

EMPIRE ENERGY GROUP LIMITED

Level 7, 151 Macquarie Street Sydney NSW 2000

T: 02 9251 1846 F: 02 9251 0244 (ASX: EEG)

ASX Announcement - Presentation

12 February 2018

CAPITAL RAISING PRESENTATION

Empire Energy Group Limited ("Empire" or the "Company") is pleased to provide the attached presentation as an overview of the recent capital raising. The presentation includes a summary of the Company, terms of the placement and the proposed use of funds raised.

ABOUT EMPIRE ENERGY GROUP LIMITED

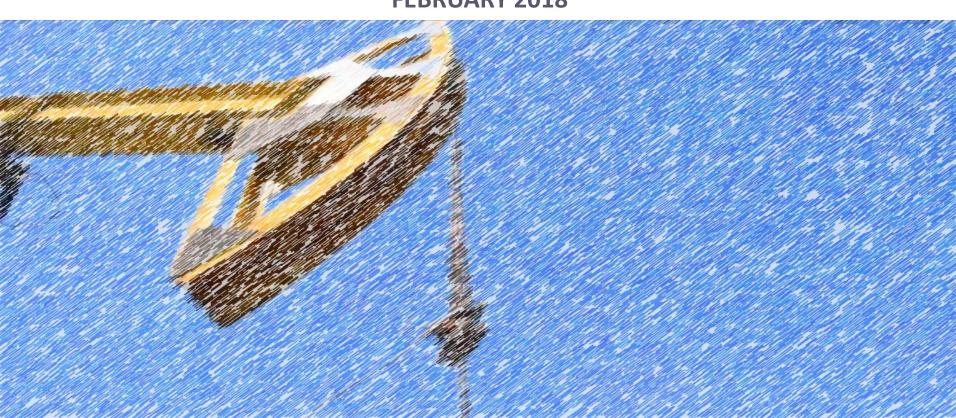
Empire Energy is a conventional oil and natural gas producer with operations in Appalachia (New York and Pennsylvania) and the MidCon (Kansas and Oklahoma). In addition, Empire Energy holds approximately 405,000 acres (gross) of Marcellus and Utica shale in New York State, US.

In 2010, Imperial secured approximately 14.5 million acres in the McArthur Basin, Northern Territory. This area is highly prospective for conventional and unconventional hydrocarbon resources. Work undertaken by the Company over the past 7 years demonstrates that the Central Trough of the McArthur Basin, is a major Proterozoic depo-center that forms one segment of a series of extensive world class proven prolific hydrocarbon basins extending through Oman, Siberia and China, all of which contain resources of many billions of barrels of oil equivalent.



EMPIRE ENERGY GROUP LIMITED

CAPITAL RAISING AND CORPORATE UPDATE
FEBRUARY 2018



KEY INVESTMENT HIGHLIGHTS



AUSTRALIA	 ✓ Ongoing discussions with potential new partners ✓ NT Fracking Inquiry draft final report indicates that fracking can be carried out safely ✓ NT Government decision on fracking expected by end of March 2018 ✓ Imperial CEO to be appointed to support development of Northern Territory assets ✓ Massive gas resource potential to help solve East Coast gas crisis & LNG plant shortage ✓ Opportunity to develop NT downstream industries following resource definition ✓ Potential to demerge and undertake an IPO of Imperial Oil & Gas
USA	 ✓ Deleveraging program underway ✓ Stable production base with leverage to oil and gas price upside ✓ Highly scalable operations leveraging existing management and infrastructure ✓ Opportunity exists to acquire bolt-on assets at attractive prices ✓ Business development VP to be appointed to assist in identification of new assets ✓ Development locations economic above \$60 / barrel ✓ Future significant upside potential from Marcellus / Utica Shale acreage at no cost to hold

CORPORATE SNAPSHOT





USA



Conventional oil & gas production

- >14 mmboe 2P reserves
- ~1,200 boe daily production
 Future shale development in NY
- > 500 mmboe resource (est)

AUSTRALIA



Shale exploration & appraisal

- >14.5m acres
- >13,000 Pj resource est.
- Discussions with potential new partners

CORPORATE



ASX code: EEG

• Mkt cap: A\$22m

Net debt: A\$50m

• Ent. Value: A\$72m

Share price: A\$0.02

CAPITAL RAISING





PLACEMENT OVERVIEW



Placement size	 Up to A\$1.875m Placement to sophisticated investors, with overs subject to director discretion Up to 150 million shares Approximately 12% of expanded issued capital
Placement price	 Offer - blended price of A\$0.0125 per share⁽¹⁾ 37.5% discount to the closing price on Wednesday 7 Feb 2018 35.3% discount to the 15 day VWAP to Wednesday 7 Feb 2018 24.3% discount to the 30 day VWAP to Wednesday 7 Feb 2018 (1) Shares will be issued in equal portions at different prices under ASX LR 7.1 and 7.1A to produce the blended price as shown
Use of proceeds	 Negotiation underway to increase and strengthen the management team Negotiations with potential Northern Territory farmout partner/s Professional fees and other expenses related to potential farmout negotiations Funding ongoing obligations to ensure that the NT tenements remain in good standing The balance being to provide additional working capital
Timing	 Books open on 10am Thursday 8th February 2018 Books close by 10am Friday 9th February 2018
Ranking	Shares issued pursuant to the Placement will be fully paid and will rank equally with existing issued shares
Syndicate	 Baillieu Holst is acting as Lead Manager to the Placement Sanston Securities is acting as a Co-Manager to the Placement

PLACEMENT TIMETABLE



Key Dates - Placement	Date
Announcement of trading halt	By 10am, Thursday 8 th February 2018
Book opens	10am, Thursday 8 th February 2018
Book closes	10am, Friday 9 th February 2018
Empire recommences trading	Monday 12 th February 2018
Placement Settles	Wednesday 14 th February 2018
Placement shares are allotted and commence trading	Thursday 15 th February 2018

AUSTRALIA SNAPSHOT





IMPERIAL'S MCARTHUR BASIN PROJECT



IMPERIAL CONTINUES DISCUSSIONS WITH POTENTIAL PARTNERS

- ✓ In 2014 one of the world's most experienced shale groups identified the McArthur Basin as one of the most exciting global opportunities for potential shale oil & gas development
- ✓ In 2015 Imperial entered into a Farmout Agreement with American Energy Partners, LP ("AEP")
- ✓ On a results driven basis, AEP committed up to US\$560 million including US\$60 million in the 1st 3 years
- ✓ Due to the tragic passing of the Founder of AEP, the Farmout agreement was terminated in 2017
- Discussions with potential new partners are ongoing

STATUS OF THE MORATORIUM

- ✓ NT Fracking Inquiry draft final report indicates that fracking can be carried out safely
- ✓ Government decision on fracking expected by end of March 2018

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory released its draft final report in December 2017 which stated:

"provided that the recommendations made in this Report are adopted and implemented, not only should the risk of harm be minimized to an acceptable level, in some instances, it can be avoided altogether."

IMPERIAL MANAGEMENT TEAM

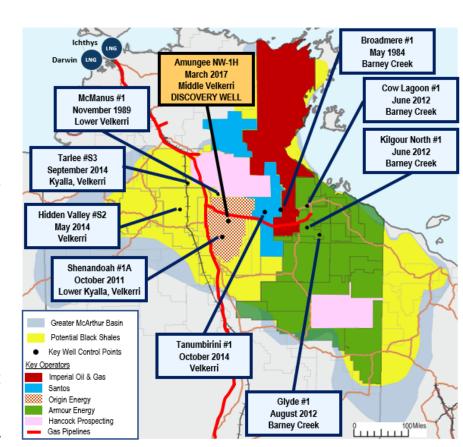


Position	Background
Bruce McLeod Executive Chairman	25 years experience in managing and financing resource and property projects in Australasia & USA. Founded Empire Energy US operations in 2006 and Imperial Oil & Gas in 2009. Non-Exec. Chairman Anson Resources Ltd.
Prof John Warburton Director	30 years technical & leadership experience in leading E&P companies including BP & LASMO-Eni. Sits on Advisory Board of Centre for Integrated Petroleum Engineering & Geoscience, Leeds University, UK. Chief of Geoscience & Exploration Excellence for Oil Search Limited and Non-executive Director of Senex Energy Ltd.
Geoff Hokin Exploration & Operations	12 years experience as a geologist in the unconventional gas and coal sectors. Works with team of field geologists, 3D mapping geologists, cultural liaison officers and traditional owners throughout the Company's Northern Territory tenements.
Rachel Ryan Co. Secretary & Administration	Company Secretary with over 10 years experience with publically listed resource companies including overseas dual listings. Australian lease and exploration administration and reporting.

THE MCARTHUR BASIN - OVERVIEW



- McArthur Basin, Northern Territory a major focus area for new exploration by Origin, Santos, Hancock and others
- √ ~\$800MM committed investment since 2014
- √ >60 shale wells drilled, most with oil and gas shows
- √ >240 Tcf of recoverable shale gas estimated across basin (Deloitte 2015)
- ✓ Potential to replicate US shale boom
- Darwin LNG plant requires additional gas supply
- ✓ New downstream hydrocarbon industries in the NT can provide many long term jobs
- ✓ Northern Gas Pipeline to connect NT shale to East Coast gas market which is critically undersupplied
- ✓ New Queensland LNG plants producing below capacity and looking for additional gas supplies

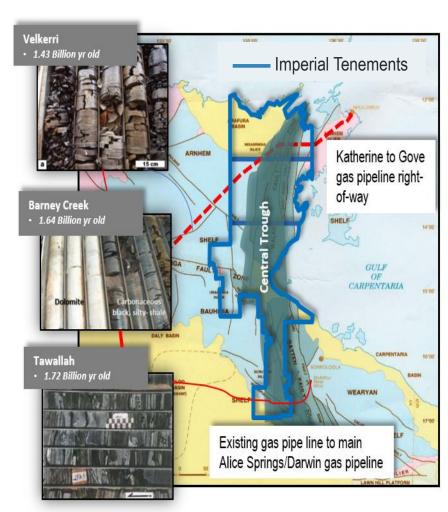


THE UNIQUENESS OF THE McARTHUR BASIN



THE MCARTHUR BASIN CENTRAL TROUGH ("MBCT")

- ✓ MBCT is one of the few global petroliferous basins to have retained its integrity since its formation 1.6b years ago
- ✓ Critical characteristics of the MBCT can be seen in analogue US basins, identifying the MBCT as ideal for hydrocarbon development
- ✓ Thickness of the Australian shales relative to the US plays should mean a much greater resource potential per acre (km²) in the MBCT
- Multilayered, undisturbed shale formations
- ✓ Impervious shale protective barriers in the MBCT have successfully sealed in the hydrocarbons ensuring little migration (or loss of hydrocarbons) and isolated the aquifers
- ✓ The unique hydrogeology of the MBCT compared to other basins in the Northern Territory
- ✓ Market access for commercialisation

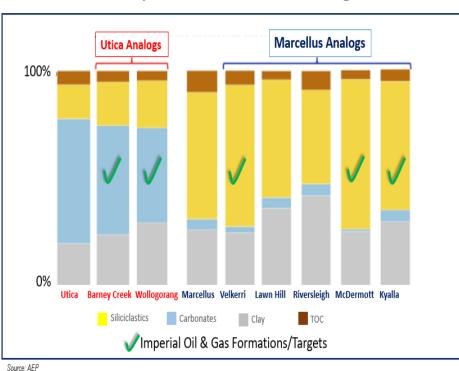


McARTHUR BASIN GEOLOGY



What The Rocks Show

Mineralogical analysis of McArthur Basin rocks reveals two distinct shale clastics with clearly identified US analogs



Why The Rocks Matter

√ 30 day initial production rates of the top 12 Utica wells versus the top 12 Marcellus wells, Appalachia, US

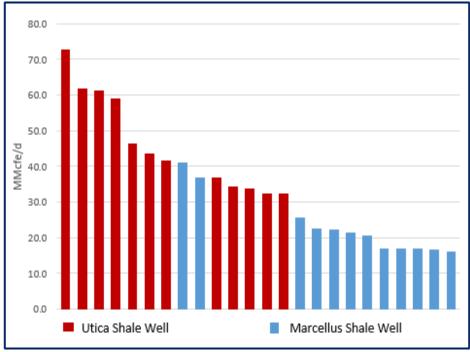


Table complied by Activity Editor, Hart Energy Data Source: HIS Inc.

COMMERCIALISATION OPTIONS



PIPELINE INFRASTRUCTURE

- ✓ Existing pipeline to Alice Springs/Darwin (EP187)
- ✓ Northern Gas Pipeline (NGP) under construction
- ✓ NGP will allow access to East Coast markets
- ✓ Gas pipeline easement Alice Springs/Darwin to Nhulunbuy

GAS SUPPLY OPTIONS

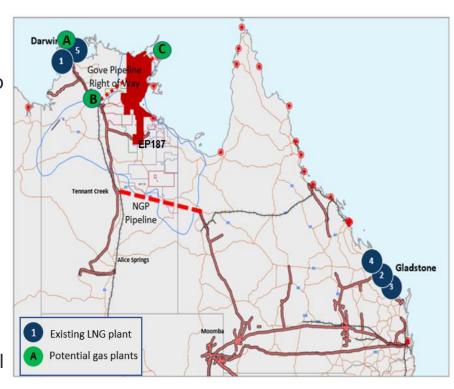
- ✓ East Coast domestic market
- ✓ Darwin LNG plants
- ✓ Queensland LNG plants

VALUE ADDED POTENTIAL FOR GAS RESOURCES

- ✓ Methanol production export A,C
- ✓ Ammonia Urea production —Darwin for export, rail south to Australian markets A&B; or export only C

PROJECT FINANCING

✓ Readily available with booked natural gas reserves



IMPERIAL RESOURCE ESTIMATE



- Significant prospective resource P(50)
 - √ 13,000 Pj (13Tcfe)
- Comparable US shale
 3P + prospective
 resource P(50)
 - √ 3,000 Pj (3Tcfe)

Formation	Permits	Geological factor discount	Area M acres	Units	P90	P50	PV10
Barney Creek Formation	EP 184, EPA180, 181, 182, 183, 188	50-90%	3,559	Bcf	3,304	8,699	20,172
		50-90%		ММВО	66	174	403
Velkerri Formation	EP184, 187, EPA 188	50%	315	Bcf	383	1,192	3,086
		50%		ММВО	8	24	62
Wollogorang	EP 184, 187, EPA	90%	1,384	Bcf	524	1,185	2,371

MMBO

MMBOE

10

851

24

2,238

47

5,183

Notes:

Total

Formation

Conversion Factor: 5.485 Mcf: 1 Bbl

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

188

Independently certified estimated prospective resource

Prospective Resource - unrisked, is the estimated quantities of petroleum that may potentially be recovered by the application of 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

90%

USA SNAPSHOT





US MANAGEMENT TEAM



Position	Background
Bruce McLeod Executive Chairman & CEO	25 years experience in managing and financing resource and property projects in Australasia & US. Founded Empire Energy US operations in 2006 and Imperial Oil & Gas in 2009. Non-Exec. Chairman Anson Resources Ltd.
Al Boyer, SVP Operations	Extensive experience in all operational aspects of the oil and gas industry, including well site activities, leasing and land negotiations and agreements, pipeline and compressor construction.
Susan Gasper, VP Financial Controller	Experienced in acquisitions, integration of oil and gas software, liaison and financial statements for reviews, auditing, and oil and gas statutory reporting.
Denise Cox Senior Geologist	19 years with Marathon Oil Company. Exploration & development geoscientist specializing in the application of technology to carbonate reservoirs and unconventional resources. Leadership in project design, implementation & evaluation. Multi-award recipient. Current President of AAPG.
Jim Farthing, VP Mid-Con Region	32 years with Conoco-Phillips in a supervisory capacity operating shallow low pressure wells in Kansas, deep high pressure wells (18,000' / 13,000# BHP) in Texas, gathering systems, pipelines, booster stations, water floods and associated facilities.
Tim Hull, VP Appalachia Region	Involved in all aspects of the oil and gas exploration, production and transportation sector in North Eastern US for over 25 years.
Shawn Streker Senior Landman	Previously an independent landman specializing in lease acquisitions, joint operating agreements, farmouts, surface agreements, due diligence and title curative
David Hale, Geologist & Geophysicist	Lead geologist and manager of geosciences for Kansas assets held by Empire. Designed and supervised 3-D seismic acquisition, interpreted seismic and incorporated geological models to develop prospects, including waterfloods.

USA OPERATIONS OVERVIEW



Operator of <u>all</u> Mid-Con and Appalachia assets

- Current production ~1,200Boe/d
- Stable cash flow with +2,000, slow decline, long life oil & gas wells
- R/P ~14 years on PDP + PDNP
- ~3,500 leases, 700 miles of pipeline, 14 compressor stations with 400 points of delivery; ~1,850 gas wells and ~220 oil wells; 48 employees & contractors
- LOE+Taxes (Appalachia) ~\$1.74/Mcf
- LOE+Taxes (Mid-Con) ~\$21.20/Bbl

Short Term Growth

- Deploy capital to:
 - ✓ Selective producing regions
 - ✓ JVs add inventory/expertise
- Deleveraging plan underway
- Value creation from:
 - ✓ Efficient asset management
 - Experienced team
 - ✓ Development success
 - ✓ Leverage to oil price

PROVEN OIL & GAS FIELD OPERATOR

2P



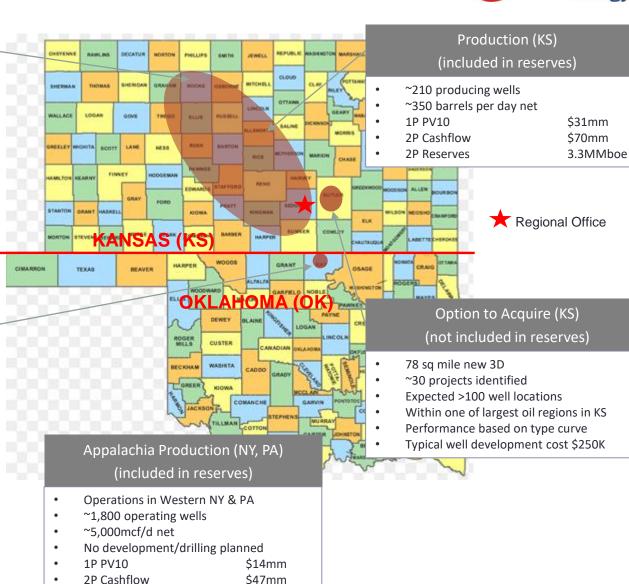
Development Locations (KS) (included in reserves)

- >30 Proved locations ready for drilling
- Locations based on 3D
- Waterflood project
- Performance based on type curve/s
- Average Return (see later section)
- Typical well development cost \$240K

Probable Development (OK) (included in reserves)

- >25 Probable locations ready for drilling
- ~200 gross locations
- Limited 3D targets
- Performance based on type curve
- Typical well development cost \$375K

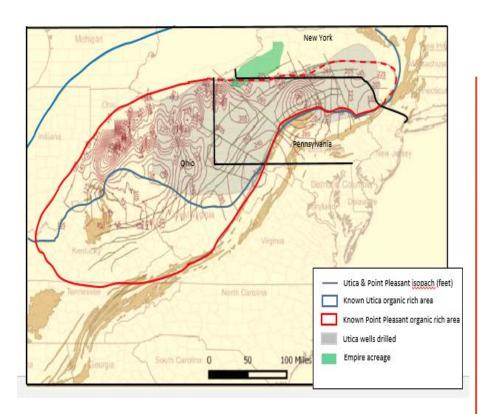
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•	Unlevered IRR	60%
•	ROI	3.6x
•	PV10	\$0.4mm
•	Payout	1.5 yrs
•	2P	5.4MMBoe



5.3MMBoe

SHALE ASSETS – NEW YORK & PENNSYLVANIA **EFEMPIRE**





Comparative shale acquisitions in Pennsylvania:

	Buyer	Year	Acres	State	US\$/ac	US\$
	Shell	2010	950,000	NY/PA	\$4,476	\$4,252,200,000
SWN Southwestern Energy*	SouthWestern	2014	413,000	PA	\$12,000	\$4,956,000,000
EQT	EQT	2016	59,600	PA	\$11,450	\$682,420,000
RICE	Rice	2016	85,000	PA/OH	\$24,700	\$2,100,000,000
	Undisclosed	2016	10,900	PA	\$10,275	\$111,997,500
SEMPIRE ENERGY	Empire Energy	2009	330,000	NY/PA	\$7	\$2,455,000

Reserves and Resources:

NY State currently has a shale fracking ban in place

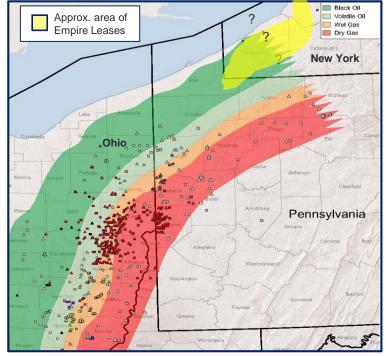
• Marcellus Shale 270,000 net acres

• 3P reserves 92.8 million Boe

• Prospective Resource 407 million Boe

• Utica Shale - TBR Limestone 135,000 net acres

 Utica resources not measured as few wells drilled into the Utica & TBR in Western NY

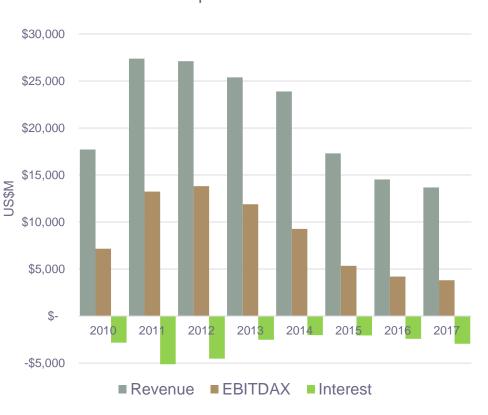


Jefferies - Utica / Point Pleasant Shale Play Update, Nov 2014

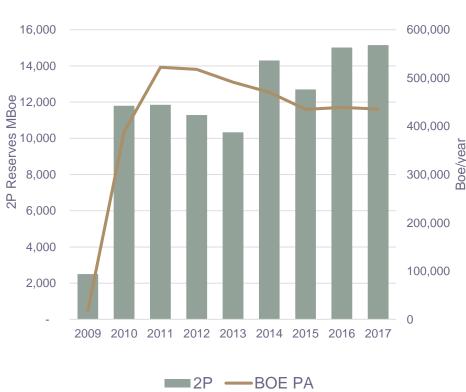
KEY FINANCIALS & PRODUCTION



US Ops - Cash Flows



US 2P Reserves (MBoe) & Annual Production (Boe/year)



USA RESERVES AND RESOURCES



As at December 31, 2017 (Preliminary)

- Existing producing reserves
 - ✓ 5,316 mboe
- Scope to increase existing producing reserves from Puds and 2P
 - ✓ 14,026 mboe
- Significant upside from shale 3P + prospective resource P(50)
 - ✓ ~500,000 mboe

Reserves	Gross Wells	Oil (Mbbls)	Gas (MMcf)	MBoe	Capex US\$M	PV0 US\$M	PV10 US\$M
Region (Reserves) - USA							
Proved Developed Producing	1,414	1,487	22,975	5,316	\$0	\$56,268	\$28,166
Proved Developed Non-producing	9	489	28	494	\$744	\$10,191	\$5,874
Proved Behind Pipe	10	151	40	158	\$582	\$4,836	\$1,455
Proved Undeveloped	58	1,001	204	1,035	\$8,904	\$23,655	\$9,285
Total 1P	1,491	3,128	23,247	7,003	\$10,230	\$94,950	\$44,780
Probable	153	3,060	23,782	7,024	\$42,060	\$99,637	\$27,694
Total 2P	1,644	6,188	47,029	14,026	\$52,290	\$194,587	\$72,474
Possible	221	1,619	3,983	2,283	\$24,595	\$41,939	\$6,115
Possible - NY Shale		90,740	12,460	92,817			
Total 3P	1,865	98,547	63,472	109,126	\$76,885	\$236,526	\$78,589
Prospective Resource NY Shale P(50)		203,500	1,221,000	407,000			
Total Reserves & Resources		302,047	1,284,472	516,126			

Notes:

US Reserves by: Ralph E Davis Associates Inc, Graves & Co Consulting & Pinnacle Energy Services, LLC Refer to reserve disclosures at the end of this presentation

Prospective Resource - unrisked, is the estimated quantities of petroleum that may potentially be recovered by the application of 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 hydrocarbon





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- **Exploration Risk** Empire and its subsidiaries have interests in assets at various stages of exploration, appraisal and development. Many leases have had very low levels of exploration undertaken to date and may not yield commercial quantities of hydrocarbons.
- Application Risk A number of Empire's Northern Territory assets are in application stage requiring native title and / or regulatory approvals to be granted as Leases capable of being explored on. Such approvals may or may not be granted.
- **Regulatory Risk** Empire has operations spanning several States in the USA and the Northern Territory, Australia. Regulatory approvals are required to explore, appraise, develop and produce from the assets. Where such regulatory approvals are already in place, there is a risk that they could be revoked. Where such regulatory approvals are not in place, there is a risk that they may not be granted.
- **Northern Territory Fracking Moratorium** The Northern Territory Government has put in place a moratorium which currently prevents the fracture stimulation of onshore unconventional gas reservoirs. Fracture stimulation is necessary to maximise the extraction of hydrocarbon's from Empire's Northern Territory resources. There is a risk that the Northern Territory may not lift the moratorium, or ban fracture stimulation, which would prevent the efficient development of the assets.
- **Debt Facility Risk** Empire, through its US subsidiaries, has debt facilities in place with Macquarie Bank Limited. It does not expect to generate sufficient cash flow by the maturity date to repay the debts in full. As such, there is a risk that it may not be able to refinance the debt facilities by the maturity date. Furthermore, it is subject to financial and other covenants under the debt facilities, which, if breached, could result in Macquarie exercising its security rights under the facilities.
- Commodity Price Risk Empire, through its US subsidiaries, sells oil and gas at market prices to customers who price
 the products off US benchmark oil and gas markets. Empire is exposed to the risk of material declines in the prices of
 those commodities.

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- **Economic Risk** General economic conditions, movements in interest rates, inflation rates and foreign exchange rates, investor sentiment, demand for, and supply of capital and other general economic conditions may have a negative impact on Empire and its subsidiaries ability to carry out its exploration, appraisal, development and production plans.
- **Environmental Risk** The upstream oil and gas industry is exposed to environmental risks, including the risk of oil and chemical spills, the risk of uncontrolled gas venting, and other material environmental risks. If an environmental incident was to occur, it may result in Empire's subsidiaries' licenses being revoked, its rights to carry on its activities suspended or cancelled, or significant legal consequences.
- **Title Risk** Interests in tenements in Australia are governed by the respective State legislation and are evidenced by the granting of licences or leases. Each licence or lease is for a specific term and carries with it annual expenditure and reporting commitments, as well as other conditions requiring compliance. Consequently, the Company could lose title to or its interest in the Tenements if licence conditions are not met or if insufficient funds are available to meet expenditure commitments.
- Native Title and Aboriginal Land The Tenements extend over areas in which legitimate common law native title
 rights of indigenous Australians exist. The ability of the Company to gain access to its Tenements and to conduct
 exploration, development and production operations remains subject to native title rights and aboriginal land rights
 and the terms of registration of such title agreements.
- **Services Risk** Empire engages the services of third party service providers to carry out exploration, appraisal, development and operating activities. The cost of such services is subject to very high price volatility, particularly in remote areas. There is a risk that such services may not be able to be provided at a reasonable price, thereby preventing exploration, appraisal, development and operations activities from occurring.

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- **Insurance Risk** The Company intends to insure its operations in accordance with industry practice. However, in certain circumstances, the Company's insurance may not be of a nature or level to provide adequate insurance cover. The occurrence of an event that is not covered or fully covered by insurance could have a material adverse effect on the business, financial condition and results of the Company. Insurance against all risks associated with mining exploration and production is not always available and where available the costs can be prohibitive..
- Acquisitions The Company may decide to pursue potential acquisitions in the future. This may give rise to various operational and financial risks, including, but not limited to, poor integration resulting in higher than expected integration costs, and financial underperformance of the acquired assets. There is also additional risk associated with the Company's inability to identify suitable acquisitions in the future that meet the Company's criteria. This may potentially have an adverse impact on the financial performance of the Company.
- Investment Speculative The above list of risk factors ought not to be taken as exhaustive of the risks faced by the Company or by investors in the Company. The above factors, and others not specifically referred to above, may in the future materially affect the financial performance of the Company and the value of the Shares offered under this capital raising. Therefore, the Shares to be issued pursuant to this capital raising carry no guarantee with respect to the payment of dividends, returns of capital or the market value of those securities. Potential investors should consider that an investment in the Company is speculative and should consult their professional advisers before deciding whether to apply for Shares pursuant to this capital raising.

APPENDICES





DISCLAIMER & CONFIDENTIALITY



This presentation has been prepared by Empire Energy Group Limited ("Empire" or the "Company"). The information in this presentation is information of a general nature and is subject to change without notice. The information in this presentation does not purport to be complete, nor does it contain all of the information which would be required in a prospectus prepared in accordance with the requirements of the Corporations Act 2001 (Cth). It contains information in a summary form only and should be read in conjunction with Empire's other periodic disclosure announcements to the ASX available at www.asx.com.au.

An investment in Empire shares is subject to known and unknown risks, many of which are beyond the ability of Empire to control or predict. These risks may include, for example, movements in oil and gas prices, a failure to acquire some or all of the targeted acreage, risks associated with the development and operation of the acreage, exchange rate fluctuations, an inability to obtain funding on acceptable terms or at all, loss of key personnel, an inability to obtain appropriate licences, permits and or/or other approvals, inaccuracies in resource estimates, share market risks and changes in general economic conditions. Such risks may affect actual and future results of Empire and its shares.

This presentation contains statements, opinions, projections, forecasts, and other material ("forward looking statements"). These statements can be identified by the use of works like 'anticipate', 'believe', 'intend', 'estimate', 'expect', 'may', 'plan', 'project', 'forecast', 'will', 'should', 'could', 'seek' and other similar expressions. Forward looking statements may be based on assumptions which may or may not prove to be correct. None of Empire, its respective officers, employees, agents, advisers or any other person named in this presentation makes any representation as to the accuracy or likelihood of fulfilment of the forward looking statements or any of the assumptions upon which they are based and disclaim any obligation or undertaking to revise any forward looking statement, whether as a result of new information, future event or otherwise.

Maps and diagrams contained in this presentation are provided to assist with the identification and description of Empire's lease holdings and Empire's intended targets and potential exploration areas within those leases. The maps and diagrams may not be drawn to scale and Empire's intended targets and exploration areas may change in the future.

All share price information is in Australian dollars (AU\$) and all other dollars values are in United States dollars (US\$) unless stated otherwise.

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DEFINITIONS & RESERVES INFORMATION



Notes to Reserves

- 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 for Reserve calculations are based on NYMEX West Texas Intermediate (WTI) as at June 30, 2017.
- Gas prices for Reserve calculations are based on NYMEX Henry Hub (HH) as at June 30, 2017.
- 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.
- Prospective Resource P(50) unrisked, is the estimated quantities of petroleum that may potentially be recovered by the application of 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.
- 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 may increase if more data was available.
- "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.
- "D&C" means drilled and completed and "F&D" means cost of finding and developing a project.
- "EBITDAX" means Earnings Before Interest, Tax, Depreciation/Depletion, Amortization & Exploration.
- "LOE" means lease operating expenses.
- "M" is defined as a thousand.
- "MM" is defined as a million & "MMBoe" is defined as a million barrels of oil equivalent.
- "Mcf" is defined as a thousand cubic feet of gas & "MMcf" is defined as a million cubic feet of gas.
- · All volumes presented are net volumes and have had subtracted associated royalty burdens which means the Net revenue interest or "NRI"...

Qualified petroleum reserves and resources evaluators

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
Kent B Lina	Graves & Co Consulting, LLC	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 *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.