

AUSTRALIA 1:250 000

FORBES

HYDROGEOLOGICAL SERIES SHEET SI 55-7



WATER RESOURCES COMMISSION
OF
NEW SOUTH WALES
FORBES
HYDROGEOLOGICAL MAP
LEGEND

AQUIFERS

Aquifers are rock formations from which water can be obtained in useful quantities. They occur in a variety of geological units which can be grouped into three major types: Unconsolidated Sediments, Sedimentary Rocks and Fractured Rocks. Although all types may be represented in one area, only the major occurrences are shown on this map.

Unconsolidated Sediments

These sediments are generally Pleistocene (2 to 5 million years) to Recent in age and include both alluvial and colluvial material, most basins being deposited by the Lachlan River and its tributary creeks. Clean sand and gravel layers, within clay, silt and sandy clay deposits, are the main source of water.

Sedimentary Rocks

Devonian rocks (36 to 395 million years) in the Scroggong and Jemalong areas are included. Rock types are shale, siltstone, sandstone and conglomerate. The groundwater generally increases in salinity in the direction of its movement.

Fractured Rocks

Ordovician (500 million years) to Siluro-Devonian rocks (345 million years) in the Parkes, Grenfell, Condon and West Wyalong areas are included. A wide range of rock types is represented, including quartzite, slate, phyllite, schist, gneiss, mylonite and granite. Groundwater is stored in the fractures of the rocks and there are considerable variations in yield. The quality of the groundwater, in regards to its salinity, varies over wide ranges, generally dependent on the rock type and the residence time of the groundwater.

GROUNDWATER OCCURRENCE

Unconsolidated Sediments

- Bore ordinarily have yields of greater than 5 litres/second
- 0.5 - 5 litres/second
- High variable salinity (suitable data for mapping salinity classes) 0.05 - 0.5 litres/second

Sedimentary Rocks

- Bore ordinarily have yields of 0.5 - 5 litres/second
- 0.05 - 0.5 litres/second
- less than 0.05 litres/second

Fractured and Weathered rocks with limited groundwater resources

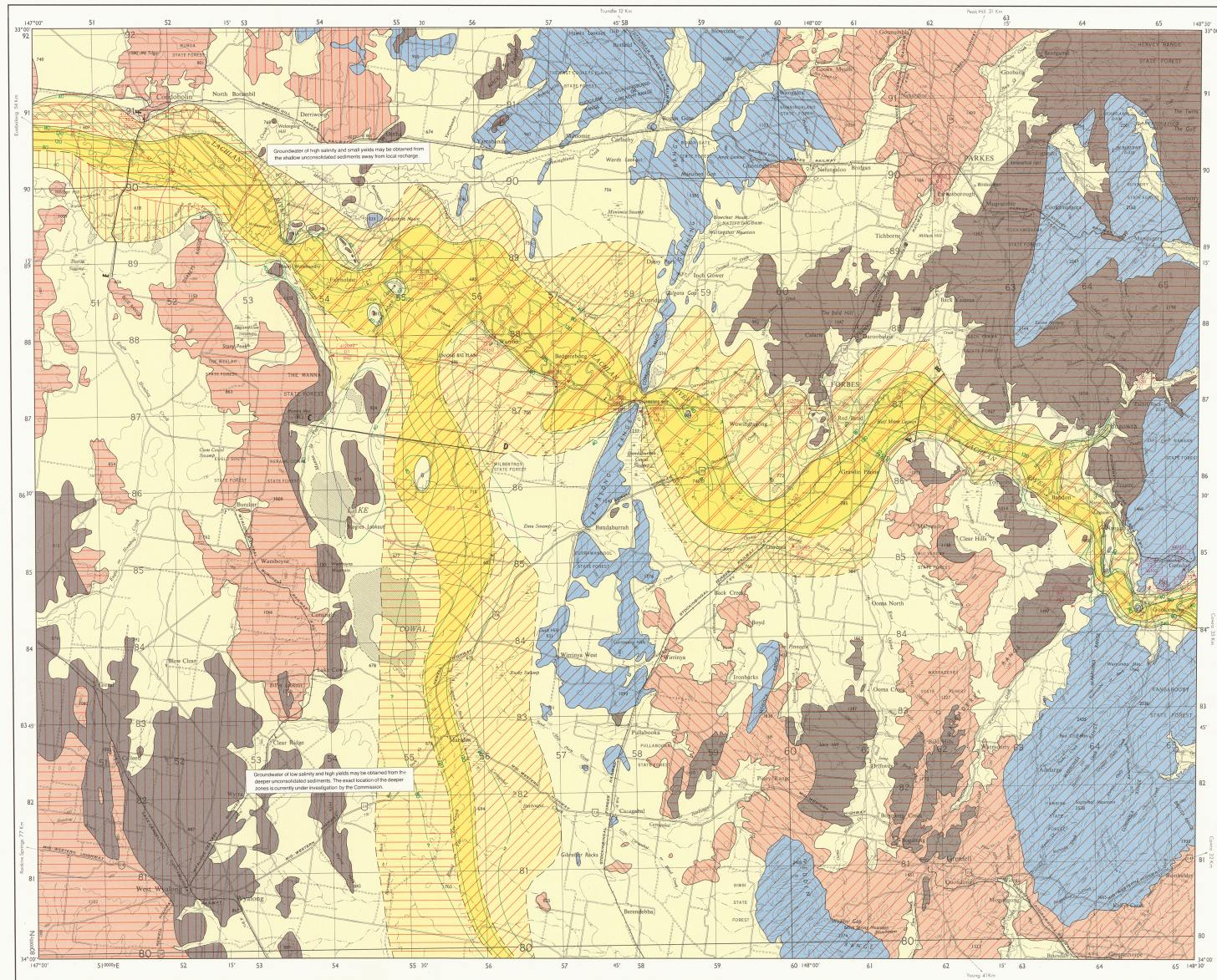
- Unfractured rocks of rocks containing water bearing areas which may locally yield low to moderate supplies (generally less than 0.5 litres/second)
- Rocks with generally very low yields
- Some low yields may be obtained in very restricted areas

GROUNDWATER SALINITY

- | Salinity Class | Micrograms per litre (mg/L) | Parts per million (ppm) | Electrical Conductivity (µS/cm) |
|-------------------------|-----------------------------|-------------------------|---------------------------------|
| 0 - 500 mg/L | 0 - 500 | 0 - 500 | 0 - 1000 |
| 500 - 1500 mg/L | 500 - 1500 | 500 - 1500 | 1000 - 3000 |
| 1500 - 3000 mg/L | 1500 - 3000 | 1500 - 3000 | 3000 - 6000 |
| 3000 - 7000 mg/L | 3000 - 7000 | 3000 - 7000 | 6000 - 14000 |
| 7000 - 14000 mg/L | 7000 - 14000 | 7000 - 14000 | 14000 - 28000 |
| greater than 14000 mg/L | > 14000 | > 14000 | > 28000 |
- 0 - 500 mg/L Suitable for stock, domestic and irrigation purposes as well as municipal uses
 - 500 - 1500 mg/L Suitable for stock, domestic and some irrigation purposes
 - 1500 - 3000 mg/L Suitable for all stock
 - 3000 - 7000 mg/L Stock water, suitable for dairy cattle, beef cattle, horses and sheep
 - 7000 - 14000 mg/L Suitable only for beef cattle and sheep. At the higher salinities the water is too saline for stock although sheep on green feed may tolerate up to 14000 mg/L
 - greater than 14000 mg/L Unsuitable for stock use

REFERENCE

- Contours defining thickness of the unconsolidated sediments in metres (100 metre intervals)
- Water table contours for groundwater associated with the unconsolidated sediments, with elevations in metres (5 metre intervals)
- Direction of Groundwater flow
- Stream Gauging Station



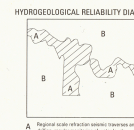
1:250 000 SHEET INDEX

NARRAMETTA	NARRAMETTA	BLUNDO
CARDIFF	FORBES	BATHURST
NARRAMETTA	COFFS HARBOUR	COFFS HARBOUR



CONTOUR INTERVAL 250 FEET
TRANSVERSE MERCATOR PROJECTION
BLACK NUMBERS LINES INDICATE THE 10 000 YARD TRANSVERSE MERCATOR GRID, ZONE 7 (AUSTRALIA SERIES), CLARK 1858 SPHEROID

- Reference**
- Roads, general
 - Roads, unimproved earth
 - Railway, single track with station
 - Power transmission line
 - River or stream perennial, intermittent
 - Spot elevation in feet
 - Contours, with elevation in feet



FORBES
SHEET SI 55-7

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