

# June 2017 Quarterly Report

27 July 2017



# **Summary**

**ASX: NWE** 

The June Quarter has been a significant one for Norwest Energy.

In early 2017, Norwest was able to form a Joint Venture for the drilling of Xanadu-1, targeting the Xanadu prospect. The Xanadu prospect located in offshore northern Perth Basin, Western Australia has an unrisked recoverable resource of 160 million barrels of oil, and is considered a significant well for Norwest Energy and the wider onshore oil and gas community of Western Australia, particularly as Xanadu-1 is likely to be the last well drilled onshore in Western Australia during 2017.

The Xanadu-1 well spud date is scheduled for the second half of September, meaning the Company has achieved finalisation of the Joint Venture, all regulatory state and local approvals and drilling the well within a nine month period – a significant achievement by a small and dedicated team.

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Earlier this month, Cyclone Energy was placed on title as Operator of the L14 production licence with a 33.722% interest, and work is now underway bringing the Jingemia Oil Field back into production. Whilst the Norwest interest in L14 remains unchanged at 6.278%, a new entrant to the northern Perth Basin – RCMA makes up the Joint Venture with a 60% interest. The Jingemia facility had been in care and maintenance under operator Origin Energy since 2012. It is an excellent outcome to have this well maintained production facility brought back online, and Norwest looks forward to first production during Quarter 4 2017, providing a welcome revenue stream to the Company.

The EP413 Joint Venture has been working collaboratively during the quarter reviewing and analysing the extensive Arrowsmith project dataset. The Joint Venture met during the quarter to continue technical discussions and forward planning for this highly prospective permit, with a commitment well planned for 2018/19.

Empire Oil and Gas, as operator of EP368, successfully secured a 12 month extension on the EP368 well commitment, now due to be drilled by 29 June 2018.

Figure 1 displays Norwest's tenement position in the northern Perth Basin, highlighting Norwest's three well program, led by the imminent spudding of Xanadu-1 in September.

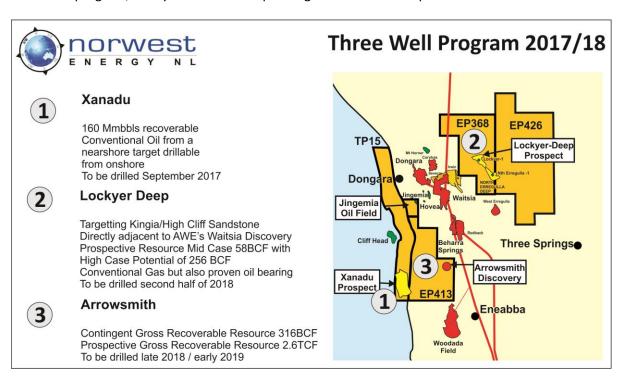


Figure 1. NWE tenements, highlighting Norwest's 3 well program for 2017/18

# **Australian Exploration Program**

# **TP/15**

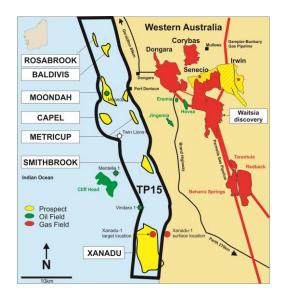


Figure 2. TP/15 permit location

TP/15 is located in the offshore northern Perth Basin, approximately 250km north of Perth. The permit occupies the 3 nautical mile wide state territorial waters of Western Australia, adjacent to the township of Port Denison, and covers an area of 645km<sup>2</sup>.

Xanadu is a conventional oil prospect located near the southern end of the TP/15 permit. The prospect has an estimated recoverable resource of 160 million barrels (Refer Table 2). On 13<sup>th</sup> July 2017, Norwest provided an update on the Xanadu-1 drilling program, and announced that the spud date has been scheduled for the second half of September 2017. Xanadu-1 is considered a significant well for the northern Perth Basin, with the Xanadu prospect having an unrisked recoverable resource of 160 MMbbls.

The primary target for the Xanadu-1 well is the Permian Dongara Sandstone, with secondary targets in the Irwin River Coal Measures and the High Cliff Sandstone. It is situated in very shallow water immediately adjacent to the coast, and will be drilled from onshore by way of a deviated well. The surface location is within EP413, a permit also operated by Norwest Energy.

AWE Limited (ASX:AWE) ('AWE') is currently drilling Waitsia-4, the second in a two-well program. Norwest will be mobilising the rig from the AWE location once drilling is complete.

Norwest's management consider this structure to be one of the biggest untested oil targets in the Perth Basin, with this same play resulting in four oilfield discoveries in the vicinity, namely the Cliff Head Oil Field (operated by Triangle Energy (Operations) Pty Ltd), the Hovea Oil Field (operated by AWE), the Eremia Oil Field (operated by AWE) and the Jingemia Oil Field (operated by Cyclone Energy Pty Ltd).

Table 1. TP/15 Joint Venture

Participant	Allocation of Expenditure in Xanadu-1*	Interest in TP/15	
Norwest	0%	25%	(Operator)
3C Group	40%	30%	
Triangle	40%	30%	
Whitebark	20%	15%	

<sup>\*</sup>Upon completion of Xanadu-1, each party will contribute to additional expenditure in proportion to their interests in TP/15.

#### **Prospective Resources**

Unrisked recoverable oil volumes have been estimated deterministically and are summarised in Table 2 below. A 50% recovery factor has been assumed.

Table 2. Un-risked Prospective Resource: Recoverable volumes of oil (MMstb)

Un-risked Prospective Resource: recoverable volumes oil (MMstb) $^{\!1}$						
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			

<sup>&</sup>lt;sup>1</sup>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.

Norwest's assessment of the chance of discovery and chance of development associated with Xanadu are provided in Table 3.

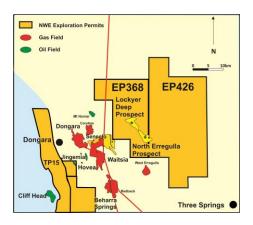
Table 3.

Reservoir	Chance of Success	
Dongara Sandstone	14%	
Irwin River Coal Measures	13%	
High Cliff Sandstone	6%	

Refer announcement released to ASX on 29/10/2014.

**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.

## **EP368**



EP368 covers an area of 600 km<sup>2</sup>, and is situated at the northern end of the hydrocarbon fairway running through the northern Perth Basin.

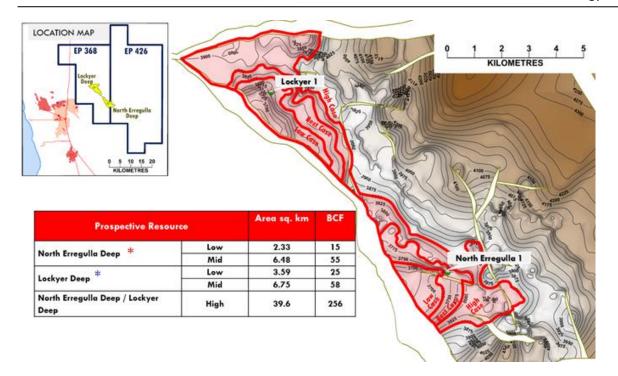
The permit lies to the east of the Dongara township, and adjacent to AWE's massive Waitsia discovery that flowed an impressive 50 MMscf/day in 2015.

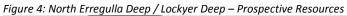
Figure 3. Location map of EP368 & EP426

On 4<sup>th</sup> July 2017, AWE Limited, Operator of Production Licences L1/L2 in the norther Perth Basin, Western Australia confirmed the southern extension of the Waitsia Gas Field. AWE assessment is that the Waitsia-3 appraisal well significantly exceeded pre-drill expectations, and they continue their evaluation with the Waitsia-4 well that recently spudded. The Waitsia Field is situated just 15km east of the Lockyer Deep prospect, and is the largest gas discovery in 40 years.

Lockyer Deep contains the same gas-producing formations as Waitsia – the Kingia and High Cliff Sandstone formations, untested in either Lockyer-1 or North-Erregulla-1 historic wells.

During the Quarter, Operator Empire Oil and Gas was successful in securing a 12 month extension on the EP368 well commitment, now due to be completed by 29 June 2018. Evaluation work has continued during the Quarter to ensure that the best location is selected for the upcoming well. Lockyer Deep-1 remains the preferred location to test the Lockyer Deep — North Erregulla structural trend, which remains untesting in the Kingia and High Cliff formations. The conventional well will be drilled to a depth of 4110m. The Operator has commenced engagement with landowners to negotiate land access agreements, and planning is underway to secure the key service providers for the upcoming drilling program.





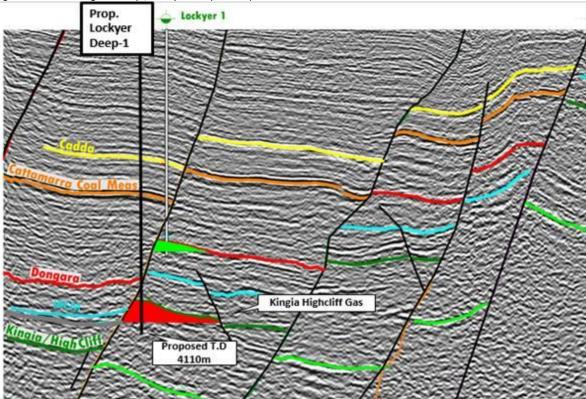


Figure 5: Lockyer Deep Seismic Section and Proposed Lockyer Deep-1 Well Trajectory Relative to Lockyer-1

- \* Possibility of success (North Erregulla Deep) 19%
- \* Possibility of success (Lockyer Deep) 20%
- \* Possibility of success (North Erregulla Dongara/Wagina target) 20%

#### **EP368 Joint Venture**

Empire Oil and Gas 80% (Operator)

Norwest Energy 20%

## **EP426**

EP426 lies adjacent and to the east of EP368, covering an area of 1197 km<sup>2</sup>. It is located on the north-eastern flank of the Dandaragan Trough in the onshore northern Perth Basin. Refer Figure 3 above for the permit location map.

The current work program commitment for EP426 is a 2D seismic survey, to be completed by June 2018, pending approvals and funding.

#### **EP426 Joint Venture**

Empire Oil and Gas 77.78% (Operator)

Norwest Energy 22.22%

### **EP413**

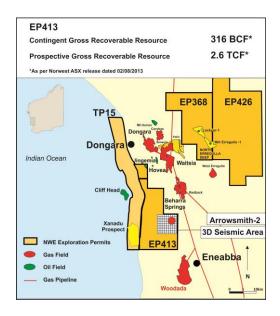


Figure 6. EP413 Permit Location Map

EP413 is located approximately 300km north of Perth between the townships of Dongara and Eneabba. The permit covers an area of 508 km², extending from immediately north of L4/L5 which hosts the Woodada Gas Field, to the southern boundary of L14 in which the Jingemia Oil Field is located. The Beharra Springs and Redback gas fields are also located in adjacent permits to the east.

Norwest is operator of EP413, and is currently executing Year 3 of the 5 year work program, with this current permit year dedicated to further technical and commercial evaluation of the block.

Work this quarter has focused on combining results from the 3D seismic survey dataset and flowback data from the Arrowsmith-2 well to map sweet spots in the permit area. The next stage of this process is to determine the most appropriate location to drill the next well on the permit. The work program commitment for drilling commences in February 2018.

### **Seismic Survey Acquisition Area Rehabilitation**

At the completion of the 3D acquisition survey in May 2015, rehabilitation works and monitoring commenced immediately, as detailed in the approved Environmental Management Plan. Norwest

Energy remains strongly committed to rehabilitating this land, with the monitoring and rehabilitation process continuing until both DMIRS and OEPA are satisfied that the area has been fully rehabilitated.

#### **EP413 Joint Venture**

Norwest Energy NL 27.945% (Operator)

AWE Limited 44.252% (via subsidiaries)

Bharat PetroResources Ltd 27.803%

# L14 Jingemia Oil Field

L14 contains the Jingemia Oil Field, estimated to have initially contained 12 million barrels of oil in place, with 4.6 million barrels produced to date. The area of L14 is 39.8 km<sup>2</sup>.

Cyclone Energy is now on title as Operator of L14, and activities have commenced on site to bring the facility back into production.

Norwest's contribution to necessary workovers and start-up costs leading to first production are forecast to be approximately \$200,000, and it is anticipated that production will recommence in the last quarter 2017, providing a revenue stream to Norwest.

There is additional identified exploration upside within the Production Licence, with none of the existing Jingemia wells reaching the deeper structures of the Kingia and High Cliff Sandstone formations, both gas-bearing at Waitsia. A study of these and other opportunities will be undertaken once the facility has been successfully brought back on line.

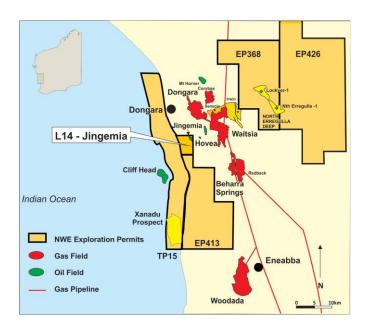


Figure 7. Location of L14 – Jingemia Oil Field

### **L14 Joint Venture**

Cyclone Energy 33.722% (Operator) RCMA Australia 60% Norwest Energy 6.278%

### **SPA-16 AO**

SPA-16 AO (SPA) covers 805 km<sup>2</sup>, and is located at the southern end of the northern Perth Basin.

In November 2014, Norwest executed an agreement with Finder Exploration Pty Ltd (Finder) to acquire its wholly owned subsidiary, Finder No 5 Pty Ltd, which holds rights to the SPA. Norwest had been progressing an application to DMIRS to convert the SPA into an Exploration Permit.

However the SPA area includes the Department of Defence Lancelin Defence Training Area and Unexploded Ordnance Area (Live Firing Range), and due to the high degree of uncertainty on whether future exploration activities could be carried out within these areas, Norwest Energy made the decision in May 2017 to hand the SPA back to Finder.

# **Corporate**

On 19<sup>th</sup> June 2017, the Company announced a Share Puchase Plan ("the Plan") to raise \$1 million. The offer price of each new share is \$0.0032. This represents a 20% discount to the VWAP of Shares of \$0.004 over the five-day trading period ending Thursday 15<sup>th</sup> June 2017.

Subsequent to the quarter end, on 13<sup>th</sup> July 2017 the Plan was extended from the original closing date of 14<sup>th</sup> July to 28<sup>th</sup> July. An announcement will be made shortly after the Plan has closed.

The funds raised from the Plan will enable the Company to focus on ongoing exploration obligations, including the 3 well program across TP/15, EP368 and EP413.

### Issued Capital as at 30 June 2017

Ordinary shares 2,673,902,727 shares Unlisted options 80,000,000 options

# **Petroleum Tenements – Interests**

Permit	Location	Type of Permit	Area (100%)	Norwest (%)			
NORTHERN PERTH BASI	N						
EP368	Perth Basin, WA	Onshore	600.3 km <sup>2</sup>	20%			
EP426	Perth Basin, WA	Onshore	1,197 km²	22.22%			
EP413	Perth Basin, WA	Onshore	508.3 km²	27.945%			
L14	Perth Basin, WA	Onshore	39.8 km²	6.278%			
TP/15	Perth Basin, WA	Offshore	645.8 km²	100%			
TOTAL AREA NET TO NORWEST 1,176.4 KM2							
TIMOR SEA							
AC/L6 (ROYALTY)	Vulcan Sub-Basin, NT	Offshore	252.1 km <sup>2</sup>	1.25% ORRI			

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