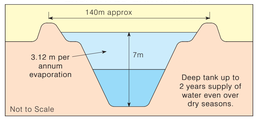
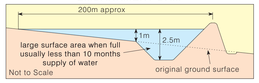
WATER RESOURCES DEVELOPMENT MAP OF MARYVALE STATION

THIRD EDITION JULY 2007

EXCAVATED EARTH TANK

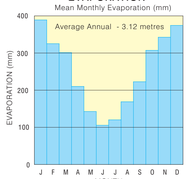


EMBANKMENT DAM



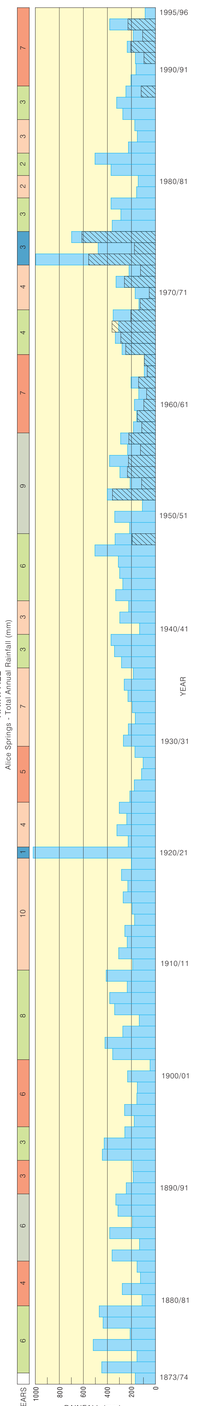
EVAPORATION

Mean Monthly Evaporation (mm)



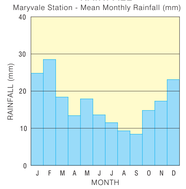
RAINFALL

Alice Springs - Total Annual Rainfall (mm)

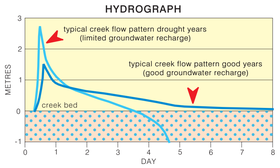


RAINFALL

Maryvale Station - Mean Monthly Rainfall (mm)

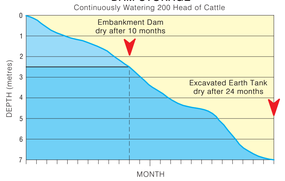


HYDROGRAPH



DAM STORAGE

Continuously Watering 200 Head of Cattle



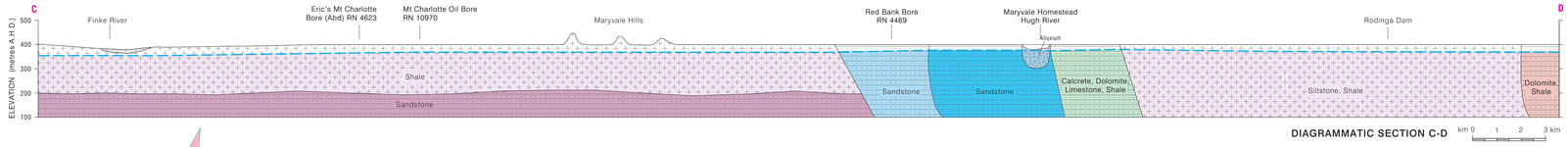
Map compilation by Avis Wiegele, GIS Officer, Natural Resources. January 1998.

Second Edition prepared and edited by John Hansen, GIS Officer, Natural Resources. June 2000

The map has been converted to Geocentric Datum of Australia (GDA94), and Government Department changes updated.

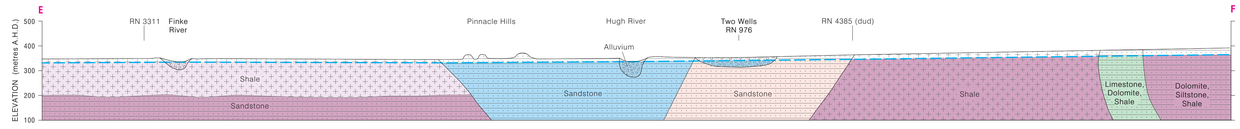
Third Edition prepared and edited by Lynton Fritz, Land and Water Division, NRETA. July 2007

Design File; Maryvale-Stn_Wrs-Map-100k_m53
Print File; Maryvale-Stn_Water-Resources



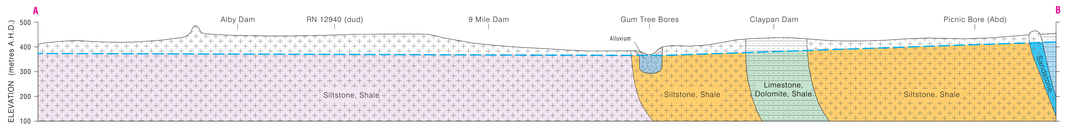
DIAGRAMMATIC SECTION C-D

km 0 1 2 3 km



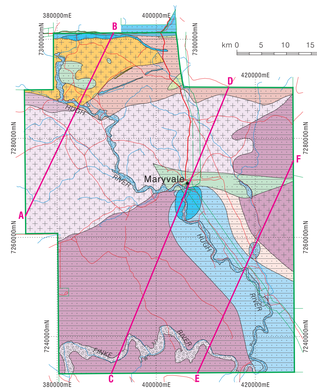
DIAGRAMMATIC SECTION E-F

km 0 1 2 3 km



DIAGRAMMATIC SECTION A-B

km 0 1 2 3 km



GROUNDWATER RESOURCES MAP

LEGEND

POROUS AND FRACTURED ROCKS - WIDESPREAD AQUIFERS

- good to fair quality water. yield 0.5 to 2.5 L/s
- brackish to saline quality water yield 0.5 to 2.5 L/s
- saline quality water yield > 5.0 L/s

POROUS AND FRACTURED ROCKS - LOCAL AQUIFERS

- good to fair quality water. yield 2.5 to 5.0 L/s
- good to fair quality water. yield > 5.0 L/s
- fair to brackish quality water. yield 0.5 to 2.5 L/s
- fair to saline quality water yield 0.5 to 2.5 L/s
- brackish to saline quality water yield 0.5 to 2.5 L/s
- saline quality water yield 0.5 to 2.5 L/s

FRACTURED AND WEATHERED ROCKS - LOCAL AQUIFERS

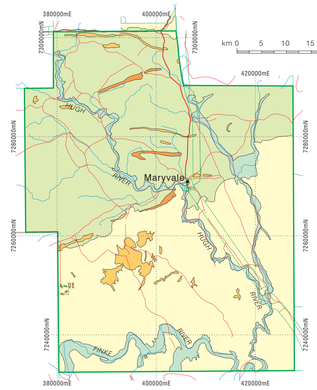
- good to fair quality water. yield > 5.0 L/s
- brackish quality water yield 2.5 to 5.0 L/s
- saline quality water yield < 0.5 L/s
- saline quality water yield > 5.0 L/s

ALLUVIAL AQUIFERS - LOCAL AQUIFERS

- good to fair quality water. yield 0.5 to 2.5 L/s
- saline quality water yield < 0.5 L/s

NO AQUIFERS

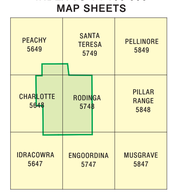
- Geological Boundary
- Watertable
- A—B Line of cross-section



SURFACE WATER RESOURCES MAP

DESCRIPTION
Sandstone ridges and hills up to 150 metres above the plains, surface runoff moderate. Surface water development unsuitable for surface storage development, some opportunities on adjacent valley floors where there is a good depth of soil and weathered rock.
Sandstone, siltstone, limestone, dolomite and shale hills up to 80 metres above the plains, surface runoff high to moderate. Surface water development unsuitable.
Alluvial plains. Flat gently undulating plains. Soils are not ideal for surface storage and in some areas quite poor. Excavated earth tanks can be constructed where sufficient runoff and a good depth of soil /weathered rock exists.
Generally broad undulating sandstone, siltstone, shale and limestone terrain, soils generally unsuited to dam construction, but deep excavated earth tanks can be constructed in selected areas.
Sand dune country, inter-dunal runoff, some clay pan, gypsum and calcrete areas, generally unsuitable for surface storage development.

INDEX TO 1 : 100 000 MAP SHEETS



MAP LOCALITY

GDA

This map was produced on the Geocentric Datum of Australia 1994 (GDA 94)

kilometres 0 1 2 3 4 5 10 kilometres

Black Numbered Lines are 10 000 Metre Intervals of the Australian Map Grid, Zone 53
Projection : Universal Transverse Mercator
Horizontal Datum : GDA 94 Vertical Datum : AHD

WATER RESOURCES DEVELOPMENT OPTIONS

	PREFERRED OPTION	DESCRIPTION
1	Unsuitable (bores or dams)	High rocky ridge and hill country.
2	Pumping from remote bores or dams	Poor quality groundwater and cavernous formations below surface in many places, generally not suitable for bores or dams.
3	Pumping from remote bores, dams or waterholes	Plains and broad valley floors, plus sand dune country south of Charlotte Range. Few suitable dam sites in sand dune country. Excavated earth tanks preferable to embankment dams.
4	Surface water (dams) supplemented by groundwater (bores)	Plains and rocky hill country where groundwater supplies brackish. Dam construction in suitable soils where there is a good depth of soil and or decomposed bedrock preferably 6-7 metres below ground level.
5	Surface water (dams)	Plains and rocky hill country where groundwater supplies saline. Dam construction in suitable soils where there is a good depth of soil and or decomposed bedrock preferably 6-7 metres below ground level.
6	Groundwater (bores)	Small to moderate supplies of good to brackish water in formations recharged by periodic flows in the Hugh River and Alice Creek.
6A	Groundwater (bores)	Large supplies of good quality water in sandstone formations recharged by periodic flows in the Hugh River.
6B	Groundwater (bores)	Shallow good to brackish water in alluvium associated with the Hugh River and its tributaries. Water quality can deteriorate over drought years.
6C	Groundwater (bores)	Waterholes and groundwater in alluvium and underlying formations associated with the Finke River Valley. Water quality is seasonal, generally fair to brackish, often saline.

LEGEND

- 2 ..... Development boundary
- ..... Development option number
- ..... Equipped bore
- ..... Equipped bore abandoned
- ..... Cased bore
- ..... Monitoring bore
- ..... Investigation bore
- ..... Exploration bore
- ..... Abandoned bore
- RN 15645 ..... Registered number of bore/well
- Picnic bore ..... Name of bore/well
- ..... Excavated earth tank
- ..... Stock watering tank
- Mages Tank ..... Earth embankment dam
- ..... Name of tank/dam
- ..... Pipeline
- ..... Ephemeral watercourse
- ..... Waterhole/billabong
- ..... Spring
- ..... Major road - sealed
- ..... Major road - unsealed
- ..... Minor road - sealed
- ..... Minor road - unsealed
- ..... Track
- Bokhara Paddock ..... Paddock name
- ..... Building/s
- ..... Landing ground
- ..... Fence
- •45 ..... Spot elevation - m A.H.D.
- ..... Cadastral boundary

Published by the Natural Resources Division of the Department of Lands Planning and Environment, as part of the resource assessment of the Alice Springs region under the National Landcare Project.

Maps produced using data compiled from water resource information held by the Natural Resources Division.

Satellite imagery supplied by Geoimage Pty. Ltd.

Geological data provided by the Australian Geological Survey Organisation.

Topographic data provided by the Australian Surveying and Land Information Group. Cadastral data provided by the Land Information Division of the Department of Lands Planning and Environment.

Project management, data compilation and interpretation by Graham Ride, Landcare Engineer, Natural Resources.

NATIONAL LANDCARE PROGRAM

LANDCARE N.T. C.L.M.A.

Northern Territory Government
Department of Natural Resources, Environment and the Arts

KKT Maryvale Station

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