

6 September 2016

The Manager Company Announcements Office Australian Securities Exchange 20 Bridge Street SYDNEY NSW 2000

Reserve reconciliation

# **ASX RELEASE**

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## 2016 Red Gully Production License Reserves Review

Perth Basin domestic gas producer, Empire Oil & Gas NL ("**Empire**", ASX:EGO) has completed its 2016 Reserves Review. The 2P gas and condensate reserves within the Red Gully Production License area (PL18 / PL19) as at 1 July 2016 are estimated to be 10.9 PJ and 340.4 Mstb . This compares to the 2P gas and condensate reserves reported as at 1 July 2015 of 17.8 PJ and 554.5 Mstb. The reduction in reserves was due to:

- Reservoir production of 2.98 PJ of gas and 104.8Mstb of condensate over the 2016 financial year;
- A higher than expected decrease in bottom-hole pressure as measured by a static gradient survey carried out in mid-August 2016
- The onset of formation water production from the Red Gully B sand in late March 2016. This water production indicates that the reservoir drive mechanism is not solely depletion but has aquifer support, resulting in a lower ultimate recovery for the field.

The Red Gully field has been in production since May 2013 and has delivered a total of 7.8 PJ of gas to Alcoa during this period. Empire has a 100% interest in the Red Gully and Gingin West fields. The table below summarises the changes to the Red Gully Production license Reserves as of 1st July 2016

Table 1-1: Reserve reconciliation since 1/7/2015

Sales gas (PJ)

	Santa Bas (1.5)		Constant (many			
	1P	2P	3P	1P	2P	3P
Reserves @1/7/15	12.30	17.80	21.50	379.6	554.5	676.1
Production	-2.98	-2.98	-2.98	-104.8	-104.8	-104.8
Revisions	-2.42	-3.92	-3.12	-59.5	-109.3	-86.0
Reserves @1/7/16	6.9	10.9	15.4	215.3	340.4	485.3



Empire is currently supplying 6.4 TJ/day to Alcoa and the Red Gully B sand continues to produce gas, consistently meeting the customer nominations at high plant uptimes. The volume of 2P gas remaining will enable Empire to meet the remaining Tranche 2 contract to Alcoa.

Empire has approved and initiated planning on two process facility upgrade projects to maximise ultimate reserve recovery including:

- Installation of a wellhead compressor; and
- Increasing the process facility water handling capacity.

Empire CEO Ken Aitken said: "The Red Gully Field continues to perform well and deliver stable revenue to the business for future growth opportunities."

"In 2015 there were two increases in Red Gully gas reserves totalling circa 9PJ on a 2P basis. Although the new reserve assessment has resulted in a reduction of 2P reserves it is important to remember that overall we have a net positive 5PJ 2P gas reserve increase since Q4 2014. Red Gully remains a high margin producing field which will deliver revenue into the future."

"A successful RGN-1 workover and test planned for later this year is anticipated to provide further reserves upside for the Red Gully Production Hub."

#### Reserves review background

This review, undertaken by Valmap Pty Ltd ("Valmap") as of 1 July 2016 has been prepared to update the last reserve estimate as at 1 July 2015 by RISC announced on 29 July 2015.

The total production license reserves include volumes associated with the Red Gully B and D sands and the Gingin West wells.

Red Gully gas reserve totals in Table 1-2 include 0.1 PJ for 2P and 0.3 PJ for the 3P case for the Red Gully D sand. The D sand was not in production during the 2016 financial year.

Valmap has estimated a slow decrease in gas-condensate ratio in the reserve estimation in line with production data for the Red Gully B sand since the 1 July 2015 report.

The Gingin West well was production tested for a short period in the 2016 financial year from 16 October 2015 to 22 October 2015. The well was shut-in after it failed to flow continuously when combined with the Red Gully-1 well with a higher wellhead tubing pressure.

This reserve assessment assumes that a three phase separator (water knock-out) and wellhead compressor will be installed in the process plant to maximise ultimate reserve recovery.

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	RESERVES (100%)				
	1P	2P	3P		
Red Gully Sales Gas (PJ)	6.9	10.7	15.1		
Red Gully Condensate (Mstb)	212.8	331.0	469.9		
Gingin West Sales Gas (PJ)	0.05	0.18	0.28		
Gingin West Condensate (Mstb)	2.5	9.4	15.4		
Total Sales Gas (PJ)	6.9	10.9	15.4		
Total Condensate (Mstb)	215.3	340.4	485.3		

Table 1-2 Red Gully and Gingin West Reserves as at 1/7/2016.

(Note: 1. 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 the Gingin West-1 well.

## **Reserves reporting**

Pursuant to the ASX Listing Rules, the reserves information in this announcement:

- is effective as at 1 July 2016;
- has been estimated and is classified in accordance with SPE-PRMS (Society of Petroleum Engineers

   Petroleum Resources Management System) and reported in the most specific resource class in
   which petroleum resources can be classified under SPE-PRMS;
- is reported according to the Company's economic interest in each of the reserves and net of royalties;
- has been estimated and prepared using the probabilistic and deterministic methods;
- are economic down to the current minimum rate of the Red Gully plant of 2TJ/day based on reasonable estimates of future contracted and uncontracted prices and costs assumed by EGO, which have not changed materially since the previous estimate in July 2015
- are reported net of lease fuel and vent losses up to the reference point and
- the reference point for gas is the outlet of the Red Gully gas plant export metering facility and the storage tank for stabilised condensate at conditions of 14.7 psia and 60 deg F

<sup>2.</sup> Red Gully reserve estimates assume 250 psi THP with installation of compression.

<sup>3.</sup> Probabilistic and deterministic evaluation methods have been used).



Think J. hun,

Yours sincerely For Empire Oil & Gas NL

Ken Aitken

**Chief Executive Officer** 



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#### **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 150kms 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 7800Terajoules (TJ) of gas. Gas produced to date has been contracted to Alcoa and delivered through the Dampier to Bunbury Natural Gas Pipeline (DBNGP), which lies next to the Processing Facility. Condensate produced is transported via road to BP.

EGO is the holder of the largest net acreage in the highly prospective onshore Perth Basin with its production licenses and permits covering more than 9000sqkm, representing 48% of the currently granted acreage in the Perth Basin. Close to pipeline infrastructure and with rapid commercialisation opportunities, the Company has significant exploration potential in an underexplored, proven petroleum system.

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, enabling Empire to attract quality farm-in partners to assist in accelerating growth plans.

#### **Qualifications and consent**

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.