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REPORT ON WATER SUPPLY

BESWICK STATION, NORTHERN TERRITORY

by

W.F. McQUEEN

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## REPORT ON WATER SUPPLY

### BESWICK STATION, NORTHERN TERRITORY

by

W.F. McQueen

Records No. 1958/6

#### SUMMARY:

The homestead buildings and camp lie near the Waterhouse River. The River lies approximately along the axis of a syncline in Middle Cambrian Rocks. The flood plain is mainly sandy alluvium. Of the three bores drilled previously, only one was successful. A site was selected between the homestead and a billabong.

#### INTRODUCTION:

Beswick Station lies approximately 240 miles south-west of Darwin and the homestead buildings are beside a billabong about half a mile east of the Waterhouse River. Access is by the Stuart Highway to the Maranboy turnoff (250 Mile) and then by a graded road through Maranboy and the Beswick Native Settlement to the Station (See Plate 1).

The Station is managed by Welfare Branch and the Commonwealth Department of Works requested through the Assistant Administrator, that a bore site be selected to augment the domestic water supply. The Station was visited on the 18th and 19th November, 1957 and recommendations were made as to a site for a bore.

#### GEOLOGY

The rocks in the vicinity of the Station belong to the Beswick Group of Middle Cambrian Age. The Leight Creek Volcanics - basalt flows slate and sandstone overlie the Dook Creek Limestone - a flaggy glauconitic limestone.

Most of the rocks in the neighbourhood of the river is covered by thick sandy alluvium and the only outcrops seen were a few low ridges of flaggy limestone.

The logs of holes previously drilled show that sandstone and slate underlie the alluvium.

#### HYDROLOGY:

The logs of previous bores are given below:-  
No. 1 Beswick Drilled by F.J. Bradshaw 15/7/50 - 27/7/50.

<u>Depth</u>	<u>Strata</u>
0' - 40'	Sandy Loam
40' - 60'	Quicksand and Water
Water struck at 40'	
Hole abandoned	

No. 2 Beswick Drilled by F.J. Bradshaw 9/8/50 - 14/9/50.

(No.2.Beswick Drilled by F.J. Bradshaw 9/8/50 - 14/9/50)

<u>Depth</u>	<u>Strata</u>
0'- 40'	Red Gravel
40'- 50'	Sand
50'- 405'	Grey Slate
Water 100 gallons per hour	
2400 " " day	
Bore unsuccessful	

No.3 Beswick Drilled by T. Cheney, July, 1951.

<u>Depth</u>	<u>Strata</u>
0'- 6'	Loam
6'- 26'	Sand and water
26'- 30'	Pug
20'- 60'	Sand and water
60'- 63'	Soft Sand Stone
63'- 65'	Pug
65'-120'	Slate and Water
Water struck at: 23', 54', 120'	
Supply: 600 gallons per hour	
14400 " " day	
Test pumping: 16 hours.	

DRILLER'S REMARKS:

Previous drilling into same slate bed to over 300' without water. Water supply should suffice the station.

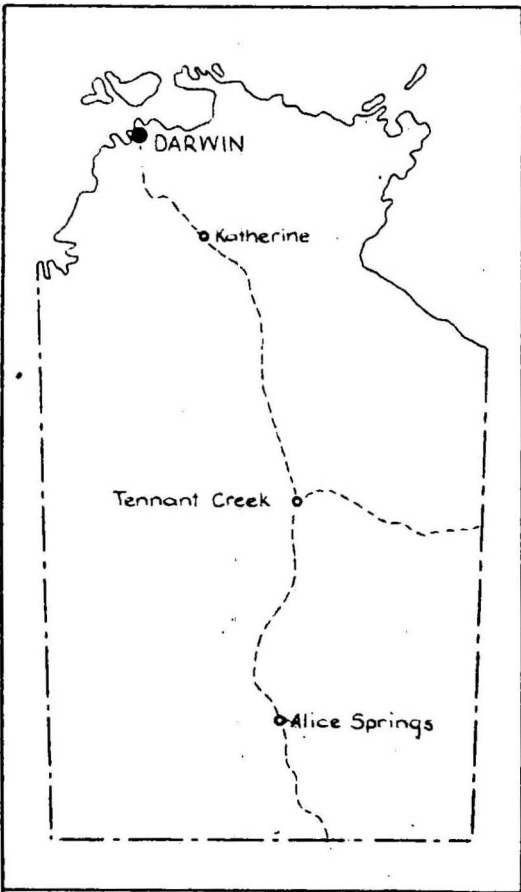
CONCLUSION:

From the above logs it will be seen that the water was obtained from the slates near the axis of the synclinal structure. All three show at least 50' of alluvial material.

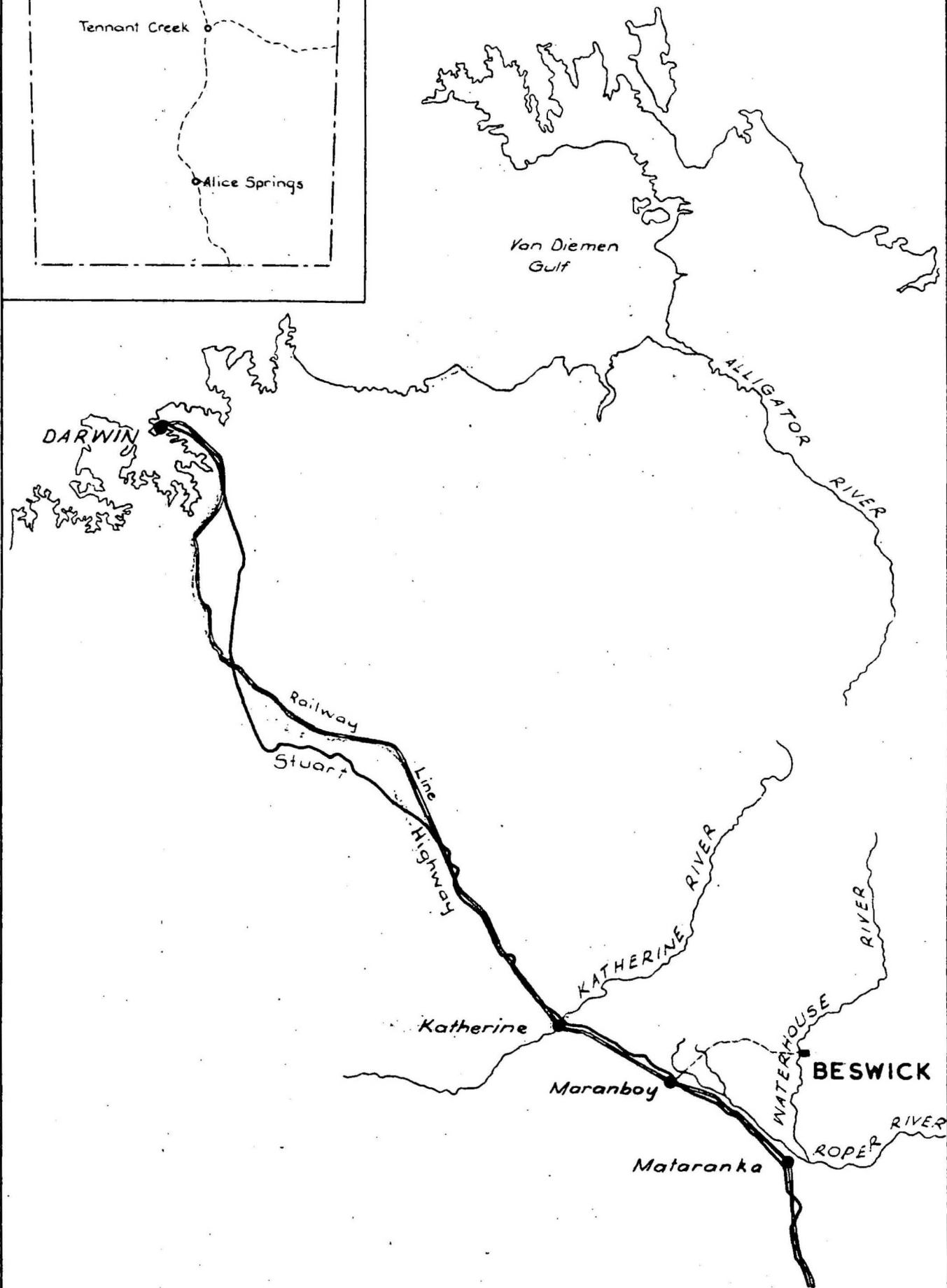
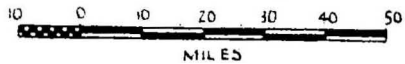
It seems that water is found between the alluvium and the slate and also in the folded slate. The amount of water available appears greatest in the neighbourhood of the river and billabong. The billabong is a permanent water hole but, due to many circumstances, is not suitable for a domestic water supply.

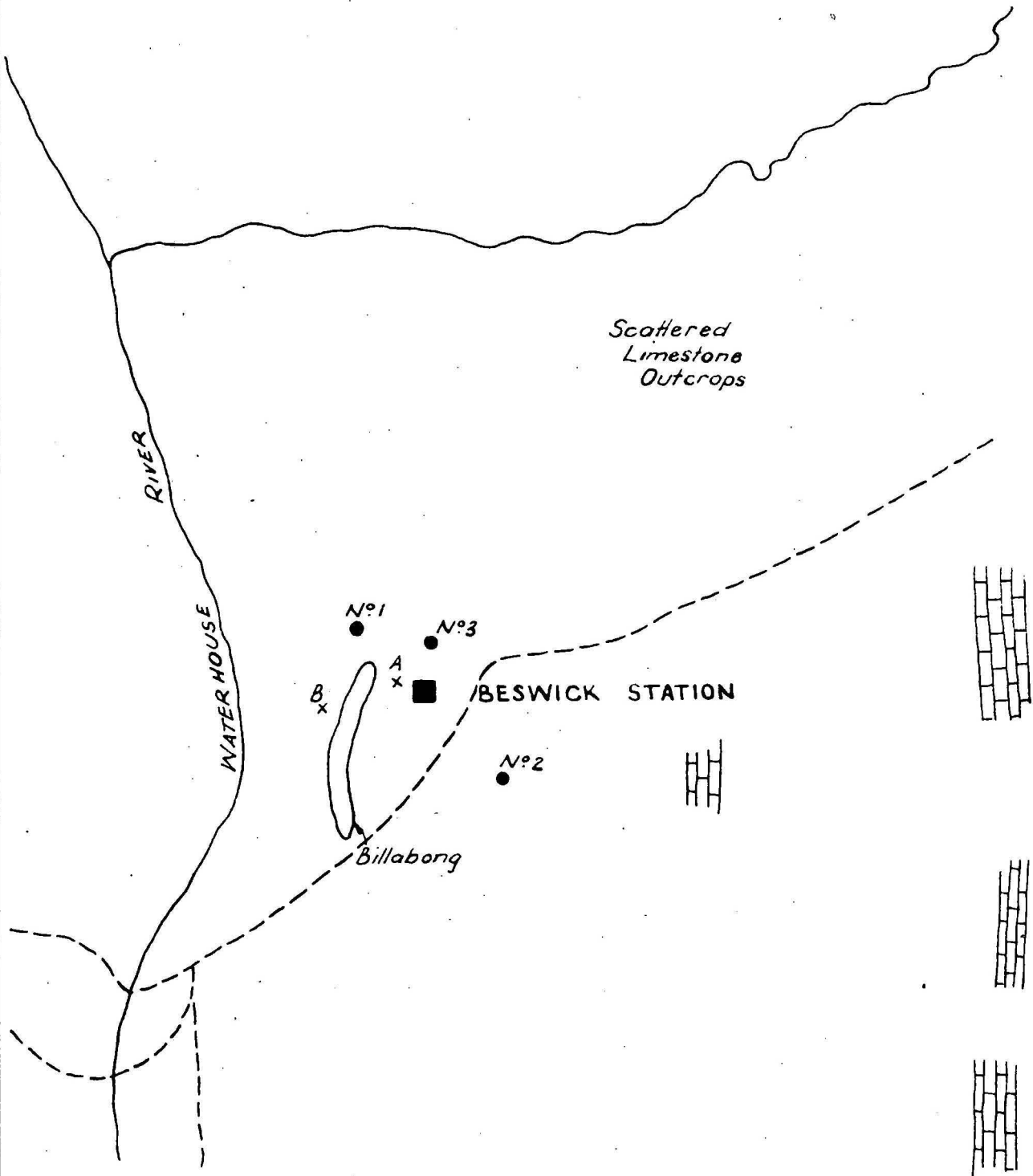
RECOMMENDATION:

A site was chosen about 100 yards from the present successful bore but closer to the billabong as the greatest supply of water appears to be in this part of the basin. It was marked by a star picket driven well into the ground. This is Site A. Site B was chosen on the opposite side of the Billabong, between it and the river. I would recommend Site A.





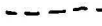


LOCALITY MAP  
BESWICK STATION.





GEOLOGICAL SKETCH MAP  
BESWICK STATION AREA, N.T.  
SCALE : 1.5 INS. TO 1 MILE

- REFERENCE
-  Recent Alluvium
  -  Dook Creek Limestones
  -  Bore
  -  Bore Site
  -  Track