# **DUG Petrophysics, Rock Physics** & Stochastic Modelling Studies





# **Quality Data for Quality QI**

MCR has exclusive rights to license DUG's comprehensive multi-client petrophysics, rock physics & stochastic modelling studies

A total of 8 studies incorporating 179 wells are available across the major hydrocarbon provinces of Australia's North West Shelf

Including onshore Perth & Southern Carnarvon basin studies

Critical input data for a comprehensive quantitative interpretation work flow

| Study                               | Description   |
|-------------------------------------|---|
| Vulcan Sub-Basin                    | Integrated data and interpretation study of 13 wells  |
| Central Browse Basin                | Integrated data and interpretation study of 33 wells  |
| Southern Browse Basin               | Integrated data and interpretation study of 14 wells  |
| Offshore Canning Basin              | Integrated data and interpretation study of 24 wells<br>(Roebuck, Beagle, Fitzroy & Oobagooma Sub Basins) |
| Monodon                             | Integrated data and interpretation study of 46 wells<br>(Barrow & Damper Sub Basins)                      |
| Exmouth Plateau                     | Integrated data and interpretation study of 13 wells  |
| Onshore Perth Basin                 | Integrated data and interpretation study of 17 wells  |
| Onshore Southern<br>Carnarvon Basin | Integrated data and interpretation study of 19 wells  |

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## Petrophysics

Comprehensive petrophysical interpretation, lithology evaluation, reservoir properties, reservoir quality & fluid content. Integrated wireline, non-wireline logs, lithological descriptions, core analysis, petrophysical studies and well test information.

# **Rock Physics**

Statistical rock physics models, correlated with seismic responses influenced by elastic rock properties, to discriminate lithology variations, porosity, pore-fluid type, water saturation and pore pressure. The statistical rock physics model can then be used in quantitative seismic interpretation to extract geological information from the seismic data.

## Stochastic Forward Modelling

#### Can answer questions such as:

- What type of AVA and amplitude response should I expect?
- Does AVA aid in the discrimination and prediction of fluid and lithology?
- What amplitude responses do we expect to see on full stack data?
- What is the range (uncertainty) in the expected response?
- Given the observed inherent scatter in end-member rock properties, can we discriminate between different lithology and fluid combinations in rock property space?
- How do all of the above change with depth, fluid and lithological variations?

### Deliverables

- Full petrophysical interpretations
- Data collation & conditioning
- Basic logs, petrophysics interpreted logs, final elastic logs, las files & WCR's
- Rock physics study & stochastic modelling
- Full documentation

### For further information please contact:

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