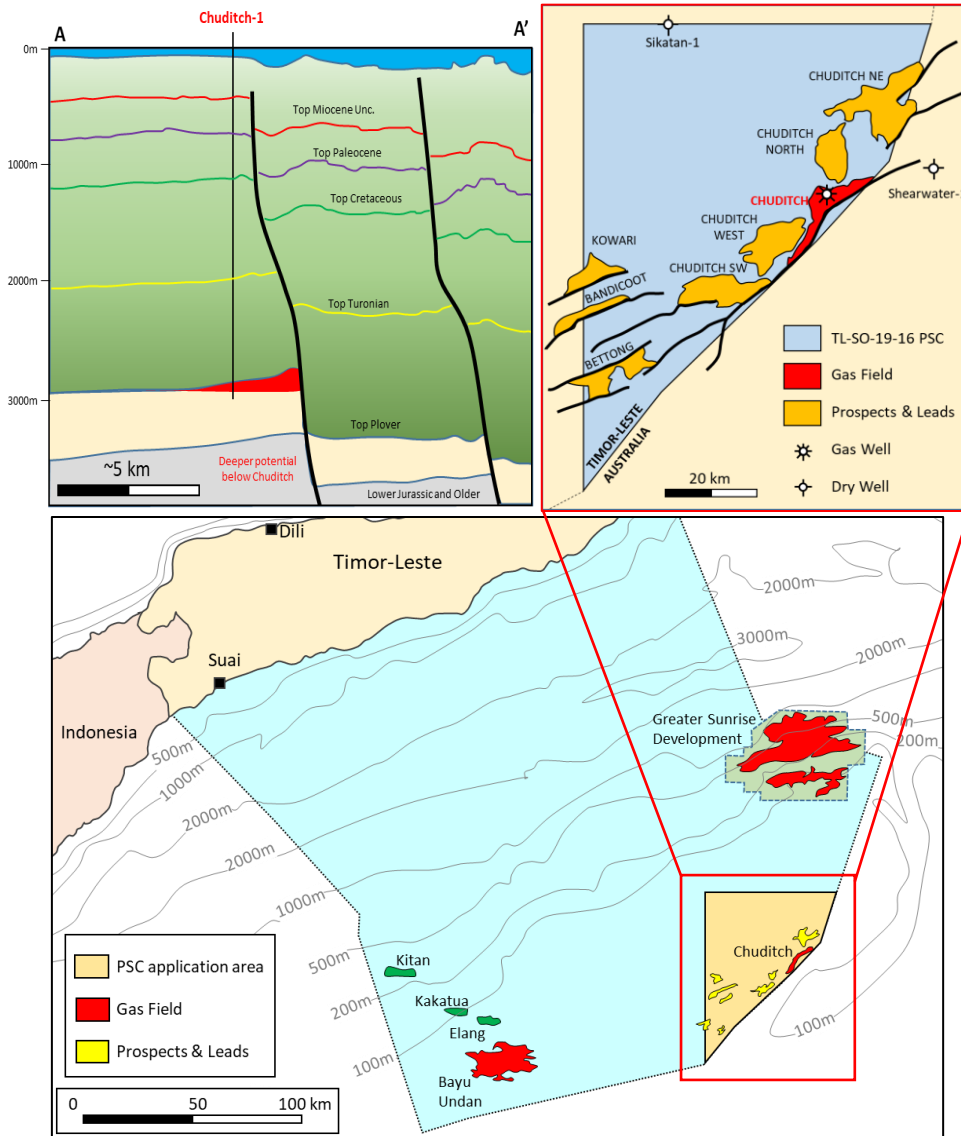


Unlocking the Potential of the Chuditch Gas Discovery, Offshore Timor-Leste

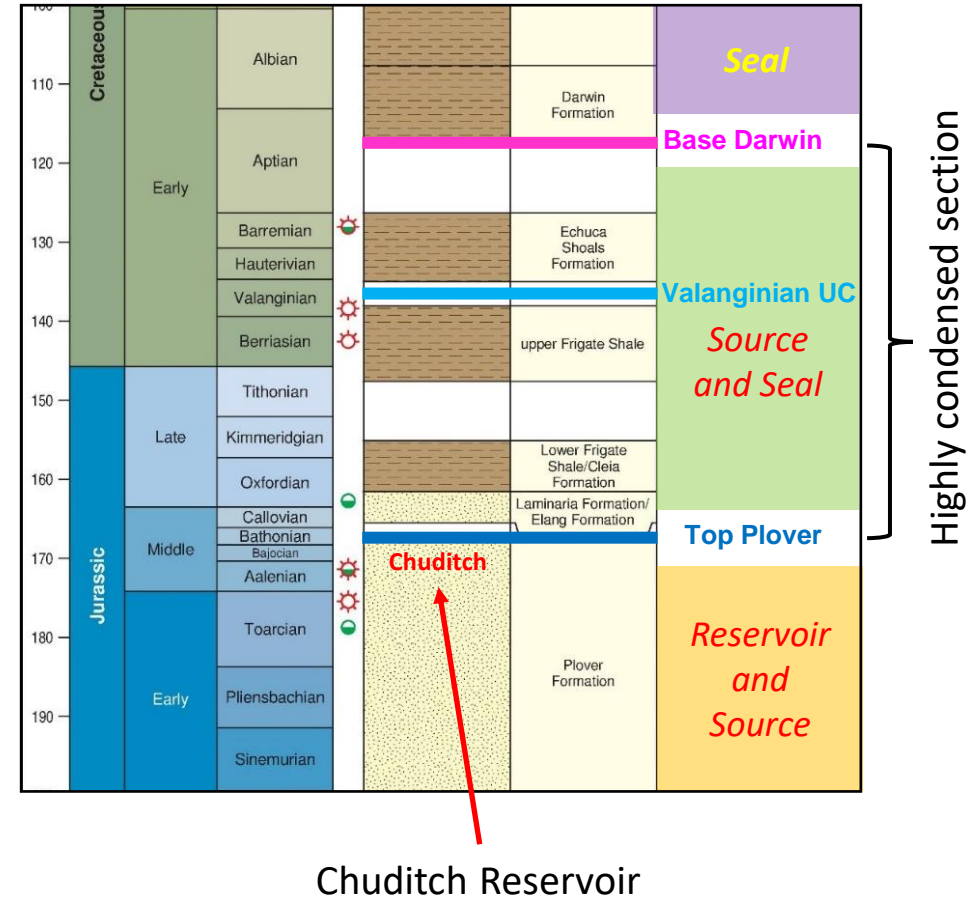
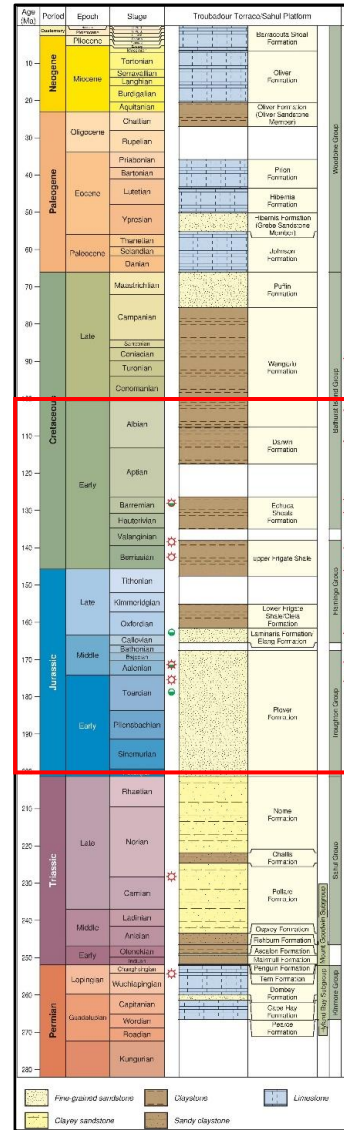
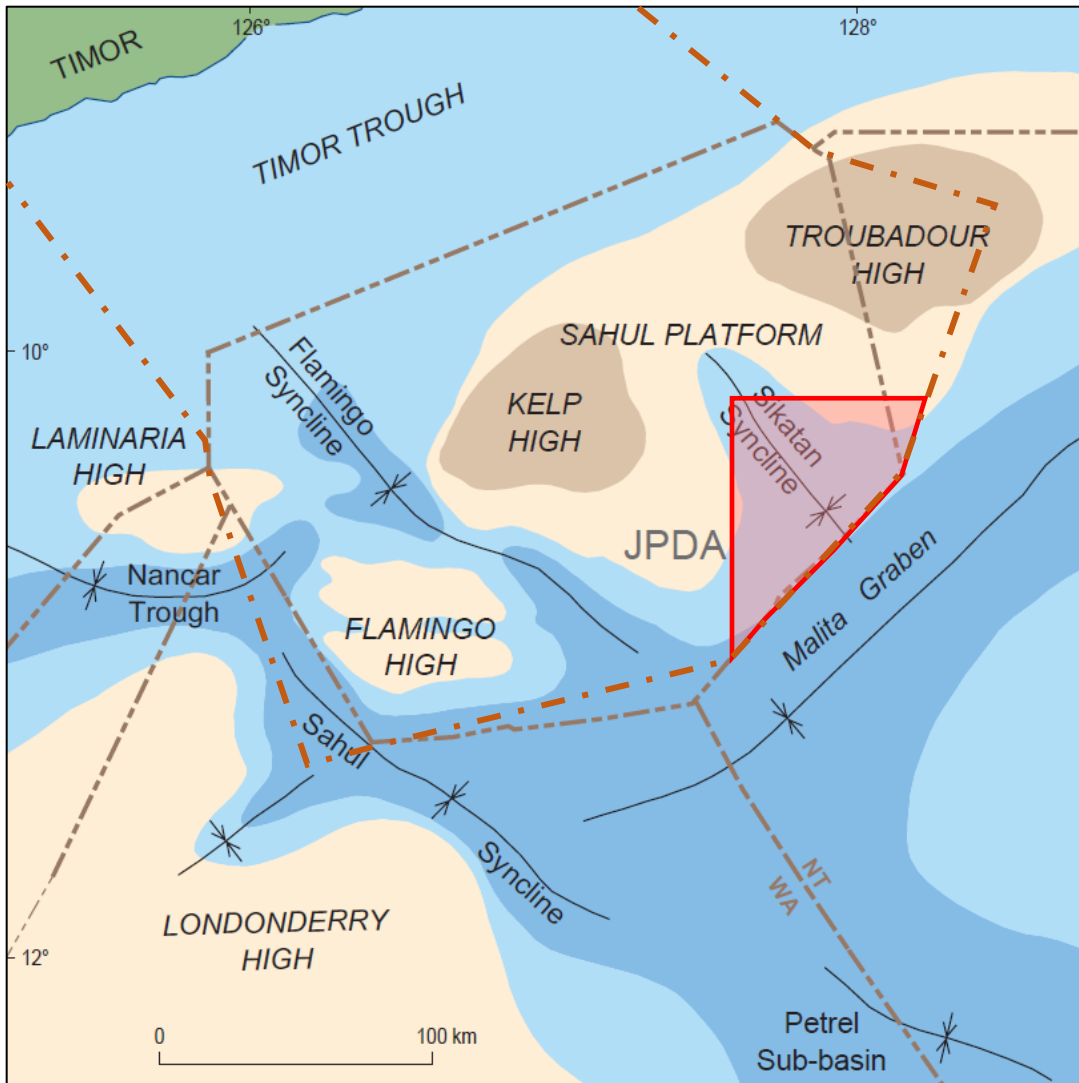


Timor-Leste TL-SO-19-16 PSC: Major Discovered Gas with Upside

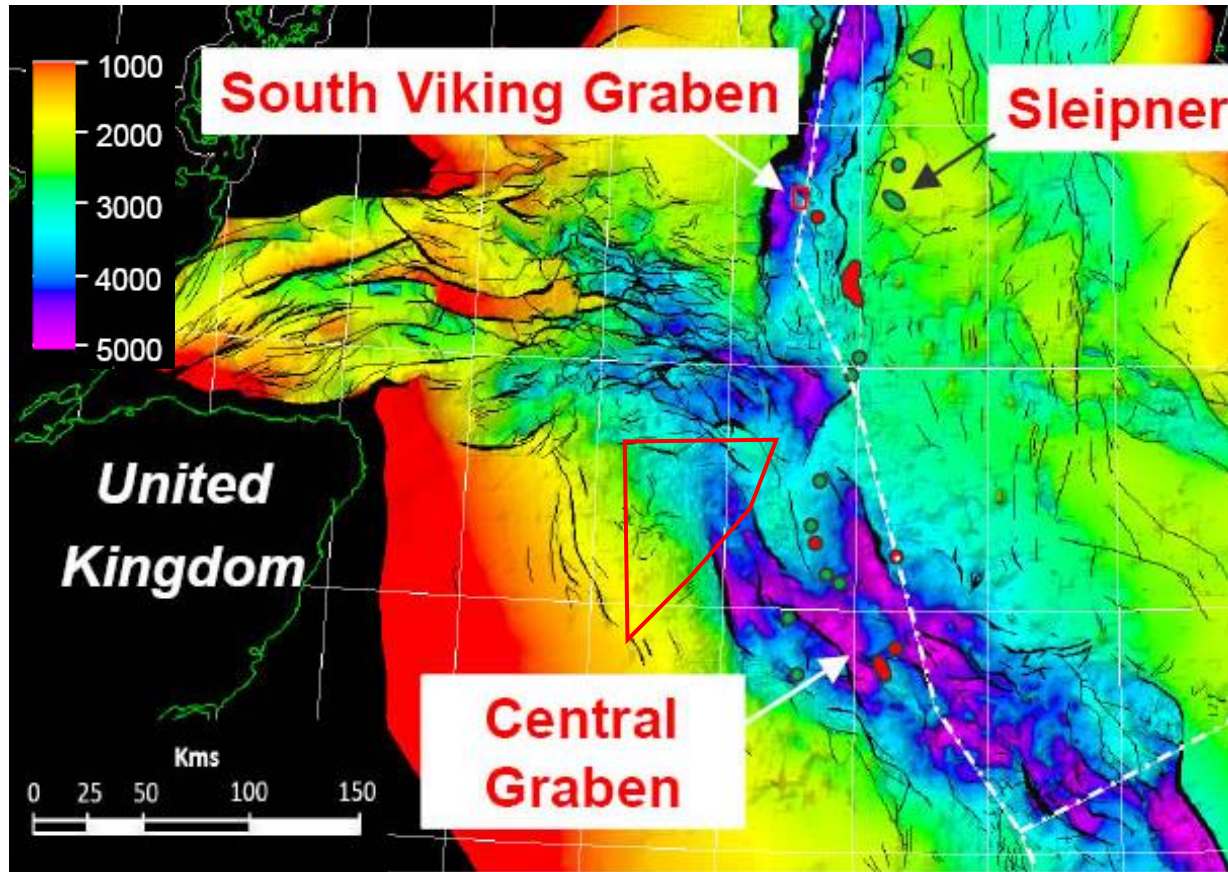


- SundaGas is a Singapore-based E&P company with interests and experience across SE Asia
- TL-SO-19-16 PSC signed on 8 November 2019 and was the first new PSC offshore Timor-Leste following the new Maritime Boundary Agreement in August 2019
- SundaGas is operator with 75% WI, partner TIMOR GAP
- PSC lies in water depths of 50-100m, east of Bayu-Undan and south of Greater Sunrise
- Chuditch discovery was drilled by Shell in 1998 and is the key feature of interest
- Adjacent undrilled traps with near-identical structural spills provide significant upside
- Gas export to regional LNG markets anticipated via existing and emerging infrastructure, accessing strong Asia-Pacific energy markets

Structural Elements and Stratigraphy

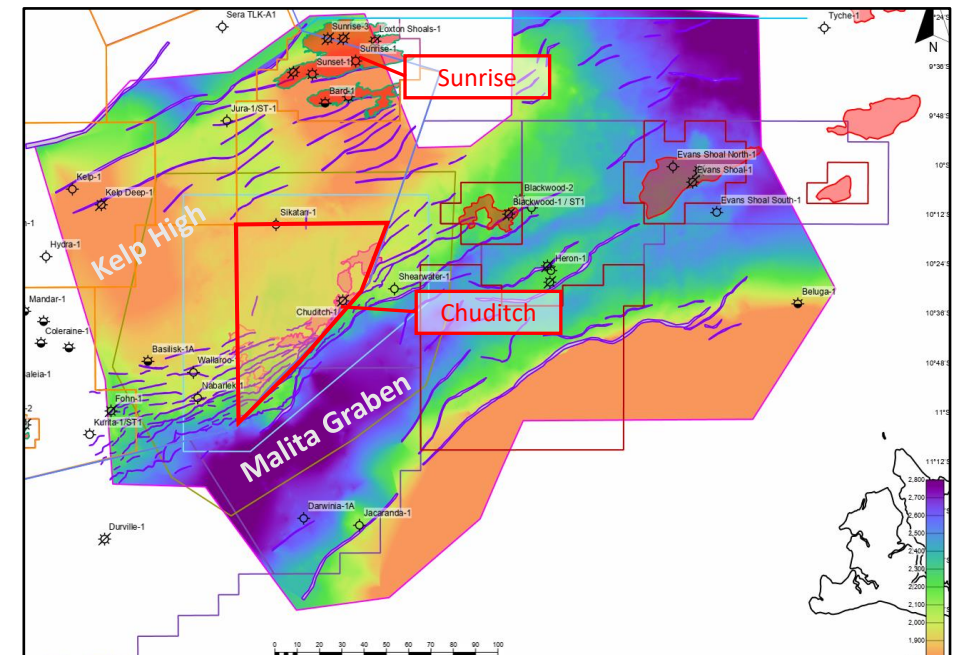


Central North Sea and North Bonaparte Basin Comparison



Triassic Petroleum Plays of the North Sea – Morris and England 2018, GeoExpro

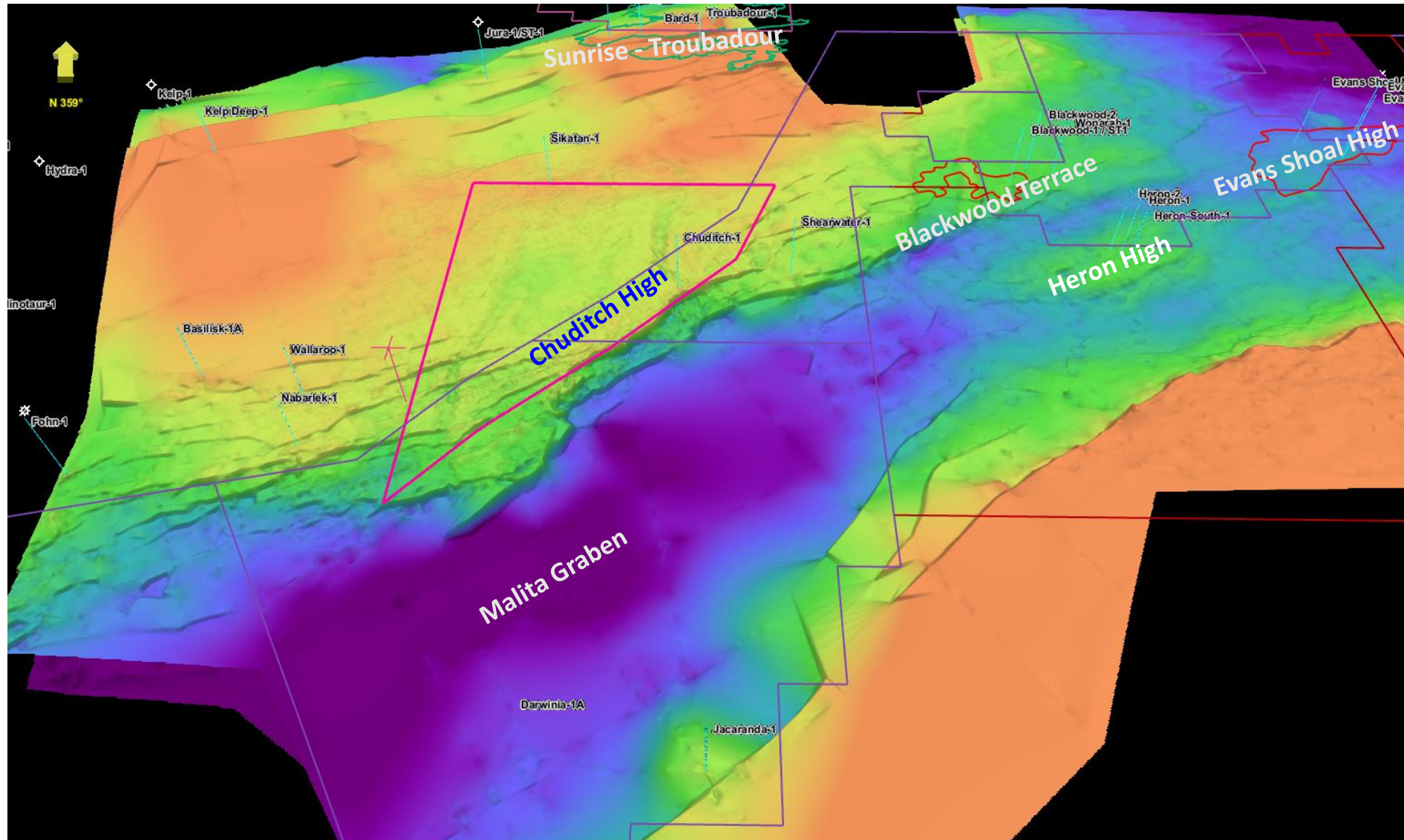
The TL-SO-19-16 PSC block is 3,571 km² in area, equivalent to ~18 full size UK North Sea blocks or more than half a UK quadrant



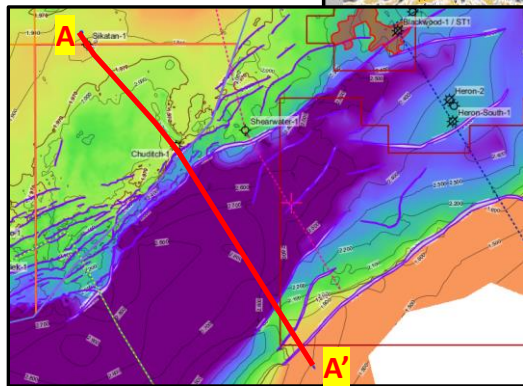
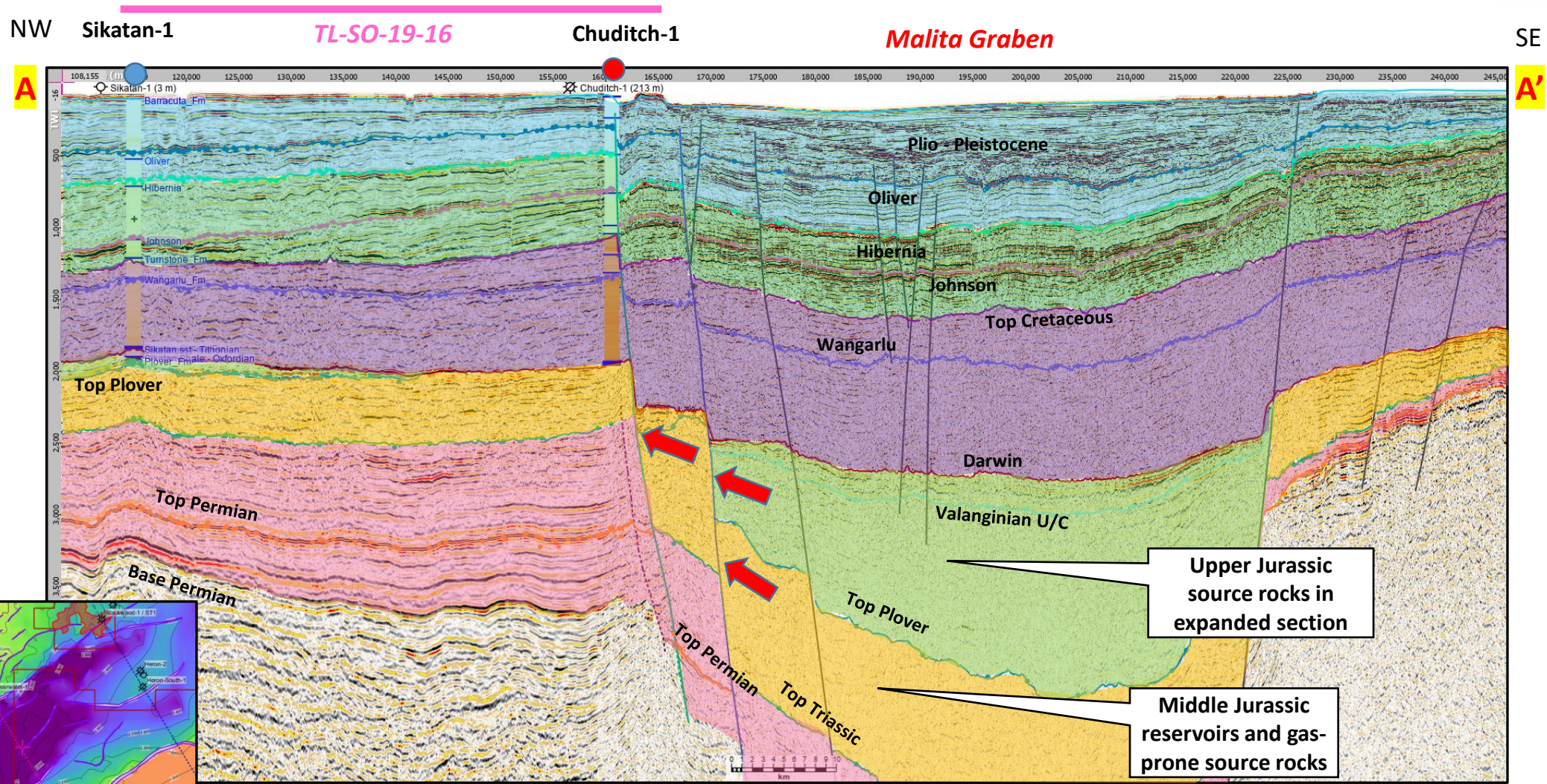
Regional Darwin TWT map – Malita Graben, Sahul Platform

- The North Bonaparte Basin, including offshore Timor-Leste, is a vast area with relatively few wells drilled in comparison to other major petroleum basins

Regional Darwin Structure

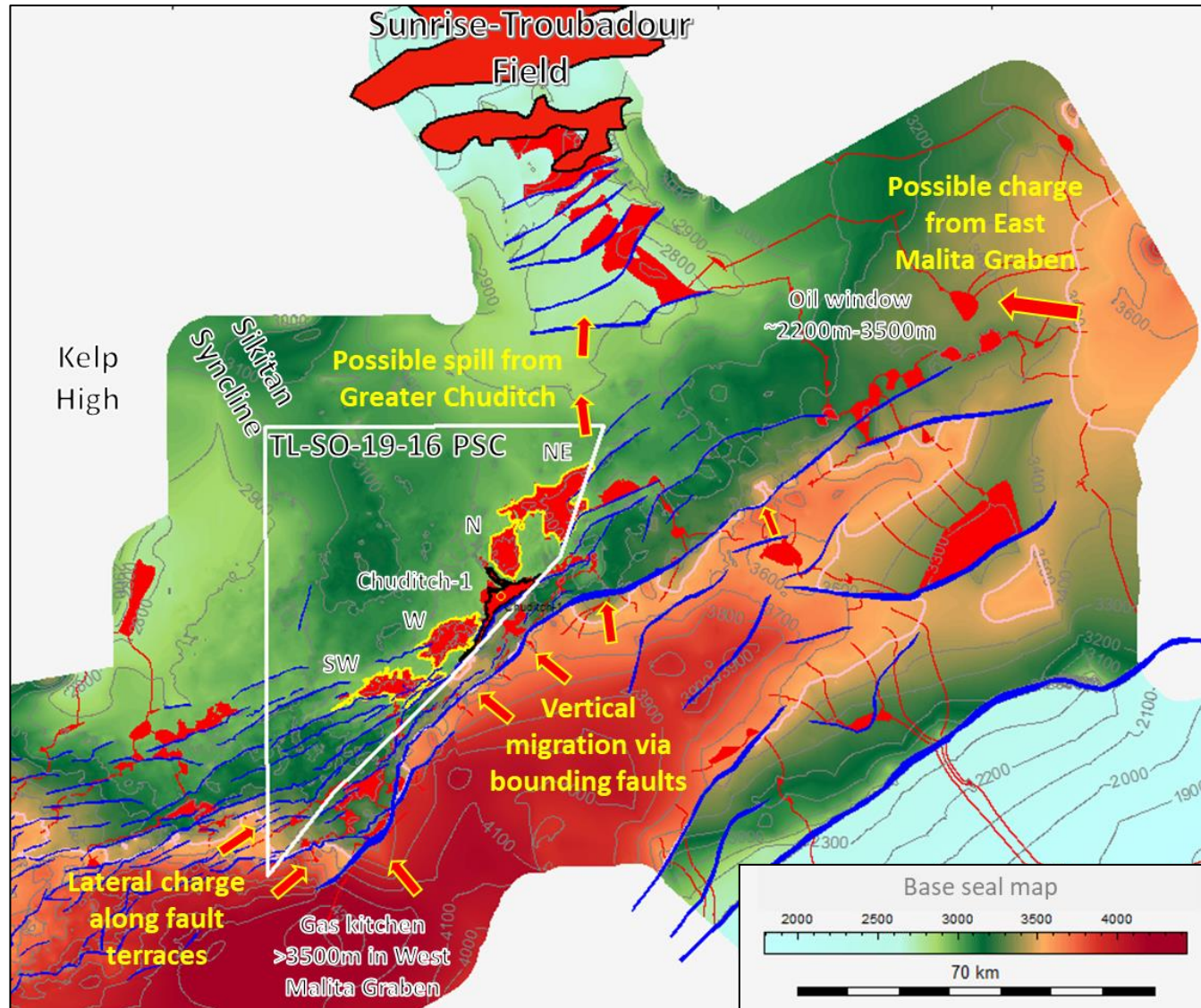


Chuditch – Malita Graben Regional Composite Seismic Tie



Chuditch ideally located adjacent to gas kitchen

Chuditch Ideally Located for Significant Gas Charge

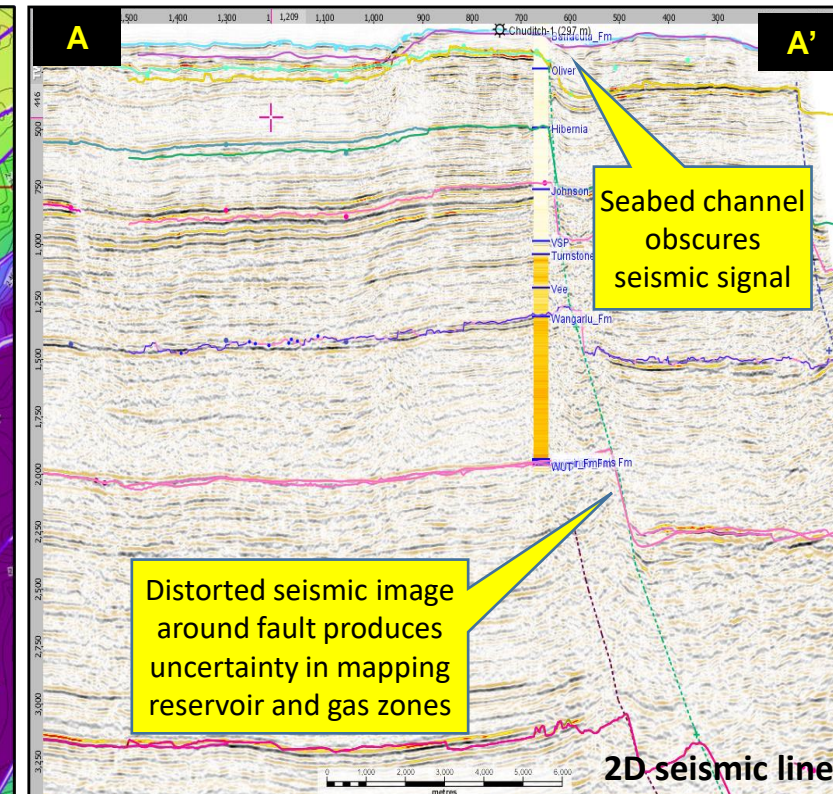
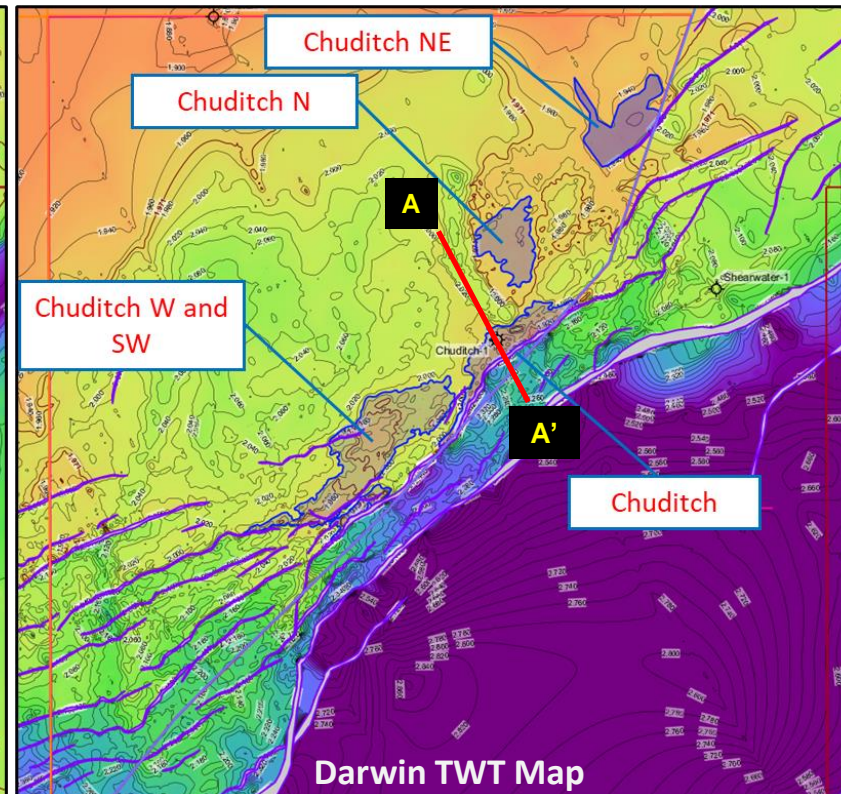
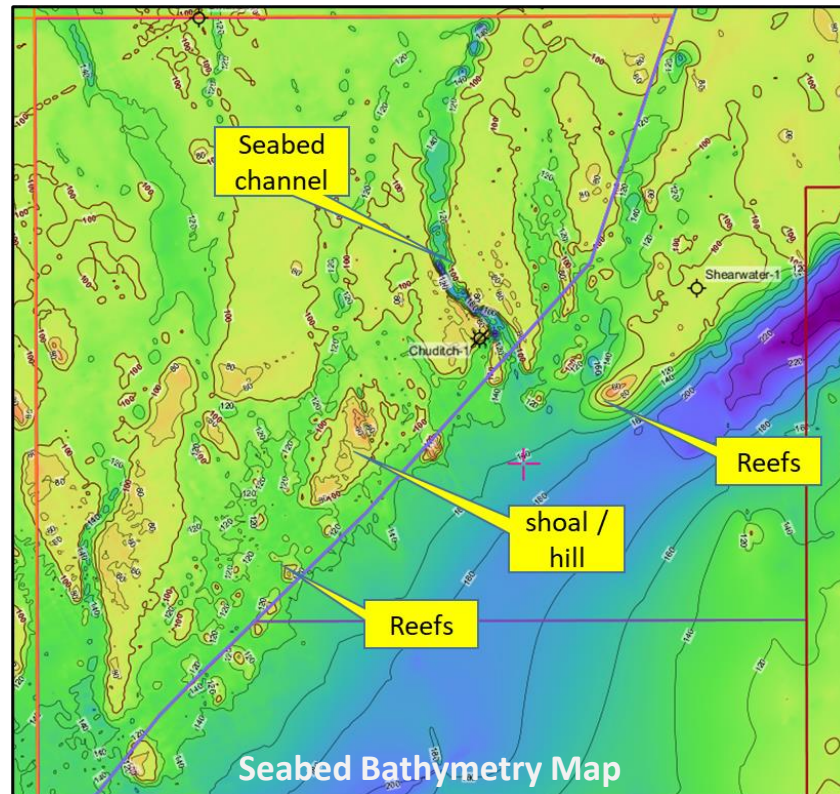


- Modelled migration pathways illustrate charge of Chuditch Field and Prospects from the adjacent Malita Graben and spill to the Sunrise-Troubadour Area

Notes

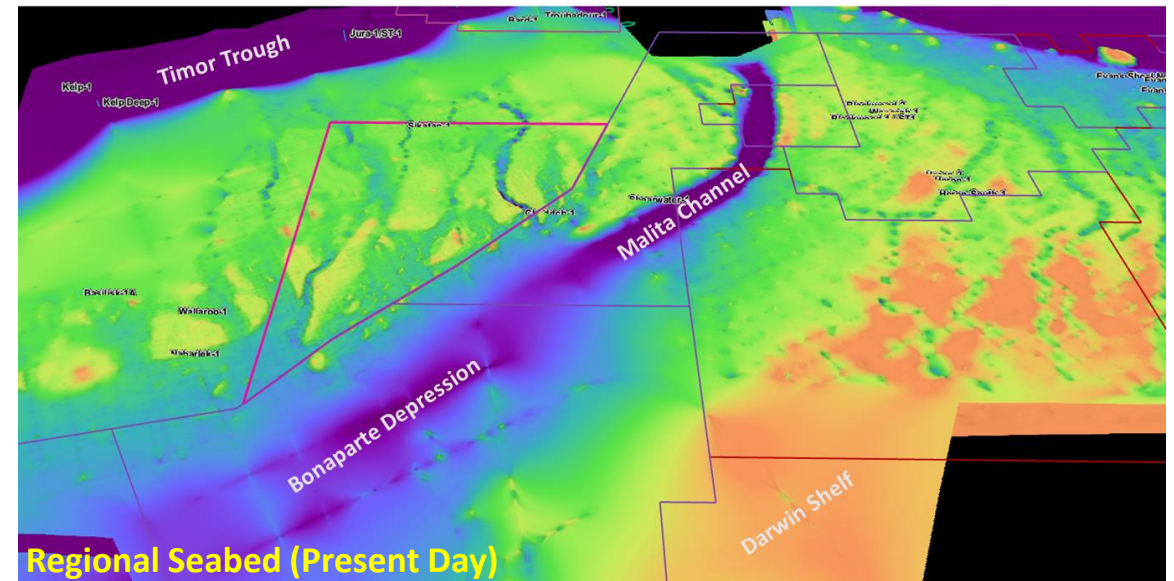
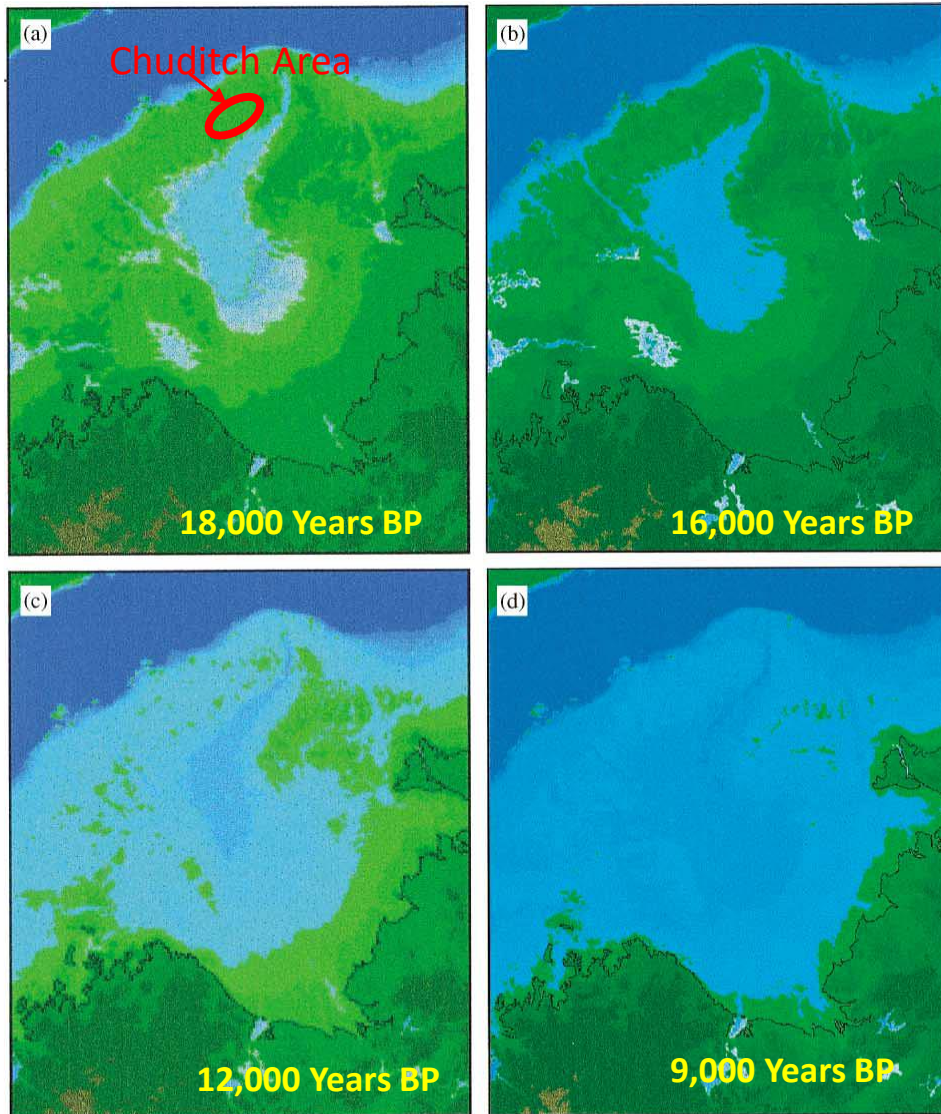
- 2D mapping extrapolated beyond mapped limits
- Simple depth conversion used time/depth relationship from sea level to base seal in Chuditch-1
- Gas expulsion window at vitrinite reflectance ~1.2 loosely defined by pink contour at ~3500m
- Provides a simple guide to present-day migration

Chuditch Area – Seismic Mapping



- Chuditch is a long narrow field set up by a key fault, with large low relief extensions into prospect areas
- Bathymetric and near surface complexities and faulting create seismic artifacts in the TWT image
- Depth conversion and velocity field uncertainties make accurate 3D depth imaging critical in understanding the structural shape and size of the Chuditch discovery and adjacent prospects

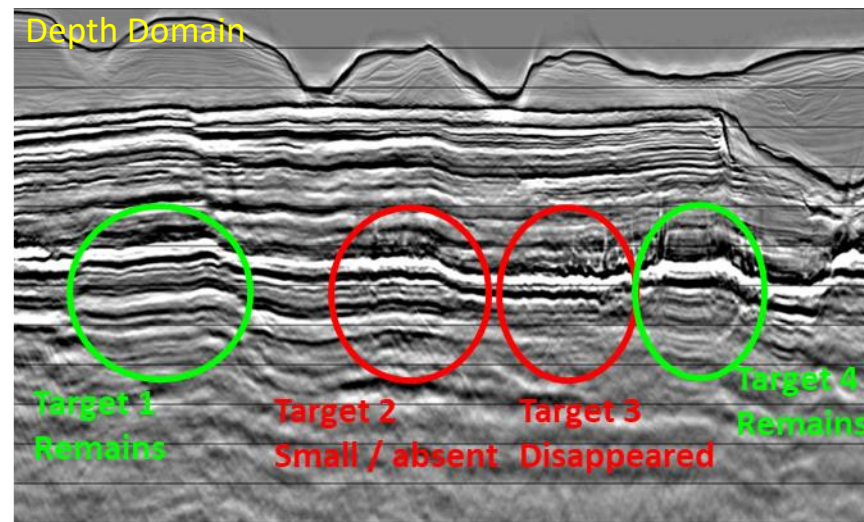
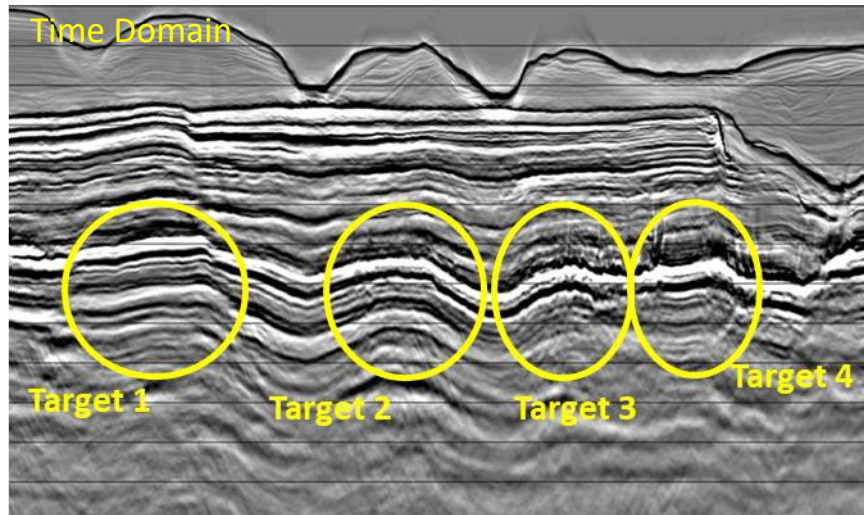
Geological Reason for Seabed Anomalies



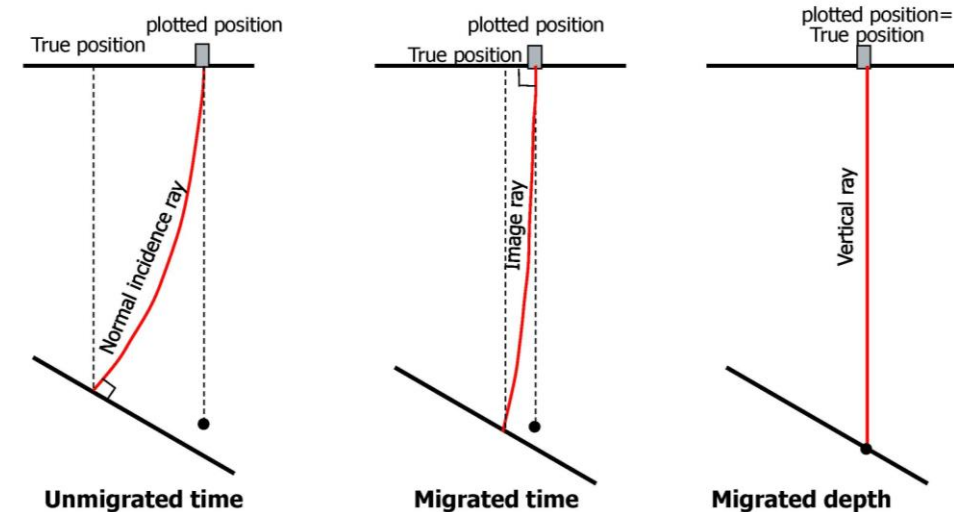
- During the last ice age, sea levels were up to 120m lower than today
- The Bonaparte Shelf was a land area with a large brackish lake occupying the central depression.
- Chuditch lay on the north side of the Bonaparte lake – the channel was a river valley draining south east into the lake
- As sea levels rose, the Chuditch area became a shallow marine shelf with reef formation on the drowned landscape

Solution – PSDM Seismic Reprocessing to provide accurate depth image

Indonesia Case Study



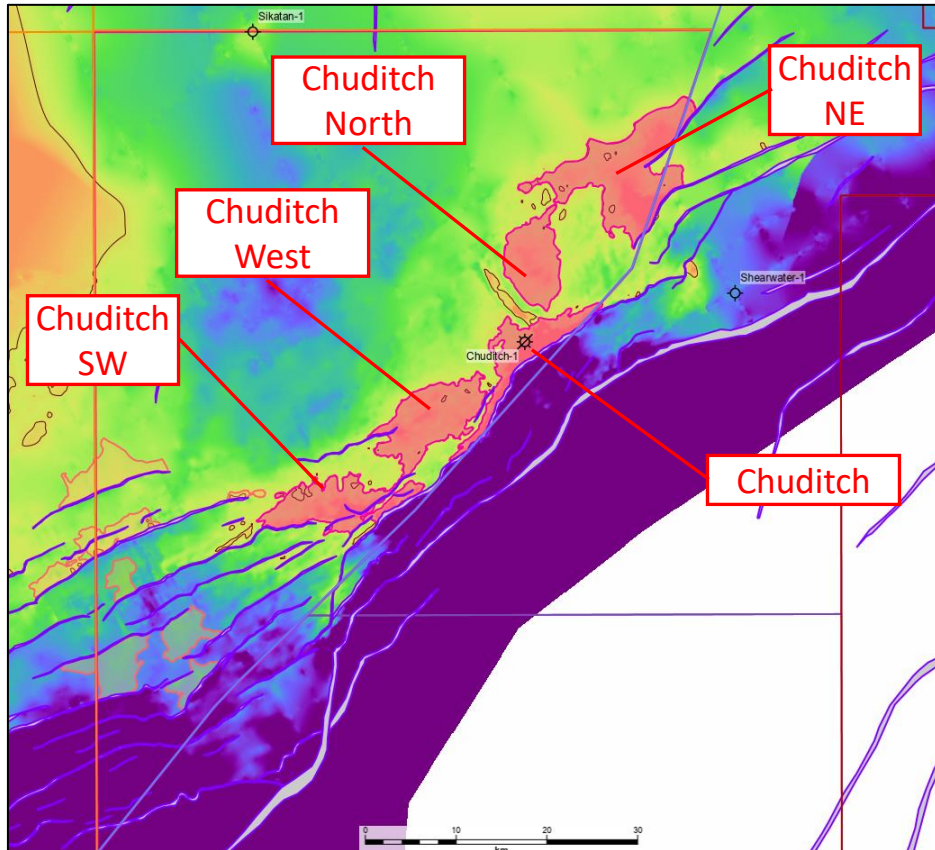
Depth migration will move the image point to the correct subsurface position in XYZ space provided the correct velocity model $V(x,y,z)$ is used



This is a time-consuming process as many iterations are required to build correct velocity model

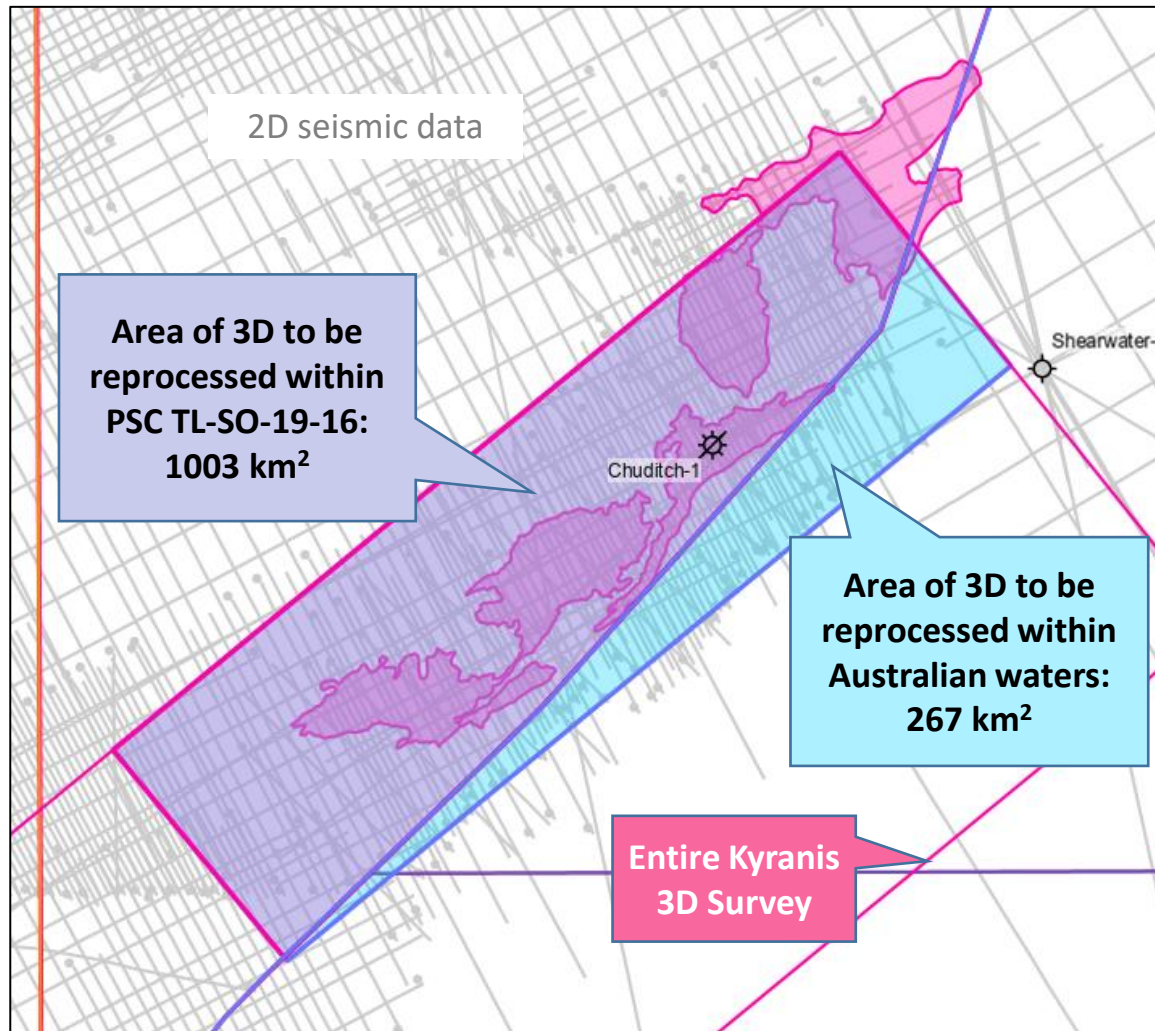
Prospectivity Summary and Forward Plans

Initial Top Plover Depth form map



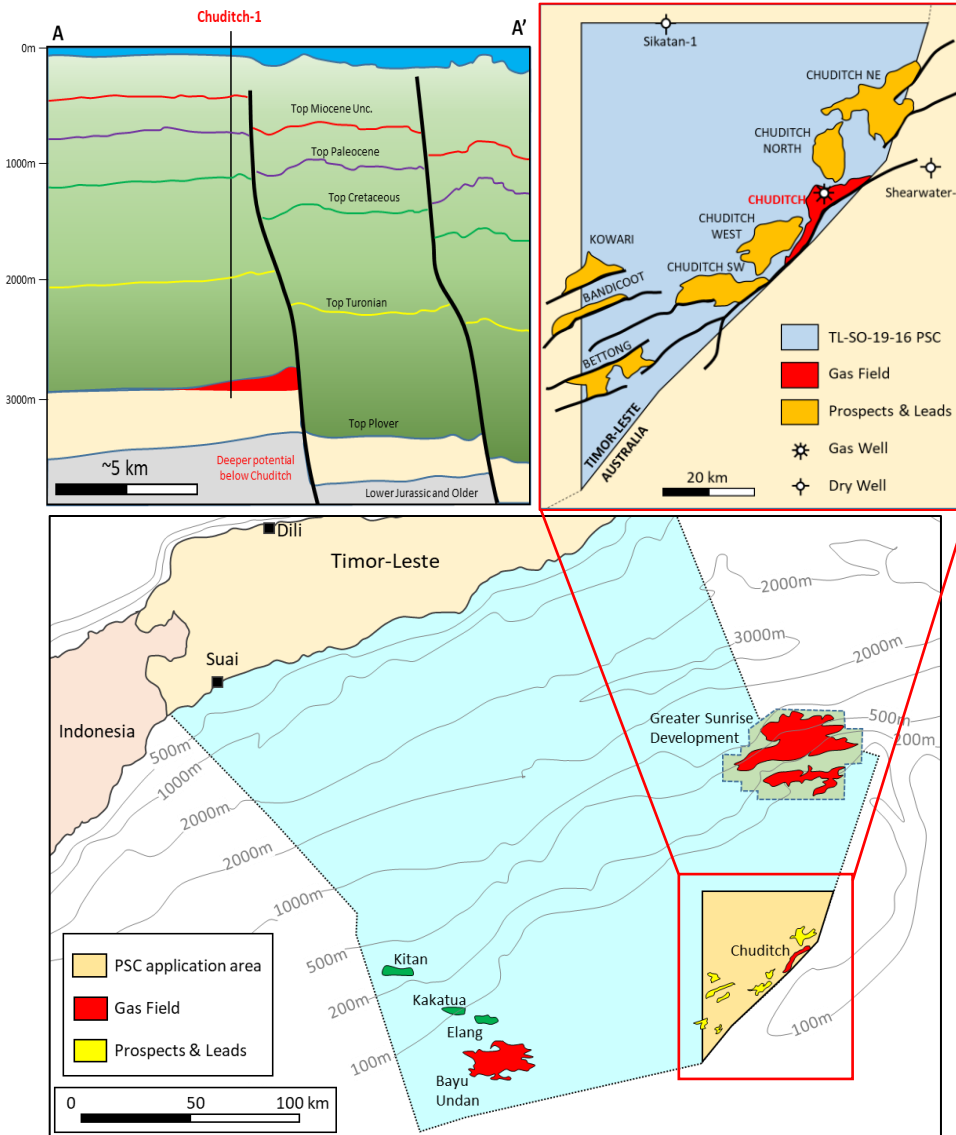
- Exciting potential is seen in the Chuditch gas discovery and adjacent exploration prospects
 - ✓ Good quality Jurassic Plover Fm reservoir ubiquitous
 - ✓ Located adjacent to large prolific source kitchen
 - ✓ Regionally effective top seal in Lower Cretaceous shales
 - ❖ Structural definition is the main challenge:
 - ❖ Traps are extensive but relatively low relief
 - ❖ Bathymetric and shallow geological variations cause velocity effects which impact seismic signal at target depths
 - ❖ Fault shadow and gas effects degrade signal near fault crests
 - ❖ Top reservoir not directly imaged due to condensed section above
- About to commence 3D seismic data reprocessing:
 - ✓ Pre Stack Depth Migration and Full Waveform Inversion to resolve depth imaging, Broadband Deghost to improve reservoir resolution
- Results should confirm field geometry and size, allowing optimum locations for future drilling to be determined

Summary of 3D Seismic PSDM Processing Plan



- Kyranis 3D was acquired in 2012 and covers 9,023 km² and lies mostly in Australian waters but also covers southern Timor-Leste waters including Chuditch
- SundaGas has selected a technically preferred area for reprocessing based on 2D mapping
 - 1,003 km² in PSC area and 267 km² in Australia
- Overlap into Australia required for full imaging, owing to Chuditch lying adjacent to the maritime boundary
- Seismic reprocessing work with TGS; expected to commence by end Q1 2021 and complete early 2022

TL-SO-19-16 PSC: Summary



- SundaGas sees exciting potential in the Chuditch gas discovery and its adjacent exploration features
- 3D seismic reprocessing work about to commence to address the key technical issue of subsurface imaging
- Drilling planned for 2023 following successful completion of seismic reprocessing will test this potential and hopefully move Chuditch gas towards development
- Thanks to ANPM and joint venture partner TIMOR GAP for their collaborative support through this project