



Company update on Indonesian assets

Key highlights:

- Lion updates market in a presentation on its East Seram PSC, Indonesia oil and gas exploration contract.
- The recent marine seismic has allowed Lion to mature a material, deep and diverse portfolio of exploration opportunities attractive to investors seeking exploration exposure.
- Lion is planning onshore seismic operations in 2022 largely funded by partner, and strategically planned to mature the existing material drilling portfolio to "ready to drill" status.
- East Seram PSC offers investors high impact oil and gas drilling prospects, attractive fiscal terms and access to existing infrastructure.
- Lion is positioned for a carried exposure to a high impact oil and gas exploration drilling.
- Onshore, Lion has some of the largest undrilled structures in Southeast Asia together exceeding 1,100 mmboe's¹ on a P50 basis.

¹ Prospective 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. The prospective resource numbers shown are unrisks.

Lion Energy Limited ("Lion" or "Company") is pleased to provide investors with an updated investor presentation on its high impact exploration program on the island of Seram, in East Indonesia.

Lion's Chairman, Tom Soulsby noted "The prospects and leads that have emerged from the marine seismic program have added significant value by maturing a diverse portfolio of world class exploration opportunities. The planned onshore seismic program in 2022 is expected to mature the current portfolio of onshore prospects and leads. Together, the offshore and onshore upgraded portfolio is expected to attract exploration interest from international players. Lion continues to enjoy a two for one carry on its seismic spending and we are excited by our material prospects in the East Seram JV."

ENDS

This ASX announcement was approved and authorised for release by the Board of Directors.

Lion at a glance

- ASX listed oil and gas company with PSC's in Indonesia.
- Focus on conventional oil and gas production and development, appraisal and step out exploration risk opportunities
- Exploring green hydrogen opportunities in Australia
- Net production around 40 bopd from the Seram (Non-Bula) PSC which also contains the 1.5TCF Lofin gas/condensate discovery
- Leveraging synergies in conventional assets and access to both infrastructure and markets
- Executive team and investors with impressive track records for value creation in Asia.

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LION ENERGY LIMITED – Investor update, September 2021

Positioning Lion for carried exposure to high impact exploration drilling



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;
- are based upon a number of assumptions and estimates that, while considered reasonable by Lion, are beyond the control of the Company as they are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies;
- involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements; and
- may include, among other things, statements regarding targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources and anticipated flow rates and are or may be based on assumptions and estimates related to future technical economic, market, political, social and other conditions.

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Prospective Resource¹ Definition: 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.

Prospective resource estimates for individual target levels were calculated probabilistically. For each prospect estimates of key parameters made for low side (P90), best case (P50) and high side (P10). Prospect level resource estimate were from the arithmetic addition of the different targets within a prospect. This means the combined low side estimate may be overly conservative and the high side estimate overly optimistic. The aggregate P90 may be a conservative estimate and the aggregate P10 may be an optimistic estimate due to the portfolio effects of arithmetic summation.

Contingent Resources² Definition are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources have an associated chance of development (economic, regulatory, market and facility, corporate commitment or political risks). These estimates have not been risked for the chance of development. There is no certainty that any portion of the contingent resources will be developed and, if developed, there is no certainty as to either the timing of such development or whether it will be commercially viable to produce any portion of the resources.

Conversion factor of 6 mcf = 1 barrel of oil equivalent (boe)

The Probability of Success (POS) or chance of discovery estimate at the prospect level is shown. It is based on the volume weighted probability of success for all the individual target levels of the prospects. The chance of development is not included and will form part of the economics to be undertaken on individual high graded prospects during 2021.

Shallow (Plio-Pleistocene) Play Prospective Resources as disclosed in Lion’s 16 June 2021 Release.

Fold-belt Play Prospective Resources as disclosed in Lion’s 4 March 2019 Release.

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.

Investment proposition

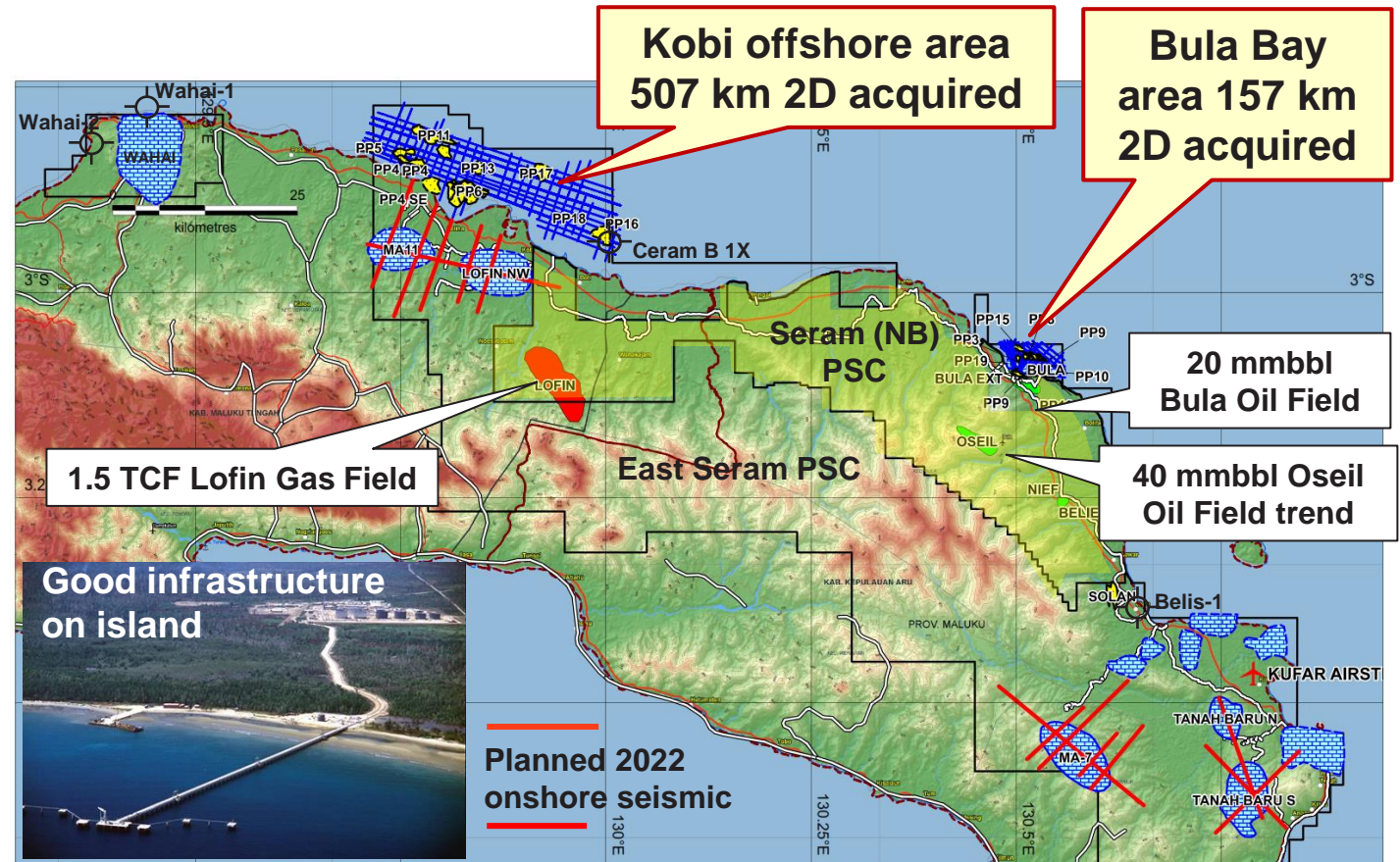
- ✓ Recent marine seismic has allowed Lion to mature a material, deep and diverse portfolio of exploration opportunities attractive to investors seeking exploration exposure.
- ✓ Onshore, Lion has some of the largest undrilled structures in Southeast Asia together exceeding 1,100 mmboe's Prospective Resource¹ on a P50 basis.
- ✓ Lion is planning onshore seismic operations in 2022 largely funded by partner, and strategically planned to mature the existing material drilling portfolio to "ready to drill" status.
- ✓ East Seram PSC offers investors high impact oil and gas drilling prospects, attractive fiscal terms and access to existing infrastructure.
- ✓ **Positioning Lion for carried exposure to high impact oil and gas exploration drilling.**

Background: Overview of Lion's Indonesian oil and gas activities



Focus on Seram Island – Proven, highly prospective province

- **East Seram PSC (60%)**
 - Lion Operator 60%, OPIC (Taiwanese NOC) 40%
 - 4,557 km²*, signed July 17 2018
 - 664 km marine 2D shot Nov 2020, primary term commitment now met
 - World-class Jurassic fold-belt play
 - Attractive shallow (Plio-Pleistocene) play
 - Only 4 shallow wells drilled, all in 70's, no valid tests
 - Prospects and leads exceed 1,300 mmboc's Prospective Resource¹ on a P50 basis
 - OPIC pay 80% of seismic costs up to US\$8.5m cap
- **Seram (Non Bula) PSC (2.5%)**
 - Fold belt play main exploration target
 - Oseil field currently ~1550 bopd
 - Contains 1-2 TCF Lofin gas field
- Lion operated the Bula field 2000-2005 and build relevant knowledge and experience



- **Planning advanced for imminent ~200 km onshore 2D survey**
- **Work ongoing on drilling costs and economic of shallow portfolio upgraded by offshore seismic**

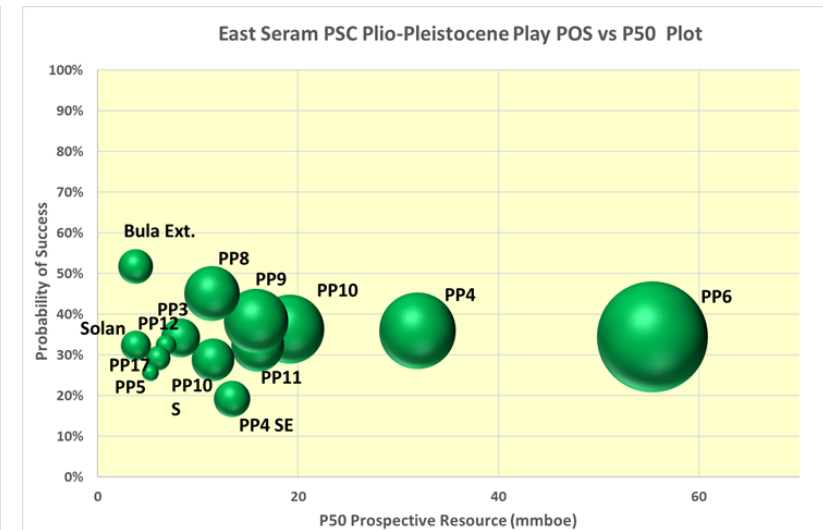
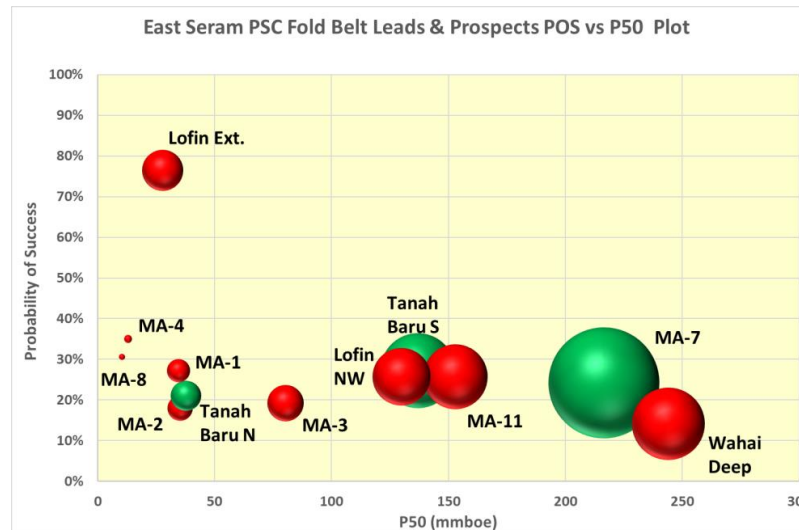
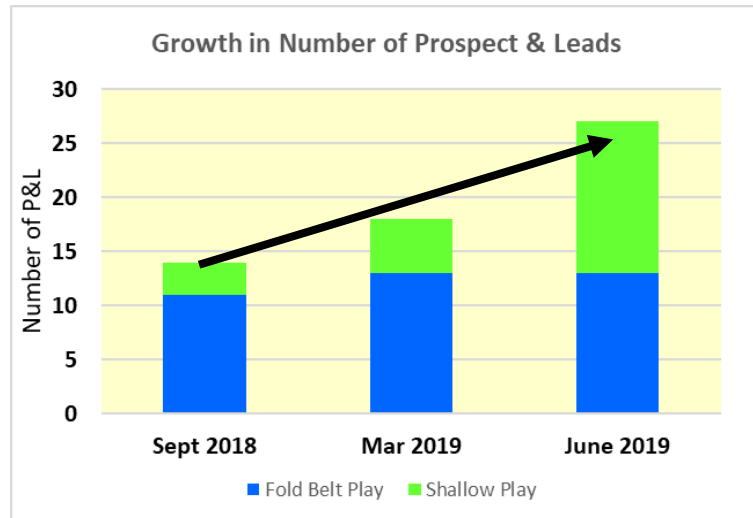
*E Seram area is post July 17, 2021 relinquishment

Lion technical work and seismic acquisition has added value

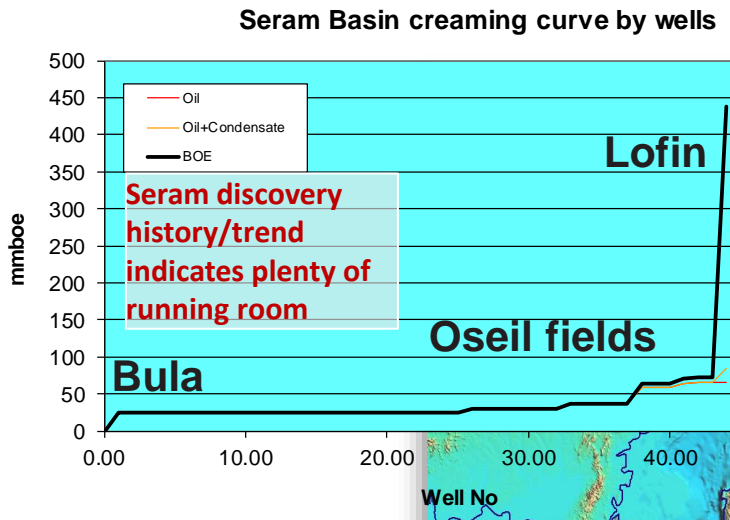
- Number of prospects and leads increased to 27
- Significant increase in prospective resources resulting in an impressive portfolio
- **Shallow (Plio-Pleistocene) Portfolio (June 2021) – 14 prospects and leads** P90 (low): **88** P50 (Best): **208** P10 (High): **494** mmboe Prospective Resource¹
- **Fold Belt Portfolio (June 2021)) - 13 prospects and leads** P90 (low): **310** P50 (Best): **1158** P10 (High): **4259** mmboe Prospective Resource¹

● Dominantly oil expected

● Dominantly gas expected



The Seram Basin is positioned in a prolific hydrocarbon province



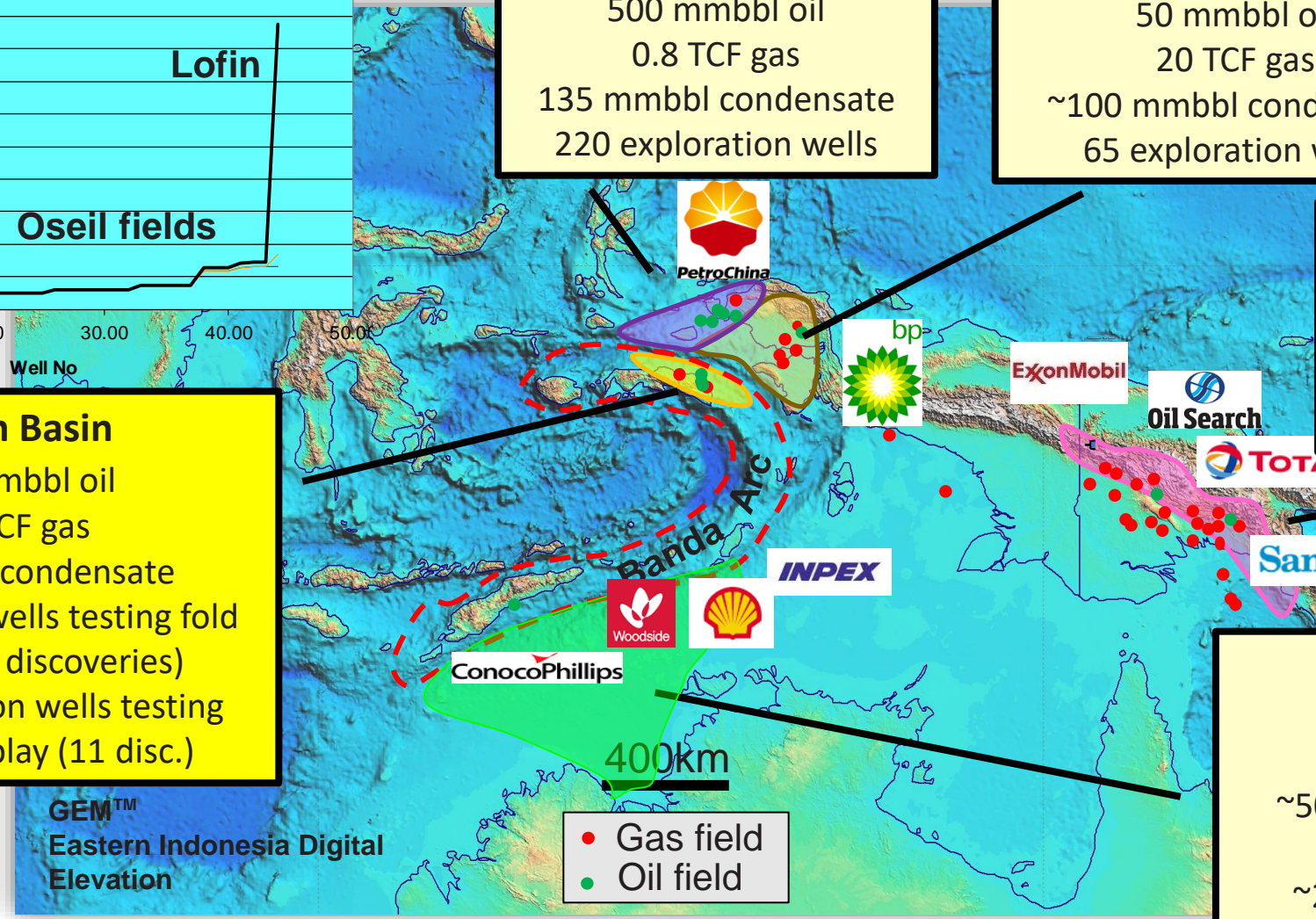
Salawati Basin
 500 mmbbl oil
 0.8 TCF gas
 135 mmbbl condensate
 220 exploration wells

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.)

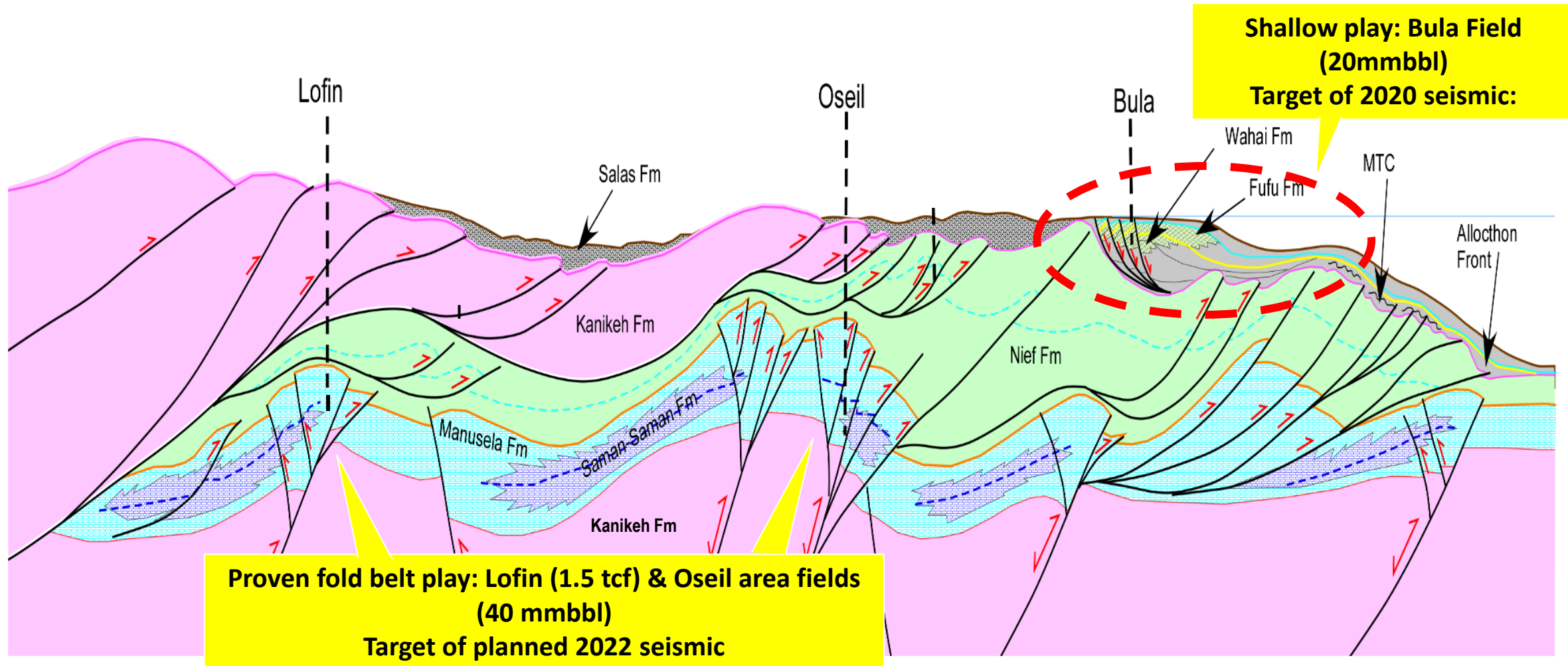
Bonaparte Basin
 750 mmbbl oil
 35 TCF gas
 ~500 mmbbl condensate
 60 fields
 ~270 exploration wells



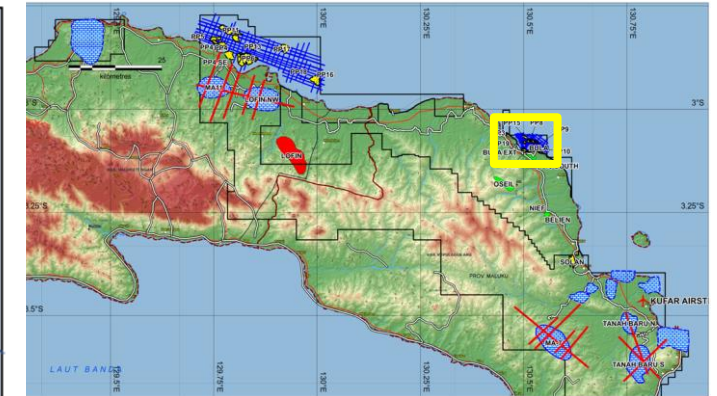
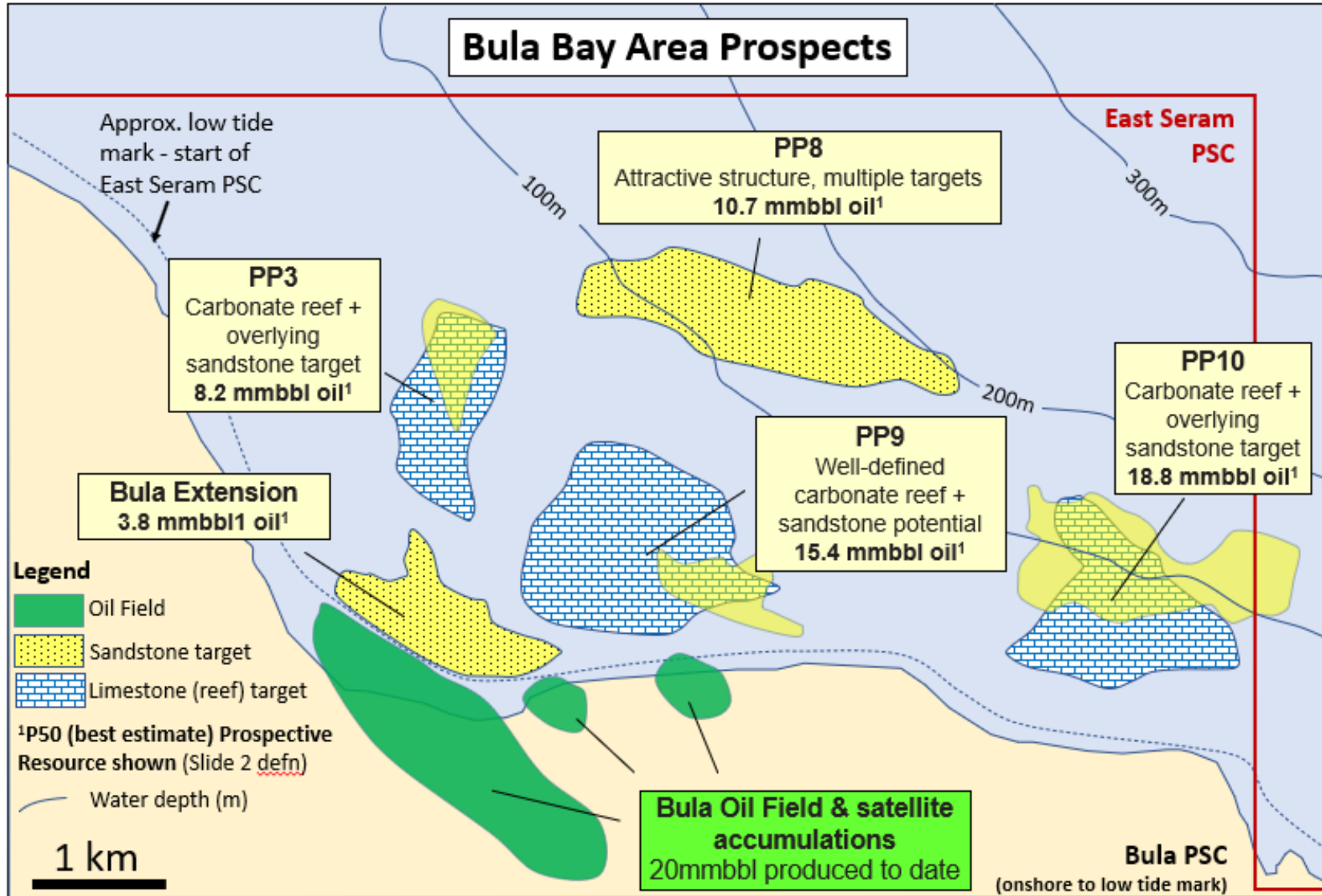
Overview of key East Seram hydrocarbon play concepts



1. Shallow Play (Plio- Pleistocene): shallow marine – deep water sandstones and reefal buildups targets
2. Fold Belt Play (Jurassic Manusela Formation): shallow marine fractured carbonate target

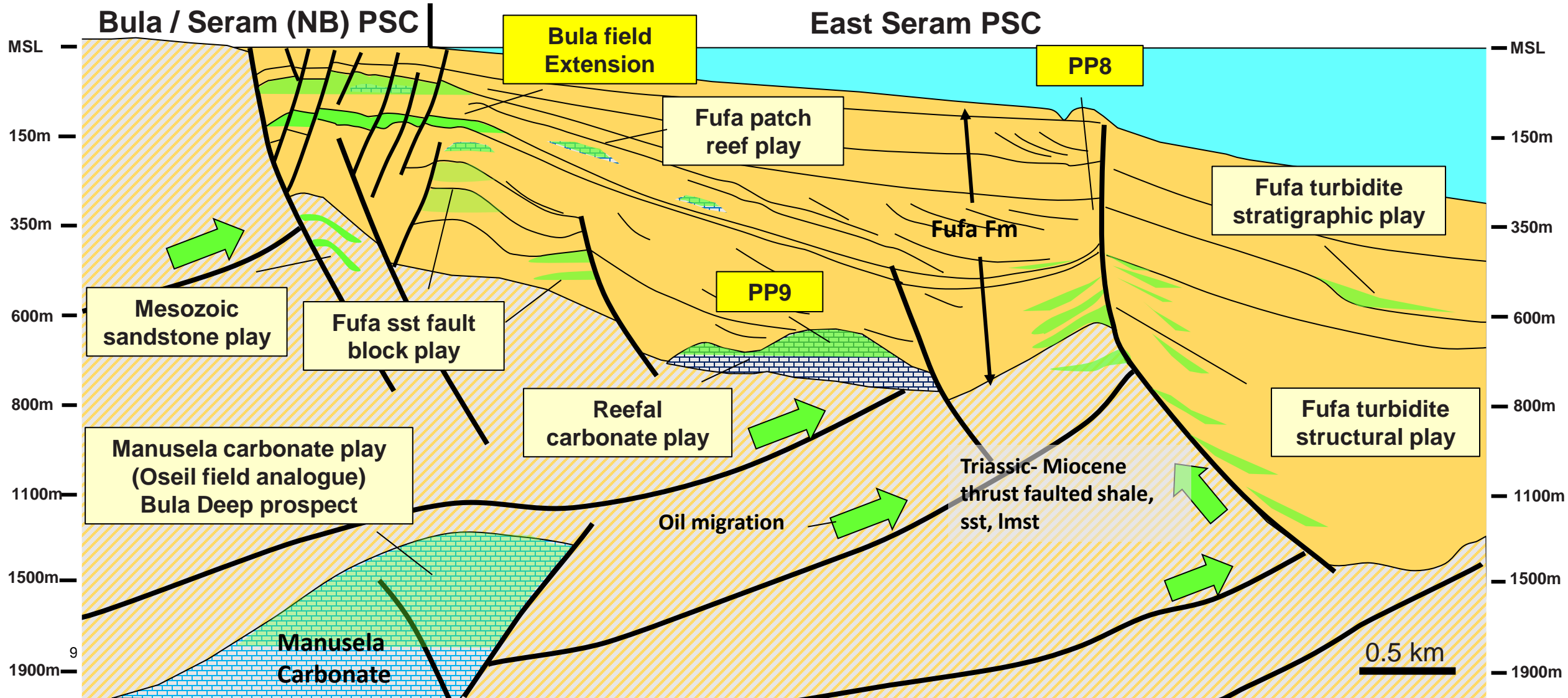


New shallow play prospects in the Bula Bay Area



¹ Prospective Resource definition on Slide 2. Note volume shown is recoverable.

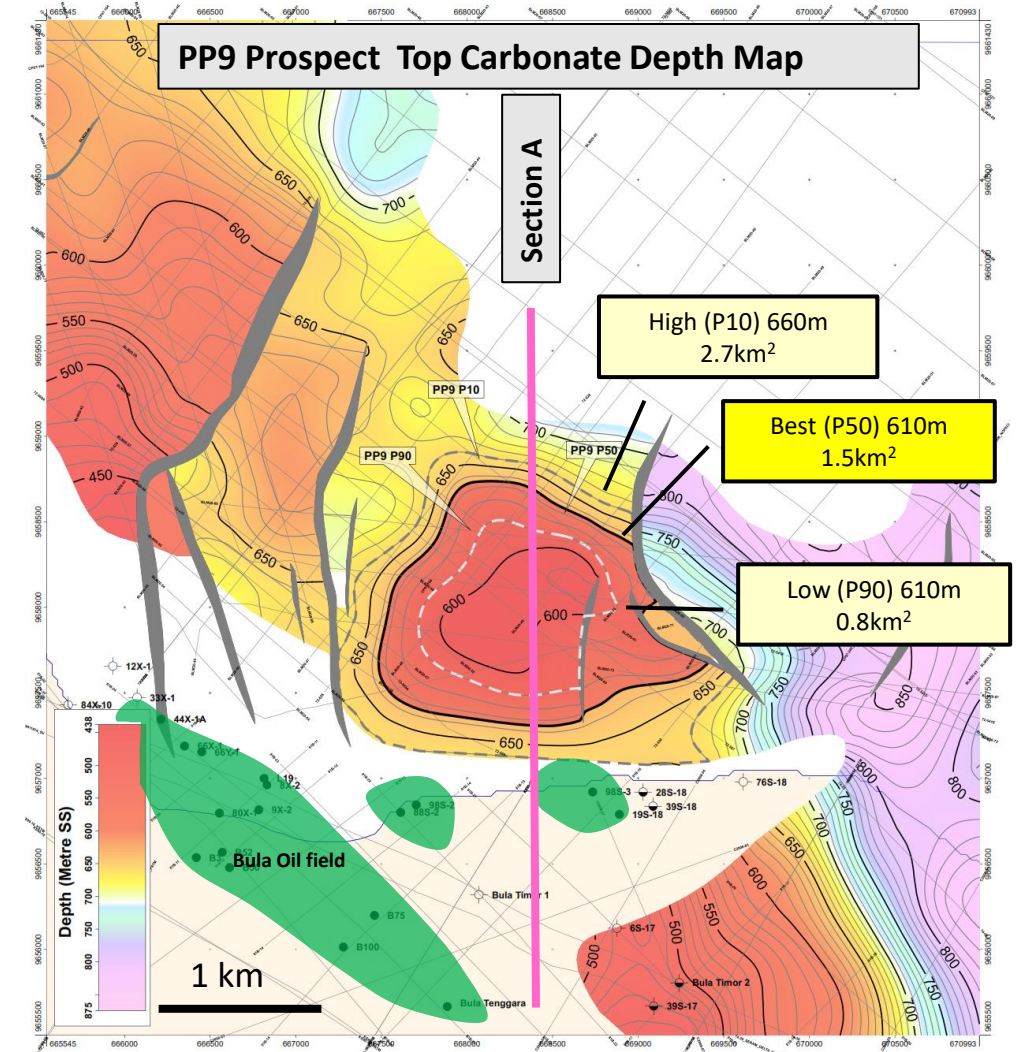
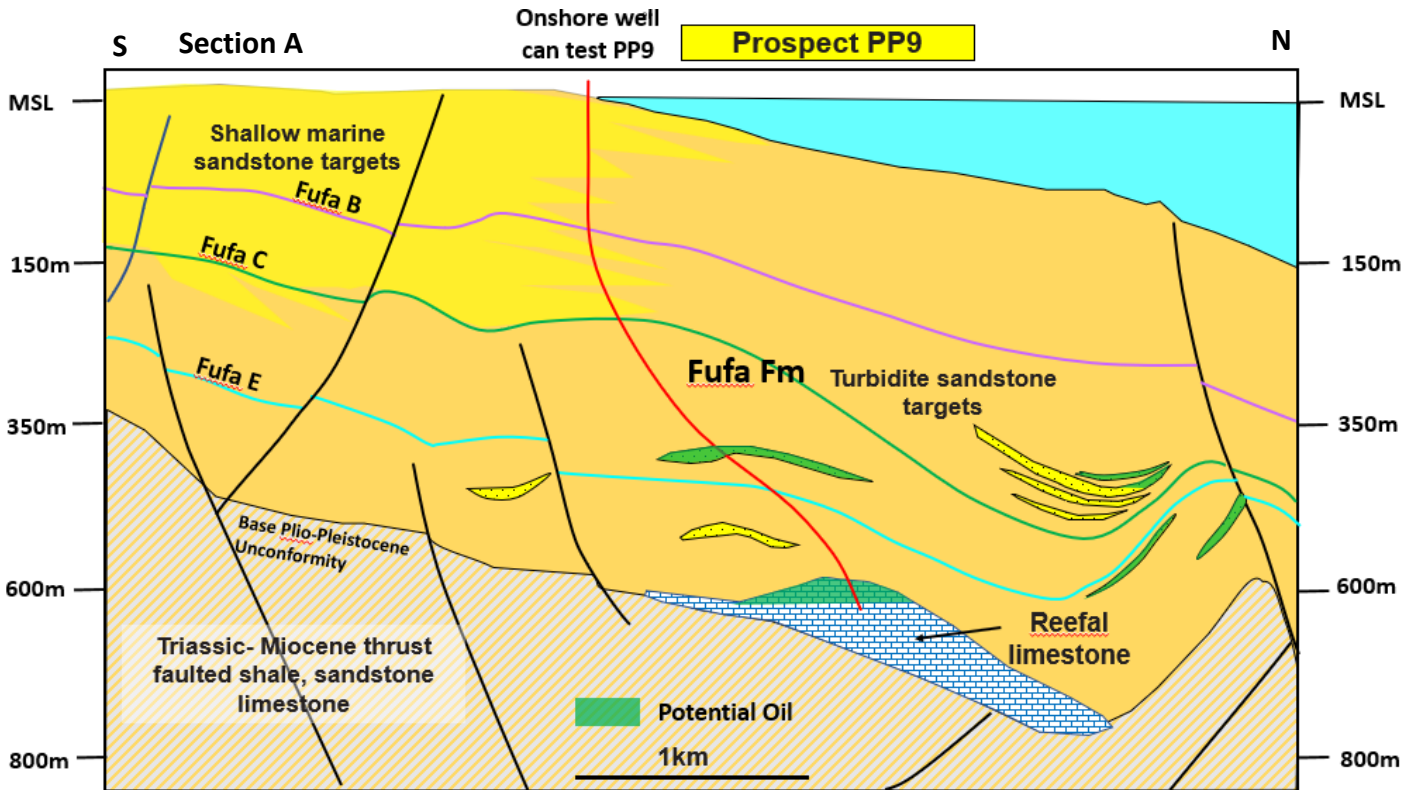
Geoseismic section showing plays in Bula Bay area



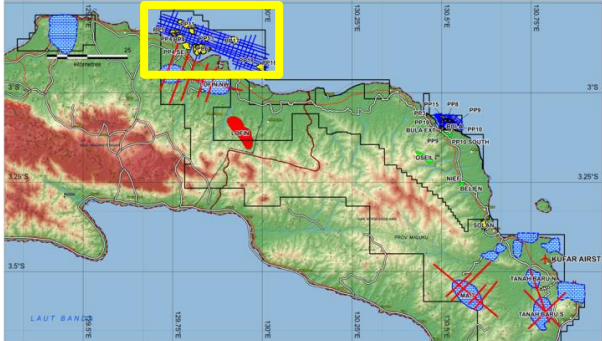
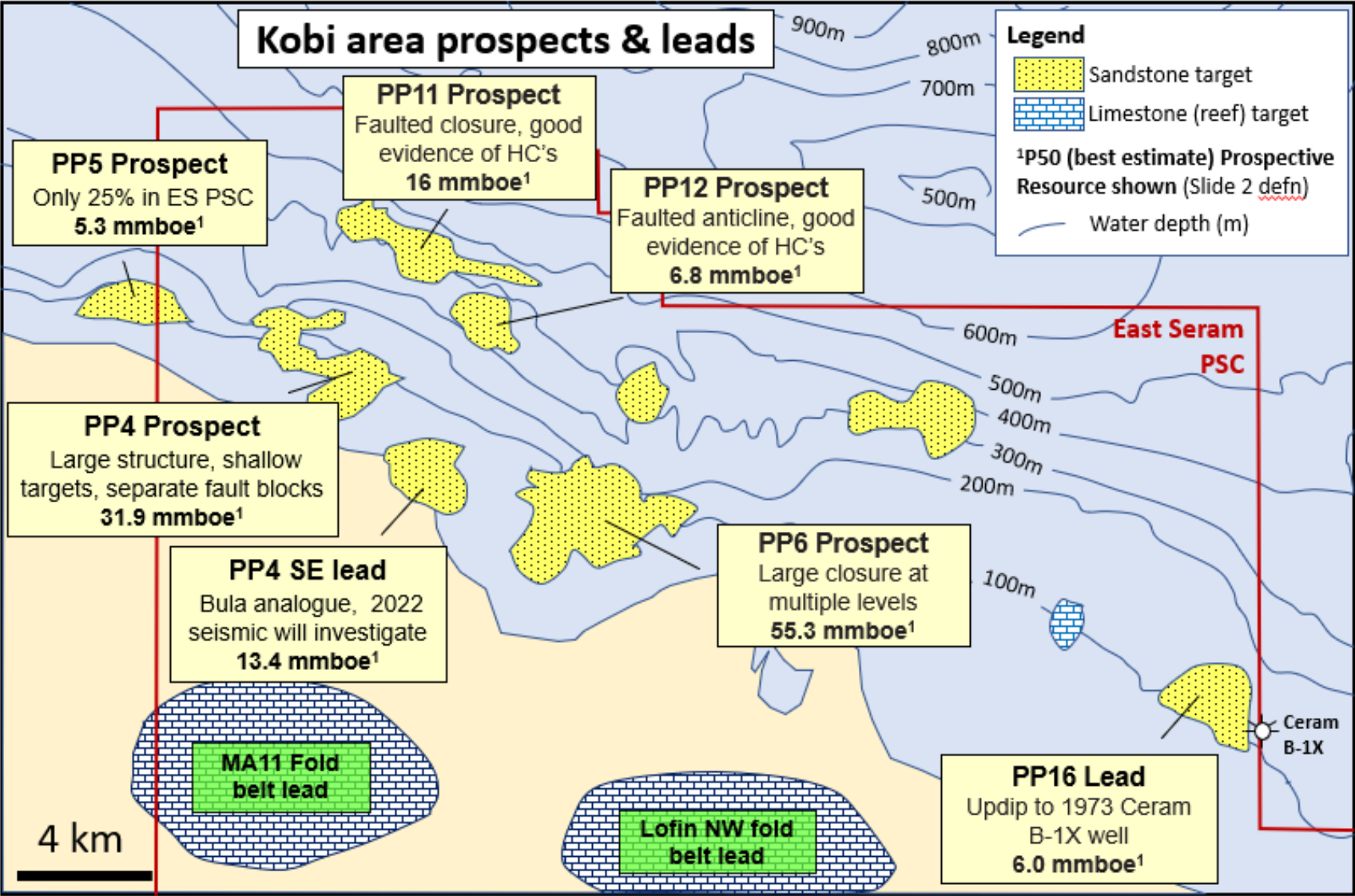
PP9 - Highest ranked new Bula Bay prospect

Well defined carbonate reef buildup (6.3-36.4 mmbbl Prospective Resource¹ range)

- Plio-Pleistocene age reef, up to 80m of relief, additional sandstone targets
- Closure 0.8-2.7 km².
- Water depth: ~50m, reservoir crest (Carbonate) ~580 mss
- Prospect can be drilled with deviated well from onshore
- Tertiary reefs are a prolific play in SE Asia



New shallow play prospects and leads in the Kobi area

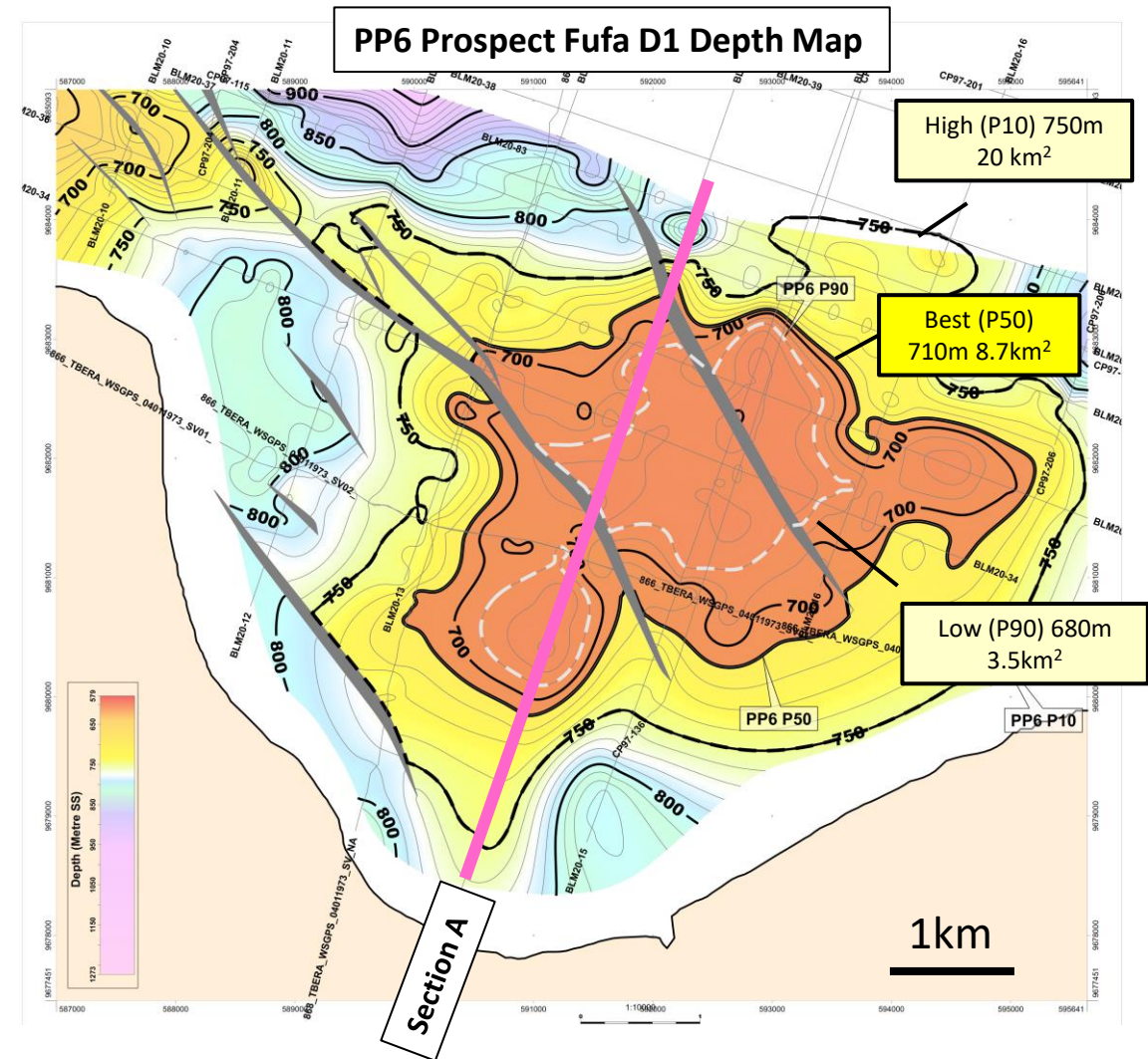
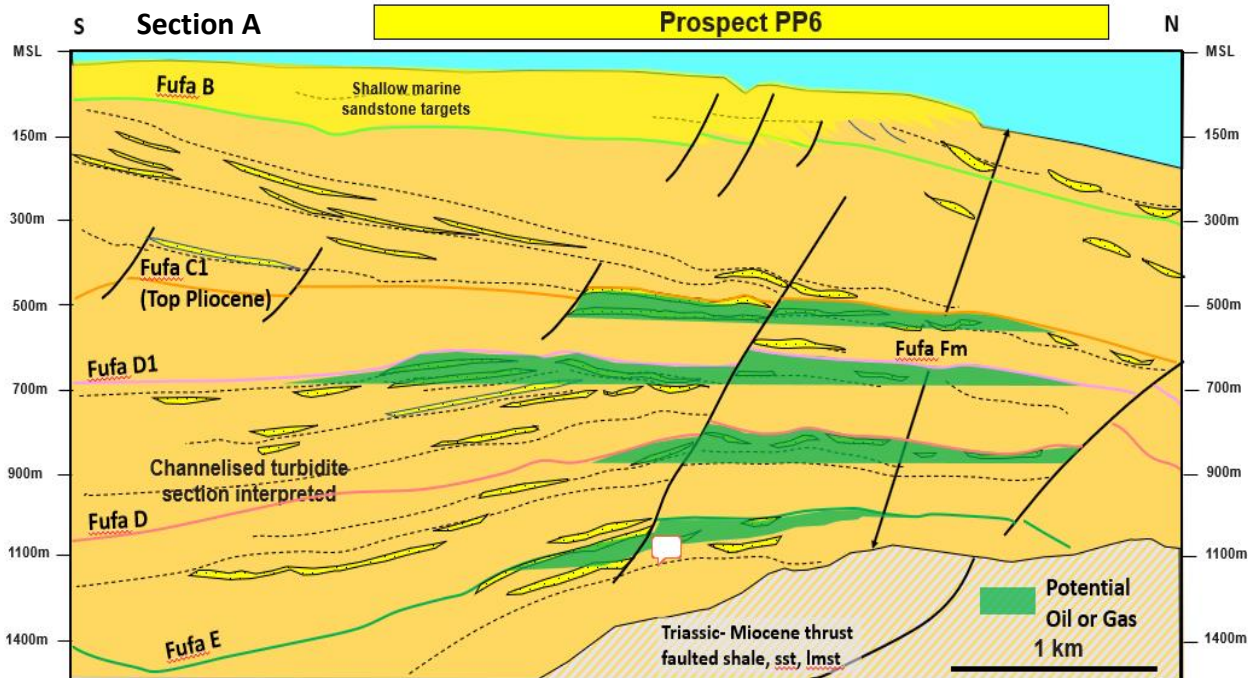


¹ Prospective Resource definition on Slide 2
Note volume shown is recoverable.

PP6 – highest potential new offshore Kobi prospect

Large faulted anticline (16-138 mmboe Prospective Resource¹ range) with multiple targets

- Large 4-way dip closure with area up to 20 km²
- Up to 100m relief
- Water depth: 50-150m
- Reservoir crest ~550-1000 mss
- Well planning and economics ongoing



Onshore fold belt leads and planned 2022 seismic program



**Onshore Kobi
planned 2D seismic
~90 km**

Lofin NW lead
~40 km², large fold belt
structure,
184 mmboe¹

Fold belt leads are supported by seismic, gravity and topographic data. Oil and gas surface seeps are documented throughout area.

MA11 lead
Up to 42km² fold belt
structure,
153 mmboe¹

Lofin Gas field
~40 km² fold belt structure
2C Contingent Resource 254 mmboe²
28 mmboe (Prospective Resources¹)
in East Seram PSC

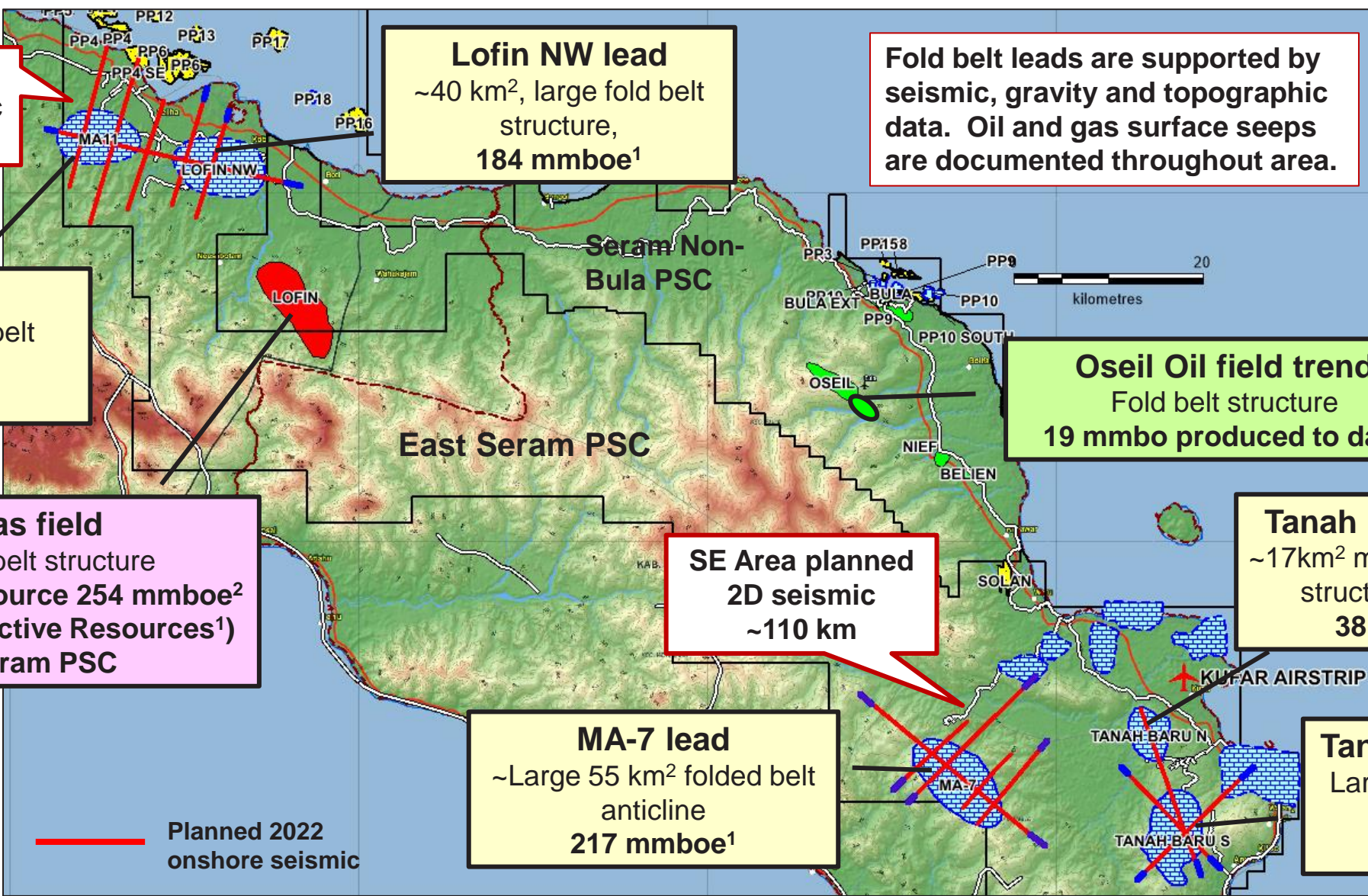
**SE Area planned
2D seismic
~110 km**

Oseil Oil field trend
Fold belt structure
19 mmbo produced to date

Tanah Baru N. lead
~17km² may connect with
structure to south
38 mmboe¹

MA-7 lead
~Large 55 km² folded belt
anticline
217 mmboe¹

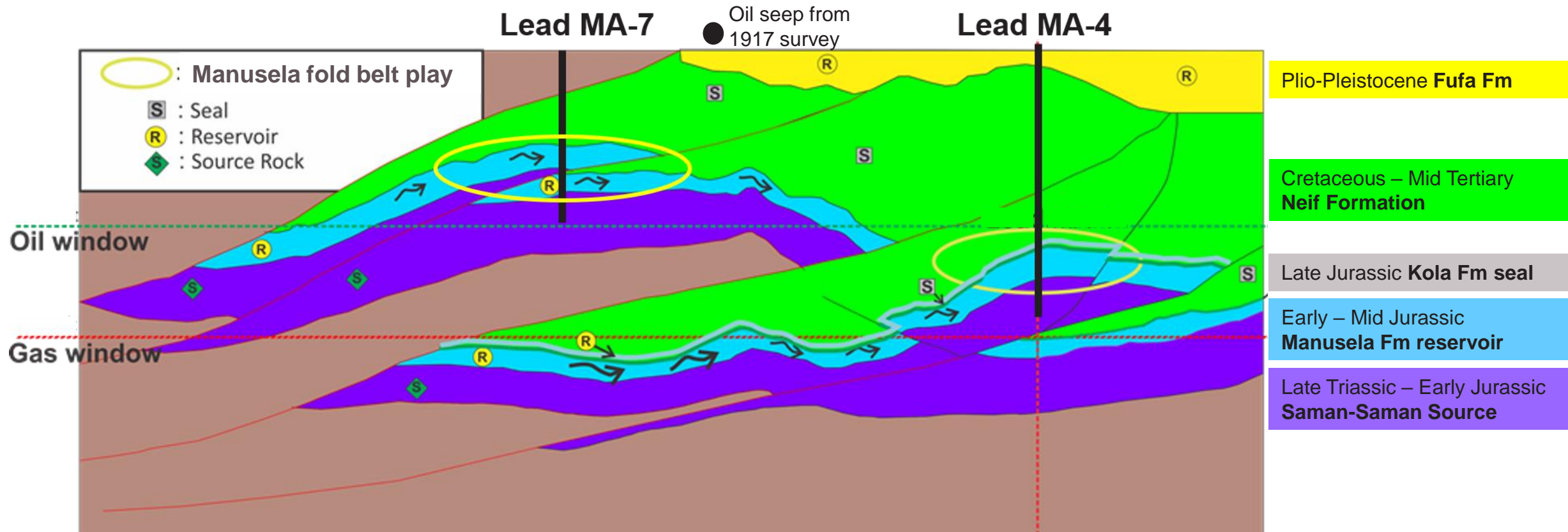
Tanah Baru S. lead
Large structure (up to
43 km²)
137 mmboe¹



**Planned 2022
onshore seismic**

Seram fold belt play: impressive undrilled structures

2022 seismic program to cover key leads including top ranked MA-7



MA-7 lead – closure up to 55 km² (+)

Prospective resource¹ P90: 45 – P10: 1006 mmboe

Structure supported by seismic and gravity and has topographic expression and seeps recorded in area

Fiscal terms, geology and infrastructure all high quality

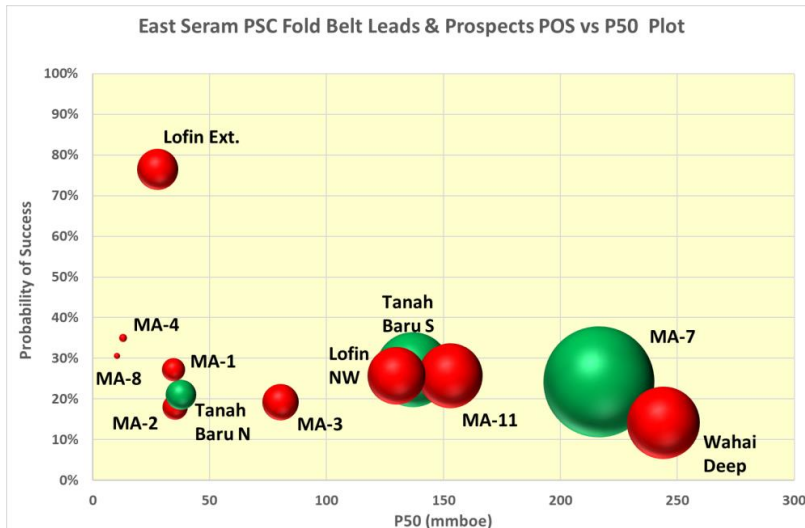
Gross Split PSC fiscal terms are world class

	Contractor Share		
	Oil	Gas	
Basic Split	43%	48%	Defined in PSC
Variable Split	+10-25%		Prescriptive, dependent upon cost location etc
Progressive Split	+10-20%		Prescriptive based on oil/ gas price and cum prodn
Discretionary Split	+/-10% - 20%		Government Discretion at POD approval stage
Total Split	Up to 90%		
Income Tax	25%	25%	Fixed at Income Tax rate at signing of PSC
BPT	5% -20%	5% -20%	Dependent upon jurisdiction and applicable DTA.
After Tax Split	50% +/- 10%		

Existing infrastructure is under utilized



Material portfolio of opportunities



Growth and returns-focused management team with considerable industry experience particularly in the Indonesian oil and gas sector



Tom Soulsby, Executive Chairman

- CEO and founder of Risco Energy Investments with 28 years' experience of the oil and gas and resources sector spanning investment banking, corporate business development and management /leadership roles.
- 15+ years experience in Indonesia



Russell Brimage, Non Executive Director

- 40 years' operating experience in the E&P and service sector
- Founder and MD of Oilserv Australia, a service company which became a major 1980's provider of contract field operations
- 15 years of Indonesian experience including GM of Kalrez that operated Bula field from 1999 to 2005



Zane Lewis, Non Executive Director

- Principal and joint founder of corporate advisory firm SmallCap Corporate which specialises in corporate advice and compliance administration to public companies.
- Member of the Governance Institute of Australia



Kim Morrison, Exploration Manager

- Geologist by background with 30 years worldwide exploration and operations experience with Woodside, Shell, Marathon and recently small cap companies
- Hands on technical expertise with 12 years Indonesian experience



Non Executive Director, Technical Advisor

- Geologist by background with 40 years of E&P industry experience in technical, commercial, & leadership roles
- Former President of IPA, EMP, and Santos Indonesia & IPA
- Co-founder of Risco Energy with 25 years in SE Asia and 20 years in Indonesia



Damien Servant, Executive Director

- Chief Financial Officer of Risco Energy and has more than 10 years experience in oil and gas including reserve based lending and corporate finance.
- 15 years of experience in M&A and capital markets with various financial institutions in the region.



Alan Fenwick, Seismic Operations Manager

- 38 years in Seismic Acquisition
- Extensive Indonesian experience
- Recent clients Kris Energy in West Papua, Oil Search PNG and Conoco Phillips in Central Kalimantan



Amrullah Hasyim, Advisor

- 30 years experience E&P experience including operations, technology BD
- 25 years international experience with Halliburton before becoming operations manager at Ephindo

Collective total of +100 years of oil and gas industry experience.
Significant influence and active management over block development and operations.



Thank you

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Damien Servant

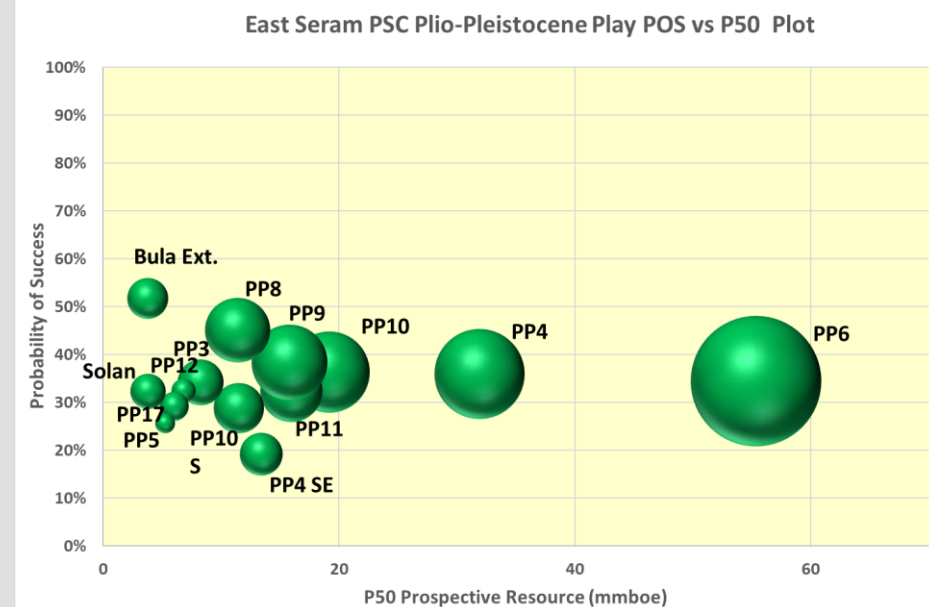
Executive Director

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East Seram shallow play prospects & leads, P50 portfolio grows from 103 to 208 mmbbl



May 2021 East Seram Prospect & Lead Inventory	Oil Recoverable (mmbbl)				HC Gas Recoverable (bcf)				Combined mmboe				POS	Expectation
	P90	P50	Mean	P10	P90	P50	Mean	P10	P90	P50	Mean	P10	Total POS	POS x Mean
Offshore														
PP6	16.2	47.6	63.4	138.0	15.1	40.5	52.6	108.6	19.1	55.3	73.4	158.7	34.4%	20.9
PP4	15.2	31.9	35.7	63.6	0.0	0.1	0.1	0.2	15.2	31.9	35.8	63.7	35.9%	10.0
PP10	8.5	18.8	22.2	41.9	0.9	2.1	2.3	4.5	8.7	19.2	22.7	42.8	36.3%	8.2
PP11	5.1	12.9	16.1	32.8	7.3	17.1	21.0	41.1	6.4	16.0	20.0	40.3	32.4%	6.5
PP9	6.4	15.4	19.0	37.7	0.1	0.2	0.2	0.4	6.4	15.5	19.0	37.8	38.1%	7.3
PP4 SE	5.9	13.4	15.8	30.0					5.9	13.4	15.8	30.0	19.2%	3.0
PP8	5.2	10.7	12.2	21.7	2.0	3.5	4.0	7.1	5.6	11.4	13.0	23.1	45.1%	5.9
PP10 S	5.3	10.8	12.1	21.3	2.0	3.4	3.9	6.5	5.7	11.5	12.9	22.6	28.7%	3.7
PP3	4.3	8.2	9.2	15.8	0.2	0.2	0.3	0.5	4.3	8.3	9.2	15.8	34.1%	3.1
PP12	2.6	6.6	8.1	15.9	0.1	0.1	0.2	0.3	2.7	6.8	8.3	16.2	32.4%	2.7
PP16	1.9	5.0	6.0	11.6	2.2	5.2	6.1	11.4	2.4	6.0	7.1	13.8	29.2%	2.1
PP5	2.2	5.3	6.3	12.4					2.2	5.3	6.3	12.4	25.5%	1.6
Solan	1.5	3.5	4.4	8.7	0.7	1.5	1.8	3.6	1.6	3.8	4.7	9.3	32.3%	1.5
Offshore Bula	2.0	3.8	4.2	7.1					2.0	3.8	4.2	7.1	51.7%	2.2
Total	82.3	194.0	234.6	458.3	30.5	73.8	92.4	184.1	88.2	208.3	252.4	493.8	31.2%	78.6

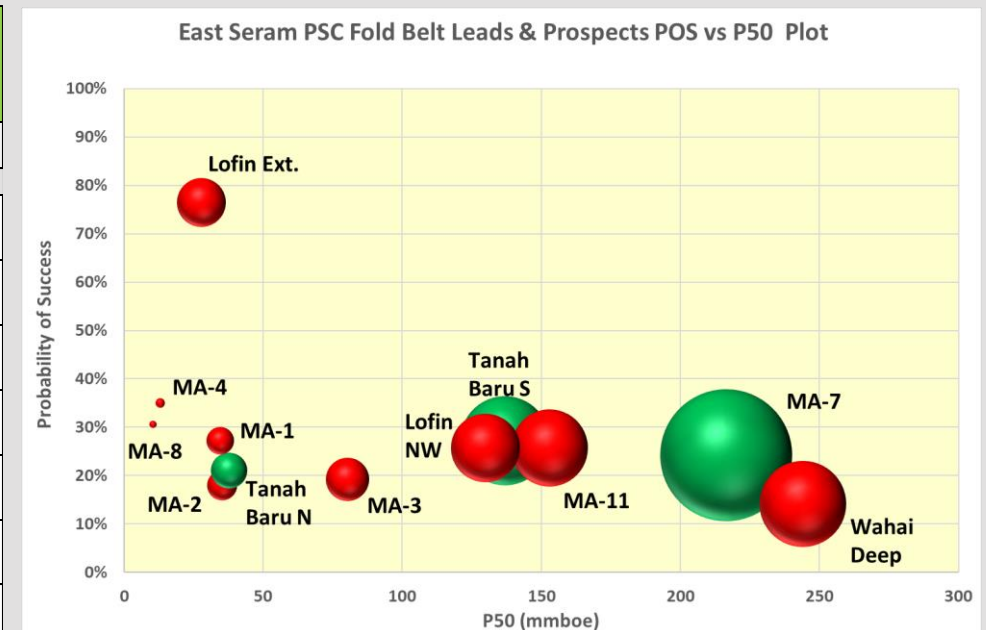


New marine seismic results have exceeded expectations!

East Seram fold belt prospects and leads add up to P50 (best estimate) of 1,158 mmboe



June 2021 East Seram Prospect & Lead Inventory	Oil/Condensate Recoverable (mmbbl)				HC Gas Recoverable (bcf)				Combined (mmboe)				Probability of Success	Expectation
	P90	P50	Mean	P10	P90	P50	Mean	P10	P90	P50	Mean	P10	%	POS x Mean
Onshore														
MA 7	39.4	189.8	342.0	881.4	33.7	160.6	285.4	748.3	45.0	216.6	389.5	1006.1	24.2%	94.2
Wahai Deep	34.1	129.1	198.4	466.8	196.4	689.6	1065.8	2632.9	66.8	244.1	376.1	905.6	14.1%	53.1
Tanah Baru S	22.7	90.0	138.8	339.1	77.4	281.9	399.2	911.1	35.6	137.0	205.3	490.9	27.2%	55.9
MA 11	15.9	55.1	81.1	184.3	164.23	587.39	856.81	2017.52	43.3	153.0	223.9	520.5	25.7%	57.6
Lofin NW (MA 10)	13.9	49.0	66.4	146.7	147.6	485.58	705.34	1623.47	38.5	129.9	183.9	417.3	25.7%	47.3
MA 3	10.7	40.9	61.2	143.5	62.46	236.32	357.96	860.05	21.1	80.3	120.8	286.8	19.2%	23.2
Tanah Baru N	4.6	17.5	25.7	61.1	36.1	123.7	181.3	424.6	10.6	38.1	56.0	131.9	20%	11.2
MA 2	4.8	19.2	30.6	75.0	23.82	96.37	145.41	349.56	8.8	35.2	54.8	133.3	18.0%	9.9
MA 8	5.3	21.0	33.2	81.2	26.09	100.82	152.46	359.34	9.7	37.8	58.6	141.1	21.0%	12.3
MA 1	5.4	17.8	23.5	53.3	32.11	100.36	137.17	294.57	10.8	34.5	46.3	102.4	27.2%	12.6
Lofin Extension	0.9	2.0	2.2	3.9	69.2	154.4	168.1	291.7	12.4	27.7	30.2	52.5	76.5%	23.1
MA 4	0.9	3.3	4.3	9.7	18.2	58.8	79.3	176.0	3.9	13.0	17.5	39.0	35%	6.1
MA 4 NE	1.1	3.5	4.7	11.0	14.5	41.5	56.7	122.6	3.5	10.4	14.2	31.4	30.6%	4.3
Total	159.6	638.2	1012.1	2456.9	901.7	3117.3	4590.9	10811.6	309.9	1157.7	1777.2	4258.8	23.1%	410.8



Highest ranked prospects (MA-, Lofin-NW, MA-11, Tanah Baru South and North to be covered by planned onshore seismic

Some of largest undrilled structures in SE Asia!

Background: Lion's Indonesian efforts are concentrated on Seram Island

