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## ASX Announcement – 2015 Year End Reserves Review

15 March 2016

### 2015 FULL YEAR RESERVES REVIEW

#### OVERVIEW

- 2P Reserves of 12.7MMboe, decreased by 11%
- Net present value (PV10) for 1P reserves is \$28.5mm, a decrease of 46%
- Net present value (PV10) for 2P reserves is \$44.5mm, a decrease of 49%
- No adjustment has been made for hedging in the calculation of reserves. That is, reserves and estimated ultimate recoveries are based on the current NYMEX forward strip only.
- Oil and gas hedges as at December 31, 2015 were marked to market showing an unrealised gain of \$10.9mm.
- Cash flow remains oil weighted accounting for ~68% 2P reserves

#### SUMMARY

Following the independent valuation of reserves for the year-end 2015 the following is to be noted:

- The Company has reported its reserves using the NYMEX strip price as at December 31, 2015.
- Lower oil prices have had a significant effect on reserves as wells reach the end of their economic life earlier. This negatively effects both cash flow and estimated ultimate recoveries (EUR).
- The Company relinquished a number of Mid-Con leases over the last six months of 2015 to focus on regions where higher returns are expected in this new oil price environment.
- The Company has not updated its existing independent Prospective Resource P(50) estimate of 1,846MMBoe, unrisks for its McArthur Basin Project in The Northern Territory.
- In December 2014 the New York Governor announced that New York State would implement a high volume water fracking ban. The ban has been implemented. The Company has included the Possible Reserves and Probable Resources but has not allocated any value to the Marcellus and Utica shale holdings. Most of the Company's shale holdings are held by production and the Company continues to accumulate these assets if they are associated with conventional gas production.

## COMMENTARY

Chairman Bruce McLeod commented: “Consistent with the E&P industry, the decline in value of the Company’s oil and gas reserves is driven by the recent significant decline in oil and gas prices. Low oil prices are expected to be temporary as with hundreds of billions of dollars of global petroleum capital expenditure now cancelled or sidelined due to the current prices, supply pressures will build as producing reserves are run down. It is not possible to predict timing for expected price increases, especially as Middle East oil producers continue to attempt to control volumes and pricing. However, with what now appears to be the start of an accelerating fall off in North American production, OPEC/Russia should ultimately realise that a small reduction in production is likely to lead to a significant increase in the oil price. This may prevail towards the end of 2016.

On page 3, is a “Proforma \$/Bbl” forward curve which sets oil prices at a level which may be realised towards the end of 2016. Utilising this forward strip based, **the Net present value (PV10) for the Company’s 2P reserves would increase from \$44.5mm to approximately \$77mm (14.3MMboe)**. A significant portion of this increase in value arises from the proved and probable undeveloped locations becoming economic at the proforma price deck.

The Company continues to maintain a low cost operating model and operates in low cost formations and regions, however, current oil and gas pricing does offer a number of challenges. With a strong hedging profile in place over the next 2 years, the Company is well placed to successfully ride out the current downturn in commodity prices and at the same time seek opportunities to grow in this difficult market scenario”.

## RESERVE ESTIMATES AND CASH FLOW

The following table provides a summary of the Company’s reserves as at 31 December 2015.

Reserves - As of Jan 1, 2016	Oil (Mbbbls)	Gas (MMcf)	MBoe	Gross Wells	Capex US\$M	PV0 US\$M	PV10 US\$M
Region (Reserves) - USA							
Proved Developed Producing	1,253	23,422	5,157	2,233	\$0	\$53,152	\$22,875
Proved Developed Non-producing	0	0	0	0	\$0	\$0	\$0
Proved Behind Pipe	0	38	6	0	\$30	\$47	\$8
Proved Undeveloped	771	98	787	36	\$7,741	\$17,017	\$5,652
Total 1P	2,024	23,558	5,950	2,269	\$7,771	\$70,216	\$28,535
Probable	2,774	23,851	6,749	131	\$60,960	\$101,999	\$15,963
Total 2P	4,798	47,409	12,700	2,400	\$68,731	\$172,215	\$44,498
Possible	180	3,820	817	16	\$4,922	\$11,069	\$2,397
Possible - NY Shale	90,740	12,460	92,817				
Total 3P	95,718	63,689	106,333	2,416	\$73,653	\$183,284	\$46,895
Prospective Res NY Shale P(50)	203,500	1,221,000	407,000				
Prospective Resource P(50) - Aust	198,000	9,891,000	1,846,500				
Total Reserves & Resources	497,218	11,175,689	2,359,833				

## NYMEX PRICING

The following prices were used to calculate reserves and cash flow as at December 31, 2015:

Year	NYMEX WTI \$/Bbl Dec 31,2015	NYMEX Henry Hub \$/Mcf Dec 31, 2015
2016	40.97	2.49
2017	46.06	2.79
2018	49.36	2.91
2019	51.96	3.03
2020	53.64	3.18
2021	54.66	3.31
2022	55.43	3.46
2023	55.82	3.61
2024	56.16	3.74
2025	56.16	3.88
2026+	56.16	4.01

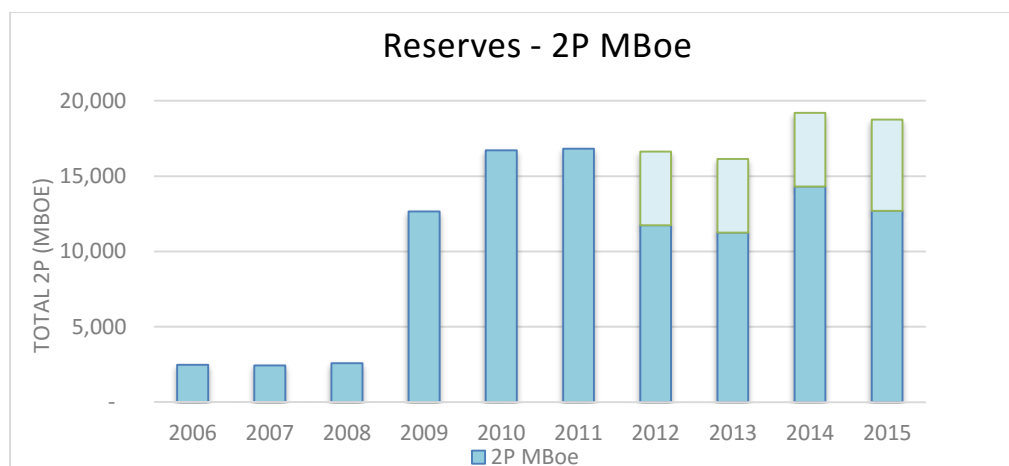
## PROFORMA PRICING

Reserves have also been calculated using the following oil pro-forma forward curve to show the value of the Company's reserves should prices increase to these levels. Gas prices remained unchanged with the NYMEX henry hub above being used. This resulted in a 2P PV10 increase from \$44.5mm to \$77mm.

Year	\$/Bbl
2016	40.00
2017	46.00
2018	55.00
2019+	70.00

## PROVED PLUS PROBABLE RESERVES (2P)

The following chart shows movement in Company 2P reserves since 2006.



*In 2012 30.9MMcf Appalachia Natural gas placed into contingent category due to marginal profitability*

## HEDGING

The reserve estimates table above does not include the Company's hedging program. A summary of the hedging in place is as follows:

Hedging - As at Dec 31, 2015 (US\$M)	Mid-Con	Appal	Total
2014	\$5,036	\$4,873	\$9,909
Realised 2015	\$4,044	\$3,543	\$7,587
2015	\$5,679	\$5,194	\$10,873
Change	\$4,687	\$3,864	\$8,551

## NOTES TO RESERVES

- "Prospective Resources" is 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.
- The scope of the Reserve Studies reviewed basic information to prepare estimates of the reserves and contingent resources.
- The quantities presented are estimated reserves and resources of oil and natural gas that geologic and engineering data demonstrate are "In-Place", and can be recovered from known reservoirs.
- Oil prices are based on NYMEX West Texas Intermediate (WTI).
- Gas prices are based on NYMEX Henry Hub (HH).
- Prices were adjusted for any pricing differential from field prices due to adjustments for location, quality and gravity, against the NYMEX price. This pricing differential was held constant to the economic limit of the properties.
- All costs are held constant throughout the lives of the properties.
- The probabilistic method was used to calculate P50 reserves.
- The deterministic method was used to calculate 1P, 2P & 3P reserves.
- The reference point used for the purpose of measuring and assessing the estimated petroleum reserves is the wellhead.
- "PV0" Net revenue is calculated net of royalties, production taxes, lease operating expenses, and capital expenditures but before Federal Income Taxes.
- "PV10" is defined as the discounted Net Revenues of the company's reserves using a 10% discount factor.
- "1P Reserves" or "Proved Reserves" are defined as Reserves which have a 90% probability that the actual quantities recovered will equal or exceed the estimate.
- "Probable Reserves" are defined as Reserves that should have at least a 50% probability that the actual quantities recovered will equal or exceed the estimate.
- "Possible Reserves" are defined as Reserves that should have at least a 10% probability that the actual quantities recovered will equal or exceed the estimate.
- "Bbl" is defined as a barrel of oil.
- "Boe" is defined as a barrel of oil equivalent, using the ratio of 6 Mcf of Natural Gas to 1 Bbl of Crude Oil. This is based on energy conversion and does not reflect the current economic difference between the value of 1 Mcf of Natural Gas and 1 Bbl of Crude Oil.
- "M" is defined as a thousand.

- “MMBoe” is defined as a million barrels of oil equivalent.
- “Mcf” is defined as a thousand cubic feet of gas.
- All volumes presented are net volumes and have had subtracted associated royalty burdens.
- Utica shale gas potential resources have only been calculated for the region where drill data is available. Very few wells have been drilled into the Utica in Western NY and NW Pennsylvania. Estimates for GIP have been made where the few existing wells have been drilled. Empire holds additional acreage outside the current potential resource region. It is expected that as with shale characteristics, the shale formations will continue within the remaining acreage. The potential GIP should increase if more data was available.
- Reserve estimates have been prepared by the following independent reserve engineers:
  - New York, Pennsylvania (Appalachia) and Kansas - Ralph E. Davis Associates, Inc.
  - Oklahoma (Mid-Con) - Pinnacle Energy Services, LLC.
  - Northern Territory - Muir & Associates P/L and Fluid Energy Consultants.

### **Competent Persons statement**

<i>The information in this report which relates to the Company's reserves is based on, and fairly represents, information and supporting documentation prepared by or under the supervision of the following qualified petroleum reserves and resources evaluators, all of whom are licensed professional petroleum engineer's, geologists or other geoscientists with over five years' experience and are qualified in accordance with the requirements of Listing Rule 5.42:</i>			
<i>Name</i>	<i>Organisation</i>	<i>Qualifications</i>	<i>Professional Organisation</i>
<i>Allen Barron</i>	<i>Ralph E Davis Associates, Inc</i>	<i>BSc</i>	<i>SPE</i>
<i>John P Dick</i>	<i>Pinnacle Energy Services, LLC</i>	<i>BPE</i>	<i>SPE</i>
<i>Wal Muir</i>	<i>Muir and Associate P/L</i>	<i>BSc,MBA</i>	<i>PESA</i>
<p><i>* SPE: Society of Petroleum Engineers</i>  <i>*PESA: Petroleum Exploration Society of Australia</i>  <i>None of the above evaluators or their employers have any interest in Empire Energy E&amp;P, LLC or the properties reported herein. The evaluators mentioned above consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.</i></p>			

## **ABOUT EMPIRE ENERGY GROUP LIMITED**

Empire Energy is a conventional oil and natural gas producer with operations in Appalachia (New York and Pennsylvania) and the MidCon (Kansas and Oklahoma). The Company recently entered into a Farm-out Agreement with American Energy Partners for its ~14.6 million acres in the McArthur Basin, Northern Territory, which is considered highly prospective for large shale oil and gas conventional and unconventional resources. Work undertaken by the Company over the past 5 years demonstrates that the Central Trough of the McArthur Basin, (of which the Company holds around 80%), is a major Proterozoic depo-centre that forms one segment of a series of extensive prolific hydrocarbon basins similar to those extending through Oman, Siberia and Southern China and which contain billions of barrels of oil equivalent resources.