

# Armour Energy

## AUSTRALIAN ENERGY & BATTERY MINERALS INVESTOR CONFERENCE

March 2018



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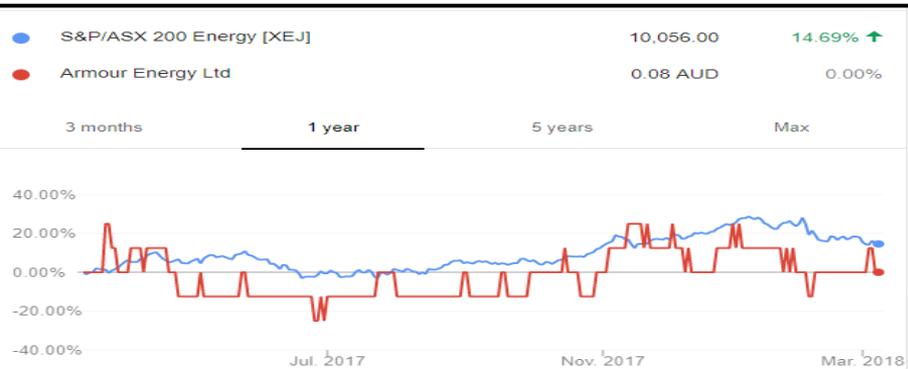
Statements in this presentation as to gas and mineral resources has been compiled from data provided by Armour’s Chief Geologist, Mr Luke Titus. Mr Titus’ qualifications include a Bachelor of Science from Fort Lewis College, Durango, Colorado, USA and he is an active member of AAPG and SPE. Mr Titus’ has over 17 years of relevant experience in both conventional and unconventional petroleum 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.

# Capital Structure

## Capital Structure

<b>ASX Code:</b>	AJQ
<b>Share (Ordinary)(i)</b>	405m
<b>Options (unlisted)(i)</b>	24m
<b>Convertible Notes (unlisted)(i)</b>	374m
<b>Share Price(ii)</b>	8.6 cents
<b>Market Capitalisation</b>	\$34.8m
<b>Cash on hand(iii)</b>	\$4.2m

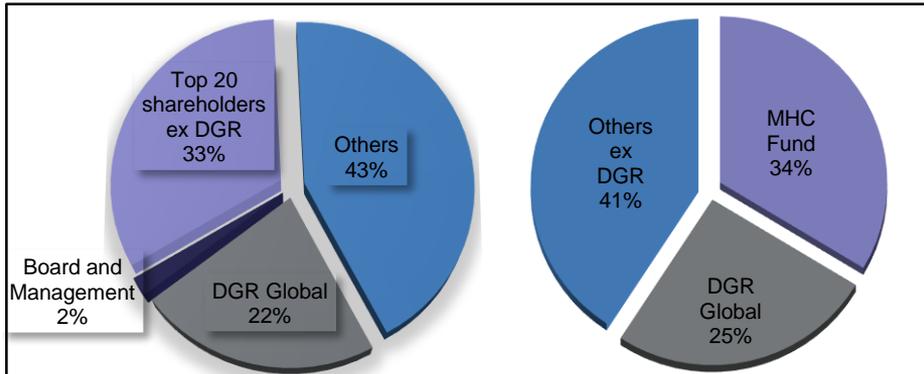
## Share Price Performance (1 year)



## Share Register

## Convertible Notes Register

## Board of Directors



- Nick Mather Executive Chairman
- Matthew Beach Non-executive Director
- Stephen Bizzell Non-executive Director
- Roland Sleeman Non-executive Director
- William Stubbs Non-executive Director
- Eytan Uliel Non-executive Director

(i) Source: <https://www.armourenergy.com.au/capital-structure/> 7 February 2018

(ii) Armour Energy share price as at 09/03/2018

(iii) Source: Armour Energy Quarterly Report 31/01/2018

## Investment highlights

- Independent oil and gas exploration & production company with significant growth potential
- Large and low risk tenures dominating the Roma Shelf – a province position with a 35% historic success rate
- Positive East Coast Australia gas market setting with strong demand and price growth
- First stage of Armour's 3 stage growth plan successfully executed with Kincora Gas Plant recommissioned
- Currently producing at 9 TJ/day sales gas, plus associated liquids and LPG<sup>(i)</sup>
- Production ramp up targeted from existing wells and planned new wells to 20 TJ/day plus liquids and LPG
- Awarded two new tenements recently by Qld Government close to Armour's existing production infrastructure
- Exploration strategy to target over 1 TCF gas and liquids in the Surat Basin
- Portfolio of quality exploration and appraisal projects in the Northern Territory and north Queensland provide additional long term value drivers
- Experienced board and management with previous track record of significant shareholder value creation in the energy sector

(i) Source: Armour Energy ASX announcement 12/02/2018

## Key Value Drivers

### **For Armour's Kincora asset:**

- Expand Armour's footprint
- Permian stratigraphic exploration of liquids rich gas targets of up to 1 TCF
- 3D seismic to define oil and Gas targets and minimise risk
- Well completions to protect the Permian Resources
- Dependable production
- Sale and lease back opportunities for infrastructure
- More GSA's
- Opportunistic gas trading (injection/withdrawal) utilising Newstead storage

# Armour – an emerging gas producer - SW QLD

## Kincora Project Summary

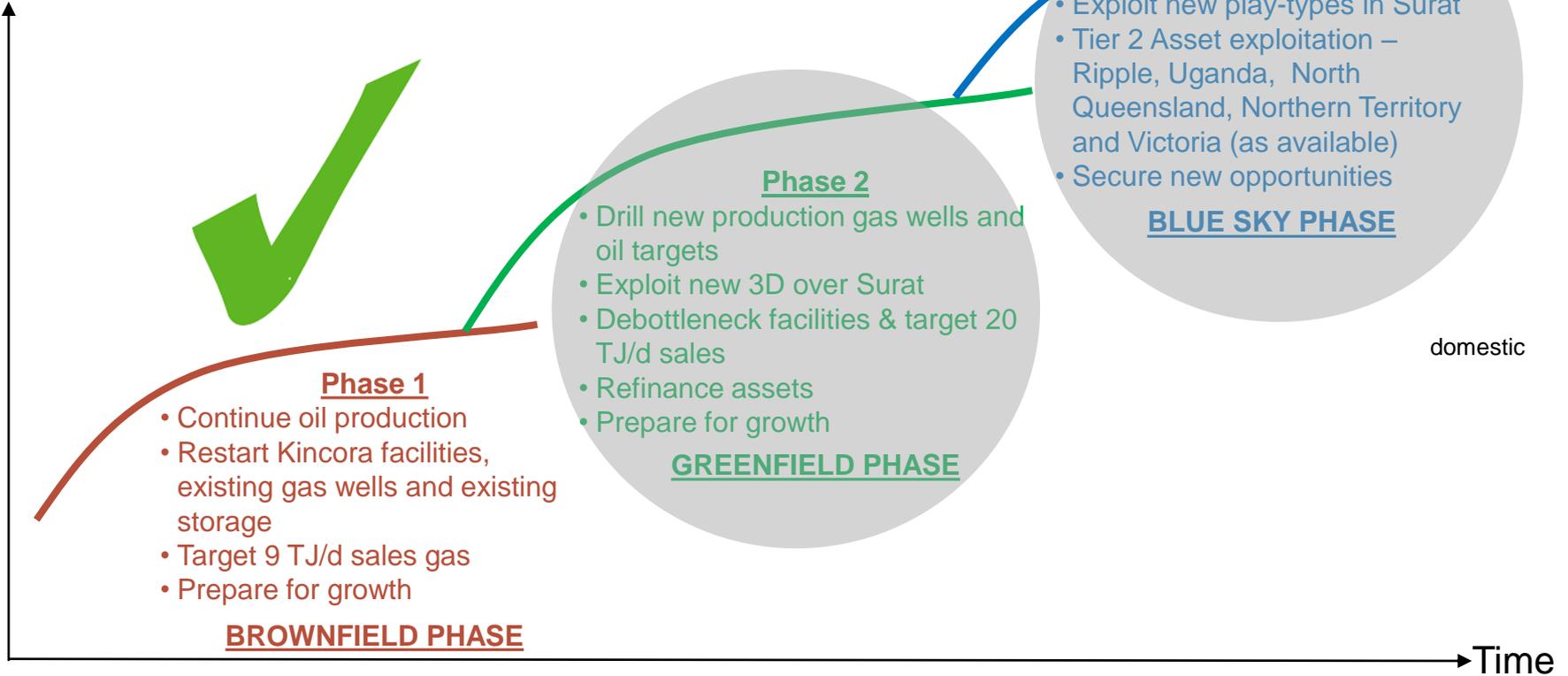
- ✓ Acquisition of Kincora Gas Project from Origin – completed early 2016
- ✓ Since then, further acquisitions:
  - ✓ Acquisition of Santos interest – working interest increased to 100% over 5 Petroleum Leases covering our core operations
  - ✓ Acquisition of QGC interest – working interest increased to 100% on ATP 647 - viewed as highly prospective
  - ✓ Awarded ATP 2030 block – contiguous with other Armour blocks
  - ✓ Preferred Tenderer for PLR201718-1-2 - contiguous with other Armour blocks
- ✓ Commenced oil production and sales in September 2016
- ✓ Executed a GSA with foundation customer Australian Pacific LNG Marketing Pty Limited (i)
- ✓ Executed our connection agreement with APA, connecting Armour’s Kincora Project into the Roma-Brisbane Pipeline at Wallumbilla
- ✓ Commenced dry gas production and sales – September 2017
- ✓ Completed recommissioning of the LGP and wet gas circuits at Kincora – December 2017
- ✓ Achieved our phase 1 goal of 9 TJ/day of gas sales and production – February 2018

(i) Source: Armour Energy ASX Announcement on 22/12/2016 and 17/08/2017.



# Armour Strategy – 3 Phases of Growth

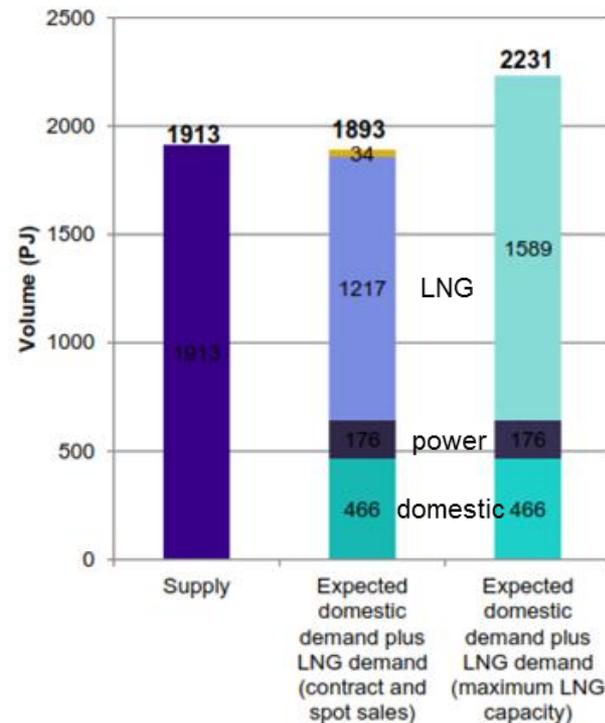
Shareholder  
Value



# The Perfect (East Coast Gas) Storm = Armour's Opportunity

- Growing shortfall in gas supply
- Opportunities for new onshore gas production restricted by regulation, activism
- LNG exporters seeking additional supply
- LNG net back pricing driving domestic market prices
- Armour is one of only a few independent gas producers able to take advantage of this opportunity

## 2018 Forecast Supply Demand Balance East Coast Gas Market (excl NT)



Source: ACCC and AEMO data.

# Armour is ideally placed to serve the tight East Australian Gas Market



## PROXIMITY

Queensland is supplying LNG and most of Eastern Australia – and supply is tight



**Armour is at the heart of the supply network**

+

## PURCHASERS

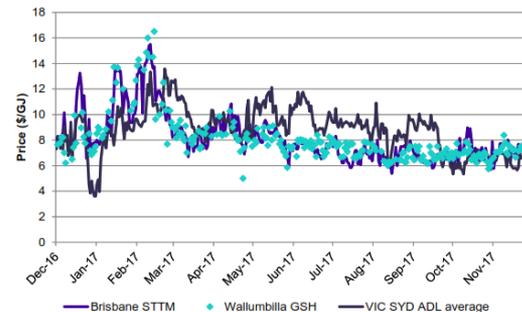
**Armour can supply gas to the interconnected east coast gas market**

- LNG producers
  - Gas purchase price linked to LNG price ('netback' price)
  - Can absorb huge volumes at the right price
  - Sets a firm floor price for gas based on LNG spot price
- Aggregators and Retailers
  - 'middle-men' who trade gas over Eastern Australia
  - Selling to Commercial & Industrial and retail customers
  - Hold and use most of the pipeline capacity rights
  - Hungry for gas to take south
- Commercial and Industrial
  - Struggling to find acceptable deals (price and duration)
  - Keen to buy as market stabilises
  - Small C&I being particularly squeezed (<2 PJ/yr)

+

## PRICE

- East Coast supply demand balance remains tight but is stabilising due to Govt / ACCC intervention
- Short Term Trading Market prices have steadied

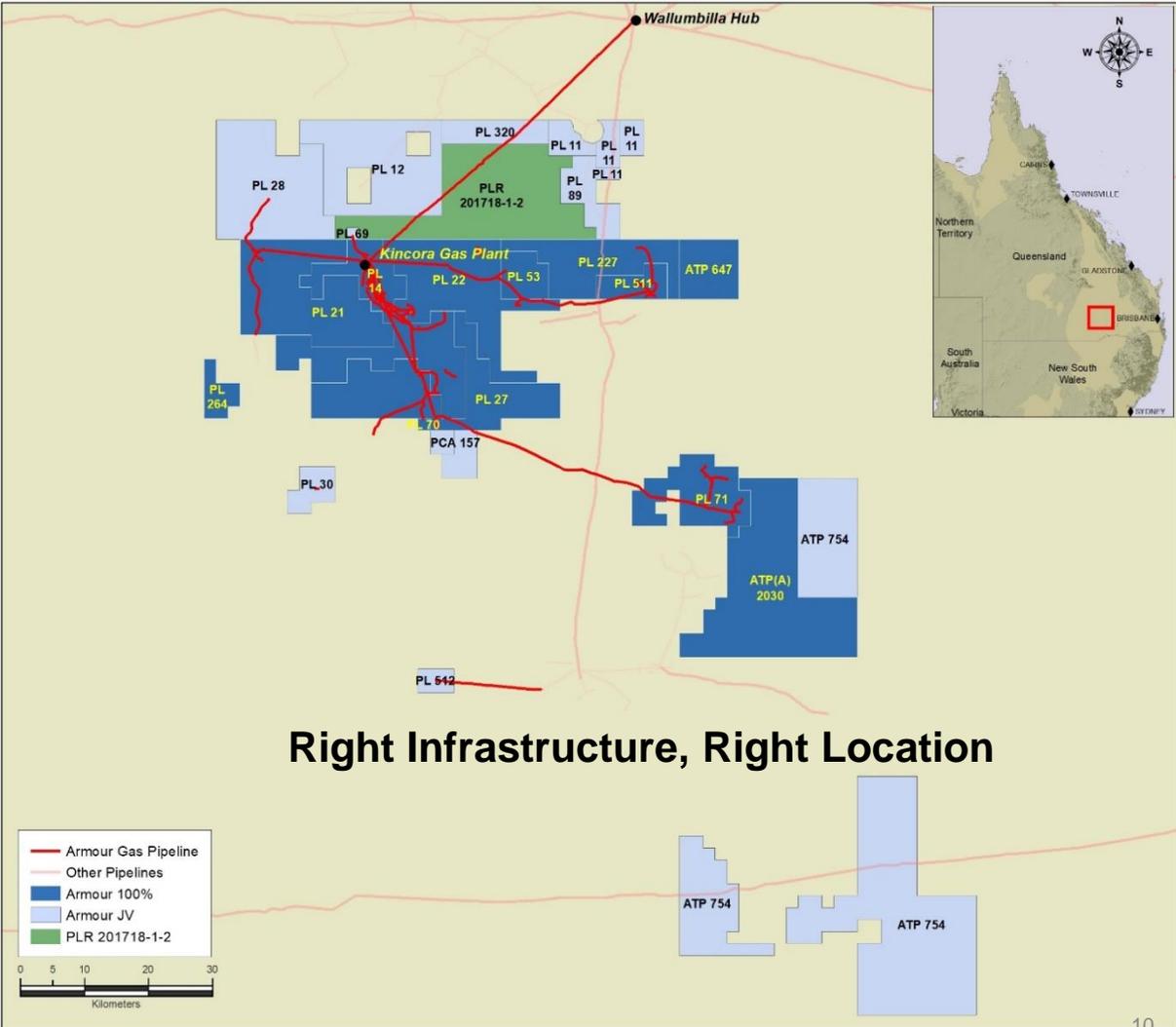


Source: ACCC analysis of AEMO data

- ACCC benchmark price for Queensland is \$7.85 for 2018 – but many sales remain considerably higher
- Armour's gas can be sold on STTM or via GSA** - and are ideally suited to C&I users where prices have been >\$10

# Armour's Kincora Gas Project Overview

- Located south of Roma
- Close proximity to Wallumbilla Gas Hub; connected to the Roma Brisbane Pipeline (RBP)
- Over 3000km<sup>2</sup> of highly prospective petroleum acreage
- Kincora Gas Plant producing Gas, LPG and condensate
- Significant surface infrastructure
- Connection Agreement with APA
- Gas Sales Agreement with APLNG
- Newstead Gas Storage facility has a capacity of 7.5 PJ

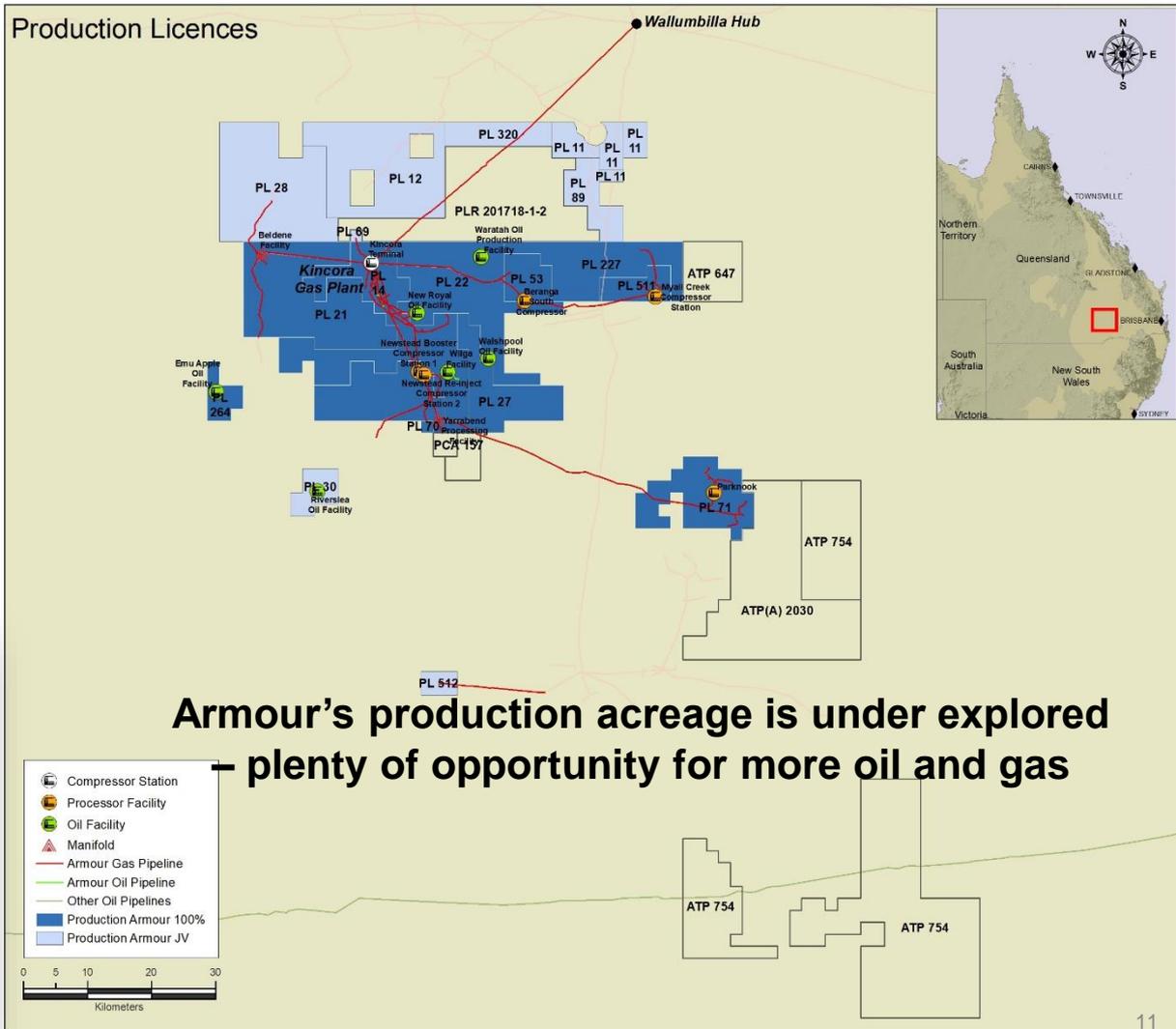


**Right Infrastructure, Right Location**

# Production acreage

## Armour holds significant Petroleum Lease acreage:

- 9 PLs at 100% ~ 1385.46km<sup>2</sup>
- 11 PLs in JV ~ 721.61km<sup>2</sup>
- Valuable existing infrastructure supporting future development
- Large acreage under explored



# Exploration acreage

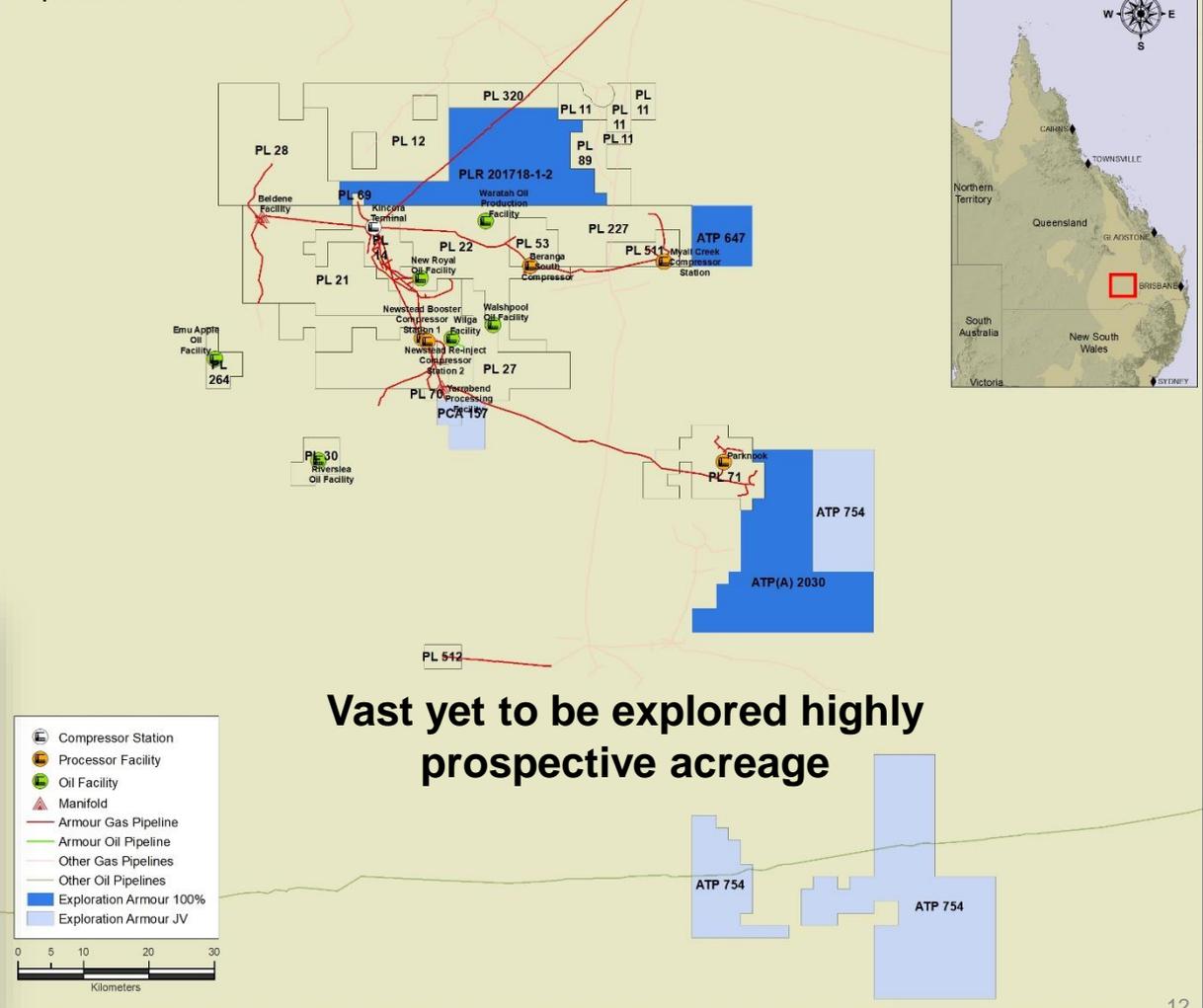
Exploration is in Armour's DNA

Armour's Kincora Project includes:

- 3 ATPs ~1230.52km<sup>2</sup>
- 1 PCA ~ 42.66km<sup>2</sup>
- 1 tender block ~ 317.93km<sup>2</sup>



## Exploration Licences

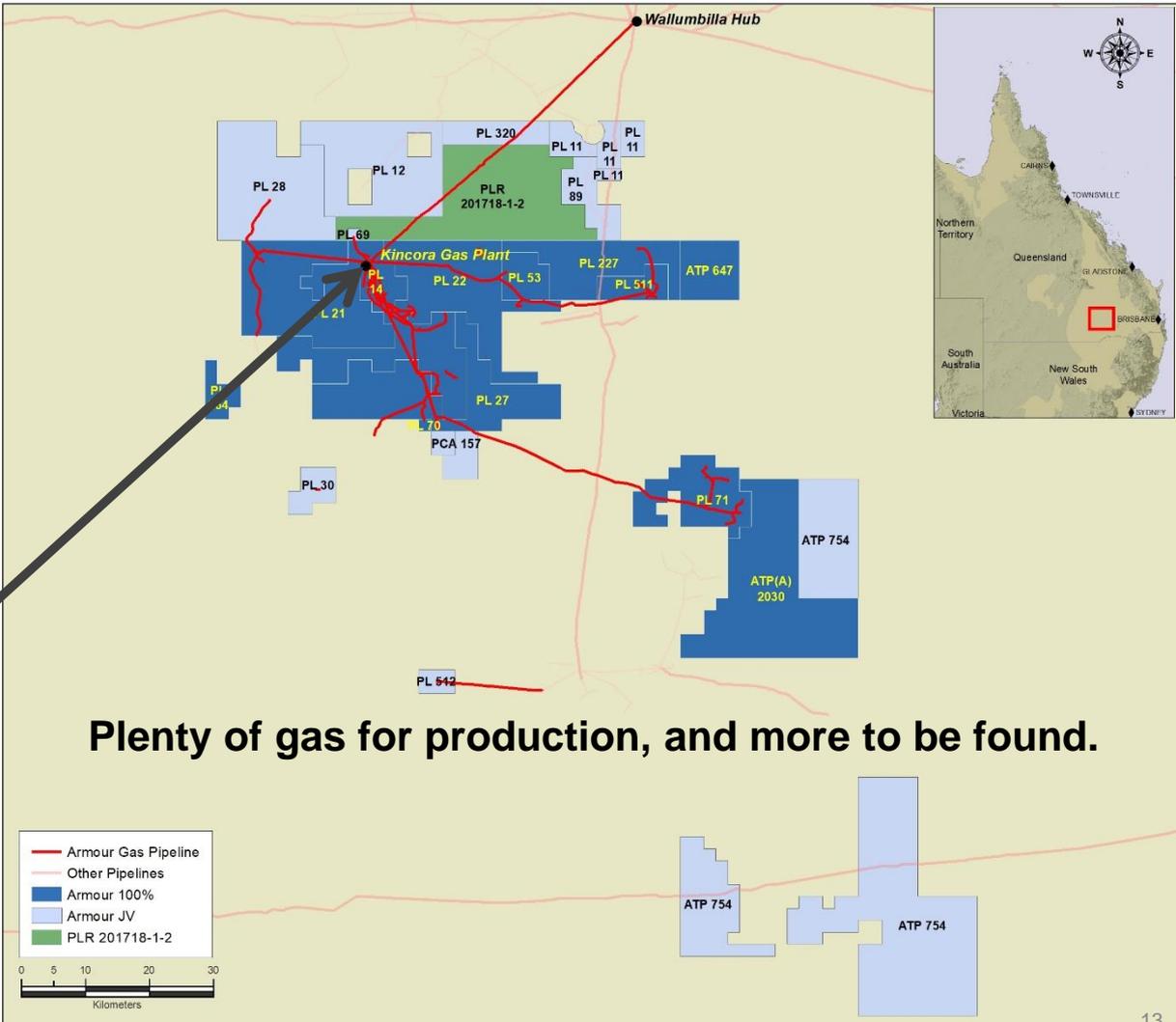


Vast yet to be explored highly prospective acreage

# Kincora Gas Plant

- Currently producing 9TJ/day (i)
- Engineering studies underway, seeking to increase production to 20 TJ/day in the next 12 – 18 months
  - Based on current 2P reserves, 20 TJ/day provides 7.8 years of production
- Producing sales quality gas, LPG (auto-mix) and condensate
- Connection via PPL3 to the Roma Brisbane Pipeline at Wallumbilla

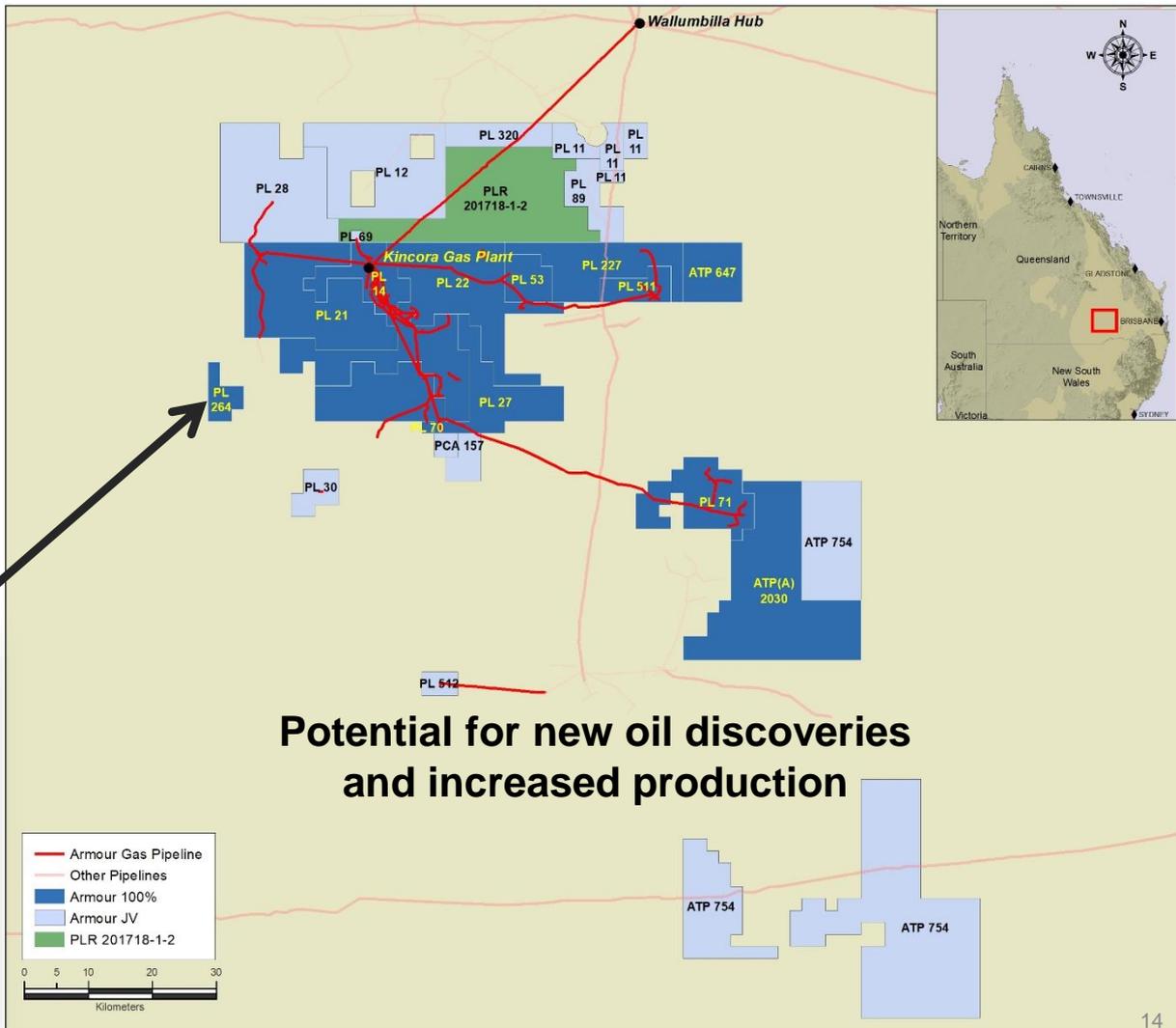
(i) Source: Armour Energy ASX announcement 12/02/2018



**Plenty of gas for production, and more to be found.**

# Emu Apple Oil Facility

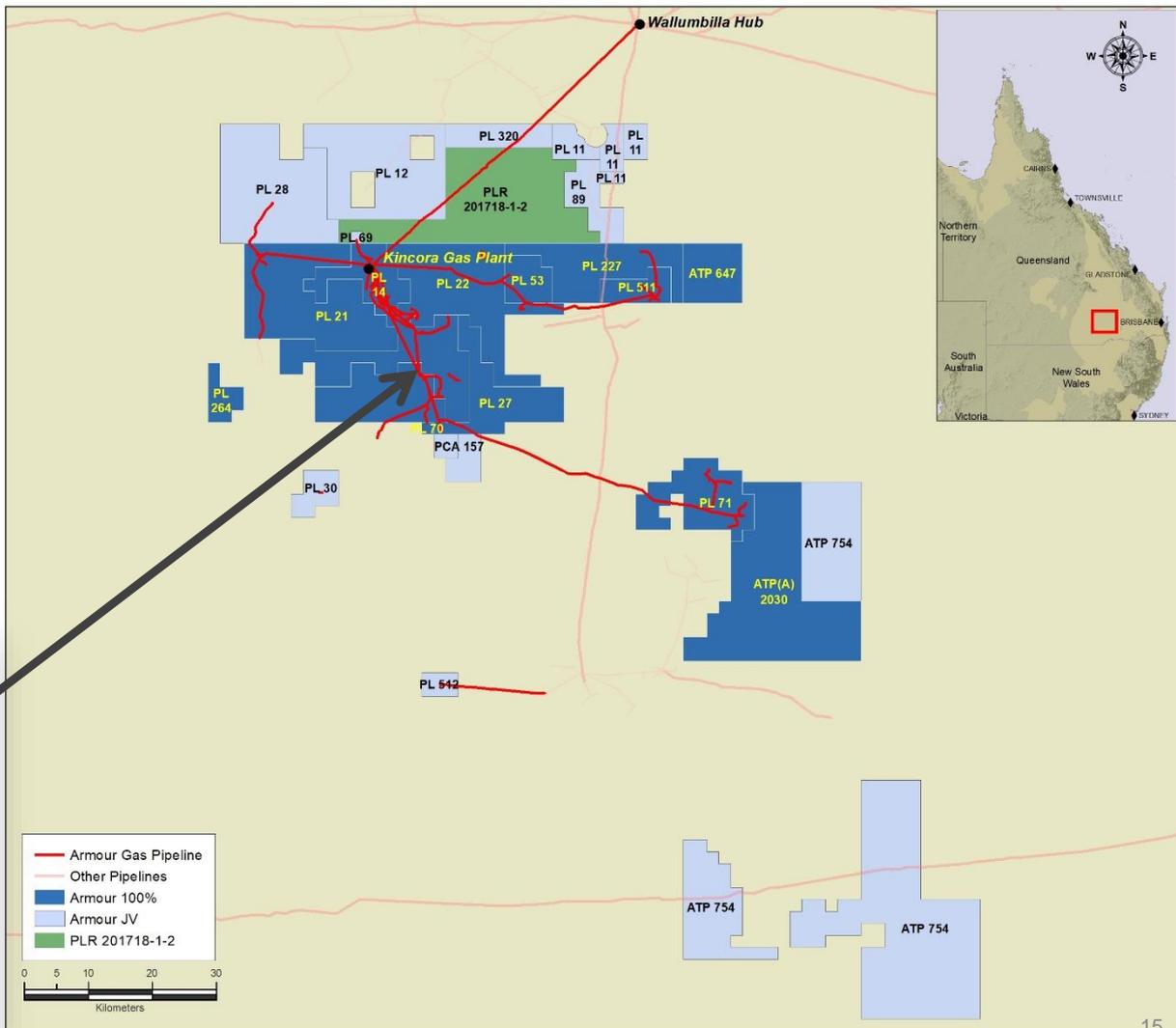
- Oil production since September 2016
- Producing on average 40 barrels per day
- Low cost operation
- Potential for more oil discovery targets and increased production within Armour acreage



**Potential for new oil discoveries and increased production**

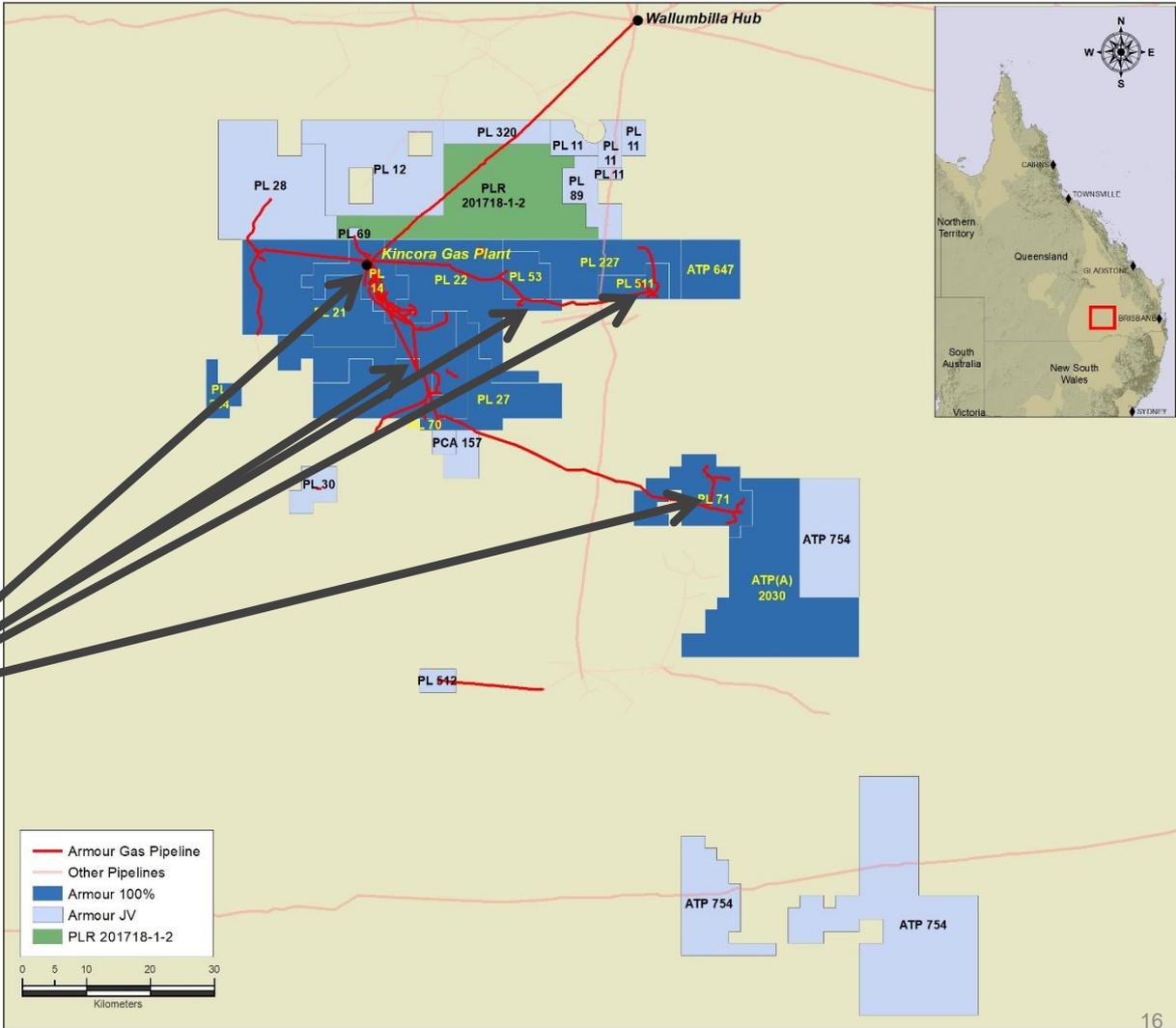
# Newstead Storage Facility

- 7.5 PJ storage capacity, with 7 TJ/day withdraw / inject rates
- Provides flexibility:
  - back-up capacity for unplanned and planned shutdowns
  - capacity to store gas when price is low and sell when higher; maximising opportunity during price cycles
- Additional storage opportunities exist in several depleted reservoirs across the tenements



# Field Compression Assets

- Myall Creek
  - 14TJ/ day
- Parknook
  - 5TJ/day
- Newstead booster
- Newstead reinjection
- Beranga South



# Certified Reserves – 5 year development plan to maintain production profile and reserve replacement ratio



Reserves <sup>(1)</sup>	1P	2P (1P+2P)	3P (1P+2P+3P)
Estimated Net Total Gas (BCF)	30.16	53.86	149.56
Estimated Net Total Gas (PJ)	31.82	56.82	157.79
LPG Yield (Tonne)	65,706	117,338	325,828
Condensate Yield (BBL)	316,215	564,700	1,568,075

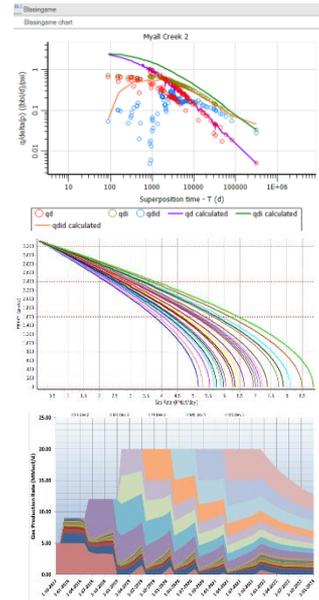
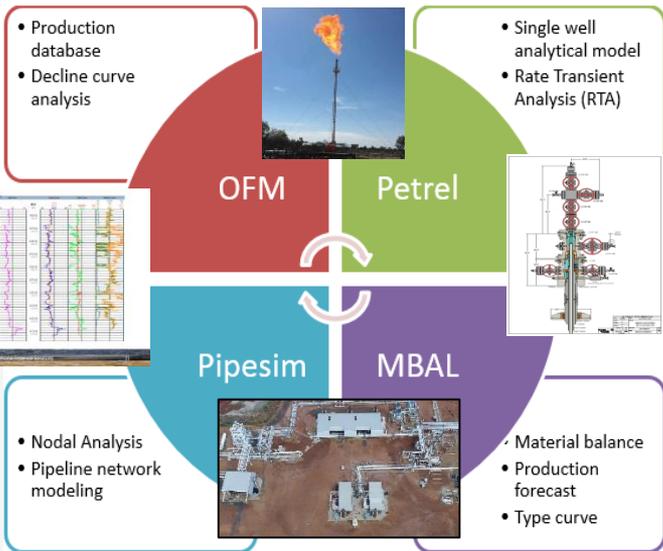
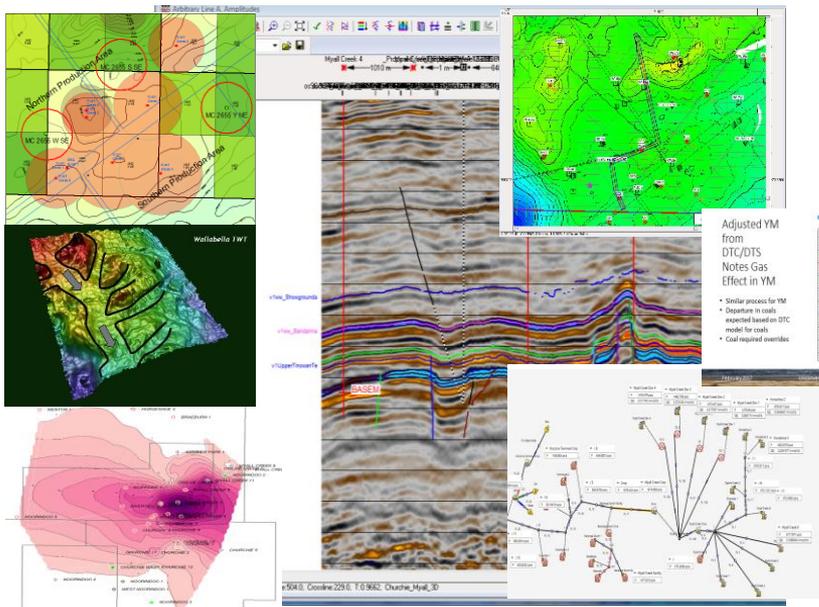
## Notes:

- Petroleum reserves are classified according to SPE-PRMS.
- Petroleum reserves are stated on a risked net basis with historical production removed.
- Petroleum reserves are stated inclusive of previous reported estimates.
- Petroleum Reserves have no deduction applied for gas used to run the process plant estimated at 7%.
- BCF = billion cubic feet, LPG = liquefied petroleum gas, PJ = petajoules, kbbl = thousand barrels, kTonne = thousand tonnes; Conversion 1.055 PJ/BCF.
- 1P = Total Proved; 2P = Total Proved + Probable; 3P = Total Proved + Probable + Possible.
- LPG Yield 2065 tonnes/petajoules, Condensate Yield 9938 barrels/petajoules

<sup>(1)</sup> Source: Armour Energy ASX Announcement on 3 April 2017

# Subsurface to Surface Integrated Asset Approach (Armour-Style)

- Developed inhouse assets model to leverage understanding and solutions for the life of a gas molecule to sales
- Excellent acreage position offers ability to demonstrate a complete understanding of asset behaviours and economics and simulate outcomes to optimise investment decisions and maximise results
- Bridging and sharing workflows from exploration to production to make better decisions based on a clear understanding of opportunities and risks
- Achieved by interlinking surface and subsurface disciplines as part of those simulations and all historic data matched in real time. A “Plan-Do-Check-Act” workflow



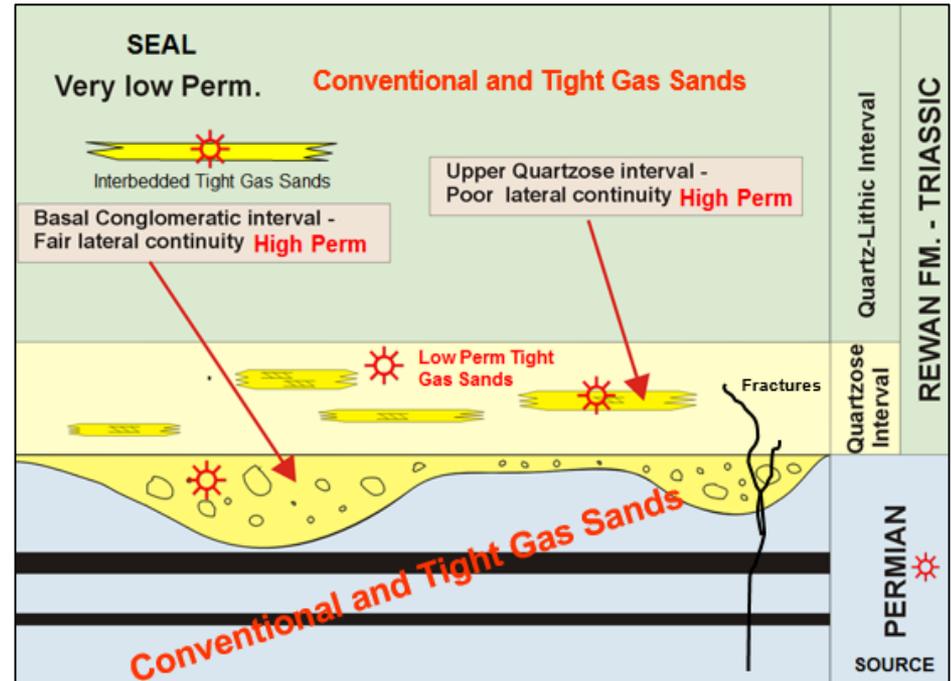
# Modern World Subsurface Exploration and Production (Armour-Style)

- Project planning & efficient delivery
  - Continue to analyse data – lots of hidden gems
  - Successful and safe implementation of 2018 drilling and well completion programs
  - Generate drillable low cost high yield inventory
  - Commence new 3D surveys
  - Aggressively pursue 2D reprocessing

- Reserve maturation
  - Reserve Replacement Year-on-Year
  - Conversion of 2C Resources to Reserves
  - Discoveries & extensions of unbooked reservoirs in newly granted ATPs

- Optimisation of production operations
  - Target 20 TJ/day – 12 – 18 months
  - Investigate infrastructure expansion requirements / opportunities

## Deep Regional Tight Gas Play - Queensland's Next Mega Project



Top Continuous Gas Column  
~1800mMD to >3000mMD

Thick Continuous Triassic Sands  
Widespread Over-pressured Permian Sands

# Kincora Project – solid foundation to build on...

- ✓ Connection at Wallumbilla on the Roma to Brisbane Pipeline
- ✓ Gas processing plant, producing sales quality gas, condensate and LPG
- ✓ Existing wells producing 9 TJ/day, increasing to 20 TJ/day in 12 – 18 months
- ✓ Newstead Storage facility, capable of storing 7.5 PJ; injection/withdrawal rates of 7 TJ/day
- ✓ 56.82 PJs of 2P Reserves <sup>(1)</sup>, plus upside
- ✓ Over 3,000km<sup>2</sup> of highly prospective petroleum acreage

**...an exciting growth opportunity**



Armour's end of line facility at Wallumbilla hub



Sales compressor's at KGP



Newstead #10 well



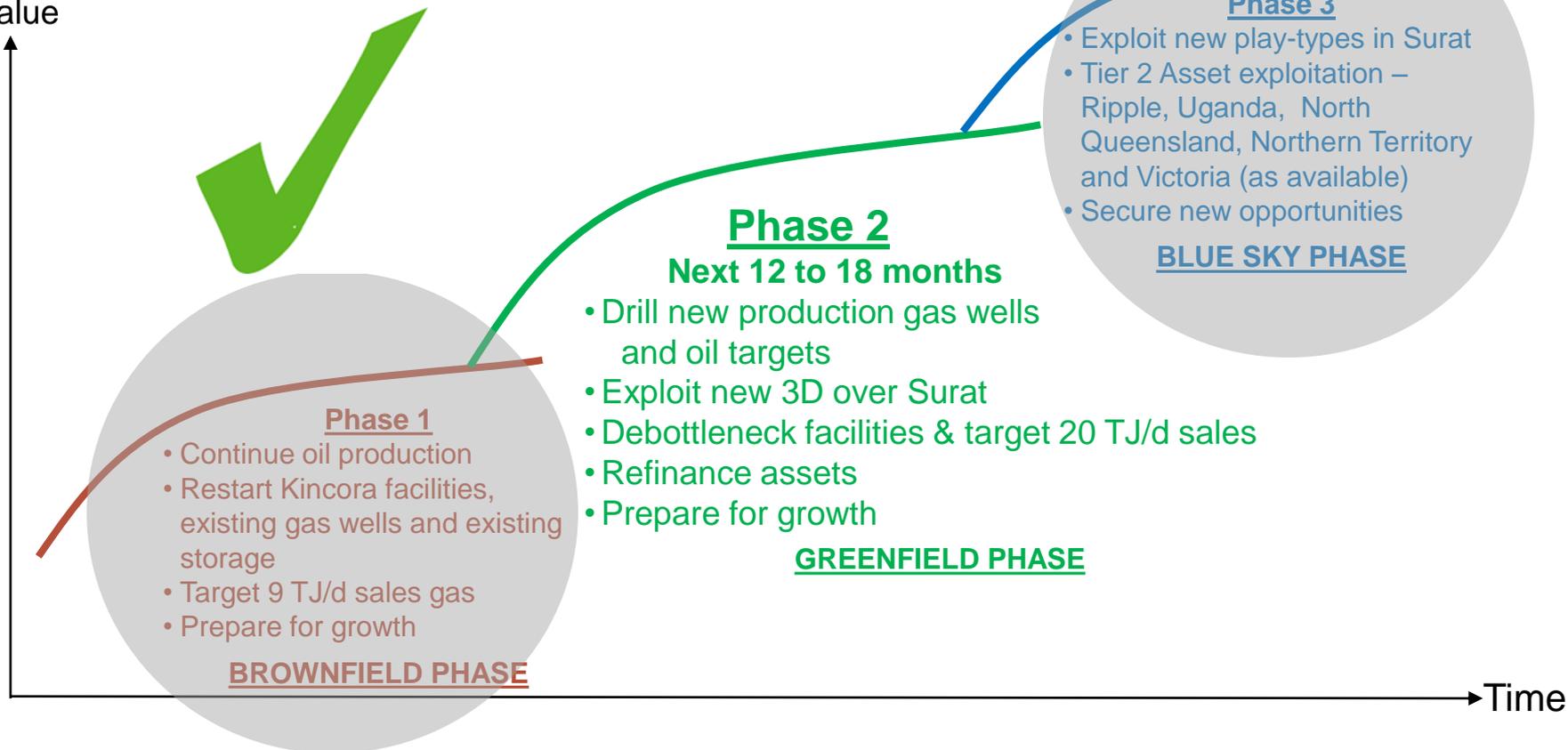
Newstead Compression station

<sup>(1)</sup> Source: Armour Energy ASX Announcement on 3 April 2017

# Armour Strategy – 3 Phases of Growth



Shareholder  
Value

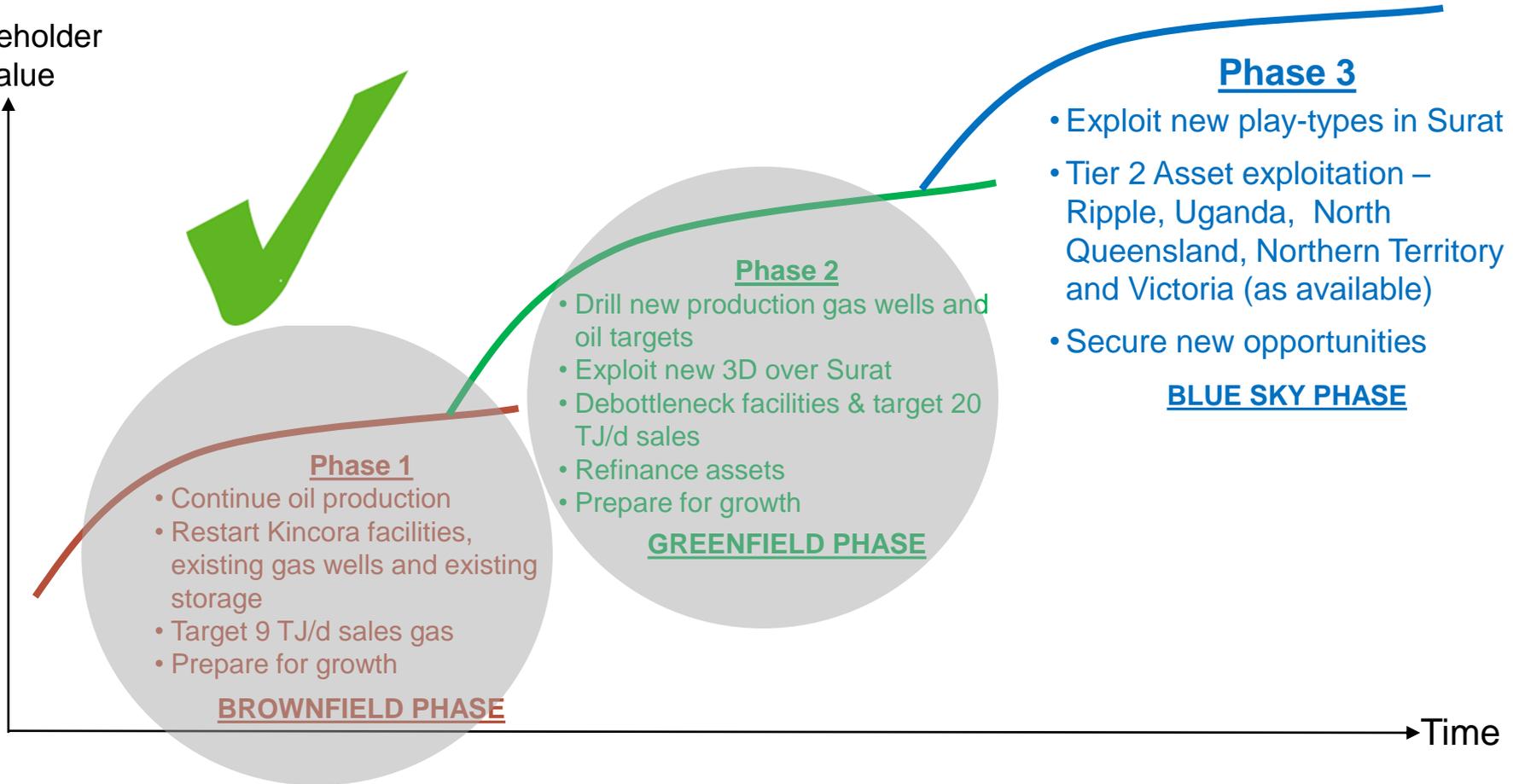


Time

# Armour Strategy – 3 Phases of Growth



Shareholder Value



## Phase 3 – future upside in addition to Armour’s Kincora Project

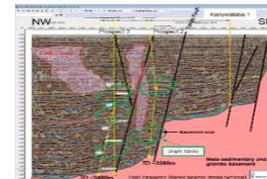
Shale Gas Plays

McArthur Basin NT<sup>(1)</sup>  
ISA Superbasin QLD



Oil Exploration

Uganda Project



Onshore  
Conventional Gas

Otway & Gippsland  
Basins in Victoria<sup>(1)</sup>



Zinc Upside

Ripple Resources  
NT & QLD



<sup>(1)</sup> Armour's projects in the Northern Territory and Victoria are currently suspended due to government action regarding hydraulic stimulation that either bans or imposes a moratorium on onshore petroleum exploration.

# Northern Territory Shale Gas Play: Deep Oil and Gas Plays (100% AJQ)

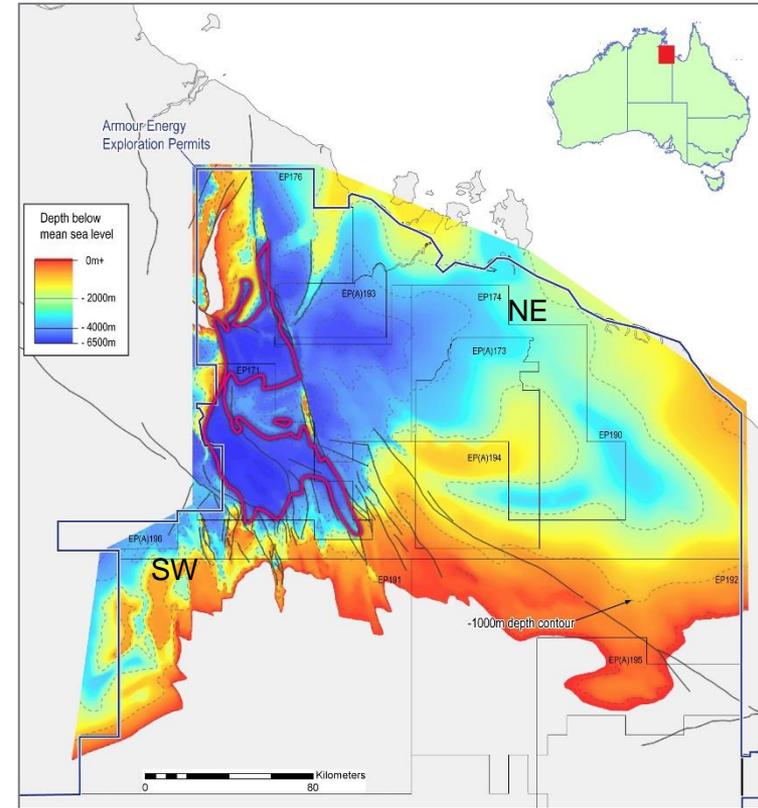


## McArthur Basin

- **McArthur Group**
  - Barney Creek Formation
  - 1.2 MMbbl, 13 TCF Prospective Resource <sup>(1)</sup>
- **Tawallah Group**
  - Recently discovered
  - Underlying and beyond McArthur Group
  - Large, thick formations with up to 7% TOC:
  - Wologorang Formation and
  - McDermott Formation
  - Prospective Resource under assessment.

<sup>(1)</sup> Best estimate prospective resource: 13.0TCF in EP171/EP176, MBA 2012

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.



# Northern Queensland Shale Gas Play: Isa Super Basin (100%)

## Results to date

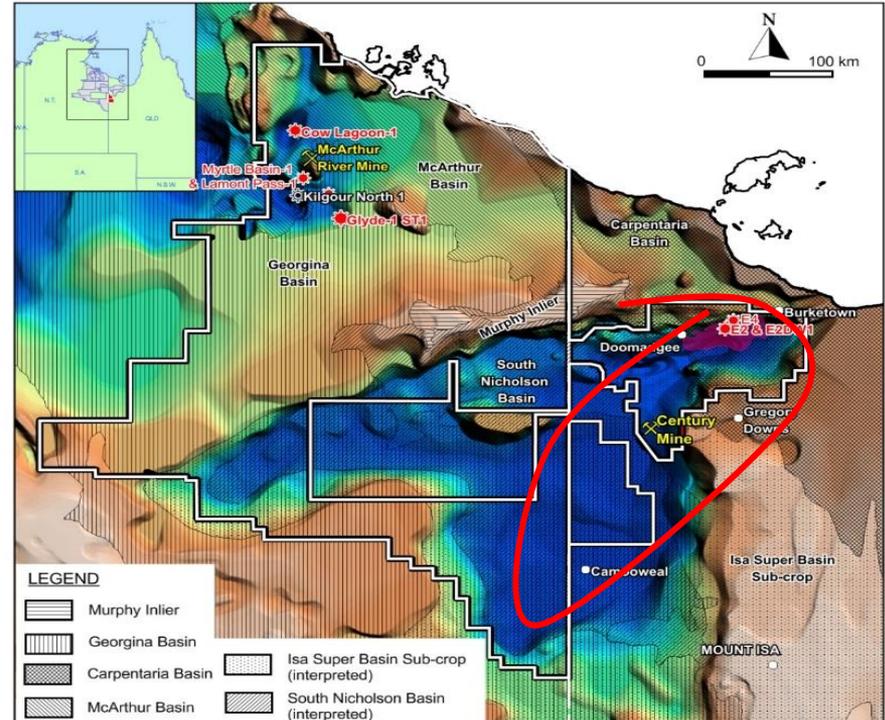
- 6 wells drilled in ATP1087 to date
- Extensive seismic data
- 18.7 TCF Prospective Resource<sup>(1)</sup>
- Highly prospective shale formations
- Egilabria-2 well - an Australian first: flows from a hydraulically stimulated lateral in shale

## Opportunity

- Stacked play opportunities
- Play potentially extends into NT
- 39 conventional leads
- Large scale production

## What's next?

- Appraisal to establish commercial flow rates
- Seismic plus well in deeper part of basin



<sup>(1)</sup> Best estimate prospective resource: 18.7TCF in ATP1087, MBA 2012 (excludes Riversleigh Shale)

## Summary and Outlook

- Independent Oil & Gas E&P company with significant growth potential
- Positive East Coast Australia gas market setting with strong demand growth and pricing
- Production ramp up targeted from existing wells and planned new wells
- Experienced board and management with previous track record of significant shareholder value creation in the energy sector
  
- Spudding Armour's first new production well on the Roma Shelf, more to come
- Resource upgrades as a result of drilling campaign
- Engineering studies – confirm path to reliable and increased production rates
- Optimisation of operating activities – experience of running the plant
- Stable cashflows from reliable production
- Planning and implementation of exciting new exploration activities – 3D seismic



**...to deliver our growth plans and open up further new opportunities**

# Armour Energy

## AUSTRALIAN ENERGY & BATTERY MINERALS INVESTOR CONFERENCE

March 2018

**For further information contact:**

- **Nick Mather – Executive Chairman**
- **Roger Cressey – CEO**