A scenic view of a lush, green mountain landscape. In the foreground, there are dense tropical plants and trees. In the background, a large, forested mountain rises, with a body of water visible in the distance under a clear sky.

East Seram PSC Opportunity

High impact, under-explored fold belt & exciting shallow Plio-Pleistocene prospects



Kim Morrison

Exploration Manager

Lion Energy Ltd

Seapex Farmout Forum

March 6 2023

View from Manusela National Park lookout toward Sawai Bay

Important notice and disclaimer



Forward-looking statements

Certain statements contained in this presentation, including information as to the future financial or operating performance of Lion and its projects are forward-looking statements. Such forward-looking statements:

- should or can generally be identified by the use of forward looking words such as “anticipate”, “believe”, “expect”, “forecast”, “estimate”, “will”, “could”, “may”, “target”, “plan” and other similar expressions within the meaning of securities laws of applicable jurisdictions, and include earnings guidance and statements of intention about future matters and the outcome and effects of the equity raising. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance are also forward looking statements;
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Prospective Resources

Prospective Resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective Resources have both an associated chance of geologic discovery and a chance of development. Prospective Resources are further categorized in accordance with the range of uncertainty associated with recoverable estimates, assuming discovery and development, and may be sub-classified based on project maturity. Further exploration, appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

Competent Persons Statement: Qualified Petroleum Reserves and Resources Evaluator

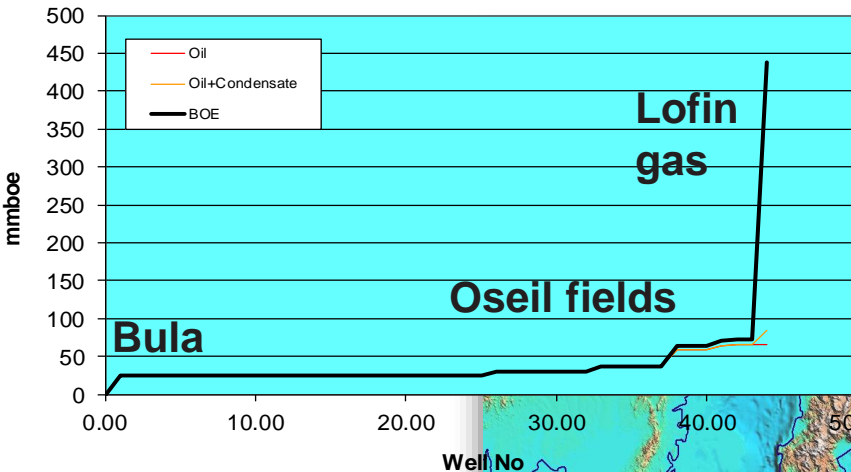
Pursuant to the requirements of the ASX Listing Rules Chapter 5, the technical information, reserve and resource reporting provided in this presentation are based on and fairly represent information and supporting documentation that has been prepared and/or compiled by Mr Kim Morrison, Exploration Manager of Lion Energy Limited. Mr Morrison holds a B.Sc. (Hons) in Geology and Geophysics from the University of Sydney and has over 30 years' experience in exploration, appraisal and development of oil and gas resources - including evaluating petroleum reserves and resources. Mr Morrison has reviewed the results, procedures and data contained in this website. Mr Morrison consents to the release of this report and to the inclusion of the matters based on the information in the form and context in which it appears. Mr Morrison is a member of AAPG.

Conversion from gas volume to barrels of oil equivalent (BOE) in this document is based a BOE conversion ratio of 6 mcf:1 bbl.

East Seram PSC region contains prolific hydrocarbon provinces

Seram Basin proven area (oil production, major gas discovery), plenty of running room

Seram Basin creaming curve by wells



Salawati Basin

500 mmbbl oil
0.8 TCF gas
135 mmbbl condensate
220 exploration wells

Bintuni Basin

50 mmbbl oil
20 TCF gas
~100 mmbbl condensate
65 exploration wells

Papuan/Aure Fold belt

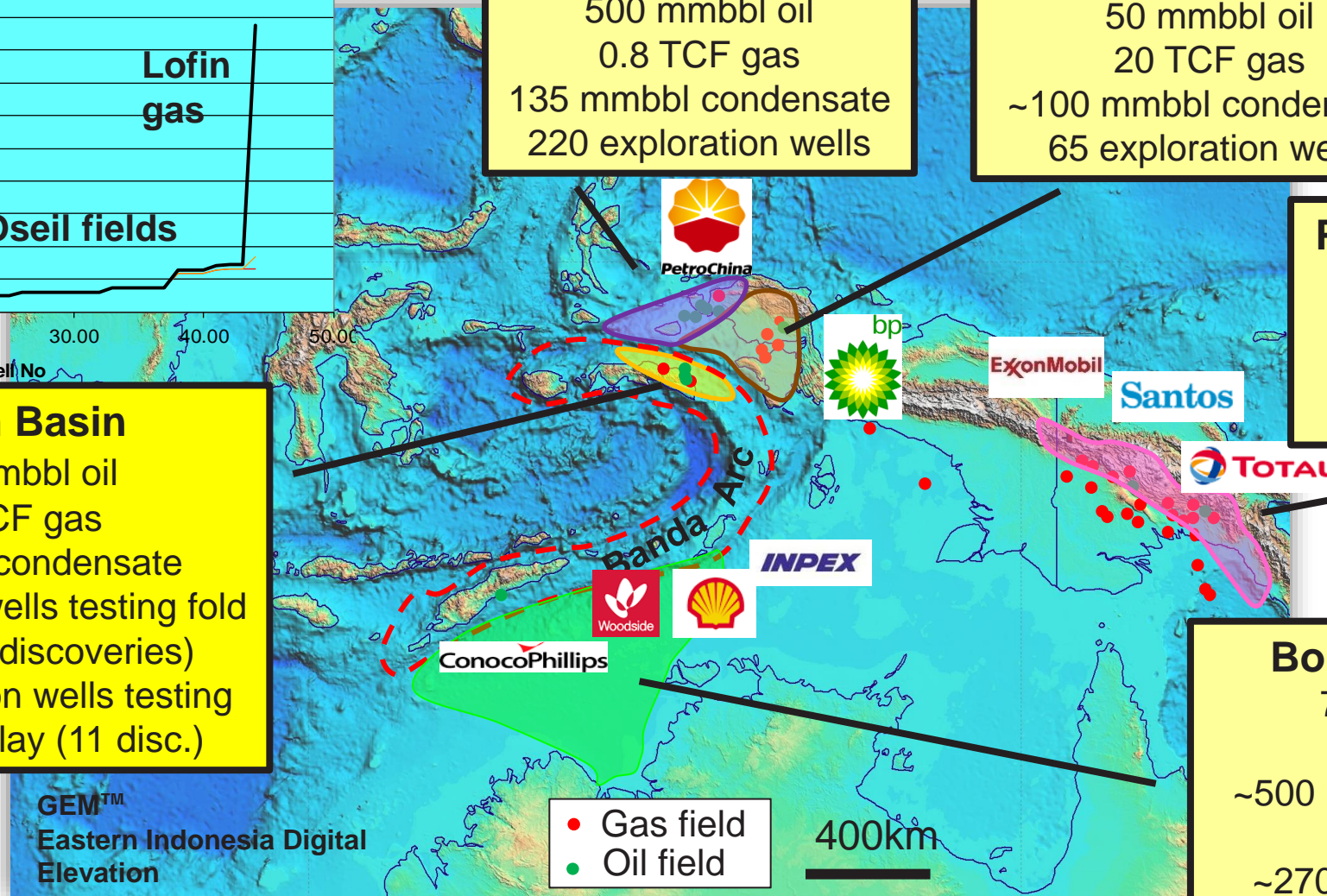
700 mmbbl oil
30 TCF gas
400 mmbbl condensate
~100 exploration wells

Seram Basin

~60 mmbbl oil
1.5 TCF gas
15 mmbbl condensate
9 exploration wells testing fold belt play (6 discoveries)
~30 exploration wells testing shallow oil play (11 disc.)

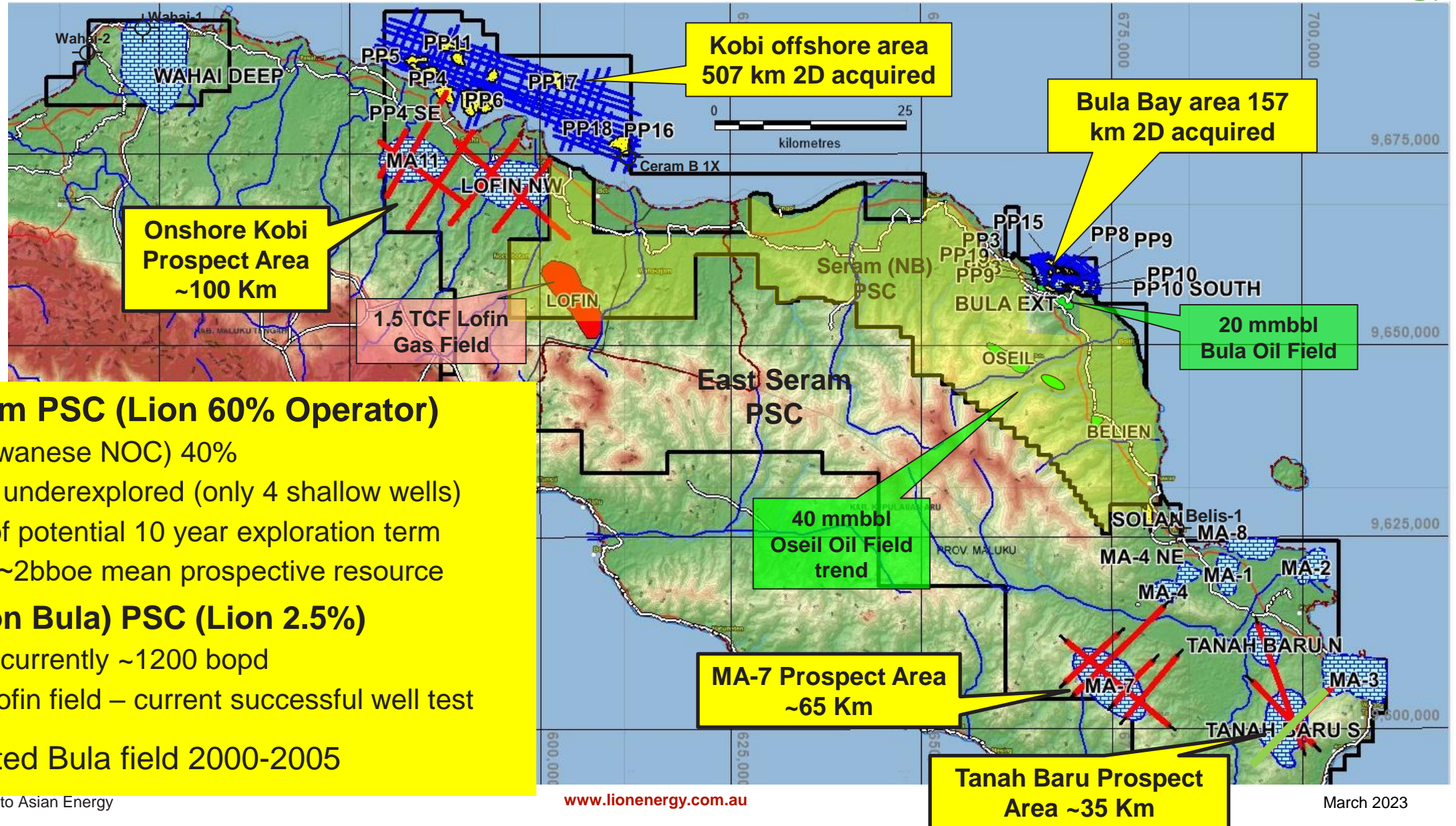
Bonaparte Basin

750 mmbbl oil
35 TCF gas
~500 mmbbl condensate
60 fields
~270 exploration wells



East Seram PSC - Partner sought to help fund exploration drilling

2020 offshore & 2022 onshore 2D (being processed) delineate highly attractive portfolio



East Seram PSC (Lion 60% Operator)

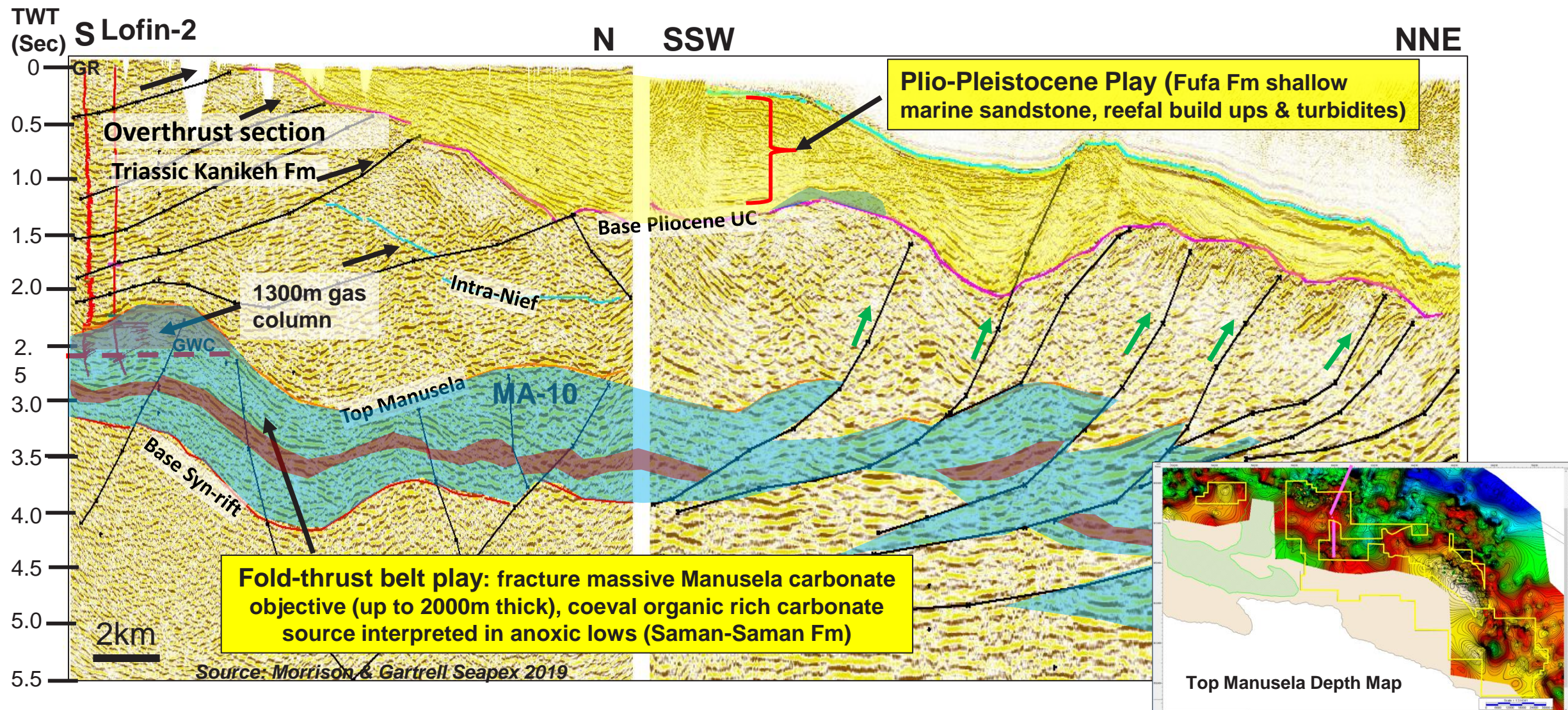
- OPIC (Taiwanese NOC) 40%
- 4457 km², underexplored (only 4 shallow wells)
- In year 5 of potential 10 year exploration term
- 27 P&L's: ~2bboe mean prospective resource

Seram (Non Bula) PSC (Lion 2.5%)

- Oseil field currently ~1200 bopd
- 1-2 TCF Lofin field – current successful well test

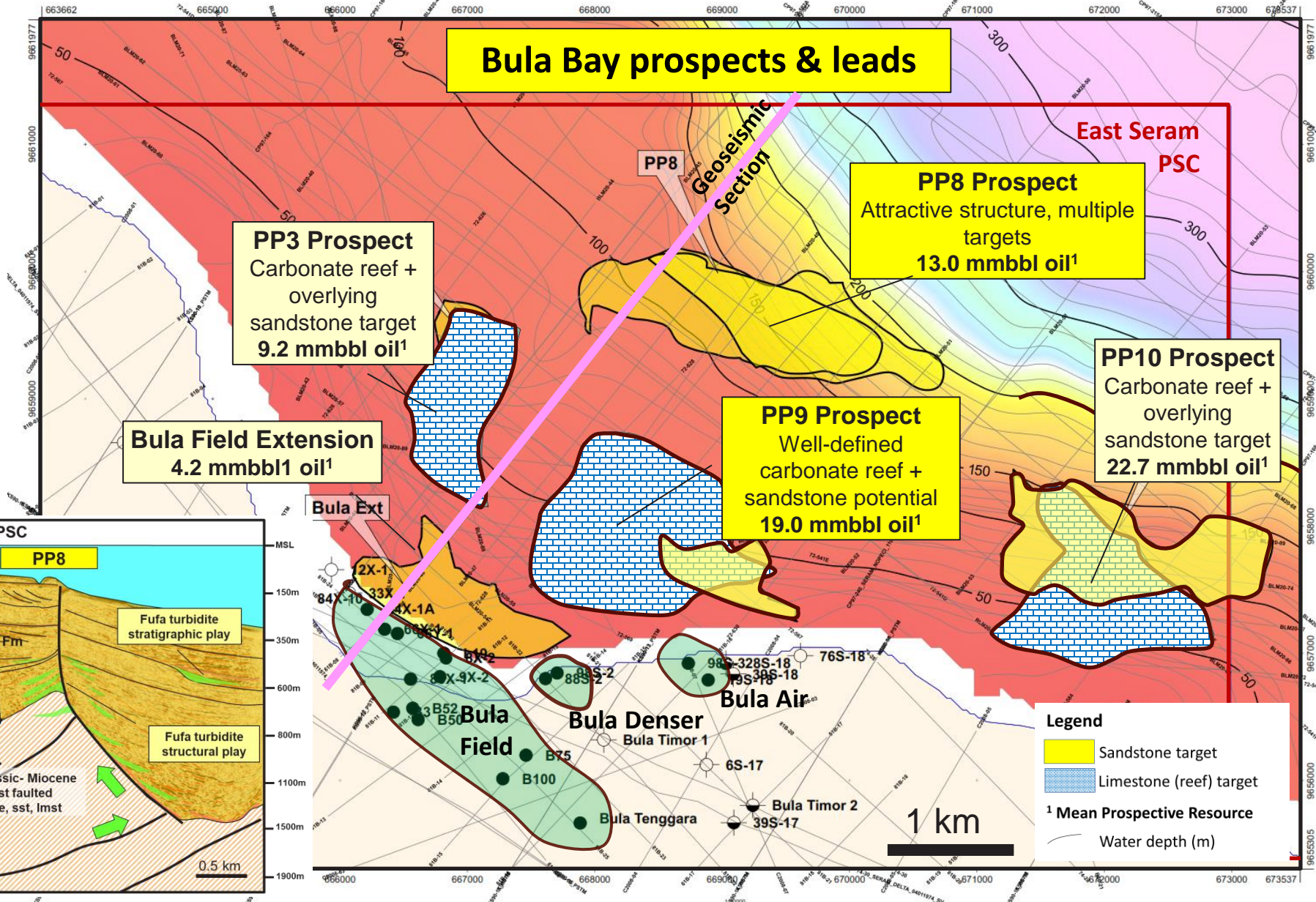
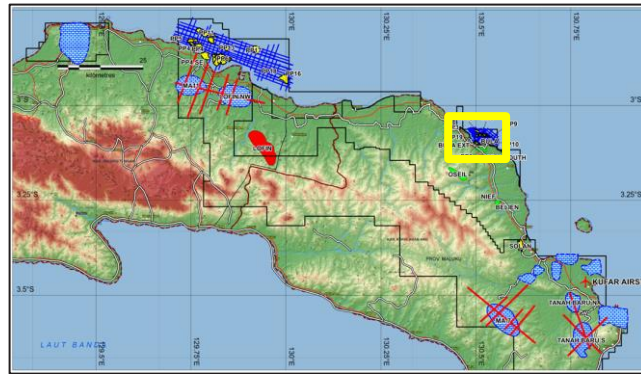
Lion operated Bula field 2000-2005

World-class fold belt structures, emerging Plio-Pleistocene play, Multiple targets with abundant evidence of present hydrocarbon charge



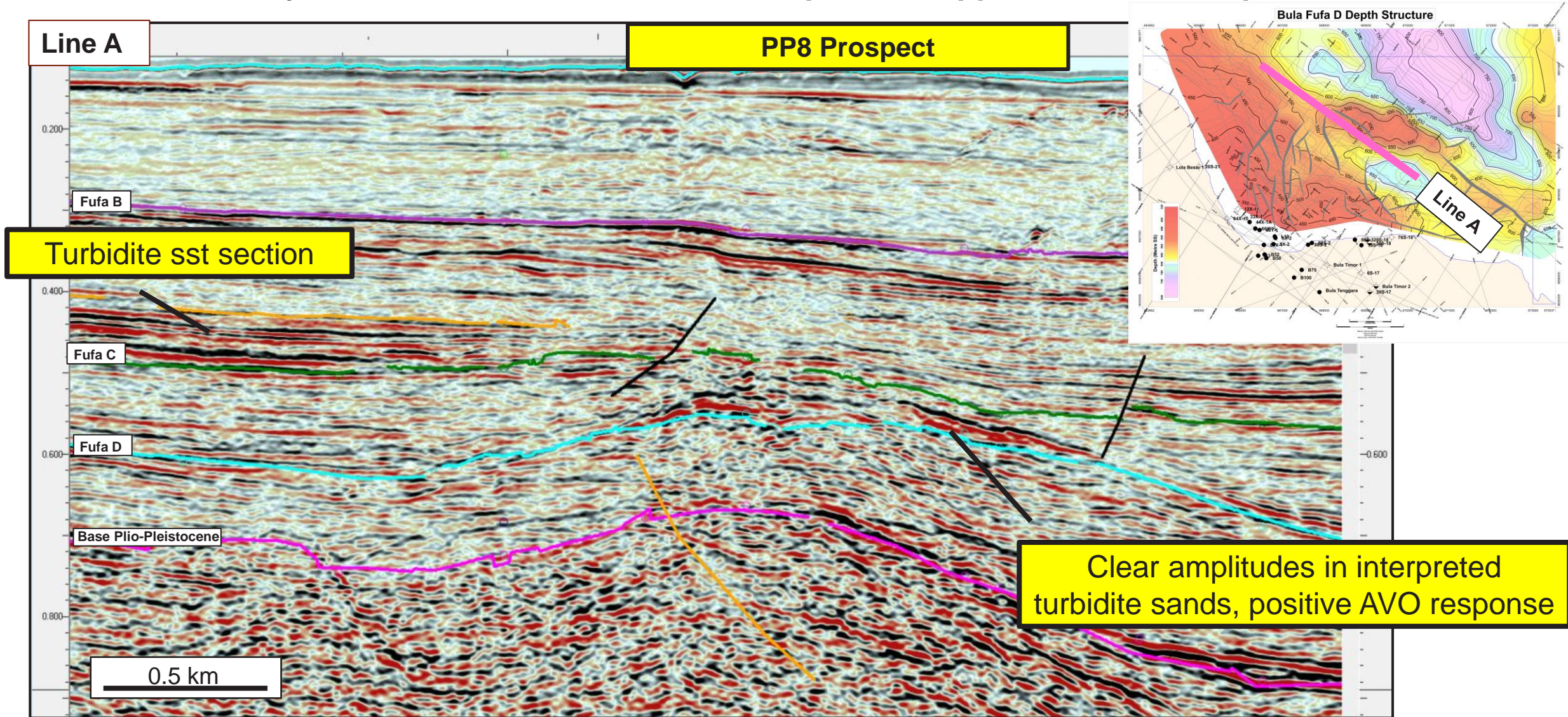
Prospects in Bula Bay area

2020 high-resolution data on 0.5km grid has uncovered highly attractive structures



Bula Bay NW-SE Line over PP8 Prospect

PP8 faulted 4-way anticlinal structure has clear amplitude support and AVO response

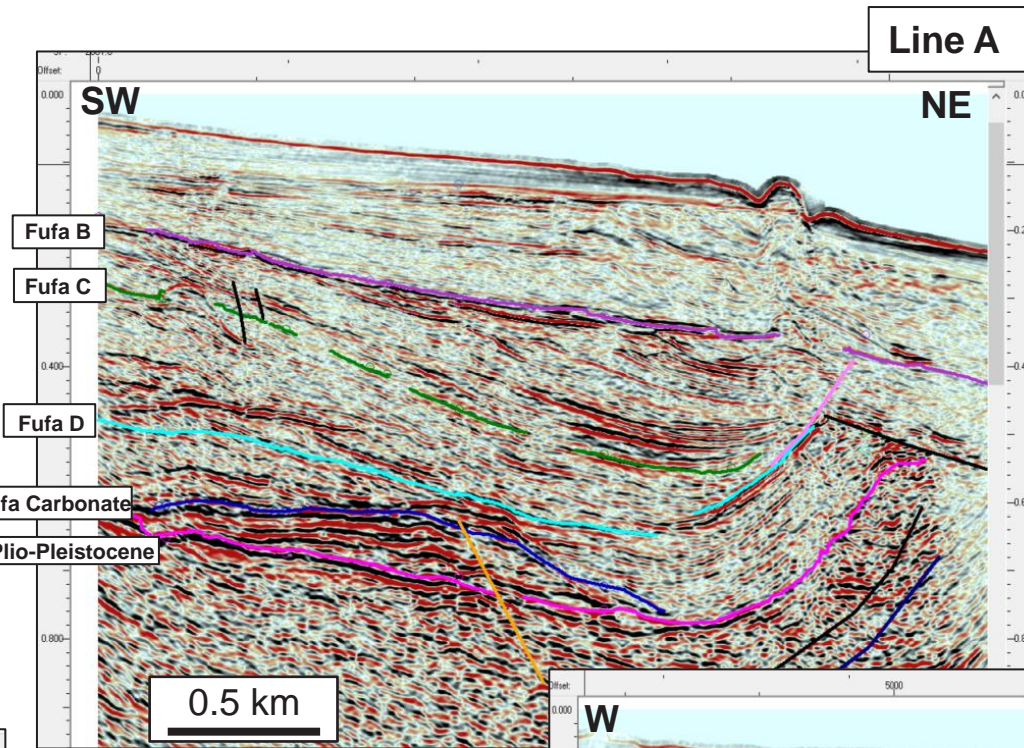
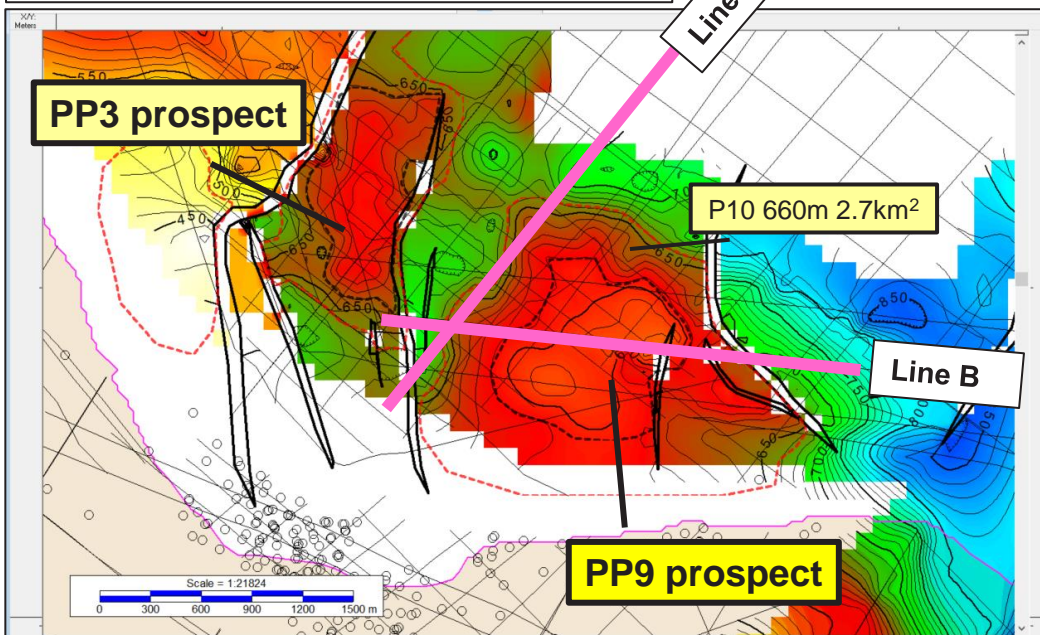


PP9 Prospect: 19mmbo¹

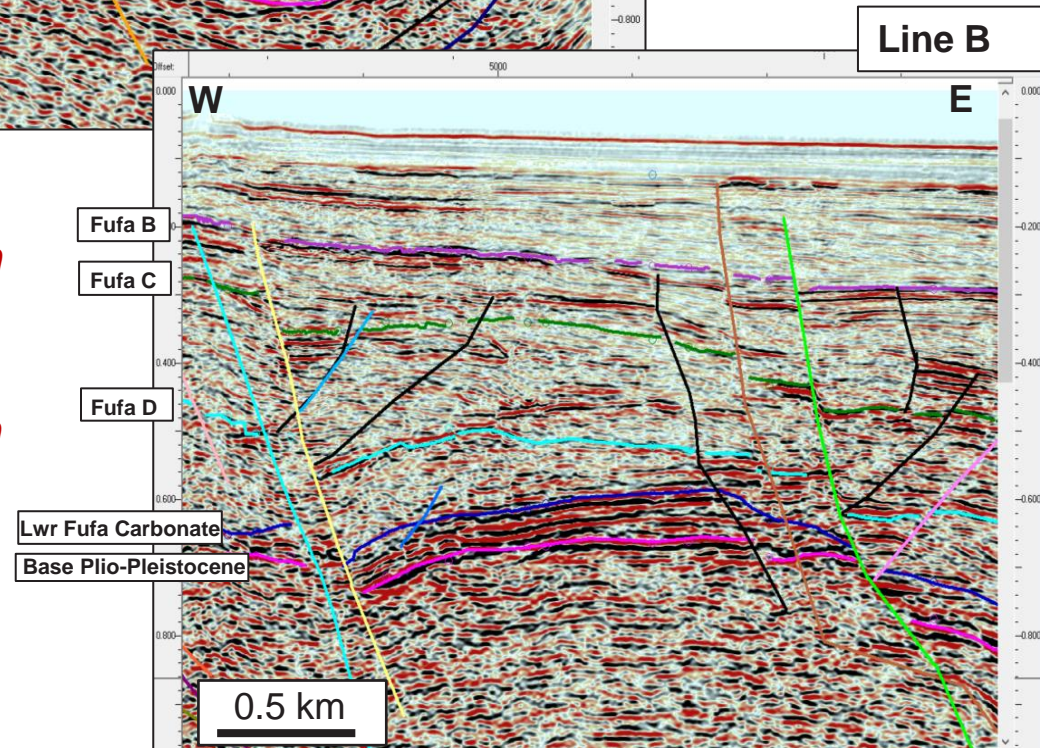
- Newly identified, well defined Plio-Pleistocene reefal buildup up to 2.7 km² with 80m relief
- Amplitudes in overlying Fufa C/D turbidite sandstones fault block
- Water depth 20-60m
- Reservoir depth ~600 mss

¹ mean prospective resource

Fufa Lower Carbonate Depth Map

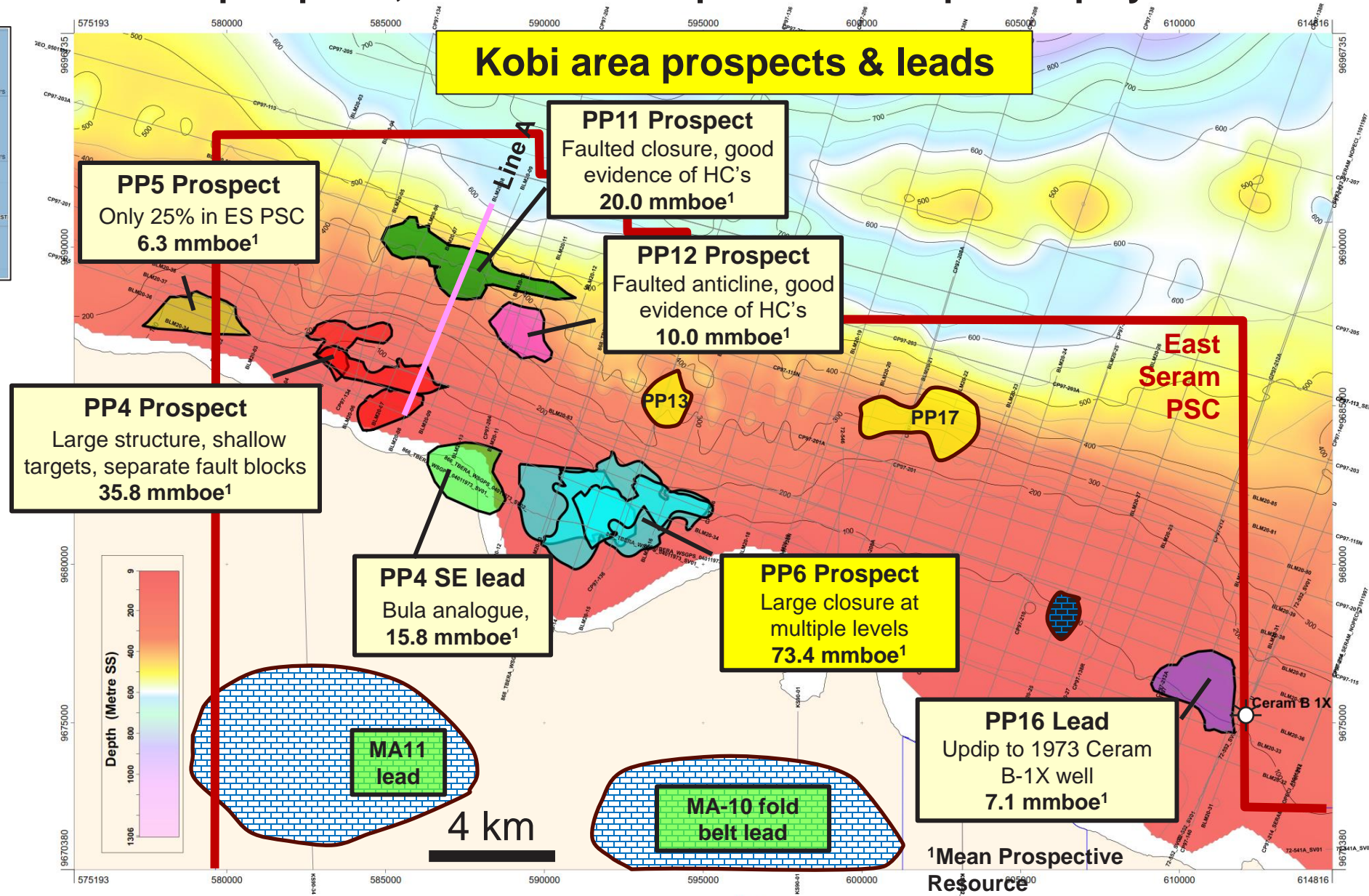
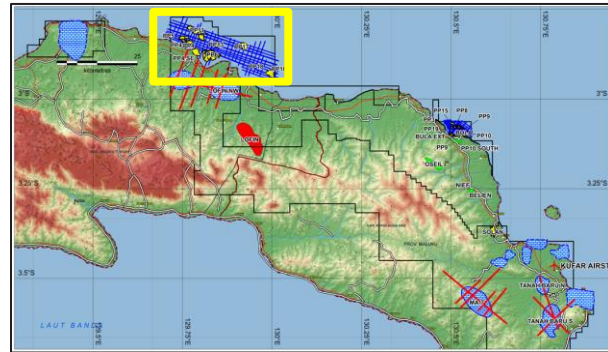


**Prospect can
be drilled from
onshore
deviated well
for ~USD 4mm**



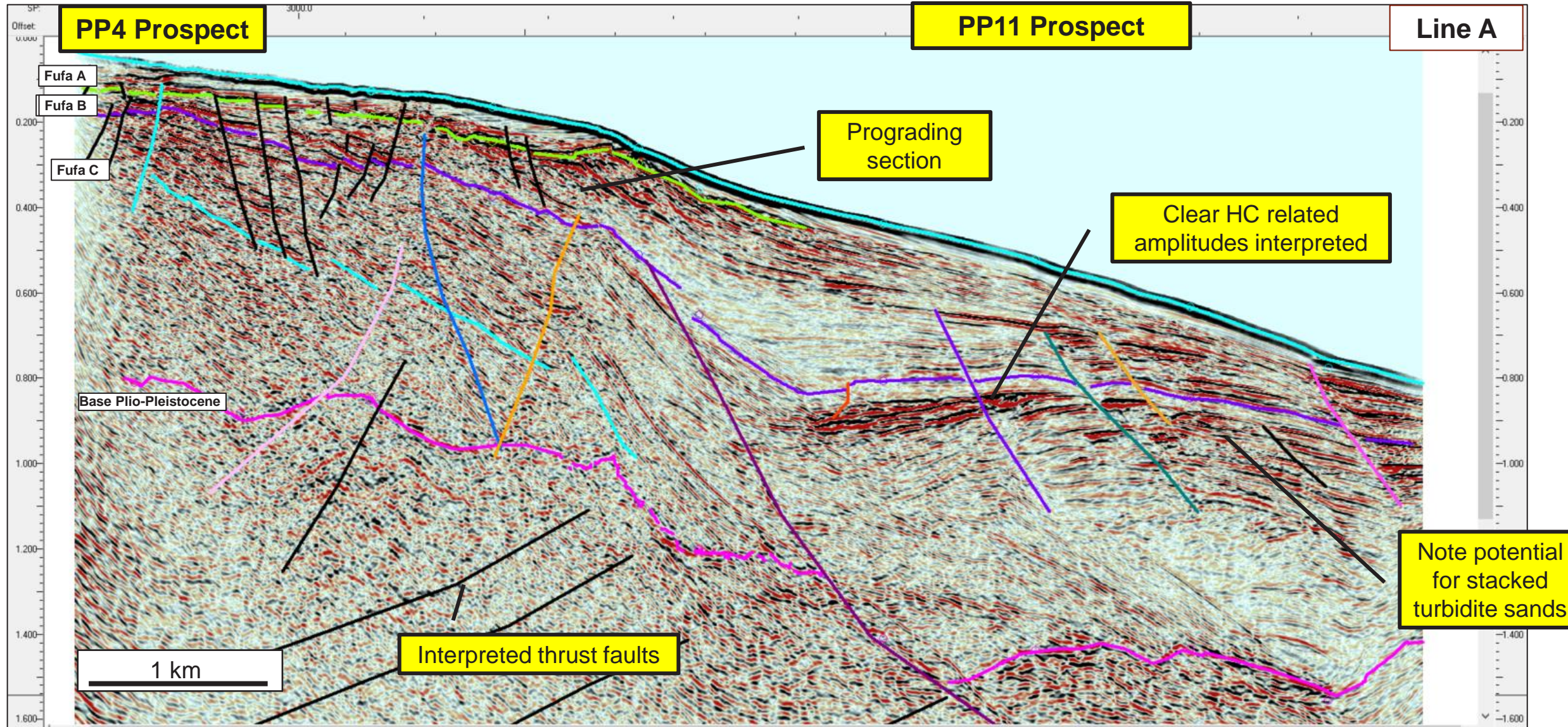
Prospects in offshore Kobi area

2020 data delineates shallow marine prospects, 20km² PP6 Prospect & DW amplitude play



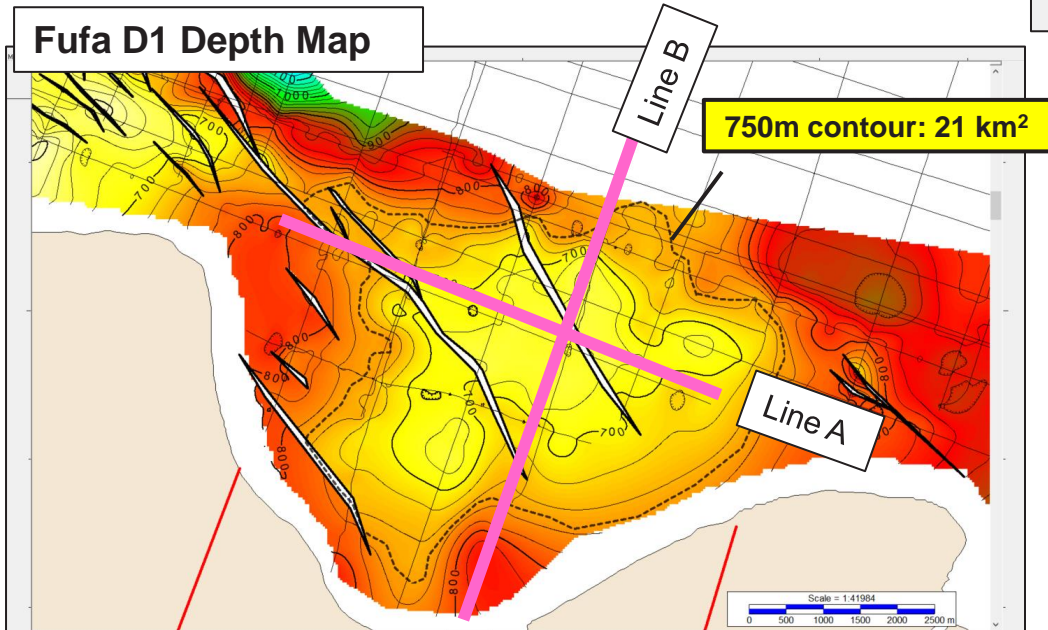
Kobi area NNE-SSW seismic line

Faulted shallow marine traps and deeper water, amplitude supported trend



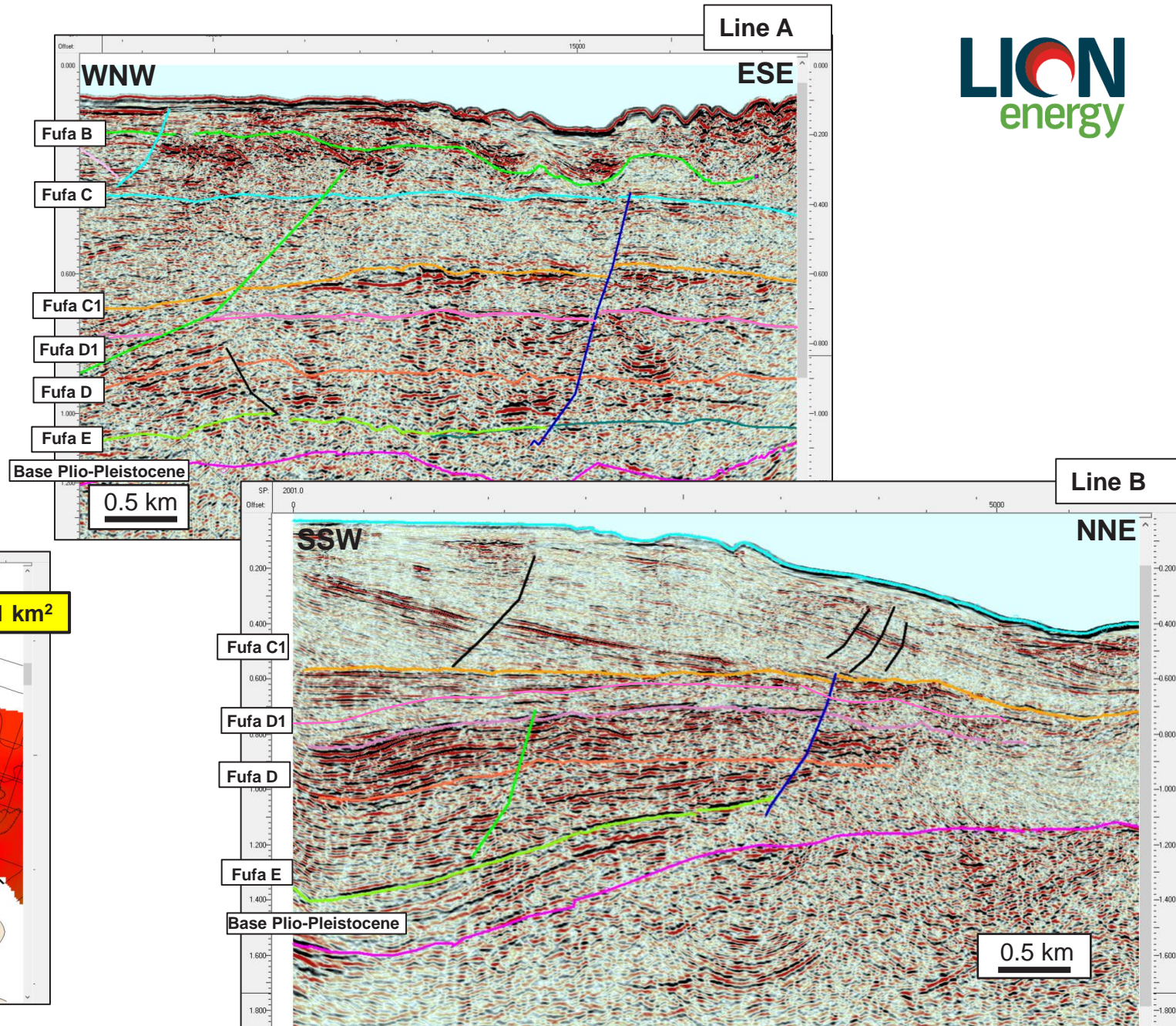
PP6 Prospect: 73 mmboe¹

- 4-way dip closure up to 20 km² , 4 potential zones & 100m+ relief
- Good amplitudes response over crest of feature
- Channelised turbidite reservoir development
- Water depth: 50-150m
- Objective interval 550-1200 mss



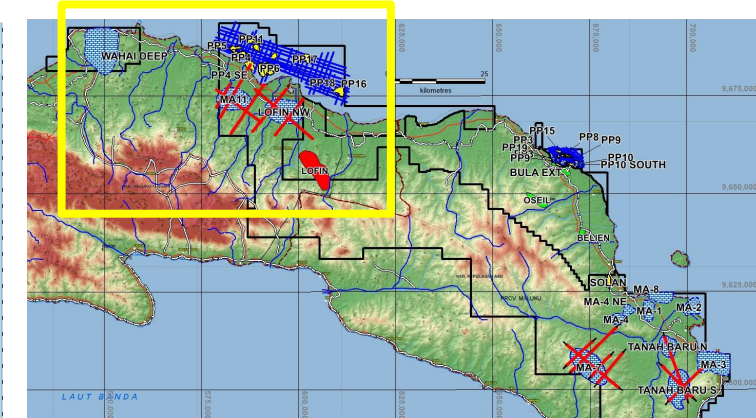
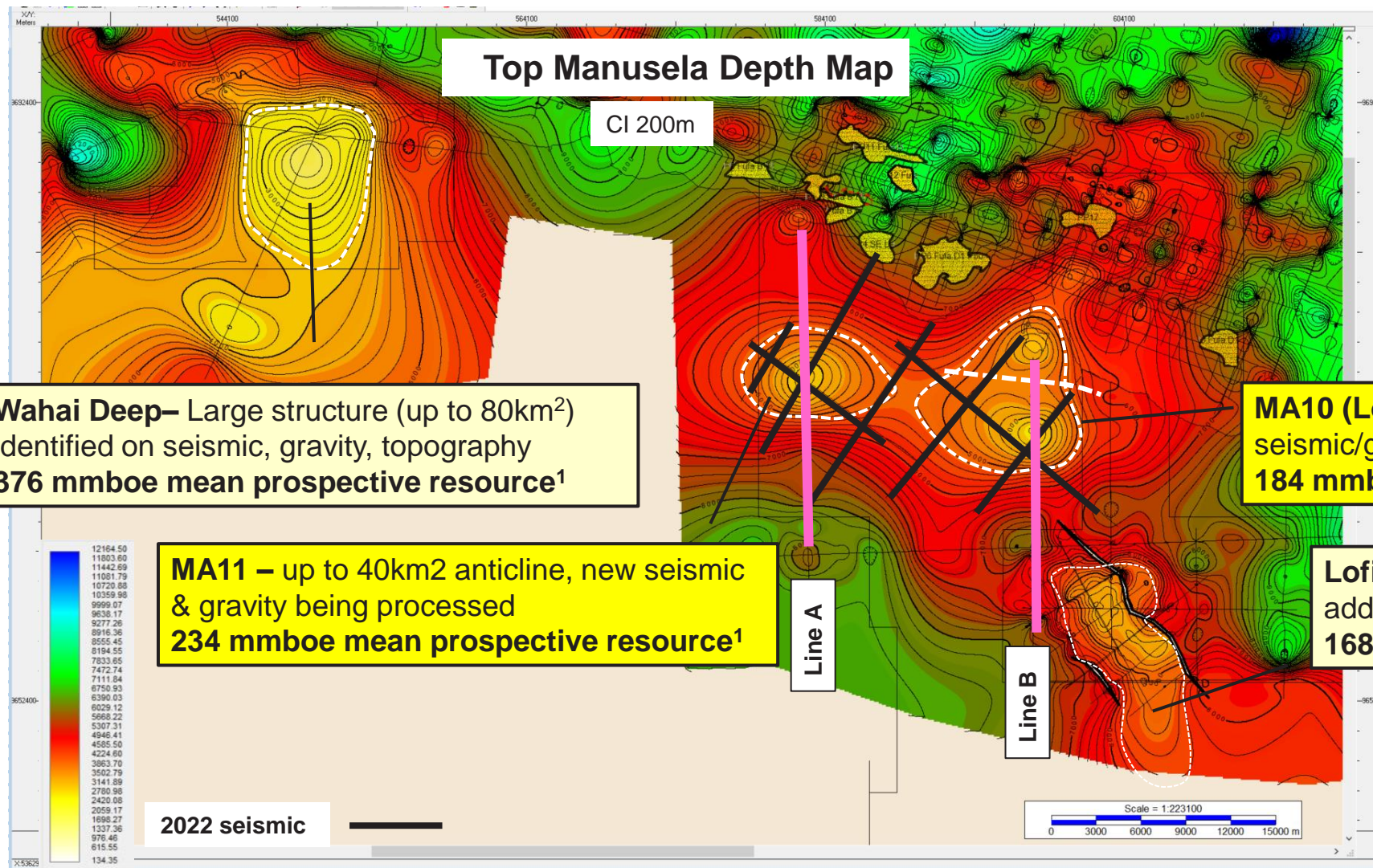
¹ mean prospective resource

A New Approach to Asian Energy



Onshore Kobi area - large fold belt structures near Lofin Gas Field

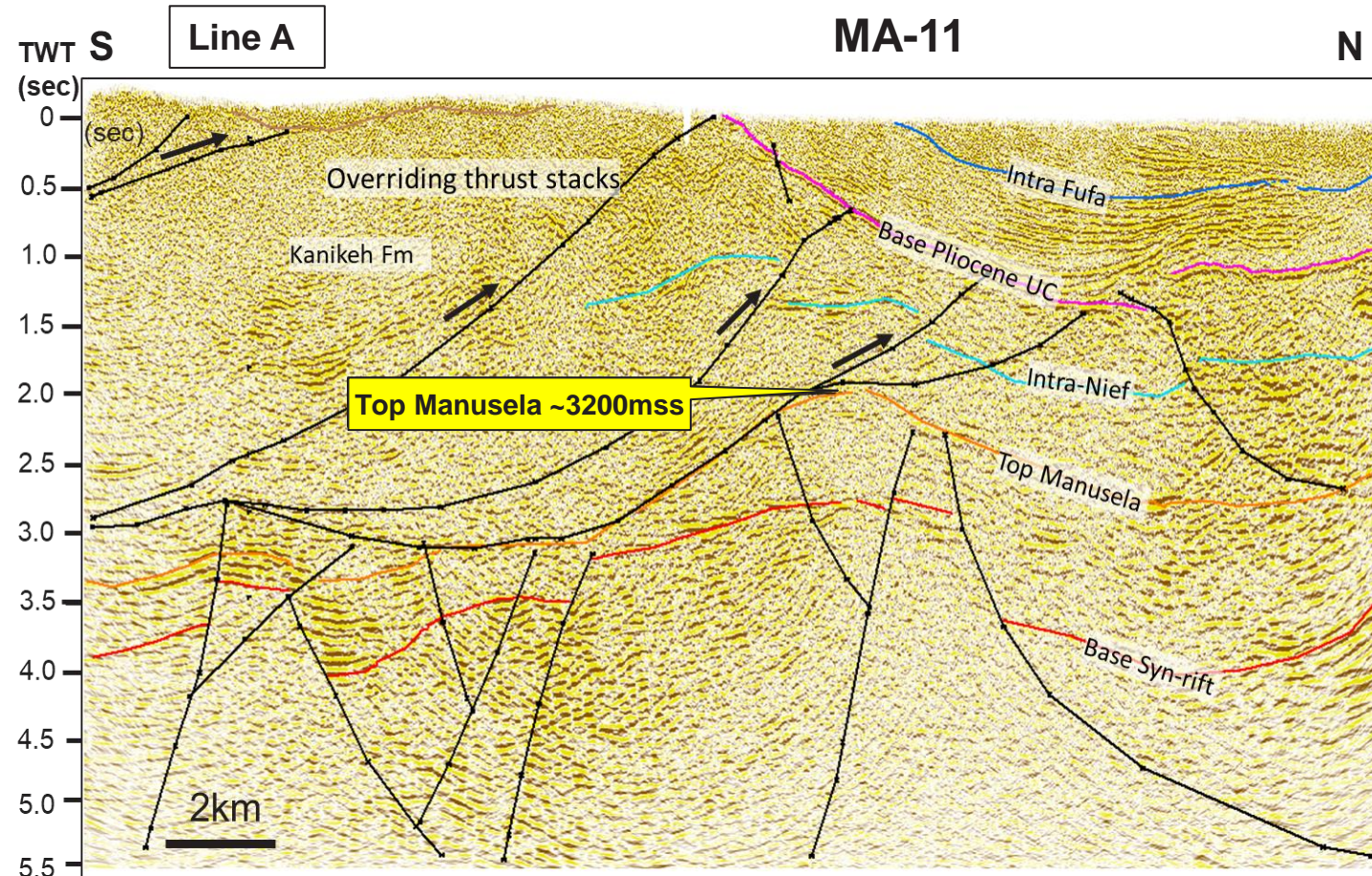
Impressive structures defined by seismic, surface mapping, gravity & topography,
oil & gas seeps in area



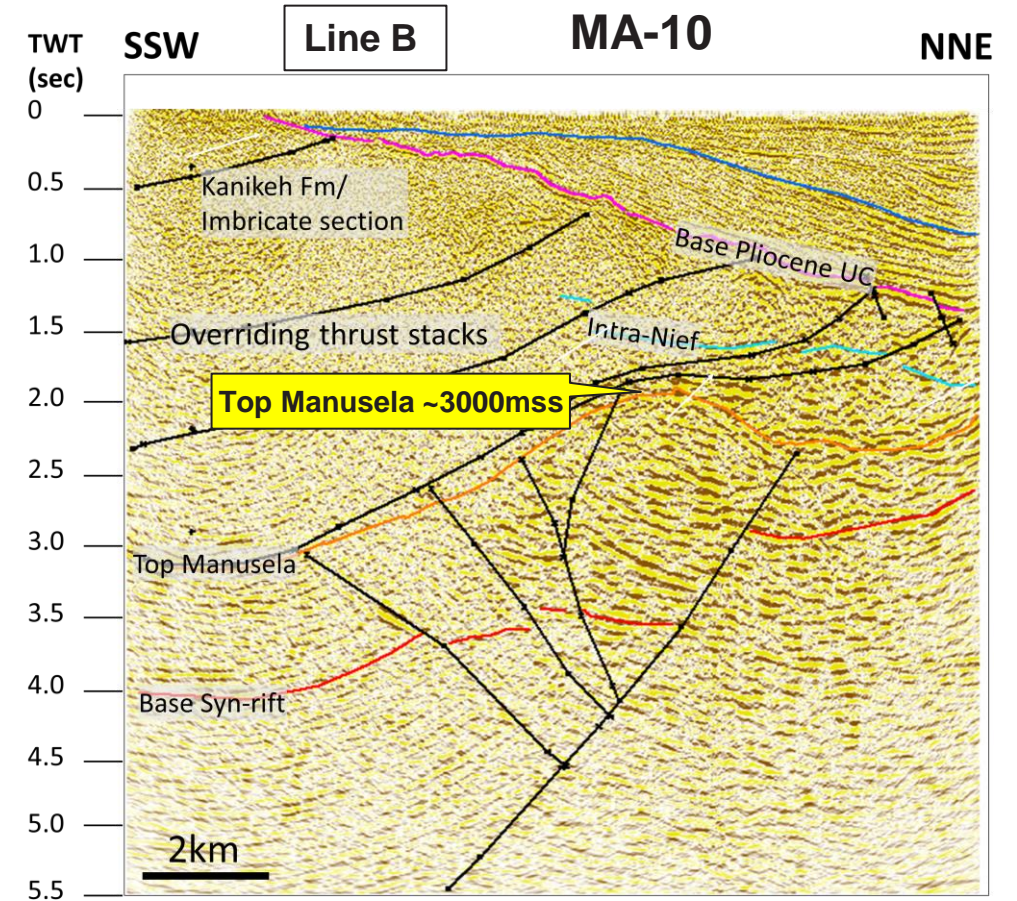
¹Prospective Resource: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons. P90-P10 range given.

Onshore Kobi: key leads analogous to Lofin but shallower depth

2022 seismic & gravity program (7 lines) cover key leads, preliminary results positive



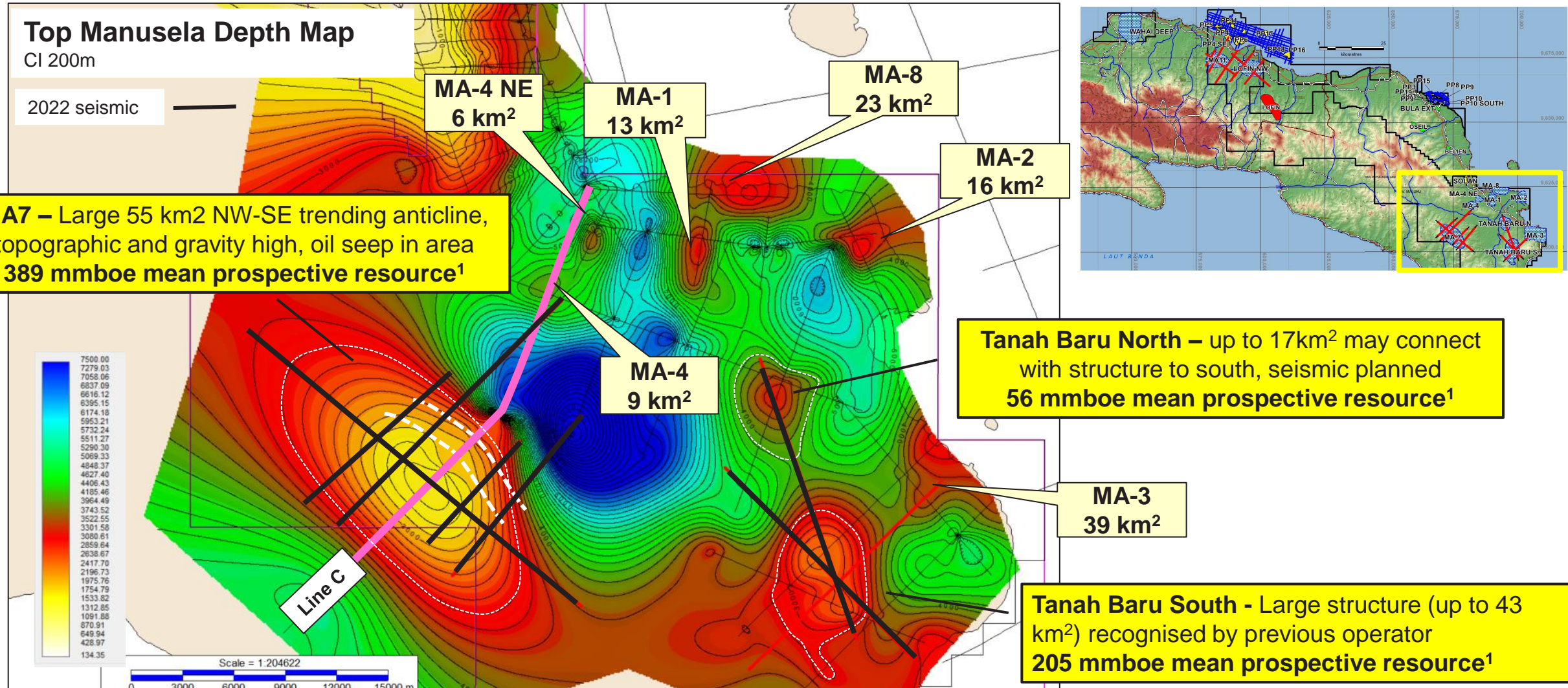
MA-11 Lead – up to 42 km² (+)
Prospective resource¹ 43 - 520 mmboe (P90-P10)



MA-10 Lead ~40 km²
Prospective resource¹ 39 - 417 mmboe (P90-P10)

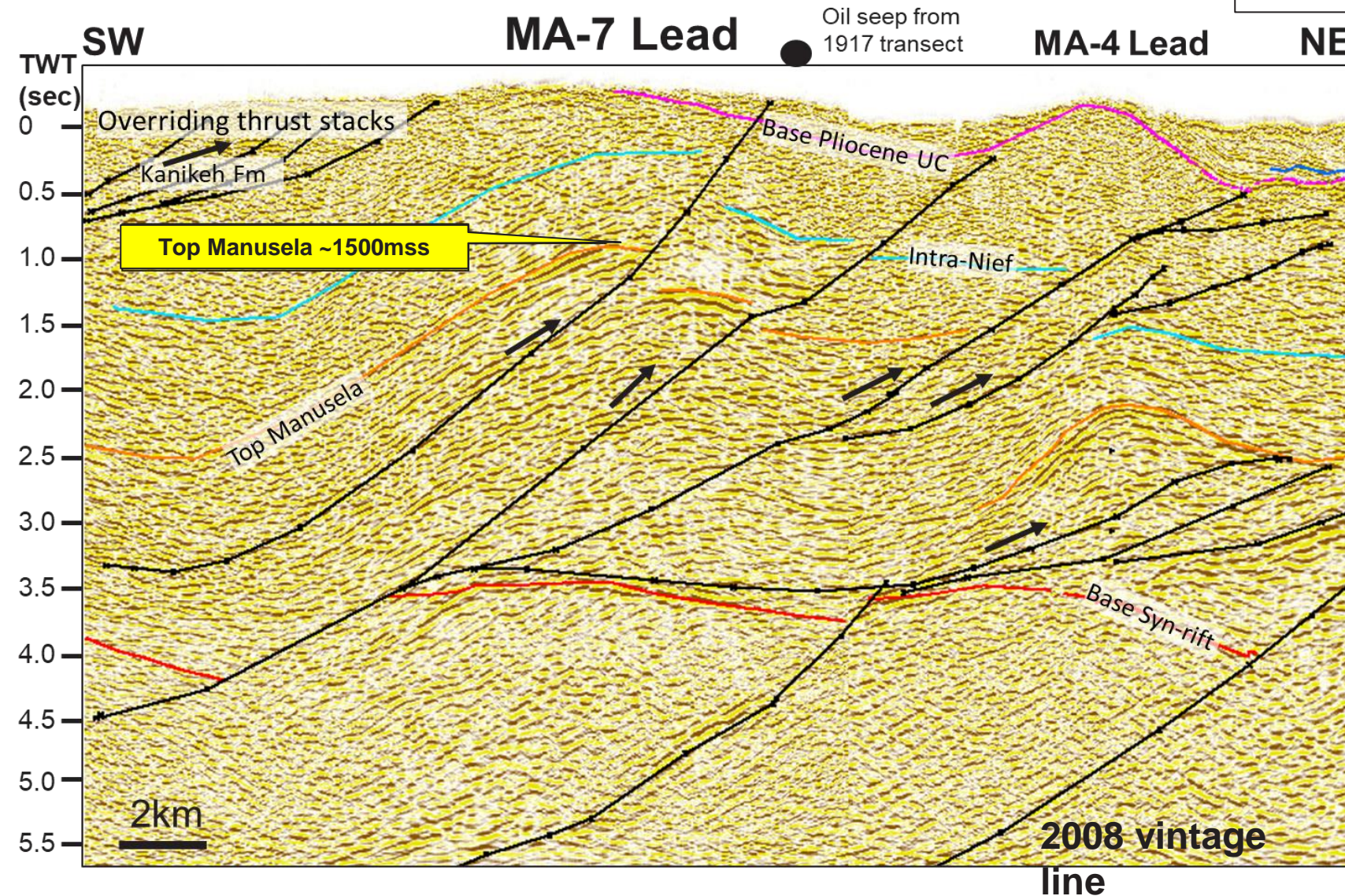
SE Area, large fold belts structure, analogues with Oseil oil field

Impressive structures defined by seismic, surface mapping, gravity & topography



SE Area of Seram fold belt play: MA-7 is standout structure

2022 seismic and gravity program being processed



**MA-7 lead –
up to 55 km²
Prospective resource¹
45 – 1006 mmboe
(P90-P10)**

**Gravity & topographic
high, seeps in area
5 new lines confirm
structure**

¹Prospective Resource: 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. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons. P90-P10 range given.

East Seram Investment Value Proposition

Up to 35% working interest available

New 2D over major onshore prospects available for review April/May 2023



Proven Basin, Immature Plays with High Prospectivity

- Proven, underexplored fold-belt: new 2022 2D data delineates major prospects
- 2020 marine seismic has uncovered exciting new Plio-Pleistocene prospects
- Impressive P&L portfolio exceeding 2 bboe (mean Prospective Resource)

Attractive Fiscal Terms Operating Flexibility

- New Gross Split PSC with light handed regulation and operating flexibility, regulator approves work programs, not budgets or procurement
- Contractor take after all tax at least 48%

Lion Data, Knowledge, & Insight Advantage

- Unrivalled Seram data & knowledge from long history in Seram E&P
- Strong relationships: experienced Indonesian team

Established Oil Production & Export Infrastructure

- Bula and Oseil oil production facilities with capacity up to 21,000 bopd, significant ullage

Low Commitments & Low Cost Flexible Program

- Modest signature bonus (US\$0.5mm) & performance bond (US\$1.5mm) - paid
- Firm work commitment met (664 km marine 2D/200 km land 2D).
- Up to 5 yrs left on exploration PSC, 20 yr production licence on discovery

Thank you!

**For more information or to request a detailed presentation, please contact Kim Morrison
kmorrison@lionenergy.com.au**