COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

RECORD No. 1965/33

MAPS SHOWING THE RESULTS OF AN AIRBORNE MAGNETIC AND RADIOMETRIC SURVEY OF THE LAKE JOHNSTON 1 : 250,000 AREA, W A 1957

Map Nos. *G 362 - 5*
G 362 - 6
G 362 - 7
G 362 - 8

Scale 1 : 126,720

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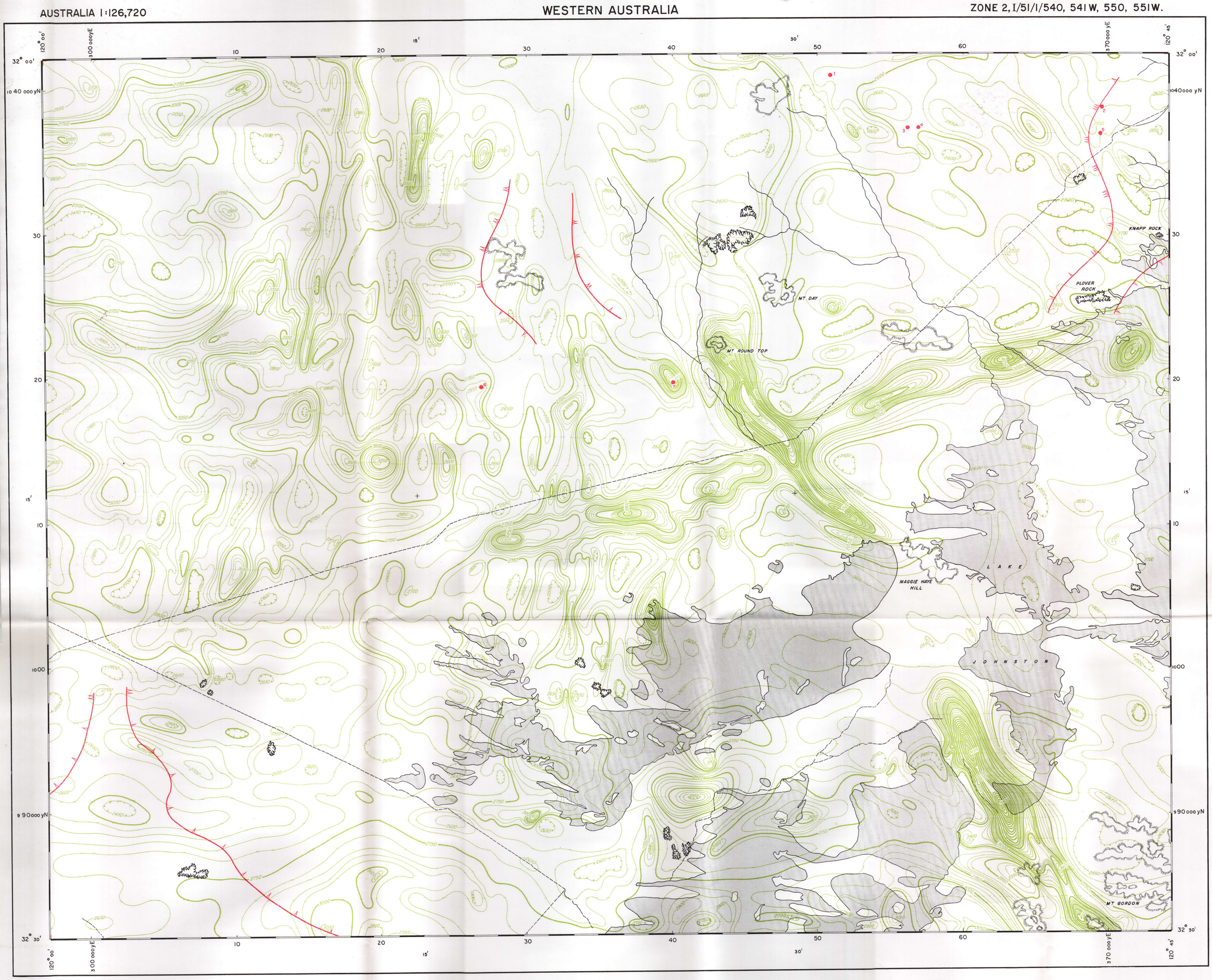
Scale 1 : 126,720

LAKE JOHNSTON-N.W.

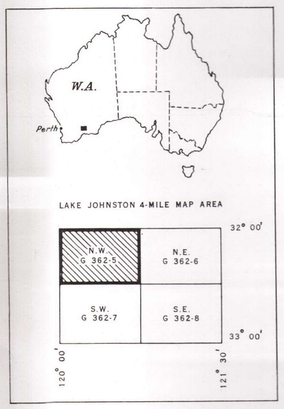
WESTERN AUSTRALIA

AUSTRALIA 1:126,720

ZONE 2, I/51/1/540, 541W, 550, 551W.



LOCATION DIAGRAM



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

MAP DATA

PROJECTION :- *Transverse Mercator Australia Series*

CONTROL & DETAIL :- *Planimetric detail based on compilations by Western Australian Department of Lands and Surveys.*

RELIABILITY :- *Planimetric detail:* Accurate.
Flight lines: Accuracy is generally within 100 yards.

MAP SHOWING

TOTAL MAGNETIC INTENSITY

MEASURED BY AIRBORNE MAGNETOMETER

AND

RADIOACTIVITY

DETECTED BY AIRBORNE SCINTILLOGRAPH

SCALE

MILES 2 1 0 2 4 6 8 10 MILES

KILOMETRES 5 0 5 10 KILOMETRES

MAGNETIC CONTOUR INTERVAL 50 GAMMAS

LEGEND

TOPOGRAPHICAL DATA

- River or Creek
- Highway or Main road
- Road or Track
- Hill feature
- Rock outcrop
- Lake or Claypan

MAGNETIC DATA

- 2000 / 1900 — Magnetic contours
- Magnetic "Low"
- Contour/Flight line intersections

SCINTILLOGRAPH DATA

- Anomaly
- Intensity Change A
- Intensity Change B
- Intensity Change C

An anomaly occurs where the radioactive intensity is greater than the average intensity of the surrounding area and where the radioactive profile is interpreted as corresponding to a source whose radius is not greater than 600 feet. These symbols indicate a change in the level of radioactive intensity along a flight line. The short hachured lines point to the lower average intensity. The magnitude of the change is graded as A, B, or C, depending whether it is 1/3, 1, or 3 times the background level on the low side of the change.

EXPLANATORY NOTES

This map was compiled from an airborne survey of the Lake Johnston 4-mile area flown by the Bureau of Mineral Resources in November 1960. The objects of the survey were (a) to delineate magnetic anomalies which might be associated with mineral deposits or reveal structural trends in the geology of the area, and (b) to indicate areas in which uranium minerals might occur, and (c) to record changes in the level of radioactive intensity, as an aid to geological mapping.

The survey was made with a DC.3 aircraft at an altitude of 500 feet above ground level along lines spaced one mile apart. The height of the aircraft was controlled through a radio altimeter. Aerial photographs were used for navigation, and the actual track of the aircraft was recorded by a 35-mm camera operated during flight.

The total magnetic intensity was recorded continuously by an airborne magnetometer. The data remain uncorrected for a regional gradient in total magnetic field of 7.5 gammas per mile in a direction S.5° E.

The gamma radiation from the ground was recorded continuously by two airborne scintillographs. One scintillograph was mounted in the main compartment of the aircraft and the other in a "bird" which was towed 300 feet below the aircraft. No claim is made that the radioactive anomalies correspond to uranium deposits. Investigation on the ground would be necessary to determine the importance of the anomalies.

G 362-5

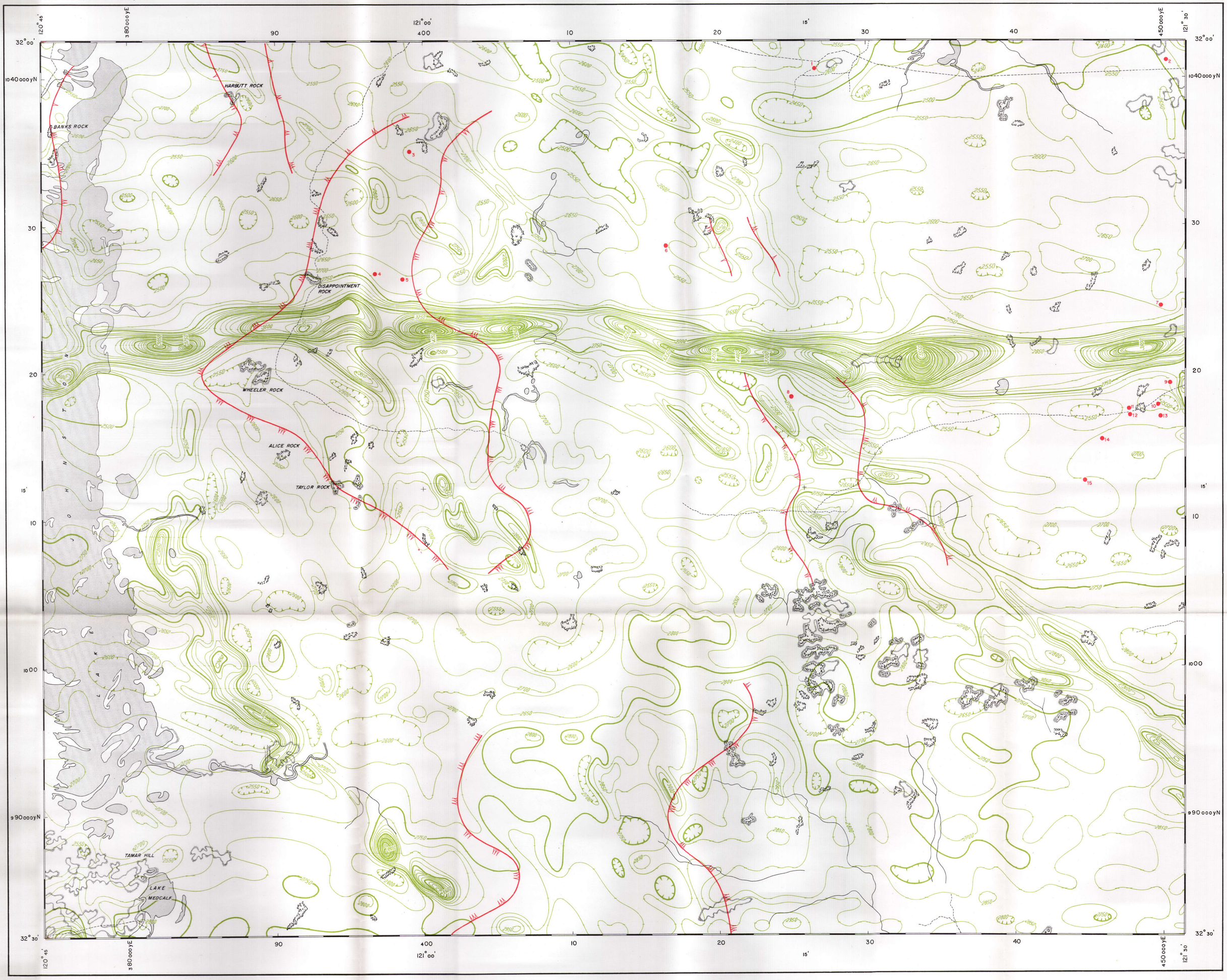
JULY 1962

LAKE JOHNSTON-N.E.

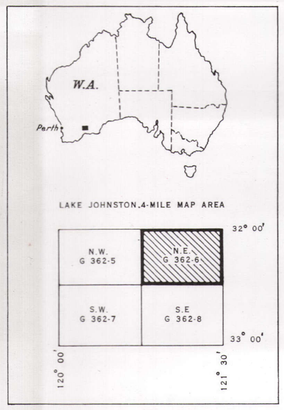
WESTERN AUSTRALIA

AUSTRALIA 1:126,720

ZONE 2, I/51/1/541E, 542, 551E, 552.



LOCATION DIAGRAM



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

MAP DATA

PROJECTION :- *Transverse Mercator Australia Series*

CONTROL & DETAIL :- *Planimetric detail based on compilations by Western Australian Department of Lands and Surveys.*

RELIABILITY :- *Planimetric detail:* Accurate.
Flight lines: Accuracy is generally within 100 yards.

T.N.
M.N.

MAP SHOWING

TOTAL MAGNETIC INTENSITY

MEASURED BY AIRBORNE MAGNETOMETER

AND

RADIOACTIVITY

DETECTED BY AIRBORNE SCINTILLOGRAPH

SCALE

MILES 2 1 0 2 4 6 8 10 MILES

KILOMETRES 5 0 5 10 KILOMETRES

MAGNETIC CONTOUR INTERVAL 50 GAMMAS

LEGEND

TOPOGRAPHICAL DATA

- River or Creek
- Highway or Main road
- Road or Track
- Hill feature
- Rock outcrop
- Lake or Claypan

MAGNETIC DATA

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

SCINTILLOGRAPH DATA

- Anomaly

An anomaly occurs where the radioactive intensity is greater than the average intensity of the surrounding area and where the radioactive profile is interpreted as corresponding to a source whose radius is not greater than 600 feet.

These symbols indicate a change in the level of radioactive intensity along a flight line.
The short hachured lines point to the lower average intensity. The magnitude of the change is graded as A, B, or C, depending whether it is 1/3, 1, or 3 times the background level on the low side of the change.

- Intensity Change A
- Intensity Change B
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The gamma radiation from the ground was recorded continuously by two airborne scintillographs. One scintillograph was mounted in the main compartment of the aircraft and the other in a "bird" which was towed 300 feet below the aircraft. No claim is made that the radioactive anomalies correspond to uranium deposits. Investigation on the ground would be necessary to determine the importance of the anomalies.

G 362-6

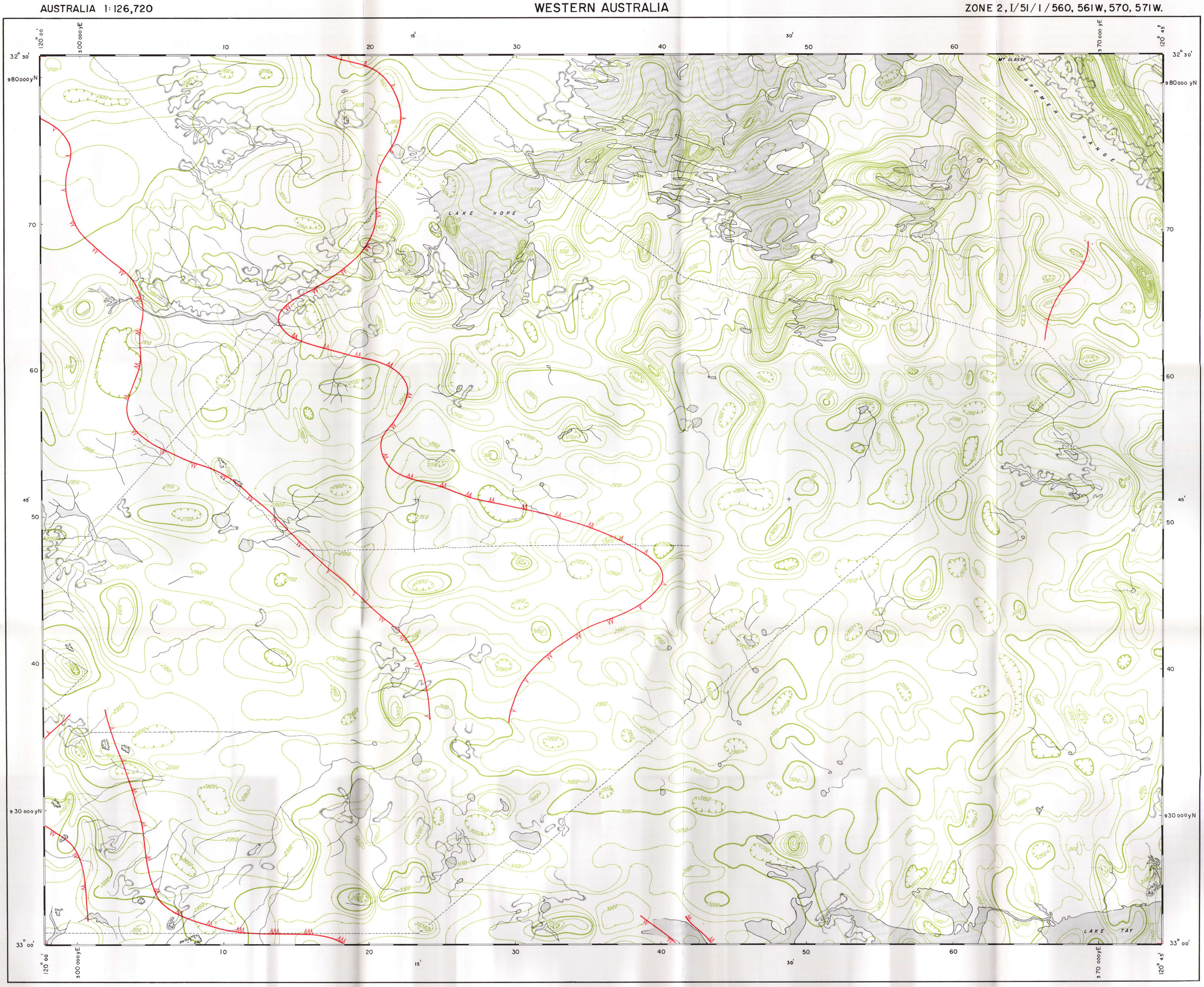
JULY 1962

LAKE JOHNSTON-S.W.

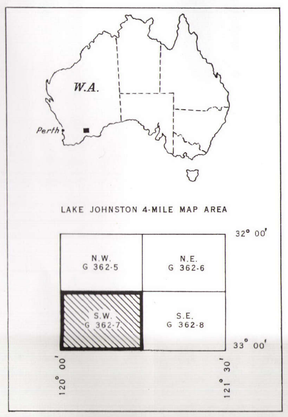
AUSTRALIA 1:126,720

WESTERN AUSTRALIA

ZONE 2, I/51/1/560, 561W, 570, 571W.



LOCATION DIAGRAM



DEPARTMENT OF NATIONAL DEVELOPMENT.
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COMPILED AND DRAWN IN THE GEOPHYSICAL BRANCH, MELBOURNE.

MAP DATA

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CONTROL & DETAIL :-

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MAP SHOWING

TOTAL MAGNETIC INTENSITY

MEASURED BY AIRBORNE MAGNETOMETER

AND

RADIOACTIVITY

DETECTED BY AIRBORNE SCINTILLOGRAPH

SCALE

MILES 2 1 0 2 4 6 8 10 MILES

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MAGNETIC CONTOUR INTERVAL 50 GAMMAS

LEGEND

TOPOGRAPHICAL DATA

- River or Creek
- Highway or Main road
- Road or Track
- Hill feature
- Rock outcrop
- Lake or Claypan

MAGNETIC DATA

- 2000 / 1900 — Magnetic contours
- Magnetic "Low"
- Contour/Flight line intersections

SCINTILLOGRAPH DATA

- Anomaly — *An anomaly occurs where the radioactive intensity is greater than the average intensity of the surrounding area and where the radioactive profile is interpreted as corresponding to a source whose radius is not greater than 600 feet.*
- Intensity Change A
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These symbols indicate a change in the level of radioactive intensity along a flight line. The short hachured lines point to the lower average intensity. The magnitude of the change is graded as A, B, or C, depending whether it is 1½, 1, or ½ times the background level on the low side of the change.

EXPLANATORY NOTES

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G 362-7

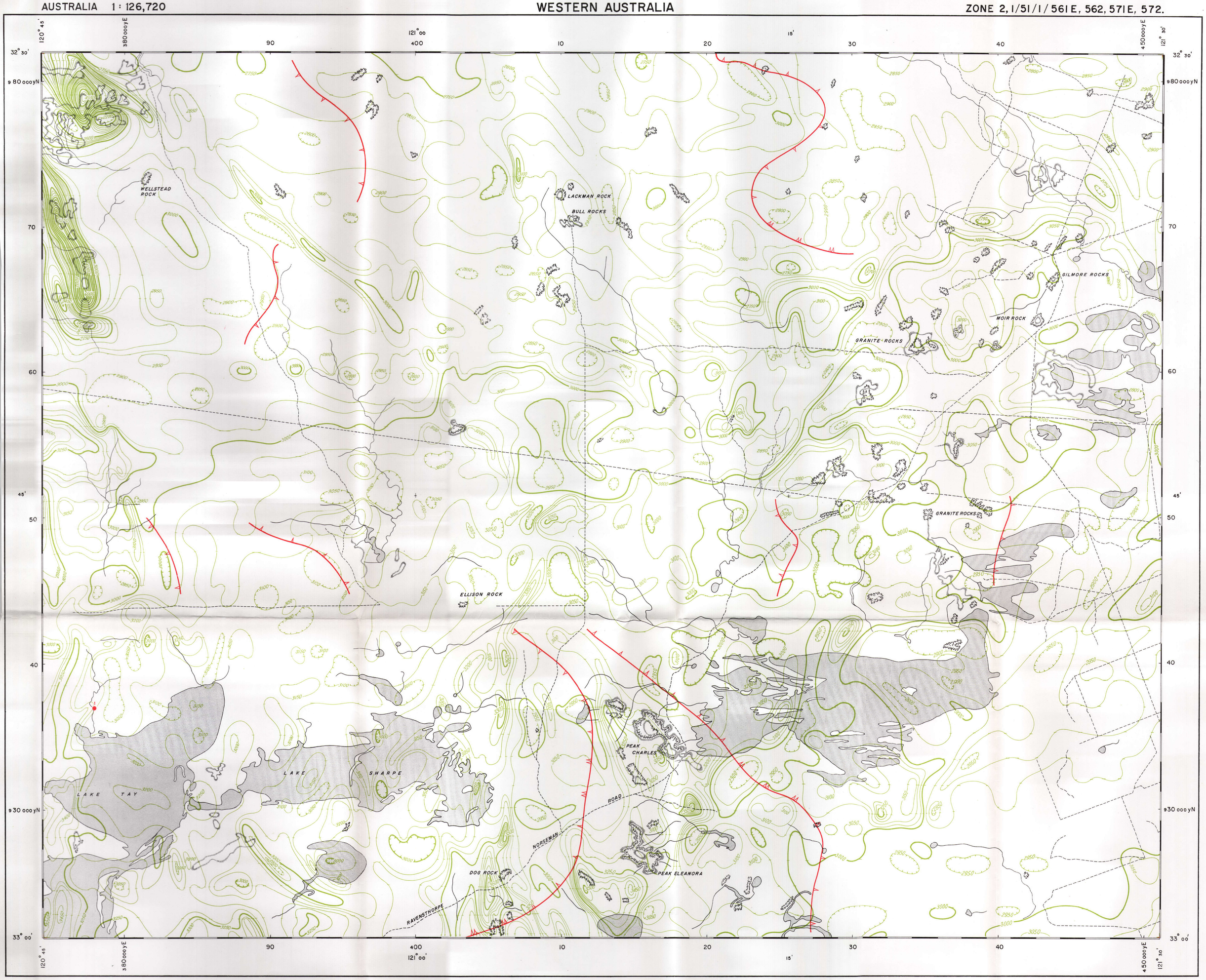
JULY 1962

LAKE JOHNSTON-S.E.

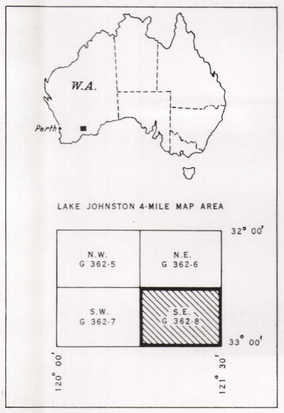
AUSTRALIA 1 : 126,720

WESTERN AUSTRALIA

ZONE 2, 1/51/1/561E, 562, 571E, 572.



LOCATION DIAGRAM



DEPARTMENT OF NATIONAL DEVELOPMENT.
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MAP DATA

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CONTROL & DETAIL :-
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AND

RADIOACTIVITY

DETECTED BY AIRBORNE SCINTILLOGRAPH

SCALE

MILES 2 1 0 2 4 6 8 10 MILES

KILOMETRES 5 0 5 10 KILOMETRES

MAGNETIC CONTOUR INTERVAL 50 GAMMAS

LEGEND

TOPOGRAPHICAL DATA

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MAGNETIC DATA

- 2000 / 1900 Magnetic contours
- Magnetic "Low"
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SCINTILLOGRAPH DATA

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G 362-8

JULY 1962