

ASX Announcement

Enterprise North – Project Update

28 September 2022

The Directors of Armour Energy Limited (ASX: AJQ, the Company) are pleased to provide the attached presentation regarding the recently identified Enterprise North prospect, located within Petroleum Exploration Permit ("PEP") 169 in the onshore Otway Basin, Victoria.

Highlights

- Enterprise North Prospect is fully evaluated and drill ready based on reinterpreted and merged 3D seismic data.
- On trend with the Beach Energy Enterprise-1 discovery (161 PJ OGIP¹, 3.2km south) and Cooper Energy Minerva Field (558 BCF OGIP, 9.6km south).
- Seismic anomalies within the Enterprise North Prospect are indicative of a gas filled trap, filled to the spill point in the highly productive Waarre sandstone reservoir.
- A liquids-rich gas discovery of 25 bbl/MMscf, similar to Beach Energy's Enterprise-1², will add significant additional value to the prospect
- Enterprise North holds a prospective resource of up to 419 Bcf of gas in place and 10 MMbbl condensate in place.
- Planning phase for the drilling and testing of the Enterprise North prospect is underway.

PEP 169 is 51% owned by the Company (and operator) with Lakes Blue Energy NL, holding 49% of the permit. The Enterprise North prospect is well located relative to existing gas distribution infrastructure and with the potential to be monetized quickly in the expected case of a commercial discovery.

The Enterprise gas field was discovered by Beach Energy in 2020 (BPT ASX release 10 November, 2020) and contains a 2P reserves estimate of 161 PJ of sales gas and 4 MMbbls of condensate– (BPT ASX release 15 February, 2021).

Following the recent completion of reinterpretation of merged 3D seismic, the Enterprise North prospect has been identified as a drill ready target. The JV is now rapidly progressing the various workstreams to enable the drilling of the prospect. These activities include; Environmental and regulatory approvals; native title and landholder access agreements; procurement of long-lead items and contracting of the drilling rig and ancillary services.

This information update has been provided to ensure all shareholders are aware of the significance of the Enterprise North Prospect. Further information will be released when available.

¹ BEACH ENERGY ASX Announcement 15 Feb 2021

² BEACH ENERGY ASX Announcement 15 Feb 2021



This announcement has been authorised and approved by the Board of Armour Energy for lodgement with ASX.

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Reserves disclosure

Armour prepares its petroleum reserves and contingent resources estimates in accordance with the 2018 update to the Petroleum Resources Management System (PRMS) published by the Society of Petroleum Engineers.

The reserves and resources information in this report is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of Armour’s Reservoir Engineering Advisor, Mr John Mackintosh. Mr Mackintosh has over 25 years of diverse oil and gas industry experience and has significant reservoir engineering, production technology and operations experience in multiple basins worldwide with a variety of International Operators and Consulting firms. He has previously held roles in Santos (Australia/Houston), Halliburton Consulting (Russia), Wintershall (Norway) and Apache (Egypt). Mr Mackintosh has sufficient experience that is relevant to Armour Energy and Lakes Blue Energy for reserves and resources to qualify as a Reserves and Resources Evaluator as defined in the ASX Listing Rules. Mr Mackintosh has consented to the inclusion in this report of the matters based on his information in the form and context in which it appears.

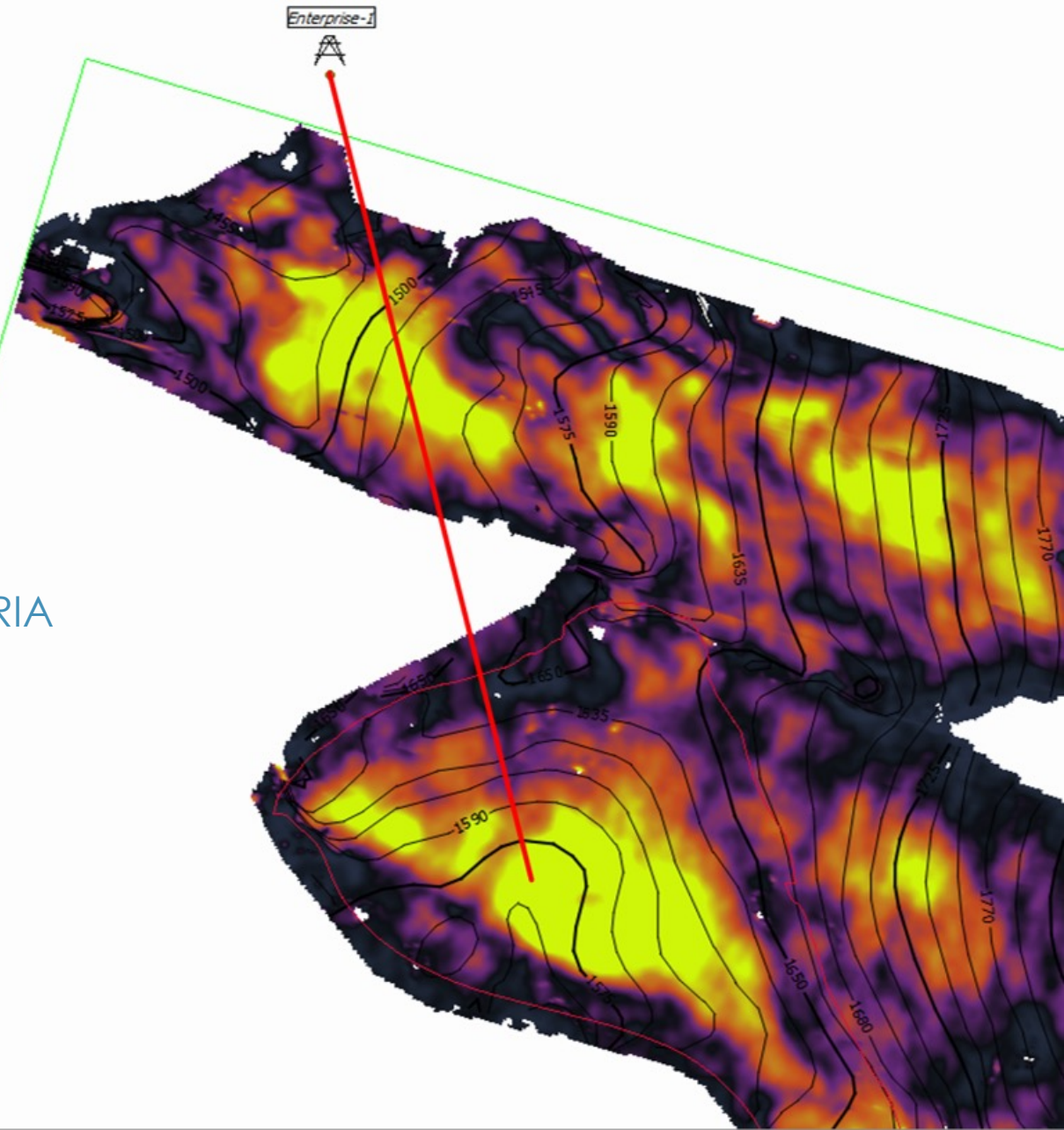
Cautionary statement

The estimated quantities of petroleum that may be potentially recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration, appraisal and evaluation is required to determine the existence of a significant quantity of moveable hydrocarbons.



ARMOUR ENERGY

PORTFOLIO REPORT - PEP 169 (51% AJQ | 49% LKO)
ENTERPRISE NORTH-1 PROSPECT | OTWAY BASIN VICTORIA



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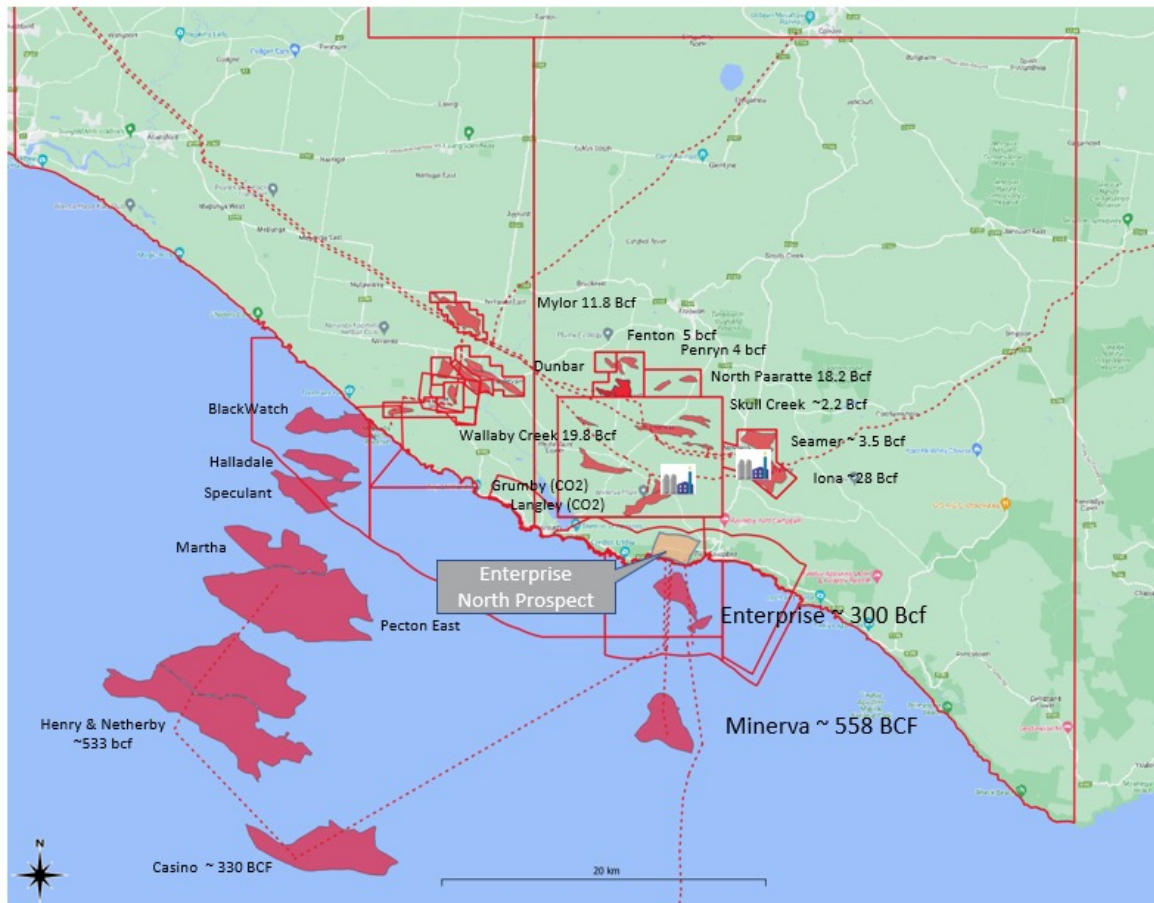
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Statements in this presentation as to gas and mineral resources has been compiled from data provided by Armour's Reservoir Engineering Advisor, Mr John Mackintosh. Mr Mackintosh has over 25 years of diverse oil and gas industry experience and has significant reservoir engineering, production technology and operations experience in multiple basins worldwide with a variety of International Operators and Consulting firms. He has previously held roles in Santos (Australia/Houston), Halliburton Consulting (Russia), Wintershall (Norway) and Apache (Egypt). Mr Mackintosh has sufficient experience that is relevant to Armour Energy and Lakes Blue Energy for reserves and resources to qualify as a Reserves and Resources Evaluator as defined in the ASX Listing Rules. Mr Mackintosh has consented to the inclusion in this report of the matters based on his information in the form and context in which it appears.

PROSPECT PEP 169, 'ENTERPRISE NORTH-1' VICTORIAN HIGH-VOLUME HIGH-RATE GAS DRILLING



Highlights

- ❖ Enterprise North is a drill ready prospect following reinterpretation of merged 3D seismic.
- ❖ Various workstreams being rapidly progressed to enable the drilling of the prospect. These activities include; Environmental and regulatory approvals; native title and landholder access agreements; procurement of long-lead items and contracting of the drilling rig and ancillary services.
- ❖ Drilling location near the Enterprise-1 (Beach Energy) well location.
- ❖ Targeting up to 419 Billion cubic feet of gas and 10 Million barrels of condensate in place.
- ❖ Flow rates could deliver up to 60 Million cubic foot a day from a single well from the proven & prolific Waarre Sandstone Reservoir.

PEP 169 BLOCK SUMMARY

ARMOUR ENERGY 51% OPERATOR / LAKES BLUE ENERGY 49%



Work Program restart following extended drilling and fracking ban



New shallow water liquids-rich discovery by Beach Energy – Enterprise-1 (161 PJ*) in an adjacent permit.



Northern tip of structural closure at Beach Energy's Enterprise-1 is only 800m from Armour/Lakes PEP169 boundary



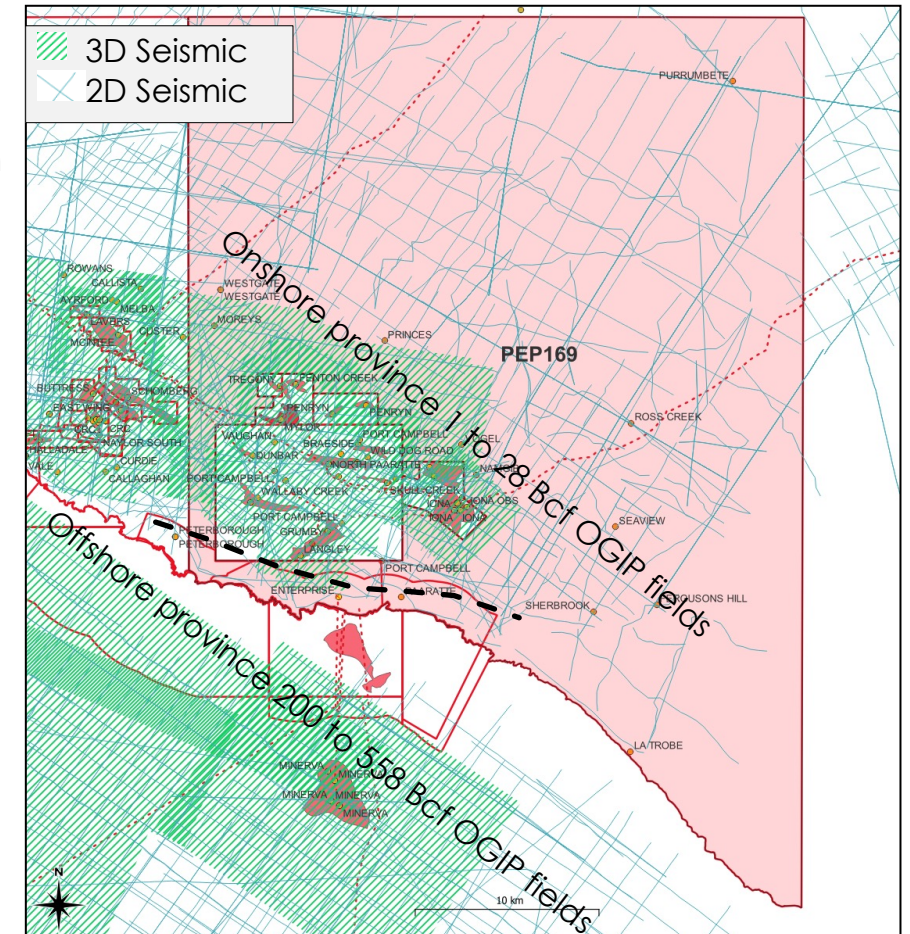
New transition seismic demonstrates prospect 'Enterprise North' onshore – analogue of Enterprise Gas Field



Additional Prospect – 'Scimitar' west of Enterprise North requires further 3D Seismic



Both Scimitar Lead and the Enterprise North prospect are **located south of the Bounding fault complex in the high volume offshore province with OGIP 200-500 Bcf vs 1-28 Bcf onshore province****



ENTERPRISE NORTH-1 IS A HIGH VOLUME 419 BCF OGIP TARGET

ENTERPRISE NORTH-1 PROSPECT (OGIP 47 to 419 Bcf estimated) (Armour 51% Operator | Lakes Blue Energy 49%)

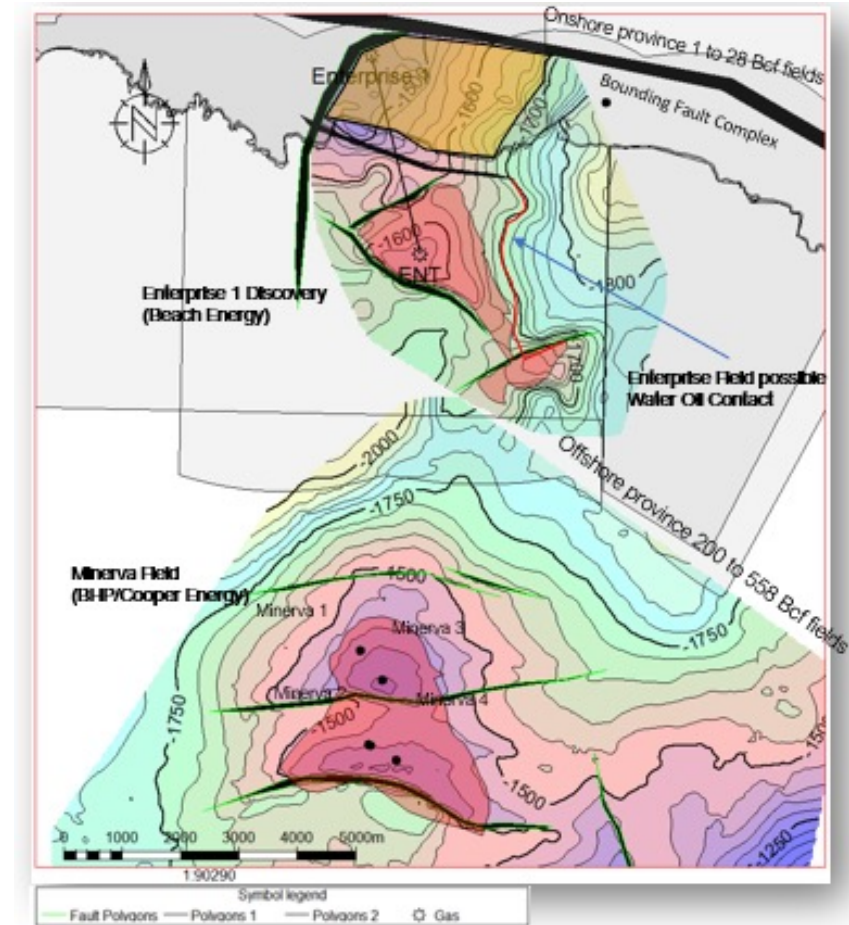
- On trend with the Enterprise 1 Discovery (3.2 km) and the Minerva Field (9.6 Km).

ENTERPRISE-1. 161 PJ, 34 Mmboe Recoverable Liquids-rich gas discovery* (Beach Energy Discovery 2020)

- Upper Waarre Sandstone (2052m TVDSS)
- 115m Net Reservoir Thickness*
- 2P: 161 PJ / 352,000 T LPG / 4 MMbbl Condensate / 10% CO₂ *
- Expected first gas production mid 2023*
- Beach plans to investigate further exploration opportunities identified in the vicinity of the Enterprise 1 gas field, with plans to utilise the existing Enterprise 1 drill pad, which Beach states have been de-risked by the Enterprise-1 success.*

MINERVA 558 BCF OGIP 330 Bcf Recoverable (Cooper Energy - BHP Discovery 1993)**

- Waarre Sandstone (1790m TVD)
- 110m Net Pay**
- 2P: 330 PJ / 331,000 T LPG / 0.7 MMbbl Condensate / 1.3% CO₂**
- Minerva 1 DST 28.8 MMscfd** (facility restricted)
- Minerva 3 DST 50 MMscfd** (facility restricted)



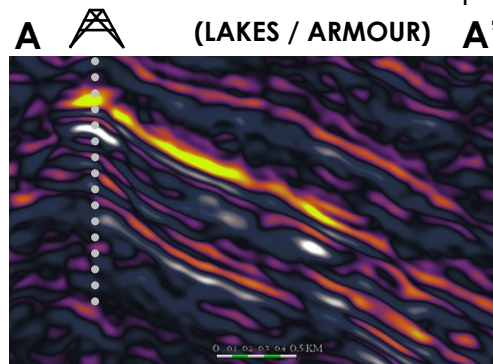
ENTERPRISE NORTH 419 BCF OGIP TARGET

SEISMIC AMPLITUDE SIMILAR TO MINERVA (558 BCF**) AND ENTERPRISE (161 PJ*) DISCOVERIES

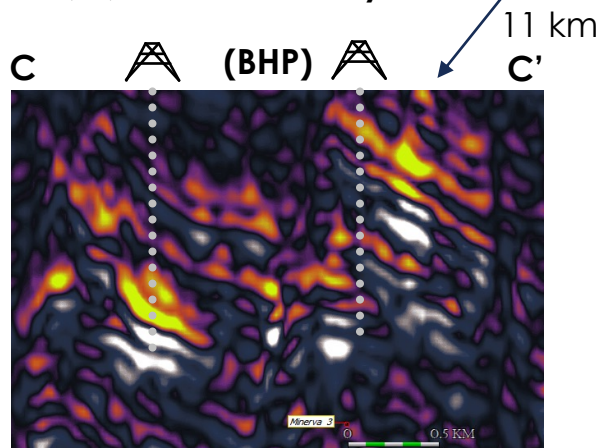
Interpreted gas charged sands cause a bright amplitude anomaly on the seismic.

The Waarre Sandstone in Enterprise North-1 is prognosed to be 115m, similar in thickness to Enterprise 1 (115m)****

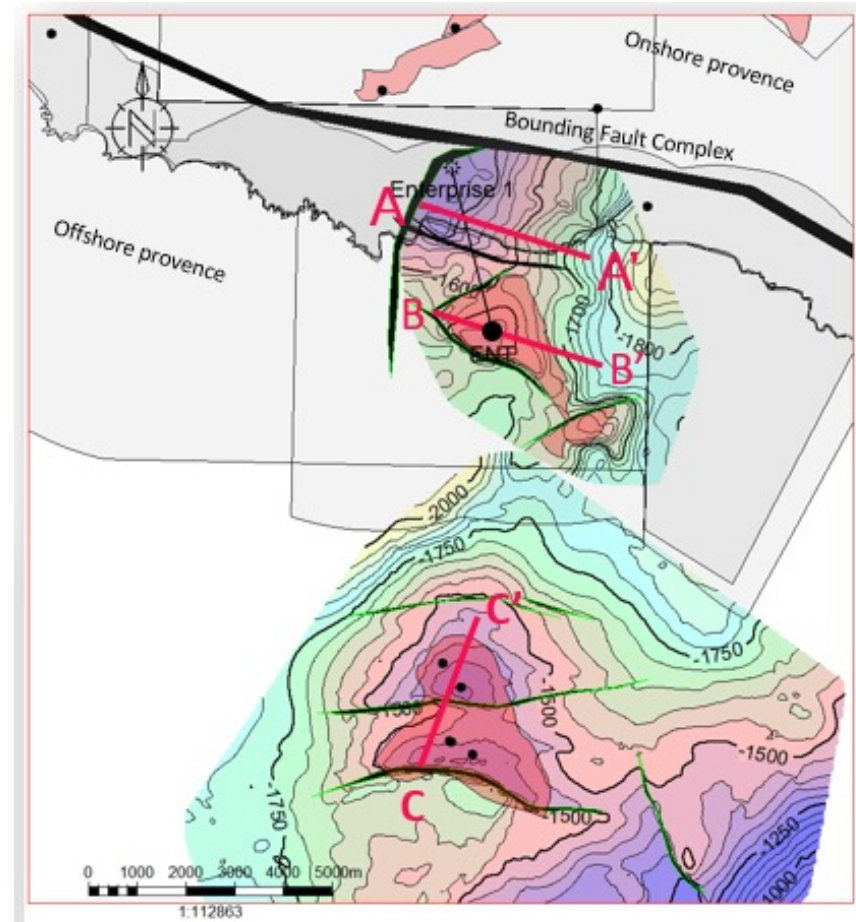
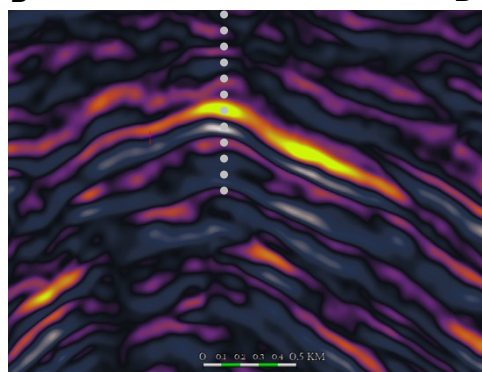
ENTERPRISE NORTH 1 - Proposed



MINERVA 1, 2, 3 & 4 Discovery



3 km **ENTERPRISE 1 Discovery**
(BEACH) B B'



100% success rate to date in Beach operated acreage with seismic amplitude supported exploration in the near shore and offshore Victorian Otway Basin.***

SOURCE

* BEACH ENERGY ASX Announcement 15 Feb 2021

DNRME gas resources of the Otway Basin Victoria *Beach ASX presentation 24.9.2019:

****BEACH ENERGY 10 November 2020 ASX Announcement & 2021 Beach Energy Investor Update 28 sept 2021



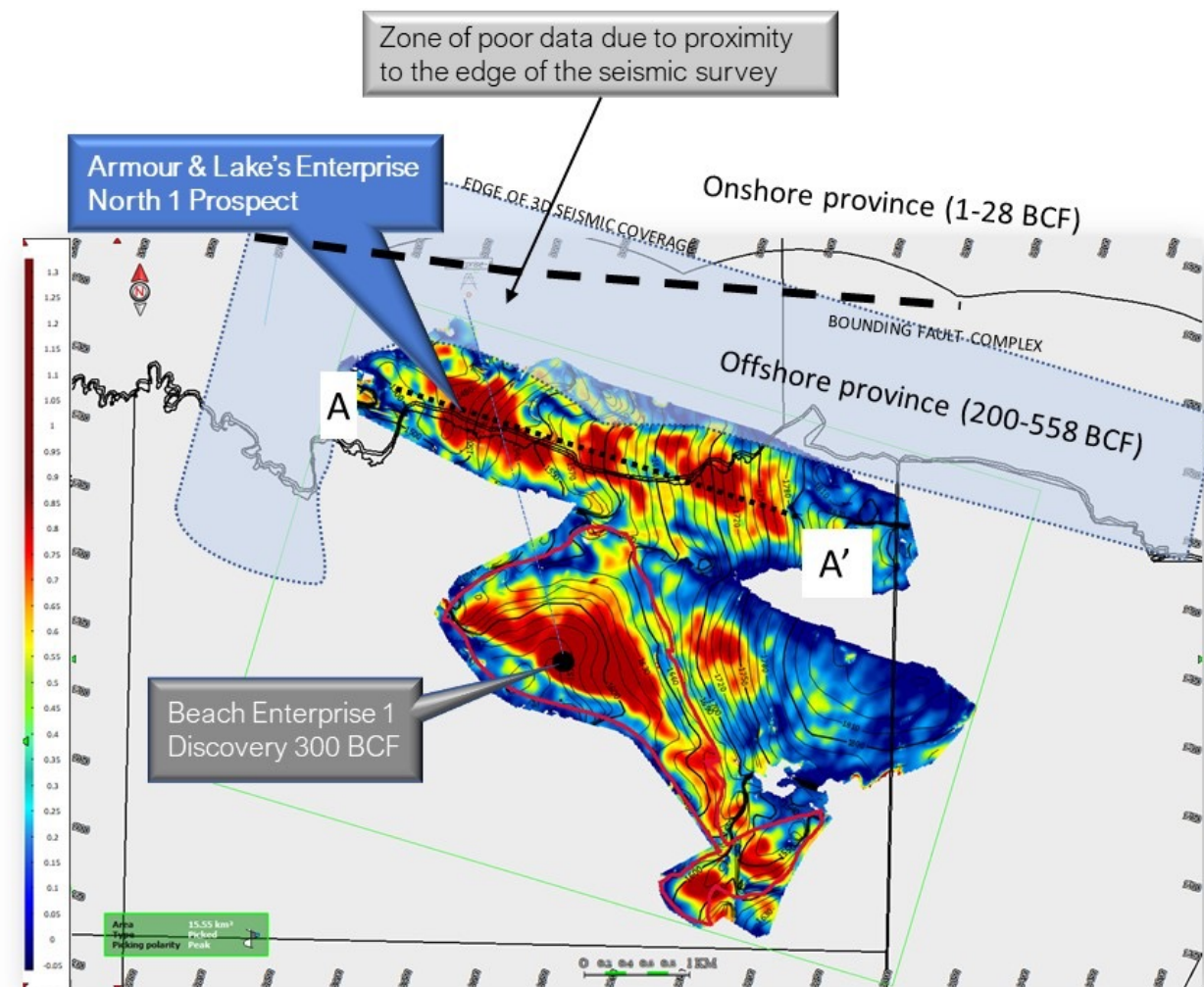
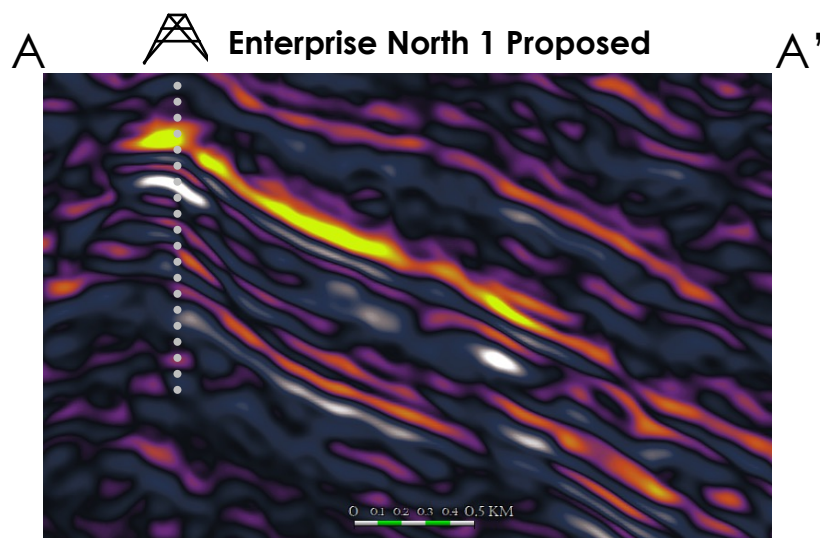
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ENTERPRISE NORTH-1 SEISMIC AMPLITUDE ANOMALIES ARE CALIBRATED TO LARGE OFFSHORE OTWAY BASIN GAS DISCOVERIES

HIGHLIGHTS:

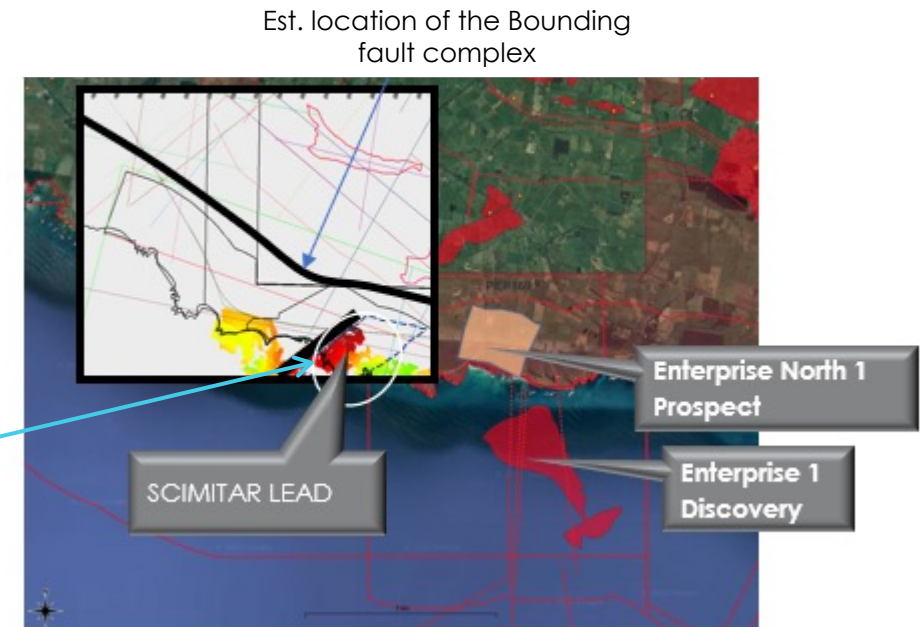
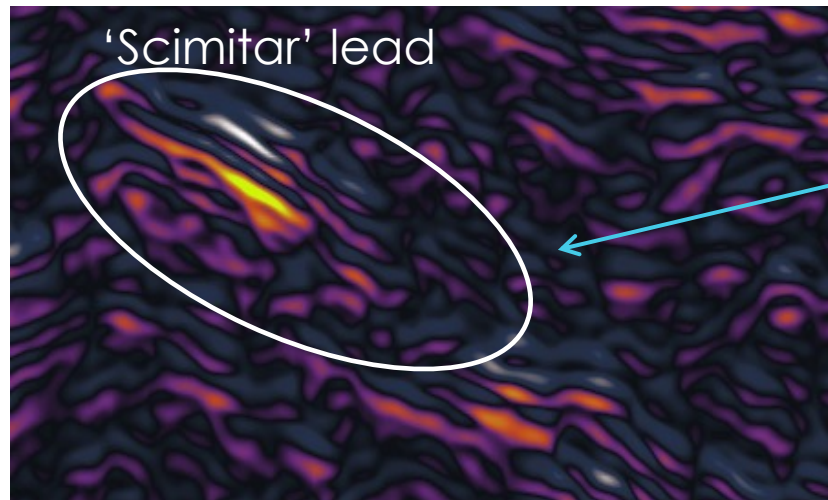
- Enterprise North 1 is 2.4 km from Enterprise-1 in a proven Waarre Sandstone Reservoir with 115 m of net gas reservoir thickness*.
- New transition zone data allows the seismic to be calibrated to known fields (Minerva and Enterprise) reducing subsurface risk
- Success case would see Enterprise North-1 cased and suspended as a future producer
- 3D seismic Merge to better image the northern zone of the Enterprise North structure is under evaluation



SCIMITAR LEAD SIMILAR TO ENTERPRISE NORTH

HIGHLIGHTS:

- Scimitar lead is mapped on the open file Enterprise-2 3D and 2D seismic data
- It is a large and robust closure supported by seismic amplitude anomalies, indicating closure, seal and charge
- Evaluation of the lead is ongoing



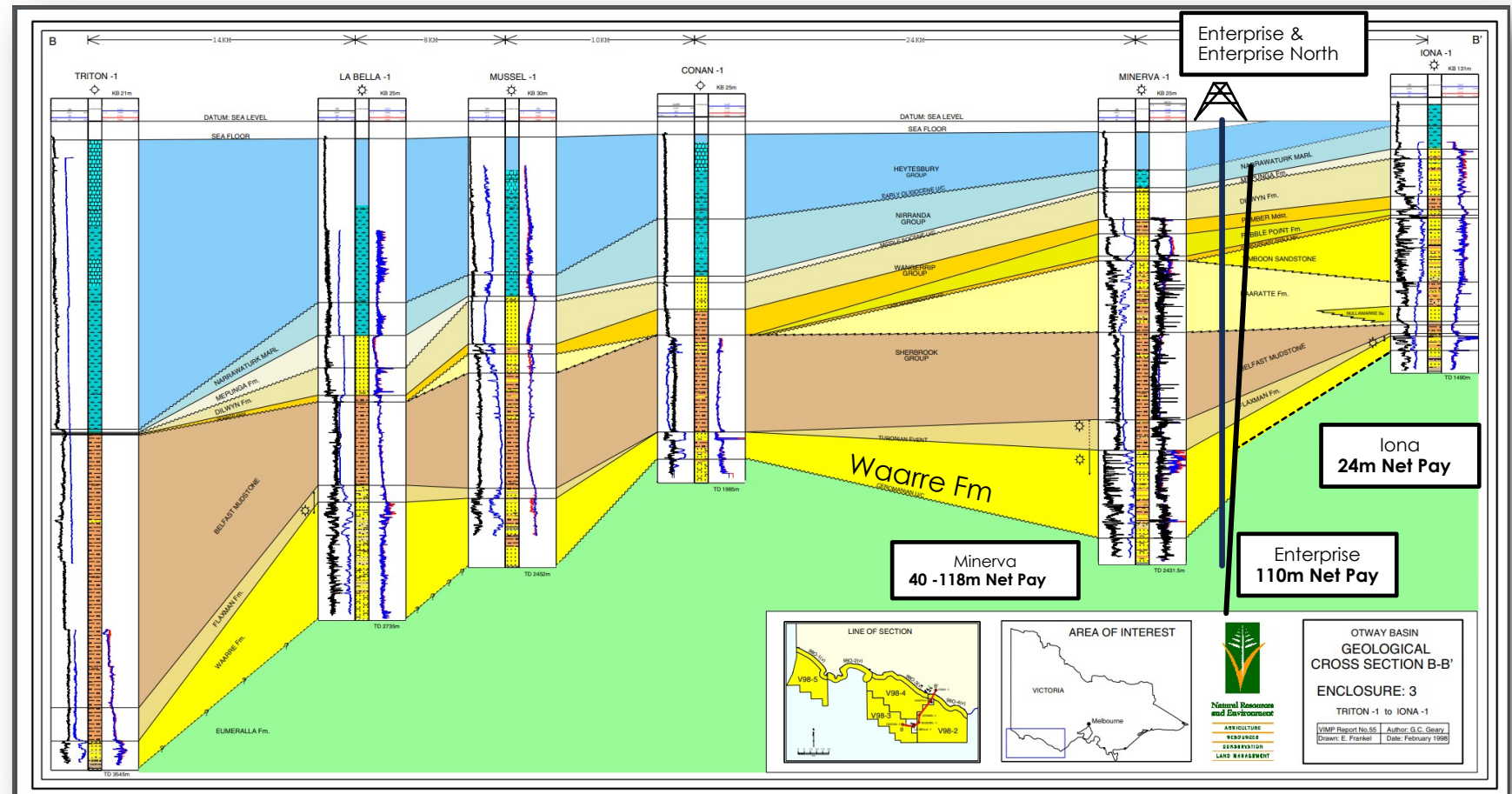
WAARRE SANDSTONE RESERVOIR STRATIGRAPHY

VERY THICK RESERVOIR, UP TO 115m IN THE OFFSHORE PROVINCE. (ENTERPRISE NORTH-1 UP TO 419 Bcf PROSPECT, ENTERPRISE-1 (Beach Energy) MINERVA (Cooper Energy)

The Waarre Sandstone reservoir is significantly thicker offshore at Minerva & Enterprise gas fields (up to 115m*) and thins onshore towards Iona and adjacent gas fields north of the bounding fault complex (10-48m).

Enterprise North-1

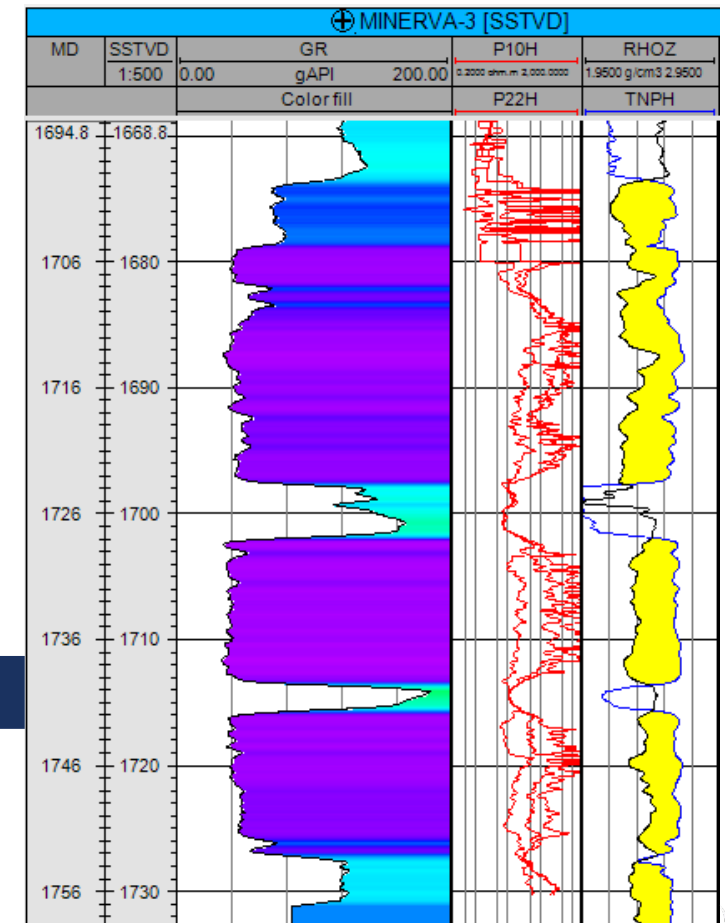
Shows excellent potential to be the thickest onshore Waarre Reservoir to be drilled onshore Victoria and comparable to an offshore well i.e. Enterprise & Minerva



WAARRE SANDSTONE – AN EXCEPTIONALLY PRODUCTIVE RESERVOIR

HIGHLIGHTS:

- The Waarre Sandstone reservoir is characterised by high Permeability (1-10 Darcies**) and High Porosity (19-25%**). Combined with a reservoir pressure of ~2745 psi it can deliver flow rates greater than 50MMscfd (Minerva 3 DST 50 MMscfd)**
- Condensate production ranges from 2 bbl/mmscf (Minerva**) to 25 bbl/mmscf (Enterprise 1)*
- Enterprise North is anticipated to be similar condensate production to Enterprise-1
- The Waarre Sandstone reservoir has a prolific ability to deliver gas and condensate at high rates, constrained only by the mechanics of the wellbore, completion string and infrastructure.



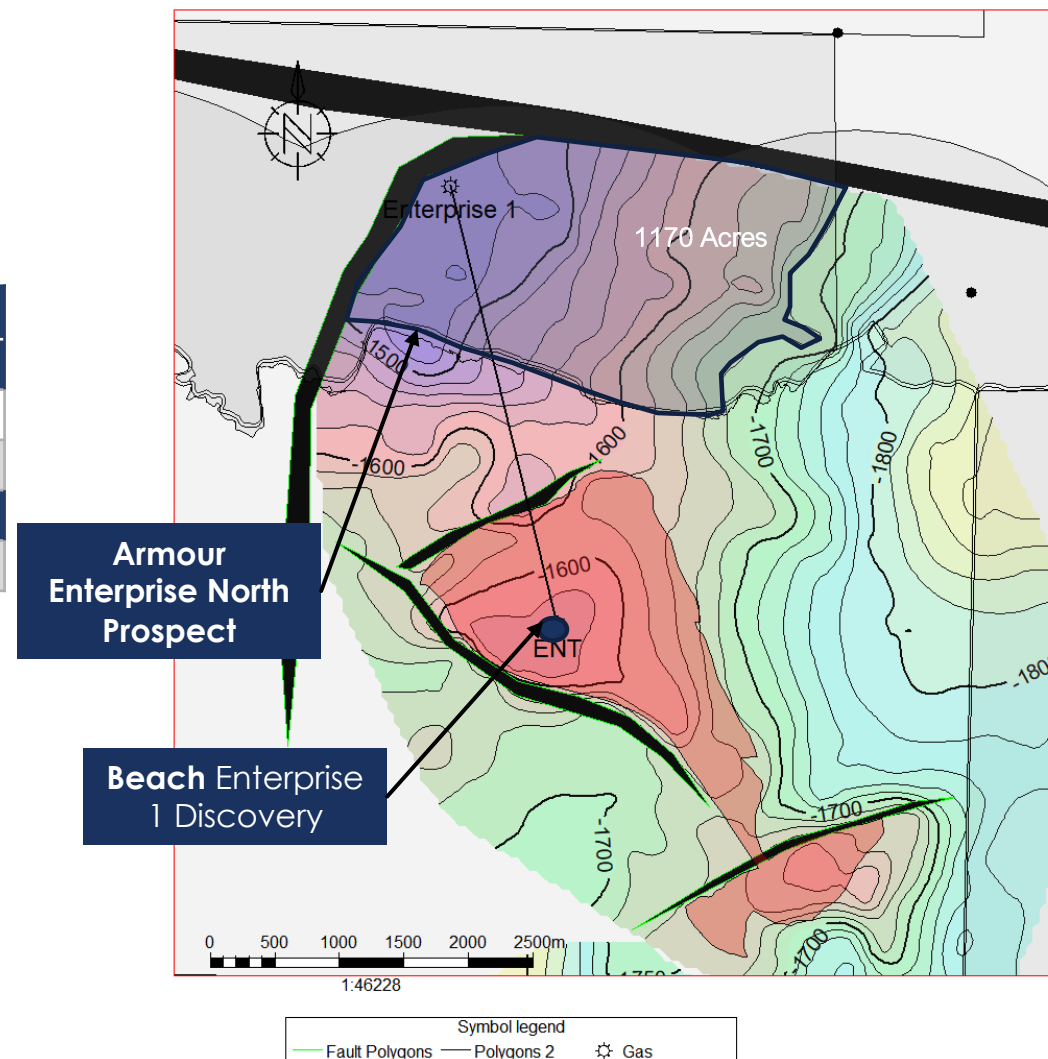
WAARRE SANDSTONE - AN EXCEPTIONALLY PRODUCTIVE RESERVOIR

Enterprise-1 discovery has significantly reduced Enterprise North-1 risk

- Seismic amplitude anomalies indicate closure, seal and charge.
- Volumes are estimated based upon regional offset data.

LOGNORMAL DISTRIBUTION								
FORMATION	Unrisked Original Gas In Place (Bcf)				Unrisked est. Recoverable Gas (PJ)			
	Low	Mid	Pmean	High	Low	Mid	Pmean	High
Waarre Gas	47.40	141.00	202.00	419.00	23.40	65.80	91.79	193.80
					Estimated Rec. Condensate (Mill Bbl)			
Waarre Cond					0.59	1.67	2.11	4.88

RISK ASSESSMENT		
Risk	Geological (Pg)	
Closure	95%	
Reservoir	95%	
Seal	80%	
Charge	100%	
Total	72%	Chance of Success



APPENDIX

CONTENTS:

- The Otway Basin
- Infrastructure nearby
- The Prospective Otway Basin
- History of PEP 169
- Terms

THE OTWAY BASIN

KEY PRODUCTIVE RESERVOIRS

- Three Waarre Sandstones (A, B & C)
- High porosity (20 – 25%) and permeability (1-10 Darcy)

SECONDARY RESERVOIRS

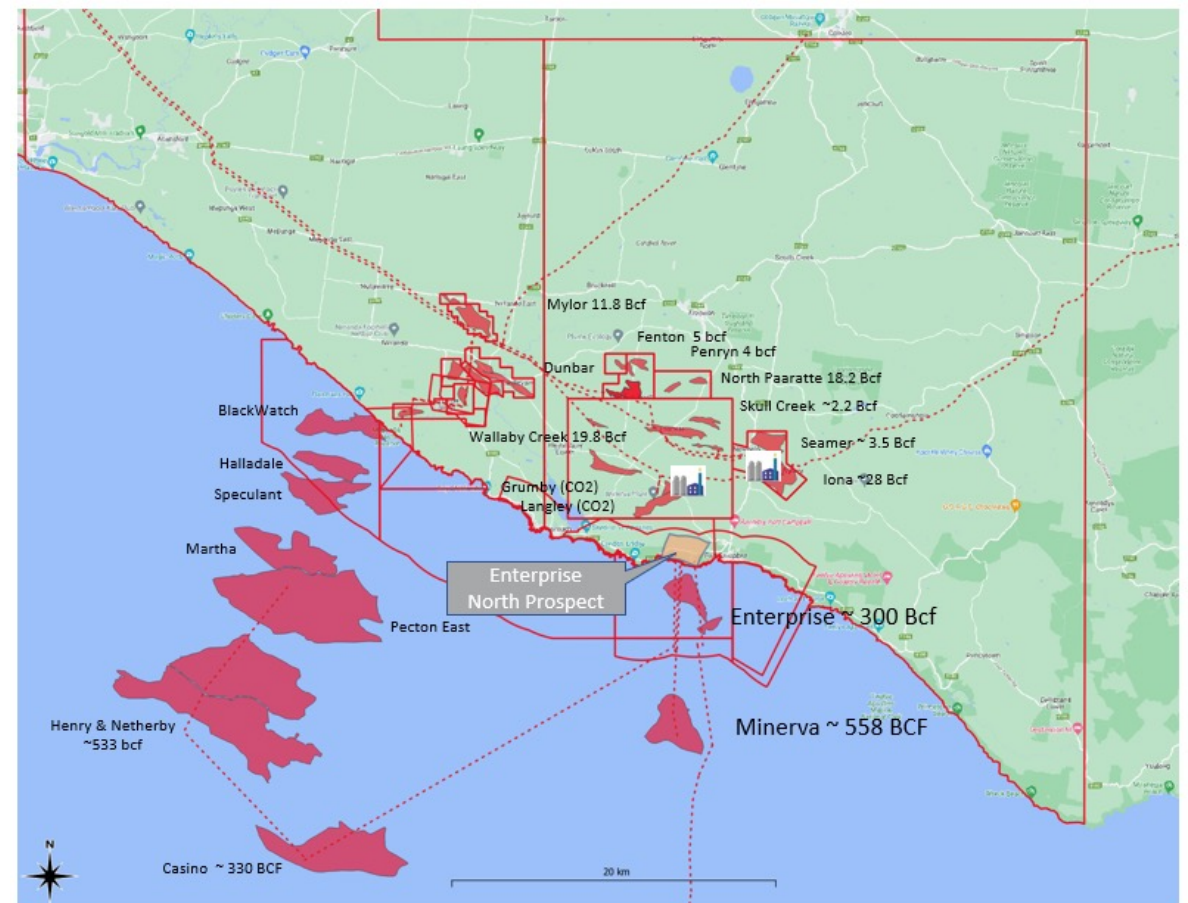
- Pebble Point Sandstone
- Heathfield Sandstone (Eumeralla Fm)

GAS STORAGE FACILITIES

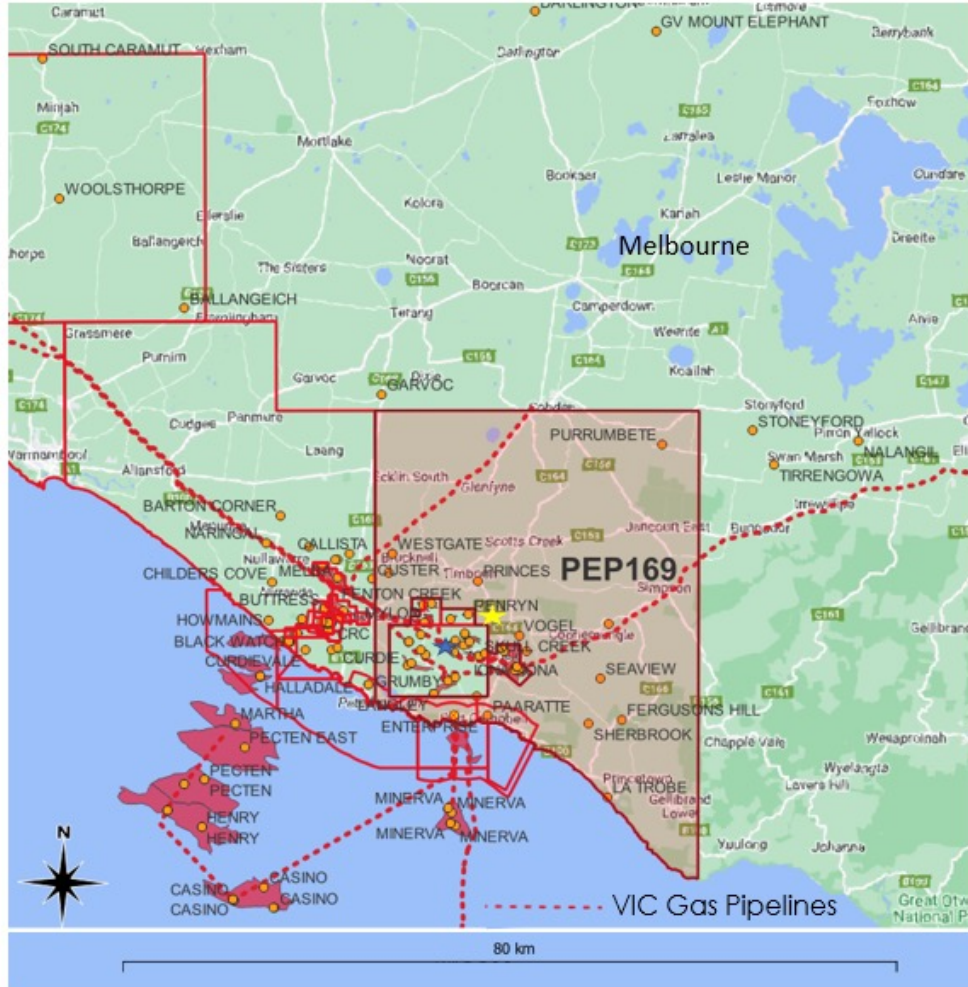
- Iona Gas Storage (26PJ)
- North Paaratte Gas Storage (18.2PJ)
- Wallaby Creek Gas Storage (19.8 PJ)

GAS PROCESSING PLANTS

- Otway Gas Plant (Beach Energy) (205 TJ/d Capacity)
- Minerva Gas Plant (Cooper Energy) (150 TJ/d Capacity)



VICTORIAN GAS AN EXTENSIVE LOCAL PIPELINE NETWORK



CURRENT NEARBY GAS PLANT CAPACITY ~355TJ/d

- **Otway Gas Plant (205TJ/d)**
 - Current throughput approx. 190TJ/d
 - (Beach Energy) ★
- **Athena Gas Plant (150TJ/d)**
 - Current throughput approx. 28TJ/d
 - (Cooper Energy - Mitsui) ★

2 plants to potentially receive Enterprise North gas. Both plants are operating at approximately 218 TJ/day, 137 TJ/day under capacity.

SOURCE: AEMO 2022 Victorian gas planning report update Cooper energy Quarterly Report – Amended 27 January 2022

HISTORY OF PEP 169 ACREAGE

ARMOUR ENERGY 51% OPERATOR | LAKES BLUE ENERGY 49%

2007: PEP 169 Awarded to Lakes Blue Energy, Formally Lakes Oil (ASX: LKO)

2012: Armour Energy (ASX: AJQ) farmed-in to PEP169 earning 51% ownership and operatorship after drilling Moreys 1 (Discovery, uncommercial)

2017: Onshore drilling moratorium implemented by Victorian government

2020: July onshore drilling moratorium ends

Beach Energy drills Enterprise 1 offshore (2P 161 PJ, 4 MMbbl condensate recoverable)*

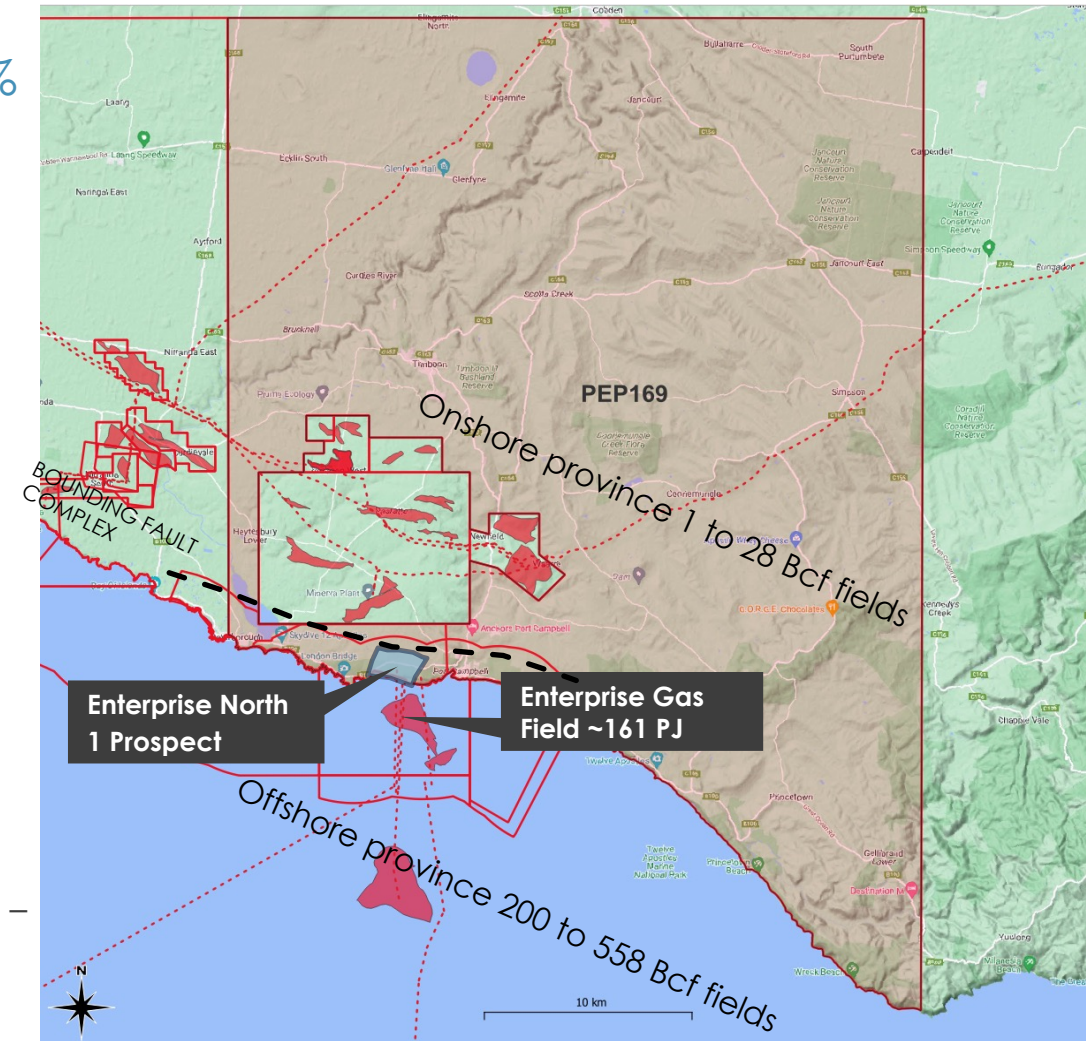
- Enterprise 1 targeted a fault bounded closure approx. 3.2km from its surface location
- Enterprise 1 structure potentially spills into a larger fault bounded structure lying within PEP 169

2021: July onshore gas drilling restarted in Victoria

2022: Armour / Lakes Work Program

- New transition seismic demonstrates potential target 'Enterprise North' onshore – analogue of Enterprise Gas field
- Additional Lead – 'Scimitar' west of Enterprise North requires further evaluation

*SOURCE BEACH ENERGY ASX Announcement 15 Feb 2021



TERM	DEFINITION
AEMO	Australian Energy Market Operator
Bcf	Billion cubic feet
Ft	Feet
GJ	Giga Joule (1 thousand million (10^9) Joules)
Km	Kilometres
LPG	Liquid petroleum gas
MJ/SCF	Mega joules per standard cubic feet – energy content in a cubic foot volume
m	Meters
MM scfd	Million standard cubic feet per day
NPV10	Net Present Value at 10% discounted rate
OGIP	Original Gas In Place
PJ	Peta Joules (one billion (10^5) Joules)
PEP	Petroleum Exploration Permit
1H 2023	Prior to 1 July 2023
TJ	Terra Joules (1 million (10^{12}) Joules)
TJ/d	Terra Joules per day
TVD	True Vertical Depth
TVDSS	True Vertical Depth Sub-Sea
VIC	Victoria



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