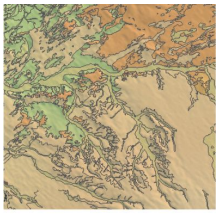
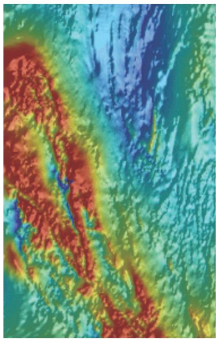


Department of State Development

Metadata: Cariewerloo Basin Unconformity-Related Uranium Project

Date Printed: 16/04/2015



Dataset

Title: Cariewerloo Basin Unconformity-Related Uranium Project

Custodian: Geological Survey of South Australia

Jurisdiction: South Australia

Description

Abstract:
Similarities between the Athabasca and Cariewerloo Basins were first proposed by DMITRE geologists in the 1990s. Subsequently, the uranium potential of the Cariewerloo Basin has been heavily promoted by DMITRE (e.g. Fairclough et al. 2006). Both are intracratonic basins containing Palaeo-Mesoproterozoic, unmetamorphosed and largely undeformed, quartz-dominated, fluvial sedimentary rocks (Jefferson et al. 2007; Cowley 1991). In addition, both basins unconformably overlie deformed and metamorphosed Palaeoproterozoic and Archaean basement including metasedimentary rocks, such as graphitic schists, and granitoid rocks. Reactivated basement structures that propagate into the basin sediments are also common. Moreover, basement rocks under both basins contain elevated uranium concentrations.More recent visits by DMITRE geologists to Saskatchewan have further delineated the similarities leading to a memorandum of understanding (MoU) being signed in early 2009 between the Geological Survey of South Australia (GSSA), DMITRE and the Saskatchewan Geological Survey, Saskatchewan Ministry of Energy and Resources, Canada. This MoU has resulted in substantial benefits for both parties, throughout the technical phase of this collaboration. Secondments of GSSA and Saskatchewan Geological Survey staff have enabled specialist expertise and knowledge exchange to be utilised in both jurisdictions. Examples of this include the development of 3D basement models of the Athabasca Basin, geophysical modelling of the basement underlying the Athabasca Basin and the development of lithostratigraphic logging capabilities within the GSSA.

The Cariewerloo Basin Data Release Version 2 represents the technical component of over 18 months of collaborative work undertaken by both parties. The data release includes: detailed lithostratigraphic logging of 13 drillholes, petrophysical data and accompanying handheld Niton® XL3t XRF analyses for each drillhole; 3D modelling of the internal stratigraphy of the Pandurra Formation, including top and base of the Pandurra and associated fault network; HyLogger -2™ or, where available HyLogger -3™, summary diagrams and downhole mineralogy plots represented in 3D; 3D modelling of mineralogy determined by HyLogger data; InnovX™ DP-6000 XRF collected at the unconformity of selected drillholes; geochemical assay data available for selected pathfinder elements; basement modelling and multi-scale edges (worms) produced from the reduced to pole TMI data; interpretation of AEM data flown over the Cariewerloo Basin; and accompanying literature are provided as part of the data release.

ANZLIC Search Terms:
INDUSTRY Mining Exploration

GEN Category: Province

GEN Custodial Jurisdiction: South Australia

GEN Name: Gawler Province

Geographic Extent Polygon: -29.358781 134.574265, -29.358781 137.805471, -33.203250 137.805471, -33.203250 134.574265

North bounding latitude: -29.358781

South bounding latitude: -33.203250

East bounding longitude: 137.805471

West bounding longitude: 134.574265

Data Currency
Beginning Date: 2010

End Date: 2012-06-12

Dataset Status
Progress: In Progress

Maintenance: Irregular

Version Number: 2

Access
Stored format: DIGITAL

Available format(s): DIGITAL

Data Quality

Positional accuracy: Horizontal accuracy of the drillholes is variable due to the method of capture (map, hand-held GPS, differential GPS, etc)

Attribute accuracy: N/A

Contact Information
Contact organisation: Department for Maufacturing, Innovation, Trade, Resources and Energy

Contact position: Customer Service Centre

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Contact telephone: 08 8463 3000

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

Metadata Dates
Add date: 2012-06-21

Change date: 2012-06-21

Responsible Party
Responsible party: Geological Survey of South Australia

Responsible party function: Owner

Description
Dataset classification: Principal version

Dimension: x,y

Usage
Purpose: Mineral exploration; modelling

Use: Project generation; exploration

Usage limitations: The Department of Manufacturing, Innovation, Trade, Resources and Energy(DMITRE) disclaim liability for any act done or omission made on the information in this DVD and any consequences of such acts or omissions.

Dataset Associations

Origin

Projection: Lambert 28+36

Datum: GDA94

Dataset Management
Authorised date: 2012-06-12

Authorised by: Chief Geoscientist, GSSA Mapping and Exploration Group

Attributes
