# Armour's transformation to a Production company

armour energy

Noosa Mining and Exploration Conference, 21-22 July Robbert de Weijer, CEO Armour Energy





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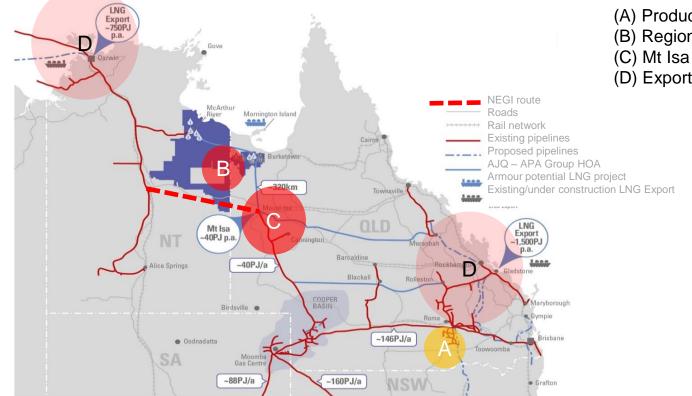
Statements in this presentation as to gas and mineral resources has been compiled from data provided by Armour's Chief Geologist, Mr Luke Titus. Mr Titus' qualifications include a Bachelor of Science from Fort Lewis College, Durango, Colorado, USA and he is an active member of AAPG and SPE. Mr Titus' has over 17 years of relevant experience in both conventional and unconventional oil and gas exploration in various international hydrocarbon basins. Mr Titus has sufficient experience that is relevant to Armour's reserves and resources to qualify as a Reserves and Resources Evaluator as defined in the ASX Listing Rules 5.11. Mr Titus consented to the inclusion in this report of the matters based on his information in the form and context in which it appears.







#### Armour's NT and QLD acreage – short and long term monetisation routes facilitated by the NEGI armour energy pipeline (mid 2018)

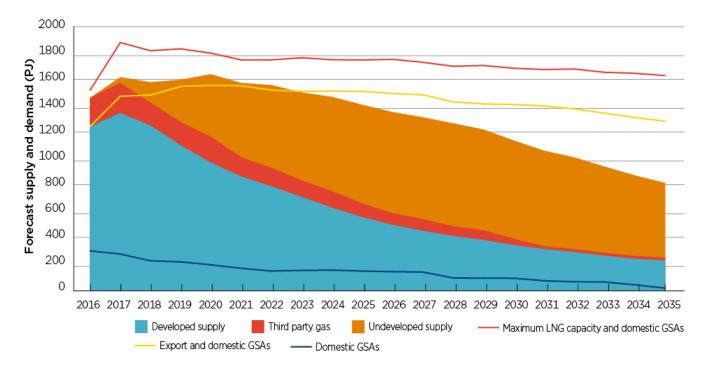


- (A) Production from Roma Shelf
- (B) Regional markets
- (D) Export markets

# Eastern Australia: demand is outstripping supply

"From about 2018, production of 2P reserves from projects that are already producing is not likely to be sufficient to meet the expected demand in the east coast gas market." \*





Forecast gas supply and demand balance in the east coast gas market, excluding Arrow, 2016–25\*

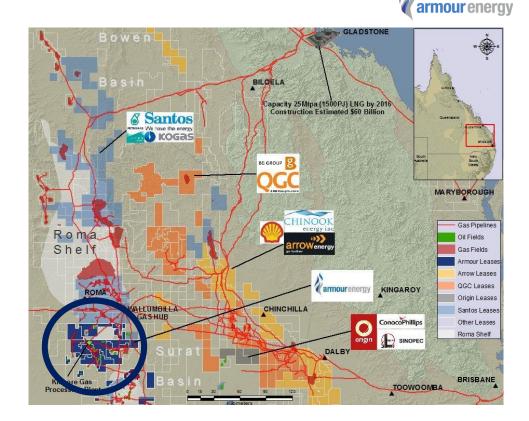






# Kincora project on the Roma shelf, Queensland

- Acquired from Origin in September 2015.
- Consideration \$10m cash plus \$3m in deferred consideration.
- Armour is now on title for all tenements save 1 ATP (31/8/16)
- >\$250m asset replacement value<sup>(1)</sup>: 100% owned Kincora gas, LPG and condensate processing facilities, pipeline to Wallumbilla, gas storage.
- Assets strategically located near Wallumbilla gas transporting hub.
- Over 3,000km<sup>2</sup> of highly prospective western flank of the Taroom Trough of the Bowen / Surat Basin.
- $_{\odot}$  Key operational staff retained from Origin.



# Armour's Kincora project on the Roma shelf in Queensland





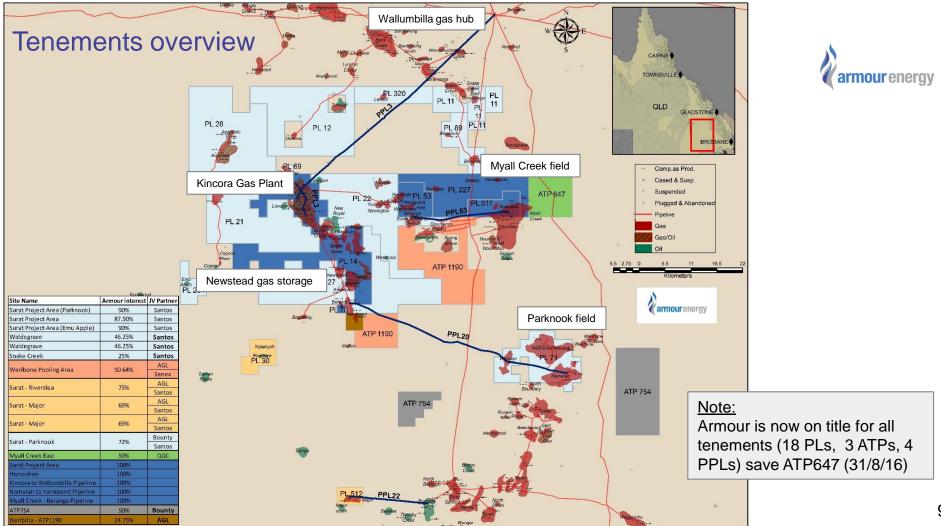












# Armour is becoming a significant petroleum producer

Category	Estimate	armour energy
Cash flow timing	<ul> <li>Oil – by August 2016</li> <li>First gas by December 2016</li> <li>Gas / LPG / condensate – by start 2017</li> </ul>	
Independently verified 2C contingent resources (net) <sup>(1)</sup>	<ul> <li>Gas – 105 PJ gas</li> <li>Condensate - 1,011,978 bbls</li> <li>LPG - 214,580 tonnes</li> </ul>	
Note: 2C resources will be converted to 2P upon re	estart of facilities.	
Independently verified 2C contingent oil resources (net) <sup>(2)</sup>	• Oil - 152,800 barrels <sup>(RISC 2015)</sup>	
Gas Storage	<ul> <li>Newstead facility - 7.5 PJ capacity</li> <li>Contains 2.3 PJ sales gas</li> <li>Potential for a further 19 PJ capacity</li> </ul>	
Unrisked prospective resources exploration upside	<ul> <li>Conventional gas and condensate in Permian reservoirs &gt; 500 bcf (best estimate)</li> <li>Gas in Permian Coals and shallower Walloon Coal Measures - up to 3 Tcf (best estimate)</li> </ul>	

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. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

<sup>(1)</sup> Source: Armour Energy ASX Announcement on 19 July 2016

<sup>(2)</sup> Source: Armour Energy ASX Announcement on 2 September 2015 and 17 November 2015.

# 2C Resources have increased fourfold since acquisition

2C resources will convert to 2P at re-start of the Kincora facilities

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TOTAL (Parknook, Myall Creek and other PLs)	2C (1C+2C)
Estimated total gas (PJ)	105.1
LPG (C3 C4) Yield (Tonne)	214,580
Condensate (C5) Yield (bbl)	1,011,978

Myall Creek Field (100% WI)	1C	2C (1C+2C)	3C (1C+2C+3C)	
Total Estimated total gas (PJ)	19.4	60.3	145.4	
LPG (C3 C4) Yield (Tonne)	40,086	124,614	300,208	
Condensate (C5) Yield (bbl)	192,196	599,719	1,444,777	
Parknook area (PL71) (90% WI)	1C	2C (1C+2C)	3C (1C+2C+3C)	
Estimated total gas (PJ)	7.8	31.5	88.7	
LPG (C3 C4) Yield (Tonne)	16,078	65,096	183,131	
Condensate (C5) Yield (bbl)	77,378	313,279	881,335	

Notes:

All numbers are all net to Armour

#### <sup>(1)</sup> Source: Armour Energy ASX Announcement on 2 September 2016

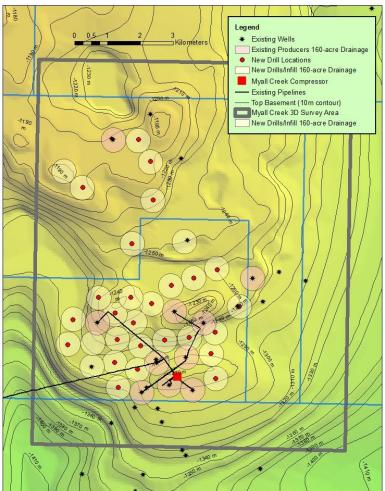
## Newstead gas storage facility

- Storage capacity of 7.5 PJs and includes currently
   2.3 PJs of sales gas
- Opportunities to increase the gas storage capacity further from nearby fields (owned by Armour) by up to 19 PJs.
- Flexibility of supply because of Newstead will allow Armour to attract higher gas prices.
- Commercialising Gas Storage has a different risk profile (e.g. no discovery risk).
- lona transaction (\$1.8b) in Victoria, while much bigger (500 TJ/d in /out), is evidence of the attractiveness of gas storage assets.





# Myall Creek: 60 PJs of 2C to convert to 2P at start-up



#### Further development:

- Goal: increase production to Kincora Plant
- Excellent 3D control
- Established infrastructure corridors
- Continuous schedule of drilling
- Commingle multiple liquid rich reservoirs
- Underbalance drill production section
- Take advantage of current low drilling / services costs
- 49 well development locations inventory

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<sup>(1)</sup> Source: Armour Energy ASX Announcement on 19 July 2016

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# Excellent well stimulation and drilling opportunities

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			TOTAL	5,600
PL 71	Warroon 1	Perf & Stim new zones	Perf and stimulate Rewan	350
PL 71	Parknook 5	Perforate new zones	28m of behind pipe potential over Showgrounds, Rewan and Bandanna	350
PL 71	Parknook 2	Perforate new zones	25m of behind pipe potential over Showgrounds, Rewan and Bandanna	400
PL 511	Myall Creek 3	Perforate and stim new zones	25m of behind pipe pay in Lower Tinowon	1,500
PL 511	Myall Creek 2	Perforate and stim new zones	25m of behind pipe pay in Lower Tinowon	1,500
PL 511	Myall Creek 4	Perforate and stim new zones	25m of behind pipe pay in Lower Tinowon	1,500
Tenement	t Well Operation Details		Details	Estimated initial targeted uplift (mscf/d)

#### First drilling / deepening targets

First stimulation targets

Tenement	Well	Operation	Details	Estimated initial flow (mscf/d)
PL 511	Myall Creek 12	New drill and stimulate	Targeting entire Tinowon interval	3,000
PL 511	Myall Creek 13	New drill and stimulate	Targeting entire Tinowon interval	3,000
PL 511	Myall Creek 14	New drill and stimulate	Targeting entire Tinowon interval	3,000
PL 511	Myall Creek 8	Deepen, case & stim	Perforate Lower Tinowon and stimulate both Upper and Lower Tin	2,500
PL 511	Myall Creek 6	Deepen, case & stim	Perforate and stimulate all Tinowon	2,500
PL 511	Myall Creek 11	Redrill Underbalanced	Redrill underbalanced; perforate all Tinowon sands	1,800
PL 511	Myall Creek 7	Deepen well underbalanced	25m of underlying pay in Lower Tinowon	600
			TOTAL	16,400

<u>Notes</u>: (1) the flowrates in table are based on historical well performance from nearby wells and detailed sub-surface analysis work undertaken by Armour; (2) Armour is currently negotiating funding for these programs.

# Re-start of oil, gas, LPG and condensate production

- $\circ\,$  Specialist consultants engaged; detailed re-start plan prepared
- Risks identified and mitigated
- Restart will be fully Compliance with: Regulatory requirements, Australian Standards, Environmental Authority, Armour's HSE Management System and Policies and Procedures.

		2Q16			3Q16			4Q16			1Q17		7
	Target schedule	А	Μ	J	J	А	S	0	Ν	D	J	F	Μ
1	Restart planning and estimate												
2	Site preparation & Operational Readiness												
3	Emu Apple Oil (inspections, tests, re-start*)												
4	First Oil*						•						
5	PPL3 (survey, repairs, end of line modifications)					·							
6	Kincora Gas Plant - Newstead gas (re-start)									•			
7 First Gas - ex Newstead									•	$\diamond$			
8	8 Kincora Gas Plant - LPG system (re-start)												
9	Myall Creek Production (re-start)												
10	LPG Production Starts (incl condensate)										$\diamond$		
11	Start Further Field Development												

\* subject to artificial lift system availability









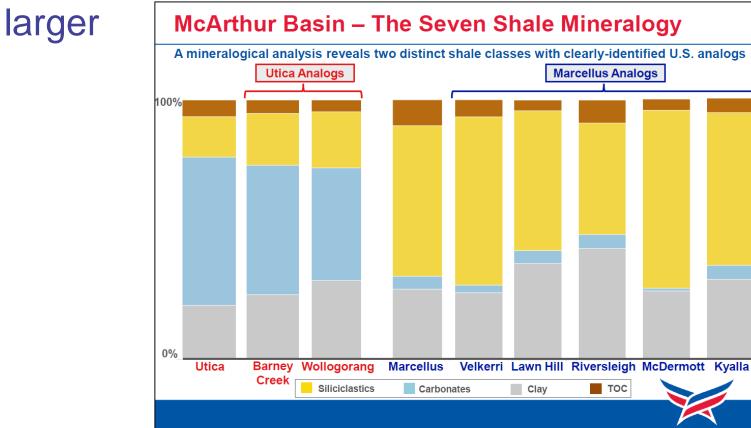
○ AEGP will spend up to US\$130m over a maximum of five years to earn a working interest of up to 75%.

- Cash payment to Armour Energy of US\$13m on closing the Farm-Out Agreement to assist in funding Roma Shelf assets acquisition and other projects.
- o Armour will receive bonus payments of:
  - US\$3m on grant and transfer of interests in EP177 and EP178 to AEGP
  - US\$7m on grant of one million acres of production licences or grant and transfer of farm-in interests in remaining NT tenements to AEGP.
- AEGP will assist Armour to access up to US\$130m of debt funding for Armour's share of Phase Two appraisal and development costs.
- Cash proceeds to Armour Energy of A\$6.7m from Placement to American Energy of 33.7 million new Shares at \$0.20 per share. The first placement of \$3.37m has been completed

<u>Note</u>: the farm-out agreement has been the subject of recent litigation between the parties and if AEGP comply with the orders made by the SUPREME COURT of Queensland on 15-July-2016 this will require AEGP to make payment to Armour of USD 13 million and subscription of 16.85 shares at 20c for AUD 3.37 million.

<sup>&</sup>lt;sup>(1)</sup> Source: Armour Energy ASX Announcement on 17 November 2015.

# McArthur Basin Shales have similar characteristics to most successful Shale plays in USA but is much



# Northern Territory McArthur Basin project – a vast area full of organic shales

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## McArthur Basin

#### $\circ$ McArthur Group

Barney Creek Shale

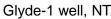
 $_{\odot}$  Prospective Resources 1.2 MMbbl, 13 TCF  $^{(1)}$ 

#### ○ Tawallah Group

Recently discovered

- $_{\odot}$  Underlying and beyond McArthur Group
- $_{\odot}$  Large, thick formations with up to 7% TOC:
  - o Wollogorang Shale
  - McDermott Shale
- Prospective Resources 17 TCF <sup>(2)</sup>





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# North west Queensland Isa Super Basin project

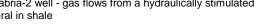
#### Results to date

- o 6 wells drilled in ATP1087 to date
- Extensive seismic data, highly prospective shale formations
- 22.1 TCF gas prospective resource<sup>(1)</sup>
- Egilabria-2 well an Australian first: gas flows from a hydraulically stimulated lateral in shale

## Future plans

- o Further definition of the resource fairway and sweet-spots for the Lawn Hill and Riversleigh Shales
- Additional seismic plus well in deeper part of basin
- Appraisal to establish commercial flow rates from stacked play opportunities

Egilabria-2 well - gas flows from a hydraulically stimulated lateral in shale





<sup>(1)</sup> Source: Armour Energy ASX Announcement on 17 November 2015 <sup>(2)</sup> Best estimate gas prospective resource: ATP1087, SRK 2015

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# Victoria: Onshore Otway and Gippsland Basins – Australia's best endowed and still the most productive

#### Results to date

 Otway and Gippsland Basins highly prospective • AJQ : 51% in PEP169 and 25% in PEP166 (Otway) o Farmin rights and acquisition to PRL2 (Gippsland) Substantial shareholder in Lakes Oil

### **Opportunity**

Conventional and unconventional plays

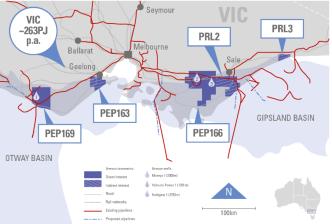
- Stacked play opportunities
- Near existing infrastructure and major gas users

### Future plans

o Continue work programs upon lifting of moratorium Pursue commercial monetisation opportunities



Wombat-2 well





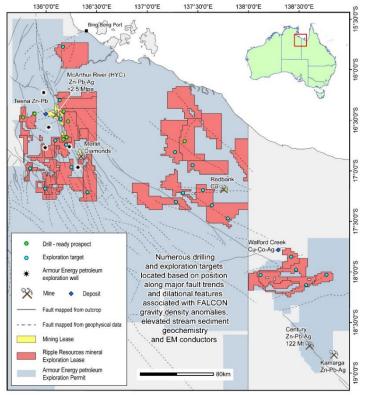




# Ripple Resources - redefining a world class base metals province

#### **Current Portfolio**

- Delivering 100% WI in over 10,000-km<sup>2</sup> of prospective exploration mineral licenses
- Targeting Zn-Cu-Co-Pb metal prone areas
- 8 high graded areas for shallow drilling campaign stacked intersection potential; 20 exploration prospects
- o 2D seismic coverage
- New 3567 km<sup>2</sup> of 400-m line spaced gravity-magnetic airborne data
- $\circ~$  New 3D model over the heart of the Batten Fault Zone
- $\circ~$  Central to concentrate ship loader at Bing Bong Port



# Armour's transformation to a Production company

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