

# A 3D Subsurface Groundwater Atlas for CSG Fields

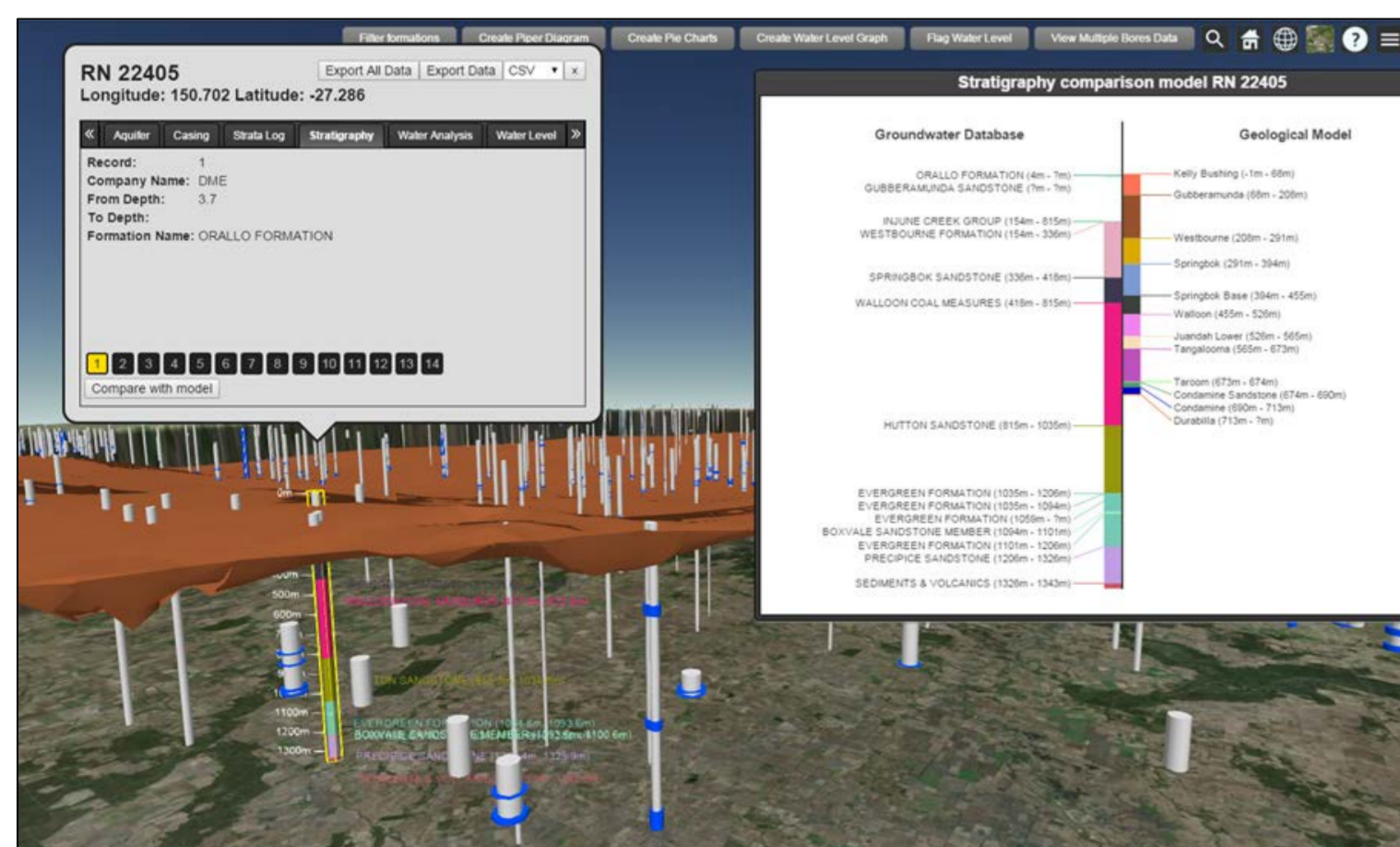
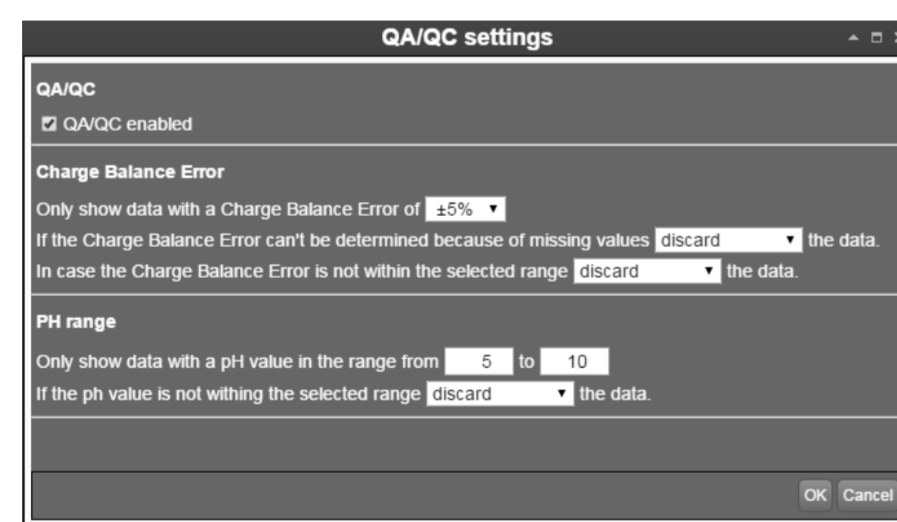
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 Prof. Joan Esterle, Earth Sciences

## OBJECTIVE

To produce a unified Web Portal to groundwater data, geological stratigraphy and geochemical analyses plus time series and analysis tools and visualisation interfaces to facilitate regional and local scale interpretation

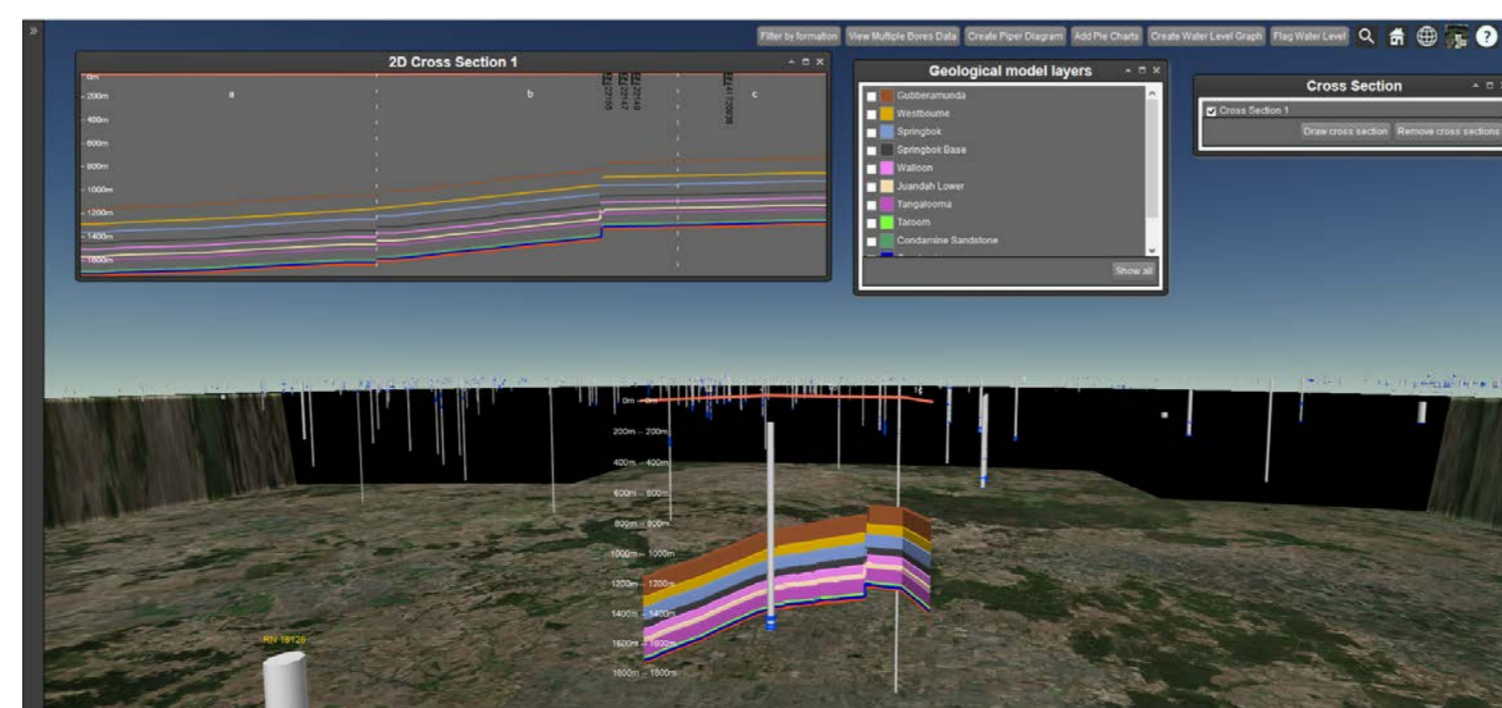
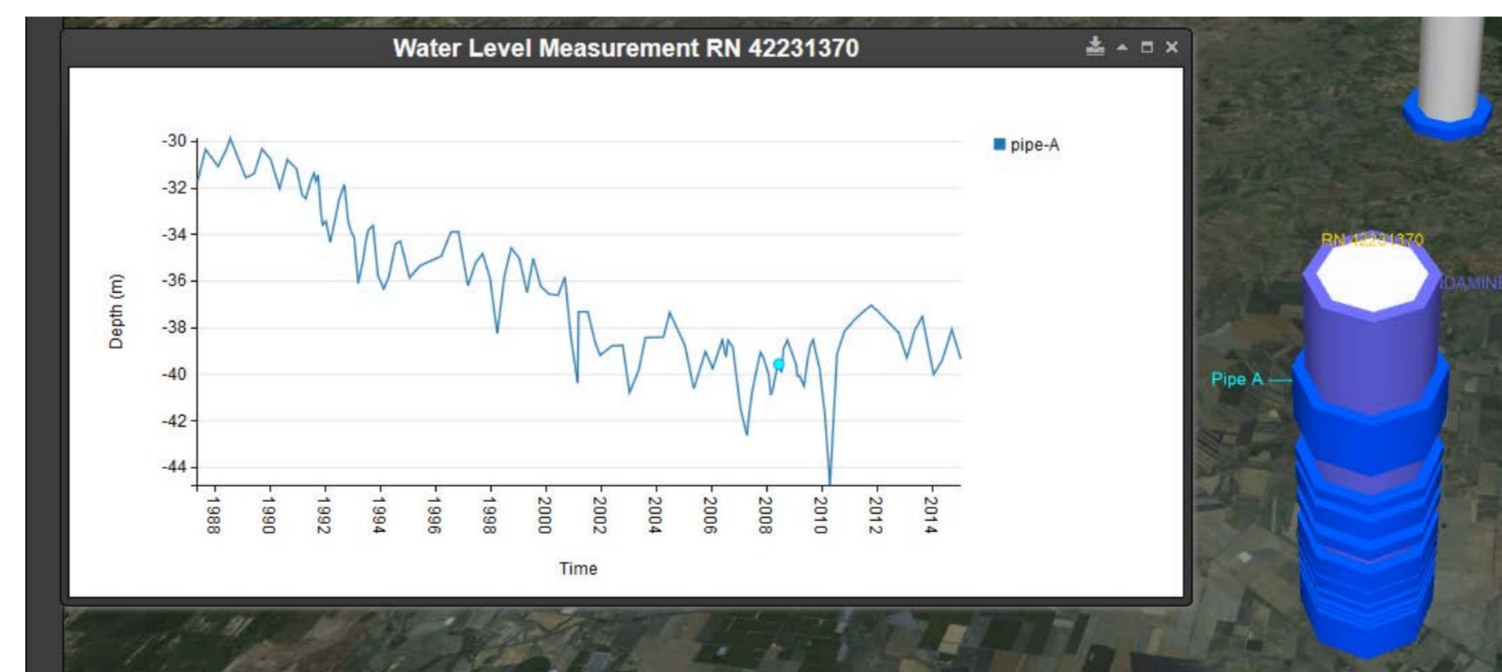
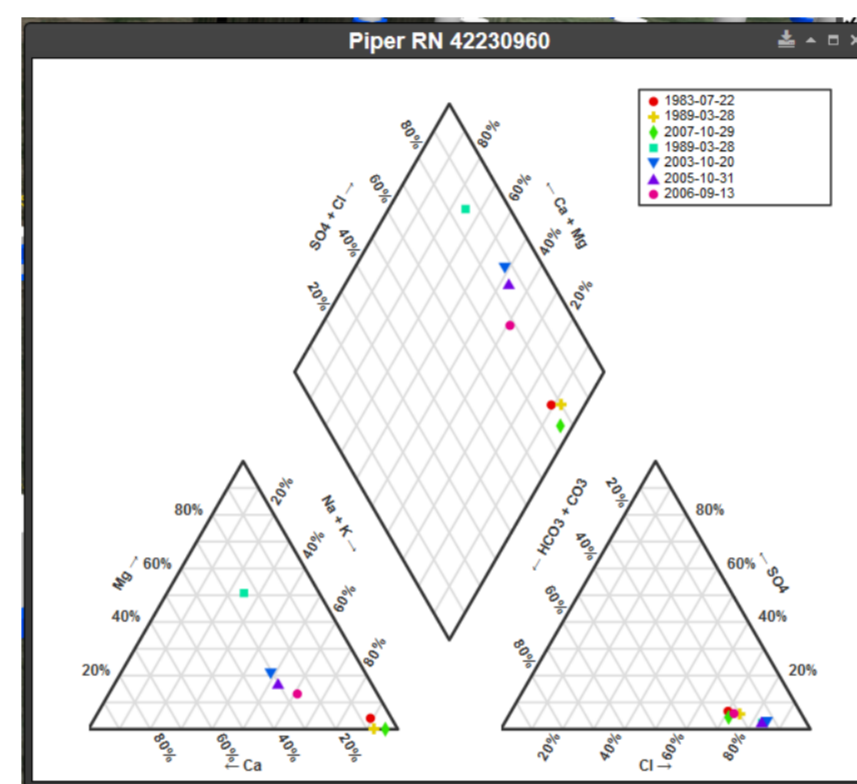
## Tools and filters

- Customisable automated QA/QC procedure
- Filter by formation
- Options for bore visibility, e.g. only bores with water analysis records
- View data for multiple bores at once
- Favourites
- Search window



## Data analysis and visualisation

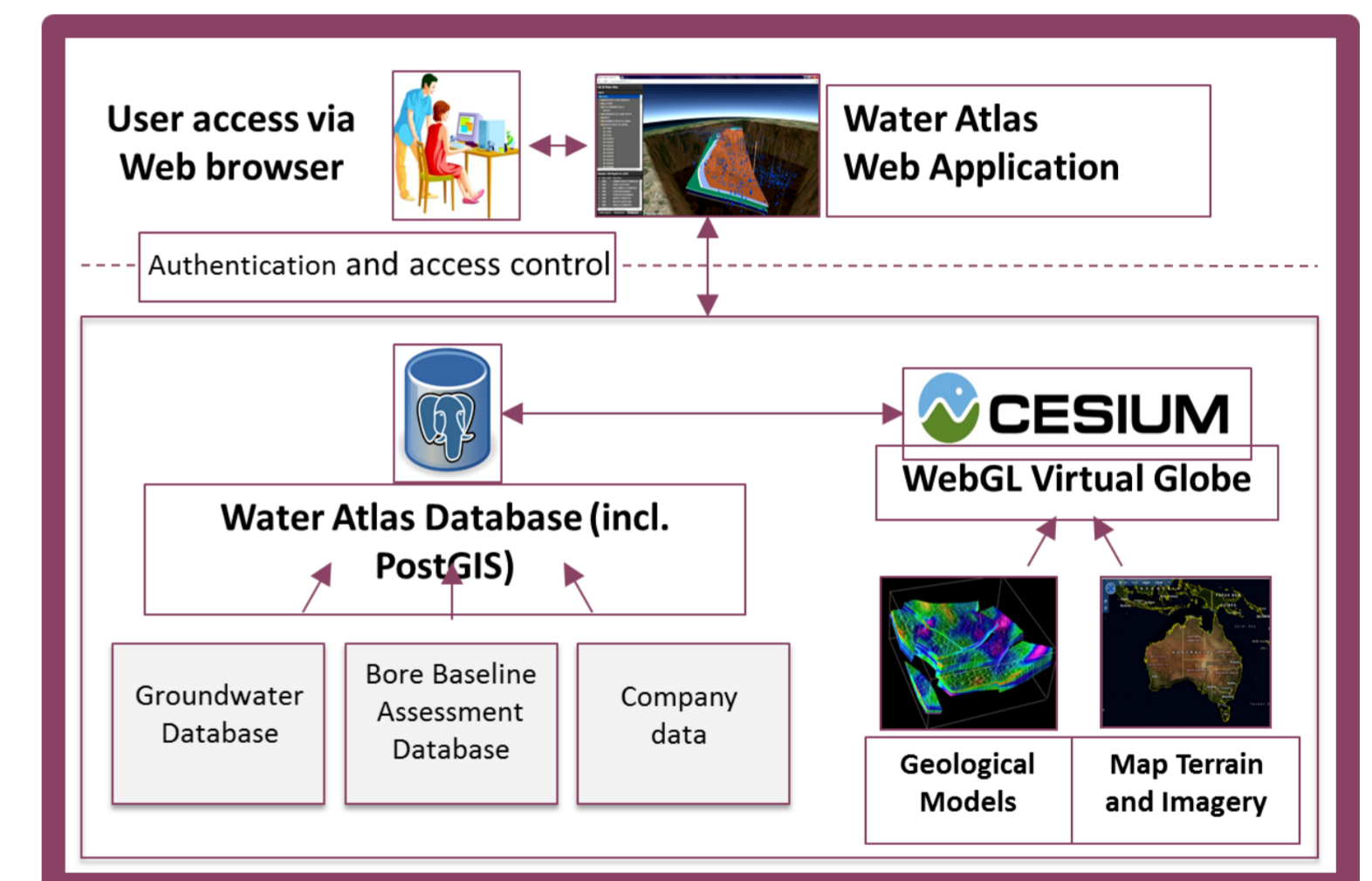
- Cross-sections
- Time series of water constituents and levels
- Animations over time
- Piper, Stiff and pie charts
- Compare casing, stratigraphy and geological model
- Map Overlays e.g. Cadastral and Petroleum and gas lease boundaries



## Differential User Access

- Project team version – access to all data
- Company version(s) – access to public and own company data
- Public version – access to public data and selected tools

## System Architecture



## PHASE 3 – maintenance

- Periodic Data & geological Model updates
- Upgrade to new version of Cesium
- Updates to User Interface based on user feedback

## Acknowledgements

This work received industry funding via the Centre for Coal Seam Gas, The University of Queensland. For more information about the Centre's activities and governance see <http://www.ccsq.uq.edu.au/>