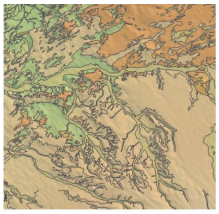
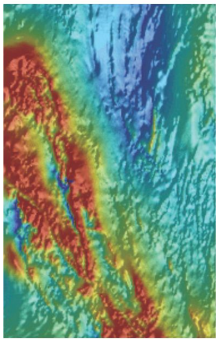


Department of State Development

Metadata: Curnamona Province Basement model

Date Printed: 30/03/2015



Dataset

Title: Curnamona Province Basement model

Custodian: Geological Survey of South Australia. Department for Manufacturing, Innovation, Trade, Resources and Energy

Jurisdiction: South Australia

Description

Abstract:
PIRSA's early 3D modelling trials targeted the Curnamona Province Region. The process of building the Curnamona model in 3D GeoModeller began with identifying the statigraphic units that were to be modelled. Due to the regional scale of the project, the stratigraphic pile represents packages of units aggregated into single units. The input data were prepared utilising appropriate subsets of PIRSA's geoscientific database and spatial data library. These data sources included elevation, solid geology, surface geology, faults, field observations, sectional interpretations based on geological interpretation of unconstrained geophysical inversions. 2D points were used to define contact between units as parameters for interpolation into 3D objects. In addition to the topographic section (top-down view), the modeller created cross-section views of the input data and added further observation and contact points. Stratigraphic pile and contact relationship between units (erosive or onlapping) are further parameters used by 3D GeoModeller for model interpolation. After the input data points were added to the 3D GeoModeller sections, the 3D model was computed. Geomodeller uses kriging interpolators to compute a three dimensional model, utilising the rules of stratigraphic pile as well as conformable and erosional contact of units as defined by modeller. Forward modelling and inversion were not utilised on the Curnamona model, therefore the 3D model has not been tested against potential field data (gravity and magnetic intentsity). The completed model displays 3D objects representing the major stratigraphic units within the Curnamona Province. The model was exported to file formats suitable for viewing in Discover 3D, Gocad or Adobe Reader.

GEN Name: Curnamona Province, South Australia

Geographic Extent Polygon: E327000 N6405000, E327000 N6710000, E600000 N6710000, E600000 N640500

North bounding latitude: N6710000

South bounding latitude: N6405000

East bounding longitude: E600000

West bounding longitude: E327000

Data Currency

Beginning Date: 2005

End Date: 2010

Dataset Status

Progress: Complete

Maintenance: As required

Version Number: 1

Access

Stored format: DIGITAL, 3D-pdf

Available format(s): DIGITAL, 3D-pdf, Gocad, Geomodeller

Access constraint(s): Data is not to be redistributed without approval from Authorisation Officer.

Data Quality

Positional accuracy: Vertical accuracy of the interpolated formation volumes, topographic and basement surfaces are variable due to resampling (topographic surface), interpretation (formation boundaries) and interpolation/unconstrained inversions (formation volumes).

Attribute accuracy: N/A

Logical consistency: N/A

Contact Information

Contact organisation: Department for Manufacturing, Innovation, Trade, Resources and Energy, South Australia

Contact position: Customer Service Centre

Contact mail address: GPO Box 1671, Adelaide, SA 5001

Contact telephone: 08 8463 3000

Contact email: resources.customerservices@sa.gov.au

Metadata Dates

Add date: 2012-02-20

Change date: 2012-09-18

Responsible Party

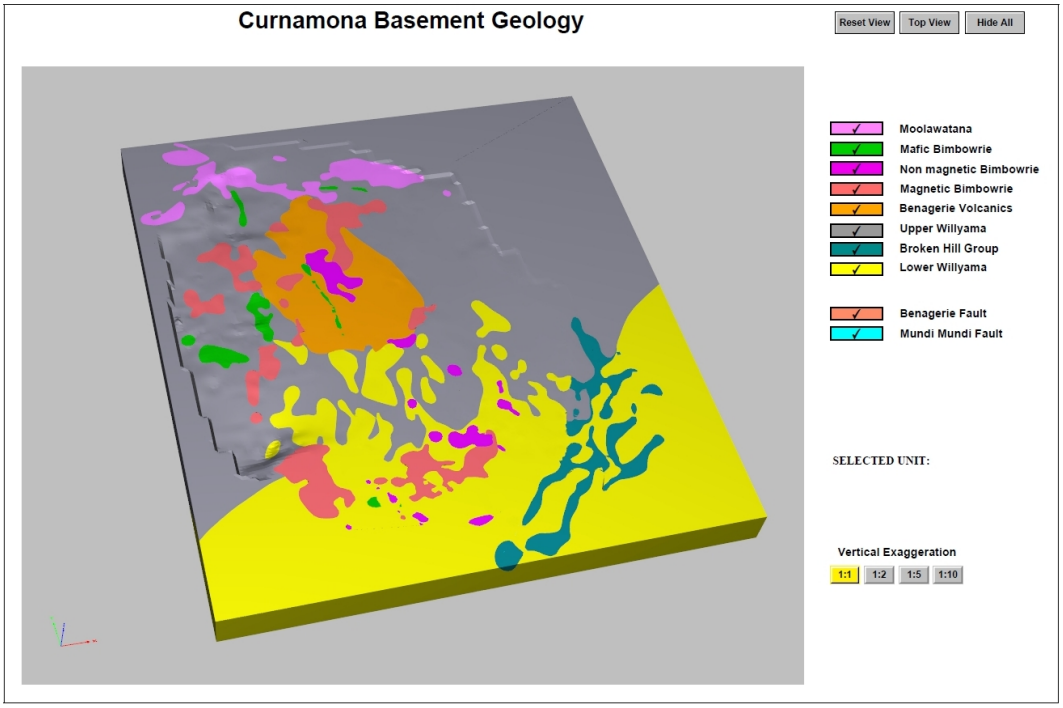
Responsible party: Chief Geoscientist, Mapping and Exploration, GSSA

Description

Dataset classification: Principal version

Dimension: x,y,h

Sample Graphic(s)



Curnamona Basement Geology 3D-pdf

Usage

Purpose: Exploration geology, 3D visualisation

Use: Exploration geology, 3D visualisation

Usage limitations: This model is presented as a 'proof of concept' only and the accuracy (spatial or otherwise) should not be relied upon for exploration or other decision making processes.

Dataset Associations

Dependant datasets: http://www.minerals.pir.sa.gov.au/geology/3d_geological_models/curnamona_province

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Origin

Dataset size: 8.4MB

Projection: UTM Zone 54

Datum: GDA94

Dataset Management

Authorised by: Chief Geoscientist, Mapping and Exploration, GSSA

Attributes