



EMPIRE OIL & GAS NL

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ABN 55 063 613 730  
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Ground Floor  
229 Stirling Highway  
CLAREMONT 6010  
WESTERN AUSTRALIA

Tel: + 61 8 9286 4600  
Fax: + 61 8 9284 6588  
Email:  
admin@empireoil.com.au  
Web:  
www.empireoil.com.au

## Empire provides focused exploration program update

Perth Basin domestic gas producer, Empire Oil & Gas NL (**Empire**, ASX: EGO) advises it has today lodged an updated investor presentation to provide an update on its exploration program which summarises the status to secure a farm-in partner.

Work has been progressing on the exploration program and farm-out process in line with Empire's previous market updates. Empire has progressed discussions with a number of interested parties and two of these are well advanced. However, given the persisting challenging conditions in the Australian oil and gas exploration market, the Board will maintain a disciplined approach to achieve the right balance to ensure Empire shareholder value is maximised.

Key highlights of the update include:

- An outline of the Company's key exploration prospects in the Perth Basin, which have the potential to be company transforming;
- An overview of the exploration prospects and leads around the Red Gully-1 and the volatile oil discovery at Red-Gully North-1;
- A status update on the drilling program planning; and
- An outline of Empire's forward work program for the remainder of 2017 and 2018.

Chief Executive Officer Ken Aitken said: *"Empire's base business is going well and producing profitably. Empire's Board and management team have been working hard to deliver the farm-in partner in order to explore and develop drill-ready prospects. Empire has a well balanced portfolio of assets - we have a cash producing asset, a number of drill ready prospects, and a number of other exploration prospects and leads that require further work to advance them to be 'drill ready'. A farm in partner will allow us to progress our work program to maximise the value of this portfolio of assets."*

*"These partner discussions and the increasing crude price have led to the focus on drilling the North Erregulla Deep well in 2017 which has two significant targets."*

*"A well at North Erregulla will still test the deeper gas potential of the Kingia/High Cliff (Waitsia) sandstones with the added advantage of testing significant oil volumes at the shallower Dongara/Wagina sandstone, which have already been confirmed to contain oil."*

– ENDS –

**For further information, contact:**

Ken Aitken  
Chief Executive Officer

Rachel Rees  
Chief Financial Officer and  
Company Secretary

Cameron Morse

Empire Oil & Gas NL  
Telephone: +61 8 9286 4600  
[www.empireoil.com.au](http://www.empireoil.com.au)

Empire Oil & Gas NL  
Telephone: +61 8 9286 4600  
[www.empireoil.com.au](http://www.empireoil.com.au)

FTI Consulting  
Telephone: +61 8 9485 8888

**About Empire Oil & Gas**

Empire Oil & Gas NL ('Empire' or the 'Company') is an onshore conventional gas and condensate producer and explorer listed on the Australian Securities Exchange (ASX: EGO) with key assets in the Perth Basin in Western Australia.

The Company's producing assets at Red Gully are less than 150 kms from the city of Perth where there is a strong gas market. Since commencing operations in 2013, the 100% owned Red Gully Processing Facility has produced and delivered over 8,950 Terajoules (TJ) of gas. Gas produced to date has been contracted to Alcoa of Australia (Alcoa) and delivered through the Dampier to Bunbury Natural Gas Pipeline (DBNGP), which runs close to the Red Gully Processing Facility (RGPF). Condensate is transported via road to BP.

Empire is the holder of the largest net onshore acreage in the highly prospective Perth Basin with its production licenses and permits covering more than 8,000 km<sup>2</sup>, representing 46% of the currently granted acreage in the onshore Perth Basin. Close to pipeline infrastructure and with rapid commercialisation opportunities, the Company has significant exploration potential in an underexplored, proven petroleum basin.

Empire's vision is to sustainably grow the business into a mid-tier exploration and production company. Empire's strategy is to be the Perth Basin operator of choice, safely supplying WA domestic gas by growing the Red Gully production hub, delivering reserves and production growth by drilling material quality exploration prospects in the high profit margin onshore Perth Basin and, enabling Empire to attract quality farm-in partners to assist in accelerating growth plans.



- 1 Company snapshot
- 2 Exploration portfolio
- 3 Red Gully North-1 update
- 4 Red Gully production update
- 5 Financial performance
- 6 Forward work program
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## Empire is an established Perth Basin domestic gas producer

### Company overview

- Onshore Perth Basin conventional gas and condensate producer and explorer
- Current focus on company's exploration portfolio**
- Stable production and CPI-linked gas revenue streams** through secure Sales Agreements with Alcoa and BP
- Supportive equity cornerstone shareholder in Mineral Resources** (ASX: MIN, A\$2.1bn market capitalisation), an integrated mining services company
- Red Gully North-1 **oil reserve potential realised via a successful extended well test** planned for 3Q 2017. Test expected to be cash flow positive

### Financial information

Share price (5-Apr-17)	A\$0.190
Number of shares <sup>1</sup>	102.4m
<b>Market capitalisation</b>	<b>A\$19.5m</b>
Cash (31-Dec-16)	A\$3.1m
Debt (31-Dec-16) <sup>2</sup>	A\$15.1m
<b>Enterprise Value</b>	<b>A\$31.5m</b>

Source: IRESS

Notes:

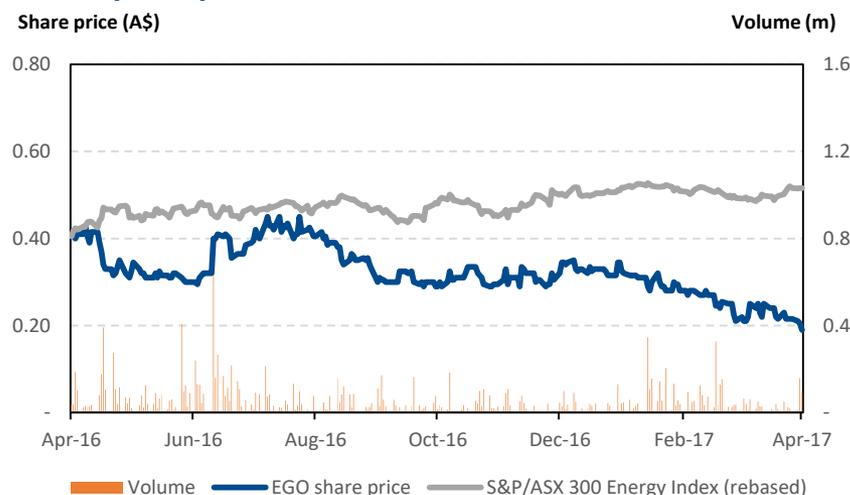
- Excludes 7.5m unlisted options with exercise price of A\$0.50 expiring 11 August 2018 and 7.9m listed options with exercise price A\$0.90 expiring 29 April 2018
- Mineral Resources 3 year revolving working capital facility

### Top shareholders

Mineral Resources	19.4%
Philip Garratt	7.1%
Dynamic Supplies	4.8%
Robert Hutchfield	1.9%
Vincent Family	0.9%
Board and management	8.6%

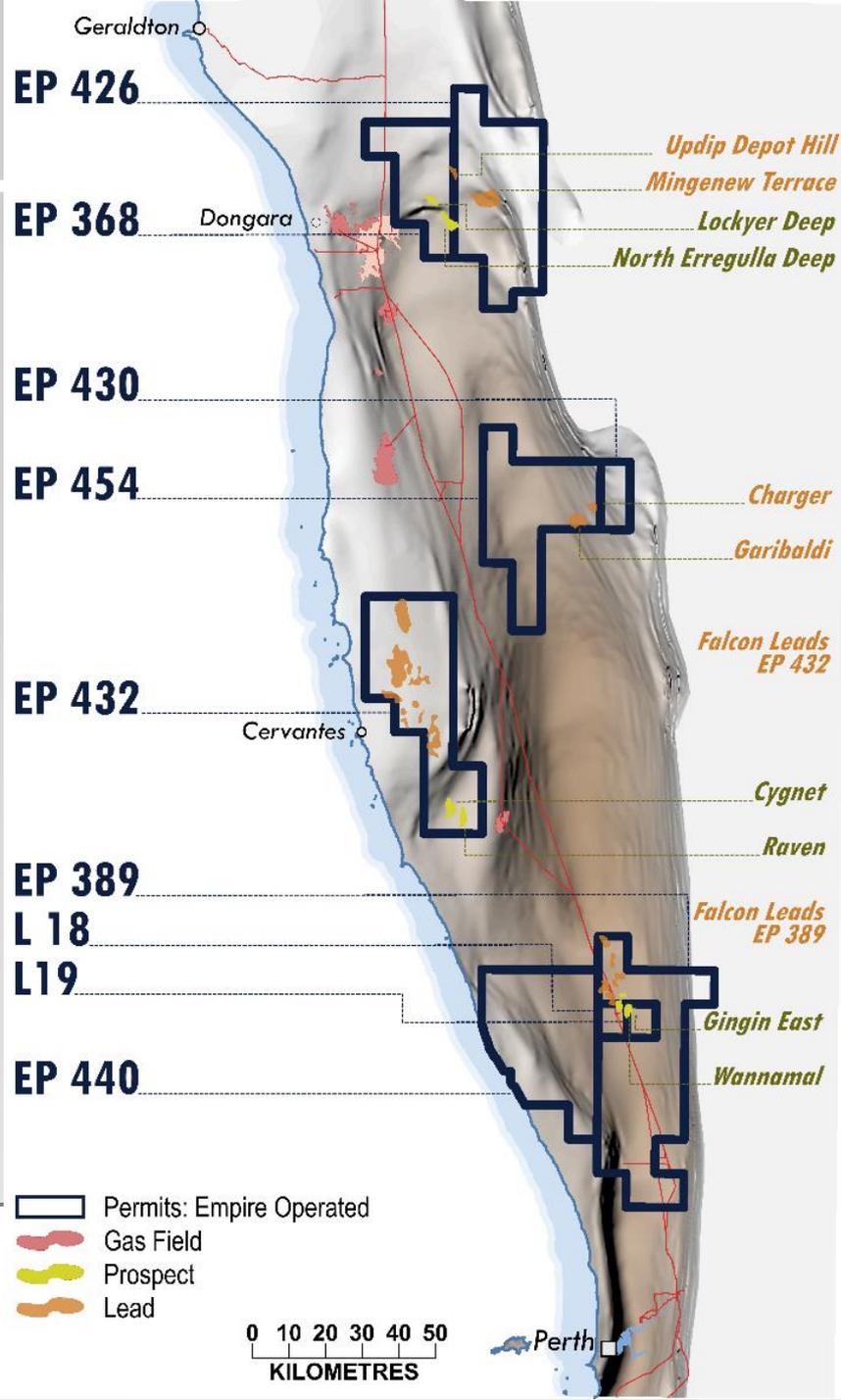
Source: Link Market Services (March 2017)

### Share price performance



# Exploration portfolio highlights

- **North Perth Basin** core exploration focus
- Targeting **proven petroleum systems** with diverse plays
- **Basin leading tenement portfolio**
- **High equity position** in material prospects (up to 80-100%)
- **2017 exploration program to focus on three main areas** (EP 389, EP 368/426, EP 432)
- **3 drill ready prospects** (EP 368/426 and EP 432)
- Substantial **exploration potential** surrounding the 100%-owned Red Gully Production Hub
- **2D seismic survey planning underway** to mature further prospects for drilling in EP 389 and EP 432
- **Farm-out discussions** at an advanced stage with a number of parties



## Empire has a leading Perth Basin oil and gas exploration portfolio with multiple transformational prospects and leads

**1**

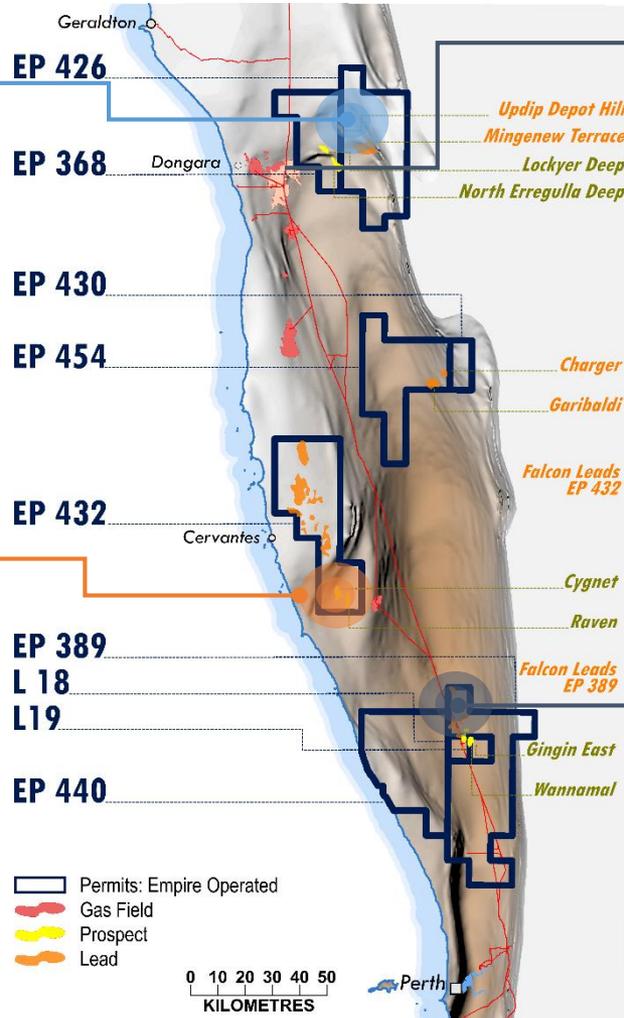
**EP368 – Lockyer Deep**  
**EP426 – North Erregulla Deep**  
 Multiple high volume gas plays and secondary oil (ref slides 6-8)

0 5 10 15 20  
KILOMETRES

**2**

**EP432 – Raven**  
 High impact Jurassic oil prospect (refer slides 9-10)

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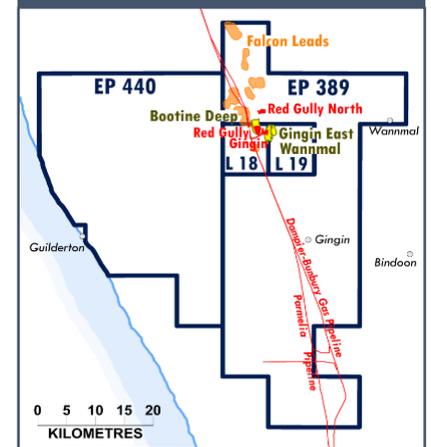


**Waitsia (AWE 50% / ORG 50%)**

- 15km east of Lockyer Deep
- Largest onshore Perth Basin gas discovery in 40 years
- 2P gas reserves: 460 bcf
- 2C gas reserves: 232 bcf

**3**

**PL18/19 and EP389 –**  
 Red Gully production hub and 400bopd play opening C sand oil discovery (refer slides 11-16)



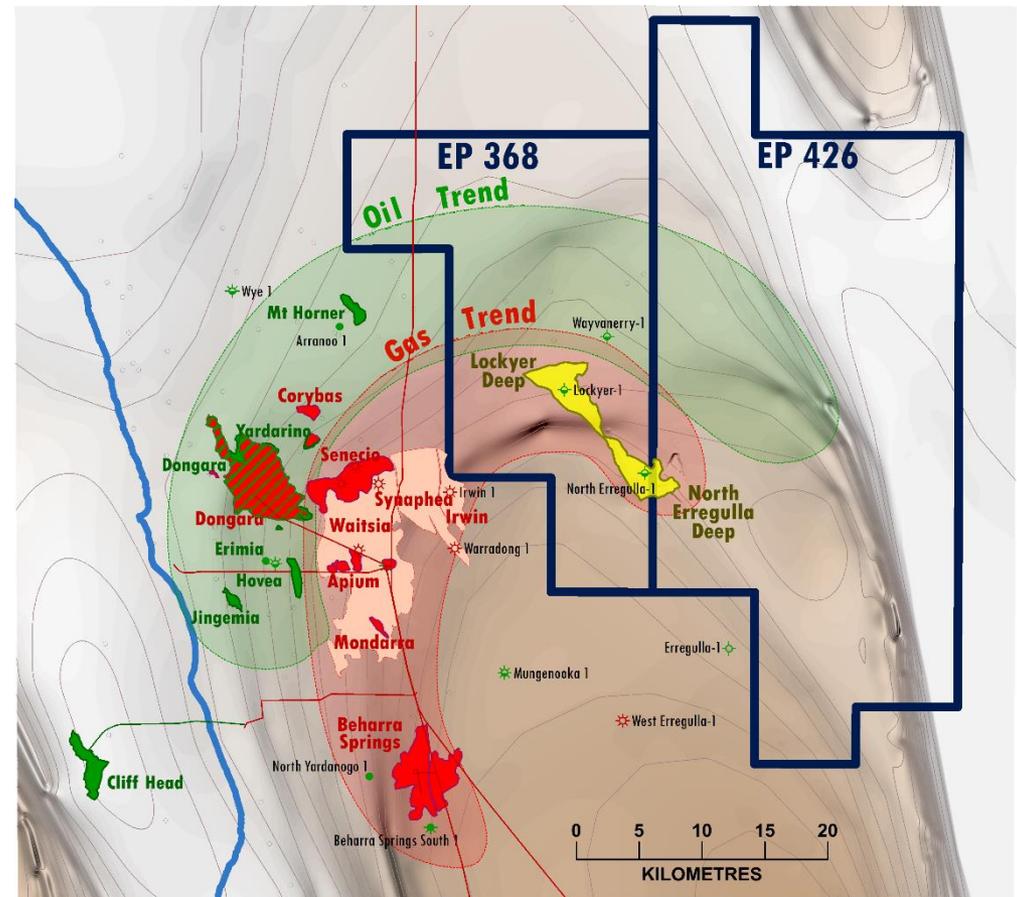
# 1 Lockyer Deep and North Erregulla Deep

North Erregulla Deep / Lockyer Deep is a high impact, high volume target located along trend to AWE's recent Waitsia discovery

## Overview

- Significant potential for a Waitsia-style gas play in EP 368/426
- Empire's prospects located near AWE's recent Waitsia discovery
  - This discovery was perhaps the most significant since Dongara field in the 1960's
- Lockyer/North Erregulla has proved oil bearing through the historic North Erregulla-1 and Lockyer-1 wells at the Dongara/Wagina Sandstone level
  - Deeper stratigraphic levels were not drilled and remain untested
  - Major gas potential at deeper levels likely post Waitsia discovery
  - Oil potential up dip at North Erregulla
- The northeast side of the Perth Basin remains grossly underexplored with few wells drilled to date.

## Regional setting

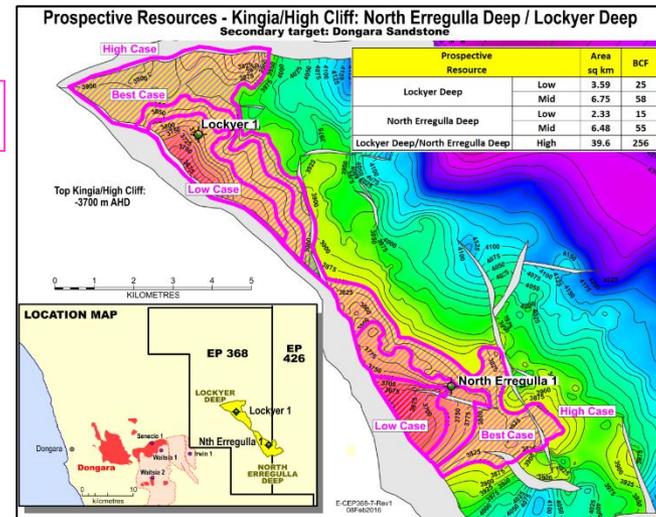


## North Erregulla Deep represents one of the largest gas exploration prospects remaining in the Perth Basin with significant oil potential in the shallow target

### Overview

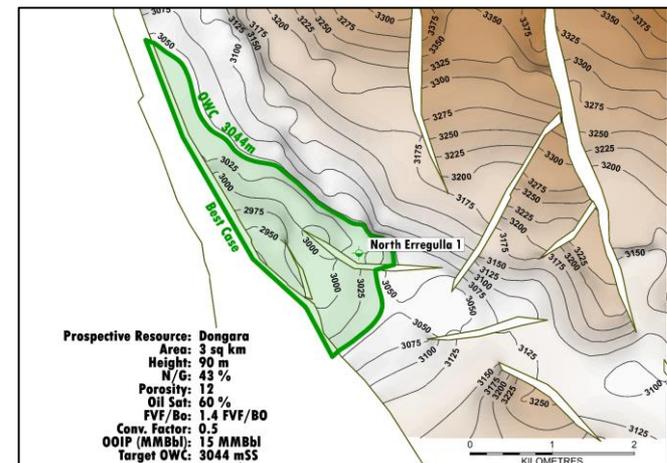
- North Erregulla Deep represents one of the largest gas exploration prospects remaining in the Perth Basin with significant oil potential in the shallow target
- Kingia/High Cliff targeting up to 256 BCF prospective resources
- Erregulla North-1 well discovered oil but was not crestally located
- Significant up-dip potential remains in the Dongara/Wagina
- Potential for up to 15 mmbbls OIP however a resource cannot be assigned at this stage due to the uncertainty in the recovery factor
- Potential for better quality sandstones in an up-dip setting
- Can be evaluated as a secondary target on the way to the Kingia primary target

Primary Gas Target



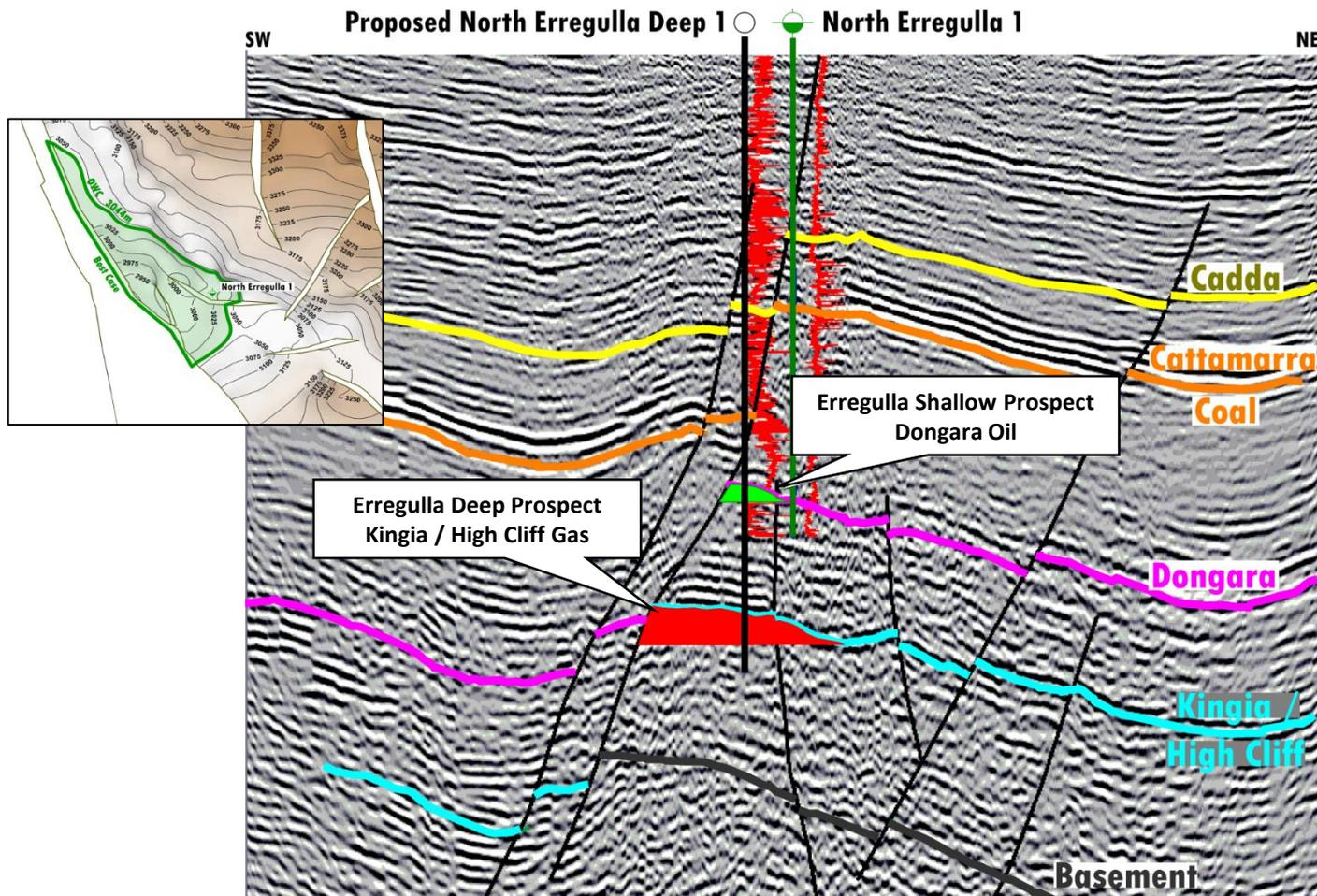
North Erregulla-Dongara/Wagina Structure

Secondary Oil Target



# 1 North Erregulla Deep – two significant hydrocarbon targets

North Erregulla Deep has appealed to farminees due to two large targets (gas and oil) to be tested via one vertical exploration well

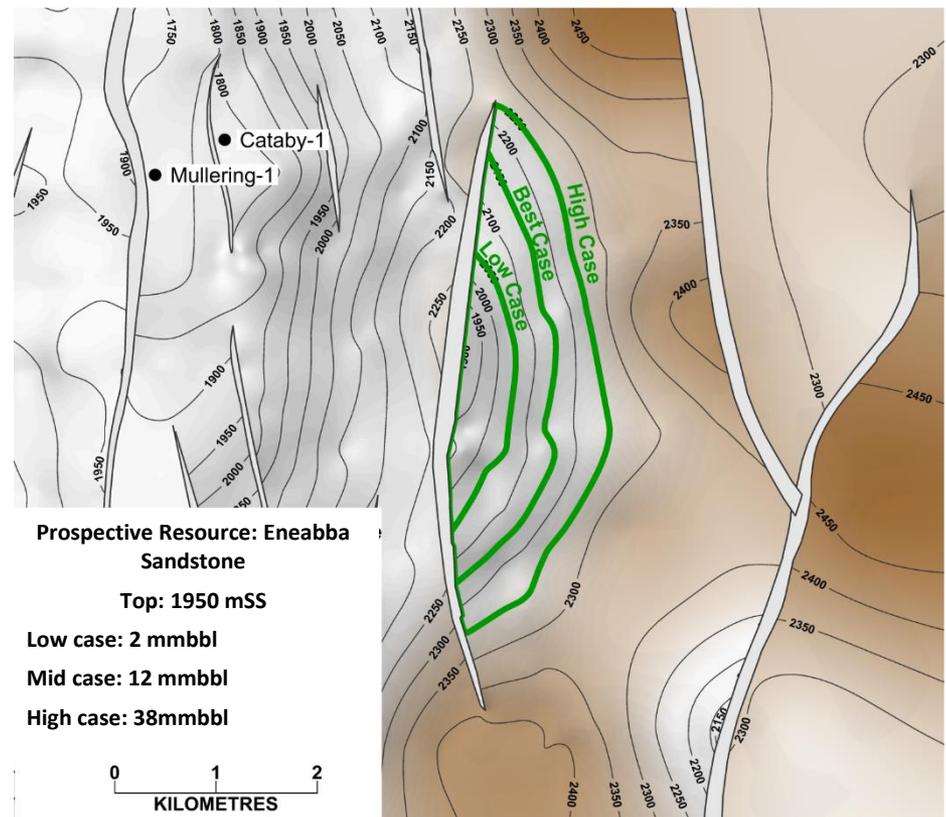


## Raven is a shallow oil play that can be rapidly monetised given exploration success

### Overview

- Targeting top Eneabba Sandstone
- Empire owns 100% equity in the permit
- Targeting 12 million barrels (mid/best case)
- Oil already discovered updip at Cataby-1
- Drilling currently anticipated for 2018
  - Medium risk/high impact well
  - Drilling will test a large fault block adjacent to a proven Jurassic source kitchen
  - Success has the potential to open up a new Jurassic oil play
- Currently finalising funding alternatives including potential farm-in partners
- Raven presents a strong commercialisation opportunity for Empire due to:
  - Relatively low drilling costs compared to deeper Waitsia-style gas targets
  - Oil-rich plays can be commercialised faster compared to gas

### Prospective resource

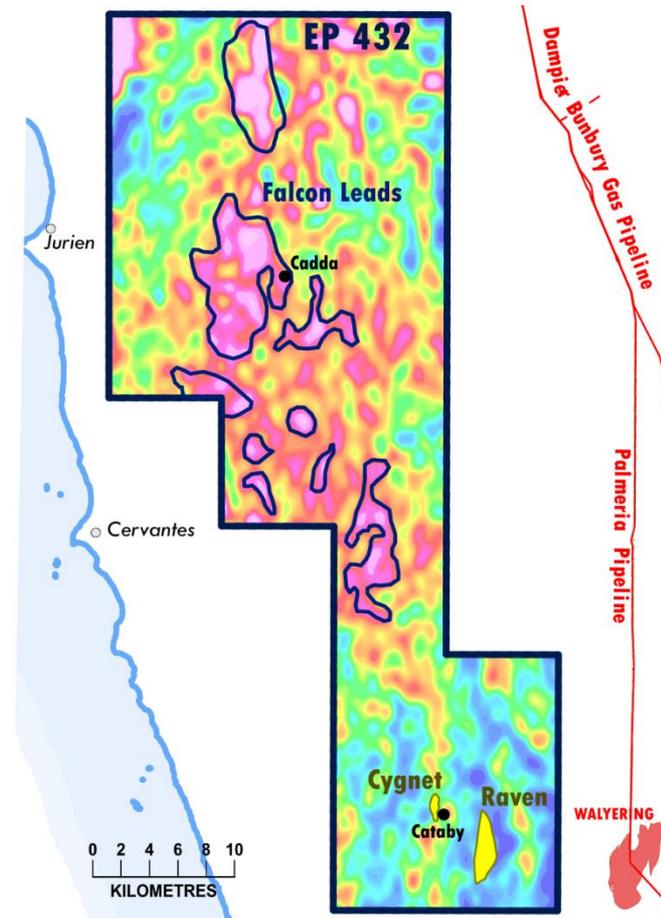


## Black Swan survey in EP 432 highlights major structural trends and prospectivity

### Overview

- Extremely limited 2D seismic data coverage
- Black Swan Survey images a large north–south structural trend
- Limited offset well data indicates the High Cliff and Kingia sandstone are present
- Targets are typically less than 3,000m
- Adjacent to mature source rock
- Potential for a Waitsia play but with wet gas potential
- Identified leads are numerous and large
- Leads will be matured with 2D seismic currently being planned
- Adjacent to major gas trunk lines
- At early stage of evaluation but company making potential beyond the Raven Jurassic oil play to the south

### Falcon gravity leads (from Black Swan survey)

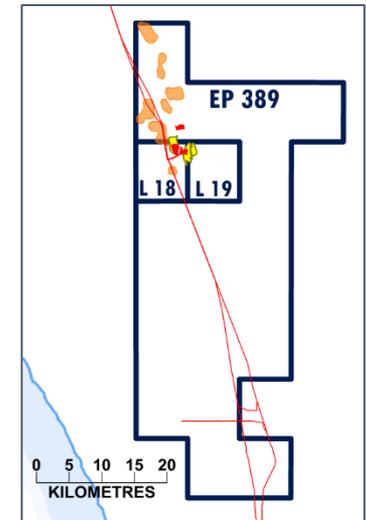
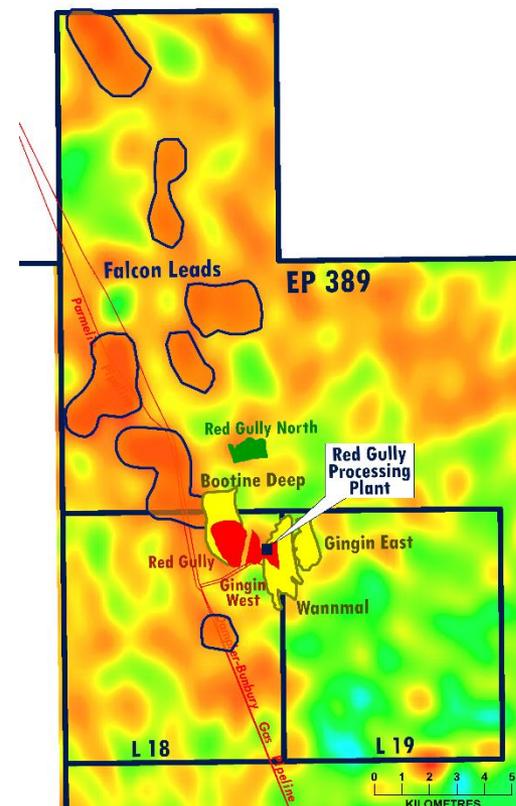


## Red Gully project area contains the Red Gully-1 and production plant, Red Gully North-1 volatile oil discovery and several other oil and gas targets

### Overview

- There are currently three main focus areas within the Red Gully project area (EP 389, PL 18 and PL 19)
  - Red Gully production licences and processing facility
  - Red Gully North-1 volatile oil discovery and potential development
  - Exploration potential for gas, condensate and volatile oil surrounding production hub
- Empire has 100% ownership of Red Gully project areas located 150km north of Perth which is close to end-users and exploration assets
- The Red Gully North-1 oil discovery has opened up a new C sand oil play across the basin in addition to the known B and D sand gas and condensate produced from the Upper Cattamarra sands to date
- Black Swan survey interpreted structural leads in a fairway in northern EP 389
  - Potentially large gas/condensate targets and C sand gas and oil targets
  - Future discoveries could be rapidly tied back to the production hub at Red Gully
  - 2D seismic being planned to mature all leads

### Exploration overview

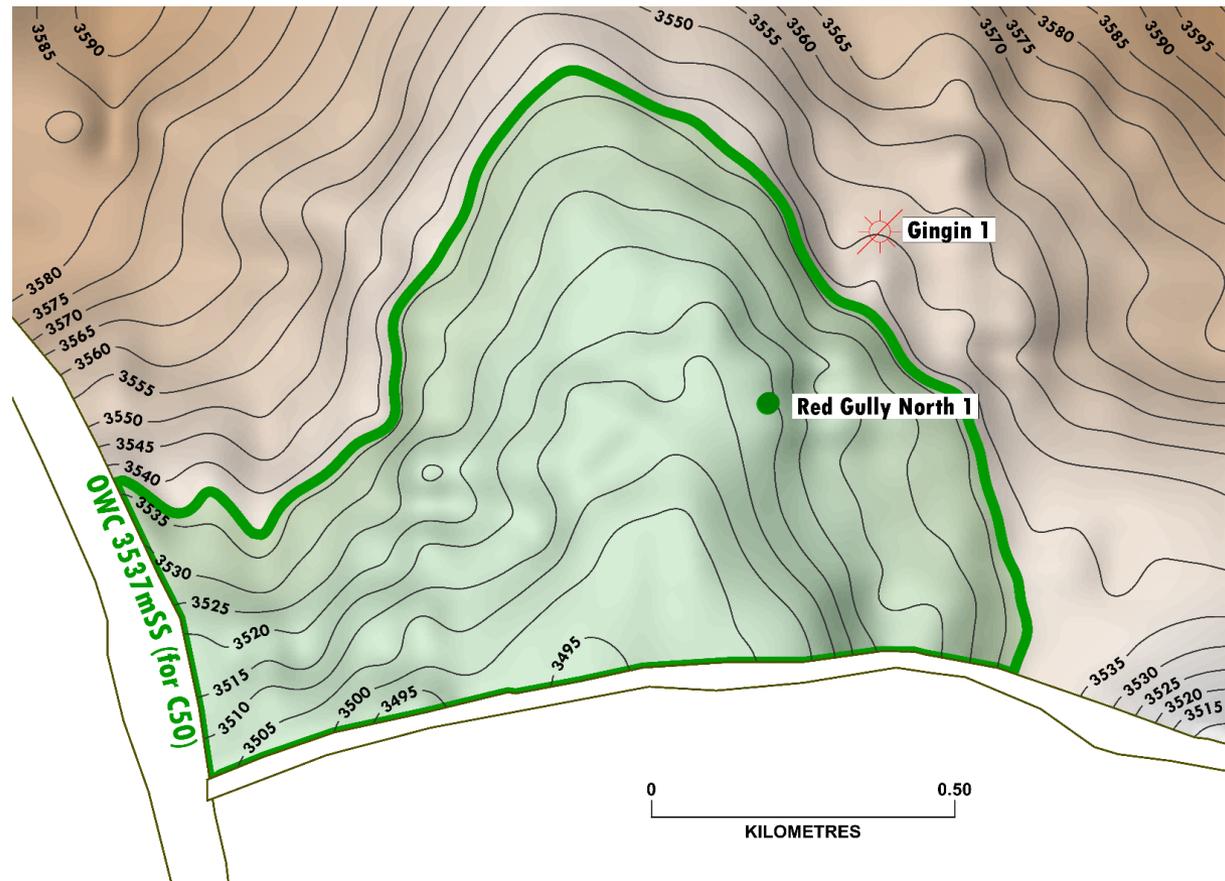


## Red Gully North-1 is an immediate opportunity to commercialise oil reserves and associated gas via the RGPF

### Overview

- ~400 bopd and 1.2 mscfd tested in January 2017
- Currently analysing size of the potential volatile oil volumes in the C Sand
- Finalising laboratory analysis of recovered hydrocarbons to assess contingent resource
- Currently planning an extended well test in Q3 2017
- Objectives of test are:
  - Determine stabilised oil, gas and water rates
  - Recover further pressure and sample data
  - Determine commerciality and book oil reserves
  - Current analysis indicates that the EWT will be economically positive
  - Reviewing options to flow upper D Sand flow prior to EWT

Depth structure map of Red Gully North volatile oil field

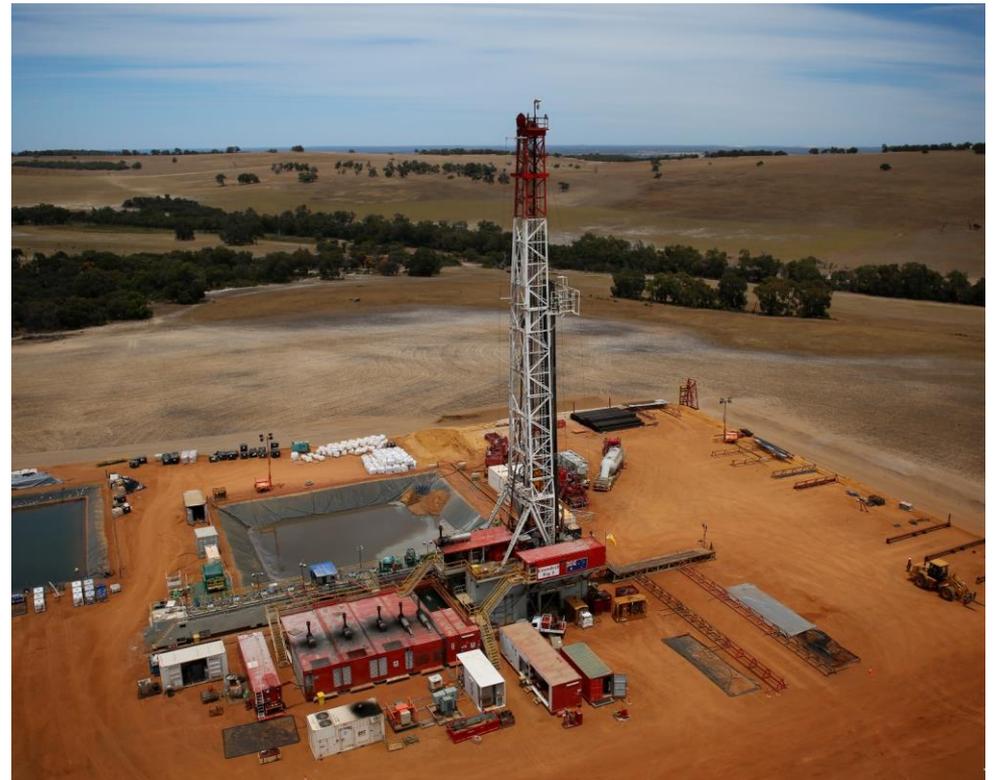


## The 2017 drilling program planning has commenced with the tendering of the drilling rig and completion of the geological basis of design for Lockyer Deep-1

### Overview

- Empire has submitted a tender to the market to secure a suitable drilling rig
- Empire has also submitted a tender for well project management services to experienced well consultancies
- The geological basis of design has been completed for Lockyer Deep-1 and is currently underway for North Erregulla Deep-1
- Land access and DMP approval process pending an agreed well location with potential farminee
- Empire anticipates that current planned drilling by other operators in the Perth Basin will offer cost sharing opportunities
- Evaluating options for back to back drilling with Raven-1 to spread campaign costs

### Drilling rig at Red Gully

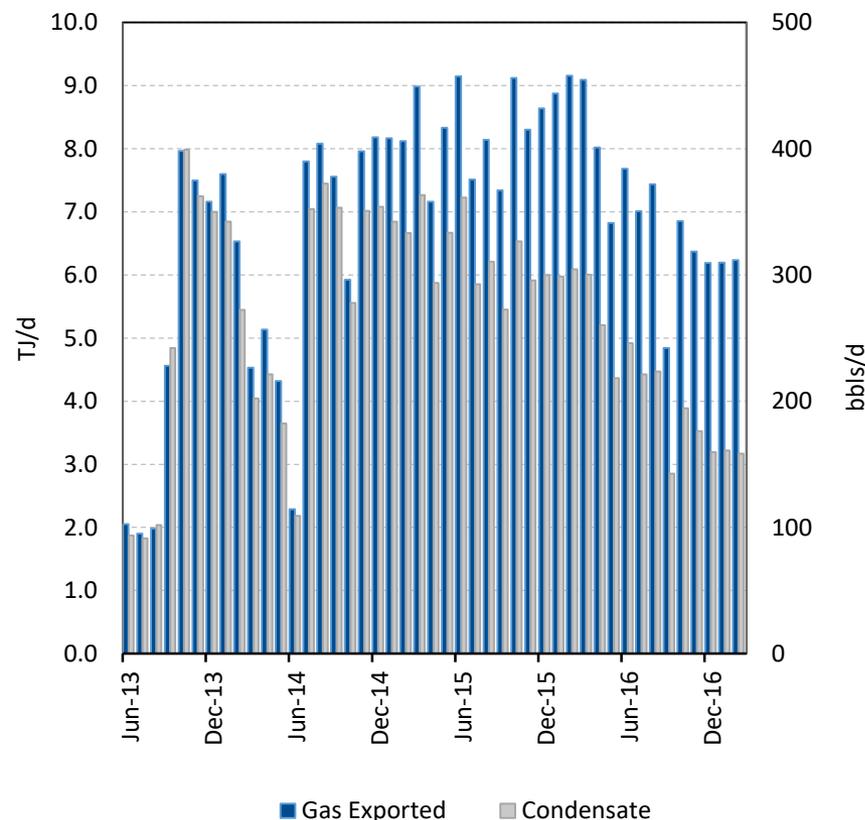


## Empire’s owns 100% of its processing infrastructure and has successfully operated the plant with best in class uptime

### Infrastructure overview

- **100% ownership of Red Gully gas and condensate processing plant** located 150km north of Perth, close to end-users and exploration assets
  - Plant is currently capable of processing **10TJ/d of gas and 400bbl/d of condensate**
  - Plant operating efficiently with **best in class uptime (93.5%) & safety (3 years LTI free)**
  - **Operating cost reduced by 17%** between FY14 and FY16
  - **100% ownership of the pipeline infrastructure** connecting Red Gully and the major Dampier-Bunbury pipeline
  - Compression project underway to **extend production plateau**
  - **Gingin West to be returned to production** via coiled tubing nitrogen lift to support RG-1 production. Operation planned for late April
- Room for plant expansion subject to project economic viability
- Average production in 1H FY16/17 of 6.5 TJ/d gas and 187.7 bbl/d condensate

### Monthly average production FY14 - current



## Empire successfully upgraded the water handling facilities at RGPF to process the increase in formation water and ultimately increase hydrocarbon recoveries

### Overview

- Over the last year the water-gas-ratio at Red Gully-1 has slowly increased to approx. 13bbbls/mmscf
  - Indicates that reservoir drive mechanism is not solely depletion but has aquifer support
  - Has not impacted ability to meet Alcoa gas nominations
- The project will increase the produced water handling capacity from the current 50bbbls to 500bbbls of formation water per day
  - Upgrade will divert formation water away from the RGPF condensate stabilisation heater
  - Ultimately will allow the heater to operate more efficiently and provide better stabilised Red Gully condensate throughout winter months
- Water handling facility with capacity up to 500 bwpd was installed in January 2017 and operating successfully

### Production test separator



## The gas compressor project will extend the RG-1 field production plateau and optimise reserve recovery

### Overview

- The B sand gas production from RG-1 has been excellent and to maintain the current production levels of approx 7 TJ/day into FY17/18 production modelling has indicated that wellhead compression is required by mid year
- The September 2016 Valmap reserve report identified the wellhead compressor project was required to maximise ultimate reserve recovery
- Empire has screened available 2<sup>nd</sup> hand compressors in Australia to minimise capital expenditure
- Two compressors will be purchased
- Total project cost is estimated at A\$2.5m
- This project will maintain production levels in FY17/18

### Red Gully processing facility

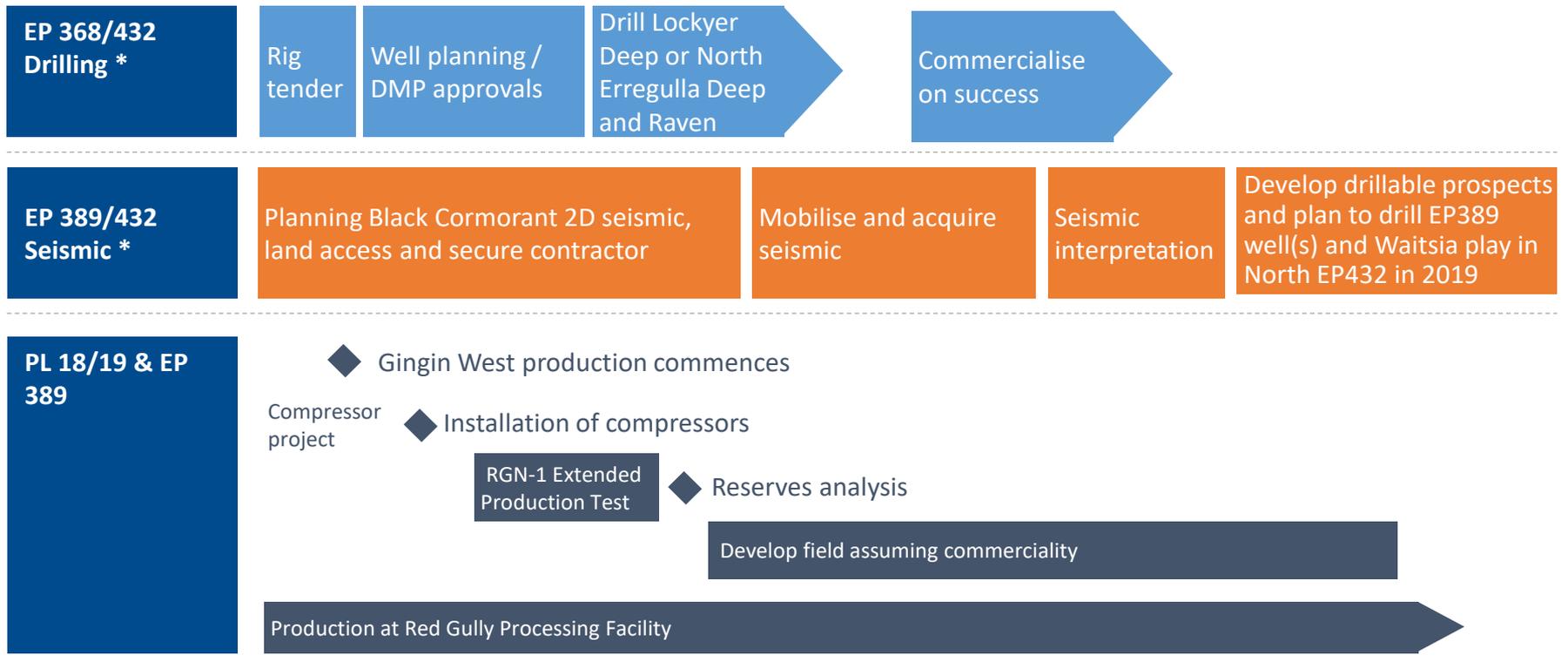


## EBITDAX of A\$4.0m for 1H F17 positively impacted by cost saving initiatives at Red Gully including the revised operations and maintenance contract

Key financials (A\$m)	FY16	1H FY17	
Gas revenues	16.3	7.3	
Condensate revenues	3.6	1.4	
<b>Total revenues</b>	<b>20.0</b>	<b>8.7</b>	Revenue of A\$8.7m after lower gas nominations from Alcoa and an expected decline in the condensate-gas-ratio
Cost of sales and other expenses	(10.0)	(4.7)	This included significant one off costs associated with financial and legal advisory services relating a third party sales process for a significant growth opportunity
<b>EBITDAX</b>	<b>10.0</b>	<b>4.0</b>	
Pre-tax impairment / write-offs	(7.2)	-	
<b>EBITDA</b>	<b>2.8</b>	<b>4.0</b>	
Depreciation	(7.5)	(3.1)	
Net finance costs	0.0	(0.3)	
Income tax (loss) / gain	1.3	(0.3)	
<b>Profit after tax</b>	<b>(3.3)</b>	<b>0.4</b>	Steady profit after tax of A\$0.4 million (1H FY16 A\$1.2 million)
Total assets	80.7	81.7	
Total liabilities	20.6	21.2	

# Forward work program

**Extensive 2017 exploration program aimed at preparing the exploration well at either EP 368 and/or EP 432 and the Black Cormorant 2D seismic survey**



\* Seismic and drilling project subject to attaining a successful farminee

## Technical details of Empire's tenements and latest resource and reserves include:

### Overview

Operated	Area (km <sup>2</sup> )	Shareholders
EP 389	1,392	Empire: 100%
EP 426	1,197	Empire: 77.78% Norwest: 22.22%
EP 368	599	Empire: 80% Norwest: 20%
EP 432	1,183	Empire: 100%
EP 454	966	Empire: 100%
EP 430	149	Empire: 100%
EP 440*	1,127	Empire: 100%
EP 416	621	Empire: 40% Pilot: 60%
EP 480	1,348	Empire: 40% Pilot: 60%

\* EP 440 in process of being surrendered

### Empire Resources and Reserves<sup>1,2,3,4</sup>

	Sales gas (PJ)			Condensate (Mstb)		
	1P	2P	3P	1P	2P	3P
Reserves at 1 July 2016	6.9	10.9	15.9	215.3	340.4	485.3

	Sales gas (PJ)			Condensate (Mstb)		
	1P	2P	3P	1P	2P	3P
Contingent resource at 1 July 2016	9.1	15.7	220	261.1	432.8	672.6

#### Notes:

1. Resource estimate include compression due for installation in July 2017
2. Economic cut-off of 2 TJ/d
3. Resource in accordance with SPE-PRMS guidelines
4. Reserves report compiled by Valmap September 2016

# Conclusion – Investment highlights

- 1 High margin, CPI-linked **domestic onshore gas producer with 83% of revenue linked to gas under long term contract**
- 2 **North Perth Basin exploration focus with** high equity position in material prospects (up to 80-100%)
- 3 Strong competitive position with **material exploration prospects which could deliver reserves to meet potential growth in WA domestic gas demand**
- 4 Lockyer Deep / North Erregulla Deep represent **one of the largest gas exploration prospects remaining in the Perth Basin**
- 5 **Owner of significant infrastructure assets** including the 100% owned Red Gully Processing Facility
- 6 **Basin leading tenement portfolio** hosting material drill ready prospects (EP 368/426 and EP 432)
- 7 **Well aligned board and management team** with 8.6% shareholding and **supportive equity cornerstone shareholder in Mineral Resources**

- This presentation has been prepared by Empire Oil and Gas NL (“EGO”) for general information purposes only. This presentation may contain certain forward-looking statements which have not been based solely on historical facts but rather on EGO’s current expectations about future events and a number of assumptions which are subject to significant uncertainties and contingencies, many of which are outside the control of EGO and its Directors, Officers and Advisers. Due care and attention has been taken in the preparation of this presentation.
- However, the information contained in this presentation (other than as specifically stated) has not been independently verified for EGO or its Directors and Officers, nor has it been audited. Accordingly, the Company does not warrant or represent that the information contained in this presentation is accurate or complete. To the fullest extent permitted by law, no liability, however arising, will be accepted by EGO or its Directors, Officers or Advisers, for the fairness, accuracy or completeness of the information contained in the presentation. The Company is not under any obligation to update the information contained in this presentation.
- The preparation of the Reserve update report as of 1 July 2016 was undertaken by Mr. Ian Paton, Valmap Pty. Ltd. Ian has over 30 years of Australian and International experience in the Upstream Petroleum business. This experience includes extensive work in asset evaluation, reserve assessment, due diligence in acquisitions and preparation of assessment reports. Mr Paton is a current Member of the SPE and holds B.Sc. Hons (geophysics), M.Pet.Eng Western Australia University and MBA South Australia University. The estimates of reserves presented in this assessment fairly represents the information and supporting documentation prepared by Mr Ian Paton who is a competent petroleum and resources evaluator and has consented to the inclusion of such information in this announcement in the form and context in which it appears. Mr Paton is a part-time Geoscience and Engineering consultant to Empire Oil and Gas

## Notes to Reserve and Resource table

- Red Gully and Gingin West Reserves as of Valmap 2016 evaluation report.
- Contingent resources updated for Red Gully North-1 as at September 2016.
- Red Gully comprises the B and D sand reserves discovered by the Red Gully-1 well. Gingin West comprises the D sand reserves discovered by Gingin West-1 well.
- Red Gully, Gingin West, and Gingin East contingent resources at 1 July 2016.
- Red Gully comprises the B and D sand resources discovered by the Red Gully-1 well. Gingin West comprises the D sand resources discovered by the Gingin West-1 well. Gingin East comprises the resources discovered by the Gingin-2 well.
- Additions beyond the field level have all been made arithmetically, as a result the consultants cautions that 1P and 1C aggregate quantities may be very conservative and the 3P and 3C aggregate quantities may be very optimistic due to portfolio affects.
- Probabilistic and deterministic evaluation methods have been used (in accordance with ASX listing rule 5.28).