Geomodelling Consultancy Services and Solutions

+61 (0) 414 535 481 • pchamp@brmltd.com.au
www.blackrockmodelling.com.au

Blackrock Modelling Pty Ltd (BRM) is a geomodelling consultancy within the petroleum industry, providing specialised services and support throughout the Australasia and SE Asia region, as well as internationally.

BRM aims to offer a broad range of geomodelling services and solutions, specified to your company's individual requirements. Backed by a wealth of experience in all types of oil and gas field reservoirs in a number of depositional settings and structural regimes internationally, Blackrock Modelling, can provide all your geomodelling needs.

Blackrock Modelling Pty Ltd (BRM) was formed in early 2010 as a precursor to building a consultancy service that provides static geomodelling services and solutions to the oil and gas industry within **Australasia** and **SE Asia**.

BRM aims to provide a geomodelling service to clients, both regionally and internationally, that allows an experienced and competent geomodeller to work on-site within a subsurface team.

We aspire to deliver a high quality service that strives to deliver your geomodelling product or solution on time and on budget. We understand the current strict industry timelines and deadlines and endeavour to develop the scope of work with the client to achieve the desired result. We maintain high levels of technical expertise and provide up to date knowledge of the latest geomodelling industry standard software, in particular Schlumberger's Petrel™ software.

Paul Champ, director and principal consultant for BRM, has over 18 years of experience in the petroleum industry, with eight of those working directly as a consultant senior geomodeller.

Paul has developed a strong working relationship with a number of clientele in the **Australasian** and **SE Asian** petroleum industry and has upheld a strong reputation for geomodelling capacity and capability along with prominent project management and project development skills.

Paul Champ *Director - Owner*
Principal Geomodeller - Senior Geoscientist

Perth, WA, Australia
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Knowledge Base

Principal consultant **Paul Cham**p, having built over 80 separate static geomodels as a senior geomodelling consultant, has a wide range of international experience and has developed a knowledge base of reservoir characterisation techniques and methods for many different classifications of oil and gas fields. These models have incorporated fluvial channel sandstone reservoirs, deltaic and shallow marine environments, on-lapping and truncated multi-reservoir systems, incised channel reservoir modelling, advanced object modelling and channel geometries, heavy oil to tight gas fields, carbonate reservoirs, onshore, offshore, deepwater and shallow target fields, gas storage, complex structural regimes, complex fault intersection and truncated faulting.

It is from this experience in all types of reservoirs that Paul has developed many robust and technically sound modelling methodologies and workflows, that have been targeted to the specific field and setting to ensure that the geology and well data provided has been properly represented in the 3D static geomodel.

3D geocellular modelling also involves many facets of troubleshooting and problem solving and involves levels of lateral thinking required when working in 3D space. From this range of invaluable experience we can provide many solutions and alternatives, utilising the flexibility of current modelling software to ensure your models are robust, comprehensive and technically defendable.

BRM can provide a geomodelling consultant that will **listen, understand, initiate, generate** and **deliver** a solution to your reservoir characterisation or optimisation needs.

Industry Experience

BRM has experience in working for a number of regional and international companies, from small operators to large multi-national corporations, and has built up a large network of associates and affiliates. It is our goal to build a portfolio of experience and capability on which to service the petroleum industry in this region.

Clients and major operators that BRM has had experience in working with include Apache, APA Group, AED, Arc Energy, AWE Group, Cape Energy, Coastal Energy, ConocoPhillips (Perth), Coogee Resources, Daewoo (South Korea), ENI, Genting Group (Malaysia), Idemitsu (Vietnam), Modelling Matters, Mosaic Oil, Murphy Oil, Nexus Energy, Nido Petroleum, ODIN Reservoir Consultants, Origin Energy, Osaka Gas, Ophir Energy, Otto Energy, Pertamina (Indonesia), Petronas Carigali (Malaysia), PetroVietnam, PTTEP (Thailand), Roc Oil (Sydney, China), Salamander Energy, Santos, Shell (Perth, NZ), Shell Todd Oil Services (NZ), Sinopec (China), Strike Oil, 3D Oil and RPS Energy (Perth, SG, UK). National and government companies include the Western Australia Department of Industry and Resources, Western Australia Department of Water, Petrobangla and Pakistan Petroleum Limited.

BRM is also affiliated to global consultancy firm RPS Group as a senior associate and can draw on any number of additional geological and geophysical or reservoir engineering industry consultants, resources, operations or services if required.

Having worked within many countries including Australia, China, Singapore, Indonesia, New Zealand, Thailand, Malaysia, Bangladesh, Philippines, Vietnam and the UK, generally within the client's office, we are confident our consultants can adapt to your team and work environment and be able to work efficiently and effectively. Where appropriate, offsite or remote project services are also available. This diversity in industry experience, along with very flexible day rate options and contracts, designed on scope and length of contract, allow **BRM** to offer a complete specialised geomodelling consultancy choice for your company.

Businesses and personal references are available upon request. See the Contact Us page for an extensive CV, incorporating all major projects and relevant industry work experience.

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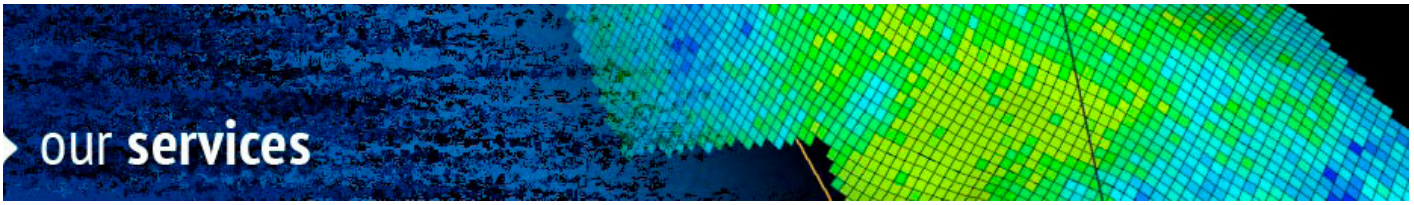

BRM aims to offer a broad range of geomodelling services and solutions, specified to your company's requirements, no matter how generalised or detailed. Backed by a wealth of experience in all types of oil and gas field reservoirs in a number of depositional settings and structural regimes internationally, we understand that each field is different and requires a case-by-case approach.

BRM has experience in fulfilling the geomodelling lead role within a technical team and realises the importance of interaction within the entire team.

We also incorporate a high level of quality control and provide relevant modelling iterations for the reservoir engineering team, as required, once the static geomodel has been exported for dynamic simulation.

Whether it be complete static geomodelling constructing, editing, updating, maintaining, iterating, reviewing, auditing, expanding, revising or modernising, we have the capability to assist you in all your geomodelling needs.

Consultancy services

- ☐ Complete static geomodel construction
- ☐ Well, geological and geophysical input data quality control and import
- ☐ Well correlation panel interpretation and creation
- ☐ Structural modelling analysis and 2D/3D pillar interpretation
- ☐ Skeleton grid framework generation and grid integrity check
- ☐ Stratigraphic zone modelling, layering and well upscaling
- ☐ Comprehensive facies and petrophysical property modelling
- ☐ Detailed upscaling of properties, fit for simulation purposes
- ☐ Comprehensive workflow generation
- ☐ Volumetric calculation and uncertainty analysis
- ☐ All relevant well and property export of static model to dynamic model simulation, including all iterations and updates for subsequent historical data matching
- ☐ Reservoir characterisation and optimisation
- ☐ Data and geostatistical analysis
- ☐ Various property distribution techniques
- ☐ Reserve audits
- ☐ Peer reviews
- ☐ Geomodelling mentoring and training
- ☐ Competent person's reports
- ☐ Reservoir target and well path design
- ☐ Bringing your geomodels "into the future"
- ☐ Fit-for-purpose model building
- ☐ Troubleshooting and problem solving
- ☐ Deterministic and probabilistic volume calculations