



EMPIRE OIL & GAS NL

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2017 Red Gully Production License Reserves Review

Perth Basin domestic gas producer, Empire Oil & Gas NL (“Empire”, ASX:EGO) has completed its 2017 annual Reserves Review. The review involved the completion of a successful pressure survey of the Red Gully-1 well. This required the shut in of the Red Gully-1 well for the duration of the survey, and Empire is now undertaking activities to bring the well back into production.

The 2P gas and condensate reserves within the Red Gully Production License area (PL18 / PL19) as at 1 July 2017 are estimated to be 6.56 PJ and 146.5 Mstb respectively. This represents a decrease in the 2P gas and condensate reserves from 10.9 PJ and 340.4 Mstb as at 1 July 2016 (refer to ASX announcement dated 6 September 2016). The reduction in reserves was due to:

- Reservoir production of 2.33 PJ of gas and 63.1Mstb of condensate over the 2017 financial year;
- The onset of formation water production from the Red Gully B sand in late March 2016 resulting in a lower ultimate recovery for the field;
- A reduction in ultimate recovery of sales gas and condensate from the Red Gully Field as a result of increased water ingress into the wellbore at a greater rate than was evident at the time of the 2016 review. However the P50 Red Gully OGIP remains unchanged from the 2016 review; and
- Decline in the condensate to gas ratio of the Red Gully field due to a greater rate of retrograde liquid drop-out in the reservoir.

As a result, Empire is likely to impair the carrying value of Red Gully Field in view of the reduction in ultimate recovery. The Board will consider this when preparing the annual report due to be released 30 September 2017.

The Red Gully field has been in production since May 2013 and has delivered a total of 10.1 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 2017.

Table 1-1: Reserve reconciliation since 1/7/2016

Reserve reconciliation	Sales gas (PJ)			Condensate (Mstb)		
	1P	2P	3P	1P	2P	3P
Reserves @1/7/16	6.9	10.9	15.4	215.3	340.4	485.3
Production	-2.33	-2.33	-2.33	-63.1	-63.1	-63.1
Revisions	-1.41	-2.01	-4.37	-87.9	-130.7	-211.9
Reserves @1/7/17	3.16	6.56	8.70	64.3	146.6	210.3

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Empire's average supply during the June 2017 quarter to Alcoa was 6.4TJ/day. The volume of 2P gas remaining is forecast to enable Empire to meet the remaining Tranche 2 contract to Alcoa.

Empire initiated two process facility upgrade projects during the year to maximise ultimate reserve recovery. The RGPF produced water handling upgrade project was successfully completed and has increased the RGPF produced water handling capacity from 50 bbls to 500 bbls of formation water per day which is the maximum modelled water rate expected from the Red Gully area wells.

The installation of a wellhead compressor at the RGPF will enable Empire to maintain gas production levels into the 2018 financial year and maximise ultimate hydrocarbon recovery from Red Gully-1. Installation of the wellhead compressor is underway and is expected to be completed in H1 2018 financial year.

Empire CEO Angus Walker said:

"The Red Gully field continued to deliver solid gas production during FY2017, which was the major contributor to the reduction in reserves. While we also had another reduction in reserves due to the onset of formation water, we initiated steps designed to address this to maintain production levels and maximise the ultimate recoveries from the RG-1 reservoir. We expect our 2P gas reserves are sufficient to deliver the balance of our Tranche 2 commitments to Alcoa, and continue to generate solid revenue and cash flow for Empire."

Reserves review background

The 2017 Red Gully Production Licence Reserves Review was undertaken by Valmap Pty Ltd ("**Valmap**") as of 1 July 2017. It has been prepared to update the reserve estimate as at 1 July 2016, also conducted by Valmap (refer to ASX announcement dated 6 September 2016).

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 and the Gingin West well was shut in during the 2017 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 Red Gully reserves assessment assumes that a three phase separator (water knock-out) and wellhead compressor will be installed in the process plant and a well recompletion at the appropriate time to maximise ultimate reserve recovery



Table 1-2: Red Gully and Gingin West Reserves (100% basis, as at 1/7/17)

	1P	2P	3P
Red Gully Sales Gas (PJ)	3.11	6.38	8.42
Red Gully Condensate (Mstb)	61.8	137.2	194.9
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)	3.16	6.56	8.70
Total Condensate (Mstb)	64.3	146.6	210.3

Notes:

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.
2. Red Gully reserve estimates assume 250 psi THP with installation of compression.
3. Red Gully-1 Well workover activities are assumed in 2P and 3P estimates.

Reserves reporting

Pursuant to ASX Listing Rule 5.25, the reserves information in this announcement:

- is effective as at 1 July 2017;
- 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 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 2016;
- 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.

-ENDS-

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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 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 10,000 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 produced is transported via road to BP.

EGO is the holder of the largest net onshore acreage in the highly prospective onshore Perth Basin with its production licenses and permits covering more than 8000 km² 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 a 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.

Qualifications and consent

The preparation of the Reserve update report as of 1 July 2017 was undertaken by Mr. Ian Paton, Valmap Pty. Ltd. Mr Paton 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 is based on and fairly represents the information and supporting documentation prepared by Mr Paton who is a qualified petroleum reserves 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.