



To	Company Announcements Office	Facsimile	1300 135 638
Company	ASX Limited	Date	15 February 2017
From	[REDACTED]	Pages	9
Subject	Beetaloo Basin drilling results indicate material gas resource		

Please find attached a release on the above subject.

Regards

A handwritten signature in black ink, appearing to be "John Goff", written in a cursive style.

A black rectangular redaction box covering the name of the sender.



ASX/Media Release

15 February 2017

Beetaloo Basin drilling results indicate material gas resource

Origin Energy Limited (Origin) today announced it had submitted the Amungee NW-1H – Velkerri B Shale Gas Pool Discovery Evaluation Report to the Northern Territory Government, on behalf of the Beetaloo Joint Venture*.

This follows the completion of extended production testing at the Amungee NW-1H exploration well of the “B Shale” member of the Velkerri Formation in the onshore Beetaloo Basin. Origin has also undertaken a resource study based on Amungee NW-1H well results and other key wells in the Beetaloo Basin including regional seismic data.

Key report and study points:

- Drilling and seismic results across more than 10,000km² illustrate the continuity of the Velkerri Formation shale gas play over a large area
- The “B Shale” member of the Velkerri Formation is interpreted to be the most continuous of the three individual targets within the Velkerri Formation shale gas play
- Production test data from Amungee NW-1H, an approximately 1,100m in-zone horizontal well with 11 fracture stimulation stages across approximately 600m of the lateral section, confirms the ability of the Velkerri Formation “B Shale” to flow gas following hydraulic fracture stimulation
- Origin has prepared a Contingent Resource estimate (Table 1) using probabilistic methods and reservoir evaluation data, in addition to regional seismic data

Table 1. Assessment of 2C Contingent Gas Resource Estimates for the Velkerri B Shale Pool within EP76, EP98, and EP117 as of 14 February 2017¹

Measured and Estimated Parameters	Units	Best Estimate
Area ²	km ²	1,968
Original Gas In Place (OGIP) ³ (Gross)	TCF ⁶	61.0
Contingent Resource ⁴ (Gross)	TCF	6.6
Contingent Resource ⁴ (Net) ⁵	TCF	2.3

¹ Contingent Resource Estimates have been prepared on a statistical aggregation basis and in accordance with the Society of Petroleum Engineers Petroleum Resources Management System (SPE-PRMS). Contingent Resource Estimates are those quantities of gas (produced gas minus carbon dioxide and inert gasses) that are potentially recoverable from known accumulations but which are not yet considered commercially recoverable due to the need for additional delineation drilling, further validation of deliverability and original gas in place, and confirmation of prices and development costs.

² P50 area from the Contingent Resource area distribution

³ OGIP presented is the product of the P50 Area by the P50 OGIP per km²

⁴ Estimated Gas Contingent Resource category of 2C

⁵ Net to Origin’s 35% interest in EP76, EP98, and EP117

⁶ TCF: trillion cubic feet



Origin CEO Integrated Gas, David Baldwin, said “Origin is pleased to confirm it has submitted a report to the Northern Territory Government that indicates the existence of a material gas resource within the Beetaloo Basin.

“The Beetaloo Basin is the Territory’s most prospective onshore basin for unconventional gas and our test results further confirm the region’s outstanding shale gas potential. Further exploration and appraisal activity will be required to progress our understanding of the play and mature the contingent resources to reserves,” Mr Baldwin said.

On 14 September 2016, the Northern Territory Government implemented a moratorium on hydraulic fracturing of unconventional gas reservoirs. The moratorium will remain in place until the Government has considered the outcomes of a comprehensive independent scientific inquiry into the social and environmental impacts of hydraulic fracture stimulation.

*** BEETALOO JOINT VENTURE**

Origin Energy Limited (Operator) **:	35%
Sasol Petroleum Australia Limited:	35%
Falcon Oil and Gas Limited:	30%

** Via a wholly owned subsidiary

For further information please contact:

Media



Investors





Further information relating to the Discovery Evaluation Report:

Table 2. Amungee NW-1H Well Test Results

Well name	Amungee NW-1H
Permit	EP98 (onshore Beetaloo Basin NT)
Working interest in well	Origin 35%
Geological rock type of formation drilled	Organic rich shale (mudstone and siltstone)
Depth of zones tested	~2170-2190 metres below sea level
Type of test	Production test following hydraulic fracture stimulation
Hydrocarbon phases recovered	Gas (Approximate composition: methane ~92%, ethane+ ~3%, carbon dioxide and inerts ~5%)
Flow rates and volumes	Average rate (57 days): 1.1 million standard cubic feet per day (mmscf/d) Final production rate: 1.07 mmscf/d Cumulative production: 63 million standard cubic feet (mmscf)
Number of fracture stimulation stages	11 stages (average size ~ 100T/stage)

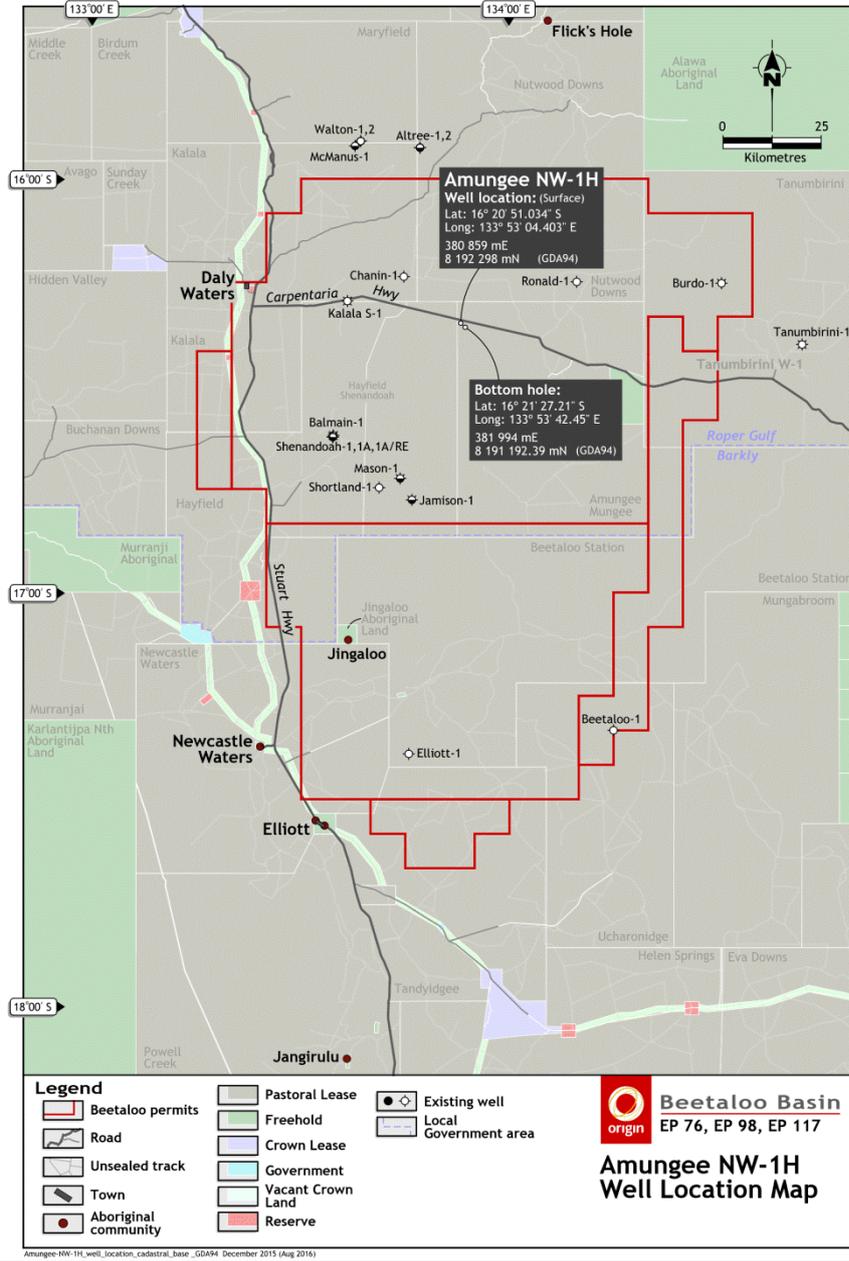


Table 3. Contingent Resources

Type of permit	Exploration Permit (EP)
Permits	EP76, EP98, EP117
Basis for determining a discovery	<ul style="list-style-type: none"> • The successful well test at Amungee NW-1H which produced enough gas to surface to be of commercial interest. • Core and log data from Amungee NW-1H, Beetaloo W-1, Kalala S-1, Tanumbirini-1, McManus-1, Aلتree-2 and Walton-2 provide convincing evidence of a significant volume of moveable hydrocarbons (See Appendix 1) • The Marcellus Shale (Pa., USA) and Barnett Shale (Tx., USA) are analogous, commercially-productive fields that are similar to the Velkerri B Shale reservoir
Analytical procedures used in estimation	Contingent Resource Estimates have been prepared on a statistical aggregation basis and in accordance with the SPE Petroleum Resources Management System
Key contingencies preventing classification as reserves	Key contingencies for commercialising the estimated resource include the lifting of the Northern Territory moratorium on hydraulic fracture stimulation, completing longer-duration production testing, reducing well costs with scale of activity, establishing gas sales agreements and building infrastructure to connect the resource to market.
Further appraisal drilling and evaluation work	Contingent on the moratorium on hydraulic fracture stimulation being lifted, additional appraisal drilling is planned (as per the work program associated with the permits), along with hydraulic fracture stimulation and testing to assess deliverability and move the project towards commercialisation.



Figure 1. Well Location Map





Appendix 1: Data Obtained to Characterise the Velkerri B Shale Gas Reservoir

Data	Usage	Acquired	Comments
TOC	Provides an indication of source-rock richness and sorption capacity.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1, McManus-1, Atree-2, Walton-2
Gas content	Includes the volumes of desorbed, lost, and residual gas obtained from the desorption of core. It is an indicator of the in-situ sorbed gas content.	Yes	Data from Kalala S-1
Sorption isotherm	A relationship, at constant temperature, describing the volume of gas that can be sorbed to a shale as a function of pressure.	Yes	Data from Amungee NW-1, Kalala S-1
Gas composition	Used to quantify the percentage of methane, carbon dioxide, nitrogen, ethane, etc. in the desorbed gas. Used to build composite sorption isotherms.	Yes	Data from Amungee NW-1, Amungee NW-1H, Kalala S-1, Beetaloo W-1
Rock-eval pyrolysis	Assesses the petroleum-generative potential and thermal maturity of organic matter in a shale sample.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Mineralogical analyses	Determines bulk and clay mineralogy using petrography, X-ray diffraction, scanning electron microscopy, and similar techniques.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Vitrinite reflectance	A value indicating the amount of incident light reflected by the vitrinite maceral. It is a fast and inexpensive means of determining thermal maturity.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Core description	Visually captures lithology, bedding, fracturing, grain size variations, etc.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1, McManus-1, Atree-2, Walton-2
3D seismic	Used to determine interwell shale properties including lateral extent, thickness, faulting, and those	No	2D seismic coverage over the majority of the pool



areas with higher gas saturation and brittleness.

Kerogen types	Used to assess whether rockKalala S are Type I (oil-prone), II (mixed), or III (coal).	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Routine core analysis	Includes total porosity, fluid saturations, bulk density, and matrix permeability (via pressure pulse testing on crushed samples).	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Conventional logs	SP, GR, resistivity, microlog, caliper, density, neutron, sonic, and temperature logs are run to provide thickness, porosity, matrix, and sorbed gas saturations.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1, McManus-1, Atree-2, Walton-2
Special logs	May include image logs (fractures), NMR logs (free water, bound water, gas saturation), pulsed neutron and geochemical tools (mineralogy), dipole sonic (geomechanical properties), spectral GR (clay types), etc.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1
Pressure transient tests	Pressure buildup or injection fall-off tests to determine static reservoir pressure, permeability, skin factor, and to detect fractured-reservoir behaviour.	Yes	Data from Amungee NW-1H, Kalala S-1
Geomechanical properties	Young's modulus and Poisson's ratio for determining shale brittleness, stress orientations and magnitudes to predict fracture growth.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1
Microseismic	Used to assess hydraulic fracture geometries and stimulated reservoir volumes.	No	
Fracture diagnostics	Treating pressures, closure stress, pumped volumes, flowback volumes, etc. to determine the quality of a fracture stimulation.	Yes	Data from Amungee NW-1, Amungee NW-1H, Kalala S-1
Gas, water rates	Captured daily (preferably) to assess individual well behaviour.	Yes	Data from Amungee NW-1H
Bottomhole pressures	Preferably recorded in closely-spaced increments early in well life; can also use surface	To be collected	Data from Amungee NW-1H



	pressures with wellbore-fluid gradients.		
Tracer surveys	Chemical or radioactive tracers to assess which fracture stages are contributing.	No	
Facilities	Variations in line pressure, etc., that affect producing well rates.	Yes	Data from Amungee NW-1H
Rate-transient analysis	Decline analysis tool that analyses production rates and pressures using various methods to assess EUR, GIP, drainage area, etc.	Yes	Data from Amungee NW-1H
Numerical modelling	Helpful in understanding reservoir mechanisms, predicting early well behaviour, and estimating EURs and recovery factors.	Yes	Data from Amungee NW-1H
Decline-curve analysis	Traditionally used to forecast well performance. More reliable later in well life (after a few years) due to uncertainties regarding b-factor values.	Yes	Data from Amungee NW-1H
Analogues	May be useful to estimate EURs and recovery factors if a strong correlation exists between key reservoir parameters of subject and analogue reservoir.	Yes	Key static reservoir parameters are analogous Marcellus and Barnett

The contingent resource estimates contained in this report are based on, and fairly represents, information and supporting documentation that have been prepared by Alexander Côté who is a full time Origin employee and a Qualified Reserves and Resource Evaluator. Mr Côté is a registered professional engineer with specialised unconventional gas resource characterisation and development experience. Mr Côté has consented to the form and context in which these statements appear.

The contingent resource estimates have undergone an assurance process to ensure that the contingent resource estimates contained in this report are based on, and fairly represents, information and supporting documentation and have been prepared according to our reserves and resources process, which includes adherence to the SPE PRMS guidelines. This process is overseen by full time Origin employee, Andrew Mayers, Chief Petroleum Engineer and Mr Mayers has consented to the form and context in which these statements appear.



Falcon Oil & Gas Ltd. (“Falcon”)

Beetaloo Basin Drilling Results Indicate Material Gas Resource

15 February 2017 - Falcon Oil & Gas Ltd. (TSXV: FO, AIM: FOG, ESM: FAC) is pleased to announce that Origin Energy Resources Limited (“Origin”), Falcon’s 35% joint venture partner, has submitted the Results of Evaluation of the Discovery and Preliminary Estimate of Petroleum in Place for the Amungee NW-1H Velkerri B Shale Gas Pool (“Report”) to the Northern Territory Government.

The submission follows the completion of extended production testing at the Amungee NW-1H exploration well of the “B Shale” member of the Middle Velkerri Formation.

In addition, Origin undertook a resource study based on the Amungee NW-1H well results and other key wells in the Beetaloo Basin including regional seismic data to determine a 2C contingent gas resource estimate for the Middle Velkerri B Shale Pool within EP76, EP98 and EP117.

Key Details of the Discovery Evaluation Report

The Report was submitted in compliance with Section 64 of the Northern Territory Petroleum Act (2016) and as per the *Reporting a Petroleum Discovery Guideline*. The Report follows the initial submission of the notification of discovery and an initial report on discovery in October 2016. The Report provides the following volumetric estimates and recovery / utilisation factor for the B Shale member of the Middle Velkerri Formation within permits EP76, EP98, and EP117.

Middle Velkerri B Shale Volumetric Estimates ⁽¹⁾		
	Gross	Net Attributable ⁽²⁾
	Best Estimate	Best Estimate
Area km ² ⁽³⁾	16,145	4,751
OGIP (TCF)	496	146
Combined Recovery / Utilisation Factor ⁽⁴⁾	16%	16%
Technically Recoverable Resource (TCF)	85	25
OGIP Concentration (BCF/km ²)	31	31
¹ The Report and estimates included in the table above were not prepared in accordance with COGEH ² Falcon’s working interest is 29.43%, net attributable numbers do not incorporate royalties over the permits ³ Area defined by a depth range at a maturity cut-off consistent with the dry gas window within the Beetaloo JV Permits (EP79, EP98, EP117) ⁴ The combined recovery/utilization factor range was applied stochastically to the OGIP range to calculate the range of technically recoverable resource within the Beetaloo JV permits.		

Understanding the factors controlling deliverability and recovery as well as spatial variation within the gas play/shale pool are in their infancy. A quantitative assessment of the aggregated estimated recoverable resource of the gas play that can handle these complexities will require a statistically significant number of wells testing the gas play. As there is only a single production test within the gas play Origin decided upon a qualitative assessment approach instead to estimate the technically recoverable resource.

Factors considered in the qualitative assessment of technically recoverable hydrocarbon resource in the gas play were the SRV recovery factor range, the subsurface utilization factor range and surface utilization factor range.

Origin’s Contingent Gas Resource Estimates for the Middle Velkerri B Shale Pool within EP76, EP98 and EP117

Origin has prepared a contingent gas resource estimate using probabilistic methods and reservoir evaluation data, in addition to regional seismic data.

Assessment of 2C Contingent Gas Resource Estimates for the Middle Velkerri B Shale Pool within EP76, EP98 and EP117 as of 15 February, 2017¹		
Measured and Estimated Parameters	Units	Best Estimate
Area ²	km ²	1,968
Original Gas In Place (OGIP) ³	TCF	61.0
Gross Contingent Resource⁴	TCF	6.6
Net Contingent Resource^{4,5}	TCF	1.94

¹ Contingent resource estimates have been prepared on a statistical aggregation basis and in accordance with the Society of Petroleum Engineers Petroleum Management System (SPE-PRMS). Contingent resource estimates are those quantities of gas (produced gas minus carbon dioxide and inert gasses) that are potentially recoverable from known accumulations but which are not yet considered commercially recoverable due to the need for additional delineation drilling, further validation of deliverability and original gas in place, and confirmation of prices and development costs. If the estimates were to be prepared in accordance with COGEH, Falcon is highly confident that there would be no change to the contingent resource estimates above.

² P50 area from the contingent resource area distribution

³ OGIP presented is the product of the P50 Area by the P50 OGIP per km²

⁴ Estimated contingent gas resource category of 2C. There is no certainty that it will be commercially viable to produce any portion of the resources

⁵ Net to Falcon’s 29.43% working interest in EP76, EP98, and EP117, net contingent resource number does not incorporate royalties over the permits

As noted in Origin’s press release the “The contingent resource estimates contained in [their] report are based on, and fairly represents, information and supporting documentation that have been prepared by Alexander Côté who is a full-time Origin employee and a Qualified Reserves and Resource Evaluator. Mr Côté is a registered professional engineer with specialised unconventional gas resource characterisation and development experience. Mr Côté has consented to the form and context in which these statements appear”. Mr Côté is a member of the Association of Professional Engineers and Geoscientists of Alberta.

Suspension of Drilling Operations

On 14 September 2016, the Northern Territory Government introduced a moratorium on hydraulic fracturing, and subsequently established an independent scientific inquiry. Pending the outcome of this independent inquiry, Origin has requested a suspension of all drilling operations with the DPIR. We await their formal response to the request.

Philip O’Quigley, CEO of Falcon, commented:

“The submission of a discovery evaluation report supporting the existence of a material gas resource in the Beetaloo Basin coupled with Origin’s best estimate assessment of a gross contingent gas resource of 6.6 TCF for the Middle Velkerri B shale pool surrounding and adjacent to the Amungee NW-1H exploration well are exciting developments for Falcon.

Additional exploration and appraisal activity will be required to refine the pool size and better assess the recoverable resource range and ultimately the commerciality of the play.

However, it is interesting to note that in Origin’s opinion the Marcellus and Barnett Shales in the USA are analogous, commercially-productive fields that are similar to the Middle Velkerri B Shale reservoir.”

Origin’s ASX/Media Release

Please refer to Appendix A for a copy of Origin’s ASX/Media Release “Beetaloo Basin drill results indicate material gas resource”.

This announcement contains inside information for the purposes of Article 7 of Regulation 596/2014 of the European Parliament and of the Council.

CONTACT DETAILS:

Falcon Oil & Gas Ltd.

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Davy (NOMAD & Broker)

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Further information relating to disclosure of resources

Well Name	Amungee NW-1H
Permit / location	EP98 (onshore Beetaloo Basin Northern Territory, Australia)
Working interest in well	Falcon 29.43%
Product type	Shale gas
Risks and level of uncertainty with recovery of resources	<p>Risks and uncertainties include the lifting of the Northern Territory moratorium on hydraulic fracture stimulation, completing longer-duration production testing above the 57 days conducted on Amungee NW-1H, reducing well costs with scale of activity, establishing gas sales agreements and building infrastructure to connect the resource to market.</p> <p>Contingent on the moratorium being lifted, additional appraisal drilling is planned (as per the work program associated with the permits), along with hydraulic fracture stimulation and testing to assess deliverability and move the project towards commercialisation.</p>
Significant positive and negative factors relevant to the estimate	<p>Significant positive factors relevant to the estimate of the contingent resources include the successful well test at Amungee NW-1H which produced enough gas to surface to be of commercial interest; core and log data from Amungee NW-1H, Beetaloo W-1, Kalala S-1, Tanumbirini-1, McManus-1, Altree-2 and Walton-2 provide convincing evidence of a significant volume of moveable hydrocarbons; and the Marcellus Shale (Pa., USA) and Barnett Shale (Tx., USA) are analogous, commercially-productive fields that are similar to the Velkerri B Shale reservoir.</p> <p>Significant negative factors include the lifting of the Northern Territory moratorium on hydraulic fracture stimulation, the limited number of wells on the Company's acreage, lack of a developed service sector providing uncertainty regarding estimates of capital and operating costs, developing hydrocarbon regulations and environmental legislation and the requirement to obtain social acceptability for oil and gas operations.</p>
Commerciality	<p>Currently this project is based on a conceptual study. The economic status is undetermined at this time. The contingent resources will continue to be assessed as additional appraisal wells are drilled and tested in order to better evaluate the commercial potential of the play. After a sufficient number of wells have been drilled to demonstrate that the project is technically feasible and a development plan has been generated, economics can be run to determine commerciality of production.</p>

Amungee NW-1H Well Test Results

Well name	Amungee NW-1H
Permit	EP98 (onshore Beetaloo Basin NT)
Working interest in well	Falcon 29.43%
Geological rock type of formation drilled	Organic rich shale (mudstone and siltstone)
Depth of zones tested	~2170-2190 metres below sea level
Type of test	Production test following hydraulic fracture stimulation
Hydrocarbon phases recovered	Gas (Approximate composition: methane ~92%, ethane+ ~3%, carbon dioxide and inerts ~5%)
Flow rates and volumes	Average rate (57 days): 1.1 MMscf/d Final production rate: 1.07 MMscf/d Cumulative production: 63 MMscf
Number of fracture stimulation stages	11 stages (average size ~ 100T/stage)

Advisory regarding forward looking statements

Certain information in this press release may constitute forward-looking information. Any statements that are contained in this news release that are not statements of historical fact may be deemed to be forward-looking information. Forward-looking information typically contains statements with words such as “may”, “will”, “should”, “expect”, “intend”, “plan”, “anticipate”, “believe”, “estimate”, “projects”, “potential”, “scheduled”, “forecast”, “outlook”, “budget”, “hope”, “support” or the negative of those terms or similar words suggesting future outcomes. This information is based on current expectations that are subject to significant risks and uncertainties that are difficult to predict. Such information may include, but is not limited to, comments made with respect to the type, number, schedule, stimulating, testing and objectives of the wells to be drilled in the Beetaloo basin Australia, the prospectivity of the Middle Velkerri play and the prospect of the exploration programme being brought to commerciality, risks associated with the introduction of a moratorium, fluctuations in market prices for shale gas; risks related to the exploration, development and production of shale gas reserves; general economic, market and business conditions; substantial capital requirements; uncertainties inherent in estimating quantities of reserves and resources; extent of, and cost of compliance with, government laws and regulations and the effect of changes in such laws and regulations; the need to obtain regulatory approvals before development commences; environmental risks and hazards and the cost of compliance with environmental regulations; aboriginal claims; inherent risks and hazards with operations such as mechanical or pipe failure, cratering and other dangerous conditions; potential cost overruns; variations in foreign exchange rates; competition for capital, equipment, new leases, pipeline capacity and skilled personnel; the failure of the holder of licenses, leases and permits to meet requirements of such; changes in royalty regimes; failure to accurately estimate abandonment and reclamation costs; inaccurate estimates and assumptions by management and their joint venture partners; effectiveness of internal controls; the potential lack of available drilling equipment; failure to obtain or keep key personnel; title deficiencies; geo-political risks; and risk of litigation.

Readers are cautioned that the foregoing list of important factors is not exhaustive and that these factors and risks are difficult to predict. Actual results might differ materially from results suggested in any forward-looking statements. Falcon assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those reflected in the forward looking-statements unless and until required by securities laws applicable to Falcon. Additional information identifying risks and uncertainties is contained in Falcon’s filings with the

Canadian securities regulators, which filings are available at www.sedar.com, including under "Risk Factors" in the Annual Information Form.

This announcement has been reviewed by Dr. Gábor Bada, Falcon Oil & Gas Ltd's Head of Technical Operations. Dr. Bada obtained his geology degree at the Eötvös L. University in Budapest, Hungary and his PhD at the Vrije Aniversiteit Amsterdam, the Netherlands. He is a member of AAPG and EAGE.

About Falcon Oil & Gas Ltd.

Falcon Oil & Gas Ltd is an international oil & gas company engaged in the acquisition, exploration and development of conventional and unconventional oil and gas assets, with the current portfolio focused in Australia, South Africa and Hungary. Falcon Oil & Gas Ltd is incorporated in British Columbia, Canada and headquartered in Dublin, Ireland with a technical team based in Budapest, Hungary.

For further information on Falcon Oil & Gas Ltd. please visit www.falconoilandgas.com

About Origin Energy

Origin Energy (ASX: ORG) is the leading Australian integrated energy company with market leading positions in energy retailing (approximately 4.3 million customers), power generation (approximately 6,000 MW of capacity owned and contracted) and natural gas production (1,093 PJ of 2P reserves and annual production of 82 PJe). To match its leadership in the supply of green energy, Origin also aspires to be the number one renewables company in Australia.

Through Australia Pacific LNG, its incorporated joint venture with ConocoPhillips and Sinopec, Origin is developing Australia's biggest CSG to LNG project based on the country's largest 2P CSG reserves base.

www.originenergy.com.au

Glossary of terms

2C	Best estimate of a contingent resource
AIM	London Stock Exchange's international market for smaller growing companies
ASX	Australian Securities Exchange
BCF/km ²	Billion cubic feet per square kilometre
COGEH	Canadian Oil and Gas Evaluation Handbook
CSG	Coal seam gas
DPIR	Northern Territory Government's Department of Primary Industry and Resources
EP	Exploration Permit
JV	Joint Venture
KM ²	Square kilometres
LNG	Liquefied natural gas
MMscf	Million standard cubic feet
MMscf/d	Million standard cubic feet per day
MW	Megawatt
OGIP	Original gas in place volumes
SRV	Stimulated rock volume
TCF	Trillion cubic feet
T/stage	Ton per stage

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

Appendix A - Origin's ASX/Media Release

ASX/Media Release

15 February 2017

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Key report and study points:

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- The “B Shale” member of the Velkerri Formation is interpreted to be the most continuous of the three individual targets within the Velkerri Formation shale gas play
- Production test data from Amungee NW-1H, an approximately 1100m in-zone horizontal well with 11 fracture stimulation stages across approximately 600m of the lateral section, confirms the ability of the Velkerri Formation “B Shale” to flow gas following hydraulic fracture stimulation
- Origin has prepared a Contingent Resource estimate (Table 1) using probabilistic methods and reservoir evaluation data, in addition to regional seismic data

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⁵ Net to Origin's 35% interest in EP76, EP98, and EP117

⁶ TCF: trillion cubic feet

Appendix A - Origin's ASX/Media Release

Origin CEO Integrated Gas, David Baldwin, said "Origin is pleased to confirm it has submitted a report to the Northern Territory Government that indicates the existence of a material gas resource within the Beetaloo Basin.

"The Beetaloo Basin is the Territory's most prospective onshore basin for unconventional gas and our test results further confirm the region's outstanding shale gas potential. Further exploration and appraisal activity will be required to progress our understanding of the play and mature the contingent resources to reserves," Mr Baldwin said.

On 14 September 2016, the Northern Territory Government implemented a moratorium on hydraulic fracturing of unconventional gas reservoirs. The moratorium will remain in place until the Government has considered the outcomes of a comprehensive independent scientific inquiry into the social and environmental impacts of hydraulic fracture stimulation.

* BEETALOO JOINT VENTURE

Origin Energy Limited (Operator) **: 35%

Sasol Petroleum Australia Limited: 35%

Falcon Oil and Gas Limited: 30%

** Via a wholly owned subsidiary

For further information please contact:

Media

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Investors

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Appendix A - Origin's ASX/Media Release

Further information relating to the Discovery Evaluation Report:

Table 2. Amungee NW-1H Well Test Results

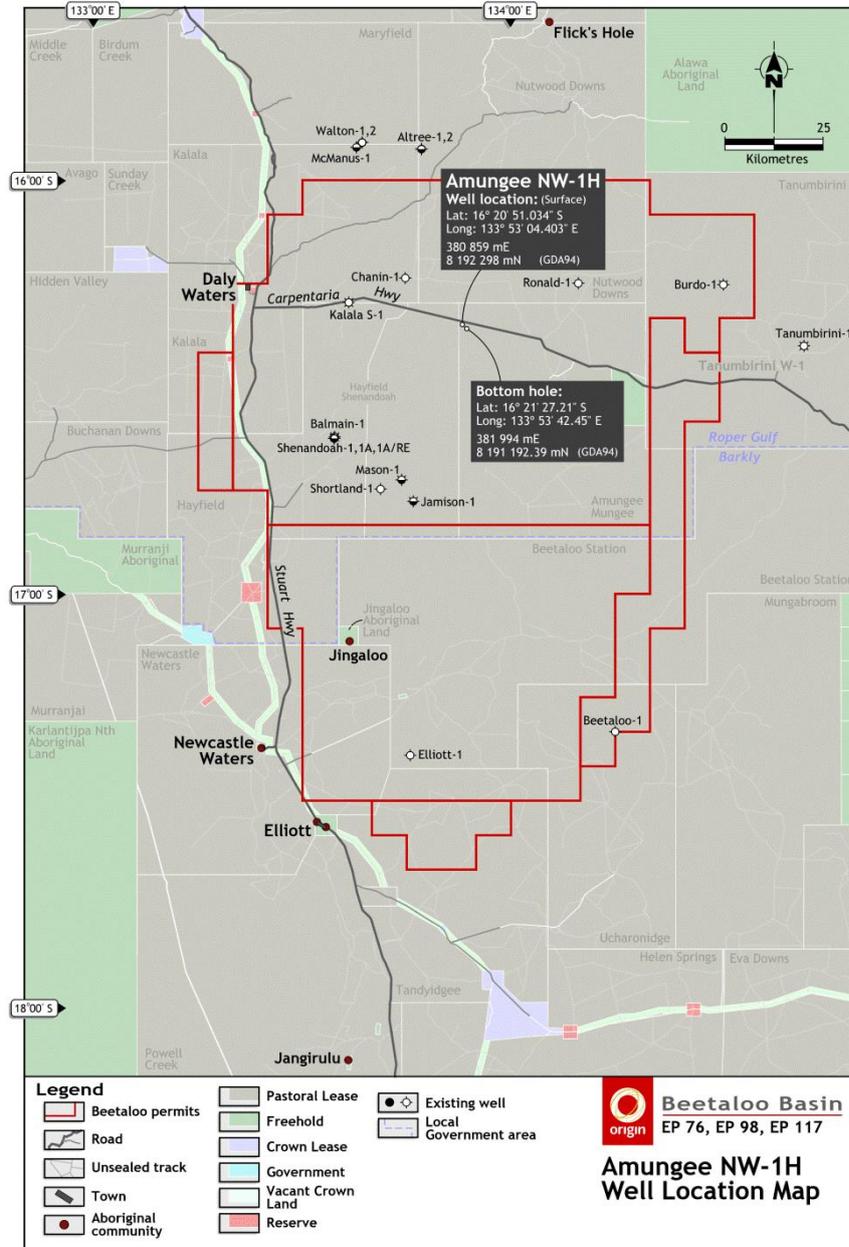
Well name	Amungee NW-1H
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Type of permit	Exploration Permit (EP)
Permits	EP76, EP98, EP117
Basis for determining a discovery	<ul style="list-style-type: none"> • The successful well test at Amungee NW-1H which produced enough gas to surface to be of commercial interest. • Core and log data from Amungee NW-1H, Beetaloo W-1, Kalala S-1, Tanumbirini-1, McManus-1, Aintree-2 and Walton-2 provide convincing evidence of a significant volume of moveable hydrocarbons (See Appendix 1) • The Marcellus Shale (Pa., USA) and Barnett Shale (Tx., USA) are analogous, commercially-productive fields that are similar to the Velkerri B Shale reservoir
Analytical procedures used in estimation	Contingent Resource Estimates have been prepared on a statistical aggregation basis and in accordance with the SPE Petroleum Resources Management System
Key contingencies preventing classification as reserves	Key contingencies for commercialising the estimated resource include the lifting of the Northern Territory moratorium on hydraulic fracture stimulation, completing longer-duration production testing, reducing well costs with scale of activity, establishing gas sales agreements and building infrastructure to connect the resource to market.
Further appraisal drilling and evaluation work	Contingent on the moratorium on hydraulic fracture stimulation being lifted, additional appraisal drilling is planned (as per the work program associated with the permits), along with hydraulic fracture stimulation and testing to assess deliverability and move the project towards commercialisation.

Appendix A - Origin's ASX/Media Release

Figure 1. Well Location Map



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Appendix 1: Data Obtained to Characterise the Velkerri B Shale Gas Reservoir			
Data	Usage	Acquired	Comments
TOC	Provides an indication of source-rock richness and sorption capacity.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1, McManus-1, Atree-2, Walton-2
Gas content	Includes the volumes of desorbed, lost, and residual gas obtained from the desorption of core. It is an indicator of the in-situ sorbed gas content.	Yes	Data from Kalala S-1
Sorption isotherm	A relationship, at constant temperature, describing the volume of gas that can be sorbed to a shale as a function of pressure.	Yes	Data from Amungee NW-1, Kalala S-1
Gas composition	Used to quantify the percentage of methane, carbon dioxide, nitrogen, ethane, etc. in the desorbed gas. Used to build composite sorption isotherms.	Yes	Data from Amungee NW-1, Amungee NW-1H, Kalala S-1, Beetaloo W-1
Rock-eval pyrolysis	Assesses the petroleum-generative potential and thermal maturity of organic matter in a shale sample.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Mineralogical analyses	Determines bulk and clay mineralogy using petrography, X-ray diffraction, scanning electron microscopy, and similar techniques.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Vitrinite reflectance	A value indicating the amount of incident light reflected by the vitrinite maceral. It is a fast and inexpensive means of determining thermal maturity.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Core description	Visually captures lithology, bedding, fracturing, grain size variations, etc.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1, McManus-1, Atree-2, Walton-2
3D seismic	Used to determine interwell shale properties including lateral extent, thickness, faulting, and those areas with higher gas saturation and brittleness.	No	2D seismic coverage over the majority of the pool

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Kerogen types	Used to assess whether rock are Type I (oil-prone), II (mixed), or III (coal).	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Routine core analysis	Includes total porosity, fluid saturations, bulk density, and matrix permeability (via pressure pulse testing on crushed samples).	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, McManus-1, Atree-2, Walton-2
Conventional logs	SP, GR, resistivity, microlog, caliper, density, neutron, sonic, and temperature logs are run to provide thickness, porosity, matrix, and sorbed gas saturations.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1, McManus-1, Atree-2, Walton-2
Special logs	May include image logs (fractures), NMR logs (free water, bound water, gas saturation), pulsed neutron and geochemical tools (mineralogy), dipole sonic (geomechanical properties), spectral GR (clay types), etc.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1, Tanumbirini -1
Pressure transient tests	Pressure buildup or injection fall-off tests to determine static reservoir pressure, permeability, skin factor, and to detect fractured-reservoir behaviour.	Yes	Data from Amungee NW-1H, Kalala S-1
Geomechanical properties	Young's modulus and Poisson's ratio for determining shale brittleness, stress orientations and magnitudes to predict fracture growth.	Yes	Data from Amungee NW-1, Kalala S-1, Beetaloo W-1
Microseismic	Used to assess hydraulic fracture geometries and stimulated reservoir volumes.	No	
Fracture diagnostics	Treating pressures, closure stress, pumped volumes, flowback volumes, etc. to determine the quality of a fracture stimulation.	Yes	Data from Amungee NW-1, Amungee NW-1H, Kalala S-1
Gas, water rates	Captured daily (preferably) to assess individual well behaviour.	Yes	Data from Amungee NW-1H
Bottomhole pressures	Preferably recorded in closely-spaced increments early in well life; can also use surface pressures with wellbore-fluid gradients.	To be collected	Data from Amungee NW-1H
Tracer surveys	Chemical or radioactive tracers to assess which fracture stages are contributing.	No	
Facilities	Variations in line pressure, etc., that affect producing well rates.	Yes	Data from Amungee NW-1H

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Rate-transient analysis	Decline analysis tool that analyses production rates and pressures using various methods to assess EUR, GIP, drainage area, etc.	Yes	Data from Amungee NW-1H
Numerical modelling	Helpful in understanding reservoir mechanisms, predicting early well behaviour, and estimating EURs and recovery factors.	Yes	Data from Amungee NW-1H
Decline-curve analysis	Traditionally used to forecast well performance. More reliable later in well life (after a few years) due to uncertainties regarding b-factor values.	Yes	Data from Amungee NW-1H
Analogues	May be useful to estimate EURs and recovery factors if a strong correlation exists between key reservoir parameters of subject and analogue reservoir.	Yes	Key static reservoir parameters are analogous Marcellus and Barnett

The contingent resource estimates contained in this report are based on, and fairly represents, information and supporting documentation that have been prepared by Alexander Côté who is a full time Origin employee and a Qualified Reserves and Resource Evaluator. Mr Côté is a registered professional engineer with specialised unconventional gas resource characterisation and development experience. Mr Côté has consented to the form and context in which these statements appear.

The contingent resource estimates have undergone an assurance process to ensure that the contingent resource estimates contained in this report are based on, and fairly represents, information and supporting documentation and have been prepared according to our reserves and resources process, which includes adherence to the SPE PRMS guidelines. This process is overseen by full time Origin employee, Andrew Mayers, Chief Petroleum Engineer and Mr Mayers has consented to the form and context in which these statements appear.