



ASX: NWE

## Company Update

14 September 2015

### Highlights

- Norwest continues to drive an active exploration and appraisal program in the northern Perth Basin with numerous permits currently being assessed for future exploration potential.
- The operator of EP368 has identified a high impact near term drilling prospect targeting the Kingia formation, just east of the recent AWE Waitsia and Irwin discoveries.
- Processing and interpretation of the EP413 Arrowsmith 3D seismic acquisition continues, with preliminary results indicating a substantial improvement in sub-surface structural definition.
- The strategic alliance with Rey Resources Limited (Rey) to investigate opportunities in the Perth Basin continues, including ongoing farm-in discussions for earning an interest in TP/15.
- Reprocessing of historic 3D seismic data continues over P2265 in the Wessex Basin, southern United Kingdom.
- Norwest continues to be active in engaging with industry, stakeholders and local communities.

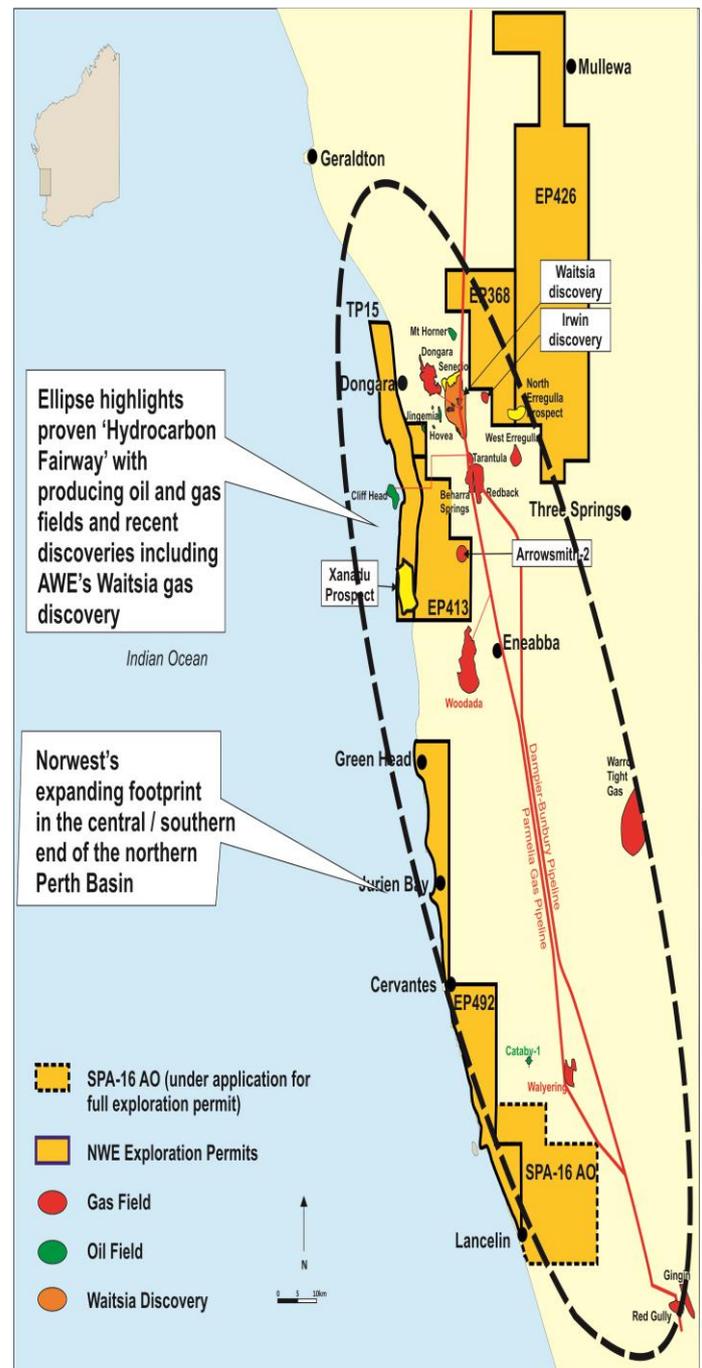


Figure 1. NWE tenements

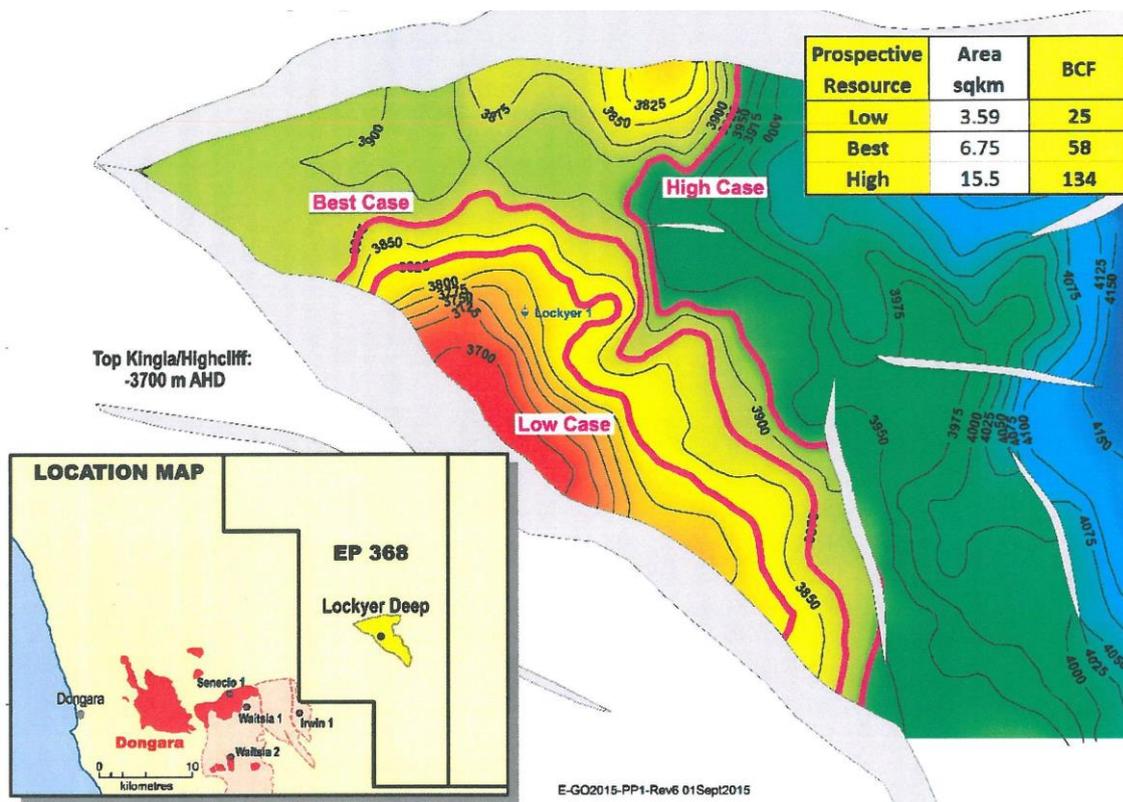
# Australian Exploration Program

## EP368 and EP426

The operator of EP368, Empire Oil and Gas NL, has advised Norwest that following the successful completion of the “Black Swan” airborne geophysical survey that it has identified an exciting, high impact, near term drilling prospect named Lockyer Deep.

Lockyer Deep is a medium risk well, targeting between 25 and 134 BCF, with a best case estimate of 58 BCF<sup>1</sup>. This prospect will be targeting the Kingia reservoir fairway which has been identified following the recent drilling success by AWE at Senecio-3, Waitsia-1 and 2 and Irwin-1, all located in acreage immediately west of EP368. A new and significant gas play in the Kingia Sandstone has been confirmed in the northern part of the Perth Basin which will be further tested to the east of the play with the drilling of Lockyer Deep.

### Lockyer Deep Prospective Resources – Kingia / High Cliff Sandstones Secondary targets: Hovea Member; Dongara Sandstone; Carynginia Formation



*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.*

1. Refer Empire Oil and Gas NL (ASX: EGO) Investor Presentation released to ASX on 2<sup>nd</sup> September 2015

The extent of the play into EP368 remains to be confirmed but the results of the recent AWE Irwin-1 well suggests that the Kingia reservoir fairway increases in thickness to the east and thus potentially into EP368.

Lockyer Deep will also be used to appraise an attractive secondary oil target from the previously discovered oil in both the Lockyer-1 and North Erregulla-1 historic wells where oil was encountered in the Dongara/Wagina sandstone in tight reservoir. The deep gas potential of the Kingia Sandstone was not reached by these wells and as such remains untested.

The reprocessing of more than 400km of historic 2D seismic data in the vicinity of Lockyer 1 and North Erregulla 1 is nearing completion, with encouraging results which can be expected to greatly reduce structural risk. The improvement in data quality is substantial and offers the potential of providing a significant improvement in the definition of the subsurface structure, and improving confidence in selecting future drilling locations.

The operator has a contingent rig slot secured for the drilling of Lockyer Deep in mid 2016 subject to funding and government approvals.

Should Lockyer Deep be successful, there is immediate follow up potential at the North Erregulla prospect, located to the south west of Lockyer Deep.

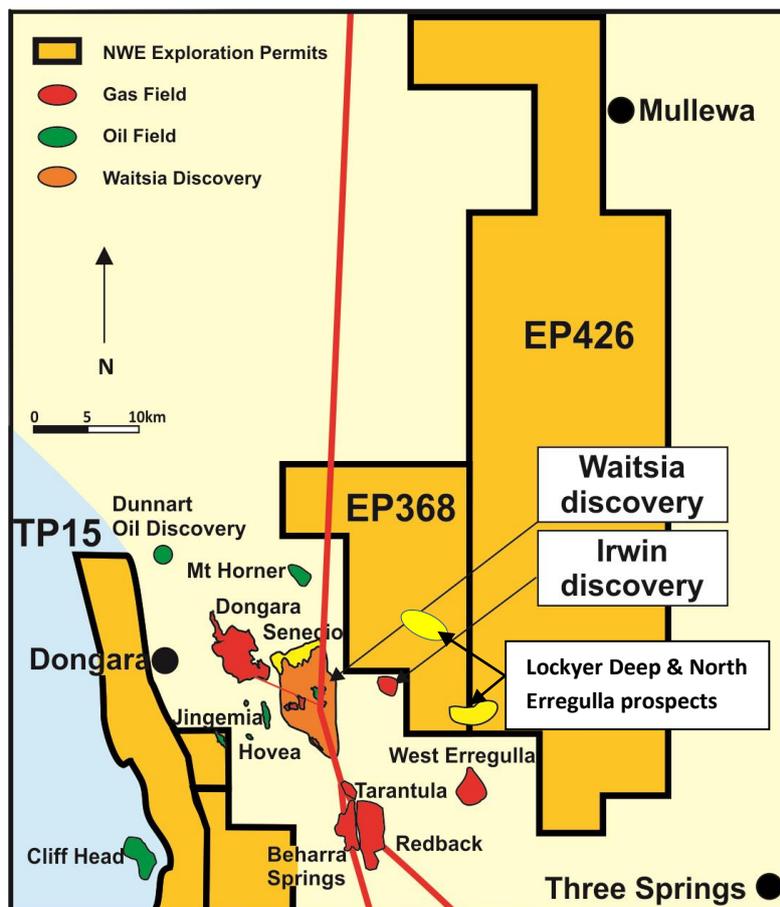


Figure 2. Location of EP368 & EP426 highlighting proximity to the AWE discoveries

**EP426**

Empire Oil Company (WA) Limited (Operator)	77.78%
Westranch Holdings Pty Ltd (Norwest Energy NL)	22.22%

**EP368**

Empire Oil Company (WA) Limited (Operator)	80.00%
Westranch Holdings Pty Ltd (Norwest Energy NL)	20.00%

**EP413 – Northern Perth Basin shale gas exploration****(Norwest 27.945%, Operator)**

During Q2 CY2015, Norwest successfully completed the EP413 Arrowsmith 3D seismic acquisition survey on behalf of the EP413 Joint Venture. The survey was designed to assess the extent of the resource surrounding Arrowsmith-2, and to assist in defining the optimal location and target formation for Norwest's first horizontal well, Arrowsmith-3.

The 3D dataset obtained from the acquisition program is currently being processed in the United States. Preliminary results indicate a substantial improvement in structural definition. Ongoing processing, which includes pre-stack depth migration and fracture analysis, is expected to be finalised during October. Following receipt of the final dataset, a detailed in-house interpretation will be conducted which will allow the planning for Arrowsmith-3 to continue.

**Arrowsmith-3 Planning**

Preliminary planning with the co-venturers has commenced for Arrowsmith-3, planned for the 2015/16 permit year, with timing dependent upon equipment availability and the regulatory approvals process.

The final decision on surface location, target formation and lateral extent will be made once the 3D seismic survey processing and interpretation cycle is complete, as a clear understanding of the subsurface geology is essential to this process.

**EP413 Joint Venture**

Norwest Energy NL	27.945% (Operator)
AWE Limited	44.252% (via subsidiaries)
Bharat PetroResources Ltd	27.803%

## TP/15

### (Norwest 100%)

Norwest continues to progress discussions with Rey Resources to agree on the terms and conditions under which Rey may earn an interest in TP/15.

As detailed in the ASX Announcement dated 29 October 2014, TP/15 contains a number of conventional oil plays, with primary prospect Xanadu having an un-risked prospective recoverable resource of 160mmbbls (best estimate).

#### The Xanadu Prospect

Structurally, the Xanadu Prospect is a prominent horst block lying parallel to the coastline in very shallow water. Xanadu-1 will target Permian sands from a depth of approximately 800 metres. Near-shore sands of the Dongara Sandstone represent the primary target, with secondary targets in the fluvio-deltaic Irwin River Coal Measures and the regressive marine sands of the High Cliff Sandstone.

Retrieval and mapping of additional 2D marine seismic data has provided a comprehensive regional interpretation of the structural setting and charge history for the Xanadu oil prospect.

The structural mapping, which is based on good quality 2D seismic data, as well as high resolution gravity data resulting from a 2009 airborne 3D Full Tensor Gradiometry Survey, indicates the Xanadu Prospect is geologically similar to both the Cliff Head and Hovea structures. On the basis of reliable seismic correlations, the stratigraphic section at Xanadu is expected to be very similar to that encountered at Vindara 1, seven kilometres to the north-northwest.

In estimating potential Xanadu hydrocarbon volumes, the reservoir parameter values observed in Vindara 1 have been the primary reference. Vindara 1, testing a rotated fault block, had only minor hydrocarbon shows. The failure of this well, and similar structural tests further north, is considered to be due to insufficient charge and/or breach of seal resulting from fault re-activation.

The Xanadu structure is considered to be more favourably located for hydrocarbon charge. Additionally, leakage on fault planes is considered less likely because of the interlocking nature of the fault network which gives rise to the Xanadu horst.

In estimating the recoverable oil volumes summarised in Table 1 below, a 50 per cent recovery factor has been assumed.

**Table 1.**

<b>Un-risked Prospective Resource: recoverable volumes oil (mmstb)*</b>			
<b>Reservoir</b>	<b>Low estimate</b>	<b>Best estimate</b>	<b>High estimate</b>
Dongara Sandstone	3	12	22
Irwin River Coal Measures	13	88	159
High Cliff Sandstone	29	60	256
<b>Total</b>	<b>45</b>	<b>160</b>	<b>437</b>

*\*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 timing of drilling Xanadu-1 is dependent upon a range of factors including government approvals process, rig availability and securing a farminee.

## **EP 492**

### **(Norwest 100%)**

EP492 covers 860km<sup>2</sup>, along the northern Perth Basin coastal region between Green Head and Lancelin.

Data retrieval and interpretation of structural and depositional history of EP492 has been undertaken to assist with the evaluation of hydrocarbon prospectivity. EP492 has a six year term, with year one of the work program requiring geological studies to be followed in year two with a 2D seismic survey.

## **SPA-16 AO**

### **(Norwest 100%)**

SPA-16 AO (SPA) is located at the southern end of the northern Perth Basin and adjoins EP447 that contains the Walyering gas/condensate field. The SPA also adjoins EP432 that contains the Cooljarloo and Woolka oil prospects and the Cataby-1 oil discovery.

Data retrieval and preliminary seismic interpretation of historic data has been undertaken on the permit to further assist with the evaluation of hydrocarbon prospectivity.

Norwest has applied to the Department of Mines and Petroleum to convert the SPA to an Exploration Permit and has submitted a proposed six year minimum work program for consideration.

## **United Kingdom Exploration Program**

### **P2265 (Blocks 98/7b, 98/8a and 98/12a) – Offshore Wessex Basin**

#### **(Norwest 65%)**

Permit P2265 lies to the east of the producing Wytch Farm oil field in Bournemouth Bay in southern England and includes conventional oil targets, with the ability for nearshore targets to be drilled from onshore.

Reprocessing of the historical 3D seismic data is currently being carried out in the United States. Time processing has been completed and depth processing is continuing. It is anticipated that this reprocessing will be finalised before the end of Q4 CY2015.

Immediately to the west of P2265 and straddling this permit is the Colter Prospect (operated by InfraStrata plc) which is estimated to have 50 mmbbls oil in place. The reprocessing of the historical 3D seismic data will further assist in determining how far this prospect extends into P2265.

Norwest and HALO have two years to reprocess the historical 3D seismic data, select a drillable target and find a suitable farm-in partner. At the end of this two year period, a commitment must be given to drill a well in the subsequent two years or relinquish the Licence.

#### **P2265 Joint Venture**

NWE Mirrabooka (UK) Pty Ltd	65%
Hague and London Oil (HALO)	35% (Administrator)

## **Corporate Activities**

#### **Perth Basin Oil and Gas Expo**

Norwest is assisting in the organisation and will participate in the upcoming Shire of Irwin Oil and Gas Expo (“Expo”). The purpose of the Expo is to bring together community and stakeholders to communicate and share information in relation to local oil and gas mining activities.

#### **AAPG Conference**

Norwest is presenting a number of presentations at this weeks AAPG International Conference and Exhibition and will be discussing the unconventional prospectivity of the northern Perth Basin in addition to providing an overview of the company’s project portfolio.

#### **CSIRO Perth Basin Research Program**

Norwest is a founding member of a syndicate of companies working closely with CSIRO to undertake a baseline monitoring program in the onshore Perth Basin. The program is designed to establish environmental baselines associated with tight gas development and to effectively target monitoring of any potential impacts of such development.

## Petroleum Tenements – Interests

Permit	Location	Type of Permit	Area (100%)	Norwest %
<b>NORTHERN PERTH BASIN</b>				
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%
<b>TOTAL AREA NET TO NORWEST</b>			<b>3,100.1 KM<sup>2</sup> (766,261.4 ACRES)</b>	
<b>TIMOR SEA</b>				
AC/L6 (ROYALTY)	Vulcan Sub-Basin, NT	Offshore	252.1 km <sup>2</sup>	1.25% ORRI
<b>UNITED KINGDOM</b>				
P2265	Wessex Basin, UK	Offshore	~160 km <sup>2</sup>	65%

### For further information, please contact:

Norwest Energy NL  
 Level 2, 6 Thelma Street  
 West Perth WA 6005  
 PO Box 1264 West Perth WA 6872

Tel: +61 8 9227 3240  
 Fax: +61 8 9227 3211

Web: [www.norwestenergy.com.au](http://www.norwestenergy.com.au)

Media enquiries:  
[info@norwestenergy.com.au](mailto:info@norwestenergy.com.au)

Shareholder enquiries:  
[shareholder@norwestenergy.com.au](mailto:shareholder@norwestenergy.com.au)

### Competent Person

The information on the Xanadu prospect is based on information compiled by Mr. Dean Powell of Powell Seismic Services. Mr. Powell holds a Bachelor Degree of Applied Science (Physics) and is a member of the Society of Exploration Geophysicists. He has over 40 years of experience in petroleum exploration.

Mr. Powell has consented in writing to the inclusion of the information stated in the form and context in which it appears.