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Geological Branch,
Department of Supply & Development,
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19th February, 1942.

PRELIMINARY REPORT ON FURTHER SAMPLES FROM W.R. JOHNSTON'S
BORE, NEAR BOURKE, NEW SOUTH WALES

Received from the Water Conserv-
ation & Irrigation Commission on
11th February, 1942.

The series of samples forwarded for micro-palaeontological examination was from the depth of 1275 feet down to 1553 feet and was in continuation of that reported upon on 19/1/42.

From 1275 feet down to 1278 feet, the material consisted almost entirely of subangular to angular quartz grains with a few fragments of carbonaceous shale.

From 1315 feet down to 1350, the samples consisted chiefly of angular quartz grains, frequently ironstained and with some glauconite.

At 1400 feet, abundant quartz grains were associated with dark brown, fine-grained, ferruginous sandstone.

From 1410 to 1417 feet, the samples were almost entirely composed of quartz grains.

At 1424 feet the sample contained a mixture of quartz grains and fragments of chocolate and green coloured, micaceous shale.

At 1500 feet, the sample consisted chiefly of fragments of chocolate coloured, micaceous shale with veins of calcite.

From 1542 to 1545 feet the fragments were greenish limestone, with calcite, and a few fragments of greenish, cherty rock.

From 1546 to 1547 feet, the sample consisted chiefly of greenish cherty rock, sometimes veined with calcite, and a few fragments of green limestone.

From 1548-1549 feet, the fragments were chiefly of a white to black, calcareous rock, with particles of the green cherty rock.

From 1550-1553 feet, the sample consisted of some quartz grains, calcite, and numerous small and large particles of the white and black calcareous rock.

It is possible that the samples from 1275 down to 1278 feet belong to the Jurassic but there is no indication as to age of any material below this depth.

It has been suggested by the Government Geologist of New South Wales that the strata just below 1500 feet may be of Devonian age.

It is impossible for me to indicate whether further supplies of water would be encountered if drilling were continued as no micro-palaeontological information is available from bores in the immediate vicinity for correlative purposes.

Under such circumstances the advice of the officers of the New South Wales Mines Department should be obtained.

Specimens of the green, cherty rock and the white and black, calcareous material have been forwarded to Melbourne for special petrological examination. On the receipt of this information a full report on the samples will be furnished.

(Irene Crespin)
Commonwealth Palaeontologist.