



1:500 000 Tectonic units of Western Australia - Preliminary

The digital 1:500 000 scale tectonic units map of Western Australia has been compiled using boundaries extracted from the 2006 digital 1:500 000 Interpreted bedrock geology of Western Australia (for cratonic and orogenic regions and older Precambrian basins), the Geoscience Australia "Australian Geological Provinces" GIS dataset for offshore basinal divisions, and boundaries based on the 2001 1:2 500 000 Tectonic units of Western Australia (Tyler and Hocking, 2001, 2002). There are three main groupings of tectonic units: Archaean to Paleoproterozoic Cratons, Proterozoic Orogens, and Archean, Proterozoic and Phanerozoic Basins. The Pilbara Craton is subdivided into granite-greenstone terranes and basins, the Hamersley Basin and its sub-basins together with the Gregory Granitic Complex, and granite-greenstone inliers and domes. In the Pilbara Craton, the Central Pilbara Tectonic Zone includes the Mallina Basin and parts of adjacent granite-greenstone terranes. The Yilgarn Craton is divided into terranes, and also outcrops in inliers and domes. The Lucas Craton outcrops in the Browns Range Dome. Orogens are divided into igneous and metamorphic complexes and related sedimentary basins. Complexes may be subdivided into terranes or zones, and also outcrop in inliers. Orogenic forelands are recognised reworking adjacent craton and basin margins to form fold belts or duplexes, gneisses and gneiss complexes. Basins may be divided into sub-basins, which include shelves, highs, terraces, arches, platforms, ridges, troughs, embayments and grabens, and outcrop in inliers and as outliers, and are locally ranked and stacked according to age. The Centralian Superbasin consists of related Neoproterozoic basins within central Western Australia. The Westralian Superbasin is a grouping of related, mostly offshore Phanerozoic basins along the Northwest Shelf. This data is held in GDA decimal degrees.



Geological Survey of
Western Australia



Government of Western Australia
Department of Mines and Petroleum

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