

## Product and service outputs from the EIS to January 2015

Program	Product and Service Outputs							Deliverables
	Q4 2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	
<b>Exploration and Environmental Coordination</b>		<ul style="list-style-type: none"> <li>Online confidential tracking of mining title applications by tenement applicants</li> </ul>	<ul style="list-style-type: none"> <li>Online lodgement of mining tenement applications</li> <li>Online lodgement of 3 Mining Act forms                             <ul style="list-style-type: none"> <li>Form 5 (operations)</li> <li>Form 16 (Objections)</li> <li>Form 18 (Exemption from expenditure)</li> </ul> </li> <li>Online advertising of mining tenement application by RSS Feed</li> <li>Online lodgement and confidential tracking of                             <ul style="list-style-type: none"> <li>Environmental Program of Works</li> <li>Mining proposals</li> </ul> </li> <li>Online confidential tracking of                             <ul style="list-style-type: none"> <li>Environmental management plans</li> <li>Oil spill contingency plans</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Online Mining Act                             <ul style="list-style-type: none"> <li>Rental payments</li> <li>Form 9 (Extension of Term/Renewal of Tenement)</li> <li>Automation of graticular block selection for Exploration Licences</li> </ul> </li> <li>Online confidential tracking of mining tenement applications proceeding through Native Title process</li> <li>Completion of development of EARS Online Environmental Application process (Petroleum)</li> </ul>	<ul style="list-style-type: none"> <li>Online Mining Act                             <ul style="list-style-type: none"> <li>Partial Surrender</li> <li>Transfers</li> <li>Management and registration of Caveats</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Completed "quick appraisal module" into online applications, determination and native title processing.</li> <li>Development of stage 1 of the TENGRAPH enquiry replacement module using Geocortex Framework</li> </ul>	<ul style="list-style-type: none"> <li>Completed auto creation and attachment of TENGRAPH maps to notices using the Geocortex framework</li> <li>Continuing implementation of full appraisal into the mineral title management system, specifically in the area of title determination and native title management</li> <li>Design and implement clustered ArcGIS server/Geocortex infrastructure for scalable delivery of Web application services</li> </ul>	<ul style="list-style-type: none"> <li>Over 65% of major transactions surrounding mining tenement applications and management are now conducted on line</li> </ul>
<b>Innovative Drilling</b>		<ul style="list-style-type: none"> <li>29 Co-funded drilling projects completed. Total metres drilled ~60 000 m</li> <li>Major exploration investment promotion in China, Japan, Korea, North America</li> <li>Stratigraphic piggy-back coring of Bongabinni and Noonkanbah Formations and Acacia Sandstone</li> </ul>	<ul style="list-style-type: none"> <li>38 Co-funded drilling projects completed. Total metres drilled ~70 000 m</li> <li>Major exploration investment promotions in China, Japan, Korea, India, North America</li> </ul>	<ul style="list-style-type: none"> <li>53 Co-funded drilling projects completed. Total metres drilled ~82 500 m</li> <li>Major exploration investment promotions in China, Japan, Korea, India, North America, Europe</li> <li>Drilling and logging of GSWA Harvey 1 stratigraphic well to total depth of 2945 m</li> </ul>	<ul style="list-style-type: none"> <li>First phase of Eucla drilling by GSWA undertaken with completion of 5 drillholes into the crystalline rocks beneath the Eucla Basin. 1 511 metres of core acquired as well as samples from 722 metres of reverse circulation drilling</li> <li>44 Co-funded drilling projects completed. Total metres drilled ~58,800m</li> <li>Major exploration investment promotions in China, Japan, Korea, India, North America, Europe</li> <li>Acquisition of 65 metres of core from the Hickman crater</li> </ul>	<ul style="list-style-type: none"> <li>Two stratigraphic holes were drilled into the basement rocks beneath the Eucla basin to retrieve core for further analytical work.</li> <li>Major exploration investment promotions in China, Japan, Korea, India, North America, Europe</li> <li>59 Co-funded drilling projects completed. Total metres drilled ~ 83,000m</li> </ul>	<ul style="list-style-type: none"> <li>The Co-funded exploration drilling program continued with the completion of round 8 (commenced in January 2014), and ongoing drilling in round 9 (2014/15 FY) as well as the commencement of R10 (2015) drilling projects</li> <li>50 Co-funded drilling projects completed with ~ 78,000m drilled</li> <li>Major exploration investment promotions in China, Japan, Korea, North America Singapore Malaysia</li> </ul>	<ul style="list-style-type: none"> <li>Co-funded drilling program has supported 275 projects, consisting of 432,580 m, drilled to June 2015</li> <li>Contributed to discovery of                             <ul style="list-style-type: none"> <li>Hand pump gold project</li> <li>Tropicana East gold project</li> <li>Lake Mackay uranium project</li> <li>Magnus gold project</li> <li>Yeneena copper-lead-zinc project</li> <li>Speewah vanadium-uranium project</li> <li>Nova nickel-copper deposit</li> <li>McIntosh graphite deposit</li> <li>Rinaldi copper deposit</li> <li>Oxley potash deposit</li> <li>Citadel gold, silver, copper, tungsten deposit</li> <li>Camelwood nickel deposit</li> <li>Millennium Zinc project</li> <li>Dusk Til Dawn gold project</li> <li>Webb diamond project</li> </ul> </li> <li>Funded drilling of deep hole that assisted in decision by owners to reopen Mt Magnet gold mine</li> <li>Early indications that suitable reservoir and seal exists for long-term CO<sub>2</sub> storage for Collie Hub</li> <li>Information on the crystalline rocks below the Eucla Basin sediments</li> </ul>
<b>Geophysical and Geochemical Surveys</b>	<ul style="list-style-type: none"> <li>Cunderdin Gravity Survey</li> <li>Purchased existing TerraSearch WA exploration</li> </ul>	<ul style="list-style-type: none"> <li>208 000 line-km of airborne magnetics and radiometric acquired (9 survey areas)</li> </ul>	<ul style="list-style-type: none"> <li>1.1 million line-km of airborne magnetic and radiometric acquired (10 survey areas)</li> </ul>	<ul style="list-style-type: none"> <li>1.4 million line-km of airborne magnetic and radiometric acquired (12 survey areas)</li> </ul>	<ul style="list-style-type: none"> <li>Pilot AEM survey in the Bryah Basin</li> <li>717,000 line-km of airborne</li> </ul>	<ul style="list-style-type: none"> <li>200 km deep seismic acquired as an extension to the WA/SA border, of the Albany-Fraser deep crustal</li> </ul>	<ul style="list-style-type: none"> <li>Seismic and gravity, raw and processed data packages of the Canning Basin (Kimberley) Deep</li> </ul>	<ul style="list-style-type: none"> <li>Whole of State covered airborne magnetic and radiometric survey data</li> <li>New tenement applications in</li> </ul>

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	and geochemical dataset	<ul style="list-style-type: none"> <li>21 000 2.5 km gravity stations acquired (3 survey areas)</li> <li>Establishment of gravity test range near York</li> <li>256 km of deep seismic acquired in Capricorn Orogen and northern Yilgarn (Youanmi line)</li> <li>East Wongatha regolith geochemical and mapping survey</li> <li>2 x 100 000 scale regolith landform map layers</li> </ul>	<ul style="list-style-type: none"> <li>22 000 2.5 km gravity stations acquired (3 survey areas)</li> <li>236 km deep seismic acquired over Musgrave Province</li> <li>Extended Western Yilgarn Laterite Geochemical Atlas to the Murgoo area</li> </ul>	<ul style="list-style-type: none"> <li>31,500 2.5 km gravity stations acquired (3 survey areas)</li> <li>592 km deep seismic acquired across the south eastern margins of the Yilgarn Craton and in the Albany-Fraser Orogen</li> </ul>	<ul style="list-style-type: none"> <li>magnetic and radiometric data released</li> <li>Fugro Menzies-to-Norseman multiclient airborne magnetic and radiometric data acquired</li> <li>11,815 2.5 km gravity stations acquired and released (1 survey area)</li> </ul>	<ul style="list-style-type: none"> <li>seismic reflection line acquired along the Trans Australian Railway east of Kalgoorlie in 2012.</li> <li>700 km of deep crustal seismic was acquired in the onshore Canning Basin.</li> <li>720,000 line-km of airborne magnetic and radiometric data released.</li> <li>16,010 2.5 km gravity stations acquired and released</li> </ul>	<ul style="list-style-type: none"> <li>Crustal Geophysical Survey released in February 2015</li> <li>Data from 11 662 gravity stations were acquired and released during the year from a survey in the area between Sir Samuel and Throssell</li> </ul>	<ul style="list-style-type: none"> <li>Eucla Basin after airborne geophysical surveys released</li> <li>New EIS surveys completed. E-W seismic line from Shark Bay across WA to NT border and across the Eucla Basin to the SA Border.</li> </ul>
<b>3D Geological Mapping (including Unconventional Energy)</b>		<ul style="list-style-type: none"> <li>Software upgrades begin</li> <li>250 line-km MT survey Southern Cross area</li> <li>Initiation of advanced geochronology program – Lu/Hf, Sm/Nd isotopic analyses</li> <li>Solid geology and regolith data acquisition commences in the Kimberley</li> </ul>	<ul style="list-style-type: none"> <li>Software upgrades continue</li> <li>Solid geology and regolith data acquisition in the Kimberley, Capricorn and Gascoyne Orogens</li> <li>200 line km MT survey Musgrave Province</li> <li>Four regional assessments of geothermal potential released</li> <li>Commencement of four major unconventional energy studies <ul style="list-style-type: none"> <li>Tight gas reservoirs in the South Perth Basin</li> <li>Shale gas potential in the Perth Basin</li> <li>3D modelling of the western Canning Basin (for CO<sub>2</sub> storage)</li> <li>Carbon storage atlas for strategic WA basins</li> </ul> </li> <li>100 line km, 2D seismic acquired in the Harvey area to locate GSWA Harvey 1 CO<sub>2</sub> stratigraphic test</li> </ul>	<ul style="list-style-type: none"> <li>Software upgrades continue</li> <li>WAPIMS system upgrade completed</li> <li>Release of WA ASTER image dataset</li> <li>Solid geology and regolith data acquisition in the Kimberley, Capricorn and Gascoyne Orogens</li> <li>Release of 3 reports and 10 1:100 000 geological information series packages</li> <li>Capture of drilling and surface geochemistry from &gt;10 000 exploration reports into database</li> <li>Completion of West Arunta and Musgrave targeting studies</li> <li>Report on tight gas reservoirs in the South Perth Basin released</li> </ul>	<ul style="list-style-type: none"> <li>WAPIMS upgrade goes live on web</li> <li>Acquisition of 39,500 records in Bryah-Padbury basins form exploration reports</li> <li>Continuation of capture of drilling and surface geochemistry from &gt;10 000 exploration reports into database</li> </ul>	<ul style="list-style-type: none"> <li>Completion of collaborative project with Curtin University researching shale gas potential of Perth and Canning basins</li> <li>Completion of collaborative project with UWA on 3D modelling of Canning Basin for hydrocarbon resources and geological storage potential for CO<sub>2</sub>.</li> <li>Release of carbon Storage atlas of strategic basins in WA.</li> <li>Release, via the web, of the mineral exploration drilling and geochemistry databases.</li> <li>Completion of CO<sub>2</sub> storage assessment of the on-shore western Eucla Basin.</li> <li>Redevelopment of WAMEX database.</li> </ul>	<ul style="list-style-type: none"> <li>Online submission of mineral exploration reports</li> <li>Release of report on the Geosequestration potential of the Carboniferous-Permian Grant Group and Permian Poole Sandstone, northwest Canning Basin, Western Australia</li> </ul>	<ul style="list-style-type: none"> <li>WAPIMS voted best Government petroleum database in the world by Fraser Institute petroleum industry survey</li> <li>First large scale Aster coverage in the world</li> <li>First comprehensive regional surveys of geothermal potential in WA</li> <li>Alternative technologies proposed to produce tight gas from Perth Basin other than by hydraulic fracturing</li> <li>First basin-by-basin outline of possible CO<sub>2</sub> storage sites in WA produced.</li> <li>Whicher Range Tight Gas Sands Study released</li> <li>The Mineral exploration drillhole database containing over 1.5million records, and the exploration geochemistry database containing over 4 million records available online via DMP website</li> <li>WA voted no. 5 in the world in the category of Geological Databases in the 2014 Fraser Institute Survey of Mining Companies</li> </ul>
<b>Strategic Industry Research</b>		<ul style="list-style-type: none"> <li>Funding to MERIWA</li> </ul>	<ul style="list-style-type: none"> <li>First MERIWA project supported by EIS, 'North East Yilgarn biogeochemistry project' completed</li> <li>EIS funding assigned to 3 new MERIWA projects</li> <li>3 WA Regional Researcher Initiative programs, managed by CSIRO, commenced</li> </ul>	<ul style="list-style-type: none"> <li>MERIWA projects funded by EIS continuing</li> <li>WA Regional Researcher Initiative programs continuing</li> </ul>	<ul style="list-style-type: none"> <li>MERIWA projects funded by EIS continuing</li> <li>WA Regional Researcher Initiative programs continuing</li> </ul>	<ul style="list-style-type: none"> <li>MERIWA/ MRIWA projects funded by EIS continuing</li> <li>Two of the three WA Regional Researcher Initiative projects completed</li> </ul>	<ul style="list-style-type: none"> <li>MERIWA projects funded by EIS continuing</li> </ul>	<ul style="list-style-type: none"> <li>First MERIWA project supported by EIS, 'North East Yilgarn biogeochemistry project' completed</li> <li>Release of 2 publications detailing the results of the WA Regional Researcher Initiative projects.</li> </ul>
<b>Sustainable Working Relationships with Aboriginal Communities</b> <i>Note: Emergence of a whole of government approach to Aboriginal land access issues where Native Title has</i>		<ul style="list-style-type: none"> <li>Completion of two Regional Heritage surveys to conduct GSWA geochemical programs</li> <li>Community awareness activities about uranium mining and transport in Kalgoorlie, Leonora, Wiluna, Menzies, and</li> </ul>	<ul style="list-style-type: none"> <li>In association with the Department of Indigenous Affairs, began funding of a project to remap the 100 km<sup>2</sup> buffer zone surrounding registered Heritage Sites</li> </ul>	<ul style="list-style-type: none"> <li>Completed remapping many buffer zones to 1 km<sup>2</sup></li> <li>Began scanning of the approximately 6500 hard copy Heritage Reports held by the Department of Indigenous Affairs</li> </ul>	<ul style="list-style-type: none"> <li>Continued scanning of the approximately 6500 hard copy Heritage Reports held by the Department of Indigenous Affairs with over 2000 reports scanned by end of December 2012</li> </ul>	<ul style="list-style-type: none"> <li>Completion of scanning of 7458 heritage reports held by Department of Aboriginal Affairs.</li> <li><i>Completion of Sustainable Working Relationships with Aboriginal Communities program</i></li> </ul>		<ul style="list-style-type: none"> <li>Increased area for low risk access for exploration</li> </ul>

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already been determined overtook some of the EIS activities under this program		Laverton						