

1964/133

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COMMONWEALTH OF AUSTRALIA

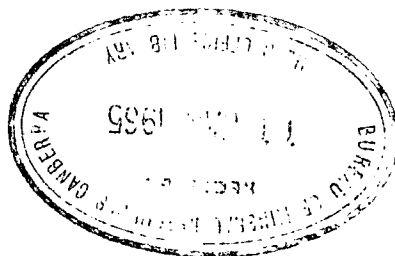
REFERENCE COPY HEAD OFFICE

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

RECORD No. 1964/133

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MAPS SHOWING THE
RESULTS OF AEROMAGNETIC
AND GRAVITY SURVEYS
IN THE PERTH BASIN,

W A 1949 - 1960

<i>Dongara-Perenjori</i>	<i>G 193-22</i>
<i>Hill River-Moorra</i>	<i>G 193-23</i>
<i>Perth</i>	<i>G 198-24</i>
<i>Pinjarra</i>	<i>G 193-25</i>
<i>Busselton-Collie</i>	<i>G 193-26</i>
<i>Augusta-Pemberton</i>	<i>G 193-27</i>

Scale 1 : 253,440



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 It may not be published in any form or used in a company prospectus or statement without the permission in writing of the Director, Bureau of Mineral Resources, Geology and Geophysics.

RECORD No. 1964/133



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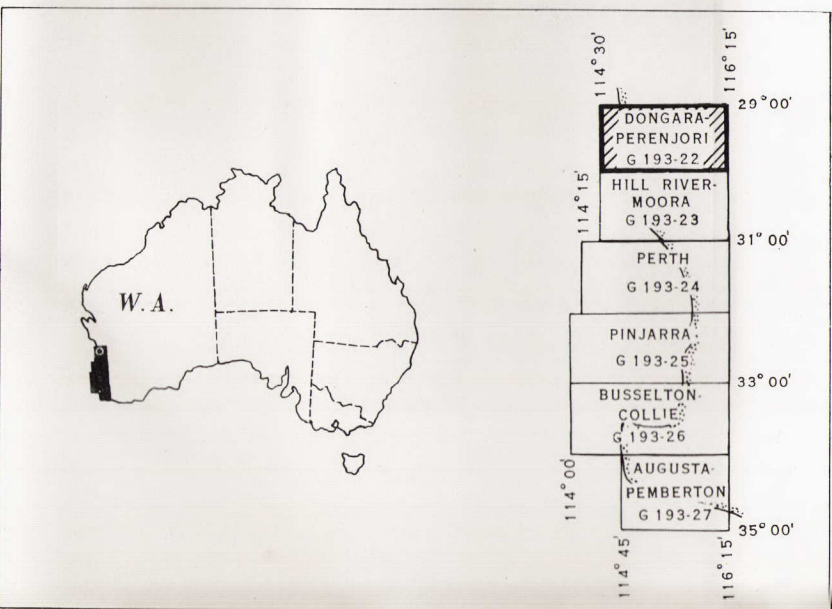
DONGARA-PERENJORI
WESTERN AUSTRALIA



I N D I A N

O C E A N

LOCATION DIAGRAM



COMPILED AND DRAWN BY GEOPHYSICAL BRANCH,
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
DEPARTMENT OF NATIONAL DEVELOPMENT, MELBOURNE

MAP DATA

PROJECTION: Transverse Mercator Australian Series.

CONTROL & DETAIL:

Planimetric detail was compiled from Royal Australian Survey
Corps 4-mile maps of the area.
Gravity stations plotted from 1949-1950 survey data.

RELIABILITY:

Planimetric detail: reliable
Magnetic data: reliability of plotted position of aircraft,
within ± 75 yards
Gravity data: reconnaissance

MAP SHOWING

TOTAL MAGNETIC INTENSITY

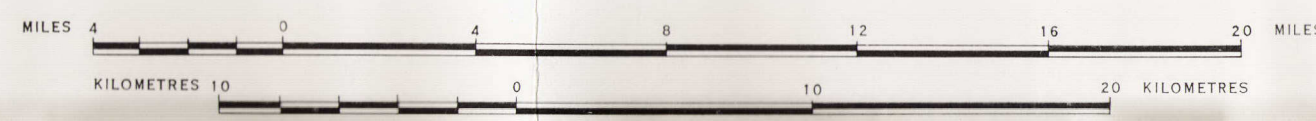
MEASURED BY AIRBORNE MAGNETOMETER

AND

BOUGUER ANOMALIES

DETERMINED BY GRAVITY SURVEY

SCALE 1:253,440



CONTOUR INTERVALS

MAGNETIC: 20 GAMMAS GRAVITY: 5 MILLIGALS

LEGEND

TOPOGRAPHICAL DATA

- River or Creek
- Highway or Main Road
- Road or Track
- Railway
- Fence
- Telegraph Line
- Named place
- Aerodrome or Landing Ground

MAGNETIC DATA

- Magnetic contours
- Magnetic 'low'
- Contour/Flight line intersection

GRAVITY DATA

- Gravity station
- Bouguer Anomaly (Milligals)
- Elevation
- High anomaly
- Low anomaly

EXPLANATORY NOTES

MAGNETIC DATA

The magnetic data have been compiled from an airborne magnetometer survey of the Perth Basin carried out in 1957 by the Bureau of Mineral Resources. The object of the survey was to delineate magnetic anomalies indicating the depth and principal structural features of the basin.

The total magnetic intensity was recorded continuously by an airborne magnetometer in a D.C. 3 aircraft flown at an altitude of 1,500 feet above sea level along lines spaced one mile apart. The data have been corrected for a regional gradient in total magnetic field of 6.5 gammas per mile in a direction south.

The heights of the aircraft were controlled through a radio altimeter. Over most of the survey area the position of the aircraft was controlled by a Shoran navigation system. Over the remainder of the area, photomosaic assemblies were used as a visual aid to navigation and the track of the aircraft was plotted from vertical photography taken with a 35-mm strip camera.

GRAVITY DATA

The gravity Bouguer values used in compiling this series of maps are based on the following Bureau of Mineral Resources pendulum stations:-

No. 17 Perth	979,394.3 milligals
No. 18 Albany	979,705.5 milligals
No. 19 Watheroo	979,216.0 milligals
No. 20 Geraldton	979,270.6 milligals

The contours show Bouguer Anomalies, which have been calculated using 2.2 gm/cm³ as an average rock density. Elevation datum: M.S.L. Perth.

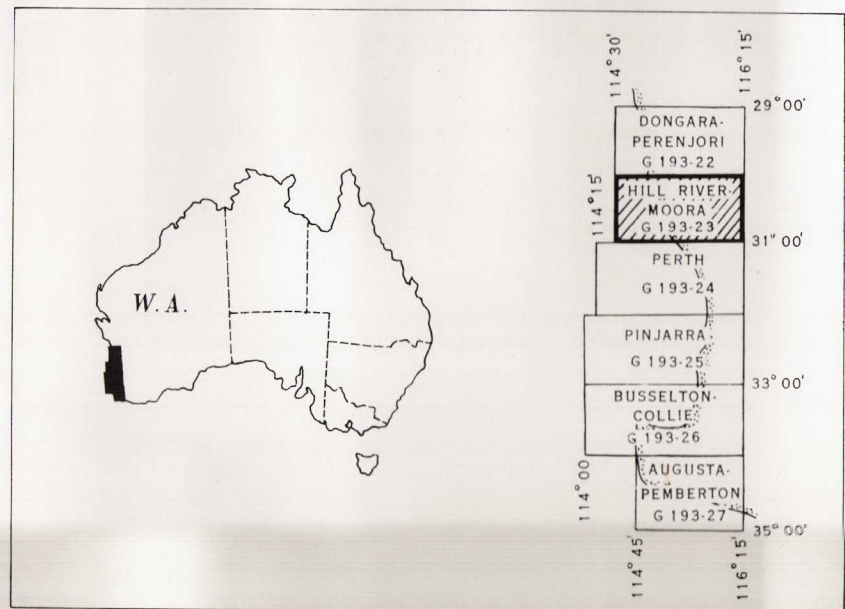
G193-22
MAY 1960

COMPLIMENTARY

HILL RIVER - MOORA
WESTERN AUSTRALIA



LOCATION DIAGRAM



COMPILED AND DRAWN BY GEOPHYSICAL BRANCH,
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
DEPARTMENT OF NATIONAL DEVELOPMENT, MELBOURNE

MAP DATA

PROJECTION: Transverse Mercator Australian Series.

CONTROL & DETAIL:

Planimetric detail was compiled from Royal Australian Survey
Corps 4-mile maps of the area.
Gravity stations plotted from 1949-1950 survey data.

RELIABILITY:

Planimetric detail: reliable
Magnetic data: reliability of plotted position of aircraft,
within 75 yards
Gravity data: reconnaissance

MAP SHOWING

TOTAL MAGNETIC INTENSITY

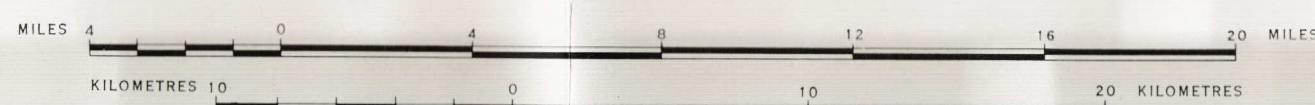
MEASURED BY AIRBORNE MAGNETOMETER

AND

BOUGUER ANOMALIES

DETERMINED BY GRAVITY SURVEY

SCALE 1:253,440



CONTOUR INTERVALS

MAGNETIC: 20 GAMMAS GRAVITY: 5 MILLIGALS

LEGEND

TOPOGRAPHICAL DATA

--- River or Creek
--- Highway or Main Road
--- Road or Track
--- Railway
--- Fence
--- Telegraph Line
o --- Named place
+ --- Aerodrome or Landing Ground

MAGNETIC DATA

--- Magnetic Contours
--- Magnetic Low
--- Contour Flight line intersections

GRAVITY DATA

o --- Gravity station
--- Bouguer Anomaly (Milligals)
--- Elevation
--- Isogals
--- High anomaly
--- Low anomaly

EXPLANATORY NOTES

MAGNETIC DATA

The magnetic data have been compiled from an airborne magnetometer survey of the Perth Basin carried out in 1957 by the Bureau of Mineral Resources. The object of the survey was to delineate magnetic anomalies indicating the depth and principal structural features of the basin.

The total magnetic intensity was recorded continuously by an airborne magnetometer in a D.C.3 aircraft flown at an altitude of 1,500 feet above sea level along lines spaced one mile apart. The data have been corrected for a regional gradient in total magnetic field of 0.5 gamma per mile in a direction south.

The height of the aircraft was controlled through a radio altimeter. Over most of the survey area the position of the aircraft was controlled by a Shoran navigation system. Over the remainder of the area, photostatic assemblies were used as a visual aid to navigation and the track of the aircraft was plotted from vertical photography taken with a 35mm strip camera.

GRAVITY DATA

The gravity Bouguer values used in compiling this series of maps are based on the following Bureau of Mineral Resources pendulum stations:

No. 17 Perth 979,284.3 milligals
No. 18 Albany 979,705.5 milligals
No. 19 Watheroo 979,216.0 milligals
No. 20 Geraldton 979,270.6 milligals

The contours show Bouguer Anomalies, which have been calculated using 2.2 g/cm³ as an average rock density.
Elevation datum: M.S.L. Perth

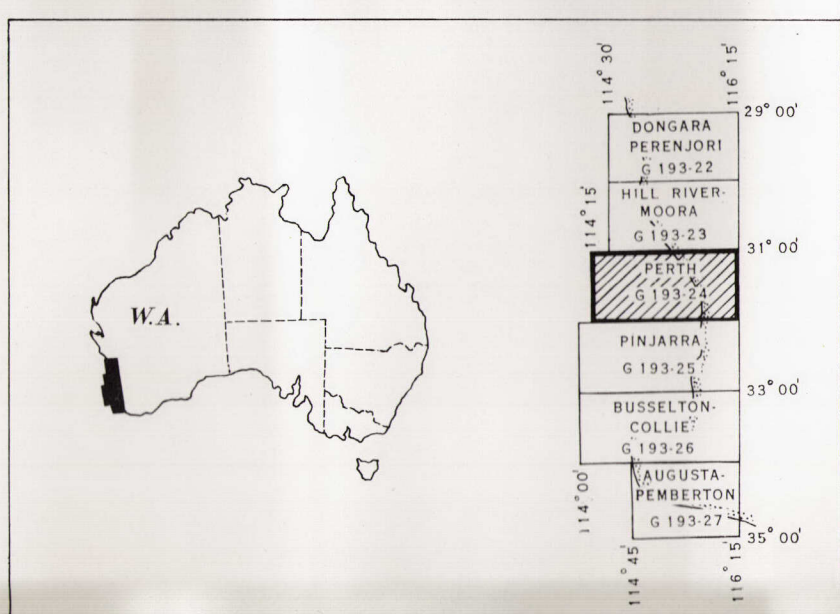
G 193-23
MAY 1960

COMPLIMENTARY COPY

PERTH
WESTERN AUSTRALIA



LOCATION DIAGRAM



MAP DATA

PROJECTION :- Transverse Mercator Australian Series.

CONTROL & DETAIL :-
Planimetric detail was compiled from Royal Australian Survey
Cuts 4-mile maps of the area.
Gravity stations plotted from 1949-1960 survey data.

RELIABILITY :-
Planimetric detail :- Reliable
Magnetic data :- reliability of plotted position of aircraft,
within ± 75 yards.
Gravity data :- reconnaissance

MAP SHOWING

TOTAL MAGNETIC INTENSITY

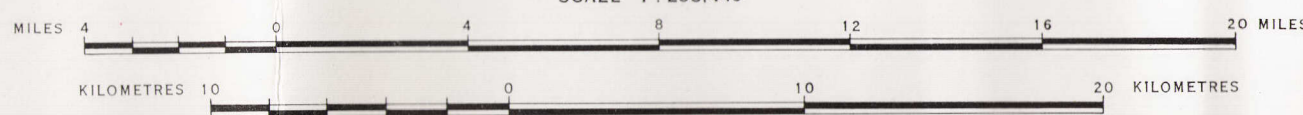
MEASURED BY AIRBORNE MAGNETOMETER

AND

BOUGUER ANOMALIES

DETERMINED BY GRAVITY SURVEY

SCALE 1:253,440



CONTOUR INTERVALS

MAGNETIC: 20 GAMMAS GRAVITY: 5 MILLIGALS

LEGEND

TOPOGRAPHICAL DATA

--- River or Creek
--- Highway or Main Road
--- Road or Track
--- Railway
--- Fence
--- Telegraph Line
--- Named place
--- Aerodrome or Landing Ground

MAGNETIC DATA

--- Magnetic Contours
--- Magnetic "Low"
--- Contour Night line intersections

GRAVITY DATA

--- Gravity station
--- Bouguer Anomaly (Milligals)
--- Elevation
--- Isogals
--- High anomaly
--- Low anomaly

EXPLANATORY NOTES

MAGNETIC DATA

The magnetic data have been compiled from an airborne magnetometer survey of the Perth Basin carried out in 1937 by the Bureau of Mineral Resources. The object of the survey was to delineate magnetic anomalies indicating the depth and principal structural features of the basin.

The total magnetic intensity was recorded continuously by an airborne magnetometer in a D.C.3 aircraft flown at an altitude of 1,500 feet above sea level along lines spaced one mile apart. The data have been corrected for a regional gradient in total magnetic field of 6.5 gammas per mile in a direction south.

The height of the aircraft was controlled through a radio altimeter. Over most of the survey area the position of the aircraft was controlled by a Shoran navigation system. Over the remainder of the area, photostatic assemblies were used as a visual aid to navigation and the track of the aircraft was plotted from vertical photography taken with a 35mm strip camera.

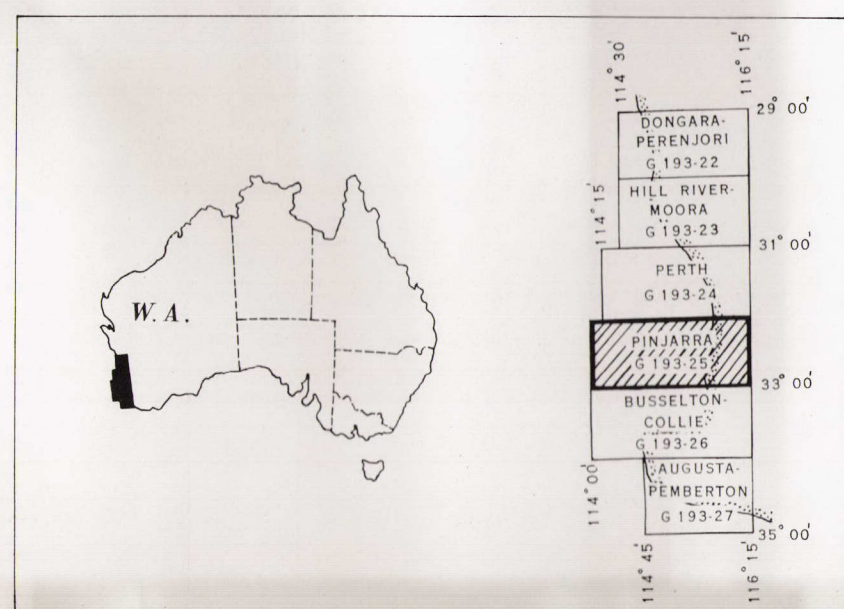
GRAVITY DATA

The gravity Bouguer values used in compiling this series of maps are based on the following Bureau of Mineral Resources pendulum stations :-
No. 17 Perth 979,394.3 milligals
No. 19 Albany 979,705.5 milligals
No. 19 Watheroo 979,216.0 milligals
No. 20 Geraldton 979,270.6 milligals
The contours show Bouguer Anomalies, which have been calculated using 2.2 gm/cm³ as an average rock density. Elevation datum: M.S.L. Perth

PINJARRA
WESTERN AUSTRALIA



LOCATION DIAGRAM



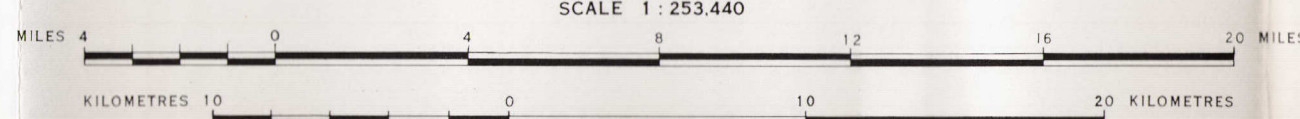
MAP DATA

PROJECTION: Transverse Mercator Australian Series
CONTROL & DETAIL: Planimetric detail was compiled from Royal Australian Survey Corps 4 mile maps of the area. Gravity stations plotted from 1949-1960 survey data.
RELIABILITY: Planimetric detail: Reliable
Magnetic data: reliability of plotted position of aircraft, within 2-75 yards.
Gravity data: reconnaissance

MAP SHOWING

TOTAL MAGNETIC INTENSITY
MEASURED BY AIRBORNE MAGNETOMETER
AND
BOUGUER ANOMALIES
DETERMINED BY GRAVITY SURVEY

SCALE 1:253,440



CONTOUR INTERVALS

MAGNETIC: 20 GAMMAS GRAVITY: 5 MILLIGALS

LEGEND

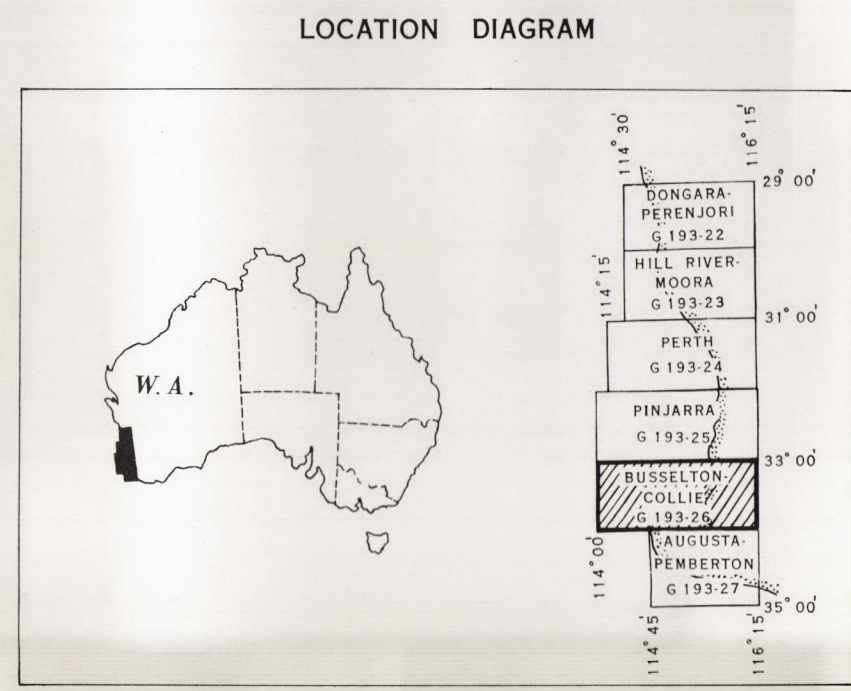
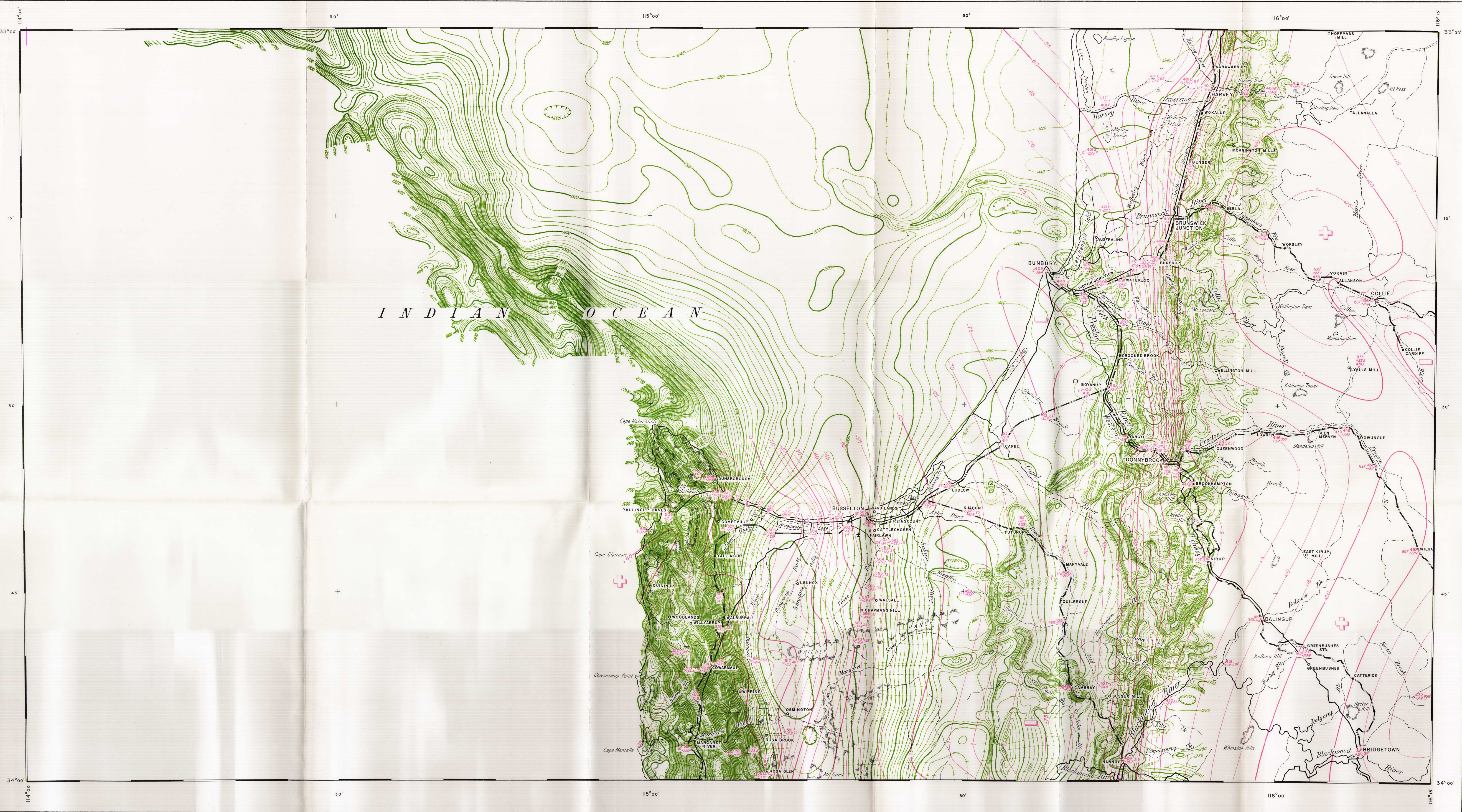
- TOPOGRAPHICAL DATA
- River or Creek
 - Highway or Main Road
 - Road or Track
 - Railway
 - Fence
 - Telegraph Line
 - Named place
 - ✈ Aerodrome or Landing Ground
- MAGNETIC DATA
- Magnetic Contours
 - Magnetic Low
 - Contour/Flight line intersections
- GRAVITY DATA
- Gravity station
 - Bouguer Anomaly (Milligals)
 - Elevation
 - Isogals
 - High anomaly
 - Low anomaly

EXPLANATORY NOTES

MAGNETIC DATA
The magnetic data have been compiled from an airborne magnetometer survey of the Perth Basin carried out in 1957 by the Bureau of Mineral Resources. The object of the survey was to determine magnetic anomalies indicating the depth and principal structural features of the basin.
The total magnetic intensity was recorded continuously by an airborne magnetometer in a D.C. aircraft flown at an altitude of 1,500 feet above sea level along lines spaced one mile apart. The data have been corrected for a regional gradient in total magnetic field of 4.5 gammas per mile in a direction south.
The height of the aircraft was controlled through a radio altimeter. Over most of the survey area the position of the aircraft was controlled by a Shoran navigation system. Over the remainder of the area, photostatic assemblies were used as a visual aid to navigation and the track of the aircraft was plotted from vertical photography taken with a 35mm strip camera.

GRAVITY DATA
The gravity Bouguer values used in compiling this series of maps are based on the following Bureau of Mineral Resources pendulum stations:
No. 17 Perth 979,394.3 milligals
No. 18 Albany 979,705.5 milligals
No. 19 Watheroo 979,216.0 milligals
No. 20 Goolburra 979,210.4 milligals
The contours show Bouguer Anomalies, which have been calculated using 2.2 gm/cm³ as an average rock density. Elevation datum: M.S.L. Perth

BUSSELTON — COLLIE
WESTERN AUSTRALIA



COMPILED AND DRAWN BY GEOPHYSICAL BRANCH,
BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS,
DEPARTMENT OF NATIONAL DEVELOPMENT, MELBOURNE

MAP DATA

PROJECTION: Transverse Mercator Australian Series

CONTROL & DETAIL: Planimetric detail was compiled from Royal Australian Survey Corps 4-mile maps of the area. Gravity stations plotted from 1949-1960 survey data.

RELIABILITY: Planimetric detail: Reliable
Magnetic data: reliability of plotted position of aircraft, within ± 75 yards.
Gravity data: reconnaissance

MAP SHOWING
TOTAL MAGNETIC INTENSITY
MEASURED BY AIRBORNE MAGNETOMETER
AND
BOUGUER ANOMALIES
DETERMINED BY GRAVITY SURVEY

SCALE 1:253,440

CONTOUR INTERVALS
MAGNETIC: 20 GAMMAS GRAVITY: 5 MILLIGALS

LEGEND

TOPOGRAPHICAL DATA
River or Creek
Highway or Main Road
Road or Track
Railway
Fence
Contour/Flight line intersections
Named place
Aerodrome or Landing Ground

MAGNETIC DATA
Magnetic Contours
Magnetic 'low'
Contour/Flight line intersections

GRAVITY DATA
Gravity station
Bouguer Anomaly (Milligals)
Elevation
Isogals
High anomaly
Low anomaly

EXPLANATORY NOTES

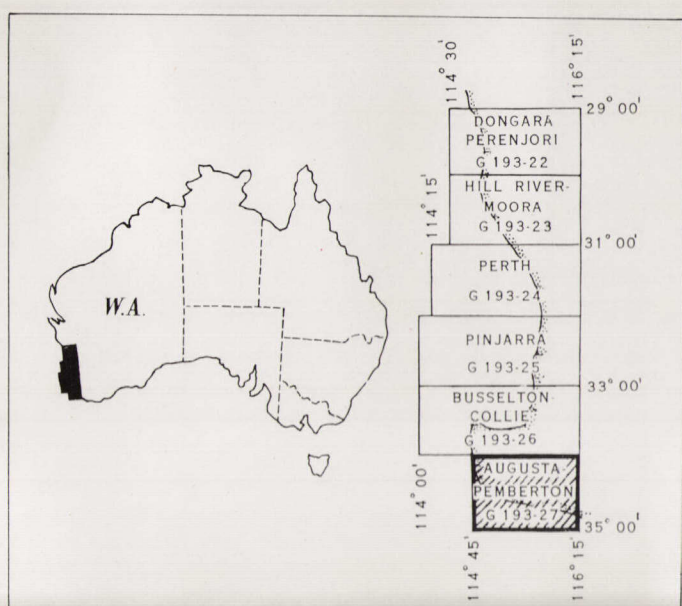
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The total magnetic intensity was recorded continuously by an airborne magnetometer in a D.C.3 aircraft flown at an altitude of 1,000 feet above sea level along lines spaced one mile apart. The data have been corrected for a regional gradient in total magnetic field of 6.5 gammas per mile in a direction south.
The height of the aircraft was controlled through a radio altimeter. Over most of the survey area the position of the aircraft was controlled by a Skymark navigation system. Over the remainder of the area, photometric assemblies were used as a visual aid to navigation and the track of the aircraft was plotted from vertical photography taken with a 35mm strip camera.

GRAVITY DATA
The gravity Bouguer values used in compiling this series of maps are based on the following Bureau of Mineral Resources production stations:
No. 17 Perth 979,294.3 milligals
No. 18 Albany 979,203.5 milligals
No. 19 Westport 979,216.0 milligals
No. 20 Geraldton 979,270.0 milligals
The contours show Bouguer Anomalies, which have been calculated using 2.2 g/cm³ as an average rock density.
Elevation datum: M.S.L. Perth

AUGUSTA - PEMBERTON
WESTERN AUSTRALIA



LOCATION DIAGRAM



MAP DATA

PROJECTION :- Transverse Mercator Australian Series.
CONTROL & DETAIL :-
Planimetric detail was compiled from Royal Australian Survey Corps 4-mile maps of the area.
Gravity stations plotted from 1949-1960 survey data.
RELIABILITY :-
Planimetric detail : reliable
Magnetic data : reliability of plotted position of aircraft, within ± 75 yards.
Gravity data : reconnaissance

MAP SHOWING

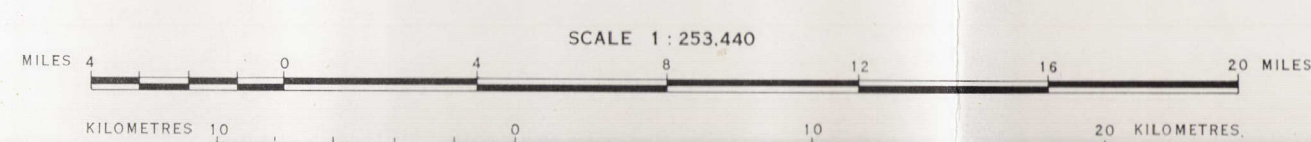
TOTAL MAGNETIC INTENSITY

MEASURED BY AIRBORNE MAGNETOMETER

AND

BOUGUER ANOMALIES

DETERMINED BY GRAVITY SURVEY



CONTOUR INTERVALS

MAGNETIC: 20 GAMMAS GRAVITY: 5 MILLIGALS

LEGEND

TOPOGRAPHICAL DATA

--- River or Creek
--- Highway or Main Road
--- Road or Track
--- Railway
--- Fence
--- Telegraph Line
--- Named place
--- Aerodrome or Landing Ground

MAGNETIC DATA

--- Magnetic Contours
--- Magnetic Low
--- Contour/Flight line intersections

GRAVITY DATA

--- Gravity station
--- Bouguer Anomaly (Milligals)
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--- High anomaly
--- Low anomaly

EXPLANATORY NOTES

MAGNETIC DATA

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GRAVITY DATA

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No. 17 Perth 979,394.3 milligals
No. 18 Albany 979,705.5 milligals
No. 19 Watherston 979,216.0 milligals
No. 20 Geraldton 979,270.6 milligals

The contours show Bouguer Anomalies, which have been calculated using 2.2 gmc/cm³ as an average rock density.
Elevation datum : M.S.L. Perth