

4d.3 Potential hydraulic interconnection at the base of the Great Artesian Basin

Abstract	<p>Polygons representing a qualitative estimate of the potential for hydraulic interconnection between the base of the Great Artesian Basin and top of underlying basement units. This dataset is derived from the 'Hydrogeological basement units in contact with the base of the Great Artesian Basin' dataset (Geoscience Australia, catalogue #75910, 2013) and 'Base Great Artesian Basin hydrogeological units in contact with basement' dataset (Geoscience Australia, catalogue #75911, 2013). It is used to identify potential hydraulic interconnection between the Great Artesian Basin and basement units.</p> <p>Data is available as polygons in Shapefile format</p> <p>This GIS data set was produced for the Great Artesian Basin Water Resource Assessment and used in Figure 3.6 of Smerdon BD, Ransley TR, Radke BM and Kellett JR (2012) Water resource assessment for the Great Artesian Basin. A report to the Australian Government from the CSIRO Great Artesian Basin Water Resource Assessment. CSIRO Water for a Healthy Country Flagship, Australia.</p> <p>This dataset and associated metadata can be obtained from www.ga.gov.au, using catalogue number 75839.</p>																																											
Lineage	<p>SOURCE DATA:</p> <p>1. Hydrogeological basement units in contact with the base of the Great Artesian Basin (Geoscience Australia dataset, Catalogue #75910, 2013)</p> <p>2. Base Great Artesian Basin hydrogeological units in contact with basement (Geoscience Australia dataset, Catalogue #75911, 2013)</p> <p>METHOD</p> <p>A new dataset was created by using 'Hydrogeological basement units in contact with the base of the Great Artesian Basin' dataset and 'Base Great Artesian Basin hydrogeological units in contact with basement'. Using a matrix method, the potential for hydraulic connection was classified from high to negligible depending on the spatial relationship between the two datasets described above. See the accompanying data dictionary for the table of potential for hydraulic interconnection matrix.</p> <p>1: Potential for hydraulic interconnection matrix</p> <table><tr><th colspan="2" rowspan="2"></th><th colspan="5">GAB units in contact with Basement</th></tr><tr><th>Aquifer</th><th>Partial Aquifer</th><th>Leaky aquitard</th><th>Tight Aquitard</th><th>Aquiclude</th></tr><tr><th rowspan="5">Basement units in contact with the base of the GAB</th><th>Aquifer</th><td>High</td><td>Medium</td><td>Low</td><td>Very low</td><td>Negligible</td></tr><tr><th>Partial Aquifer</th><td>Medium</td><td>Medium</td><td>Low</td><td>Very low</td><td>Negligible</td></tr><tr><th>Leaky aquitard</th><td>Low</td><td>Low</td><td>Low</td><td>Very low</td><td>Negligible</td></tr><tr><th>Tight Aquitard</th><td>Very low</td><td>Very low</td><td>Very low</td><td>Very low</td><td>Negligible</td></tr><tr><th>Aquiclude</th><td>Negligible</td><td>Negligible</td><td>Negligible</td><td>Negligible</td><td>Negligible</td></tr></table>			GAB units in contact with Basement					Aquifer	Partial Aquifer	Leaky aquitard	Tight Aquitard	Aquiclude	Basement units in contact with the base of the GAB	Aquifer	High	Medium	Low	Very low	Negligible	Partial Aquifer	Medium	Medium	Low	Very low	Negligible	Leaky aquitard	Low	Low	Low	Very low	Negligible	Tight Aquitard	Very low	Very low	Very low	Very low	Negligible	Aquiclude	Negligible	Negligible	Negligible	Negligible	Negligible
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Extent	West 131.800236 ; East 153.184352; North -7.931810 ; South -33.098704																																											
Scale	1:6 000 000																																											

