

Shale resource data from the greater McArthur Basin

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Title:	Shale resource data from the greater McArthur Basin.
Custodian:	Northern Territory Geological Survey (NTGS) Department of Industry, Tourism and Trade
Abstract:	<p>This dataset focusses primarily on the greater McArthur Basin (McArthur Basin and Birrindudu Basin in particular). The dataset consists of analysis of shales from the greater McArthur Basin (and the South Nicholson Basin and Lawn Hill Platform) that were selected specifically for the purpose of determining the potential for unconventional hydrocarbon resources. The dataset consists of organic geochemistry, physical and mechanical rock properties, kerogen geochemistry and kinetics, bulk and clay mineralogy, fluid extract chromatography, organic petrography, gas geochemistry and reflectance and inorganic geochemistry.</p> <p>This is version 14 of the NTGS Digital Information Package 014 (DIP 014) dataset.</p>
Search Word(s):	petroleum, geoscientific information, McArthur Basin, Birrindudu Basin, Beetaloo Sub-basin, South Nicholson Basin, shale, oil, gas
Bounding Coordinates (GDA94):	North Bounding Coordinate: -11°S South Bounding Coordinate: -26°S East Bounding Coordinate: 138°E West Bounding Coordinate: 129°E
Reference System Information:	The dataset is supplied in Geocentric Datum of Australia (GDA94), latitude and longitude [EPSG: 4283]
Data Currency Start Date:	04/03/2022
Data Currency End Date:	
Progress:	In Progress
Maintenance and Update Frequency:	As Required
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Lineage:

The McArthur Basin is recognised as having potential for petroleum; and both oil and gas are known to have flowed from petroleum wells and mineral exploration drillholes. An extensive sampling program of legacy cores held at the NTGS Core Facility in Darwin and the Data Repository of Geoscience Australia in Canberra was undertaken in 2014–18. Collated data includes sample points from the Mesoproterozoic Roper Group and the Palaeoproterozoic units of the McArthur and Limbunya groups. This program has increased the sampling frequency for the organic geochemistry of the shales of the Roper, Limbunya and McArthur groups and has resulted in a reduced sampling interval of between five to ten metres through the shale intersections. The suite of analyses of these samples includes total organic carbon content, programmed pyrolysis, bulk and clay mineral content, kerogen kinetics and elemental kerogen analysis, shale rock properties, organic petrography, whole rock geochemistry, mechanical rock properties, gas chromatography and biomarker analysis and gas geochemistry. These analyses are essential to determine areas of greater potential for hosting shale petroleum plays as defined by key parameters. The data from the newer sampling analyses has been combined with legacy data compiled from open file company reports to form an integrated properties dataset.

Positional Accuracy:

Positional accuracy is dependent on the quality of the source dataset and is highly variable.

Attribute Accuracy:

Attributes have been derived from multiple sources. Some interpretation of company-provided data has been required to equate to NTGS formats, structures and definitions.

Logical Consistency:

Internally consistent with source datasets and adapted to meeting the Shale Resource Assessment project requirements. Further review of the data, structure and alignment and integration with other NTGS datasets is probable in the future.

Completeness:

Dataset is partially complete. Dataset will be updated as required.

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