

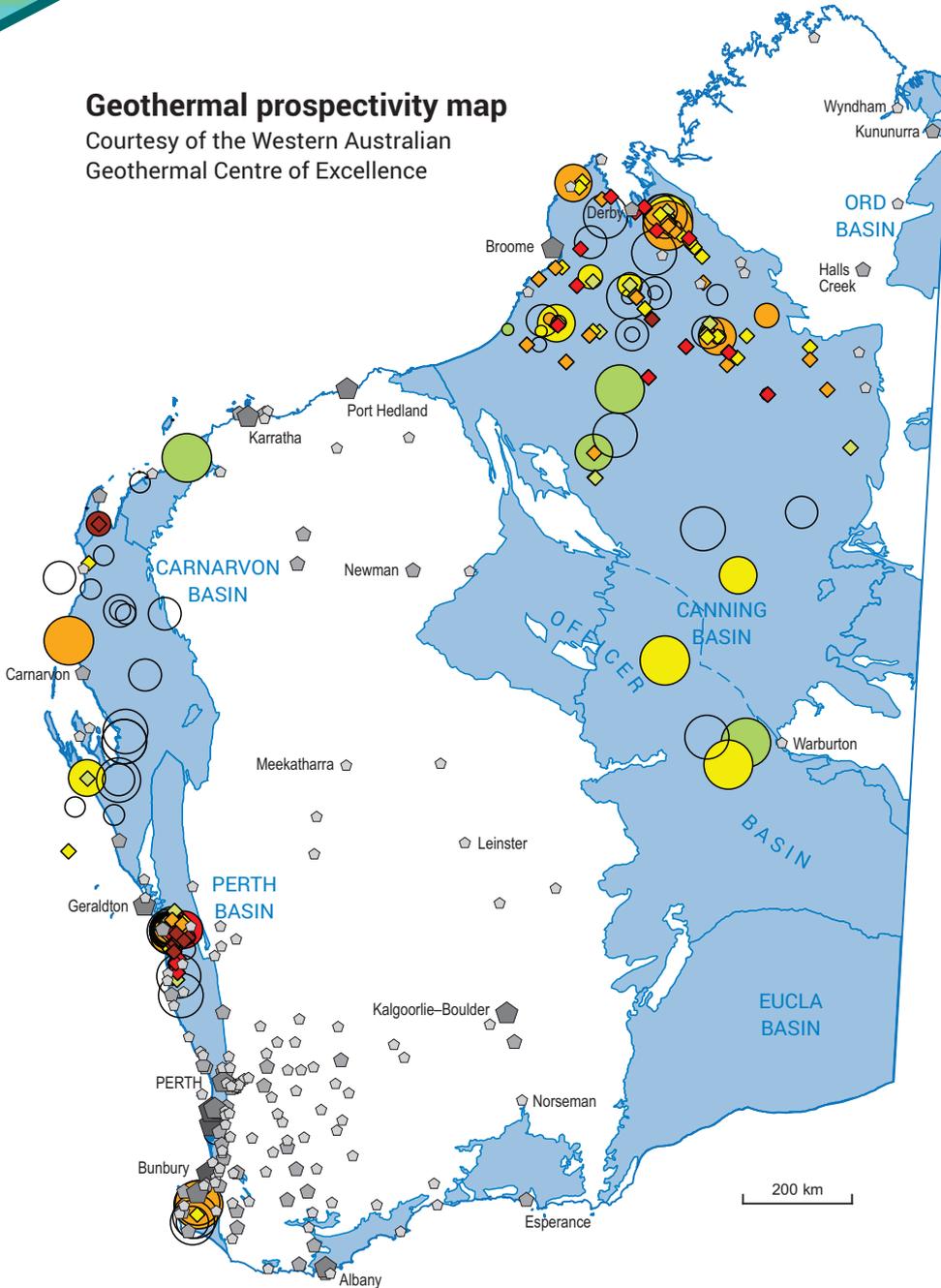
GEOHERMAL

INVESTMENT OPPORTUNITIES

WORLD-CLASS RESOURCE PROVINCE | SECURE INVESTMENT LOCATION
WORLD-LEADING GEOSCIENTIFIC DATA | LOCAL ENERGY SERVICES INDUSTRY

Geothermal prospectivity map

Courtesy of the Western Australian Geothermal Centre of Excellence



Geothermal energy overview

Geothermal energy is considered to be a baseload renewable energy source with low emissions. It is already being harnessed in many locations around the world. In Western Australia, geothermal resources include shallow direct-use reservoirs which target sedimentary aquifers, and also deeper natural reservoirs (sedimentary or fractured reservoirs) which are suitable for direct-use applications and electricity generation. Strike Energy is looking at developing a geothermal power plant project in the Perth Basin.

Current drilling technology limits economic development of geothermal resources to a maximum depth of about 5 km. The temperature at this depth varies across the Australian continent due to a range of geological factors, such as high heat-generating basement rocks. The heat is derived from the decay of radiogenic elements in rocks, particularly granite, and is trapped by insulating blankets provided by layers of overlying sediment.

Prospectivity

Western Australia has significant potential for geothermal energy generation due to its abundance of radiogenic basement rocks overlain by thick insulating sediments, and the presence of good-quality reservoir sands.

A map of geothermal prospectivity across Western Australia displays reservoir quality and estimated reservoir temperature overlain onto a reference map showing population density (see map). High temperatures in the northern Perth Basin and the western Canning Basin suggest potential for projects generating electricity with geothermal heat. Good reservoir quality in the southern Perth Basin, the Carnarvon Basin, the Officer Basin, and the Western Canning Basin indicates areas that could support geothermal projects requiring high flow rates.

Population per locality

- ◊ Less than 1000
- ◻ Between 1000 and 10 000
- ◼ Between 10 000 and 50 000
- ◽ More than 50 000

Reservoir quality

- ◊ No data
- Poor reservoir
- Fair reservoir
- Good reservoir
- Very good reservoir

Estimated reservoir temperature

- Less than 60 °C
- Between 60 and 80 °C
- Between 80 and 100 °C
- Between 100 and 120 °C
- More than 120 °C



Geothermal acreage release

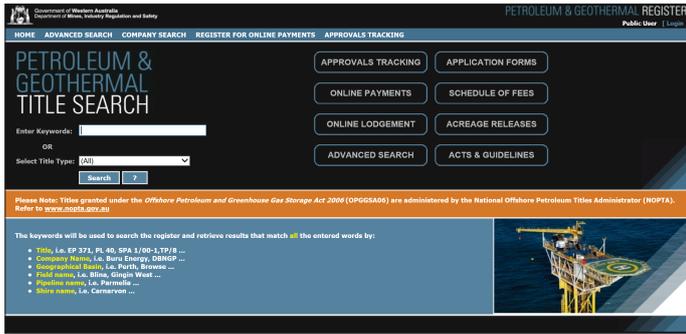
For Western Australian areas, precise release area configurations are identified and an invitation to apply for a permit is published in the Government Gazette. Permits are awarded based on an assessment of competitive work programs.

Go to: www.dmirs.wa.gov.au/acreage_release

Titles information

The Petroleum and Geothermal Register (PGR) provides information relating to petroleum and geothermal titles, and allows for online lodgement of applications and payment of fees.

Go to: www.dmirs.wa.gov.au/pgr



Geoscience information

The Geological Survey of Western Australia (GSWA) publishes geoscientific maps, data packages, Reports, and other online products. Much of this information can be obtained as a free download. Also accessible are physical assets such as cores, cuttings, thin sections and a world-leading State fossil collection.

Data and Software Centre

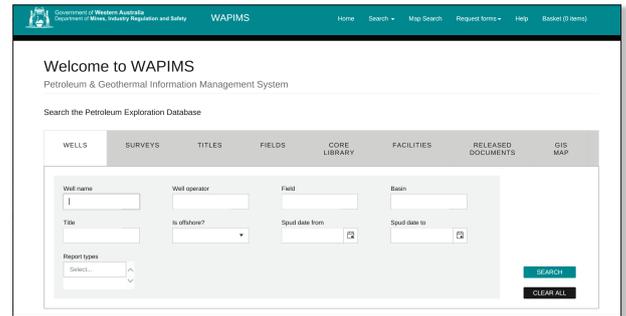
A facility that allows the downloading of spatial datasets relating to geoscience information.

Go to: <https://dasc.dmirs.wa.gov.au>

Western Australian Petroleum and Geothermal Information Management System (WAPIMS)

An online petroleum exploration database with large archives of exploration results from company titleholders. WAPIMS contains data such as wells, geophysical data and the core library database.

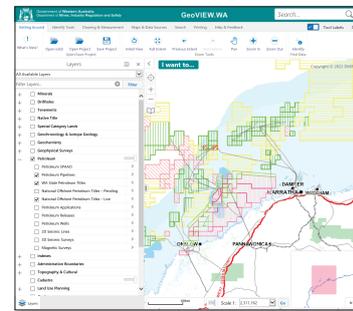
Go to: www.dmirs.wa.gov.au/wapims



GeoVIEW.WA

An online interactive mapping system that includes geology, wells, seismic lines and infrastructure.

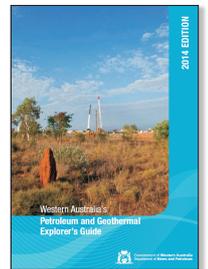
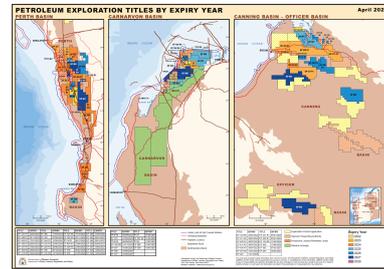
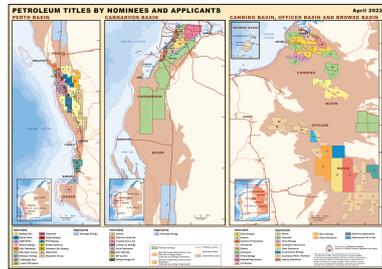
Go to: www.dmirs.wa.gov.au/geoview



For more information, visit:

Geothermal energy: www.dmirs.wa.gov.au/geothermalenergy

eBookshop: www.dmirs.wa.gov.au/ebookshop



For more information



www.dmirs.wa.gov.au/gswa



www.dmirs.wa.gov.au/wapims



www.dmirs.wa.gov.au/pgr

Contact us

Energy Geoscience and Carbon Strategy
Geological Survey and Resource Strategy Division
Email: basinenergy.geoscience@dmirs.wa.gov.au



Government of Western Australia
Department of Mines, Industry Regulation and Safety

dmirs.wa.gov.au

Geological Survey of
Western Australia

