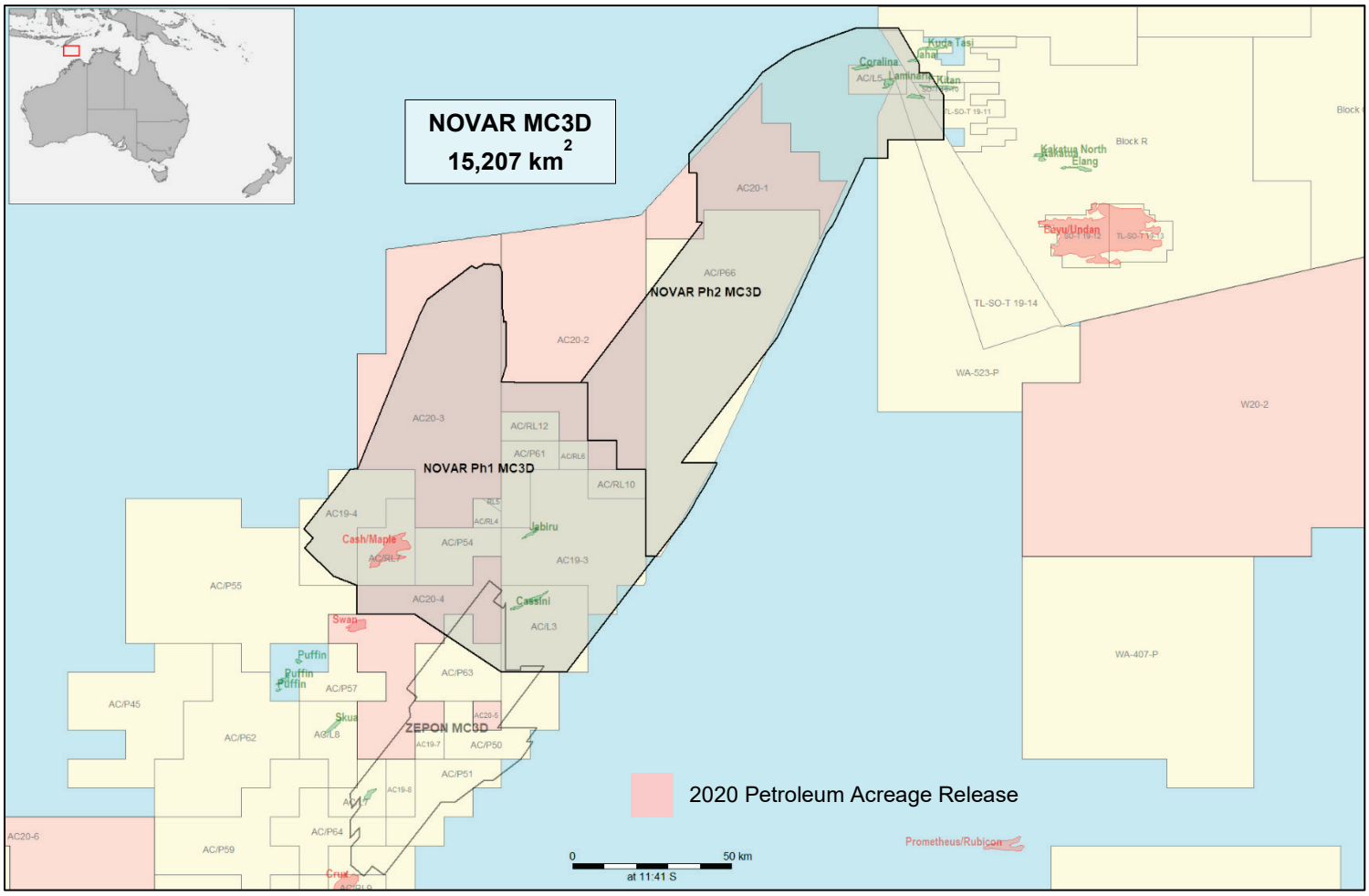
NOVAR MC3D

North Vulcan Sub-Basin Advanced 3D Reprocessing

MCR Multi-Client Resources



Project Overview

Multi-Client Resources (MCR) in collaboration with DUG, has produced a very large advanced 3D seismic reprocessing project in the Vulcan Sub-Basin, North West Shelf, Australia.

The North Vulcan Advanced 3D Reprocessing project (NOVAR MC3D), incorporating ten legacy 3D surveys reprocessed through a high order PreSDM sequence with FWI imaging now provides the industry with a superlative seamless 3D dataset covering four proven petroleum provinces. This project will be essential for defining new prospects and redefining play fairways.

The NOVAR MC3D data has significantly improved imaging of the deeper Jurassic & Triassic structural & stratigraphic objectives and will allow E&P companies to undertake a more extensive evaluation of the petroleum potential and complex fault-seal risks in the basins.

The continuous 15,200 km^2 3D dataset extends across the basin margins of the northern Vulcan Sub-Basin and north east across the Nancar Trough and Laminaria High. It covers high impact exploration, field development and production acreage including:

- **2020 Offshore Petroleum Acreage Release blocks**
- **Orchid-1 commercial gas/condensate discovery**
- **Cash/Maple multi-TCF field development**
- **Jabiru & Challis shut-in fields**
- **Laminaria-Corallina and Buffalo oil field rejuvenations**

Molyneux Advisors, in collaboration with MCR, has undertaken a regional seismic interpretation study of the NOVAR MC3D and is available for licensing with the seismic data.

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Processing Parameters

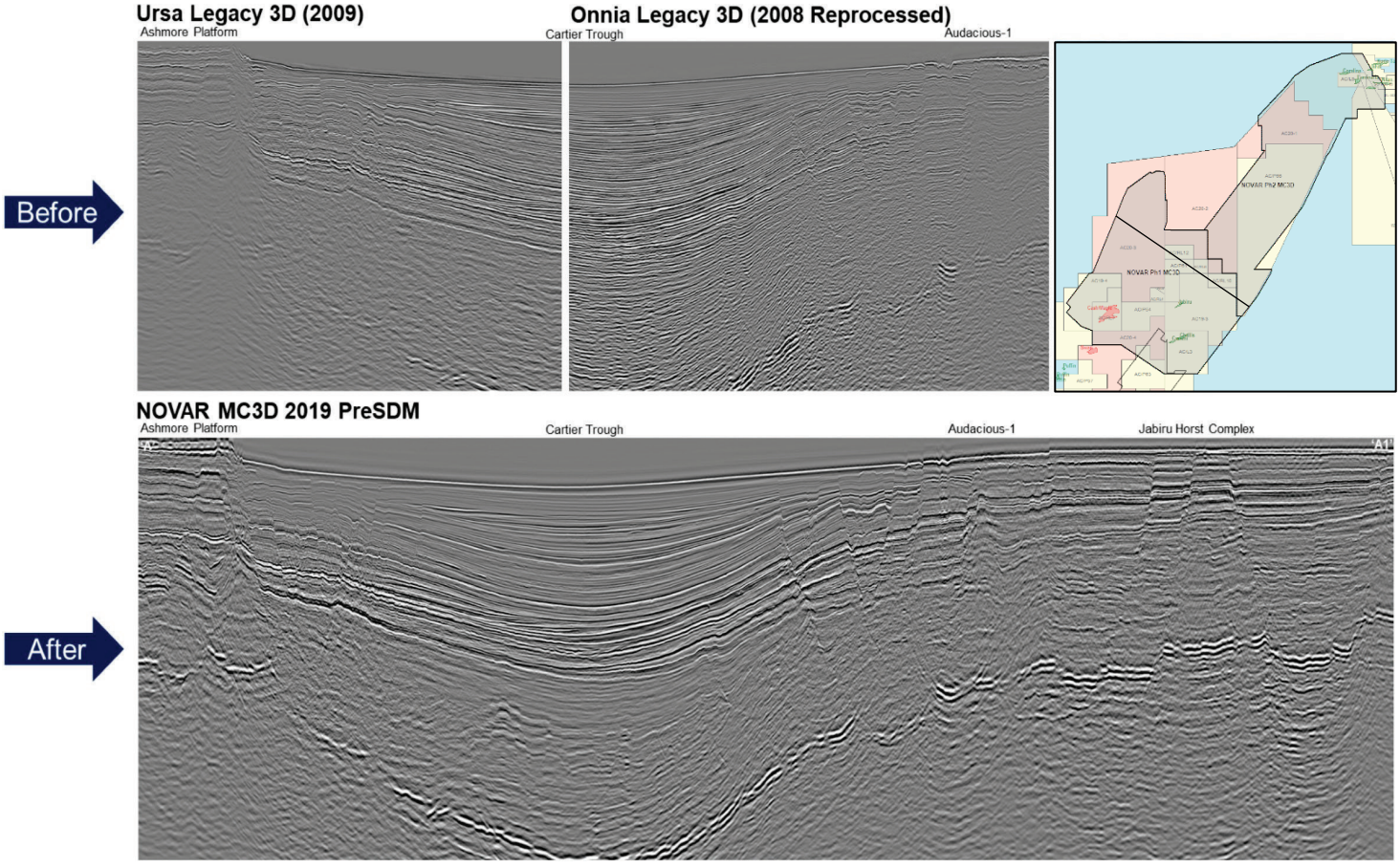
The NOVAR MC3D survey encompasses the merging and reprocessing of over 18,000 km^2 of 3D marine seismic data.

It incorporates 10 legacy surveys from field tapes through a comprehensive, broadband, pre-stack depth migrated workflow including, source & receiver de-ghosting, 3D SWSRME & 3D SRME, Tau-P Deconvolution, High Resolution Radon Demultiple, 3D Interbed Multiple Elimination (IME), 4D Regularisation, five iterations of reflection and refraction tomography and Anisotropic Pre-Stack Kirchhoff Depth Migration.

The Phase 2 area includes FWI imaging within the data processing workflow to improve sub-surface imaging below the extensive distribution of the shallow shoals in the area.

Deliverables

- **Image gathers after migration**
- **Full fold stacks & angle stacks in time & depth**
- **Migration velocity fields**
- **FWI products**
- **Navigation data & final processing report**



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