

# WHY THE NORTHERN PERTH BASIN?

## Right Time & Right Place

**Norwest Energy Investor Presentation  
January 2015**





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# Corporate Overview

## Share Price Performance



## Capital Structure

### As at 23 January 2015 (undiluted)

Share price	\$0.005
Ordinary Shares (ASX:NWE)	1,105.1 million
Market Capitalisation	\$5.525 million
Cash (31 <sup>st</sup> Dec 2014)	\$1.861 million
Debt	nil
Net Cash	\$1.861 million
Enterprise Value	\$3.664 million

### Major Shareholders

David Kennedy	3.4 %
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# Norwest Board & Management

## Board



**Michael Fry, Non-Executive Chairman**

- Extensive experience in capital markets and corporate treasury, specialising in risk management.
- Non-Executive Chairman of Challenger Energy Limited.



**Peter Munachen, CEO - Director**

- Chartered Accountant, and former partner in an international accounting firm.
- Considerable experience in the resources industry.
- Director of East Africa Resources Limited.



**David Kennedy, Non-Executive Director**

- Founding shareholder & Director of Norwest Energy.
- Long association with Australian and New Zealand resource companies.
- Instrumental in the formation and development of several successful listed companies (Pan Pacific Petroleum, NZ Oil & Gas, Mineral Resources and Otter Exploration). Chairman of Pancontinental Oil and Gas NL.

## Senior Management



**John Annand, General Manager Corporate & Commercial**

- Chartered Accountant and Chartered Secretary with 25+ years corporate experience
- 15+ years with Woodside Energy on NWS JV
- Significant knowledge of domestic gas and LNG supply chains



**Shelley Robertson, Asset Manager**

- SPE & PESA Member with postgraduate qualifications in Petroleum Engineering.
- On the NWE senior management team since early 2010 managing all project operations, regulatory compliance and approvals.
- 20+ years experience in the resources industry.



**Dean Powell, Technical Advisor**

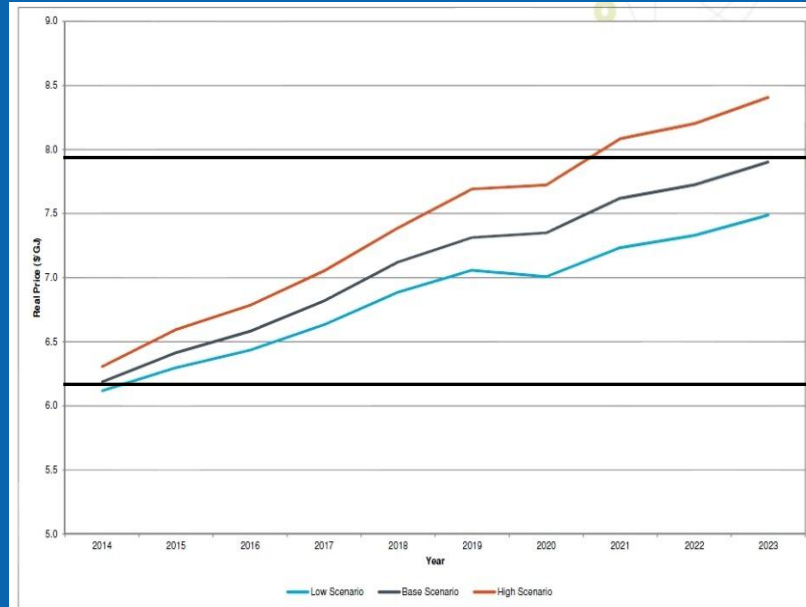
- SEG and PESA Member with 45 years experience in oil and gas exploration.
- Actively involved in Perth Basin exploration since early 1970s.
- Senior geoscientific roles with majors as well as 20+ years as independent consultant on exploration projects overseas and in many Australian basins.



# Why the Northern Perth Basin?

- 1 Proven hydrocarbon province with multiple producing oil and gas fields
- 2 Since 1990 the 50-plus exploration wells demonstrated a 1 in 4 chance of commercial success
- 3 Close proximity to pipeline infrastructure servicing the Western Australian domestic gas market
- 4 Strong gas price  $> \$7.0/\text{GJ}$  forecast in coming years with a predicted shortfall in gas supply as NWS producers wind back commitment to domestic market
- 5 Perth Basin positioned to become a centre of growing exploration, development and corporate activity
- 6 Opportunity for new discoveries as basin remains underexplored eg. Waitsia discovered in September 2014

## Forecast Medium to Long-Term Average New Contract Gas Prices (Real) for Domestic Market 2014-2023



Source: NIEIR's Forecasts 2014 – 2023.

**GAS SUPPLY– CRITICAL FOR THE ONGOING GROWTH AND STABILITY OF WA'S ECONOMY**







# Northern Perth Basin Activity Map - 2015

## AWE / Origin

- AWE's Waitsia gas discovery has opened a new play in the northern Perth Basin. Reported by AWE as potentially the largest discovery in the northern Perth Basin since 1960's, assigning a 2C (P50) Contingent Resource of 360Bcf
- AWE is planning further appraisal drilling on Waitsia in 2015 ahead of full field development
- AWE is also planning an exploration well on the Irwin prospect

## Empire Oil & Gas

- New management team is planning to drill 4 wells in the next 2 years (2 expected in 2015) on its Perth Basin permits including EP389 (Red Gully) with recent reported major of resource (22/01/2015)

## Transerv / Alcoa

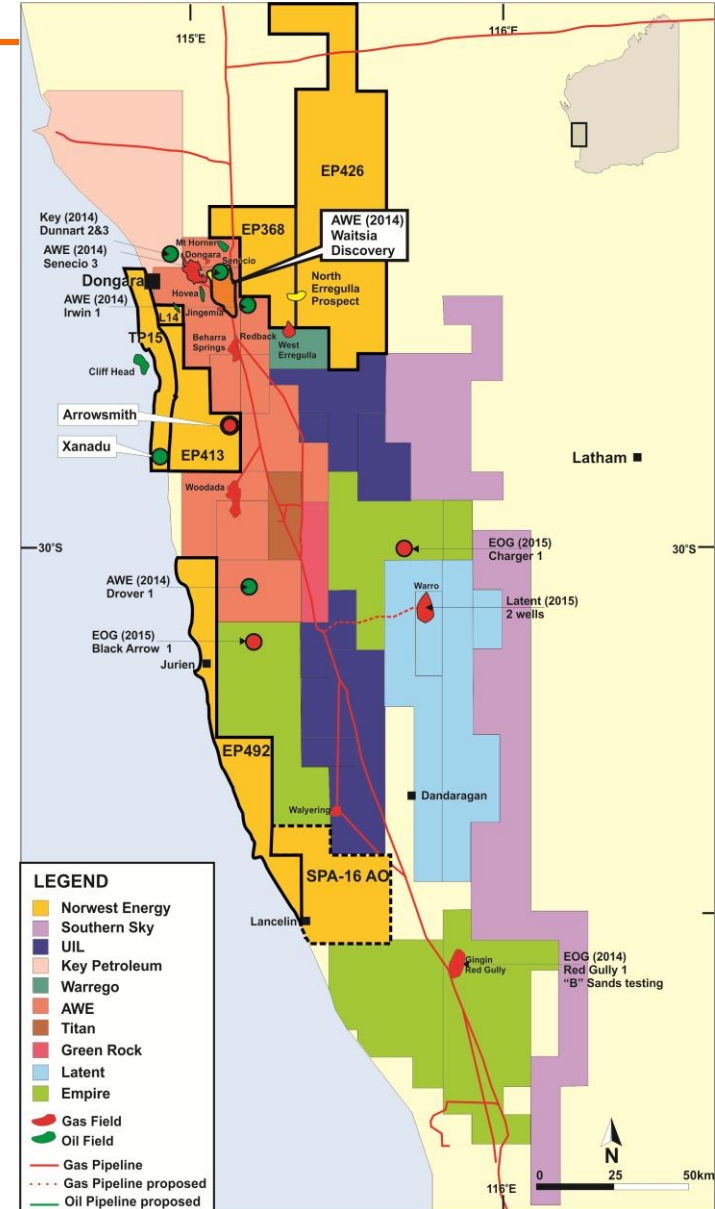
- Alcoa has agreed to fund the drilling of Warro-5 and Warro-6. Drilling is expected to commence H1 2015

## Warrego

- A\$40m farm out to Dyas and Mazarine Energy to appraise and develop West Erregulla in EP469. Work has commenced with 3D acquisition now complete

## Norwest Energy

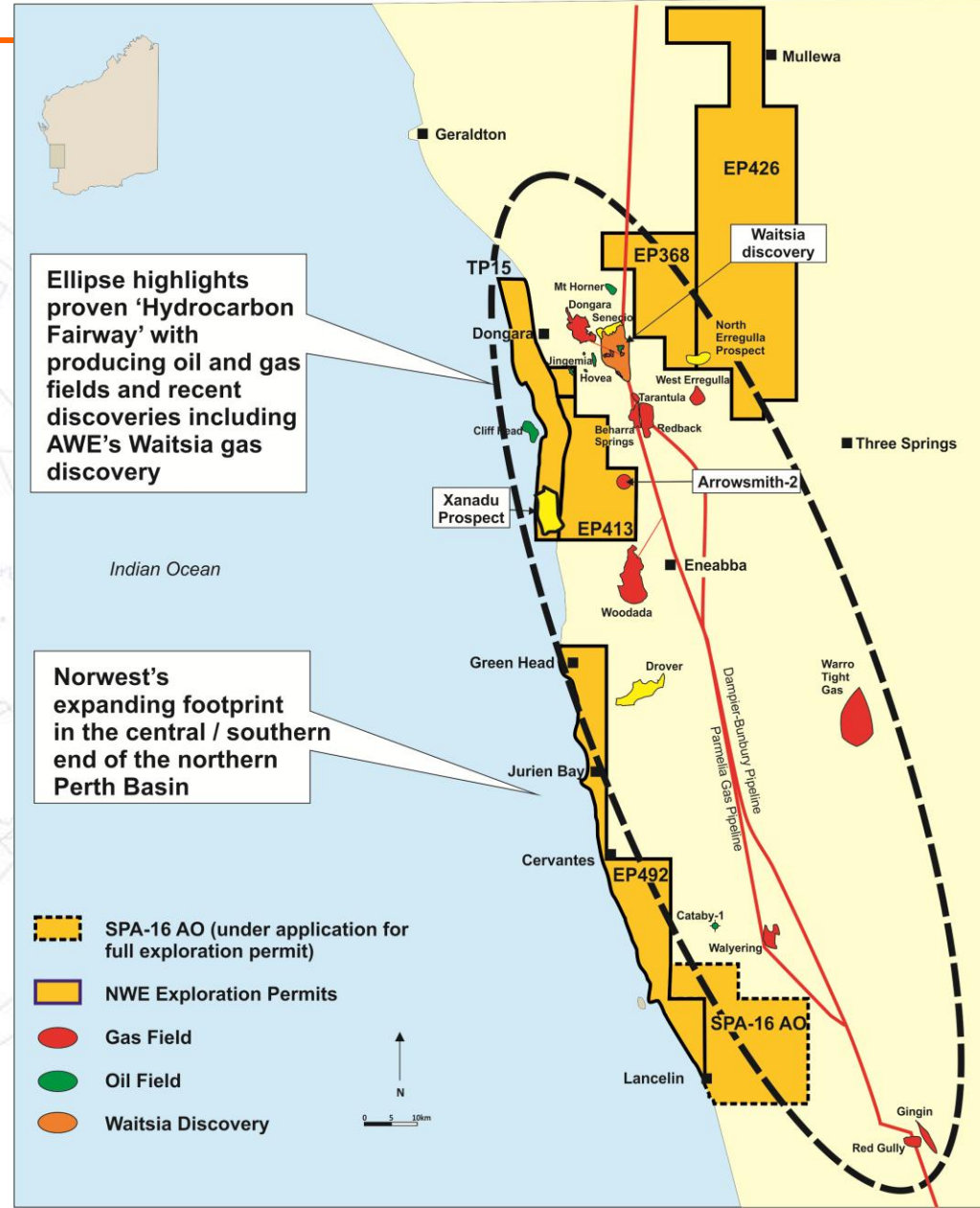
- 3D seismic Q1/2015
- Xanadu-1 drilling, offshore northern Perth Basin, late 2015
- Arrowsmith 3 horizontal gas well, onshore northern Perth Basin, late 2015 / early 2016





# Why Norwest Energy?

- High equity positions on prime acreage in the Basin within the proven hydrocarbon fairway
- Leader and active participant in northern Perth Basin explorers and operators
- Strong reputation and credentials for getting things done
- Proven track record as Operator
- Highly experienced team
- Demonstrated success in approvals and Native Title agreements
- Proactive in community engagement
- Key player in resurrecting the Onshore Natural Gas Working Group
- A strong focus on the northern Perth Basin, with a mix of both oil and gas plays, providing significant exploration potential and exciting opportunities for development and growth





# Forward Program & Outlook

## Forward Program

Permit	Interest	Activity	Q1 15	Q2 15	Q3 15	Q4 15	Q1 16
TP/15	100%	Farm out					
		Drill Xanadu -1					
EP413	27.945%	Acquire and Process 3D Seismic					
		Drill Arrowsmith-3 horizontal well					
		Testing of Arrowsmith-3					
EP 368/426	20%/22.22%	Acquire AGG					
EP 492	100%	Mapping, G&G					
SPA-016 AO	100%	Native Title Negotiations					
UK Blocks	65%	Reprocess 3D data, select drilling target, secure farm-in partner					

## Outlook

With Norwest's planned activity in the basin coupled with programs by AWE, Origin, Empire, Transerv, UIL and others, 2015 is shaping up to be the 'renaissance' of the Northern Perth Basin, with Norwest an active participant holding some of the most prospective acreage





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# Norwest Projects





# EP413

- Arrowsmith Field ranked as a 'Discovery' after independent evaluation by DeGolyer and MacNaughton
- Arrowsmith-2 evaluation program completed in 2014 - two separate intervals being high-graded for potential development; the Carynginia Formation and the Irwin River Coal Measures
- 3D seismic survey scheduled for Q1-Q2/2015 subject to regulatory approvals
- Results of the seismic will fine-tune location and target for Arrowsmith-3
- Preliminary planning with partners AWE Limited (Mkt Cap ~A\$700m) and Bharat PetroResources Ltd (Indian state-controlled) has commenced for Arrowsmith-3 (horizontal), with drilling scheduled in the 2015-16 permit year

## EP413

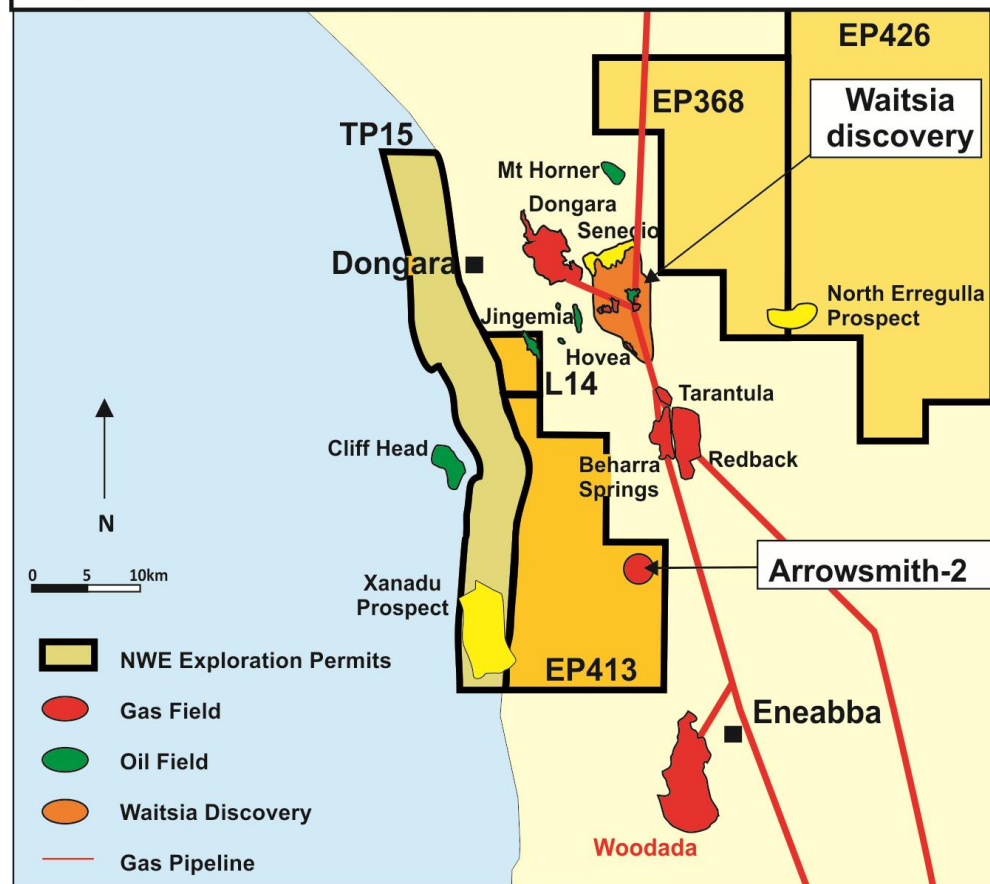
Contingent Gross Recoverable Resource

316 BCF\*

Prospective Gross Recoverable Resource

2.6 TCF\*

\* As per Norwest ASX release dated 02/08/2013



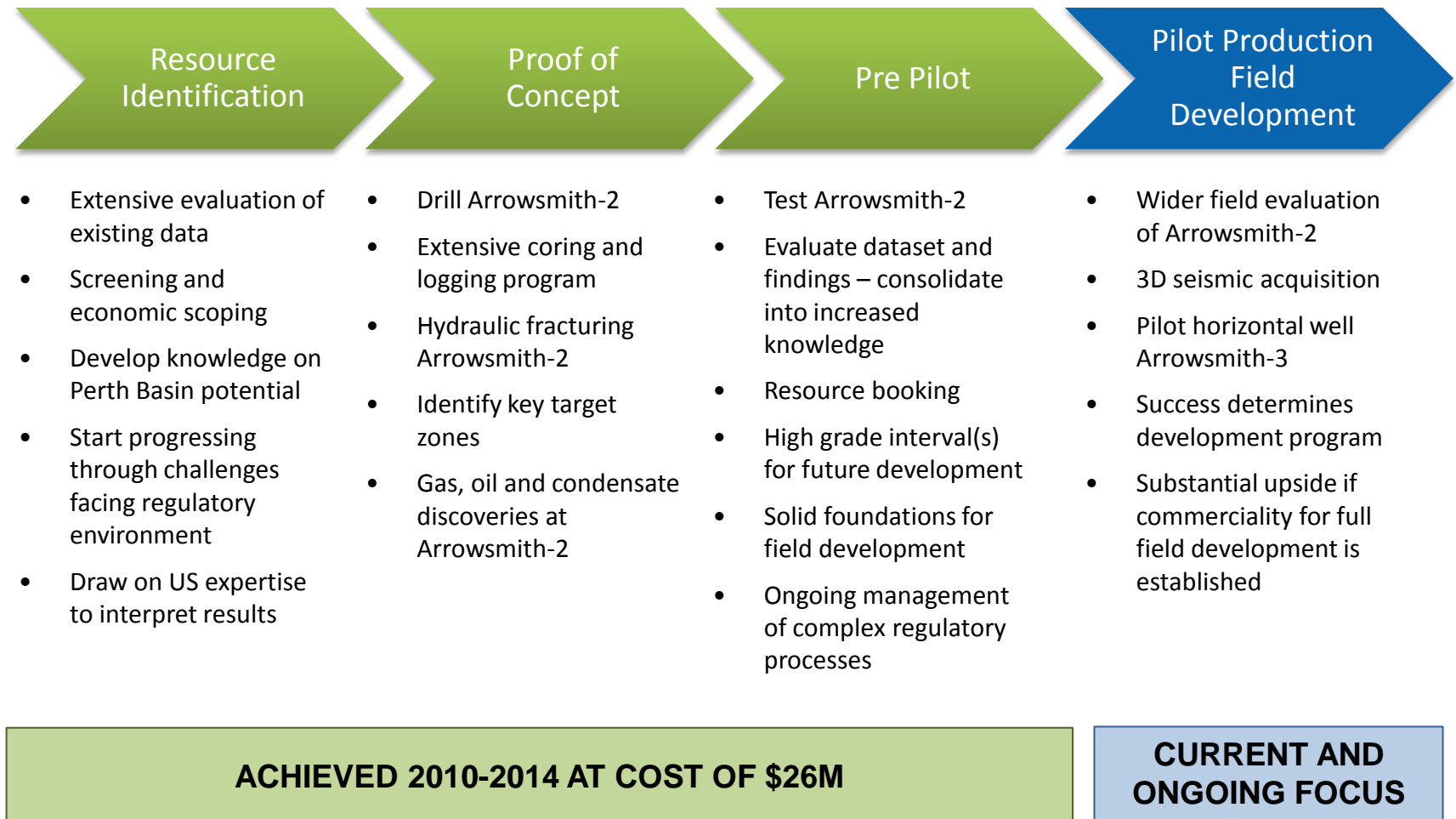
### EP413

### Interest

Norwest (Operator)	27.945%
AWE	44.252%
Bharat PetroResources	27.803%



# Arrowsmith – Pathway to Commercialisation





# TP/15

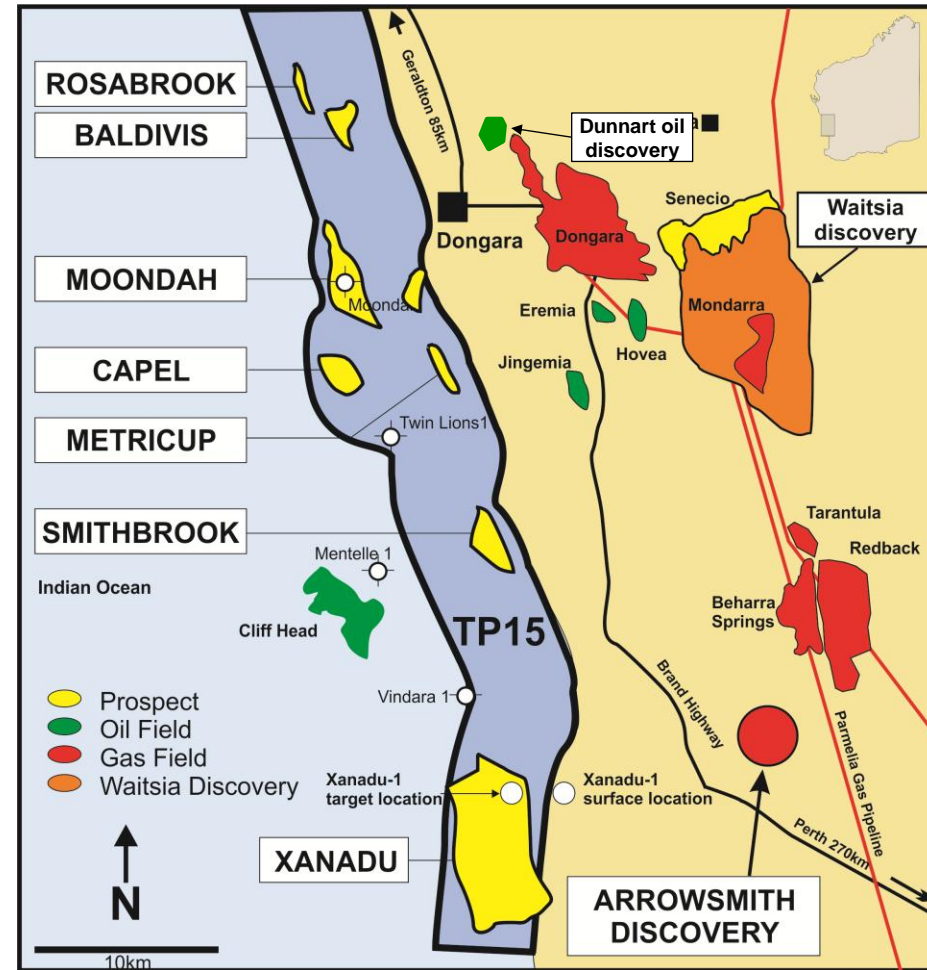
- Norwest – 100%
- TP/15 contains conventional oil plays within a proven hydrocarbon fairway, with primary prospect Xanadu having an un-risked prospective recoverable resource of 160mmbbls (best estimate, refer below)
- Low cost exploration - prospects can be drilled from onshore, and are close to existing infrastructure for cost-effective commercialisation

## Xanadu Prospective Resource

Un-risked Prospective Resource: recoverable volumes oil (mmstb)\*

Reservoir	Low estimate	Best estimate	High estimate
Dongara Sandstone	3	12	22
Irwin River Coal Measures	13	88	159
High Cliff Sandstone	29	60	256
Total	45	160	437

\*as per ASX announcement dated 29 Oct 2014 (50% recovery factor assumed)





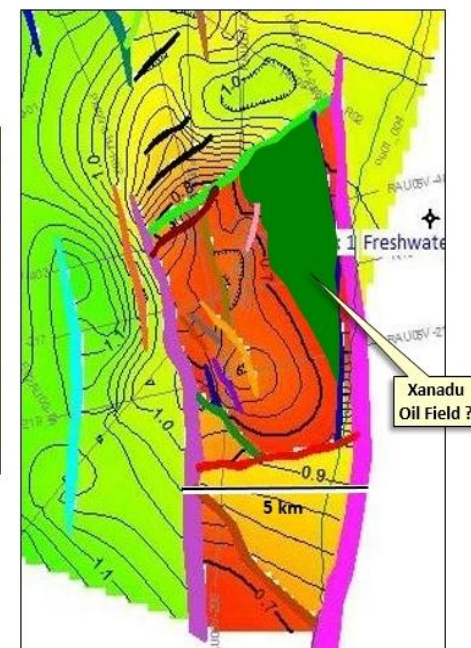
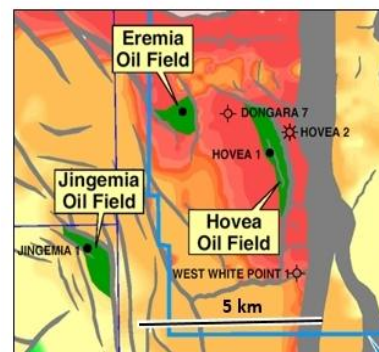


# TP/15 Main Prospect – Xanadu

Xanadu - The only large oil play to be drilled in the northern Perth basin in the near future

- Same play as Hovea/Eremia and Cliff Head
  - ✓ Horst Structure with north-south orientation
  - ✓ Similar internal cross-faulting
  - ✓ 5km wide structure
- Xanadu is potentially 8 times larger than Hovea, which has produced over 4 mmbbls
- Multiple stacked reservoirs - Dongara/Wagina Sandstone, Irwin River Coal Measures and High Cliff Sandstone
- Kockatea Shale provides excellent top and cross-fault seal
- Structural mapping based on good quality 2D seismic and high resolution gravity data.
- Dongara, Hovea, Cliff Head, Beharra Springs and Jingemia fields all discovered using 2D seismic.

To-scale image – 8 times the size of Hovea



## Comparison of Geology

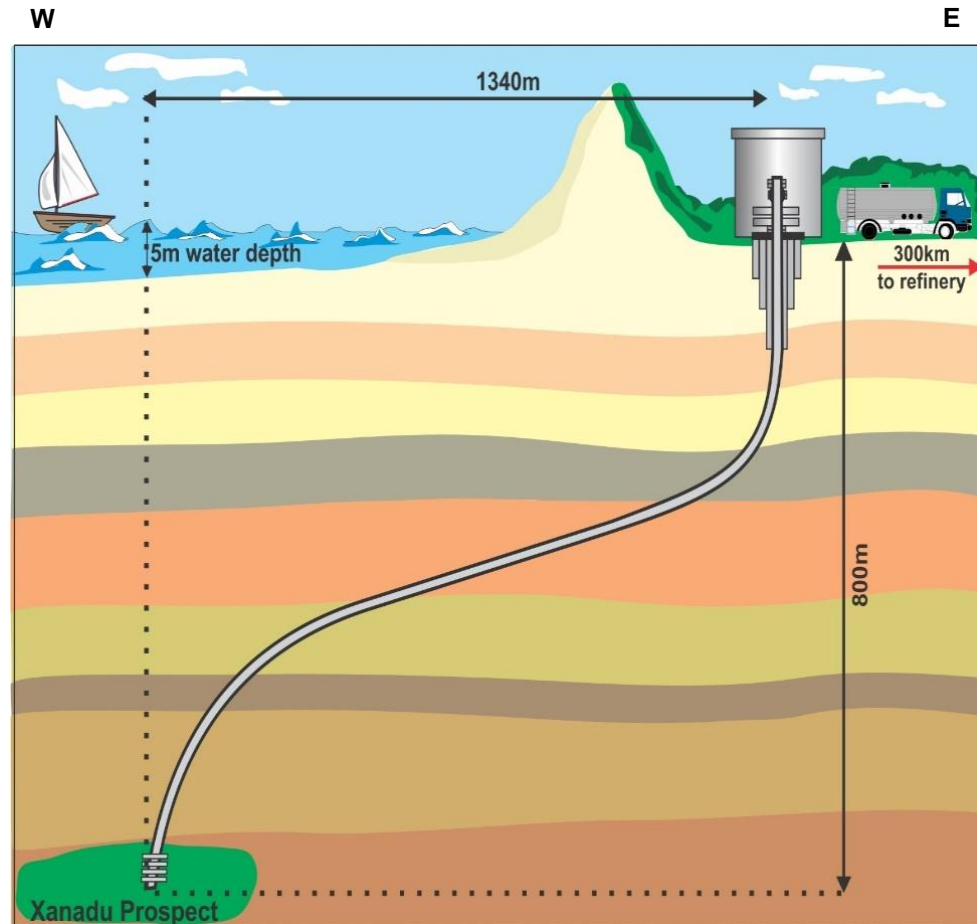
Reservoir	Best Estimate	Discovered Fields
Dongara Sandstone	12mmbbls	Hovea, Jingemia, Beharra Springs
Irwin River Coal Measures	88mmbbls	Cliff Head
High Cliff Sandstone	60mmbbls	Waitsia, Hovea-2
<b>Total</b>	<b>160mmbbls</b>	



# Xanadu-1 Drilling Program

- Expected timing to drill late 2015 – fast-track to potential discovery
- Estimated cost of well A\$8-10m
- Farm-out expected to free carry Norwest through drilling
- Proposed onshore development concept, low capex
- Planning and approvals process has commenced
- Suitable drilling rig available

## Development Concept



Norwest is seeking a farm-in partner to participate in Xanadu. RFC Ambrian appointed as farm-out advisor



# SPA-016 AO/ EP492

## SPA-016 AO ( Norwest 100%)

- Recently acquired from Finder Exploration covering 805km<sup>2</sup>
- Reprocessed and merged over 2500km<sup>2</sup> of AGG (Airborne Gravity Gradiometry) over SPA and adjoining tenure, identifying a number of leads
- Application to convert to a 6 year EP has been submitted to DMP



## EP492 (Norwest 100%)

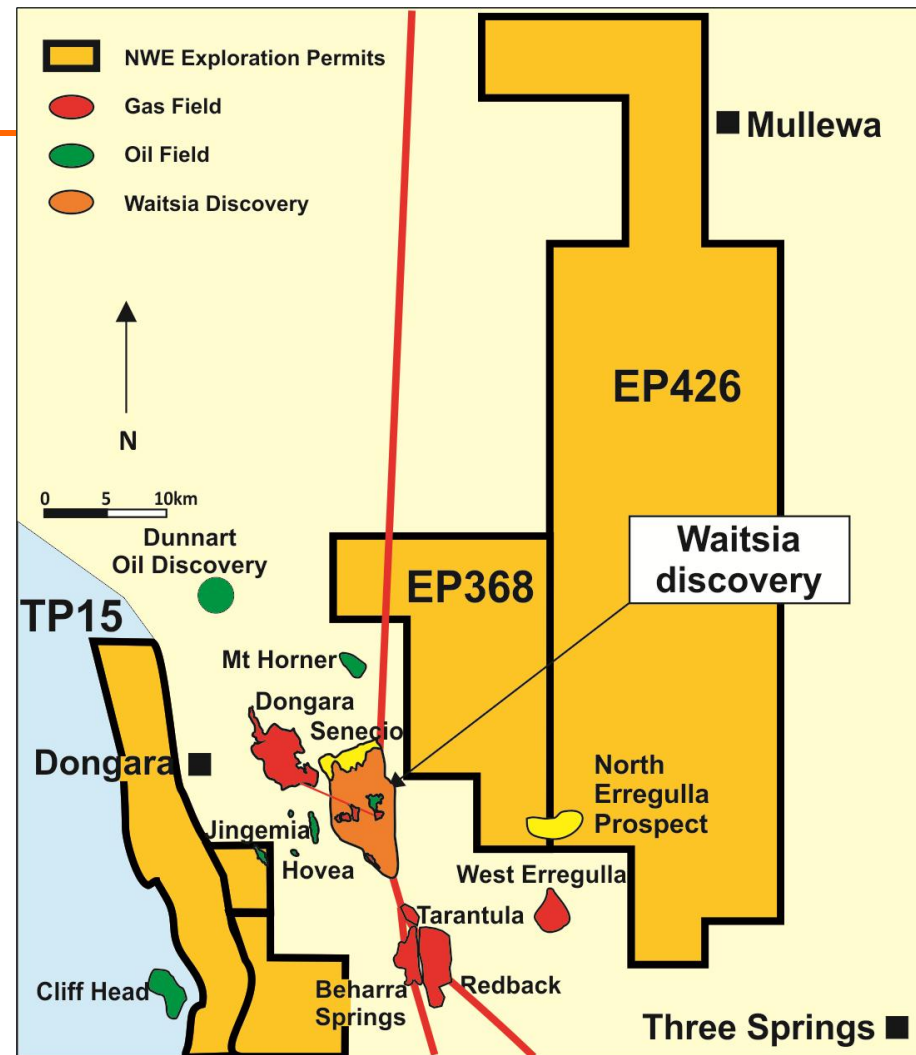
- Awarded in Nov 2014, covering 860km<sup>2</sup>
- Immediately northwest of Empire Oil & Gas EP389 hosting the Red Gully and Gingin gas fields
- Desktop studies indicate potential conventional oil and gas targets
- Work commitment includes mapping (Year 1) and 2D seismic acquisition (Year 2)



# EP368/426

## Close Proximity To Waitsia Discovery

- Operator (Empire Oil & Gas) to determine the extent of the prospective fairway into EP368
- A number of other prospective trends in EP368 are being pursued including North Erregulla where oil was discovered at North Erregulla-1 and Lockyer-1
- Empire has outlined a large structure up-dip of the North Erregulla-1 well, which encountered a 3m oil column in the Wagina reservoir
- Estimated potential of 25 MMbbls\* un-risked prospective recoverable oil
- Empire is planning AGG imaging survey over entirety of both permits for Q1 2015 to replace 3D program



\* As reported by Empire Oil and Gas NL in ASX release dated 31<sup>st</sup> October 2013

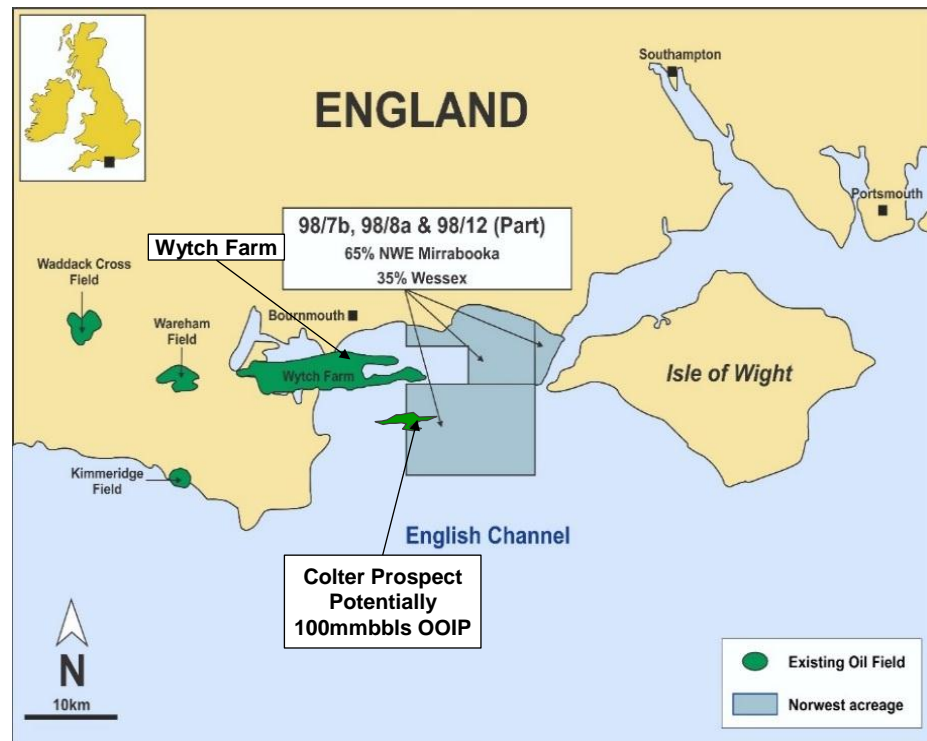
	EP368	EP426
Norwest	20%	22.22%
Empire Oil & Gas (Operator)	80%	46.91%
ERM	-	30.87%





# UK Blocks, Wessex Basin, southern England

- Norwest 65%
- Recently announced the provisional award of these three blocks, which lie immediately to the east of producing Wytch Farm oil field
- Near-coastal conventional oil targets that can be drilled from onshore
- The JV holds a significant dataset over the area including 2D & 3D seismic, the reprocessing of which will provide the basis for both the work program going forward, and the decision to drill
- Upon full award, the JV will have 2 years to reprocess the data, select a drillable target and find a suitable farm-in partner



## Forward Program

Permit	Interest	Activity	Q1 15	Q2 15	Q3 15	Q4 15
UK	65%	Reprocess UK 3D dataset				
		Interpretation, G&G				
		Seek farm-out partner				



# Permit Summary

Permit	Location	Type of Permit	Area (100%)	Norwest %
NORTHERN PERTH BASIN				
EP368	Perth Basin, WA	Onshore	600.3 km <sup>2</sup>	20%
EP426	Perth Basin, WA	Onshore	2360.0 km <sup>2</sup>	22.22%
EP413	Perth Basin, WA	Onshore	508.3 km <sup>2</sup>	27.945%
L14	Perth Basin, WA	Onshore	39.8 km <sup>2</sup>	6.278%
TP/15	Perth Basin, WA	Offshore	645.8 km <sup>2</sup>	100%
EP492	Perth Basin, WA	Onshore	860.0 km <sup>2</sup>	100%
SPA-016 AO	Perth Basin, WA	Onshore	805.0 km <sup>2</sup>	100%
TOTAL AREA NET TO NORWEST 3,100.1 KM <sup>2</sup> (766,261.4 ACRES)				
TIMOR SEA				
AC/L6 (ROYALTY)	Vulcan Sub-Basin, NT	Offshore	252.1 km <sup>2</sup>	1.25% ORRI
UNITED KINGDOM				
98/7b, 98/8a, 98/12	Wessex Basin, UK	Offshore	160 km <sup>2</sup> **	65%

\*\* subject to final award

# Why the Northern Perth Basin?



**Right Time & Right Place**

*...The Renaissance of the northern Perth Basin...*