Creek, the unit thins considerably and at one locality 17 miles west of Pentland is overlapped by the Warang Sandstone. The variations in thickness are probably mainly due to deposition on a very irregular basement surface. At the top of Section x17 there is a slight discordance in dip between the Betts Creek Beds and the overlying Warang Sandstone, and the coal-bearing sequence of the Oxley Creek area (Reid, 1918) is missing (Plate 5). There has also been slight erosion on the crest of a local anticline at Section x16. Elsewhere there is no angular unconformity. The widespread occurrence of coal seams near the top of the Permian sequence, both in outcrop and subsurface, suggests that approximately the same horizon is overlain by Triassic rocks throughout most of the area.

Only plant fossils have so far been found in the Betts Creek Beds. The macroflora, as described by White (1964) is dominated by species of Glossopteris of Upper Permian age. Evans (1964) also describes a microflora of Upper Permian age. No evidence of marine conditions has been seen in the Betts Creek Beds. Widespread coal seams and carbonaceous shale indicate swampy conditions, at least at the top of the unit. Grains in the arenites are little altered, and are mainly sub-angular to sub-rounded, indicating rapid transport from nearby source areas. Torrential deposition was confined mainly to the Betts Creek area, where thick conglomerates abut against, and overlap, quartzose rocks of the Cape River metamorphics. It is likely that a mountain chain, now represented by the NW-trending ridges

PLATE 6

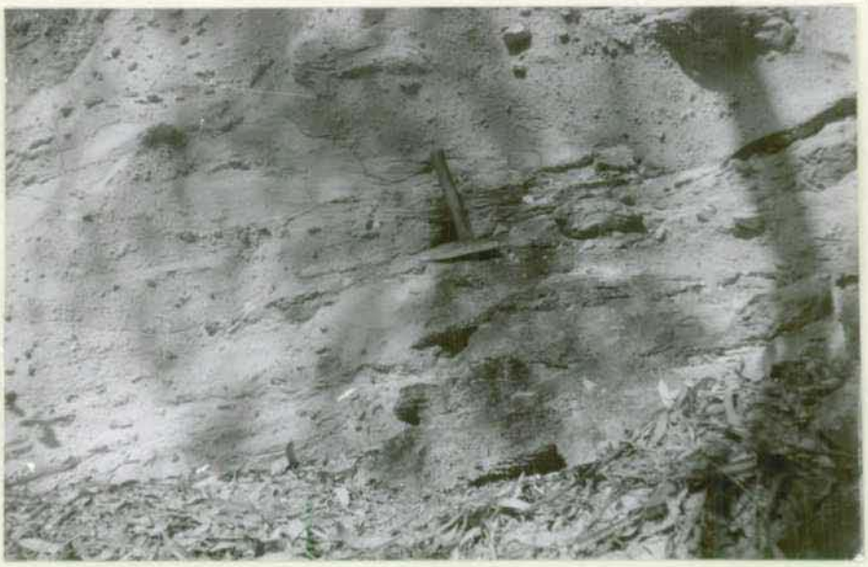


Fig. 1 Pebbly mudstone, Betts Creek Beds, Betts Creek, 10 miles W of Pentland, Hughenden Sheet area. In Section x18, part C.

BMR. Neg. M326

Fig. 2 Type locality of Betts Creek Beds, in Betts Creek, 10 miles W of Pentland, Hughenden Sheet area. Rock face is Glossopteris-bearing mudstone and sandstone at base of part C of Section x 18. Hammer is resting on conglomerate at top of part B of x18.

BMR. Neg. M326

of the Cape River Metamorphics, was the source of a large part of the Betts Creek Beds in the Hughenden area. Betts Creek Beds are probably piedmont deposits, and the variability of the unit is a reflection of the variety of local environments associated with such deposits.

WARANG SANDSTONE (new name)

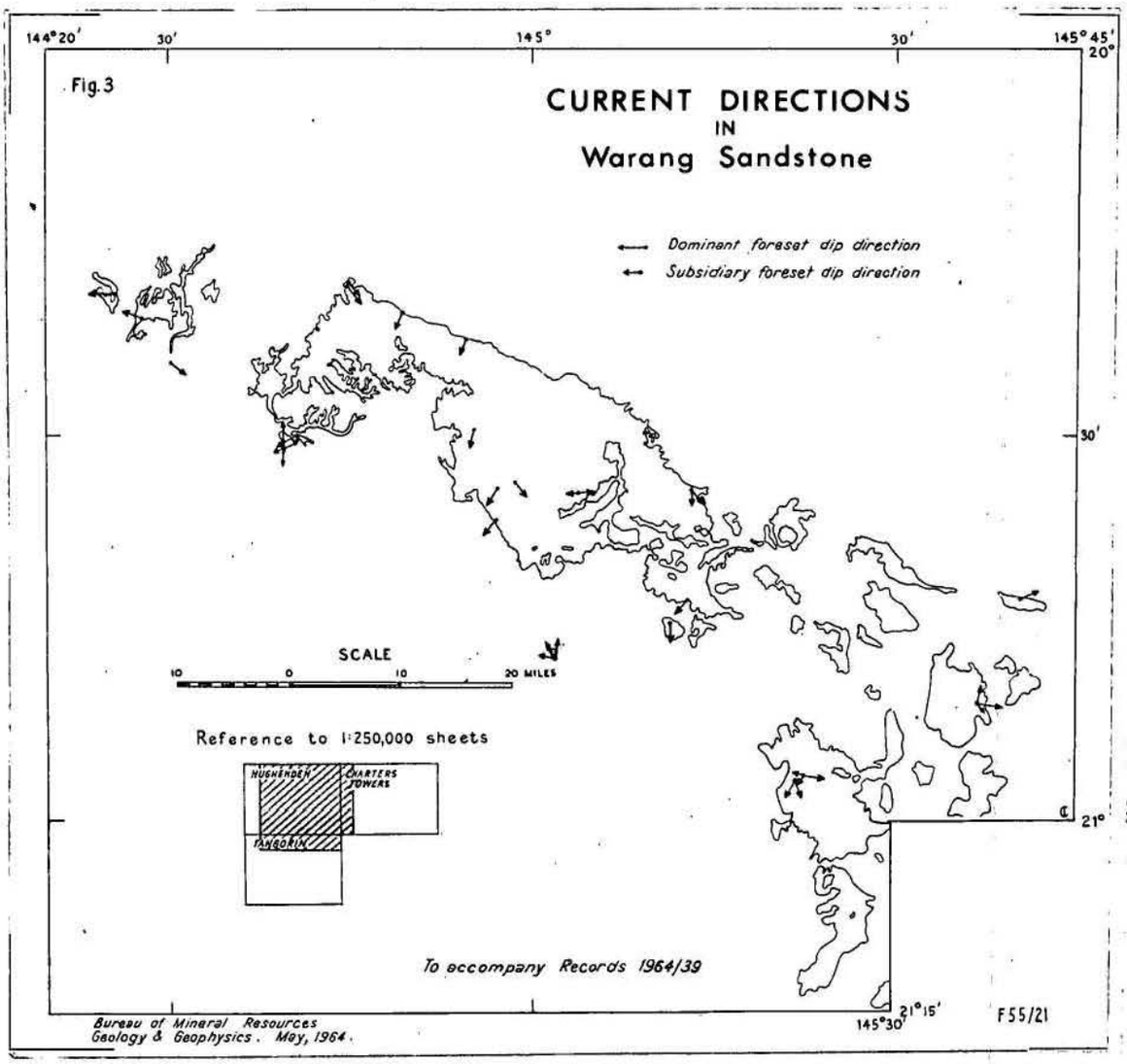
Sandstones forming the White Mountains and the Great Dividing Range west of Pentland have been referred to by previous workers under different names, e.g. Desert Sandstone by Rands (1891) and Reid (1916), Blythesdale Beds by Maitland (1898), and part of the Bundamba Group by Whitehouse (1954). Each reference has lacked formal definition and consisted mainly of an attempt at correlation, without fossils, with sequences mapped elsewhere. It is now proposed to name and define the unit formally as the Warang Sandstone.

The name is taken from the parish of Warang, a part of the uninhabited White Mountains, north-east of Hughenden. The type section, x11 (Appendix A & Plate 8), was measured along an unnamed tributary of the south branch of Betts Creek, 11 miles WSW of Pentland, at Lat. 20°34'S, Long. 145°14'E. Outcrops so far mapped are in Galah Gorge and adjacent gorges, the gorge of the Flinders River, the White Mountains, on the east flank of the Great Divide west of Pentland, and in deeply dissected inliers in the Alice Tableland south of Pentland. An outlier of similar rocks is also reported from the Just Range, near Charters Towers (R. Harding, pers. comm.).

In addition to the type section, sections x9, x10, x22 and x24 (Appendix A & Plate 8) were measured in the Warang Sandstone; all are lithologically similar and these lithologies representative of the unit. Briefly, it is predominantly poorly sorted kaolinitic quartz sandstone, with thin interbeds of red siltstone. The sandstone is commonly gritty, grading to pebbly sandstone, and with pebbles of quartz or rhyolite. The only significant variation in lithology from the sections was seen on a helicopter traverse along an unnamed tributary of the Flinders River in the west of the White Mountains. There, an interval estimated to be 70 feet thick, consists almost entirely of red siltstone, with thin interbeds of red sandstone (Plate 6, Fig. 2). From photo interpretation this siltstone member possibly extends along the gorge for over 20 miles. This is considerably thicker and more extensive than any other interval of siltstone seen.

Most of the sandstone beds are extremely friable except where local surface silicification has produced "case hardening". Where this crust has been breached the rocks can easily be broken down by rubbing by hand, and they are very susceptible to wind-fretting.

A characteristic feature of the sandstone is trough cross-bedding, commonly on a very large scale. Current directions indicated by the troughs are very variable, but the most consistent directions in individual outcrops were recorded, and are plotted on Figure 3.



The most consistent direction is southerly, but with a subordinate easterly direction in the south-east of the Hughenden Sheet area and in the Charters Towers Sheet area.

Measured thicknesses of the unit vary from 420 feet in Galah Gorge to 724 feet (top not exposed) near Betts Creek. The maximum thickness in the outcrop area probably does not exceed 800 feet. In the north-west of the Hughenden Sheet area Jurassic Blantyre Sandstone rests directly on crystalline basement; in the abandoned Hughenden No.1 Town Bore the thickness of the Warang Sandstone is interpreted from the driller's log as 1660 feet. These variations in thickness are interpreted as being due partly to deposition on an irregular surface, and partly to infilling of a trough extending SE from Hughenden. This is discussed further under "Structure".

The Warang sandstone is strongly jointed. The joints have been picked out by differential erosion to produce deep narrow gorges which have thick, tangled scrub in the bottoms (Plate 3, Figs. 1 & 2). On air photos the Warang Sandstone has a distinctive pattern; white, where the sandstone crops out, and with numerous parallel and intersecting black lines due to vegetation along the joints.

Evans (1964) identified spores of Lower Triassic age in cuttings from the unsuccessful Whitecliffe No.2 Stock Route Bore (Reg. No. 15415), 30 miles north of Hughenden. He suggested a correlation with the Clematis Sandstone or the Rewan Formation of the Bowen Basin. The cuttings were identified as part of the Warang Sandstone by the presence of a thick interval of red siltstone and from extrapolation from the sequence mapped in Galah Gorge approximately 1 mile to the east. No other samples from the Warang Sandstone have yielded diagnostic fossils, although previous workers have referred to rare woody fragments from sediments which may be part of the formation.

The presence of red beds and the absence of organic remains indicate that the depositional environment was an oxidising one. Large scale trough cross-bedding with a dominant current direction (Fig.3) to the south along most of the strike of the unit suggests a fluviatile environment, and that deposition took place during periodic rapid floods on extensive flood plains marginal to a mountain range. Possibly, the source of much of the Warang Sandstone in this area was quartzose rocks of the Cape River Metamorphics. The swing in current directions to the east in the Charters Towers Sheet area may indicate that in Triassic times the uplands of the Cape River Metamorphics did not extend any further south-east than the site of Pentland, and that some of the drainage from the uplands was to lower land in the east.

"BROOKWOOD BEDS"

In the completion report for Exoil Brookwood No.1, Pemberton (1963) introduced the name 'Brookwood Beds' for an interval of 429 feet of Lower Triassic sandstone, siltstone and shale. The name is, as yet, unpublished and has not been registered with the Central Register of Stratigraphic Names.

The unit is identified by a microfloral assemblage found in the Rewan Formation of the Springsure area and the Pickanjinnie Formation of the Roma area (Evans, Appendix D in Pemberton, 1963).

Pemberton (loc.cit.) describes the unit as follows:

"Sandstones comprise approximately 60% of this interval. They are generally medium to very coarse grained, sub-angular to angular, often poorly sorted clean quartz sands with only small amounts of lithic, carbonaceous, feldspar and dark mineral grains. Cementing material is soft white clay. One thin sand is very fine grained, silty and tight. Shales are generally medium grey, soft, slightly carbonaceous and locally silty. Cuttings from the interval 3070-3090 feet contain small amounts of red ochre, partly mottled, hard, brittle, micaceous shale. Siltstones are brown, grey and greenish, locally carbonaceous and sandy. Carbonaceous laminations appear to occur throughout the interval".

This description suggests that the 'Brookwood Beds' are lithologically comparable with the Warang Sandstone, except for the presence of carbonaceous material. The composite log of the well also records several macrofossil occurrences. In these two details there is a significant difference from the Warang Sandstone, and it is undesirable at this stage to regard the two sequences as identical, but rather as possible correlates. It is likely that there is an environmental and facies difference between the two units, reflected mainly by the organic content.

PLATE 7

Fig. 1 Galah Gorge, 41 miles NNE of Hughenden. Massive sandstone of the Betts Creek Beds, with interbedded carbonaceous shale and coal (at figure).
BMR. Neg. M326

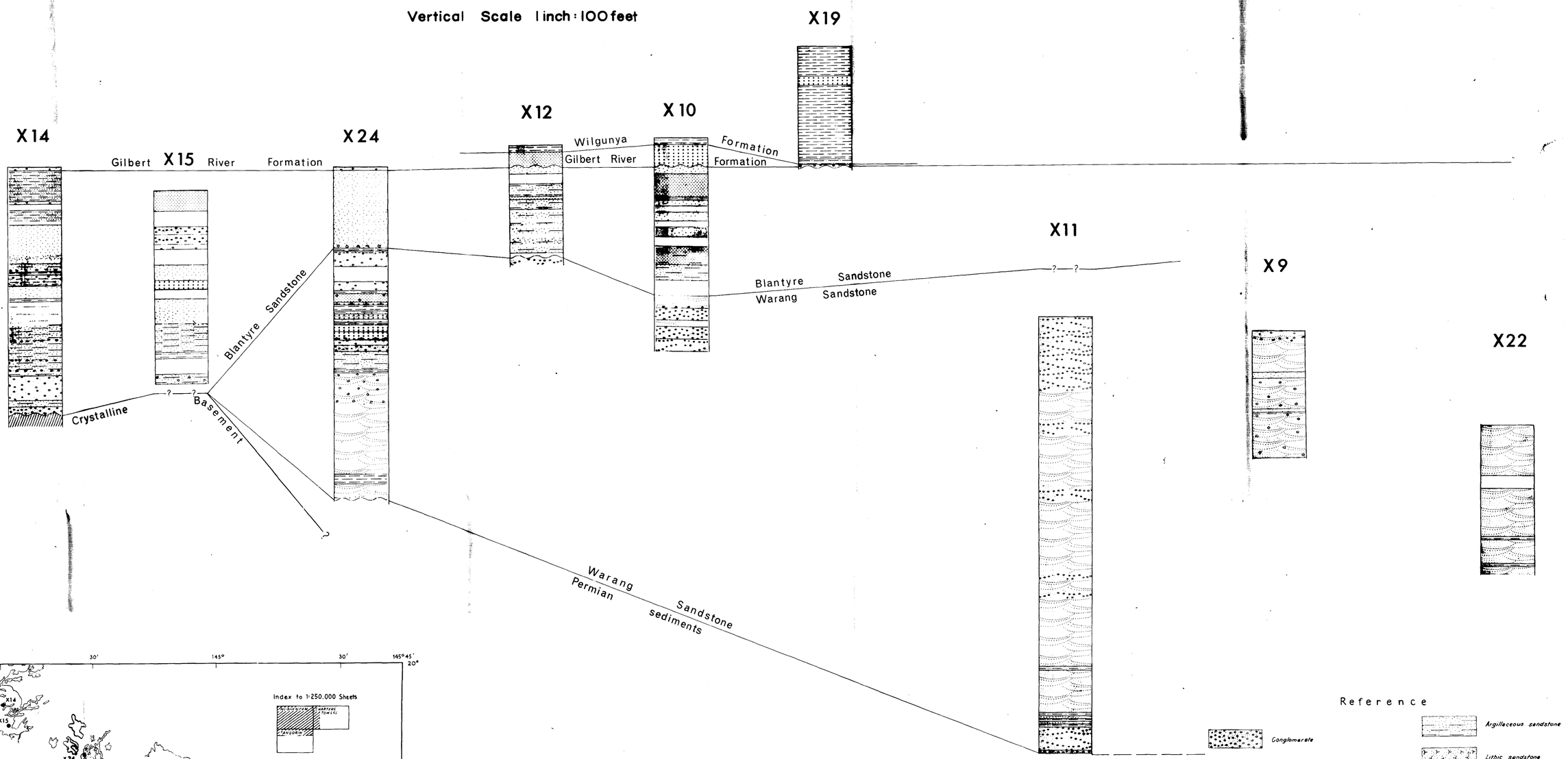
Fig. 2 Gorge of unnamed tributary of the Flinders River in the White Mountains, approximately 6 miles E of Clyde Park Homestead, Hughenden Sheet area. Massive interval of red siltstone with prominent benches of red and white sandstone. Trees on cliff face are approximately 35 feet tall.
BMR. Neg. M325

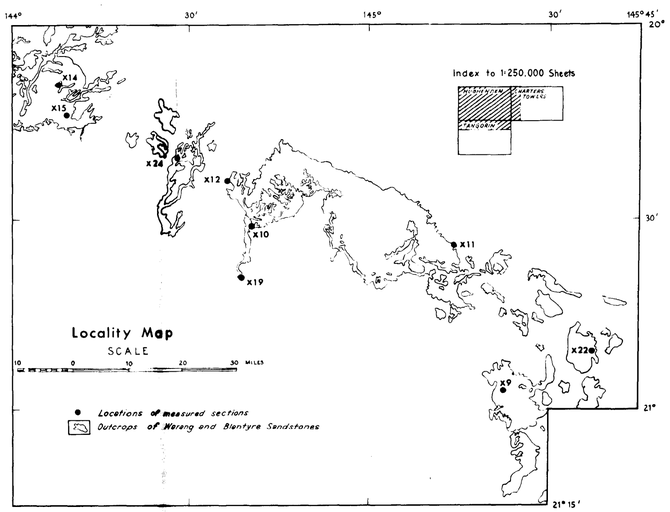
PLATE 8

MEASURED SECTIONS OF MESOZOIC SEQUENCES

(For detailed lithological descriptions see Appendix A.)

Vertical Scale 1 inch : 100 feet





To accompany Records 1964/39

Reference

- Conglomerate
- Pebbly sandstone
- Festoon-bedded pebbly sandstone
- Breccia
- Tillite
- Coarse-very coarse sandstone
- Medium sandstone
- Fine-very fine sandstone
- Festoon bedded sandstone
- Argillaceous sandstone
- Lithic sandstone
- Siltstone
- Mudstone, claystone
- Shale
- Carbonaceous shale
- Coal
- Varves
- Crystalline basement
- Unconformity

Bureau of Mineral Resources, Geology & Geophysics June, 1964

F55/28

BLANTYRE SANDSTONE (new name)

During the 1962 mapping (Vine, Bastian and Casey, 1963) a sandstone sequence below the Wilgunya Formation was regarded as the southern continuation of the Gilbert River Formation (Laing & Power, 1960), as mapped in the Gilbert 1:250,000 Sheet area (Reynolds, 1960). Vine et. al. (loc.cit. p.17) suggested that there was a possible hiatus near the top of the sequence. Mapping during 1963 showed that the suspected hiatus is a regional unconformity (Plate 9, Figs. 1 & 2). Because Laing & Power originally described the Gilbert River Formation as a Lower Cretaceous unit conformably below marine Cretaceous argillaceous rocks; the name "Gilbert River Formation" is now restricted to the rocks above the unconformity and which are conformable below the Wilgunya Formation. For the sequence below the unconformity the name "Blantyre Sandstone" is proposed.

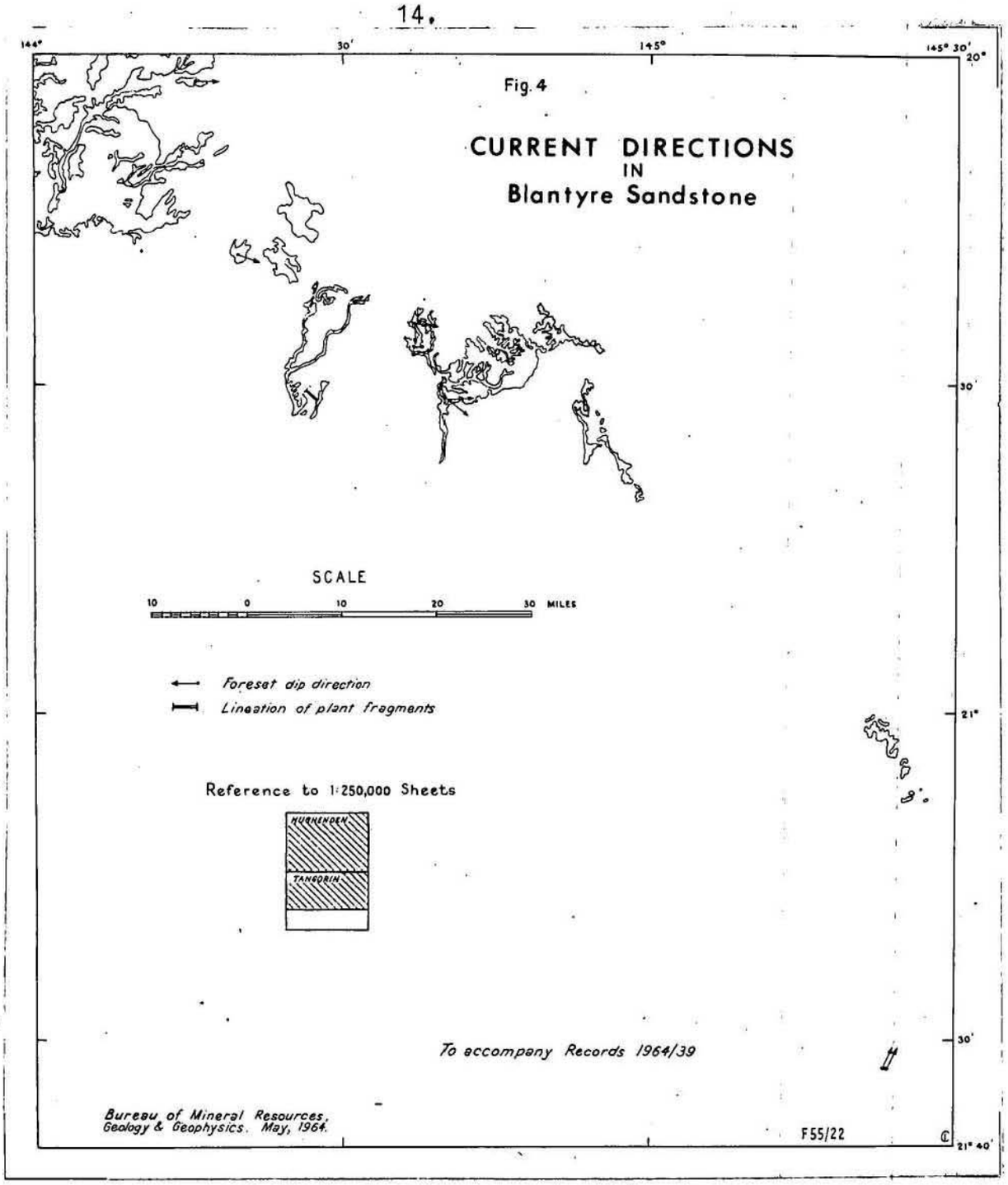
The name is derived from Blantyre Holding, approximately 35 miles north-east of Hughenden. The type section X10 (Appendix A & Plate 8), is in the gorge of the Flinders River, 15 miles north of Blantyre Homestead at Lat. 20°31'S, Long. 144° 40'E. Other measured sections are X12, X13, X14, X15 and X24 (Appendix A & Plate 8).

The Blantyre Sandstone is essentially a medium to fine-grained, quartz sandstone, with well developed planar cross-bedding in medium to thick sets. Foresets commonly have some laminae with a kaolinitic matrix, but most are clean quartz sandstone. At the top of the unit are lenses of thin to thick bedded quartz and micaceous sandstone, with mudstone, carbonaceous shale and very minor coal.

Within the area mapped outcrops of Blantyre Sandstone are restricted to the Hughenden Sheet area and the north-east of the Tangorin Sheet area. The main outcrops are in the north-west of the Hughenden Sheet area, where the unit rests unconformably on Cape River Metamorphics. In Galah Gorge and the gorges of its tributaries, on the northern margin of the Alice Tableland, and in the north-east of the Tangorin Sheet area, the unit rests disconformably on the Warang Sandstone. In addition sandstone outcrops at the base of small cliffs near Mundee Bluff (near eastern margin of Tangorin Sheet area) consist of up to 2 feet of planar cross-bedded quartz sandstone, similar to the Blantyre Sandstone, overlain by 6 inches of conglomerate regarded as Gilbert River Formation, and overlain by leached mudstone of the Doncaster Member of the Wilgunya Formation.

Measured thicknesses vary from 405 feet in the north-west of the Hughenden area to 125 feet in Galah Gorge. Other thicknesses in the Flinders River area are less than 200 feet. From photo interpretation the Blantyre Sandstone is thinning eastwards, and may be less than 100 feet thick on the northern margin of the Alice Tableland.

Current directions, indicated by dips of foresets, are most consistently to the east (Figure 4) with the exception of northerly directions near Mundoo Bluff.



The thickest sequences are in the west. However, correlation between outcrops is entirely lithological, and it is possible that other units may be present in some of the thicker sections mapped as Blantyre Sandstone.

The sub-surface continuation to the south can only be inferred, as drillers' logs of water bores are not sufficiently diagnostic and there are insufficient oil search wells to provide control. No time correlations can yet be attempted because the Blantyre Sandstone is not well enough dated.

Rare wood fragments found in several parts of the unit are indeterminate. Identifiable fossils, all plants or spores, are restricted to the finer grained lenses in the upper part. Unfortunately the macroflora ranges through the Jurassic and into the Lower Cretaceous (White, 1964). Evans (1964) suggests a probable Upper Jurassic age for the microflora.

The presence of wood fragments and absence of marine fossils is suggestive of a continental environment. The combination of generally good sorting, moderate to good rounding, well-developed planar cross-bedding with a consistent current

PLATE 9

Fig. 1 Flinders River at the Rockies Waterhole 32 miles ENE of Hughenden. Massive conglomeratic sandstone of the Gilbert River Formation unconformably overlying thin to thick-bedded quartz sandstone of the Blantyre Sandstone. At the foot of the figure is lenticular carbonaceous shale with plant fragments.
BMR. Neg. G6131

Fig. 2 Galah Gorge, 35 miles NNE of Hughenden. Sandstone and conglomerate of the Gilbert River Formation unconformably overlying thin to thick-bedded and cross-bedded quartz sandstone of the Blantyre Sandstone. Scour channel at base of Gilbert River Formation approximately 1 foot above thin-bedded sandstone.

BMR. Neg. M326

direction suggest fluviatile deposition, possibly in a structurally controlled, broad valley.

JURASSIC SEQUENCE IN BROOKWOOD NO. 1 WELL

Pemberton (1963) gives a description of the Jurassic sequence in Exoil Brookwood No.1 Well, and identifies:

Blythesdale Group	2085'	- 2360',	Quartz sandstone, some minor conglomerate, rare carbonaceous shaly or coaly partings.
	2340	- 2468	Siltstone.
Walloon Equivalent	2468	- 2674	Shale, with sequence predominantly siltstone below 2600'.
Bundamba "Formation"	2674	- 2988	Quartz sandstone.

The unit called "Blythesdale Group" in Brookwood No.1 is probably the correlate of the Gilbert River Formation plus the Blantyre Sandstone. Evans (in Pemberton, 1963) recorded Lower Cretaceous spores from Core 5 (2108-2128 feet) and suggested there was a hiatus between Cores 5 and 6 (2625-2631 feet). This hiatus could possibly be part of the time gap represented by the disconformity at the base of the Plantyre Sandstone. The unconformity between the Blantyre Sandstone and the Gilbert River Formation may also be present in the subsurface, and be represented by an interval of non-deposition in Brookwood No.1; in the composite log a lithological change is evident at 2135 feet.

GILBERT RIVER FORMATION

Gilbert River formation was originally named by Laing and Power (1960) from outcrops in the Gilbert River of sandstone conformably below marine Cretaceous argillaceous rocks. Reynolds (1960) regarded the sandstone of the Gregory Range as the southerly continuation of the Gilbert River Formation, and further outcrops of the sandstone sequence were mapped in 1962 in the Richmond Sheet area (Vine et al., 1963). As noted under 'Blantyre Sandstone' the suspected hiatus in the sequence is now known to be a regional unconformity separating the Blantyre Sandstone from the uppermost part of the sandstone sequence. The name Gilbert River Formation is now restricted to that part of the sandstone sequence above the unconformity.

Lithologies of the Gilbert River Formation are illsorted sandstone, grading to conglomeratic sandstone and polymict conglomerate. Measured sections in the Gilbert River Formation are X10, X12, X13, X14, X19 and X24 (Appendix A & Plate 8). In the area mapped during 1963 outcrops are restricted to isolated outliers in the north-west of the Hughenden Sheet area, and to a thin interval which underlies the Wilgunya Formation from Galah Gorge eastwards to the northern margin of the Alice Tableland in the valley of Torrens Creek. In addition, a bed of conglomerate, 6 inches thick, underlying the Wilgunya Formation near Mundoo Bluff is regarded as Gilbert River Formation.

Measured thicknesses of the complete formation vary between 2 feet at the Rockies Waterhole in the Flinders River (Section X19) and 38 feet 10 miles further north in the gorge of the Flinders River (Section X10). However a thickness of approximately 100 feet for the Gilbert River Formation, as now restricted, was recorded in Section X4 in the north-east of the

Richmond Sheet area (Vine et al, 1963). Plate 9 Fig.1 illustrates the Gilbert River Formation at the Rockies Waterhole, approximately ½ mile upstream from section X19; the bed of conglomeratic sandstone photographed is the full thickness of the unit at that locality.

The Gilbert River Formation is overlain by the Doncaster Member of the Wilgunya Formation; the contact varies from sharp to gradational with some interbedding of sandstone and mudstone. Even where the contact is gradational or has interbedding the change occupies less than 10 feet. The sequence is regarded as conformable but with a rapid change in type of sedimentation. The Wilgunya Formation is thought to have been deposited in a shallow marine environment and in the Hughenden Sheet area the Gilbert River Formation probably represents terrestrial sediments deposited immediately before the Cretaceous marine transgression. No marine fossils have yet been found in the Gilbert River Formation in this area and the only organic remains are well rounded pieces of wood.

ROLLING DOWNS GROUP

Detailed descriptions of the members of the Wilgunya Formation, Mackunda Beds and Winton Formation, which comprise the Rolling Downs Group in the northern Eromanga Basin, were given by Vine, Bastian & Casey (1963) following mapping in adjacent areas. The following sections are essentially supplementary to that report, and contain summaries of each unit together with details of new information.

The age of the Wilgunya Formation and Mackunda Beds are Lower Cretaceous. The ages given in the following sections are the European stages to which Day (Appendix D & pers.comm) assigns each fauna. The age of the Winton Formation is discussed separately.

A formal nomenclature of the Rolling Downs Group is being prepared for publication (Vine & Day, in prep.).

WILGUNYA FORMATION

Doncaster Member

The Doncaster Member consists of more than 80% blue-grey mudstone, with thin to medium interbeds of silty to sandy, glauconitic mudstone and thin beds or bands of nodules of brownish-grey silty limestone, commonly strongly brecciated. Some nodules are richly fossiliferous and locally carry algal colonies. The mudstones are mainly non-fissile, but shaly in part; some develop a poor fissility on weathering. Due to lack of complete sections thickness estimates can only be made from drillers' logs; estimates range from 350 to over 550 feet.

A rich marine fauna of Aptian age is present. The environment is suggested as shallow marine with the sediments occasionally subjected to wave break-up.

With the area mapped during 1963 the member is mainly concealed by Cainozoic deposits. Outcrops in the Tangorin and Muttaburra Sheet areas, mostly near the eastern margins, are mainly leached and duricrust-capped. Small areas of fresher rock are present in the face of a duricrust-capped plateau 23 miles north-east of Aramac. In the south-west of the Hughenden area are some of the best exposures seen of the member; these are mainly in cliffs along some of the valleys and gorges of

PLATE 10

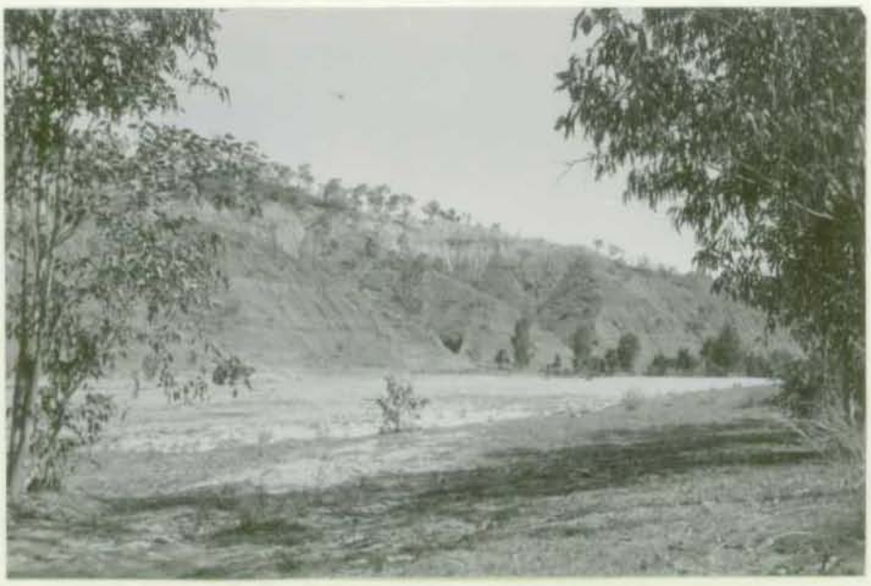


Fig. 1 Cliffs of Doncaster Member at the Rockies Waterhole, 32 miles ENE of Hughenden. Prominent bench in light-coloured top of cliff is glauconitic and quartz sandstone. Rest of sequence is blue-grey mudstone with glauconitic horizons showing as narrow pale bands. Top of section leached. Sandstone bench is 130 feet above valley floor.
BMR. Neg. M325

Fig. 2 Mackunda Beds in west bank of Landsborough Creek at Muttaburra. Poorly thin-bedded friable lithic sandstone with development of large concretion of tough calcareous lithic sandstone; some thin interbeds of mudstone. BMR. Neg. M326

the Flinders River and its tributaries (Plate 10, Fig.1). Between these outcrops are areas of undulating grassland - the typical rolling downs - containing scattered poor exposures.

The main additions to knowledge of the unit as the result of the 1963 mapping are:

(a) A more complete knowledge of the fauna was obtained. Detailed collecting along the Flinders River was carried out by R.W. Day and the fauna was shown to be entirely Aptian. Fossils are common only in some beds but a rich fauna was obtained. Day's determinations are included in Appendix D and are being summarized in the formal definition of the unit (Vine and Day, in prep.).

(b) Sandstone beds previously regarded as transitional from the underlying Gilbert River Formation (Vine et al, 1963), were shown to be interbeds within the member. This is well illustrated at the Rockies Waterhole in measured section X19 (Appendix A & Plate 8; Plate 10, Fig. 1). Section X21 (Appendix A) was measured through another sequence including sandstone beds, and earlier (Vine et al, 1963) regarded as transitional from the Gilbert River Formation. Some mudstone was seen below this sequence and photo-interpretation suggests it is about 50 feet stratigraphically above the Gilbert River Formation.

(c) Gypsum is locally abundant, but in fairly fresh exposures it is seen to be mainly filling joints or along bedding planes. The significance of this is not yet clear; it is possible that the abundant gypsum is confined to a stratigraphic level, i.e. near the base of the member, or the control may be Cainozoic weathering, i.e. near the base of a deep weathering profile.

(d) Some shallow core-drilling carried out approximately 20 miles west of Hughenden showed that the upper part of the unit contains numerous interbeds of green (glauconitic or lithic) coarse-grained siltstone.

Jones Valley Member

The Jones Valley Member consists of thin-bedded and friable khaki siltstone and medium to thick-bedded calcareous siltstone with minor glauconite, and with some beds of tough, silty, fine-grained limestone. Intraformational conglomerate occurs rarely. The type section is in the Hughenden Sheet area at 20°26'S, 144°06'E, in a river cliff of a small tributary of Jones Valley Creek, beside the track to Strath Stewart Homestead, 200 yards north of the southern boundary of Strath Stewart Station. It is 25 feet thick in the type section and this seems to be the thickest development. A marine fauna of Aptian age is present. The environment is suggested as shallow marine, possibly slightly deeper than that of the Doncaster Member. The best exposures are in the "window" within the Sturgeon Plateau near Strath Stewart Homestead (Vine et al, 1963).

During the 1963 mapping the unit could not be traced much further east than previously. A good outcrop was seen on the northern flank of Mount Canterbury (15 miles NNE of Hughenden), and some rubbly outcrops north-west of the Burraway Hills. Eastwards the unit is mainly concealed by superficial deposits. One other exposure was seen, in the valley of the Flinders River 5 miles north-east of Glendower Homestead, where there is 7 feet of green, glauconitic siltstone overlain by about 6 feet of interlaminated blue-grey mudstone and glauconitic siltstone.

This exposure seems to be the most easterly where the siltstone grades laterally into interbedded mudstone and siltstone, indistinguishable from similar associations of lithologies in the Doncaster Member.

One shallow core-hole drilled approximately 20 miles west of Hughenden intersected the Jones Valley Member. The lithology is green (glauconitic or lithic) coarse-grained siltstone, cross-laminated in part.

Ranmoor Member

The Ranmoor Member is only rarely exposed and normally forms flat soil plains. Lithologies previously recorded are almost entirely blue-grey to dark grey and black mudstone, and carbonaceous mudstone or shale. The top of the unit, where gradational to the Toolebuc Member, is locally calcareous siltstone with thin coquinite bands of flattened Inoceramus plates and fragments. Due to lack of exposures the thickness estimate of 200 feet has had to be made from drillers' logs. The environment is suggested as shallow marine basin, with restricted circulation.

Outcrops mapped during 1963 are confined to two areas; east of Aramac, and north-east of Hughenden. Those near Aramac differ from ones described previously only in that calcareous siltstone is more common. Outcrops north-east of Hughenden are mainly in the banks of the Flinders River between Hughenden and Glendower Homestead. Two miles south-west of Glenmoan the formation contains lenticular beds of silty sandstone up to 2 feet thick.

The fossil assemblages collected from near the base of the unit are identified by Day (Appendix D) as Lower Albian, corresponding to the inferred time interval between the Roma and Tambo faunas (Whitehouse 1926).

A shallow core-hole drilled approximately 20 miles west of Hughenden intersected the lower part of the member. The lithology is entirely blue-grey to dark grey mudstone.

Toolebuc Member

The Toolebuc Member consists of interbedded concretionary limestone, platy or flaggy limestone, and calcareous shale. Platy limestone and thinly interbedded calcareous shale form the major part of the unit, but are less resistant than the concretions and less obvious. The thickness is approximately 30 feet. Fossils are abundant, and locally form coquinites, but the fauna is restricted.

Outcrops mapped during 1963 are confined to a discontinuous belt extending nearly 40 miles north from Aramac (outcrops east and west from Hughenden were mapped in 1962 Vine, Bastian & Casey, 1963). Between the Hughenden and Aramac outcrop areas the member is concealed by Cainozoic deposits.

Outcrops in the Aramac area differ from those described previously in that they consist entirely of thinly interbedded platy limestone and calcareous shale - none of the characteristic limestone concretions were seen. The significance of this is not clear; it is possible that the Toolebuc member is lensing out, or alternatively the lack of limestone concretions may represent a slightly deeper water facies. In Brookwood No.1 the Toolebuc Member was identified from the electrical and gamma-ray logs, but the lithology was described as entirely shale (Pemberton, 1963).

Allaru Member

The Allaru Member consists of grey to blue-grey mudstone, with uncommon interbeds of lithic, feldspathic siltstone and calcareous siltstone grading to very fine grained sandstone and calcareous sandstone. It is usually only poorly exposed. Thicknesses are estimated from drillers' logs as varying between 600 and 1000 feet. Recorded fossils are not common, possibly in part due to lack of outcrops; the fossils are marine and of Albian age. The environment is suggested as shallow marine, in part at least within the zone of wave action.

Mapping during 1963 confirmed the essential uniformity of the member. In the vicinity of Hughenden the belt of outcrops swings from an E-W direction near the northern margin of the Eromanga Basin to an approximately N-S direction, presumably paralleling the eastern margin of the Basin. Continuity of this belt is interrupted north-east of Muttaburra by a cover of Cainozoic deposits, including the Glendower Formation on the western side of the Alice Tableland.

In the Manuka and Richmond 1:250,000 Sheet areas a feature of the unit is an abundance of cone-in-cone limestone. It is not so common in the Tangorin and Muttaburra Sheet areas except in association with local slump(?) folding. Although cone-in-cone limestone has been found throughout the Cretaceous sequence it is only in the Allaru Member and the Mackunda Beds that it is consistently common.

MACKUNDA BEDS

The Mackunda Beds are principally pale brown to brown and buff very fine-grained lithic, feldspathic sandstone and interbedded blue-grey mudstone; the sandstone may be either calcareous and tough, or non-calcareous and friable. Gradations to coarse-grained siltstone and silty limestone are also common. The arenites are mainly thin to medium-bedded, and the mudstone is commonly laminated, but non-fissile. Thin seams of cone-in-cone limestone are common and locally abundant. Towards the top of the unit a few beds of intraformational conglomerate occur.

Fossils are sporadically abundant, commonly in coquinites, although near the top of the unit they are rare and mainly fragmentary. The fauna is much richer than any part of the Wilgunya Formation other than the Doncaster Member, but becomes impoverished towards the top of the Mackunda Beds. Marine fossils previously collected are of Albian age; a few indeterminate fragmentary plant fossils are also present in the upper part of the unit. Initially deposition took place in a shallow recessive sea, but later in a paralic environment.

Mapping during 1963 served to extend the known limits of the Mackunda Beds southwards to Latitude 23°S. They form a belt of rolling downs in which Landsborough Creek and the Thomson River occupy an approximately median position.

Two collections of plant fossils were made during the 1963 mapping approximately 30 miles NW of Muttaburra. Most of this material is fragmentary and preservation is poor, but White (1964) suggested that some of the material is referable to the Lower Cretaceous species Phyllopteris lanceolatus.

WINTON FORMATION

Mapping during 1963 included the type area of the Winton Formation, which Whitehouse, (1954 p.10 defined as:

> "The blue shales and sandstones with intercalated coal seams met with in the bores in and about Winton. No good outcrops are to be seen in and close to Winton itself owing to the cover of late alluvia."

Although this definition leaves much to be desired it is difficult to improve. Identification of the unit rests basically upon a concept - Dunstan (1916) proposed 'Winton Series' for the upper or freshwater section of what was called the 'Rolling Downs Formation' - and it has proved to be a useful concept on which to base the mapping. Lithologically the Winton Formation is similar to the Mackunda Beds but differs in having coal seams and lacking marine fossils. In this connection it must be emphasised that marine fossils, independant of genera or species, form one of the lithological constituents of the Mackunda Beds. Their absence from the Winton Formation is, therefore, a lithological distinction. Because a lithological distinction can be made, the Winton Formation, while retaining the concept of a freshwater unit, is a valid rock unit in accordance with the terms of the Australian Code of Stratigraphic Nomenclature.

The Winton Formation consists of roughly equal proportions of blue-grey mudstone and fine to very fine-grained lithic, feldspathic sandstone grading to coarse siltstone. Some of the sandstone and siltstone beds are calcareous, and commonly concretionary. Intraformational conglomerate is a common minor lithology, and drillers' logs record some coal seams. Bedding is mainly thick to very thick, and intervals of mudstone or sandstone tend to be very much thicker than in the Mackunda Beds.

Mapping during 1963 showed that the eastern boundary of the Winton Formation trends approximately north near the western margin of the Muttaburra Sheet area. This is in marked contrast to the eastern boundary of the Winton Formation shown on the 1953 Geological Map of Queensland where the trend is NE, and the south-east of the Winton Sheet area is shown as 'Tambo Formation'. However fossiliferous Mackunda Beds were recognised in the south-east of the Winton Sheet area, but the outcrops are interpreted as an inlier on an inferred southern axial continuation of the Beryl Anticline. This is discussed further under "STRUCTURE". Mapping to the south during 1964 may help to resolve the reasons for the different placements of the boundaries.

Two collections of plant fossils from the Winton Formation were obtained from localities approximately 35 miles WSW of Muttaburra from the lower part of the unit. The material is poor, but White (1964) referred some leaves to Zamites or Podozamites which are not known in rocks younger than Lower Cretaceous. Whitehouse (1954) suggested that the age of the Winton Formation is Upper Cretaceous, but the above determinations of diagnostic plant fossils and another from the Mackunda Sheet area (Vine, 1964) show that the lower part at least is Lower Cretaceous.

GLENDOWER FORMATION

The Glendower Formation was described in detail by Vine et al (1963) after the 1962 mapping. Lithologies are poorly sorted argillaceous sandstone and sandy mudstone, with some conglomerate. Bedding is seldom well developed, and many sections show only a poor stratification.

Mapping during 1963 showed that the formation extends south almost to the southern border of the Muttaburra Sheet area. Good exposures are restricted to a belt trending due south from Prairie and forming the western margin of the Alice Tableland. Poorer exposures occur in narrow belts trending south-west across the Tableland; the most prominent of these is near Uanda in the centre of the Tangorin Sheet area.

Thicknesses are generally small but no complete sections were measurable. The maximum estimated thickness is 70 feet in the north of the Muttaburra Sheet area, but most thicnesses are estimated to be less than 50 feet. South of Muttaburra the Glendower Formation is preserved in isolated erosional residuals and thicknesses there are rarely greater than than 20 feet.

Vine et al (1963) noted that in the Hughenden and Richmond Sheet areas a large part of the Glendower Formation is covered by basalt but can be identified over wide areas from drillers' logs. Mapping during 1963 showed that there were three main periods of extrusion of basalt, and that only basalt of the first period rests directly on Glendower Formation. Later basalts rest on younger sediments, which were partly derived from erosion of the Glendower Formation; these are now included in undifferentiated Cainozoic sediments (see below). The photograph entitled Glendower Formation in the previous report (loc. cit. Plate 12, Fig. 2) is of these younger undifferentiated Cainozoic sediments.

The Glendower Formation is interpreted as the deposit of an extensive river system, with source in the high country north of Hughenden. The main valley extended due south, with tributaries from the east now represented by the poorly exposed outcrops of the unit on the Alice Tableland. Erosion has removed any evidence of western tributaries.

STURGEON BASALT

Most of the Sturgeon Basalt was mapped during 1962 and is described by Vine et al (1963). It is an olivine basalt, commonly porphyritic, of wide areal extent, but mainly less than 100 feet thick. Vents are preserved as low hills with relief varying from about 20 feet to 600 feet.

Additional mapping during 1963 established that there were three main phases of basalt extrusion, each separated by appreciable periods of erosion, so that the successive groups of flows are at progressively lower levels.

The highest and oldest flows (Fig.5) are mainly east of Porcupine Creek, and possible follow old valleys of the Flinders River and Porcupine Creek. Where this group of flows forms plateaus there is commonly a superficial cover of sand and red dust. There has also been strong marginal dissection, so that parts of some flows have been isolated as erosional residuals e.g. Mts. Wongalee, Canterbury and Beckford, and the Burraway Hills (Mt. Canterbury was earlier thought to be possibly an elevated block because it was considerably higher than the nearby basalt plateau (Vine, Bastian and Casey, 1963). It is

now recognized as being the most westerly residual of the oldest flows and it is at a similar elevation to Mounts Wongalee and the Burraway Hills).

The second oldest group of flows forms most of the southern half of the Sturgeon Plateau, west of the oldest group. Near Mount Canterbury and in the northern part of Galah Gorge the flows are between 100 and 200 feet lower than the oldest group. Erosion of these basalts has been much less extensive, and the original positions of the flows are still evident as linear bodies (Fig.5). Erosion has so far done little more than remove those original divides which separated basalt flows, and undercut the edges of the original flows.

The youngest basalts comprise two valley flows (Fig.5). One follows the valley of Pine Tree Creek in the north-west of the Hughenden area; the second has a long serpent-like trace near Porcupine Creek, north of Hughenden, and probably followed an old main channel of this creek. Volumes of both these flows are considerably less than the earlier flows.

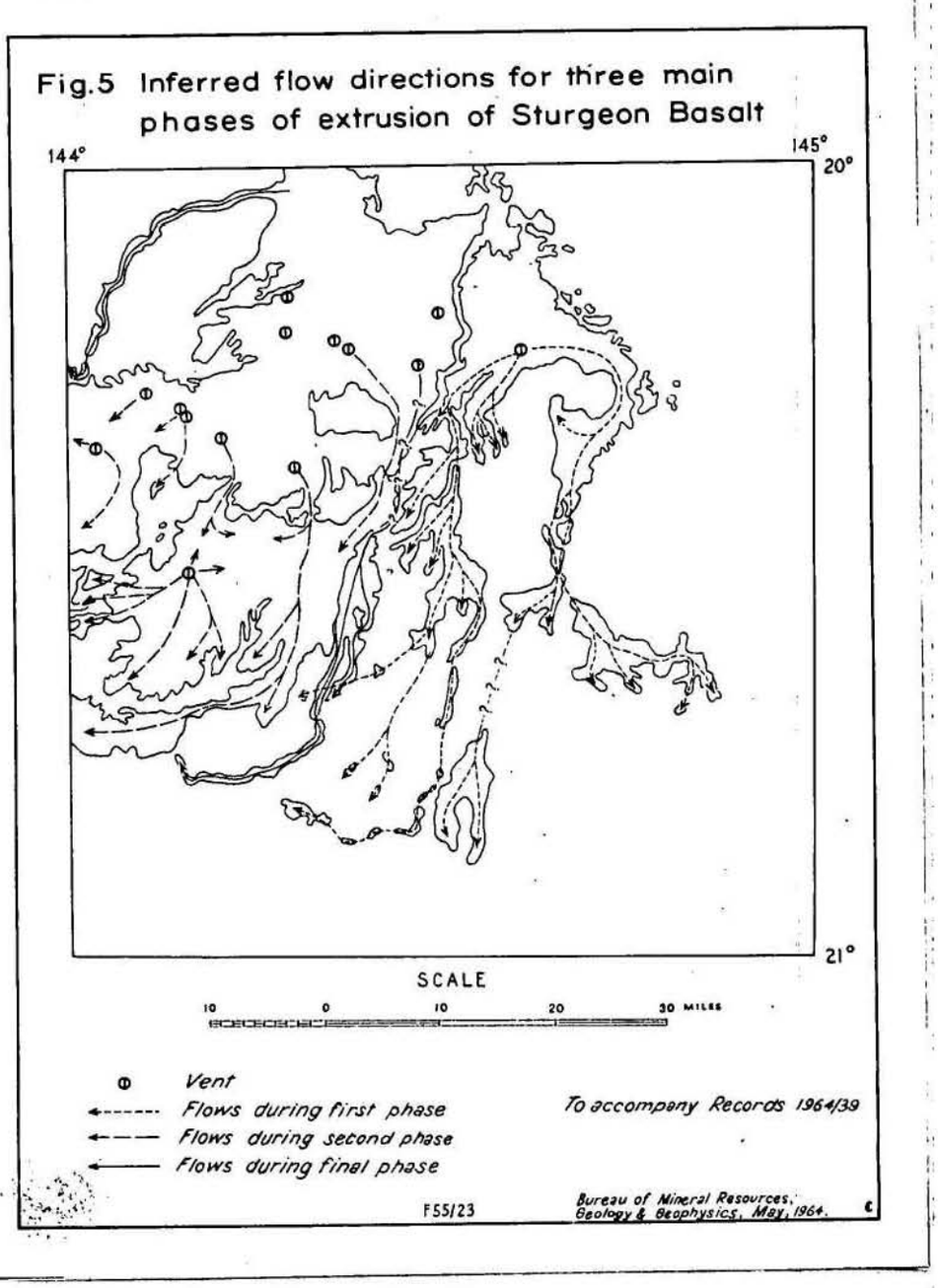


Fig.5 Inferred flow directions for three main phases of extrusion of Sturgeon Basalt

PLATE 11

Fig. 1 Mottled zone of laterite. Cobble of basalt in poorly sorted Glendower Formation, 9 miles ENE of Wongalee Homestead, Hughenden Sheet area.
BMR. Neg. M326

Fig. 2 Mottled argillaceous sandstone of old alluvium of Gorge Creek, ½ mile west of Flinders Highway, Hughenden Sheet area. Hammer rests on conglomerate containing reworked iron pisolites derived from erosion of a laterite profile.
BMR. Neg. M326

The age of the basalts of northern part of the Sturgeon Plateau is problematical. This area is clearly separated from the southern part by a scarp extending east from Colindale Homestead, and is up to 250 feet above the adjacent basalt plateau level to the south. This scarp is comparable with others marginal to the earliest flows, yet in two places flows descend the scarp and merge with the younger, lower basalt flows. Probably this area has been covered by flows from both the older extrusive phases.

None of the basalts of these three phases is deeply weathered, and the oldest flows rest upon lateritized Glendower Formation. However 9 miles ENE of Wongalee Homestead Glendower Formation overlain by basalt of the oldest phase contains weathered cobbles and pebbles of basalt (Plate 11, Fig.1), thus indicating there was still older, pre-lateritization basalt. These cobbles are regarded as evidence of an earlier phase of extrusion of the Sturgeon Basalt, one that is either completely eroded or is concealed by later flows

WERITE BEDS

A brief formal definition of the Werite Beds is included in a paper on Tertiary sequences (Vine, 1964) being submitted for publication.

The unit is named from Werite Holding (pronounced wereety), between 30 and 40 miles south of Winton. The type section, X20 (Appendix A), is in the northern face of the Forsyth Range, 11 miles east of Athelstane Homestead at Lat. 22°49'S, Long. 143°07'E (Winton Sheet area). Werite Beds form the major part of the Forsyth Range and hills to the west and north-west, Allen's Range, and the eastern part of Cory's Range. Forsyth Range is an extensive, dissected plateau; Allen's and Cory's Ranges are part of the margin of a more extensive plateau now mainly covered by Quaternary sediments. Probably large areas of Werite Beds are concealed by these younger sediments. Hills marginal to the three ranges are dissected remnants, now forming mesas and buttes.

In the type section the lithology is mainly grey mudstone, with thin intervals of sandy mudstone and porous very fine-grained sandstone; this section is typical of the deposits of the Forsyth Range and nearby areas. In contrast, sandstones dominate the suite of lithologies in the Allen's and Cory's Ranges area. They are mainly fine to very fine grained, commonly gritty and in part argillaceous; quartz grains are mainly angular to sub-angular, and sorting is poor. Some beds of conglomerate and conglomeratic sandstone occur in which the clasts are mainly reworked sandstone and mudstone from the Winton Formation. At one locality on the north-east of Allen's Range and approximately one mile west of Scrubby Bore (Reg. No. 12958), a basal breccia was seen containing blocks of Winton Formation up to 12 feet long. The blocks appear to have been incorporated in the Werite Beds by collapse, presumably from a local small cliff.

A thickness of 145 feet was measured in the type section in the northern scarp of the Forsyth Range, but the base of the unit is not exposed near the Range. From photo-interpretation it is estimated that less than 50 feet of section occurs below the type section. This area appears to have the thickest development of Werite Beds, although mapping to the south in the Manaroo 1:250,000 Sheet area during 1964 may yet reveal thicker exposures. The unit wedges out on the eastern margin of the Forsyth Range. Exposures in the Allen's and Cory's Range area

are nowhere more than 50 feet thick and most are less than 20 feet. The deposits in this area thin to the west and finally wedge out in Cory's Range.

Most of the rocks of the Werite Beds are deeply weathered, and the topography is due to a protective duricrust capping. The Werite Beds are leached and silicified and rest unconformably on lateritized Winton Formation. Superficially some areas of the Werite Beds appear to be lateritized because the sand grains have a ferruginous coating or because sandstone beds are mottled red-brown and grey-white; but there is no extensive alteration and replacement by iron as is characteristic of the ferruginous and mottled zones of a true laterite profile. In the northern face of the Allens Range, 4 miles west of Emu Hole Bore (Reg. No. 9056) a sandstone of the Werite Beds is mottled but contains pebbles of ferruginous sandstone which have a general similarity to pisolites. These pebbles are reminiscent of lateritic material, and it is suggested that the iron in the mottled and red sandstone is not due to lateritization of the Werite Beds but is derived from an eroded laterite profile. This problem is discussed further with regard to the undifferentiated Cainozoic deposits of the Warrigal Creek (Hughenden Sheet) area.

No fossils have been found in the Werite Beds. The amount of erosion suggests that they are older than Quaternary (and in this they differ from the undifferentiated Cainozoic deposits of Warrigal Creek). They rest upon an eroded laterite profile of Tertiary age. The Werite Beds are regarded, therefore, as Tertiary.

Quartz sand grains are uncommon in the Cretaceous sandstones adjacent to and underlying the Werite Beds, and most are much finer than those in the Werite Beds. As there is no record of any other extensive post-Winton Formation sandstones and the Rolling downs Group is now exposed over a very large area the source of the sand grains in the Werite Beds must have been far removed. Possible sources are the crystalline rocks of either the Charters Towers or Cloncurry areas. It has already been suggested that the Glendower Formation was the deposit of a southward-flowing river system 100 miles east of the outcrops of the Werite Beds; the regional slope in that area is still southwards. The Cloncurry area is, therefore, a more likely source. Mudstones in the Forsyth Range were probably derived from the Rolling Downs Group and may have had a northerly or northeasterly source.

The Werite Beds were probably deposited in a fluviatile environment. Extensive sandstone beds represent sheet flood with some local valley deposition; local erosion and sediment source is reflected by mud pebbles and large blocks in the basal breccia.

A distinct north-easterly alignment of the spurs and valleys of the Forsyth Range is possibly due to a jointing which reflects basement fractures, and which could conceivable have formed a control for the location of the area of thickest sedimentation of the Werite Beds. As the unit wedges out in Cory's Range and in the east of the Forsyth Range the greater thicknesses in the Forsyth Range area are probably due mainly to thicker sedimentation and only partly due to the accident of preservation

DURICRUST

The term "duricrust" is used in this report in the sense originally given by Woolnough (1928, p.892):

> 'A hard crust or "armor-plate" of chemically formed material. This crust may be aluminous, ferruginous, siliceous or calcareous; but always reflects in its composition the nature of the underlying bed-rocks'.

Thus the term includes both silcrete and the ferruginous zone of a laterite profile.

This is a particularly useful term in the Great Artesian Basin because most of the relief is due to the presence of a protective capping of duricrust. The capping may be the top of a complete laterite profile, but more commonly is a silcrete cap on a partly eroded laterite profile.

Within the area mapped during 1963 the main areas of duricrust are:

(a) the Alice Tableland, and marginal residuals;

(b) the plateau south of Winton, and marginal residuals.

On the Alice Tableland the main units with duricrust are the Glendower Formation (western margin) and the Wilgunya Formation (eastern part of area mapped).

South of Winton the main plateau has a protective duricrust cap. The rocks with duricrust are the Winton Formation (western margin and nearly all the marginal residuals) and Werite Beds (north-eastern margin and Forsyth Range). The relationship between lateritization and silicification is particularly well shown on the eastern margin of the Forsyth Range. A lower plateau level is lateritized Winton Formation which, in the face of the Forsyth Range, is unconformably overlain by the Werite Beds. Above the unconformity the Werite Beds are leached, but not lateritized, and have a protective cap of silcrete which forms the upper plateau level of the top of the Forsyth Range.

UNDIFFERENTIATED CAINOZOIC SEDIMENTS

Areally restricted arenaceous sequences occur in some of the valleys in the eastern part of the Hughenden Sheet area. The sequences produce cliffs up to 80 feet high in the lower parts of present day valleys. Exposures so far seen are in the valleys of Torrens Creek, Warrigal Creek and its tributaries, and Betts Creek. The sequences are commonly strongly mottled, giving the appearance of part of a laterite profile, and locally show several repeated zones of mottling.

The lithology is mainly red, white, orange or yellow, poorly-sorted silty sandstone, with minor amounts of conglomerate. Clasts in conglomerate beds are mainly quartz, sandstone and red siltstone; however, in the river cliff of Gorge Creek, ½ mile west of the Flinders Highway, a conglomerate contains iron pisolites (Plate 11, Fig.2). Bedding is generally only poorly expressed, although there is some well-developed trough cross-bedding.

Poor sorting, presence of cross-bedding, and confinement to present day valleys indicate that the sequences are of

fluviatile deposition. The lithification and the amount of erosion suggest that it is not a Recent alluvium.

Red colouration is common, due to iron staining or coatings on sand grains. Much of the colouration is original as can be seen where individual beds in a multi-coloured succession are entirely of one colour. The presence of iron pisolites in a thin conglomerate indicates that the source of the ferruginous material was an earlier laterite. It is envisaged that the sources of the sediments were mainly lateritized Warang & Blantyre Sandstones from an area of rapid erosion on the north-eastern margin of the Alice Tableland. Possibly the Tertiary Campaspe Beds (Wyatt, Paine, Harding & Clarke, 1964) also acted as a local source, for the valley of Betts Creek is partly cut into this unit.

On cursory examination these sediments appear to be lateritized because some show strong colour mottling or colour zonation. However, the reddest parts of the exposures are not invariably at the top, and along some cliffs the colour changes laterally from red to white. The colour reflects iron-staining only, and not the extensive alteration by ferruginization within the ferruginous and mottled zones of a laterite profile. This iron-staining is simply an indication of the mobility of iron under normal weathering conditions, and is well developed in these sediments because iron, derived from a true laterite, is abundant.

In the Record on the 1962 mapping, Vine et al (1963) stated that the Glendower Formation underlies basalt flows in the Hughenden and Richmond Sheet areas. Investigations during 1963 established that there were three main periods of basalt extrusion, with considerable amounts of erosion between. Only the oldest, high-level, basalt flows are underlain by lateritized Glendower Formation; the younger, lower-level, flows are underlain by post-lateritization arenites, containing material derived from the erosion of a laterite profile. Because they are younger than the lateritization these arenites are included in the undifferentiated Cainozoic sediments.

SUPERFICIAL DEPOSITS

Included in the term 'superficial deposits' are unconsolidated sand, gravel, rubble (mainly scree), clay and sandy soils. Those which are obviously related to present-day water courses and are being deposited by present-day stream flow or floods are mapped as alluvium (map symbol Qa). The more extensive sheet deposits are divided according to whether they are mainly of sand-grain size or larger (sand, gravel, rubble, sandy soil; map symbol "Qs") or argillaceous (silt, clay, clay soils; map symbol "Qb"). Thick scree consisting mainly of basalt blocks and boulders, and cloaking the margins of basalt-capped plateaus, is mapped separately (map symbol "Qc"). The basalt scree is characterized by the development of a very thick cover of Gidgea scrub, showing on air photos as a dense black photo pattern.

Alluvium of the northern rivers is mainly sand or gravel derived from Mesozoic arenites. In the rollings downs the alluvium is mainly mud, with gravel near duricrust-capped hills. Alluvium of streams on the Alice Tableland is a mixture of sand and mud derived from nearby superficial deposits.

Some of the alluvium near the eastern margin of the Muttaburra Sheet area is characterized by a pure white photo pattern, partly due to large areas which are devoid of vegetation.

Lithology is mainly poorly consolidated to unconsolidated white sand, with variable amounts of argillaceous matrix, possibly locally indistinctly cross-bedded. One such area on Pelican Creek, 15 miles north-east of Armac, has yielded vertebrate remains which were identified by A. Bartholomai, of the Queensland Museum, as of Pleistocene age. More remains were collected from the same general locality during 1963 as fossil collection GAB 1392 (shown on map as G1392). This is still an area of active alluvation and no certain boundary can be put between the present-day deposits and those containing the Pleistocene vertebrates. Locally, at least, therefore, the alluvium ranges in age from Pleistocene to Recent.

No other Quaternary fossil remains were found during the mapping but no intensive search for them was made in the alluvium. Detailed investigation of the alluvial areas with a pure white photo pattern will probably produce more fossils.

Argillaceous sheet deposits form extensive flood plains east of Muttaburra and west of Winton. Numerous small deposits also occur on the Alice Tableland in a belt trending southerly from east of Glendower Homestead (north-east of Hughenden). These argillaceous sediments were probably originally derived from Doncaster Member outcrops which are now drained by the Flinders River. The distribution of these argillaceous deposits possibly indicates the position of an old river system now represented only by the headwaters of the Flinders River and by Prairie Creek.

Sandy superficial deposits range in composition from sand to sandy soil, with local areas of quartzose gravel and scree, and are derived from Mesozoic and Tertiary arenites. Most deposits are marginal to, or form veneers on, the plateaus; the sandy deposits south of Muttaburra surround erosional residuals of Glendower Formation, from which they are derived. On the Sturgeon Plateau the deposits are a red dust containing sand grains; the underlying basalt surface is stained red. The red dust is thought to be finely divided ferruginous material derived from the breakdown of the Upper part of a laterite profile and, in the deposit, mixed with sand derived from the erosion of Mesozoic sandstone inliers. Distribution of the red dust was probably by wind.

As is to be expected with related superficial deposits, distinctions between the divisions are locally vague and each unit may merge laterally into another. However, it is felt that the overall differences in physiographic expression of each unit justifies attempting the division even though boundaries in places are somewhat arbitrary.

STRUCTURE

Surface mapping suggests an extremely simple structural picture of Cretaceous rocks dipping gently basinwards, and a swing in strike of these rocks paralleling the margin of the Eromanga Basin. Contours on the base of the Wilgunya Formation (Plate 12), drawn from interpretations of drillers' logs of water bores, tend to confirm this (in plotting the contours account has been taken of treads indicated by photo-interpretation and of seismic work).

Deeper structure is inferred from photo-interpretation. Cretaceous rocks in the rolling downs give a photo pattern which is mainly irregular curved lines with apparently random directions referred to as "curlicues". The pattern represents differences in the amount of grass on different beds, and is

Plate 12

CONTOURS ON THE BASE OF THE WILGUNYA FORMATION

interpreted from water bore drillers' logs

R1673 — *Registered number of bore*

● — *Bore position*

- 726 — *Elevation of base of Wilgunya Formation*

– – – – – – *Trend lines, from photo interpretation*

–? 700' *Inferred Fault with downthrow*

Datum – Mean sea level
Contour interval 100 feet

Scale 1:1,000,000

0 10 20 30 40 50

HUGHENDEN

TANGORIN

MUTTABURRA

WINTON

INTAKE AREA

EXOIL BROOKWOOD NR

Anticline

Beryl

Fault

Coal

outcrop

outcrops

20°

21°

22°

23°

142°30'

144°

145°30'

present even where the rocks are concealed by a thin derived soil; the directions and shape are a function of the shape of the land surface in areas of very low dips. In several parts of the Winton Sheet area and one in the Muttaburra Sheet area, the curlicues show distinct alignments which have been mapped as trends of bedding. One group indicates a continuation of the Cork Fault (Vine, 1964a) and approximates the position of a steep gravity gradient (Magellan Petroleum Corporation, 1961). Others coincide with the steeper flanks of gentle anticlines detected by seismic work, such as the Beryl and Eyriewild Anticlines (Namco International Inc. 1963).

Other sources of sub-surface information are geophysical surveys (locations shown on Fig. 1) and drillers' logs of deep water bores. Possibly the most useful of these has been the regional gravity survey, because it provides a complete and uniform coverage of the whole area.

An interpretation of the structural elements of the area is given in Fig.6, which is presented with a transparent overlay of the contours of Bouguer anomalies (Fig.7).

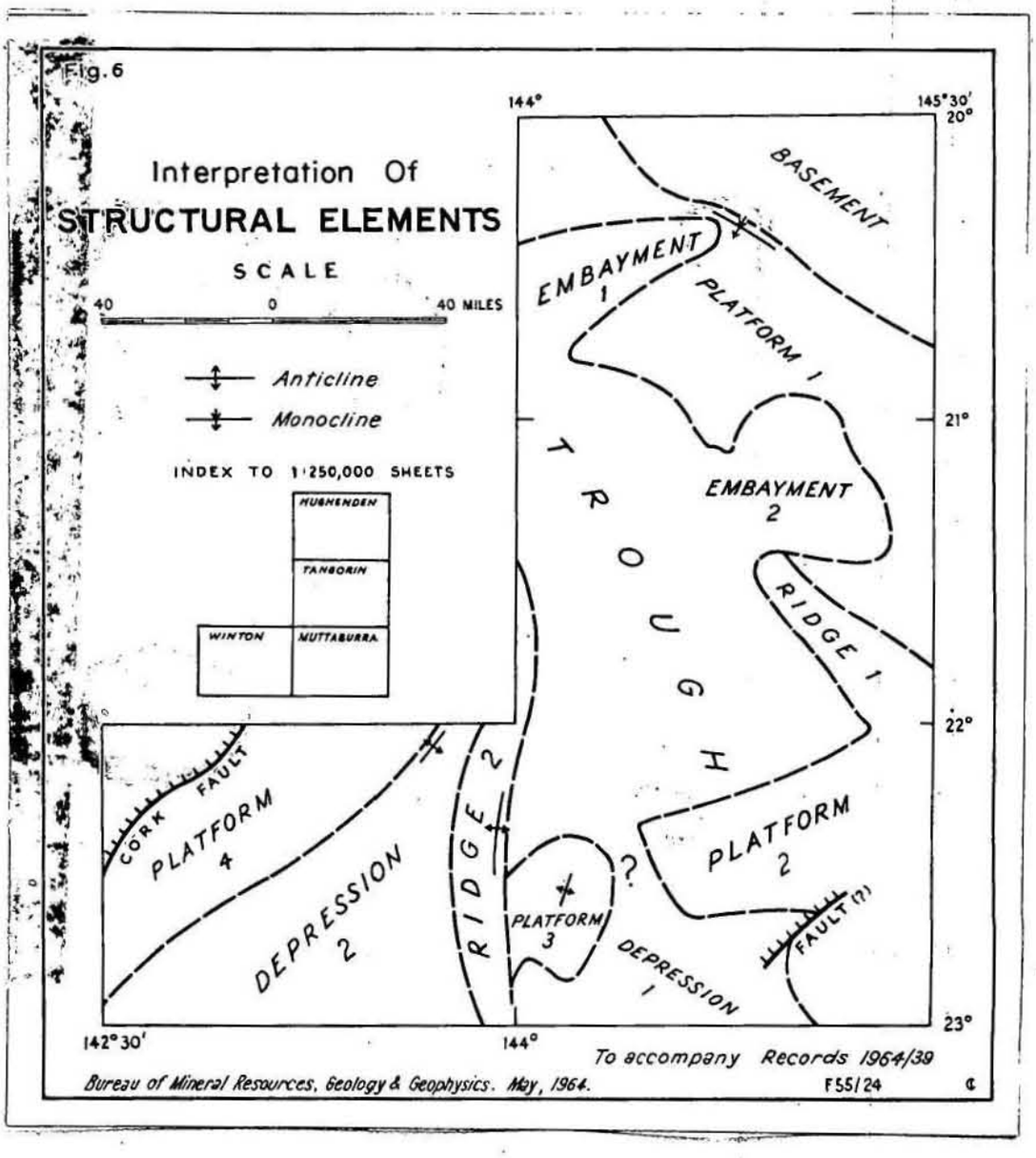
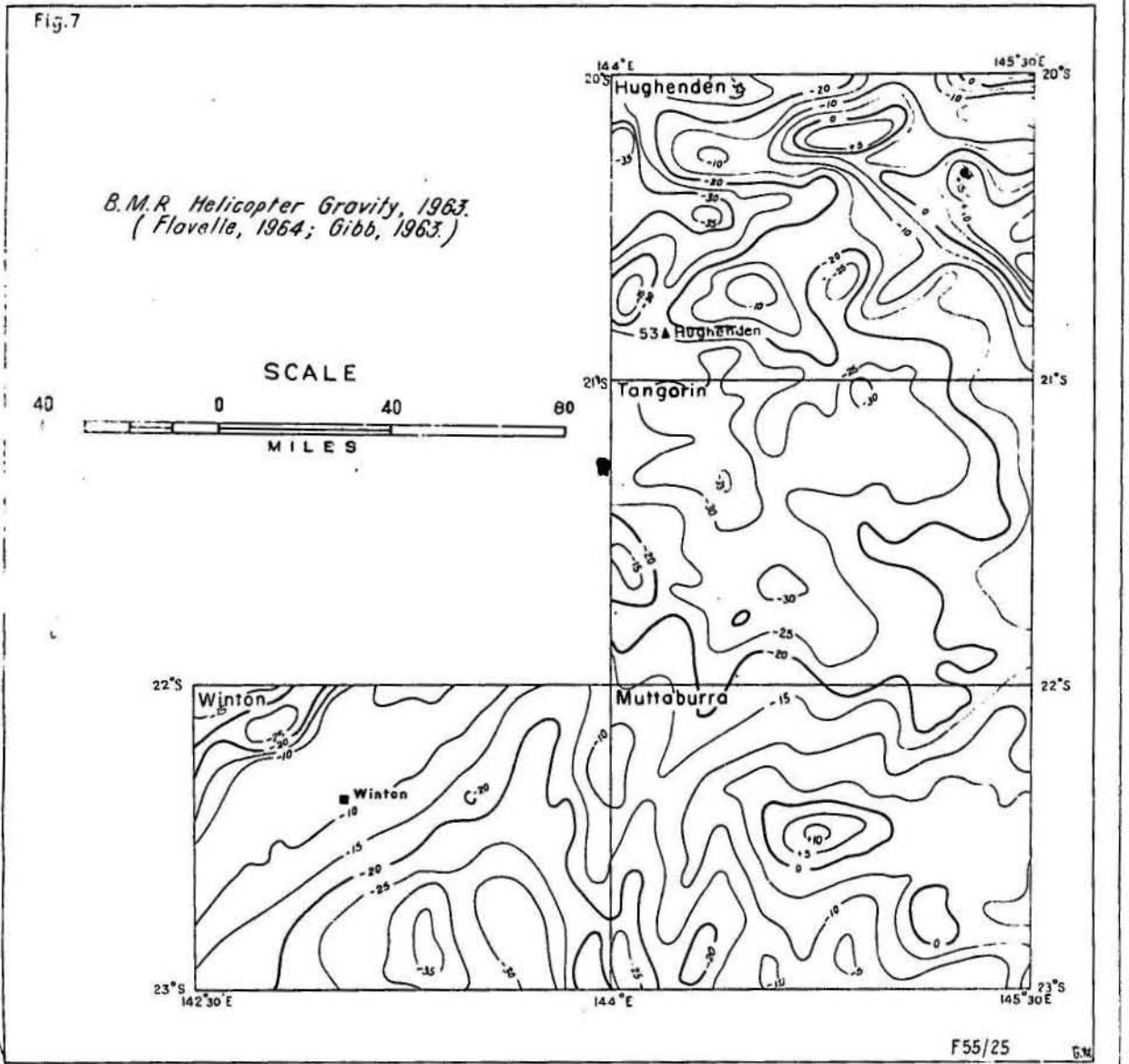


Fig.7


B.M.R Helicopter Gravity, 1963.
(Flavelle, 1964; Gibb, 1963.)
SCALE
40 0 40 80
MILES
144°E
145°30E
20°S
Hughenden
53 Hughenden
21°S
Tangorin
22°S
Winton
Mutta burra
Winton
23°S
142°30'E
144°E
145°30E
F55/25

The reasons for suggesting each unit are discussed below. In discussion, each unit is capitalized for ease of reference. The thesis of the interpretation is that the Cretaceous sequence forms a blanket which conceals most of the underlying structure.

Crystalline BASEMENT crops out in the north-east of the Hughenden Sheet area. It shows on the Bouguer anomaly map (Fig.7) as intense gravity maxima with steeper gradients than the basinal areas.

A zone of monoclinal folding, here named The White Mountains Structure, adjacent to the basement outcrops is considered to be the surface expression of faulting of basement. The White Mountains Strucutre coincides with part of a steep gravity gradient which approximates the present margin of the basin.

The northern part of PLATFORM 1 is an area of good exposures; measured sections show that sequences are thin. It is essentially an area where there has been periodic temporary overlap of the basin margin during Permian and Mesozoic time.

Evidence for the southern part of PLATFORM 1 is from the Torrens Creek Seismic Survey which indicated a thin sequence of Permian and Mesozoic sediments over a thick development of Devonian and Carboniferous sediments of the Drummond Basin (see cross-section of Tangorin Geological Sheet). Comparable magnitudes of Bouguer anomalies to those of the northern part of the platform may only indicate that the Drummond Basin sediments in this area are well indurated.

EMBAYMENT 1 is indicated mainly by a gravity depression. It is an area where the Boonderoo Beds are preserved and, at the eastern end, includes the thickest development of the Betts Creek Beds. The northern boundary of the embayment is also indicated by a steep gradient of the base of the Wilgunya Formation in the north-west of the Hughenden Sheet area (Plate 12). Essentially the embayment is part of PLATFORM 1, but is interpreted as a less stable area which periodically developed as an arm of the TROUGH. There is a possibility that this gravity depression is due to a granitic basement of lower density than surrounding areas. This is regarded as unlikely because both the Dumbano Granite and Lolworth Igneous complex coincide with gravity maxima.

EMBAYMENT 2 is indicated entirely by a gravity depression. Possibly downwarping in the Drummond Basin continued into Permian times in this area, or alternatively the low gravity values may indicate that the Drummond Basin sequence is less lithified and accordingly less dense than to the south east.

PLATFORM 2 is indicated mainly be a gravity rise. In Addition, in the eastern part, magnetic basement is interpreted (Hunting Survey Corporation, 1962) to be approximately 4000 feet higher than in areas to north and south.

PLATFORM 3 is indicated by a sharp reduction in the basinwards slope of the base of the Wilgunya Formation (Plate 12), which coincides with a regionally flat area indicated by the Muttaburra Seismic Survey. Brookwood No.1 entered granite basement at a depth of 4796 feet on this platform. The platform is probably not a very strong feature and may be no more than a slightly elevated part of the TROUGH.

PLATFORM 4 is possibly the eastern part of the Boulia Shelf. The margin on the south east is inferred from a strong gravity gradient, extending to the Queensland-Northern Territory border and separating intense positive anomalies with NW trends

from broad negative anomalies with NE trends. The former are related to outcropping Proterozoic rocks and the latter are interpreted as deeper parts of the Eromanga Basin. On PLATFORM 4 in the Winton Sheet area the Cork Fault, is represented by another sharp gravity gradient with a gravity depression on the downthrown side. A seismic traverse by the Bureau of Mineral Resources across the fault (in Magellan Petroleum Corporation, 1961) recorded several deep reflections which were interpreted as being from Palaeozoic sediments.

RIDGE 1 corresponds to a gravity ridge and was indicated by the Torrens Creek Seismic Survey, which suggested that sediments of the Drummond Basin terminated on the south-west against an escarpment on the north-east side of the ridge.

RIDGE 2 corresponds to a strong gravity ridge which continues south to Longreach where granite was intersected at shallow depths. The Beryl Anticline, (Namco International Inc., 1963) and inliers of Mackunda Beds within the main outcrop area of the Winton Formation are interpreted as a drape fold over a basement ridge.

Coals recorded at depths commonly greater than 2000 feet below the base of the Wilgunya Formation in the trough are interpreted as upper Betts Creek Beds. A good reflecting horizon recorded in the Torrens Creek Seismic survey on PLATFORM 1 is also interpreted as coal seams in the Betts Creek Beds, but only 1100 feet below the base of the Wilgunya Formation. The thickening of the Triassic-Jurassic section is shown on the cross-section of the Hughenden and Tangorin Geological Sheets.

Coals recorded in bore logs in the southern part of the Muttaburra Sheet area indicate that the top of the Betts Creek Beds are at similar depths to those in the trough. However this feature, marked DEPRESSION 1, is tentatively regarded as a discrete structural unit.

DEPRESSION 2 is suggested entirely by the presence of a major gravity depression.

Values of the gravity minima indicate greater thicknesses of sediments than are at present known in the Mesozoic sequences. It is likely that the structural elements were present much earlier, with expanded Palaeozoic successions in the depressions.

GEOLOGICAL HISTORY

Known crystalline basement adjacent to the area mapped consists of granite and metamorphics. Outcrops in the north-east of the Hughenden Sheet area are regarded as Precambrian to Lower Palaeozoic, but without any good evidence as to age. Granite basement in wells at Longreach has been dated as 420 million years. This determination however, was carried out on a poor, weathered sample, and the result is unreliable (Webb, Cooper and Richards, 1963).

Existence of pre-Upper Carboniferous sediments in the area is hypothetical, being based mainly on interpretation of results of seismic surveys. Palaeozoic sediments, possibly of comparable age to the Lower Palaeozoic carbonate sequence of the Georgina Basin, may occur in the platform area of the north-west of the Winton Sheet area; and Devonian and Carboniferous sediments of the Drummond Basin are postulated in the south-east of the Tangorin Sheet area.

The earliest known sediments in the area are the Boonderoo Beds of Lower Permian or Upper Carboniferous age. They are mainly glacial outwash, and varves deposited in a glacial lake. Outcrops are restricted to a single inlier in Galah Gorge; nearby, Upper Permian and younger sediments rest directly on crystalline basement. The sediments penetrated by Brookwood No.1 are similar in lithology to the Boonderoo Beds and could also be either glacial or periglacial. Possibly the Boonderoo Beds are preserved because they were deposited in a hollow (Embayment 1 of Fig.6).

A period of non-deposition, with some erosion followed, corresponding to the time of a major marine incursion in the Bowen Basin.

The succeeding Upper Permian Betts Creek Beds were deposited on flood plains and in valleys, in which swamps formed late in Permian time. In the Hughenden Sheet area most of the Betts Creek Beds were deposited as a piedmont, marginal to a mountain range now represented by outcrops of quartzose rocks of the Cape River Metamorphics. Further south the land surface was probably much flatter and swampy conditions conducive to the formation of coal were more extensive.

Slight erosion took place early in the Triassic near the margin of the basin, but in the deeper parts sedimentation may have been continuous. The marked change in lithology from the Betts Creek Beds to the Warang Sandstone is a reflection of a change to more torrential and strongly oxidising conditions. Near the margin, deposition of the Warang Sandstone is thought to have taken place on extensive flood plains formed by outwash from the bordering mountain range. The almost complete lack of organic material in the Warang Sandstone may indicate an arid climate; deposition of the poorly sorted sediments was mainly from flash floods. In the lower-lying parts of the basin deposition may have been in a less torrential, poorer drained environment, as indicated by carbonaceous material reported in the "Brookwood Beds".

On the north-east margin of the basin deposition of the Warang Sandstone was followed by a long period of non-deposition before the Blantyre Sandstone was laid down. In most of the localities examined the top of the Warang Sandstone is a distinctive conglomeratic phase; the widespread preservation of this conglomerate indicates that little erosion took place during the hiatus.

In the more central parts of the basin sediments were deposited intermittently during Jurassic time. Within these Jurassic sediments a horizon containing microplankton of a brackish or possibly marine environment has been identified in Penrith and Brookwood Wells, Corfield Town Bore and, more recently, in Glenalvon Bore near Richmond (Evans, 1964). A strong possibility exists that thicker marine Jurassic sediments were deposited in the trough and depressions (Fig.6).

The age of the Blantyre Sandstone is not certain, so its relationship to units identified in the sub-surface is conjectural. It was deposited during a period when currents maintained an easterly direction with little variation. The widespread good sorting suggests deposition a long way from source, probably on a large flood plain. Swampy conditions, developed late in Blantyre time.

Lower Cretaceous (Aptian) sediments rest unconformably on Jurassic sediments; there is no evidence as yet of rocks of

Neocomian (lowest Cretaceous) age in the area.

The very thin Gilbert River Formation is only a precursor of the marine Cretaceous sequence. Definite marine conditions are first evident in the Wilgunya Formation. The sea was extremely shallow with only restricted access to the open ocean. Currents were probably lacking and with only slight water circulation. In such conditions salinity of the bottom waters increased, and the fauna was restricted to the upper waters which were freshened by water brought in by rivers. Even the most fossiliferous part of the Wilgunya Formation, the Toolebuc Member, has a very restricted fauna.

A decrease in salinity of the bottom waters is indicated by the Mackunda Beds. It corresponds to a sharp increase in the amount of arenaceous sediment deposited, with the subsequent development of paralic conditions. During deposition of the Mackunda Beds there was a gradual change to continental deposition, possibly with many intervals of marine conditions. The Winton Formation represents the continuation of the more arenaceous sedimentation in a wholly continental environment. Although very flat, lack of evaporites in the sequence indicates that the basin was well drained, with abundant water in rivers and lakes, and local development of swamps.

Deposition of the Winton Formation may have been brought to a close by diversion of the sediment supply or be a cessation of basinal sagging. Later erosion bevelled off the slightly upturned margins of the basin and thin Tertiary sediments were deposited in several areas. The resultant flat land surface was lateritized during a period of stability. A renewal of tectonic activity, accompanied by extrusion of basalt resulted in a renewal of erosion, which finally gave rise to the present land surface.

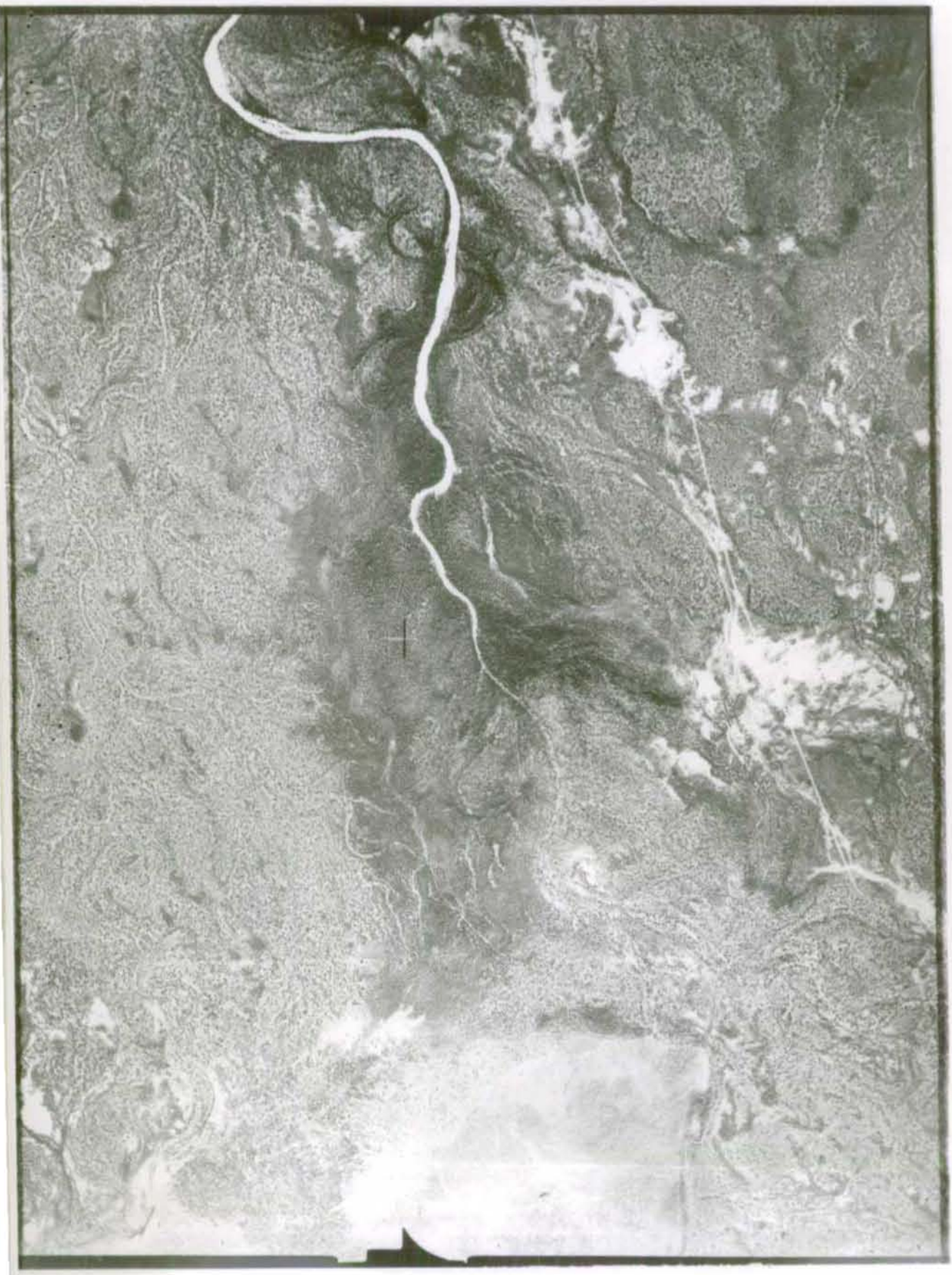
ECONOMIC GEOLOGY

UNDERGROUND WATER

The area is part of the Great Artesian Basin, and abundant supplies of potable water are available from aquifers below the Wilgunya Formation. Most of the artesian bores are now being pumped from shallow depths, but some in the lower lying parts of the basin near the margin have never flowed, particularly in the Hughenden area, where some of the main intakes of the basin are in the bottoms of deep gorges. In such areas the water table is too deep for water to be pumped economically.

Information on pre-Wilgunya aquifers is obtained partly from outcrops and partly from the drillers' logs of the water bores. In outcrop the Gilbert River is of variable thickness, but thin, and probably provides only minor aquifers. The Blantyre Sandstone appears to have good aquifer characteristics with numerous beds of well-sorted, clean, quartz sandstone of large extent. The Warang Sandstone is almost entirely a kaolinitic sandstone which appears to have low porosity. Permian rocks are mainly fine-grained or very lenticular, and sandstones commonly have a kaolinitic matrix. Other sandstone units were recorded in Exoil Brookwood No.1 which have not been recognized in outcrop, and in the well Pemberton (1963) noted a total of 645 feet of effective porosity in the Mesozoic and 547 feet in the Permian.

PLATE 13



Floodout of Torrens Creek, approximately 4 miles NE of Hopewell Park Homestead, Tangorin Sheet area, where main flow of creek enters aquifer. North is at top of photo. Reproduced from air photo Tangorin Run 4 Photo 5177.

BMR. Neg. G6450

Even in areas covered by superficial sediments some sandstone aquifers absorb water readily. This is graphically illustrated in Plate 13, which shows the sharp reduction in the size of Torrens Creek where it flows across the inferred sub-crop of the Blantyre Sandstone and for the Gilbert River Formation.

Drillers' logs of water bores are insufficiently detailed to identify Mesozoic stratigraphic units older than the Wilgunya Formation; on the geological sheets the arenaceous sequence is shown as "Undifferentiated Mesozoic". Within this sequence several aquifers are recorded, some of which are probably from rocks older than the Blantyre Sandstone. It is likely that some of the rocks which appear to be lacking in porosity in outcrop become cleaner and more permeable further towards the centre of the basin.

A better understanding of the stratigraphic position of the aquifers should be possible when a planned programme of systematic gamma-ray logging of water bores by the Bureau of Mineral Resources is carried out.

PETROLEUM

The petroleum prospects of an area depend upon four factors:

(a) suitable source beds to generate petroleum,

(b) suitable reservoir rocks with suitable cap rocks to receive the petroleum,

(c) suitable structures to trap and store the petroleum,

(d) a suitable geological history to prevent the loss of the petroleum before reaching the reservoirs.

Source Beds

In general terms, the most useful source beds are marine argillaceous rocks in which much organic material was buried. On present knowledge only the marine Cretaceous sequence - the Wilgunya Formation and the Mackunda Beds - can be regarded as potential source beds, and these may not have been buried under sufficient weight of sediment to generate petroleum.

It was postulated earlier (see "Structure") that a trough extending south-east from Hughenden existed in late Palaeozoic to early Mesozoic times. Evans (1964) suggests that in the area, for a short time during the Jurassic, conditions were either brackish or marine. If the trough was in existence at the time there is a strong possibility that marine argillaceous rocks were deposited in the deepest part, and these may provide source beds.

Reservoir Rocks

The presence of pre-Wilgunya aquifers with abundant supplies of water indicates that good permeability exists in some parts of the sequence. Discussion above of the stratigraphic position of beds suitable as aquifers applies equally to petroleum reservoirs, but lenticular beds within source-bed sequences are also acceptable, because a reservoir is only required to hold petroleum until tapped, not transmit it continuously.

Permeability is also indicated in the Cretaceous sequence by the presence of aquifers bearing low-pressure water in the Mackunda Beds and Winton Formation. Stratigraphically these are suitably located to receive migratory fluids from the Wilgunya Formation and Mackunda Beds, but are apparently markedly lenticular and they lack strong hydrostatic pressure. Except in the case of multiple accumulations in the older Mesozoic and Palaeozoic successions it is unlikely that petroleum trapped in these rocks would prove a commercial proposition.

Possible reservoir rocks which do not seem to have been investigated as yet the sandstone beds near the base of the Doncaster Member. Those examined in the field have good porosity, although individual beds are thin. Their depositional environment is not yet clear; they may be shoestring sandstone bodies, although a well-developed bed at the Rockies Waterhole (Plate 10 Fig.1) has considerable lateral continuity and appears to be a sheet-like body.

Thin sandstone beds were also seen in the Ranmoor Member near Hughenden, and the possibility that other sandstone beds occur in the Wilgunya Formation must also be considered.

Structures

Surface mapping is mainly insufficiently detailed to delineate structures, mainly because lithological variations are not enough to enable detailed mapping to be done. However seismic surveys have shown that gentle folding has taken place and that structures suitable for entrapment of petroleum are present. Location of suitable structures does not seem to present much difficulty.

The displacement on the Cork Fault (up to 1000 feet) is sufficient to bring large thicknesses of Cretaceous potential source beds against older reservoirs. Folds associated with the faulting warrant detailed investigation and testing.

Geological History

Cretaceous source beds were deposited in a conformable sequence which continued to the Winton Formation. It is unlikely that petroleum from these beds if generated would have been lost by erosion, and that most is still present in the sequence.

The geological history of Jurassic time is imperfectly known, and the possibilities of loss of petroleum from Jurassic source beds during Jurassic erosion are hypothetical. More knowledge is needed of Jurassic stratigraphy before this point can be discussed.

Prospects

Prospects for petroleum in the area seem to depend on two possibilities:

(a) location of suitable reservoirs in the marine Cretaceous sequence,

(b) identification of Jurassic source beds in the suggested trough extending south-east from Hughenden.

MANGANESE

During the 1963 mapping a manganese prospect was found in the Forsyth Range approximately 32 miles SSE of Winton; location

PLATE 14

Fig. 1 Manganese prospect, Forsyth Range, Winton Sheet area. Manganese horizon is dark band with base at head of hammer. Rocks below are leached mudstone with surface stain of manganese oxides.
BMR. Neg. M325

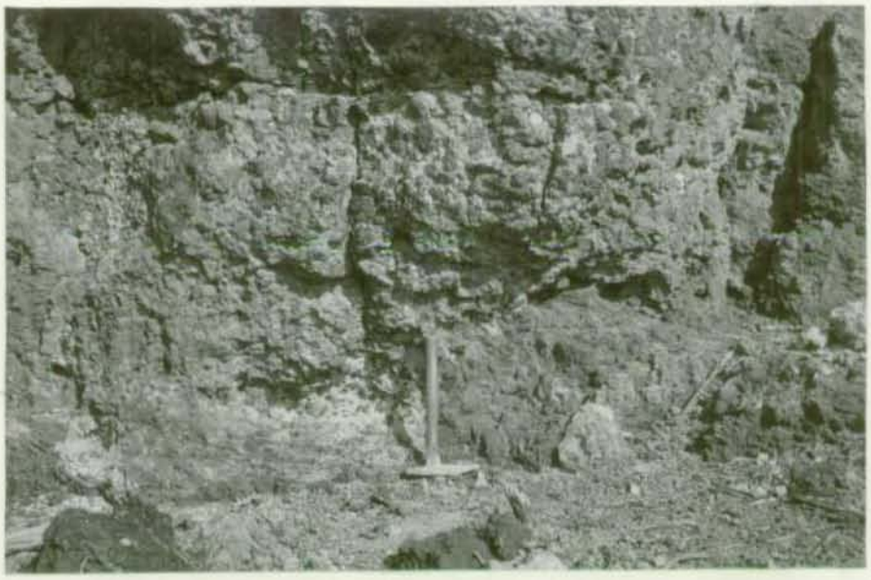


Fig. 2 Manganese prospect, Forsyth Range. Pisolitic manganese-rich horizon.
BMR. Neg. M325

is shown on the Winton Geological Sheet. Representative samples were taken but analyses are not yet available. Even if of high grade it is unlikely that the prospect would be of economic value under present day conditions, for ore would have to be transported 28 miles by road to a rail siding at Chorregon and then 500 miles by rail to the nearest part of the coast at Rockhampton; the value of the ore would probably be insufficient to cover both the mining and freight costs involved.

The manganese oxides occur in pisolites (Plate 14, Fig.2) in a bed with an average thickness of 4 feet (Plate 14, Fig.1) which could be traced over a distance of approximately 1/3 mile. The occurrence is in a valley cut into the Werite Beds; at the prospect the overburden is thin, but increasing up the valley sides to approximately 60 feet.

In the field the well developed pisolites associated with an overlying bed of pisolitic ironstone were regarded as indicating a lateritic origin for the manganese oxides. However, J.E Harms, of B.H.P. suggested (pers. comm.) that the occurrence is similar to others on Groote Eylante and there regarded as of lacustrine origin. It is intended to investigate this problem further during 1964 while mapping nearby areas.

The original host rock of the manganese oxides is considerably altered and its stratigraphical position is uncertain. If the occurrence is lateritic the host rock is probably part of the Winton Formation because it is the only known lateritized unit in the area. However, some coarse sand grains of quartz are present in the host rock; such grains are atypical of the Winton Formation, but have been found in the overlying Werite Beds. A lacustrine origin for the manganese is not inconsistent with the freshwater environment inferred for the Werite Beds.

COAL

Coal in the Betts Creek Beds has been investigated on several occasions in the past, but most occurrences are too small to be considered economic. The most thorough investigation was made by Mt. Isa Mines Ltd, which carried out a programme of geological exploration, diamond and percussion drilling, and finally shaft sinking near Oxley Creek on the northern margin of the White Mountains. Economically significant amounts of coal were only found in the Oxley Creek area, where a seam 8 feet thick was proved extending for 274 feet along the whole length of an exploratory drive.

Coal samples were taken at approximately 25 feet intervals along the drive; their proximate analyses were given by Carter (1948) as:

Sample	Moisture	Ash	Fixed Carbon	Volatile hydrocarbons
1	5.0	23.0	52.60	24.33
2	5.35	20.19	53.27	26.54
3	5.61	22.61	52.01	25.38
4	5.4	20.62	53.98	26.40
5	5.91	19.56	55.13	25.31
6	5.20	19.36	54.43	26.21
7	6.03	16.77	56.42	26.81
8	3.28	19.70	54.34	25.96
9	7.64	24.6	50.35	25.01
10	7.32	29.59	44.33	26.08
11	6.44	27.89	49.17	22.94

Moisture Free

The higher ash content of samples 9, 10 and 11 was thought to be due to the taking of higher ash coal when the drive was lifted to include the top of the seam. The analyses indicate that the coal is of comparable quality with Colinsville coal, although with a slightly higher ash content.

Mt. Isa Mines Ltd apparently did not consider the prospect an economic proposition. Mapping in nearby areas has not so far provided evidence that the seam maintains its thickness. In addition the prospect is over 50 miles from the nearest accessible point on the railway, at Pentland. A shorter route to Torrens Creek is precluded by the ruggedness of the White Mountains (Plate 3).

Coal has also been reported from several bores and wells in the Winton Formation near Winton. Jack (1898) reported that a coal from one well contained 4.6% ash, 42.9% fixed carbon and 52.6% volatile matter and produced a compact coke; the moisture content was not recorded. In the new Winton No.2 Town Bore (Reg. No.14269) "black coal" was reported between 198 and 214 feet. This area would warrant detailed testing if there was a possibility of developing any industry in the region. The main factor against developing bulk minerals in the Winton area is the remoteness from present potential users.

IRON AND ALUMINA

Any area where the uppermost part of a mature laterite profile is preserved must be considered a prospect for iron or alumina.

In the Hughenden area and on the Alice Tableland all outcrops of laterite contained numerous quartz grains and pebbles and are similar to the samples collected in 1962 (Vine et al, 1963, p.43) which were shown on analysis to contain approximately 25% Fe_2O_3 and 55% SiO_2.

Laterite in the south of the Winton area, on the lower level plateau east of the Forsyth Range, is much lighter in weight and has an earthy texture. Sample GAB 1098 was analysed by C.R. Edwards of the Australian Mineral Development Laboratories who reported that it contained:

Fe_2O_3	5.15%
Al_2O_3	21.4 %
SiO_2	59.6 %

This is an aluminous laterite, but the proportion of alumina is too low, and the proportion of silica considerably too high, for it to be regarded as possible ore.

Laterite profiles in other areas are incomplete.

CONSTRUCTION MATERIALS

Sand

The superficial sand cover (map symbol "Qs") is commonly argillaceous and sand grains have a ferruginous coating. It is mainly only suitable for road surfacing, except in two area south of Winton:

(a) Sand grains in the median belt of sand with interspersed claypans on the plateau south of Winton appear to have only thin ferruginous coatings and the sand is clean. This could possibly be used for concrete making.

(b) Superficial sand and associated alluvium, approximately 12 miles south of Winton and 5 miles south-west of Bladensburg Homestead, consist of a white quartz sand which would probably be suitable for concrete making.

Sand in the beds of the larger northern rivers which drain outcrops of Mesozoic arenites is excellent for use in concrete, and supplies are plentiful.

Friable sandstone in the Glendower Formation and the undifferentiated Cainozoic sediments is suitable for road surfacing, and has been used extensively for road construction on the Sturgeon Plateau.

Gravel

Gravel, suitable for use in concrete, is restricted to the beds of the larger northern rivers.

Silcrete, gravel suitable for road surfacing, is available on the margins of duricrust-capped hills; this material is opaline and unsuitable for use in concrete.

Near Winton, scree of leached Winton Formation from the pallid zone of a laterite profile has been used as a gravel for road surfacing. This material has little strength and where used in road construction commonly breaks down to form "bulldust" in potholes. Near Winton new bitumen roads are already breaking up, and it is possible that this is caused by weak foundations of this leached material.

Ballast

Basalt is the only rock in the area in sufficient quantity with sufficient strength for railway permanent way.

Limestone

Extensive deposits of limestone are restricted to the Toolebuc Member near Hughenden. Some is suitable for manufacture of lime, but deposits are very thin. Platy limestone from the Toolebuc Member is suitable for road surfacing; after rain it sets to give a hard smooth surface which stands up to traffic better than a normal unimproved earth surface.

PROBLEMS

What is the significance of lithological differences within the Toolebuc Member; and in particular why are the characteristic concretions not found in outcrops in the Tangorin and Muttaburra Sheet areas? Why is limestone only rarely reported in oil search wells and in drillers' logs of water bores which intersect the Member?

Three main lithologies are known in outcrop of the Toolebuc Member:

(a) Thin interbedded calcareous shale and platy limestone, with common flattened shells of Aucellina and Inoceramus.

(b) Concretionary limestone, with colours ranging through pink, white and grey, and with abundant Aucellina and Inoceramus and rare ammonites, belemnites, vertebrates and wood.

(c) Coarsely crystalline, grey, flaggy limestone, with few fossils.

Type (b) is most characteristic of the unit, but (a) is probably the most abundant although commonly covered by soil.

Reviewing the occurrences mapped since 1957, it seems that (c) is restricted to three main areas.

(i) Along the St. Elmo Structure, north-east of Julia Creek,

(ii) Along the Burke River Structure in the north of the Springvale Sheet area,

(iii) Associated with parallel NNE trending structures north-west of Richmond.

All these structures are thought to have been positive features during the Cretaceous and to have exercised some control over sedimentation.

Type (b) is only well developed near the present margins of the Eromanga Basin, commonly in areas interpreted as being underlain by shelves or platforms, with only thin sediments over crystalline basement. Concretions become less common between Richmond and Hughenden, in an area where it is inferred that the pre-Cretaceous sequence thickens eastward. Well developed concretionary limestone with abundant fossils is also common in the areas of type (c).

It was earlier thought that many in areas of poorly outcropping Toolebuc Member the characteristic concretions were concealed beneath a thin soil cover. This assumption is probably incorrect, because mapping during 1963 showed that concretions are not invariably present in the Toolebuc Member. This also provides a possible understanding of why drillers' logs of water bores seldom record limestone or hard rock, and why in oil search wells there is commonly no clear lithological evidence for the presence of the Toolebuc Member and identification of the member can only be made from the gamma-ray logs. The calcareous shale-platy limestone lithology is possibly a deeper water facies of types (b) and (c), and with increasing depth becomes entirely an argillaceous deposit.

The problem of lithological variations of the Toolebuc Member requires a complete reinterpretation of the existing data, including field observations and bore logs, together with further photo-interpretation. It is suggested that the variations may bear a relation to (a) positive structures existing during the Cretaceous, and (b) depth of water during sedimentation.

Is there a sedimentary trough extending south-east from Hughenden?

The reasons for suggesting the existence of a trough were given under "Structure". In order to provide confirmation, it is recommended that a single seismic traverse be shot across the southern part of the Tangorin Sheet area, westwards from the traverses of the Torrens Creek Seismic Survey.

Were sediments deposited in a marine environment during the Jurassic?

Evans (1964) suggests that the presence of microplankton in Jurassic sediments in Brookwood No.1, Corfield No.1, and the Glenalvon Water Bore indicate brackish or possibly marine conditions for a short period during the Jurassic. If a trough extending south-east from Hughenden did exist in Jurassic time it is possible that marine sediments suitable as source beds for petroleum were deposited in it. This could only be tested by a stratigraphic well, to be drilled if the results of the seismic traverse, recommended above, are encouraging.

What is the geometry of the sandstone beds in the Doncaster Member?

The importance of sandstone beds in the Doncaster Member is discussed above under "Petroleum". Knowledge is needed of the extent, shape, and size of individual bodies, to establish if they are small lenses and whether they are sheet-like or linear bodies.

A programme to gamma-ray log water bores by the Bureau of Mineral Resources should provide information relative to this problem.

How extensive was the deposition of Lower Triassic red beds?

Mapping during 1963 showed that red beds are confined to the Warang Sandstone. Evans (1964) dated the unit as Lower Triassic, so that the age is comparable with other red bed sequences known from oil search wells in the Great Artesian Basin.

Drillers' logs of water bores record Red rock" and "red marl" in many bores in the north-western part of the Eromanga Basin. Vine and Jauncey (e.g. 1962) noted that many of the occurrences were in hollows in crystalline basement and indicated the presence of sediments older than the known sedimentary sequences (Jurassic and younger) in that part of the basin. It is suggested that these older sediments containing red rocks are also Lower Triassic in age. If so it was a time of very wide-spread sedimentation. This interpretation can be checked by making a palynological examination of cuttings from selected water bores throughout the northern Eromanga Basin in which drillers recorded drilling red rocks.

What is the relation of the Blantyre Sandstone to Jurassic rocks recorded subsurface?

In outcrop within the area mapped during 1963 the only Jurassic rocks known are the Blantyre Sandstone, of probable Upper Jurassic age. Middle and Lower Jurassic rocks have been reported by Evans (1964, and in Pemberton, 1963). Because fossils are rare in the Blantyre Sandstone, and the only ones found were at the top of the unit the possibility must be considered that the formation includes more than one Jurassic sequence. More probable alternatives, because the Blantyre Sandstone is thin, are that older Jurassic sequences were never deposited on the platform forming most of the Hughenden Sheet area, or were deposited and subsequently eroded. If the whole of the Jurassic is represented by a unit which varies in thickness between 175 and 400 feet either the rate of sedimentation was extremely slow or there are numerous diastems.

Unless further oil search wells are drilled between either Glenalvon Bore (near Richmond) or Brookwood No.1 Well, both of

which have been examined by Evans (1964, and in Pemberton, 1963), the problem can best be resolved by examination of cuttings from water bores near Hughenden. Unfortunately most of the deep bores were drilled before retention of cuttings was made mandatory by legislation, and the number of bores valuable for stratigraphic purposes may be very few.

What are the economic prospects for manganese in the Forsyth Range area?

The manganese prospect in the Forsyth Range is of unknown value. Much depends upon the proportion of manganese in the samples submitted for analysis, and it is possible that the grade is too low to justify further investigation at this time. If the results are encouraging the following work needs to be done:

(a) determine the extent of the existing deposit

(b) establish the stratigraphic position of the manganiferous horizon, and the likelihood of other deposits in the Forsyth Range area.

A programme of further geological mapping with some shallow drilling if necessary has been planned for the 1964 field season to achieve these objectives.

What are the prospects for locating deposits of bauxite in the area?

Laterite on the eastern margin of the Forsyth Range has been shown by analysis to be aluminous, but also very siliceous. The only sample taken was from the top of a plateau and may be silicified. Further work is necessary to determine if any laterite which is overlain by the Werite Beds in the Forsyth Range is less silicified. During the 1964 field season it is intended to obtain for analysis further samples of laterite from the Maneroo Sheet area near the Forsyth Range.

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APPENDIX A

Measured Sections

SECTION X9 near Spotted Gum Creek,
at Hughenden Run 15, Photo 5205, points 308-9

Top (plateau level)

198'-200'+ Argillaceous quartz sandstone with bands of pebble conglomerate, sandstone white, moderately sorted, fine to coarse grained, subrounded to rounded; pebbles glassy and varicoloured quartz.

134'-198' Argillaceous quartz sandstone, pure white, moderately sorted, fine to coarse grained, friable and subject to wind fretting, medium to very thick bedded and strongly trough cross-bedded, with foresets direction 265°, 300°; scattered pebble bands becoming more common upwards.

GAB877 124'-134' Micaceous sandstone, pink or white, fine to very fine grained, friable, thin to medium bedded.

78'-124' Argillaceous quartz sandstone, pure white, becoming pale brown at top; moderately sorted, fine to coarse grained, friable and subject of wind fretting, medium to very thick bedded and strongly trough cross-bedded; scattered pebble bands.

69'- 78' Concealed

67'- 69' Micaceous sandstone, white, very fine grained, friable, thin bedded.

GAB876 66'- 67' Micaceous siltstone grading to very fine grained sandstone, brown-chocolate, tough, thin bedded.

GAB875 (Bastian, 1963) 0 - 66' Argillaceous lithic sandstone, pure white, moderately sorted, fine to coarse grained, friable and subject to wind fretting, medium to very thick bedded, and strongly trough cross-bedded with foresets direction 250°, 260°, 330°; scattered pebble bands and a few white mud pebbles; bedding becomes thinner at top.

Base (in valley floor)

Interpretation:

0-200' Warang Sandstone.

SECTION X10 in the Gorge of the Flinders
River at Hughenden Run 9, Photo 5149, points 122-123

Top (plateau level)

GAB1044K 326'-336'+ Mudstone, red and white, leached and silicified, poorly thin bedded.

GAB1044J 288'-326 Quartz sandstone, illsorted, medium to coarse grained, gritty throughout, pebbly near bottom and with lenticular very pebbly beds grading to pebble conglomerate, friable, porous, Massive except where bedding indicated by pebble bands. Between 298 and 299 is 1 foot bed of pebble conglomerate containing scattered sub-angular cobble-size fragments.

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(irregular erosional surface)

	281'-288	Quartz sandstone, red-brown, well-sorted, fine grained, rounded, porous but partly silicified; common pipe rock; mainly irregularly thin bedded with bedding disturbed by worm tubes, but some medium bedded and planar cross-bedded with foresets direction 085°, cleaved and closely jointed.
	243'-281'	Quartz sandstone, red, orange and white, moderate to poorly sorted and slightly argillaceous; mainly medium grained with laminae of coarse grained and gritty sandstone; grains subrounded; friable, porous; medium and thick bedded and strongly planar cross-bedded with foresets direction 090°.
GAB1044H	241'-243'	Micaceous quartz siltstone, white, poorly medium bedded; numerous wood fragments.
GAB1044G	229'-241'	Quartz sandstone, red and orange, moderately sorted and with some argillaceous matrix, fine grained with scattered medium grains; friable except where "case-hardened", medium and thick bedded and strongly planar cross-bedded with foresets direction 150°.
	219'-229'	Concealed
GAB1044F (see White, 1964)	206'-219'	Micaceous quartz sandstone, white to orange, well sorted, very fine grained; porous, fairly friable although slightly silicified; thin to medium bedded and laminated; wood fragments and plants.
	193'-206'	Concealed
GAB1044E	180'-193'	Quartz sandstone, buff to brown, moderately sorted; fine grained with scattered medium grains, with some laminae containing argillaceous matrix; porous, friable except where "case-hardened"; strong honeycomb weathering; poorly thick bedded, and within thick beds very poorly developed thin to medium bedding.
	165'-180'	Concealed
GAB1044D	137'-165'	Quartz sandstone, brown, moderately sorted, and slightly argillaceous, medium grained, sub-angular to angular; friable except where "case-hardened"; some honeycomb weathering; thick bedded to massive and with some major foresets (up to 10') with direction 080°.
GAB1044C	110'-137'	Quartz sandstone and argillaceous quartz sandstone, with some micaceous laminae; white; quartz sandstone is well sorted, argillaceous sandstone is moderately sorted; fine grained but with some medium grained laminae: sub-angular; friable, very subject to wind fretting where case-hardened surface breached, producing small caves; medium to thick bedded and strongly thinly planar cross-bedded.
	85'-110'	Concealed
	61'-85'	Kaolinitic quartz sandstone, with some scattered mica flakes; pure white; poorly sorted; medium grained with kaolinite matrix and gritty laminae or thin beds; sub-angular; friable; strongly trough cross-bedded in direction 360°.

44'- 61' Sandy pebble conglomerate, white except for colour of pebbles, poorly sorted and with beds up to 1' thick of pebbly sandstone and kaolinitic sandstone; pebbles subrounded, sandgrains sub-angular; pebbles of glassy and milky quartz, red/green and black chert and quartzite, and acid volcanics; well cemented; thick bedded to massive.

38'- 44' Kaolinitic quartz sandstone, pure white, poorly sorted, medium grained with kaolinite matrix and gritty laminae or thin beds; sub-angular, friable; thick bedded and poorly trough cross-bedded.

32'- 38' Kaolinitic quartz sandstone, with some scattered mica flakes; pure white; poorly sorted, medium grained with kaolinite matrix and scattered angular grit and subrounded pebbles; sand grains mainly sub-angular, some angular or subrounded; pebbles mainly glassy or milky quartz, with jasper, chert, quartzite and acid volcanics; strongly trough cross-bedded with direction 180°.

16'- 32' Pebble conglomerate and sandy pebble conglomerate; white except for colour of pebbles, poorly sorted; pebbles subrounded to sub-angular, of glassy and milky quartz, quartzite, chert and acid volcanics; sand white, gritty, kaolinitic, sub-angular; conglomerate very strongly trough cross-bedded with individual festoons over 7' thick.

GAB1044B 0- 16' Kaolinitic quartz sandstone, with scattered mica flakes; pure white poorly sorted with kaolinite matrix and with angular grit and subrounded pebbles scattered throughout and in thin bands; very friable; very strongly trough cross-bedded with large troughs.

GAB1044A (pebble)

Base (at river level)

Interpretation:

326'-336'+	Wilgunya Formation	10'+
288'-326'	Gilbert River Formation	38'
110'-288'	Blantyre Sandstone	178' Type Section
0 -110'	Warang Sandstone	110'+

SECTION X11 along a tributary of Betts Creek at Hughenden Run 9 Photo 5165 points 172-173.

Top (at plateau level. From photo interpretation this does not seem to be the top of the Warang Sandstone, but probably there is less than 100' of section eroded.)

At 715' 608'-724' Pebbly kaolinitic, quartz-lithic sandstone, white; GAB1064E illsorted but mainly fine-grained, gritty and pebbly with kaolinite matrix, and with pebble bands; sub-angular, friable; thick-bedded and strongly festoon cross-bedded.

At 400' 250'-608' Kaolinitic quartz sandstone, mainly white, yellow and red in part between 280' and 420'; illsorted, GAB1064D but mainly fine grained and gritty with kaolinite matrix, and with pebble bands, sub-angular, cross-friable; thick-bedded and strongly festoon/bedded, At 270' directions of foresets 150° at 568', 180° at 430', GAB1064C 165° at 314', 140° at 275'.

150'-250' Kaolinitic quartz sandstone, white, illsorted but mainly fine-grained, gritty and with argillaceous matrix, rare pebbles; sub-angular; friable; thick bedded and strongly festoon-bedded; massive; direction of foresets 190° at 180', 170° at 155'.

146'-150' Micaceous siltstone, red, with scattered coarse sandgrains; poorly thin bedded.

71'-146' Kaolinitic quartz sandstone, white, illsorted but mainly fine to medium grained, gritty, with kaolinite matrix and some pebble bands; sub-angular; friable; thick bedded and strongly festoon cross-bedded, massive.

66'- 71' Micaceous siltstone, red, thin bedded.

59'- 66' Kaolinitic quartz sandstone, white; illsorted, but mainly fine to medium grained, gritty, with kaolinite matrix, and some pebble bands; sub-angular; friable; thick bedded and strongly festoon cross-bedded, massive.

55'- 59' Micaceous siltstone, red, with scattered coarse sandgrains and a few pebbles; poorly thin bedded.

48'- 55' Kaolinitic quartz sandstone, white; illsorted, gritty to pebbly, mainly medium grained with kaolinite matrix, and with pebble bands; sub-angular; friable; thick bedded and festoon cross-bedded.

GAB1064B 45'- 48' Micaceous siltstone, red, friable, thin bedded.

At 20' GAB1064A 0'- 45' Kaolinitic quartz sandstone, yellow and white; ill-sorted, gritty but mainly medium grained with kaolinite matrix, and with pebble bands; sub-angular; friable except where "case-hardened"; thick-bedded and strongly festoon cross-bedded; at base 1'bed of conglomeratic sandstone.

Base (resting disconformably on Betts Creek Beds).

Interpretation 0-724 Warang Sandstone (Type Section)

SECTION X12 south of Mickey Spring,
at Hughenden Run 7, Photo 5067 points 196-197

Top (plateau level)

169'-175'+ Mudstone, white and pink, leached and silicified, with scattered small lenses of fine-grained quartz and glauconite(?) and scattered mica flakes; poorly medium bedded.

163'-169' Sandy mudstone, white and pale brown, illsorted, leached and porous; rubbly outcrop.

139'-163' Quartz sandstone, pale brown, poorly sorted, gritty and somewhat argillaceous, medium grained, sub-angular to subrounded, massive bench and poorly bedded; basal pebble conglomerate 1' thick resting on an irregular surface.

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129'-139' Quartz sandstone, pale brown, well sorted, fine grained, friable, except where "case-hardened", well developed honeycomb weathering and with a tendency to development of caves below the conglomerate at 139'; planar thin cross-bedding in medium to thick sets; strongly jointed (strike 255°); vertical worm tubes extending down from top surface of interval.

115'-129' Concealed

107'-115' Argillaceous quartz sandstone, white, moderately to poorly sorted, mainly very fine to fine grained, but gritty and argillaceous, sub-angular to angular; friable except where "case-hardened"; massive.

105'-107' Mudstone, white, unbedded.

93'-105' Argillaceous quartz sandstone, pale brown, moderately sorted, fine grained, subrounded, friable and subject to wind fretting; strongly planar cross-bedded in medium to thick sets.

88'- 93' Quartz sandstone, white, medium grained and gritty, massive set and strongly cross-bedded with foreset direction 180°.

75'- 88' Argillaceous quartz sandstone, white to pale brown, moderately sorted, fine grained, subrounded; friable and subject to wind fretting; planar thinly cross-bedded with sets varying from 6" to 4', foresets direction 100°.

0 - 75' Rubbly outcrop of argillaceous quartz sandstone with some mudstone, white; sandstone moderately sorted, fine grained with scattered medium grains and argillaceous matrix, subrounded, friable, planar thinly cross-bedded with medium and thick sets.

Base (on bench of pebbly sandstone of the Warang Sandstone.)

Interpretation:

163'-175'+	Wilgunya Formation	12'+
139'-163'	Gilbert River Formation	24'
0'-139'	Blantyre Sandstone	139'
base	Warang Sandstone	

SECTION X13, at Mickey Spring
at Hughenden Run 7, Photo 5067 points 198-199

Top (rubble of leached mudstone and argillaceous gritty sandstone on gentle slope grading into plateau level).

58'-75'+ Mudstone, white, leached with lenticular sandy mudstone.

52'-58' Argillaceous sandstone grading to sandy mudstone; illsorted; leached; sandstone gritty.

22'-52' Pebbly quartz sandstone; white grading to red at top; illsorted - gritty pebbly and argillaceous - but with sorting improving from 22' to 35', thereafter poorly sorted quartz sandstone with thin (2") pebble beds; basal 5' very pebbly and grading locally to sandy pebble conglomerate.

U N C O N F O R M I T Y

16'- 22' Quartz sandstone, with laminae of micaceous sandstone, white, very fine grained; medium bedded, with interbedded medium sets of thin bedded and laminated micaceous siltstone; sandstone has oscillation ripple-marks.

14'- 16' Micaceous siltstone, white, laminated and thin bedded; mica mainly in laminae.

GAB1076 (White, 1964) 0 - 14' Mudstone, white, massive, with plant fragments; grades up into siltstone of interval 14'-16'

Base (at valley floor)

Correlation: Intervals o-22' are represented in X12 by the concealed interval 115'-129'.

Interpretation:

52' - 75'+	Wilgunya Formation	23'+
22' - 52'	Gilbert River Formation	30'
0' - 22'	Blantyre Sandstone	22'+

SECTION X14, 10 miles west of Mt. Sturgeon Homestead at Hughenden Run 3 Photo 5219 Points 646-647

Top (at hilltop covered with Quaternary red sand)

405-410' Ferruginous pebbly sandstone and conglomerate, poorly sorted, including both pebbles and cobbles.

354'-405' Poorly exposed ferruginous siltstone with sandstone benches; sandstone fine to medium grained; cross bedded.

348'-354' Pebbly quartz sandstone, brown and red, medium to fine grained, pebbles commonly in bands; friable; medium to thin bedded and cross-bedded.

340'-348' Concealed

316'-340' Poorly exposed ferruginous siltstone and sandstone; siltstone platy; sandstone fine grained, sub-angular, thin to medium bedded.

251'-316' Quartz sandstone, red, fine to very fine grained, with scattered pebbles and some pebble bands; minor argillaceous sandstone; well developed honeycomb weathering and strong E-W jointing; strongly cross-bedded; some interbeds up to 3' of white and purple siltstone.

234'-251' Argillaceous sandstone, white and purple, pebbly at base and grading up through medium grained to fine grained; scattered pebbles throughout; thick bedded; minor interbeds of siltstone.

232'-234' Siltstone, fawn-grey, indurated.

210'-232' Argillaceous pebbly sandstone, white, fine grained, micaceous; thick bedded; with some thin beds of micaceous siltstone.

190'-210' Quartz sandstone, white, fine grained, medium grained and massive; some thin interbeds of micaceous siltstone.

185'-190' Micaceous siltstone and quartz sandstone; siltstone thin bedded; sandstone light brown, very fine grained, sub-angular; and including a pebble band.

144'-185' Concealed; rubble of white siltstone.

130'-144' Argillaceous sandstone; white, fine grained, indurated; medium to thick bedded.

58'-130' Argillaceous sandstone with pebble bands and coarse mica flakes; white; medium to fine grained; cross-bedded; outcrop discontinuous.

20'- 58' Pebbly quartz sandstone, white, fine grained, well sorted, sub-angular.

10'- 20' Argillaceous sandstone, white, poorly sorted, medium to fine grained with few pebbles, friable.

0 - 10' Conglomerate and pebbly sandstone; conglomerate contains quartz pebbles, cobbles and boulders up to 1' diameter and pebbles of phyllite; sandstone white, somewhat argillaceous, poorly sorted, medium grained, angular, friable.

Base (on weathered Precambrian(?) phyllite in bottom of gorge).

Interpretation:

405'-410' Gilbert River Formation 5'+
0 -405' Blantyre Sandstone 405'

SECTION X15, 10 miles SW of Mt. Sturgeon Homestead at Hughenden Run 4 Photo 5015 Points 648-649

Top (at hilltop)

290'-318' Quartz sandstone, brown, poorly sorted, medium and coarse grained; massive, poorly cross-bedded; friable; 2' bed of grey siltstone at 308'.

265'-290' Concealed

232'-265' Interbedded pebbly quartz sandstone (75%) and siltstone (25%); sandstone brown, medium to fine grained with pebble bands; siltstone white.

207'-232' Mainly concealed; small outcrops of sandstone and sandy siltstone; sandstone fine grained, sub-rounded.

180'-207' Quartz sandstone, white, brown and purple; well-sorted, fine grained; subrounded; thick to medium bedded and some cross-bedding.

164'-180' Quartz sandstone, coarse to medium grained, with some pebbly sandstone and a thin conglomerate; sandstone sub-angular, thin bedded and cross-bedded; indurated.

149'-164' Concealed

99'-149' Quartz sandstone, brown, well sorted, fine grained with some medium grained interbeds; some micaceous and a few pebble bands; thin to medium bedded and cross-bedded with foreset direction.

98'- 99' Siltstone, white indurated.

96'- 98' Quartz sandstone, yellow-brown, well sorted, fine grained.

51'- 96' Argillaceous sandstone, white, poorly sorted, fine to medium grained with some coarse grains; sub-angular; friable; massive and poorly bedded; some thin interbeds of sandy or pebbly siltstone.

43'- 51' Sandy siltstone, light brown and white, medium bedded; with thin interbeds of fine grained sandstone.

13'- 43' Concealed

0- 13' Argillaceous pebbly sandstone, white, poorly sorted, medium grained, also some cobbles; massive.

Base (at start of outcrop 30' above creek bed)

Interpretation: 0-318' Blantyre Sandstone

SECTION X16 at northern end of Galah Gorge at Hughenden Run 5 Photo 5075 Points 94-96.

Top (unconformably overlain by Warang Sandstone)

780'-800' Interbedded lithic sandstone and micaceous siltstone; sandstone white, coarse grained and gritty, kaolinitic; siltstone grades into very fine grained sandstone; top of interval altered to ironstone at unconformity.

GAB1034H 773'-780' Micaceous siltstone, white; grading up into carbonaceous shale; grading up into poor grade coal; plant fragments, including Glossopteris common.

768'-773' Kaolinitic quartz sandstone, white, poorly sorted, medium grained and gritty, somewhat pebbly; angular to sub-angular.

765'-768' Carbonaceous shale, black, micaceous; few plant fragments.

750'-765' Kaolinitic sandstone, white, poorly sorted, medium grained and gritty with 3' bed of pebbly sandstone; angular to sub-angular.

740'-750' Concealed

726'-740' Kaolinitic sandstone, white, poorly sorted, medium grained and gritty, angular to sub-angular.

721'-726' GAB1034G Carbonaceous shale, dark grey, rather silty, micaceous; thin bedded to laminated and with some coaly laminae; abundant plant fragments.

696'-721' Pebbly mudstone, grey; unsorted, containing pebbles and cobbles scattered through carbonaceous sandy mudstone; abundant plant fragments, coaly fragments and wood pieces.

684'-696' Kaolinitic sandstone, white, poorly sorted, medium to coarse-grained and gritty, with lenticular beds of pebble conglomerate; thin to thick bedded; pebbles sub-angular to angular.

679'-684' GAB1034F GAB1034U Carbonaceous shale, with thin seam (up to 2') of coal; dark grey to black, micaceous; contains common plant fragments, including Glossopteris; lenticular bed up to 18" thick of tuffaceous(?) sandstone.

669'-679' Kaolinitic sandstone, white; illsorted, medium to coarse grained and gritty; feldspathic(?); thick bedded; with beds of pebble conglomerate, pebbles angular to subrounded. Interval grades upwards through fine grained sandstone into overlying carbonaceous shale.

GAB1034B GAB1034C GAB1034E 667'-669' Carbonaceous shale with partings of coal, dark grey to black; micaceous, common plant fragments, including Glossopteris. Along strike interval cut out by overlying sandstone.

632'-667' Conglomerate, white, massive with poorly developed thick bedding; poorly sorted, pebble to cobble grade with sandy matrix; angular to subrounded clasts of quartz, bedded quartzite, mica schist, gneiss, and rounded clast of green mudstone (similar to underlying sequence).

U N C O N F O R M I T Y

GAB1034A 612'-632' Lithic sandstone, yellow, fine-grained, thin bedded and laminated; with laminae of carbonaceous fragments and some poorly preserved plant fragments.

At 520': GAB1034T At 440': GAB1034S 431'-612' Varves, blue-grey to grey-green, very fine interlamination of coarse and fine-grained mudstone with graded bedding, scattered raffed pebbles and granules, with very thinly interbedded dark grey recrystallised limestone; at top grades into interlaminated siltstone and very fine-grained lithic sandstone; rare woody fragments.

413'-431' Mudstone, blue-grey and grey-green, laminated and thin bedded; with lenticular tillitic beds; culminates in 6" bed of green fine grained lithic sandstone.

GAB1034R 408'-413' Tillite, grey-green, with both argillaceous and sandy matrix, containing clasts up to cobble size, many striated and/or faceted.

395'-408' Concealed

394'-395' Greywacke, grey-green, fine-grained, tough.

393'-394' Pebble conglomerate, with scattered cobbles and boulders; some clasts striated or faceted; irregular thickness.

390'-393' Lithic sandstone, grey-green, fine-grained.

389'-390' Siltstone, grey-green, poorly laminated.

378'-389' Lithic sandstone, grey-green, fine-grained, thinly cross-bedded.

254'-378' Sandy mudstone, pale grey, irregularly interbedded with pebbly sandstone, very fine grained, some carbonaceous fragments; grades into grey-green sandy mudstone with scattered fine pebbles upwards.

130'-254' Mudstone, with scattered sand grains; grey, unbedded except at top where there is interlaminated siltstone.

50'-130' Concealed

44'- 50' Siltstone, grey-green, massive, poorly exposed.

34'- 44' Concealed

24'- 34' Siltstone, grey-green, massive, poorly exposed.

3'- 24' Lithic sandstone, grey-green, poorly sorted with numerous scattered granules and pebbles, rare cobbles; poorly bedded at base, rest massive, poorly exposed.

0'- 3' Tillite, with lenticular pebbly gritty sandstone at top; erratics pebble to boulder size, some are striated and/or faceted and some have snub scars; erratics of granite (both fresh and very weathered), mica schist, amphibolite, quartzite, quartz, sandstone, mudstone, and contorted carbonaceous shale.

GAB1034P

Base (overlying poorly exposed sequence apparently mainly unbedded except at base, of fine-grained lithic sandstone with stringers of mudstone and carbonaceous siltstone; broken wood pieces widespread, and near the top of the unmeasured sequence carbonaceous fragments are common; the sandstone immediately below the basal tillite is extensively fractured, with the fractures filled by calcite veins and sand dykes; top surface of this sequence very irregular. This unmeasured sequence is estimated to be between 50' and 100' thick with its base not exposed in the core of an anticline).

Interpretations:

632'-800' Betts Creek Beds
0'-632')
plus underlying sequence of 50'-100') Boonderoo Beds TYPE SECTION

SECTION X17 along a tributary of White Mountain Creek at Hughenden Run 6 Photo 5025 points 138-139

Top (Overlain by Warang Sandstone with slight unconformity)

1168'-1172' Pebbly mudstone, red, consisting of mudstone with scattered angular pebble-sized fragments, some subrounded; red colour possibly represents old weathering surface.

1158'-1168' Concealed

1088'-1158' Pebbly mudstone, pale grey and white; consisting of mudstone with scattered angular pebble-sized fragments, some subrounded; slump structures common, but well laminated 118'-1123'.

	1071'-1088'	Breccia, illsorted, angular, mainly pebble size but with fragments up to 6"; fragments mainly milky or glassy quartz; massive.
GAB1048G (Appendix B)	1052'-1071'	Kaolinitic sandstone, pure white, poorly sorted, fine grained friable, thick bedded.
	1028'-1052'	Concealed, with 1' bed of red and white silicified mudstone 1044'-1045'.
	1010'-1028'	Kaolinitic lithic sandstone, fine and medium grained, massive.
GAB1048F (Appendix B)	986'-1010'	Kaolinitic lithic sandstone, white, very fine grained, porous, thin bedded and laminated with lenses of medium grained kaolinitic lithic sandstone, and white mudstone; and with thin beds up to 2" thick of conglomerate.
	963- 986	Kaolinitic lithic sandstone, medium grained; cross-bedded and massive.
GAB1048E	854'-963'	Siltstone, yellow, with scattered pebbles and lenses of conglomerate up to 6" thick, and with thick beds of conglomerate 942'-945' and 956'-958'; and with finer grained mudstone 958'-959'; siltstone in part sandy with lithic grains, mainly massive, but locally thin-bedded.
	At 854'	STRIKE FAULT hading 55°; probably little displacement.
	710'-854'	Kaolinitic lithic sandstone; moderately sorted, but variable grain size - fine, medium and coarse grained - and commonly gritty and pebbly; mainly massive, some thick or medium bedding.
GAB1048D (Appendix B)	701'-710'	Micaceous siltstone; white, medium bedded, in part sandy with lithic grains.
	630'-701'	Kaolinitic lithic sandstone, mainly massive and thick bedded some cross-bedding; friable but locally intricately veined with very thin ramifying quartz veins which give a much more indurated rock; lenticular breccia and conglomerate verying from 0' to 5' thick at 683'.
	617'-630'	Concealed
	575'-617'	Kaolinitic lithic sandstone, coarse grained and gritty, massive; indurated and quartz veined.
GAB1048C (Appendix B)	533'-575'	Quartz Siltstone, yellow, thin bedded; with plant fragments; poorly exposed.
	432'-533'	Kaolinitic lithic sandstone, irregularly interbedded fine, medium, and coarse grained and gritty; thick bedded and poorly cross-bedded; strong very thin quartz veining mainly vertical (i.e. parallel to bedding); coarse-grained and pebbly 432'-433'.
	399'-432	Concealed.

346'-399' Kaolinitic lithic sandstone, medium-grained, thick bedded and strongly cross-bedded, mainly friable.

318'-346' Concealed.

303'-318' Lithic sandstone, very coarse grained with abundant fine pebbles; thick bedded; interval 310'-314' concealed.

245'-303' Kaolinitic lithic sandstone, fine and medium grained; mainly medium bedded; poorly exposed.

GAB1048B (Appendix B) 224'-245' Lithic sandstone, illsorted, coarse-grained, gritty and with scattered pebbles, thick bedded.

186'-224' Micaceous sandy siltstone, with thinly interbedded fine grained lithic sandstone; siltstone thick bedded and laminated; poorly exposed.

175'-186' Kaolinitic lithic sandstone, fine-grained, massive.

126'-175' Concealed

GAB1048A (Appendix B) 96'-126' Kaolinitic lithic sandstone, fine-grained, massive.

86'- 96' Concealed

83'- 86' Kaolinitic lithic sandstone, fine grained, meddium bedded.

26'- 83' Micaceous sandy siltstone, laminated with thin and medium interbeds of medium and coarse-grained illsorted lithic sandstone; poorly exposed.

0'- 26' Kaolinitic lithic sandstone, medium grained, moderately sorted, sub-angular to angular; gritty in bands; very friable.

Base (Base of unit not exposed at section line. By extrapolation from nearby rubbly outcrops no more than 175' of section is concealed).

Interpretation: 0'-1172' (175') Betts Creek Beds

SECTION X18 at Betts Creek Hughenden Run 9 Photo 5165, points 179-177, 183-184, 185, 186-187

This is a composite section in which correlation between parts is tentative only; the probably error and method of correlation is indicated.

Part C

Point 187 Top (overlain by conglomerate and sandstone of Warang Sandstone).

136'-146' Micaceous sandstone, white very fine grained, and yellow quartz siltstone, laminated and flaggy; poorly exposed.

	116'-136'	Lithic sandstone, micaceous, white; poorly sorted; coarse grained, gritty and argillaceous; massive.
	101'-116'	Micaceous sandstone, white, very fine grained to fine grained, and yellow quartz siltstone, laminated and flaggy; poorly exposed.
	96'-101'	Concealed.
	95'- 96'	Mudstone, blue-grey, with scattered sand grains; poorly thin bedded; thin cap of yellow porous mudstone with wood fragments.
GAB1066D	87'- 95'	Pebbly mudstone, violet to purple, blue grey, dark grey and brown; unsorted earthy, pebbly, gritty and with coaly fragments; containing pebbles and clasts of milky quartz, sandstone, and mudstone varying from rounded to angular, and including some large clasts up to 15" of laminated mudstone.
GAB1066C	81' -87'	Quartz sandstone, white, medium to coarse grained, argillaceous matrix, friable; massive.
	79' -81'	Kaolinitic lithic sandstone, white; moderately and poorly sorted, coarse grained and with kaolinite matrix, gritty bands and scattered angular quartz fragments; sub-angular; massive.
	63'- 79'	Mudstone, white, some porcellanised and polished; a few fragmentary plant fossils.
	54'- 63'	Concealed
Point 186	31'- 54'	Kaolinitic lithic sandstone, white, moderately and poorly sorted, coarse grained and with kaolinite matrix, gritty bands and scattered angular quartz fragments; sub-angular; massive and poorly thick bedded. (continued by extrapolation from strike at point 185).
Point 185	21'- 31'	Lithic sandstone, white, poorly sorted, coarse grained with numerous scattered quartz pebbles and clasts of pebbly mudstone; very irregularly interbedded with pebbly mudstone and unbedded mudstone draped over clasts up to 2' of arkosic(?) sandstone; a few thin interbeds of laminated mudstone.
GAB1066B	6'- 21'	Micaceous sandstone, white, very fine grained to fine grained; with thin to medium interbeds of finely laminated mudstone, some of it micaceous and shaley; bedding mainly thin, but varies to medium bedded and laminated, and undulatory bedded; some beds lenticular with abundant wood fragments, and some with root tubes.
Point 185		
Point 184 GAB1066A (White, 1964)	1'- 6'	Mudstone, grading to sandstone, white, some porcellanised and polished; laminated and blocky; some beds finer grained than others and also occur as clay pebbles within the coarser, two grain sizes thinly interbedded and lenticular; abundant plant fossils and fragments, wood pieces and root tubes.
	0'- 1'	Lithic sandstone, pale brown to white, fine grained; poorly medium bedding and filling up irregularities in surface of underlying conglomerate.
Point 184		

Part B

(Thickness of 100'-150')

Interval between the part of the section above and that below is unmeasurable; the top bench of the section below can be followed round the valley side to point 183. Between points 183 and 184 the section is partly obscured and the rocks are massive, precluding dip measurement. The thickness of this interval is estimated to be between 100' and 150'. Included are two main beds of pebble to cobble conglomerate, 30' to 50' thick, with two main intervals of poorly exposed medium grained lithic sandstone. The upper part of the section (point 184) rests on a massive cobble conglomerate which, by photo interpretation, is the upper of the two main conglomerate beds in this unmeasured interval.

Point 183

Part A

Point 177

100'-134' Pebble conglomerate, with scattered cobbles, and a 1' bed of cobble conglomerate at the top; minor lenticular medium interbeds of lithic sandstone, fine grained; conglomerate has poorly developed cross bedding indicated by sorting of pebbles, foreset direction 040°.

92'-100' Concealed

87'- 92' Lithic sandstone, white, well sorted, fine grained, poorly medium bedded and massive.

73'- 87' Concealed

GAB1065 65'- 73' Lithic sandstone, white, well sorted, fine grained, poorly medium bedded and massive.

0'- 65' Pebble and cobble conglomerate, with scattered boulders, mainly rounded pebbles and cobbles, boulders most common at base up to 4' long and sub-angular to angular; massive, poorly cross-bedded, indicated by sorting of pebbles, foreset direction 040°.

Point 179 Base (in bottom of small valley, probably close to Precambrian(?) metamorphics).

Total approximate thickness 400'.

Interpretation: Whole section in Betts Creek Beds Point 184 is the type locality of the Betts Creek Beds.

SECTION X19 at The Rockies Waterhole
at Hughenden Run 11 W-C Photo 5123, points 258-259

Top (at top of valley side)

146'-195'+ Mudstone, white, brown and red, leached and partly ferruginized.

128'-146' Quartz sandstone, with glauconitic sandstone at base; white and pale green, poorly sorted, coarse grained, but gritty and somewhat argillaceous; sub-angular to subrounded; porous and friable; basal

glauconitic sandstone has some thin interbeds of green glauconitic mudstone.

11'-128' Mudstone, blue-grey with interbeds of green glauconitic mudstone; some thin interbeds of sandy mudstone, and with concretions of silty limestone; poorly laminated, massive with blocky fracture, in part emphasized by steeply dipping cleavages; gypsum common on bedding and cleavage planes.

5'- 11' Sandy mudstone, blue-grey and green; with clay-ball texture developed by local concentration of sandy glauconitic patches; thick bedded and in part poorly laminated.

2'- 5' Mudstone, blue-grey, with some clay-ball texture due to patches of sandy glauconitic patches. Massive, in part poorly laminated.

1'- 2' Quartz sandstone, poorly sorted, gritty, and with a few pebbles.

0'- 1' Pebble conglomerate grading to cobble conglomerate, with sandy matrix; clasts mainly of glassy and milky quartz, with some quartzite and jasper.

U N C O N F O R M I T Y

Base (at top of set of cross-bedded sandstone of Blantyre Sandstone)

Fossils: Fossil collections GAB1134 and 1135 are from this sequence within the intervals 2-128'; the age is Aptian (Lower Cretaceous)

Interpretation:

2-195'+	Doncaster Member of Wilgunya Formation.
0- 2'	Gilbert River Formation.
Base	Blantyre Sandstone.

SECTION X20 in northern face of the Forsyth Range at Winton Run 13 Photo 5199 point 105

Top (plateau level)

143'-145' "Billy" - silicified argillaceous sandstone, fine grained.

113'-143' Mudstone, pale grey becoming dark grey and red stained near top; leached.

110'-113' Sandy mudstone, grey, massive, leached.

90'-110' Mudstone, pale grey, leached.

80'- 90' Quartz sandstone, white, very fine grained, porous, rubbly exposure.

44'- 80' Concealed

0'- 44' Siltstone, grading upwards to finer-grained mudstone and with thinly interbedded sandy mudstone; grey and white; massive.

Base (at foot of scarp, Base of unit proably less than 50' below).

Interpretation: 0-145' Werite Beds (TYPE SECTION).

SECTION X21 near Valley Bore of Wongalee Station at Hughenden Run 10 Photo 5203 point 74.

Top (at top of exposure; scarp above mainly grass-covered, with scattered floaters and rare poor exposures of mudstone and dark grey to black limestone).

72-83' Mudstone, blue-black, massive; some greener glauconitic mudstone.

58'-72' Sporadic outcrops of mudstone, blue-grey, with some thin interbeds of glauconitic mudstone and siltstone.

52'-58' Mudstone, blue-grey, weathered; plentiful gypsum

44'-52' Concealed

32'-44' Quartz sandstone, pale brown, with green tint; fine-grained, well sorted, subrounded; slightly micaceous; thick to thin-bedded, friable.

28'-32' Concealed, rubble of blue-grey mudstone.

22'-28' Quartz sandstone, brown coarse-grained with scattered clasts of mudstone and wood pieces up to 6".

17'-22' Pebbly quartz sandstone, brown, interbedded coarse and fine-grained, with scattered clasts of mudstone up to 3"; medium bedded, some cross-bedding; friable.

1-16' Thinly interbedded blue-grey mudstone and very friable fine-grained sandstone with some cross-bedding; grades down into blue-grey mudstone; poorly exposed.

0'- 1' Quartz sandstone, brown, well sorted, medium grained, rounded, medium bedded; friable and porous.

Base (at base of exposure; further poor outcrops of blue-grey mudstone occur nearby at lower stratigraphic levels).

Interpretation: Whole section in Doncaster Member of Wilgunya Formation, near base of Member.

SECTION X22 in the valley of Crooked Creek, at Charters Towers Run 8 Photo 5049 points 1-2.

Top (at hilltop)

162'-238' Argillaceous quartz sandstone, brown to white, poorly sorted, mainly fine-grained but varying to coarse-grained and gritty in bands and cross-strata; strongly trough cross-bedded; friable except where case-hardened; massive.

135'-162' Concealed, with scattered poor outcrops of argillaceous quartz sandstone.

59'-135' Argillaceous quartz sandstone, white, poorly sorted, mainly fine-grained but varying to coarse-grained and gritty in bands and cross-strata; strongly trough cross-bedded with foreset directions 20°, 90°, 90°, 110°, 190°; massive, friable except where case-hardened.

56'- 59' Siltstone, red and white.

12'- 56' Argillaceous quartz sandstone, white, poorly sorted, mainly fine-grained but varying to coarse-grained and gritty in bands and cross strata; strongly trough cross-bedded with foreset direction 145°; massive; friable except where case-hardened.

10'- 12' Micaceous siltstone, red and white, with patchy colouration; thick-bedded.

0'- 10' Argillaceous quartz sandstone, white, poorly sorted, mainly fine-grained but varying to coarse grained and gritty in bands and cross-strata; strongly trough cross-bedded with foreset direction 35°; medium to thick sets, massive; friable except where case-hardened.

Base (at creek level).

Interpretation: Whole section in Warang Sandstone.

SECTION X23 in Porcupine Creek
Hughenden, Run 6, Photo 5035, point 263

Permian sediments overlain disconformably by white argillaceous coarse quartz sandstone.

129½-131'+ Mudstone white to brownish, shaly, sandy micaceous (clear sericite(?)), small carbonaceous fragments.

102½-129½' Grit, pebbly, with fine sandstone lenses showing current bedding with low dips.

102 -102½' Siltstone, white, fissile, micaceous.

100½-102 ' Carbonaceous shale, grey and black with carbonised plant fragments.

93½'-100½' Siltstone, laminated white and grey, rich in mica; coarse gravelly to pebbly beds containing fragments of granite, pegmatite and/or quartz-feldspar gneiss.

83½-93½' Argillaceous sandstone, medium-grained, poorly sorted, micaceous, feldspathic-kaolinised(?).

73½-83½' Polymict conglomerate and coarse gritty sandstone; pebbles sub-angular to subrounded.

50½-73½' Argillaceous sandstone, white, mainly coarse-grained and friable, sub-angular.

32½-50½' Interlensing quartz grit and grey shale rich in mica and carbonaceous material; plant fossils with Vertebraria, etc. common (sample 1073B from 15 feet above base); this unit varies considerably along strike in both thickness and lithology.

31'-32½' Shale, grey rich in plant remains (GAB 1073A).

23'-31' Fine conglomerate to coarse-grained sandstone, white, with thin shaly partings between beds; current-bedded; some black carbonaceous laminae.

15'- 23' Interbedded black to dark grey carbonaceous shale and grey shaly siltstone, with bands of dull coal - an upper 11 inches thick with an arc inch lens of grey siltstone, a lower 1 foot with fine white shale laminae, but thicknesses variable along strike.

0 - 15' Conglomerate with sandy matrix and lenses of gritty to pebbly quartz sandstone; current bedding to south and 260°; pebbles and cobbles varied including porphyry and metamorphic rocks; pebbles rounded to sub-angular.

Base of Section

Overall dip of beds 6° to south.

SECTION X24 in Galah Gorge at Pyramid and to north along Porcupine Creek Hughenden Run 6, Photo 5035, Point GAB 1089-1090.

Top (plateau level)

(Thicknesses estimated)

385'-388'+ Quartz sandstone, white, pebbly with quartzite pebbles and cobbles up to 8 inches, very coarse sand, poorly sorted, grains sub-angular to subrounded, partly indurated by silicification.

260'-385' Quartz sandstone, mainly red iron-stained, fine to medium grained, well-sorted, sub-angular to sub-rounded; prominent fine quartz breccia bands up to 6 inches thick with white sub-angular fragments at base and in lower part; sandstone with thin planar cross bedding and sets up to 5 feet thick - consistent low dip to east or east-south-east, coarse sandy and micaceous layers along foresets; some beds disturbed by burrowing and some with vertical pipes; plant impressions and beds with clay pellets noted at 5feet from top; top beds indurated.

GAB 1090

Top of pyramid-shaped cliff.

255'-260' Mudstone, deep red, shaly, partly mottled red and white.

230'-255' Pebbly sandstone to siltstone, white leached, coarse sand in lower part but finer towards top, scattered mica.

205'-230' No outcrop - covered with scree.

190'-205' Micaceous sandstone, coarse gravelly to very fine, yellow brown to red brown limonitic at top.

185'-190' Argillaceous sandstone, white, fine-grained, pebbly, friable; interbedded with shaly micaceous siltstone; thin-bedded, beds show interlensing.

170'-185' Quartz sandstone, medium to coarse-grained with pebbly layers; short thin current beds and other cross beds up to several feet long but with lower dips - dips vary in direction to north-west, west and south-east.

166'-170' Argillaceous conglomerate to very coarse sandstone in basal 2½ feet; overlain by a brown and light green grey siltstone with irregular shaly cleavage.

Local erosion surface.

157'-166' Claystone, light grey, fine sandy to micaceous sandy siltstone, reddish brown with white mottling; cleavage is irregular and varies from blocky to shaly; 6" lens of brown and white mottled fine-grained sandstone in upper part; thin limonite layer on top.

153'-157' Argillaceous sandstone, fine to medium grained with limonite band on top.

141'-153' Interbedded coarse gritty sandstone (in 1 to 2 foot beds) and thinner soft friable shaly mudstone.

136'-141' Quartz sandstone, white, fine-grained with friable coarse-grained band at top capped by limonite layer.

134'-136' Argillaceous sandstone, coarse-grained thin-bedded.

132'-134' Claystone, soapy, grey, coarse gritty, sand scattered throughout; deeply eroded.

121'-132' Mainly sandstone, coarse-grained, gritty, sub-angular, mostly friable but beds up to one foot indurated, with argillaceous cement; basal 3 inch lens of grey claystone with scattered coarse sand, rootlet(?) marks.

Small bench.

93'-121' Sandstone, lower 10 feet fine to medium-grained, with pebbly bands, some brown ferruginised, sand generally angular; upper part coarse-grained with pebble lens at base, limonite layer at top; bed thickens to west.

87'- 93' Polymict conglomerate with lens of shaly green claystone at base, grades up into pebbly sandstone; bed is lensing; pebbles and cobbles include porphyry, light brown and dark blue grey chert(?), quartzite, quartz, brown siltstone, mainly as fine rounded pebbles.

Erosional unconformity.

57'- 87' Argillaceous sandstone, brownish to white clean with clear quartz grains, some altered feldspar(?), scattered mica; pebbly claystone lens in lower part (about 13 feet above base); laminae of coarse sand to gravel; red-brown ferruginized in top part; thickness in vertical cliff part of section estimated to be 30 feet.

50'- 57' Interlensing light green to grey mudstone and conglomerate to coarse gritty sandstone; higher beds pink to brown with strong red-brown limonitic banding at top; mudstone cleavage irregular shaly around nodular development, some rootlet(?) marks; deep erosion in mudstone forms caves.

0'- 50' Argillaceous quartz sandstone; mainly white, fine to medium-grained, well-sorted, sub-angular; micaceous; lenses and layers of grit and lithic gravel with porphyry, green schist, light-coloured chert, and argillaceous sandstone; clay pellet bands; sets of long festoon/cross beds up to 5 feet thick.

Base of Pyramid-shaped cliff.

Underlying section has low south dip and may be traced to north in cliffs along Porcupine Creek.

40'-160' Argillaceous quartz sandstone, as above 50 feet, mainly fine-grained, but coarser and more friable in upper part; current (festoon-type) bedding mainly to south; thickness estimated.

25'- 40' Mudstone, micaceous, light green to mottled red-brown and white in upper part with 3-4 inch limonite layer on top.

10'- 25' Argillaceous quartz sandstone, fine-grained with some coarse layers; festoon bedding with apparent south dip; boxwork limonite development in top part with concentric hard layers.

0'- 10' Argillaceous quartz sandstone, white, coarse to fine-grained, mainly angular, micaceous, rare quartz gravel bands; occurs above erosional unconformity over flat Permian sediments and thickness probably greater to south. Sandstone has strong west-south-west jointing and a minor jointing at right angles.

Interpretation:

	385'-388'	Gilbert River Formation	3'+
	260'-385'+	Blantye Sandstone	125'
	0'-260')	Warang Sandstone	420'
plus	0'-160)	"	"

APPENDIX B.

BRIEF DESCRIPTIONS OF THIN SECTIONS

by

M. Arman

BOONDEROO BEDS

Sample R16818 (Field number GAB 1034T), Measured section X16 (Appendix A)

Field determination: Varves

The sample appears to be a silty, graded claystone with clay aggregates and micas oriented along parallel laminae. The grading goes in the same direction in each laminae (from coarser to finer grained) and supports the possibility of it being varving. There are also some curved clay flakes suggesting desication.

Name: Varved Claystone.

BETTS CREEK BEDS

Samples R15955-7; R15948-51 (Field numbers GAB 1048A-G) Measured section X17 (Appendix A)

Field determinations
1048A Argillaceous feldspathic sandtone
1048B Argillaceous feldspathic sandstone
1048C Siltstone
1048D Micaceous sandy siltstone
1048E Sandy siltstone
1048F Pebbly mudstone
1048G Argillaceous sandstone.

1048A

Macro: The rock is yellowish brown sandstone. It is rather friable, porous and homogenous with no apparent bedding.

Micro: The grains are fairly well sorted; grain size ranges from 0.06 to 0.4mm. (Average: 0.2mm). They are subrounded to sub-angular, and have moderate to low sphericity.

30% Qtz - with some overgrowth and a few corroded surfaces (embayments).
10% Potash feldspar, mostly microcline.
3% Mica, including 2% biotite, which mostly have bent, tabular habit.
15% Kaolinite matrix.
15% Devitrified glass and chert - in the form of somewhat rounded fragments.
7% Argillaceous rock fragments.
10% Opaque mineral
10% Pores; rare patches of chlorite.

Name: Kaolinitic, tuffaceous sandstone.

1048B

Macro: Whitish, medium to coarse grained sandstone. It is rather friable and shows no evidence of bedding.

Micro: The grains are poorly sorted, and range in size from 0.1 to 1.5 mm. (Average: 0.4 mm.).

35% Quartz - subrounded to rounded with moderate sphericity some grains show embayments and partings on planes of inclusions.
7% Microcline
3% Muscovite and biotite.
40% Devitrified glass and chert, with some evidence of shards.
10% Kaolinite matrix.
5% Siltstone fragments - some are micaceous, a few chlorite.

Name: Tuffaceous sandstone.

1048C

Macro: This is a buff coloured rock, massive and has conchoidal fracture.

Micro: The grains are well sorted, with an average grain size of 0.01 mm.

85% Quartz - sub-angular to subrounded.
3% Potash feldspar.
5% Muscovite, occurring as fine laths or chips.
7% Opaque minerals.

Name: Quartz siltstone.

1048D

Macro: The rock is a light buff siltstone with a vague bedding lamination of darker coloured materials.

Micro: Moderate sorting of grains with size ranging up to 0.1 mm. Most of the grains are, however, in coarse silt range, having an average size of 0.05 mm.

60% Quartz - subrounded to sub-angular.
5% Potash feldspar.
5% Muscovite and biotite.
20% Devitrified glass.
10% Kaolinite.

Name: Tuffaceous, sandy siltstone.

1048E

Macro: Light brown to buff sandy siltstone with undulating dark brown laminae about 5 mm. thick each.

Micro: Fine grained quartz sand (about 10%) set in a fine silt-sized matrix.

Matrix: 40% quartz
2% microcline
8% mica
20% kaolinite
20% devitrified glass

Name: Tuffaceous, sandy siltstone.

1048F

Macro: Very light pinkish yellow sandstone. It is massive and fine grained.

Micro: The grains are rather poorly sorted with size ranging from 0.05 to 0.3 mm. (Average: 0.10 mm.).

20% Quartz - subrounded to sub-angular, and low to moderate sphericity.
5% Microcline.
40% Kaolinite - as matrix and fragments.
30% Devitrified glass.
5% Argillaceous rock fragments.

Name: Kaolimitic, tuffaceous sandstone.

1048G

Macro: Whitish, massive sandstone with fine to medium grain size.

Micro: Poorly sorted grains ranging in size from 0.05 to 0.7 mm. (Average: 0.20 mm.).

25% Quartz - generally subrounded to rounded. (Some are sub-angular and well rounded); moderate sphericity.
40% Kaolinite
10% Devitrified glass
15% Clay matrix
10% Rock fragments - mostly argillaceous but some are metaquartzite.
A few grains of muscovite and tourmaline.

Name: Kaolinitic sandstone.

Samples R15938 - R15942 (Field numbers GAB 1065, 1066A-D)
Measured section X18 (Appendix A)

Field determinations GAB 1065 Feldspathic sandstone
GAB 1066A Lithic sandstone
GAB 1066B Micaceous sandstone
GAB 1066C Feldspathic sandstone
GAB 1066D Pebbly mudstone

GAB 1065

Macro: Reddish buff, siliceous, medium grained sandstone.

Micro: Fairly well sorted, 0.1 - 0.4 mm; average: 0.3 mm.

35% Quartz - generally sub-angular to angular. Many grains contain inclusions.
5% Feldspar, including some sericitised potash feldspar.
30% Fragments of spherulitic rhyolite, chert and silt
20% Chert cement
10% Kaolinite matrix.

Name: Volcanic lithic sandstone.

GAB 1066A

Macro: Dull white, fine siliceous sandstone with prominent large grains parallel to bedding.

Micro:

30% Quartz - angular outline, often with sharp edges. The grainsare of bimodal sizes, the averages being 0.1 and o.7 mm. A few show wavy extinction.
40% Reworked fragments of opaline sandstone. The fragments are large (about 1 mm. diam.), round, and contain poorly sorted fine to medium quartz grains.
30% Opal cement with concretionary texture in places. Also some limonite cement.

Name: Opal cemented, brecciated sandstone.

1066B

Rather well sorted, with grain size range from 0.02 - 0.15 mm. Average: 0.08 mm.

85% Quartz - sub-angular to subrounded, and moderate to good sphericity; inclusion of tourmaline, muscovite and apatite.
10% Sericite
5% Biotite

Name: Very fine grained, micaceous sandstone.

1066C

Bimodal size distribution, with averages of 0.3 mm and 1.5 mm. Maximum grainsize: 3.0 mm.

75% Quartz - sub-angular to subrounded, and moderate to low sphericity; many quartz grains contain inclusions of tourmaline, zircon, apatite and muscovite; some quartz have sutured contacts.
5% Potash feldspar - mostly microcline.
10% Muscovite and biotite.
10% Kaolinite matrix.

Name: Very coarse grained quartz sandstone

1066D

Macro: Dirty dark brown sandstone with "porphyritic" texture and porous appearance.

Micro: Bimodal grain size distribution; the finer fraction has an average grain size of 0.15 mm, and the coarser up to 4 mm.

30% Quartz - sub-angular to angular common inclusion and pressure solution.
15% Large fragments of quartz and possibly metaquartzite.
10% Iron oxide matrix.
45% Cement matrix, consisting of patches of coaly matter, kaolin and some isotropic material, possibly glass.

Name: Carbonaceous kaolinitic sandstone.

Sample R16822 (Field number GAB 1080A) from Hughenden, Photo 5175 Run 8 point 274.

Field determination: Tuff(?)

Purplish red, massive claystone.
Some kaolinite present: tiny vermicular crystals (thickness >2μ) of very low birefringence are very common, and also larger clumps of vermicular form which appear to be kaolinite nodules. No definite shards can be recognized.

WARANG SANDSTONE

Samples R15962-63 (Field numbers GAB 1044A-B), Measured section X10.

Field determinations: GAB 1044A Rhyolite pebble from pebbly sandstone.
GAB 1044B Argillaceous sandstone

1044A

Macro: Light buff, porphyritic, vesicular and massive.

Micro: The rock has a porphyritic texture, with medium to coarse euhedral crystals of quartz set in a groundmass of devitrified glass; also evidence of flow texture around the quartz.

10% Quartz phenocrysts - many with embayments.
90% Glass and devitrified glass, including chert and quartz.

Name: Rhyolite.

1044B

Macro: Light grey, friable and non-laminated.

Micro: Rather poorly sorted (0.1 - 2.0 mm) Average: 0.6 mm.

60% Quartz - sub-angular to subrounded and moderate sphericity.
5% Metaquartzite
30% Kaolinite matrix.
5% Chert.

Name: Kaolinitic quartz sandstone.

Sample R15953 (Field number GAB 1047A) from Hughenden Photo 5191 Run 10 point 132.

Field determination: Argillaceous sandstone.

Macro: Very light grey, with pink laminae. Very friable.

Micro: Moderately sorted 0.06 - 0.6 mm; average: 0.3 mm.

70% Quartz - subrounded to sub-angular, moderate sphericity.
5% Metaquartzite.
5% Chert grains
20% Matrix - a mixture of kaolinite (15%), illite and patches of chert.

Name: Kaolinitic quartz sandstone.

Samples R15952 and R15967, (two specimens with field number GAB 1061) from Hughenden Photo 5041 Run 11 E-C, point 167.

Field determination: Red and white micaceous siltstone.

1061 Red (R15952)

Macro: Red, friable, slightly laminated.

Micro: Silt-size, up to 0.06 mm; average: 0.04 mm.

25% Quartz - generallyin layers, alternating with layers of fine matrix.
20% Chert fragments.
5% Mica flakes (coarser than the matrix size).
50% Matrix consisting of:-
25% Iron oxide
15% Muscovite, illite and possibly biotite.
10% Fine silt.

Name: Ferruginous shaly siltstone.

1061 White (R15967)

Macro: White, massive, no evidence of bedding.

Micro: Fine silt size with an average of: 0.02 mm. Slightly laminated.

30% Quartz
15% Muscovite and illite.
55% Fine matrix, probably mostly kaolinite and illite.

Name: Micaceous, kaolinitic siltstone.

Samples R15943-47 (Field numbers GAB 1064A-E) from Type Section X11 (Appendix A).

Field determinations:

GAB 1064A	Argillaceous sandstone
GAB 1064B	Red micaceous siltstone
GAB 1064C	Argillaceous sandstone
GAB 1064D	Argillaceous sandstone
GAB 1064E	Pebbly, argillaceous sandstone.

1064A

Poorly sorted, with grainsize range: 0.08 - 1.5 mm. Average: 0.7 mm.

70% Quartz - sub-angular to subrounded, and moderate sphericity. Some quartz have wavy extraction, overgrowths or embayments; also some large fragments of strongly interlocked metaquartzite.
10% Chert and devitrified glass - as fragments or matrix.
20% Kaolinite matrix, some in curved aggregate.
A few detrital grains of micaceous silt.

Name: Coarse, kaolinitic, quartz sandstone.

1064A

Macro: Light yellowish grey, and very friable.

Micro: Moderately sorted; 0.06 - 0.6 mm , Average: 0.3 mm.

70% Quartz - sub-angular to subrounded, moderate sphericity. Some overgrowth, and some metaquartzite.
25% Kaolinite, including some muscovite leached into kaolinite.
5% Chert.

Name: Medium grained, kaolinitic sandstone.

1064B

Red, ferruginous silt and shale.
The particles are generally poorly oriented. Many needle-shaped muscovite fragments.

1064C

Macro: Yellowish grey, slightly laminated, porous, coarse grained and friable.

Micro: Poorly sorted (0.05 - 2.0 mm); average: 1.0 mm.
60% Quartz - sub-angular to subrounded; most grains have some dust inclusions.
10% Metaquartzite
15% Kaolinite matrix.
10% Chert
5% Micaceous rock fragments and matrix.
Rare tourmaline.

Name: Very coarse, kaolinitic quartz sandstone.

1064D

Slightly friable, yellowish and vaguely laminated.

Micro: Poorly sorted (0.05 - 1.5 mm); average: 0.8 mm.

50% Quartz - angular to sub-angular; moderate to low sphericity.
10% Metaquartzite
3% Shreds of muscovite
7% Chert
30% Ferruginous (limonite?) cement.

Name: Coarse ferruginous sandstone.

1064E

Light pinkish grey, slightly friable with a number of very coarse scattered sand grains. No lamination visible.

Micro: Poorly sorted (0.05 - 1.2 mm); average size 0.4 mm.

68% Quartz - sub-angular to subrounded; moderate to low sphericity; some quartzite with many "dust" inclusions.
5% Muscovite, in the form of elongated and fibrous shreds. Many are bent and broken, and some are strongly leached.
15% Chert and devitrified glass.
15% Kaolinite.

Name: Medium grained, kaolinitic sandstone.

Sample R16821 (Field number GAB 1079) from Hughenden Photo 5025 Run 6 point 269.

Field determination: Red sandy siltstone.

Macro: Red and vaguely laminated.

Micro:

8% Coarse silt to fine sand-sized quartz grains; some grains have irregular shape, suggesting a volcanic ? origin.
2% Potash feldspar
90% Shale - fairly laminated.

Name: Ferruginous silty shale.

Sample R16823 (Field number GAB 1080B) from Hughenden Photo 5175 Run 8 point 275.

Field determination: Lithic sandstone.

Macro: Yellowish white, friable, gritty and porous. No evidence of lamination.

Micro: Poorly sorted grains, with size range from 0.06 to 3.0 mm. (Average: 0.8 mm).

50% Quartz - subrounded to sub-angular; moderate to low sphericity; some grains show corroded surfaces (embayment).
10% Metaquartzite.
25% Chert and devitrified glass; also glossy bubbles.
15% Kaolinite
Some shreds of muscovite, generally strongly leached.

Name: Kaolinitic, quartz and chert pebbly sandstone.

Sample R16824 (Field number GAB 1082) from Hughenden Photo 5159 Run 9 point 280.

Field determination: Lithic sandstone.

Macro: Light pink, rather friable, and non-laminated.

Micro: Moderately sorted (0.08 - 0.6 mm) Average: 0.25 mm.

50% Quartz - sub-angular to subrounded, mostly of low sphericity.
5% Micaceous matrix.
20% Kaolinite and illite (leached mica).
15% Chert and devitrified glass.
10% Fragments of micaceous rocks (such as schists, gneisses).
Some K-feldspar, mostly kaolinitised.

Name: Kaolinitic, quartz chert sandstone.

Sample R16925 (Field number GAB 1083) from Hughenden Photo 5157 Run 9 point 281.

1083
Macro: Light grey, non laminated.

Micro: Fairly well sorted, with grain sizes up to 0.15 mm. (Average: 0.08 mm); the grains show a good dimensional orientation.

50% Quartz - sub-angular to subrounded, low to moderate sphericity.
15% Micaceous matrix.
20% Kaolinite and illite.
15% Chert; a few feldspars.

Name: Fine grained, micaceous lithic sandstone.

BLANTYRE SANDSTONE

Samples R15964-66, R15958-59 (Field numbers GAB 1044C-H) from measured section X10 (Appendix A).

Field determinations:
GAB 1044C Argillaceous sandstone
GAB 1044D Quartz sandstone
GAB 1044E Quartz sandstone
GAB 1044F Micaceous sandstone
GAB 1044G Quartz sandstone

1044C

Macro: Fissile, light brownish grey with pale brown laminae.

Micro: Fairly well sorted (0.05 - 0.8 mm). Average: 0.25 mm.

65% Quartz - mostly sub-angular, and moderate to low sphericity.
5% Micaceous (muscovite) matrix.
20% Kaolinite.
10% Chert; some "cutan" cement.

Name: Kaolinitic quartz sandstone.

1044D

Macro: Light grey with patches of pink colour. No visible lamination and rather friable.

Micro: Rather poorly sorted (0.06 - 0.7 mm). Average: 0.4mm.

70% Quartz - sub-angular to subrounded, moderate sphericity.
5% Metaquartzite.
10% "Cutan" cement
5% Chert matrix
5% Kaolinite
5% Pores.

Name: Quartz sandstone.

1044E

Macro: Reddish pink, with vague laminations. Rather friable.

Micro: Moderately sorted, 0.06 - 0.7 mm. Average: 0.2 mm.

90% Quartz - mostly subrounded (some sub-angular); most of the quartz grains have "dust" inclusions, giving a dirty appearance. Also some evidence of pressure solution.
10% "Cutan" - as cement or stains around the grains.

Name: Quartz sandstone.

1044F

Macro: Light pinkish red with parallel, well-developed laminae; slightly fissile.

Micro: Fairly well sorted, the grain size up to 0.15 mm; average: 0.08 mm.

90% Quartz - subrounded to sub-angular, moderate sphericity; some overgrowths.
10% "cutan" and iron oxides, as cement and stains.
A few zircon, tourmaline and opaque minerals.

Name: Very fine grained quartz sandstone.

1044G

Macro: Pinkish red, friable and fissile.

Micro: Moderately sorted, 0.08 - 0.7 mm; average: 0.3 mm.

85% Quartz - subrounded to rounded; moderate to poor sphericity; some overgrowths.
15% "cutan" cement, showing collaform texture in parts.
A few zircon, biotite, muscovite and potash feldspar.

Name: Quartz sandstone.

Sample R15954 (Field number GAB 1047B) from Hughenden Photo 5191 Run 10 point 134.

Field determination: Micaceous siltstone.

Macro: Light Buff, with somewhat conchoidal fracture. Faint yellowish laminae.

Micro: Bimodal grain size distribution:-
coarser portion (about 5%): 0.2 - 0.6 mm, average 0.3 mm.
finer: very well sorted 0.05 - 0.08 mm, average size 0.06 mm.

90% Quartz - mostly subrounded, moderate sphericity. Many overgrowths and evidence of pressure solution.
5% Argillaceous matrix (dark colour).
3% Muscovite flakes.
2% Patches of chert cement.

Name: Sandy quartz siltstone.

GILBERT RIVER FORMATION

Sample R15960 (Field number GAB 1044J), measured section X10 (Appendix A).

Field determination: Illsorted quartz sandstone.

Macro: Red friable and vague laminations.

Micro: Rather poorly sorted, 0.1 - 1.0 mm. Average: 0.4 mm.

85% Quartz - subrounded to sub-angular, moderate sphericity; a few overgrowths.
10% "Cutan" cement.
5% Chert fragments.
Some muscovite, zircon and rutile.

Name: Quartz sandstone.

DONCASTER MEMBER OF WILGUNYA FORMATION

Sample R15961 (Field number GAB 1044K) measured section X10 (Appendix A).

Field determination: Leached and silicified mudstone.

Macro: Tough, white with light pink patches; slightly laminated.

Micro: Generally of very fine silt size; but some grains have sizes up to 0.06 mm.

10% Quartz - subrounded to sub-angular, moderate sphericity.
10% Muscovite and hydro mica.
15% Kaolinite
65% Mixture of glass, devitrified glass or chert. It may also include much finely divided quartz.

Name: Kaolinitic siliceous claystone.

APPENDIX C.

NOTE ON THE PALAEONTOLOGICAL EXAMINATION OF SURFACE SAMPLES FROM THE NORTH-EASTERN EROMANGA BASIN

by

G.R.J. Terpstra

Summary

Twenty samples have been examined of which six contain a microfauna of Lower Cretaceous age.

Introduction

Twenty samples from surface exposures collected in the north-eastern Eromanga Basin by R.R. Vine and party have been examined. Six of these contain a fauna which although rather poorly preserved indicate a Lower Cretaceous age for the strata from which they were collected.

Observations

1. G.A.B. 1070, 1200, 1203, 1233, 1251, 1300, 1314, 1326 (a-c), 1341, 1345, 1366, 1369(b) proved to be barren.

2. G.A.B. 1043, 1205 (Mackunda Beds) contain a few badly preserved arenaceous foraminifera which are indeterminate.

3. G.A.B. 1202 (Allaru Member)
Hyperammina sp. (fairly common)
Trochamminoides coronus Loeblich & Tappan 1946.
Inoceramus prisms

G.A.B. 1207 (Mackunda Beds)
Hyperammina sp.
Trochamminoides coronus Loeblich & Tappan 1946
Inoceramus prisms
Flat disc-like objects of unknown origin.

G.A.B. 1200 (Mackunda Beds)
Inoceramus prisms
Flat disc-like objects of unknown origin.

G.A.B. 1221 (Allaru Member)
Haplophragmoides sp.
Trochamminoides sp.
Verneuilinoides kansasensis Loeblich & Tappan 1950
Inoceramus prisms

G.A.B. 1230 (Allaru Member)
Haplophragmoides sp.
Reophax sp.
Verneuilinoides kansasensis Loeblich & Tappan 1950
Inoceramus prisms

G.A.B. 1377 (Doncaster Member)
Ammodiscus cretaceous (Reuss) 1845.
Haplophragmoides sp.
Hyperammina sp.

References

CRESPIN, I., 1963 - Lower Cretaceous Arenaceous Foraminifera of Australia. Bur.Min. Resour.Aust.Bull. No.66.

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APPENDIX D

Palaeontological Reports

by

R.W. Day

Lower Cretaceous (Aptian) fossils from
the Flinders River on Glendower Station.
Hughenden 1:250,000 sheet area.

The fossils of this report were collected by the writer in June 1963, during a visit to the B.M.R. - G.S.Q. Great Artesian Basin Party.

Locality: GAB 1134: Photo pt. 200/11WC/5123 Hughenden. E. bank of Flinders R. at N. end of the Rockies Waterhole, about 5 miles N. of Glendower No.2 bore. (m.r. 246417 Hughenden 1:250,000 sheet). From glauconitic limestone concretions 60-70 ft. above a conglomerate forming the floor of the Flinders R. at this point, i.e., 60-70 ft. above the exposed base of the Doncaster Member.

Determinations: Tropaeum or Australiceras sp.
Maccoyella barklyi (Moore)
Fissilunula clarkoi (Moore)
Tatella aff. maranoana Eth.fil.
Euspira eyrensis Findlay
fossil wood

Age: Aptian.

Remarks: An Aptian age is indicated by the occurrence of portion of an ammonite whorl referable to either Tropaeum or Australiceras. both of which are world wide Aptian, genera, together with the typical pelecypods of the Aptian Roma Formation and its equivalents, Maccoyella barklyi and Fissilunula clarkei.

Tatella aff. maranoana is represented by a single left valve, which is proportionately higher than the type specimen (F. 1314 GSQ Colln.) figured by Etheridge Jnr. (1892, pl. 27, figs. 4 and 5) from the Maranoa River near Mitchell (Roma Formation). Very similar forms have been observed in GSQ Collections from the Wrotham Park area (Blackdown Formation) and the northern forms may be a distinct species or subspecies.

The naticoid gastropod Euspira eyrensis is represented by a single, small, well preserved specimen.

Fossil wood is very common at this horizon and in the underlying sediments. The transitional claystone/sandstone lithology near the river floor has an abundance of stem and bark impressions as well.

Locality: GAB 1135: Photo pt. 202/11W-C/ Hughenden. Near S. end of exposure at the Rockies Waterhole, at highest point of cliff on E. bank. (m.r. 246416 Hughenden 1:250,000 sheet). From sandy, glauconitic limestone concretions, 70-80 ft. above horizon of GAB 1134.

Determinations: Maccoyella reflecta (Moore)

Age: Aptian.

Remarks: Three specimens identified here as Maccoyella reflecta resemble topotypic specimens in GSQ collections from Wallumbilla. The original figure and description given by

Moore (1870, p.246, pl. 12, figs. 1a and b) do not give a clear idea of this species, and the interpretation made by Etheridge Jnr. (1892, p.457) is adopted here. Maccoyella reflecta is widely distributed in Aptian sediments of the Great Artesian Basin. In the Roma area the species first occurs about 150-180 ft. above the base of the Roma Formation.

Locality: GAB 1136: Photo pt. 203/11W-C/5125 Hughenden. E. end of exposure in S. bank of Flinders River, about 1.5 miles upstream from the old Glendower homestead. (m.r. 236413 Hughenden 1:250,000 sheet). In black limestone concretions from base of section. Horizon is probably near that of GAB 1135.

Determinations:
Tropaeum or Australiceras sp.
Pseudavicula anomala (Moore)
Maccoyella sp. ind.
Indet. belemnites
decapod crustaceans

Age: Aptian.

Remarks: The presence of sections of ammonite whorls referable to either Tropaeum or Australiceras together with the wide-spread Aptian pelecypod Pseudavicula anomala indicates an Aptian age.

In addition the collection contains Maccoyella fragments, indeterminate cylindrical belemnites and numerous fragmentary decapod crustaceons.

Locality: GAB 1137: Photo pt. 204/11W-C/5125 Hughenden. S. bank of Flinders R. about 400 yards downstream (W.) of GAB 1136. (m.r. 235413 Hughenden 1:250,000 sheet). From blue-grey claystones and black limestone concretions between 30-50 ft. about base of section. Highest fossils are 50 ft. above horizon of GAB 1136 and 15 ft. below a 1 ft. very green glauconitic sandstone, which could be taken as the base of the Jones Valley Member.

Determinations:
Australiceras irregulàre (Tenison-Woods)
Maccoyella reflecta (Moore)
Maccoyella umbonalis (Moore)
Maccoyella barklyi (Moore)
Maccoyella corbiensis (Moore)
Pseudavicula anomala (Moore)
Panopea rugosa Moore
Protocardia ? sp.
Nucula sp.
Nuculana sp.
Camptonectes sp.
Barbatia sp.
Mytilus sp.
'Rhynchonella' rustica Moore
decapod crustacea
Indet. encrusting bryozoan
Indet. belemnites

Age: Aptian.

Remarks: An Aptian age is clearly indicated by the occurrence of Australiceras irregulare, Pseudavicula anomala and the four Aptian species of Maccoyella.

Only the early whorls are present in the specimen of Australiceras irregulare. These are loosely coiled and are

trituberculate. In the Wrotham Park area Woods (1961) recorded A. irregulare from the upper part of Blackdown Formation.

Maccoyella reflecta is represented by numerous well preserved specimens, which closely resemble N.S.W. ones figured by Etheridge Jnr (1902b, pl. 1, figs. 1-2; pl. 2, figs. 1-2; pl. 3, figs. 1-3; pl. 4, fig. 2) as Maccoyella reflecta. Specimens from GAB 1135 are similar though smaller. The shells of several have been bored by gastropods.

The specimens of Maccoyella umbonalis are large and are very similar to those reported by Day (1963b) from GAB 883 in the Doncaster Member of the Richmond 1:250,000 sheet area. One has been bored by a gastropod, the hole being 4 mm. in diameter.

Maccoyella barklyi is represented by two specimens which have short hinge lines, very crenulate left valve anterior ears, and radial ribs arranged in 3-4 well defined orders, features characteristic of this widespread Aptian species. In the Roma area M. barklyi seems to be restricted to the lower part of the section i.e. the basal 60-80 ft. of the Roma Formation and the topmost 50-70 ft. of the underlying Blythesdale Formation. However, the range here is apparently longer as the present occurrence is very close to the top of the Aptian sequence.

The specimens of Maccoyella corbiensis show the multicostate ornament characteristic of this Aptian species. The specimen reported by Day (1963a) from GAB 699, in the Jones Valley Member of the Richmond 1:250,000 sheet area, is similar.

Pseudavicula anomala, a widespread species characteristic of Aptian sediments in the Great Artesian Basin, is abundant in this collection. Similar specimens were reported by Day (1963b) from GAB 870, 884, 1017 and 1036, in the Doncaster Member of the Richmond 1:250,000 sheet area. As with Maccoyella barklyi this species seems to have a longer range here, for in GSQ collections from Roma and Wrotham Park, Pseudavicula anomala seems to be confined to the lower part of the section.

The two specimens of Panopea rugosa in this collection have the shape and ornament of this widely distributed Aptian species. Specimens recorded by Day (1963b) from GAB 884 and GAB 1115 in the Doncaster Member of the Richmond 1:250,000 sheet area are similar.

The form designated Protocardia? sp. is similar in size and shape to that figured by Cox (1961, pl. 4, figs. 7a and b) as Protocardia sp. from the Nanutarra Formation of Western Australia. Isocardia ? tatei Etheridge Jnr (1902a, pl. 3, fig. 27; pl.4, figs. 13-14) from the Lake Eyre Basin of South Australia is also similar shape, but is much smaller. The species is represented by several internal moulds, one of which is encrusted by bryozoa. None show the hinge features clearly.

Nucula sp. differs from described Australian Lower Cretaceous nuculids in its elongate oval shape. Specimens reported by Woods (1961) from the Blackdown Formation of the Wrotham Park area as Nucula sp. are similar.

Several small, quite convex, taxodont pelecypods designated Nuculana sp. have rather truncate posteriors, prominent anterior umbos and fine, concentric ornament. They are distinct from the widespread Aptian - ? Albian species Neilo randsi, which is somewhat rostrate.

Camptonectes sp. is represented by a single right valve internal mould which has traces of radial ornament. The specimen

is comparable in shape to those recorded by Day (1963a) as Camptonectes sp. indet. from GAB 687 and GAB 689 in the Jones Valley Member of the Richmond 1:250,000 sheet area.

A few small pelecypods have the shape and ornament of the genus Barbatia Gray.

Mytilus sp. is represented by a single right valve internal mould, which has a mytiliform shape.

The single specimen of 'Rhynchonella' rustica is similar to specimens collected by the writer from the Roma Formation in Wallumbilla Creek near Wallumbilla and from Pickanjinnie. All are comparable with the types figured by Moore (1870, pl. 10, figs. 7-9) from the Wallumbilla district.

In addition the collection contains a few indeterminate cylindrical belemnites and decapod crustacea.

Locality: GAB 1139: Photo pt. 210/11W-C/5127 Hughenden. E. bank of Flinders R. about 1 mile S. of the old Glendower homestead, and about 1.5 miles W. of GAB 1136. (m.r. 234413 Hughenden 1:250,000 sheet)

From interbedded claystone, siltstone and sandstone. Lithology suggests horizon 15-30 ft. above that of GAB 1137.

Jones Valley Member equivalent.

Determinations:
Maccoyella reflecta (Moore)
Maccoyella corbiensis (Moore)
Maccoyella umbonalis (Moore)
Pseudavicula anomala (Moore)
Fissilunula clarkei (Moore)
'Cucullaea' robusta Eth.
'Cytherea' woodwardiana Hudleston
Panopea rugosa Moore
Nucula sp.
Nuculana sp.
Entolium sp.
Camptonectes sp.
'Pecten' sp.
Inoceramus prisms
Euspira eyrensis Findlay
'Turritella' sp.
Peratobelus oxys (Tenison-Woods)
'Dentalium' sp.
Lingula aff. subovalis Davidson
rhychonelloid brachiopod
decapod crustacea
cycloid fish scales
Rhizocorallium
Equisetites sp.

Age: Aptian.

Remarks: The collection contains numerous species typical of the Aptian Roma Formation and its equivalents. Notable among these are the three species of Maccoyella, M. reflecta, M. corbiensis, M. umbonalis, Pseudavicula anomala, Fissilunula clarkei, Panopea rugosa, and Peratobelus oxys.

The three Maccoyella species are represented by specimens which are comparable with those from GAB 1137.

As in the collection from GAB 1137 Pseudavicula anomala is abundant.

The specimens of Fissilunula clarkei do not differ appreciably from those recorded from low in the Aptian sequence at GAB 1134.

'Cucullaea' robusta is represented by two incomplete external moulds, which have an ornament like that of the specimen reported from Doncaster Member at GAB 1036 by Day (1963b).

Numerous small pelecypods have a shape and ornament like that of Cytherea woodwardiana Hudleston (1884, pl. 11, figs. 8a and b) from South Australia. No hinge teeth are visible and the species is apparently edentulous. In GSQ collections from the Roma area similar specimens have been observed in collections from high in the Roma Formation.

The specimens of Panopea rugosa, Nucula sp. and Nuculana sp. are similar to those reported from GAB 1137.

A small pectenid referred to the genus Entolium Meek differs principally from those referred to Camptonectes Meek in its lack of radial ornament.

Camptonectes sp. is represented by several internal and external moulds. The external ornament is cancellate and punctate like that seen in fragmentary specimens reported by Day (1963a) from the Jones Valley Member of the Richmond 1:250,000 sheet area at GAB 687. Internal moulds usually have an ornament of delicate radiating and divaricating lines. The specimen recorded from GAB 1137 is conspecific.

The form designated 'Pecten' sp. is represented by a single large external mould 3.5 ins. long and 4 ins. high. Unfortunately it lacks auricles. The ornament on the body of the shell consists of weak concentric lines. Somewhat similar large pectenids have been observed in GSQ collections from the Maryborough Formation.

Specimens of Euspira eyrensis in this collection do not differ appreciably from those reported from low in the Aptian sequence at GAB 1134.

'Turritella' sp. is represented by a few small internal moulds.

Several well preserved belemnites are referred to Peratobelus oxys. One, in particular, very closely resembles Tenison-Wood's type specimen from north-west N.S.W., which was refigured by Etheridge Jnr. (1920b, pl. 6, figs. 4-6). In the Roma area this species seems to be confined to the upper part of the Roma Formation.

Numerous, small, thin shelled scaphopods designated 'Dentalium' sp. are poorly characterised. They are rather like specimens of 'Dentalium' sp. reported from GAB 687 in the Jones Valley Member by Day (1963a), but it is difficult to say whether or not they are conspecific.

The specimens of Lingula aff. subovalis are similar in size, shape and ornament to those in GSQ collections from the uppermost part of the Blythesdale Formation of the Roma area.

They differ from L. subovalis Davidson (1852, pl. 1, figs. 29-30) from the Upper Greensand (Cenomanian) of England, in their stronger ornament. In South Australia Lingula was reported from the Santos Oodnadatta No. 1 well by Brunnschweiler (1959), where it occurred in the interval between sediments with Aptian fossils and those with Albian fossils ('Terebratella' beds of Glaessner and Parkin, 1958).

Rhizocorallium is represented by a single specimen, which is 530 mm. long and has a maximum width of 20 mm. The burrow is in fine-grained glauconitic sandstone and is parallel to the bedding. Veevers (1962) has reviewed the occurrence of this fossil in Australia. Most of the records are from sediments of Aptian age. Rhizocorallium has also been reported from probable Aptian sediments of the Laura basin by Woods (1963).

A number of equisetalean stems preserved in claystone are designated Equisetites sp. The stems show numerous nodes 1-1.5 mm. apart. Each node has several small free teeth. The form is much smaller than Equisetites cf. rajmahalensis figured by Walkom (1918, pl. 1, fig. 8) from Maryborough. Walkom's specimen was also associated with Aptian marine fossils.

In addition the collection contains a few scattered Inoceramus prisms, a fragmentary rhynchonelloid brachiopod, several decapod crustacea and a few cycloid fish scales.

Locality: GAB 1140: Photo pt. 211/12/5075 Hughenden. S. bank of Flinders Rivers where it turns from a southerly course to a westerly one, about 2 miles E.N.E. of the present Glendower Homestead. (m.r. 232407 Hughenden 1:250,000 sheet)

From a 1 ft. bed of glauconitic siltstone 8 ft. above base of section, and from black limestone concretions below this bed.

Horizon is approx. same stratigraphic level as that of GAB 1139.

Determinations:

Maccoyella reflecta (Moore)
Maccoyella corbiensis (Moore)
Pseudavicula anomala (Moore)
Panopea rugosa Moore
'Tellina' mariaeburiensis Eth.
Lima aff. randsi Eth. fil.
Camptonectes sp.
Mytilus sp.
Pholadamya sp.
Teredo sp.
Euspira eyrensis Findlay
Peratobelus oxys (Tenison-Woods)
Lingula cf. subovalis

Age: Aptian.

Remarks: This collection and that from GAB 1139 have many common species, and the two are clearly Aptian in age. Only 'Tellina' mariaeburiensis, Lima aff. randsi, Mytilus sp., Pholadamya sp. and Teredo sp. are not represented at GAB 1139.

The single specimen referred to 'Tellina' mariaeburiensis is similar to those reported by Day (1963b) from GAB 884 in the Doncaster Member of the Richmond 1:250,000 sheet area, but is better preserved.

Lima aff. randsi is represented by a right valve internal mould which has an ornament like that of the type of L. randsi (F. 1406 GSQ collection) figured by Etheridge Jnr (1892, pl. 21, fig. 13) from Maryborough. However, the present specimen is proportionately longer.

The single specimen of Mytilus sp. is not unlike that recorded from GAB 1137.

Pholadamya sp. is represented by a posteriorly incomplete, internal mould of closed valves which is ornamented with prominent radial and concentric ribs. It differs from P. terrareginae Etheridge Jnr (1902c) in shape, particularly that of the anterior end.

The collection also contains a 3½" x 2" block of fossil wood bored by Teredo. One tube shows a dome shaped anterior termination enclosing a small valve, which unfortunately, is now represented only as an internal mould. The tube is approx. ¾ ins. in diameter at the anterior termination. All tubes follow the grain of the wood. In size the tubes approach those referred to Teredo vastitas by Etheridge Jnr (1902c, pls. 34-35), but these are still larger (1"-1½" in diameter).

Lower Cretaceous (Aptian) fossils from Bott's Gorge Creek, Hughenden 1:250,000 sheet area

The fossils of this report were collected by R.W. Day (G.S.Q.) and R.R. Vine (B.M.R.) on 26th June, 1963.

Locality: GAB 1145: Photo pt. 110/10/5211 Hughenden. N. bank of Bett's Gorge Creek, ¾ mile N.N.W. of old Fairlight homestead (m.r. 196419 Hughenden 1:250,000 sheet). From black limestone concretions and glauconitic, clayey sandstone near base of section.

Doncaster Member.

Determinations:
- Pseudavicula anomala (Moore)
- Fissilunula clarkei (Moore)
- 'Cytherea' woodwardiana Hudleston
- 'Myacites' planus Moore
- Nucula sp.
- 'Actaeon' cf. hochstetteri (Moore)
- Peratobelus oxys (Tenison-Woods)
- Peratobelus selheimi (Tenison-Woods)

Age: Aptian.

Remarks: All species represented in this collection are known only from the Aptian Roma Formation and its equivalents.

Pseudavicula anomala is abundant, all specimens exhibiting the characteristic features of this widespread Aptian species, P. anomala has previously been reported from the Doncaster Member at GAB 870, 884, 1017 and 1036 (Richmond 1:250,000 sheet) (Day, 1963b) and at GAB 1136, 1137, 1139 and 1148 in the Hughenden 1:250,000 sheet area (this appendix).

The single right valve internal mould of Fissilunula clarkei has the typical shape of this Aptian species, which was reported by Day (1963a) from GAB 1117 in the type locality of the Doncaster Member (Richmond 1:250,000 sheet). In the Aptian sequence exposed in the valley of the Flinders River (Hughenden 1:250,000 sheet) the species was reported from GAB 1134, low in the sequence, and from GAB 1139 at the top (this appendix).

'Cytherea' woodwardiana is represented by a single right valve internal mould, which though larger, is similar in shape to those reported from GAB 1139 (this appendix).

An anteriorly incomplete internal and external mould of a left valve of 'Myacites' planus resembles better preserved specimens reported by Day (1963a) from GAB 870 and GAB 1115 in the Doncaster Member of the Richmond 1:250,000 sheet area.

Nucula sp., an elongately oval taxodont pelecypod is represented by an internal and external mould of a right valve, which is very similar to specimens reported from Aptian sediments at GAB 1137 and GAB 1139 (this appendix).

The small gastropod identified as 'Actaeon' cf. hochstetteri closely resembles specimens reported by Day (1963a) from the Doncaster Member of the Richmond 1:250,000 sheet area at GAB 872 and GAB 1017.

The Aptian belemnite Peratobelus oxys is represented by three well preserved specimens, which are similar to those recorded by Day (1963b) from GAB 1139 and GAB 1140, at the top of the Aptian sequence exposed in the valley of the Flinders River, Hughenden 1:250,000 sheet (this appendix).

Peratobelus selheimi is represented by a large phragmocone which is similar to the type of this species figured by Tenison-Woods (1883, pl. 7, fig. 1) from the Palmer River (Carpentaria Sub-basin). Specimens figured by Etheridge Jnr from the Flinders River near Hughenden (1892, pl. 35, figs. 10 and 11) and from the Lake Eyre basin of South Australia (1902a, pl. 7, figs. 16-17) are also similar. Woods (1961) recorded the species from the upper fauna of the Blackdown Formation of the Wrotham Park area. In the Roma area the species occurs in the higher fauna of the Roma Formation.

Lower Albian fossils from the Flinders River, on Glendower Station, Hughenden 1:250,000 sheet area

Locality: GAB 1138: Photo pt. 206/11W.C./5125 Hughenden. About ¼ mile south of Flinders River at GAB 1136 - 1137. (m.r. 236412, Hughenden 1:250,000 sheet). From claystone 40 - 50 ft. above highest Aptian fossils.

Collector: R.W. Day 15.6.63.

Determinations: Dimitobelus diptychus (McCoy)

Locality: GAB 1141: Photo pt. 211/12/5075 Hughenden. South bank of Flinders River where it turns from a southerly course to a westerly one, about 2 mile E.N.E. of the present Glendower homestead (m.r. 232407, Hughenden 1:250,000 sheet). From a 2 - 4 ft. siltstone horizon 40 - 50 ft. above GAB 1140.

Collector: R.W. Day 19/6/63.

Determinations: Dimitobelus diptychus (McCoy).

Locality: GAB 668: Photo pt. 14/12A/5107 Hughenden. East bank of Flinders River where it turns from a S.E. Course to a W. one about 1 mile downstream from the Prairie - Glentor road crossing (m.r. 228403, Hughenden 1:250,000 sheet).
From claystone. This horizon is probably above that of GAB 1138 and 1141.

Collectors: R.R. Vine 1962
R.W. Day 10/9/62 and 20/6/63

Determinations: Beudanticeras cf. flindersi (McCoy)
Aconeceras sp.
Aucellina hughendenensis (Eth.)
Inoceramus constrictus Eth. fil.
Inoceramus sp.
Camptonectes sp.
Nucula sp. ind.
Indet. pelecypod ? Cyrenopsis

Locality: GAB 1142: Photo pt. 212/12A/5107 Hughenden. South bank of Flinders River about $\frac{1}{4}$ mile downstream from GAB 668 (m.r. 227402 Hughenden 1:250,000 sheet).
In claystone. This horizon is about the same as that of GAB 668.

Collector: R.W. Day 20/6/63.

Determinations: Aucellina hughendenensis (Eth.)
Inoceramus sp.

Remarks: The association of the world wide Albian genus Beudanticeras Hitzel and the Barremian - Lower Albian genus Aconeceras Hyatt indicates a Lower Albian age.

Aconeceras sp. is represented by numerous small, rather crushed specimens, the largest of which is about 25 mm. in diameter. They have well developed, nonserrate keels and on ornament of fine, falcate striae, but preservation does not allow comparison with described species. Previous Australian occurrences recorded by Whitehouse (1926, 1927) and by Brunnschweiler (1959) have been confined to Aptian strata, although overseas the genus ranges from high in the Neocomian to the top of the Lower Albian.

The genus Beudanticeras is represented by two specimens only one of which is well preserved. The better preserved specimen is 110 mm. in diameter and has a suture line with narrow stemmed saddles and an ornament of fine lines. It closely resembles G.S.Q. specimens collected from the Flinders River at Hughenden, at the top of the Ranmoor Member. Judging from the figures and diagnosis of the type given by Whitehouse (1928, pl. 25, fig. 3), these are closest to Beudanticeras flindersi McCoy. "Beudanticeras characterizes Albian strata in many parts of the world, ranging from Alaska to Queensland and from Madagascar to Japan" (Casey, 1961, p. 145.)

Aucellina hughendenensis is abundant in the collection from G.A.B. 668; at G.A.B. 1142 it is represented by a single right valve. All specimens have the typical shape and ornament of this Australian Albian index species.

The crushed right valve of Inoceramus constrictus from G.A.B. 668 shows the quadrate shape and anterior sulcus seen in the type (F. 1316 G.S.Q. Colln.) figured by Etheridge Jnr (1901, pl. 3, fig. 6) from the Flinders River at Hughenden. This is a very readily identified species. This collection also contains a number of smaller specimens that are more erect than I. constrictus. Inoceramus sp. from G.A.B. 1142 is an incomplete specimen.

Camptonectes sp. from G.A.B. 668 is a small form, apparently distinguished from known Aptian species by the very prominent longitudinal ribs on the anterior auricle. Specific distinction in this group is difficult as specimens showing diagnostic features are rare.

The small, incomplete and rather crushed nuculid from G.A.B. 668 has strong concentric ornament on the ventral part and displays about six teeth behind the umbo. It is specifically indeterminate.

Collection G.A.B. 669 also includes several indeterminate, crushed pelecypods, the ornament of which suggests possible reference to Cyrenopsis.

Dimitobelus diptychus occurs in large numbers at G.A.B. 1138 and G.A.B. 1141. At both localities it occurs 40 - 50 ft. above the highest Aptian fossils reported (this appendix). They are the lowest Albian fossils found in the area. All are clavate and are flattened dorsally and ventrally. In every specimen the alveolar region has been exfoliated producing a pseudalveolus, while in several cases the apex has also undergone exfoliation. The stem region bears double lateral lines or grooves. Towards the alveolus the more ventral groove or line swings ventrally to take up a ventro-lateral position. The dorsal one continues without change in direction. There is a considerable variation in the degree of impression and development of these lines and grooves. In G.S.Q. collections similar specimens have been observed from the Flinders River near Hughenden. The specimen (F. 1369 G.S.Q. Colln.) collected by R.L. Jack from "Cambridge Downs Run, Flinders River, seven miles from Richmond Downs Station", and figured by Etheridge Jnr (1892, pl. 35, figs. 7 - 8) as Belemnites Canhami Tate (= Dimitobelus diptychus) is also similar, differing from the present specimen only in the weaker development of the double lateral lines. To my knowledge the type of Dimitobelus diptychus, Belemnitella diptycha McCoy (1867, p. 42), has not been figured. This specimen should be in the collections of the National Museum, Melbourne. It was collected by James Sutherland, the locality being given as "head of Flinders River". Daintree (1872) in company with Sutherland further localised this collection as "Hughenden Cattle-station about twenty miles upstream from Hughenden Head Station". The present specimens may be topotypes. As noted by Glaessner (1957, 1958) Peratobelus can be distinguished from Dimitobelus by its more or less cylindrical guard, and the presence of ventro-lateral grooves only,

double lateral lines being absent. Peratobelus is apparently restricted to Aptian strata. The range of Dimitobelus itself is uncertain. The view of Whitehouse (1924) that all species were Upper Albian in age requires modification. The New Zealand species cited by Whitehouse, Dimitobelus superstes (Hector), originally attributed a Lower Utatur age (Upper Albian-Lower Cenomanian) by Woods (1917), is listed by Wellman (1959) as an Arowhanan Stage (Coniacian) fossil. Furthermore the validity of the ? Aptian-Cenomanian genus Tetrabelus and the Upper Senonian genus Cheirobelus has been questioned by Glaessner (1957), who places Cheirobelus in the synonymy of Dimitobelus, and affords recognition to Tetrabelus only as a subgenus.

Lower Albian macro-fossils have not been reported from the Great Artesian Basin previously. The present evidence does not support the conclusions of Whitehouse (1926, 1928 b, 1955), who maintained there was a nonsequence involving the Lower Albian sub-stage. Its absence from previous records can be explained by collection failure and by the fact that Whitehouse uncritically assigned all his 'Tambo' fossils an Upper Albian age.

The affinities of the Lower Albian fauna are with 'Tambo' ones found higher in the Albian Artesian Basin sequence. Dimitobelus diptychus, Beudanticeras cf. flindersi and Inoceramus constrictus are also known from the top of the Ranmoor Member at Hughenden, while Aucellina hughendenensis occurs in the overlying Toolebuc and Allaru Members as well. The change from the immediately underlying Aptian 'Roma' fauna (this appendix) is abrupt, but is not reflected by any marked change in sedimentation.

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1964/39
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BUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS.

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Appendix E - Bore data

Part 1 - Winton Sheet area

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PROGRESS REPORT, 1963, ON THE GEOLOGY OF PART OF THE NORTH-EASTERN EROMANGA BASIN, QUEENSLAND.

by

R.R.Vine, D.J. Casey, and N.E.A.Johnson.

The information contained in this report has been obtained by the Department of National Development, as part of the policy of the Commonwealth Government, to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus without the permission in writing of the Director, Bureau of Mineral Resources, Geology and Geophysics.

APPENDIX E - TO RECORDS 1964/39.

BORE DATA

Information on all bores in the Winton, Muttaburra, Tangorin, Hughenden, and Charters Towers 1:250,000 Sheet areas, collected from the records of the Irrigation and Water Supply Commission, Brisbane, and from property owners and managers, is listed in this Appendix.

The Appendix is bound in four parts, as follows: -

Part 1 : Winton Sheet area
Part 2 : Muttaburra Sheet area
Part 3 : Tangorin Sheet area
Part 4 : Hughenden and Charters Towers Sheet areas.

Within each sheet area the order of listing is numerical by the registered numbers allocated to water bores by the Irrigation and Water Supply Commission.

Abbreviations used in the Appendix are listed on Page 2 of each part. To save needless repetition of column headings throughout the Appendix, the columns in the body of the Appendix are lettered; a specimen bore sheet giving the full headings and the appropriate letter is given on Page 3 of each part.

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ABBREVIATIONS

Water

B	Brackish
F	Fresh
G	Good
P	Potable
S	Salty, saline
Su	Surface

Drillers Logs

Ba.	basalt
Bd.	bed
Bk.	black
Bl.	blue
Bld.	boulder
Bnd.	band
Br.	brown
Carb.	carbonaceous carboniferous
Choc.	chocolate
Cl.	clay
Cong.	conglomerate
Cs.	coarse
Cv.	cave
Cvg.	caving
Di.	diorite
Dk.	dark
F.	fine
Fm.	formation
G.	grained
Gn.	green
Gr.	granite
Gvl.	gravel
Gy.	grey
Hd.	hard
Ind.	indurated
Lst.	limestone
Lt.	light
Md.	mud
Med.	medium
P.cl.	pipe clay
Pk.	pink
Qtz.	quartz
Qtzite.	quartzite
Rd.	red
Rk.	rock
Rtn.	rotten
S.	sand
Sch.	schist
Sh.	shale
Shy.	shaly
Si.	silt
Sk.	streak
Sky.	streaky
Sm.	seam
S.rk.	sandrock
Sst.	sandstone
St.	stone
Stky.	sticky
Su.	surface
Sy.	sandy
T.D.	total depth
V.	very
W.	with
Wd.	weathered
Wh.	white
Y.	yellow

Reg. No. Name PROPERTY	Position (Long. and Lat.)	Elevation Driller Year completed	Latest info. (year) S.W.L. Pump depth Supply (g.p.d.)	WATER (original record) Struck (feet)	Rose to (feet)	Supply (g.p.d.)	Quality	Temp ^{o}F	DRILLERS LOG
A	B	C	D	E	F	G	H	J	K

A	B	C	D	E	F	G	H	J	K
105 CRONULLA	143° 46' 22° 35'	— 1886							T.D. 800
151 Stock Route WINLERMERE	142° 51' 22° 23'	— 1887	Abd.						T.D. 203
407 WINTON	143° 2' 22° 24'	608 1895		2960 3410	Surface	700,000			0 - 372 Sh. - 2500 Bl. sh. - 890 Sst.& sh. - 3020 Gy. sh. - 920 Sh. - 3027 Hd. sst. -1095 Sst. & sh. - 3187 Stiff sl -1135 Sh. - 3261 Sks of l -1215 Sh. & cl. ws. - 3510 Yshw.bnd -1454 Bl. & whcl. - 4010 Wh. sst. -1639 Bl. cl. s. & sh. in bnds. -1923 Bl. cl.
408 WINTON	143° 2' 22° 24'	— 1883							T.D. 357
410 Stock Route TEVIOT	No trace	— 1907	Abd.						T.D. 303
409 — WINTON	143°2' 22°24'	- 1883							T.D. 357

A	B	C	D	E	F	G	H	J	K
1320 AYRSHIRE	142°40' 22°1'	620 1897		2880	950				0-500 Dk. Sh. -550 Vhdsh. -650 Dkcvgsh. -780 Hdsh. -900 Sh. -1350 Dk. Sh. -1365 Sh.w Shells & Silica crystals -1600 Sh. -1650 Hdbksst. -1800 Lt. Sh. + -1808 Bldiorite -1911 Bl. diomite -2025 Ltsh. -2050 Hddiorite -2450 Cvgshvhdsk -2462 Hdst. -3910 Blsh. -4438 Vhdvhsh. + -1900 Lt.sh.
1323 TEVIOT	142° 450' 22° 14'	— 1912	1963 280						T.D445
1324 TEVIOT BONNIE DOWNS	142° 53' 22° 16'	— — —							T.D.462
1329 LEESON	142° 45' 22° 11'	- 1919	1963 240						T.D.300
1499 - BLADENSBURG	142° 49' 22° 41'	- 1909							T.D.37
1500 - GUNBARREL GOLEBURRA	142° 40' 22° 31'	- 1910							T.D.404
1501 - CARISBROOKE	142° 32' 22° 40'	- 1910							T.D.965

A	B	C	D	E	F	G	H	J	K
1506 - BLADENSBURG	142° 41' 22° 40'	- - 1911							T.D.309
1508 - ATHELSTANE	142° 56' 22° 47'	- 1911							T.D.609
1509 No.1 ATHELSTANE	142° 57' 22° 51'	- 1911							T.D.200
1510 - ATHELSTANE	142° 57' 22° 48'	= 1915							
1511 - BLADENSBURG	143° 2' 22° 32'	649 1911							T.D.496
1512 - SURPRISE	142° 52' 22° 34'	= 1912			487	90			T.D.500
1513 - BLADENSBURG	142° 39' 22° 41'	= 1912							T.D.165

A	B	C	D	E	E	E	H	J	K
1514 GALLIPOLI	142° 35' 22° 39'	= 1912	Abd						T.D.468
1516 No.16 BLADENSBURG	142° 58' 22' 43'	= 1912							T.D.331
1517 - BLADENSBURG	142° 43' 22° 37'	- 1913							T.D.622
1519 No.19 BLADENSBURG	142° 43' 22° 41'	= 1914							T.D.246
1520 - BLADENSBURG	143° 10' 22° 38'	751 1914							T.D.610
1521 - BLADENSBURG	142° 49' 22° 42'	= 1915							T.D.473

A	B	C	D	E	F	G	H	J	K
1522 BLADENSBURG	143°12' 22°43'	= 1917							T.D.784
1523 BLADENSBURG	142°53' 22'42'	= 1913							T.D.493
1524 BLADENSBURG	142°41' 22°40'	= =							T.D.130
1525 BLADENSBURG	142°43' 22°42'	- - -							T.D.126

A	B	C	D	E	F	G	H	J	K
1526 - THYMANIA	142° 38' 22° 47'	— — —	Abd.						T.D. 300
1527 - COLANE	142° 47' 22° 28'	— — 1912							T.D. 508
1528 - GOOLMA	142° 36' 22° 24'	— — 1914							T.D. 441
1529 - COLANE	142° 40' 22° 26'	- - -							T.D. 200
2238 - CORK	142° 33' 22° 50'	- - 1914							T.D. 117
2243 - CORK	142° 34' 22° 52'	- - 1916							T.D.485
2250 - THYMANIA	142° 5' 22° 45'	- - -							T.D. 70
2349 No. 2 DARR RIVER DOWNS	143° 58' 22° 43'	- - -		700	598	35,000		100°	0 - 14 Soil -920 Brsh.W.Layers of Sst. -1000 Gn.gy.sst. Later deepened to 3899

A	B	C	D	E	F	G	H	J	K
2350 HOUSE MORAGO	143° 51' 22° 37'	844 - -		2500 3210) 3650)	Sub surface	45,000 285,580 560,000			0-1000 Br.sh.w.layers of sst. -1330 Bl.sh. -1575 Soft bl.sh. -1940 Hd. bl. sh. -2250 Bl.sh.w.layers of sst. -2450 Br.sh. & gn.sst. -2650 Hd.sst. -3149 Wh.cl. & s coal sm. -3550 Wh.sst.
2351 No. 4 DARR RIVER DOWNS	143° 52' 22° 52'	835 - -		2480 2560) 3320) 4000)	520 Surface	148540			0- 900 Bl.sh.w.layers of sst.& wh.sh. -1060 Bl.sh. -2092 Sh. -2480 Br.sst. -2980 Layers of sst. & pcl. -3190 Layers of sh. & sst. -3235 Vhd.cement -3514 Sst. -3660 Br.sst. -3743 Fwh.sst. -3770 Sh. -4000 Sst.w.sks. of qtz. -4006 Vhd.qtzite
2352 - BIRDWOOD DOWNS	143° 50' 22° 29'	885 - 1912							Gasin Water T.D. 3640
2354 - BUDE	143° 51' 22° 44'	775 - -							T.D. 430
2355 Bondo ROSEHEARTY	143° 49' 22° 4'	787 - -							T.D. 460
2356 - WESTWARD HO	143° 44' 22° 44'	782 - -							T.D. 430

A	B	C	D	E	F	G	H	J	K
2357 – GLANAGH	143° 57' 22° 40'	844 – –							T.D. 448
2358 – GLANAGH	143° 56' 22° 39'	833 – 1916							T.D. 400
2359 – WESTWARD HO	143° 43' 22° 41'	821 – –							T.D. 470
2360 Drylands LLEWELLYN	143° 54' 22° 45'	788 – –							T.D. 430
2364 – ROSEHEARTY	143° 46' 22° 39'	781 – –							T.D. 130
2365 – BUDE	143° 48' 22° 47	785 – 1914							T.D. 500
2366 – BUDE	143° 48' 22° 47'	805 – 1914							T.D. 600
2369 – BILDWOOD DOWNS	143° 50' 22° 30'	903 – 1910							T.D. 300
2368 – CRONULLA	143° 49' 22° 36'	852 – 1915							T.D. 550

A	B	C	D	E	F	G	H	J	K
2369	143° 49'	935							T.D. 550
–		–							
BIRDWOOD DOWNS	22° 23'	1913							
2370	143° 46'	894							T.D. 550
–		–							
CULLADAR	22° 28'	1913							
2371	143° 46'	820							T.D. 500
–		–							
CRONULLA	22° 35'	–							
2373	143° 48'	830							T.D. 450
–		–							
BIRDWOOD DOWNS	22° 32'	–							
2374	143° 47'	936							T.D. 487
–		–							
CULLADAR	22° 24'	–							
2377	143° 43'	898							T.D. 530
–		–							
PIALAWAY	22° 26'	1922							
2378	143° 50'	855							T.D. 798
–		–							
PIALAWAY	22° 35'	–							
2379	143° 43'	851							T.D. 320
–		–							
PIALAWAY	22° 29'	–							
2380	143° 43'	836							T.D. 450
–		–							
PIALAWAY	22° 31'	1912							

A	B	C	D	E	F	G	H	J	K
2381 – FAIRYMEAD	No trace	812 – 1912	Abd						T.D. 602
2382 – PIALAWAY	143° 40' 22° 26'	860 – 1912							T.D. 534
2383 No. 1 HEREWARD	143° 51' 22° 53'	780 – 1912							T.D. 400
2384 – HEREWARD	143° 53' 22° 56'	830 W. Sainsbury 1912		168) 320) 420) 480)	160				T.D. 800
2385 No. 3 HEREWARD	143° 48' 22° 54'	– W. Sainsbury 1912		90) 370) 433) 450)	80				T.D. 555
2386 – HEREWARD	143° 46' 22° 52'	733 – 1913	Abd	80 360 480 620 710 800 835 868 910	80) 360) 480) 620)	Soak			0 – 480 No infor. – 515 Gy.sy.sh. – 660 Dk.gy.sh. – 710 St ky.ssh. – 790 Sy.sh. – 805 Ssh. – 910 Sy.sh. – 916 Dk.gy.sh. Traces of oil
2387 No. 3 HEREWARD	143° 48' 22° 50'	778 – 1913							T.D. 423

A	B	C	D	E	F	G	H	J	K	
2486	142° 35'	745	1963	2980	40				0- 50 No.info.	-3283 Sst.
Capo Goleburra	22° 31'	I.B.C.	72	3093)					- 175 Br.sh.	- 3461 Hd.rk.
JARVISFIELD		1901	-	3203)	Surface	180,000			-2695 Cvg.sh.	-3687 Sst. & hd.sk
			-	3687)					-3001 Sst.	-3692 Hd.rk.
									-3045 P.cl.	

A	B	C	D	E	F	G	H	J	K
2491	142°31'	-							T.D. 545
-	22°7'	-							
LOVELLE DOWNS		1915							
2495		-		330					380-408 Coal & sh.
-		-		558					T.D.620
AMELIA DOWNS	No trace	1913	Abd.	574					
2496	142°34'	-							T.D.610
Stock Route	22°17'	-							
ELDERSLIE		-							
2628	143°34'	-		3030)					0-27 Y.cl. -3030 Gy.sh.
No.1	23°00'	-		3260)	Surface 200,000.				- 94 Y.sh.& Lst. -3536 Choc.sh.
EVESHAM		1910		4120)					-103 Felspar -3622 Stky. sh.
									-1616 Gy.sh. -3898 Hd.rk.& cl.
									-2290 Bl.sh. -3908 Sst.
									-2361 Bk.sh. -4000 Stky.rd.sh.
									-2392 Bl.sh. -4065 Choc.sh.
									-4150 S.rk.
									Smell of kero and gas present in flow.
2631		-							T.D. 320
-									
TANDARA	No trace	1908	Abd.						
2632	No trace	-							T.D. 325
-									
MAHRIGONG		1909	Abd.						

A	B	C	D	E	F	G	H	J	K
2633 - MAIRIGONG	No trace	- - 1909	Abd						T.D. 368
2634 - MAIRIGONG	153°51' 22°17'	- - 1909							T.D. 350
2635 - MAIRIGONG	143°47' 22°20'	- - 1909							T.D. 400
2636 - MAIRIGONG	143°44' 22°13'	- - 1909							T.D. 371
2638 Offender TANDARA	143°47' 22°56'	- - 1909							T.D. 340
2639 - MERRIWEN	143°41' 22°56'	- - 1915							T.D. 414
2640 - MERRIWEN	No trace	- - 1914	Abd						T.D. 703
2641 - TANDARA	No trace	702 - 1914	Abd						T.D. 554

A	B	C	D	E	F	G	H	J	K
2642 – MERRIWEN	143°42' 22°53'	– – 1915							T.D. 546
2643 –	143°47' 22°59'	873 – 1914		280 520	106				317-406 Waterbearing s. rk. - 600 Gysh. in bottom
2647 – MERRIWEN	No trace	– – 1914	Abd						T.D. 556
2643 – MT. EUSTON	143°23' 22°56'	– – 1914							T.D. 600
2649 No. 6 RIMBANDA	143°43' 22°51'	715 – 1912							T.D. 360
2650 No. 7 MERRIWEN	143°40' 22°53'	806 – 1914							T.D. 308

A	B	C	D	E	F	G	H	J	K
2971 No. 2 HIGHFIELDS	143°17' 22°57'	1158 H. BODE 1908	Abd						0-495 No info. -575 Bk. Sst.
2972 No. 1 HIGHFIELDS	143°19' 22°58'	— — 1913		450 587) 624) 775)	450 197	Soak			0-5 Soil -265 Sst. & Ycl. -445 Gy. Ssh. -450 Bks. -620 Gy. Ssh. -770 Stky. dk.br.sh. -775 Wh. S. -838 Dk. br. Sh.
3057 Triton ENRYB DOWNS	143°27' 22°4'	—		200 393 490					0-7Ys. -28Ysst. -38 Whba. -48 Y. Ycl. -65 Drifts & Clbais -76 Drifts & hdgyrk. -90 Blgy. Sh. -130 Blstky. Sh. -150 Llsy. Sh. -166 Grsy. Sh. -180 Gysysh. -200 Sysh. -220 Blsysh. -241 Blsh. -258 Bksh. -292 Gy. & blsy. Sh. -330 Bksh. cug. -365 Dk. Sysh. -390 Dk. Slippery Back. -413 Sysh. -480 Sysh. -496 Blsh. & coal
3173 BERYL	143°36' 22°23'	849 1914		469	91	13			T.D. 469 Bottom in Sst.

A	B	C	D	E	F	G	H	J	K
3181 BERYL	143°53' 22°24'	889 1914							T.D. 419

A	B	C	D	E	F	G	H	J	K
3176 BERYL	Notrace	826 =	Abd						T.D.235
3177 - BERYL	143°54' 22°19'	858 1910							T.D.335
3178 BERYL	143°53' 22°23'	905 =							T.D.400
3180 ROM BERYL	143°53' 22°20'	884 1914							T.D.386
3182 OLD ORIEL BERYL	143°58' 22°23'	840 1914							T.D.531
3183 - BERYL	143°56' 22°23'	859 1914							T.D.140
3184 3V BERYL	143°54' 22°19'	826 1902							T.D.100
3185 - BERYL	No Trace	863 1916	Abd	151 162	96				T.D.400
3188 - LILLIANFELS	143°59' 22°27'	883 1938	Abd						T.D.360

A	B	C	D	E	F	G	H	J	K
3189 - LILLIANFELS	143°54' 22°27'	902 1910							T.D.300
3190 - LILLIANFELS	143°54' 22°33'	930 - 1910	Abd						T.D.560
3191 - LILLIANFELS	143°56' 22°34'	947 1912		325	121				0-14 Cl. -717 Cl.& Lst. -93 Br Sst -109 Gy. Sst. -129 Br. & Bf. Sh. -164 Hd. Sh. -175 Gn. Sst. -219 Sh. -262 Sst. -325 Sst. & Br. Sh
3192 - LILLIANFELS	143°54' 22°30'	962 1912							T.D.370
3193 - LILLIANFELS	143°55' 22°30'	958 1912							T.D.480
3194 - LILLIANFELS	143°52' 22°25'	931 1916							T.D.366
3195 - LILLIANFELS	143°57' 22°29'	930 1916							T.D.350

A	B	C	D	E	F	G	H	J	K
3196 LILLIANFELS	143° 58' 22° 33'	– 1913			150	900	B		T.D. 546 0-500 No info. -541 Sst. -546 Sh.
3357 CORUNNA	143° 53' 22° 8'	887 1910	Abd						T.D.295
3358 ESKDALE	143° 56' 22° 9'	837 1910							T.D. 272
3359 TARRAGONA	No trace	802 1912	Abd						T.D.461
3360 – TARRAGONA	143° 58' 22° 4'	857 1911							T.D.320
3361 – ADIREL DOWNS	No trace	846 1911	Abd						T.D.400
3365 MOIRA CORUNNA	143° 53' 22° 6'	827 – 1912							T.D. 263

A	B	C	D	E	F	G	H	J	K
3366 – ADIREL DOWNS	143° 53' 22° 2'	893 1912							T.D. 324
3367 – ESKDALE	143° 59' 22° 12'	902 1912							T.D. 290
3368 – ESKDALE	143° 56' 22' 12'	891 1912							T.D. 253
3372 – LUCELLA	143° 6' 22° 11'	906 1913	Abd						T.D. 285
3377 – EYRIEWALD	143° 45' 22° 00'	883 1913							T.D. 382

A	B	C	D	E	F	G	H	J	K
3378 – BONNIE DOWNS	143° 51' 22° 6'	837 – 1911	Abd						T.D. 79
3379 – BONNIE DOWNS	143° 45' 22° 6'	916 – 1913							T.D. 300
3380 – BONNIE DOWNS	143° 3' 22° 8'	= 1922							T.D. 300
3381 – BONNIE DOWNS	143° 49' 22° 4'	– 1922	Abd						T.D. 349
3382 – GLENULLIN	143° 55' 22° 19'	878 – 1910							T.D. 237
3383 – MAHRIGONG	143° 44' 22° 17'	869 – 1910							T.D. 300
3384 – MAHRIGONG	No trace	885 – 1910	Abd						T.D. 300

A	B	C	D	E	F	G	H	J	K
3385 MAHRIGONG	143° 43' 22° 17'	832 1910							T.D. 254
3386	143° 46' 22° 17'	879 1910							T.D. 280
3387 MAHRIGONG	No trace	842 1910	Abd						T.D. 270
3388 MAHRIGONG	143° 47' 22° 15'	907 1910							T.D. 348
3389 LUCELLA	143° 47' 22° 11'	908 1914							T.D. 300
3390 MAHRIGONG	143° 54' 22° 14'	916 1915							T.D. 453
3571 MALBOONA	143° 40' 22° 2'	958 1911							T.D. 430
3572 MALBOONA	143° 42' 22° 7'	950 1911							T.D. 400

A	B	C	D	E	F	G	H	J	K
3573 MALBOONA	145° 43' 22° 4'	948 1911	Abd						T.D. 410
3574 MALBOONA	143° 38' 22° 6'	910 1911	Abd						T.D. 350
3835 STRANRAER	143° 53' 22° 51'	755 1908							T.D. 315
3836 STRANRAER	143° 53' 22° 51'	755 1908							T.D. 315
3839 KELLYS CREEK	143° 42' 22° 48'	743 1909							T.D. 315
3840 KELLYS CREEK	143° 42' 22° 48'	744 1909							T.D. 315
3841 KELLYS CREEK	143° 42' 22° 48'	744 1909							T.D. 315

A	B	C	D	E	F	G	H	J	K
3842 House PARALOS PARK	143° 39' 22° 39'	857 1912		300 600 1200 3040 3130 3880	170 Surface	60,000			0-4 Soil -857 Ysh. -130 Bksh. -360 Grysnd w.cl. -525 S. mixed W.C.l -660 Bksh. wlayers of rk. -900 Cl. & S. -2430 Bk. & gysh. -2440 Gns. -2606 Bksh. -2647 Gns. -2740 Bksh. -2920 Gysh. -2950 Cl. s. -2985 Wh. Sh. -3035 Pcl. & S. -3085 Srk. -3125 Pcl. & s. -3170 Srk. -3300 Pcl. s. -3387 Br. & chcc. s -3654 Pcl. & s. -3724 Br. & chocsh -3850 Smixed w.p. -3880 Srk. -4071 Br. qtz. Crystalline rk.
3843 – DRUMLION	143° 39' 22° 36'	873 1914							T.D. 825
3844 – STRANRAER	143° 53' 22° 51'	755 C.Watson 1914		494 500 630		24,000			T.D. 640
3845 – KELLY CREEK	143° 42' 22° 48'	743 – 1914							T.D. 630
3846 – STRANRAER	No trace	776 1914		Abd					T.D. 630

A	B	C	D	E	F	G	H	J		K
4094 – VIOLET	143° 29' 22° 18'	757 – 1912		175 400 2901 3090	175 400 Surface	Soak 550,000	S		0-175 Srk -396 Sh. -1084 Hdsh. -1200 Strysh. -1350 Sh. -2173 Sh. -2240 Sh.& brrr -2291 Brrr -2340 Rd.& brrm.	-2420 Gy.Sh. -2454 Grnrk. -2520 Hdrk & Sh -2577 Porous rk -2600 Sh. -2630 Sh.& rk. -2680 Soft rk.& hdrok. -2901 Sh. -3090 S.& Srk.
4095 – VIOLET	143° 29' 22° 18'	757 – 1911	Abd						T.D. 1350	
4096 – GLENCOE	143° 17' 22° 10'	767 – 1914	1963 25 –	450 900 1300 3600 3750	450 900 1300 Surface	Soak	F B		0-150 Yrk. -3250 Sh.	-3750 Srk. -3837 Sh.
4097 – KITTYVALE	143° 14' 22° 9'	963 – 1905							T.D. 325	
4098 – DAINTREE	143° 20' 22° 11'	763 1906	Abd						T.D. 360	

A	B	C	D	E	F	G	H	J	K
4099 - DAINTREE	No trace	675 - 1906	Abd						T.D. 294
4100 - LOCH FARGUS	143° 30' 22° 14'	708 - 1906	Abd						T.D. 300
4103 - RYB	No trace	813 - 1906	Abd						T.D. 300
4105 - DAINTREE	143° 22' 22° 14'	670 - 1907							T.D. 255
4106 - OONDOOROO	143° 9' 22° 12'	735 - 1908							T.D. 225
4107 - GLENCOE	143° 23' 22° 9'	779 - 1910	Abd						T.D. 331
4108 - CAMARA	No trace	819 - 1912	Abd						T.D. 356

A	B	C	D	E	F	G	H	J	K
4109 - CAMARA	143° 7' 22° 10'	758 1912							T.D. 362
4110 - DAINTREE	143° 24' 22° 11'	691 - 1912							T.D. 527
4113 LNRYB DOWNS	143° 35' 22° 2'	855 1912							T.D. 434
4119 VYORA	No trace	= 1909	Abd						T.D. 304
4121 RANGELANDS	143° 4' 22° 19'	765 1912	Abd						T.D. 450

A	B	C	D	E	F	G	H	J	K
4122 RANGELANDS	143°00' 22°15'	822 1914							T.D. 1012
4123 RANGELANDS	143°6' 22°12'	852 1912							
4124 RANGELANDS	143°6' 22°19'	776 1914							T.D. 400
4125 RANGELANDS	143°3' 22°17'	883 1915							T.D. 560
4127 ALDINGHAM	143°19' 22°15'	650 1909							T.D. 330
4128 ALDINGHAM	143°18' 22°16'	1909							T.D. 325
4129 ALDINGHAM	143°20' 22°17'	687 1912							T.D. 500

A	B	C	D	E	F	G	H	J	K
4130 ALDINGHAM	143°20' 22°17'	623 1912							T.D.410
4131 ALDINGHAM	143°15' 22°16'	685 1914							T.D. 310
4132 ALDINGHAM	143°13' 22°17'	- 1907							T.D. 140
4133 CAMARA	143°7' 22°9'	777 -							T.D. 408
4728 LORRAINE	No trace	- 1889	Aba						T.D. 1800

A	B	C	D	E	F	G	H	J	K
4729	143°33'	847		2800	Surface	300,000			0- 100 No info.
–		–		2981					- 260 Blsh.
LORRAINE	22°35'	1900		3119					- 337 Srk.
				3418					- 396 Gysh.
									- 519 Sst.
									- 658 Gysh.
									- 754 Srk.
									- 829 Gysh.
									- 940 Srk.
									-1022 Es.
									-1062 Blsh. & fs.
									-1107 Blsh.
									-1158 Srk.
									-1370 Blsh.
									-1400 Hdsh.
									-1427 Vhdrk.
									-1693 Blsh.
									-1732 Vhdgysh.
									-1770 Bl. & pebbly Sh.
									-2063 Blsh.
									-2112 Gysh.
									-2140 Blsh.
									-2193 Gysh.
									-2565 Blsh.
									-2607 Vhdgysh.
									-2780 Blsh.
									-2800 Srk & Chocsh.
									-2850 Chocsh.
									-2981 Srk.
									-3063 Gysh.
									-3119 S. & Gysh.
									-3159 Srk.
									-3362 Gysh.
									-3418 Srk.
									-3499 Srk. & Gysh.
									-3661 Blsh.
									-3795 Gysh.
									-4000 Srk.

A	B	C	D	E	F	G	H	J	K
4730 DAHLIA	143° 38' 22° 22'	871 1902		250 2874 2971 3582 3651 3701 3795	250 Surface	Soak 350,000			0-73 Nointo -206 Blsh. & hdrk. -311 Blsh. -435 Gysh. -565 Srk. & gysh. -682 Hdgys. -816 Blsh. & gns. -911 Blsh. & hdrk. -1015 Gns. & sh. -1040 Hdrkblsh. -1090 Hdbldsblsh. -1146 Hds. & blsh. -1200 Vhdgysh. -2044 Blsh. -207° Chocsh. -2109 Eksh. -2149 Chocsh. -2214 Gysh. -2240 Blsh. -2274 Gysh. -2338 Blshsks. of gns. -2537 Blsh. -2765 Blsh. -2800 Bl & Choc. sh. -2820 Srk. -2846 Chocsh. -2874 Srk. -2904 Cement & sh. -2935 Pcl. -2971 Srk. -3044 Hdrk. -3120 Choc. Sh. & s. -3180 Hdrk. & lime rk. -3374 Sysh. -3400 Vhdrk. -3425 Gysh. -3460 Hdrk. -3660 Hdsrk. -3795 Soft sst.
4731 LORRAINE	No trace	- 1908	Abd						T.D. 300
4732 LORRAINE	No trace	- 1909	Abd						T.D. 470
4733 LORRAINE	No trace	735 1910	Abd						T.D. 410

A	B	C	D	E	F	G	H	J		K
4734 VINDEX	143° 23' 22° 34'	=	Abd						T.D. 400	
4735 No.5 VINDEX	143° 21' 22° 37'	744 1942							T.D. 460	
4736 VINDEX	No trace	828 =	Abd						T.D. 412	
4738 WANDO	143° 24' 22° 34'	703 1911							T.D. 394	
4739 - NEWLANDS	No trace	=	Abd							
4740 VINDEX	143° 19' 22° 39'	766 =							T.D. 440	
4741 - WINBAR	143° 16' 22° 41'	=							T.D. 509	

A	B	C	D	E	F	G	H	J	K
4742 VIOLET	No trace	=	Abd	490	131	10,000	B		T.D. 510
4743 LORRAINE	No trace	=	Abd						T.D. 500
4744 VINDEX	143° 21' 22° 41'	864 1912	=						T.D. 501
4745 LORRAINE	143° 34' 22° 31'	833 1914							T.D. 597
4746 VINDEX	143° 19' 22° 36'	757 1914							T.D. 313
4747 LORRAINE	No Trace	744 1914	Abd						T.D. 600
4748 LORRAINE	143° 27' 22° 30'	- 1914							T.D. 600
4749 No.3 VINDEX	143° 22' 22° 39'	784 1915							T.D. 510

A	B	C	D	E	E	G	H	J	K
4750 – FAIRYMEAD	143° 37' 22° 24'	791 – 1915						T.D. 604	
4752 – LORRAINE	143° 28' 22° 39'	– 1918						T.D. 510	
4753 – VINDEX	143° 22' 22° 35'	– 1922						T.D. 804	
4754 – LORRAINE	143° 29' 22° 36'	763 – 1923						T.D. 673	
4757 – KYWOND	143° 36' 22° 17'	761 – 1915						T.D. 445	
4758 – DAHLIA	143° 42' 22° 12'	820 – 1914	Abd					T.D. 382	
4759 – ERINAGH	143° 38' 22° 11'	783 – 1914						T.D. 383	

A	B	C	D	E	F	G	H	J		K
4760 – ERINAGH	143° 37' 22° 11'	– 1915							T.D. 300	
4761 – BELMONT	143° 28' 22° 8'	775 1906							T.D. 280	
4762 – BELMONT	143° 33' 22° 10'	799 W North 1949		566	97	6,600			0-269 No info. -291 Sst. -294 Whsrk. -323 Gysh. -325 Hdsrk. -351 Gysst. -369 Brsh.	-394 Brpug. -441 Brsh. -485 Gysh. -522 Gypugsh. -529 Brsh. -532 Gypugsh. -563 Brsh. -570 Softsst. -600 Gypugsh.
4763 – BELMONT	143° 26' 22° 7'	765 1912							T.D. 214	
4764 – BELMONT	143° 30' 22° 5'	807 – 1912							T.D. 327	
4765 Well BELMONT	143° 25' 22° 8'	725 =							T.D. 248	
4766 – APSLEY DOWNS	143° 17' 22° 27'	672 – 1910							T.D. 352	

A	B	C	D	E	F	G	H	J	K	K
4767 APSLEY DOWNS	143° 18' 22° 29'	651 1912								T.D. 445
4768 APSLEY DOWNS	143° 21' 22° 23'	715 1909								T.D. 300
4769 APSLEY DOWNS	143° 20' 22° 26'	- 1911								T.D. 396
4770 APSLEY DOWNS	143° 20' 22° 26'	691 1911								T.D. 396
4771 APSLEY DOWNS	143° 15' 22° 24'	662 1911								T.D. 396
4772 APSLEY DOWNS	143° 14' 22° 23'	670 1911								T.D. 384
4773 Stanley APSLEY DOWNS	143° 16' 22° 32'	705 1912								T.D. 540
4774 LESWALT	143° 23' 22° 26'	679 1911								T.D. 400

A	B	C	D	E	F	G	H	J	K
4775 LESWALT	No trace	722	Abd						T.D. 315
4776 LESWALT	143° 25' 22° 26'	695							T.D. 300
4777 LESWALT	No trace	752	Abd						T.D. 600
4778 MT LANDSBOROUGH	143° 13' 22° 36'	1914							T.D. 500
4779 MT.LANDSBOROUGH	143° 13' 22° 38'	1914	Abd						T.D. 552
4780 MT.LANDSBOROUGH	143° 11' 22° 36'	1914	Abd						T.D. 486
4781 VINDEX	143° 20' 22° 34'	1914	Abd						T.D. 625
4932 RANGELANDS	142° 59' 22° 10'	1912							T.D. 425

A	B	C	D	E	F	G	H	J	K
5049 Rimband HARTREE	143° 49' 22° 54'	- 1936		120 175 315 460 530 550 580 630	120 175 315 78	Soak 15120			0-3 Su. Soil -5C Sy. Soil -120 Dk. gy. stkysh. -135 Gysh. -210 Dkgysh. -258 Gysh. -395 Sysh. -456 Dkgysh. -460 Rk. -500 Gystrysh. -530 Gysysh. -540 S. -550 Stkysh. -632 Gysysh. -662 Stkygysh.
5116 Nadjayamber WINDERMERE	142° 51' 22° 23'	- L. Blackwell 1936	Abd	462					0-11 Sst. -41 Whpcl. -73 Blcl. -106 Ycl. -160 Blsh. -166 Gns. -207 Gysh. -214 Hdwhrk. -260 Brsh. -331 Gysh. -343 Bkshcoal -355 Gysh. -410 Pcl. & S. -440 Brsh. -449 Hdgnrk. -461 Pcls. -465 Gnrk. -500 Lcl. & s. -514 Choc. Sh. -544 Gns. -645 Gysh. -725 Iksh. -756 Choc. Sh. -793 Bk. Sh. -816 Bk. slipperyback -848 Sysh. -880 Gnsst. -895 Brsh. -963 Pcl. & s. -1012 Bksh. & sysh. -1022 Sysh. -1032 Gnrk. -1091 Pcl. & s. -1096 Brsh.

A	B	C	D	E	F	G	H	J		K
5122 Stock Route APSLEY	143° 13' 22° 26'	- 1936		125 372 640	125 372 135	Soak 10,500			0-4 Bk soil -6 Rtn sst. -16 Hd sst. -71 Ycl. -125 Bl sh. -127 Gyrk. -141 Bl sh. -226 Syb l sh. -230 Bl sh. -232 Gyrk hd. -256 Brsh. -266 Gysh. -286 Sypcl. -291 Hdgnrk.	-311 Brsh. -313 Gyrk. -330 Pcl. & s. -334 Gy.rk.s. -348 Pcl. & s. -350 Bkrk. -412 Brsh. -475 Choc shw coal sks. -477 Greasy gysh. -587 Sysh. -615 Pcl. & s. -640 Sysh. -656 Gn sst. -660 Sypcl. -669 Gn sst. -679 Sypcl. -680 Bkrk. -695 Bksh.
5123 Stock Route BONNIE DOON	142° 56' 22° 15'	- 1936		215 350 470	215 350 190	Soak 12600	S		0-3 Soil -85 Acl. -180 Bl sh. -190 Rk. -211 Gysh. -213 Rk. -230 Srk. -275 Sysh. -276 Rk. -346 Gysh.	-351 Sst. -353 Rk. -429 Gysh. -469 Sysh. -470 Rk. -506 Gns. -508 Rk. -526 Gysh. -536 Dk sh.
5137 NEWLANDS	No trace	- 1936	Abd						T.D. 1000	

A	B	C	D	E	E	E	H	J	K
5143 STRATHFILLAN	142° 49' 22° 6'	- L Blackwell 1936		589 610				0-9 Sst. -132 Ycl. -142 Blsh. -157 Bksh. -225 Slippery back -251 Greasy sh. -253 Bkrk. -293 Greasy sh. -300 Coalsm.	-331 Greasy sh. -336 Coalsm. -440 Greasy sh. -530 Gnrk.& pcl. -540 Gysh. -550 Bksh. -553 Gnrk. -605 pcl. -645 Choosh. -653 Bksh.
5285 DENTON	143° 51' 22° 59'	W Sainsbury 1938		180 220 360 420 490 510 575	180 220 360 172	Soak 12960	S	0-4 Soil -50 Yclsh. -180 gysish. -220 Sysh. -420 Gysh. -490 Dksh.	-570 Sysh. -590 S. -620 Stkysh.
5363 Chorregon CLYDE	143° 35' 22° 39'	- 1937		470 560 590 620 680	176	14400		0-60 Ycl. -310 Lt.& dksysh.	-460 Stkygysh. -700 Sysh.& Strysh.
5438 INVERDOONE	143° 19' 22° 4'	- 1935						T.D. 400	

A	B	C	D	E	F	G	H	J	K
5445 GLENULLIN	143° 51' 22° 15'	- 1923						T.D. 467	
5480 EYRIEWALD	143° 52' 22° 3'	- 1925	Abd					T.D. 359	
5482 - EYRE ALD	143° 46' 22° 3'	- 1926	Abd					T.D. 248	
5515 ERINAGH	143° 34' 22° 23'	- 1935						T.D. 492	
5516 ERINAGH	143° 37' 22° 8'	- 1924						T.D. 428	
5565 Racecourse BONNIE DOWNS	143° 49' 22° 5'	- 1925						T.D. 410	
5629 HIGHFIELDS	143° 16' 22° 55'	- 1931		254 295 360	137	9000		0-40 Hdsst. -110 Crg. Gysysh. -250 Gysysh. -254 Gns.	-290 Gysysh. -300 Gys. -350 Gysysh. -370 Gns.

A	B	C	D	G	F	E	H	J	K
5516 [illegible]	143° 37' 22° 8'	- 1924						T.D. 428	
5565 Racecourse BONNIE DWNS	143° 49' 22° 5'	- 1925						T.D. 410	
5629 HIGHFIELDS	143° 16' 22° 55'	- 1931		254 295 360	137	9000		0-40 Hdsst. -110 Crgysh -250 Gysysh -254 Gns	-290 Gysysh -300 Gys -350 Gysysh -370 Gns
5630 Shakepeare HIGHFIELDS	143° 2' 22° 54'	- 1931		190 225 350	163	13,000		0-30 Pcl. -65 Hdgyrk. -80 Cl. -110 Whcl. -185 Gysysh.	-190 S. -220 Gysysh. -225 S. -340 Gysysh. -350 Gns. -373 Sysh.
571 Vintree CLDE	143° 28' 22° 41'	=						T.D. 633	
920 CLYDE	143° 24' 22° 43'	=						T.D. 160	

A	B	C	D	E	F	G	H	J	K
5749 MALBOONA	143° 36' 22° 6'	- 1937							T.D. 676
5793 CORELLA	142° 55' 22° 11'	=	Abd						T.D. 300
5794 CORELLA	142° 54' 22° 13'	=							T.D 650
5795 RANGELANDS	142° 59' 22° 13'	=							T.D. 463
5832 LOVELLE DOWNS	142° 34' 22° 7'	- 1925		384 577	330	11000			T.D. 604 384-604 Hdbksh.
5833 GOOLMA	142° 33' 22° 26'	=							T.D. 788
5878 BALRANALD	No trace	=	Abd						T.D. 630
5879 NARANGIE	No trace	=	Abd						T.D. 638
5880 NARANGIE	142° 35' 22° 15'	=							T.D. 424

A	B	C	D	E	F	H	J	K
5881 NĀRANGIE	142° 38' 22° 11'	– 1918						T.D. 783
5882 NĀRANGIE	No trace	– 1924	Abd					T.D. 457
5883 ELDERSLIE	142° 33' 22° 15'	– 1925						T.D. 767
5915 CAMARA	142° 57' 22° 9'	=						
5916 3 Mile CAMARA	143° 1' 22° 8'	=						-
5917 CAMARA	143° 2' 22° 9'	=						-
5930 - ALDINGHAM	143° 11' 22° 18'	– 1915						T.D. 332

A	B	C	D	E	F	G	H	J	K
5952 BĀRATRIA	143° 29' 22° 52'	– 1926						T.D. 800	
6001 LUTHRIE	143° 57' 22° 36'	– 1919						T.D. 465	
6030 DĪDJERIDOO	142° 56' 22° 5'	– 1912						T.D. 470	
6034 LŌVELLE DOWNS	No trace	1926	Abd					T.D. 804	
6035 WĀNDO	143° 29' 22° 23'	– 1926						T.D. 692	
6036 WĀNDO	143° 43' 22° 28'	– 1926						T.D. 619	
6043 LUCELLA	143° 43' 22° 10'	– 1923						T.D. 340	
6044 LUCELLA	143° 6' 22° 10'	– 1910	Abd					T.D. 300	
6045 MĀHRIGONG	143° 6' 22° 12'	1910	Abd					T.D. 260	

A	B	C	D	E	F	G	H	J	K
6043 LUCELLA	143° 43' 22° 10'	– 1923						T.D. 340	
6044 LUCELLA	143° 6' 22° 10'	– 1910	Abd					T.D. 300	
6045 MAHRIGONG	143° 6' 22° 12'	– 1910	Abd					T.D. 260	
6046 MAHRIGONG	No trace	= 1910	Abd					T.D. 254	
6047 MAHRIGONG	143° 46' 22° 18'	– 1934						T.D. 316	
6048 MAHRIGONG	143° 43' 22° 20'	– 1934						T.D. 300	
6049 MAHRIGONG	143° 44' 22° 24'	– 1926						T.D. 520	
6070 WESTON	142° 39' 22° 7'	= —						T.D. 1000	
6071 WESTON	142° 37' 22° 3'	– 1924						T.D. 818	

A	B	C	D	E	F	G	H	J		K
6079 RANGELANDS	143° 4' 22° 10'	- 1921							T.D. 500	
6080 RANGELANDS	143° 1' 22° 20'	- 1921							T.D. 600	
6092 COLSTON	142° 51' 22° 44'	- 1931		105 410 643 675	105 410 (60	Soak 10,000			0-200 Noinfo. -210 Hdstrata	-675 Sst.
6104 CULLADAR	143° 45' 22° 34'	= =							T.D. 494	
6273 ADIREL DOWNS	143° 55' 22° 5'	- 1934		80					0-100 Sst. -500 Pr.slatysh.	-900 V.hd.bl. & br.sh.
6275 ADIREL DOWNS	143° 53' 22° 2'	A Blackwell 1949		301	116	4508			0-220 Noinfo. -230 Sypcl. -235 Sh. -237 Sysh. -252 Sh. -265 Sysh. -280 Sh. -285 Sysh.	-293 Sypcl. -301 Sysh. -315 Sypcl. -325 Sh. -385 Sysh. -400 Sh.

A	B	C	D	E	F	G	H	J	K
6278 - MOUNTAIN VIEW	143° 7' 22° 26'	= =							T.D. 686
6279 - MOUNTAIN VIEW	No trace	- 1919	Abd						T.D. 498
6317 5 Mile MELROSE	143° 4' 22° 49'	= 1926							T.D. 519
6476 LYDIA	142° 43' 22° 28'	- 1921							T.D. 320
6477 MARITA DOWNS	143° 49' 22° 23'	- 1916							T.D. 600
6478 MARITA DOWNS	143° 47' 22° 23'	- 1916							T.D. 500
6479 MARITA DOWNS	143° 44' 22° 24'	- 1919							T.D. 600

A	B	C	D	E	F	G	H	J	K
6485 LANA DOWNS	143° 3' 22° 2'	=						T.D. 600	
6486 LANA DOWNS	143° 5' 22° 5'	- 1926	Abd					T.D. 600	
6542 Natural BLADENSBURG	143° 7' 22° 39'	- 1921						T.D. 807	
6543 No.24 BLADENSBURG	143° 11' 22° 40'	- 1918						T.D. 800	
6544 Manhole BLADENSBURG	143° 6' 22° 36'	- 1921						T.D. 786	
6556 SELWYN PARK	143° 15' 22° 45'	- 1913						T.D. 900	

A	B	C	D	E	F	G	H	J	K	
–										
6765	143°53'	–		210	210)	Soak			0-3 Sussoil	-450 Gns.
–		–		250	250)				-100 Ysy.sh.	-650 Ltgy.sh.
HEREWARD	22°56'	1938		440	(				-205 Ltgy.sh.	-715 Gy.sy.sh.
				450	(				-245 Gn.sy.sh.	-765 Ltgy.sh.
				600	(196				-440 Dkgy.sh.	
				650	(					
				715	(					
				730	(					
–										
6768		–		245	216	4488			0-10 Rtnrk.	-283 Gy. Slippery back
–	No trace	L. Blackwell	Abd	570					-43 Pkcl.	-365 Gn. Slippery back
HAPPY		1938							-114 Yssrk.	-367 Rk.
VALLEY									-134 Soft whrk.	-431 Gy. Slippery back
									-154 Ysst	-567 Gn. Slippery back
									-200 Pkchalk	-583 Gn.sdw.sk.s.p.cl.
									-240 Ysst.	-668 Bk. Slippery back
									-245 Rtnrk.	-730 Gy. Slippery back
–										
6782	143°33'	–		195	195)	Soak			0-3 Soil	-500 Gy.sy.sh.
Nellington		W. Sainsbury		225	225)				-100 Ssh.	-535 Whsy.sh.
BARATARIA	22°43'	1936		525)					-190 Gyssh.	-620 Sy.sh.
				540)	138	17280			-220 Ltsy.sh.	-980 Gy.sh.
				557)					-300 Dkgy.sh.	
									-400 Whsshw. hdsksofrk.	

A	B	C	D	E	F	G	H	J	K	
6783 Mountain BARATARIA	143°7' 22°53'	- W. Sainsbury 1925		173 365 375 410 415					0-4 Susoil -15 Ysy.sh. -170 Gy.shwrk.bnds. -173 Whs.	-365 Gysy.shwrk.bnds. -375 Dks. -410 Gysy.sh. -500 Gysy.sh. coal sms. -530 S.
6784 Brolga BARATARIA	143°14' 22°47'	- I. Sainsbury 1936		145 315 470 480 517 530					0-4 Soil -65 Ysh. -120 Ltgy.ssh. -140 Dkgy.ssh. -145 S. -165 Lt.sy.sh. -175 Hdgy.rk. -295 Lt.sy.sh.	-315 Gns. -360 Dkgn.sh. -315 Sy.sh. -380 Hd.rk. -410 Sy.sh. -480 Lt.s.sh. -510 Sy.sh. -550 Lt.sy.sh.
6872 TARRAGONA	143°57' 22°6'	- 1913							T.D. 321	

A	B	C	D	E	F	G	H	J	K
6945 - COLANE	142°44' 22°25'	- L.Blackwell 1938		307 338	70	14400			0-27 Coal - 57 Srk. - 74 Gy.sh. -107 Bl.sh. -145 Gy.sh. -187 Slippery back -190 Gark. -209 Sst. -219 Soft rk. -225 Blds. -230 Sst. -275 Sy.sh. -307 Fiees -338 Sdrift.
6946 - FAIRYMEAD	No trace	- - -	Abd						
6947 FAIRYMEAD	142°34' 22°24'	L.Blackwell 1938		300 317	244	14400			0-55 Y.cl. -89 Br.sh. -107 Sy.sh. -124 Bk.sh. -167 Br.sh & rk. -273 Sh. & rk. -300 Sy.sh. -304 Gy.rk. -317 Br.sh. -321 Gy.rk. -340 Sy.sh.
6948 Adiens BERYL	143°52' 22°22'	- - 1938							T.D. 421
6969 - ESCALE	No trace	- L.Blackwell	Abd						0-55 Sst. -118 Bl.& gy.sh. -120 Gy.rk. -140 Pcl&s. -151 Gy.sh. -164 Sy.sh. -184 Pcl. -236 Sh. -245 Pcl. -250 Gn.rk. -314 Pcl. -336 Dk. Sh. -385 Pcl. -403 Gy.sh. -416 Pcl. -440 Br.sh.

A	B	C	D	E	F	G	H	J	K
7008 – MYRAH.L	142°42' 22°5'	– – 1919							T.D. 745
7011 – LEESON	142°47' 22°52'	– –							T.D. 648
7052 – OONDOOROO	No trace	L.Blackwell 1937	Abd	170 540	170 200	Soak 12,000			0-20 Surk. -37 Srk. -65 Sst. -168 Gy.sh. -170 Gnrk. -210 Sy.sh. -211 Gnrk. -232 Sy.sh. -304 Br.sh. -306 Rk. -566 Br.sh. -573 Rk. -613 Pcls.
7053 – OONDOORCO	No trace	– L.Blackwell 1938	Abd	210 550	210 280	Soak 4,000			0-30 Sst. -60 Ycl. -86 Blcl. -117 Gycl. -187 Stky.blsh. -189 Srk. -353 Sy.sh. -475 Choc. sh. -490 Pcls. -492 Gnrk. -547 Pcl. & s. -550 Gnrk. -619 Pcl. -665 Gy.sh. -690 Pcls. -692 Gnrk. -805 Pcls.
7054 – OONDOORCO	143°25' 22°19'	– L. Blackwell 1937		120 350 492 516	120 350 300	Soak 8,000			0-58 Ycl. -74 Blsh. -106 Gy.sh. -108 Rk. -170 Gy.sh. -173 Coal SM. -208 Gy.sh. -210 Srk. -250 Gy.sh. -252 Bkrk. -346 Bk.sh. -350 Srk.sks. -386 Pcl&s. -486 Rk&pcls. -506 Gy.sh. & sy.sh. -522 Sy.sh. -552 Bk.sh.

A	B	C	D	E	F	G	H	J	K	
7058 - THE GROVE	142°37' 22°19'	- - 1919							T.D. 450	
7066 - BONNIE DOWNS	143°5' 22°6'	- L.Blackwell 1938		75 125	65	7008			0-45 Ycl. -75 Blsh. -90 Gns.	-125 Sy.sh. -135 Gns. -165 Sy.sh.
7067 - BONNIE DOWNS	143°51' 22°6'	- L.Blackwell 1938		32 142	60	5760			0-55 Ycl. -65 Blsh. -67 Rk.	-132 Sy.sh. -142 Gn.s -157 Sy.pcl.
7199 - MAHRIGONG	143°45' 22°19'	- - 1915							T.D. 400	
7250 Western WINDEX	143°19'	- L.Blackwell		187 360	187 90	Soak 16800			0-53 Ysy.cl. -185 Gy.sh. -187 Gy.rk. -217 Sst. -221 Gy.rk. -267 Gy.sst. -294 Gy.sh.	-308 Gy.chalk -323 Gy.sh. -336 Br.sh. -358 Gn.sst. -361 Br.sh. -364 Gy.rk. -410 Gy.sh.
7394 - TATONG	142°43' 22°55'	- - -							T.D. 30	

A	B	C	D	E	F	G	H	J	K
7395	142°43'	-							T.D. 100
-	22°53'	-							
TATONG		-							
7396	142°43'	-							T.D. 60
-	22°55'	-							
TATONG		-							
7397	142°43'	-							T.D. 80
-	22°53'	-							
TATONG		-							
7447	142°53'	-		100	100	(Soak			0-20 Sy.su.soil -443 Blsst. & gyrk.
COLSTON	22°47'	C.Howard 1939		176	176	(			-60 Rdrk. -624 Blsh & sst.
				425	425				-70Whrk. -626 Gyrk.
				472	176	(8640			-100 Rdrk. -659 Blsh.
				170	156	(			-103 Whcl. -661 Blsst.
									-140 Ycl. -663 Gyrk.
									-175 Whcl. -700 Blsh. & bk.
									-197 Ysst. coal sh.
									-212 Ycl. -780 Blsst.
									-375 Blsh. -797 Blsh.

A	B	C	D	E	F	G	H	J	K
7483 OONDOOROO	143° 10' 22° 7'	= 1926						T.D. 462	
7495 STRANRAER	143° 35' 22° 52'	= 1916	Abd					T.D. 640	
7496 KELLYS CREEK	143° 40' 22° 42'	- C Watson 1916	Abd	115 144 186 509 744	115 144 186	Soak 20,000		0-4 Soil -24 Ycl. -57 Gycugsh. -69 Strysh. -75 Syy. sh. & Coal sms. -90 Gysysh. -98 Rk. -107 Gypug & s. -115 Fs. -144 Brpug. & coal -186 Spcl. -193 Spug coal	-227 Pug -298 Bk hdrk -328 Choc pug s -381 Choc pug s & oily scum -435 Pcls & gypug -456 Gys -484 Spcl -549 Strygy pug -600 Pug & s -620 S & pcl -706 Gystrypug -744 Gypug
7497 KELLYS CREEK	143° 43' 22° 46'	- M Watson 1916	= =	145 217 666 752	145 217	Soak 12000		0-3 Bk. soil -21 Ysh. -55 Choc. sh. -75 Bldgysh. -92 Gysh. & s. -125 Strypug -145 S. -180 Bld. -217 Strypug -236 Gypug & s -257 Hdrk. -270 Gypug	-280 Hd. Bk. -296 Strygypug -400 Pcl. & s. -410 Gypug -460 Choc. pug -500 Br. & gypug -551 Fs. -578 Fs. & layers of -597 Css. & cl. -666 Pug -690 Br. pug -714 Fwhs. -752 Gypug & Sh.

A	B	C	D	E	F	G	H	J	K
7567 MERRIWEN	No trace	- 1923	Abd					T.D. 715	
7574 BELMONT	143° 31' 22° 5'	- 1937						T.D. 400	
7575 Excess BELMONT	143° 33' 22° 5'	- 1938						T.D. 450	
7576 BELMONT	No trace	- 1939	Abd					T.D. 348	
7611 Parallel TANDARA	143° 47' 22° 39'	- W. Sainsbury 1939		90 240 300 340 370 470 510 588	90 145	Soak 11040	F	0-65 Y.sh. -90 Sy.sh. -210 Hd.rk. -248 Dk.gy.sh. -300 Lt.sy.sh. -340 Stky.gy.sh.	-350 S. -475 Stky.gy.sh. -510 Gy.sy.sh. -525 S. -588 Dk.gy.sh. & of rk. -634 Br.sy.sh.
7687 MALBOONA	143° 38' 22° 2'	- 1925						T.D. 720	

A	B	C	D	E	F	G	H	J	K
7688 16 mile MALBOONA	143° 39' 22° 7'	– 1923						T.D. 647	
7689 – MALBOONA	No trace	– 1923	Abd					T.D. 467	
7690 Connors MALBOONA	143° 43' 22° 2'	– 1919	Abd					T.D. 600	
7711 Morella TANDARA	143° 52' 22° 59'	– 1932						T.D. 944	
7892 – JALLOONDA	No trace	C Howard 1940	Abd	125 475 679	125 475 50	Soak	S B	0-5 Susoil -25 Whrk. -61 Ycl. -145 Rdrk. -166 Whcl. -184 Rdrk. -255 Ycl. -259 Gyrk. -321 Whcl. -343 Blsh. -353 Gysh. -382 Slippery back -441 Sst. & sh.	-467 Bksh. & gnst. -519 Sst. -522 Blsh. -536 Sst. -542 Blsh. -557 Sst. -571 Blsh. -630 Sst. -633 Gyrk. -654 Sst. -660 Blsh. -678 Sst. -689 Blsh. -693 Gyrk. -700 Sst.

A	B	C	D	E	F	G	H	J	K
7941 Stock Route ALDINGHAM	143° 7' 22° 15'	- & Blackwell 1940		192 432 539	192 138	Soak 14400	S		0-4 Soil -42 Ycl. -48 Whcl. -50 Coal -116 Gysh. -126 Brsh. -134 Sysh. -138 Gyrk. -147 Sst. -157 Sysh. -192 Sst. -200 Gyrk. -418 Gysh. -431 Sysh. -434 Rk. -459 Grpcl. & s. -461 Rk. -483 Sysh. -500 Pcl. & s. -515 Gysh. -536 Sysh. -539 Rk. & sms. -561 Gysh.
7949 Crescent DARR RIVER DOWNS	143° 56' 22° 57'	- 1910							T.D. 550
8005 Stock Route COLSTON	142° 53' 22° 47'	- 1916							T.D. 413
8059 BONNIE DOWNS	143° 50' 22° 3'	- 1925							T.D. 350
8060 JALLOONDA	No trace	- 1925	Abd						

A	B	C	D	E	F	G	H	J	K
8523 - WARNAMBOOL	142°50' 22°49'	- -			77	12000			0-48 Alluvial -100 Dangerous soft rock
8524 - WARNAMBOOL	142°51' 22°49'	- -				6,000			0-32 Alluvial -96 RK.
8525 - WARNAMBOOL	142°52' 22°52'	- -				3,000			0-13 Alluvial -104 RK.
8526 Eightmile WARNAMBOOL	142°49' 22°55'	-				12,000			0-18 Alluvial - 71 soft rock -53 RK. - 87 RK.
8527 - JALOONDA	No trace	- -	Abd			9,000			0-29 Bad ground alluvial -48 RK.
8528 - JALOONDA	143°43' 23°00'	- - -							
8529 - JALOONDA	No trace	- - -	Abd			6,000			0-30 Alluvial - 77 No information - 95 RK.
8531 Fishhook WINTALLANYA	142°54' 23°00'	- - -				10,000			0-8 No information -120 Rk.
8534 - WARNAMBOOL	142°51' 22°47'	- - -		247 350 630	94	15,000			T.D. 686

A	B	C	D	E	F	G	H	J	K
9005	143°56'	W. Sainsbury		120	120	(Soak	14,400		0–70 Y. SSt. -430Lt. gy. sy. sh.
2 Mile	22°51'			220	220	(			-120 Gy. sy. sh. -500 Lt. sy. sh.
DARR RIVER DOWNS		1941		430	64				-250 Sy. sh. -550 Sst.
				500					
9006	143°59'	-		140	140	Soak			0–60 Y. sy. sh. -300 Dk oily sh.
		W. Sainsbury		175	(				-140 Gy. sy. sh. -435 Ltsy. sh.
Shed	22°56'	1941		240	(				-170 Sy. sh. -440 Gn. s.
DARRA RIVER DOWNS				280	(70	7,440			-240 Gy. sy. sh. -460 Lt. sy. sh.
				310	(				-280 Dk. gy. sh. -500 Gy. sy. sh.
				435	(				
				460	(				
9048	142°35'	-		85		Soak			0–20 Rd. cl. s. -115 Hd. rd. rk.
-	22° 55'	L. Blackwell							-83 Rd. rk. -131 Honeycomb soft
HAPPY VALLEY		1937		115	34	28,800			-95 Pk. rk. rk. w. wh. sk. s.
-		-							
9056	142°51'	L. Blackwell		338		12,480			0–19 Wh. rk.y.p.cl. -219 wh. rk. y. p. cl.
-				to					-47 Pk. rk.y.p. cl. -239 Cream rk.y.p.cl.
BLADENSBURG	22°38'	1942		382					-57 Gy. rk. y.p.cl. -269 Pk. rk.yk. p. cl.
									-68 Pk. rk. ky. p cl. -282 Rd. rk. y.p.cl.
									-83 Y. rk. y.p.cl. -298 F. wh. drift
									-93 Wh. rk. y.p.cl. -310 Medium wh. drifts
									-105 Bk. rk.y.p.cl. -320 Br. p.
									-132 Gy. slippery back -328 Gn. drifts
									-137 Pu. rk.y.p. cl. -336 Br. pug
									-168 Bk. rk. y. p. cl. -359 F. gn. free s.
									-186 Gy. slippery back -382 sy. sh.
									-209 Pk. rk. y. p. cl. -384 Gn. rk.
									-418 Bk. sh.

A	B	C	D	E	F	G	H	J	K
9059 - LILLIANFELS	143°58' 22°33'	- J. Rose 1941		162 168	160	9,600			0-3 Soil -370 Blsh. -80 w.sst. -400 sst. -103 sst. & rk. -420 Blsh. -121 sst. -455 sysh. & rk. -185 sysh. & rk. -462 Gysst. -205 Blsh. & sst. -495 Blsh. -265 Sysh.

A	B	C	D	E	F	G	H	J	K
9085	143°15'	-		370	230	9,000			0-15 Ycl. -240 Sypcl.
-		-		445					-55 Ysst. -260 Hdgnrk.
KITTYVALE	22°12'	1942							-73 Gysst. -280 Chocsh.
									-101 Pcl&S. -312 Sypcl.
									-111 Gysh. -315 Gnrk.
									-113 Coal -360 Sypcl.
									-121 Brsh. -368 Rk.
									-173 Gysh. -395 Sypcl.
									-212 Pcl&S. -437 Bksh.
									-2[illegible] -490 Brsh.
									-219 Hd.wh.rk.
-									
9167	143°54'	-							T.D. 570
-		-							
MORAGO	22°34'	-							
-									
9168	143°55'	-							T.D. 550
-		-							
MORAGO	22°37'	-							
-									
9169	143°52'	-							T.D. 570
-		-							
MORAGO	22°33'	-							

A	B	C'	D	E	F	G	H	J	K
9179	143°27'	-		111	111	Soak			0-58y.sh. - 374 Gy.sh.
-		L. Blackwell		525 (		7200			-69 Bk.sh. - 381 Gy.sst.
WANDO	22°36'	1942		700 (	90				-79 Coal.sh. - 400 Gy.sh.
									-87 Brsh - 429 Brs.y.sh.
									-111 Sysh - 444 sst.
									-125 Gysh - 469 Gy.sh.
									-132 Coal.sh - 476 Br.sh.
									-152 Gy.sh. - 49[illegible] sst.
									-162 Brsh. - 500 Gy.rk.
									-172 Gy.sh. - 520 Gy.sh.
									-184 Brsh. - 535 sst.
									- 545 Sv.sh.
									- 204 Gy.sh. - 557 [illegible]
									- 220 Bk.sh. - 573 Sy.sh.
									- 242 Sy.sh. - 585 sst.
									- 260 Brsh. - 632 Brsh.
									- 621 Gy.sh.
									- 283 Sy.sh. - 644 Sy.sh.
									- 302 Gy.sst. - 664 Gy.sh.
									- 313 Gy.rk. - 670 Sy.sh.
									- 323 Wh.sst. - 694 Sst.
									- 703 Rk.
									- 710 Sst.
									- 721 Gy.rk.
									- 760 Gy.sh.

A	B	C	D	E	F	G	H	J	K
9180 WANDO	143° 29' 21° 24'	L Blackwell 1943		408	265	2200		0-8 Soil -68 Ycl. -72 Bl pug -93 Blsysh. -110 Brsh. -136 Sysh. -144 Coal -178 Sysh. -2106 Gsh. & Coal -242 Sysh. -290 Sypcl. -328 Brsh. -371 Sypcl.	-399 Dkchocsh. -410 Pcl. -429 Pcl. & rk. -453 Pcl. -502 Gysh. -511 Sy. pcl. -620 Gysh. -670 Sysh. & rk. -680 Gysh. -685 Bk. sh.
9195 VINDEX	143° 22' 22° 36'	R Close 1943		526	120			0-2 Soil -70 Ysh. -140 Blsh. -230 Brsh. -240 Sst. -480 Brsh. -540 Sst. -550 Dkbrsh. -600 Blsst.	-616 Blsysh. -692 Blsh. -800 Dk. sh. -820 Sysh. -875 Brsh. -877 Rk. -995 Brsh. layers of ss
9279 DRUMLION	143° 39' 22° 36'	- 1935						T.D. 1170	

A	B	C	D	E	F	G	H	J	J	K
9282 FAIRYMEAD	143° 34' 22° 25'	- A Blackwell 1943		530	130				0-3 Sub soil -45 Ycl. -56 Blcl. -70 Gysh. -72 Coal -76 Brsh. -85 Slippery back -97 Brsh. -99 Slippery back -218 Brsh.	-228 Gysh.& rk. -282 Brsh. -284 Gysh. -313 Brsh. -404 Sysh.& rk. -440 Sh. -483 Gysh. -486 Sysh. -500 Gysh. -519 Sysh. -530 Gysh. -550 Sypcl. -591 Gysh.
9300 Bishops GALLIPOLI	142° 35' 22° 34'	- 1922							T.D. 665	
9302 CARISBROOKE	142° 35' 22° 42'	- 1943		233 332	185				0-3 Su. Soil -18 Lst. -24 Rdsrk. -42 Dkycl. -67 Rk. & ycl. -90 Pcl. -115 Ycl. -132 Pcl. -140 Ycl. -147 Broken Pk.	-231 Sh. -233 Sy. Sh. -258 Gnsst. -285 Sst. -330 Sst. &rk. -333 Sh. -345 Sysh. -370 Gysh. -403 Sh. -405 Sh. Slippery back
9305 LESWALT	143° 24' 22° 24'	- C Pirie 1924			600	150	10,000	S	T.D 666	

A	B	C	D	E	F	G	H	J	K	
9306 LESWALT	143° 22' 22° 24'	A Golden 1926		650	150	7200	B		T.D. 702	
9307 – LESWALT	143° 22' 22° 26'	L Blackwell 1926		575	126	9000	S		T.D. 625	
9311 VINDEX	143° 21' 22° 35'	Godfrey Bros. 1943		495	150	11520			0-2 Soil -6 Small blds. -80 Ycl. -150 Blsh. -162 Dksh.	-174 Blds. -394 Dksh. -510 Blsst. -550 Dksh.
9319 – LORRAINE	143° 27' 22° 35'	=							-	
9320 LORRAINE	143° 34' 22° 25'	=							-	
9321 LORRAINE	143° 32' 22° 3[illegible]'	=							-	
9347 GLENULLIN	143° 56' 22° 15'	– 1915							T.D. 444	

A	B	C	D	E	F	G	H	J	K
9348 BERYL	143° 59' 22° 15'	– 1916							T.D. 572
9351 TANDARA	143° 43' 22° 58'	– 1890							T.D. 300
9359 CARISBROOKE	142° 36' 22° 41'	– 1944							T.D. 740
9446 INVERDOONE	143° 16' 22° 1'	– 1943		106 232	90 78	16000			0-3 Rd. Soil -42 Ysst. -71 Blsh. -106 Blsh. & ssms. -145 Gysst. -160 Blsh. -198 Blsh. & sms. of gys. -211 Blshws. -232 Blsh. & sms. of gys. -365 Gysst. -388 Blsh.
9605 INVERDOONE	143° 16' 22° 4'	– 1943		131 172 335	131	Soak 10,000			0-3 Rd. soil -56 Ysst. -131 Blsh. -134 Gysst. -172 Blsh. -197 Gysst. -224 Bksh. -250 Blsh. -296 Brsh. -318 Blsysh. -335 Choc. sh. -384 Gysst. -400 Brsh.

A	B	C	D	E	F	G	H	J	K
9778 STRATHFILLAN	142° 53' 22° 8'	L Blackwell 1931		400 588	100			0-3 Sub soil -88 Ysh. -337 Sysh. -390 Brsh. -400 Gnsh.	-550 Gysh. -552 Rk. -574 Gysh. -588 Gns. -610 Gysh.
9896 TANDARA	143° 43' 22° 58'	- 1944						T.D. 650	
9903 The well ROSEHEARTY	143° 46' 22° 39'	- 1943						T.D. 600	
9953 HEREWARD	143° 49' 22° 56'	- 1944						T.D. 300	

A	B	C	D	E	F	G	H	J	K
10199 Vibatree BALATARIA	143°9' 22°48'	- F. Rose 1944		215 370 590	215 144	Soak 14,400			0-50 Slippery Backcl. - 249Sy.sh. -85 Y.sh. -259Brsh&rk. -116Gysh -335 Brsh. -146 Gy.sh. & rk. -342 Sy.sh. -155 Sysh -376 Gvley,sst. -165 Bk sh. -405 Sysh. -190 Gysh. -426 Gysh. -215 Sysh. -480 Brsh. -225 Sst. -540G..sh. -235 Sysh. -590 Brsh. -243 Brsh. -604 Sst. -606 Rk. -695 Gysh.
10293 - LORRAINE	No trace	- A. Blackwell 1944	Abd	375 549	160				0-4 Susoil -330 Sysh. -75 Y.cl. -370 Sysh. -110 Gysh. -375 Bkcoalsh. -118 Brsh. -405 Br. & gysh. -152 Gysh. - 413 Sypcl. -160 Sysh. -492 Sysh. -170 Gysh. -548 Sh. -190 Gysrk. -565 Sypcl. -197 Brsh -590 Sh. -202 Gyrk. -598 Sypcl. -240 Br. & Gysh. - 686 Sypcl. & rkbars -267 Sh. -704 Sh. -323 Br. &gysh.

A	B	C	D	E	F	G	H	J	K
10294 LORRAINE	143°27' 22°32'	- A. Blackwell 1945		570 600	145				0-2Susoil -42Ycl. -105 Bksh. -117 Grsst. -205 Shwsmall rk. bars -215 Srk -278Sh. & small rk.bars -293 Srk. -356sh -373 Sysh. -700 Sypcl. small rk. bars
10367 PIALAWAY DOWNS	143°43' 22°26'	- A. Blackwell 1946		325	200	3456			0-4Susoil -71 ycl. -93 Brsst. -116Gysst. -136 Sysh. -142 Brsh. -155 Sh. -175 Sysh. -195 Br. sh. -240 Sysh. -270 Sh. -305 Sysh. -315 Brsh. -335 Sh. -365 Sysh. -398 Sh. -428 Brsh. -435 Sh. -566 Brsh. &rk. -618 Sh. -632 Sypcl. -667 Sysh. -683 Sh. -703 Sypcl. -715 Sh. -738 Pcl. -791 Sh. -796 Sysh. -808 Sypcl. -834 Sh.
10371 PIALAWAY DOWNS	143°40' 22°26'	- A. Blackwell 1946		427 575	166	10500			0-6 Susoil -73 Ycl. -95 Bksh. -115 Gysh. -123 Sysh. -138 Sh. -150 Sysh. -220 Brsh. -250 Sysh. -290 Brsh. -300 Sysh. -305 Rk. -335 Sypcl. & rk. -406 Sh. & rk. -415 Sypcl. -427 Gysst. -460 Sysh. -575 Sh. & rk. - 610 Sysh. - 645 Sh.

A	B	C	D	E	F	G	H	J	K
10412 St. Andrews BARATARIA	143° 5' 22° 52'	- 1945						T.D. 800	
10656 MARITA DOWNS	143° 47' 22° 23'	F Rose 1946		210 580	175	9000		0-3 Suloam -90 Ycl. & rk. -115 Ysst. -140 Gysst. -175 Brsh. -195 Sst. -205 Sysh. -225 Sst. -245 Brsh. -260 Sst.	-280 Gysh. -287 Sysh. -335 Brsh. -340 Sst. -383 Brsh. -400 Sysh. -410 Brsh. -435 Sst. -460 Brsh. -491 Sysh. -580 Brsh. -590 Sst. -610 Brsh.
10674 Petrolia RICHFIELD	143° 59' 22° 42'	- 1914		1963 200 310 9000				T.D. 620	
10703 Siberia CLYDE	143° 26' 22° 42'	- 1946		280 390 518 745	210	10,000		0-2 Brsy soil -17 Ysh. -20 Ysst. -73 Ysh. -85 Ltysh. -105 Dkgysh. -140 Dkgysysh. -157 Dkgysh. -225 Dkgysysh. -275 Dkgysh. -280 Sh & coal -287 Lt.gy.rk.	-300 Gysh. -320 Ltbrsh. -340 Gysysh. -350 Dkbrsh. -380 Gysh. -390 S. -430 Gysh. -460 Sysh. -518 Gystkysh. -548 Sysh. -620 Gystkysh. -776 Gysysh.

A	B	C	D	E	F	G	H	J		K
10717 ESKDALE	143° 59' 22° 12'	- A.E. Blackwell 1946		275	210	4,000			0-5 Su. Soil -11 Ycl. -12 Rk. -32 Srk. -38 Rk. -47 Ycl. -57 Srk. -97 Ycl. -103 Sysh. -105 Rk. -140 Sysh.	-160 Sst. -225 Sh. -228 Rk. -250 Srk. -255 Srk. -275 Sypcl. -287 Gysst. -290 Rk. -335 Sh. -340 Sypcl. -350 Sh. -395 Sypcl. -407 Sh. -408 Rk. -446 Sh.
10720 EMU DOWNS	143° 33' 22° 00'	827 A Blackwell 1946		347 358	134	8,000			0-3 Su. Soil -55 Ycl. -70 Gysh. -111 Srk. -141 Sysh. -145 Sh. -170 Sst.	-175 Brsh. -215 Sysh. -350 Sh. & rk. -375 Sypcl. -380 Sh. -405 Brsh. -434 Sysh. -440 Sh.
10728 HEXHAM	143° 8' 22° 7'	=							T.D. 444	
10771 Kennedy BELMONT	143° 35' 22° 8'								T.D. 250	

A	B	C	D	E	F	G	H	J	K
10884 – LANA DOWNS	143° 00 22° 3'	– A Blackwell 1947	Abd	325	145	9,000		0-4 Su. Soil -55 Ycl. -95 Ysrk. -136 Sh.	-203 Sy. Sh. & rk bars -325 Sh. & rk. bars -360 Sysh. & rk. bars -500 Sh. & rk. bars
10899 West Angle MORAGO	143° 52' 22° 36'	– F Rose 1947		190 390	140	14,000		0-6 Suloam -30 Cl. -95 Sst. -142 Brsh. & rk. -160 Gysh. -190 Sysh. -195 Sst. -245 Brsh.	-295 Pug sst. -300 Gysh. -355 Pug sst. -376 Sy. sh. -390 Pug sst. -395 Sst. -405 Brsh. -410 Pug sst. -460 Gysh.
10919 – BERYL	143° 57' 22° 21'	– F Rose 1947		65	65	2,000	S	0-6 Su. loam -45 Ysst. -96 Gysh. & rk. -130 Sysh.	-260 Gysh. & rk. -348 Pug sst. & rk. -500 Blsh.
10920 BERYL	143° 57' 22° 22'	– F Rose 1947		120 483	100 67	9,000		0-4 Suloam -19 Cl. -50 Ysst. -110 Sysh. -126 Sst. -150 Sysh. -160 Brsh. -170 Gysh. -182 Sysh. -210 Gysh.	-227 Sysh. -252 Brsh. -270 Sysh. -300 Brsh. -315 Sysh. -323 Pug sst. -450 Brsh. & rk. -480 Sysh. -483 S. -510 Blsh.

A	B	C	D	E	F	G	H	J		K
10957 - HEXHAM	143° 11' 22° 4'	- A Blackwell 1947		140 339	100	1700			0-3 Su. Soil -44 Ycl. -80 Ysst. -90 Sy. ycl. -110 Sysh. -140 Sh.	-195 Sysh. & rk. -335 Sh. & rk. -390 Sysh. & rk. -396 Sh. -405 Sysh. -420 No info,
10982 DAINTREE	143° 27' 22° 10'	- A Blackwell 1947		518	96	12000			0-2 Soil -55 Ycl. -130 Gysst. -140 Sh. -145 Gysst. -250 Sh. & rk. -257 Brsh. -277 Sh -285 Sypcl. -300 Brsh.	-305 Sysh. -370 Brsh. -400 Sh. -446 Sysh. -448 Sh. -460 Sypcl. -464 Brsh. -480 Sypcl. -500 Brsh. -527 Sypcl. -540 Brsh. -578 Sh. -580 Gysst. -595 Brsh. -615 Sh.
10988 GORDON VALE	143° 24' 22° 15'	- A Blackwell 1947		320 420	105	7000			0-3 Su. soil -51 Ycl. -168 Sysh. -253 Sypcl. & rk.	-268 Rk. -383 Sh. & Sypcl. -449 Sh. & Sysh. -476 Sh.

A	B	C	D	E	F	G	H	J	I	K
10993 WANTALANYA	142° 52' 22° 55'	- 1947	Abd	62	59	12,000			0-6 Su.Soil -59 Rd.iron St.	-62 Rd.Sycl. -69 Wh.porous Sycl.
10995 BERYL	143° 53' 22° 23'	R.Rose 1947		524	130	17,000			0-4 Soil -55 Cl.& rk. -101 Gysh. -120 Sysh. -140 Brsh. -150 Sysh. -215 Brsh. -240 Sysh. -255 Pugsst.	-290 Gysh. -346 Gysysh. -394 Gysh. + -435 Sysh. -472 Gysh.& rk. -480 Brsh. -489 Sst. -502 Brsh. -524 Sysh. -540 Blsh.
										+ -463 Br.sh.

A	B	C	D	E	F	G	H	J	K
11031	143°38'	-		180	180	(Soak			0-5 Soil -325 Gy. sst. -83 Y. sh. -370 Sst. -173 Gy. sh. -402 Gy. sh. -220 Gy. sst. -280 Hd. & Soft sst.
-	22° 9'	P. North		323	323	(			
DAHLIA		1947		370	159	13,000			
11068	143°31'	-		148	(114	10,000			0-2 Soil -206 Br. sh. -75 Y. cl. -231 Sh. -85 Sh. -240 S. sh. -135 Sy. sh. -257 Sy. p. cl. -147 Sh. -280 Br. sh. -153 Sst. -362 sh. -154 Coal -380 Sy. p. cl. -160 Br. sh. -390 Br. sh. -180 Sy. sh. -399 Sy. p. cl. -203 Sh. -568 Sy. p. cl. & rk -585 Sh.
-	22°11'	A. Blackwell		400	(				
Lochfergus		1948		555	(				
11082	143°25'	-							
-		A. Blackwell		252	85	13,000			0-3 Su. soil -252 Sh. -50 Y. cl. -255 Choc. sh. -95 Sy. sh. -265 Sh. -128 Br. sh. -268 Br. sh. -134 Sh. -305 Sh. -193 Sst. & rk. -315 Br. sh. -219 Sy. p. cl. -400 Sh. & rk.
IESWALT	22°26'	1948							

A	B	C	D	E	F	G	H	K
11129 - DENTON	143°52' 22°58'	- W. Sainsbury 1948		90 110 185 482 537 588	75	16800		0-9 Brsoil -320 Dkbrsh. -11 Ysst. - 335 Sygysh. -32 Ysh. - 450 Sysh. -90 Gysh. - 480 Stkygysh. -97 Fssh. - 391 Free S. -110 Ltgysh. - 535 Gysh. + -125 Fssh. - 550 Free sysh -190 Free S. - 585 Stkygysh. -308 Gysh. - 600 Freesysh. + -185 Gy.sh. -645 Stkygysh.
11190 - GLENULLIN	143°54' 22°15'	- P. North 1948		208 330 371 394	161	11000		0-3 Br soil -310 Gycl. -83 Ysh. -315 Sst. -156 Gysh -330 Gycl. -186 Gysst. -350 Gysst. & Rk. -206 Brsh. -360 Hdsst. -235 Gysst. -371 Softgysst. -263 Gysh. -398 Gysst. -273 Gysst. -415 Gycl. -283 Gysh.

A	B	C	D	E	F	G	H	J	K	
11267 – RANDWICK	143°7' 22°21'	– W.North 1948		260) 470) 610)	104	11,928			0-2 Bk. Soil -40 Ysh. -41 Brsh. -53 Ysh. -73 Blsh. -94 Gysh. -95 Whrk. -109 Gysh. -130 Blsst. -131 Whrk. -155 Blsst. -194 Gysh. -197 Hdwhrk. -260 Gysh.	-280 Dksst. -309 Gysh. -314 Brsh. -319 Dkrk. -334 Gysh. -340 Bksh. -350 Gysh. -358 Bld. -448 Gysh. -525 Gysst. -580 Gysh. -620 Sst. -628 Gysh.
11271 – INVERDOOME	143°19' 22°1'	– E. North 1948		150 397	92	14,400			0-6 Soil -20 Ysh. -33 Gyrk. -70 Ysst. -73 Hdwhrk. -82 Ysst. -120 Gysh. -125 Gysst. -150 Gysh. -180 Gysst. -189 Gysh. -195 Bksh. -215 Gysh. –	-220 Dksst. -280 Gysh. -305 Sy.gysh. -323 Sycl. -380 Gysh. -389 Gysst. -397 Gysycl. -405 Gysst. -416 Sycl. -437 Puggygycl.

A	B	C	D	E	F	G	H	J	K	
11350 – ADIREL DOWNS	143°53' 22°4'	– A.Blackwell 1949		285	135	5,760			0-3 Soil -34 Ycl. -50 Ysrk. -55 Ycl. -60 Gy.sh. -110 Gy.srk.	-118 Rk. -140 Gy.srk. -150 Sh. -230 Syncl. -250 Brsh. -300 Syncl. -409 Sh.
11463 – PIALAWAY DOWNS	143°43' 22°29'	– F.Rose 1949		210 468	160 117	9,600			0-4 Suloam -60 Ysh. -140 Brsh. -160 Sy.sh. -165 Brsh. -210 Sy.sh. -251 Gy.sh. -270 Brsh. -282 Sy.sh. -322 Gy.sh. & rk.	-327 Sy.sh. -391 Brsh. -415 Sy.sh. -440 Brsh. -445 Pugsst. -463 Gy.sh. -468 Rk. -493 Gy.sh. -540 Brsh.
11489 Cattle Creek TANDARA	143°44' 22°56'	– F.Rose 1949		635	43	14,400			0-40 Ysh. -68 Ysst. -200 Gy.sh. & rk. -341 Brsh. & rk. -350 Sy.sh. -370 Sy.sh.	-425 Brsh. -442 Sst. -471 Gy.sh. -627 Sy.sh. & rk. -635 Sst. -700 Brsh.

A	B	C	D	E	F	G	H	J	K
11517 – ALTREL DOWNS	143°5' 22°	– A. Blackwell 1949		175 345	130	4500	G		0-5 Soil -17 Ycl. -20 Ysrk. -44 Ycl. -51 Ysst. -70 Ycl. -78 Ysst. -85 Brsy.sh. -100 Gnsst. -218 Sy.sh. &rk. -285 Sh. -295 Sy.pcl. -391 Sh.
11520 – CORUNNA	43°5'4' 22°10'	– A.E. Blackwell 1949		229 315	125	10,000	G		0-2 Susoil -5 Syy.cl. -40 Ycl. -58 Variegated Ycl. -63 Ysst. -75 Brsst. -78 Gysst. -83 Gy.sh. -90 Sy.sh. -91 Rk. -108 Sy.sh. -110 Rk. -128 Sy.sh. -129 Rk. -135 Sy.sh. -173 Gy.sh. -195 Sy.sh. -215 Sy.gy.sh. -220 Sy.sh. -221 Rk. -228 Sy.pcl. -229 Rk. -242 Sy.gy.sh. -271 Gy.sh. -282 Sy.gy.sh. -283 Rk. -315 Gy.sh. -330 Sy.pcl. -350 Br.sh. -355 Br.sy.sh. -375 Gy.sy.sh. -395 Greasy.gy.sh.

A	B	C	D	E	F	G	H	J	K
11579 - MAhRIGONG	143°43 22°22'	- W. North 1949		167 374	159	10800	G		0-53 Ysh. -167 Gysh. -171 Dkgysst. -182 Gysysh. -185 Gysrk. -229 Gysh. -232 Srk. -253 Gypuggysh. -256 Gysrk. -280 Gycl. -303 Gysh. -305 Whrk. -320 Gypuggyrk. -323 Whrk. -360 Gysh. -363 Whsrk. -373 Ltgysh. -374 Softsst. -401 Sysh. -428 Gyssh. -430 Gysrk. -440 Blsh. -450 Gysh.
11586 - ADIREL DOWNS	143°55' 22°4'	- A. Blackwell 1950		225 290	81	3840	G		0-4 Susoil -54 Ycl -55 Spcl. -103 Gysst. -120 Gysysh. -160 Gysh. -195 Spcl. -225 Gysh. -230 Spcl. -275 Gysh. -290 Spcl. -300 Gysst. -340 Sypcl. -350 Brsh. -375 Gysh. -398 Sypcl.

A	B	C	D	E	F	G	H	J	K	
11630	143°37'	-		115	115	Soak			0-4 Su.loam	-278 Gy.sh.
-	22°28'	F. Rose		561	145	10,000	S		-40 Y.sh.	-287 Sy.sh.
PIALAWAY		1950							-50 Bk. sh.	-318 Br.sh.
									-53 Rk.	-320 Rk.
									-117 Gy.sh.	-366 Sy.sh.
									-118 Rk.	-370 Rk.
									-177 Gy.sh.	-393 Sy.sh.
									-179 Rk.	-395 Rk.
									-214 Gy.sh.	-483 Br.sh.
									-215 Rk.	-494 Rk.
									-227 Gy.sh.	-553 Gy.sh.
									-228 Rk.	-561 Rk.
									-270 Gy.sh.	-570 Gy.sh.
									-271 Rk.	-620 Br.sh.
11631	143°43'	-		211)	180		S		0-10 Su.loam	-295 Br.sh.
-	22°31'	F. Rose		224)					-11 Rk.	-299 Rk.
CULLADAR		1950		473	118	14,400			-40 Y.sh.	-339 Gy.sh.
									-72 Gy.sh.	-370 Br.sh.
									-74 Rk.	-382 Rk.
									-178 Bl.sh.	-394 Gy.sh.
									-180 Rk.	-397 Rk.
									-190 Gy.sh.	-403 Pug sst.
									-211 Sy.sh.	-405 Rk.
									-213 Rk.	-433 Pug sst.
									-224 Sy.sh.	-455 Br.sh.
									-228 Rk.	-473 Sst.
									-233 Gy.sh.	-478 Br.sh.
									-244 Sy.sh.	-480 Rk.
									-247 Rk.	-500 Sy.sh.
									-271 Pug sst.	-540 Gy.sh.

A	B	C	D	E	F	G	H	J	K
11710 - PIALAWAY	143°40' 22°28'	- F.Rose 1950		183 546	183 160	Soak 10,000	B		0-4 Su.loam -110 Ysh.& rk. -120 Gy.sh. -147 Sst. -165 Gy.sh. -210 Sst. -237 Gy.sh. -261 Sy.sh. -280 Gy.sh. -315 Sy.sh. -375 Pugsst.& rk. -470 Br.sh. -500 Pugsst. -546 Gy.sh.& rk -596 Sy.sh. -620 Br.sh. -650 Sy.sh.
11722 - COLLADAH	143°45' 22°30'	- - 1950		170 247	170 110	Soak 26,400			0-2 Rk. -98 Ysh.& rk. -130 Br.sh. -175 Gy.sh.& rk. -183 Sy.sh. -339 Gy.sh.& rk. -344 Sst. -376 Sy.sh. -437 Gy.sh.& rk. -451 Sy.sh. -471 Gy.sh. -480 Sst. -500 Gy.sh.
11745 - HARTREE	143°35' 22°52'	- W. Sainsbury 1950		617	123	13,824			0-3 Su.soil -50 Yssh. -165 Gy.s.sh&rk. -185 Br.sh. -230 Gy.sh. -237 Bk.sh. -245 Brownish gy.sh. -270 Gy.ssh. -275 Lt. gy. rk. -451 Gy.ssh. -465 Gy.sh. -470 Br.sh. -476 Gy.sh. -480 Gy.ssh. -579 Gy.sh. -617 Gy.ssh.
11746 - HARTREE	143°33' 22°49'	- W.Sainsbury 1950							0-3 Susoil -26 Y.s.sh. -31 Ysh. -44 Yssh. -50 Bl.gy.sh. -140 Gy.ssh. -167 Br.gy.sh. -190 Gy.sh. -206 Bk.sh. -212 Br.gy.sh. -275 Gy.sh. -347 Gy.ssh. -365 Stky.gy.sh. -390 Gy.ssh. -410 Stky.gy.sh. -420 Gy.sh. -460 Br.gy.sh. -465 Stky.br.sh. -508 Gy.sh. -605 Gy.ssh.

A	B	C	D	E	F	G	H	J	K	
11785 - STRANRAER	143°53' 22°51'	- W.Sainsbury 1951		245 465 512 535 608	120	16,416			0-3 Susoil -90 Ysh. -195 Gy.s.sh. -220 Stky.gy.sh. -340 Gy.s.sh. -345 Br.sh.	-444 Gy.s.sh. -463 Stky.gy.sh. -495 Gy.s.sh. -500 Stky.gy.sh. -620 Gy.s.sh&rk.
11847 - MAHRIGONG	143°42' 22°24'	- F.Rose 1951		230 510	210 160	10,080			0-8 Loam -90 Y.sst. -126 Br.sh. -140 Sy.sh. -170 Gy.sh&rk. -180 Sst. -223 Gy.s.sh&rk. -230 Sst. -236 Gy.sh. -248 Sst.	-310 Br.sh&rk. -326 Gy.sh. -345 Sy.sh. -423 Gy.sh. -430 Br.sh. -439 Sy.sh. -506 Gy.sh. -510 Sst. -540 Gy.sh&rk.
11873 - JORUNNA	143°53' 22°8'	- A.Blackwell 1950	Abd	100 190	(100	Soak			0-3 Susoil -53 Ycl. -75 Gy.sh. -125 Gy.sy.sh. -130 Gy.sh.	-160 Gy.sy.sh. -184 Sy.pcl. -210 Gy.sy.sh. -215 Sy.pcl. -225 Gy.sh.
11874 Vinderadene JORUNNA	143°54' 22°9'	- A.Blackwell 1950		106 190 295	106 (120	Soak 7,680			0-3 Susoil -55 Ycl. -80 Gy.sst. -90 Gy.sh. -104 Gy.sst. -120 Gy.sy.sh. -150 Gy.sh. -155 Gy.sy.sh -179 Gy.sh.	-189 Sh. -235 Sy.pcl. -240 Br.sh. -244 Gy.sy.sh. -295 Gy.sh. -315 Sy.gy.sh. -330 Sy.pcl. -350 P.cl. -390 Gy.sh.

A	B	C D	E	F	G	H	J	K
11952 – BONNIE DOWNS	143°47' 22°8'	- A. Blackwell 1951	160 220	102	10,008			0-2 Susoil -75 Ycl. -103 Gy.sy.sh. -150 Sy.sh. & rk. -160 Gy.sy.sh. -.55 Brsy.sh. -185 Sy.pcl. -198 Gy.sh. -245 Gy.sy.sh. -278 Gy.sh. -290 Gy.sy.sh. -300 Sh.
11967 – MARITA DOWNS	143°44' 22°24'	- F. Rose 1951	205 536	190) 145)	10,080			0-90 Ysst. -129 Gy.sh. -131 Rk. -168 Br.sh. -170 Rk. -180 Br.sh. -202 Sy.sh. -205 Rk. -215 Sy.sh. -231 Sy.sh. -232 Rk. -247 Br.sh. -249 Rk. -302 Br.sh. -305 Rk. -336 Br.sh. -348 Sy.sh. -350 Rk. -375 Gy.sh. -377 Rk. -390 Sy.sh. -415 Br.sh. -418 Rk. -465 Br.sh. -467 Rk. -485 Gy.sh. -487 Rk. -531 Br.sh. -536 Sst. -560 Br.sh.

A	B	C	D	E	F	G	H	J	K	
12014	142°54'	-		120					0-3 Susoil	-250 Gy.sh.
-	22°37'	A. Blackwell		300	110	7488			-55 Rdhoneycombrk.	-265 Gy.sst.
GALLIPOLI		1952							-65 Pk.&whcl.	-270 Sy.sh.
									-80 Whcl.	-295 Gy.sh.
									-175 Ycl.	-300 Gy.rk.
									-195 Ysst.	-320 Sst.
									-210 Ysh.	-365 Gy.sh.
12043	143°58'	-								
-	22°23'	F. Rose		470	120	14400			0-80 Ysh.	-262 Br.sh.
BERYL		1952							-94 Blsh.	-300 Gy.sh.
									-124 Gy.sh.	-388 Br.sh.
									-130 Sy.sh.	-460 Gy.sh.
									-138 Gy.sh.	-494 Pugsst.
									-146 Sy.sh.	-500 Br.sh.
									-201 Gy.sh. & rk.	
12044	143°59'	-		93	93	Soak			0-3 Loam	-386 Pugsst.
-	22°22'	F. Rose		440					-44 Ysh.	-428 Gy.sh.
BERYL		1952		453	90	17280			-65 Ysst.	-435 Sy.sh.
									-109 Sy.sh. &rk.	-440 Sst.
									-200 Gy.sh.	-443 Gy.sh.
									-230 Sy.sh.	-453 Sst.
									-315 Gy.sh.	-480 Gy.sy.sh.
									-355 Sy.sh.	-500 Br.sh.
									-376 Gy.sh.	

A	B	C	D	E	F	G	H	J	K
12074 - BLADENSBURG	142°39' 22°42'	- - 1952		355	86	12,480			0-2Rd.soil -246 Sy.sh. -12 Rd.rk. -345 Gy.sh. -100 Rk. & Whlst. -210 Y.cl. -350 Sy.pcl. -215 Bl.cl. -365 Gy.sst. -230 Gy.sh. -398 Gy.sh.
12112 - BLADENSBURG	142°45' 22°38'	- A. Blackwell 1952		115 395 458	115 110	Soak 12480			0-3 Subsoil -245 Pk.cl. -19 Rd. & Whg.vl. -330 Y.sh. -45 Wh.cl. -345 Wh.cl. -60 Pu.honeycomb -90 Rd.rk. -385 Gy.slippery back -100 Wh.cl. -390 Bk.sh. -140 Pu.honeycomb -170 Rd. honeycomb. -190 Whlst. -400 Sst. -215 Lst. -420 Gy.sh. -225 Pk.cl. -455 Sy.sh. -240 Y.cl. -480 Sst. -485 Sy.pcl. -500 Gy.sh.

A	B	C	D	E	F	G	H	J	K	
12122 ESKDALE	143°59' 22°9'	- A.Blackwell 1952	Abd	263	140	3770			0-4 Su.soil -52 Ysst. -65 Ysh. -85 Brsy.sh. -100 Blcl. -120 Gy.sh. -165 Sy.pcl. -195 Sy.sh. -215 Sst. -255 Gy.sh.	-263 Sy.sh. -273 Sst. -285 Sy.sh. -310 Sy.pcl. -365 Gy.sh. -400 Sy.pcl. -425 Gy.sh. -430 Sy.pcl. -490 Gy.sh. & rk.
12191 - KYWONG	143°37' 22°12'	- F.Rose 1952		120 369	120 85	Soak 12480			0-70 Ysh -95 Gy.sh. -120 Sy.sh. -280 Gy.sh. -290 Sy.sh.	-375 Gy.sh. -394 Sy.sh. -401 Sst. -450 Gysh & rk.
12193 - JARRAWARD	143°39' 22°15'	- F. Rose 1952		150 461	150 90	Soak 20160			0-3 Loam -55 Ysh. -142 Brsh. -150 Sst. -160 Brsh. -186 Sy.sh. -201 Ssh. -263 Brsh.	-295 Gy.sh. -329 Sy.sh. -343 Sst. & rk. -393 Gy.sh. & rk. -433 Sy.sh. & rk. -461 Blsh. -480 Sst. -400 Blsh.
12260 LUCKHAM	143°23' 22°2'	- - 1924							T.D. 452	

A	B	C	D	E	F	G	H	J	K
12319 EYRIEWALD	143° 49' 22° 2'	- A Stower 1953		215 352	150 110	11520	G	0-3 Su. Soil -65 Ysh. -95 Gysysh. -105 Sysh. -132 Gysh. -135 Gyrk. -187 Sysh. -190 Gyrk. -210 Sypcl. -215 Gysst.	-217 Gyrk. -250 Gysh. -254 Gyrk. -285 Gysh. -300 Sysh. -345 Gysh. -350 Sst. -352 Gyrk. -360 Sst. -400 Sst & bndsbrsh.
12431 TLVIOT	142° 53' 22° 3'	- A Stower 1953		175 390 605 670	160	11520		0-3 Su. Soil -62 Ysh. -82 Blds. -90 Ysh. -110 Coal sh. -130 Gysh. -150 Sysh. -190 Gysst. -260 Gysh. -280 Sysh. -285 Gyrk. -295 Gysst. -365 Sysh.	-386 Gysst. -400 Sysh. -455 Gysh. -480 Sysh. -585 Gysh. -600 Sypcl. -605 Gyrk. -615 Gysst. -640 Sysh. -650 Gysst. -655 Gyrk. -668 Gysst. -683 Sypcl. -693 Gysst. -700 Sysh.

A	B	C	D	E	F	G	H	J	K
12445 LANA DOWNS	143° 13' 22° 00'	- A. Stower 1953		150 325 390	130	5000 10512		0-3 Su. Soil -70 Ysh. & rk sms. -80 Gysh. -83 Gyrk. -150 Sysh. -160 Gysst. -163 Gyrk. -280 Gysh.	-305 Coal Sh. & coal -325 Sy. pcl. -335 Gysst. -360 Gy. sh. -390 Sysh. -405 Sst. & coal sms. -425 Gy. sh. -450 Pr. md.
12458 VINDEX	142° 23' 22° 40'	- A. Blackwell 1953		400	210	2608		0-3 Su. soil -105 Ycl. -134 Gysh. -150 Gysst. & rk. -200 Sysh. -237 Gysh. -239 Coal sh. -253 Gysh.	-255 Coal sh. -263 Gysh. -265 Sh. & rk. -375 Gysh. & rk. -379 Sypcl. -400 Sysh. -425 Sy. pcl. & rk. -500 Gysh.

A	B	C	D	E	F	G	H	J	K
12577 GALLIPOLI	142° 47' 22° 34'	A Stower 1954		130 290 445	100	11520	S	0-3 Su. Soil -13 Blds. -30 Ysh. -55 Ysst. -70 Rd. honeycomb -100 Ysst. -125 Gysst. -130 Coal sh. & coal -175 Sysh. -220 Gysh. -255 Sysh. -270 Coal sh. & coal -285 Gysh. -290 Gyrk. -310 Gysst.	-330 Gysh. -332 Gyrk. -350 Sypcl. -355 Coal sh & co -380 Gysh. -383 Gyrk. -392 Sysh. -395 Gyrk. -405 Gysst. -410 Coal Sh & Co -435 Sysh. -438 Gyrk. -448 Gysst. -460 Sysh. -480 Gysh. -500 Sysh.
12601 VINDEX	143° 18' 22 37'	A Blackwell 1954		275	145	11520		0-3 Su. Soil -70 Ycl. -110 Gysh. -150 Gysst. -170 Br. & gysysh. -220 Gysysh. -227 Gysh. -236 Gysysh.	-254 Sypcl. -256 Rk. -275 Sypcl. -290 Gysycl. -315 Gysh. -345 Brsh. -390 Gysh.

A	B	C	D	E	F	G	H	J	K
12748 Stock Route EYRIEWALD	143° 50' 22° 3'	- 1955		103 335	80	11520		0-5 Su.Soil -55 Ysst.& cl. -60 Blsh. -88 Sst.& sh. -103 Brsh.& rk. -205 Gy.sst.& rk. -215 Brsysh.	-270 Gysst.& sh. -280 Br.& gysysh. -318 Gysysh. -348 Gysst.& sh. -365 Gysst. -400 Brsysh. -420 Brsh. -440 Br.& gysysh. -442 Gyrk.
12792 TATOO	142° 55' 22° 32'	A Stower 1954		105	80	10080		0-10 Lst. -50 Rd.honeycomb -97 Ycl. -105 Sypcl.	-110 Ysh. -118 Ysst. -120 Hd.& ysh.
12793 BONNIE DOON	142° 56' 22° 20'	A Stower 1954		270 570	170	11520	P	0-3 Susoil -9 Blds. -75 Ysh. -85 Coal sh. -180 Gy.sh. -190 Sysh. -195 Coal sh. -197 Gyrk. -207 Sst. -230 Sysh. -273 Gysh. -275 Gyrk. -310 Sysh.	-405 Gysh. -410 Gyrk. -420 Sypcl. -424 Gyrk. -440 Sygn. -454 Gysst. -456 Gyrk. -475 Sysh. -505 Gysh. -510 Gyrk. -525 Gysst. -555 Gysh. -570 Sysh. -590 Sst. -600 GYsh.

A	B	C	D	E	F	G	H	J	K
12809 ALDINGHAM	143° 12' 22° 21'	- H Stockham 1954		160 420	140	9600	P	0-2 Su.Soil -50 Ycl. -70 Gysh. -92 Gysysh.& rk. -101 Brsysh. -110 Gysh. -120 Gysysh. -135 Gysh. -190 Gysysh.& rk. -265 Gysh. -270 Brsh. -273 Gnsysh.	-274 Rk. -340 Gysh. -350 Gysysh. -383 Gysh. -400 Gysysh. -403 Rk. -435 Gysysh. -450 Gysh.
12836 CONDOOROO	143° 12' 22° 12'	- W North 1953		121 150 401 509	121	17448		0-2 Rksdl. -54 Ysst. -99 Gysh. -101 Gyrk. -108 Gysst. -119 Gysh. -121 Hdgyrk. -129 Gysst. -150 Gysh. -155 Brsst. -276 Gysh.	-279 Gyrk. -285 Gysst. -286 Hdrk. -348 Gycl. -349 Whrk. -380 Gycl. -409 Bksh. -431 Brsh. -436 Brsst. -465 Blsh. -499 Gypuggysh. -506 Gysst. -522 Brsst. -565 Brsoft sst.

A	B	C	D	E	F	G	H	J	K
12848 GOLEBURRA	142° 38' 22° 26'	W North 1953		261 302	157	11520	G	0-3 Bk. soil -37 Ysh. & rk. -43 Ysst. -76 Ysh. & rk. -90 Gysh. -112 Gysst. -130 Hdgysst. & rk. -140 Gysh. -146 Coal	-151 Gysst. -156 Gysh. -168 Hdgysst. -171 Soft sst. -215 Sst. -261 Gysh. & rk. -311 Brsst. -330 Gysh. -333 Whrk. -362 Blsh. -364 Gyrk. -365 Blsh.
12938 BLADENSBURG	143° 4' 22° 50'	- =	Abd					T.D. 594	
12958 Scrubby BLADENSBURG	142° 55' 22° 36'	A Stower 1953		190 495	160 130	11520	G	0-3 Su. soil -14 Top rk. -27 Rd. rk. -45 Wh. cl. -60 Ycl. -85 Rd. rk. -105 Ycl. -150 Ysh. -175 Blcl. -195 Gysh. -205 Gnsst.	-225 Coal sh. -370 Gysh. -385 Coal sh. -420 Gysh. -423 Gyrk. -435 Gysh. -440 Gysst. -480 Gysh. -485 Gyrk. -490 Gnsst. -495 Sysh. -575 Gysh.

A	B	C	D	E	F	G	H	J	K	
12959 – BLADENSBURE	142°45' 22°40'	– A.Stower 1955		225 360 440 530	150 130 118	11,520	S		0-1 Susoil -8 Ysst. -30 Pkcl. -70 Ysh. -95 Rdrk. -110 Lst. -125 Rdrk. -170 Lst. -200 Whcl. -220 Ysh. -260 Rdhoneycomb -275 Lst. -335 Rdrk.	-365 Ysh. -400 Gysh. -425 Sypcl. -450 Opensst. -465 Gysh. -485 Sysh. -500 Gysst. -530 Gysh. -550 Sypcl. -565 Gysh.
–										
13015 Breedon DARR RIVER DOWNS	143°55' 22°58'	– – 1955		448	143	14,160	B		0-4 Bksoil -12 Hdsst. -28 Ycl. -112 Y. & whcl. -165 Sysh. -229 Whsycl. -235 Hdst. -257 Whsycl. -290 Brsh. -330 Whcl. -335 Hdst.	-335 Whcl. -397 Gy. & brsh. -448 Gysh -454 Gnsst. -478 Gysh. -480 Hdsst. -503 Gysh. -507 Gysst. -545 Gnssh. -594 Gysh. -604 Gy. & brsh.

A	B	C	D	E	F	G	H	J	K
13045 Fishhook WANTALANYA	142°54' 23°00'	- H. Lloyd 1956		140	135	3,600	P		0-1 Rd. Soil -10 Brcl. -40 Rdcl. -60 Decayed rk. -70 Choc. cl. -90 Brcl. -115 Rdcl. -125 Brcl. -140 Whrk. -145 Fs. -165 Cream cl. -170 Whrk. -175 Whcl.
13105 - CARISBROOKE	142°35' 22°42'	- A. Stower 1955		195 460 525	150	9,216	G		0-3 Rdcl. -65 Rdrk. -175 Ysh. -195 Gysh. -200 Open sst. -215 Sysh. -330 Gysh. -335 Coal sh. -400 Gysh. & rk. -420 Gysst. -435 Sypcl. -438 Gyrk. -460 Gysh. -470 Gy. open sst. -490 Gysh. -515 Sysh. -535 Open sst. -556 Gysh.
13169 - CARRAWARD	143°39' 22°19'	- - 1916							T.D. 440
13170 - CARRAWARD	142°42' 22°19'	- - 1916							T.D. 440

A	B	C	D	E	F	G	H	J	K
~~13171~~	~~143° 40'~~								~~T.D. 400~~
—		—							
CARRAWARD	22° 13'	1934							
13172	143° 38'	—							T.D. 298
—		—	Abd						
CARRAWARD	22° 13'	1934							
13183	142° 38'	—		65	55		S		0- 2 Rd.S. - 87 Hd.gy.rk. - 9 Sst. - 90 Rd.sst. -35 Sy.cl. -93 Soft rd.rk. -47 Sy.pk.cl. -102 Wh.cl. -61 Wh.cl. -110 Rd.rk. -65 Hd.rk. -117 Wh.cl. -83 Rd.sst. -120 Rd.rk.
—		H. Stockham	Abd						
NAMARVA	22° 47'	1956							
13184	142° 38'	—							0- 3 Su: soil - 92 Y.cl. -10 Y.cl. - 96 Dk.br.cl. -20 Pk.& wh.cl. -100 Gy.sh. -72 Slippery back cl.
—		H. Stockham							
NAMARVA	22° 50'	1956							
13185	142° 42'	—		78	76				0- 3 Susoil - 50 Wh.cl. - 8 Y.cl. - 71 Rd.volc..rk. -23 Y.sst. - 98 Y.ba. -31 Y.sy.cl. -102 Hd.y.ba. -35 Y.sst. -110 Slippery back y.cl.
—		—							
NAMARVA	22° 50'	1956							
13186	142° 45'	—		55	48		S		0- 2 Rds. - 32 Y.cl. - 9 Sy.cl. - 55 Wh.cl. -14 Y.cl. - 67 Soft rd.rk. -25 Rd.sy.cl. - 70 Wh.cl.
—		H. Stockham	Abd						
NAMARVA	22° 50'	1956							
13197	142° 33'	—		113 135	50 101.	14400	G		0- 3 Surk -113 Rd.rk. - 16 Hd.y.rk. -118 Y.sst. - 96 Soft rd.rk. -135 Soft rd. k. -104 Y.sst. -144 Wh.sst. -150 Rd.rk. & slippery ba
—		H. Stockham							
HAPPY VALLEY	22° 55'	1956							

A	B	C	D	E	F	G	H	J	K
13257 - CLYDE	143° 26' 22° 43'	- A. Stower 1956		323 585	323 18	Soak 7200			0- 4 Top soil - 40 Y.sh. - 60 Blcs. - 95 Y.sh. - 98 Gy.rk. -120 Y.sh. -128 Gy.rk. -160 Sy.p.cl. -165 Coal sh. -195 Gy.sh. -200 Gy.rk. -320 Gy.sh. -323 Gy.rk. -335 Gy.sst. -393 Sy.sh. -395 Gy.rk. -525 Sy.sh. & k.bn.ds. -558 Gy.sh. -585 Gy.sst. -612 Gy.sh.
13271 - MALBOONA	Not located	- A. Stower 1956		185 280 460 505	 160 208	 8500	 B P		0- 3 Susoil -140 Y.sh. & rk. -160 Gy.sh.& rk. -165 Coal sh. -215 Sy.sh. -240 Br.sh. -280 Gy.sh. -295 Sy.p.cl. -299 Gy.rk. -323 Sy.p.cl. -460 Gy.sh. & rk. -478 Sy.p.cl. -481 Gy.rk. -505 Sy.p.cl. -510 Gy.sst. -535 Sy.sh. -550 Sy.p.cl.
13411 - PIALAWAY DOWNS	143° 40' 22° 33'	- B.Myers 1957		135 630	 133	 6400	 S		0- 24 Y.cl. - 42 Y.cl.bl. sh.sms. - 55 Bl.sy.sh. - 72 Bl.sh. - 92 Bl.sy.sh. -100 Gy.sy.sh. -106 Hd.sst. -140 Gy.sy.cl. -145 Br.sh. -147 Hd. sst. -160 Blsh. -295 Bl.sy.sh. -310 Gy.sh.coal sms. -390 Gy.sy.sh. -393 Bl.sst. -400 Gy.sh. -425 Br.sh. -435 Gy.sy.sh. -437 Hd.sst. -520 Gy.sy.sh. -522 Hd.sst. -630 Gy.sh.sy.cl.sms. -640 Sy.cl. -672 Gy.sh.

A	B	C	D	E	F	G	H	J	K	
13433	143° 42'	-								
-		E. Bryce	Abd	25	22	26016	P		0- 25 Wh.gvl.	- 56 Wh.s.
JALLOONDA	22° 56'	1957		55					- 30 Wh.s.	- 69 Wh.gvl.
									- 55 Wh.gvl.	- 72 Rd.rk.
13446	143° 42'	-		140					0- 5 Bk.soil	-195 Bl.sst.
-		B. Myers		175					- 60 Y.cl.	-280 Gy.sy.sh.
DAHLIA	22° 11'	1957		395	110	14400	P		-100 Br.sh.	-340 Sy.sh.sst.s
									-102 Hd.bl.sst.	-360 Gy.sh.
									-128 Gy.sh.	-365 Gy.sst.
									-130 Bl.sst.	-395 Gy.sh.
									-160 Gy.sy.sh.	-397 Sst.
									-190 Gy.sy.cl.	-420 Gy.sh.
13447	143° 14'	-		95					0- 4 Su.soil	-225 Gy.sst.
-		A. Staver		305		6000	P		- 55 Y.sh. & rk.	-305 Br.sh.
ASHFIELD	22° 7'	1957		355		14000			- 82 Gy.sh. & rk.	-325 Gn.sst.
									-105 Gy.sst.	-328 Gy.rk.
									-150 Gy.sh. & rk.	-355 Sy.p.cl.
									-200 Sy.p.cl.	-375 Gn.sst.
									-203 Gy.rk.	-390 Sy.sh.
										-412 Gy.sh.
13451	143° 43'	-		27					0- 27 Wh.gvl.	- 35 Wh.s.
-		E. Bryce		35	20	18000	P		- 28 Wh.s.	- 50 Wh.gvl.
JALLOONDA	23° 00'	1957							- 34 Wh.gvl.	

A	B	C	D	E	F	G	H	J	K
13508	143° 34'	-							0- 3 Su.soil - 65 Y.sy.cl. & rk. - 69 Y.cl. - 72 Bl.sh. - 90 Gy.sy.sh. - 95 Bl.sh. - 98 Gy.rk. -185 Gy.sy.sh.& rk. -197 Sst.bnd.s. of sh. -225 Gy.sh. -230 Br.sh. -245 Gy.sh.sms.of coal -202 Gy.sy.sh.& rk. -298 Gy.sh. & coal -312 Gy.sy.sh. -335 Gy.sh. -440 Gy.sy.sh.& rk. -442 Gy.sh. -448 Br.sh. -462 Gy.sh. -467 Rk. -563 Gy.sy.sh. -572 Gy.sh. -601 Gy.sy.sh.& rk. -638 Gy.sh. & rk. -679 Gy.sy.sh.& rk. -690 Gy.ssh. & sst. -695 Gy.sh. -705 Gy.sy.sh. & rk. -720 Gy.sh.
—		H. Stockham		185					
CLYDE	22° 37'	1957		680	160	7000			
13543	143° 53'	-							0- 3 Su.soil - 14 Y.sst. - 35 Y.cl. -120 Y.sst. -125 Gy.sy.sh. -130 Coloured sst.& cl. -185 Gy.sy.sh. -215 Gy.sst. -260 Gy.sy.sh. -270 Br.& gy.sh. -282 Gy.sy.sh. -300 Gy.sst. & sh. -385 Gy.sy.sh. -417 Gy.sh. & rk. -497 Gy.sst. & sh. -565 Gy.sy.sh. & rk. -580 Gy.sst. & sh. -655 Gy.sy.sh. -655 Gy.sst. & sh. -700 Gy. & br.sy.sh. -735 Gy.sst. & sh. -740 Sy. sy.sh. -790 Gy.sst. & sh. -795 Gy. & br.sh. -820 Gy.sy.sh. -833 Gy.sst. -855 Gy.sh.
—		J. Small		200	200	Soak			
HEREWARD	22° 56'	1955		820	163	20160			

A	B	C	D	E	F	G	H	J	K	
13591 - CORELLA	142° 55' 22° 11'	- A. Stower 1957		145 380	136	12000	P		0- 3 Su.soil - 55 Y.sh. & blds. - 60 Coal sh. - 82 Gy.sh.rk.sm. - 95 Sy.sh. -127 Gy.sh. -149 Gy.sst.	-183 Sy.sh. -335 Gy.sh. & rk. -340 Sst. -375 Gy.sh. -390 Gy.sst. -426 Gy.sh.
13607 Neptune BONNIE DOWNS	143° 50' 22° 8'	- H. Bode 1958		150 275	130 105	12000	P		0- 3 Soil - 75 Y.sy.sh.& blds. - 85 Gn.sy.cl. -109 Gy.sh. -114 Sy.gn.cl.	-150 Br.sy.sh. -190 Gn.sy.sh. -300 Gy.sy.sh. -335 Gn.sy.sh. -352 Gy.sh.
13643 - GLENULLIN	143° 51' 22° 15'	- C. Mallyon 1958		208) 418)	185	5760	B		0- 3 Bk.soil & rk. - 19 Rtn. y.cl. - 40 Y.sh. & cl. - 47 Y.sh. & rk. - 54 Y.sh. -134 Gy.sh. -137 Gy.rk. -150 Sy.cl. -190 Gy.sh. -198 Sy.cl. -210 Gy.sh. & sst. -262 Gy.sh.	-275 Sy.pug. -293 Sy.cl. -312 Gy.sh. -354 Gy.sh.rk.sms. -359 Sy.pug. -363 Hd.gy.sh. -399 Gy.sh. -416 Sy.pug. -422 Cong.rk. & sh. -448 Sy.cl. -450 Rk. & sh. -471 Gy.sh.

A	B	C	D	E	F	G	H	J	K	
13648 - BELMONT	143° 30' 22° 8'	- H. Bode 1958		150 293 404 510	125	15600	P		0- 3 Soil - 38 Y.sy.cl. - 52 Gy.sh. - 82 Gn.s.rk. - 97 Br.sh. -152 Lt.gy.sh. -214 Gn.s.rk. -239 Bk.sh. -273 Gy.sh. -287 Gy.sy.sh.	-303 Gy.sh. -394 Gy.sh. & rk. -398 Gy.sy.cl. -404 Gy.rk. -418 Gy.sy.cl. -448 Gy.sh. -475 Sy.gy.cl. & rk. -510 Gy.sh. -520 Gn.s.rk. -551 Gy.sh.
13737 - BERYL	143° 57' 22° 25'	- F. Rose 1956		148) 452)	125	11232			0- 79 Y.sh.rk.sms. - 97 Sy.sh.rk.sms.	-585 Gy.sh. rk.sms.
13738 - BERYL	Not located	- F. Rose 1956		85) 194)	85	Soak 4240			0- 30 Y.sh. - 33 Rk. - 54 Y.sh. - 57 Rk. - 80 Sy.sh.rk.sm. -100 Sy.sh. -110 Gy.sh. -120 Sy.sh. -132 Gy.sh.	-136 Sy.sh. -138 Rk. -152 Sy.sh. -155 Rk. -169 Gy.sh. -172 Rk. -191 Gy.sh. -194 Sst. -220 Gy.sh.
13739 - BERYL	143° 57' 22° 19'	- F. Rose 1957		196 527	150) 103)	14664			0- 55 Y.sst.rk.sm. - 89 Gy.sh.rk.sms. -151 Puggy.sst.rk.sms. -196 Gy.sh.rk.sms. -222 Sy.sh.rk.sms. -307 Puggy sst.	-311 Rk. -495 Gy.sh. -499 Rk. -523 Gy.sh. -527 Sst. -550 Br.sh.

A	B	C	D	E	F	G	H	J	K	
13740 Middle Creek BERYL	143° 53' 22° 24'	- F. Rose 1956		112 198 442	112) 198) 105	Soak 14936			0- 6 Su.soil - 66 Y.sh. - 85 Y.sh.rk.sms. - 90 Sst. - 97 Gy.sh.rk.sms. -112 Sst. -171 Gy.sh.rk.sms. -198 Sst.rk.sms.	-268 Gy.sh.rk.sms. -294 Sy.sh.rk. -314 Gy.sh. -322 Sst.rk.sms. -342 Sy.sh. -432 Gy.sh.rk.sms. -442 Sst. -460 Br.sh.
13769 - LEESON	142° 41' 22° 8'	- A. Stower 1958	1963 - 320 -	210 373 540	168	19000	B		0- 4 Su.soil - 50 Y.sh. & blds. -210 Gy.sh. & rk. -220 Gy.sst. -225 Gy.rk. -370 Sy.sh. -390 Gy.sst. -430 Gy.sh.	-490 Sy.sh. -505 Coal sh. -523 Sy.sst. -525 Gy.rk. -540 Sy.sh. -548 Gy.sst. -640 Gy.sh.
13779 - HARTREE	143° 33' 22° 51'	H. Thomson 1958		170 625	170 120	Soak 9600			0- 51 Sn.soil y.sh. - 32 Sst. - 40 Y.sh. - 70 Sst. - 86 Bl.sh. & coal -106 Gy.sh. -132 Br.sh.rk.sms. -170 Br.sh. -180 Sy.sh. -204 Br.sh. -219 Sy.sh.	-287 Gy.sh. -293 Sy.sh.rk.sms. -320 Gy.sh. -436 Gy.sh.rk.sms. -450 Sy.sh. -600 Gy.sh. -620 Gy.sy.sh. -625 Sy.sh. -640 Sh. -670 Sy.sh.

A	B	C	D	E	F	G	H	J	K	
13792 – ALDINGHAM	143° 18' 22° 18'	– H. Stockham 1958		336) 480)	188	11000	G		0– 3 Susoil – 18 Y.cl. – 33 Y.sy.cl. – 36 Y.rk. – 85 Y.cl. –105 Br.sh. & coal –115 Gy.sh. –125 Br.sy.sh. –135 Gy.sh. –158 Gy.sst. –171 Gy.sh. –176 Gy.sst. –203 Gy.sh. –220 Gy.sst. –229 Gy.sh.	–245 Gy.sst. –252 Gy.sh. –279 Gy.sst.rk.sms. –289 Gy.sh. –302 Gy.sst. –309 Rk. –334 Gy.sst. –336 Rk. –348 Gy.sst. –349 Rk. –416 Gy.sst. –448 Br.sh. –462 Gy.sst.rk.sms. –481 Gy.sh. –502 Gy.sst.
13855 – HEXHAM	143° 6' 22° 7'	– A.Stower 1958		195 363 500	170	4000 9000 10000	G		0– 3 Su.soil – 40 Y.sst. – 60 Y.sh. –140 Gy.sh. –165 Gy.sst. –185 Sy.sh. –195 Coal sh. –215 Gy.sst.	–225 Sy.sh. –330 Gy.sh. –360 Sy.p.cl. –370 Gy.sst. –440 Bi.sh. –460 Sy.sh. –520 Gy.sst.

A	B	C	D	E	F	G	H	J	K
-									
13885	143°36'	-		250)	250	Soak			0-4 Soil -441 Sy.shrk.sms.
-		-		600)					-60 Y.sh. -531 Gy.sh.
STRANRAER	22°48	1959		700)					-80 Gy.sh. -640 Sy.shrk.sms.
				780)	150	3168			-95 Br.sh. -700 Gy.sh.
				936)					-180 Gy.sh. -760 Sy.shrk.sms.
									-186 Rk. -780 S.
									-195 Sy.sh. -875 Sy.shrk.sms.
									-205 Gy.sh. -906 Gy.sh.
									-269 Sy.sh. -969 Sy.sh.
									-323 Br.shrk.sms. -991 Gy.sh.
									-393 Gy.shrk.sms.
-									
13902	143°2'	-	1963	710)	710				0-2 Bk. soil -1890 C.ggysh.
-		Godfrey	20	2569)					-95 Y.sh. -1910 Sy.gy.sh.
LANA	22°3'	Bros.	60	2584)	Surface				-286 Gy.sh. -1925 Bk.sh.
DOWNS		1960							-300 Sy.gy.sh. -1935 Gy.sh.
									-347 Sy.gy.sh. -1981 C.ggysh.
									rk.sms. -1991 Gy. & gn.sh.
									-385 Br.sh. -2098 C.ggysh.
									-922 Gy.sh. -2119 Hd.gy.sh.
									-924 Gy.rk. -2248 C.ggysh.
									-1084 Gy.sh. -2343 Gy.sh.
									-1086 Gy.rk. -2415 C.ggysh.
									-1282 Gy.sh. -2440 Gy. & gn.sh.
									-1375 C.ggysh. -2490 Gy.sh.
									-1410 Gy.sh. -2540 C.g. & y.sh.
									-1442 C.ggysh. -2562 Sy.cl.
									-1500 G .sh. -2589 Sst.
									-1546 C .ggysh. -2662 Sy.cl.
									-1562 Gy.sh. -2675 Sst.
									-1860 C.ggysh. -2722 Sy.cl.
									-1882 G .sh. -2760 Gy. & br.sh.
									-2771 Gy.cl.
									-2848 Sy.gy. & br.sh.

A	B	C	D	E	F	G	H	J	K
13911 - ASHFIELD	143°8' 22°7'	- A.Stower 1959		118 295) 380)	118 129	Soak 12,000	 P		0-3 Susoil -295 Brsh. -60 Ysst&gyrk. -310 Sst. -135 Gysst&rk. -376 Sysh. -225 Gycl. -400 Gysst. -280 Sysh&rk. -424 Sysh.
13981 South Surveyors WANTALANYA	142°55' 22°53'	- E.Bryce 1959							0- 5 Hd.rd.soil -137 Bk.sst. -29 Coloured cl. -150 Br.sh. -61 Sy. coloured cl. -81 Coloured cl.
13991 - BIRDWOOD DOWNS	143°51' 22°30'	- C. Mallyon 1960		152 328 432	 129	 7,200	 B		0-7 Su.soil -278 Hd.gy.sh. -19 Y.sh. -306 Gy.sh -22 Rksh. -328 Gysh. -54 Ysh. -347 S.pug.& cl. -59 Hd.flagstone cl. -389 Gysh. -74 Ysh. & flagst. -399 Cl. -88 Gysh. -404 Hdgysh. -92 Rk.sh. -406 Hdcong. -144 Gy.sh. -422 Gysh. -168 Sy.cl. -430 Sycl. -242 Gy.sh. -439 Rksh&sst. -244 Hd.sst. -481 Gysh. -256 Gy.sh. -493 Sycl&sh. -267 Gy.sh.Hd bnds -514 Gysh.
14026 No.3 WERITE	143°9' 22°53'	- C.F.Cross 1958		385 764	385 184	Soak 12,000	 P		0-11 Rd.su.soil -385 BlSlippery Bk. -26 Soft Brrk. -407Blsycl. -31 Blds. -670BlSlippery Bk. -49 Whrk&qtz. -700Bl&Br Slippery back -58 Whrk. -114 Soft wh.rk. -743Bl&Gy. Slippery back -162 Slippery back -233 Gy. slippery back -754Slippery back & S. -236 Rdrk. -258 Ltgysycl -764 Sycl. -766 Grd. -780 Gy. cl.

A	B	C	D	E	F	G	H	J	K
14029 - MALBOONA	143°43' 22°2'	- M.Shepherd 1959		160 490	155	6,480	B		0-2 Rk. -36 Ysh. -73 Ysst.rksms. -102 Blshsh -109 Gn.sysh. -160 Pcl. -169 Blsh. -205 Blsyshrksms. -221 Brsycl. -227 Pcl. -427 Brshrksms. -441 Blshrksms. -451 Brshrksms. -490 Pcl rksms. -507 Sst. -520 Pcl. -595 Brmd&rk.
14074 - GALLIPOLI	142°39' 21°38'	- D. Stower 1959		100) 260) 310)	85	11,520	P		0-4 Rdsy. soil -100 Whcl. -110 Wh. pcl. -140 Wh.rk. -260 Wh. pcl. -295 Y. sst. -310 Gysh. -325 Gysst. -343 Gysh.
14086 - STRATHFILLAN	142°55' 22°8'	- E.Brown 1960		192) 228) 420	164) 152)	17,280	B		0-3 Top soil -20 Brsycl. -60 Br&gy. sycl. -100 Gysycl. -114 Br rk. -178 Gysh. -183 Br.rk. -202 Brsh&sst. -226 Gy. sy. sh. -229 Gy. sst. -249 Gysysh. -345 Brsh. -366 Brsh&s. -392 Brsh. -399 Hdgysst. -441 Soft gy&blsst. -460 Soft gysst.
14120 - KYWONG	143°35' 22°14'	- M.Shepherd 1959		100 239 456	83	7,440	S		0-3 Bk.soil -57 Ysh. -90 Gy. sy.sh . -125 Brsyshrksms. -150 Blsyshrksms. -158 Pcl. -170 Gysysh. -188 Pcl. -226 Brsyshrksms. -239 Gy. sy. sh. -343 Pcl. -430 Gy. sy. sh -456 Brsyshrk. -458 Sst. -500 Gymd.

A	B	C	D	E	F	G	H	J	K	
-										
14168	143°44'	-		43	43	Soak	B		0-23 Rtn.v.md.st.	-156 Gy.sy.md.st.
-		C.Mallyon		118	112	8,160			-48 Br.sy.md.st.	-157 Rk.
MAHRIGONG	22°13'	1960		216					-60 Br.md.st.	-269 Gy.md.st.
				269					-72 Gy.md.st.	-273 Broken rk.
									-114 Gy.md.st.rk.sms.	-288 Gy.md.st.
									-118 Gy.sy.md.st.	-302 Gy.sy.md.st.
									-121 Soft cong.	
-										
14235	142°38'	-		268)					0-4 Bk.soil	-265 Gy.sst.
-		E. Brown		355)	195	7,680	G		-34 Gy.sy.cl.	-268 Br.md.st. & coal
NARANGIE	22°12'	1960		535)					-41 Wh.sy.cl.	-284 Gy.sst.
									-46 Y.cl.	-349 Gy.sy.md.st.
									-54 Gy.sy.cl.	-355 Gy.rk. & sst.
									-84 Br.sy.md.st.	-398 Gy.sy.md.st.
									-92 Gy.sy.md.st.	-447 Br.sy.md.st.
									-97 Rk.gy.sst.	-531 Gy.md.st.
									-141 Gy.sst.	-535 Gy.rk.
									-171 Gy.sst. & Lt.gy.md.st.	-557 Gy.sy.md.st.
										-570 Gy.md.st.

A	B	C	D	E	F	G	H	J	K
14263 WESTWARD HO	143°48' 22°43'	R.Allen 1960		95 175 186	70	13,400	B		0-3 Bk.soil -15 Clayey bk.soil -54 Y.sy.cl. -58 Hd.gy.sst. -102 Gy.sst. -117 Symd.st. -126 Brmd.st. -129 Hd.gy.sst. -170 Symd.st. -186 Hd. & soft sst. -197 Mdy.sst. -250 Symd.st. -275 Md.st. -296 Sst. -314 Hd.mdy.sst. -455 Md.st. -496 Sst. -525 Md.st. -576 Symd.st. -582 Sst. -594 Md.st.
14264 WESTON	142°38' 22°6'	M.Shepherd 1960		416) 547) 609)	190	9,600	G		0 Topsoil Y.sh. -113 Y.shrk.sms. -128 P.cl. -170 Gy.sy.shrk.sms. -192 P.cl.rk.sms. -200 Gy.shrk.sms. -230 Bl.sh. -243 P.cl. coal sms. -251 Gy.sh. -310 Bl.sy.sh. -356 Gy.shrk.sms. -404 Gy.sh. -416 Gy.sy.sh. -443 Sst.rk.sms. -509 Gy.sh. -546 Gy.sy.sh. -558 Sst.rk.sms. -602 Gy.sy.sh -607 Gy.shrk.sm. -618 Sst. -633 Gy.sh.sy. -650 Gy.sh.

A	B	C	D	E	F	G	H	J	K
14269 – WINTON TOWN	143°2' 22°24'	Approx. 610' W.L. Sides & Co. 1960	1963 flowing	3575) 3810)	Surface		P		0-2900 Mdst. hdbnds. -2989 Mdst. -3073 Mdst.shbnds. -3186 Mdst. -3236 Mdst. & si. -3296 Mdst.hdbnds. -3335 Si.ymdst. -3714 Symdst. -3825 Sst. -3960 Hdsst. -3996 Sh. &sst. -4017 Hdsst.

Lithologies from electrical logging (Jesson & Redeski, 1961) depths corrected for cable stretch

0-305 Cased
-743 Shsysh. & sst.
--1308 as 305-763 butsst. thinner bedded.
-3220 Sh; with shy. sst. 2368-2423 and including thin sst. beds between 3112 & 3220
-3979 Sst & sh.

A	B	C	D	E	F	G	H	J	K
- 14315 - MAHRIGONG	143°44' 22°24'	- C.Mallyon 1960		195 280 456 475	174	4,608	P		0-3 Brsoil -25 Ycl. -65 Ymdst. -106 Gymdst. -109 Flagst. -195 Gymdst. -217 Gysymdst. -224 Jointed rk. -232 Gysymdst. -240 Gymdst. -263 Gysymdst. -348 Gymdst. -378 Gysymdst. -394 Gymdst. -402 Gysymdst. -435 Gymdst. -456 Brmdst. -460 Rk. & mdst. -475 Gymdst. -487 Sstmdstrk. -525 Gymdst.
- 14340 - TEVIOT	142°50' 22°10'	- D.Stower 1960		175 425	140 132	3,000	B		0-3 Soil -55 Ysh. &blds. -65 Ycl. -82 Gysh. -120 Gysst. & rksms. -130 Gysh. -140 Coal sh. -145 Gyrk. -170 Gysh. -185 Gysst. -205 Sysh. -227 Brsh. -335 Sysh. -395 Sysh. -412 Sypcl. -415 Gyrk. -445 Gysst. -460 Gysh.

A	B	C	D	E	F	G	H	J	K
14438 COLSTON	142° 41' 22° 46'	- E Bryce 1960		44	40	18144		0-20 Ycl. -35 Rd. sst. -44 Soft sst. -45 S. -55 Rd. sst.	-60 Whgvl. -70 Rd. sst.
14439 COLSTON	142° 43' 22° 44'	E Bryce 1960		50	40	4320		0-12 Whg.vl. -35 Rdrk. -40 Soft rd.cl. -50 Rdrk.	-60 Bks. -117 Rdrk. -134 Rd.cl. -140 Rdrk.
14440 - COLSTON	142° 52' 22° 42'	- E Bryce 1960		105 115 134	60	8612	P	0-3 Bk. soil -89 Whg vl. -40 Whrk. -115 Gyrk. -120 Water/strata	-134 Rdg.vl. -145 Whg.vl. -150 Whrk.
14441 COLSTON	142° 43' 22° 47'	E Bryce 1960		42 67 92	35	5616	P	0-42 Whg vl. -45 Waterstrata -67 Whrk. -69 Water/strata	-74 Whrk. -92 Gyrk. -93 Water/strata -105 Whrk.

A	B	C	D	E	F	G	H	J	K	
14491 TEVIOT	142° 52' 22° 2'	- A Stower 1960		236 495	180 250	11520	P		0-3 Soil -50 Ycl. -53 Gyrk. -95 Gysh. -100 Gyrk. -125 Gysh. -128 Gyrk. -165 Sysh. -185 Sysh. & blds. -235 Br. sh. -251 Gysst. -255 Gyrk. -270 Gysst.	-292 Sysh. -298 Gyrk. -315 Gysst. -375 Gysh. -378 Gyrk. -430 Gysh. -440 Gysst. -466 Gysh. -470 Gyrk. -510 Gysst. -520 Brsh.
14516 WESTWARD HO	143° 43' 22° 41'	- S.H. Jensen 1961		350 653	180 150	14880	B		0-5 Bk. soil -18 Cl. -59 Sst. hd. sms. -86 Soft ysst. -142 Mdysst.	-206 Symdst. -528 Gysst. & bnds. & md -653 Symdst. -664 Sst. -694 Mdst.
14608 MALBOONA	143° 40' 22° 2'	M.D. Shepherd 1960		205 420	195	5760	P		0-3 Bk. soil -45 Ysh. -84 Ysst. -86 Rk. -116 Ysst. -176 Pcl. -187 Brsycl. -212 Blsysh. -217 Blsh. -223 Pcl. -237 Brsh. -238 Rk.	-320 Blsh. -322 Rk. -340 Blsh. -363 Brsh. -364 Rk. -378 Blsh. -386 Coal -421 Blsh. -430 Brsh. -448 Gysh. -455 Brsh. -460 Gysh.

A	B	C	D	E	F	G	H	J	K	
14612 MALBOONA	145° 43' 22° 4'	- C Lobley 1961		217 411	205				0-4 Sub soil -17 Ycl. -32 Soft sst. -48 Sst. -81 Sycl. -117 Soft sst. -125 Ycl. -137 Blcl. -140 Gysst. -161 Blsh. -215 Sysh.	-217 Hdsst. -255 Blsh. -256 Hdsst. -303 Sysh. -305 Hdsst. -380 Blsh. -403 Sysh. -409 Hdsst. -498 Sysh. -508 Blsh. -510 Hdsst. -557 Sysh. -600 Blsh.
14640 BONNIE DOWNS	143° 47' 22° 4'	- M.D. Shepherd 1961		210 343					0-4 Rk -70 Ysh. -77 Blsh & rksms. -88 Ysh -95 Gyshrksms. -112 Sysh. -160 Brshrksm. -179 Gysh. -210 Sysh. -213 Sst.	-306 Sysh. -316 Sysh.rksm. -336 Blsysh. -383 Sst.& sh. -384 Rk. -400 Sysh.
14641 CORUNNA	143° 6' 22° 11'	- M.D. Shepherd 1961		125 160 180 205 245	125	10560	S		0-4 Bk. soil -90 Ysh. -91 Rk. -110 Gysh -204 Sysh.	-205 Rk. -239 Sysh. -240 Rd. -302 Sysh.

A	B	C	D	E	F	G	H	J	J	K
14771 MALBOONA	Not located	- M.D. Shepherd 1961		140 223 535	125	8520			0-4 Bk. soil -45 Ysh. -53 Coal -71 Sysh. -72 Rk. -89 Gysh. -100 Mdysst. -101 Rk. -115 Mdysst. -123 Sysh. -125 Rk. -223 Mdysst. -225 Rk.	-277 Gysh. -278 Rk. -359 Brsh. -362 Rk. -393 Mdysst. -424 Sysh. -426 Rk. -438 Sysh. -440 Rk. -458 Sysh. -493 Brmud. -495 Rk. -535 Sst. -536 Rk. -600 Gysh.
14818 MAHRIGONG	143° 46' 22° 17'	- C Mallyon 1961		214 245 349	135	4320	P		0-3 Bk. soil -56 Ycl. rksms. -78 Cugycl. -128 Gymdst. -136 Sygymdst. -138 Brokenrk. -172 Sygymdst. -196 Gymdst. -214 Sygymdst. -245 Gymdst.	-248 Mdysst. -325 Gymdst. -348 Cl. -354 Sst. & rk. -379 Mdysst. -381 Rk. -402 Puggy mdst. -416 Sy. mdst. -422 Rk. -472 Puggy mdst. -480 Sy. mdst. -500 Puggy mdst.

A	B	C	D	E	F	G	H	J	K
14818 - MAHRIGONG	143° 46' 22° 17'	- C Mallyon 1961		214 245 349	135	4320	P		0-3 Bk. Soil -56 Ycl. rksms. -78 Cug. ycl. -128 Gymdst. -136 Sygymdst. -138 Brokenrk. -172 Sygymdst. -196 Gymdst. -214 Sygymdst. -245 Gymdst. -248 Mdysst. -325 Gymdst. -348 Cl. -354 Sst. & rk. -379 Mdysst. -381 Rk. -402 Puggy mdst. -416 Sy. mdst. -422 Rk. -472 Puggy mdst. -480 Symdst. -500 Puggy mdst.
14894 New Hardwicke BERYL	143° 55' 22° 23'	- C Mallyon 1961		136 195 214) 225) 364)	136 195 135 170	Soak 8640			0-4 Soil bldsrk. -22 Ycl. -24 Rk. -38 Ycl. -68 Cugy.cl. -82 Ycl. -111 Gymdst. -114 Rk. -136 Gymdst. -143 Sygymdst. -168 Gymdstrksms. -244 Sygymdstrksm. -269 Gymdst. -294 Sygymdst. -312 Gymdst. -328 Sygymdst. -362 Puggygymd -376 Sygymdst. rk. sms. -406 Sygymdst. -433 Puggy gymdst. rksms. -448 Puggy gymdst.

A	B	C	D	E	F	G	H	J	K
14952 - CORK	Not located	- E Brown 1961		292 339 342	240	8400			0-67 Porous Pk.rk. -77 Hd.rk. -107 Soft syrk. -135 Ysy.cl. -198 Y.cl. -262 Gy.cl. -280 Gy.symdst. -310 Loose gy.sst. -339 Gy.symdst. -348 Loose gy.sst. -350 Gy.symdst.
14969 - The Grove	142° 37' 22° 19'	- E Brown 1962		148 314 436	136	7680	S		0-3 Soil -60 Gy.cl. -130 Gy.y.cl. -142 Gymdst. -182 Gysst. -224 Brmdst. -261 Gymdst. -265 Gysymdst. -314 Brmdst. -320 Gymdysst -340 Gymdst -345 Gysymdst -436 Brmdst -441 Gymdysst -496 Gysymdst -505 Brmdst
15002 - COLSTON	142° 49' 22° 44'	- E Brown 1961		80 110 112	80 80	Soak 7,680			0-4 Rds. -74 Rcl. & kopl. -110 Gyrk. -115 Waterstrata -120 Gygvl. -130 Rdrk.

A	B	C	D	E	F	G	H	J	K	
15003 - COLSTON	142° 43' 22° 46'	- E Bryce 1961		45	30	8520			0-45 Whgvl. -60 Water strata	-74 Rd.gvl. -83 Whrk.
15004 - COLSTON	142° 51' 22° 43'	- E Bryce 1961		96) 133)	95	9216			0-3 Rd.soil -23 Rdsst. -42 Whgvl. -87 Soft whgvl. -96 Rdrk. -100 Water strata	-116 Whcl. -133 Rdrk. -134 Water strata -140 Whrk. -152 Rdrk.
15005 - COLSTON	142° 53' 22° 43'	- E Bryce 1961		98) 106)	98	6932	P		0-4 Rds. -15 Whgvl. -70 Rdrk.& sst. -79 Pksst. -98 Gysst.	-99 Cl.& water -106 Pk.sst. -132 Ysst. -133 Water strata -143 Whcl.

A	B	C	D	E	F	G	H	J	K	
15293 – LILLIANFELS	143° 55' 22° 31'	– C.Mallyon 1962	Abd	188 256 368) 481)	188) 256) 195	Soak 2400	B		0– 3 Br.soil – 12 Y.cl. & gvl. – 80 Y.cl. – 82 Rk. – 96 Y.cl. –132 Gy.md.st. –138 Sy.gy.md.st. –179 Gy.md.st. –188 Sy.gy.md.st. –194 Gy.md.st. –308 Sy.gy.md.st. –309 Rk.sm. –351 Puggy gy.md.st.	–368 Br.& gy.sy.md.st –403 Gy.md.st. –408 Puggy gy.md.st. –421 Gy.md.st. –426 Puggy gy.md.st. –436 Sy.gy.md.st. –454 Puggy gy.md.st. –457 Sy.gy.md.st. –474 Puggy gy.md.st. –510 Sy.gy.md.strk.sm –525 Bl.cl. –556 Puggy gy.md.st.
15297 – HEREWARD	143° 49' 22° 56'	– F. Rose 1960	144 577	144 120	Soak 17280	Fair			0– 60 Y.sh. –103 Gy.sh.rk.sms. –146 Sy.sh.rk.sms. –259 Gy.sh.rk.sms. –269 Sh. –382 Gy.sh.rk.sms.	–389 Br.sh. –400 Gy.sh. –421 Sy.sh. –482 Gy.sh.rk.sms. –592 Sy.sh.rk.sms. –600 Gy.sh.
15298 Stud HEREWARD	143° 50' 22° 54'	– F. Rose 1960	225 842	225 225	Soak 10080	G			0– 80 Y.sh.rk.sms. –214 Gy.sh. –225 Sy.sh. –247 Br.sh. –283 Sst. –461 Br.sh.rk.sms. –641 Gy.sh.rk.sms.	–671 Pug.sst. –692 Br.sh. –780 Pug.sst. –832 Gy.sh. –843 Sst. –882 Gy.sh. –1000 Br.sh.

A	B	C	D	E	F	G	H	J	K	
15300	143° 17'	-		283	283	Soak			0- 90 Y.sh.	-490 Rk
-		F. Rose							-114 Gy.sh.	-525 Br.sh.
HIGHFIELDS	22° 57'	1961		745	253	11520	F		-156 Bl.sh.	-575 Sy.sh.rk.sms.
									-270 Gy.sh.	-673 Br.sh.
									-285 Sy.sh.& rk.	-722 Gy.sh.& rk.
									-319 Gy.sh.& rk.	-740 Br.sh.
									-433 Hd.sst.rk.sms.	-745 Sst.
									-476 Br.sh.	-775 Gy.sh.
15304	143° 47'	-		237	228				0- 36 Y.sh.	-326 Sy.sh.
Ridge	22° 58'	F. Rose							-106 Y.st.	-350 Br.sh.
TANDARA		1961		676	163	16800	G		-130 Gy.sh.& rk.	-372 Gy.sh.& rk.
									-218 Br.sh.	-415 Br.sh.
									-225 Sy.sh.	-481 Gy.sh.& rk.
									-231 Sh.	-489 Br.sh.& rk.
									-237 Sst.	-611 Gy.sh.rk.sms.
									-276 Gy.sh.rk.sms.	-673 Sy.sh.
									-292 Sy.sh.	-676 Sst.
									-310 Br.sh.	-700 Sy.sh.
									-320 Sst. & rk.	
15370	142° 53'	-		110	97	24000			0-393 No info.	
-		E. Brown							-502 Gy.sy.md.st.	
WINDERMERE	22° 24'	1962								
15369	142° 48'	-							T.D. 630	
-		-								
WINDERMERE	22° 19'	1929								

A	B	C	D	E	F	G	H	J	K	
15372 – LILLIANFELS	143° 55' 22° 31'	C. Mallyon 1962	Abd	Dud					0– 4 Br.soil – 34 Y.cl. – 39 Flag rk. – 66 Y.cl. – 71 Flag.rk. – 86 Y.cl. –120 Gy.md.st. –122 Rk. –162 Gy.md.st. –177 Gy.md.st.rk.sms. –195 Gy.md.st. –228 Dk.gy.md.st. –248 Sy.gy.md.st. –262 Br.md.st. –280 Sy.gy.md.st. rk.sms. –292 Gy.md.st.	–294 Sst. –335 Sy.gy.md.st. –341 Rk. –348 Sy.pug –380 Puggy gy.md.st. –412 Sy.md.st. –432 Sy.pug. –442 Puggy gy.md.st. –450 Sy.pug –456 Md.y.sst. –463 Sy.md.st. –518 Puggy gy.md.st. –537 Sy.gy.md.st.rk.s –558 Sy.pug –576 Puggy gy.md.st. –586 Sy.gy.md.st. –600 Puggy gy.md.st.
15409 – LLEWELLYN	143° 57' 22° 43'	– F. Rose 1962		150 573	140 80	Soak 17280	Fair		0–110 Y.sh. –112 Rk. –150 Gy.sh. –171 Sy.sh. –193 Br.sh.& rk.sms. –240 Gy.sh. –297 Br.sh. –317 Gy.sh.rk.sms.	–405 Br.sh.rk.sms. –521 Gy.sh.rk.sms. –544 Br.sh. –548 Rk. –573 Gy.sh. –612 Waterbed –616 Rk. –625 Sy.sh.
15429 – CARRAWARD	143° 39' 22° 17'	– F. Rose 1957		457	140	11520	F		0–106 Y.sh.rk.sms. –170 Gy.sh. –174 Sst. –202 Sy.sh.rk.sms. –350 Gy.sh.rk.sms.	–353 Br.sh. –457 Gy.sh. –459 Rk. –550 Gy.sh. – S.rk.

A	B	C	D	E	F	G	H	J	K	
15435 – MAHRIGONG	143° 47' 22° 12'	– C. Mallyon 1962		177) 278) 295	165	13960			0– 3 Br.soil – 48 Y.cl. – 60 Br.sy.cl. – 88 Y.cl. –116 Br.sy.md.st. –124 Y.cl. –172 Gy.md.st. –211 Gy.sy.md.st. –213 Rk. –244 Gy.md.st.	–248 Rk. –264 Gy.md.st. –278 Sy.gy.md.st. –294 Puggy gy.md.st. –306 Sy.gy.md.st. –311 Rk. –351 Puggy gy.sh. –364 Puggy gy.sst.
15464 – LILLIANFELS	143° 55' 22° 33'	– C. Mallyon 1963	Abd	190 261	190 160	Soak 2160			0– 3 Soil – 92 Coloured cl. –136 Gy.md.st. –140 Sy.md.st. –142 Rk. –190 Gy.md.st. –191 Broken rk. –209 Sy.gy.md.st. –211 Broken rk.	–218 Sy.gy.md.st. –265 Puggy gy.md.st. –275 Sy.gy.md.st. –292 Puggy gy.md.st. –307 Sy.gy.md.st. –348 Puggy gy.md.st. –360 Sy.pug –368 Puggy gy.md.st.
15576 – ALDINGHAM	143° 18' 22° 20'	– S.H. Jensen 1963		200 258 340	200) 258) 243	Soak 9600	P		0– 6 Bk.soil –138 Y.sst.hd.bnds. –258 Soft md.st. –294 Sst.	–386 Sy.md.st. hd.bnds –740 Md.st.hd.bnds. –760 Sst.hd.bnds. –805 Sy.md.st.

1964/39
A
(IN 5 PARTS)
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DEPARTMENT OF NATIONAL DEVELOPMENT.

BUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS.

RECORDS:

1964/39

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Appendix E - Bore data

Part 2 - Muttaburra Sheet area

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PROGRESS REPORT, 1963, ON THE GEOLOGY OF PART OF THE NORTH-EASTERN EROMANGA BASIN, QUEENSLAND.

by

R.R.Vine, D.J. Casey, and N.E.A.Johnson.

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APPENDIX E - TO RECORDS 1964/39.

BORE DATA

Information on all bores in the Winton, Muttaburra, Tangorin, Hughenden, and Charters Towers 1:250,000 Sheet areas, collected from the records of the Irrigation and Water Supply Commission, Brisbane, and from property owners and managers, is listed in this Appendix.

The Appendix is bound in four parts, as follows: -

Part 1 : Winton Sheet area
Part 2 : Muttaburra Sheet area
Part 3 : Tangorin Sheet area
Part 4 : Hughenden and Charters Towers Sheet areas.

Within each sheet area the order of listing is numerical by the registered numbers allocated to water bores by the Irrigation and Water Supply Commission.

Abbreviations used in the Appendix are listed on Page 2 of each part. To save needless repetition of column headings throughout the Appendix, the columns in the body of the Appendix are lettered; a specimen bore sheet giving the full headings and the appropriate letter is given on Page 3 of each part.

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ABBREVIATIONS

Water

B	Brackish
F	Fresh
G	Good
P	Potable
S	Salty, saline
Su	Surface

Drillers Logs

Ba.	basalt
Bd.	bed
Bk.	black
Bl.	blue
Bld.	boulder
Bnd.	band
Br.	brown
Carb.	carbonaceous carboniferous
Choc.	chocolate
Cl.	clay
Cong.	conglomerate
Cs.	coarse
Cv.	cave
Cvg.	caving
Di.	diorite
Dk.	dark
F.	fine
Fm.	formation
G.	grained
Gn.	green
Gr.	granite
Gvl.	gravel
Gy.	grey
Hd.	hard
Ind.	indurated
Lst.	limestone
Lt.	light
Md.	mud
Med.	medium
P.cl.	pipe clay
Pk.	pink
Qtz.	quartz
Qtzite.	quartzite
Rd.	rod
Rk.	rock
Rtn.	rotten
S.	sand
Sch.	schist
Sh.	shale
Shy.	shaly
Si.	silt
Sk.	streak
Sky.	streaky
Sm.	seam
S.rk.	sandrock
Sst.	sandstone
St.	stone
Stky.	sticky
Su.	surface
Sy.	sandy
T.D.	total depth
V.	very
W.	with
Wd.	weathered
Wh.	white
Y.	yellow

Reg. No. Name PROPERTY	Position (Long. and Lat.)	Elevation Driller	Year Completed	Latest info. (year) S.W.L. Pump depth Supply(g.p.d.)	WATER (original record) Struck (feet)	Rose to (feet)	Supply	Quality	Temp. °F	DRILLERS LOG
A	B	C	D	E	F	G	H	I	J	K

A	B	C	D	E	F	G	H	I	J	K
65 Jabiru Trust JABIRU	145°00' 22°16'	775	1909				1,000,000 plus			T.D. 1425
88 Marathon Trust LILYDALE	145°12' 23°00'	622	1915		830 1218	Surface	750000	G	110	0 - 5 Bk.soil - 85 Y.cl -170 Bl.sh -195 Sy.sh -199 Gy.rk -790 Gy.sh -830 Sy.cl -890 S rk.w.p.cl -910 Sst. -955 Cl. -972 Sst. - 975 Hd.rk. - 980 S.rk - 985 Hd.rk. -1025 Sy.cl. -1040 Br.sh. -1088 Sy.cl. -1097 Br.cl. -1162 Sy.cl. -1210 Sh. -1250 Sst.
101 South Branch LUTHRIE	144°2' 22°41'		1886		Abd.					T.D. 296'
102 MUTTABURRA TOWN	No Trace		1885		Abd.					T.D. 96'
103 BROOKWOOD	144°24' 23°33'		1886		Abd.					T.D. 296'
104 No.1 LUTHRIE	144°2' 22°36'		1884		Abd.					T.D. 345'
128 Taberna Trust REEDY CREEK	145°17' 22°24'	776	1910		Su. 175-200,000	Surface				T.D. 509'

A	B	C	D	E	F	G	H	I	J	K
307 - ARAMAC TOWN	No Trace	735	1896	Abd	980) 1280)	Surface	772,800	G	104	0 - 960 Sh. - 980 Sst. - 1280 Sh. - 1290 Sst. - 1343 Bl.sh.
308 - MUTTABURRA TOWN	144°32' 22°36'	714	1901	Su						T.D. 2707'
1034 North Comet ADELONG	145°27' 22°22'	- -	1911	67 80						T.D. 220'
1035 - ADELONG	145°26' 22°25'	825	1913	Abd.						T.D. 50'
1036 Southern Cross ADELONG	145°27' 22°28'	821	1913	26 43				S		T.D. 212'
1037 Alston ADELONG	145°28' 22°28'	- -	1914	- 60 67	95	60				0 - 8 Soil &gvl - 50 Rd.Sst. -25 Wh. Sst. - 95 Porous wh.sst. -41 Gy.Sst.
1038 - ADELONG	145°26'	- -	1900	Abd.						T.D. 15'
1202 - MYROSS	145°22' 22°49'	781	- 1891	Su - 80,000			1,300,000			T.D. 650'
1203 - BRENDALLEN	145°16' 22°55'	775 -	1891	Abd.						T.D. 1011'

A	B	C	D	E	F	G	H	I	J	K
1204 - BRENDALLEN	145°16' 22°55'	776 -	1914	- Su - 180,000	80 148) 890) 1010) 1252)	80 Surface	Soak 480,000			0 - 2 Bk.soil - 60 Y.cl. - 80 Bl.sh. - 84 Rk. -147 Bl.sh. -148 Sy.rk. -452 Bl.sh. -456 Rk. -560 Sh. -608 Sy.sh. -855 Sy.cl. -890 Srk.&cl. -1240 Srk. -1252 Cl.
1206 12 Mile RAVENSWOOD	145°25' 22°57'	776 -	1892	1959 Su - 309,607						T.D. 697'
1207 Washpool DALMAR	145°18' 22°54'	771 -	1892	1957 Su - 213,000						T.D. 830'
1213 Five Mile BALLYGAR	145°28' 22°54'	- -	1903	Abd.						T.D. 79'
1214 Tea Tree RAVENSWOOD	145°30' 22°57'	830 -	1911	Abd.						T.D. 80'
1215 Tea Tree RAVENSWOOD	145°30' 22°57'	830 -	1911	Abd.	15' 45' 60' 100'	3'				T.D. 133'
1216 Friendly Springs RAVENSWOOD	145°30' 22°58'	824 -	1903	Abd. (Replaced by R.1217)						T.D. 82'
1217 Friendly Springs RAVENSWOOD	145°30' 22°57'	824 -	1915	1947 10 15' -	220	Surface	21,000 G			0- 100 Gy.s.rk.w. rd.&y.bnds. - 120 Gy.s.rk. - 130 Coloured s.rk. - 140 P.cl. - 157 Hd.s.rk. - 163 Porous gy.rk. - 170 S. - 220 Slightly coloured s. T.D. 238'

A	B	C	D	E	F	G	H	I	J	K
1218 – MYROSS	No trace	–	1903	Abd.						T.D. 82'
1219 – MYROSS	No trace	–	1903	Abd.						T.D. 82'
1220 – MYROSS	145°28' 22°50'	793 –	1903	Abd.						T.D. 64'
1221 Five Mile BALLYGAR	145°28' 22°54'	808 –	1904	– 8–10 20 –						T.D. 100'
1222 Pelican east BALLYGAR	145°24' 22°59'	765	1913	– 264) – to) – 280) – 306) 212,000	Surface	410,700				0– 3S – 31 Y.cl. – 162 Hd.bl.sh. – 180 Br.sh. –264 S.y.cl. –280 S.rk. –304 S.y.cl. –416 S.rk.
1227 Siphon RAVENSWOOD	145°27' 22°59'	800 –	1916	– 45 – 175 – 310) – to) 680)	45) 175) Soak Surface			S F F		0– 45 Y.cl. – 57 Bl.rk. – 116 Dk.bl.sh. – 175 Lt.Bl.sh. – 185 Sy.sh. – 310 Lt.gy.sh. – – 480 S.rk. – 495 Stky.gy.cl. – 510 Lt.Bl.cl. – 580 Stiff rd. cl. – 600 Lt.bl.cl. – 640 Lt.sh. – 680 S.rk. – 710 Gy.cl. – 750 Bl.cl. – 810 Stiff d.cl. – 840 Lt.sh. – 935 Rd. marl.
1228 Loxton DALMAR	145°22' 23°00'	780 –	1916	1957 385) Su 620) – 860) 207,000	Surface	1,004,265				0– 30 Y.cl. – 40 Dk.bl.sh. – 355 Lt.gy.sh. – 367 Sy.p.cl. – 590 Lt.gy.sh. – 620 Hd.gy.sh. – 860 Sst.

A	B	C	D	E	F	G	H	I	J	K
1229 - DUDLEY PARK	145°27' 22°46'	- -	1915	Abd.	8 46	8 Surface	Soak 40,000			0- 4 Soil - 8 Cs. gvl. -13 Cong. -17 Sy.cl. - 32 Y.cl. - 39 Bk.sy.sl. - 52 Sst.
1230 Bullock Paddock DUDLEY PARK	145°27' 22°44'	- -	1915	- Su - -	57	Surface				0- 8 Soil -17 S.y.cl. -23 Bk.sh. -65 Sst.
1249 - STAINBURN	145°10' 22°51'	764 -	1896	- Su - -						T.D. 1130'
1250 SPRINGDALE	145°42' 22°44'	773 -	1892	- Su - -	750) 1000)	Surface 795000			101	0- 740 Bl.sh. - 750 Water rk. -1000 Bl.sh. -1100 Sst.
1251 - STAINBURN	145°1' 22°47' D.C. Loxton	790	1915	- Su - -						0- 78 Y.cl. - 301 Bl.sh. - 304 Hd.gy.rk. - 643 Bl.sh. - 666 Bk.petroleum sh. - 1223 Gy.sh.& hd.sks. - 1319 Dk.sh. - 1325 Sst. - 1728 Gy.sh. - 1798 S.rk. - 1804 Sst.
1252 STAGMOUNT	145°16' 22°49'	780 -	1892	- Su - 180,000	700) 900)	Surface 644,500			97	0-690 Bl.sh. -700 Water rk. -900 Bl.sh. -978 Sst.
1253 No.2 STAGMOUNT	145°17' 22°45' J. Vaner	841	1910	- Su - -	730 830 2019	60 Surface) ")85000				T.D. 2019'
1254 Windmill STAGMOUNT	145°19' 22°40'	- -	1912	- 130 150	200 586	70			BB	Determined indrifts T.D. 586.'

A	B	C	D	E	F	G	H	I	J	K
1255 KINGSBOROUGH	145°2' 22°42'	760 Coopar	1907	1953 Su – 240000	1180) 1500)	Surface	600000		110°	0– 75 Y.marl. – 670 Bl.sh. – 950 Br.sh. -1127 Bl.sh. -1180 Wh.sh. -1240 Wh.s.rk. -1350 Wh.p.cl.& s. -1500 Coloured soft pug -1650 No strata
1256 – GLENAMPLE	145°2' 22°53'	765 –	1905	– Su – –	1200 1650	322 260				T.D. 1850'
1260 – LILYDALE	145°15' 22°56'	– Plover	1920	– – – –	830) 940)	Surface	35000			0– 930 no information to 930 940 S.rk.
1418 Steam BARCOORAH	145°22' 22°38'	911	1898	– – 156 –	70 120 270 418	70) 120) 100 50	Soak			0– 80 pk.clst. -200 Flowing cl. pumped out -218 Br.lignite & gn.sst. -418 Gy.Sst. -430 Sh.& p.cl. -731 Bl.sh. -741 Gn.S. T.D. 800'
1419 Old Barcoorah BARCOORAH	145°20' 22°41'	919 –	1908	1963 – 150 –						T.D. 506'
1420 – BARCOORAH	145°20' 22°35'	866 –	1909	– – 123 –						T.D. 608'
1421 Overton OVERTON	145°20' 22°28'	836 –	1909	– – 50 –						T.D. 360'
1423 Millsvale BARCOORAH	145°24' 22°39'	– –	1909	– 154 –						T.D. 508'

A	B	C	D	E	F	G	H	I	J	K
1424 - GORDONBROOK	145°17' 22°34'	900 -	1912	- - - - -	25 120 300	25) 120) 20	Soak			Bottom in bk.sh. T.D. 310'
1425 - GORDON BROOK	145°17' 22°38'	- H.Johnston	1917	- - - -	550	138				T.D. 584'
1426 Curragong COORABAH	145°26' 22°35'	868 -	1912	- - - -						T.D. 300'
1427 - GLENAVON	145°23' 22°29'	863 F.Douglas	1915 Abd.		170	50				T.D. 200'
1429 6 Mile BARBOORAH	145°29' 22°36'	- 981 -	-	- - 190 -						T.D. 150'
1431 House CHERHILL	145°27' 22°40'	- H.Johnston	1916	- 170 190 -	153' 417'	170'	24,000			T.D. 417' 0- 5 Black soil - 16 Rd.&Y.rk. - 73 Y.cl. - 90 Bk.sh. - 120 Bl.rk. - 151 Bk.sh. -153 s.rk. -189 bk.sh. -220 s.sh. -392 Sst. -417 s.rk.
1628 Kanaka BOWEN DOWNS	145°5' 22°40'	763 -	1891	1957 Su - 27,000	960	Surface	493,000		100	0- 29 Rd.cl. - 940 Bl.sh. - 970 Porous rk.
1629 No.2 Grange BOWEN DOWNS	145°4' 22°34'	756 -	1891	1957 Su - 1370) 140,000	860) 1171)	Surface	1,500,000		105	0- 63 Rd.cl. - 860 Bl.sh. - 880 Porous rk. -1055 Cl.& sh. -1171 Bl.sh. -1370 Porous rk.

A	B	C	D	E	F	G	H	I	J	K
1630 Landsend CABER FEIDH	145°11' 22°32'	813 -	1891	- 20 40 -	585) 785)	Surface	287,000		96	0- 50 Sst.&cl. -560 Bl.sh. -600 Porous rk. -680 P.cl.& sst. -1112 Porous rk.
1631 House HIGHBURY	144°54' 22°46'	886 -	1894	6o to 80' 140' -	75 1650) 2151) 3300)	Surface	680		136	0-50 Rd.sy.cl. -1650 Bl.sh. -1680 Porous rk. -2151 Sst & p.cl. -2231 Soft porous rk. -2251 Hd.bnd.rk. -3308 P.cl.& sst.
1632 Bottom HIGHBURY	144°54' 22°42'	- -	1914	- 90 120 -	240 1440	240) 1440)	Soak	G		0- 55 Y.cl. - 68 Bl.sh. - 72 Rk. - 237 Bl.sh. - 240 Rk. -1650 Sh. -1900 Br.cl. -2010 No information
1633 Old Jabiru POTOSI	144°53' 22°15'	839 -	1894	1963 16 18 -	1145) 1487)	Surface	476,700		112	0- 50 Rd.sy.cl. - 100 Bl.sh. - 113 QuickS. -1145 Bl.sh. -1195 Water rk. -1650 Stky.cl. -1850 Water rk. -2402 Fire cl.& Sst.
1634 Jamesland CAMARA	144°54' 22°37'	838 -	1895	- - - -						T.D. 2006'
1637 ELLENDALE	145°13' 22°37'	847 -	1906	- 70-80 80-90 -				G		T.D. 1572'
1638 Yan Yean BOWEN DOWNS	144°55' 22°34'	795 -	1907	- 13 18 100,000			370,570		119	Gas in flow T.D. 1967'
1639 Palestine BOWEN DOWNS	144°59' 22°37'	796 -	1908	- 2' 30' 200,000			275,000		114	T.D. 1846'

A	B	C	D	E	F	G	H	I	J	K
1641 Spring down East REEDY CREEK	145°20' 22°25'	804 -	1909	- 10' 12' -						T.D. 841'
1642 Homestead SUMANA	145°22' 22°19'	793 -	1909	1957 Su - 83,000						T.D. 581'
1644 - RANKIN	145°10' 22°39'	813 -	1910	- 32 - -	715) 970)	8				T.D.1174' Gas in flow
1646 No.1 TUABURRA	144°8' 22°51'	821 -	1905	- 30 - -	1675) 1880) 2200) 2350)	Surface				Bottom in 700' of v.hd.rk. T.D. 2455'
1645 - NALEMBA	145°46' 22°47'	751 -	1907	- Su - -						T.D. 2560'
1647 No.2 TUABURRA	144°8' 22°49'	784 -	1913	1957 Su - 175,000	1760) to) 1765) 2300) 2965)	Surface	300,000			0- 5 Choc.soil - 50 Rtn.y.Sst. - 900 Hd.bl.sh. - 950 Bl.sh.trace petroleum -1646 Bl.sh. -1655 S.rk. -1760 P.cl. -1775 S.rk. -1922 P.cl. -1930 Sy.p.cl. -2000 Tough y.cl. -2050 Choc.pug. -2100 Tough y.cl. -2176 P.cl. -2306 S.rk. -2405 F.s.rk. -2420 S.y.p.cl. -2435 Sst. -2440 P.cl. -2465 Rd.marl. -2475 Sy.p.cl. -2515 P.cl. -2520 Gy.Fm.C.vg. -2522 Rtn.gy.cl. -2545 Rd.marl. -2550 Hd.wh.lst. -2718 Sy.p.cl. -2738 Rd.marl. -2836 F.Sst.

A	B	C	D	E	F	G	H	I	J	K
1647 No.2 TUABURRA (Cont.)										= 2843 Cs.sst.& p.cl. - 2880 Rd.marl. - 2950 Qtz.& sst. - 2965 P.cl. - 3000 Water rk. - 3001 Hd.y.fm.
1648 — WILTON	144°50' 22°42'	836 —	1912	- - - - -	1678 1820 2507) 2795)Surface 3010)	25 10	50,650			0- 50 y.cl. - 1200 sh. - 1691 Sh.c vg.badly - 2200 p.cl. - 2522 Rd.marl. - 2745 Cl.Rd.marl. - 2918 Cl. - 2970 Rd. marl.cl. - 3250 P.cl.Rd.marl.
1649 SCOTSTOUN	145°10' 22°51'	808 J.Brown	1911	- 23 -	1445) 1638)Surface 2117)			S		0- 63 y.cl. - 1436 Bl.sh. - 1445 Sst. - 1600 p.cl. - 1635 Sst. - 1875 Puggy p.cl. - 2117 Wh.s.rk. - 2185 cvg.cl.
				50,000						
1650 No.1 ACACIA DOWNS	144°43' 22°49'	791 -	1908	1957 Su -	1860	Surface	297,000		130	0- 1860 Sh.w.hd.bnds. - 2425 Water rk.
				79,000						
1651 No.2 ACACIA DOWNS	144°43' 22°46'	820 -	1923	- Su - -	1875 2230)Surface 3570)	15				0- 26 Y.sst. - 36 Y.cl. - 82 Y.sst. - 1265 Gy.sh. - 1345 Br.sh. - 1740 Sy.sh. - 1820 Br.sh. - 1870 Bl.sh. - 1890 S.rk. - 1945 S & cl. - 2000 Choc.sh. - 2080 Wh.p.cl. - 2089 Choc.sh. - 2139 S.& cl. - 2230 Choc.sh. - 2250 S.rk. - 2475 Choc.sh. - 2515 Hd.sst. - 2550 Sy.cl. - 2680 S.&cl. - 2737 Choc.sh. - 2750 P.v.sh. - 2795 Hd.s.rk. - 2890 Rd.s.rk. - 2930 Wh.s.rk. - 2980 Wh.sh. - 3020 Wh.p.cl.sst. - 3080 Bl.sh. - 3106 Wh.sh. - 3200 Bl.sh. - 3220 Gy.sh. - 3253 Lt.Coloured sh. -3293 Rd.Marl -3340 Stky.gy.& bl.sh. -3380 Pk.marl. -3420 Pk.st. -3446 Wh.marl. -3448 Coal -3458 Sst. -3460 Coal -3542 Pk.marl. -3666 Sst. -3700 Si.

A	B	C	D	E	F	G	H	I	J	K
1652 – CROSSMORE	144°35' 22°54'	756 –	1906	– Su – 270,000						T.D. 2657'
1653 – POWELLA	144°52' 22°56'	– –	1924	–	1723) 2438)	Surface	481,690			0– 3 Soil – 70 Hd.y.sst. – 109 Bl.sh.hd.sms. – 192 Gy.sy.sh. – 332 Bl.sh. – 625 Gy.sh. – 965 Bl.sh. -1080 Gy.sh. -1359 Bl.sh. -1459 Sy.gy.sh.sky. -1547 Bl.sh. -1607 Gy.sh.sy. -1712 Bk.sh. -1722 Hd.dk.sst. -1724 Sst. -1757 Wh.sy.sh. -1840 Gy.sy.sh. -1975 Hd.gy.sh. -2034 F.sst. -2084 S_st. -2159 Gy.sy.sh. -2192 Hd.br.sh. -2207 F.sst. -2222 Hd.br.sh. -2235 Gy.sy.sh. -2360 Gy.& br.sy.sh. -2453 S.rk. -2471 Hd.sst. -2481 Gy.sy.sh. -2483 Br.sh. -2508 Hd.gy.sh.
1842 Peters CALEDONIA	145°6' 22°2'	805 –	1921	– Su – –	660 715) 790) to) 880) 1000	50 Surface	160,000			0– 30 Cong. – 70 Y.sh. – 117 Gy.sh. – 147 Hd.sm. – 664 Gy.sh. – 672 Sy.cl. – 690 Br.sh. – 725 S.& sy.cl. – 775 Wh.sy.cl. -1052 Sy.p.cl.& s. -1093 Br.sh.& s.
1843 Peters CALEDONIA	145°6' 22°2'	805 –	1893	Abd.	710) 760)	Surface	50,575		99	0– 20 Y.sy.cl. – 710 Dk.sh. – 730 Gn.sst.& sh. – 765 Rd.sst. – 770 Drift s.
1844 – CALEDONIA	145°4' 22°6'	794 –	1893	Abd.	104	104	Soak	S		0– 55 Cl. – 104 Riverdrift – 454 Dk.sh.
1845 – CALEDONIA	145°4' 22°6'	794 –	1899	– Su =	725) 910)	Surface				0– 54 Lime rk.cl. – 83 Drift – 725 Dk.sh. – 910 Water rk.

A	B	C	D	E	F	G	H	I	J	K
1853 No.9 MARENGO	144°59' 22°10'	850 -	1921	- - - - - - -	1055) 1075) 1150) 1225) 1375) 1400)	13				0- 4 Soil - 10 Hd.rk. - 35 Hd.sy.rk. - 111 Gy.& y.sh. - 150 Drifts - 172 Dk.sh. - 924 Gy.sh. - 1055 S.&Sh.sks. - 1080 S.rk.& p.cl. -1205 Sy.sh.& sy.p.cl. -1230 S.rk. -1250 Sy.sh.& sy.cl. -1280 Sy.p.cl. -1305 Br.stky.sh. -1330 Sy.sh. -1335 Br.sh. -1360 Gn.sy.sh. -1405 Sy.p.cl.& s. -1415 S. -1425 Cl.&sy.cl -1435 Sy.cl.& gy.sh. -1440 Sy.sh.&s. -1485 Br.sh. -1542 Rd.marl. -1552 Gn.&rd. marl.
1908 - WESTBURY	144°23' 22°55'	756 -	1897	- Su - 175,000			Trace of F			T.D. 3340
2171 No.1 (Thoms) CORINDA	145°17' 22° 9'	793 -	1889	- Su - 29,000	334	Surface	85,300			0- 58 Sy.cl. - 304 Layers of sh.sst. bnds of qtz. - 334 Sst.
2172 Five Corners THE SPRINGS	145°15' 22°17'	789 -	1889	Abd.						T.D. 362
2173 No.15 CORINDA	145°20' 22° 3'	860 -	1889	Abd.	140) 248)	Surface	20,300		86	0- 61 Cl. -216 Layers of sh.& sst. -248 Sst.
2177 No.7(Jericho) CORINDA	145°21' 22° 7'	822 -	1889	- - - - -	66) 138) 226)	Surface	87,430		81	0- 17 Rd.& bl.cl. - 59 Sy.cl. -139 Sh.& sst. - 226 sst.
2178 - THISTLEBANK	145°14' 22°15'	777 -	1889	- - =			90,000		92	0- 57 Variegated cl. -104 Sh. -307 Sst.&sh. -404 Sh.

A	B	C	D	E	F	G	H	I	J	K
2179 Top Paddock THE SPRINGS	145°13' 22°11'	783 -	1890	- Su - 60,000	298 436	18 Surface	104,000		93	0- 73 Variegated cl. - 154 Sh. - 311 Gn.sst.& sh. - 355 sh. - 432 Gn.sst&sh. - 518 Wh.sst.
2180 No.30 CORINDA	145°13' 22° 4'	804 -	1890	- Su - -	140 413	140 Surface	Soak 117,000	S	92	0- 80 Cl.& Soft sst. - 138 Soft sh. - 243 Sh.w.sy.bnds. - 277 Hd.sh. - 373 sst.& sh.w.hd.bnds - 412 Sh. - 516 wh.sst. - 526 Bl.& sy.marl.
2181 No.13 (Haddon) CORINDA	145°16' 22° 4'	813 -	1891	- Su - 73,000	275) 372)	Surface	113,600		89	0- 78 Variegated cl. - 86 Sy.cl.& sst. - 186 Sh. - 218 Gn.sst. - 258 Sh. - 348 Gn.sst.& sh. - 375 Sh.& sst. - 440 Wh.sst.
2182 - MARIE DOWNS	145° 7' 22°11'	785 -	1891	Abd. (Replaced by R.11987)	707	Surface	123,700		98	0- 76 Variegated cl. - 320 Sh.w.hd.bnds. - 392 Gn.sst.& sh. - 395 Gn.sst. - 495 Sh. - 521 Sh.& sst. - 589 Sh. - 700 Marl.& sst. - 753 Wh.sst.
2183 No.15 CORINDA	145°20' 22° 3'	866 -	1891	- 17 20' -	244	Surface	22,240		87	0- 21 Variegated cl. - 75 Marl. - 109 Sh. -115 Sst. - 237 Sh. - 367 Hd.sst.& marl.
2184 - CORINDA	No trace	840	1891	Abd.	106	Surface	17,100		84	0- 82 Marl & cong. - 106 Soft sh. - 194 Sst.
2185 No.17 CORINDA	145°22' 22° 5'	846 -	1891	- - 10-15 33,600	216	Surface	11,770		84	0- 57 Variegated marl. - 163 Sh.w.hd.bnds. - 216 Sst. - 301 Sh.&sst. T.D. 396.
2186 No.18 (Jam Creek) CORINDA	145°20' 22° 5'	824 -	1891	- Su - 34,384	180	Surface	86,280		83	0- 56 Cl. - 88 Cl.& sh.bnds. - 180 Sh. - 222 Sst.

A	B	C	D	E	F	G	H	I	J	K
2187 No.19 (Thunderbolt) CORINDA	145°19' 22° 9'	797 -	1891	- Su - 52,208	225	Surface	110300		82	0- 72 Cl. -244 Sh.hd.bnds. -301 Sst.
2188 No.20 CORINDA	145° 9' 22° 5'	805 -	1891	- - - 15,000	572	Surface	123700		98	0- 87 Cong.cl.&gvl. -278 Sh.w.bnds. -285 Gn.sst. - 472 Sh.& bnds. - 567 Sh. - 642 Wh.sst.
2189 No.21 (Beaches) CORINDA	145°20' 22° 0'	860 -	1891	- - - 6,000	143) 243)	74 Surface	27980		87	0- 12 Cong. - 82 Cl. -143 Sh. -150 Sst. -228 Sh. -310 Sst.
2190 No.72 CORINDA	145°23' 22° 0'	838 -	1891	Abd.	113	Surface	32000		84	0- 48 Sy.cl.&st. - 71 marl. - 91 Sh. - 243 Sst.
2191 No.72 CORINDA	145°23' 22°0'	838 -	1905	Abd.						T.D. 300'
2199 No.30 CORINDA	145°13' 22° 4'	804 -	1899	- Su - -	229 420	60 Surface	53,000			0- 56 Cl. - 84 Marl -176 Cl.cong.marl. -229 Bl.sh. -419 Sh. -509 Wh.sst. -541 Bl.sh.
2201 Old Lake Huffer LAKE HUFFER	145°24' 22°15'	797 -	1898	Abd.						T.D.100'
2202 No.33 CORINDA	145°25' 22° 7'	814 -	1906	Abd. (Replaced by R.7991)	240	Surface				Sst.45-267 T.D. 267'
2205 No.36 CORINDA	145°26' 22°10'	859 -	1913	- 25 40 6000	28 50 190	28) 50) 27	Soak 47,200			0- 28 Y.s. - 92 P.cl.& s.-336 Bk.sh. -422 Gy.s - 29 Wh.s.-192 Cs.s. -350 Cs.s. sh.& rd - 50 Rd.s.-260 P.cl.&s. -360 Y.cl. cl. - 64 Cs.s.-303 Cs.s. -380 Rd.cl.gy.sh.-451Rd.cl

A	B	C	D	E	F	G	H	I	J	K
2208 Old Sumana SUMANA	145°25' 22°14'	865 -	1915	Abd. (Replaced by R.12434)						T.D. 67'
2209 Middle SUMANA	145°30' 22°13'	1025 -	1915	- - - -						T.D. 280'
2210 House ALBION VALE	145°27' 22° 5'	883 -	1914	- - 180 -						T.D. 150'
2211 Top ALBION VALE	145°30' 22°17'	986 -	1914	- - 200 -						T.D. 160'
2214 No. 45 CORINDA	145°20' 22° 3'	860 J. Allenby	1916	- - - -	90) 231) 570) 818) 878)	Sub-artesian Surface	6,000			0- 40 Y.marl - 69 Bl.marl. - 80 Y.marl - 90 Bl.s. -126 Bl.sh. -153 Gn.s. -170 Bl.sh. -230 F.s. -250 v.hd.wh.s. -330 P.cl.& s. -350 Hd.s. -403 P.cl.& s. -468 Cs.s. -480 P.cl.& s. -510 Hd.f.s. -555 cs.s. -595 F.S. -647 Wh.rk.v.hd. -660 P.cl.& s. -682 Y.marl -692 Rd.marl -710 Y.s. -722 Rd.marl -749 Bl.marl -760 Rd.marl -780 Bl.marl -792 Rd.marl -808 Br.s. -820 Bl.s. -832 P.cl. -844 Bl.s. -960 Rd.&bl.marl.
2216 No.47 CORINDA	145°26' 22° 4'	874 J. Allenby	1917	- 23 54 -	82) 230) 300)	21	18.	G		0- 8Wh.chalk.st. - 20Y.s. - 50 Lt.rd.s. - 82 Wh.s.&water. -110 P.cl.&s. -116 Hd.qtz. -176 P.cl.s. -190 F.s. -202 Cs.s -212 P.cl. -230 Cs.s. -240 Wh.s. -282 Cs.s -300 S -324 Gy. marl.

A	B	C	D	E	F	G	H	I	J	K
2224 No. 56 CORINDA	145°28' - 22° 0' -		1932	- 85 90 -						T.D. 185'
2231 - THE SPRINGS	145°23' 22°12' -	808	1920	Abd. (Replaced by R.7472)						T.D. 130'
2233 Lake Paddock LAKE HUFFER	145°19' 22°16' -	782	1923	1957 - 80,000	250) 300)	Surface	125,000			0- 6 S. soil - 56 Y.cl. - 86 Bl.cl. - 87 Sst. - 93 Bl.rk. -156 Bl.sh. -158 Gn.sh. -250 Br.sh. -320 S.rk.
2234 Lonely Creek LAKE HUFFER	145°25' - 22°17' -		1928	- - - -	46 105	5 Surface	12,000			0- 10 S. - 20 Cl. - 32 Y.cl. - 42 Bk.cl. - 43 Hd.gy.rk. - 58 Hd.gy.sst. - 60 Gy.rk. - 63 Drifts - 92 Gy.sst. -102 Bk.cl. -104 Bk.s.rk. -105 Soft wh.sst. -209 Soft wh.s.rk. -212 Wh.cl.
2235 Long Paddock THE SPRINGS	145°17' 22°12' -	788	1926	- Su - 100,000			116,000			T.D. 425'
2260 Inverness INVERNESS	144°27' 22°10' -	811	1896	- Su 120,000				G		Bottom in p.cl. T.D. 2500.
2261 - MAYFIELD	144°23' 22° 4' -	836	1907	- Su 200,000	1700) 1809) 2175) 3040)	Surface	232000			0-2500 No information -2600 Sh. -2950 S.&p.cl. -3010 Rd.marl -3025 Hd.s.rk. -3040 Rd.marl -3210 S.rk. -3224 Sh.& P.cl.alternating layers

A	B	C	D	E	F	G	H	I	J	K
2262 – BURSLEM	144°27' 22° 1'	895 –	1908	– – 50 120 to 140,000						T.D. 2755'
2263 – Preston THORNTON	144°28' 22° 8'	824 –	1923	– – – –	1680) 2131)	Surface				0– 15 Y.soil – 95 Y.cl. – 402 Gy.sh. – 404 Hd.rk. – 960 Gy.sh. -1200 Br.sh. -1290 Gy.rk. -1586 Br.sh. -1670 Sy.sh. -1685 S.rk. -1705 P.cl.& sh. -1780 Hd.sst. -1836 Stky.cl. -1853 Hd.s.rk. -1870 Sh.w.hd.bnds rk. -1926 Gy.sh. -2131 Br.sh. -2141 S.rk. -2191 Gy.sh. -2548 S.rk.w.bnds of sh. -2578 Sh.
2264 – WOOMERA	144°40' 22° 8'	787 –	1926	– Su – –	1495) 1550) 1556)	Surface	165,000	S		0– 21 S.&Y.cl. – 28 Rd.rk. – 33 Gvl. – 83 Y.cl. – 788 Bk.sh. – 853 Bl.sh. -1461 Gy.sh. -1466 S.. -1516 P.cl. -1556 S.rk. -1706 P.cl.& s. -1724 Br.s.
2348 7 Mile YARRAMAN	144° 6' 22°55'	763 –	1899	– Su – 3000	330 640	Soak 557	18,000		120	0– 150 Bl.sh. – 330 Br.sh. – 600 Bl.cl. – 700 Sst. -1300 Sst.& bl.cl. -1400 Sh. -1470 Bl.cl.&sh. -1920 Sh. -2007 Bl.sh. -3600 No info.
2361 – SHADYSIDE	No Trace	776 –	–	Abd.						T.D. 340'
2362 Cattle Creek TALAHENA	144° 8' 22°59'	719 –	–	– – – –						T.D. 428'

A	B	C	D	E	F	G	H	I	J	K
2375 House RICHFIELD	144°0' 22°45'	796 -	1914	- 220 300 7000						T.D. 425'
2388 Well DARRAVEEN	144°8' 22°55'	763 Howard	1913	Abd. (Replaced by R11805)	120	104	2000			0- 40 Cl.& soft sst. -250 Rk. -200 Sst. & rk. -321 Sh.
2389 Shed DARRAVEEN	144°10' 22°57'	759 -	1915	Abd. (Replaced by R11599)	98	92	4600			0-292 S.rk. -650 Bl.sh.
2390 Bore Paddock DARRAVEEN	144°13' 22°55'	798 -	1916	- 14 - 30 to 40,000	1730) 1745) 1820) 1850) 1895) 1960) 2149)	50 Surface	100,000			0- 22 Su.soil -1933 S.rk.& p.cl. - 49 Y.cl.& sst. -1980 Hd.s.rk. - 55 Bk.sh. -1986 Gy.sh. - 160 Bl.sh. -2033 Choc.sh. - 352 Br.sh. -2058 P.cl.& choc.sh. - 383 Bk.sh. -2100 Gy.sh. - 510 Gy.sh. -2114 Sh.& p.cl. - 572 Br.sh. -2134 P.cl. -1292 Bk.sh. -2217 Sst. -1578 Gy.sh. -2312 P.cl. -1720 Tough bk.sh. -2322 Sst. -1732 Bk.s.& sh. -2324 Hd.rk. -1780 Wh.s.rk. -2365 Sy.p.cl. -1821 S.rk.& p.cl. -2407 Stky.p.cl. -1847 Stky.sh.& p.cl. -2519 Sy.p.cl. -1910 Soft s.rk.
2893 Meadow GREENHILLS	No trace	- -	1911	Abd.						T.D. 410'
2897 Woolshed GREENHILLS	144°13' 22°41'	741 -	1914	Abd.						T.D. 370'
2898 5 Mile GREENHILLS	No Trace	- -	1912	Abd.						T.D. 432'

A	B	C	D	E	F	G	H	I	J	K
2899 Horse Paddock GREENHILLS	144°10' 22°40'	762 -	1914	Abd.						T.D. 214'
2900 Boydam MUYONG	144°18' 22°44'	739 -	1915	- 100 240 9000						T.D. 415'
2901 Jacobs Well GREENHILLS	144°12' 22°40'	756 -	1915	Abd.						T.D. 455"
2902 Jacobs Well GREENHILLS	144°12' 22°40'	- -	1884	Abd.						T.D. 287"
2903 Bradley HYPATIA	144° 7' 22° 40'	- -	1915	1963 170 190 10,000						T.D. 354'
2904 Labrador KENYA	144°11' 22°37'	824 -	1915	1963 100 220 3000						T.D. 460'
2905 4 Mile Gully GREENHILLS	144°12' 22°45' W. Warburton	- -	1915	Abd.	115) 250)	115	Soak 3000			0- 36 Y.rtn. sst. - 50 Y.s. - 55 Gy.sh.& s. - 59 Rk. - 70 Hd.s. - 72 Rk. -109 S. -111 Rk. -149 S. -150 Rk. -175 S. -190 Br.sh.& s. -207 Br.sh.& rk. -230 Gy.s.& sh. -250 Gy.s. -280 S. -290 Gy.s. -296 Rk. -300 Hd.s. -307 Rk. -310 S. -332 Rk. -340 S. -365 Gy.s.& hd.sks. -394 Rk. -399 Sh.

A	B	C	D	E	F	G	H	I	J	K
2906 Labradore HYPATIA	144°8' 22°37'	- -	1916	- 200 240 4000						T.D. 512'
2907-8 House Well HYPATIA	144° 8' 22°41'	-	1883	- 80 108 5000						Two wells, 130 feet and 60 feet deep, redug to 117 feet since 1957.
2909 Deep GREENHILLS	144°11' 22°41'	781 -	1918	- Su - 200,000	2200) 2306) 2515) 3014) 3055)	Surface				0- 65 Y.sst. - 93 Gn.gy.sh. - 124 Gy.sst. - 142 Bl.sh. - 165 Br.sh. - 167 Wh.s.rk. - 174 Gn.s.rk. - 220 Gy.sst. - 257 Gy.cl. - 272 Gy.sh. - 374 Gy.sy.sh. - 975 Bl.sh. - 978 Hd.sst. -1141 Bk.sh. -1151 Gy.sh. -1534 Bl.sh. -1628 Lt.br.&bl.sh. -1957 Bl.sh. -2175 Gy.sh. -2178 S.rk. -2235 Hd.sy.sh. -2280 Br.sh. -2300 Stky.cl. -2364 S.rk. -2408 Sy.cl. -2466 Stky.p.cl. -2500 Hd.gy.sh. -2821 P.cl. -2903 Choc.sh. -2913 P.cl. -3077 S.rk. -3130 P.cl.
2910 No.1 LUTHRIE	144° 1' 22°36'	829 -	1915	- 220 10,000						T.D. 335'
2911 Aramac LUTHRIE	144° 9' 22°50'	838 -	1911	100 220 2500						T.D. 466'
2912 LUTHRIE	144°4' 22°41'	783 -	1911	Abd.						T.D. 385'

A	B	C	D	E	F	G	H	I	J	K
2940 Thorburn HARDINGTON	144°47' 22°9'	- -	1888	Abd						T.D. 100'
2941 Avenue HARDINGTON	144°47' 22°12'	- -	1888	Abd.						T.D. 90'
2942 Avenue HARDINGTON	144°47' 22°12'	- -	1898	- - - -						Water in pebbly bed at bottom T.D. 103.
2943 6 Mile HARDINGTON	144°51' 22°10'	873 -	1908	- - - -						T.D. 136'
2944 Lagoon Ck. STOCK ROUTE	144°45' 22° 9'	818 -	1909	- - - -						T.D. 126'
2946 Denver ELIS	144°53' 22° 3'	- -	1919	Abd.	140	102				Strata decomposed gvl. & p.cl. T.D. 146.
3167 Big Mill KENSINGTON	144° 5' 22°27'	944 -	1899	- 130 180 10,000						T.D. 4286'
3168 Borehead KENSINGTON	144° 4' 22°30'	820 C. Beauchamp	1914	- su - 80,000	248 2591) 2625) 2755) 3085) 3178) 3240) 3383)	248 Surface	Soak 250,000 24.			0- 66 Y.cl. -2034 Bl.sh. -2475 Gn.sst.& sh. -3070 Sst. -3123 Sh. -3240 Hd.rk.& sst. -3688 Sst.p.cl.Hd.rk.

A	B	C	D	E	F	G	H	I	J	K
2913 No.4 LUTHRIE	144°0' 22°38'	882 -	1915	- 180 200 10,000						T.D. 400'
2914 House LUTHRIE	144°6' 22°42'	796 -	1900	- 150 176 10,000						T.D. 300' (originally a 200 feet well now deepened to 300 feet)
2915 Ram Paddock LUTHRIE	144°7' 22°44'	798 -	-	- 160 189 7000						T.D. 200'
2916 Letter Box LUTHRIE	144° 8' 22°48'	815 -	-	- - 193 4,000						T.D. 320'
2917 South Branch LUTHRIE	144° 2' 22°41'	- -	1923	- 180 230 7000						Originally a well (T.D.296') Converted to a bore (T.D. 496').
2918 Villa LUTHRIE	144° 2' 22°44'	- -	1922	- 190 220 7000						T.D. 400'
2919 - MARATHONA	144°15' 22°49'	777 -	1914	- Su - -	1940) 2080) 2270) 2460) 2680) 2710) 2770)	Surface	333,000			0- 59 Y.soil -1514 Br.sh. -2720 Choc.sh. - 114 Y.soil & s.-1606 Lt.sh. -2745 Sy.cl. - 189 Bl.sh. -1673 Lt.Br.sh.-2770 Srk - 228 Sy.sh. -1925 Gy.sh. -2788 S.rk & cl. - 232 Bl.s.rk. -1966 Srk. - 360 Sy.sh. -2106 Cl.& srk. - 400 Br.sh. -2338 Dk.cl. - 478 Lt.sh. -2350 Srk - 833 Br.sh. -2460 Sy.p.cl. -1033 Br.& gy.sh.-2535 Stky.cl. -1301 Stky.gy.sh.-2672 Sy.cl.

A	B	C	D	E	F	G	H	I	J	K
3169 Big Well INGLESIDE	144°12' 22°24'	803 -	1899	- 120 140 8000	100 172					T.D. 172'
3170 Middle Emu Ck. KENSINGTON	144°11' 22°28'	788 - -	-	- 91 200 7200	100 372 457	91				T.D. 500'
3171 No. 2 HANWORTH	144° 3' 22°18'			- - - -		90		B		Bottom in hd.rk. T.D. 315'
3172 No. 4 HANWORTH	144° 3' 22°13'	950 -	1912	- - - -						T.D. 350'
3173 No.3 HANWORTH	144°2' 22°16'	849 -	1914	(Abd. Replaced by R13415)						T.D. 469'
3174 No. 1 HANWORTH	144°3' 22°20'	838 -	1914	- - - -	116) 267) 295) 375)	91		B		Bottom in sst. T.D. 388'
3175 - PENLAND DOWNS	144°15' 22°21'	805 -	1909	- Su - 290,600						T.D. 3042'
3186 Prarie BENGAL	144° 6' 22°24'	835 -	1912	- - - -						T.D. 300'

A	B	C	D	E	F	G	H	I	J	K
3187 No.4(House) BENGAL	144° 4' 22°21'	815 -	1914	- - - -						T.D. 316'
3197 No.2 LEVUKA	144° 7' 22°20'	783 -	-							T.D. 350'
3198 No.5 LEVUKA	144° 5' 22°21'	799 -	-							T.D. 302'
3199 - LEVUKA	Position unknown	787 -	1912	Abd.						T.D. 350'
3200 No.1 LEVUKA	144° 8' 22°18'	848 -	1913							T.D. 548'
3201 No.8 LEVUKA	144° 8' 22°16'	914 -	1913	- - - -						T.D. 500'
3356 House LERIDA	144° 3' 22°11'	886 -	1899	- - 160 100,000	2630 3214 3446	100 10 Surface				0- 100 Hd.rd.sst. -2162 Bl.sh. -2200 Gn.sst. -2296 Bl.sh. -2323 Bk.sh. -2356 Bl.sh. -2400 Bl.sh.sst. -2611 Bl.sh. -2630 S.rk.p.cl. -2660 s.rk. -2695 P.cl. -2720 S.rk. -2765 P.cl. -2817 S.rk.p.cl. -3095 Rd.cl. -3197 P.cl. -3446 S.rk. -3500 Rd.sh.
3363 Field of Mars TARRAGONA	144°00' 22° 1'	918 -	1911	Abd.						T.D. 460'

A	B	C	D	E	F	G	H	I	J	K
3364 Dry Paddock TARRAGONA	144°00' 22° 2'	891 -	1911	Abd.						T.D. 424'
3369 No.2 LERIDA	144° 6' 22°11'	827 -	1912	- - - -	100 274		7- 8000		G	T.D. 292'
3370 LERIDA	144° 6' 22°13'	859 -	1913	Abd.	130 310					T.D. 350'
3371 No.3 LERIDA	144° 6' 22°13'	856 -	1913	- - 180 9000						T.D. 291'
3373 Homestead TARRAGONA	144° 0' 22° 5'	- H. Bode	1913	Abd.	130) 310)	130	10,000			0- 2 Bk.soil - 25 Rd.st. -110 Wh.sst. -160 Sy.pk.cl. - 179 Bk.sst. - 338 Bk.sh. - 385 Gy.sst.
3434 - RABBIT FENCE BOARD	144°30' 22°30'	- -	1911	Abd.						T.D. 300'
3647 Charlie's Ck. MAROOMBA	144°10' 22°11'	779 -	1911	Abd.						Met with layers of gns. T.D. 353'
3648 Homestead MAROOMBA	144°12' 22° 6'	763 -	1911	Abd.						T.D. 400'
3649 Horse Paddock MAROOMBA	144°13' 22° 7'	- -	-	Abd.						T.D. 500'

A	B	C	D	E	F	G	H	I	J	K
3650 - MAROOMBA	144°12' 22°10'	797 -	1911	Abd.						T.D. 505'
3651 - MAROOMBA	144°11' 22°11'	817 -	1912	Abd.						T.D. 602'
3652 - MAROOMBA	144°12' 22°13'	- - -	-	Abd.						T.D. 360'
3653 - MAROOMBA	144°12' 22°13'	- -	-	Abd.						T.D. 500'
3654 - MAROOMBA	144°12' 22°13'	- -	-	Abd.						T.D. 449'
3655 - MAROOMBA	144°11' 22° 4'	780 -	1915	- Su - 160,000	2030) 2085) 2537) 2575) 2795)	Surface				0- 2Bk.soil -1700 Gy.sh.& gn.s. - 4 Y.cl. -1923 Gy.sh. - 78 Hd.rk. -1975 Bk.sh. - 240 Gy.sh. -2003 Bl.sh. - 270 Gn.s. -2050 S.rk. - 292 Bk.sh. -2085 Choc.p.cl. - 320 Gn.s. -2105 S.rk. - 402 Gy.sh. -2442 Choc.p.cl. - 560 Br.sh. -2500 Sy.p.cl. - 1460 Gy.sh. -2530 Choc.p.cl. - 1520 Br.sh. -2575 Wh.p.cl. - 1675 Gy.sh. -2885 S.rk.
3656 - MAROOMBA	144°12' 22°11'	810 Brown	1916	- 10 15-20 -	2327) 2790)	Surface 254649				0- 66 Y.sh. -2342 S.rk. - 2920 Wh.p.cl. - 270 Gy.sh. -2400 S &cl. - 2980 S.cl. - 280 Sy.sh.& s. -2440 Choc.sh. - 3242 S.rk. - 1700 Gy.sh. -2690 S.& Cl. - 3270 Coal - 2327 Bl.sh. -2880 Choc.sh. - 3285 Rd.s. - 3320 Wh.cl.

A	B	C	D	E	F	G	H	I	J	K
3657 Hillview HILLVIEW	144°15' 22°16'	812 -	1925	- Su - 135,000	2231 2307) 2560) 2838) to 2907)	10 Surface	200,000			0- 3 Bk.soil - 9 Y.sh. - 12 Hd.rk. - 42 Y.sh. - 52 Y.sh.& patches of rk. - 71 Y.sh. - 123 Bl.sh. - 126 Rk. - 208 Bl.sh. - 253 Sy.sh. - 256 Hd.rk. - 326 Gy.sh. - 330 Gy.sh.& sks. of rk. - 341 Sy.sh. - 344 Rk. - 356 Sy.sh. - 364 Bl.sh. - 407 Sy.sh. - 433 Bl.sh. - 435 Hd.rk. - 1530 Bl.sh. - 1710 Bk.sh. - 1773 Gy.sh. - 1805 Br.sh. - 1843 Gy.sh. - 1868 Gy.sh.&gy.cl. - 1896 Gy.sh. -2231 Bl.sh. -2236 S.rk. -2240 Hd.rk. -2255 Sy.cl. -2265 Puggy cl. -2307 Gy.sh. -2320 S.rk. -2328 Wh.cl. -2346 Sst. -2356 Cl. -2371 Br.choc. sh. -2381 Cong. cl.or rk. -2384 Br.& wh. sh. -2397 Hd.rk. -2416 Wh.cl. -2428 Sy.cl. -2439 Hd.s.rk. -2560 Cl.wh.& pk. -2566 S.rk.& cl. -2620 Pk.& wh. cl. -2711 Wh.&br. cl. -2720 Sy.cl. -2764 tough cl -2779 Sy.cl. -2819 S.rk. -2832 P.cl.& s.rk. -2907 S.rk. -2925 S.rk.& sh.
3856 - DOTSWOOD	144°34' 22°14'	793 -	1892	- Su - -						T.D. 2320
3857 - VERASTAN	144°23' 22°26'	801 -	1906	- Su - 206,000	2180) 2280) 2780) 2970)	Surface	207,000			0- 118 No info. - 488 Bl.&sy.sh. -2191 Bl.sh. -2260 Bl.&choc.sh. -2323 S &gy.sh. -2416 Sst. -2549 Gy.sh. -2580 S.rk. -2640 Gy.sh. -2680 Sst. -2720 Gy.sh. -2970 S.rk. -3081 Rk. -3150 Sst. -3214 Hd.&soft rk.

A	B	C	D	E	F	G	H	I	J	K
3858 House BOORAMEEL	144°47' 22°37'	836 -	1909	1963 60 60 Abund- ant	1790 2075) 2660) 2743)	15 Surface				0- 80 Hd.rk. -1738 Bl.sh. -1789 S.rk. -2040 Gy.sh. -2090 Cement & sst. -2120 Drift s. -2143 Hd.rk. -2183 Gy.sh. -2218 Cement choc.sh. -2400 Gy.sh. -2543 S.rk. -2663 Gy.sh. -2785 S.rk.& loose s. -2811 Soft s. -2903 Rd.sst.& choc.sh. -2977 S.rk.
3859 Bennetts MT.CORNISH	144°42' 22°37'	825 -	1914	- - - -	1637 2145) 2178) 2656)	Surface 20,000 Surface 300,000+				0- 51 Y.cl. - 91 Br.rk.& y.cl. - 189 Bl.sh. - 256 Br.rk. - 380 Br.sh. - 442 Gy.sh. - 674 Br.sh. - 878 Br.&bl.sh. -1182 Br.sh. -1284 Bl.sh. -1361 Br.&bl.sh. -1547 Bl.sh. -1596 Br.sh. -1637 Bk. -1688 P.cl. -1729 Bl.sh.s.rk. -1821 Bl.&br.sh. -1892 Br.sh. -1981 Gy.sh. -2055 Br.sh. -2147 Gy.sh. -2239 S.&p.cl. -2302 S.rk. -2349 S.rk.p.cl. -2420 S.rk.&bl.sh. -2524 Choc.sh. -2575 Gy.sh. -2600 Bl.sh.& rk -2656 S.rk. -2708 Bl.sh. -2740 Rd.sh. -2772 S.rk. -2817 Rd.sh. & rk. -2849 Bl.sh. -2880 Sy.p.cl. -2897 Rk.
3860 East 12-Mile BOORAMEEL	144°49' 22°35'	800 -	1913	1963 Su - -	1572 2125) 2179) 2232) 2305) 2690)	Surface 13,824 Surface 285,821	F			0- 2 Bk.soil - 47 Y.cl. - 67 Bl.sh. - 80 Hd.gn.sst. - 312 Gy.sh. -1010 Bk.sh. -1075 Choc.sh. -1560 Gy.sh. -1572 Bk.sh. -1578 S.rk. -1940 Cl.& s. -1960 Choc.cl. -2070 Choc.sh. -2125 S & cl. -2145 S.rk. -2180 S.& cl. -2200 S.rk. -2240 S.& cl. -2260 S.rk. -2295 S.& cl. -2305 Coal -2340 S.rk. -2408 S.& cl. -2560 Rd.marl. -2690 Wh.cl. -2725 S.rk. -2757 Hd.sst.

A	B	C	D	E	F	G	H	I	J	K
3861 House ASHRA DOWNS	144°44' 22°39'	761 -	1915	- - - -	1637) 2145) 2178) 2656)	Surface	20,000 614928			0- 30 Y.cl. - 124 Bl.sh. - 151 Y.cl. - 160 Hd.br.rk. - 182 Y.cl. - 216 Br.sh. - 240 Bl.sh. - 265 Br.sh. - 270 Gy.rk. - 380 Br.sh. - 448 Gy.sh. - 721 Br.sh. - 876 Bl.sh. -1182 Br.sh. -1315 Bl.sh. -1361 Br.sh. -1547 Bl.sh. -1630 Br.sh. -1640 S.rk. -1729 S& p.cl. -1821 Bl.sh.stky. p.cl. -1880 Br.sh. -2026 Gy.sh. -2053 Br.sh. -2120 S & P.cl. -2265 S.rk. -2349 S.rk.& p.cl. -2380 S.rk. -2420 Bl.sh. -2505 Choc.sh. -2561 Gy.sh. -2649 Bl.sh.& s.rk -2708 S.rk. -2715 Rd.sh. -2724 S.rk. -2797 Rd.sh. -2849 S.rk.&bl.sh. -2896 Sy.p.cl. -2897 Rk.
3893 Meadows MUYONG	144°16' 22°46'	- -	-	- 100 240 6500						
3898 MUYONG	No trace	- -	-	Abd.						
4004 Bangall BROOKWOOD	144°18' 22°32'	731 -	1894	1958 Su - 297,680	165 2190) 2931)	165 Surface	Soak			0- 32 Y.sh. - 165 Y.sh.&f.s.rk. - 302 Gy.sh.& s. - 512 Fs.&sh. -1049 Bl.sh. -1570 Bk.sh. -1635 Br.sh. -1788 Bl.sh. -1845 Bk.sh.&gn.sst. -2000 Bk.sh. -2030 Lt.sh. -2179 Bk.sh. -2189 S.rk. -2200 Gy.sh. -2280 Lt.&bk.sh. -2331 Hd.f.s. -2435 Gy.sh.f.s. -2500 Bk.sh.Qtzs. -2515 F.s. -2630 Gy.sh. -2667 F.s. -2700 Hd.bnd qtz. -2780 Wh.cement gy. sh. -2820 Choc.sh f.s. -2860 Gy.sh. hds. -2934 Gy.sh. cements -3065 Hd.f.s.

A	B	C	D	E	F	G	H	I	J	K
4005 Tygwyn BROOKWOOD	144°27' 22°31'	781 -	1908	1958 Su - 152,017						T.D. 2927'
4006 Neilpo AMBO	144°20' 22°46'	766 -	1899	- - - 2000			320,000			Large amount of odourless gas strongly alkaline to phenopthalein. T.D. 2780'
4007 Woodleigh Ck. AMBO	144°22' 22°48'	803 -	1911	1959 Su - 81,000						T.D. 3505'
4008 WEEWONDILLA	144°25' 22°42'	739 -	1903	Abd.			478,000			T.D. 3060'
4009 - WEEWONDILLA	144°25' 22°42'	739 -	1910	1952 Su - 407,509						T.D. 3300'
4628 Constitution DUNDOSSIE	144°32' 22° 4'	888 -	1908	- - - -						T.D. 2900'
4630 - EASTFIELD	144°47' 22° 2'	914 -	1888	- 70 120 8000						T.D. 140'

A	B	C	D	E	F	G	H	I	J	K
5001 Driftway ARAMAC SHIRE	144°43' 22°33'	736 -	1935	- - - -	1435) 1540) 1910)	Surface	398,000			0- 2 Soil - 51 Sst. - 55 Bl.cl. - 95 Hd.gy.st. - 107 Br.tough cl. - 125 Hd.gy.cl. - 185 Tough gy.cl. - 450 Gy.cl. - 732 Heavy gy.cl. - 802 Br.cl. - 980 Gy.sh. -1207 Cvg.gy.sh. -1227 Hd.gy.sh. -1232 V.Hd.gy.st. -1252 Hd.sh. -1255 Hd.sk. -1270 Hd.gy.slate -1324 Hd.sh.cvg. -1329 Hd.sh. -1346 v.hd.slate -1430 Hd.gy.sh. -1435 Drifts -1475 Hd.br.sst -1480 Sst. -1539 Sy.cl. -1544 S.rk. -1635 Hd.br.sst -1715 Hd.br.sst -1740 Sy.cl. -1775 Tough dk. rd.cl. -1815 Tough br. cl.wadding -1850 Dk.f.gy.s -1877 Hd.sst. -1967 S.rk.
5005 Little Sardine	144°50' 22°45'	- -	1935	- - - -	1695	35	27,360			0- 11 Sst. - 47 Y.cl. - 152 Gy.sh.& rk. - 1675 Gy.sh. - 1695 Br.sh. - 1715 Sst. -1730 Br.sh. -1752 Gy.sy.sh. -1765 Tough br.sh. -1780 Wh.sy.cl. -1864 Tough gy.sh.
5017 Sandy Creek KINGSBOROUGH	145° 8' 22°44' E.A. Cooper	- -	1936	- - - -	836 1210 1230	Surface	12,000 16,000 117,500			0- 12 Soil st. - 71 Y.sh. - 818 Mixed bl.& gy.sh. - 836 Sst. - 856 Mixed sh. -1000 Pug & sy.cl.mixed sh. -1198 Gn.sst.gy.pug & sh. -1210 Mixed heavy s. -1230 S.rk.
5125 Aerodrome THE SPRINGS	145°17' 22°13'	789 Sleeman	1935	- Su - 52,000	115 324	Surface	3,000			0- 20 Pk.cl. - 40 Y.sh. - 324 Bl.sh. - 409 Wh.s.

A	B	C	D	E	F	G	H	I	J	K
5130 Five Corners THE SPRINGS	145°15' 22°17'	- -	1936	1957 Su - 116,000 to	160 262 380 434	60) 115) Surface)	120,000			0- 4 S. -20 Sy.cl. -103 Y.sh. -176 Bl.sh. *-206 Gy.sh.*-260 Blsh. -262 Gy.rk.
										-286Gy.sh.cvg. -340Hd.gy.sh.w.bnds. of y.brittle rk.cvg. -380Bk.puggy sh. -454S.rk.w.bnds of sy.p.cl.
5132 Yarraman Ck. STOCK ROUTE	144°1' 22°54'	- -	1936	- 100 120 - -	100) 515) 550) 600) 630)	80	20,400			0- 3 Su.soil - 55 Y.sy.sh. - 95 Dk.gy.sh. -200 Dk.br.& lt. br.sh. -290 Gy.sh.w.bnds of sst.
										-295 Hd.sst. -340 Dk.gy.sh. -435 Sy.sh. -450 Br.sh. -635 Sy.sh. -658 Lt.& dk.gy.sy.sh.
5297 Pelican Ck. MYROSS	145°24' 22°50'	- -	1936	- Su - 24,000			24,000	P		T.D. 290
5343 House COORABAH	145°27' 22°33'	- -	1936	- - - -	60 276	60 67	Soak	S S		0- 55 Wh.sst. - 85 Y.cl. -100 Sy.sh. -155 S.sh. -242 No info.
										-248 Sy.sh. -270 P.cl. -276 No info. -300 P.cl. -304 No info.
5441 - HILLVIEW	144°12' 22°15'	- -	1918	Abd						T.D. 432
5564 - GORDONBROOK	145°17' 22°36'	- -	1925	- - - - -						T.D. ?
5730 No.6 LEVUKA	144° 9' 22°20'	- -	1923	- - - - -						T.D. 382

A	B	C	D	E	F	G	H	I	J	K
5731 No.7 LEVUKA	144° 7' - 22°22' -		1917	- - - -						T.D. 417'
5732 - LEVUKA	144° 8' - 22°13' -		1919	- - - -						T.D. 276'
5733 No.9 LEVUKA	144° 6' - 22°16' -		1919	- - - -						T.D. 280'
5838 One South ABRACH	144°11' - 22°34' -		1934	1963 120 145 14,400				S		T.D. 390'
5839 House ABRACH	144°10' - 22°32' -		1934	- 100 - 110 2400						T.D. 150'
5840 2 South ABRACH	144° 7' - 22°34' -		1934	- 100 140 12000				B		T.D. 500'
5990 No.3 (3Mile) BENGAL	144° 1' - 22°23' -		1918	- - - -						T.D. 291'

A	B	C	D	E	F	G	H	I	J	K
5991 No.2 BENGAL	144°2' 22°23'	- -	1919	- - - -						T.D. 427'
5992 No.6 BENGAL	144° 4' 22°25'	- -	1923	- - - -						T.D. 327'
5993 No.5 BENGAL	144° 1' 22°25'	- -	1919	Abd						T.D. 308'
6306 Homestead BELVEDERE	145°19' 22°48'	- -	1934	- 10 20 -						T.D. 650'
6320 Gum Creek CALEDONIA	144°58' 22° 8'	- -	-	- - - -						T.D. 80'
6406 - ALBION VALE	145°25' 22°20'	- -	1934	- - 90 -						T.D. 37'
6408 - ALBION VALE	145°25' 22°22'	- -	1935	- - 20 -						T.D. 23'
6418 - EDGBASTON	145°25' 22°44'	- -	1932	- Su - -						T.D. 100'

A	B	C	D	E	F	G	H	I	J	K
6419 Boundary MYROSS	145°22' 22°46'	- -	1936	- 30 40 3000	230 505	24				0- 4 Soil -200 Soft sh. -505 Stratas of sst. & cl.
6514 Shadyside SHADYSIDE	144°12' 22°59'	717 W. Sainsbury	1936	- 60 140 16800	1773 1925	Subartesian	Good trace fluorine			0- 90 Y.sy.sh. - 140 Gy.sy.sh. -1200 Gy.sh. -1300 Dk.br.sh. -1500 Dk.& lt.gy. sh.& sst. -1560 Dk.sh. -1610 Lt.gy.sh. -1620 Hd.gy.rk. -1760 Dk.br.sh. -1773 S -1820 Wh.cl.& s. -1823 Loose dry s. -1918 Cl.& s. -1925 S. -1957 Stky.gy.sh.w.oily patches
6551 Limestone Well ABRACH	144° 9' 22°32'	- -	-	Abd (Replaced by R11407)						T.D. 150'
6780 Home ARRANMORE	144° 6' 22°50'	- -	-	- - 260 15000						T.D. 450' approx.
6781 Top ARRANMORE	144° 8' 22°52'	- W. Sainsbury 240 15000	-	195) 225) 525) 540) 557	195 138	Soak 17280				0- 3 Soil -100 Y.sh. -190 Gy.sh. -220 Lt.sy.sh. -300 Dk.gy.sh. -400 wh.s.sh. -500 Gy.sy.sh. -535 Wh.sy.sh. -620 Sy.sh. -980 Gy.sh.
6859 Southern Cross CORRABAH	144°25' 22°34'	- -	1935	- - - -						T.D. 167'

A	B	C	D	E	F	G	H	I	J	K
6944 Crombie LORIDA	144°1' 22°12'	- A.E.	1937 Blackwell	- - 275 10,000	300) 320)	90	12,400			0- 75 Y.cl. - 85 Bl.cl. -105 Bl.sh. -107 Gy.rk. -117 Gy.sh. -127 Bl.sh. -157 Gy.sh. -158 Gy.rk. -168 Br.sh. -193 Sy.sh. -208 Gy.sh. -211 Gy.rk. -287 Sy.sh. -307 Br.sh. -310 Gn.rk. -325 Gn.s., -345 Br.sh.
7121 Aramac Town ARAMAC SHIRE	145°15' 22°59'	722 -	1933	- - - -	651 974 1030 to 1178	Surface	622,000			0- 6Cl. - 66 y.sh. - 647 Gy.sh. - 651 S. - 670 Choc.pug. - 712 Mixed wh. sy.p.cl. - 782 Sh.&pug - 922 Choc.sh.&pc. - 976 Stky.pug & s. - 978 Choc.pug -1000 Sst. -1180 Mixed sst. -1200 Mixed sy.cl.
7193 Range CHERHILL	145°25' 22°41'	- -	1926	- 130 156 -				G		T.D. 299'
7194 Sherburn BARCOORAH	145°23' 22°33'	- -	1929	- - - -				G		T.D. 314'
7195 Rawcliffe BARCOORAH	145°17' 22°32'	- -	-	- - 150 -				B		T.D. 326'
7196 Maltby BARCOORAH	145°19' 22°29'	- -	-	- - 100				B		T.D. 254'

A	B	C	D	E	F	G	H	I	J	K
7249 Gelebele Well GELEBELE	144°37' 22°18'	- -	1913	- - -						T.D. 65'
7259 Bristol ARAMAC SHIRE	145°21' 22°47'	- -	1900	Abd.						T.D. 130'
7380 New BROMPTON	144° 2' 22°34'	- -	1934	- 200 230 14000						T.D. 405'
7446 South Lambert Mill PENLAND DOWNS	144°12' 22°23'	- -	1919	- - 160 8000						T.D. 287'
7472 Smokey THE SPRINGS	145°22' 22°12'	- T. Sleeman	1938	1950 - 12 6-7000						0- 15 Y.cl. - 50 Y.sst. - 51 Y.rk. -106 Bl.sst. -109 Gy.rk. -169 Bl.sst. -194 Lt.gy.sst. -227 Wh.sst.
7381 Comet BROMPTON	144° 1' 22°31'	- -	1923	- 200 235 14000						T.D. 303'
7656 Plains TALAHEENA	144°4' 23°0'	- -	1919	- - - -						T.D. 525'
7667 GELEBELE	144°44' 22°17'	- -	1929	Dud						T.D. 400'

A	B	C	D	E	F	G	H	I	J	K
7675 Martin's Gully BOWEN DOWNS	144°3' 22°37'	807 -	1941	- 15 40 70,000	1065 1397	30 15				0- 150 Bl.sh. - 398 Gy.sh. - 420 Gn.sy.sh. - 422 Lst. - 450 Gn.sy.sh. - 640 Gy.sh. -1060 Bl.sh. -1125 Sst. -1143 P.cl. -1225 Br.sh.hd.sst. -1245 Br.cl. -1276 Stky.p.cl. -1327 Br.sh. -1344 P.cl. -1402 Gy.sh.sy.sh. -1408 Sst. -1500 F.sst. -1504 Sy.p.cl. -1545 Sst. -1660 Sy.sh. -1680 Lst. -1700 Br.sh. -1720 Rd.marl -1742 Dk.rd. marl -1745 Bl.sh. -1767 Sy.sh. -1840 Rd.marl y.cl. -2040 Rd.marl gn.gy.s -2139 Gy.sh. -2144 Y.cl. -2181 Gy.sh.
7762 Mona POTOSI	144°49' 22°18'	- -	1918	- - - -						T.D. 200'
7763 House POTOSI	144°47' 22°15'	- -	1925	- - - -						T.D. 70'
7880 BELVEDERE	144°21' 22°48'	- -	1938	- Su - -	120 303 475) 490) 503)	25 17 Surface	15,000 40,000 70,000	B B		0- 5 Bk.soil - 92 Y.cl. - 50 Choc.cl. -130 Bl.sh. -210 Gy.sh. -303 Dk.gy.sh. -305 S. -315 Gy.sy.cl. -320 S.rk. -330 Gy.sy.cl. -335 Choc.cl. -350 Gy.sy.cl. -352 Lt.gy.sh. -445 Lt.br.sh. -446 Water strata -455 Sy.cl. -475 Sy.sh. -480 S. -490 S.rk. -503 Sst.
7881 Pinnacle BELVEDERE	145°18' 22°46'	- -	1939	- Su - -	45 60 80 645	45) 60)Soak 80) 25	4800	S		0- 5 Subsoil - 35 Y.cl. - 40 Choc.cl. - 60 Bl.sh. -520 Dk.gy.sh. -533 Lt.br.sh. -538 Gn.sy.cl. -555 Sy.cl. -557 S.rk. -558 Decomposed qtz. -612 Lt.br.sh. -620 Sy.cl. -621 Hd.s. -646 Sy.cl. -651 Water. -654 Sy.cl.

A	B	C	D	E	F	G	H	I	J	K
7890 Westbury Well ELMORE	144°17' 22°51'	- -	1880							T.D. 225'
7923 House ADELONG	145°26' 22°25'	- C.J. Langdon	1940	- 23 42 -	45 95	25) 15)	12000			0- 3 Sy.loam - 58 Gy.rk. - 81 Gy.rk. - 7 Gy.sst. - 63 Gy.sst. - 85 Gy.sst. - 40 Gy.sy.cl.- 69 Gy.rk. - 90 Gy.rk. - 50 Gy.sst. - 74 Gy.sst. - 98 Gy.sst. -100 Gy.rk.
7991 No.33 (5 Miles Spring) CORINDA	145°25' 22° 7'	- J. Small	1940	- Su - -	220) 235) 330) to 350)	Surface)	7,000 57,400			0- 4 Su.soil -220 Wh.sst. -300 Br.sh. - 31 Y.&wh.cl. w.wh.cl.-305 Hd.wh.sst. - 38 Bk.cl. -235 Sst. -320 Sst. - 50 Sst. -270 Wh.sst. -330 Hd.wh.sst. w.wh.cl.-350 Sst.
8087 Bristol ARAMAC SHIRE	145°47' 22°21'	- T. Sleeman	1940	- Su - -	12 33 39) 86) 129) 136) 160	7 5 Surface	73,122			0- 4 Br.gritty soil - 12 Br.cl. - 15 Y.sy.cl. - 23 Y.& bl.cvg.sh. - 32 Bl.cl. - 39 Sy.bl.cl. - 43 S.rk. - 48 S.&bl.cl. - 56 Drifts - 66 Drifts & bl.cl. - 72 S & bl.cl. - 78 Wh.sy.p.cl. - 86 Wh.&br.sy.p.cl. -111 Sy.p.cl. -132 Sy.p.cl.w.bars of s.rk. -145 S.rk. -161 Wh.& br.s.rk.
8508 Mootaburra CORINDA	145°30' 22° 2'	- -	-	Abd.						T.D. 637'
8509 No.16 CORINDA	145°23' 22°3'	- -	1905	- - - 1400						T.D. 396'

A	B	C	D	E	F	G	H	I	J	K
8552 - TYRONE	145°9' 22°32'	- E. Cooper	1936	- Su - - -	695) 758) 895)	3				0- 3 Y.cl. - 758 Sst. - 30 Mixed cl. - 895 P.cl. - 34 Coloured sh. -1089 S. -695 Bl.sh. -1095 Br.sh.& s.
8897 - Rainsby RAINSBY	145°17' 22° 1'	833 Roberts	1941	- Su - - -	212 300) 340)	212 Surface	Soak 70,000			0- 3 Rd.loam -212 Gn.s.rk. - 27 Rd.cl. -292 Gy.sh. - 93 Y.cl.&slippery -300 S.rk. back -320 Hd.f.s.rk. -209 Gy.sh. -340 S.rk.
9045 Three Mile BALLYGAR	145°27' 22°52'	- -	1941	- Su 10 - -						0- 3 Soil s - 87 Dk.gy.sh. - 25 Various -101 Puggy br.sh. coloured s.cl. -102 S. - 35 Gy.sh. -126 Lt.br.puggy sh. - 56 Dk.gy.sh. -127 S. - 57 S. -132 Br.sh. - 67 Dk.gy.sh. -154 Lt.br.puggy sh. - 77 Gy.sy.sh.
9077 House ELLENDALE	145°12' 22°34'	- -	1912	- 90 112 - -				P		T.D. 800'
9295 Scots Creek KENSINGTON	144° 2' 22°28'	- -	1933	- 150 300 7200 -						T.D. 450'
9431 - ADELONG	145°29' 22°30'	- -	-	- 33 46 - -						T.D. 100'

A	B	C	D	E	F	G	H	I	J	K
10576 Share ADELONG	145°27' 22°22'	- H. Hogg	1945	- 220 226 -	210	207	7,200			0- 4 Rd.sy.loam -130 Creamy sst.-230 Wh.cl. - 10 Rd.rk. -195 F.sst. -245 Y.s. - 60 Y.sst. -210 Wh.cl. -250 Y.drift - 95 Rd.& wh.sst.-212 Water rk.
10642 - ALBION VALE	145°24' 22°22'	- G. Langdon	1946	- Su - -	72 278	10 Surface	18,000			0- 13 S. - 86 Gy.sst. - 35 Y.cl. -136 Bk.sy.cl. - 72 Br.sh. -278 Gy.sst.&bars of rk.
10672 New Mill RICHFIELD	144°2' 22°44'	- -	1923	- 200 260 8000						T.D. 600'
10673 Dry Block RICHFIELD	144° 3' 22°49'	- -	1917	- 200 310 8000						T.D. 497'
10675 Centre RICHFIELD	144° 3' 22°46'	- -	1917	- 120 220 9- 10000						T.D. 500'
10679 Lalarea LILLAREA	144°51' 22°24'	- Godfrey Bros.	1947	- - - -	1152 1240 1276 1446 to 1483	Surface	279000			0- 21 Gy.&pk.cl. -1152 Br.sy.sh. -1302 Wh.sy.cl. - 50 Y.cl.&blds -1163 Gn.sst. -1331 Wh.cl. - 92 Y.cl. -1168 Wh.p.cl. -1367 Br.sh. - 490 Dk.sh. -1207 Br.sy.sh. & rk. -1428 Br.sh.&rk - 880 Br.sh. -1453 Sst. -1050 Dk.sh. -1242 Hd.sst.&rk.-1469 Sst.&br.sy sh. -1052 Gn.sst. -1276 Sst. -1483 Sst.

A	B	C	D	E	F	G	H	I	J	K
10740 Creek(No.2) ORIELTON	144°6' 22°0'	- A.E. Black- well	1946	- - 180 10,000	132) 222) 231)	75	10000			0- 13 Soil &rk.-132 Rk. -241 Rk. - 55 Y.cl. -185 Sy.sh. -244 Sy.p.cl. - 70 Sh. -186 Rk. -265 Sh. - 83 Rk.& sst.-190 Sy.sh. -277 Sy.sh. - 90 Sy.sh. -220 Sh. -305 Sh. -110 Sh. -228 Rk. -309 Rk. -130 Sy.sh. -231 Sy.p.cl.-330 Sh.
10741 No.1 ORIELTON	144°4' 22°4'	- C.Rose	1935	Abd.	115 150 365	115 (Soak 150 (110	1000			0- 50 Y.cl.&sst-228 Sst. -360 Rk. - 53 Rk. -231 Rk. -374 Sst. -115 Sy.sh. -255 Sst. -415 Sh. -130 Sst. -260 Rk. -430 Sy.sh. -150 S.sh. -335 Sh. -437 Rk. -175 Br.sh. -340 Rk. -450 Sh. -215 Sy.sh. -354 Sh.
10769 - BENGAL	144°4' 22°21'	- F.Rose	1946	Dud				B		0- 5 Su.loam - 90 Y.sst. - 20 Y.sst. -100 Sy.sh. - 23 Rk. -140 Gy.sh.
10775 No.1 SUMANA	145°26' 22°18'	- C. Langdon	1946	- - - -	65	55	17,000			0- 2 Rd.sy. loam - 88 Gy.sst. - 95 Gy.rk. - 14 Rd.rk. -110 Gy.sst. - 65 Y.sy.cl. -126 Y.sy.cl.
10866 - HANSWORTH	144° 3' 22°20'	- F. Rose	1946	Dud	160	150	350			0- 4 Su.loam - 52 Rk. -160 Gy.sh. - 25 Cl. - 80 Gy.sh. -180 Sst. - 27 Rk. - 83 Rk. -220 Gy.sh. - 50 Cl. -120 Sy.sh.
10901 House THISTLEBANK	145° 8' 22°16'	767 Godfrey Bros.	1947	- Su - -	150 715 (750 (	100 Surface	213,000			0- 13 Soil cl. -620 Hd.bl.sh. - 75 Y.cl. -680 Gy.& br.sh. -100 Hd.gy.sh.-740 Gy.sst.& cl. -415 Bl.sh. -760 Gy.sst. -445 Gy.sh. -765 Gy.sst.& cl.
10922 GLENAVON	145°23' 22°29'	- J. Langdon	1947	- 160 170 -	145(195(	101	12,000			0 - 7 Rd.rk. -145 Bk.cl. -201 Gy.cl. - 22 Br.cl. -150 Gy.sst. - 29 Cl. -195 Gy.cl. - 71 Y.cl. -200 Gy.sst.

A	B	C	D	E	F	G	H	I	J	K
10927 Tetherope WOOLTHORPE	145° 6' 22°21'	- Godfrey Bros.	1947	- Su - -	700 800	(Surface	149,000			0- 20 Soil & s.-190 Hd.gy.sh.-705 Bk.gvl.cl.&rk. - 52 Y.cl. -240 Gy.sh. -800 Hd.br.&gy.cl. -100 Gy.sh. -700 Bl.sh. -820 Br.cl.& sst.
10937 Tremere KOOLARINA	145° 6' 22°28'	- Godfrey Bros.	1947	- Su - -	140 830 1045 1074	140 (Surface (	Soak 220,000			0- 3 Bk.soil -500 Hd.gy.sh. -835 Cl. - 75 Y.cl. -700 Br.sh.&bnds-900 Hd.gy.sst.cl. -155 Gy.sh. of rk. -1020 Br.& gy.sst. -156 Gy.slate -830 Bl.sh. -1075 Gy.sst.
11103 - LUTHRIE	144° 5' 22°40'	- F. Rose	1948	- 220 250 10,000	150 420	150 105	Soak 14,400			0- 2 Rk. -150 Sst. -240 Br.sh. - 30 Cl. -180 Br.sh. -242 Rk. - 60 Gy.sh. -184 Sy.sh. -250 Gy.sh. - 90 Sst. -187 R.rk -251 Rk. - 94 Rk. -202 Sy.sh. -300 Sy.sh. -120 Sy.sh. -204 Rk. -302 Rk. -139 Gy.sh. -214 Br.sh. -390 Br.sh.& rk. -144 Rk. -215 Rk. -420 Sst. -422 Rk. -450 Gy.sh.
11200 Longreach LUTHRIE	144° 6' 22°45'	- F. Rose	1948	- 220 250 7,000	210 448	210 180	Soak 10000			0- 2 Rk. -228 Sst. -353 Br.sh. - 70 Sh. -235 Rk. -356 Rk. - 73 Rk. -248 Sst. -379 Gy.sh. - 85 Y.sh. -249 Rk. -382 Rk. - 87 Rk. -265 Sy.sh. -406 Br.sh. -105 Y.sh. -266 Rk. -440 Gy.sh. -110 S.rk. -291 Sy.sh. -442 Rk. -150 Y.sh. -293 Rk. -448 Sst. -161 Gy.sh. -300 Sy.sh. -450 Rk. -165 Rk. -333 Br.sh. -500 Gy.sh. -210 Gy.sh. -335 Rk.
11295 - STOCKHOLM	144°44' 22°23'	- -	1948	- Su - -	1368 1618 1900 to 1915	15 18 Surface		300000		0- 8 Br.soil -1385 Sst. -1775 Wh.cl. - 20 Pk.sy.cl.-1587 Wh.sy.cl. -1785 Br.sy.cl. - 68 Y.cl. -1618 Br.&wh.cl.-1818 Br.sh. -754 Gy.sh. -1625 F.sst. -1850 Wh.sy.cl. -909 Lt.gy.sh.-1645 Br.sh. -1887 Br.sy.sh. -1355Gy.sh. -1690 Gy.sy.cl. -1900 Br.sh. -1368Wh.cl. -1704 Br.sy.cl. -1904 F.sst.

A	B	C	D	E	F	G	H	I	J	K
11295 STCCKHOLM (cont.)										-1912 Lt.br.sh. -1958 Sst. -1916 F.sst. -1963 Sst.w.bnds of sh. -1918 Gy.sy.cl.
11357 Bibil BIBIL	144°32' 22°10'	- 1949 -		- Su - - -	1598 1728 1940 to 2270	80 6 Surface	(((279,880 ((			0- 3 Br.soil -1728 Wh.sy.cl. -2004 Sst. - 60 Y.cl. -1748 Sst. -2080 Wh.sy.cl. -1568 Wh.sy.cl. -1752 Br.sh. -2126 F.sst. -1602 F.sst. -1757 Br.wh.cl. -2167 Wh.sy.cl. -1650 Wh.sy.cl. -1833 Wh.sy.cl. -2185 F.sst.cl. -1690 Br.sh. -1849 Toughwh.cl. -2294 Wh.sy.cl. -1695 Br.sy.sh. -1940 Br.sh. -2342 Sst. -2350 Gy.carbonate sh. -2389 Sst. -2396 Gy.sh.
11407 Limestone Well ABRACH	144° 9' 22°32'	F.1949 Rose		- - 170 -	73 438	73 65	Soak 14,400			0- 6 Su.loam -175 Gy.sh. -270 Pug.sst. - 50 Y.sh. -177 Rk. -335 Gy.sh. - 68 Gy.sh. -207 Pug.sst. -337 Rk. - 73 rk. -208 Rk. -388 Gy.sh. - 93 Sst. -235 Sy.sh. -391 Rk. - 120 Gy.sh. -236 Rk. -438 Gy.sh. - 122 Rk. -254 Gy.sh. -443 Sst. - 130 Sy.sh. -255 Rk. -470 Gy.sh.
11416 - ORIELTON	144° 9' 22° 7'	- - -		Dud	154 333	154 107	Soak 2160			0- 4 Soil -387 Sh. -490 Sy.p.cl. - 67 Gy.sst. -389 Rk. -499 Sh. - 70 Sy.sh. -420 Sh. -501 Rk. - 85 Sh. -430 Sy.p.cl. -507 Sy.pcl. - 135 Sy.sh. -433 Rk. -555 Sh. - 138 Rk. -445 Sh. -575 Sy.p.cl. - 179 S.rk. -449 Rk. -650 Sh. - 335 Sh. -470 Sy.p.cl. - 352 P.cl. -475 Sh.
11455 Rose's KENYA	144°13' 22°36'	- 1949 F. Rose		- 105 260 9000	428	105	9600			0- 4 Su.loam- 91 Rk. -168 Sysh. -230 Gy.sh. - 46 Y.sh. -105 Sy.sh. -170 Rk. -244 Br.sh. - 47 Rk. -138 Br.sh. -177 Sy.sh. -245 Rk. - 70 Y.sh. -143 Sst. -184 Rk. -272 Sy.sh. - 89 Sy.sh. -144 Rk. -205 Sy.sh. -275 Rk.

A	B	C	D	E	F	G	H	I	J	K
11455 Rose's KENYA (cont)										-300 Gy.sh. - 412 Rk. -400 Pug.sst.- 442 Pug.sst. -403 Rk. - 460 Gy.sh. -407 Gy.sh.
11466 GLENAVON	145°23' 22°27'	- G. Langdon	1948	- - - -	95	10	24,000			0- 3 Rd.s. - 93 Bk.sy.cl. - 20 Gy.sy.cl.- 95 Gy.rk. - 22 Gy.sst. -108 Gy.sst. - 47 Gy.sy.cl.-109 Drift s.
11471 9 Mile ELIS	144°53' 22° 2'	-- -	1939	Abd.						T.D. 116'
11504 4 North KINSINGTON	144° 9' 22°27'	- - -	-	Abd. (Replaced by 14126)						T.D. 350'. Silting up.
11599 Shed LARRIVEEN	144°10' 22°57'	- W. Sainsbury	1943	- 140 180 -			16,800			0- 4 Dk.bl.soil -125 Lt.sy.sh. - 14 Bl.stky.y.sh. -180 Lt.sy.sh.w.small - 65 Y.sy.sh. bnds of dk.sh. - 70 Dk.gy.sh. -184 Hd.bnds of rk. - 73 Hd.bnds of rk. -192 S.
11794 - WOOLTHORPE	145° 8' 22°25'	- Godfrey Bros.	1951	- Su - -	687 842	687 Surface	Soak 27000	B G		0- 3 Su.soil -241 Hd.sst.-690 Rk. - 6 Gy.sst. -446 Bk.sh. -728 Gn&gy.sst. - 60 Coloured cl.-449 Hd.rk. -750 Br.sh. - 99 Bk.sh. -545 Bk.sh. -808 Br.& gy.sh. -100 Rk. -546 Rk. -842 F.sst. -120 Bk.sh. -605 Gy.sh. -853 S. -200 Gy.sh. -687 Bk.sh. -239 Bk.sh. -689 S.
11803 Hillview HYPATIA	144° 7' 22°38' F. Rose	-	1951	- 140 200 20000	165 379	160 140	20160			0- 2 Loam -155 Rk, -280 Br.sh. -401 Rk. - 4 Rk. -161 Sy.sh. -323 Pug.sst.-417 Sst. - 45 Y.sh. -175 Gy.sh. -343 Gy.sh. -450 Gy.sh. - 47 Rk. -177 Rk. -350 Br.sh. - 80 Y.sh. -220 Gy.sh. -353 Rk. -145 Br.sh. -250 Sy.sh. -379 Br.sh. -153 Sy.sh. -399 Sst.

A	B	C	D	E	F	G	H	I	J	K
11805 Well DARRWEEN	144°8' 22°55'	- F. Rose	1951	- 113 180 20000	171 461	160 113	20160			0- 3Loam -252 Gy.sh. -433 Rk. - 15 Y.sh. -257 Rk. -454 Gy.sh. - 17 Rk. -312 Pug sst. -455 Rk. - 50 Y.sst. -355 Gy.sh. -461 Sst. - 90 Y.sh. -357 Rk. -500 Br.sh. - 145 Gy.sh.& rk. -426 Gy.sh.& rk. - 189 Sy.& rk. -432 Pug sst.
11841 Upper Jam THISTLEBANK	145°10' 22°14'	- Godfrey Bros.	1951	- Su - -	523 (Surface 561 (		175,000			0- 12 Su.cl. -523 Bk.sh. - 24 Coloured sy.cl. -525 S. -561 Sst. - 60 Y.cl. -608 S & coal. - 334 Bk.sh. - 404 Gy.sh.
11888 Woolshed Woolthorpe	145°11' 22°24'	- Godfrey Bros.	1951	- Su - -	532 (690 (Surface to (720 (		54,000 279,880			0- 4 Su.soil -560 S.rk. - 35 Coloured cl. -568 Sst. - 36 Rk. -570 Hd.rk. - 78 Coloured cl. -602 Br.&gy.sh. - 421 Bk.sh. -648 Sst. & cl. - 421 Gn.sst. -672 Gy.sh. - 532 Bk.sh. -691 Sst. - 538 S. -720 S.
11960 Cornwall CABERFEIDH	145°15' 22°27'	- Godfrey Bros.	1952	- Su - 129,000	130 242(384(500(	30 Surface	Soak 11,000 129,000			0- 2 Su.loam -305 Bk.sh. -476 Br.&gy.sh. - 49 Coloured cl. -306 Rk. -489 Gy.sst. - 167 Bk.sh. -313 Gn.sst. -500 Br.& gy.sh. - 242 Gy.sh. -384 Bk.sh. -549 S. - 266 Gn.sst. -428 Sst.
11987 - MARIE DOWNS	145° 7' 22°11'	785 Godfrey Bros.	1952	- Su - 239,000	672 692 (717 (to (805 (	672 (Surface	Soak 6,000 13,000 to 239,000			0- 2 Su.soil -506 Bk.sh. -672 Gy.sst. - 18 Coloured cl. -511 Gn.sst. -682 S. - 79 Y.cl. -554 Gy.sh. -692 Sst. - 286 Bk.sh. -589 Bk.sh. -708 S. - 288 Rk. -601 Br.sst. -713 S.rk. - 293 Gn.sst. -632 Br.sh. -717 Br.sh. -805 S.

A	B	C	D	E	F	G	H	I	J	K
12015 Burr Gully YARRAMAN	144°3' 22°57'	- W. Sainsbury	1950	- 200 230 16,000	512	90	15,840			0- 4 Su.Soil -268 Cvg.dk.gy.sh. - 96 Y.sh. -270 Hd.rk. - 101 Hd.rk. -470 Gns. - 140 Gy.stky.sh. -490 Y.stky.sh. - 245 Gy.sh. -568 Gy.sh.bnds.of rk.
12175 No. 1 LERIDA	144° 6' 22° 9'	- F. Rose	1952	- - 222 10,000	105(360(370(	105'	Soak 14,4000			0- 6 Loam -144 Rk. -255 Rk. - 8 Rk. -162 Gy.sh. -267 Pug sst. - 65 Y.sh. -164 Rk. -340 Br.sh. - 94 Gy.sh. -175 Sy.sh. -350 Sst. - 96 Rk. -242 Gy.sh. -360 Sy.sh. - 105 Sy.sh. -243 Rk. -370 Sst. - 143 Gy.sh. -250 Gy.sh. -400 Gy.sh.
12196 Bex J BROMPTON	144° 4' 22° 4'	- F. Rose	1952	- 160 220 15000	150 386	120(105(	14400			0- 68 Y.sh.& bnds of rk. -304 Br.sh.w.rk.bnds. - 142 Gy.sh.w.rk.bnds. -360 Bl.sh. - 150 Sst. -379 Gy.sh. - 173 Gy.sh. -386 Rk. - 187 Sy.sh. -397 Gy.sh. - 218 Br.sh.w.rk.bnds. -420 Puggy sst. - 250 Sy.sh.w.rk.bnds.
12261 CRIELTON	144° 3' 22°32'	- F. Rose	1953	Dud (to Replace R.10741)	165 (235 (	(140	2000	F		0- 5 Loam -212 Gy.sh. -348 Rk. - 45 Y.sh. -218 Rk. -357 Gy.sh. - 54 Sst. -230 Gy.sh. -359 Rk. - 56 Rk. -235 Br.sh. -375 Gy.sh. - 70 Sst. -240 Sy.sh. -385 Sy.sh. - 115 Br.sh. -296 Br.sh. -386 Rk. - 116 Rk. -297 Rk. -420 Br.sh. - 165 Br.sh. -307 Gy.sh. - 170 Sy.sh. -343 Br.sh.
12370 - ELMORE	144°18' 22°56'	- F. Rose	1950	Dud	185(213(262(	145	4800			0- 6 Top soil - 102 Y.sst. - 40 Y.sst. - 155 Sy.sh.& rk. bnds. - 41 Rk. - 185 Br.sh.& rk.bnds. - 75 Y.sst. - 371 Sy.sh.& rk.bnds. - 77 Rk. - 396 Gy.sh.

A	B	C	D	E	F	G	H	I	J	K
12371 - ELMORE	Position unknown No trace	- F. Rose	19 3	Dud						0- 6 Topsoil -120 Gy.sh. -225 Gy.sh.& rk.bars - 24 Y.loam & bars of rk. -242 Br.sh.& rk.bars - 40 Y.sh. -142 Br.sh.& bars of rk. -289 Gy.sh. -300 Sy.sh. -350 Gy.sh.
12373 - WESTBURY	144°12' 22°59'	- -	-	- - 275 8400						0- 4 Bk.soil -140 Bl.sh. -270 Bl.sh. - 30 Y.cl. -170 Sst. -280 Bl.sh. - 70 Y.sst. -200 Bl.sh. -305 Bl.sh.
12374 Chestnut WESTBURY	144°20' 22°58'	- 1952 McGovern & Moulder	-	- - - -	309	125	7200			0- 4 Bk.soil-100 Bl.sst. -324 Sst. - 45 Y.cl. -125 Sst. - 70 Y.sst. -300 Bl.sst.
12434 Old Sumana SUMANA	145°11' 22°15'	- 1953 T.W. Sleeman	-	- - - -	62	60	7200			0- 3 Sy.subsoil-65 Hd.sst. - 6 Br.cl. -69 Sy.br.rk. - 45 Hd.rk. -86 Br.& gritty rk. - 51 S .rk. -87 Drifts. - 54 Y.& Pk.cl. - 56 Gy.p.cl.
12457 Exton WESTBURY	144°22' 22°59'	- 1953 F. Rose	-	- 110 240 5,500	145 259 338	145) 25) 118)	Soak 8000		F	0- 2 Rk. -205 Gy.sh.-270 Br.sh. - 82 Sst. -207 Rk. -290 Sy.sh. - 84 Rk. -245 Gy.sh.-335 Gy.sh. - 90 Y.sst. -247 Rk. -341 Sy.sh. -140 Gy.sh. -258 Sy.sh.-375 Gy.sh. -150 Sy.sh. -260 Rk.
12516 Vinson's MYROSS	145°28' 22°49'	- 1953 J.W. Kirby	-	- - =	8(25(	1	14,400 51.			0- 36 Soil & s. bottom in sst.

A	B	C	D	E	F	G	H	I	J	K
12535	145°20'	-	1954	-	53	(23				0- 5Sy su soil -198 Wh.sst. -465 Wh.sy.cl.
-	22°22'	-		Su	186	(				- 10 Wh.sy.cl. -225 Sst. -495 Sst.
REEDY CREEK				-	280	(Surface	6800	G		- 53 Gn.sst. -264 Gy.sy.cl. -540 Wh.sy.cl.
				30,000	546	(	77000			- 56 Gn.sst. -267 Sst. -546 Sst.
										-129 Gy.sh. -270 Cs.s. -585 Br.sh.
										-133 Gn.sst. -290 F.sst.
										-186 Bk.sh. -460 Sst.
12541	145°18'	-	1953	-	420	420	Soak			0- 3 Topsoil -420 Hd.pk.sh.
-	22°49'	-		Su	623	Surface	30,000			- 26 Y.cl. -623 Wh.sy.cl.
BELVEDERE				-						-306 Gy.sh. -651 Sst.
				-						
12546	146°18'	-	1954	-	80	10	9600			0- 4 Rd.su.soil -167 Gn.sst.
Taberna	22°19'	-		Su	165	12	24,000			- 25 Wh.sy.cl. -231 Gy.sh.
LAKE HUFFER				-	231	Surface	62,000			- 76 Y.cl. -257 Wh.sst.
				62,000						-165 Bk.sh.
12614	144°17'	-	1954	-	139	139	Soak			0- 2 Top soil -114 Rk. -338 Br.sh.
Ardno Cottage	20°40'	F.		-	417	111	14400			- 3 Rk. -139 Gy.sh. -353 Gy.sh.& rk.
(AMBO No.1)		Rose		202						- 78 Y.sst. -217 Sy.sh.& -378 Br.sh.
AMBO				14,400						- 83 Rk. rk. -383 Gy.sh.
										-102 Y.sst. -265 Sst.& rk. -388 Rk.
										-106 Sy.sh. -301 Gy.sh.& -417 Gy.sh.
										-113 Gy.sh. rk. -428 Sy.sh.
										-450 Gy.sh.
12616	144°53'	-	1952	Abd.	105	95	16800			0- 6 Su.soil - 47 Gy.s.rk. - 85 Y.cl.
-	22° 2'	H.								- 16 Lt.rd.s.rk. - 49 Cs.wh.s. - 95 Rd.cl.
ELIS		Bode								- 18 Sy.cl. - 55 Gy.s.rk. -103 Wh.cl.
										- 28 Rd.s.rk. - 63 Cs.sy.cl. -105 Rd.cl.
										- 36 Y.s,rk. - 69 Lt.rd.s.rk. -118 F.drifts
										- 37 Lt.y.sst. - 71 Wh.cl. -134 Cs.s.
										- 38 F.gy.s.rk. - 74 Y.cl.
										- 43 Creamy s.rk. - 80 Lt.rd.s.rk.

A	B	C	D	E	F	G	H	I	J	K
12653 (Stock Route Bore) LERIDA	144° 3' 22° 8'	- -	1954	- - 300 -	135 571	135 90	Soak 13680			0- 3 Su.soil - 40 Y.sst. - 42 Gy.sst. - 80 Y.sst.&cl. -125 Gy.sst.&sh. -135 Gy.sst. -161 Gy.sy.sh. -255 Sst.&sh. -258 Gy.&bl.sh. -259 Gy.s.rk. -270 Br.&gy.sh. -295 Gy.sy.sh. -317 Gy.sh. -320 Gy.rk. -335 Gy.sst. & sh. -340 Gy.&br. sh. -355 Gy.sst.sh. -365 Gy.&br.sh. -395 Gy.sy.sh. -410 Gy.sh. -430 Gy.sst.&sh. -445 Gy.sh. -460 Gy.sst.&sh. -470 Gy.&br.sh. -510 Gy.sh. -520 Br.&gy.sh. -550 Gy.sh. -560 Gy.sy.sh. -585 Gy.&br.sh. -610 Gy.sy.sh. -630 Gy.sh. -640 Gy.sst.& sh. -800 Gy.sh.
12658 GLENALVON	145°22' 22°30'	- T.W. Sleeman	1954	Abd.	191	40	Soak			0- 4 Sy.soil - 8 Cvg.cl.sh. - 64 Cvg.y.&br.sh. - 90 Y.&br.cl.sh. -190 Bl.sh. -191 S.rk. -211 Bl.sh.
12664 ELMORE	144°16' 22°54'	- F. Rose	1953	Dud	157(to (200(291	100	14400			0- 4 Top soil - 48 Y.loam - 50 Rk. -116 Gy.sh.&rk. -145 Sy.sh. -153 Br.sh. -157 Rk. -200 Sy.sh. -240 Br.sh. -243 Sy.sh. -246 Rk. -264 Gy.sh. -291 Br.sh. -306 Sy.sh. -319 Br.sh. -320 Rk.
12665 Four Corners ELMORE	144°17' 22°54'	- F. Rose	1953	- - - -	195 431	195 175	Soak 14400	F		0- 4 Top soil - 28 Y.loam - 36 Y.sst. - 38 Rk. - 49 Y.sh. - 51 Rk. - 75 Y.sst. -115 Gy.sh. -117 Rk. -195 Gy.sh. -201 Sy.sh. -231 Gy.sh. -232 Rk. -245 Gy.sh. -248 Br.sh. -254 Rk. -298 Gy.sh. -304 Rk. -341 Gy.sh. -348 Gy.sh. -353 Gy.sh. -358 Sy.sh. -363 Gy.sh. -378 Sy.sh. -402 Br.sh. -431 Gy.sh. -436 Sy.sh. -450 Gy.sh.
12724 South Tooall ELMORE	144°18' 22°52'	- F. Rose	1954	- - - -			53.			0- 14 Y.sst. - 16 Rk. - 62 Y.sst. -207 Gy.sh. -209 Rk. -245 Gy.sh. -246 Rk. -255 Gy.sh. -257 Rk. -500 Gy.sh.

A	B	C	D	E	F	G	H	I	J	K
12794 No. 72 CORINDA	145°23' 22° 1'	- -	1955	- Su - - -	34 95 (125 (280 (305 (	Surface	Soak 58,000			0- 2 Rd.sy.soil - 26 Wh.sy.cl. - 34 F.wh.s. - 45 Pk.cl. - 65 Rd.cl.& iron st.gvl. - 73 Rd.cl. - 91 Soft gy.sh. - 95 Sst. -104 Wh.sy.cl. -125 Cs.sst. -272 Wh.sy.cl. -301 Cs.wh.sst. -305 Br.sst.sms of coal.
12881 No.75 CORINDA	145° 9' 22° 7'	- -	1955	- Su - -	580 592	580 Surface	Soak 120,000	P		0- 5 Rd.soil - 35 Wh.sst.&cl. - 76 Y.cl. - 198 Gy.sh. -568 Bk.sh. -576 Wh.cl. -580 Sst. -592 Wh.sy.cl. -633 Sst. -636 Wh.cl.
13089 AMBO	144°14' 22°40'	- F. Rose	1954	- - 193 20,000	143 (430 (465 (	116	20,160	P		0- 3 Top soil - 7 Rk. - 68 Y.sh. - 143 Y.sst. - 185 Sy.sh. - 196 Gy.sh. - 200 Sy.ch. -238 Gy.sh.& rk. -296 Br.sh. -325 Sst. -341 Gy.sh. -373 Sy.sh. -409 Gy.sh. -415 Sy.sh. -420 Sst. -430 Gy.sh. -442 Sy.sh. -451 Gy.sh. -459 Sy.sh. -465 Gy.sh. -468 Sy.sh. -490 Gy.sh.
13090 - AMBO	144°14' 22°41'	- F. Rose	1954	- - 330 3000	120 392	120 130	Soak 3480	P		0- 4 Topsoil - 15 Y.sst. - 17 Rk. - 31 Y.cl. - 98 Y.sst. - 120 Gy.sh. - 128 Sy.sh. - 171 Gy.sh.&rk. - 184 Br.sh. - 186 Rk. -198 Sy.sh. -200 Rk. -225 Gy.sh. -240 Br.sh. -266 Sh. -291 Sst. -300 Gy.sh. -304 Rk. -328 Sst. -335 Gy.sh. - 337 Rk. - 349 Pug sst. - 352 Rk. - 392 Br.sh. - 399 Sy.sh. - 429 Sst. - 468 Sy.sh. - 501 Br.sh. - 508 Sy.sh. - 530 Br.sh.
13091 No.4 Bore AMBO	144°20' 22°49'	- F. Rose	1955	- - 219 20160	161 205 468	161 (205 (140	Soak 20160	S P		0- 4 Top soil - 13 Y.cl. - 14 Rk. - 48 Y.sst. - 58 Y.cl. - 77 Y.sst. - 80 Rk. - 92 Gy.sh. -105 Sy.sh. -117 Br.sh. -122 Rk. -161 Br.sh. -175 Sy.sh. -205 Br.sh. -208 Sy.sh. -209 Rk. -238 Sy.sh.&rk. -307 Br.sh. -323 Sst.&rk. -340 Sy.sh. -377 Gy.sh. -381 Rk. -429 Br.sh. -432 Rk. -468 Sst. -482 Sy.sh. -500 Br.sh.

A	B	C	D	E	F	G	H	I	J	K
13137 – CALEDONIA	145° 2' 22° 4'	– H. Bode	1956	Dud	112	96	14,400			0 – 5 Su.soil & cl. – 32 Pk.s.rk. – 35 Pk.cl. – 65 Choc.cl. – 77 Creamy.cl. – 79 Rd.cl. – 81 Pk.cl. – 91 Lt.br.cl. –133 Drift s.& gvl. –157 Y.sh.
13138 – CALEDONIA	145°1' 22°6'	– H. Bode	1956	– – – –	112	112	12,000			0 – 9 Su.soil & cl. – 47 S.rk. – 97 Creamy cl. – 107 Br.cl. – 112 Lt.br.cl. –117 Cs.s.&gvl. –127 Cs.gvl. –155 Drift s. & gvl. –167 Y.sh. –174 Gy.sh.
13182 Woolshed LUTHRIE	144° 4' 22°41'	– –	1956	– 180 230 7000	221	143	10,800	P		0 – 2 Bk.su.soil – 55 Y.sy.cl. – 70 Gy.sh. – 71 Gn.sst. – 122 Gy.sy.sh. – 135 Wh.&br.sy.sh. –136 Hd.gn.sst. –150 Gy.sh. –186 Gy.&wh.sy.cl. –187 Hd.gn.sst. –221 Gy.sy.cl. –225 Porous/sst. –275 Gy.sh. –278 Hd.gy. sst. –315 Gy.sh. –330 Br.sh. –334 Hd.gn. sst. –377 Br.sh. –402 Gy.sh.
13234 No.17 BOWEN DOWNS	145° 0' 22°28'	– C. Mallyon	1957	– Su – 30,000	962 (989 (1227(1271(	Surface	238000		108	0 – 4 Bk.soil – 79 Y.sh. – 93 Bl.sh. – 314 Gy.sh. – 328 Br.sy.sh. – 642 Gy.sh. –692 Gy.sh.cvg. –955 Gy.sh. –969 Sy.sh.&cl. –989 Hd.br.sh. –994 Sst. –1003 Hd.sst.& sy.sh. –1061 Sy.sh. –1092 Br.sh. –1114 Y.sy.sh. –1124 Hd.br.sh. –1164 Y.sy.sh. –1172 Rd.&gn.pug. –1179 Br.sy.sh. –1222 Y.sy.sh. –1292 Sst.
13333 BUNGOONA	144°15' 22°30'	– F. Rose	1956	– 200 300 –	202	115	21,500	G		0 – 3 Top soil – 10 Y.cl. – 41 Y.sst. – 93 Y.cl. – 149 Y.sst. – 202 Y.cl. – 224 Sy.sh. –251 Sst. –254 Rk. –284 Sst. –301 Br.sh. –326 Sst. –332 Rk. –348 Br.sh. –360 Sst. –368 Rk. –381 Sst. –402 Br.sh. –406 Rk. –601 Gy.sh. –698 Gy.sh.rk.sms. –704 Gy.sh.

A	B	C	D	E	F	G	H	I	J	K
13516 Fischer CHERHILL	144°23' 22°40'	- I Fischer	1957	- 123 140 23000	163 343	150 123	23040	B		0- 3 Top soil - 10 Rk. - 15 Cl.& rubble - 20 Cl. - 65 Gy.cl. - 75 Y.cl. - 245 Gy.sh. - 310 Bk.sh. - 343 Sst. - 365 Sy.sh.
13771 - WESTBURY	144°26' 22°59'	- A.F. Rose	1958	Abd.	125	105	900	F		0- 4 Soil & rk. - 32 Y.sst.rk. sms. - 57 Y.cl. - 88 Y.sst.rk. sms. - 95 Sst. - 104 Gy.sh. -114 Sst. -121 Sy.sh. -125 Rk. -146 Sy.sh. -210 Sst. -216 Rk. -237 Sst. -325 Gy.sh. -328 Rk. -374 Gy.sh. -417 Sst. -450 Gy.sh.
13944 - MARENGO	145° 0' 22°12'	- T. Fischer	1957	- - - -	1000 1025 1250 1400	40 20 Surface		G 14,904		0- 3 Soil - 20 Wh.rk. - 45 Wh.cl.hd. bnds. - 85 Rd.cl.wh. bnds. - 125 Drift -210 Bk.sh. -875 Sy.sh. -940 Sy.cl. -950 Sy.sh. -980 Br.sh. bnds.sy.sh. -990 Gy.sh. -1025 Sy.sh. -1285 Sst. -1340 Sy.sh. -1350 Sst. -1365 Sy.sh.bnds. br.sh. -1405 Sy.sh. -1425 Sst. -1442 Sy.sh. -1445 Hd.sst. -1503 Rd.marl.&gy. sh.
13993 No. 7 AMBO	144°24' 22°50'	- F. Rose	1955	1963 - 195 20000	120 396	100 75	Soak 20160	B		0- 3 Top soil - 17 Y.cl. - 65 Y.sst. - 78 Gy.sh. - 101 Sst. - 105 Rk. - 120 Gy.sh. -132 Sy.sh. -205 Gy.sh. -245 Sst. -248 Rk. -290 Br.sh. -315 Sst. -318 Rk. - 340 Sst. - 351 Sst. rk.sms. - 384 Sst. - 396 Br.sh. - 426 Sy.sh. - 455 Gy.sh.

A	B	C	D	E	F	G	H	I	J	K
13994 No. 5 AMBO	144°22' 22°51'	- F. Rose	1955	1963 - 200 20,000	201 412	163) 135)	20,160			0– 3 Top soil & rk. – 15 Y.sst. – 22 Y.cl. – 42 Y.sst. – 46 Y.cl. – 75 Y.sst. – 76 Rk. – 88 Y.cl. – 92 Gy.sh.&rk. – 143 Gy.sh. – 145 Rk. -168 Sy.sh. -175 Gy.sy.sh. -179 Sy.sh. -188 Puggy sst. -195 Gy.sh. -201 Br.sh.&rk. -212 Sy.sh.&rk. -231 Puggy sst. -254 Br.sh. -273 Sy.sh.rk. sms -280 Br.sh. -305 Sy.sh. -343 Puggy sst. -347 Rk. -364 Gy.sh. -371 Br.sh. -385 Gy.sh. -412 Br.sh. -422 Sy.sh. -460 Gy.sh.
13995 Butlers AMBO	144°27' 22°53'	- F. Rose	1955	Abd.	220	111	Soak			0– 7 Soil sst. & y.cl. – 85 Y.sst. – 89 Gy.sh. – 108 Sy.sh. – 122 Sst. -128 Rk. -220 Sst. -231 Sy.sh. -248 Gy.sh. -254 Rk. -268 Gy.sh. -308 Br.sh. -314 Rk. -650 Br.sh.
13996 Road Paddock AMBO	144°29' 22°47'	- F. Rose	1958	Abd.	199	199	Soak	B		0– 3 Top soil – 180 Y.sst. – 195 Sst. – 199 Rk. – 214 Sy.sh. – 230 Sst. – 233 Rk. – 264 Gy.sh. -281 Br.sh. -284 Rk. -297 Sst. -331 Gy.sh. -359 Br.sh. -361 Rk, -392 Sst. -452 Gy.sh. -471 Br.sh. -483 Sst. -499 Gy.sh. -514 Bl.sh. -520 Gy.sh. -541 Br.sh. -600 Gy.sh.
13997 Little Bull AMBO	144°27' 22°47'	- F. Rose	1956	Abd.	101	90	Soak	S		0– 2 Top soil – 11 St. – 40 Y.cl. – 71 Y.sst. – 101 Gy.sh. – 108 Sy.sh. – 111 Rk. – 121 Sy.sh. -127 Gy.sh.&rk. -139 Sst. -145 Sy.sh. -156 Gy.sh. -187 Br.sh. -196 Rk. -240 Gy.sh. -250 Rk. -287 Br.sh. -293 Rk. -324 Br.sh. -328 Rk. -389 Br.sh. -392 Rk. -600 Br.sh.

A	B	C	D	E	F	G	H	I	J	K
13998 No.14 AMBO	144°20' 22°50'	- F. Rose	1957	- - - -	232 452	95	20160			0- 5 Top soil -141 Sst. -328 Rk. - 10 Y.sst. -151 Br.sh. -351 Sst. - 21 Y.cl. -187 Gy.sh. -360 Rk. - 25 Rk. -224 Sst. -393 Gy.sh. - 76 Y.sst. -232 Rk. -452 Sst. - 82 Y.cl. -251 Sy.sh. -467 Sy.sh. - 91 Rk. -295 Gy.sh. -500 Gy.sh. -120 Gy.sh. -314 Br.sh.
14103 - CHERHILL	145°26' 22°37'	- F. Lawrence	1960	1963 134 144 21,600	274	134	21600	B		0- 5 Rd.soil - 43 Rd.sh. -230 Gy.sy.sh. - 9 Bk.soil - 69 Gy.sh. -272 Sst. - 17 Rd.cl. - 83 Y.cl. -301 S.rk. - 19 Rk. -215 Gy.sh. -310 Sy.sh.
14126 - KENSINGTON	144°9' 22°27'	- C. Mallyon	1960		193) 323)	155	4,080			0- 4Bk.soil -251 Rk. -477 Sy.cl. - 21 Y.cl.& gvl. -285 Gy.sh. -495 Rk.sh. - 66 Y.sh. -310 Cl.& -505 Gy.sh. - 91 Y.sh.w.small pug -521 Pug patches of -388 Sy.cl. -527 Gy.sh. flagstone -403 Pug. -569 Pug -170 Gy.sh. -407 Hd.gy.sh. -575 Hd.gy.sh. -193 Br.sh. -420 Gy.sh. -598 Pug. -214 Sy.cl. -423 Hd.gy.sh. -216 Rk.sh. -435 Gy.sh. -248 Gy.sh. -443 Br.sh.
14265 - CHERHILL	145°29' 22°41'	- F. Lawrence	1960	1963 152 164 17,280	167	153	19,200	P		0- 2 Top soil - 26 Rd.rk.& -81 Wh.& y.cl. - 6 Rd.gvl. y.cl. -152 Sy.sh. - 23 Rd.cl. - 31 Rd.rk. -191 Sst. -197 Sy.sh.
14317 - ELIS	144°50' 22° 1'	- -	1960	- - - -	134	122	16,800			0- 2 Rd.sy.soil - 70 Top rk. -134 Gritty cl. -135 S.

A	B	C	D	E	F	G	H	I	J	K
14320 House BARBOORAH	145°30' 22°33'	- O.G. Moy	1961	- - 18 -	1055 1717 1800	1055 (Surface (	Soak 16800	S		0- 16Cl. -548 Rk. -1615 Sh. - 46 S. -1055 Sh. -1640Sy.sh. - 100 Cl. -1070 Sy.sh. -1717 Sh. - 140 Rk. -1165 Sh. -1773 Sst. - 170 Cl. -1283 Sh.&sy.sh.-1800 Sh. - 440 Sh. -1298 Sst. -1838 Sst. - 480 S.sh-1420 Sh. -1860 Sh. - 540 Sh. -1560 Sy.sh.
14346 Zoe HARDINGTON	144°50' 22°12'	- -	1954	Abd.						T.D. 130'
14347 Marlow HARDINGTON	144°51' 22° 7'	- -	1935	Abd.						T.D. 122'
14348 No. 1 HARDINGTON	144°55' 22°10'	- -	1938	- - - -						T.D. 148'
14349 12 Mile HARDINGTON	144°53' 22° 4'	- -	1936	Abd.						T.D. 115'
14389		- M. Shepherd	1960	Abd.	130 235	130) to) 235)	Soak			0- 3 Soil -154 Rk. -327 Gy.sh. - 52 Y.sh. -223 Sh. -331 Rk. - 75 P.cl. -225 Rk. -336 Gy.sh. - 90 Gy.sh. -306 Sh. -339 Rk. -113 Coloured-308 Rk. -353 Gy.sh. sst. -315 Sy.sh. -149 Sy.sh. -318 Rk.
14464 Twelve Mile HARDINGTON	144°55' 22° 4'	870 -	-	- - - -	961	33	24000			0- 2 Sy.soil -105 Gravelly cl.-1010 Hd.&soft sst. - 27 Sst. -122 Sy.cl. - 65 S. -168 Coloured cl. - 80 Sy.cl. -872 Gy.md.st. - 95 Coloured-925 Gy.md.st.w.hd.layers cl. -958 Gy.sh.

A	B	C	D	E	F	G	H	I	J	K
14939 - EDGBASTON	145°23' 22°43'	- E.Brown	1961	1963 45 106 19,200	109 201	42) 32)	19680	G		0- 3 Topsoil - 18 Y.cl. -201 Gy.md.st. -205 Gy.s.
14951 - MYROSS	145°28' 22°48'	- E.Brown	1961	- - - -	48) 90)	28	27360	G		0- 1 Topsoil - 3 Soft wh.rk. - 34 Y.sst. -57 Wh.sst. - 64 Wh.cl. -100 Wh.sst.
15032 Fischer's ABRACH	144°9' 22°34'	- T. Fischer	1957		91 150	91 140	Soak 10,080	B		0- 4 Topsoil - 20 Soft sst. - 22 Hd.sst. - 45 Soft sst. - 63 Gy.sh. - 65 Hd.rk. -136 Gy.sh. -138 Rk. -150 Gy.sh. -170 Sst. -216 Sy.sh. -218 Rk. -238 Sy.sh. -242 Rk. -272 Sy.sh. -275 Rk. -300 Sy.sh. -340 Gy.sh. -440 Sy.sh. -452 Gy.sh. -468 Sy.sh. -471 Rk. -483 Sy.sh. -508 Gy.sh. -510 Sy.sh. -515 Gy.sh. -530 Sy.sh. -607 Gy.sh.
15075 No.3 HANWORTH		- D. Shepherd	1962	1963 133 300 9960						0- 4 Bk.soil - 60 Y.sh. - 88 Sy.sh. -116 Mdy.sst. -117 Rk. -121 Mdy sst. -143 Rk. -207 Mdy sst. -289 Br.sh. -313 Sy.sh. -315 Rk. -325 Sy.sh. -327 Rk. -355 Mdy sst. -356 Rk. -370 Sy.sh. -372 Rk. -380 Sst. -400 Sy.sh. -405 Sh.
- No. 7 CALEDONIA	145°3' 22°2'	-	-	Abd. - -						
- No.2, 5 Mile EASTFIELD	144°48' 22°5'	- H. Bode	1953	- 70 100 7000						T.D. 140'

1964/39
A
(IN 5 PARTS)
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Appendix E - Bore data

Part 3 - Tangorin Sheet area

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PROGRESS REPORT, 1963, ON THE GEOLOGY OF PART OF THE NORTH-EASTERN EROMANGA BASIN, QUEENSLAND.

by

R.R.Vine, D.J. Casey, and N.E.A.Johnson.

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The information contained in this report has been obtained by the Department of National Development, as part of the policy of the Commonwealth Government, to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus without the permission in writing of the Director, Bureau of Mineral Resources, Geology and Geophysics.

APPENDIX E - TO RECORDS 1964/39.

BORE DATA

Information on all bores in the Winton, Muttaburra, Tangorin, Hughenden, and Charters Towers 1:250,000 Sheet areas, collected from the records of the Irrigation and Water Supply Commission, Brisbane, and from property owners and managers, is listed in this Appendix.

The Appendix is bound in four parts, as follows: -

Part 1 : Winton Sheet area
Part 2 : Muttaburra Sheet area
Part 3 : Tangorin Sheet area
Part 4 : Hughenden and Charters Towers Sheet areas.

Within each sheet area the order of listing is numerical by the registered numbers allocated to water bores by the Irrigation and Water Supply Commission.

Abbreviations used in the Appendix are listed on Page 2 of each part. To save needless repetition of column headings throughout the Appendix, the columns in the body of the Appendix are lettered; a specimen bore sheet giving the full headings and the appropriate letter is given on Page 3 of each part.

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ABBREVIATIONS

Water

B	Brackish
F	Fresh
G	Good
P	Potable
S	Salty, saline
Su	Surface

Drillers Logs

Ba.	basalt
Bd.	bed
Bk.	black
Bl.	blue
Bld.	boulder
Bnd.	band
Br.	brown
Carb.	carbonaceous carboniferous
Choc.	chocolate
Cl.	clay
Cong.	conglomerate
Cs.	coarse
Cv.	cave
Cvg.	caving
Di.	diorite
Dk.	dark
F.	fine
Fm.	formation
G.	grained
Gn.	green
Gr.	granite
Gvl.	gravel
Gy.	grey
Hd.	hard
Ind.	indurated
Lst.	limestone
Lt.	light
Md.	mud
Med.	medium
P.cl.	pipe clay
Pk.	pink
Qtz.	quartz
Qtzite.	quartzite
Rd.	rod
Rk.	rock
Rtn.	rotten
S.	sand
Sch.	schist
Sh.	shale
Shy.	shaly
Si.	silt
Sk.	streak
Sky.	streaky
Sm.	seam
S.rk.	sandrock
Sst.	sandstone
St.	stone
Stky.	sticky
Su.	surface
Sy.	sandy
T.D.	total depth
V.	very
W.	with
Wd.	weathered
Wh.	white
Y.	yellow

Reg.No. Name PROPERTY	Position (Long. and Lat.)	Elevation Driller Year completed	Latest info. (year) S.W.L. Pump depth Supply (g.p.d)	WATER (original record) Struck (feet)	Rose to (feet)	Supply (g.p.d)	Quality	Temp. °F	DRILLERS LOG
A	B	C	D	E	F	G	H	J	K

A	B	C	D	E	F	G	H	J	K
356 Stock Route ABERFOYLE	145°14' 21°36'	L922 - -		1963 20 -				T.D. 423	
361 Stock Route AFTON DOWNS	144°13' 21° 8'	- - 1909			1010 1135	25 90		0 - 8 Gvl. -82 Y.sh. -450 Mixed sh.gy. Bl.&Br. -605 Gy.sh. -668 S.rk. -890 Bk.& gy.Sh. & hd.bnds.	- 987 Gn S.rk & Bk.Sh. -1009 Bk.Sh. -1014 S.rk. -1026 P.cl. -1033 Rds. -1123 P.cl. -1130 Lt.bl.sh. -1135 Bl.sh.
362 Broken Dam STOCK ROUTE	144°10' 21°26'	L880 1911	Abd					0 - 69 Y.cl. -1236 Bl.sh.	-1773 S.rk. & p.cl.
363 TANGORIN	144°12' 21° 43'	- - 1925			1590 2010	Surface	420,000	0 - 4 Su.soil -100 Y.cl. -1590 Bk.sh. 1600 Sst. -1670 Pcl.& sh.	-1698 Sst. -1810 P.cl. & Sst. -2038 Sst. & Sh. -2300 Pc.l & S w hd. shallow bars.
1010 - ABERFOYLE	No trace	895 - 1890	Abd					T.D. 494	
1011 - ATHERFIELD	145°10' 21°27'	993 1897	Abd Abd	290) 420) 533)	100			0 - 38 Cl. - 290 Sh. -360 Cong.& Sst. - 407 Cl.& sy.sh. - 436 Si.& gvl.	-496 Cl.& Sst. -519 Hd.rk. -579 Soft Sst. -621 F.sst.& cl. -707 Sst.
1012 - ABERFOYLE	No trace	- - 1892	Abd					T.D. 100	

A	B	C	D	E	F	G	H	I	J	K
1013 - ABERFOYLE	No trace	- - 1892	Abd	120) 154) 250	Surface	26400				0 - 67 Cl. -107 Y.cl. -154 Bk.sh. -267 Waterbed -280 Lime rk. -354 Sst.
1014 ABERFOYLE	No trace	- - 1892	Abd							0- 40 Cl. -82 Cong.stiff Cl. -133 Sst. -169 Y.cl. -192 Sh. -253 Hd. slate. -313 Lime rock w. sst. -365 Cement or lime rk. -380 Soft sst. -441 Lime & sst. -500 Sst.
1015 - ABERFOYLE	143°24' 21°56'	- - 1905	Abd							T.D. 735
1016 I.R. ABERFOYLE	145°24' 21°42'	885 - 1905								T.D. 661
1017 ABERFOYLE	145°17' 21°40'	890 - 1905	1963 2 4			46,430				T.D. 848
1018 - ABERFOYLE	No trace	- - 1906	Abd							T.D. 730
1019 - ABERFOYLE	145°22' 21°36'	894 - 1907	1963 0							T.D. 580
1020 Banty ABERFOYLE	145°23' 21°35'	- - 1922	1963 2 - -	348 540						0 - 50 Rd.& Y.cl. - 80 Y.cl. -100 Y.cl.& drifts -128 Bk.sh. -138 Gn.s. - 158 Sst. - 168 Hd.rk. - 268 Sst. & p.cl. - 298 Br.sh. - 348 Hd. sst. - 422 P.cl. & sst. - 552 Hd. Sst.

A	B	C	D	E	F	G	H	J	K
1021 - ABERFOYLE	No trace	- - 1909	Abd						T.D. 130
1022 - ABERFOYLE	145°16' 21°38'	- - 1910	1963 - 2						T.D. 750
1023 Freemans ABERFOYLE	145°23' 21°47'	977 W.Blee 1916	1963 - 20	50 130 630	50) 130) Surface	Soak 107,348	B F F		0 - 50 Rd & y.cl. -80 Y.cl. -100 Rd.cl.& drift -120 Bk.sh. -130 Gn.sst. -150 Sst. -160 Hd. rk. - 260 Sst. & P.cl. - 290 Br.sh. -340 Hd.sst. -422 Sst.& p.cl. -489 Hd. Sst. -530 Free sst. -550 Hd. sst. -630 Sst.
1024 Taylor's ABERFOYLE	145°13' 21°39'	- - 1916	1963 - 48						T.D. 630
1025 - ABERFOYLE	145°17' 21°43'	- - 1906	1963 - 100						T.D. 700
1026 - ABERFOYLE	145°17' 21°40'	- - 1928	1963 2 4						0 - 18 Br.cl. - 20 Cs. drifts - 31 Hd. rk. - 34 Pk.cl. - 40 Hd.y.rk - 80 Y.sh. -120 Bk.sh. -126 Gy.& y.sh. -265 Bl.sh. 422 Wh.sst. & p.cl. -466 Lt.br.sh. - 570 Wh.sst. & p.cl. - 575 Br. sh. - 598 Wh. sst. - 608 Dk. br.sh. - 613 Wh. sst - 625 Cs. wh.s. - 633 F. sst. - 657 Br.sh. - 725 F.Wh.sst. & cl. 745 Bk.slippery Sh.cvg. - 770 Sst. & cl.

A	B	C	D	E	F	G	H	J	K
1027 Spring Plains ABERFOYLE	145°24' 21°50'	- - 1930	1963 42	45 153 293 503	35 10 6 Surface	15000	B	0 - 45 Rd.y.cl. - 75 Y.cl. -95 Y. drift -123 Br.cl. -153 Sst. -173 P.cl. -233 Hd. st. -243 P.cl.	- 293 Hd. sst. -308 P.cl. - 388 Hd. sst. - 393 P.cl. - 486 Hd. sst. - 492 P.cl. - 621 Hd. sst. - 636 P.cl.
1028 - PRAIRIE- VALE	145°12' 21°45'	893 - 1910	1963 8 20					T.D. 450	
1029 - ABERFOYLE	145°52' 21°37'	- P.Brody 1932	1963 - 20	35 86 172	35	Soak		0 - 4 S & cl. -27 Rk -35 br.cl. -44 S.rk. -80 Cl. drifts -86 S.rk. -148 Cl. drift -158 Wh.cl.	- 161 Sst. - 165 Choc.cl. - 172 S. & wh.cl. - 181 Choc.cl. - 187 Gy.cl. - 195 Choc.cl. - 261 S.st.
1030 - ABERFOYLE	145°20' 21°38'	- P.Brody 1932		99 135 280) 501)	8 5 Surface	15,000 77,000		0 -12 Cl. -17 Rk. -29 Cl. -45 Br.cl. -98 Y.cl. -99 Br. rust -123 Y.cl. -133 Br.sh. -135 Gvl.	- 160 Sst. - 240 Pc.l. - 278 Sst.. - 305 P.cl. -470 Sst. - 477 Wh. cl. - 499 Choc.cl. - 501 Sst.

A	B	C	D	E	F	G	H	J	K
1031 PRAIRIE- VALE	145°13' 21°41'	881 Hether- ington 1915	1963 27 45	135 454	135 Surface	Soak 3,000	B		0 - 39 Desert Sst. not hd. - 57 Y.stky.cl. - 81 Wh.p.cl. -135 Wh.s.drift -142 Y.s. - 150 Wh.p.cl. - 262 Br.sh. -318 Bl.sh. - 400 Hd.sh. - 454 S.rk.
1032 Sawmill ULVA	145°17' 21°26'	- - 1908	1963 50 60						T.D. 630
1041 AFTON DOWNS	144° 4' 21° 8'	993 - 1893		1760 2544	Surface	99,090		123	Sst. & Sh. in bore T.D. 2871
1045 LIBRI DOWNS	144° 2' 21°10'	935 - 1899							T.D. 1726

A	B	C	D	E	F	G	H	J	K
1049 - AFTON DOWNS	144°02' 21°06'	- 1914		910) 1220) 1378)	Surface	98,000		109	0 - 84 Y.sh. - 339 Bl.sh. - 432 Bk.sh. - 766 Gy.sh. - 910 Bk.sh. - 1084 S.rk. - 1202 Lt.choc.sh. - 1520 S.rk. - 1545 Rd.sh.cvg. - 1563 Gy.S rk. - 1590 Rd.cvg.sh. - 1600 Gy.sh. - 1618 Rd.sh. - 1684 Gy.s. - 1708 Rd.& gy.sh. - 1840 Dry Gy.s.w.sks of cl. - 1860 Wh.p.cl. - 1866 Rd.cvg.sh.
1050 Ingleounda AFTON DOWNS	144°09' 21°14'	- 1912		1202) 1815) 2501) 2539) 2643) 2723) 2826)	Surface	250,000		126	0 - 50 Y.sh. - 136 Bl.sh. - 382 Gy.sh. - 1199 Bl.&.gy.sh. - 1815 S.rk.& pcl. choc.sh.layers. - 1920 P.cl.&sst. - 1990 Rd.cvg.sh. - 2085 Cvg.gy.sh. - 2100 Rd.cvg.sh. - 2199 Cvg.gy.sh. - 2235 Cvg.bl.& rd.sh. - 2318 P.cl.& s. - 2437 Sy.cl.cvg. - 2539 Sst.p.cl. - 2627 Sst. - 2648 Rd.rk. - 3001 Sst. - 3017 Rd.rk.cvg.cl.
1055 - ALBA	144°02' 21°02'			726) 956)	13	96,000			0 - 726 No info. - 956 S.rk.
1056 -	144°2' 21°3'	- - 1914	Abd						T.D. 996

A	B	C	D	E	F	G	H	I	J	K
1432 Shed EVANDALE	144°15' 21°29'	897 - 1900	1963 8 12							T.D. 1897
1433 - EVANDALE	144°17' 21°33'	- - 1914	1963 50 60							T.D. 1460
1434 - BARENYA	144° 2' 21°37'	910 - 1906	1963 90 100							T.D. 2800
1435 - BARENYA	144°11' 21°37'	841 - 1897								T.D. 2405
1436 - SANDALWOOD	144° 6' 21° 29'	884 - 1398								T.D. 2400
1438 - SANDALWOOD	144° 1' 21°32'	858 - 1918								T.D. 2000
1439 - SUTTON DOWNS	144° 8' 21°28'	4858 - 1907	1963 - - 3000	1356 1425 1478 1709 1781 1950	Surface					0 - 75 Y.cl. -1080 Bl.sh. -1349 Bk.sh. -1356 S.rk. -1425 Stky.br.sh. -1544 Wh.s.rk. - 1603 Sh. - 1663 Sh.w hd.sks. - 1781 Sh. & wh. S.st - 2097 S.rk.& stk y.sh. - 2200 Rd & Bl.sh.

A	B	C	D	E	F	G	H	J	K	
1440 WAVERLEY	144° 4' 21°40'	847 - 1908	1963 6 10						T.D. 2300	
1441 - SUTTON DOWNS	144° 9' 21°28'	- - 1925	Abd	1354 1738	Surface 168000				0 - 15 S.&y.cl. - 25 y.cl. - 1328 Gy.sh. -1334 Hd.s.rk. -1458 S. & p.cl. -1508 P.cl. -1587 Br.p.cl.	-1627 S. & p.cl. -1667 Br.sh. -1720 Sh.& p.cl.w.s. -1845 S. -1926 S.w.sk.s.of sh. -1990 Br.sh.w srks gy.sh.
1442 - BANJOORAH	144°27' 21°40'	918 - 1914	1963 150 250						T.D. 1418	
1443 - BANJOORAH	144°27' 21° 5'	- - -	1963 150 200						T.D. 1295	
1444 - ANTRIM	144° 2' 21°39'	863 - 1897							T.D. 2250	
1445 - ANTRIM	144°23' 21°40'	- - 1915							T.D. 2970	
1446 Glenanah EVANDALE	144°13' 21°28'	901 - 1917	1963 150 160						T.D. 1290	
1580 -	144°46' 21°22'	1098 —							T.D. 295	
BOGUNDA		1893								

A	B	C	D	E	F	G	H	J	K
1582 – BOGUNDA	144°51' 21°24'	1077 – 1894	Abd	927	150	27,900		94	0 - 927 Bl.sh. - 1260 Sst & p.cl. alternating
1583 – BOGUNDA	144°45' 21°25'	1084 – 1916							T.D. 998
1584 – BOGUNDA	144°43' 21°21'	1122 – 1916		300 1088			S B		T.D. 1088
1835 – AFTON DOWNS	144° 17' 21° 7'	976 – 1898							T.D. 2250
1836 Calthness AFTON DOWNS	144° 8' 21° 2'	974 – 1901							T.D. 2305
1837 Reay AFTON DOWNS	144°10' 21° 6'	974 – 1901							T.D. 2340
1838 Canesby AFTON DOWNS	144°10' 21° 8'	985 1896		1044) 1087)	60				0 - 64 Y.sh. - 1800 Rd. sh. -1044 Bl.& br.sh. - 1880 Y.sh. -1163 S.rk. - 2100 Rd.sh. -1200 Choc.sh. - 2121 Gy.sh. -1250 P.cl.& s. - 2245 Rd.& gy. sh.w.p.cl. -1330 Choc.sh. - 2296 Cs.s. -1506 Dk.sh. - 2790 F.s. -1710 S.rk.w.sks of p.cl. - 2840 Rd. sh.
				1500) 1710)	50				
				2245) 2296) 2330)	Surface				

A	B	C	D	E	F	G	H	J	K
1839 — AFTON DCWNS	144° 7' 21°13'	- - 1917		1200) 1240) 1265	115 96				0-55 Su soil y.sh. - 1240 Sst. -142 Bl.sh. - 1256 P.cl. -670 Gy.&dk.gy.sh. - 1265 Sst. -1199 Bl.sh. - 1268 P.cl.
1841 - AFTON DCWNS	144°12' 21° 4'	- - 1917		881) 978)	102		F		0-12 Rubble -351 Gy.sh. -72 Y.sh. -780 Gy.sy.sh. -203 Bl.sh. -978 Sst. -283 Bk.sh. -1063 P.cl.
1846 - TANCRED	145° 1' 21°58'	895 - 1899							T.D. 1540
1847 CLAYDON	145° 3' 21° 8'	909 - -	1963 - 80						T.D. 1120
1848 - CLAYDON	No trace	- - 1917	Abd						T.D. Abd. in quicksd.
1850 - TANCRED	145° 8' 21°54'	853 - 1901							T.D. 970
1851 TANCRED	No trace	- - 1915	Abd						T.D. 1050
1852 No.8 TANCRED	145° 6' 21°55'	- - 1919	1963 10 25						T.D. 1000
1855 - BANNOCKBURN	145° 6' 21°47'	918 - 1900	1963 70 80						T.D. 1104

A	B	C	D	E	F	G	H	J	K
1856 - BANNOCKBURN	145° 9' 21°43'	906 - 1914	 Abd	40 104	40) 104)	Soak	B	0 - 40 Drifts - 150 Cl.	
1857 No.2 BANNOCKBURN	145° 8' 21°49'	886 D.Brisby 1915	1963 80	90 480) 590)	90 20	Soak	B	0-90 S.drift -170 S.	- 480 Sh.&gn. sst. - 620 Sst.
1895 - CAMERON DOWNS	144°18' 21°21'	940 - 1913	1963 40 50 -	1156 1544) 1579) 1627)	40 25			0-105 Y.cl. -396 Gy.sh. -431 Gy.br.sh. -519 Br.sh. -907 Gy.sh. *1635 Hd.Sk. -1146 Bk.sh. -1156 S.	-1276 Dk.sy.cl. -1338 Dk.sy.cl. -1381 Br.cl. -1544 Dk.sy.cl. *1627 S.rk. & s. -1654 Dk.cl.& s.
1896 - BARRAGUNDA	144°23' 21°19'	963 - 1913	1963 40 60	1080 1252	30			0-70 Su.strata -1080 Sh.	- 1282 S.rk.
1897 - CAMERON DOWNS	144° 8' 21°22'	911 - 1912	1963 - 36 -	1317 1682) 1909)	20 Surface	8,000		0 -25 Bk.y.cl. -120 Y.cl.& Bl.sh. -700 B.sh. -826 Dk.sh. -1000 Lt.sh. -1295 Sh. -1350 P.cl.s.*-2285 Rd.sh. -1420 Wh.s.rk. -1465 Bk.sh.	-1521 Cs.wh.s. -1650 Br.sh. -1696 P.cl.s.rk. -1796 S.rk. -1909 S.rk. & Br.sh. -2000 Choc.sh. *2212 Rd.sh.& p.cl. -2305 S.rk. -2376 S.rk.& rd.sh. 2386 S.rk.
1898 - CAMERON DOWNS	144°11' 21°22'	- - 1924	1963 12	1135 1245) 1620)	40 Surface	20,000		0 - 4 Bk.soil. - 50 Y.cl. -1135 Sh. -1145 S.	-1245 P.cl. -1252 S. -1620 Sh.& cl.whnd.sks. of rk. -1655 S. & p.cl.

A	B	C	D	E	F	G	H	J	K	
1899 - ENSAY	144°17' 21°25'	901 - 1912	1963 10 25 -	1170 1517 1543 1573 1610 1728 1800 1812					0 - 80 Y.sh.& hd. sks. -148 Bl.sh. -483 Gy.sh. -574 Dk.sh. -739 Bk.&gy.sh. -1036 Gy.sh.	- 1162 Br.sh. -1222 S.rk. -1304 P.cl. -1449 Br.cl. -1573 Gy.sy.cl.& s.rk. -1812 Sy.p.cl.&s. -1875 Sy.p.cl. -1964 Dk.bl.& hd.cl.
1900 - ENSAY	144° 7' 21°25'	877 - 1924	1963 10 30 -	1335	1	20,000			0 - 13 Cl. - 60 Y.cl. -187 Dksh. -603 Dk.gy.sh. -828 Br.sh. -928 Gy.sh. -1028 Dk.sh.	-1103 Gy.sh. -1335 S. -1345 P.cl. -1367 Br.cl. -1389 S. & cl. -1880 Br. cl.
1901 - ZARA	144°22' 21°13'	998 - 1912	1963 80 115						T.D. 1314	
1902 - ZARA	144°19' 21°12'	1022 - 1913		875 970	875	Soak	B F		0 - 875 No info. -970 Bl.sh. -1060 Sst.	- 1066 Choc.sh. - 1086 Sst. - 1505 No info.
1903 - ZARA	144°19' 21°15'	- - 1913	1963 80 105 -						T.D. 1150	
1904 - ZARA	144°16' 21°12'	1022 - 1916	1963 90 135 -						T.D.1225	
1906 - ZARA	144°23' 21°11'	- - 1920		897 996					0 - 996 No info. -1070 Sst.	

A	B	C	D	E	F	G	H	J	K
2174 No.34 CCRINDA	145°26' 21°48'	900 - 1889		392	30				0 - 44 S.y.cl. - 265 Sh. -260 Sst. - 392 Sst.
2175 No.5 CORINDA	145°20' 21°54'	833 - 1899		161 231	137) Surface)	29780			0 - 91 Bl.&rd.cl. - 280 Layers of sh. & Sst. -137 Dk.sh.
2176 CORINDA	145°28' 21°59'	- - 1889		80	40				0 -80 Cong. - 297 S.rk.
2192 - CORINDA	145°19' 21°56'	832 - 1891		207	Surface	29,000		87	0 -79 Cl.&cong. -261 Sst. -207 Sh.
2193 No.24 CORINDA	145°23' 21°54'	854 - 1891		162	Surface	25,000			0- 80 Variegated marl. - 142 Pudding st. & -106 Sh. - 214 Sst. marl.
2194 Round Mtn. CORINDA	145°26' 21°54'	859 - 1891		69	Surface	20,000			0- 21 Cl.& marl. -217 St. -58 sh.
2195 CORINDA	No trace	910 - 1891	Abd	145	50				0 -102 Cong.& Variegated Cl. -143 Sh. -300 Sst.
2196 No.27 CORINDA	145°20' 21°52'	860 - 1892		134) 230)	Surface	48,550			0 - 65 Cong.& marl. -219 Sh. -342 Sst.
2197 - CORINDA	No trace	880 - 1892	Abd	91					0 - 65 Variegated cl. - 212 Sst. - 83 Sh.

A	B	C	D	E	F	G	H	J	K
2200 - UANDA	145°00' 21°41'	885 - 1898	1963 - 80						T.D. 800
2203 No.71 CORINDA	145°27' 21°44'	912 - 1912		100 378 430					0 - 40 Y.cl.& lst. - 50 Lst. - 60 Y.rk. - 80 S. - 169 Wh.s. - 253 P.cl.& s. - 270 Choc. S. - 293 Sy.sh. - 310 P.cl.& s. - 430 Cs.s. - 434 Coal sm. - 506 Cs.s. - 548 P.cl. & s. - 570 Bl.sh. -592 Choc.sh. - 600 Sh. - 607 Sy.sh. - 616 P.cl.& s. - 671 Cs.s. - 685 P.cl.& Cs.S. - 713 Choc.sh. - 767 F.s. - 792 S. - 857 Rd.choc.sh.
2204 No.35 CORINDA	145°25' 21°53'	901 - 1913		79	21				0 - 56 Y.cl. - 79 S.rk. - 92 P.cl.&s. - 159 Gy.sh. - 167 Cs.s. - 312 P.cl.&s. -314 Hd.rk. -320 F.s. -395 Cs.s. -433 F.s. -448 Cs.s. -460 Bl.sh. -495 P.cl. &s. -592 P.cl. & s. -612 Bl.sh.
2217 - RAINSBY	145°13' 21°54'	839 - 1917		85) 375) 430)	20	89,000	S		0 - 18 Soil - 30 Rd.marl - 50 hd.qtz - 85 Drifts - 100 Y.s. - 110 Rd. marl. - 122 Wh. marl. -165 Y. marl. -204 Bl.marl. -340 Bl.sh. -344 S. -390 Bl.sh. -430 S. -498 Whs.

A	B	C	D	E	F	G	H	J	K	
2218 No.49 COLINDA	145°22' 21°52'	892 - 1917		180 400	180 14	Soak			0 - 46 Y.rk. - 81 Wh.rk. -123 Rd. marl -173 Y.marl -188 Cs.s. -266 P.cl.s. -400 Cs.s. -410 Br.rk. -480 P.cl.s -490 F.S.	-540 Coal -542 Br.s. -590 Cs.s. -617 Wh.rk. -627 P.cl.s. -640 Bl.rk. -655 P.cl.s. -720 Br.marl. -723 F.s. -746 Rd.rk. -758 Br.marl.
2219 No.50 CORINDA	145°27' 21°56'	930 - 1917		60 300	60 65	Soak			0 - 3 Br.soil - 14 Rd.cong. - 28 Y.s. - 53 Pk.s. - 85 Wh.rk. - 95 Rd.s. -128 Wh.s.	-156 Wh.s.v.hd. -172 P.cl.s, -205 Whs. -271 Cs.s. -300 Cs.s. & water -312 F.S. -363 Y.s.
2945 ELIS	144°49' 21°56'	940 - 1919	1963 121 130						T.D. 176	
2947 ELIS	144°52 21°57'	- - 1920	1963 137 140						T.D. 180	
3140 - STANLEY DOWNS	144°00' 21°26'	- - 1917							T.D. 1474	
3293 LAMMERMOOR	144°40' 21°18'	1191 - 1913	1963 - 280	858 988	47				Bottom p.cl. & s. rk. T.D.	

A	B	C	D	E	F	G	H	J	K
3294 Spot CURRAGILLA	144°31' 21°11'	1323 - 1914							T.D. 1100
3295 - LAMMERMOOR	144°43' 21°16'	1167 - 1900	1963 - 280	760) 860)	100				
3296 Pandora ASHTON	144°41' 21°13'	1186 - 1912							T.D. 1200
3297 - ASHTON	144°40' 21°11'	1218 - 1912	1963 - 250						T.D. 900
3298 ASHTON	144°46' 21°11'	1198 - 1914							T.D. 683
3299 - CURRAGILLA	144°42' 21° 7'	1259 - 1889							T.D. 720
3301 - CURRAGILLA	144°32' 21° 6'	- - 1916		820	350	9.680			0 - 25 Hd.gvl. - 85 Rtn.cl. -220 Bl.sh. -268 Bk.sh. -820 Gy.sh. -1000 Gn.sh. - 1104 Rk.p.cl.coal - 1195 Gy.sh. - 1210 P.cl. - 1301 Sy.sh. - 1477 Br.sh. - 1509 Sy.sh.
3304 - LAUNCESTON	144°32' 21° 2'	1294 - -							T.D. 900

* See next sheet.

A	B	C	D	E	F	G	H	J	K	
3300 Roys Camp CURRAGILLA	144°42' 21° 7'	1270 - 1890		710	50	70,000		96	0 - 170 Y.sh. - 695 Bl.sh.w. hd.bnds.	-720 Gn. sst. -820 F.running s.

A	B	C	D	E	F	G	H	J	K
3305 - LAUNCESTON	144°38' 21° 2'	1319 - -							T.D. 900
3306 - LAUNCESTON	144°36' 21° 3'	1325 J.Kirby 1914			774	170	Unlimited		0 - 50 S.&cl. -110 Y.cl. -130 Bl.sh. -155 Y.sst. -530 Bk.sh. -575 Br.sst. -670 Bk.sh. -680 Gn.sst. -754 Bk.sh. -774 Wh.sst.
3309 - MERLIN	144°49' 21° 7'	1232 - 1910	1963 160 280						T.D. 575
3310 - MOONDAH	144°46' 21° 3'	1289 - 1911							T.D. 620
3312 Mitchell MOONDAH	144°49' 21° 4'	1277 - 1914							T.D. 500
3315 - EWAN PLAINS	144°51' 21°17'	1146 - 1909	1963 200 =						T.D. 780
3316 Bogunda EWAN PLAINS	144°49' 21°18'	1142 - -	1963 220 =						T.D. 734
3317 Merlin EWAN PLAINS	144°53' 21°12'	1178 - 1910	1963 280	335 395 469	91				- Bottom in sand T.D. 734

A	B	C	D	E	F	G	H	J	K
3318 - EWAN PLAINS	144°53' 21°12'	1165 - -	1963 280						T.D. 658
3319 - BOGUNDA	144°53' 21°23'	L1125 - -							T.D. 595
3320 - OAKLEY		1288 - -							T.D. 355
3322 - CHELTENHAM	144°56' 21° 4'	1253 - 1912	1963 300 =	226 317 353					0 -317 No info. -364 Sst.
3323 - WOGADOONA	144°55' 21° 7'	1159 - 1015	1963 - 160						T.D. 366.
3324 - WOWRA PARK	144°58' 21°12'	1162 - 1911	1963 - 280	260	212		G		0 - 38 Soil & cl. -183 Sh. -260 Waterbed -290 Si. 360 Cong.& sst. -407 Cl.& sy.sh. -486 Cl.& sst. -520 Sst. & sh. -579 Soft sst. -590 Coal sm. -701 Sst. -540 Hd.rk sst.
3325 - BINDI	144°56' 21°17'	1114 - 1910							T.D. 699
3326 - BOGUNDA	144°50' 21°21'	1107 - 1910							T.D. 715

A	B	C	D	E	F	G	H	J	K	
3327 HOPEWELL PARK	145° 6' 21°14'	1136 - -						T.D. 570		
3328 - CRANFORD	145° 5' 21°23'	- - 1933	1963 - 127					T.D. 480		
3329 - KENTLE DOWNS	144°23' 21°28'	1032 - 1893						T.D.2063		
3330 No.1 LANDSBOROUGH DOWNS	144°21' 21°33'	957 - 1899	1963 110 130					T.D.1920		
3331 - LANDSBOROUGH DOWNS	144°21' 21°35'	873 1907 -	1963 - - 30,000	1285) 1377) 1628) 1688) 1743) 1845) 1885) 1934) 1977) 2021)	Surface	9,600 28,400 155,000 200,000 405,000 440,000 450,000 490,000 620,000		0 -1256 Sh. -1743 S.rk. & p.cl.	-1885 Hd.s.rk. -2045 S.rk. & p.cl. -2060 S.rk.	
3332 - ELABE	144°24' 21°37'	899 P.Connell 1913		1155	Surface	10,590		0 - 50 Su.y.cl. -250 Bk.sh. -255 Sst. -400 Lt.gy.sh. -560 Bk.oily sh. -570 Bk.sst. -810 Lt.sy.sh. -860 Gn.sst.	- 970 P.cl. -1120 Bk.sh. -1180 Gn.sst. -1260 Bk.sh. -1320 Sst. & p.cl. -1400 Dry Sk.sst. -1440 Br. & choc.p. cl.	

A	B	C	D	E	F	G	H	J	K
3333 - ELABE	144°24' 21°37'	899 H.Bode 1958	1963 80 140	800 1155 1260	800 30 Surface	Soak 16,800			0 - 6 Bk.soil -950 No info. except s.rk.at 80°. -1070 P.cl.sms Br.sh. -1200 Bl.sh.w.sms of p.cl. -1213 Marl -1221 Hd. f. sst. - 1245 Marl. - 1260 Lt.gy.sy.cl. - 1276 Sst. - 1286 Marl. - 1360 Br.sh. -1374 F.sst. - 1376 Marl.
3334 - LANDSBORCUGH DOWNS	144°24' 21°31'	969 J.Kirby 1914		1410	59				0 - 50 Y.cl. -1030 Bl.sh. -1050 Gn.sst. -1070 B.sh. -1100 Gn. sst. -1140 Lt.bl.sh. -1175 Wh.cl.& sst. -1195 Br.cl. -1410 Dry sst.w.thin sms wh.&br.p.cl.& c.sst. -1995 Dry sst.w.sms of of wh.&br.p.cl.
3352 - BRANGA DCWNS	144° 4' 21°58'	870 - 1911			1				T.D. 450
3374 - BRANGA DCWNS	144° 4' 21°58'	870 1914	1963 70 210 4000	2080) 2209)	Surface	1500			0 - 108 Blds & rubble -436 Bk.sh. -1000 Bl.sh. -1070 Gy.sh. -1130 Br.sh. -1324 Bl.sh. -1401 Bk.sh. -1492 Br.sh. -1577 Gy.sh. -1624 Bk.sh. -1746 Gy.sh. -2000 Bk.sh. -2212 S.rk. p.cl.

A	B	C	D	E	F	G	H	J	K	
4171 Four Mile REDCLIFFE	144°21' 21° 2'	1089 - 1895							0 - 600 Sh. 3200 Sst.	- 3207 Coal - 3750 Sst.
4172 - ARRARA	144°15' 21° 5'	1004 - 1902							T.D. 2280	
4173 - REDCLIFFE	144°23' 21°23'	1168 - 1907							T.D. 780	
4174 Tableland REDCLIFFE	144°24' 21° 6'	1417 - 1914		1062	189				0 - 80 Cl. -1062 Sh.	-1080 S.rk.
4175 Mountain Creek REDCLIFFE	144°20' 21° 7'	1159 - 1914							T.D. 1030	
4176 Bridle Crk. PERONNE	144°22' 21° 9'	1166 - 1914	1963 170 200						T.D. 1080	
4177 Redcliff ARRARA	144°19' 21° 6'	1097 - 1918							T.D. 760	
4178 - REDCLIFFE	144°24' 21° 1'	1222 - 1918							T.D. 810	

A	B	C	D	E	F	G	H	J	K
4237 - LUDGATE	144°46' 21°41'	1005 - 1896	1963 - 18	1204 3763	80 Surface	12430	F	121	0 - 18 Thin sst. -150 Sky.sh.w.colours - 2790 Cvg.sh. -950 Coloured sh. - 3000 Sst. & sh. -1100 Dk.hd.sh. - 3760 Sh. -1200 Sh.&sst. - 3768 Water st. -2620 Sst.w.sh. beds - 4140 Hd.gy.sst.w. w. bright scales & coal. - 4220 Sst.
4238 - TRURO	144° 7' 21°47'	859 - -	1963 16 =						T.D. 2650
4239 ROCKWOOL	144°17' 21°47'	859 - -				150,000			T.D. 2500
4240 - LUDGATE	144°44' 21°38'	1025 - 1897							T.D. 1232
4242 - LUDGATE	144°54' 21°48'	954 - 1898							T.D. 1080
4241 Mountain ROCKWOOI	144°23' 21°48'	919 - 1899	1963 650 60						T.D. 2616
4243 - DUNROSSIE	144°26' 21°57'	912 - 1900	1963 53 80						T.D. 2660

A	B	C	D	E	F	G	H	J	K
4244 - ROCKWOOD	144°24' 21°54'	828 - 1909		1540 1668 1918 1979 2010	Surface				0 - 75 Y.cl.hd.sks. - 879 No info. -1092 Lt.coloured sh. -1169 Bl.sh. -1505 Rtn.sh. -1540 Choc.sh. -1542 S.rk. -1642 Choc.sh. -1699 S.rk.& p.cl. -1762 Rd.sh. -1830 S.rk.w.rk.s. p.cl. -1921 Stky.sh. -2290 S.rk.
4245 Hollowback ROCKWOOD	144°24' 21°40'	937 - 1910	1963 20 25 -	1505 1514 2755) 2927) 3315) 3325)	20 150 Surface				0 - 77 Y.cl. - 100 Bl.cl. -1304 Bl.cl. -1514 Bk.sh.w.s.rk. -1802 Stky.sh.& hd. s.rk. -1827 S.rk. -2279 Sh.&sks.s.rk. -2390 S.rk.p.cl. 2460 Pk.sh.& p.cl. -2486 Choc.sh. - 2547 S.rk.& beds sh. - 2655 Sy.sh. - 2716 S.rk.& p.cl. -2755 S.rk. -2810 Rd.sh. -2927 Rd.sh.&s.rk. -3055 S.rk. -3105 S.rk.&choc.sh. -3224 S.rk. -3275 Rd.cl. -3335 Sst & sh.
4246 - GLENREACH	144°11' 21°52'	940 - - 1916		1800) 2770)	Surface				0 - 11 Y.cl. -1240 Bl.sh. -1300 Br.sh. -1777 Bl.sh. -1950 P.cl.&choc. sh. -2154 Lt.coloured sh. - 2252 Gy.sh. - 2630 S.rk. - 2680 P.cl. - 2762 S.rk. - 2803 P.cl.
4247 - ELWELL	144°38' 21°44'	945 - 1913							T.D. 1125

A	B	C	D	E	F	G	H	J	K
4248 - GUE	144°21' 21°57'	- - 1919	1963 - 230,000	160 1754) 1950) 2300) 2553)	160 Surface	Soak 293,800			0 - 2 Soil - 12 Y.sst. - 61 Y.sh. - 251 Bl.sh. -1051 Gy.sh. -1121 Br.sh. -1200 Gy.sh. -1551 Bk.sh. -1754 Bl.sh. -1769 S,rk. -1819 S. & cl. -1950 Choc.p.cl. -1955 S.rk. -2000 Wh.p.cl. -2250 Choc.p.cl. -2300 S. & cl. -2440 S.rk. -2550 Hd.wh.s. -2600 Sst.
4249 - ROCKWOOD	144°20' 21°45'	- - 1922		135 1540) 2010)	90 Surface	221,000	B		0 - 10 Downs soil 40 Sst. & br.sh. - 90 Br.& gy.sh. - 135 Gy.sh. - 140 Sst. -1530 Gy.sh. -1580 Sst. & p.cl. -2090 Gy.sh. -2200 Sst. & p.cl. -2240 Gy.sh. -2300 Rd.marl.
4629 - NEEDLEWOOD	144°47' 21°54'	963 - 1901							T.D. 1700
4664 - EYRIE DOWNS	144°45' 21°32'	1055 - 1900	1963 - 300						T.D. 1350
4665 - KEENGEA	145° 5' 21°28'	- - 1900	1963 70 90						T.D. 700
4666 Blackfellow VANDA	144°49' 21°30'	1043 P.Brody 1928	1963 - 130	908 1028 1195					0 - 20 Bk.soil -80 Y.sh. -900 Bl.sh. -908 Hd.s.rk. -1000 Bl.sh. -1028 Free sst. -1135 Br.cl. -1185 Wh. sst. -1202 P.cl.& s.

A	B	C	D	E	F	G	H	J	K
4667 One Mile UANDA	144°54' 21°36'	998 - 1908	1963 - 100						T.D. 900
4668 - UANDA	144°55' 21°31'	1047 - 1917	1963 - 140						T.D. 1000
4669 - UANDA	144°59' 21°35'	971 - 1899							T.D. 935
4671 - TIREE	145°10' 21°41'	910 - 1890		394 510	70 Surface				0 - 87 Variegated sst. -130 Sst. & gvl. -174 S.& gvl. -231 Soft sh. - 370 Sh.w.bnds of gn. sst. - 474 Sh.& gn. sst. - 511 Sst. - 606 Dry porous sst.
4672 - TIREE	145°11' 21°36'	934 - 1896	1963 50 70						
4673 - TIREE		931 - 1910	1963 45 65	480					0 - 120 No info. - 135 Drift -285 Rd.cl.& sh. -480 Hd.sh.w.little sst. -540 No info. -875 Cl.& narrow sms. of sst.Small sm.of coal.
4674 - TIREE	145° 6' 21°35'	- - 1914	1963 50 70						T.D. 610

A	B	C	D	E	F	G	H	J	K
4675 - TIREE	145° 6' 21°35'	- - 1890	1963 15 35						0 - 84 Sst & cl. -150 Mrl.& pudding st. -320 Sh. -488 Sh.& gn.sst. -578 Sh. -658 Wh.sst.
4676 - TIREE	145° 6' 21°38'	941 - 1915	1963 40 60						T.D. 625
4677 - TIREE	145°12' 21°39'	907 - 1915		112 400	15				T.D. 450
4678 SHIRLEY	144°58' 21°30'	999 = 1899		900	100				T.D. 900. Water in s.rk. Coal sms in bore.
4679 - SHIRLEY	144°56' 21°22'	1070 - 1900		930	Subartesian				0 - 58 Y.sh. -551 Bl.sh. -589 Rk. -621 Bk.sh. -846 Bl.sh. -1013 S.rk.
4680 - SHIRLEY	144°55' 21°25'	- - 1900		685	140				0 - 48 Y.cl. -104 Bl.cl. -202 Bl.sh. -300 Hd.rk.& bl. sh. -680 Bl.sh. -745 Hd.rk. -790 Bl.sh.
4681 - SHIRLEY	145° 2' 21°22'	1073 - -		40	30				Sand throughout T.D. 40
4682 - SHIRLEY	145° 2' 21°23'	1060 - -							T.D. 200

A	B	C	D	E	F	G	H	J	K	
4760 - UANDA	144°56' 21°39'	974 - 1908							T.D. 900	
5018 - MARELLAN	145°25' 21°24'	- - 1935		386		10,000			0 - 10 Rd.hd. soil - 60 Rd.Hd.sst. - 70 Rd.Hd.rk. -100 Sy.dry drift -120 Drift -133 Wh.rk. -150 Sst. -170 Hd. sst. -225 Sy.cl.	-285 Y.sst. -295 Gy.sh. -310 Y.sst. -350 Gy.sh. -365 Sy.sh. -380 Sst -390 Ck.wash -402 Br.stky.sh.
5032 - BUNDELLA	144° 7' 21°53'	825 - 1936		1945) 2006) 2555) 2735)	100 Surface	200,000		142	0 - 2 Soil - 30 Sst. -45 Y.sst. - 55 Hd.sst. -74 V.hd.blds. - 78 Rd.sst. -138 Gn.sst. -142 Bl.cl. 160 Br.cl. -415 Gn.sst. -735 Gy.sh. -1035 Gy.cl. -1132 Cvg.gy.cl. -1147 Hd.gy.rk. -1264 Gy.cl. -1315 Gy.sh.cvg. -1395 Br.sh.cvg. -1420 Bk.cl. -1540 Gy.cl. -1560 Hd.sst. -1630 Hd.gn.sst. -1660 Gy.sh.cvg.	-1696 Hd.bl.di. -1812 Cvg.gy.sh. -1865 Tough br.sh. -1870 Hd.gn.sst. -1950 Hd.br.sh. -1985 S. -2016 Hd.sst. -2045 Lt.bi.cl. -2210 F.sst.& p.cl. -2246 Sy .cl. -2345 Wh.sst.& sy.cl. -2410 Sy.cl. -2610 Hd.f.sst. -2710 S.rk. -2715 Coal. -2737 Hd.br.qtz. -2756 Lst. -2760 Coal -2769 S. -2780 Marl. -2784 Dk.fm. -2786 Coal -2805 S.rk. -2819 Hd.qtzite.

A	B	C	D	E	F	G	H	J	K	
5045 - HILLVIEW	144° 4' 21° 3'	- - 1936		782 830	55	24,000			0 - 10 Rd. soil - 80 Y.cl. -130 Gy.sh. -319 Bk.sh. -420 Gy.sh.	-435 Gy.sh.& rk. -788 Gy.sh. -800 Br.sh.& S.rk. -830 S.rk.
5126 - ROSSIEVALE	144° 8' 21°56'	- - 1934		125					T.D. 500	
5148 SANDALWOOD	144° 5' 21°35'	- H.Bode 1937	1963 - - 70,000	1572	Surface				0 - 25 Top soil - 80 Y.sh. - 250 Bl.sh. - 510 Gy.sh. -691 Dk.sh. - 945 Gy.sh. -1456 Dk.sh.& rk. -1508 Hd.sh.& rk.	-1562 Dk.sh. -1590 Sst. -1621 S & p.cl. -1660 P.cl. -1667 Stky.cl. -1706 P.cl. -1771 Gy.cl. -1808 Gy.sh. -1910 P.cl.& sh. -2170 Sy.p.cl.& p.cl.
5430 - STANLEY DOWNS	144° 3' 21°20'	- - 1918		1450					0 - 1400 Y.sh. - 1474 S.rk.	
5604 - BANNOCKBURN	145° 8' 21°53'	- - 1936	1963 5 15	573 649	Surface				0 - 2 Soil - - 23 Bld.country - 48 Colour slippery back.	- 87 Slippery back -573 Bl.sh. -649 Sst.
5605 Brady's BANNOCKBURN	145° 7' 21°43'	- - 1935	1963 70 80	680	38				0 - 550 Sh.	-800 Sst.
5606 Picaninny UANDA	144°52' 21°30'	- H.Warren 1925	1963 - 137	1410					0 - 14 S.soil - 20 y.soil -180 Gy.sh. -220 Bk.sh.	-950 Bl.sh. -1375 P.cl.& sst. -1410 Br. sst.

A	B	C	D	E	F	G	H	J	K
5607 - WOGADOONA	144°58' 21° 6'	- - 1925	1963 - 160						T.D. 460
5692 CASTERTON	144°53' 21°51'	- R.Tichbourne - 1935	1963 100) 1053) 1201130)		100	Soak	B F		0 - 2 gy.soil -947 Bl.sh. - 11 Gvl. -950 Hd.s. -51 Gy.rk . -1048 Bl.sh. -101 Y.cl. -1050 S. -161 Wh.cl. -1130 P.cl.& s. -171 Rd.cl. -210 S.& Y.cl.
5760 No.62 CORINDA	145°28' 21°52'	- - 1935							T.D. 200
5765 - HOLMLEIGH	144°35' 21°31'	- - 1926	1963 150 170						T.D. 1505
5845 - CURRAGILLA	144°39' 21° 7'	- - 1930							T.D. 1136
5911 - STRATHROY	144°27' 21°15'	- - 1926		900	130				0 -1100 Bl.sh. & sst.
5933 - YANTEBOBBERA	144°28' 21°19'	- - 1920							T.D. 1600
5934 Top Wombine CAMERON DOWNS	144°27' 21°23'	- - 1919							T.D. 1300

A	B	C	D	E	F	G	H	J	K
5944 - KOBURRA	145°26' 21°11'	- - 1920							T.D.
5945 MARELLAN	No trace	- - 1920	abd						T.D. 314.
5967 - CORINDA	145°21' 21°51'	- - 1921							T.D. 608
6075 - TIREE	145° 8' 21°35'	- - 1925	1963 60 80						T.D. 610
6076 Byes TIREE	145° 5' 21°32'	- - 1929	1963 60 80	133 560	123 80				0 - 20 Bk.soil. - 32 Gvl. -125 Cl. -131 Sst. -144 Gvl. -294 Cl. -494 Sh. 496 Rk. -560 Sh. -568 Sst.
6077 Owens TIREE	145° 8' 21°32'	- - 1929	1963 60 80						T.D. 489
6078 - TIREE	145°10' 21°38'	- - 1928	1963 30 50						T.D. 453
6800 - BOGUNDA	144°47' 21°20'	- P.Brody 1939	1963 - 200	784) 895) 1123)	230				0 - 180 Sh. - 784 No info. - 794 Gn.sst. - 895 Sh. -916 Sst gvl. -990 Br.sh. -1000 Sst. -1035 Gn.cl. -1045 Sst. & gy.d. -1123 Free sst.

A	B	C	D	E	F	G	H	J	K	
6877 Kennedys SHIRLEY	144°55' 21°25'	- - 1938	1963 120 184	663 775 800	663 120	Soak 10800	s		0 - 68 Y.cl. -518 Bl.sh. -663 Gy.sh. -668 S.rk.	-775 Bl.sh. -783 S.rk. *-800 Sy.sh.*-805 S.rk. -825 Sycl.
7081 - EYRIE	No trace	H.Hogg 1938	Abd						0 - 4 Soil - 15 Y.cl. - 80 Gvl.&cl. -130 Y.cl.	-310 Gy.sh. -370 Br.sh. -418 Gy.sh.
7344 - ABERFOYLE	No trace	- - 1916	Abd						T.D. 80	
7391 - ULVA	145°14' 21°24'	- - 1929	1963 125 160						T.D. 172	
7392 - ULVA	145°11' 21°24'	- - 1923							T.D. 150	
7470 - ULVA	145°18' 21° 30'	- - 1924							T.D. 131	
7500 - HOPEWELL PK.	145° 4' 21°14'	- H.Roberts 1939		260 396) 540)	130 210	12,000	S		0 - 50 Cl.& gvl. - 95 Y.cl. - 260 Bl.sh. - 268 Gn.S.rk. - 364 Br.sh.	-371 F.sst. -396 Sy.cl. -401 S.rl. -540 Sy.cl. -612 S.rk.& F.sst.
7502 - TIREE	No trace	H.Roberts 1939	Abd	98 424	98 50	Soak 18,000			0 - 37 Rd.wh.cl. - 90 Rd.&wh.rk. - 98 Sy.cl. - 178 Gvl.&Sdrift -187 Y.cl.	-200 Gvl.& cl. -424 Sh. -430 S.rk. -440 Cl.

A	B	C	D	E	F	G	H	J	K	
7565	144°44'	-		982	220				0 - 132 Various	-1115 Br.cl.
-	21°22'	-							Strata	-1135 Sst.
BOGUNDA		1929							- 982 Bl.sh.	-1182 P.cl.& sst.
									-1010 Sst.	
7566	144°50'	1107	1963	875					0 - 179 Various strata	-1828 Bl.sh.
-	21°21'	-	-						- 668 Bl.sh.	- 875 Gn.pug.sh.
BOGUNDA		1933	200						- 690 Gy.sst.	- 929 Sst.
									-711 Bl.sh.	- 937 Br.cl.
									-727 Gn.sst.	-1035 Ssts & p.cl.
7591	145° 6'	-	Abd	109	109	Soak			0 - 109 Y.cl.	-360 S.rk.
Dud	21°14'	S.Hogg		205	100		S		-205 Bl.sh.	-420 Sy.p.cl.
HOPEWELL PK.		1938		350	230				- 214 Bl.s.rk.	-500 S.rk.
									- 350 Br.sh.	-540 S.rk.& cl.
7706	145°13'	-	1963		40				T.D. 350	
Silver Gidyea	21°36'	-	-							
ABERFOYLE		-	80							
7707	145°19'	-	1963	23	23	Soak			0 - 4 Br.cl.	- 76 Y.cl.
No.3	21°49'	-	-	139	11				- 10 Wh.cl.&gvl.	- 80 wh.cl.
ABERFOYLE		1935	18						- 19 Y.cl.& gvl.	- 87 Y.cl.
									- 23 Wh.cl.& s.	-100 Pk.cl.
									-42 Y.cl.&s.	-109 Y.cl.
									- 47 Wh.cl.	-137 Hd.bk.sh.
									- 49 Y.cl.	-139 Gn.sst.
									- 61 Rd.cl.	-161 Hd.bk.sh.
7708	145°27'	-	1963	60	60	Soak			0 - 6 Rd.cl.& s.	- 76 Wh.cl.& sst.
No.5	21°40'	-	-	156	47				- 9 Y.cl.&s.gvl.	-114 Wh.sst.
ABERFOYLE		1935	80						- 18 Wh.cl.& s.	-144 Wh.cl.& sst.
									- 22 Y.cl.& s.	-146 Wh.cl.
									- 28 Wh.cl.&s.	-149 Pk.cl.
									- 34 Y.cl.& s.	-192 Wh.sst.
									- 54 Wh.cl.	

A	B	C	D	E	F	G	H	J	K	
7709 Toms ABERFOYLE	145°25' 21°36'	- - 1923	1963 - 80						T.D. 300	
7951 - ARRARA	144°18' 21° 2'	- - 1897							T.D. 725	
8014 - ABERFOYLE	no trace	880 Abd Roberts 1940		160) 277)	Surface	34,560			0 - 45 Y.cl.& cong. -108 Rd.& y.cl. -130 Sh.	- 150 Sy.cl. - 160 S.rk. - 175 Sycl. -180 S.rk. -277 Sy.cl.
8040 - CHELTENHAM	144°54' 21° 5'	- J.James		78 245 615	78) 245) 155	Soak	S		0 - 40 Sycl. - 43 Hd.rk. -107 Slippery back -427 Sh. -435 Gn. sst.	-485 Sy.sh. -595 Sh. -610 Sy.sh. -615 Sy.cvg.sh. -653 Sst.
8120 Corner Camp ABERFOYLE	145°20' 21°47'	- - 1940		159	14				0 - 30 Rk. - 52 Cl. - 70 Rd.rk.	-105 Wh.cl. -155 Br.s.rk. -189 Sh.
8173 - TIREE	145°10' 21° 41'	910 - 1940	1963 20 40	485	30	19,200			0 - 25 Rd.gvl.& cs. gvl. - 60 Rd.rk. - 77 Creamy rk. - 83 Loose s.	-115 Y.s. -192 Gvl.& drift s. -476 Br.sh. -485 S.rk. -502 Wh.sy.cl. -520 Cs.s.rk.

A	B	C	D	E	F	G	H	I	J	K	
8378 Stock Route BRAEMAR	144°12' 21°18'	- - 1941		1160	30		B			0 - 5 Soil - 40 Cl. -100 Sh.& rk. -457 Sh. -503 Gy.sh. -540 Gy.sh.& rk. -570 Br.sh. -663 Dk.sh. -719 Gy.sh.	- 748 Dk.oily sh. -1156 Sh. -1160 Gn.rk. -1262 Sh. -1300 Sh.&rk. -1335 Sh. -1345 S. -1375 Sh. -1390 S. -1410 Sh.
8392 - ABERFOYLE	No trace	- - 1940	Abd	182	160					0 - 44 Rd.cl. - 70 Wh.cl.& s. -106 Pk.cl.& s. -120 Wh.cl.s.	- 140 Creamy cl.& s. - 175 Wh.cl.& s. - 182 S.rk.*190 Sy.cl. - 250 Rd.&Wh.s.rk.
8401 - ABERFOYLE	145°25' 21°36'	- P.Brody 1935	1963 - 80	77 142	25					0 - 2 Rd.s. - 12 Y.cl.& s. - 14 Rd.rk. - 50 Wh.cl.& s. - 62 Y.cl.& s. - 75 Wh.cl.& s.	- 77 Wh.cl.& sst. - 110 Wh.cl.& s. - 131 Pk.hd.sst. - 158 Wh. sst. - 171 Cl.& wh.sst.
8521 - CORINDA	145°30' 21°50'	- - -								T.D. 200	
8898 - RAINSBY	145°19' 21°52'	850 - 1942								T.D. 273	
8997 - PRAIRIEVALE	145°12' 21°48'	- Roberts 1941	1963 3 9	75 335) 435) 485)	75 15	Soak				0 - 15 Rd.wh.rk. - 34 Wh.rk. - 60 Rd.rk. - 70 Wh.rk. - 98 Gy.sh.	-160 Slippery back -335 Sh. -340 Gn.s. -433 Sh. -485 S.rk. -492 Sh.

A	B	C	D	E	F	G	H	J	K	
9069 Frasers ABERFOYIE	145°26' 21°49'	- H.Roberts 1940	1963 - 80	151	40	14,400			0 - 6 S.loam - 30 Rd.rk. - 52 Creamy rk. -90 Y.cl. -146 Y.s.& cl.	-151 Bl.cl. -160 Y.sst. -180 Bl.cl. -192 Whitish sy.cl.
9308 Bells SHIRLEY	144°56' 21°22'	- - 1928	1963 150 180						T.D. 830	
9309 Mingo SHIRLEY	145° 2' 21°23'	- - 1926	1963 190 200						T.D. 1020	
9310 Prairie SHIRLEY	144°55' 21°24'	- - 1923	1963 140 168						T.D. 1000	
9312 - ASHTON	144°46' 21°11'	- - 1930	1963 - 350						T.D. 730	
9606 - MUNDOO BLUFF	145°22' 21°31'	- - 1925		98					0 - 6 Gy.hd.cl. - 16 Gy.& rd.cl. -22 Chalky wh.cl.	- 67 Soft sst. - 68 Fine dry drifts -107 Soft sst.
9607 Warrens ATHRTFIELD	145° 8' 21°28'	- - 1926	1963 70 90	150	150	Soak	B		0 -150 No info. -200 Drifts & river pebbles	-700 No info. Seated in sst.
9723 - MUNDOO BLUFF	No trace	- -	Abd		34				8 - 47 Sst. T.D. 71	
9736 - KENTLE DOWNS	144°23' 21°28'	- - 1923							T.D. 1500	

A	B	C	D	E	F	G	H	J	K	
9849 Well ATHERFII LD	145°11' 21°32'	- - 1940	1963 50 70						T.D. 80	
10520 Lake ABERFOYIE	145°23' 21°40'	- G.Pirie 1945		60 200 290	50 13 Surface	14,400	B		0 - 60 Y.cl. - 85 P.cl.sy. -200 P.cl. -220 Bk.puggy sh. -230 Bk.sh.	-245 Br.sh. -265 Bk.sh. -290 Br.&bk.sh. -295 Sst. -300 Sh.
10551 - ABERFOYIE	145°18' 21°36'	- G.Pirie 1945	1963 40	80 250	40 25	12,000	B G		0 - 25 Y.cl. - 40 Y.sst. - 55 Rd.sst. - 65 P.cl.& sst. -85 B.cl. - 95 Drifts. -120 Y.cl.	-145 Bk.sh. -165 Br.sh. -200 Bk.sh. -235 Br.sh. -257 Bk.sh.&some s.rk. -300 P.cl.& s.
10744 - MUNDOO ILUFF	145°22' 21° 3'	- - 1946		100		12,000			0 - 3 Gy.cl. - 10 Y.cl.& gvl. - 16 Wh.cl. - 20 Pk.st. - 66 Wh.sst.	- 68 F.dry s. - 73 Wh.sst. - 75 Wh.dry s. -103 Wh.sst. -106 S.& gvl. -111 Pk.hd.sst.
10745 - MUNDOO ILUFF	145°22' 21°28'	- - 1946		98) 114)	94	12,000			0 - 1 Subsoil - 12 Y.cl.& gvl. - 15 Wh.cl.&s. - 73 Wh.sst - 83 Wh.cl.	- 94 Pk.hd.sst. - 96 Wh.cl.& s. -106 Sy.rk. -111 Wh.cl.& sst. -130 Sy.rk.
11039 - ATHERFII LD	145°10' 21°27'	- W.James 1947	1963 20 90	196	80	12,000			- 60 Sy.cl. - 63 Sst. -120 Sy.cl. -122 Rd.cl. -159 Drifts	-162 Sst. -175 Drifts -181 Y.&bl.sh. -205 Sh. -209 Sst. -235 Sh.

A	B	C	D	E	F	G	H	J	K	
11055 - BRAEMAR	144°18' 21°19'	- Godfrey Bros 1948	1963 100 130 -	1198	80	17,000			0 - 3 Gvl. - 93 Y.cl. -486 Gy.sh. -506 Br.sh. -909 Sh. -996 Rk.	- 1098 Sh. - 1213 Cs.sst. - 1248 Puggy sst. -1296 Br.cl. -1300 Sy.cl.
11059 - ENSAY	144°10' 21°25'	- Godfrey Bros 1949		1114) 1215) 1650	10	3,600			0 - 3 Bk.soil. - 10 Y.cl. - 20 Gvl. - 80 Y.cl. -535 Gy.sh. -536 Rk. -1000 Sh. -1207 Dk.bl.sh. -1210 Bk.s. -1228 Hd.sst. -1311 Br.sst. -1315 Hd.gy.s.rk. -1334 B.sst.	-1347 Bl.s.rk. -1410 Bl.sst. -1449 Br.sh. -1455 Sy.sh. -1476 Br.sh. -1481 Sy.sh. -1504 S.sh. -1517 Br.sh. -1563 Sy.sh. -1587 S.sh. -1602 Sy.sh. -1614 Br.sh. -1634 Sy.sh. -1721 Sst. & sh.
11060 - STRATHROY	144°25' 21°17'	- Godfrey Bros 1947		1062	121	14,000			0 - 8 Gvl. - 18 Rd.cl. - 58 Y.greasy cl. - 90 Gy.md.st. -410 Gy.sh. -750 Lt.gy.sh. 950 Gy.sh.	-955 Gy.sst. -960 Wh.rk. -1062 Gy.sh. -1105 Wh.s. -1151 Br.rk. -1173 Br.sh. -
11147 - PRAIRIEVALE	145°12' 21°51'	- Godfrey Bros 1948	1963 - - 30,000	75 348 455) 480)	75) 60) Surface	Soak 33,000	S		0 - 5 Rd. loam - 9 Y.cl. - 25 Rd.rk. - 65 Wh.rk. -130 Slippery back.	- 375 Gy.sh. - 410 Gn.sh. -455 Bk.sh. - 495 Whs. - 505 Wh.sst.

A	B	C	D	E	F	G	H	J	K
11179 - TUMUTVALE	145° 9' 21°22'	- W.James 1947		120 240	120 135	Soak 12,000			0 - 5 Rd.sy.loam. - 12 Drift s. -140 Y.sy.cl. -230 Pk.slippery back. -250 Bl.gy.sh. -270 Sst. -300 Water bearing Sst.
11211 - BOGUNDA	144°43' 21°24'	- - -	1963 - 200	1020					0 - 3 Rd. soil - 18 Wh.cl. - 35 Slippery back - 79 Ironst. -89 Wh.sst. -162 Slippery back -920 Gy.sh.& rk. - 935 Gn.sst. -1020 Gy.sh. -1075 Water s. -1084 Br.sh. -1148 Gy.sh. -1208 Gy.sst.
11247 - UAI DA	144°56' 21°39'	974 J.McGown 1948	1963 - 82	928	82	24,000			0 - 6 Soil - 18 Soft rd.st. -100 Soft rd.&wh.cl. -130 Soft bl.st. - 160 Wh.sy.cl. - 162 Drifts -180 Stky bk.cl. - 192 Bk.sh.
11308 - BAKENYA	144° 9' 21°36'	- - 1949		1433) 1441) 1455)	Surface	20,000			0 - 73 Bk.su.soil. - 196 Gy.sh. - 197 Bk -1426 Gy.sh. -1429 Hd.bk.rk. - 1441 Bk.sst. - 1455 Wh.sst. - 1540 S.rk.& patches sy.cl. - 1608 Hd.s.rk.
11429 - HILLVIEW	144° 7' 21° 3'	- J.James 1949		785 885	95	16,800			0 - 5 Soil - 25 Ribbon st. - 90 Slippery back - 295 Gy.sh. - 335 Dk.sh. - 755 Gy.sh. - 780 Sy.sh. -835 Sst. - 885 P.cl.& s. - 899 Sst.. - 901 S.rk.
11528	No trace	M.Cox 1950	Abd	874) 990) 1027) 1035) 1120)	120 110	17,000			0 - 3 Bk.soil - 21 Br.sy.cl. - 30 Cl. - 38 Sy.cl. - 70 Y.sst.& cl. - 82 Wh.sst. - 148 Cl. - 168 Gy.sh.& rk. - 180 Cong. -292 Gy.sh. -425 Gy.sy.sh. 874 Gy.sh. -883 Gy.sst. -987 Gy.marl. -1200 Gy.sst.

A	B	C	D	E	F	G	H	J	K
11552 No.67 COLINDA	145°30' 21°47'	- J.Bates 1950		50 140 160	36				0 - 14 Bl.cl. - 85 Gy.sst. -140 Gy.sy.cl. -144 Wh.s. - 154 Cream sy.cl. - 160 Cream sst. - 168 Wh.s. - 188 Hd.y.sst.
11607 - BOGUNDA	144°35' 21°22'	- - 1950	1963 - 200	1030 1150	170	15,840		0- 6 Rd.rk - 11 Hd.sst. - 19 Wh.qts.rk. - 32 Hd.sst. - 52 Pk.&wh.sst. & y.cl. - 72 Y.cl. - 90 P.cl.&bl.cl. -120 Y.sh. -130 Sh. -165 Bl.sh. -366 Gy.sh. -375 V.hd.Br.st. -385 Hd.choc.sh. -405 Bl.waddy sh. -428 Hd.br.sh. -430 Cvg.sh. -450 Gy.sh. -495 Sy.gy.sh. -530 Gy.sh. *-857 Gy.sh.	0- 539 Bl.sh. waddy - 575 Waddy gy.sh. -595 Br.bl.sh. -620 Rubbery marl -646 Rubbery marl & gy.sh. 696 Marl gy.sh. -706 Waddy bl.sh. -784 Gy.sh. -802 Hd.gy.rk. * -827 Marl -877 Slippery back -902 Gy.slippery back -927 Bl.sh. -942 Puggy granulated sh. -952 Puggy sh. -1020 Gy.sh. -1029 Hd.cs.sst -1031 Gy.soft sst. 0-1034 Hd.sst. -1062 Waddy bl.sh. -1082 Gy.&bl. Gumbo -1127 Gumbo -1147 Choc.sh.. -1157 Sst. -1168 Gy.drifts -1182 Coal&p.cl. -1192 Porous sst -1202 Sst.&p.cl. -1212 P.cl. -1237 Decomposed Sst. -1267 Sst. -1282 Br.mdst. -1297 Sy.p.cl. -1312 Pasty fine drift.s -1362 Wh.p.cl. -1552 Sst. -1562 Sst.& bnds of qtz. -1790 Drifts -1800 Y.sh. -1815 Gy.sst. -1895 Gy.sy.sh.
11652 - TUMUTVALE	145° 7' 21°21'	- W.James 1950		90 420 464	90 89) 85)	Soak 19,000			0 - 5 Rd.cl. - 8 Sy.cl. -90 Rd.rk&wh.chalk -105 Wh.cl. -138 Slippery back -148 Y.sh. -171 Lt.gy.sh. -320 Gy.sh. -355 Dk.gy.sh. -370 Sy.gy.sh. -390 Sy.sh. -405 Md.y.sst. -464 Sst.

A	B	C	D	E	F	G	H	J	K	
11660 - EVANDALE	144°20' 21°26'	- J.Arrowsmith 1951		1261 1590	115 104	24,000			0 - 3 Bk.sub soil - 65 Y.cl. - 70 Bl.cl. -1157 Gy.sh. -1159 Gy.rk. -1161 Gn.sst. -1215 Dk.gy.sh.	-1245 Gy.sh. -1275 Br.sh. -1405 Sst. -1423 Br.sh. -1470 Sst. -1590 Br.sh. -1605 Sst. -1700 Gy.sy.sh.
11698 - EWAN PLAINS	144°52' 21°18'	- A.Hawthorne 1950		577	110	11,520			0 - 18 Su. soil -120 Y.cl. -136 Br.sh. -345 Gy.sh. -350 Bl.sh. -355 Gy.sh. -381 Bl.sh. -456 Gy.sh.	-476 Waddy bl.sh. -511 Waddy gy.sh. 543 Waddy gy.sh&lime -550 Gn.carb.sedi- mentary -555 Waddy bk.gumbo -585 Hd.mdst. -591 Heavy cs.s.
11771 - CRANFORD	145° 8' 21°17'	- - 1926		230	150	9,600			0 - 8 S. - 108 Sst.	-120 S -230 Sst.
11772 - TARELLA	145°13' 21°18'	- - 1931	1963 163 170	270	48	2,400			0 - 6 Claypan - 16 S. -116 Rd.rk.	-206 Sh. -216 Sst. -270 Sh.
11773 Mountain LANDSBOROUGH DOWNS	144°26' 21°33'	920 - 1951	1963 80 120	1170 1240) 1292)	70 60	28,800			0 -1160 Gy.sh. -1170 Bk.sh. -1189 Honeycomb. sst. -1220 Marl -1240 H.wh.sst.	-1253 F.wh.s. *1275 Marl. *1292 Gy.sh. -1307 Honeycomb sst. -1350 Marl.
11779 - MELINGA	145°12' 21°15'	- S.Bramhan 1938		287	157	9,600			0 - 25 Cl.fm. - 75 Wh.sst. - 115 Y.slippery back - 135 Wh.sst.	- 195 Sst. - 215 Pk.chalk - 265 Rd.s.rk. -287 Bird.s .

A	B	C	D	E	F	G	H	J	K
11854	144°25'	-	1963	1599)	45				0 - 3 Br. soil
-	21°56'	-	53	1996)					- 72 Y.sh.
DUNROSSIE		1952	80	2101)					-390Gy.sh.
				2194)					-593 Tough gy.sh.
				2271)	Surface	158,400			-910 Gy.sh.
				2349)					-1200 Tough gy.sh.
				2366)					-1262 Dk.gy.stky sh.
				2470)					-1375 Dk.gy.sh.
									-1569 V.tough gy. sh.
									-1582 Sst.
									-1660 Br.sh.
									-1715 Tough Br. sh.
									-1730 Br.sh.
									-1790 Br.sh.& s.
									-1825 Wh.sy.sh.
									-1857 Tough gy.sh.
									-1900 Br.sh.
									-1945 Gy.sh.
									-1988 Sst.& gy.sy.sh.
									-2015 Gy.sy.sh.& p.cl.
									-2048 Sst.& p.cl.
									-2092 F.sharp sst.
									-2117 Sst.
									-2121 F.sst.
									-2130 Hd.dk.sst.
									-2150 Hd.s.rk.
									-2190 Sst.
									-2200 Br.sh.
									-2215 Sst.
									-2360 Sharp s.rk.
									-2375 Sst.
									-2411 Sharp sst.
									-2445 Br.sy.sh.
									-2507 Br.sy.sh.w. hd bnds of gy.rk.
11836	144°25'	-							- 3 Sub. soil
-	21°10'	-							- 15 Y.cl.
LIMBRI DOWNS		1951							- 20 Gvl.& water
									- 70 Y.cl.
									-1105 Gy.sh.
									-1115 Br.sh.
									-1120 Cs.s.
									-1165 Gy.sst.

A	B	C	D	E	F	G	H	J	K
11910 - JIREENA	144°35' 21°24'	- - 1912							T.D.1780
12029 - MUNDOO BLUFF	145°27' 21°34'	- - 1952		245	245	17,280			0 - 3 Rd.cl. - 8 Pk.rk. -26 Y.cl -38 Y.cl.& chalk -40 Wh.chalk -53 Wh.chalk& cl. -55 Y.cl. -61 Wh.sst. -71 Rusty sst. - 98 Wh.sst. -124 Wh.cl. -186 Wh.sst. -189 Wh.cl. -214 Wh.s.rk. 216 Pk.sst. -221 Chalk wh.cl. -261 Wh.sst. -279 F.hd.sst.
12073 - BINDI	144°56' 21°17'	1114 R.Poole 1952	1963 - 200	1060	187	15,600			0 - 20 Topsoil& cl. -100 Cl. -146 Sh. -500 Gy.sh. -530 Gy.rk.gns. -550 Lt.gy.sh. -610 Lt.gy.sh.& s. -850 P.cl.& s. -880 Wh.sy.cl. -920 Gy.sh. -940 Gy.& choc.sh. -955 Choc.sh. -975 Wh.sst. -1005 Puggy gy.sh. -1050 Bl.sy.sh. -1085 Wh.sst.
12116 - LUDGATE	144°49' 21°36'	- - 1952							0- 8 Subsoi. & rk. - 31 Sy.cl. - 76 S.rk. - 100 Sst. - 139 Sy.cl.& gvl. - 142 Drifts - 152 Y.cl. - 202 Gy.sh.
12126 - ROCKWOOD	144°19' 21°43'	- - 1953		1515) 1525) 1540) 1580)	80 Surface	30,500	G		0 - 5 Top soil - 70 Y.cl. - 885 Bl.sh. - 895 Br.sh.&lst. - 955 Br.sh. -1100 Gy.sh. -1130 Br.sh. -1150 Gn.sh. -1170 Br.sh. -1215 Gy.sh. -1230 Br.sh. -1310 Gy.sh. -1325 Br.sh. -1370 Hd.gy.sh. -1400 Hd.gy.sh. -1508 Gy.sh. -1545 Sst. -1560 Puggy wh.sst. -1573 Br.marl. -1580 Puggy wh.sst. -1600 Br. marl. -1610 Gy.sy.sh. -1614 Gy.sh.

A	B	C	D	E	F	G	H	J	K	
12135	144°49'	-	1963	1090	85	18,000			0 - 10Su.rk.	- 458 Br.sh.
-	21°45'	-	-						- 24 S.rk.	-1076 Sy.cl.
LUDGATE		1953	200						-104 Wh.cl.	-1087 Sy.cl.
									-168 Y.cl.	-1141 Sst.
									-435 Gy.sh.	-1150 Cl.
12240	144°26'	-	1963	933	40	28,800			0 - 7 Soil	- 933 Gy.sh.
-	21°11'	J.James	130	1043	150				- 60 Y.cl.	-942 Sst.
ZARA		1953	220						- 85 Dk.sh.	- 945 Br.s.rk.
									-750 Gy. sh.	- 950 Puggy sh.
									-770 Gn.rk.	-1043 Bk.marl.
									-890 Gy.sh.	-1085 Sst.
									-905 Gn.rk.	-1090 Sy.sh.
12439	144°46'	-	1963	212	90	24,000			0 - 3 Su.soil	- 101 Lt.gy.s.rk.
-	21°57'	H.Bode	10						- 57 S.rk.coloured	-*105 Sst.* 107 Cong.
BIRICANNIA		1913							- 79 Sy.lt.gy.cl.	- 126 Rd.ironst.
12566	144°54'	-	1963	100	85		S		0 - 3 Su.soil	- 377 Hd.sh.
-	21°34'	-	-	900	108	46,080	G		- 22 Hd.sst.	- 460 Gy.sh.
UANDA		1953							- 41 Pk.cl.	- 463 Bk.sh.
									- 67 Pk.& y.cl.	- 484 Sh.
									- 90 Pk.cl.	- 486 Hd. st.
									-130 Gy.sy.cl.	- 627 Sh.
									-133 Hd.sst.	- 635 Hd. slate
									354 Gy.sh.	-802 Sh.
									-365 Sh.	-805 Br.sh.
									-367 Hd.sst.	- 902 Sst.

A	B	C	D	E	F	G	H	I	J	K
12600 - LANDSBOROUGH DOWNS	144°22' 21°32'	- Godfrey Bros.	1963 80 =	1242 1565	83 73	17,424 48,000	P			0 - 6 Su.soil - 45 Y.cl. - 70 Bl.sh. - 628 Gy.sh. -1082 Gy.sh.bnds s.rk. -1099 Hd.gy.sy.sh. -1231 Sh.& rk.bnds -1242 Sh.&.cs.s. -1248 Cs.qtz.s. -1296 Sst.hd.bnd sh. *1317 P.cl.& s. -1411 P.cl. -1423 P.cl.& f.s. -1437 Sst. -1453 P.cl. -1474 Rd.sh. -1494 Sh.w.sms of s. -1510 P.cl.& s.sms -1524 Br.sh.& s.sms. -1550 Sh. -1560 F.sst. -1577 Cs.sst. -1600 Hd. sst. *-1366 Sst.
12779 - PIECEWOOD	No trace	H.Bode 1954	Abd							0 - 2 Su.rubble - 67 S.rk.various colours. - 72 S.cl. - 100 Lt.gy.s.rk.& cl. - 105 Pk.cl. - 138 Wh.chalky S.rk. - 146 Blood rd.s.rk. - 170 Hon.coloured s.rk. - 185 Y.& gy.sh.
13025 - UANDA	144°55' 21°31'	- H.Bode 1955		165 910 1000	104					0 - 5 Bk.soil. - 45 Sy.cl. - 55 Sy.cong.& gvl. - 130 Y.slippery back - 165 Dk.gy.sh. - 898 Gy.sh. - 908 Sy.p.cl. - 910 Sst. -1000 Soft gy.sy.rk. -1043 Wh.sst.
13343 - TANCRED	145° 7' 21° 58'	857 C.Mallyon 1957	1963 5 20	42 590 694) 816)	42 320) 14)	Soak 57,000				0 - 4 Choc.sy.soil - 14 Cong.sh. - 37 Y.sy.sh. - 53 Cs.drifts - 96 Rtn.y.sh. - 108 Bl.pug -589 Gy.sh. - 591 Gn.sh. - 618 Gy.sh. - 640 Dk.gy.sh. - 651 Hd.gy.sh. - 694 Gy.sh. - 701 Sst. - 739 Br.sh. - 868 Sst. - 886 Qtz & sh. -1007 Br.sy.sh. -1021 Qtz & cl. -1041 Br.sy.cl. -1092 Wh.sy.cl. -1100 Br.sy.cl.

A	B	C	D	E	F	G	H	J	K	
13347 - BRAEMAR	144°14' 21°18'	- J.C.James 1958	1963 100 130 -	1235	98	16,800			0 - 4 Soil - 60 Y.cl. - 95 Gy.sh.& rk. -145 Gy.sh. -150 Hd.gy.rk. -157 Gy.sh. -740 Dk.sh. -755 Sy.sh. -755 Sy.sh.&gy.marl. -805 Sy.sh. -845 Gy.marl.	- 850 Cvg.sh. -1120 Bk.marl. -1125 Hd.rk. -1150 S.rk. -1160 Dk.sh. -1200 Bk.marl. -1235 Hd.Bk.marl -1255 Sst. -1260 Hd.rk. -1271 Sst.
13432 Topshed ABERFOYLE	145°13' 21°39'	- H.Bode 1957	1963 - 48	114 320	45 13	36,000	G		0 - 4 Su.soil -114 Sy.cl. -139 Drifts -159 Sy.cl. -164 Cs.drift & gvl.	- 174 Y.sh. - 318 Gy.sh. - 320 Gn.rk. - 350 Cs.sst. - 355 Drifts.
13480 Torrens ABERFOYLE	145°22' 21°41'	- H.Bode 1957		270	Surface	31,418	G		0 - 4 Su.soil - 14 Sycl. - 16 Gvl. - 49 Sy.cl. - 97 Rd.cl. -112 Y.sh.	- 132 Dkgy.sh. - 150 Lt. gy. sy. sh. - 153 Cs.gvl. - 240 Sy.cl. - 300 Sy.gy.p.cl.&w. bnds of water-bearing s.
13512 Lilyhole TIREE	145°11' 21°27'	- J.Holland 1957	1963 40 50						0 - 4 Cl. - 9 Cl.& s. - 18 Cl. - 26 Cl.& Wh.md. - 39 Wh.ground - 80 Cong. - 99 Sh.	- 119 Sst. - 146 Cl. - 176 S. - 197 Sst. - 215 Hd. sst. - 217 Water strata.

A	B	C	D	E	F	G	H	J	K	
13644 Gilles ATHERFIELD	145°10' 21°27'	- J.Holland 1958	1963 60 80	125 201 504	76 88 64	10,800	G		0 - 5 Cl. -128 Sst. -150 S.& pebbles	- 158 Soft sst. - 200 Sst. - 210 Slippery back - 514 Sst.
13731 STRATHROY	144°29' 21°16'	- H.Bode 1957		955 1100) 1130) 1185)	120 95	16,800	G		0 - 4 Soil - 16 Iron st. - 75 Y.sh. -292 Gy.sh. -375 Dk.sh. -700 Lt.gy.sh. -885 Dk.sh. -887 Hd.bnd. -903 Gy.sh.	- 928 Cream sst. - 955 Sy.gy.sh. - 964 F.sst.& s. -1000 Dk.sh. -1107 Sst. -1128 Sy.cl. -1141 Sst. -1185 Sy.gn.cl. -1186 Cs.s. -1211 Br.sh.
13822 - WOWRA	144°56' 21°13'	- H.Bode 1959	1963 - 250	60 265) 511) 652	60 125) 120)	16,800	B		0 - 10 Bk.soil - 90 Cl. -260 Sh. -290 S.rk. -510 Sh. -640 Sst.	- 664 Cs.gy.sst. - 675 P.cl. - 681 Cs.sst. - 705 P.cl. - 710 Sst. - 752 Br.sh.
13847 - CATUMNAL	144°00' 21°53'	- H.Bode 1958		105 155) 180)	105 80	Soak 6,240			0 - 6 Bk.soil. - 16 Y.cl. - 50 Sy.y.cl. - 53 Gy.rk. -105 Sy.gn.cl.	- 115 Gn.s.rk. - 155 Gy.sh. - 160 Gy.rk. -180 Gy.sh. -200 Gy.sy.cl.
13904 - ARRAMA	144°18' 21° 2'	- J.C.James 1959		752 875	270 215	12,000			0 - 4 Soil - 65 Y.cl. - 90 Gy.sh. - 95 Gy.rk. -560 Gy.sh. -605 Bk.cvg.sh. -635 Gy.sh. -645 Gy.rk.	-720 Gy.sh. -725 Gn.rk. -745 Gy.sh. -750 Qtz & gn.rk. -756 S.rk. -875 Gy.sh. -900 Sst.

A	B	C	D	E	F	G	H	J	K	
13970 – THORNVILLE	144°15' 21°57'	– H.Bode 1960	1963 – –	1845) 2310)	Surface	40,000			0 – 8 Rd cl. – 134 Y.sh. – 1235 Gy.sh.& hd.bnds. – 1249 Oily dk.sh. – 1448 Gy.sh.& rk. – 1461 Gn.rk. – 1479 Gn.sst. – 1499 Layers gn.	-1640 Gy.sh. -1683 Gy.sh.gn.sms. -1702 Gn.rk. -1742 Gy.sh. -1798 Gy.sh.gn.sms. -1845 Gy.sh. -1865 Sst. -1893 Sy.cl. -1900 Marl. -1925 Sy.cl. -1928 Hd.wh.rk. -2000 Si. cl. -2114 Si.cl. -2134 Gy.marl. -2156 Stky.gy.marl. -2250 Marl. -2265 Sy.cl. -2300 Gritty gy.rk. -2310 Sy.gy.cl. -2341 Sst. -2346 Hd.f. sst.
			42,000							
14083 – ASHTON	144°44' 21°12'	– H.Bode 1960		730 880) 898) 910	130 330) 270)	Soak 14,400	G		0 – 8 Top soil & br.cl. – 15 Cong. – 24 Rd.gvl.& cl. – 86 Y.cl.& gvl. – 93 Y.s.rk. -135 Cong. -171 Y.sh. -583 Gy.sh. -601 Gy.si.s.& sh. -610 Gn.gy.si.s -615 Hy.sh. -630 Gy.si.s. -680 Gy.sh. -683 Gn.si.s.	-738 Gy.sh. -750 Sst. -760 Gy.sh.& cl. -854 Gy.sh. -868 Gy.cl. -878 S.rk. -880 Pk.cl. -882 Sst. -898 S.rk. -900 Sst. -910 S.rk. -930 Sst. -950 S.rk.

A	B	C	D	E	F	G	H	J	K	
14122	144°24'	-		1139	100)				0 - 3 Soil	-1138 Gy.sh.
-	21°31'	H.M.Bode		1200	)	24,000	G		- 61 Y.sh.	-1245 Sst.
LANDSBOROUGH		1960		1230	81)				-1043 Gy.sh.	-1280 S.rk.& cl.
DOWNS									-1053 Gn.s.rk.	-1400 Marl.
14335		-		180	84)				0 - 3 Cl.soil	- 142 Cl.& s.
-		C.Mallyon		345	234)	12,000	P		- 22 Cl.& gvl.	- 150 Qtz & cl.
		1961							- 32 S.gvl.& water	- 192 Cl.qtz.& s.
									- 55 S.cl.& gvl.	- 205 Cong.
									- 67 Mdy. sst.	- 214 Cong.& cl.
									- 80 S.& cong.	- 224 Cvg.cl.
									- 87 Cs.dry s.	- 272 Y.cl.& sh.
									- 132 Cl.& s.	- 291 Cl.
									- 137 Qtz.gvl.& cl.	- 297 Hd. sst.
										- 366 Sst.
14545	144°50'	H.Bode		893					0 - 6 Soil	-923 Sst.
-	21°24'	1961		995	81	28,800	P		- 25 Rd.cl.&ironst	-945 Cl.
BOGUNDA				1010					- 130 Cong.	-970 Sy.cl.
				1110					- 155 Slippery back sh.	-995 Cl.
										-1017 Sst.& cl.
									- 725 Gy.sh.	-1110 F.sst.
									- 735 Gn.s.rk.	-1117 Sst.
									- 745 Gy.sh.	-1166 F.sst.
									- 771 Gn.s.rk.	
									- 893 Gy.sh.	
14602	144°50'	-	1963	1075	160)	29,160			0 - 8 Soil& cl.	-845 Gy.mdst.hd.layers
-	21°43'	S.Jensen	-	1178	150)		P		- 45 Sst.	-1025 Gy.mdst.
LUDGATE		1961	220						- 76 Cong.	-1073 Gy.mdst.hd.layers
									- 94 Sy.cl.	-1098 Sst.
									- 183 Cl.	-1140 Gy.mdst.hd.bnds.
									- 500 Gy.mdst.	-1174 Sy.mdst.hd.bnds
									- 506 Hd.gy.rk.	-1244 Sst.
									- 820 Gy.mdst.	

A	B	C	D	E	F	G	H	J	K	
14607 – TUMUT VALE	145°12' 21°22'	– C.Mallyon 1961		233) 252)	120	17,280	P		0 - 17 Dry cks. - 39 Cong. - 88 Sy.mdst. - 93 S.gvl.& cl. -120 Sy.mdst. -122 Cong. -165 Cl.& patches of s.	-179 Cvg.cl. -228 Drifts -233 Rd.cl. -241 Sst. -252 Mdy.sst. -285 Sst. -295 Mdy. sst. -312 Sst.
14960 – PERONNE	144°18' 21° 9'	– G.Molle 1962		936 1161	160) 200)	43,200	P		0 - 3 Su.soil - 58 Coloured sh. -360 Gy.mdst. -408 Br.& gy.mdst. -668 Gy.mdst. -722 Gy.sy.mdst. -822 Gy.mdst. -828 Gy.sst.	- 916 Gy.mdst. - 935 Sst.& mdst. - 946 Gn.wh.& gy.sst. -1061 Gy.mdst. -1068 Wh.s. *1110 Wh.s.& cl. -1146 Wh.sst.& s. sst.& cl. -1162 Br.mdst.
15030 – ELIS	144°50' 21°58'	– C.Mallyon 1962		146	114				0 - 4 Su.soil - 30 Cong.gvl. - 36 Hd.rk. - 43 Cong.gvl. - 52 V.hd.patches	- 95 Swelling cl. - 108 Swelling cl. hd. bnds. - 135 Cl.traces hd.rk. - 146 Cl. - 148 S.

A	B	C	D	E	F	G	H	J	K
15506	144° 2'	-							0 - 3 Su.soil
-	21°39'	G.Molle							- 55 Coloured sh.
ANTRIM		1963							- 72 Gy.sy.mdst.
									- 74 Rk.
									- 214 Gy.sy.ch.
									- 886 Gy.mdst.
									- 915 Br.mdst.
									-1130 Gy.mdst.
									-1180 Gn.sy.mdst.
									-1367 Gy.mdst.
									-1370 Gn.sst.
									-1508 Gy.mdst.
									-1520 Wh.s.
									-1540 Wh.p.cl.& s.
									-1546 Pk.marl.
									-1548 Rk.
									-1590 Wh.p.cl.& s.
									-1627 Br.marl.
									-1685 Wh.cl.& s.
									-1738 Br.mdst.
									-1761 Wh.cl.& sst.
									-1782 Br.mdst.
									-1850 Br.mdst.& sst.
									-1860 Wh.sst.
									-1896 Br.mdst.& sst.
									-1947 Wh.sst.& cl.
									-1964 Wh.s.& cl.
									-1981 Wh.&br.sst.& cl.
									-2020 Wh.sst.cl.& s.
									-2065 Wh.sst.& cl.
									-2080 Br.wh.sst.& cl.
									-2120 Br.sst.& cl.
									-2130 Br.mdst.
									-2143 Br.sst.
									-2166 Wh.sst.cl.& s.
									-2190 Wh.sst.cl.
									-2208 Wh.s.& cl.
									-2273 Br.S.& cl.
									-2293 Wh.cl.
									-2298 Choc.sh.
									-2330 Wh.cl.& sst.
									-2336 Puggy wh.cl.
									-2398 Choc.sh.

A	B	C	D	E	F	G	H	J	K
15432 - ZARA	144°19' 21°11'	- 1963 C.Molle		990 1106	75) 135)	16,800			0 - 8 Soil & si. - 52 Coloured sh. -420 Gy.mdst. -482 Br.& gy.mdst. -545 Gy.sy.mdst. -704 Gy.mdst. -770 Gy.sy.mdst. -964 Gy.mdst. -970 Gn.sst. -990 Sst & mdst. -995 S.& sst. -1005 Gn.mdy.sst. -1070 Gy.mdst. -1106 Br.mdst. -1117 Wh.& br.cl. -1135 Wh.s.& sst. -1210 Wh.s.
15606 - ENSAY	144°	- C.Mallyon 1963		119	40				0 - 3 Su.soil - 53 Coloured sh. -213 Gy.mdst. -527 Gy.crumbly mdst. -577 Br.crumbly mdst. -1072 Gy.crumbly mdst. -1191 Gy.crumbly mdst. & rk. sms. -1230 Coloured s.& cl. -1239 Br.mdst.& wh.cl. -1261 Wh.& br.cl. -1310 F.cs.br.s. -1320 Wh.sst.& cl. -1340 Wh.s.& cl. -1390 Br.sndst. -1407 Stky.wh.cl. -1425 Br.mdst.& cl. -1442 Stky.wh.cl. -1525 Br.s.& cl. -1540 Br.s.& cl. -1580 Wh.sst.& cl. -1635 Wh.s.& cl. -1653 Br.s.& cl. -1665 Wh.cl.& s. -1685 Br.cl.& s. -1738 Wh.s.& cl. -1775 Bk.mdy.s. -1805 Wh.s.& cl. -1808 Bk.mdst. -1844 Wh.cs.s. -1872 Wh.sst.& cl. -1884 Pk.marl.

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Appendix E - Bore data

Part 4 - Hughenden and Charters Towers Sheet areas.

PROGRESS REPORT, 1963, ON THE GEOLOGY OF PART OF THE NORTH-EASTERN EROMANGA BASIN, QUEENSLAND.

by

R.R.Vine, D.J. Casey, and N.E.A.Johnson.

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APPENDIX E - TO RECORDS 1964/39.

BORE DATA

Information on all bores in the Winton, Muttaburra, Tangorin, Hughenden, and Charters Towers 1:250,000 Sheet areas, collected from the records of the Irrigation and Water Supply Commission, Brisbane, and from property owners and managers, is listed in this Appendix.

The Appendix is bound in four parts, as follows: -

Part 1 : Winton Sheet area
Part 2 : Muttaburra Sheet area
Part 3 : Tangorin Sheet area
Part 4 : Hughenden and Charters Towers Sheet areas.

Within each sheet area the order of listing is numerical by the registered numbers allocated to water bores by the Irrigation and Water Supply Commission.

Abbreviations used in the Appendix are listed on Page 2 of each part. To save needless repetition of column headings throughout the Appendix, the columns in the body of the Appendix are lettered; a specimen bore sheet giving the full headings and the appropriate letter is given on Page 3 of each part.

ABBREVIATIONS

Water

B	Brackish
F	Fresh
G	Good
P	Potable
S	Salty, saline
Su	Surface

Drillers Logs

Ba.	basalt
Bd.	bed
Bk.	black
Bl.	blue
Bld.	boulder
Bnd.	band
Br.	brown
Carb.	carbonaceous carboniferous
Choc.	chocolate
Cl.	clay
Cong.	conglomerate
Cs.	coarse
Cv.	cave
Cvg.	caving
Di.	diorite
Dk.	dark
F.	fine
Fm.	formation
G.	grained
Gn.	green
Gr.	granite
Gvl.	gravel
Gy.	grey
Hd.	hard
Ind.	indurated
Lst.	limestone
Lt.	light
Md.	mud
Med.	medium
P.cl.	pipe clay
Pk.	pink
Qtz.	quartz
Qtzite.	quartzite
Rd.	red
Rk.	rock
Rtn.	rotten
S.	sand
Sch.	schist
Sh.	shale
Shy.	shaly
Si.	silt
Sk.	streak
Sky.	streaky
Sm.	seam
S.rk.	sandrock
Sst.	sandstone
St.	stone
Stky.	sticky
Su.	surface
Sy.	sandy
T.D.	total depth
V.	very
W.	with
Wd.	weathered
Wh.	white
Y.	yellow

Reg.No. / Name / Property	Position	Elevation (feet)	Driller / Year completed	Standing water level / Pump depth (feet)	WATER					DRILLERS LOG
					Struck (feet)	Rose to (feet)	Supply (g.p.d.)	Quality	Temp. °F	
A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.

Hughenden Bore Logs : Pages 4 to 32.

Charters Towers Bore Logs : Pages 33 to 34.

A	B	C	D	E	F	G	H	I	J	K
57 Fairlight Trust SODA VALLEY	144°01' 20°39'	946	– 1916	Flowing	70 220 386 540 650	40 15 " " "	 650,000 667,500			0 – 5 Soil – 40 Y. sh. – 200 Bl. sh. – 346 S. rk. & p. cl. – 370 F.s. – 380 S. rk. & p. cl. – 400 S. & cl. – 447 S. rk & p. cl. – 464 Dk. br. cl. – 465 Gr. sst. – 540 P. cl. – 586 cl. & cs.s. – 672 Sst. – 682 V. soft br. sh. – 686 S. & coal – 689 Br. sst.
63 – MT. ETNA	No trace									T.D. 495'
121 – PRAIRIE	144°36' 20°52'	1418			362 770	 222 				0 – 90 Sy. cl. & gvl. – 124 S.rk. – 146 Rd. & y. cl. – 317 Gy. sh. – 395 Gy. sy. sh. – 478 Gy. sh. – 498 S.rk. – 599 Gy. sh. – 634 S.rk. – 810 Cs. s. & p.cl. – 1031 Drifts coal & layers sh. – 1073 S. & p.cl. – 1250 Sh. & p.cl. – 1350 S. & p.cl. – 1395 Rd. sh.
282 Warreah Siding RAILWAY	144°50' 20°49'	1420		Abd						T.D. 494'
283 Torrens Creek RAILWAY	145°01' 20°46'		1915		392 450	383	36,000			0 – 392 Y. sst. – 450 Wh. sst. & p.cl.

A	B	C	D	E	F	G	H	I	J	K
5715 Ormonde 364 No. 1 HUGHENDEN Town	144°12' 20°51'	1094	1898	Abd (casing collapsed)	575 1320 1800	64				0 - 60 y. sh. - 575 Bl. sh. - 1200 Sst. & p.cl. - 1500 Rd. cv. g. sh. - 1635 Sst. - 1800 Rd. sst. & cl. - 2000 Wh. sst. - 2500 Rd. & wh. sst. 2 to 50 ft. belts - 2650 Rd. sst. - 2860 Wh. sst. - 3015 Coal sst. - 3069 Wh. & rd. cong.
365 No. 2 HUGHENDEN Town	144°12' 20°51'	1097	1902	SWL203 Draw down to 315' at continuous pumping of 6500 g.p.h. (1959)	350 575	Soak 154	64,400			0 - 12 S. & cl. - 55 Si. y.cl. w.gypsum pebbles - 300 hd. bl. sh - 374 Soft blsh. - 413 Bl. slate - 418 Gn. Sst. - 428 Gn. sst. & slate - 575 Hd. dk. bl. cl. - 585 Gr. wh. S. - 601 Gy. plastic cl.
366 No. 3 HUGHENDEN Town	144°12' 20°51'	1094	1927	Abd						T.D. 602'
367 No. 4 HUGHENDEN Town	144°12' 20°51'	1097	1928	SWL203 draw down to 348'10" at continuous pumping of 10,500 gph (1962)	575 605 639 665	200				0 - 45 Y. sh. & gypsum - 65 Gy. sh. - 105 Lt. gy. sh. - 110 Gy. sh. y. rk. - 178 Hd. gy. sh. rk. - 184 Bk. sh. - 192 Stky. dk. sh. - 296 Dk. sh. - 325 Gy. sh. - 327 Gn. rk. - 370 Gy. sh. - 373 Gn. rk. - 440 Gy. sh. - 443 Gn. rk. - 484 Gy. sh. - 496 Hd. gy. sh. - 574 Gy. sh. - 592 Cs. s.rk. - 594 Sy. gy. sh. - 615 Cs. sst. - 636 F. sst. - 646 Sy. p.cl. - 663 V. cs. cl. - 692 Mary. cl. - 700 Sy. p.d.

A	B	C	D	E	F	G	H	I	J	K
1040 Old Homestead AFTON DOWNS	144°01' 20°59'	915	1892		1013	Surface	999,000		103°	T.D. 844' - from Manager's records 1214' - from I.W.S. records 0 - 1013 No info. - 1214 Sst.
1043 Mill Paddock AFTON DOWNS	144°03' 20°55'	979	1896	60 80	610 1000 1140	abt.600 abt.770 Surface	66,300	F	100°	T.D.1296'
1048 Homestead AFTON DOWNS	144°01' 20°59'	912	1913	Flowing			197,000	F		0 - 75 Y. sh. - 681 Bl. sh. & hd. sks. - 855 S.rk. - 892 P.cl. & S. sks. - 970 Bl. & choc. sh. - 1000 Gy. sh. - 1346 Water bearing S.rk. & strips of brsh. & p.cl.
1840 Watten Hill AFTON DOWNS	144°06' 20°59'		Station Plant. 1916	80 110	553 828 995	80 69	unlimited	F B F		0 - 18 Fm. & rk. - 88 Y. sh. - 550 Bl. sh. - 553 Crs. S. - 798 Bl. sh. - 828 Sst. - 840 Wh. p.d. & br. p.cl. - 860 p.cl. & s. - 928 p.cl. & sy. material like cement. - 995 Water bearing Sst. - 1000 Br. - purple sh.
2033 Top STRATH-STEWART	144°04' 20°21'			150						T.D. 246'
2684 - JONES VALLEY	No trace									Originally a well to 75' or 140' deepened as a bore to 400', but no water.
2783 - BLANTYRE	144°42' 20°39'			Abd						T.D. 675'

A	B	C	D	E	F	G	H	I	J	K
274 – GLNDOWER	144°04' 20°44'	1472		S.A.						T.D. 1010
275 – GLNTOR DOWNS	144°26' 20°42'	1214	1901							T.D. 455'
278 Sandy Creek GLEDOWER	144°30' 20°09'	1287								T.D. 330'
278 – BLATYRE	144°42' 20°44'	1505		Abd						T.D. 300'
278 – BLATYRE	144°42' 20°44'	1505		Abd						T.D. 400' N.O.I.
278 OldHouse BLATYRE	144°42' 20°44'	1510	1912	Abd						T.D. 525'
279 No.2 BLATYRE	144°46' 20°44'	1479	1912	510 520	515		unlimited	F		T.D. 591 s.rk at 515'
279 House No.1 PENICE	144°45' 20°52'	1396		250 280			20,000	F		T.D. 409'

A	B	C	D	E	F	G	H	I	J	K
2792 No. 2 PENRICE	144°44' 20°54'	1385		250 280				F		T.D. 500'
2793 No. 3 PENRICE	144°46' 20°51'	1410		250 280	395	170		F		T.D. 428' Strata chiefly sh. & cl.
2794 - LAUREL VALE	No trace		1901		570		large			T.D. 850'
2795 - THE PLAINS	No trace	1437			90 300 to 360	200	soak unlimited	B F		T.D. 500' 0 - 50 Earth & cl. fm. - 90 Y. soapst. - 120 loose gvl. & sy. frm. - 300 Bl.sh.w strips of sy.fm. - 360 Gn. Sst. through bk.sh.
2796 House LAUREL VALE	144°41' 20°50'	1455	1901	235 260		214		P		T.D. 1200'
2797 Warreah Siding RAILWAY	144°50' 20°49'			Abd						T.D. 400' N.O.I.
2798 No. 1 STRATHGLASS	144°35' 20°46'			220 260	304 425	160 196	17,000	F F		T.D. 449' 0 - 70 cong. cl. - 395 Sh. - 448 Sst. Finished in p.cl.
2799 - EURINGA	No trace									T.D. 474'

A	B	C	D	E	F	G	H	I	J	K
2800 BURANGA	144°50' 20°51'	1405	1911	160 198	230	170		F		0 - 200 No info. - 230 S. rk. T.D. 278'
2801 - WOODBINE	144°43' 20°56'	1368	1900	Abd				G		Dns. silting up bore T.D. 480'
2802 No. 2 WOODBINE	144°43' 20°58'	1348		200 260			ample	F		T.D. originally 600', now reported as 950'.
2803 Redgate WOODBINE	144°37' 20°58'	1360		180 240			ample	F		T.D. originally 600', now reported as 850'.
2804 House well WOODBINE	144°37' 21°00'						soak			T.D. 50' Strata mostly sand and gravel, clay and gravel at bottom.
2805 Ashbrook ASHBROOK	144°39' 20°55'	1388		200 260			ample	F		Original T.D. was 800', now reported as 1100'.
2991 House STRATHALLEN	144°15' 20°43'	1075	1902		513	154	64,000			0 - 220 sh. T.D. 573
2992 . TRATHALLEN	144°16' 20°43'		1913		230 310	60	Main	Little Soda		0 - 30 Y. sh. - 120 Bl. sh. - 250 Sst. sms mixed w. bl. sh. - 275 Cs. wash & hd. substance - 350 Fine sst. & a white pug.
2993 - MT BECKFORD	144°19' 20°48'	1097	1915							T.D. 480'

A	B	C	D	E	F	G	H	I	J	K
2994 MOUNTAINVIEW	144°18' 20°44'		1913							T.D. 350'
2995 MOUNTAINVIEW	144°19' 20°46'		1916		70	56				T.D. 108'.
2996 Skeleton Creek THE SPRINGS	No trace		1886							T.D. 400'
2997 House COOLIBAH	144°01' 20°49'	987	1908	60 100				F		T.D. 1250'
001 Top CANTERBURY	144°08' 20°45'		1911		246	36		S		0 - 46 Soil gvl. & sh - 400 Bk. or blsh. - 246 Y. sh. - 404 Sst. - 256 Gn. Sst.
003 Flats RENFREW	144°06' 20°55'	980	C. Watson 1906		205) 230) 270) 657) 995)	 50 10	from IWS from Station records			T.D. 1292 - I.W.S. T.D. 1295 - Station records 0 - 30 Rk. - 210 Heavy cl. - 300 Sh.
3004 Ballindallock RENFREW	144°09' 20°52'	1044								T.D. 640'
3005 No. 1 MOUNT DEVLIN	144°11' 20°59'	1319	1908	300 330				F		T.D. 900'
3006 No. 2 HUGHENDEN	144°09' 20°54'	1325		160 200			ample	F		T.D. 774'

A	B	C	D	E	F	G	H	I	J	K
3007 House MOUNT ETNA	144°09' 20°58'	1034								T.D. 775'
3008 No. 4 HUGHENDEN	144°19' 20°53'	1120		180 200			ample	F		T.D. 600'
3009 Back Paddock MONA VALE	144°22' 20°49'	1143		60 70			ample	F		T.D. 334'
3010 House MONA VALE	144°23' 20°53'	1188		60 80			ample	F		T.D. 636'
3011 Station Creek (No. 7) HUGHENDEN	144°19' 20°56'			180 200			ample	F		T.D. 816'
3012 Mt. Walker MT. ETNA	144°09' 20°57'		1916		814	200				T.D. 829'
3013 House (Spinifex) KOONKOOL	144°23'	1127								T.D. 87'
3302 - LODDON	144°49' 20°56'	1315		Abd	420 600	abt100 200	50,000			0 - 420 Y. & bl. sh. - 600 Gn. Sst. - 858 Y. marl w.wh.buds - 870 Bk. sh. & coal - 1070 Wh. dry Sst. - 1170 V. soft y. sh.

A	B	C	D	E	F	G	H	I	J	K	
3303 House LODDON	144°51' 20°55'		1914	170 320				F		0 - 122 Sh. - 382 No strata	- 421 Gn. S. - 438 Sy. cl.
3311 - MORTIMER	144°53' 21°00'	1317			300 508 617	280				T.D. 630' Bottom in 16' Sst.	
3313 Tp COTONVALE	144°48' 20°55'	1366			330 380	167				T.D. 462' Bottom in sh.	
3314 House COTONVALE	144°48' 20°56'	1349								T.D. 432'	
3321 Silky Oak OAKLEY	144°57' 20°58'	1348	P.Ircidy 1913	215		202				T.D. 417'	
3863 No. 2 MT. EMU PLAINS	144°24' 20°09'									T.D. 153'	
3865 Ring: Mill MT. EMU PLAINS	144°33' 20°12'	2693									
3867 - MT. EMU PLAINS	144°28' 20°13'	2594								T.D. 136'	
3869 - MT. EMU PLAINS	144°41' 20°13'	2561	—							T.D. 198'	

A	B	C	D	E	F	G	H	I	J	K
3870 House MT. EMU PLAINS	144°32' 20°07'	2552								T.D. 54'
3970 ½ mile yards MT. STURGEON	144°20' 20°18'	2186	1916							T.D. 305'
3971 2 mile yards MT. STURGEON	144°18' 20°07'		1916							T.D. 217'
3972 - MT. EMU PLAINS	Not Located									T.D. 225'
3976 James MT. STURGEON	144°21' 20°14'	2573								T.D. 120'
3977 Homestead Well MT. STURGEON	144°16' 20°08'	2619								T.D. 99'
3978 Top Well MT. STURGEON	Not Located	2708								T.D. 152'
4179 - RAILVIEW	No trace									T.D. 500'

A	B	C	D	E	F	G	H	I	J	K
4180 No. 1 House, RAILVIEW	144°34' 20°55'	1356		160 200				P		T.D. 696'
4181 No. 2 RAILVIEW	144°31' 20°56'	1376		340 400	260 608	264		S F.		0 - 630 Sh.
4182 No. 3 RAILVIEW	144°28' 20°58'	1353		340 400				F		T.D. 710'
4183 - IONA	144°23' 20°58'	1223								T.D. 620'
4935 The Valley WONGALEE	144°30' 20°36'		E.Emblem 1914	400) 415) approx.			G	G		T.D. 557'
4936 Old House WONGALEE	144°25' 20°37'	1206	1914	Abd. Replaced by 15014						T.D. 331'
4937 Dud WONGALEE	Not located		E.Emblem 1914 Continued by Black- well 1916				Insufficient			T.D. 600'
4938 Windmill Creek WONGALEE	144°20' 20°28'	1455	1916	100-200 200	77 ?		Variable, would dry out in droughts 24,000	P		0 - 97+ Basalt in well sunk during period 1870 - 1915 - 428. Drilled in bottom of well. No info. on strata

A	B	C	D	E	F	G	H	I	J	K
4939 Front WORWOMBIE	144°24' 20°31'	1358	Blackwell 1914	345) 360) approx.			At least 16,000 Never pumped dry	G		0 - 30 approx. Ba. T.D. 400'
4940 - WORWOMBIE	144°21' 20°28'		Blackwell 1914 Deepened by J.C. James 1936	530 - Abd too deep to pump	473					Bore deepened previous depth 441' 0 - 456 Dry Sst. - 519 Sst. & choc. sh.
4941 House DELBESSIE	144°24' 20°40'	1172		Abd Replaced by R11977						T.D. 350'
4942 No. 2 DELBESSIE	144°20' 20°39'									T.D. 250'
4943 House WORWOMBIE	144°23' 20°35'	1226	1914	220 230			29,000+	G but hard		Started in sh. & sst. T.D. 400'
5145 Jardine Valley FLINDERS SHIRE	144°23' 20°52'			60	483) 605) 61 618)					0 - 60 Y. cl. -140 Bl. sh. -483 Gy. sh. -490 Gy. sh - S.rk. -497 Gy. sh. -510 Bk. sh. -512 Rk. -539 Gy. sh. - 554 Br. sh. - 576 Gy. sh. - 580 Rk. - 594 Bk. sh. - 598 Rk. - 605 Bk. sh. - 612 Bk. ba. - 618 S. rk.
5404 - SUSSEX PARK	144°06' 20°51'									T.D. 610'

A	B	C	D	E	F	G	H	I	J	K
5459 Well ALSTON VALE	144°05' 20°44'			S.A.						T.D. 75'
5460 House Well ALSTON VALE	144°04' 20°50'			S.A.						T.D. 75'
5461 - ALSTON VALE	144°04' 20°43'			S.A.						T.D. 601'
5511 Thelma LAUREL VALE	144°47' 20°49'		1913	240 260		190		B		T.D. 280'
5570 House (No. 2) MOUNT DEVLIN	144°14' 20°56'		H.Bode(Snr) 1933	290 310				P		T.D. 791'
5580 House KALLEROO	144°45' 20°48'			216 306	250			F		T.D. 520'
5581 Bullock Creek KALLEROO	144°49' 20°47'			416 467				F		T.D. 480'
5582 House BOGGLEYWALLAH	144°11' 20°44'			80						T.D. 300'

A	B	C	D	E	F	G	H	I	J	K
5662 Dalraer THE PLAINS	144°32' 20°47'		1914	210 220	300 to 600	210	24,000 (1914)	F		0 - 30 Soil - 70 Soapst. - 200 Sh. - 600 Sst. & sh. - 630 Sst.
5707 MT. EMU PLAINS	144°37' 20°									T.D. 81'
5708 - MT. EMU PLAINS	Not located									T.D. 166'
5715 Woolshed ORMONDE	144°12' 20°44'									T.D. 320'
5888 No. 2 STRATHGLASS	144°39' 20°47'		Chisholm abt.1912	290 340	abt300		17,000	F		
5963 Dinorwick Well DUTTON RIVER	Not located						5,000	G		Originally well to 35', later deepened to 60'.
6091 Well JONES VALLEY	144°01' 20°28'									0 - 60 Ba. - 75 Barat. sh. - 90 S. & sh.
6131 House GLENTOR DOWNS	144°28' 20°45'									T.D. 160'
6132 Match box GLENTOR DOWNS	144°25' 20°43'									T.D. 228'

A	B	C	D	E	F	G	H	I	J	K
6263 – MCONDAH	144°49' 21°00'									T.D. 437'
6321 Rail COOLIBAH	144°04' 20°50'		1921	100 130				F		T.D. 970'
6324 – STRATHALLEN	144°16' 20°43'			Abd						T.D. 402'
6383 Tableland TORVER VALLEY	144°07' 20°39'		1937	15'-32' (Variable according to season) 120'	100 345	285	2,400 12,000 Total 14,400	Scammy white offlorescene		0 – 2 Soil – 99 Bl. metal – 100 Rd. sh., pebbles – 345 Bl. sh. to sst. – 446 Sst. seams of p.cl. through it – 555 Br. choc. sh. Knocked off drilling in sh.
6393 – GLENMOAN	144°30' 20°49'									
6847 – MONA VALE	No trace									T.D. 700'
7101 – STRATH-STEWART	144°07' 20°21'									T.D. 200' (800' according to present owner)
7102 Dud STRATH-STEWART	144°03' 20°23'									T.D. 400'
7103 Old Big Valley STRATH-STEWART	144°09' 20°26'			Abd.replaced by 11159	300	270	7,200 38.			0 – 257 No info. – 276 Sh. – 302 Hd. Sst. – 352 Water Sst. – 363 Sh. – 373 Sst.

A	B	C	D	E	F	G	H	I	J	K
7104 House, No. 4 STRATH-STEWART	144°05' 20°26'			300	720	300				T.D. 720 0 – 500 Sh. – 720 P. cl. & s.
7938 Beckford HUGHENDEN	144°14' 20°51'			160 200	550 to 610	154	Ample	F		0 – 8 Sy. loam – 550 Sh. – 610 Sst. & rk. sms.
7999 No. 3 RENFREW	144°04' 20°57'		Cameron & Peiniger 1914		667 to 790 (probably)	56	80,000 (1914)			0 – 80 Surface to Y.country – 109 Bk. sh. – 165 Lt. gy. sh. – 212 Bn. sh. lt. gn. sh. mixed – 372 Bl. sh. – 406 Lt. bl. sh. – 433 Lt. gn. s.rk. – 488 Dk. gn. S. rk. – 521 Bl. sh. – 570 Bk. kerosène sh. – 638 Bl. sh. – 667 Pebble sh. & gn. sh. mixed – 790 S. rk. – 807 P. cl.
8000 No. 4 RENFREW	144°04' 20°54'		J.V.Kirby 1917		462 516 748	127 127 127	80,000 (1917)			0 – 4 Soil – 64 Y. sh. – 454 Bl. sh. – 512 Gn. Sst. then Dk. bl. sh. – 656 Gn. Sst, then Bl. sh. – 748 Sst. – 786 Wh. p.cl.
8015 Desolation DENBIGH	144°08' 20°30'		J.C.James 1939	Abd	179 800	720	small	F		0 – 4 Bk. soil – 163 Bl. metal – 175 Rd. burnt sh. – 186 Drift s. – 190 Slippery back – 270 Y. sh. – 796 Bl. sh. – 840 Sst.
8041 Bottom End TURVER VALLEY	144°06' 20°40'		J.C.James 1940	80	57	40	6,000	B Scammy White efflorescence		0 – 5 Soil – 12 Gravel and blds. – 34 Porous basalt – 52 Sh. – 57 Gn. Sst. – 80 Sh. – 83 Gr. Sst. – 150 Sh.
8104 Dud STRATA-STEWART	144°03' 20°23'		J.L.Sturat 1948	Nil (Tools lost before completion)	Nil					0 – 80 blds.

A	B	C	D	E	F	G	H	I	J	K
8105 Dud STRATH-STEWART	144°03' 20°23'		J.L.Stuart 1938		175		Small			0 - 135 Bal. blds. - 175 River wash - 440 Desert Sst.
8106 Dud STRATH-STEWART	144°03' 20°23'		J.L.Stuart 1938		350		Small			0 - 135 Ba. blds. - 175 River Bed - 365 Desert Sst. running into coal seam.
9035 - PRAIRIE	144°36' 20°52'		1935		480 550	247	24,000			0 - 635 No strata. - 690 Hd. Sst.
9284 - HUGHENDEN	Not located Probably in Hugh-enden Town		1923							T.D. 670'
9439 -	Not located		J.James 1942		435 550	160 159	12,000	B G		0 - 3 S. & cl. - 36 Cong. - 40 Dr. S. - 50 Rd. & wh. cl. - 100 Slippery back cl. - 110 Gy. Sh. - 430 Sh. - 435 Hd, gn. rk. - 451 Sh. - 495 Sh. & hd. Sns. - 520 Hd. gy. sh. - 540 Sh. & hd. bnds. - 550 Gy. sh. - 590 Sst.
9447 House DENBIGH	144°02' 20°33'		J.James	217 235			G	G		T.D. 600
9709 Dud DENBIGH	144°07' 20°30'			480-500 approx. Too deep to pump	600 approx.	480-500 approx.	G			T.D.600'
9751 - BLANTYRE	144°42' 20°44'									T.D. 815'

A	B	C	D	E	F	G	H	I	J	K
9976 Spring Creek BALLABAY	Not Located									T.D. 105'
9977 Soale Mill BALLABAY	145°19' 20°30'									T.D. 155'
9978 Rush Creek BALLABAY	Not located									T.D. 156'
9979 Spring Creek Well BALLABAY	145°18' 20°28'									T.D. 60'
10202 Hungry BALLABAY	145°16' 20°28'		1944		115	65	14,400			0 - 2 S. & gvl. - 7 Y. cl. - 27 Mica Rk. - 67 Soft gr. rk. - 87 Hd. & soft gr. - 107 Hd. gy. rk. - 121 V. Hd. gy. rk.
10304 Coming Home BALLABY	145°16' 20°32'		1944		103	60	14,400			0 - 9 S. - 10 Y.cl. - 60 Y. sh. - 103 Y. Sst. & gvl.
10543 No. 1 LOLWORTH	145°05' 20°09'		S.Biddle 1945		30 110	Soak 30	14,880			0 - 4 Bk. soil - 10 Ba. Bld. - 21 Gy. ba. - 38 Soft. ba. - 100 Bl. ba. - 101 Br. ba. - 107 Hd. bl. ba. - 122 Hd. ba. - 123 Pug. or Si.
10544 No. 2 LOLWORTH	Not Located		S.Biddle 1945		30 54to 58	Soak 20	20,400			0 - 4 Rd. soil - 38 Bl. ba. blds. - 46 Bl. ba. - 50 Hd. bl. ba. - 52 Small ba. blds. - 54 Br. ba. - 58 Hd. bl. ba. - 103 Hd. br. ba.

A	B	C	D	E	F	G	H	I	J	K
10545 No. 3 LOLWORTH	144°58' 20°09'		S.Biddle 1945		56 63	Soak	43,200			0 - 2 Bk. Soil - 5 Ba. blds. - 6 Hd. bl. ba. - 8 Broken ba. - 26 Hd. Bl. ba. - 32 Br. ba. - 33 Ba. blds. - 35 Hd. bl. ba. - 37 Rd. pug. - 46 Soft br. ba. - 62 Hd. bl. ba. - 65 Porous ba. - 69 Desprite blds.
10555 BOOLEYWALLAH	144°40' 20°40'		J.C.James 1945	90 Draw Down 93'	39 244-250	33	Soak 24,000	G		0 - 16 Soil - 25 Ba. rk. - 36 Broken Ba. - 56 Hd. ba. rk. - 86 Gy. sh. -100 Hd. gr. rk. -134 Dk. sticky sh. -154 Dk. sh. & narrow sms.hd. rk. - 164 ltd. rk. - 195 Ltd. bk. rk. - 200 Dk. sh. - 230 Dk. sh. & narrow sms hd. rk. - 242 Dk. sticky sh. - 244 Sy. sh. - 250 Sst.
10643 Dud CLYDE PARK	144°39' 20°19'		J.C.James 1946		Nil					0 - 4 Soil - 26 Rd. ba. - 28 Blds. - 60 Rd. ba. - 65 Blds. - 80 Rd. ba. -100 Bl. metal -110 Honecomb rk. - 140 Y. sst. - 155 Rd. ba. - 160 Bk. ba. rk. - 164 Rd. sst. - 170 Iron st. - 189 Rd. ba. - 195 Rd. honecomb rk. - 201 Rd. ba.
10708 Dud CLYDE PARK	144°39' 20°18'		J.James 1946							0 - 29 Ba.rk. - 50 Rd. ba. -137 Rd. sst.
10837 - MT. EMU PLAINS	144°25' 20°11'		J.C.James 1946		36 50-60	15	Soak 29,000			0 - 10 Soil - 30 Bl. metal - 35 Bl. metal blds. - 50 Bl. metal - 60 Creek wash - 68 ltd ba. rk.
10838 - MT. EMU PLAINS	144°27' 20°12'		1947							T.D. 182'

A	B	C	D	E	F	G	H	I	J	K
10896 The Twins PRETTY PLAINS	144°22' 20°04'		J.C.James 1947							0 – 3 Soil – 30 Ba. rk. – 32 Rd. porous rk. – 37 Bl. metal – 42 Creek bd. – 47 Creek bd. & wash – 50 Rd. ba.
10958 .. EMU PLAINS	Not located		J.C.James 1947		50 to 60	35	4,000			0 – 5 Soil – 7 Gul. – 20 Rd. honeycomb rk. – 50 Rd. sst. – 60 Creek wash – 80 Porous gr. – 85 Rd. gr. – 87 Hd. Qtz. – 152 Rd. gr.
11004 Rosevale ROSEVALE	144°15' 20°45'		J.C.James 1947	130 234	190 426	150	10,000	F		T.D. 440' 0 – 5 Soil – 15 Y. sst. & qtz. – 40 Y. cl. – 110 Slippery back – 175 Dk. sh. – 185 Sy. sh. – 235 Dk. sh. – 243 Gn. sst. – 310 Dk. sh. – 334 Gy. sh. – 400 Sst. & p.cl. – 420 Sst. & sms. cl. – 426 Sst. – 433 – 440 Br. strata
11030 .. DOGGLEY WALLAH	144°11' 20°46'		J.C.James 1947	107 Draw Down 145	443	107	12,000	G		0 – 5 Soil – 50 Y. cl. – 75 Slippery back cl. – 90 Dk. sh. – 390 Dk. sh. – 437 Gy. sh. – 447 Sst. – 450 Hd. sst.
11095 House TOWER VALLEY	144°03' 20°41'		J.C.James 1948	44 140 (Draw down to 48)	206	44	19,200	P		0 – 5 Soil – 48 Ba. rk. & blds. – 55 Gn. sst. – 70 Dk. sh. – 80 Ba. rk. – 90 Gy. Sh. – 95 Ba. – 135 Gy. sh. – 155 Dk. sh. – 180 Sticky sh. – 205 Dk. sh. – 206 Hd. sst. – 216 Sst. – 217 Hd. s. rk.

A	B	C	D	E	F	G	H	I	J	K
11159 Big Valley STRATH-STEWART	144°09' 20°26'		J.L.Stuart 1948	22 96	29-31 80-85 93-95	22	2,000 total 8,640			0 - 10 Alluvial - 25 Crumbling bl. sh. -100 Bl. sh. w. gn. sh 80-85, 93-95
11221 Hughenden RAILWAY	144°12' 20°51'		Godfrey Bros.		565	161	4,320			0 - 40 Y. cl. - 53 Blsh. - 61 Y. cl. - 410 Gy. sh. - 442 Dk. gy. sh. - 565 Gy. sh. - 605 Sst.
11222 No. 3 MOUNTAIN VIEW	Not located (near2995)		J.C.James 1948		214	61	19,200			0 - 5 Soil - 20 sy. cl. - 27 Dr. S. - 67 Y. cl. - 72 Dr. S. -106 Gy. sh. - 110 Gn. rk. - 202 Gy. sh. - 214 Sst. - 222 Dk. sh. - 242 Sy. sh. - 250 Dk. sh.
11243 House NICHOLECHE	144°10' 20°54'									T.D. 700'
11256 - MT. ETNA	144°14' 21°00'		J.C.James 1949		41 847	Soak 195	14,400	G		0 - 5 S. - 10 Ribbon st. - 15 Y. cl. - 80 slippery back cl. - 165 Gy. sh. - 195 Dk. sh. - 200 Gy. rk. - 220 Gy. sh. - 230 Gy. rk. - 425 Gy. sh. - 650 Dk. sh. - 660 Gn. rk. - 803 Dk. sh. - 847 Sst.
11487 - STRATH-STEWART	144°06' 20°23'			400	437	360	19,000			T.D. 448' 0 - 12 alluvial - 290 Sh. - 437 Sy. cl. sh. - 448 S. & cl.

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A	B	C	D	E	F	G	H	I	J	K	
11534	144°36'		J.C.James	180	480	170	9,600			0 - 3 Soil	- 610 Water bearing Sst.
-	20°52'		1950		693	180	30,000			- 20 Sy. Cl.	- 615 Wh. Sst.
PRAIRIE										- 23 Drifts	- 623 Sy. sh.
										- 35 Drifts & water	- 628 Hd. Sst.
										- 68 Y. cl. & qtz.	- 635 Sst.
										- 85 Driftsy. qtz.	- 645 Wh. Sst.
										- 95 Drifts	- 655 Sst. & brsh.
										- 100 Drift sy. qtz.	- 665 Sst.
										- 105 Drifts	- 675 Water worn Sst. & p.cl.
										- 150 Slippery back cl.	- 685 Sst. & choc. sh.
										- 155 Dk. cl.	- 693 Choc. sh. & waters
										- 480 Dk. sh.	- 705 Waters
										- 500 Sst.	- 760 Hd. S.rk.
										- 555 Dk. sh.	- 795 Porous Sst.
										- 595 Dk. Stky. sh.	- 812 S.rk.
11742	144°14'		J.C.James		710	200	18,500			0 - 10 Soil	- 733 Sst.
Flindbend	20°59'		1951		723	180				- 70 Y. cl.	- 743 Wh. Sst.
STOCK ROUTE					775	176				- 100 Gy. sh.	- 760 Sst.
										- 150 Dk. sh.	- 775 P.cl. & Sst.
										- 380 Gy. sh.	- 790 Sst.
										- 550 Dk. sh.	- 804 Water bed sand & wh.Sts.
										- 590 Gy. sh.	- 892 Sst.
										- 605 Gn. rk.	- 905 Choc. sh.
										- 615 Dk. sh.	- 907 Hd. S.rk.
										- 710 Dk. sh.	
11809	144°27'		1954	200	140	110	24,000	F		0 - 7 Soil	- 524 Sh.
House	20°53'			300	526					- 55 Y. cl.	- 529 Sst.
ELLINGTON PARK											
11884	Not		J.C.James	125	330	125	33,600			0 - 4 Soil	- 210 Dk. sh.
-	located		1951	132	to					- 15 Y. cl.	- 213 Gn. rk.
GLENMOAN					340					- 43 Gvl. & Y.cl.	- 225 Dk. sh.
										- 68 Y.cl.	- 230 Dk. Sst.
										- 100 Gy. sh.	- 310 Dk. sh.
										- 115 Ba. rk.	- 330 Sy. sh.
						25.				- 130 Porous rk.	- 340 Sst.

A	B	C	D	E	F	G	H	I	J	K	
11939 – JONES VALLEY	144°01' 20°30'		1952	1'	85 310	1'. trickle	G 48,000	G		0 – 15 Surface loam – 310 Sh.	– 315 Sh. – 410 Sst.
11977 House DELBESSIE	144°24' 20°40'			127	260	127				0 – 6 Soil – 26 Y. cl. – 30 Slippery back sh. – 55 Slippery back cl. – 80 Dk. cl. – 170 Gy. sh. – 180 Sy. sh. – 185 Sst.	– 185 Sst. – 190 Choc. sh. – 325 Sst. – 328 Dk. sh. – 330 Hd. br. S.rk. – 352 Sst. w. sms. – cf choc sh.
12581 Bullock Paddock WONGALEE	Not located		J.C.James 1954	94 111	135	92	23,000	G		0 – 6 Soil – 65 Y. cl. – 79 Dk. cl.	– 135 Dk. sh. – 145 Sst. – 147 Hd. s.rk.
12673 Wongalee STOCK ROUTE	144°23' 20°42'		J.C.James 1954		60 75	Soaks		S		0 – 10 Soil – 40 Gvl. & Cl. – 60 Dk. stky. cl. – 75 Gy. sh. – 80 Gn. rk. – 195 Gy. sh. – 204 Waddy sh. – 226 Water bearing Sst. – 254 Sy. sh. – 274 Sst. – 292 Sy. sh. – 300 Sst.	– 309 Unconsolidated Sst. – 315 Gy. Sst. – 331 Unconsolidated Sst. – 340 Dk. gy. Sst. – 342 Drifts – 349 Sst. – 357 Unconsolidated Sst. – 364 Drifts – 368 Sst. – 385 Unconsolidated Sst. – 396 Hd. Sst. – 408 Sst.
12803 – MT. STURGEON	Not located		T.D.Brownlow 1954		90	85	720			0 – 5 Bk. soil & ba. bl. – 12 Ba. blds. – 22 Ba. cl. & blds. – 28 Ba. blds. – 34 Honeycomb ba. – 40 Cs. Sst. micaceous – 53 Cs. Sst. – 90 Sst.	– 140 Decomposed gr. – 144 cl. fm. – 155 Decomposed gr. – 156 Cl. fm. – 176 Rd. gr. – 179 Cl. fm. – 192 Rd. gr.

A	B	C	D	E	F	G	H	I	J	K
12804 – MT. STURGEON	Not located		T.D.Brownlow 1955							C – 4 Br. soil – 86 Ba. – 12 Rd. ba. cl. – 144 Hd. ba.
13408 New LAURELVALE	144°44' 20°49'		H.Bode 1957	220 250	320			F		T.D. 350' "Water was just under green rock near bottom".
13422 – LOWHOLM	144°58' 20°07'									T.D. 112'
13707 Whitecliff(1) STOCK ROUTE	144°25' 20°24'		J.Holland 1959	Abd						0 – 6 Bk. soil & s. – 129 Rd. Sst. – 23 Ba blds. – 149 Rd. Sst. – 111 Ba. – 180 Pk. Sst. – 118 Hd. rd. Sst.
13813 No. 5 HUGHENDEN Town	144°12' 20°51'		1959	186	528	186	134,160			0 – 2 Top soil – 530 Cs. wh. Sst. – 23 Y. shy. cl. – 625 Wh. Sst. – 30 Y. cl. – 631 P.cl. & S. – 33 Bk. rk. – 638 Bl. cl. – 59 Y. sh. – 642 Wh. Sst. – 185 Gy. sh. – 650 P.cl. & S. – 225 Bk. sh. – 670 P.cl. – 360 Gy. sh. – 700 Gy. marl. – 400 Gy. sh. cug. – 720 P.cl. & S. – 515 Gy. sh. – 722 Gy. marl. – 520 Hd. gy. sh. – 730 Wh. Sst. – 525 Sy. gy. sh. – 750 Wh. p.cl. & s.
13876 No. 6 HUGHENDEN Town	144°12' 20°51'		1957	84	30 518 696	Soak 214 108	24,000	S P		0 – 1 Soil – 592 Sst. – 54 Y. sh. – 630 Br. cl. – 474 Gy. rk. – 696 F. Sst. – 518 Hd. gy. sh. – 720 Sst. – 539 Wh. Sst. – 743 P.cl. & S.

A	B	C	D	E	F	G	H	I	J	K	
14068 Whistling OAKLEY	145°00' 20°52'		H.Bode 1959	480 500	495 500 527 598 600	480 Soak	9,600	G		0 - 1 Su. Soil - 34 Rd. sy. cl. - 65 Rd. s.rk. - 100 Rd. cl. & grit - 179 Rd. sy. cl. - 190 Y. sh. - 230 S.rk. - 235 Cl. - 460 S.rk. - 495 Sst.	- 527 Sst. barot lst. - 550 Wh. lst. - 581 Cl. - 587 Bl. sh. - 595 Gy. sh. - 600 Sst. - 619 Qtz. - 621 S. rk. - 636 Hd. qtz. - 662 Gy. lst.
14069 No. 1 OAKLEY	144°55' 20°53'		H.M.Bode 1959	348	348 368	348	Small 9,600	G P		0 - 1 Su. Soil - 6 Sy. cl. - 18 Grit. y.cl. - 23 Cl. - 33 Cl. & gvl. - 47 Cong. - 70 Iron St. - 169 Rd. Sst. - 202 Cl. - 212 S.rk.	- 217 Cong. - 240 S.rk. - 245 Gy. cl. - 310 Rd. S.rk. - 370 Wh. S.rk. - 395 Sst. - 405 Lst. - 430 Cy. cl. - 444 Lst. - 450 Qtz.
14961 House WATTLE VALE	144°51' 20°48'		H.Bode 1961	420 450	136 515 530 560	Soak 478		P		0 - 10 S. - 15 S.rk. - 175 Sy. cl. - 235 Bl. cl. - 240 Hd. Sst.	- 440 Soft Sst. - 488 Dk. sh. - 500 Sy. sh. - 540 Sst. - 582 Sst. & coal
15014 New House WONGALEE	144°25' 20°37'	1206	H.Bode 1962	196 216	225 240 294 315		48,000	V.G.		0 - 3 Soil - 6 Soft Y. Sst. - 145 Creamy Sst. - 146 Rk. - 170 Br. Sst. sh. - 195 Gy. Sh. - 225 Creamy Sst. - 230 Cs. Sst. - 240 F. Sst.	- 242 Cs. Sst. - 255 Sst. & coal sms. - 270 Gy. cl. - 294 Sy. gy. cl. - 297 V.cs. Sst. - 315 Gy. cl. - 322 Cs. Sst. - 329 Sst.

A	B	C	D	E	F	G	H	I	J	K	
13415 Whitecliff No. 2 STOCK ROUTE	144°25'		T.Brownlow 1963		412 518 678 to 692	400 486 482	360 5,160			0 - 3 Bk. Soil - 12 Decomposed & ba. - 20 Ba. blds. - 27 Decomposed ba&blds. - 32 Ba. - 36 Cl. & ba. - 57 Rd. Volcanic cl. - 63 Ba. blds. & cl. - 73 Honeycomb ba. - 93 Hd. ba. - 109 Honeycomb ba. - 117 Cl. - 137 Sst. - 208 Porous Sst. - 218 Sst. - 232 P. cl. - 241 Porous Sst. - 247 P.cl. - 262 Porous Sst. - 273 Sy. cl. - 295 Sst. - 301 P.cl.	- 308 Sst. - 396 Porous Sst. - 401 Rd. marl. - 417 Wh. mudst. - 424 Rd. & gy. mdst. - 449 Rd. & wh. cl. - 459 Br. cl. - 464 Coloured sy. cl. - 504 Coloured cl. & S. - 521 Y. sy. cl. - 531 Coloured cl. & S. - 559 Coloured sy. cl. - 588 Gy. cl. & Css. - 610 Rd. & gy. cl. & Css. - 638 Rd. mdst. & Cs. S. - 653 Gy. sy. cl. - 680 Rd. & gy. mdst. & Css. - 700 Gy. sy. mdst. - 722 Sy. mdst. - 751 Lt. bl. sy. mdst. - 768 Gy. slippery back. - 795 Rd. slippery back.
15636 Horse Creek DELBESSIE	144°18' 20°38'		1963	76 94 (1963)	83 93	83 76	See page 4,800			0 - 3 Bk. soil - 6 Porous broken Ba. - 34 Ba. blds. - 62 V. hd. ba. - 74 Ba. blds. - 93 Rd. cl.	- 94 Muddy S. - 96 Sy. cl. & muddy S. -114 V. sy. cl. -140 Y. sh. gvl. -142 Bl. gy. sh.
Turkey Nest TORVER VALLEY	Beside 11095			45	200-225 235-245		23,000	B hard		0 - 153 No. info, old bore - 173 Dk. sh. - 185 Sh. - 200 Dk. sh.	-225 Sst. - 235 Hd. Sst. -245 Sst. -252 Sy. choc. sh.

A	B	C	D	E	F	G	H	I	J	K
– Horse Creekwell WONGALEE	144°18' 20°35' (approx.)		about 1900							0 – 7 approx. Ba. – 60 Approx. Sh. – 61 Caving S. W. Water
– Well STRATH-STEWART	144°08' 20°23'									T.D. 50' Started in Ba.
– Humpy MT. EMU PLAINS	144°44' 20°15'	2262								
– Wire Gate WONGALEE	144°20' 20°32'		J.Holland 1956	88 110 Draw down to 100						0 – 51 basalt Below basalt waterbearing sand with waterworn shell. Casing seated in 2' of harder Sst. T.D. 150' approx.
– Spring Hill DLANTYRE	144°54' 20°43'		R.B.Mitchell 1916		402	376	5,000			0 – 42 Rd. rk. soft – 92 Rd. cl. & S. – 134 S. rk. dry – 292 S. & p.cl. – 323 Dry Sst. – 402 Cl. & Sst. – 448 Crs. Sst. & p.cl. – 488 Sst. & p.cl. – 518 P. cl. – 528 Wh. Sst. – 536 Pure p. cl. – 541 Puggy cl.

A	B	C	D	E	F	G	H	I	J	K
– Mitchell's BLANTYRE	144°46' 20°40'		R.B.Mitchell 1928	360 380	355 388 451	353 386	soak soak soak present supply 7,000	F		0 – 5 Surface – 10 cl. – 17 Rd. rk. – 22 Wh. rk. hd. – 30 Rd. & wh. rk. fairly hd. – 102 Y. cl. soft, cvg. – 119 Gy. sh. w. sms. S. – 139 Bk. sh. – 151 Dry Sst. – 161 v. f. Sst. hd. – 167 Like Coal. – 175 Bk. sh. – 187 Sst. hd. – 197 S. & sh. mixed. – 209 Bk. sh. – 224 Sy. sh. – 296 Dry S. fairly hd. – 331 p. cl. & S. T.D. recorded as 535' – 345 Cl. cvg. – 355 Cl. – 362 Good S. – 377 Cl. & S. – 388 cl. – 398 Wh. crs. S. – 404 Crs. S. & p.cl. – 418 S. & cl. – 451 S. & wh. stuff like chalk – 469 Crs. S. – 476 Cl, cvg. badly – 487 Cl. w. little s, hd. – 502 Cl. more colours – 522 S. & cl. – 533 Pk. rk, hd. – 548 Rd. cl. hd.
– Barry's BLANTYRE	144°43' 20°37'		R.B.Mitchell 1915	350 380				F		T.D. 505'
– Dalraer New Bore THE PLAINS	144°34' 20°46'			260						T.D. 300-400'.
– House THE PLAINS	144°36' 20°50'		abt 1901	200	300 (1st good) water			F		T.D. 360'
– Old House WATTLE VALE	Beside 1481									

A	B	C	D	E	F	G	H	I	J	K
"	144°14'									
Bloodwood	20°19'									
MT. STURGEON										

A	B	C	D	E	F	G	H	I	J
14993 No.5 MILRAY	145°44 'E 20°52'S	T.J.Wynne 1945	1945 23 146' 17000	30-40 164		Main	Salty		T.D.174' Lt s.all way,no rock reported. Main supply in cs. S.with some cl.
14994 No.2 MILRAY	145°47'E 20°55'S	- ? 1932	1963 - - 2400	93 184	60	4800 10,500	Brack.		T.D.190. Cored to 186. Water in drift S.
14995 5-Mile Well MILRAY	145°46'E 20°42'S.	 1910	1963 45 70' Unlim.	122-125			G."bit of taste"		T.D.130' Timbered to 119' Now mainly collapsed but with bore casing in it.
14996 5-Mile Bore MILRAY	145°-46E 20°-42'S.	J.Johnson 1958	1963 45' 70' 17000	88-92 116-119 119-126 126-131		Soak			0'- 4 Bk.soil - 6½ Wh.cl. - 18 Creamy cl.(no. S.) - 25 Reddish cl. - 32 " " W.small amount S. - 46 Wh.cl. (no s.) - 53 Wh.cl. (W.S.) - 69 Rainbow cl. - 88 Creamy Cl.(No S) - 92 " " (W. little S. -111 Creamy Cl.(No S) -116 " " (W.S.) -119 S.W.small amt Cl. -126 S. w. large amt Cl. -131 Cl.W.gvl.S. -131 Creamy cl.(sm. amt of sand) -138½ Creamy Cl.(No S)
14997 Native Dog MILRAY	145°49'E. 20°44'S	J.Johnson 1958.	1963 45 80 17000	148			G. "bit of taste"		Replaces old well. 0'-3½ Bk.soil - 14 Creamy cl. - 25 " " W.f.s. - 32 " " " Cs s. - 38 Cs S.W.little Cl. - 42 S.W.small pebbles - 48 Wh.cl.v.hd packed - 56 Cr.cl. No S. - 92 Wh.cl.hd packed -121 Creamy cl. -124 " cl.W.sm.S. -148 S.nearly free from cl. Seated on Wh.cl.

A	B	C	D	E	F	G	H	I	J
1535 LONGTON	No trace	- - 1919							T.D.492
5941 EUCHRE CREEK	9 145 43'E 20°59'S	- - 1950							T.D.307
14989 Flow MILRAY	Not located	H.Bode(Jnr) 1961	1963 Flow - 1440	47 185-190	Su. (press- ure) 31 lbs sq.foot	Soak	"briny"		0- 3 Su.sy.cl. - 7 Clay - 46 Cl. & gvl. - 47 pervious gvl. - 60 Cl.tending to cave. -175 Cl. W.gvl. -185 Conglom. -190 Sand
14990 House No.1 MILRAY	145°42'E 20°42'S.	H.Bode 1952	1963 30' - -	60-63 63-73					0- 3 Su.soil - 8 Lt br.s.rk. - 16 Y.s.rk. - 22 Cream Cong. - 32 Y.s.rk. - 40 Br.sy.cl. - 53 Y.sy.cl. - 60 Gy rk. - 63 Br.rk. - 73 River bed S.
14991 House No.2	145°42'E. 20°42'S.	H.Bode 1954		58-62 62-65					0- 5 Su.soil - 20 Creamy s y.cl. - 36 Y.s.rk. - 48 Conglom. - 58 Lt.br.s.rk. - 62 S.rk.& gvl. - 65 Lt.br.s.rk. s.rk.& gvl.
14992 No.6 MILRAY	145°45'E 20°49'S.	W.H.James 1948	1963 60(approx) 140 17000	60 158-160		50 gph	Brackish G.		0- 6 Y.sy.cl. - 7 Red sst. - 9 Red sy.cl. - 10 Red ss t. - 30 Red sy.cl. -102 Y.sy.cl. -104 Cs s.& cl.mixture (falls in) -130 Y.s y.cl. -158 Rd rk & wh.chalk mix. -160 Sst. -163 S. -171 Y.sy.cl.

AUSTRALIA 1:250,000

WINTON
QUEENSLAND

1:250,000 GEOLOGICAL SERIES SHEET SF 54-12

PRELIMINARY EDITION 1964

SUBJECT TO AMENDMENT

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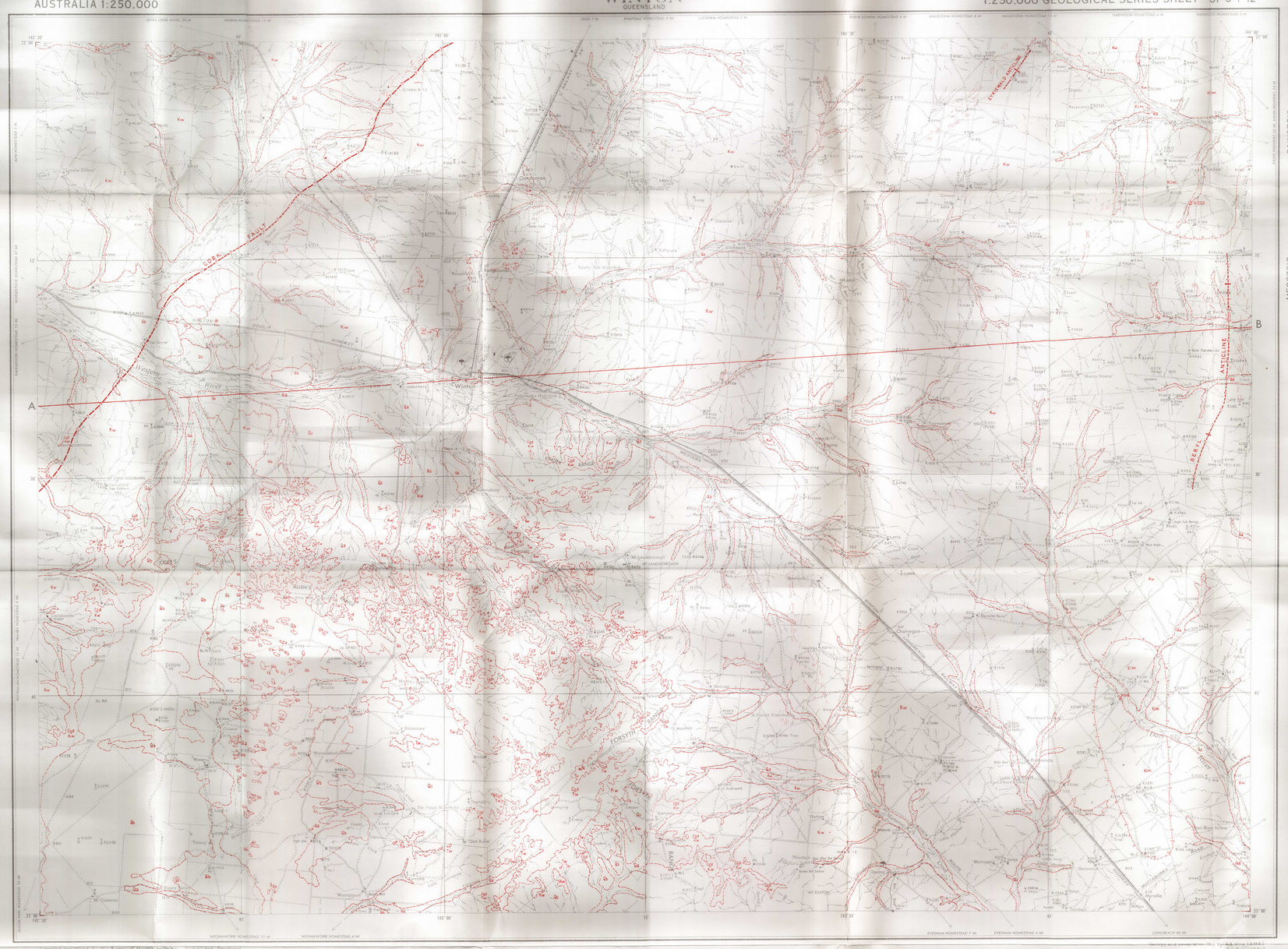

Reference

CAINOZOIC

- QUATERNARY
  - Qa — Alluvium
  - Qb — Clay, silt, clay soil
  - Qs — Sand, gravel, rubble, sandy rise
- UNDIFFERENTIATED — Czd — Duricrust (laterite, silcrete)
- TERTIARY — Were Beds — Tw — Mudstone, wereite sandstone

MESOZOIC

- LOWER TO UPPER CRETACEOUS — Winton Formation — Kw — Lithic sandstone, calcareous lithic sandstone, mudstone, coal
- LOWER CRETACEOUS
  - Mackunda Beds — Klm — Lithic sandstone, calcareous lithic sandstone, mudstone, coquinite
  - Wilgunya Formation — Klw — Mudstone, calcareous lithic siltstone, limestone } Section only
- UNDIFFERENTIATED — M — Sandstone, shale, conglomerate

- Geological boundary
- Anticline
- Fault — Where location of boundaries, faults and faults is approximate, lines broken, where inferred, dotted, where concealed. Boundaries and faults are labelled. Drills are shown by short lines. Type Section and section number.
- Trend lines
- Macrofossil
- 6/250 — Locality reference number
- Mn — Manganese prospect
- Flowing bore
- Non-flowing bore or well
- Dug bore or well
- Abandoned bore or well, previously productive } 6/294 Refers to bore registered number of Queensland Irrigation and Water Supply Commission records
- Waterhole
- Dam
- Earth tank
- Windpump
- Road
- Vehicle track
- Railway with siding
- Fence
- Homestead
- Airfield
- Landing ground
- Ford
- 1,176 — Height in feet - datum mean sea level
- Astronomical station
- PD — Position doubtful

Compiled and issued by the Bureau of Mineral Resources, Geology and Geophysics, Department of National Development. Topographic base compiled by the Division of National Mapping and the Bureau of Mineral Resources, Geology and Geophysics, Department of National Development. Aerial photography by the Royal Australian Air Force - complete vertical coverage at 1:40,000 scale. Transverse Mercator Projection.

Drawn by: I. Chertok

Geology and compilation 1962 by R.A. Vine, I. Smith, D.J. Casey (QGS)

GEOLOGICAL RELIABILITY DIAGRAM

A — Reconnaissance-numerous traverses and air-photo interpretation

Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 Kilometres

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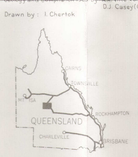
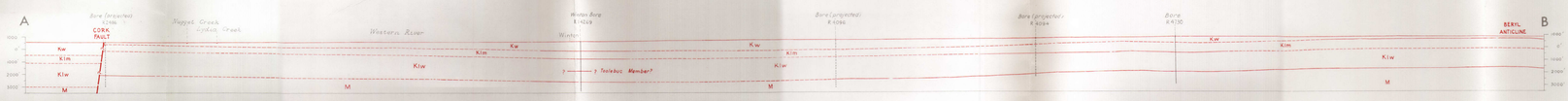
ANNUAL CHANGE 2°15'E



Section

Scale: 1/2 = 4



WINTON
Sheet SF 54-12

AUSTRALIA 1:250,000

MUTTABURRA

QUEENSLAND

1:250,000 GEOLOGICAL SERIES SHEET SF 55-9

HUGHENDEN 87 M
HUGHENDEN 88 M
PRAIRIE 79 M
TORRENS CREEK 93 M
DARR SIDING 17 M
FAIRFIELD HOMESTEAD 21 M
BARCALDINE 30 M
144°00'
144°30'
145°00'
145°30'
22°00'
23°00'
15'
30'
45'
A
B
Landsborough Creek
Thomson River
Tambo
Barcaldine
Muttaburra
Aramac
Jericho
Alpha
Tocal
Ellerbeck
Ardmona
Mistake Downs
Mutaul
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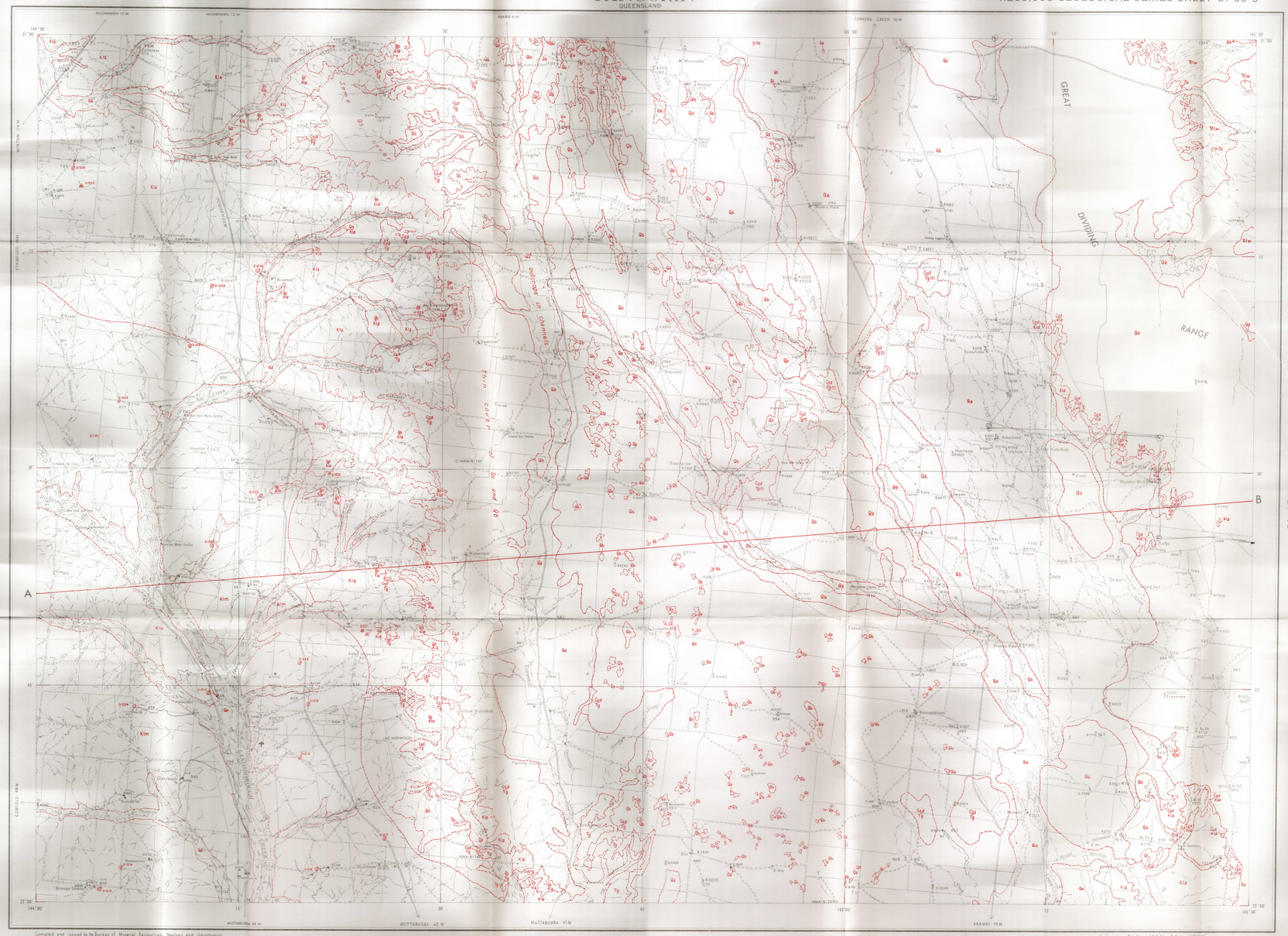

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Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 Kilometres

Geology by — D.J. Casey (G.S.Q.), R.K. Ying (B.M.R.)
Original photo-interpretation by: J.T. Scarrick, B. de Lassaux Saint-Genies (I.F.P.) W.J. Perry (B.M.R.)
Compiled 1963 by: D.J. Casey (G.S.Q.)
Drawn by: I. Chertok

Reference

CAINOZOIC

- QUATERNARY
  - Qa — Alluvium
  - Qb — Clay, silt, clay soil
  - Qs — Sand, gravel, rubble, sandy soil
- UNDIFFERENTIATED — Gcd — Duricrust (laterite, silcrete)
- TERTIARY — Glendower Formation — Tg — Sandstone, conglomerate, sandy mudstone

MESOZOIC

- LOWER CRETACEOUS
  - Mackunda Beds — Klm — Lithic sandstone, mudstone, calcareous lithic sandstone
  - Allaru Member — Kla — Mudstone, calcareous siltstone
  - Wilgunya Formation — Klw — Mudstone, calcareous siltstone, limestone (Section only)
  - Doncaster Member — Kld — Mudstone, limestone, sandstone
- JURASSIC — Blantyre Sandstone — Jb — Sandstone, shale, conglomerate
- LOWER TRIASSIC (?) — Warang Sandstone — Rlw — Argillaceous quartz sandstone, red siltstone, conglomerate
- UNDIFFERENTIATED — M — Sandstone, shale, conglomerate

PALAEOZOIC

- PERMIAN — P — Coal and undifferentiated sediments (Section only)

Geological boundary
Where location of boundaries, folds, and faults is approximate, line is broken, where inferred, queried, where concealed, bo-indaries and folds are dotted, faults are shown by short dashes

Geological boundary, reference from Torrens Creek Seismic Survey for Exoil No Liability, 1963 (Section only)

Macrofossil locality

0124 Locality reference number

Flowing bore

Non-flowing bore or well

Dud bore

Abandoned bore, previously productive

R2205 refers to bore registered number of Queensland Irrigation and Water Supply Commissions records

Waterhole

Dam

Earth tank

Windpump

Spring

Road

Vehicle track

Railway with siding

Fence

Homestead

Landing ground

Yard

1017 Height in feet, datum mean sea level

Astronomical station

PO Position doubtful

GEOLOGICAL RELIABILITY DIAGRAM

B. Reconnaissance-traverses and air-photo interpretation

INDEX TO ADJOINING SHEETS

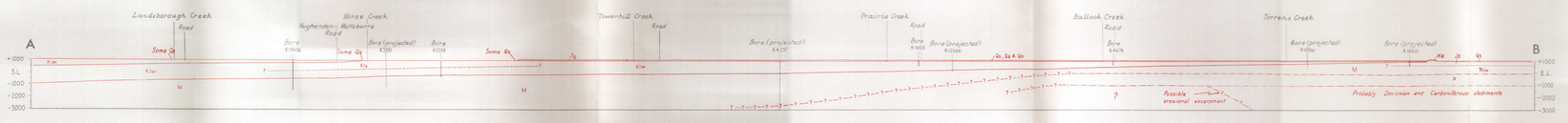
Showing Magnetic Declination

WALGETT SF 55-13	LEICHHARDT SF 55-14	CLARKE RIVER SF 55-15	TOWNSVILLE SF 55-16	1955 0° 12' E
MOUNT OXIDE SF 54-3	RICHMOND SF 54-4	HUGHENDEN SF 55-3	CHARTERS TOWERS SF 55-4	1955 0° 30' E
WARREGO SF 54-7	BLANCH SF 54-8	TANGORIN SF 55-5	BUCHANAN SF 55-6	MT. COGLON SF 55-7
WALGUNDI SF 54-11	WINTON SF 54-12	MUTTABURRA SF 55-9	GALILEE SF 55-10	CLERMONT SF 55-11
BOOMERANG DOWNS SF 54-15	MARION SF 54-16	CONCORDIA SF 55-13	JERICHO SF 55-14	CAROLINE SF 55-15

Annual Change 2½' E

Section A-B

Scale: $\frac{1}{4}$" = 4



TANGORIN

Sheet SF 55-5

AUSTRALIA 1:250,000

HUGHENDEN
QUEENSLAND

1:250,000 GEOLOGICAL SERIES SHEET SF 55-1

PRELIMINARY EDITION 1964
SUBJECT TO AMENDMENT

NO PART OF THIS MAP IS TO BE REPRODUCED FOR PUBLICATION WITHOUT THE WRITTEN PERMISSION OF THE DIRECTOR OF THE BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS, DEPARTMENT OF NATIONAL DEVELOPMENT, CANBERRA, A.C.T.

Reference

- Geological boundary
- Anticline
- Syncline
- Monocline
- Fault (D.U. indicate relative vertical movement down, up)
- Fault (arrows indicate relative horizontal movement)

Where location of boundaries, folds, and faults is approximate, line is broken, where inferred, queried, where concealed, boundaries and folds are dotted, faults are shown by short dashes

- Strike and dip of strata
- Drag fold showing plunge
- Dip & dip direction
- Dip > 45°
- Joint pattern
- Lineament
- Strike and dip of foliation, showing plunge of lineation
- Vertical foliation
- Foliation, dip indeterminable
- Strike and dip of primary pegmatitic banding
- Microfossil locality
- Microfossil locality
- Plant fossil locality
- Spore locality
- With reference number
- Dyke or other small sheet-like intrusion: Ad = aplite, g = gabbro, p = pegmatite, q = quartz, Qv = quartz vein, d = dolerite, m = microgranite, mp = microporphyry, r = rhyolite, s = syenite, v = volcanic rock, mg = microgranite (megascopic), sp = spilite and granite
- Extinct base volcanic vent
- Type section
- Measured section
- Section reference number
- Mine
- Abandoned mine
- Abandoned alluvial diggings eg prime, Au gold, Sn - tinstone, C - coal
- Flowing bore
- Non-flowing bore or well
- Abandoned bore or well
- Bore registered number of Queensland Irrigation and Water Supply Commissions' records
- Spring
- Waterhole
- Earth tank
- Dam
- Windmill
- Road
- Vehicle track
- Railway with siding
- Fence
- Homestead
- Airport
- Landing ground
- Yard
- Astronomical station
- Trigonometrical station
- Height in feet, datum mean sea-level
- Position doubtful

Reference

CAINOZOIC	QUATERNARY		Qa — Alluvium
			Qc — Basalt scree
			Q — Undifferentiated residual and colluvial black soil, sand, and rare gravel
			Qb — Clay, silt, clay soil
			Qs — Sand, gravel, rubble, sand, soil
		Toombs Basalt	Qt — Vesicular olivine basalt
		Sturgeon Basalt	Qsm — Olivine basalt
		Nulla Basalt	Qsn — Olivine basalt
			Qzb — Olivine basalt
	UNDIFFERENTIATED		Qzw — Argillaceous sandstone, conglomerate
			Qzd — Ferruginous laterite, laterite
			Tl — Ferruginous fossiliferous laterite
	TERTIARY	Campaspe Beds	Tc — Argillaceous sandstone, conglomerate, siltstone, sand
		Allendower Formation	Tg — Argillaceous sandstone, conglomerate, sandy mudstone
MESOZOIC	LOWER CRETACEOUS	Wiglunya Formation	
		Allaru Member	Kla — Mudstone, calcareous siltstone, silty limestone
		Toolebuc Member	Klo — Platy and concretionary limestone, calcareous shale
		Hanmoor Member	Klq — Mudstone, carbonaceous mudstone, calcareous siltstone
		Jones Valley Member	Klj — Siltstone, calcareous siltstone, limestone
		Doncaster Member	Kld — Mudstone, glauconitic mudstone, concretionary limestone, quartz sandstone, glauconitic sandstone
		Gilbert River Formation	Klg — Conglomerate, sandstone
	JURASSIC	Blantyre Sandstone	Jb — Quartz sandstone, carbonaceous shale, coal, conglomerate
	LOWER TRIASSIC	Warang Sandstone	Rlw — Kaolinitic sandstone, conglomeratic, calcareous mudstone
PALAEOZOIC	UPPER PERMIAN	Mundic Igneous Complex	Pum — Rock porphyritic microgranite, granitic intrusion breccia
			Pud — Porphyritic microdiorite
		Betts Creek Beds	Pub — Lithic tuff, feldspathic lithic sandstone, micaceous siltstone, conglomeratic sandstone, carbonaceous shale, coal, pebbly mudstone, tuff breccia
			Puv — Conglomerate, rhyolitic tuff, tuffaceous siltstone and sandstone
	LOWER PERMIAN OR UPPER CARBONIFEROUS	Boonderoo Beds	Plb — Mudstone, varves, sandy mudstone, lithic sandstone, rare tuffs
	UPPER PALAEOZOIC(?)		Pzg — Leucogranite, adamellite, quartz monzonite
PRECAMBRIAN TO LOWER PALAEOZOIC		Lolworth Igneous Complex	Pzl — Porphyritic biotite adamellite and granodiorite, minor hornblende-biotite granodiorite, biotite-quartz diorite, muscovite pegmatite
		Dumbano Granite	Pzd — Porphyritic biotite adamellite, garnet-muscovite granite, muscovite pegmatite
			Pzy — Foliated leucocratic biotite granite and microgranite, biotite pegmatite
			Pzk — Foliated white biotite adamellite
			Pzn — Foliated and gneissoid adamellite and granodiorite gneiss, rare migmatite
		Cape River Metamorphics	pCq — Clearly quartzitic, with quartz-mica schist and amphibolite
			pCm — Mica schist, quartz-mica schist, biotite gneiss, garnet-biotite gneiss, amphibolite, rare hematite quartzite, banded ironstone, metamorphosed greywacke and tuff

Compiled and issued by the Bureau of Mineral Resources, Geology and Geophysics, Department of National Development. Base map supplied by the Royal Australian Survey Corps and the Bureau of Mineral Resources, Geology and Geophysics from 1:250,000 scale photographic mosaics prepared by the Royal Australian Survey Corps. Complete optical coverage at 1:250,000 scale.
Transverse Mercator Projection

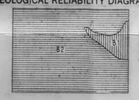
INDEX TO ADJOINING SHEETS

Showing Magnetic Declination

Scale 1 : 250,000

5 0 5 10 15 MILES
5 0 5 10 15 20 25 KILOMETRES

GEOLOGICAL RELIABILITY DIAGRAM

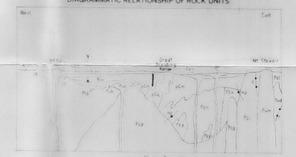


B1 Detailed reconnaissance – Numerous traverses and air-photo interpretation

B2 Reconnaissance – traverses and air-photo interpretation

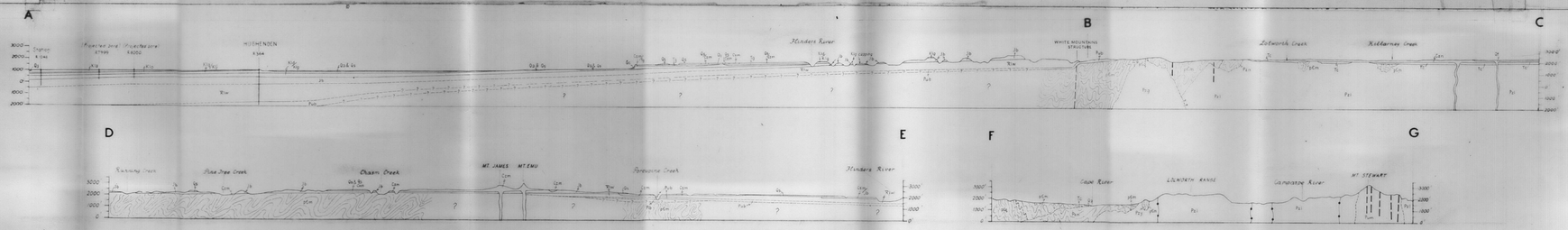
Geology, 1962–63, by R.R.Vine, L.V.Bastian, M.A.Reynolds, A.G.L.Paine, R.K.Harding, Fide Keyser, E.C.da Fayrpark (B.M.R.) D.J.Casey, D.E.Clarke (G.S.Q.)
Compiled, 1963–64, by R.R.Vine, L.V.Bastian, A.G.L.Paine (B.M.R.) D.E.Clarke (G.S.Q.)
Drawn by I.Chertok

DIAGRAMMATIC RELATIONSHIP OF ROCK UNITS



Sections

Folding schematic
Scale: 1/4" = 4



HUGHENDEN
Sheet SF 55-1

Part of 1:250,000 Progress Map – 1963

CHARTERS TOWERS

QUEENSLAND

SCALE

5 0 5 MILES

Reference

(For detail see Hughenden 1:250,000 Geological Sheet. Preliminary Edition, 1964)

Qa *Alluvium*

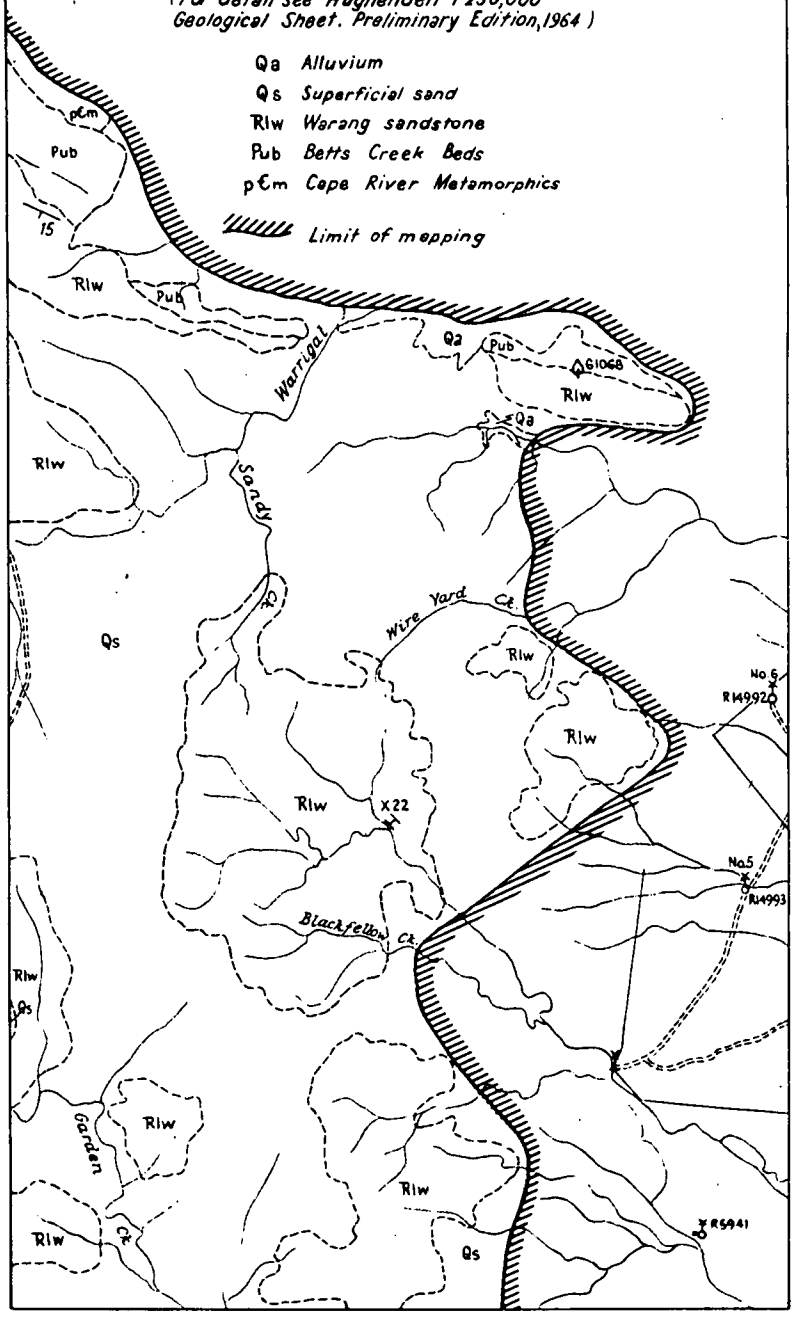
Qs *Superficial sand*

Rlw *Warang sandstone*

Pub *Betts Creek Beds*

pCm *Cape River Metamorphics*

Limit of mapping



To accompany Records 1964/39