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BUREAU OF MINERAL RESOURCES
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RECORDS.

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Pt. 1 of 2

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EXPLANATORY NOTES, MCKINLAY SHEET, QUEENSLAND.

by

R.R. Vine and W. Jauncey.

PART 1

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of 2

EXPLANATORY NOTES, McKINLAY SHEET, QUEENSLAND.

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EXPLANATORY NOTES, MCKINLAY SHEET, QUEENSLAND.SUMMARY

The McKinlay Sheet area was mapped during 1961 by the Great Artesian Basin Field Party of the Bureau of Mineral Resources. A conformable sequence reaching a thickness of about 3500 feet from the basal Cretaceous Longsight Sandstone to the ?Upper Cretaceous Winton Formation is present.

West of Kynuna the Edkins Formation, of probable Tertiary age, was deposited in what may have been an earlier tributary of the ancestral Diamantina River.

Plentiful supplies of underground water are available in the Longsight Sandstone aquifer, but in the eastern half of the area it is too deep to be economically tapped for pastoral use. Smaller and less certain supplies, some of them saline, are available in the Mackunda Beds and the Winton Formation. Precious opal occurs in duricrust-capped hills of the Winton Formation, south of Kynuna. Possible source beds for petroleum are present in the marine Wilgunya Formation, and poor reservoir rocks exist in the Winton Formation. The Longsight Sandstone would be an ideal reservoir, but is probably thoroughly flushed by meteoric water. Possible sedimentary rocks of pre-Cretaceous age are present in some basement hollows.

Recommendations are made for further geophysical work to test inferred faulting and basement relief, and for a stratigraphic bore to test the pre-Cretaceous, possibly sedimentary rocks and petroleum indications in the Wilgunya Formation.

INTRODUCTION

During 1961 the Great Artesian Basin Party of the Bureau of Mineral Resources, consisting of R.R. Vine and W. Jauncey with I. Chertok as draftsman, mapped the McKinlay Sheet area as part of a programme of regional mapping covering the margins of the Eromanga Sub-Basin in western Queensland. Four military 1:250,000 sheets were mapped during the field season, and explanatory notes to accompany each sheet have been produced. In addition to McKinlay, the sheets mapped were Brighton Downs (Jauncey, 1962), Mackunda (Vine, 1962) and Julia Creek (Vine and Jauncey, 1962). Mapping was done on airphotos taken by the Royal Australian Air Force in 1951.

Apart from the hill country in the south, much of which is impassable except on horseback, access within the area is excellent, with many station tracks. The area is also served with highways or main roads from Cloncurry, Gilliat, Julia Creek, Maxwellton and Winton. All are earth roads and impassable after rain; they are normally trafficable again within three days.

Potable water from bores is available throughout the area except in the hill country. Waterholes are mainly small and temporary.

Most of the area is held under petroleum Authorities to Prospect: 54P by ^{the} Papuan Apinaipi Petroleum Co. Ltd and 76P by Exoil N.L.

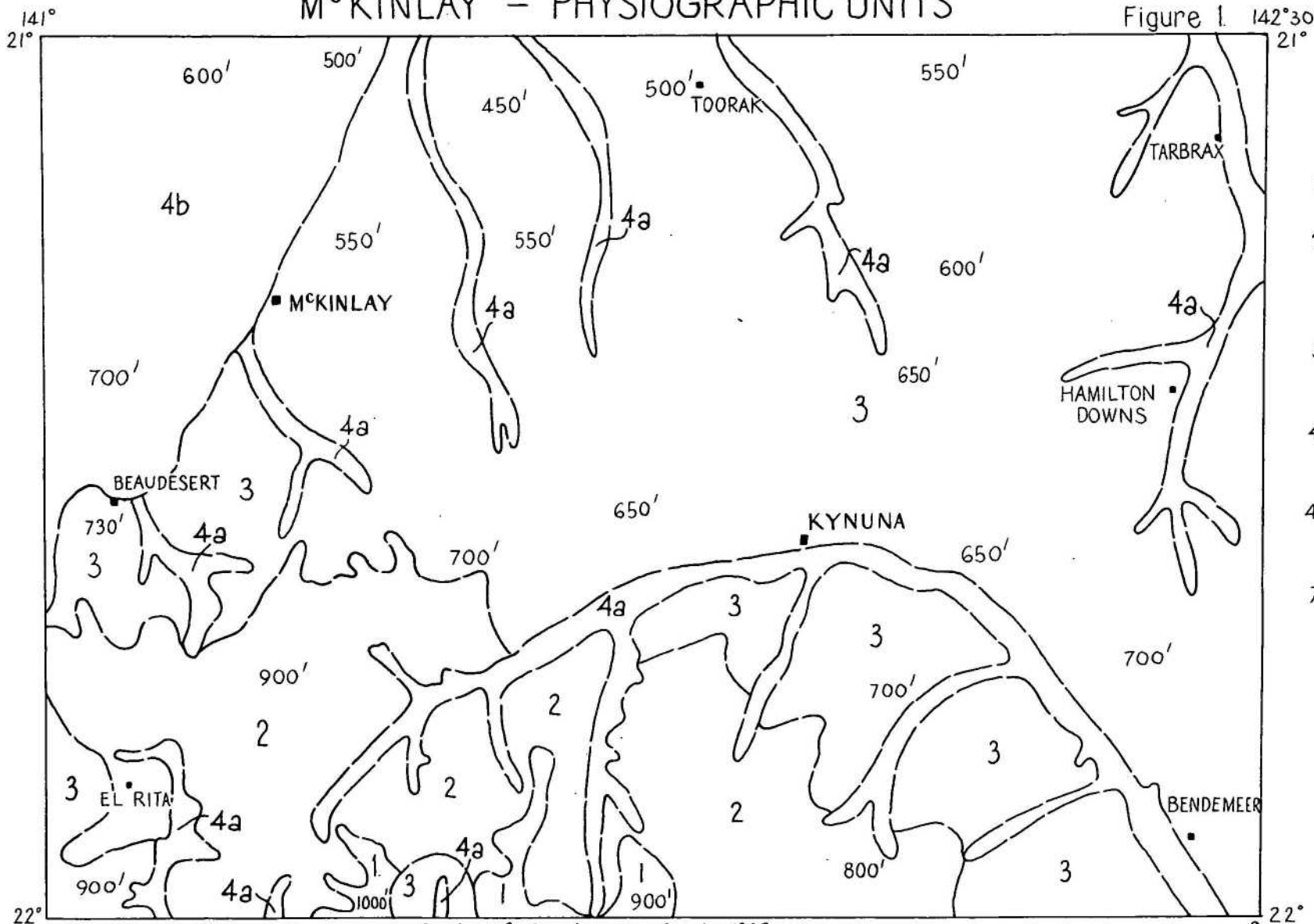
PREVIOUS INVESTIGATIONS

Before the present survey, only very broad regional geological work had been carried out in the general area. Early workers recognised an old metamorphosed belt of rocks forming the Cloncurry Mineral Field, and Cretaceous rocks forming the rolling downs, with an arenitic aquifer at the base (Daintree, 1872; Jack, 1885, 1895; Jack & Etheridge, 1892; Cameron, 1901; Dunstan, 1920; Jensen, 1925; Reid, 1929). Lateritised and duricrust capped rocks of the Winton Formation in the hills south of Kynuna caused some confusion; Daintree (1872) and Jack & Etheridge (1892) both recorded them as metamorphic, while Dunstan (1920) regarded them as Jurassic intake beds of the Basin.

More detailed, though still broad reconnaissance, work was carried out on the Great Artesian Basin as a whole by Whitehouse (1930, 1945, 1953, 1954). A comprehensive account

MCKINLAY - PHYSIOGRAPHIC UNITS

Figure 1



1. Plateaus - duricrust caps.
 2. Duricrust residual areas
mesas, buttes, scree
covered hills.
 3. Downs - thin soil cover
on Cretaceous rocks.
 - 4a Alluvial belts - silt along
watercourses in downs.
 - 4b Alluvial plain - mainly
sand.
- 700' Average height of area.

5 0 5 10 15 Miles

of the stratigraphy, structure and geological history is given by Whitehouse (1954). He also discussed late geological history and physiography in western Queensland, suggesting that laterite was once far more extensive, and that the streams draining to the Gulf of Carpentaria are probably much younger than the Diamantina River system (Whitehouse, 1940, 1941, 1948).

More systematic work on the western margins of the Great Artesian Basin began in 1957 with mapping of the Boulia Sheet (Casey et al., 1960), Springvale (Reynolds, 1960a), and south-western Queensland (Reynolds, Olgers and Jauncey, 1961) and was continued by the present field party. Casey (1959) established the nomenclature for the western margin of the basin; the Mesozoic sequence, with a probable correlation with Whitehouse's is:

<u>Casey, 1959</u>		<u>Whitehouse, 1954</u>	
Winton Formation		Winton Formation	
Upper	} Wilgunya Formation	{	Tambo Formation
Toolebuc Member			
Lower			Roma Formation
Longsight Sandstone			Blythesdale Group (upper part)

Geophysical work in the McKinlay area is limited to gravity surveys. Single traverses were run by Sydney University (Marshall and Narain, 1954) and Mines Administration Pty Ltd for ^{the} Papuan Apinaipi Petroleum Company Ltd (Starkey, 1960). The Bureau of Mineral Resources has made a helicopter gravity survey of most of the area with a covering of 1 station each 50 square miles, (map only, Plate III, this report).

A photo interpretation of the sheet was made by the Institut Francais du Petrole (de Lassus St Genies, Perry and Scanvic, 1962).

PHYSIOGRAPHY

The division into physiographic units is dependent upon the extent to which an old duricrust surface has been eroded from the area. Large remnants form plateaus (Figure 1, Unit 1) and the smaller remnants form a maze of mesas, buttes, and scree-covered hills (Unit 2). Practically all erosion is by scarp retreat.

Most of the lowlands are rolling downs (Unit 3), probably representing a large area from which the duricrust cap has been completely stripped with the headward erosion of rivers draining to the Gulf of Carpentaria. Units 1 to 3 are

PLATE I



Figure 1 - Precambrian (?Lower Proterozoic) metamorphics protruding through alluvium, five miles west of Strathfield No.1 Bore.

B.M.R. Negative M/138



Figure 2 - Typical outcrop of the Mackunda Beds in rolling downs, showing the characteristic thin interbedding of arkose and siltstone and the development of harder calcareous beds, one mile west of Belford Homestead.

B.M.R. Negative M/138

of erosional origin. The fourth unit is depositional and consists of alluvial flats. These are divisible into Unit 4(a), long, narrow belts of silty alluvium along the watercourses draining the Cretaceous rocks and Unit 4(b) a large alluvial plain in the north-west formed by a sandy alluvium derived from Precambrian igneous and metamorphic rocks to the west of the sheet area.

STRATIGRAPHY

Table I summarises the stratigraphy of the McKinlay Sheet. It includes several units recognised and named from earlier surveys in nearby areas. The most significant results of the mapping were:

- (a) Establishing the presence of Precambrian basement outcrops within the sheet area (Plate I, Figure 1).
- (b) Establishing the continuation of the Mackunda Beds, a new unit named and defined from the adjoining Mackunda Sheet (Vine, 1962). Shelly fossils were found **in** this unit but no determinations have, as yet, been made. Plate I, Figure 2 is a photograph of a typical outcrop in the rolling downs, showing the characteristic thin interbedding of arkose and silt, and the development of harder calcareous beds.
- (c) Establishing the presence of a post-Winton unit of presumed Tertiary age. This was named the Edkins Formation and is defined and described below.

The term "duricrust" is used in this report in the sense originally given by Woolnough, 1928: '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'.

TABLE I

STRATIGRAPHY OF THE MCKINLAY 1:250,000 SHEET.

ROCK UNIT	THICKNESS (feet)	LITHOLOGY & FOSSILS	DISTRIBUTION	STRUCTURE	TOPOGRAPHY	STRATIGRAPHIC RELATIONSHIPS & AGE	PRINCIPAL REFERENCES
ALLUVIUM (Qa)		Silt, gravel near hills, sandy west of McKinlay R.	Along watercourses, wide plain in north-west.		Braided watercourses, sand plain.	Quaternary	
DURICRUST (Czd)		Laterite, silcrete.	South & south-west part of area. (Plysiographic units 1&2, Figure 1).	Flat or gently undulating capping of hills.	Plateaus, mesas, buttes.	Chemical alteration products of Cretacic and Tertiary rocks. Cainozoic	Woolnough, 1928
EDKINS FORMATION (Te)	0 - 23 (top eroded)	Conglomerate, thin-bedded, inter-laminated & cross- laminated sandstone and siltstone, thin-bedded to massive sandy siltstone.	From Whiskey Toggler & Mt Edkins along north bank of the Diamantina River to Mt Salmond, north-west to south of Hampden Downs No.3 Bore.	Flat- lying hill cappings	Chain of flat-topped hills.	Unconformably overlies Mackunda Beds & Winton Formation. ?Tertiary	Named and defined this report.
WINTON FORMATION (Kuw)	1,000 approx. (top eroded) possibly thickening to south-east.	Thickly to massively interbedded arkose and siltstone, arkosic lime- stone, calcareous arkose. Indeterminate plant fragments.	South-east quarter of area.	Dipping very gently south- eastwards.	Rolling downs and in duricrust- capped hills.	Unconformably overlain by Edkins Formation, conformably overlies Mackunda Beds. Lower-Upper Cretaceous.	Whitehouse, 1954
MACKUNDA BEDS (Klm)	300-500 (estimated)	Thinly interbedded arkose & siltstone with medium- bedded arkose, calcareous arkose & arkosic limestone. Shelly fossils, plant frag- ments.	Arcuate belt approx. 12 miles wide, extending from the Swords Range to east of Hamilton Downs; sub-surface to the south-east.	Dipping very gently south- eastwards.	Rolling downs and in duricrust- capped hills.	Conformably overlain by Winton Formation, conformably overlies Wilgunya Formation. Lower Cretaceous.	Vine, 1962.
WILGUNYA FORMATION						Conformably overlain by Mackunda Beds, conformably overlies Longsight Sandstone. Lower Cretaceous.	Casey, 1959. Casey et al., 1960. Reynolds, 1960.
UPPER MEMBER (Klw ₂)	700-1000, thickening to south- east.	Blue & grey claystone and siltstone, silty limestone, cone-in-cone limestone. Shelly fossils.	South-west, centre and north of sheet area; sub-surface to south-east.	Dipping very gently south-eastwards, faulted in west.	Rolling downs and in duricrust- capped hills.		
TOOLEBUC MEMBER (Klt ₂)	30	White, grey & pink limestone, coquinite, calcareous shale. Shelly fossils, fish scales, wood fragment.	South-west margin of sheet area, & south of Strathfield Homestead; sub-surface farther east.	Dipping very gently south-eastwards, faulted in west.	Low ridge and knolls, rubble-covered plain.		
LOWER MEMBER (Klw ₁)	450-550	Blue & grey claystone and siltstone, silty limestone.	Sub-surface throughout most of the area.	Dipping very gently south- eastwards, faulted in west.			
LONGSIGHT SANDSTONE (Kll)	10-700'	Sandstone, "pipe clay" (drillers' term), conglomerate.	Sub-surface throughout most of the area.	Dipping very gently south-eastwards, faulted in west. Thick- ening eastwards, thinning over basement ridges, thickening in basement depressions.		Conformably overlain by Wilgunya Formation, unconformably overlies Precambrian metamorphics. Late Jurassic - Lower Cretaceous.	Casey, 1959. Casey et al., 1960.
PRE-MESOZOIC		"Granite", "diorite", "schist", "slate", "hard rock", "bedrock", "hard formation", "red rock", "red marl", "quartz", "quartz & mica rubble" recorded by drillers below Longsight Sandstone.	Sub- surface only.	Probably faulted		Probably mainly Precambrian igneous and metamorphic rocks. Red rock and red marl mainly in basement depressions, could be younger deposits.	
20. Metasediments (pl)		Mica schist, amphibolite.	Small outcrops on Mayfields Station in north-west.	Steeply dipping, possibly on crest of tilted horst.		Unconformably overlain by Longsight Sandstone.	

PLATE II



Figure 1 - Conglomerate and inter-laminated sandstone and siltstone of the Edkins Formation, type section on Whiskey Nobbler Hill, one mile west of Kynuna Town Bore.

B.M.R. Negative M/138

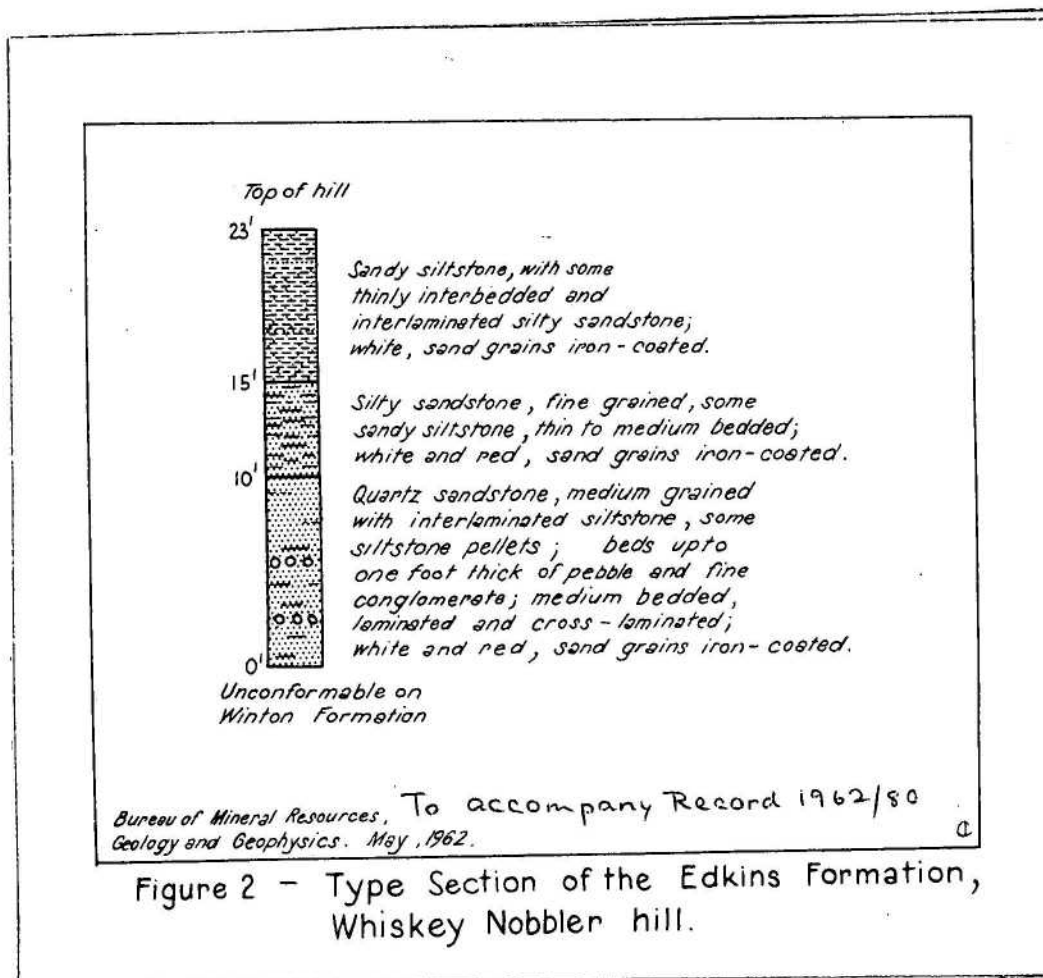


Figure 2 - Cross-laminated and inter-laminated sandstone and siltstone of the Edkins Formation (fallen block), Whiskey Nobbler Hill, one mile west of Kynuna Town Bore.

Edkins Formation

The Edkins Formation is defined as a flat-lying sequence of conglomerate, thin-bedded, interlaminated and cross-laminated sandstone and siltstone, and thin-bedded to massive sandy siltstone (Plate 2). It overlies deeply weathered sediments of the Mackunda Beds and Winton Formation, and is itself partly leached and silicified. The upper surface is erosional.

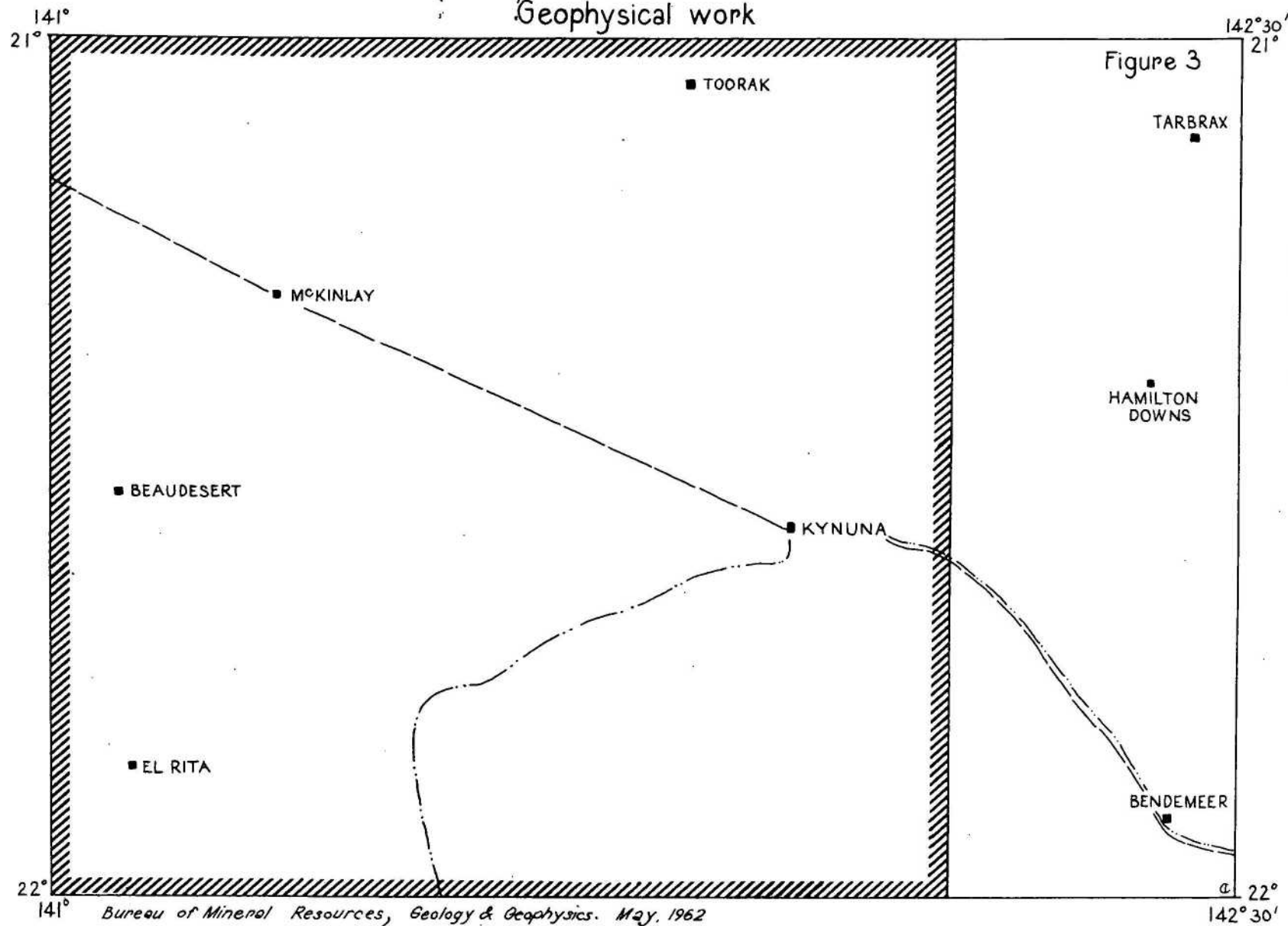
It is named from Mt. Edkins, a prominent flat-topped hill, capped by the unit, and situated 3 miles west of the Kynuna Town Bore. The type section (Figure 2) was measured on a small conical hill, known locally but informally as Whiskey Nobbler (Lat. $21^{\circ} 35'S$, Long. $141^{\circ} 52'E$), two miles east of Mt. Edkins and one mile west of the Kynuna Town Bore.



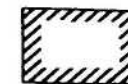
The unit forms the cappings of a chain of dominantly flat-topped hills extending westwards from Whiskey Nobbler and Mt. Edkins along the northern bank of the Diamantina River to Mt. Salmond and thence north-westwards to south of Hampden Downs No. 3 Bore, a total distance of nearly 20 miles. On some of the hill tops only the sandy siltstone facies has been preserved and this is usually strongly silicified. All the

MCKINLAY

Geophysical work



Reference



*Bureau of Mineral Resources
helicopter gravity survey.*



*Sydney University
gravity traverse.*



*Mines Administration
gravity traverse.*

5 0 5 10 15 Miles

Bureau of Mineral Resources, Geology & Geophysics. May, 1962

To accompany Record 1962/80

outcrops are erosional residuals, the type section of 23 feet was the thickest ~~one~~ seen.

Little evidence is available for the original extent of the unit, although the present roughly linear distribution suggests that deposition was confined to a belt, rather than widespread. The lithologies and bedding indicate deltaic conditions, and exposures such as that illustrated in Plate 2, Fig. 2 suggest an unidirectional current. It is probable, therefore, that the Edkins Formation was laid down in a valley, during temporary damming into a lake. The present distribution of the unit would, therefore, indicate an earlier course of either the Diamantina River or one of its major tributaries.

Dating of the Edkins Formation is rather uncertain. It is younger than the Winton Formation, which it overlies unconformably, and the extent to which it has been eroded suggests that it is older than the Quaternary. It is, therefore, tentatively assigned to the Tertiary.

STRUCTURE

Distribution of the stratigraphic units shows a regional very gentle dip to the south-east. The only sharp structure recorded by the surface mapping was a fault on Dingading Station, and extending on to El Rita Station; this fault is here named the Dingading Fault. Its surface expression is a line of steep dips, varying between 55° and 65° west. Gentle east dips west of the fault cancel out the regional effects in distances of between 4 and 8 miles. The throw of the fault is estimated from these dips at 200 feet, with the west side downthrown.

Geophysical work in the area is limited to gravity surveys; these are listed on page 4 and their locations shown in Figure 3. The results of the surveys, though somewhat conflicting are best interpreted as being dominated by basement lithologies and relief. The results of the Bureau of Mineral Resources helicopter gravity survey are shown on Plate III.

A ^Pphoto-interpretation of the sheet (de Lassus St. Genies, Perry and Scanvic, 1962) showed the trace of the Dingading Fault and delineated the duricrust-capped areas. The radial pattern of the tributaries of the Diamantina River and the striking circular trace of the river itself was interpreted as structure in the underlying rocks. Neither the gravity results, nor the rather sparse bore log information shed

any light on this problem.

Numerous bores have been drilled to the Longsight Sandstone, particularly in the northern and western parts of the area. From an analysis of the drillers' logs structural contour maps and isopachs of the Longsight Sandstone have been drawn (Plates IV - VI). These give a picture of considerable pre-Longsight relief, somewhat modified by the time deposition of the Longsight Sandstone was completed. Plate IV also shows the various pre-Longsight lithologies recorded by the drillers. Low parts between "granite" and other pre-Longsight highs in the central part of the area are occupied by "red rock" or "red marl" according to the drilling logs.

In the north-west of the area and extending into the Julia Creek sheet area is a very sharp linear crowding in the structural contours of both the top and the bottom of the Longsight Sandstone, but the isopachs indicate no thinning over pre-existing ridges or scarps. This suggests a fault, with downthrow to the east of about 900 feet. The outcrops of Precambrian basement are immediately west of this fault, and further west the base of the Longsight Sandstone dips west. The outcrops are, therefore, probably situated at the crest of a tilted horst.

GEOLOGICAL HISTORY

Apart from two small outcrops of mica schist and amphibolite on Mayfields Station, the evidence of the early geological history of the McKinlay area is suggested entirely by the drillers' logs. These indicate that much of the area has Precambrian metamorphic or igneous rocks underneath the Mesozoic sequence, probably a continuation of the belt of mineralised Precambrian rocks which form the highlands of north-west Queensland.

At the bottom of some of the basement hollows or valleys drillers record "red rock" or "red marl". This is quite possibly a sedimentary rock, younger than the Precambrian, either of local extent only or mainly eroded before the deposition of the Longsight Sandstone. One bore record in the Mackunda area (Vine, 1962) and several in the Julia Creek area (Vine and Jauncey, 1962) also show red rock or red marl.

The main sedimentation on the Boullia Shelf since deposition of the red rocks began with the Longsight Sandstone. Casey et al (1960) showed that this was at first a freshwater

or non-marine, arenaceous deposit, which later became brackish and finally marine. It was followed by the Wilgunya Formation, the deposit of a very muddy sea, with one interval of clear water during which the Toolebuc Limestone Member was formed.

The Mackunda Beds represent alternation of marine and non-marine conditions in a transitional period between the marine Wilgunya Formation and the non-marine Winton Formation. This was possibly in the form of floods of brackish or fresh water carrying terrestrial, arenaceous material into a shallow sea. The gradation to the deposits of the Winton Formation represents the blocking of access to the open sea and the development of a large lake or inland sea. Cretaceous sedimentation was probably brought to a close with the filling of the basin or by gentle tilting and drainage.

A drainage system was initiated at this stage. It is unlikely that it bears more than a superficial resemblance to the present system, except perhaps some parts of the Diamantina River. The early drainage would have been very sluggish across the gentle surface of the infilled basin, and in the absence of strong mechanical erosion, chemical weathering would have started.

The extent of the original surface, with sluggish rivers and chemical weathering, is largely a matter of supposition, but it is likely that it originally extended to the north of the McKinlay area, and the parts of it which now form the hill cappings in the southern part of the area are but relicts of a much larger surface. At this stage the ancestral Diamantina may have had many large tributaries rising far to the north, these having since been gradually captured by rivers of steeper gradient flowing to the Gulf of Carpentaria. The Edkins Formation may mark the trace of one such early tributary.

The duricrust was probably formed over a long period of time. The earliest laterite may have been formed shortly after deposition of the Winton Formation ceased, and chemical weathering in the south probably continued while the northern part of the area was being eroded. Silicification, and the forming of silcrete was possibly a later effect, as various parts of the lateritic profile are affected. Some of the silicification was later than the deposition of the Edkins Formation.

There is little evidence of the date of the main tectonic activity in the area. Both the Dingading Fault and the inferred fault in the north-west affect all members of the Wilgunya Formation and the Longsight Sandstone. The faulting is, therefore, post-Lower Cretaceous. The duricrust surfaces on each side of the Dingading Fault are at approximately the

same elevations, although on El Rita Station the laterite profile appears to be slightly folded. The present drainage is unrelated to the tectonic lines, and in the northwest the alluvium completely masks all surface trace of the fault.

ECONOMIC GEOLOGY

Underground Water

Abundant supplies of potable water are obtained from the Longsight Sandstone throughout most of the area, but more particularly in the western half where the aquifers are fairly shallow. Analyses of water from most of the bores are available from the Irrigation and Water Supply Commission, Brisbane. Many of the bores were once flowing, but with the regional decrease in head in these aquifers the only flowing bores are now in the north of the area at the lowest topographic levels (below 550 feet above mean sea level).

In the eastern half of the area the Longsight Sandstone is too deep to be economically tapped for pastoral use, and most property owners now prefer to sink large earth tanks.

Smaller, and less reliable supplies are obtained from the Winton Formation and the Mackunda Beds. Some of these are brackish, and some bores drilled into the Winton Formation are unusable because the water is too saline. No clear control is evident for the distribution of saline water nor the quantity of water available.

Opal

Small amounts of precious opal have been found in the hill country south-west of Kynuna Station. The occurrences appear to be restricted to the Winton Formation. Kynuna is mentioned in some popular books on gemstones as a locality for opal, so sporadic, non-systematic prospecting occasionally takes place. Some pieces of opal collected by prospectors on a weekend trip in 1961 were of good quality, though not of large size. More precious opal is likely to be collected in this area, but no indication can be given of the amount which could be found.

Road Metal

Leached and silicified material suitable for surfacing gravel roads is present around the margins of duricrust hills in the south of the area. On the rolling downs the only possible

sources of road metal are the resistant calcareous arenites of the Winton Formation and Mackunda Beds. The life of the material would probably be short once crushed due to its susceptibility to solution. West of the McKinlay River the alluvium is mainly sand, with some gravel beds, and could be used for foundations for bitumen roads.

Building Materials

The Toolebuc Member has some very pure limestone; Reynolds (1960b) records an analysis of 90% CaCO_3 of a sample from the unit. This would probably be suitable for the manufacture of lime. The unit is extensive in the west of the area, but is only 30 feet thick, of which approximately half is limestone.

Aggregate for concrete is obtainable from gravel in the alluvium west of the McKinlay River. Sand is restricted to this alluvial belt.

Petroleum

An interesting feature of the area is the number of bores from which petroleum traces have been reported by drillers. The information on these is summarised in Table 2:

Table 2

PETROLEUM TRACES IN THE MCKINLAY AREA

<u>Registered Number</u>	<u>Bore Name</u>	<u>Lithology (Drillers' terms)</u>	<u>Depth (feet)</u>	<u>Height above Longsight Sandstone</u>
2561	No. 14 (Eulolo)	Kerosene shale	674-719	275-310
2562	No. 15 (Eulolo)	(Oily shale Black oily shale	720-740 950-1100	480-500 120-270
2563	Glenbede	Kerosene shale	408-478	602-672
2564	Quart Pot (Kooroora)	Oily shale	670-450	445-525
2568	No. 20 (Eulolo)	Oily black shale with beds of rock	134-472	531-869
2600	No. 19 (Strathfield)	Kerosene shale	360-460	312-412
2606	Nettle Creek (Beaudesert)	Oily shale	300-550	237-487
2608	Maori Downs	Oil shale	300-550	250-500
2618	Dud (Beenfields)	Kerosene shale	248-258	?470- ?480
3260	No. 11 (Kynuna)	Brown shale with fossil shells smelling strongly of kerosene	1224-1260	424-460
3272	Rosevale	Little gas	?	?
4626	Coolreagh	Gas in flow	?	?

The distribution and thicknesses involved in these records shows quite clearly that some attention must be paid to the marine Cretaceous as possible source beds. These are only drillers' interpretations and there is possible confusion caused by organic matter in mud coming from the holes giving appearance of oily material.

Within the McKinlay area possible reservoir rocks are limited to arenites in the Winton Formation. The top of this unit has been eroded; the thickest preservation is in the south-east of the McKinlay area. The Longsight Sandstone would be an ideal reservoir if it was not so thoroughly flushed by meteoric water.

RECOMMENDATIONS

Three problems have arisen from the analysis of drillers' logs which can only be resolved by further work.

1. Age and lithology of the "red rock" and "red marl".
From the drillers' descriptions it is likely that the pre-Cretaceous rocks referred to as "red rock" and "red marl" are not Precambrian metamorphic or igneous rocks. This can only be tested by a stratigraphic well. The most suitable locality is near Eulolo No. 15 Bore (Registered Number 2562), and will also serve to test two zones of "oil shale" recorded by the driller (see Table 2).
2. The extent and nature of the basement relief. This is only inferred from interpretation of bore logs. Aeromagnetic work may be able to give some indication of major relief and comparison with the general picture given by bore logs. Seismic work will give a more detailed picture of the basement relief and reveal evidence of later faulting. It could also show if there is a structural high in the area drained by the Diamantina River system.
3. The fault in the north-west. This is, as yet, only inferred from the interpretation of bore logs and basement outcrops. Basement is at such shallow depths (less than 1000 feet) that variations within it would almost certainly produce the gravity or magnetic anomalies. It is recommended that one seismic traverse be run east from the outcrops of basement on Mayfields Station across the line of the fault. If this shows the fault clearly, further traverses are needed to the south to delineate

the southerly continuation and variations in throw. Further traverses to the north in the Julia Creek area will also be required.

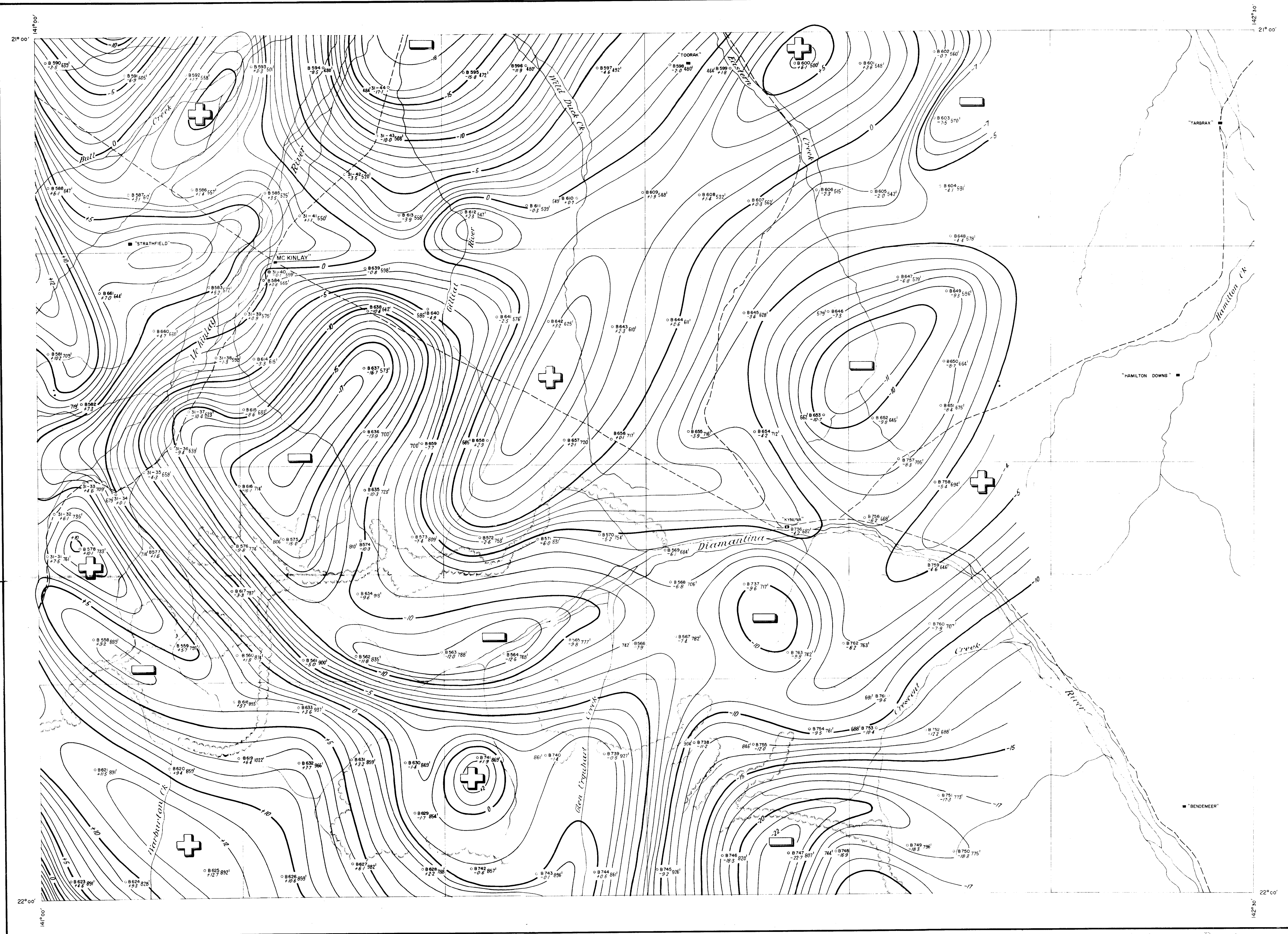
4. The Dingading Fault: the east side of the fault is a suitable location for testing at shallow depths (500-700 feet) the Longsight Sandstone as a possible reservoir for petroleum accumulation. Here the very porous unit is faulted and folded. The area could form a trap for petroleum drainage from deeper parts of the basin. It is of interest that most of the drillers' records of oily shale and kerosene shale are in the western half of the sheet.

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LOCATION



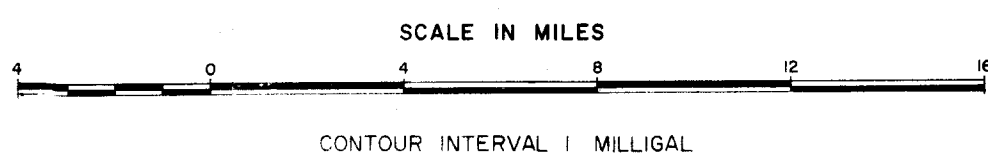
CLONCURRY	JULIA CREEK	RICHMOND
DUCHESS	MC KINLAY	MANUKA
BOULIA	WACKINDA	WINTON

REFERENCE TO AUSTRALIAN NATIONAL 4 MILE MAP SERIES

MAP DATA

PROJECTION: TRANSVERSE MERCATOR, AUSTRALIAN SERIES
 CONTROL: NATIONAL MAPPING 4 MILE CONTROLLED PHOTOMAP WITH THE SAME NAME
 DETAIL: B.M.R. LAND TRAVERSES PLOTTED FROM FIELD NOTES WITH THE AID OF THE DEPT. OF THE INTERIOR 4 MILE GRAVITY SURFACE CONTROL MAP
 B.M.R. HELICOPTER TRAVERSES IDENTIFIED FROM AIR PHOTOGRAPHS AND SUBSEQUENTLY PLOTTED ON THE BASE MAP
 RELIABILITY: PLANIMETRIC - RELIABLE SKETCH
 GEOPHYSICAL - GRAVITY RECONNAISSANCE

RECONNAISSANCE GRAVITY SURVEY (1959)
 GREAT ARTESIAN BASIN, QLD
 BOUGUER ANOMALIES



LEGEND

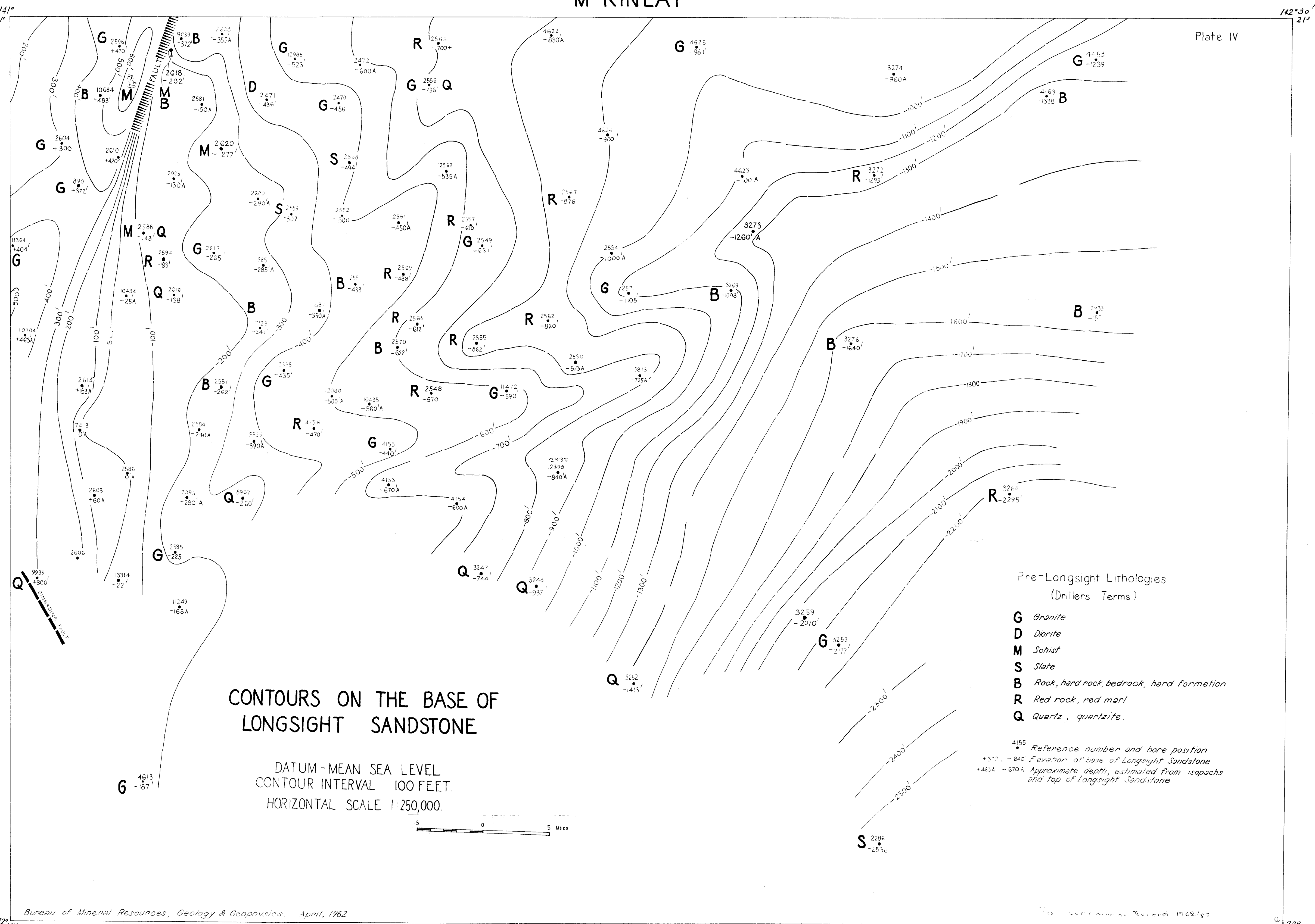
ROAD	WATERCOURSE (KNOWN PERMANENT)
TRACK	HOMESTEAD
TRIG STATION	ASTR STATION
B.M.R. STATION	ISOGALS
-92	RELATIVE BOUGUER ANOMALY (MILLIGALS)
926	ELEVATION
	HIGH ANOMALY
	LOW ANOMALY

EXPLANATION

RELATIVE BOUGUER ANOMALIES ARE BASED ON THE OBSERVED GRAVITY VALUES -1 FOLLOWING B.M.R. PENDULUM STATIONS:
 N° 55 CLONCURRY 978,650.7 MILLIGALS
 N° 56 BOULIA 978,791.9 MILLIGALS
 FOR THE CALCULATION OF BOUGUER ANOMALIES 1.9 GR/CCM HAS BEEN ADOPTED AS AN AVERAGE ROCK DENSITY
 NOTE: TOPOGRAPHY AND CULTURAL FEATURES SHOWN ONLY TO LOCATE GEOPHYSICAL DATA

MCKINLAY

Plate IV



CONTOURS ON THE BASE OF
LONGSIGHT SANDSTONE

DATUM - MEAN SEA LEVEL
CONTOUR INTERVAL 100 FEET.
HORIZONTAL SCALE 1:250,000.

Pre-Longsight Lithologies
(Drillers Terms)

- G Granite
- D Diorite
- M Schist
- S Slate
- B Rock, hard rock, bedrock, hard formation
- R Red rock, red marl
- Q Quartz, quartzite.

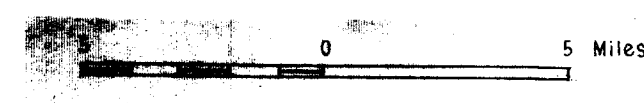
4155 Reference number and bore position
+372, -640 Elevation of base of Longsight Sandstone
+463A - 670A Approximate depth, estimated from isopachs and top of Longsight Sandstone

MCKINLAY QUEENSLAND

Plate V.

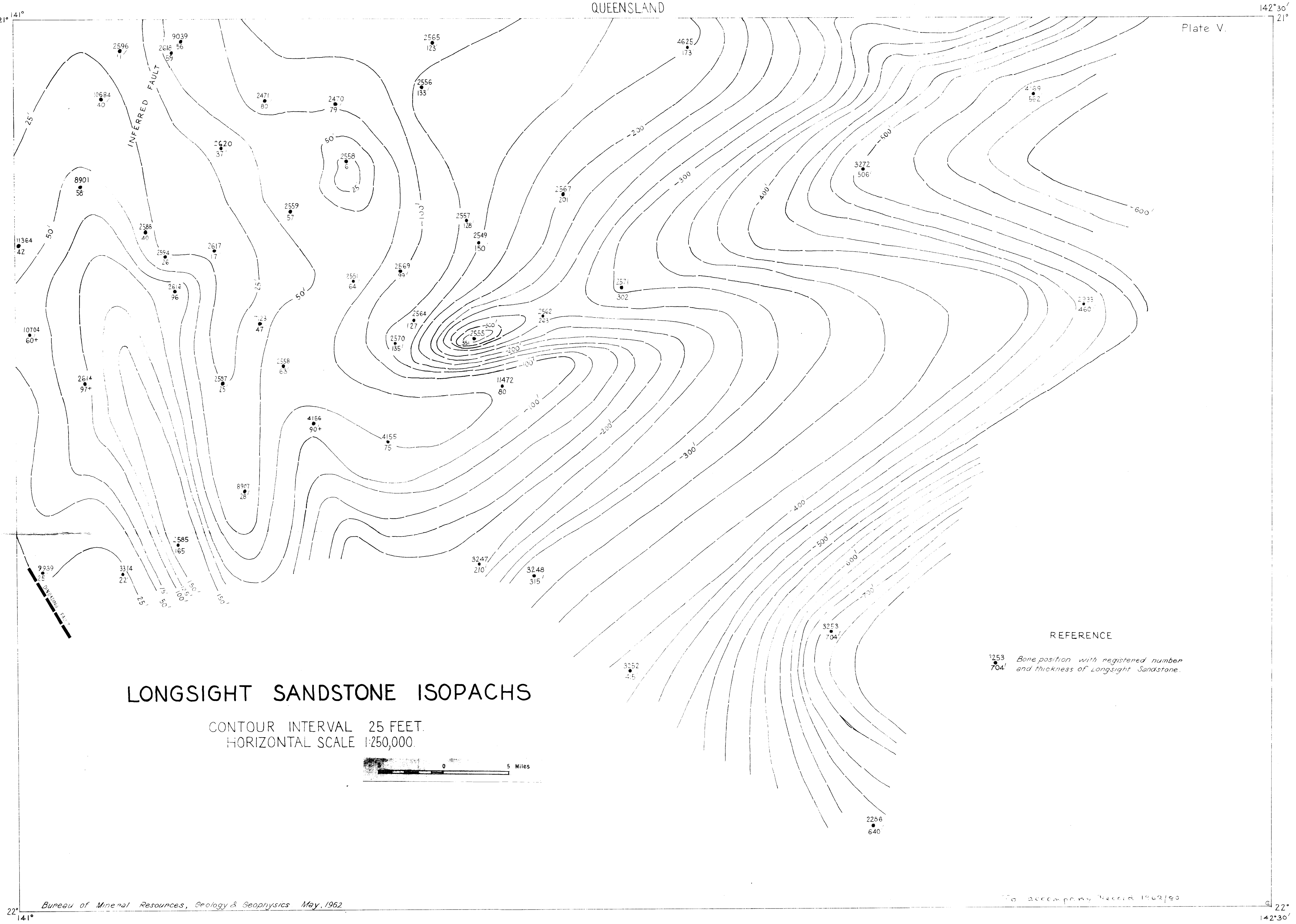
LONGSIGHT SANDSTONE ISOPACHS

CONTOUR INTERVAL 25 FEET.
HORIZONTAL SCALE 1:250,000.



REFERENCE

3253 Bore position with registered number
704' and thickness of Longsight Sandstone.



MCKINLAY

Plate VI

CONTOURS ON THE TOP OF THE LONGSIGHT SANDSTONE

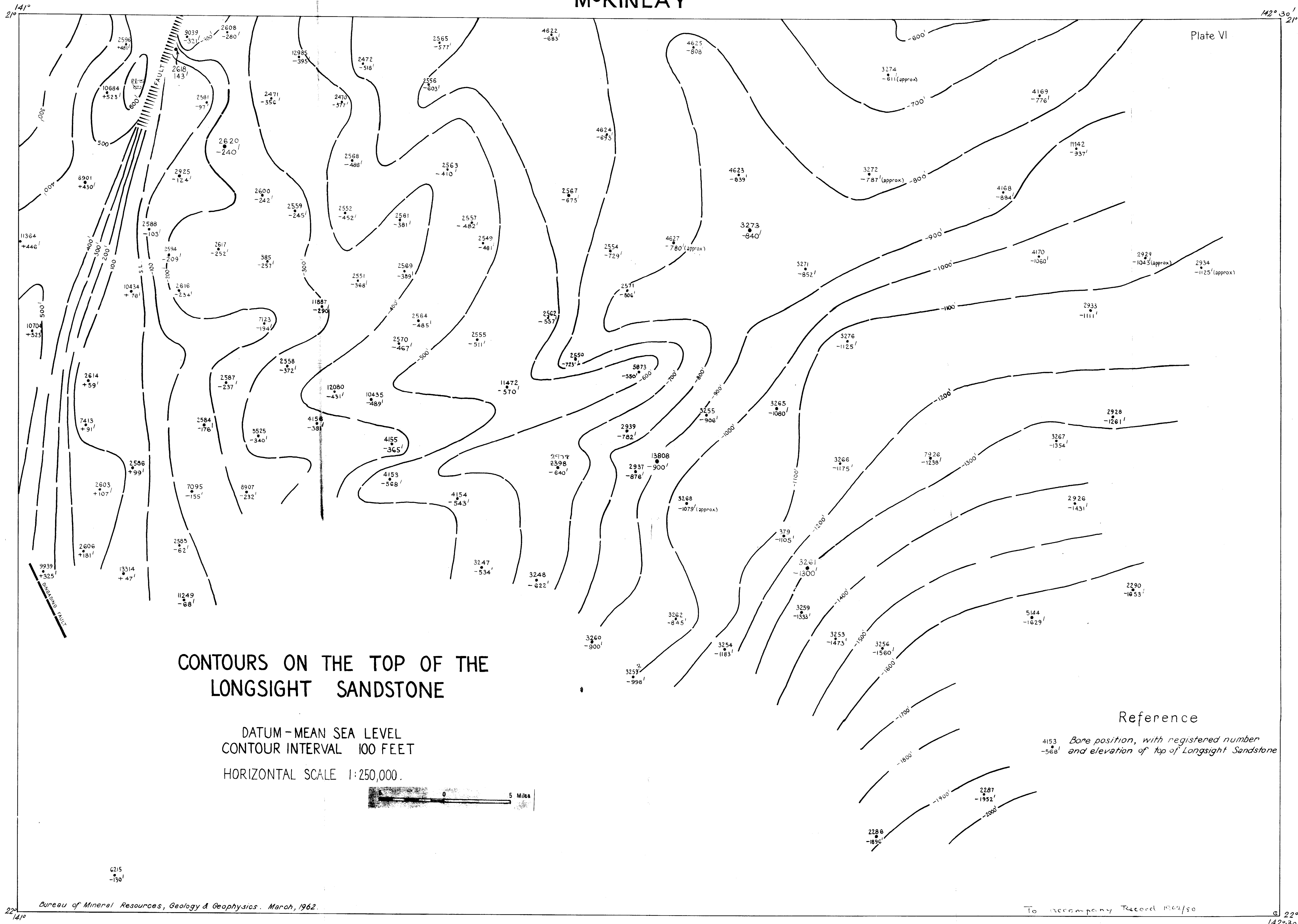
DATUM - MEAN SEA LEVEL
CONTOUR INTERVAL 100 FEET

HORIZONTAL SCALE 1:250,000.



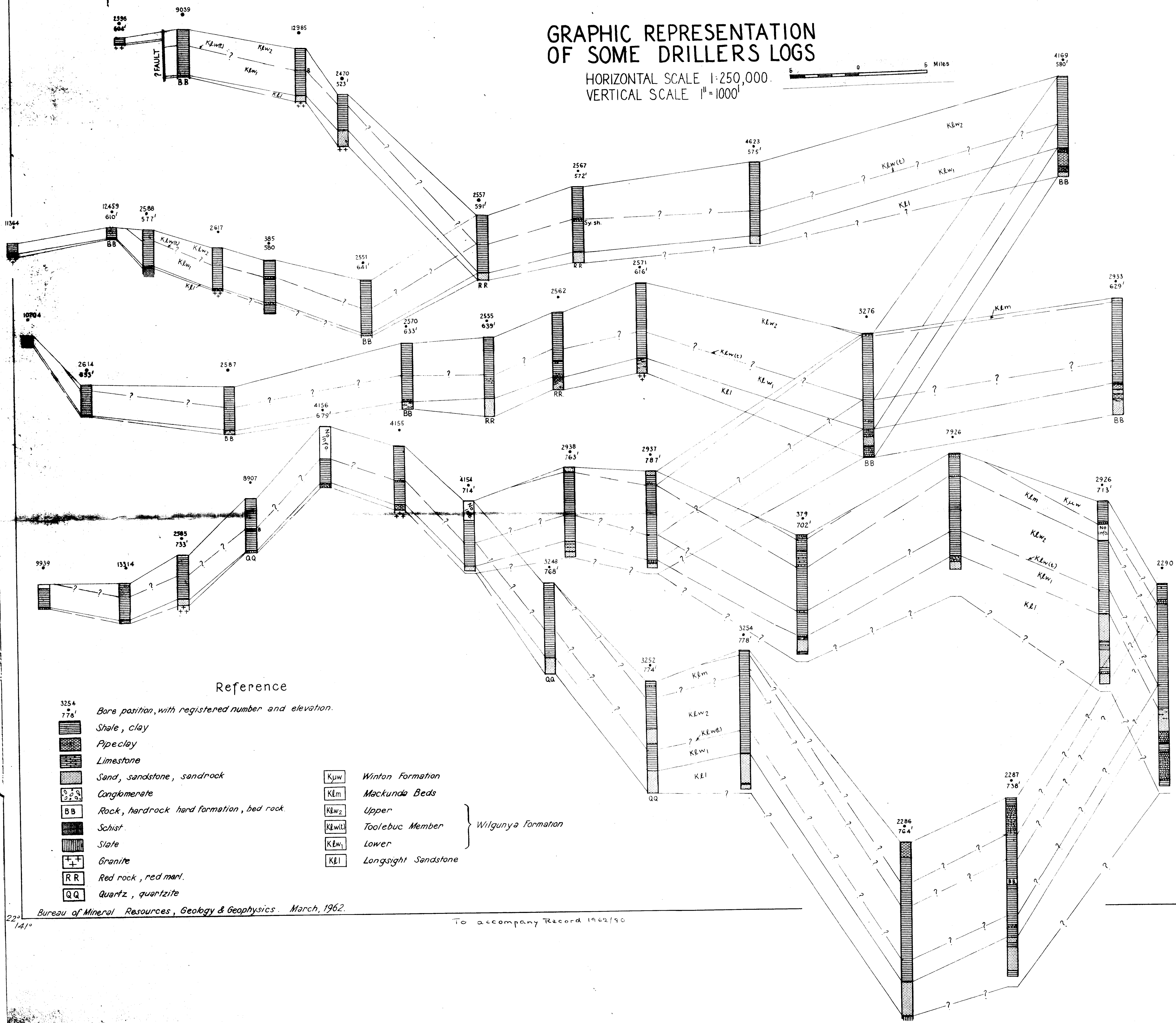
Reference

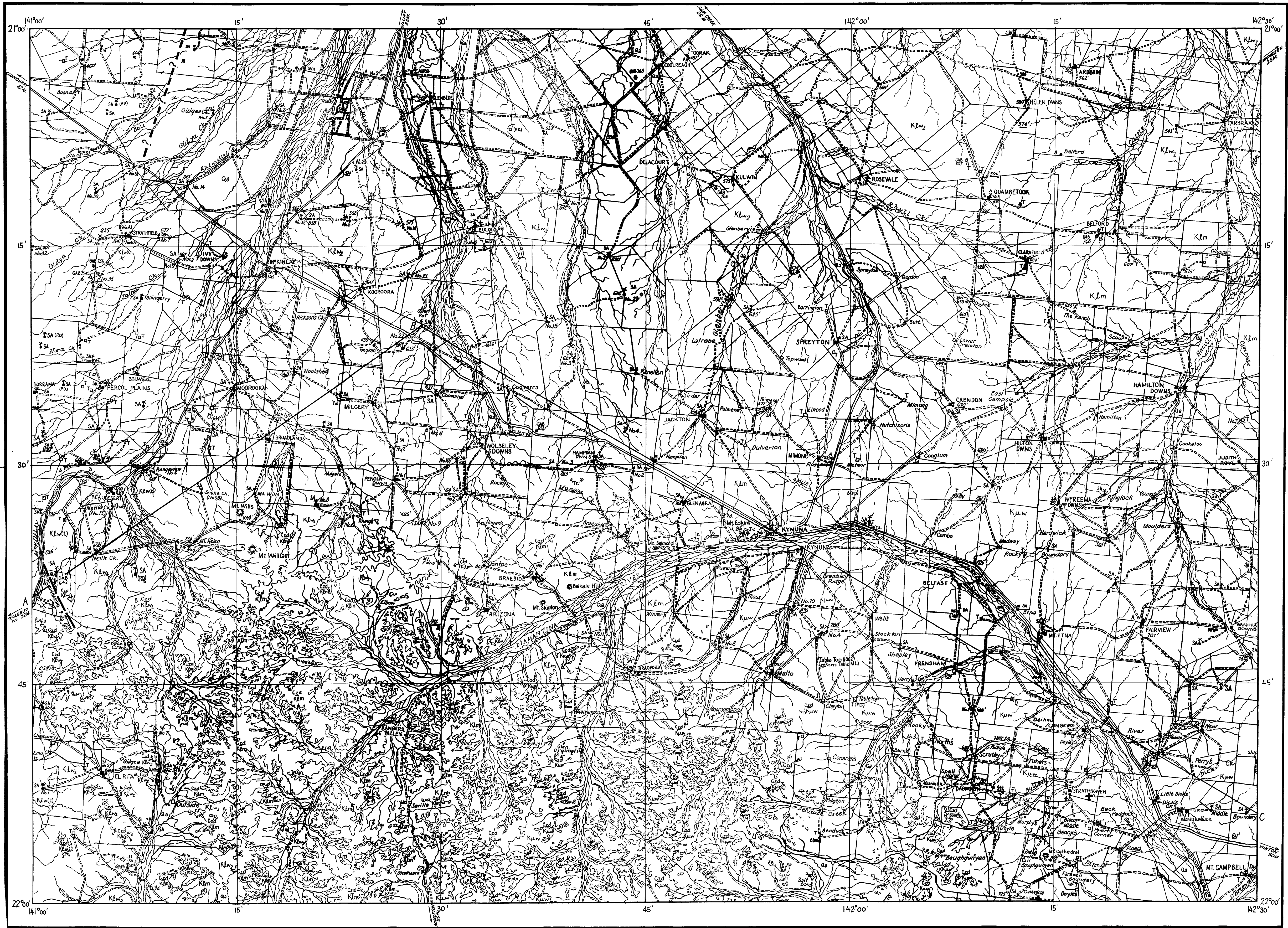
4153 Bore position, with registered number
-568' and elevation of top of Longsight Sandstone



GRAPHIC REPRESENTATION
OF SOME DRILLERS LOGSHORIZONTAL SCALE 1:250,000.
VERTICAL SCALE 1"=1000'

0 5 Miles





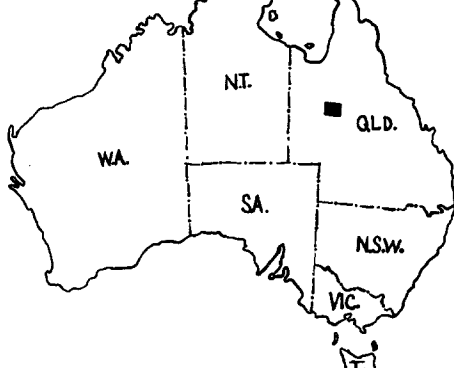
Reference

CENOZOIC	QUATERNARY	Qa	Alluvium	
	UNDIFFERENTIATED	Czd	Duricrust (silcrete, laterite)	
	TERTIARY	Edkins Formation	Te	Conglomerate, sandstone, siltstone
MESOZOIC	? UPPER CRETACEOUS	Winton Formation	K _W	Arkose, siltstone, arkasic limestone
		Mackunda Beds	K _{lm}	Arkose, siltstone, arkasic limestone
	Wigganys Formation	Upper	K _{W2}	Mudstone, limestone, sandy limestone
		Toolebuc Member	K _{W(t)}	Limestone, calcareous shale
		Lower	K _{W1}	Mudstone, limestone sandy limestone
		Longsight Sandstone	K _L	Sandstone, conglomerate
	? LOWER PROTEROZOIC		Unconformity	
			El	Migmatite, schist, amphibolite

- Geological boundary, position approximate.
K65 Strike and dip of strata
Fault, position approximate.
Fault, inferred, concealed
GAB 652 Macrofossil locality and reference number
GAB 657 Plant fossil locality and reference number

- Road
Vehicle track
Artesian bore
Sub-artesian bore
Abandoned bore
Dud bore
Earth tank
Dam
Building
Yard
Windmill
Fence
Dog netting fence
Landing ground
Instrument levelled height feet above mean sea level
Barometric spot height

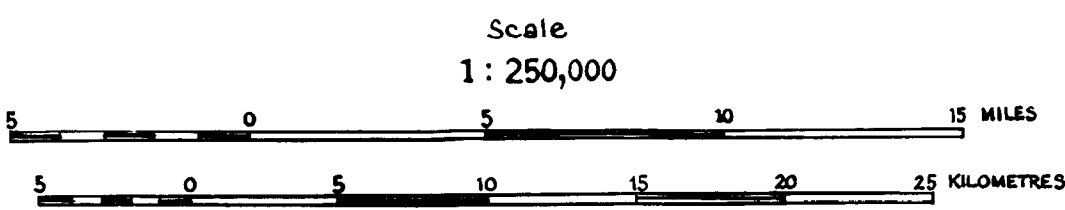
Compiled and published by the Bureau of Mineral Resources, Geology and Geophysics, Department of National Development. Topographic base compiled by the Division of National Mapping and the Bureau of Mineral Resources, Geology and Geophysics, Department of National Development. Aerial photography by the Royal Australian Air Force; complete vertical coverage at 1:40,000 scale. Transverse Mercator Projection.



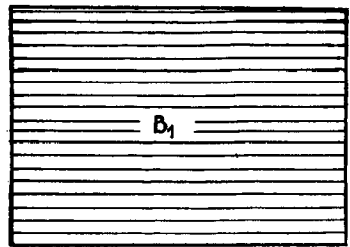
INDEX TO ADJOINING SHEETS
SHOWING MAGNETIC DECLINATION

CLONCURRY	JULIA CK.	RICHMOND
DUCHESSE	McKINLAY	MANUKA
BOULIA	MACKINNA	WINTON

ANNUAL CHANGE 2° E

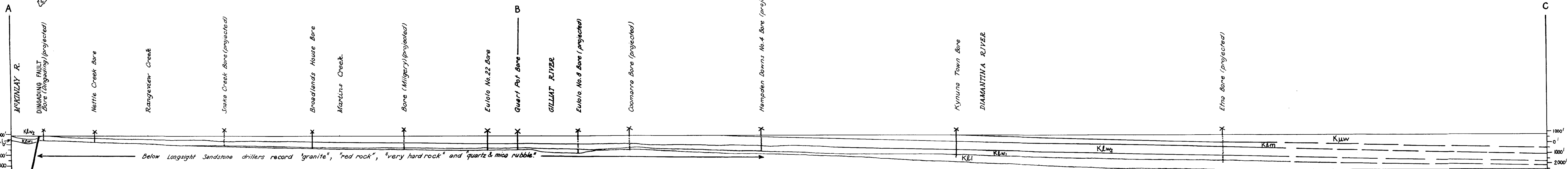
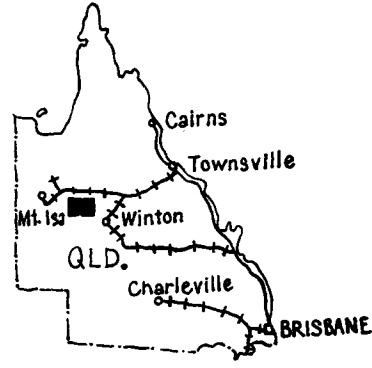


GEOLOGICAL RELIABILITY DIAGRAM



B1 Detailed reconnaissance - numerous traverses and air-photo interpretation.

Geology by: R.R. Vine, W. Juncney
Compiled Dec. 1961, by: R.R. Vine, W. Juncney.
Drawn by: I. Chertok.



COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS

RECORDS

Pt. 2 of 2

APPENDIX "A" TO RECORDS 1962/80

BORE DATA - MCKINLAY.

(WITH APPENDICES "B" AND "C")

PART 2
of 2

APPENDIX A to RECORDS 1962/80

BORE DATA - McKINLAY

Information on all bores in the McKinlay Sheet area, collected from the Irrigation and Water Supply Commission, Brisbane, and from property owners and managers, is listed in this appendix.

The order of listing is numerical by the registered numbers allocated to water bores by the Irrigation and Water Supply Commission.

Abbreviations used in this appendix are as follows:

<u>Position</u>	Mi Miles	}	FROM Kynana Township (K.) OR McKinlay Township (Mc.)
	N North		
	S South		
	E East		
	W West		

Elevation 868. Elevation of ground surface at bore, barometric measurement, or method of survey unknown.

I868 Elevation of ground surface at bore, instrument levelled height.

Standing water level

S.A. Present level unknown, pumping from below surface.

Water Quality

P	Potable
F	Fresh
G	Good
B	Brackish
S	Salty or saline

Drillers' Log

Bd.	band	P.cl.	pipe clay
Bk.	black	Pk.	pink
Bl.	blue	Qtz.	quartz
Bld.	boulder	Qtzite.	quartzite
Br.	brown	Rd.	red
Cl.	clay	Rk.	rock
Cong.	conglomerate	S.	Sand
Cs.	coarse	Sh.	shale
Dk.	dark	Shy.	shaly
F.	fine	Sst.	sandstone
Fm.	formation	St.	stone
Gn.	green	Stk.	streak
Gvl.	gravel	Stky.	sticky
Gy.	grey	Sy.	sandy
Hd.	hard	T.D.	total depth
Lts.	limestone	v.	very
Lt.	light	w.	with
N.O.I.	no other information	Wh.	white

APPENDIX A to RECORDS 1962/80

BORE DATA - MCKINLAY

<u>Reg.No.</u> <u>Name</u> Property	<u>Position</u>	<u>Elev-</u> <u>ation</u> (feet)	<u>Driller</u> <u>Year</u> Completed	<u>Standing</u> <u>water</u> <u>level</u> <u>Pump</u> <u>depth</u> (feet)	<u>Struck</u> (feet)	<u>Rose</u> <u>to</u> (feet)	<u>WATER</u> <u>Supply</u> (g.p.d.)	<u>Quality</u>	<u>Temp.</u> <u>°</u> <u>F</u>	<u>Drillers Log</u>
Column A	Column B	Column C	Column D	Column E	Column F	Column G	Column H	Column I	Column J	Column K

Throughout this appendix the columns are indicated by the letters A to K. The full headings are given above.

Position from Kynuna Township indicated by (K.)
 " " McKinlay Township " " (Mc.)

[illegible]

2.

A	B	C	D	E	F	G	H	I	J	K	
379										0- 1836 Sy.cl.	- 2040 Cs. sst.
Kynuna										at - 1836 Lst	- 2070 Sst. bds. p.cl.
TOWN										- 1857 Plastic cl.hd.bds.	- 2073 Cl.
(cont.)										- 1883 Bl.gy.sst.	- 2086 Sst.p.cl.
										- 1890 Sg. cl.	- 2156 Sst., carb. wood.
										- 1904 Cl. & mud	- 2179 Sy.sh.
										- 1910 Shy.s. rk.	- 2194 Sst.
										- 1931 Cl. & sst.w.p.cl.	- 2208 Gy.sh.
										- 2034 Cs.sst.	- 2221 Choc.gy.cl.
										- 2036 Gn.sst.	
385	½ Mi E. L580		S.A.	306	256	?	?			0- 88 y.sh.	- 837 Bl.sh.
McKinlay	Mc.			897	Sur-	214,000	P	108		- 300 Bl.sh.	- 897 Gy.sst.
TOWN					face					- 310 Sst.	- 1002 Bl.sh.
1325	38 Mi ESE		1917	S.A.						T.D. 551'	NOI
?											
DONALD	K										
DOWNS											
1326	37 Mi. ESE		1917	S.A.						T.D. 400'	N.O.I.
?											
DONALD	K										
DOWNS											
1327	33 Mi. ESE		1918	S.A.						T.D. 200'	N.O.I.
?											
DONALD	K										
DOWNS											

DRILLERS LOG

A	B	C	D	E	F	G	H	I	J	K
2286	24 Mi.									
No. 1	SSE K	764	1893	S.A.	3300	Sur-	775,000 F	196	0- 300 Rd. Loamy soil w	- 3300 Sst.
DAGWORTE						face			stks wh.p.cl.	- 3335 Slate
									- 2660 Sh.	
									- 2700 Dry s.	
2287	25 Mi.	738	I.B.C.	S.A.	2700	Sur-			0- 140 y.rk.& cl.	- 2136 Hd.sh.& rk.
House	SE K		1898		to	face	F		- 714 Sy.sh. & rk.	- 2180 Rk. & bk.sh.
DAGWORTE					3319				- 1499 Sh.	- 2425 Caving sh.
									- 1631 Hd.rk.	- 2500 S.rk. sh.
									- 1870 Caving sh.	- 2552 Rk.sh.
									- 1951 Gy.sh.	- 2690 Caving sh.

DRILLERS LOG

A	B	C	D	E	F	G	H	I	J	K	
2287	Dagworth	House	(cont.)							O- 2765 S.rk. - 2851 Sh. - 2953 Sst.	- 3319 Hd. sst. - 3400 Caving sh.
2288	19 Mi.	Dud	SE K	Dagworth					T.D. 600'	N.O.I.	
2290	27 Mi.	No.2	E K	FAIRVIEW	1926	S.A.	2360	80		O- 89 y.cl. - 128 Bl.sh. - 209 Gy.sh. - 307 Dk.sh. - 367 Lt.sy.sh. - 489 Dk.sh. - 685 Lt.sh. - 791 Gy.sh. - 1242 Lt.sh. - 1585 Dk.sh. - 1706 Lt.sh. - 1917 Bk.sh. - 2363 Lt.sh. - 2396 Gy.sy.sh. - 2426 sl.rk. - 2467 Stkypcl. - 2509 s. rk. - 2520 P. cl. - 2549 s. rk. - 2591 P. cl. - 2707 Hd.s.rk. - 2727 Hd. sst. - 2811 S. rk.	- 2879 Sy.sh. - 2883 S. - 2920 sy.sl. - 2930 P.cl. & s. - 2940 S.rk. - 2980 Sy.sh. - 3008 Soft s. rk. - 3049 Stky dk.sh. - 3068 Rd.stky.sh. - 3178 Rd.marl - 3210 Stky sh. - 3251 s. rk. - 3340 sy.sh. - 3507 wh.sy.sh. - 3564 sy.sh. - 3580 Rd.marl - 3653 sy.sh. - 3673 Gy.sh. - 3720 Sy.sh. - 3740 stk. coal - 3776 Gy.sh. - 3816 Sy.sh.
* 2289	No.1	FAIRVIEW	(see Page 4)								
2470	14 Mi.	No.1	ENE Mc	LAGAVEN	523	1905	S.A.	900	Surface	Hott 40- 671 sh. - 979 Sst. Bottom on ?granite	

4.

DRILLERS' LOG

A	B	C	D	E	F	G	H	I	J	K		
* 2289	30 Mi.	707	1900	?Flow-		Surface				T.D. 3579'	N.O.I.	
No.1	ESE	K		ing								
FAIRVIEW												
2471	13 Mi.	505	1914	S.A.	861	Surface	25,000			0 - 50 y.cl.	- 85 y.cl.	- 905 Br.p.cl.
No.2	N McE.						(1914)	F		- 70 Bds.ofs.	- 861 Bl.sh.	- 941 P.cl.& s.
LAGAVEN											- 885 S.sst.	- 963 Diorite.
2472	17 Mi.	486	1926	S.A.	1080)					0 - 110 y.sh.	- 678 Dk.sh.	-1078 Drifts
No.3	ENE McE.				1126)					- 114 Rk.	- 805 Gy.sh.	-1099 Hd.rk. (sy)
LAGAVEN					to	Surface	30,000			- 264 Dk.sh.	- 833 Dk.sh.	-1125 Hd.s.
					1165)					- 274 y.sh.	- 881 Gy.sh.	-1165 Hd.s.rk.
										- 276 Dk.rk.	- 934 Dk.sh.	-1191 Sst.
										- 492 Dk.sh.	-1004 Sst.& sh.	-1203 Sst. indurated s.rk.
										- 613 Gy.sh.	-1069 Hd.rk.	
2484	34 Mi.	725	1898	S.A.						T.D. 3500	N.O.I.	
House	SE	K.										
(No.1)												
CATHEDRAL												
2494	32 M.		1913	Abd.						T.D. 1001'	N.O.I.	
Boungun-	SE											
yah	K											
STRATH-												
BOWEN												
2548	17Mi.	L677	1915	S.A.	1400	Surface	540,000	138		0 - 750 Bk.sh.		
COOMARRA	SE									- 810 Rotten sh.	T.D. later corrected	
WOLSELEY	McE									-1300 Sst.	to 1446'	
DCWNS										-1426 Pk.sst.		

DRILLERS' LOG

5.

A	B	C	D	E	F	G	H	I	J	K	
2549 No.2 (Scour) EULOLO	18 Mi. LNE M	L559	1892	S.A.	1040) 1100)	Surf- 388,600	30,000		135	0- 50 Alluvial cl. - 590 Bk.sh. - 1056 Loose wh.s.,sst.	- 1190 Sst. - 1220 Granite
2550 No.3 EULOLO	26 Mi. ESE Mc	L627	1895	S.A.	1340	Sur- face	431,000		145	0- 830 Bl.sh. - 1340 Bk.sh. - 1874 Dry qtoze rk., no hd. bottom.	
2551 House KOOROOBA	8 Mi. E Mc	L641	1897	S.A.	1010	Sur- face				0- 135 Cl. - 1010 Sh.	- 1054 S.rk. - 1074 Hd.rk.
2552 No.5 EULOLO	8 Mi. NE Mc	558	I.B.C. 1899	S.A.	1010	Sur- face				T.D. 1217	N.O.I.
2553 No.6 EULOLO	17 Mi. ENE Mc	L584	1903	S.A.	1092	Sur- face				0- 77 No info - 888 Sh	- 1106 Sst. - 1182 Granite
2554 No.7 EULOLO	27 Mi. E Mc	L620	1905	S.A. (ceased flow- ing 1925)	1349) 1374) 1404) 1439)	Sur- face	215,000 405,000 710,000 785,000			0- 7 Bk.soil - 107 y.sh. - 1330 Bk.sh. - 1349 Bk.sh. & s. - 1561 wh.s.rk. - 1592 Hd.s.rk.	
2555 No.8 EULOLO	18 Mi. ESE Mc	L639	1907	S.A. (ceased flow- ing 1921)	1309) to) 1420)	Sur- face	150,000			0- 30 y.cl. - 500 Gy.sh. - 800 Bk.sh. - 830 Sy.sh. - 1150 Hd.bk.sh. - 1200 Rotten gy.sst. - 1250 Bk.sy.rk. - 1305 Gy.sst.	- 1309 sticky mud - 1330 S. rk. - 1336 S & p.cl. - 1400 Hd.gy.s.rk. - 1410 Bk.s. rk. - 1430 Pk.s.rk. & gy.sh. - 1501 Pk.& gy.s.rk. - 1502 Rd. rk.

6.

DRILLERS' LOG

A	B	C	D	E	F	G	H	I	J	K			
2556 ? GLENBIDE	19 Mi. NE. Mc.	543	1908	S.A.	1147) 1204) 1279)	Sur- face	273,000 (1914) 71,000 (1933)		126	0-	3 Rd.earth 94 y.sh. 209 Bk.sh. 262 Gy.sh. 358 Bk.sh.	- 512 Gy.sh. - 733 Bk.sh. - 859 Gy.sh. - 912 Sy.gy.sh. - 972 Bk.sh.	-1037 Sy.sh. -1046 Gy.sh. -1146 Sy.gy.sh. -1279 Sy.gy.s.rk. -1288 Granite& qtz.
2557 No.10 EULOLO	17 Mi. ENE Mc.	591	1908	S.A. (ceased flow- ing 1919)	1073) 1190)	Sur- face	243,864		128	0-	94 y.sh. 119 Gy.sh. 456 Bk.sh.	-1073 Gy.sh. -1095 Hd.sst. -1102 Bk.sh.	-1190 Rotten sst. -1201 Gy.sst. -1234 Rd.rk.
2558 Woolshed SSE Mc. BROADLANDS	8 Mi.	L565	1908	S.A.	900	Sur- face				0-	937 sh. 973 Sst.	-1000 Slate -1051 Granite	
2559 No.12 EULOLO	5 Mi. NNE Mc.	558	1908	S.A. (ceased flow- ing 1924)	301 813	? Sur- face	Soak 25,714		105	0-	10 y.cl. 20 Rd.rk. 110 Red sh. 304 Gy.sh.	-756 Bk.sh. - 803 sy.sh. - 813 s.rk. - 860 p.cl.	- 905 wh.& bk. slate - 976 Bk.slate (Last 10' v.hd.)
2560 Tongkah SE McK. KOOROORA	11 Mi.	L655	1912	S.A.	1070) 1150)	Sur- face					T.D. 1181	N.O.I.	
2561 No.14 EULOLO	12 Mi. ENE McK	573	1914	S.A. (plus 2) increases to bottom	234 954))	? Sur- face	Little 140,000 (1914) 54,754 (1924)	B	116 116	0-	120 y.cl. 210 Bk.sh. 213 Rky.Fm. 255 Bk.sh. 259 Rky.Fm.	- 347 Gy.sh. - 351 Sy.sh. - 449 Gy.sh. - 669 Bk.sh. - 674 Gy.sh.	- 719 Keroseene sh. - 954 Bk.sh. - 994 S.rk. -1001 Gy.sh. -1068 P.cl.

A	B	C	D	E	F	G	H	I	J	K
2562 No. 15 EULOLO	23 Mi. E McK		1915	S.A. (ceased flow- ing 1927)	720 1187 to 1220 1230 to 1250 1270 to 1300 1310 to 1400 1425 to 1450	? Sur-	Small- 20,000 face Sur-200,000 face Sur-180,000 face Sur- 50,000 face Sur- 50,000 face	F	0-	110 y.cl. 720 Bk.sh. 740 Oily sh. 900 Bk.sh. 950 Sy.sh. 1100 Bk.oily sh. 1187 Lt.sy.sh. 1220 wh.sst. 1230 Br.p.cl. 1250 wh.sst. 1270 P.cl.& s. 1300 wh.sst. 1310 Br.p.cl. 1400 wh.Sst. 1420 Gy.sh. 1450 Pink sst. 1462 Hd. rd, rk.
						Total 460,000 (1915)				
2563 ? GLENBEDE	16 Mi. NE Mck.		1915	Flow- ing	975 1018 1161	Sur- face " "	50,000 20,000 10,000 Total(1915) 180,000 49,120 (1927)		117	85 y.cl. 210 lt.bl.sh. 408 Bl.sh. 478 Kerosene sh. 512 Sy.sh. 612 Bk.sh. 924 Bl.sh. 936 Gn.sh. 975 Gy.sy.sh.
										- 983 Sst. - 1018 P.cl.&s. - 1080 Sst. - 1079 P.cl.&s. - 1093 Sst. - 1097 Cey.y.s. - 1134 Bl.p.cl. - 1161 Wh.p.cl. - 1164 Sst.

A	B	C	D	E	F	G	H	I	J	K
2564 Quart Pot KOOROOORA	13 Mi. ESE McK		1916	S.A. (ceased flowing by 1928)	1105 1127 to 1220	2 Sur- face	150,000		128	0- 90 y.cl. - 980 Bl.sh. - 1140 Sst. - 280 Lt.bl.sh.- 1080 Bk.sh. - 1190 P.cl. - 670 Bl.sh. - 1105 Sy.sh. - 1220 Sst. - 750 Oily sh. - 1115 S.rk. - 1232 Pk.sst.
2565 ? CAIRO	22 Mi. NE Mc		1934	Flow- ing.	40 1112) 1131) 1154) 1180) 1192)	Sur- face	v.small soak 135,000			0 - 2 Surface - 765 Bk.sh. - 1102 S.rk. - 102 Y.sh. - 769 Rk. - 1107 S & sh. - 140 Gy.sh. - 789 Gy.sh. - 1122 Sst. - 146 Rk. - 792 Rk. - 1127 Qtz. - 246 Gy.sh. - 842 Gy.sh. - 1141 Sst. - 249 Rk. - 867 Br. sh.- 1147 Qtz. - 309 Gy.sh. - 900 Gy.sh. - 1164 Sst. - 318 Rk - 904 Rk. - 1167 Qtz. - 419 Gy.sh. - 944 Bk.sh. - 1190 Sst. - 423 Rk. - 949 Rk. - 1194 Qtz. - 503 Gy.sh. - 979 Bl.sh. - 1208 Sst. - 507 Rk. - 1030 Bk.sh. - 1214 Qtzite - 547 Gy.sh. - 1062 S & sh.- 1216 S & Qtzite - 551 Rk. - 1072 Sh. - 1222 Qtzite - 600 Gy.sh. - 1076 S & rk.- 1229 Pink Qtzite. - 685 Rk. - 1100 S.& sh.
2566 No.18 EULOLO	17 Mi. ENE Mc	L590	1919	S.A.	1086) 1144) 1175)	Sur- face	6,000 40000 84000			0- 4 Gvl. - 520 Bl.sh. - 40 y.cl. - 970 Gy.sh. - 150 y.cl.& - 1042 Bl.sh. br.sh. - 1154 P.cl.& s.rk. - 176 gy.sh. - 1183 s.rk. - 178 Rk. - 1202 Lst. - 210 Bl.sh. - 1211 Slate - 284 Rk. - 1216 R.rk. - 702 Gy.sh. - 1233 R. marl. - 774 Br.sh.

A	B	C	D	E	F	G	H	I	J	K
2567 No.19 EULOLO	25 Mi. ENE McK	L572	1921	S.A.	1210) 1240) 1300) 1416)	)trickle Sur- face	20,000 106,000 Total Est. 155,000			0 - 10 Rk. -1231 Br.sh. - 1395 Cs.s. & p.cl. - 17 Gvl. -1247 Sy.cl. - 1414 sst. - 110 y.cl. -1260 S.rk. - 1415 Granite - 691 Gy.sh. -1265 S. - 1420 s. - 843 Sy.sh. -1277 Bl.sh. - 1421 Gvl. - 917 Br.sh. -1298 P.cl. - 1430 s. - 980 Bl.sh. -1340 s. - 1441 Coal -1050 Gy.sh. -1368 Hd.sst. - 1448 R.rk & gvl.
2568 No.20 EULOLO.	11 Mi. NE McK		1925	S.A.	208 1007) 1084)	Sur- face	72,000	S	0	4 Surface - 475 Bl.rk. - 1007 Coarse sst. - 42 y.cl. - 539 Bl.sh. - 1016 Fine sst. - 44 y.rk. - 555 Bl.rk. - 1049 P.cl.& sst. - 124 y.cl. rotten - 1050 Rubble - 133 Gy.sh. - 572 Br.sh. - 1068 Fine hd.sst. - 134 Bl.rk. - 755 Bl.sh. - 1072 P.cl.& sst. - 220 Bl.sh. - 758 wh.rk. - 1077 Hd.sst. Oily - 808 Bl.sh. - 1086 Rotten sst. - 222 Bl.rk. - 809 Sst. & water - 271 Bl.sh. - 820 Bl.sh. - 1091 Hd.sst. Oily - 822 wh.rk. - 1109 Mica sst. - 272 Bl.rk. - 901 Bk.sh. - 1121 Mica slate - 315 Bl.sh. - 953 Br.sh. - 1123 Hd. rk. Oily - 998 Bl.sy.sh. - 1139 Hd. slate. - 317 Bl.rk. -1003 Bk.sticky - 337 Bl.sh. sh. Oily - 339 B.rk. - 472 Bl.sh. Oily.

A	B	C	D	E	F	G	H	I	J	K
2569 No.21 EULOLO	11 Mi. E.McK		1925	S.A.	1010) 1035) Sur- 1093) face		86,000			0- 86 Y.sh.& rk.- 590 Lt.bl.sh. - 1024 Hd.gy.s.rk. - 188 Lt.bl.sh. & gy.rk. - 1029 P.cl. & rk. - 610 Br.sh. - 1035 wh.s.rk. - 210 Sy.sh. & - 907 Lt.& bk. - 1044 P.cl.& s.rk. s.rk. sh & rk. - 1089 wh.s.rk. - 403 Lt.bl.sh. - 927 Br.sh. - 1093 s.rk. & gy.rk. - 999 Lt.bl.sh. - 1098 Hd.wh.s.rk. - 406 S.rk. -1010 Cs.gy. - 1108 v.h.rd.rk. s.rk.
2570 No.22 EULOLO	13 Mi. SE McK	L633	1926	S.A.	1108	17				0- 74 y.sh. - 625 Bl.rk. - 1001 Bl.sh. - 159 Lt.bl.sh. - 644 Lt.bl.sh. - 1016 Br.sh. - 161 wh.rk. - 648 Bl.rk. - 1039 Lt.bl.sh. - 192 Lt.bl.sh. - 665 Lt.bl.sh. - 1050 Lt.bl.sy.sh. - 194 Hd.gy.sst. - 669 Bl.sh. - 1060 Lt.bl.sh. *235 Lt.bl.sh. - 237 Hd.gy.rk. - 672 Lt.bl.sh. - 1068 Bl.rk. - 253 Lt.bl.sh. - 679 Bl.rk. - 1083 Lt.bl.sh. - 256 wh.rk. - 683 Br.rk. - 1100 Lt.bl.sy.sh. - 309 Lt.bl.sh. - 717 Br.sh. - 1103 v.sy.strata. - 310 Gy.rk. - 781 Dk.bl.sh. - 1108 Gy.sst. - 349 Lt.bl.sh. - 841 Lt.bl.sh. - 1123 P.cl.& sst. - 350 gy.rk. - 843 Gy.rk. - 1140 Pure p.cl. - 357 Lt.bl.sh. - 848 Lt.bl.sh. - 1170 P.cl.& sst. - 359 gy.rk. - 850 Cs.s.rk. - 1180 Pure p.cl. - 473 Lt.bl.sh. - 904 Lt.bl.sh. - 1200 P.cl.& sst. - 494 Gy.rk. - 909 Br.sh. - 1205 Pure p.cl. - 514 Lt.bl.sh. - 951 Lt.bl.sh. - 1220 P.cl.& sst. - 516 Gy.rk. - 953 Br.rk. - 1225 Fairly hd. - 561 Lt.bl.sh. - 961 Dk.bl.sh. gy.sst. - 566 Bl.rk. - 979 Lt.bl.sh. - 1235 v.hd.rk.& - 624 Lt.bl.sh. - 981 Bl.sh. cs.sst. - 999 Lt.bl.sh.

A	B	C	D	E	F	G	H	I	J	K
2571 No. 23 EULOLO	29 Mi. E. McC.	L616	1927	S.A.	1422) 1520) 1578) 1622) 1668)	Sur- face	94,750			0- 3 Soil - 1422 Bk.sh. - 143 y.sh.& rk.- 1425 Coarse - 388 Bk.sh, sst. -1629 Coarse sst. & rk. - 1440 wh.sst. -1659 wh.sst. - 389 Sy.sh. - 1490 P.cl.& -1661 Fine wh.sst. - 438 Bk.sh. sst. -1672 Coarse sst. & rk. - 1520 P.cl. -1704 wh.sst. - 976 Gy.sh. - 1525 Sst. -1709 v.hd.gy.sst. & rk. - 1578 P.cl.& -1724 wh.sst. - 1004 Br.sh. sst. -1730 Rd.granite - 1050 Gy.sh. - 1583 Coarse - 1300 Lt.bl.sh. sst. - 1622 wh.p.cl.
2574 Cld No. WNW McC. 40 STRATHFIELD	11 Mi.	L610	1915	Abd.						T.D. 145' N.O.I.
2575 Old No. W 42 McC. STRATHFIELD	19 Mi.		1889	Abd.						T.D. 146 N.O.I.
2581 Gidyea Ck. NNW (No. 1) STRATHFIELD	13 Mi.	523	1891	S.A.	850	Sur- face			113	0- 620 (Approx) sh. - 850 sst.
2582 No. 2 WNW. STRATHFIELD McC.	14 Mi.	625	1892	S.A.	420	53				0-420 Solid hd.rk.

A	B	C	D	E	F	G	H	I	J	K
2583	Not located ?Percol Plains 20 Mi. SW Mc.	L694	1892	?Abd	200	?Sur-face	?250			0- 820 ?sh.
2584	13 Mi. Snake Creek SSW Mc. MOOROOKA	L634	1895	S.A.	855	Sur-face	560,200		115	0- 115 cl. - 810 sh. - 855 s.
2585	23 Mi. Mt. Helen SSW. Mc. (No.5) BEAUDESERT	L733	1895	S.A.		Sur-face				0- 80 y.cl. - 750 Bl.sh. - 815 Drift - 700 Bl.sh. - 753 Sst. - 959 Sst. - 725 Bk.sh. - 795 P.cl. -1067 Granite
2586	19 Mi. Rangeview (No.6) Mc. BEAUDESERT	L649	1896	S.A.	560 (approx)	Sur-face Sur-face face	511,600			0- 50 cl. - 550 sh. - 592 Sst.
2587	10 Mi. House S Mc. MOOROOKA		1924	S.A.	720 837) 888)	Soak small face	16,000			0-10 Rd.gvl. - 401 sh. - 847 Cs.loose sst. - 90 y.cl. - 413 Hd.rk. - 851 Hd.rk. - 129 Lt. col. - 704 Bk.sh. - 862 Hd. sst. oured sh. - 729 Sy.sh. seams rk. - 132 Hd. rk. - 807 Bk.sh. & sst. - 271 sh. - 837 Bk.sh. - 888 Rk. - 285 Hd.seams - 838 Sy.sh. & sh.

13.

DRILLERS' LOG

A	B	C	D	E	F	G	H	I	J	K
2588 No.7 STRATHFIELD	9 Mi. WNW McC.	L577	1896	S.A.	720	Sur- face	7880		99	0- 72 y.cl. - 720 Bk.Quick s. - 265 Bl.sh. - 866 Mica schist - 680 Bk.sh. & qtz.rk.
2594 Nora (No.13) STRATHFIELD	7 Mi. W. McC.	L567	IBC 1897	S.A.	750	Sur- face	7,000			0- 70 7.cl. - 750 Bk.s. - 295 Bl.sh. - 905 Rk. - 735 Bk.sh.
2595 No.14 STRATHFIELD	9 Mi. NW.McC.	661	1900	S.A.	797	Sur- face	6,000			0- 785 sh. - 821 sst.
2596 Dud MAYFIELDS	20 Mi. NW McC.	604	1901				9,600			0- 30 Hd. rk. - 134 Sst. - 60 cl. - 143 Granite - 115 sh.
2600 No.19 STRATHFIELD	5 Mi. N.McC.	785	W. Moulder 1911	S.A.	360 765	Sur- face		B		0- 2 s. - 460 Kerosene bl.sh. - 10 sh. - 765 Gy.sh. - 92 y.sh. - 772 s. drift - 350 Bl.sh. - 782 sst. - 360 Congl.
2603 House BEAUDESERT	22 Mi. SSW. McC.	L676	W. Simpson	S.A.	287 591	Below Surface Surface				0- 8 cl. - 287 Bk.s. - 18 Drift - 569 Bk.sh. - 102 y.sh. - 591 F.sst. - 283 Bl.sh. - 799 Soft sst.

DRILLERS' LOG

14.

A	B	C	D	E	F	G	H	I	J	K
2604 Dud No.22 STRATHFIELD NW. Mc.	Not Located Approx 18Mi.		1914							0- 2 Sst. Rest P.cl. Bottom in Granite T.D. 320'
2606 Nettle Creek (No.24) BEAUDESIRT	26 Mi. SSW. Mc.	787	1914	S.A.	550	18				0- 300 No info. - 550 Oily sh. - 787 S., sh., p.cl.
2608 ? MAORI DOWNS	18 Mi. NNW Mc.	500	1914	S.A.	350 780) 870)	Little Sur- face	40,000			0- 90 y.cl. - 140 Gy.sh.w.hd.rk. - 300 Bk.sh. - 550 Oil sh. - 780 Bl.sh. - 800 Sst. - 860 P.cl.& s. - 870 Sst. - 888 S.rk.
2609 ? MAYFIELD	18 Mi. NW. Mc.		1915	S.A.						T.D. 170 N.O.I.
2610 No.33 STRATHFIELD	13 Mi. NW Mc.		1924	S.A.						T.D. 210 Bottom in hd. fm.
2614 ? PERCOL PLAINS	16Mi. SW Mc.	L653	1915	S.A.	190 594) 600)	100 Sur- face	9,500	S		0- 30 S.gvl. - 80 y.sh. - 560 Bl.sh. - 590 Bk.sh. - 594 Bl.silt - 600 Sst.
2615 ? PERCOL PLAINS	16Mi. SW.Mc.		1920	S.A.						T.D. 311 N.O.I.

A	B	C	D	E	F	G	H	I	J	K		
2616 Dud OLIVE GROVE	7 Mi. SW Mc.	IBC 1920			710	80	v. small	F		0- 36 y.greasy back - 110 y.cl. - 500 Gy.sh.	- 709 Br.sh. - 713 Sst. - 724 Qtz.	
2617 ? IVY DOWNS	3 Mi. WNW Mc.	1920	S.A.	670 797) 830)	Soak 4,000 20,000 13,130 (1920)				106	0- 34 St.& drift s. - 56 y.cl. - 369 Gy.sh. - 440 Br.sh.	- 812 Gy.sh. - 825 S & p.cl. - 860 Granite	
2618 Dud PTENFIELDS	18 Mi. NNW Mc.	1924		200 733 833						0- 52 Surface Soil - 132 y.cl. - 152 Bl.sh. - 172 Bk.sh. - 245 Gy.sh.	- 248 Rk. - 258 Kero Sh. - 266 Rk. - 298 Br.sh. - 563 Bk.gy bl.sh.	- 566 Bk.rk. - 693 Bk.gy.sh. - 728 Sy.sh. - 752 p.cl. - 802 Broken schist - 827 Broken bk.rk. hd. bds. - 852 wh.Fm. - 868 Hd.bl.rk.
2620 No.37 STRATHFIELD	9 Mi. NNW Mc.	1927	S.A.	350 800	Sur- face	Soak				0- 790 Sh.y.gy.bl. - 800 wh.sst. - 827 P.cl.& sst.	- 847 Qtz & mica - 851 Schist.	
2923 ?Dud HAMILTON DOWNS	34 Mi. ENE K.									T.D. - 601	N.O.I.	
2924 ? JUDITH ROYL	21 Mi. ENE K	620 1902	S.A.							T.D. 4523	N.O.I.	

A	B	C	D	E	F	G	H	I	J	K
2926 Wyreema HILTON DOWNS & WYREENA	22 Mi. ENE K.	713	IBC 1900	S.A.	2093) 2144) 2673) 3261)	Sur- face				0- 417 Bl.sh. - 2144 p.cl. - 3187 bk.sh. - 443 S.rk. - 2673 s.rk. - 3244 bk.sh. & s.rk. - 765 No info. - 2732 sh. - 3261 Hd.rk. - 877 Gy.sh. - 2761 s.rk. - 3457 S.rk. -2090 Sh. - 2811 sh. -2093 S.rk. - 3145 S.rk.
2928 No.4 HAMILTON DOWNS	27 Mi. NE K.	L631	1924	Flow- ing	1895 2270) 2300) - 2388) 2578)	75 Sur- face	450,820			0 - 15 y.cl. -1200 Gy.sh. - 2227 cl. - 77 boulders - 1351 Br.sh. - 2390 S. rk. y.cl. - 1892 Gy.sh. - 2454 Heavy cl. - 113 y.cl. - 1963 Sd.rk. - 2479 Sd. rk. - 165 Gy.sh. - 1977 Hd.br.rk. - 2751 Sst. - 974 Gy.sh. - 2007 Bl.cl. * 2062 s. rk. hd.strks. - 2201 Br.rk. * 2195 Br.cl.
2929 Belford BELFORD	35 Mi. NE. K	607	1898		1650	Sur- face	1,330,000 (1898)			T.D. 2200 N.O.I.
2933 The Ranch CLARAFIELD	29 Mi. NE K.	629	1914	Flow- ing	1712) 1744) 1924) 1979) 2060)	Sur- face	611,260			0 - 13 Gy.rk. - 1173 Dk.sh. - 1680 p.cl. - 47 y.cl. - 1217 Choc sh. - 1688 Dk.sh. - 96 Bk.sh. - 1294 Bk.sh. - 1740 P.cl. - 447 Light sh. - 1418 Bl.sh. - 1820 s.rk. - 535 p.cl. - 1495 Dk.sh. - 1845 Br.sh. - 616 Choc.sh. - 1541 Bk.sh. - 1900 P.cl. - 763 Bl.sh. - 1565 Br.sh. - 1920 s.rk. - 822 Choc.sh. - 1600 Bk.sh. - 1940 P.cl. - 840 Br.sh. - 1620 Bl.sh. - 2200 S.rk. - 890 Gy.sh. - 1638 Gn.sst. - 2214 Hd.Fm. - 980 Bl.sh. -1099 Br.sh.
2934 Dimora BELFORD	38 Mi. NE. K	575	1905	Flow- ing	1700) 1820) 1920) 2000) 2103)	Sur- face				T.D. 2103 N.O.I.

A	B	C	D	E	F	G	H	I	J	K
2936 House No.1 HAMPDEN DOWNS	16 Mi. WNW. K.	L751	1922	S.A.						T.D. 1532 N.O.I.
2937 No.2 HAMPDEN DOWNS	13 Mi. WNW K.	L787	IBC 1923	S.A. 1668) 1740)	160			F		0- 4 Surface - 881 Light - 1697 Sy.sh. Soil gy.sh. - 1703 Gy.sh. - 10 Hd.sst. - 1115 Gy.sh. - 1738 Wh.p.cl. - 61 y.sh. caving - 1740 Seam s. - 267 Gy.sh. badly - 1804 s.rk. - 273 Hd.gy.rk. - 1256 Br.sh. - 1820 Hd.s.rk. - 713 Gy.sh.light - 1663 Gy.sh. - 721 Dk.sh. - 1668 Seam s. caving
2938 No.3 HAMPDEN DOWNS	19 Mi. WNW K.	L763	IBC 1924	S.A. 1475) 1660)	140			F		0- 37 y.sh. - 448 Sy.sh. - 1482 Sy.sh. - 41 Hd.sst. - 950 Gy.sh. - 1493 wh.p.cl. - 103 y.sh. - 1090 Br.sh. - 1600 Sy.sh. - 281 Gy.sh. - 1403 Bad dk. - 1677 S.rk. - 288 Sy.sh. gy.sh. (40') - 295 Hd.rk. - 1473 Sy.sh. - 428 Gy.sh. - 1475 Seam s.
2939 No.4 HAMPDEN DOWNS	15 Mi. NW. K.		IBC 1924	S.A. 1532) 1634)	below "good Sur- pumping face supply"					0- 75 Hd.rk.& - 1079 Br.sh. - 1572 Stky.sy.sh. y.sh. - 1107 Gy.sh. - 1644 Sy.sh.& sst. - 364 Gy.sh. - 1324 Dk.gy.sh. - 366 Rk. - 1502 Gy.sh. - 1044 Gy.sh.
3247 Oontoo BRASIDE	24 Mi. WSW K.	L866	1896	S.A. 1500	65			Hot		0- 60 Alluvium T.D. corrected -1400 Sh. later to 1619' -1610 Sst. -1630 Qtzite

A	B	C	D	E	F	G	H	I	J	K
3248 House BRAESIDE	20 Mi. WSW K.	L768	1896	S.A.	1700	Sur- face	595,000		155	0- 30 y.cl. - 1390 Sh.& sst. -1290 Bl.sh. - 1707 Sst. -1350 Bk.sh. - 1708 Qtzite.
3252 Bradford KYNUNA	16 Mi. SW K.	L774	IBC 1896	S.A.	1770	Sur- face				0- 98 y.cl. - 1772 Sh. - 120 S.rk. - 1962 s.rk. - 920 sh. - 2187 sst. -1162 Sst. Finished in loose qtz.
3253 No.4 KYNUNA	8 Mi. SSE. K.	L768	IBC 1897	S.A.	2222	Below Sur- face		F		0- 22 No info- 326 Hd.rk. - 2241 Gy.sh. - 34 Rk. - 511 Sh. - 2288 s.rk. - 61 Cl. - 754 Dk.sh.sh. - 2589 s.rk. & sh. - 131 Sty sh.- 760 Hd.stk. - 2945 Hd. s. rk. - 243 Sst.sh.- 1907 Sh. - 2975 Granite - 255 s.rk. - 2164 Lk.sh. - 296 Sh. - 2210 Bk.sh. stks.gn. sst
					2390) 2710)	Sur- face	600,000			
3254 Tumulka (No.5) KYNUNA	12 M. SSW K	L778	1898	S.A.	1910 2192 2220 2458					0- 55 Cl. -1961 Sh. -2559 Sst. -2590 sh. -2680 S.rk.
3255 Jackton JACKTCN	12 M. NW K.	L675	IBC 1899	S.A.	1630) 1692)	Sur- face				0- 100 Hd.y.cl. - 740 Bl.sh. - 1169 Caving sh. - 287 Hd.sh. - 744 Hd.stk - 1232 Sh.w.hd.stk. - 361 Bl.sh.& - 929 Hd.sh. - 1581 sh. Hd.rk. - 954 Hd.sh. - 1990 s.rk. - 416 Hd.sh & & hd.stk. Hd.stk.

A	B	C	D	E	F	G	H	I	J	K
3256 Stockton KYNUNA	11 M. SE.K.	744	11 BC 1908	S.A.	279 2290 2624) 2679) 2757) 3159)	20 Sur- face	Soak			0- 50 Hd.rk.& s.rk.- 1345 Gy.sh. - 2660 s.rk. - 80 Boulders - 1565 Bk.sh. - 2821 s.rk. s.rk. - 1664 Gy.sh. - 3159 s.rk., s., - 222 Rotten rk. - 2231 Bk.sh. & p.cl. & sh. - 2304 Light - 3226 s.rk. - 275 Gy.sh.Hd. sh.& s.rk. stk. - 2418 S.& p.cl. - 668 Gy.sh. - 2535 S.rk. - 1073 Bk.sh. - 2600 S.& p.cl.
3259 No.10 KYNUNA	6 M. S.K.	L695	1921	S.A.	482 1964) 2014) 2040) 2310) 2560) 2566)	29	Small			0- 45 Y.cl. - 1172 Dk.gy.sh. - 2120 Lt.gy.sh. - 66 y.sy.sh. - 1889 Lt.gy.sh. - 2144 S.rk. - 110 Gy.sy.sh. - 1201 Sy.stk. - 2180 Sy.wh.cl. - 147 Gy.sh.w hd. - 1217 Hd.rocky - 2296 Gy.sy.sh. seams bars - 2367 S.rk. - 195 Gy.sh.w. - 1354 Dk.gy.sh. - 2385 Br.cl. sst.bars. - 1406 Lt.Gy.sh. - 2454 S.rk.& cs.s. - 220 Gy.sh. - 1408 Gy.sh. - 2481 P.cl. - 244 Gy.sy.sh. - 1416 Hd.rk. - 2494 Sy.cl. - 282 Gy.sh. - 1449 Gy.sh. - 2513 S.rk. - 286 Gy.sy.sh. - 1480 Lt.gy.sh. - 2527 Sy.cl. - 375 Gy.sh. - 1487 Dk.gy.sh. - 2568 S.rk. - 405 Gy.sy.sh. - 1566 Er.sh. - 2589 wh.sy.p.cl. - 443 Gy.sh. - 1844 Gy.sh. - 2634 s.rk. - 521 Dk.gy.sh. - 1878 Gy.sy.sh. - 2761 Sst. - 624 Hd.gy.rk. - 1976 Gy.sh. - 2765 (Hd.rk sst. Dk.sy.sh. - 1980 Gvl. (Hd.wh.rk. - 844 Gy.sh. - 1983 Sst. like granite. - 850 Hd.gy.rk. - 2028 Lt.gy.sh. * 2254 Gy.sh. - 1087 Lt.gy.sh. - 2064 S.rk. - 2080 Gy.sy.sh.
3260 No.11 KYNUNA	18 M. WSW K.		1927	S.A.	1675					0- 1224 sh.y.bl.gy. - 1675 Sh.bl.gy.w - 1715 P.cl. w.2'rk.bds rk.seams. - 1744 Sst.& p.cl. - 1260 Br.sh.w. - 1684 S.rock in layers. fossilshells - 1768 S.rk. smelling s strongly of Kerosene

A	B	C	D	E	F	G	H	I	J	K		
3261	2½ M.				103		Soak		0-	60 y.sh.	- 468 Hd.rk.	- 1460 Blds.
No.12	SSE K.				1880				-	97 Bl.sh.	- 560 Sy.sh.	- 1488 Fossil sh.
KYNUNA					2047-				-	100 Rk.	- 802 Bl.sh.w.	- 1980 Sh.,dk.,br.bl.gr.
					2132				-	103 Sst.	bds soft	- 1987 Soft sst.
					2136-				-	173 Bl.sh.	rk.	- 1989 Hd.sst.
					40				-	176 Rk.	- 849 Bl.sh.	- 2013 Gy.sh.
									-	260 Bl.sy.sh.	- 852 Rk.	- 2041 sh.& p.cl.
									-	346 Bl.sh.w	- 863 Bl.sh.	- 2047 Gy.sh.
										bars soft	- 866 Rk.	- 2132 Soft sy.sh.& s.
										rock	- 880 Gy.sh.	- 2136 P.cl.
									-	361 Pug s	- 883 Rk.	- 2140 s.
									-	366 Sst.	-1414 Gy.sh.w.	- 2150 Hd.dk.sh.
									-	383 Pug s	1'-3'rk.	
									-	401 Sst.	bds.	
									-	466 Bl.sh.	-1417 Blds.in sh.	
											-1450 Gy.sh.	
3262	11 M.		J.Benson		1695)				0-	66 y.sh.	- 863 Rk.	- 1133 Rk.
Winters SW			1929 S.A.		1785)				-	120 Bl.sh.	- 869 Gy.sh.	- 1185 Gy.sh.
(no.13) K					1848)	110		F	-	122 Rk.	- 870 Rk.	- 1269 Dk.gy.sh.
KYNUNA					1890)				-	194 Bl.sh.	- 910 Bl.sh.	- 1273 Boulders
									-	198 Rk.	- 912 Rk.	- 1345 Dk.gy.sh.
									-	267 Bl.sh.	- 918 Gy.sh.	- 1685 Gy.sh.
									-	270 Rk.	- 919 Rk.	- 1726 S.rk.
									-	507 Bl.sh.	- 962 Gy.sh.	- 1755 Gy.sticky
									-	508 Rk.	- 964 Rk.	sh.broken sh.
									-	599 Bl.sh.	-1000 Gy.sh.	- 1785 Sy.sh.
									-	697 Bl.sh.	-1001 Rk.	- 1848 S. rk.
										w 1'-2'	-1032 Gy.sh.	- 1851 Boulders in s.rk.
										bds.rk.	-1033 Rk.	- 1856 P.cl.
									-	715 Slippery	-1046 Gy.sh.	
										ba. sh.	-1047 Rk.	T.D. 1935.
									-	735 Bl.sh.	-1091 Gy.sh.	
									-	809 Gy.sh.	-1092 Rk.	
									-	812 Rk.	-1132 Gy.sh.	
									-	860 Gy.sh.		

A	B	C	D	E	F	G	H	I	J	K	
3263 House CRENDON	17 M. NE K	682	1900	S.A.						T.D. 2564 N.O.I.	
3264 7V CRENDON	17 M. ENE K	733	1907	S.A.			Hot		T.D. 3028	Finished in very hard red formation.	
3265 Poimina MIMONG	10 M. N. K.	L672	1 BC. 1901	S.A.	2060	Sur- face			0- 137 y.cl. - 214 Rk.& sh. - 217 Rk.	- 585 caving sh. - 1708 Hd.sh. - 1752 Sy.sh.	- 2060 S.rk. - 2156 Hd.sst.
3266 Rosemead MIMONG	7 M. NNE K	L700	1900	S.A.	1875 ?	Sur- face	Trickle		0- 35 No info. - 47 y.sh. - 1487 sh.	- 1875 Bl.sh. - 2473 s. rk.	
3267 Hilton Downs House HILTON DOWNS & CRENDON	22 M. ENE K.	646	1923	S.A.	300 1965 2012	120	Little Strong pumping supply.		0- 4 Bk.soil - 80 Cl. - 200 sh. - 1249 Bk.sh. - 1323 Gy.sh.	- 1831 Br.sh. - 1963 Bk.sh. - 2000 Sy.cl. - 2012 Hd.s.rk.	
3268 House GLENAGRA	9 M. WNW K.	763	1923	S.A.	412 1842 1925 1978	114				T.D. 2008 N.O.I.	
3269 No.1 GLENBERVIE	20 M. NNW K	L592	1899	Flow- ing	1680	Sur- face				T.D. 1690 completed in hd. rk.	
3270 No.2 GLENBERVIE	18 M. NNW K	L625	1906	S.A.						T.D. 1669 Strata like rock.	

A	B	C	D	E	F	G	H	I	J	K
3271 No.3 GLENBERVIE	21 M. N. K.	L575	1934	Flow- ing	162 592 905 1422) 1452) 1515) 1530) 1630) 1695) 1714)	140 } } Sur- face) } }	320,000			0- 50 y.sh. - 1106 Gy.sh. - 1507 p.cl. - 52 Blds. - 1110 Hd.gy.rk. - 1550 Hd sst. - 82 y.sh. - 1140 Gy.sh. - 1586 s.rk. & p.cl. - 202 Bl.sh. - 1142 Hd.gy.rk. - 1611 P.cl. - 376 Gy.sh. - 1238 Gy.sh. - 1638 Gy.sh. - 381 Hd.bd. - 1240 Hd.gy.rk. - 1656 Sly.rk. - 517 Gy.sh. - 1307 Gy.sh.sh. - 1670 Hd.rk. - 522 Hd.bd. - 1310 Hd.gy.rk. - 1690 S.rk. - 905 Gy.sh. - 1378 Gy.sh. - 1705 p.cl. - 907 Hd. bd. - 1380 Hd.gy. rk. - 1714 P.cl. & stn. - 962 Bl.sh. - 1424 Gy.sly.sh. - 964 Sl.rk. - 1427 Hd.gy.rk. - 1000 Bk.sh. - 1460 sh.rk.
3272 ? ROSEVALE	29 M. ENE K.	553	1907	Flow- ing	1340	Sur- face		v. clear		T.D. 1846 Bottomed in bedrock. Little gas in flow.
3273 House GLENBERVIE	24 M. NNW K.		1934	Flow- ing	217 1420) 1440) 1450) 1520) 1572) 1590) 1603) 1642) 1661) 1692)	Sur- face } } } } } } } } } }	increas- ing	S S		0- 2 Soil -1422 Stky gy.marl-1562 P.cl. - 85 y.sh. -1440 Sst. -1572 Sst. - 209 Gy.sh. -1446 Hd.gy.rk. -1580 Hd.rk. - 217 Sy.gn.sh.-1450 Sst. -1590 Sst. - 219 Gn.rk. -1457 Gy.marl. -1595 Rk. - 283 Gy.sh. -1467 Sst. -1661 sst. - 360 Sy.gn.sh.-1471 Hd.rk. -1677 P.cl. hd.bds. -1491 Marl. -1698 Sst. - 1416 Gy.sh. -1495 Hd.rk. - 1420 Sst. -1520 Cs.sst.
3274 ? ROSEVALE	35 M. N.K.	569	1916		1340	Sur- face				T.D. 1586 Sst. at 1180 Red oxide present in bore drain.

DRILLERS' LOG

A	B	C	D	E	F	G	H	I	J	K.
3276 House SPREYTON	16 M. NNE K.		1924	Flow- ing	1110 1257 1966 2035 2090 2165)	80 60				0- 9 Rk. - 1157 Br.sh. - 1690 Stky sh. - 50 y.cl. - 1225 Bk.sh. - 1710 Sh.s. - 149 Bk.sh. - 1250 Bl.sh. - 1750 Stky.gy.sh. - 425 Bl.bk.sh. - 1359 Bl.Bk.sh. - 1767 S.rk. - 636 Bl.sh. - 1409 Bl.sh. - 1936 Sy.sh. - 878 Gy.bl.sh. - 1454 Gy.sh. - 2059 S. & s.rk. - 894 Bl.sh. - 1543 Bl.sh. - 2265 Sh. & s.rk. - 976 Gy.sh. - 1604 Bk.sh. - 2320 Bedrock. - 1038 Bl.sh. - 1630 Stky.bl.sh.
4153 House No.1 PENOLA DOWNS	20 M. SE McK.	L768	1892	IBC (ceased flow- ing 1900)	900 1340 320 320 320 320)	200 40				0- 103 cl. - 1224 Gy.sh. - 523 sh. - 1336 Sy.sh. - 540 Bk.sh. - 1407 S.rk., - 810 Gy.sh. qtz & sst. - 900 Bk.sh.
4154 No.2 PENOLA DOWNS	24M SE McK.	L714	1899	S.A.	1180	Sur- face				0- 373 No info. - 1257 Bk.sh. - 1357 S.rk.
4155 No.7 PENOLA DOWNS	17 M. SE McK.		W. Moulder 1918	S.A.	657 1112 1165	30 12	Soak			0- 90 y.sh. - 657 Cong. - 1130 wh.s.rk. - 135 Gy.sh. - 817 Bk.sh. - 1150 p.cl. - 160 Bk.sh. - 967 Gy.sh. - 1165 wh.s.rk. - 166 Congl. - 1000 Bk.sh. - 1175 Pk.s.rk. - 296 Bk.sh. - 1090 Gy.sh. - 1180 Rd.s.rk. - 546 Gy.sh. - 1105 Bk.s.shot - 1265 Granite - 542 Bk.sh. - 1112 S.rk.
4156 ? MULGARA	13 M. SSE McK.	L679	1913	S.A.	734 1078 1123 1142)	Sur- face	Soak 13,000 (1941)			0- 609 No info. - 925 Gy.sh. - 1123 wh.s.rk. - 694 Gy.sh. - 1035 Bk.sh. - 1141 Pink s.rk. - 734 Bk.sh. - 1060 Bk.s.&sh. - 1142 Rd.s.rk. - 800 Gy.sh. - 1078 wh.s. - 855 Bk.sh. - 1103 p.cl.

23a

DRILLERS' LOG

A	B	C	D	E	F	G	H	I	J	K
4157	17 M.	L701	W.Moulder	642	Soak					
			1913	S.A.	1130)	12'		F		0- 90 y.sh. - 296 Bk.sh. - 967 Gy.sh. -1120 S.rk.
					1165)			F		- 135 Gy.sh. - 546 Gy.sh. -1000 Bk.sh. -1150 P.cl.
										- 160 Bk.sh. - 642 Bk.sh. -1090 Gy.sh. -1165 wh.s.rk.
										- 166 Cong. - 657 Cong. -1105 Bk.sh. -1175 rk.s.rk.
										- 817 Bk.sh. -1112 S.rk. -1180 Rd.s.rk.
										-1182 Primary rk.
4158	22 M	L683	1913	S.A.	1259)			F		0- 660 Gy.sh. - 1320 Dk.p.cl.
House					1379)	13		F		- 800 Bk.sh. - 1380 S. rk.
WOLSELEY										- 806 Cong. - 1400 p.cl.
DOWNNS										- 1201 - 1470 Pk.sst.
										- 1260 S.shot sh. - 1487 Rd.sst.
										- 1300 s.rk. - 1488 Granite
4159	21 M.	L760	W.Moulder	850	50'	Soak				0- 80 y.sh. - 850 Kero sh.
No.6			1914	S.A.	1252					- 280 Bk.sh. - 1200 Bk.sh.
PENOLA										- 350 Gy.sh. - 1212 S., sh.
DOWNNS										- 356 Cong. - 1252 s.rk.
										- 596 Bk.sh. - 1282 Dk.p.cl.
										- 690 Gy.sh. - 1292 Pk.s.rk.
										- 800 Bk.sh. - 1300 Gy.s.rk.
4168	31 M.	L616	1896	Flow-	1260)	Sur-	1,666,666	139	0-	50 Alluvium - 930 Lt.gy.sh. - 1666 Sst.
? NNE K.				ing	1266)	face			-	130 Y.sh. - 1260 Br.sh. - 1700 p.cl.
QUAMBEYTOOK					1310)				-	330 Bl.sh. - 1500 Dk.sh. - 1998 Sst.

A	B	C	D	E	F	G	H	I	J	K
4169 House HELEN DOWNS	39M. NNE K.	580	IBC 1913	Flow- ing	1359) 1409) 1553) 1646) 1696) 1721) 1752) 1776) 1797) 1814) 1881) 1899) 1906)					0- 76 y.cl.w.hd. stk.bl.sh. - 235 Bl.sh. - 662 Dk.gy.sh. - 1356 Bk.sh. - 1432 S.rk.& p.cl. - 1571 P.cl. & br.rk. - 1687 Br.sh.& p.cl. - 1816 P.cl.& s.rk. - 1918 S.rk.& hd.rk. - 1955 Hd.wh.rk.
4170 House CLARAFIELD	29M. NE K.	639	Woodleys 1921	S.A.	1625 2100) 2130) - 60) 2203)		140,000 200,000 400,000			0- 2 Surface cl. - 30 Y.pug. - 33 Gy.blds - 53 Y.pug. - 57 Hd.gy.rk. - 99 Y.pug. - 126 Hd.bl.sh. - 288 Dk.br.sh. - 326 Gy.sh.patches hd.rk.
										- 432 Br.sh. - 1699 wh.stky. - 887 Gy.sh. pug. - 889 Br.sh. - 1710 wh.sst. - 1000 Lt.col.- 1812 wh.sy.sh. sh. - 1880 wh.stk. - 1053 Gy.sh. pug. - 1329 Br.sh. - 2140 wh.sy.sh. - 1558 Gy.sh. - 2157 wh.sst. - 1589 Sst. - 2173 wh.sy.cl. - 2203 Sst.

A	B	C	D	E	F	G	H	I	J	K
4623 ? KULWIN	28 M. N. K.	L575	1897	Flow- ing	1414) 1500)	Sur- face	3,000 698000		136	O- 20 Alluvium - 1414 y.sh. v. fragile bl. & bk.shs. w. abed of qtzite - 1500 s. - 1550 s.w. bds of p.cl. T.D later amended to 1670.
4624 No.3 TOORAK	29 M. NE. Mc.	538	IBC 1896	Flow- ing	1231) 1265) 1305) 1312) 1366) 1428) 1447) 1455) 1460)	Sur- face	10,000 20,000 increasing			O- 414 No. info. - 784 Gy.sh. - 916 Bk.sh. - 1094 Gy.sh. - 1460 No.info.
4625 No.4 TOORAK	38 M. NE Mc.	492	1 BC 1897	Flow- ing	1280) 1305) 1321) 1380) 1404) 1417) 1434) 1462) 1473)	Sur- face	10,000 100,000 300,000 increasing			O- 600 No info. - 1473 s.rk. - 690 sh. - 1497 granite - 763 No.info. - 861 Bk.sh. - 1165 Gy.sh. - 1265 p.cl.& s. - 1300 p.cl. - 1321 s.rk. - 1360 p.cl.
4626 ? COOLREAGH	25 M. NE Mc.	L533	1905	Flow- ing			1,000,000 (1907) 272,900 (1948)		134	T.D. 1425 Gas in flow.
4627 ? ELACOURT	25 M. NNW		1912	Flow- ing	1380) 1660)	Sur- face				T.D. 1720 N.O.I.

A	B	C	D	E	F	G	H	I	J	K
5144 Etna WINTON SHIRE	20 M. ESE K.		Tichbourne 1937	143 S.A.	2412	Sur- face	Soak 25,443			0- 54 y.cl. - 367 Gy.sh. - 2254 Bl.sh. - 110 Gy.sh. - 407 Br.sh. - 2267 Sy.sh. - 141 Sy.sh. - 427 Sy.sh. - 2271 Sst. - 143 S. - 1711 Gy.sh. - 2306 P.cl. - 185 Sy.sh. - 1768 Br.sh. - 2311 Sy.p.cl. - 195 Gy.sh. - 1811 Bk.sh. - 2386 P.cl. - 197 Rk. - 1919 Gy.sh. - 2403 Sy.p.cl. - 342 Gy.sh. - 1920 Sst. - 2413 S. - 347 Br.sh. - 2081 Gy.sh. - 2440 Sy.p.cl.
5358 ? COLWELL	15 M. SW Mc		1924	S.A.						T.D. 601 N.O.I.
5424 ? MILGERY	12 M. S Mc		1923	Abd. (Replaced by 12080)						T.D. 1126 N.O.I.
5425 House BROADLANDS	13 M. S Mc		1926	S.A.						T.D. 1027 Mesozoic sst at bottom
5573 ? BOORAMA	19 M SW Mc		1920	S.A.						T.D. 311 N.O.I.
5574 ? BOORAMA	21 M. SW Mc		1923	S.A.						T.D. 252 N.O.I.
5575 ? BOORAMA	22 M. SW Mc		1933	S.A.						T.D. 248 N.O.I.

DRILLERS' LOG

A	B	C	D	E	F	G	H	28. I	J	K
5721 ? MT. ETNA	22 M. ESE K			S.A.						T.D. 600 N.O.I.
5797 House ARIZONA	25 M. WSW K		1924	S.A.						T.D. 1497 N.O.I.
5873 Kenellen JACKTON	17 M. NW K		H. Bode 1921	S.A.	1203- 1499	7		V.G.	0- 6 Bk. soil - 76 y. sy. sh. -1200 Br. & gy. sh. v. stky, w.v. small seams rk.	- 1203 Rk. - 1499 Rk. water bearing
5889 ? ASCOT	42 M. SE K.		1924	S.A.						T.D. 727 N.O.I.
6024 ? BELFAST	15 M. ESE K		1923	S.A.						T.D. 465 N.O.I.
6094 O'Brien Creek MT. CAMPBELL	46 M. SE K.		1922	S.A.						T.D. 757 N.O.I.
6129 House STRATHBOWEN	31 M. SE K		1923	180 350			10,000	B		T.D. 408 N.O.I.
6130 Middle STRATH- BOWEN	32 M. SE K		1925	Abd				S		T.D. 804 N.O.I.

29.

A	B	C	D	E	F	G	H	I	J	K
6140 ? DINGADING	27 M. SW Mc.		1919							T.D. 400 N.O.I.
6215 9-Mile TOOLEBUC	49 M. SSW Mc.	Davidson & Royle 1938	S.A. 958	230						0- 10 Rd.gravel- 573 Gy.rk. - 940 Hd.br.rk. & soil - 595 Br.rk. - 960 Gy.sh. - 56 wh.cl. - 650 Gy.sh. - 964 water s. - 189 y.cl. - 771 Bl.sh. - 972 Sy.cl. - 571 Gy.sh. - 935 Gy.sh.
6388 Old Salt WYREEMA	26 M. E K		1925	Abd.				S		T.D. 400 N.O.I.
6481 ? TAL TAL	19 M. WSW Mc.		1920	S.A.						T.D. 199 N.O.I.
6538 House BENDEMEER	39 M. SE K.		1923	S.A.						T.D. 650 N.O.I.
6539 Middle BENDEMEER	41 M. SE K.		1923	S.A.						T.D. 646 N.O.I.
6540 Boundary BENDEMEER	43 M. SE K.		1923	S.A.						T.D. 620 N.O.I.
6725 No.2 NUL EN	34 M. SE K.			S.A.						T.D. 500 N.O.I.
6726 Middle NUL EN	35 M. SE K.			S.A.						T.D. 500 N.O.I.

A.	B	C	D	E	F	G	H	I	J	K
6727 New NUKEN	37 M. ESE K			S.A.						T.D. 620 N.O.I.
7095 Snake Creek (No.38) BEAUDESERT	19 M. SSW Mc	R.Tichbourne 1938		S.A.	835	70				0- 3 Rd.soil - 420 Gy.sh.w.sst. - 836 sst. - 10 Gy.cl. - 610 Bk.sh. - 840 Sy.sh. - 54 Gvly cl.- 739 Gy.sh. - 857 Bl.sh. - 70 y.cl. - 759 Lt.gy.sh. - 860 Sst. - 117 y.cl.& - 783 Bk.sh. - 863 Gy.sh. mudstone- 810 Gy.sh. - 194 Bl.sh. - 835 Gy.sh. - 373 Gy.sh. &sst.
7123 ? IVY DOWNS	5 M. S. Mc.	Tichbourne 1938		S.A.	754) 764)	Sur- face	1250			0- 3 Bk.soil - 384 Sy.sh. - 754 Sy.sh. - 45 Rd.y.& - 490 Bk.sh. - 764 Sst. bl.sh. - 625 Gy.sh. - 801 Sy.p.cl. - 76 y.sh. - 744 Dk.sh. - 805 Hd. - 280 Gy.sh.
7382 Benduck DAGWORTH	24 M. S.K.		1916	Abd. (casing collapsed)						T.D. 520 N.O.I.
7383 No.8 PENOLA DOWNS	19 M. SSE Mc.		1920	S.A.						T.D. 1457 N.O.I.
7384 No.9 PENOLA DOWNS	24 M. SE Mc.		1920	S.A.						T.D. 1271 N.O.I.
7385 No.10 PENOLA DOWNS	22 M. SE. Mc.		1923	S.A.						T.D. 1358 N.O.I.

DRILLERS' LOG

DRILLERS' LOG												
A	B	C	D	E	F	G	H	31. I	J	K		
7413 ? PERCOL PLAINS	19 M. SW Mc.	R. Tichbourne 1939			570) 600)	18				O- 19 Rd. sy. soil- - 30 s. - 95 y. cl. - 164 Dk. gy. sh. - 175 Dk. rk. - 202 Bk. sy. sh.	266 Br. sh. - 318 Sy. sh. - 352 Bk. sh. - 414 Dk. gy. sh. - 451 Gy. sh. - 461 Bk. sh.	- 486 Gy. sh. - 569 Dk. sh. - 600 S w hd. stks.
7414 ? PERCOL PLAINS	20 M. SW Mc.		1918							T.D. 610	N.O.I.	
7415 ? PERCOL PLAINS	22 M. SW Mc.		1920							T.D. 475	N.O.I.	
7499 ? Dud PERCOL PLAINS	Not Located Approx 14 Mi. WSW Mc.		1934							T.D. 441	N.O.I.	
7610 No. 35 STRATHFIELD	14 M. W. Mc.		1925	S.A.						T.D. 535	N.O.I.	
7893 No. 1 NE KIRKLANDS	6 M. K.	A. Stower 1940			176 Add.			F		O- 59 y. cl. - 61 Gy. rk. - 71 Gy. sst - 136 Gy. st. - 141 Gy. rk. - 167 Gy. sh. - 176 Gy. sh.	- 176 Sst. - 191 Sy. sh. - 211 Sst. - 225 sy. sh. - 311 Gy. sh. - 314 Gy. rk. - 345 Sst. w sy sh.	- 357 Sst. - 377 Gy. sh. - 382 Br. sh. - 384 Rk. - 412 Sst. - 419 Gy. rk. - 425 Sst.

A	B	C	D	E	F	G	H	I	J	K
7894	7 M.		1940	S.A.						0- 49 y.sh. - 183 sh.
No.2	ENE									- 164 sh. - 190 Sst. & rk.
KIRKLANDS	K.									- 174 Sst. - 201 sh.
7926	12 M		D. Weston	1961	200)	30,240				0- 22 y.cl. - 507 p.cl. - 1762 Dk.sh.
Cooglum	NE		1942	S.A.	2126	80)				- 58 y.st. - 875 Gy.sh. - 1932 Gy.sh.
CRENDON	K									- 80 y.cl. - 891 Rk. - 1958 Dk.sh.
										- 101 Dk.bl.sh. - 943 Gy.sh. - 1970 S.
										- 113 Rk. - 947 Rk. - 2000 Gy.marl.
										- 149 Dk.bl.sh. - 964 Gy.sh. - 2020 p. cl.
										- 394 Gy.sh. - 966 Rk. - 2040 Sy.cl.
										- 429 Lt.gy.sh. - 1518 Gy.sh.w.rk. - 2196 Sst.
										- 475 Lt.sy.sh. - 1589 Dk.sh. - 2200 Sy.p.cl.
										- 497 Gy.sh. - 1626 Br.sh.
3901	15 M.		L.Blackwell	184		11,000				0- 98 y.cl. - 202 Gun metal sh- 256 Qtz.
No.39	WNW Mc.		1942	S.A.						- 179 Bk.sh. - 220 congl.rk. - 258 Granite Fm.
STRATFIELD										- 184 S.rk. - 250 Rotten granite & hd.patches
8907	18 M.		1942	S.A.						0- 6 Surface - 468 Rk. - 806 sh.
Mt.Wills	S Mc.									- 81 Cl. - 545 Sh. - 808 Rk.
BROADLANDS										- 172 Gy.sh. - 548 Rk. - 840 sh.
										- 192 Rk.&gy.sh. - 583 sh. - 842 Rk.
										- 246 Gy.sh. - 606 Rk. - 872 sh.
										- 249 Rk. - 644 sh. - 874 Rk.
										- 281 Gy.sh. - 648 Rk. - 918 sh.
										- 285 Rk. - 695 sh. - 922 Rk.
										- 400 Gy.sh. - 697 Rk. - 982 sh.
										- 401 Rk. - 735 sh. - 1006 sst.
										- 426 sh. - 739 Rk. - 1007 Qtz.
										- 429 Rk. - 786 sh. - 1010 Sst.
										- 464 sh. - 788 Rk. - 1033 Qtz.

A	B	C	D	E	F	G	H	I	J	K
9039 ? BEENFIELDS	18 M. NNW Mc.		1942	S.A.	887	40				0- 72 y.sh. - 390 Rk. - 644 sh. - 210 Gy.sh. - 394 Dk.sh. - 674 sh.rk. - 215 Rk. - 494 Dk.sh. - 714 sh. - 230 Gy.sh. - 498 Rk. - 841 sh.rk. - 250 Gy.rk. - 582 sh. - 887 Qtz. - 282 Gy.sh. - 586 rk. - 897 s. - 320 Br.rk. - 631 sh. - 965 Rk. - 334 sh. - 636 Rk.
9175 No.40. STRATHFIELD	11 M. WNW Mc.	L.Blackwell 1942		S.A.	153	3600				0- 60 y.cl. - 153 Bk.pugh. - 200 Congl.& rubble & s. - 80 Bk.pugh. - 156 Bk.sst. - 208 Bk.sh. - 96 congl. - 166 Bk.sh. rk.slate- 186 Bk.sh. sh. & congl.
9939 ? DINGADING	29 M. SW Mc.	E.A. Emblem 1944			480	150 17,280				0- 44 y.sh. - 376 sh. - 455 Hd.sh. - 87 Rk. - 424 Br.sh. - 478 Sst. - 222 Gy.sh. - 430 s. - 480 Qtz.& iron - 225 Rk. - 438 sh. pyrites - 237 sh. - 447 Hd.sh. - 243 rk. - 449 s.
10434 Yaningerry BOORAMA	10 M.WSW Mc.	E.A. Emblem 1945		S.A.	528	111 26,600 +	F			0- 2 soil - 272 sh. - 387 Rk. - 5 cl. - 232 rk. - 394 Hd.sh. - 13 Sst. - 332 sh. - 462 sh. - 76 y.sh. - 336 rk. - 509 Hd.sh. - 111 Dk.sh. - 350 Hd.sh. - 528 s. - 131 Br.rk. - 377 sh. - 534 Hd.sh.& qtz. - 186 Dk.sh. - 385 Hd.sh.
10435 House MILGERY	14 M. SE Mc.	E.A. Emblem 1946		S.A.	723 1138	573 500 110 22,000	G G			0- 92 y.sh. - 429 sh.&rk. - 931 Gy.sh. - 180 Gn.sh. - 630 sh. - 1009 Hd.gy.sh.& rk. - 252 sh. - 670 sh & rk. - 1090 Dk.sh.& trace s. - 259 Rk. - 760 Br.rk. - 1139 sh. - 288 sh. - 798 sh.&rk. - 1142 s. - 292 rk. - 814 Br.sh. - 1149 Rk. - 348 Gy.sh. - 853 Hd.gy.sh. - 1164 sh. - 350 Rk. - 880 Hd.gy sh. & rk.

cont..

DRILLERS' LOG

A	B	C	D	E	F	G	H	34. I	J	K
10435 House MILGERY	cont...									0- 1171 Qtz. - 1203 Rk. - 1182 Sy.rk. - 1220 Qtz. - 1193 Qtz.
10650 No. 1 WANCRA DOWNS	34 M. ESE K.		1925	260			7000			0- 180 y.cl. - 820 Hd.sh.
10651 No.2 WANCRA DOWNS	35 M. E. K.		1928	180			11000			0- 80 y.sst. - 385 bl.s.rk.
10652 No.3 WANORA DOWNS	37 M. E. K		1920	160			11000			0- 80 y.sst. - 390 Bl.s.rk.
10684 ? MAYFIELD S	18 M. NW Mc.	E.A. Emblem 1946		?	97 117	76)	34000			0- 1 Surface - 92 Dk.sh. - 137 s. Soil - 97 Hd.rk. - 140 Hd.rk. - 46 Cl. - 103 s. - 82 y.sh. - 117 s & qtz.
10704 ? TAL TAL	19 M. WSW Mc.		1946	?	106) 147) 180) 187)	40	35000			0- 1 Surface - 106 Dk.sh. - 182 S. Soil - 111 Rk. - 187 Dk.sh.& mica - 11 Cl. - 147 Dk.sh.& - 202 s. - 18 y.sst. pyrites - 207 s & cl. - 26 Hd.rk. - 153 s & sh. - 38 S. & gvl. - 76 y.sh. - 180 Dk.sh.& mica.

A	B	C	D	E	F	G	H	I	J	K
11142 Belford BELFORL	37 M. NNE K.		IBC 1948		1512 1650) 1740) 1780) 1804) 1857)	12 25,000 42,000 59,000 157,000 222,000				0- 3 Br. soil - 1650 Gy.sh.w. - 1754 Fine sst. - 65 y.cl.& s.rk. sst.bars - 1804 Sst.w.hd.bars. - 1512 Gy.sh. - 1667 Cs.sst. - 1857 Sst. - 1516 Sst. - 1727 Sy.cl. - 1550 Gy.sy.sh. - 1732 Fine sst. - 1625 Lt.gy.sy.sh. - 1750 Sy.cl. w.sst.bars.
11249 No.41 BEAUDESERT	27 M. S. Mc.		1949	140	828	140	36,000			0- 114 Soapy head - 453 Hd.gy.sh. or y.cl. - 455 Gy.rk. - 426 Bk.cl., sh - 630 Bl.sh. & small blds. - 682 Hd.bl.rk. - 440 Large blds. - 828 Bl.sh. - 445 Sh. rk. - 887 wh.s.rk.
11360 No.4 EL RITA	39 M. SSW Mc.			S.A.						T.D. 600 N.O.I.
11361 No.5 EL RITA	46 M. S. Mc.			S.A.						T.D. 1100 N.O.I.
11364 No.42 STRATHFIELD	19 M. W. Mc.		1949	94 125	120 240	90 94	23,000	B G		0- 84 y.cl. - 150 Soft.bk.sh. - 246 Rotten granite - 120 Bk.sh. - 204 Bk.sh. - 252 Gy.granite - 122 Bk.sy.sh. - 206 Congl.
11472 Coomarra STOCK ROUTE	22 M. SE Mc.		Godfrey Bros. S.A.	710 ?		150 Main Supply				0- 16 y.sh. - 723 Lst. - 1008 Hd.sh. - 40 y.cl.or soft sh. - 730 Bk.sh. - 1015 Bk.sh. - 44 Bl.sh. - 740 Lst. - 1032 Bl.sh. - 60 y.cl.or soft sh. - 800 Bl.sh. - 1136 Bk.sh. - 805 Bk.sh. - 1141 Bl.sh. - 840 Bl.sh. - 1150 1'rk.then s. - 79 y.sh. - 857 Gy.sh. - 1160 Gy.marl. - 327 Bl.sh. - 911 Bk.sh. - 1170 S.sh.or gy - 418 Lt.gy.sh. (hd.stks) - 935 Stky.gy.sh. marl. - 951 Stky.sh. - 1177 s. sh.&gvl. - 710 Bl.sh. - 1000 Bl.sh. - 1183 sst. cont...

A	B	C	D	E	F	G	H	I	J	K
11472 Coomarra STOCK ROUTE cont...										- 1185 stky sh. - 1233 Stky sh.sst.gvl. - 1205 sst. - 1250 Sst. - 1208 stky sh. - 1260 Granite - 1230 Sst.
11529 26 M. Ringlock ENE WYREEMA K.		1949	155 280	260-70) 389-400)	155	4,000	G	0-	80 Cl. 270 Sl. 290 sh. & p.cl.	- 292 rk. - 410 sh. & p.cl.
11704 21 M. Boundary E.K. WYREEMA		Blackall 1950	190 300	428-45	190	2,500	G	0-	35 Soil,y.cl. & rk. 45 y.sy.cl. 65 Gy.s.rk. 67 Rk. 91 Gy.s.rk. 100 Br.sy.sh. 127 Gy.sy.sh. 130 Rk.	- 165 Gy.sy.sh. - 325 Gy.sy.sh. - 182 Br.sy.sh. - 360 Gy.sh. - 185 Rk. - 362 Sy.p.cl. - 247 Gy.sh. - 364 Rk. - 267 Gy.sy.sh. - 426 Gy.sh. - 270 Rk. - 428 Rk. - 300 Gy.sy.sh. - 440 Gy.sy.sh. - 315 Sy.cl. - 477 Sy.p.cl. - 316 Rk. - 600 Gy.sh.
Deepened beyond 600' in 1961 by driller A. Stockham.										
11887 6 M. Hickson's SE Creek Mc. KOOROCRA		V.R. Beauchamp 1952	36 103	946	36	22,560	G	0-	96 y.cl. 98 Hd.sst. 110 Bl.sh. 120 Gy.rk. 325 Bl.sh.	- 375 Gy.sh.&s - 550 Bk.sh. - 460 Bl.sh. - 946 Bl.sh. - 500 Bk.sh. - 1020 wh.sst. - 511 Hd.bk. - 1022 Pyrites of shale. sh.& rk.
12080 12M. ? SE MILGERY Mc.		E.A. Emblem 1953	1068 87 ?	87	Unlimited			0-	3 Surface 7 Rk. 11 y.sh. 15 Rk. 93 y.sh. 454 Gy.sh.c bds rk. 464 sh. 466 Rk. 506 sh. 516 Gy.sh.	- 546 Sh. - 1008 Gy.sh. - 586 Gy.sh. - 1010 Rk. - 600 Sh. - 1047 Hd.st. - 655 Rk. - 1061 Gy.sh. - 849 Gy.sh. - 1068 Sst.?? - 851 Rk. - 1084 S. - 863 Gy.sh. - 1109 Sst. - 865 Rk. - 1121 Qtz.sst. - 903 Gy.sh. - 1134 s. - 906 Rk. - 1138 Qtz.

A	B	C	D	E	F	G	H	I	J	K
12450 No.7 EL RITA	38 M. S.Mc.		1948	S.A.						T.D. 1080 N.O.I.
12459 No.43 STRATHFIELD	12 M. WNW Mc.	E.A. Emblem 1953	70	206	70	23,040				0- 4 Surface - 198 Rk. soil - 205 Dk.sh. - 58 y.sh. - 214 S. - 70 Dk.sh. - 223 Hd.dk.sh. - 75 Rk. - 229 Sh. - 149 Hd dk.sh. - 245 s. - 185 Dk.sh. - 259 Rk.
12750 Shipley's FPENSHAM	13 M. SE K.	1954	145 350	165 585	145 145	3600 6000 (total 9600)	G P			0- 3 Surface - 123 Gy.sh. - 475 Gy.sy.sh. soil - 131 Br.sh. - 490 Gy.sh. - 15 y.sst. - 160 Gy.sh. - 495 Gy.sy.sh. - 29 y.cl. - 207 Gy.sy.sh. - 540 Gy.sh. - 33 Rk. - 313 Gy.sh. - 556 Gy.sy.sh. - 36 y.cl. - 327 Gy.sy.sh. - 557 Rk. - 46 Rk. - 334 Gy.sh. - 582 Gy.sy.sh. - 48 y.cl. - 339 Gy.sy.sh. - 585 Gy.rk. - 53 Rk. - 403 Gy.sh. - 597 Gy.sy.sh. - 76 Gy.sy.sh. - 418 Gy.sy.sh. - 600 Gy.sh. - 93 Gy.sy.sh. - 460 Gy.sh. w.blds.
12815 Dud CONGEWCI	22 M. SE K.	H.A. Stockham 1955	140	160 592- 600	140	10,080	S			0- 67 y.cl. - 178 Gy.rk. - 540 Gy.sh. - 70 Rk. - 203 Gy.sy.sh. - 554 Gy.sy.sh. - 82 y.cl. - 335 Gy.sh. - 573 Gy.sh. - 108 Gy.sh. - 358 Gy.sy.sh. - 592 Br.sh. - 116 Gy.rk. - 361 Rk. - 600 Sy.sh. - 140 Gy.sy.sh. - 375 Gy.sh. - 611 Br.sh. - 155 Gy.sh. - 395 Gy.sy.sh. - 625 Gy.sy.sh. - 165 Gy.sy.sh. - 420 Gy.sh. bars sst. - 170 Br.sh. - 506 Gy.sy.sh. - 645 Gy.sh. - 174 Gy.sh.

DRILLERS' LOG

A	B	C	D	E	F	G	H	38. I	J	K		
12985 No. 4. LAGAVEN	16 M. N. Mc.	W.A. James 1955	675 867- 87	400 Sur- face	1000 19,000	B G		0-	5 25 28 91 200 220 420 440	Surface cl. - S & cl. - y.cl. - y.sh. - Gy.sh. - Gy.sh.c.rk. - seams - sh. - Sh c rk. - seams. -	672 sh. - 692 Sh.gn. - sst.seams. - 857 sh. - 865 sh.gy.rk. - seams - 887 sst. - 920 sst.cl. - seams - 940 sst.gy. - marl.stone. -	949 sst.flakes mica 959 Rotten gran- ite & mica schist. 963 Gy.mica schist 993 Sy.mica cl. conglomerate 1018 Granite.
13314 ? GLENHOLME	26 M. SSW Mc	1956	125 167 735	710 720 735	500) 300) 125)	24,000 G		0-	70 269 305	y.sh.bars semi-rk. Gy.sh.w.bars hd.gy.rk. Brittle br. sh.&belmified rk.	- 688 Caving gy.sh. - 710 Sy.sh. - 713 Sst. - 720 Bk.puggy sy.sh. - 723 Sst.	- 735 Sy.sh. - 757 Sst. - 758 Qtz.& mica rubble
13503 No.6 WANORA DOWNS	35 M. E. K.	H.A. Stockham 1957	165 280 456)	175) 322) 456)	165 9,600	P		0-	3 72 98 100 112 118 120 128 132 138 150	Surface soil y.cl. Gy.sh. Rk. Gy.sh. Gy.sy.sh. Rk. Gy.sy.sh. Rk. Gy.sy.sh. Rk. Gy.sh.	- 164 Gy.sy.sh. - 166 Rk. - 180 Gy.sy.sh. - 237 Gy.sh. - 239 Rk. - 295 Gy.sh. - 330 Gy.sy.sh. - 333 Rk. - 345 Gy.sy.sh. - 348 Rk. - 362 Gy.sy.sh.	- 364 Rk. - 368 Gy.sy.sh. - 370 Rk. - 405 Gy.sy.sh. - 428 Gy.sh. - 439 Gy.sy.sh. - 441 Rk. - 456 Gy.sh. - 465 Sst. - 475 Gy.sy.sh. - 480 Gy.sh.

A	B	C	D	E	F	G	H	I	J	K.
13808 Hampden STOCK ROUTE	12M. NW K	1959	S.A.	745 1685		Below Sur- face	Soak			0- 1340 sh.y.gy.bl.etc. - 1345 Blds. - 1684 Sh.gy. - 1715 Sst. - 1730 Puggy sh. & sst. - 1755 Puggy sh.
13966 Harry's KRENSHAM	16M. SE K	Stockholm 1959	133 155	135 563	133 133	1200 14,400 (Total)		B.		0- 3 Soil - 155 Gy.sst. - 393 Gy.sh. - 8 y.sy.cl. - 238 Gy.sh. - 437 Gy.sst. - 11 Rk. - 270 Gy.sst. - 440 Rk. - 62 Y.sy.cl. - 272 Rk. - 467 Gy.sst. - 82 Y.sst. - 290 Gy.st. - 549 Gy.sh. - 89 Gy.sst. - 292 Rk. - 552 Rk. - 98 Y.sst. - 325 Gy.sst. - 572 Gy.sst. - 585 Gy.sy.sh.
14381 No. 11 PENOLA DC INS	18M. SE	E.A. Emblem (drilling 1961-2)								0- 79 Cl. - 1296 Rk. - 108 Gy.sh. - 1326 Gy.sh. - 142 Rk. - 1335 Rk. - 590 Gy.sh. - 1384 Gy.sh. - 593 Rk. - 1399 Gy.sh. 1620 Glauconitic - 634 Gy.sh. s.rk. sandy siltstone - 637 Rk. - 1444 Hd.rk. with Lower - 1215 Gy.sh. - 1451 Sh. & Cretaceous foram s - 1218 Rk. pyrites (see Appendix B) - 1294 Gy.sh. - 1576 Hd.sh, rk.seams 1720 Blue-grey - 1676 Rk. siltstone with - 1692 Hd.gy.sh. Lower Cretaceous forams. (see Appendix C)
14463 Stock Route McKINLAY CHIRE	14M. NE K Mc	1961	Flow- ing							Drilling ahead at 1912 July 1962 T.D. 1143

APPENDIX BMicro-examination of Sample from Penola No. 11 Bore
McKinlay Sheet, Western Queensland.

by

Irene Crespin

A sample was recently collected by R. Vine from Penola No. 11 Bore, Queensland, from the depth of 1620 feet. The rock was a glauconitic sandy siltstone containing numerous but not well preserved foraminifera of Lower Cretaceous age. A few pyritic tests of radiolaria and ostracoda were also present. The foraminifera are as follows :-

Ammobaculoides pitmani Crespin
Ammobaculites cf. minimus Crespin
Ammodiscus sp.
Bimonilina sp.
Globulina sp.
Hyperammia sp.
Haplophragmoides spp.
Neobulimina sp.
Psammospaera sp. nov.
Pelosina lagenoides Crespin
Reophax sp.
Robulus spp.
Spiroplectammia sp.
Trochammia minuta Crespin.

With the presence of numerous tests of Ammobaculoides pitmani it is considered that this sample is the equivalent of the Upper Longsight Sandstone of S.W. Queensland.

31/10/61.

APPENDIX CPENOLA DOWNS No.11 BOREMcKINLAY 1:250,000 SHEET, WEST QUEENSLAND.

by

G.R.J. Terpstra

A sample was received from R. Vine of Penola Downs No.11, a cutting from 1780 feet. It contains an assemblage of Lower Cretaceous microfossils in which Anomalina mawsoni Crespin 1953 occurs commonly.

15th May, 1962.