



25 January 2017

## Red Gully North-1 Testing Update

- Second test on C sand confirms higher than expected condensate rate of 405 barrels per day
- Gas flow of 1.29 mmscf per day recorded over the last 24 hours of the second test, in line with earlier 8 hour test
- Second test on C sand produced average water rate of 734 bpd indicating marginally higher rates from the initial 8 hour flow
- A combined flow test of the C sand and the Upper D sand was conducted in an attempt to induce D sand flow. The results of this combined flow test were inconclusive. Further detailed analysis of the data is required.

Perth Basin domestic gas producer Empire Oil & Gas NL (Empire, ASX:EGO) provides the following update on the Red Gully North-1 (RGN-1) project.

Empire has successfully completed a second test of the RGN-1 well on the C sand over a 27.5 hour period. The results are shown in Table 1 (38/64" choke).

Table 1: RGN-1 C Sand Flow Rates

C Sand	24 hour flow test
Condensate (bbls, 50.1 API)	405
Gas (mmscf)	1.29
Water (bbls)	734

The flow test was completed after mobilising a larger condensate tank to site and receiving environmental approval from the Department of Mines and Petroleum to flow produced water to the drilling pond.

Empire Oil and Gas CEO Ken Aitken said that it was encouraging that the second flow test confirmed the C sands hydrocarbon production performance over an extended flow period.

*"The production test results from the second C sand flow test have given Empire additional information from which to determine the commercial potential of the reservoir. The C sand zone has given us stable gas production and high levels of condensate production. The potential source of the water production will be determined by analysing all well data collected during the completion and testing process. Empire will be performing a reserves analysis to understand the size of the C sand gas condensate discovery. A review of light oil/condensate artificial lift techniques to maximise hydrocarbon production as well as analysing the options to handle the water production both downhole and at surface will be the key focus areas of a commerciality analysis,"* Mr Aitken said.

*“It was prudent to try to flow the Upper D sand one more time in combination with the C sand however the results were inconclusive due to potential reservoir interference between the two zones and further work will be required to understand if the Upper D sand is commercially significant.”*



**Figure 1: Red Gully North-1 Second Test**

### **Details**

The C sand required wireline swabbing to regain natural flow to surface after a 36 hour pressure build-up. The C sand was then flowed for 27.5 hours via the surface test equipment and condensate has been stored in tanks for future sale. Surface hydrocarbon samples were also collected for laboratory analysis.

The C sand test was shut-in for a 55 hour pressure build up and the downhole pressure gauges were recovered.

After careful consideration, it was decided to flow the Upper D sand again using the C sand reservoir pressure drawdown to induce flow from the Upper D sand.



The plug in the completion isolating the Upper D sand was successfully removed, and the C sand and Upper D sand were flowed together. No wireline swabbing was required to induce flow to surface. The 24 hour test was inconclusive due to potential reservoir interference and will require detailed technical analysis to determine the significance of the results.

### Participants

Empire Oil & Gas NL 100%

### Plan/Next Steps

The current plan is to:

- Complete shut in of C sand and Upper D sand for a short pressure build up
- Isolate C sand from Upper D sand
- On completion of testing operations, secure the well and de-mobilise testing equipment (expected by the end of the week)
- Review pressure, sample and flow rate data recovered from the well, perform reserve analysis and commerciality study of the RGN-1 well

### Location/History

RGN-1 is situated in EP 389 approximately four kilometres to the north of the Company's Red Gully Production Facility. RGN-1 was drilled in November/December 2015 and discovered 53 metres of moveable gas and condensate. In March/April 2016 RGN-1 was successfully completed, however the test results on the Upper D and C sands were compromised by a nearby water production zone due to a shale washout-affected cement bond.

In November/December 2016 the RGN-1 remedial cementing workover successfully isolated the water zone connecting with the Upper D and C sand hydrocarbon zones.

– ENDS –

### For further information, contact:

Ken Aitken  
Chief Executive Officer  
Empire Oil & Gas NL  
Telephone: +61 8 9286 4600  
[www.empireoil.com.au](http://www.empireoil.com.au)

Cameron Morse  
  
FTI Consulting  
Telephone: +61 8 9485 8888

### 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 kilometres 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 8,350 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 is transported via road to BP.

Empire is the holder of the largest net onshore acreage in the highly prospective Perth Basin with its production licenses and permits covering more than 8,000 km<sup>2</sup>, representing 46% 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 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 and, enabling Empire to attract quality farm-in partners to assist in accelerating growth plans.