



**ACHIEVING SIGNIFICANCE IN THE OIL & GAS INDUSTRY  
PRESENTATION  
November 2012**



**EMPIRE ENERGY GROUP LIMITED**

[www.empireenergygroup.net](http://www.empireenergygroup.net)

1. Overview
2. Empire Energy Growth Model
3. Overview of Empire Energy
4. Summary

# Overview of Empire's assets



<b>1</b> Conventional E&P Operations USA	<b>2</b> Unconventional Shale Basins USA	<b>3</b> Unconventional Shale Basin Australia
<ul style="list-style-type: none"> <li>■ Produces ~1,450 boepd</li> <li>■ Operating +2,200 oil &amp; gas wells</li> <li>■ 48 employees + contractors</li> <li>■ Production split 37% : 63% oil / gas</li> <li>■ Field EBITDAX 2012<sup>1</sup> = US\$18mm</li> <li>■ Group EBITDA 2012<sup>1</sup> = US\$12mm</li> <li>■ Gearing –net debt / EBITDA of 4.0x</li> <li>■ 2P Reserves of 11.7 mmboe</li> <li>■ Long life, slow decline oil and gas</li> <li>■ Low production risk</li> <li>■ Strategic hedging of cash flow risk</li> </ul> <p>■ <sup>1</sup> Forecast</p>	<p><b>Marcellus Shale ~231,000 acres</b></p> <ul style="list-style-type: none"> <li>■ 96% in New York state</li> <li>■ Contingent resource +70m bbls recoverable (on 100,000 ac)</li> <li>■ Currently subject to New York fracture stimulation moratorium</li> <li>■ Development asset, not an exploration play</li> </ul> <p><b>Utica Shale ~142,000 acres</b></p> <ul style="list-style-type: none"> <li>■ 94% in New York state</li> <li>■ Contingent resource – 4.6 Tcf GIP (on 40,000 acres)</li> <li>■ Currently subject to New York fracture stimulation moratorium</li> <li>■ Development asset, not an exploration play</li> </ul>	<ul style="list-style-type: none"> <li>■ Barney Creek Shale – 14.5m acres in the Northern Territory</li> <li>■ Located in the McArthur Basin</li> <li>■ Includes ~70% Batten &amp; Walker Troughs</li> <li>■ Targeting the carbonaceous (organic rich) black oil and gas shales</li> <li>■ Resource objective – multi mbbls / Tcfs</li> <li>■ Exploration play with substantial potential upside</li> <li>■ Opportunity to ‘fast track’</li> </ul>

# Corporate Snapshot



▪ Ticker	ASX:EEG    OTCQX:EEGNY
▪ Shares Issued	298.2 million (Insiders 11.4mm)
▪ Options Outstanding	27.2 million (Insiders 13.8mm)
▪ 52 week range	US\$0.10 – \$0.33
▪ Current Share Price	US\$0.15
▪ Market Cap	US\$45 million
▪ Enterprise Value	US\$90 million
▪ Av. Daily Trades (90 days)	ASX: 525,000 shares
▪ Available Credit Facility	US\$100 million (Acquisition/development)
▪ Major Shareholder	Macquarie Bank Limited 15.8%

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# Growth Model



## Targeted Acquisitions

- Purchase Proved Reserves for <US\$20.00 per Boe.
- Purchase 2P reserves for <US\$17.00 per Boe.
- Payback period <5 years.
- Long life assets with significant development opportunities.
- Targeting assets in regions of existing operations.
- Focus on oil to move oil/gas ratio >60%.



## Increases in earnings

- Acquiring production leads to immediate increase in EBITDAX.
- Accretive to earnings given existing management and operational footprint.
- Small incremental increases in G&A as a result of accretive acquisitions.



## Company transforming acquisitions

- Target to build from 1,450 boepd to 2,000 boepd and then to 5,000 boepd.
- At an additional 500 bopd, Empire's production will be split ~50% : 50% oil / gas.
- Cashflow generated from the acquisitions will be utilized to amortize debt.
- Surplus funding can be applied to (1) funding Empire's substantial unconventional shale oil and gas plays; (2) conventional oil and gas acquisitions; (3) development of Empire's proved but undeveloped reserves.

# Growth Model (cont.)



## Low risk acquisition model

- Combined production over a large number of wells which have extensive operating history with highly predictable forecast production.
- Long life, slow decline producing assets (~3 – 5% declines).
- Any declines in production are offset by:
  - Additional drilling
  - Workovers
  - Enhanced Oil Recovery techniques
  - Reduction in shrinkage
- Cashflow risk significantly reduced through oil and gas hedges (up to 80% of production).
- Production and cashflow structuring reduces concentration risk and commodity price risk.
- Leads to very manageable leverage risk against new producing assets.
- Target >80% of debt repaid by year 5, leaving long term, cashflow producing assets.

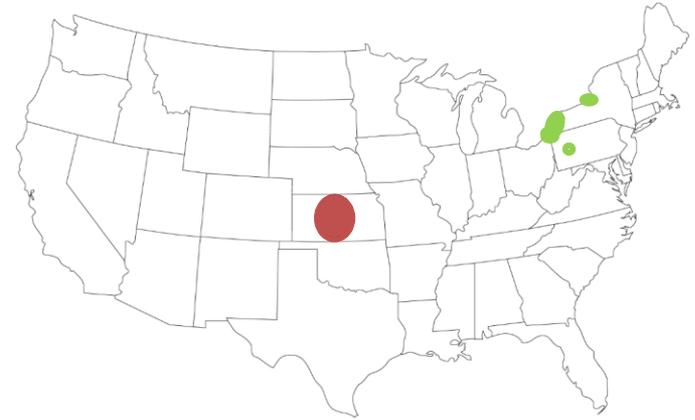
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# Overview of Empire Energy's Acreage



## 1. Appalachian Basin

- Currently producing conventional gas
- Significant unconventional opportunity in both the Marcellus and Utica Shale
- ~287,300 gross acres (~99% working interest)



## 2. Central Kansas Uplift (post acquisition)

- Currently producing oil
- Arbuckle / Lansing
- 18,000 gross acres (~96% working interest)



## 3. McArthur Basin

- Significant unconventional opportunity – oil & gas
- 14.5mm gross acres (100% working interest)

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### 3.1 Conventional Operations

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# 1 Conventional E&P operations

## Strong reserve and resource base

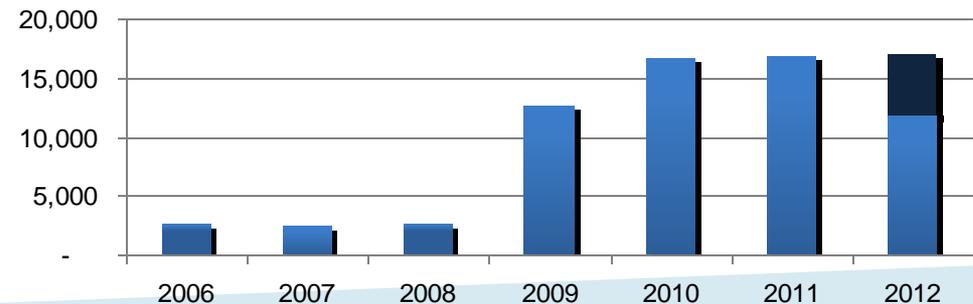
- Empire has a significant reserve and resource base
- With a significant number of relatively low risk growth opportunities
- Split between oil and gas is ~37% : 63%
- Reserve and resource base is significantly undervalued

	Oil (bbls)	Gas (mcf)	Undiscounted cashflow	NPV at 10%
Resources and reserves			US\$	US\$
Proved Developed Producing	3,411	38,329	\$202.7mm	\$85.8mm
Proved Developed Non-producing	13	119	\$0.1mm	\$0.1mm
Proved Undeveloped	572	165	\$21.7mm	\$13.4mm
<b>Total Proved</b>	<b>3,996</b>	<b>38,612</b>	<b>\$314.8mm</b>	<b>\$99.3mm</b>
Probable	1,289	146	\$62.8mm	\$24.2mm
<b>Total Proved and Probable</b>	<b>5,285</b>	<b>38,758</b>	<b>\$377.6mm</b>	<b>\$123.2mm</b>

## Proven track record of growing reserves

- Over the past five years, Empire's 2P reserves have increased from 2.5mmboe to 16.9 mmboe<sup>1</sup>
- This growth has been by development drilling and opportunistic acquisitions
- Over the next two years, Empire plans to build its reserve base to a targeted level of 30 mmboe

## 2P Reserve growth over the past five years (mmboe)<sup>1</sup>



**Empire has a significant and growing resource base**

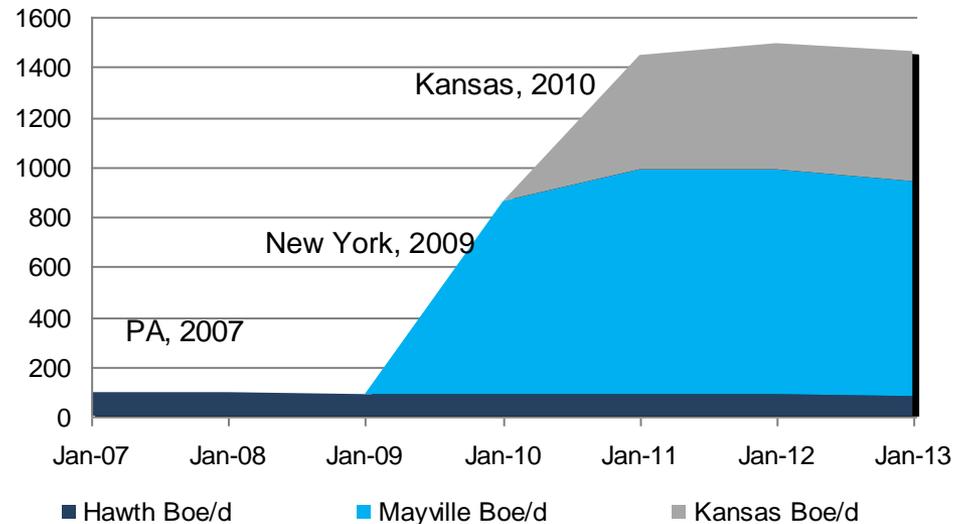
<sup>1</sup>5.2mmboe considered contingent reserve due to prevailing natural gas price at time of reserve estimate.

# 1 Conventional E&P operations

## Very low production risk

- The graph illustrates Empire's production (boepd) over the past 5 ½ years
- The graph splits out three acquisitions Empire has made in different colours
- As the daily production indicates, these are reliable long life predictable assets
- Assets experience only marginal declines each year and production can be maintained at a steady state through development drilling and workovers.

BOE production per day over the past 5 ½ years



## Hedging policies result in very low cashflow risk

- Empire's policy is to hedge up to 80% of its production by way of oil and gas price hedges for 4 – 5 years.
- Effect of this hedging policy is to protect cashflow assuring that ~80% of debt will be extinguished after 5 years.
- Hedging is a part of Empire's credit facility and is not required to make cash calls against negative hedges.
- Given the current interest rate environment, Empire currently does not hedge against interest rates – Empire has facilities to hedge interest rates in the future.
- Management have extensive experience and skill in managing the financing of risk and believe the current hedging policy is appropriate.

**Empire's conventional E&P operations have very low production and cashflow risk**

# 1 Key objectives for conventional

- Empire's plans for its conventional E&P business:
  - Double oil production & then double again – target 5,000 boepd
  - Focus on oil (not gas) production
  - Continue to acquire attractively priced oil assets – strict acquisition criteria
    - < 5 year payback
    - < \$US20 per boe of Proved reserves
    - >70% oil
  - Development drilling to grow production ~10 to 15 new wells over next 12 months
  - To book Probable and Possible reserves to the balance sheet at minimal cost

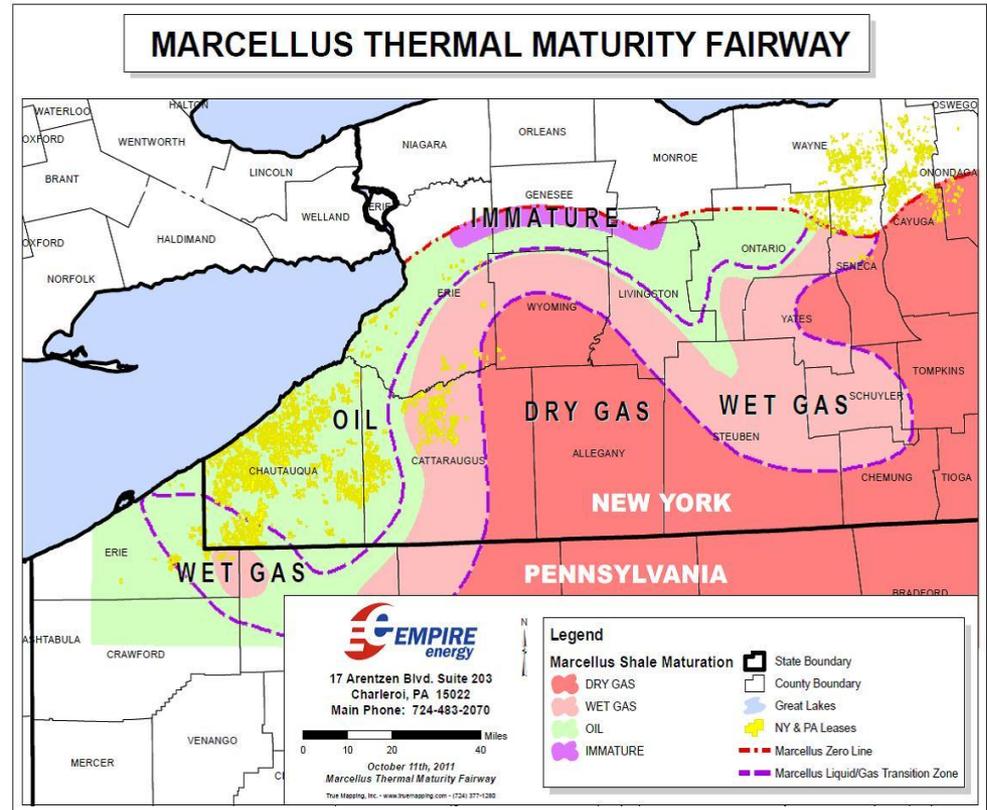
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## 3.2 Unconventional Operations (US)

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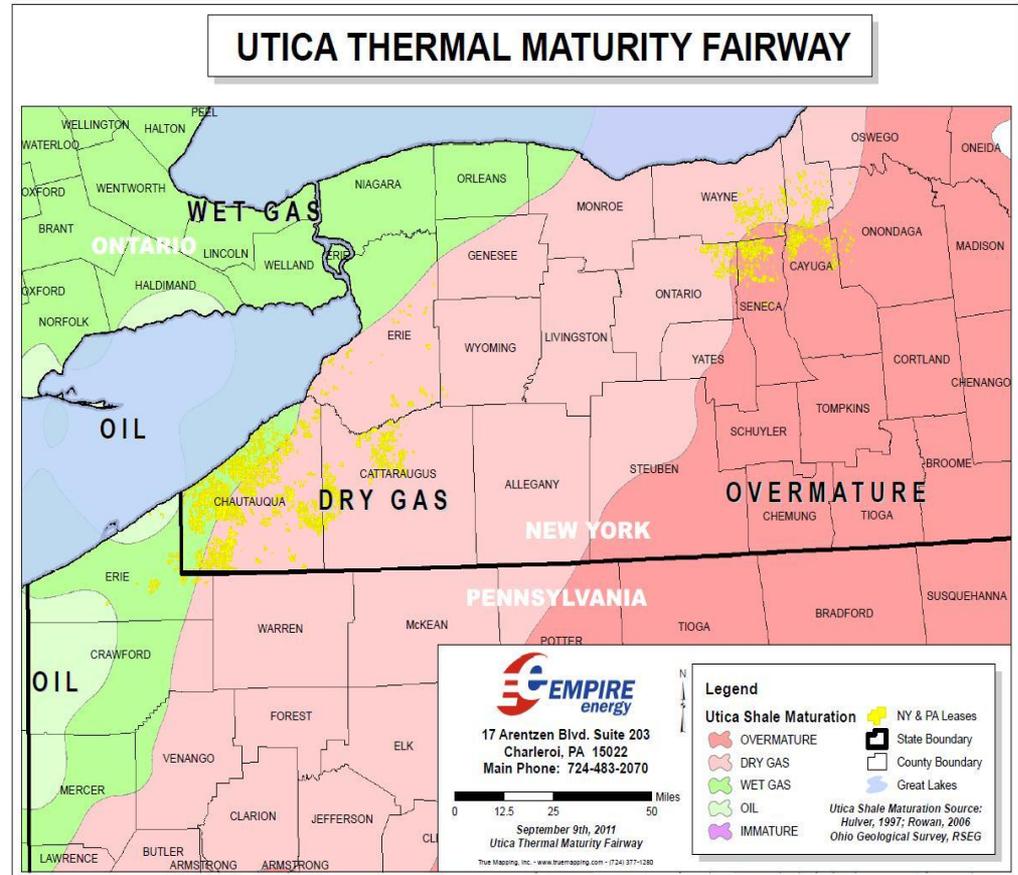
# Unconventional – Marcellus Shale

- Oil and wet gas transition zone
- ~231,000 gross acres (99% working interest)
- A portion of leases under staged renewal
- ~94.5% of acreage is held by production (acreage does not expire)
- Oil – Resource P50\* = 70.3 mmbbls
  - Assumed 3% recovery factor (conservative)
  - Based on 100,000 acres only
- Net Marcellus thickness up to 150'
- Depth 2,500' to 5,000'
- Fracture stimulation Moratorium currently in place in NY State



# Unconventional – Utica Shale

- Oil/wet gas/dry gas transition zone
- Utica higher carbonate/less clay than Marcellus (similar to Eagle Ford)
- ~142,000 gross acres (99% working interest)
- ~65.6% of leases held by production
- Oil and Condensates
  - To be tested in western counties
- Gas – Resource P50\* GIP = 4.6 Tcf
  - Recovery factor 20-25%
  - Based on 40,000 acres
  - ~190 mmbobe recoverable
- Utica thickness 250' to 350'
- Depth 4,000' to 6,500'
- Potential of the Utica/Trenton-Black River interface 750' to 1250' thick

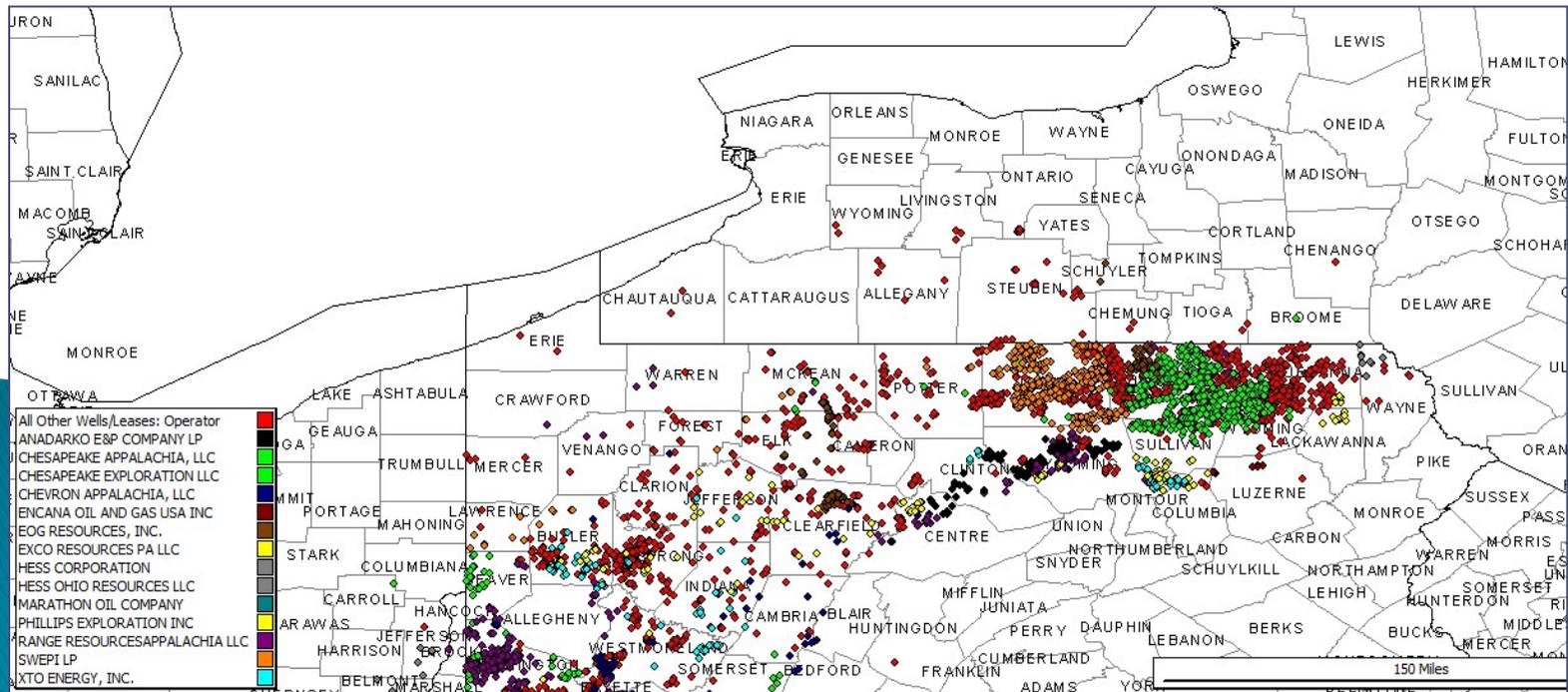


- A moratorium on fracture stimulation has been in place since Jul 2008 – moratorium is centred around water supply concerns – especially around contaminated or saline water leaking into the water supply formations
- Empire's acreage is a long way away from eastern New York water catchment regions
- The previous New York Governor put the moratorium in place to allow the NY Department of Conservation ("DEC") to consider water and health concerns
- A consultation period resulted in 80,000+ comments being received from members of the public
- Fracture stimulation guidelines for operations were to be released within 1 year of comments being received pursuant to the consultation period, which implied revised fracture stimulation guidelines are to be released by 29 Nov 2012 (although there is a provision for a 90 day extension – Feb 2013)
- Currently the DEC undertook health report which the NY Governor is reviewing and this could result in the above timeline being extended and indeed the latest announcement from NY Governor Cuomo (end of September 2012) was vague as to expected timing of fracture stimulation guidelines
- New York is missing out on the significant production and severance taxes generated from oil and gas production
- Should the moratorium be lifted it would have a substantial and lasting impact on employment and income tax revenues
- The case studies of Pennsylvania and Ohio show that fracture stimulation can occur safely and has resulted in significant economic growth to these States
- Industry and landowners generally support fracture stimulation guidelines that meet strict environmental guidelines

2

## Extensive production in Ohio and PA

- The map below shows a selection of companies operating in nearby states.
- This clearly illustrates the significant level of production in these two states and the extensive number of operating wells.
- Initial focus was dry gas but now condensate and oil in East Ohio and West Pennsylvania.
- This map is not exhaustive – it just shows the activity of several companies operations, generally targeting dry gas. There are a lot of other operators in these regions.
- Shale geology does not stop at a border.



\*Source: HPDI

## Unconventional – Some of the Ohio Wells

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Although a more comprehensive list of drill results from Ohio and PA Utica Wells is available, provided below are some of the more successful drill results from Ohio:

- ✓ Chesapeake – Mangun 8H well in Carroll County, OH ▪ 3.1mmcf, 1,015 bopd liquids
- ✓ Chesapeake – Neider 3H well in Carroll County, OH ▪ 3.8mmcf, 980 bopd liquids
- ✓ Chesapeake – Brown 10H well in Jefferson County, OH ▪ Peak: 1,445 boepd (includes 8.7 mmcf)
- ✓ Chesapeake – Buell 8H well in Harrison County, OH ▪ 9.5mmcf, 1,425 bopd liquids
- ✓ Gulfport – Wagner 1-28H well in Belmont County, OH ▪ Peak: 17.1mmcf, 432 bopd condensate

There have been some successful wells in nearby locations

These are transactions showing acreage in neighbouring states trading at following prices

1

Noble Energy paid US\$3.4b for 50% of CONSOL Energy's Marcellus assets – 663,350 acres  
> US\$10k per acre

2

Endeavour Int'l paid US\$80m for SM Energy's Marcellus assets – 42,000 acres  
>US\$1.9k per acre

3

Exxon Mobil paid US\$1.69b for TW Phillips Marcellus & Utica assets – 317,000 acres  
>US\$5k per acre

4

Enerplus Corporation sold 91,000 acres of its Marcellus assets for US\$575m  
>US\$5k per acre

5

Magnum Hunter Resources paid \$20m for 2,225 acres of Marcellus assets  
>US8.9k per acre

**These are not isolated examples... there are a number of other similar transactions**

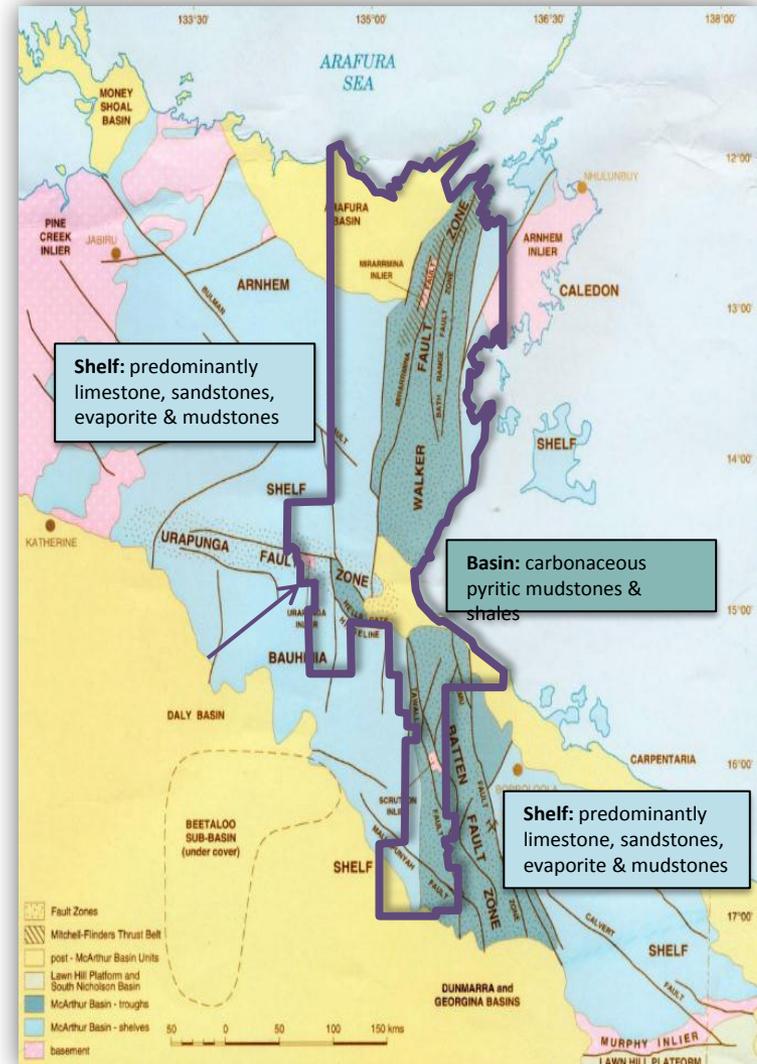
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### 3.3 Unconventional Operations (Aus)

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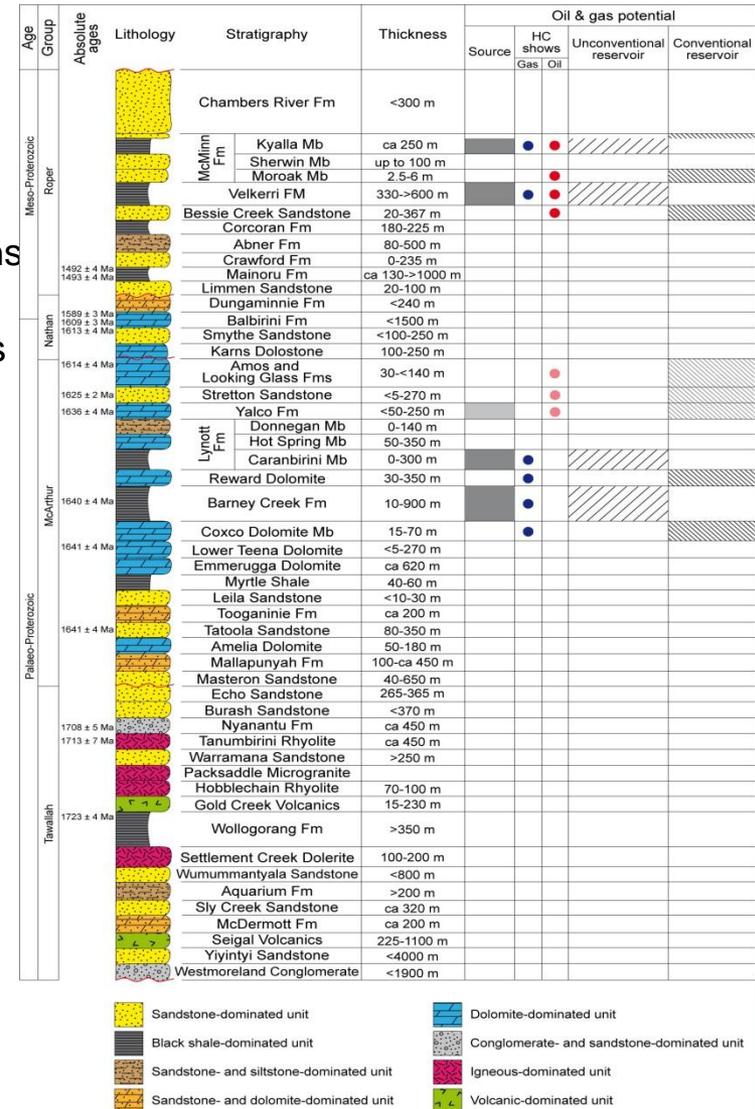
# Unconventional – McArthur Basin

- 14.5 mm gross acres (59,000km<sup>2</sup>)
- Working Interest (100%) under application, held by 100% subsidiary Imperial Oil & Gas
- Proven unconventional hydrocarbon play
- Targets are the carbonaceous (organic rich) black oil & gas shale of the Barney Creek Formation
- Negotiations with Traditional Land Owners advancing with targets in 2012 and 2013
- Research team headed by Prof Martin Kennedy – extensive Shale Basin exp. with ExxonMobil
- Build-up of operations team
- Increasing interest from global majors in large scale basin development
- In discussions with ‘Gas to Gove’ Strategic Action Committee formed by NT Government to fast track gas production in East Arnhem Land



# McArthur Basin – Active Petroleum System

- Barney Creek the primary unconventional source rock
- Proterozoic (1,485 to 1,700 Ma)
- Shallow marine depositional environment, type 1 kerogens
- Rock Source - saprophillic oil prone carbonaceous shales
- Target depths up to 5,000ft
- Formation estimated up to 3,000ft thick in Walker Trough
- Expected to be liquid/wet gas mature as move north
- Recent wells and older mineral wells show live oil & gas
- Migration and traps created conventional targets (eg Reward and Coxco dolomites)
- Gas in Batten Trough shows negligible CO<sub>2</sub>
- Substantial data available for southern tenements



# McArthur Basin - Regional Activity



## Cow Lagoon #1 drilled June 2012<sup>1</sup>

- Vertical well drilled to ~5,500ft
- At ~3,800ft a prospective 200ft Barney Creek Shale formation was intersected and gas shows occurred
- Gas also in the Lynott and Rewards Formations

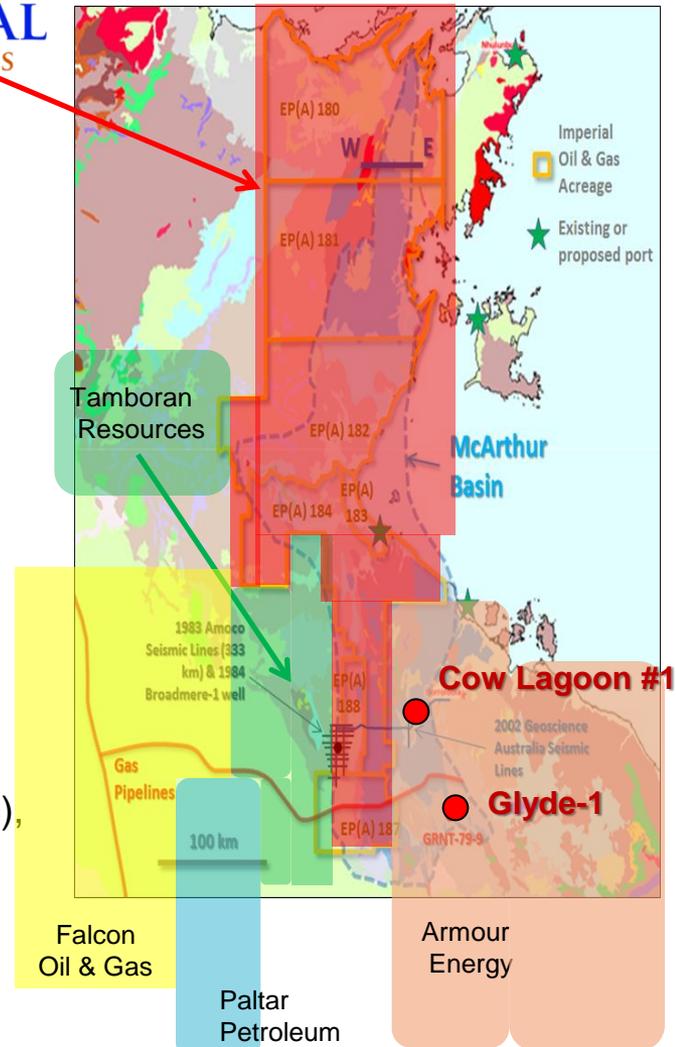
## Glyde-1 drilled Aug 2012<sup>1</sup>

- Well was drilled laterally through the Barney Creek
- Shale at a depth of 2,500ft
- Gas flowed at high rates 3.3mmscf/d from natural fractures in the rock (unusual for shales)
- Uniformity of shale formations should mean commercial gas flows throughout the Batten Trough

<sup>1</sup> Wells drilled by Armour Energy Limited

## Analogous Basins – Other regions

- Proterozoic basins (similar in age to McArthur Basin), being, black, bituminous, limy, silty carbonaceous, source rock shales, include:
  - Lena-Tunguska Basin, Russia
  - Ghaba, Oman



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# Significant potential upside in Empire

## Appalachia (gas), Kansas (oil) Conventional

Current production,  
development drilling,  
further acquisitions

## Appalachia (NY) Unconventional

Shale oil – 70mmbbls+  
Shale gas – 5Tcf+  
(subject to Moratorium)

## McArthur Basin (NT) Unconventional

Shale oil / gas  
Multi bbl / Tcf targets  
(Agreement phase)

**Production**

**Development**

**Exploration**

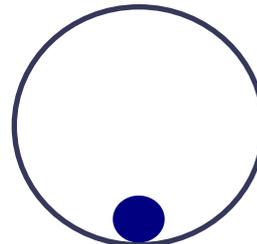
PV10 (2P) = \$123.0 mm  
7x Field EBITDA = \$126.0 mm

+150 mmboe (OIP) @ \$5/Boe  
= \$750mm

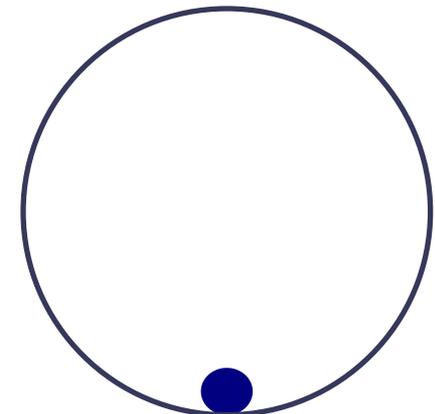
Current EV =  
\$90.0mm



**Mkt Cap**      **x 1.4**



**x 8.0+**



**x ??? Potential uplift**

# Management & Research - Australia



**Bruce McLeod – Executive Chairman & CEO, Empire Energy Group** – extensive experience in the Australian Corporate and Resource Capital markets. Over the past 25 years he has been involved in the acquisition and rationalisation of listed and unlisted companies, as well as raising debt and equity capital for projects and companies. Prior to this he spent six years with a major international bank where he was Executive Director, responsible for the financial and capital markets operations. Formed Empire Energy in late 2006.

**Dr John Warburton – Director & CEO Imperial Oil & Gas Pty Ltd** – 27 years of technical and leadership experience in International Petroleum E&P including 11 years with BP and 4 years as General Manager Exploration & New Business for LASMO–ENI in Pakistan. John's petroleum expertise covers the Middle East, Kazakhstan, Azerbaijan, North & West Africa, Pakistan, Europe, Australia, New Zealand, PNG, SE Asia, China, Korea and Japan. He has published 28 internationally recognised technical articles with particular focus on petroleum exploration in complex fold and thrust belts.

**Geoff Hokin – Advisor, Exploration and Operations Imperial Oil & Gas Pty Ltd** – 9 years experience as a field geologist in the unconventional gas and coal sectors, with various senior geologist roles including Armour Energy Limited, Metgasco Limited, Arrow Energy Limited. Extensive geological and business experience in other operations.

**Australian Shale Carbon Sequestration Group** – University of Adelaide, SA – Imperial Oil & Gas has entered into an exclusive Research Agreement with ASCS to provide geological and engineering services for Imperial's exploration leases in the McArthur Basin.

- **Professor Martin Kennedy** – Heads up the ASCS. Professorships in geology & geochemistry, University of Adelaide and California. Expertise in carbonate systems & controls of organic rich source rocks. Previously 12 years at a research position at the Exxon–Mobil Upstream Research Company. Recent research on nano – scale processes that control porosity, TOC and frackability in unconventional reservoirs. Members of the ASCS group include:
- **Dr Telm Bover–Arnal** – Full time Imperial Oil & Gas Project Leader. Extensive experience in geology, geochemistry, sequence stratigraphy and field work interpretation.
- **Dr Rosalind King** – Structural styles & well log records
- **Dr Simon Holford** – Basin scale computer hydrocarbon system models
- **Dr Stefan Loehr** – Research Associate, micro–beam analysis of shale, clay, mineralogy/geochemistry
- **Mr Tony Hall** – Laboratory Manager, Organic & isotope geochemistry
- **Ms Elizabeth Baruch** – (PhD candidate) Unconventional exploration program specialist at Conoco–Phillips



# Management - USA

**Al Boyer – SVP & COO, Empire Energy E&P** – involved in the natural gas business for +40 years. Operates over 40 privately owned wells. In early 2000's involved in a well drilling program (200 wells in 20 months) and the consolidation of field operations for Somerset Oil & Gas Inc until its takeover by EOG Resources. Has drilled 1,000's of wells in western PA, NY, OH and WV.

**Rob Kramer – VP, Mid Continent Operations, Empire Energy E&P** – responsible for the Company's Mid-Continent operations. Prior to joining Empire Energy Rob was a Completions and Production Engineer for Anshutz Exploration Corp, USA. Prior to that Rob played a key role in the establishment of Sanjel (USA) Inc in the Mid Continent where he was Lead Engineer for well design including cementing, fracturing, acidizing as well as coil tubing operations. Rob began his E&P engineering career with Schlumberger where he was a Field Engineer for Well Stimulation Services.

**Tim Hull – VP, E&P Appalachia Operations, Empire Energy E&P** – responsible for Appalachian operations. Tim has been involved in the North Eastern US natural gas industry for over 20 years. He is a director member of IOGA (New York).

**Tony Crisafio – Contract CFO, Empire Energy E&P** – serves as an independent financial consultant, providing financial advice to the Company. Tony is also a Director and Chairman of the Audit Committee of PDC Energy Inc, an oil and gas company with operations in the Appalachians, Michigan and the Rocky Mountain Region. Prior he was a Partner with Ernst & Young.

**Bob Gustafson – Financial Controller, Empire Energy E&P** – responsible for the company's accounting activities. Bob has over 20 years of oil and gas industry experience. He began his career with Gulf Oil and was previously the Controller for Columbia Energy Services.

# Disclaimer



## **Important Notice and Disclaimer**

The purpose of this presentation is to provide general information about Empire Energy Group Limited (“Empire Energy”). The presentation contains certain statements which may constitute “forward-looking statements”. Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward-looking statements.

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## **Competent Person Report**

For Empire, the information in this announcement which relates to reserves is based on information compiled by Ralph E Davis Associates Inc, Houston, Texas; LaRoche Petroleum Consultants, Dallas, Texas who are certified professional engineers with over five years experience and are qualified in accordance with the requirements of ASX Listing Rule 5.11. Neither Ralph E Davis Associates Inc., LaRoche Petroleum Consultants nor any of the their employees have any interest in Empire Energy Group Limited or the properties reported herein.

# Glossary



Abbreviated terms used in this presentation have the following meaning:

Term	Abbreviation
Barrel of oil equivalent per day	boepd
Barrel of oil per day	bopd
Earnings represents net income (or loss) before interest expense, income taxes, depletion, amortisation, development and exploration expenses – detailed descriptions of Empire’s policies with reporting earnings are provided in its 2011 Annual Report and 2012 Half Yearly Report.	EBITDAX
Revenue from oil and gas production less production, property and severance taxes and lease operating expenses, before field and corporate general administrative costs, non recurring expenses, delayed rental payments, land costs, interest expense, income taxes, depletion, amortisation, development and exploration expenses – detailed descriptions of Empire’s policies with reporting earnings are provided in its 2011 Annual Report and 2012 Half Yearly Report.	Field EBITDAX
Exploration and production	E&P
Gas in place	GIP
Millions of barrels of oil	mmbbls
Millions of barrels of oil equivalent	mmbob
Net present value discounted at 10%	PV10
Oil in place	OIP
Proved and probable reserves	2P reserves
Trillion cubic feet	Tcf
50% confidence interval	P50