



Great Artesian Basin Water Allocation Plan update, South Australia



Tony Hill, DPC

*Meeting of the Roundtable for Oil and Gas Projects, Adelaide,
30 November 2017*

Far North Water Allocation Plan (WAP) Review

Current WAP provides 60 ML for co-produced water

Due to projected increase volumes of co-produced water there is a need to develop a numerical GW model to assess the ability of the GAB to account for the projected volumes by mid to late 2019

The model will also inform cross border management of the GAB.

This needs to balance impacts on springs, other users.

The transient GW model will include individual aquifers and aquitards of the GAB.

Current Golders model doesn't provide sufficient information to enable us to address industry's requirement in the WAP

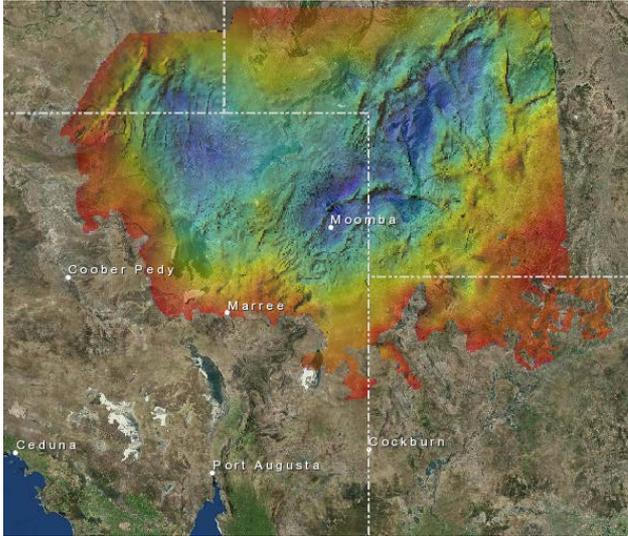
Model will incorporate OD data and model config, GA/DoEE/ Company
SAAL NRM Board meeting today to discuss WAP and Industry will be kept informed.

Current studies

DPC-ERD is currently working with DEWNR to determine datasets and data gaps that need to be gathered and addressed to underpin a transient model of the GAB.

This includes revision of seismic horizon, stratigraphic picks, porosity/permeability and water quality and pressure data.

Seismic mapping review



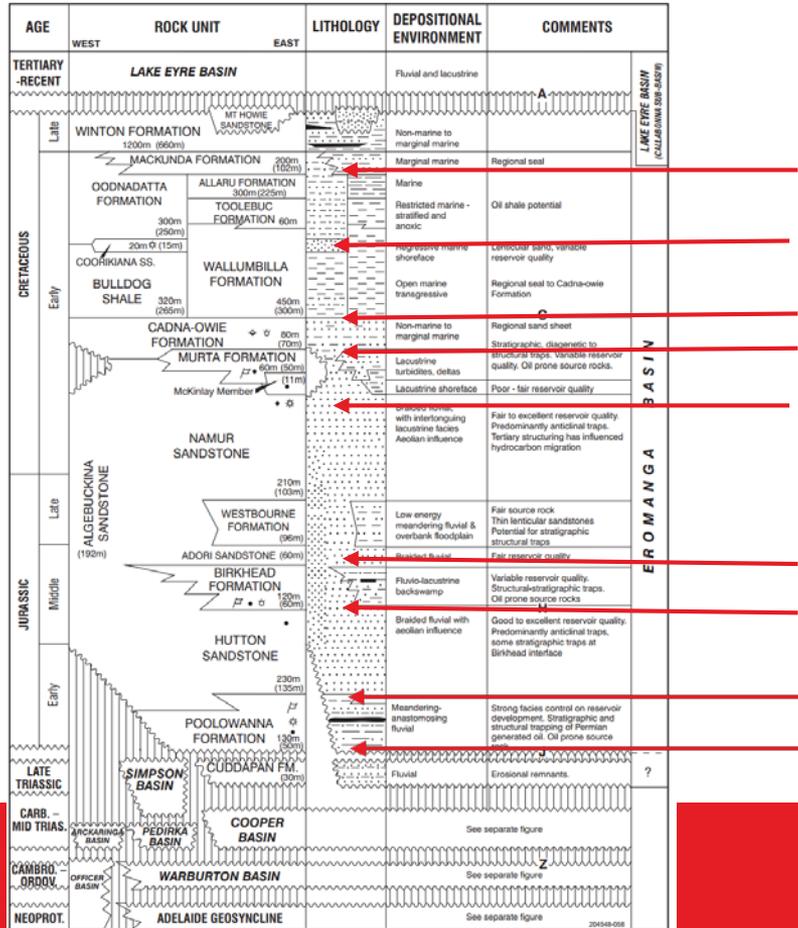
DPC-ERD/DEWNR are currently updating key seismic horizons (Depth and Time)

- Top Cadna-owie
- Top Permian
- Top Basement

There is a need to share key interpreted seismic lines with Qld NRM to ensure continuity across the border.

DPC-ERD is currently in the process of liaising with Cooper Basin operators to secure updated C,P,Z horizons and any other mapped horizons to avoid duplication of effort.

Stratigraphic surfaces to be mapped for Far North Groundwater Model



- Winton
- Coorikianna
- Bulldog Shale
- Cadna-owie
- Murta
- Namur
- Birkhead
- Hutton
- Poolowanna
- base Poolowanna.

Aquifer/Aquitard characterisation

Porosity / Permeability data

Assessment of porosity / permeability data for the Eromanga and Cooper Basins (existing porosity/permeability data) from both industry and DPC studies)

Acquire porosity / permeability data for low permeability shale units in the Cooper / Eromanga basins. Testing to be organised by DPC_ERD.





Australian Government



BIOREGIONAL
ASSESSMENTS

PROVIDING SCIENTIFIC WATER RESOURCE
INFORMATION ASSOCIATED WITH COAL
SEAM GAS AND LARGE COAL MINES

Geological and bioregional assessments – Stage 2

Cooper Basin

A scientific collaboration between the Department of the Environment, Bureau of Meteorology,
CSIRO and Geoscience Australia

Geological and bioregional assessments

Objectives:

- i. Encourage exploration to assist getting new unconventional gas supplies to the east coast gas market within five to ten years;
- ii. Increase the understanding of the potential impacts on water and the environment posed by shale and tight gas development;
- iii. Increase the efficiency of assessment and ongoing regulation, including through improved reporting and data provision/management approaches; and
- iv. Inform community understanding of the industry.

Stage 1 – Rapid regional prioritisation (GA) – completed late 2017

Stage 2 – Geological and environmental baseline assessment (CSIRO, GA, BOM)

Stage 3 – Impact analysis and regulatory integration (CSIRO, GA, BOM)

GBA aims and outcomes

The program will generate:

- suite of publicly available geological and environmental data and
- planning, assessment and reporting tools to support regulation

The program will be undertaken in parallel with, and contribute directly to a strategic assessment process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) which includes a Matters of National Environmental Significance (MNES) Plan and an Impact Assessment Report.

The aim is to improve regulatory efficiency in the Commonwealth and States/Territories by providing regulators and industry with a common information base to inform decision-making and to enhance the co-ordinated management of cumulative impacts.