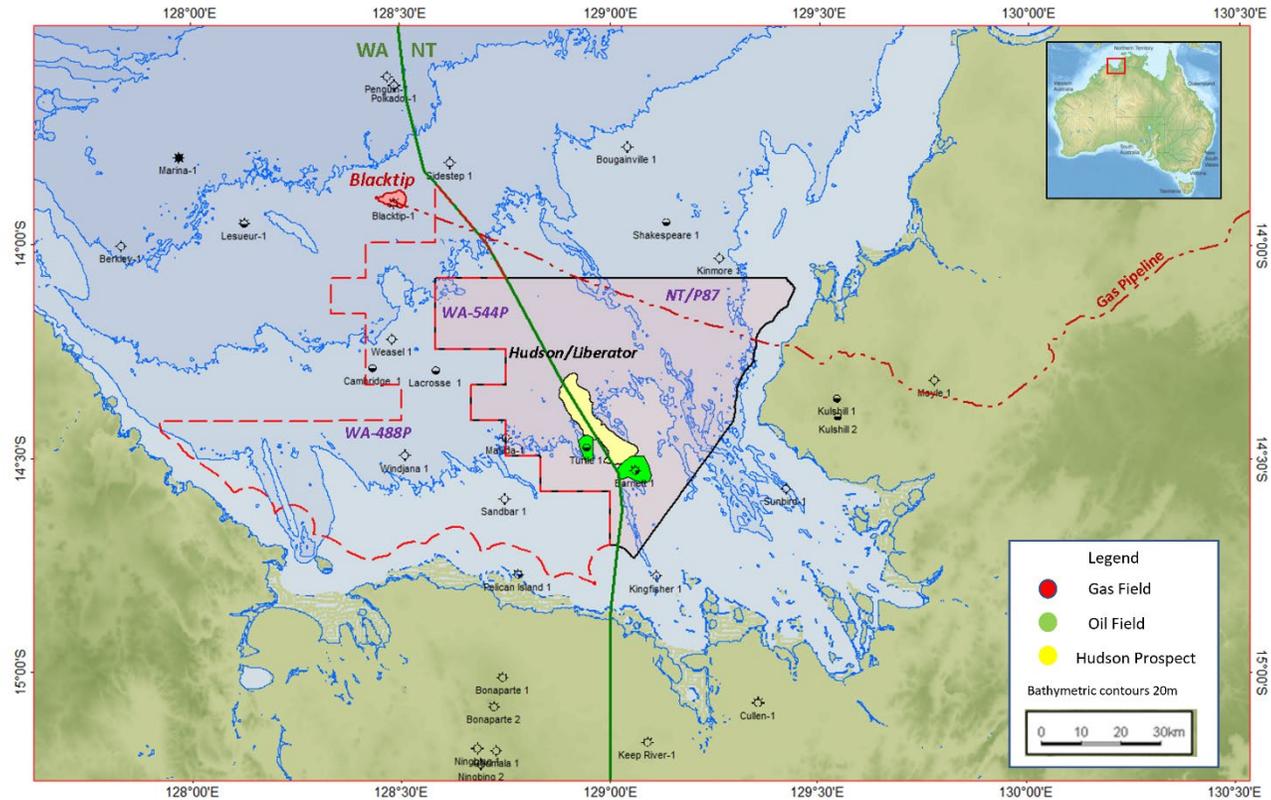


Project Overview and Resource Assessment

NT/P87 and WA-544-P

Hudson Isolated Carbonate Build-Up

July 2023



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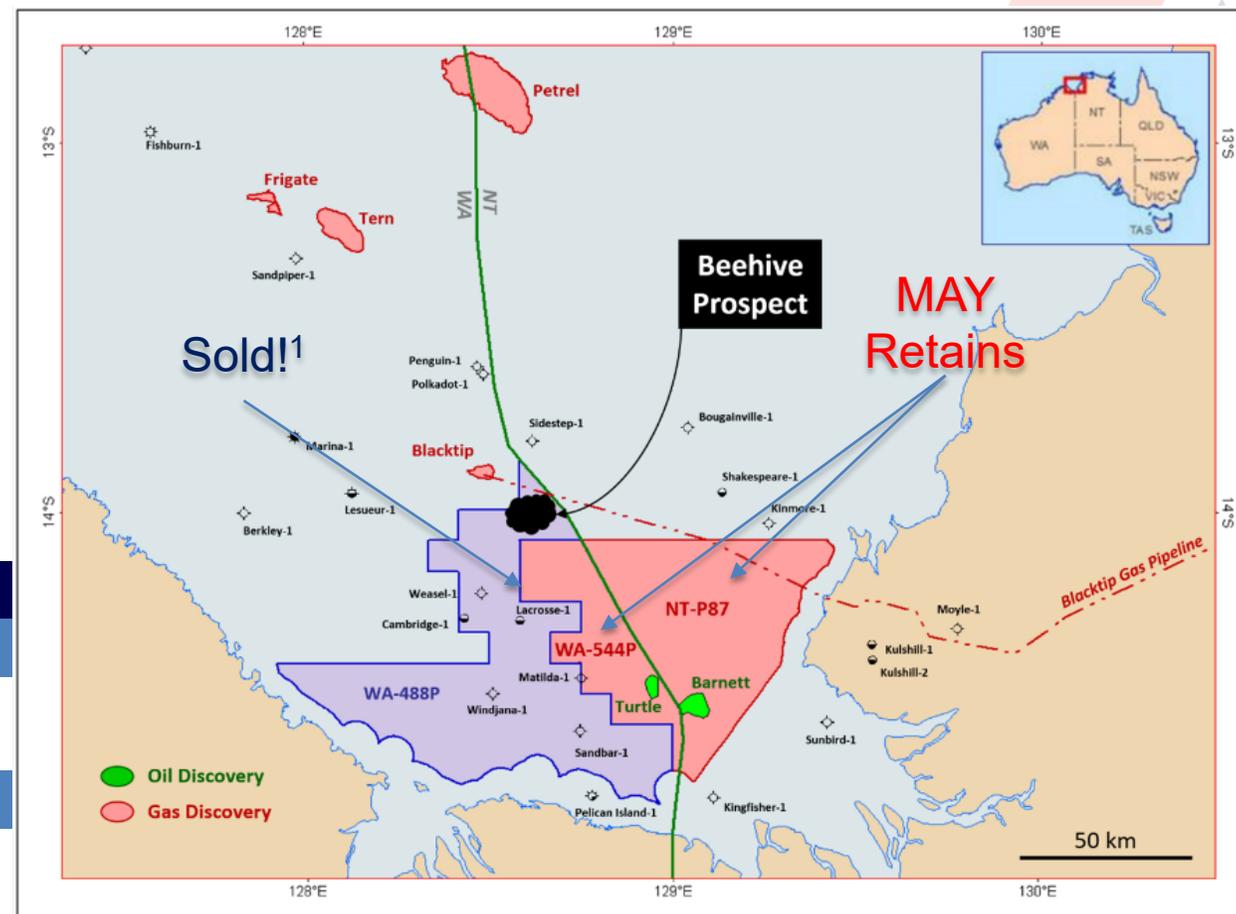
Contingent and Prospective Resources: Unless otherwise specified, the information that relates to Contingent Resources and Prospective Resources for Melbana is based on, and fairly represents, information and supporting documentation compiled by Mr. Dean Johnstone, who is an employee of the company and has more than 34 years of relevant experience. Mr. Johnstone is a member of the American Association of Petroleum Geologists. Mr. Johnstone consents to the publication of the resource assessments contained herein. The Contingent Resource and Prospective Resource estimates are consistent with the definitions of hydrocarbon resources that appear in the ASX Listing Rules. Conversion factors: 6 Bscf gas equals 1 MMboe; 1 bbl condensate equals 1 boe

Prospective Resources Cautionary Statement: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Future exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

About WA-544-P and NT/P87

1. Melbana awarded Permits WA-544-P and NT/P87 in November 2020
2. Permits cover approximately 3,900km² and contain the Turtle and Barnett Oil Fields
3. Located offshore about 300km to the southwest of Darwin
4. Adjacent to the Beehive Project (WA-488-P)¹
5. Melbana technical analysis estimates gross Prospective Resources of:

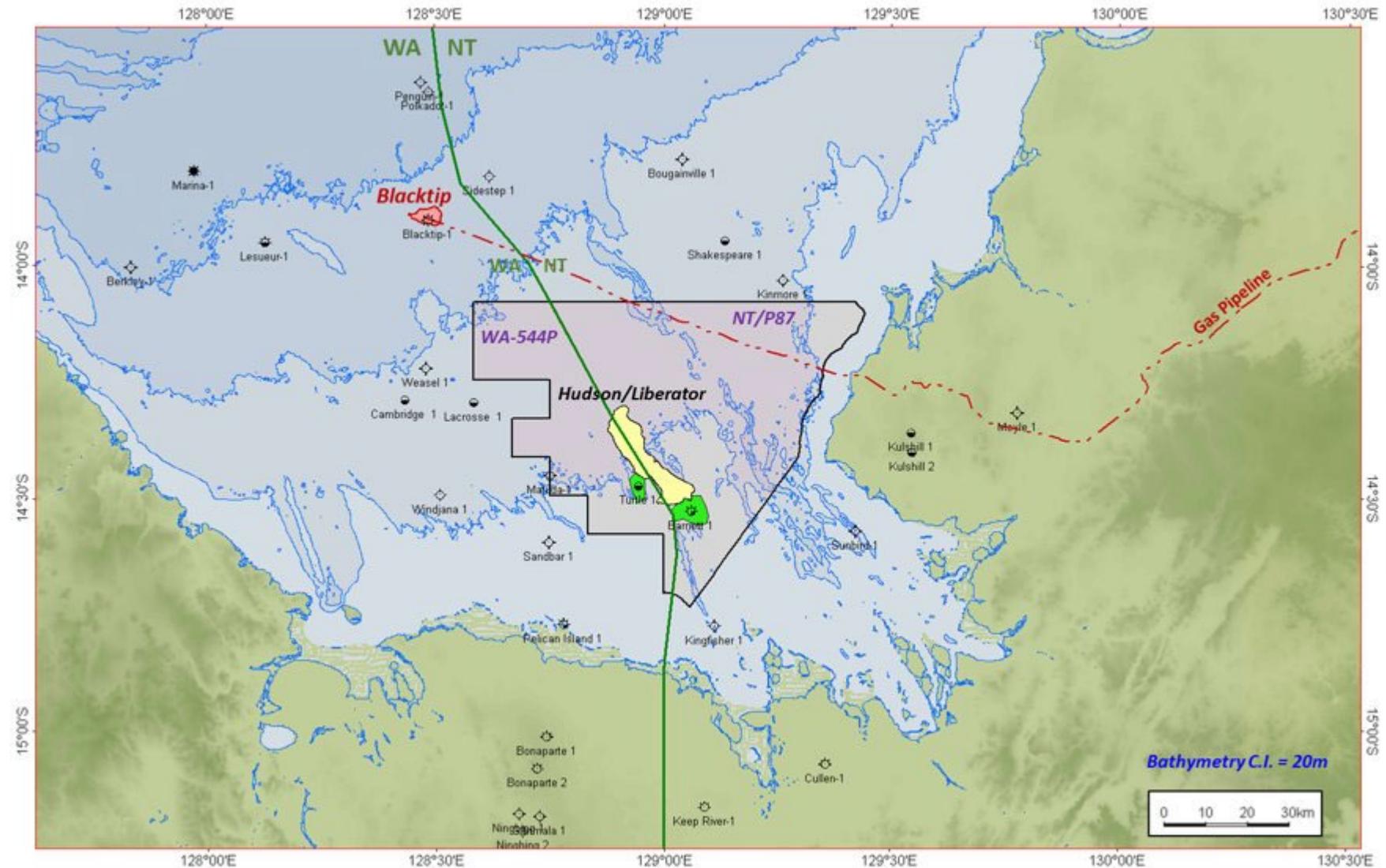
Gross Prospective Resources ²				
Oil Only (mmboe)	P90	P50	Mean	P10
STOOIP	9	371	1,573	4,845
Recoverable	2	90	395	1,184
Gas Only (bcf)	P90	P50	Mean	P10
GIIF	16	700	3,070	10,097
Recoverable	11	466	2,034	6,741



1. Melbana sold WA-488-P, containing the Beehive prospect, to a US oil major in late 2021. Drilling expected in mid 2024.
2. Cautionary Statement: Volumes here are a best estimate. The estimated quantities of petroleum that may be potentially by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both a risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially recoverable hydrocarbons. This best estimate may be a very optimistic estimate due the portfolio effects of arithmetical summation.

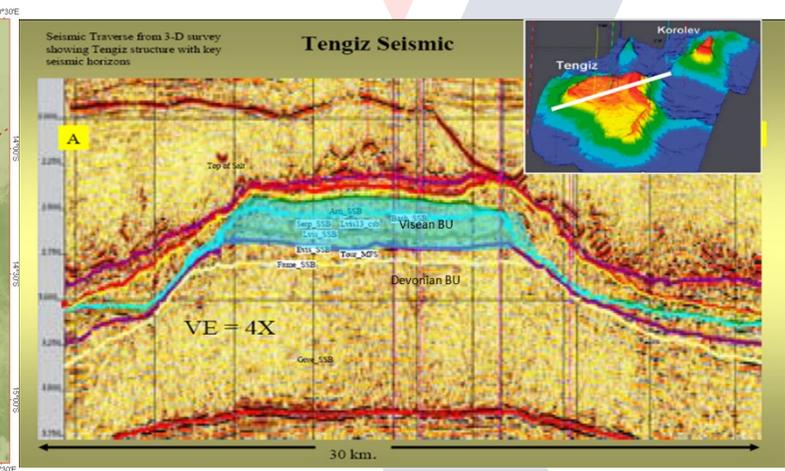
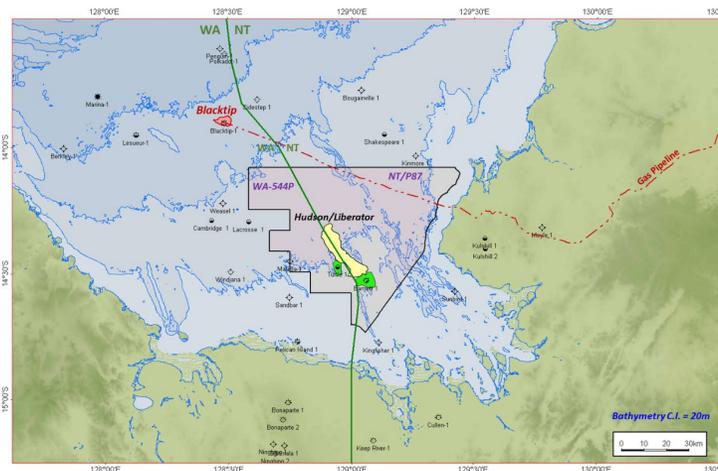
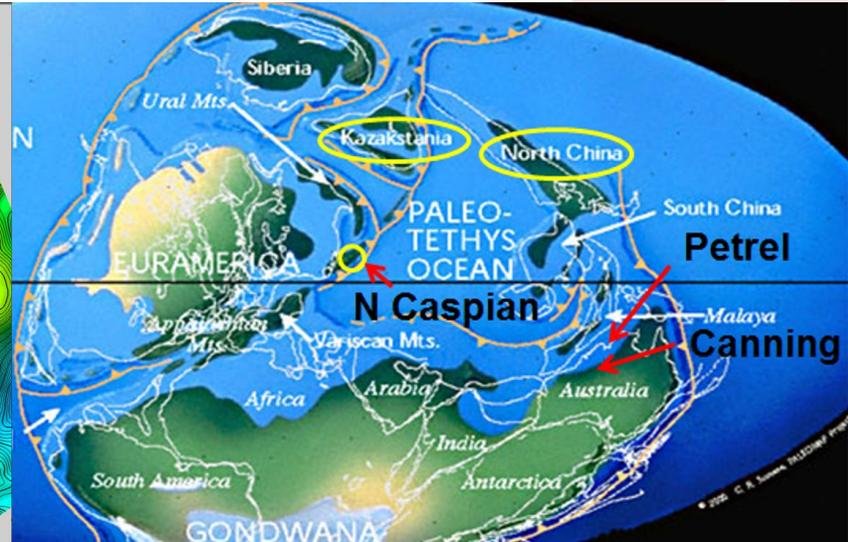
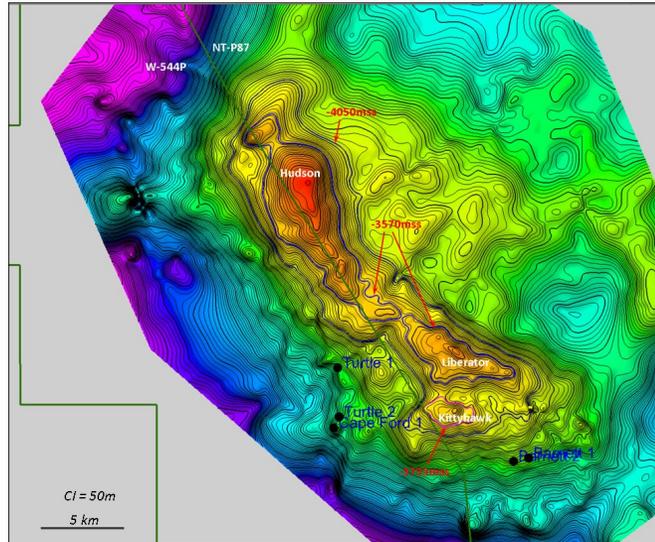
Location

1. Both licences located within the Petrel sub-Basin in the Joseph Bonaparte Gulf
2. Adjacent to WA-488-P (Beehive) sold in 2021
3. Licences include the oil discoveries made at Turtle and Barnett
4. Blacktip gas field and pipeline is to the north of the licences allowing potential access to Darwin LNG facility or east coast domestic gas market
5. Water depths in the licence areas are 20 – 40 metres allowing the use of jackup drilling facilities



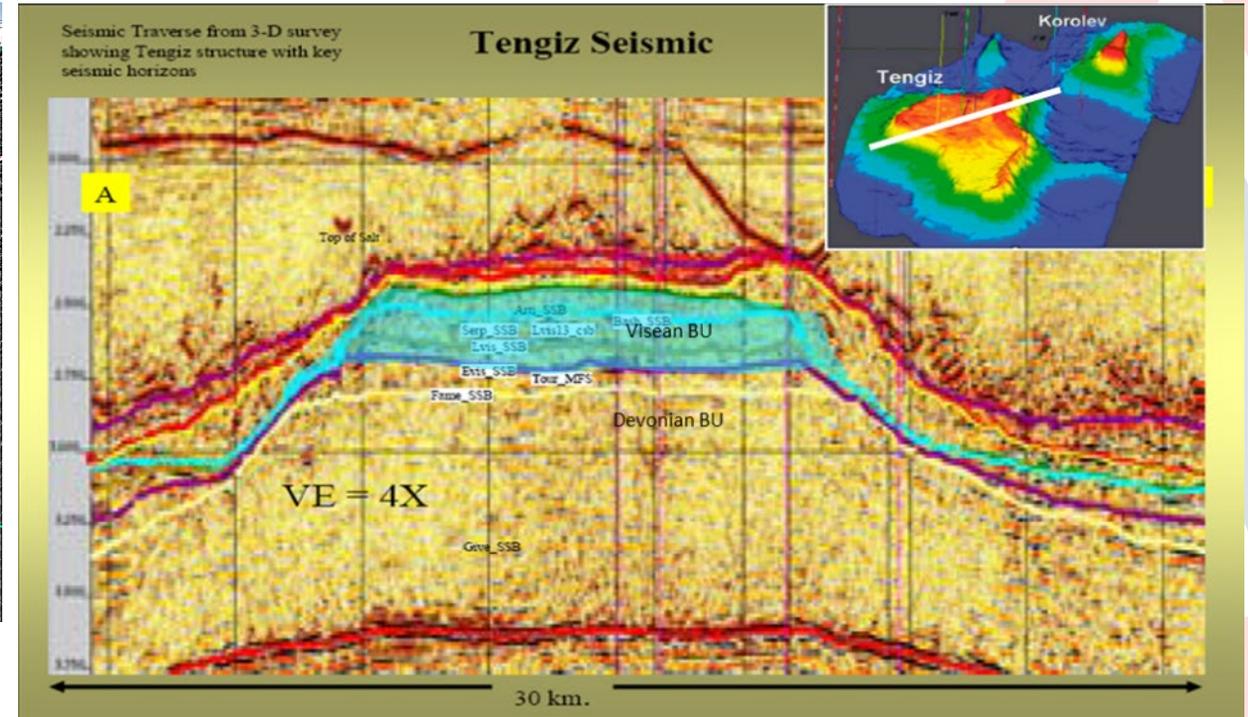
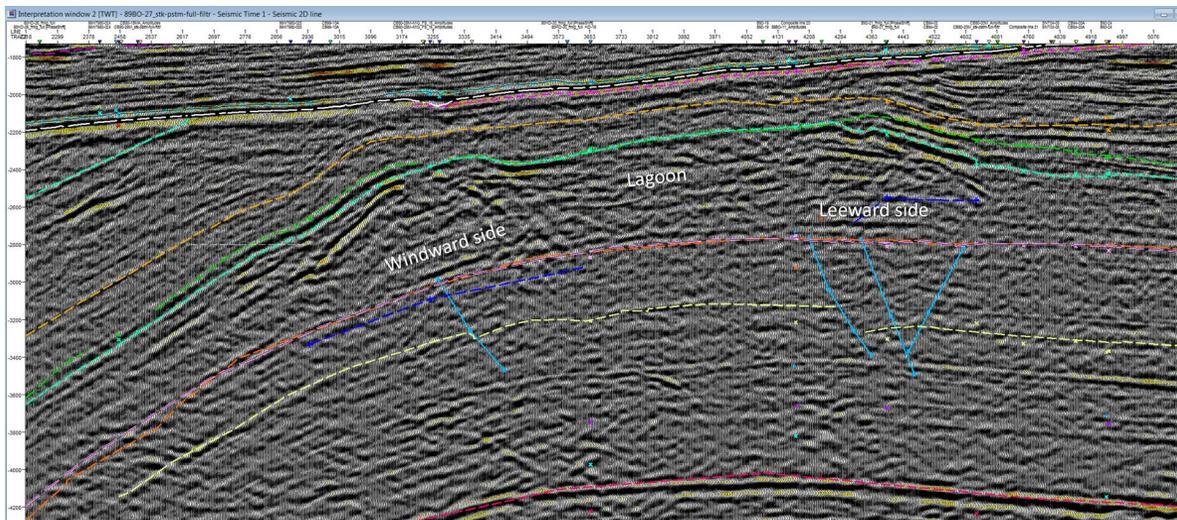
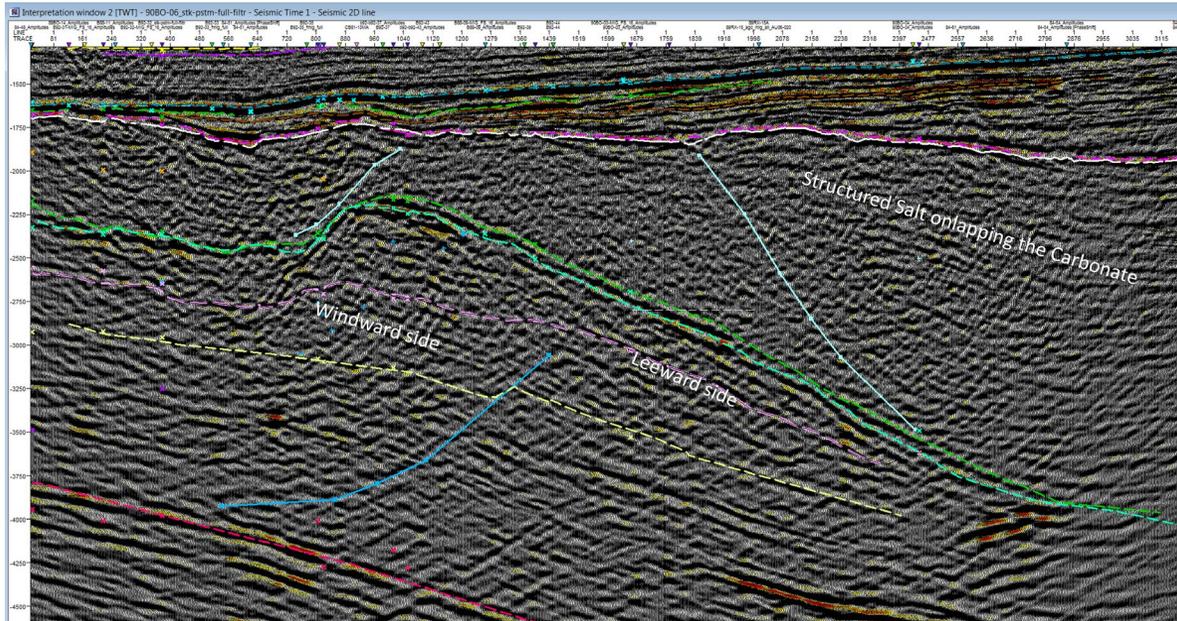
The Hudson Platform – An Isolated Devonian Carbonate Platform

1. Melbana's technical team has identified a new concept within the Hudson Platform.
2. Early Paleozoic Carbonate platforms with salt seals - responsible for some of the largest oil provinces in the world.
3. Analogues are seen in the Amadeus/Canning Basins and, by extension, the deeper Petrel Basin.
4. Some success has been achieved on this play type in Canning Basin exploration (Ungani oil and Raphael gas discoveries).
5. Vintage 2D seismic data in Petrel has many interesting anomalies consistent with these play concepts.
6. New 3D at Beehive in WA-488-P provided a huge uplift in defining play elements and carbonate platform margins more clearly.
7. Melbana seeking to Farmout.
8. Melbana believes this may identify large Devonian Carbonate objectives and even larger, deeper. Ordovician possibilities



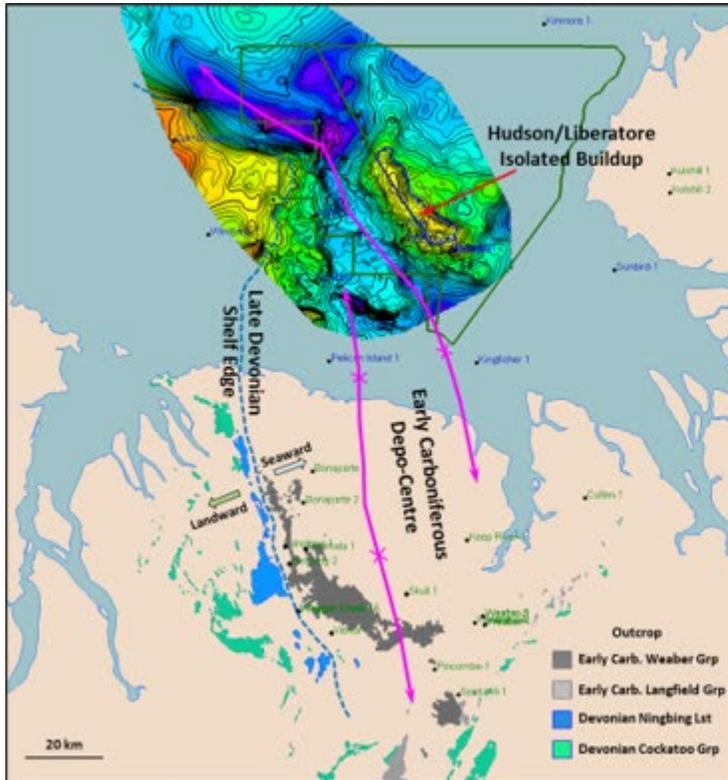
Seismic line over the Tengiz oil field, Kazakhstan, the sixth largest oil field in the world with 25 Bbbls OOIP and between 6-9 mmbbls recoverable. Tengiz is hosted in an isolated carbonate build-up sealed by evaporites.

Devonian Isolated Carbonate Platform – Tengiz Analogue



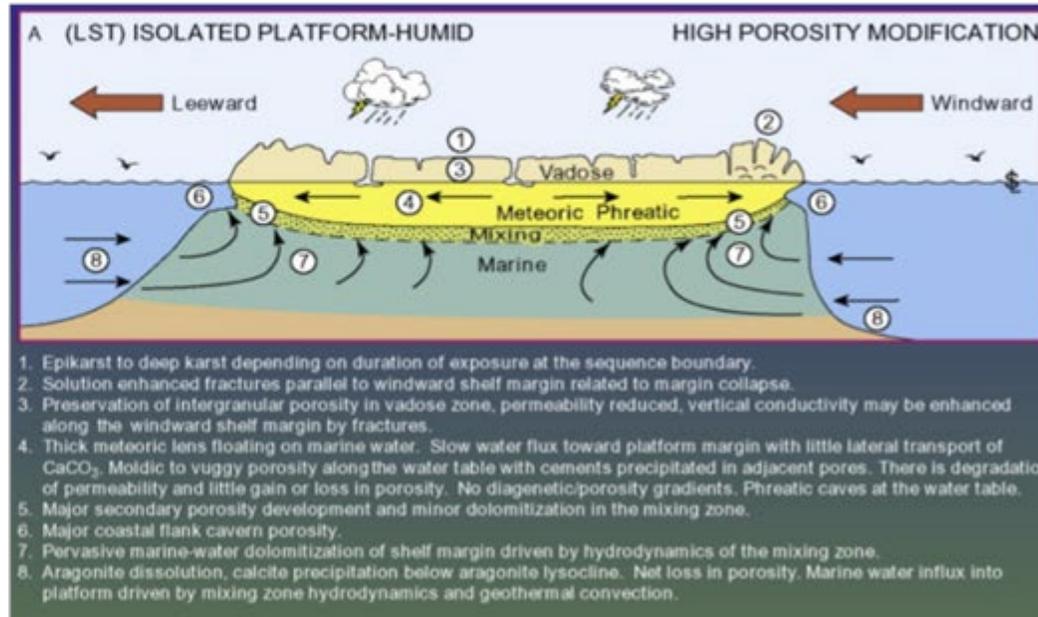
1. Seismic line over the Tengiz oil field Kazakhstan, the sixth largest oil field in the world with 25 Bbbls OOIP and between 6-9 Bbbls recoverable.
2. Tengiz is hosted in an isolated carbonate build-up sealed by evaporites.
3. Seismic lines over the Hudson platform demonstrating similarities to the geological setting of Tengiz with the development of carbonate platform overlain by evaporites.
4. Initial depth conversion indicates top of the structure at ~3500m at Hudson.

Hudson – Evidence for Isolated Build-up



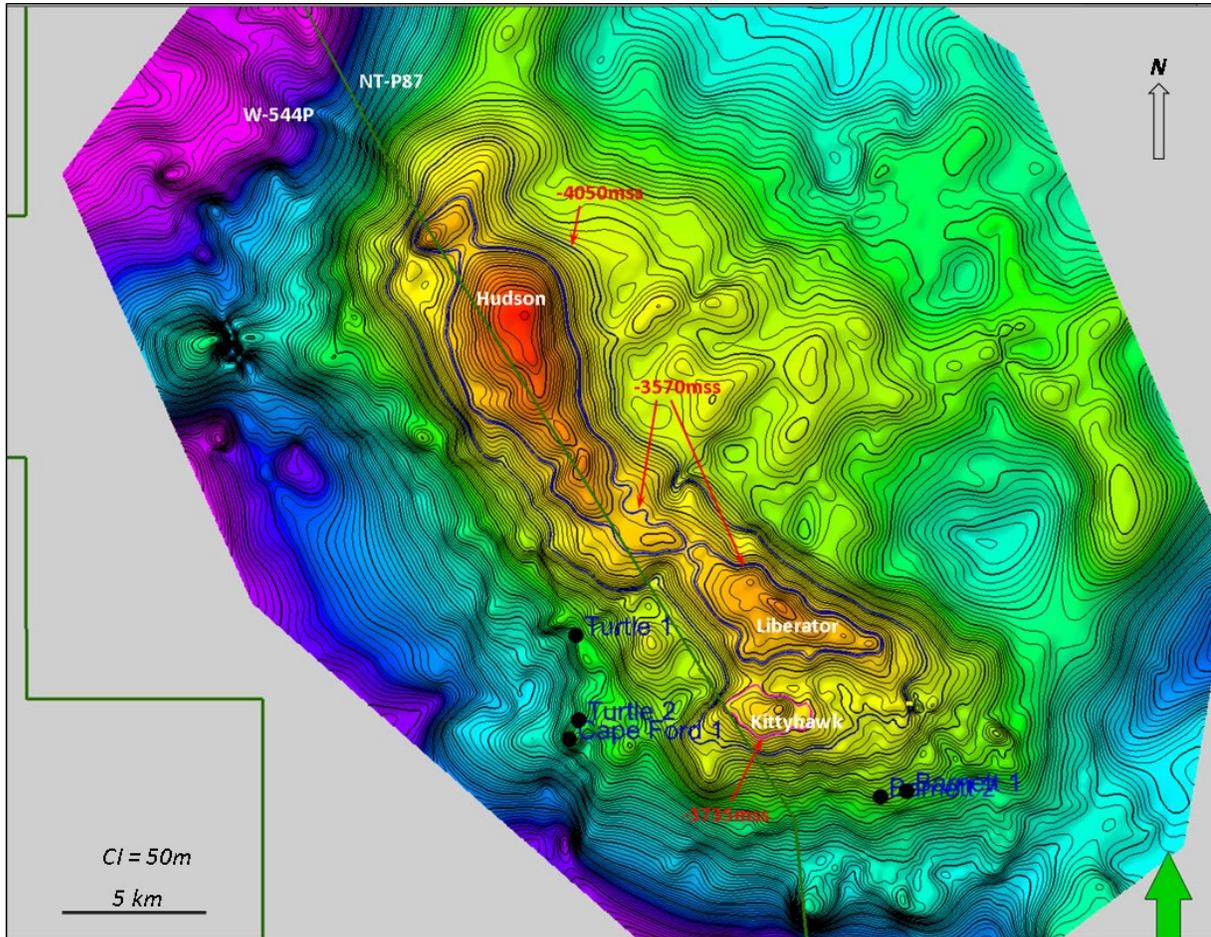
Isolated Carbonate Platform setting

Brines from the land cannot reach the isolated platform preserving reservoirs



1. Regional setting indicates the Hudson area was an isolated Carbonate platform during the Devonian.
2. The isolated location of the build-up is key to the potential for porosity preservation in a carbonate setting.
3. Beehive, Ungani and Tengiz locations are all shelf detached (isolated platforms at Carboniferous/Tanmurra time) and as such are not exposed to the continental migrating fluids which cause diagenetic cements degrading reservoir quality in shelf attached platform fields.
4. The isolated setting allows the mixing of fresh and marine fluids to promote karsting and dolomitization which enhances porosity.

Potential size of the prize

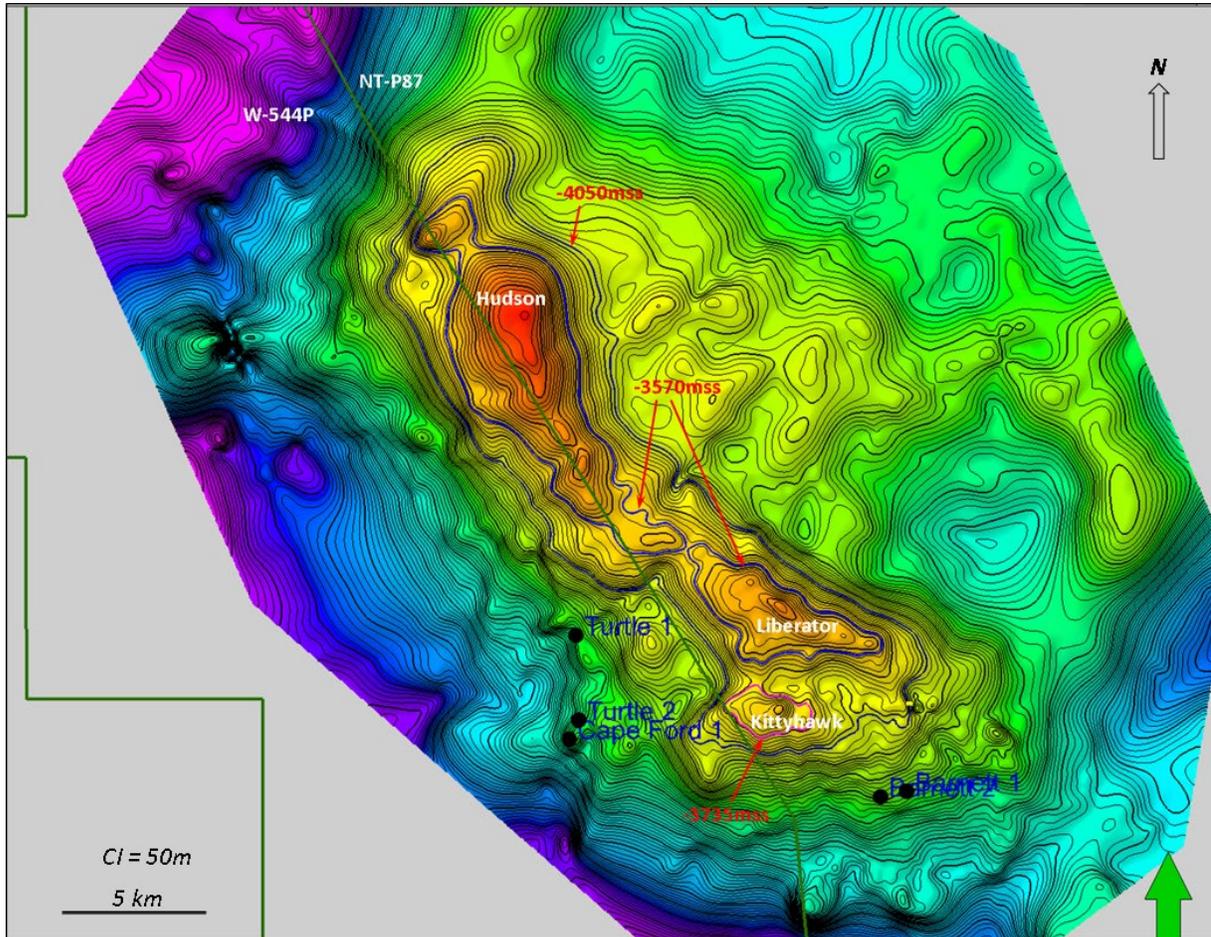


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- The whole carbonate platform has three individual culminations within it:
 - Hudson
 - Liberator
 - Kittyhawk
- Volumetrics presented here represent the whole platform with weighting applied to GRV distributions based on lead ranking.
- Volumetric input parameters based on global carbonate analogue data.
- Large range between minimum and maximum is indicative of the spread of uncertainty.
- Mapping based on vintage 2D seismic data and depth converted using regional velocity well based velocity data.

Potential size of the prize



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