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Chief Geophysicist *[Signature]*
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GEORGE CREEK URANIUM PROSPECT

PROGRESS REPORT, DECEMBER, 1954

BY

J. RADE, GEOLOGIST AND G. F. CLARKE, GEOPHYSICIST.



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INTRODUCTION :

The George Creek Uranium Prospect is located 80 miles from Darwin and 9 miles from Adelaide River southwards along the Stuart Highway. It is situated on the side of a hill a few hundred feet west of the highway.

The regional geology was mapped by field parties of the Bureau of Mineral Resources during 1954, and will be shown on the Burnside (West) 1 - mile sheet. At the prospect, geological and structural investigation is in progress.

GEOLOGY :

The George Creek Uranium Prospect is located in rocks belonging to Lower Proterozoic Brooks Creek Group. Greyish brown sandstones, grey dark-banded siltstones and greywackes are exposed on the prospect. Uranium mineralization is located in siltstones and the contact zone of siltstones with sandstones. The prospect lies in a sheared anticline.

Radiometric readings from 4750-6000 counts per minute on Austronic Geiger Counter PRM 200 were obtained in shallow holes in the area 300 feet long. Torbernite was encountered in five holes in this area. An assay made from a shallow hole less than 1½ feet deep on the middle of the prospect showed 1.61 and 1.55 per cent e. U₃O₈.

RECOMMENDATIONS :

Deepening and enlarging of the few existing holes is recommended to ascertain the dip and strike of uranium mineralization.

..... J. Rade
(J. RADE).

PROGRESS REPORT ONLY

RADIOMETRIC SURVEY

A radiometric grid survey of the George Creek Prospect was carried out during the week ending 22nd October, 1954.

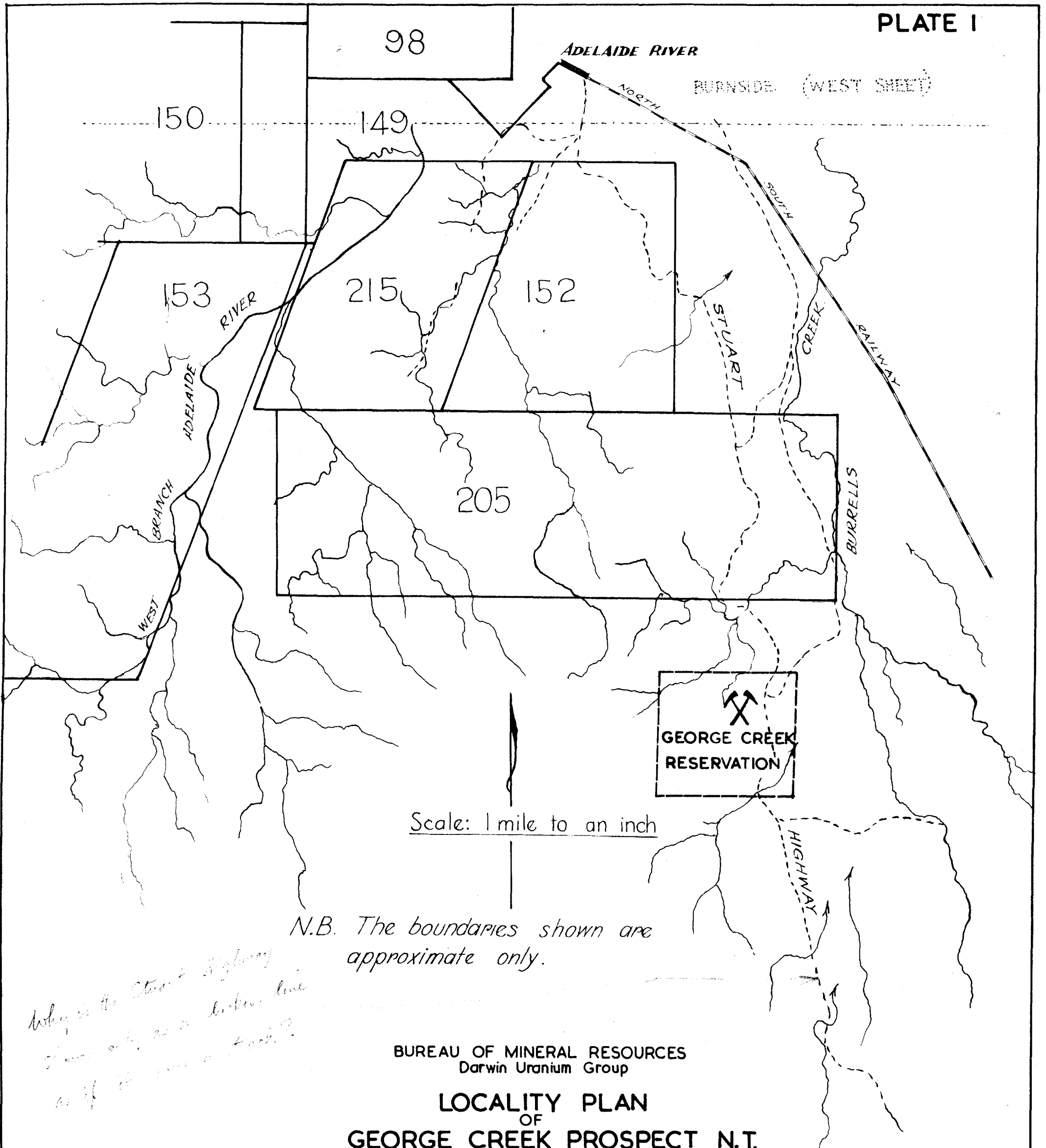
A baseline 600 feet long and bearing 350° M was surveyed along the strike of the beds. Integral multiples of the background count of the Geiger Counter used were recorded along cross traverse run at 25 foot intervals along the baseline. The length of these cross traverses was approximately 600 feet.

A radiometric contour map was drawn to a scale of 1 inch = 40 feet. Several zones of high activity appear within the three times background contour. Costeans dug in these high zones have shown torbernite within eighteen inches of the surface.

RECOMMENDATION :

A S.P. survey of the area using the grid established for the radiometric survey would yield useful information to help in selecting drilling sites.

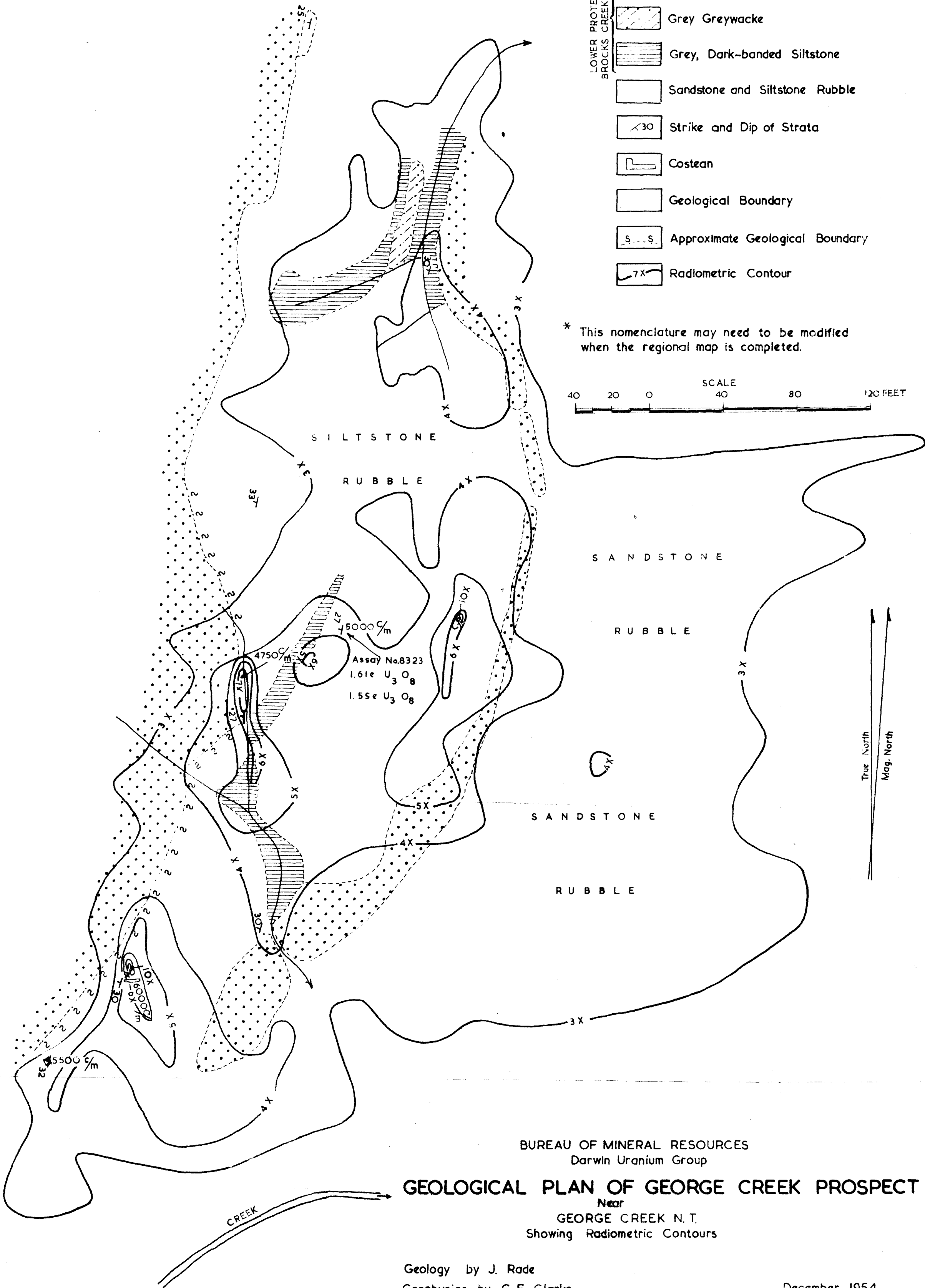
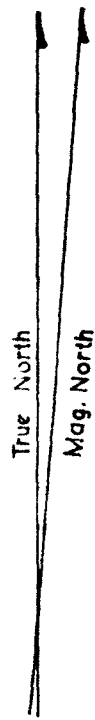
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(G. F. CLARKE.)



LEGEND:

- * LOWER PROTEROZOIC BROOKS CREEK GROUP
- Greyish Brown Sandstone
 - Grey Greywacke
 - Grey, Dark-banded Siltstone
 - Sandstone and Siltstone Rubble
 - Strike and Dip of Strata
 - Costean
 - Geological Boundary
 - Approximate Geological Boundary
 - Radiometric Contour

* This nomenclature may need to be modified when the regional map is completed.



BUREAU OF MINERAL RESOURCES
Darwin Uranium Group

GEOLOGICAL PLAN OF GEORGE CREEK PROSPECT

Near
GEORGE CREEK N. T.
Showing Radiometric Contours

Geology by J. Rade
Geophysics by G. F. Clarke

December, 1954