ANZLIC Metadata Element	Fields
Title	NSW 1500K Simplified Surface Geology
File Identifier	BE8A8BED-FA0F-4746-BA85-42B0FB47D2CD
Abstract	The surface geology of NSW, including the type, location and age of rocks and deposits, and geological boundaries. The New South Wales 1:1 500 000 scale geology map represents an up-to-date synthesis of the surface geology of the state. The map has been compiled principally from 1:250 000 scale geological map data from the Geological Survey of New South Wales. This data has undergone substantial simplification and harmonisation both for display at 1:1 500 000 scale and to reconcile nomenclature and mapping mis-matches across the borders of its map tiles and jurisdictional boundaries. Due to the substantial simplification and generalisation which has occurred during editing, it is not recommended that the map or data be used at scales smaller than 1:1 500 000. For more detailed studies, the user is referred to the Geological Survey of New South Wales 1:250 000, 1:100 000 and 1:25 000 scale series geological maps.
Purpose	This feature class shows the Rock Unit polygons of the 1:1,500,000 scale surface geology, New South Wales, Australia.
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Jurisdictions	New South Wales
Geographic Bounding Box	northBoundLatitude -28.157371 southBoundLatitude -37.504866 eastBoundLongitude 153.638418 westBoundLongitude 140.999300

Lineage	LINEAGE AND PROCESSING OF DATA SOURCES USED IN THIS MAP Between 2001 and 2004, a 'best available' 1:250 000 scale geology of the NSW was compiled as part of the NSW Statewide Geology Geodatabase project (Xie 2003). The data for the project was obtained from the Geological Survey of New South Wales 1:250 000 series geological and metallogenic map sheets, along with several regional synthesis projects which were completed between 1995 and 2003 (Figure 1). These synthesis datasets were typically compilations of the existing best available series geological mapping with additional data added from thesis maps and geological interpretation of geophysical and remote sensing imagery. The various datasets were brought together in an ESRI geodatabase format by Xie (2003) and given a common data structure and attribute tables. No attempt was made to resolve edge-match problems between sheet and dataset boundaries. Between 2003 and 2005, a team from Geoscience Australia (Liu et al. 2005) generalised the New South Wales geology dataset of Xie (2003) to produce a seamless 1:1 000 000 scale geology map of NSW. In addition, the team added provisional datasets from the Goulburn and Cargelligo 1:250 000 mapping project areas and 1:100 000 scale mapping from the Cobar and Nymagee 1:250 000 map sheet areas. Synthesis datasets from western New South Wales (Laing et al. 1996) and the Murray Basin region (Brown & Stephenson 1991) were also integrated (Figure 1). The Geoscience Australia team then produced a seamless state dataset by edge matching the various source datasets which often did not agree due to their widely varying ages and compilation scales. Adjustment of some of the older geological datasets was made using geophysical data interpretation, particularly where poor edge matching or spatial accuracy (± 1 km) was identified in the source data. Due to the 1:1 000 000 scale, many smaller units from the 1:250 000 source datasets were deleted, merged or enlarged. Between 2006 and 2008, Gary Colquhoun (Geological Survey of New South Wales) performed substantial edits on the Geoscience Australia 1:1 million scale geology dataset with the aim of producing a New South Wales geology map at 1:1 500 000 scale. These edits comprised:

Simplifying the geological unit symbology by changing from a stratigraphic unit-based code to an age-lithology code (see below for explanation).

•Merging many units as a result of this code simplification.
•Deleting, or merging many polygons which were too small for display at 1:1 500 000 scale.
•Substantial generalisation of geological linework to reduce nodes for smoother display.
•Subdividing plutonic and volcanic rocks based on type (I-type, S-type, etc). These data were derived from a variety of sources, namely: Eastern Lachlan Orogen Geoscience database (Glen et al. 2006); NSW AMIRA geochemical database; and numerous unpublished geochemical datasets held by the Geological Survey of New South Wales.
•Many areas were reclassified to emphasise bedrock data rather than a thin veneer of regolith (eg. Qr/Ks was reclassified as Ks not Qc). This involved merging and simplifying many hundreds of rock unit polygons.
•Minor changes in stratigraphic nomenclature were made to make the data consistent with the Eastern Lachlan Orogen dataset (Glen et al. 2006).
•To enable easier simplification to 1:1 500 000 scale, the original Cobar and Nymagee 1:250 000 metallogenic sheet data were added, replacing many 1:100 000 scale datasets added by Geoscience Australia in these areas.
•The finalised Cargelligo 1:250 000 geology map (Meakin et al. 2006) was added and simplified. An updated preliminary Goulburn 1:250 000 geology map was also added and simplified.

EXPLANATION OF GEOLOGICAL LETTER SYMBOLS USED ON THE MAP

•The geological units of the map have been symbolised using a code to convey generalised age-lithology information about a geological unit.

•1st letter: the first letter indicates the geological period or era and is represented on the vertical column of the geology legend (eg. P = Permian; D = Devonian; O = Ordovician, etc.). Note that some geological periods or eras use 2 letters (eg. Cz = Cainozoic) and can have a letter different to the initial letter of the period due to some periods sharing the same initial letter (eg. E = Cambrian; K = Cretaceous).

	•2nd letter: the second letter represents the type of rocks in the unit and relates to the top row of headings on the geology legend (eg. Cs = Carboniferous sedimentary rocks; Sm = Silurian mafic intrusions). Note that mixed sedimentary and volcanic units use two letters and have been annotated "sv" •3rd letter: the third letter generally subdivides the igneous rocks into I-type, S-type, A-type or undifferentiated (e.g. Dvi = Devonian volcanics I-type; Sgs = Silurian granite S-type). CREDITS •Bibliographical reference: GEOLOGICAL SURVEY OF NSW 2009.New South Wales 1:1 500 000 Geology Map. First edition. Geological Survey of New South Wales, Department of Primary Industries, Maitland, NSW, Australia. •Geology compiled and edited by J. Xie,, G.P. Colquhoun (Geological Survey of New South Wales) O.L. Raymond, S.F.Liu, A.J. Retter, D. Phillips, A. Kernich, D.S. Percival, C. Macgregor(Geoscience Australia). •Explanatory text by G.P. Colquhoun. •Technical editing by: J. Greenfield, P. Blevin, J. Stroud, D. Pogson. •Cartography by: W. Zhang, L. Mills, L. Li. •Topographic base map data were compiled and extensively edited by L. Mills from digital data supplied by Geoscience Australia, Canberra. •Front cover photograph by D. Barnes •Printed by Department of Lands. Panorama Avenue, Bathurst, New South Wales •Published by Department of Primary Industries 2009•
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