



EMPIRE ENERGY GROUP LIMITED
Level 7, 151 Macquarie Street
Sydney NSW 2000
T: 02 9251 1846
F: 02 9251 0244
(ASX: EEG)
(OTCQB: EENY)

ASX Announcement – 2016 Year End Reserves Review

20 February 2017

OVERVIEW – (December 31, 2016 compared to December 31, 2015)

- 1P Reserves increased from 5.95MMBoe to 7.9MMBoe, up 33%
- Net present value (PV10) for 1P reserves increased from \$28.5mm to \$56.5mm, up 98%
- 2P Reserves increased from 12.7MMBoe to 15MMBoe, up 18%
- Net present value (PV10) for 2P reserves increased from \$44.5mm to \$91.5mm, up 106%
- Reserves and estimated ultimate recoveries are based on the current NYMEX forward strip. No adjustment has been made for hedging in the calculation of reserves.
- Oil and gas hedges as at December 31, 2016 show an unrealised gain of \$4.5mm.
- Cash flow currently remains weighed at ~73% oil.
- The McArthur Basin project Prospective Resource P(50) increased from 1,846MMBoe to 2,068MMBoe, an increase of 12%

RESERVES & ECONOMIC PROJECTIONS UPDATE

The following table summarises Reserves and Resources as at December 31, 2016:

NET RESERVES & CASH FLOW - NYMEX STRIP, DEC 31, 2016

Reserves - As of Dec 31, 2016	Oil (Mbbls)	Gas (MMcf)	MBoe	Gross Wells	Capex US\$M	PV0 US\$m	PV10 US\$m
Region (Reserves) - USA							
Proved Developed Producing	1,647	27,045	6,155	1,637	\$0	\$80,033	\$36,626
Proved Developed Non-producing	492	38	498	15	\$1,647	\$12,606	\$6,267
Proved Behind Pipe	152	40	159	9	\$582	\$5,878	\$1,416
Proved Undeveloped	1,111	101	1,128	58	\$10,479	\$31,803	\$12,164
Total 1P	3,402	27,224	7,939	1,719	\$12,708	\$130,320	\$56,473
Probable	3,085	23,923	7,072	153	\$42,376	\$132,816	\$34,984
Total 2P	6,487	51,147	15,012	1,872	\$55,084	\$263,136	\$91,457
Possible	1,620	4,024	2,291	222	\$24,945	\$54,576	\$8,866
Possible - NY Shale	90,740	12,460	92,817				
Total 3P	98,847	67,631	110,119	2,094	\$80,029	\$317,712	\$100,323
Prospective Resource New York Shale P(50)	203,500	1,221,000	407,000				
Prospective Resource P(50) - Australia (NT)	222,000	11,076,000	2,068,000				
Total Reserves & Resources	524,347	12,364,631	2,585,119				

USA Reserves by: RE Davis Associates, Inc & Pinnacle Energy Services, LLC.

Northern Territory Resources by: Muir & Associates P/L and Fluid Energy Consultants

NOTES

The following NYMEX price strip, as at December 31, 2016 was used to calculate reserves and economic projections:

Year	\$/Bbl	\$/Mcf
2017	56.26	3.62
2018	56.54	3.09
2019	56.08	2.87
2020	56.05	2.88
2021	56.23	2.91
2022	56.57	2.94
2023	57.48	3.02
2024	57.88	3.16
2025	58.10	3.31
2026	58.10	3.46
2027	58.10	3.61
2028	58.10	3.76
2029+	58.10	3.89

As per previous reports, no cash flow valuations were completed for the New York shale 3P Reserves of 92.8MMBoe due to the existing fracking ban in the State.

COMMENTARY

Executive Chairman Bruce McLeod commented: "*The Company continues to maintain a low cost operating model and operates in low cost formations and regions and improving operating efficiencies has enabled lease operating expenses to be reduced for both oil and gas production. The recent increases in oil and gas prices have played a major role in ensuring a significant turnaround in the value of the Company's oil and gas reserves. In addition, ongoing development (geological and geophysical) programs to identify additional proved, undeveloped locations (Pud) has been successful. With drilling being viable once oil prices are +\$50/Bbl a drilling program is currently being finalised for a number of the Company's Kansas Pud locations as well as commencing a drilling program at the Newkirk JV, where the Company's holds approximately 5,000 net acres in Kay County, Oklahoma. With the recent capital raising, expected to be completed in the short term, the Company continues to seek opportunities where it can identify low cost growth opportunities to continue to build reserves and production".*

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.
- "PVO" 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 were 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 (Mid-Con) - 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

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:

Name	Organisation	Qualifications	Professional Organisation
Allen Barron	Ralph E Davis Associates, Inc	BSc	SPE
John P Dick	Pinnacle Energy Services, LLC	BPE	SPE
Wal Muir	Muir and Associate P/L	BSc, MBA	PESA

* SPE: Society of Petroleum Engineers, USA
 *PESA: Petroleum Exploration Society of Australia
None of the above evaluators or their employers have any interest in Empire Energy E&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.

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 has ~14.6 million acres in the McArthur & Beetaloo Basins, Northern Territory, both of which are considered highly prospective for large shale oil and gas 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 resources of billions of barrels of oil equivalent.