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Announcement to ASX



6 February, 2017

### **WA-481-P** Technical Update

Pilot Energy Ltd (the **Company**, ASX: PGY) is pleased to provide the attached technical update further to the Company's announcement of 30 January 2017, in which the major prospective oil and gas resources for exploration permit WA-481-P were announced.

#### Enquiries

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**About Pilot Energy**: Pilot Energy Ltd is an emerging junior oil and gas exploration company that is implementing a low-cost, counter-cyclical strategy to develop a portfolio of high quality oil and gas exploration assets. The Company's aggressive new ventures program has rapidly resulted in acquisition of material working interests in the WA-481-P, WA-507-P, WA-503-P and EP416/480 exploration permits, located offshore and onshore Western Australia, in addition to a minor working interest in the EP437 permit. Key to Pilot Energy's strategy is minimisation of project entry cost and work commitments, while allowing sufficient time to add value through desktop studies prior to seeking farmin partners to fund seismic and/or drilling. Pilot Energy works closely with industry partners such as seismic contractors in order to develop creative pricing models for services that help to reduce the Company's upfront cash investment.





# WA-481-P Prospective Resources Assessment

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Prospective Resources are those quantities of petroleum estimated as of a given date to be potentially recoverable from undiscovered accumulations by the application of future projects. Contingent Resources are the estimated quantities of petroleum that may be potentially recoverable from known accumulations, but the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies.

Refer to the Company's announcement of 30 January 2017 for details of prospective and contingent resources.



- *Highly prospective* permit with numerous oil & gas prospects
- Total prospective resources of up to 435 MMBOE
- Four hydrocarbon trends, *three of which are de-risked by existing discoveries*
- Prospects to south of Cliff Head oilfield are significant, and situated *directly on oil migration path*
- Dunsborough oil discovery and adjacent prospects could lead to an oil production hub
- Largest oil prospect offers potential for up to 78 MMBbls
- Frankland gas discovery with nearby potential could lead to a gas production hub, via Dongara facilities
- Even a small oil discovery could be commercialised, via Cliff Head facilities
- Leander Reef trend remains untested and offers significant upside

### WA-481-P Location



- Very large permit (17,745 km<sup>2</sup>)
- Pilot Energy 60% (Operator)
- Proven petroleum system
- Located over offshore extension of north Perth Basin hydrocarbon province
- Shallow water
- Highly prospective for both oil and gas
- Close to existing oil & gas facilities with spare capacity



### A Proven Petroleum System



- On trend with numerous oil and gas fields
- Permit surrounds Cliff Head oil field (18 MMBbls)
- Dunsborough oil discovery has 2C contingent resources of 6 MMBbls
  - Potential tieback to future discovery
- Frankland gas discovery has 2C contingent resources of 42 Bcf
  - Additional potential on-trend



# **Structural Setting**



- Abrolhos sub-basin runs north-south through the permit
- Structural highs flank the sub-basin to east and west
- Major oil & gas source kitchen
- Basin is thermally mature and generative
- Migration of hydrocarbons from Abrolhos sub-basin, eastwards up to structural high
- Faulting along structural high has created numerous structural closures for entrapment of hydrocarbons



# Stratigraphy



- Good quality clastic reservoirs in Dongara
   Sandstone and Irwin River
   Coal Measures (e.g. Cliff Head)
- High quality source rocks in Irwin River Coal Measures (gas and some oil) and the Kockatea Shale (oil)



### **Prospects & Leads**



- Seismic interpretation completed
- 13 structural prospects identified
- Significant prospective resources determined
- Four main focus areas
  - Cliff Head oil trend
  - Dunsborough oil trend
  - Frankland gas trend
  - Leander Reef oil trend



# **Cliff Head Oil Trend**



- Three prospects located in vicinity of Cliff Head oil field (18 MMbbl)
- Two southerly prospects located directly on oil migration path from source kitchen to Cliff Head
- Good potential for large discoveries
- Even small discoveries of order of 3 MMbbls could be commercialised via Cliff Head facilities, just 10km to the northeast



# **Cliff Head Oil Trend Seismic Example**





**Composite Seismic Line** 

# **Cliff Head Oil Trend Resources**



### Best estimate prospective resources over 3 prospects 101.7 MMBbls

#### Largest prospect has potential for up to 78 MMBbls

Prospect	Prospective Resources MMbbl			
	Low	Best	High	
Cliff Head SW Dongara	11.0	20.0	35.0	
Cliff Head SW IRCM	14.0	24.8	43.4	
Cliff Head SW Total	25.0	44.8	78.4	
Cliff Head S Dongara	2.1	4.0	7.3	
Cliff Head S IRCM	4.8	8.7	15.4	
Cliff Head S Total	6.9	12.7	22.7	
Twin Lions W Dongara	13.0	24.6	43.4	
Twin Lions W IRCM	11.5	19.6	32.4	
Twin Lions W Total	24.5	44.2	75.8	
Twin Lions Updip Dongara	0.7	1.3	2.5	
Twin Lions Updip IRCM	2.0	3.8	7.0	
Twin Lions Updip Total	2.7	5.1	9.5	
TOTAL ALL PROSPECTS OIL		Prospective Resources MMbbl		
	Low	Best	High	
	59.1	106.8	186.4	

# **Dunsborough Oil Trend**



- Dunsborough-1 oil discovery has 2C contingent resources of 6 MMBbls
- Three additional structures mapped on trend – Yungarra, Burney and Bootenal
- Prospects substantially derisked by Dunsborough-1 discovery
- Discovery of incremental oil resources could well create a hub for commercial development







**Composite Seismic Line** 

## **Dunsborough Oil Trend Resources**



#### 2C contingent resources 6 MMBbls

#### Best estimate prospective resources over 4 prospects 35 MMBbls

Largest prospect has potential for up to 31 MMBbls

Prospect	Contingent Resources MMbbl			Prospective Resources MMbbl		
	1C	2C	3C	P90	P50	P10
				Low	Best	High
Dunsborough-1 Dongara	2.4	4.2	6.8			
Dunsborough-1 IRCM	0.9	1.8	3.0			
Total	3.3	6.0	9.8			
Bootenal Dongara				2.3	4.8	9.1
Bootenal IRCM				1.8	3.1	5.0
Total Bootenal				4.1	7.9	14.1
Burney Dongara				1.1	2.7	6.6
Burney IRCM				0.7	1.4	3.2
Total Burney				1.8	4.1	9.8
Batavia Updip Oil				8.8	15.4	31.3
Yungarra Dongara				3.0	6.3	11.9
Yungarra IRCM				0.9	1.6	2.7
Total Yungarra				3.9	7.9	14.6
TOTAL ALL PROSPECTS OIL	Contingent Resources MMbbl		Prospective Resources MMbbl			
	1C	2C	3C	Low	Best	High
	3.3	6.0	9.8	18.6	35.3	69.8

# Frankland Trend



- Frankland-1 gas discovery contains
  2C contingent resources of 42 Bcf
- Minimum economic field size estimated at 60 Bcf, assuming gas sales price of A\$6.50 per mmbtu
- Frankland-2 appraisal well was drilled in structurally low position but did encounter gas
- Two look-alike structures mapped on trend
- Gas play de-risked by Frankland-1 discovery
- Discovery of additional gas resources would likely result in commercial resource
- Dongara gas infrastructure located just 20km to east



### Frankland Trend Seismic Example





## **Frankland Trend Resources**



### 2C contingent resources 41.6 Bcf

#### Best estimate prospective resources over 2 prospects 45.6 Bcf

Largest prospect has potential for up to 46 Bcf

Prospect	Contingent Resources Bcf			Prospective Resources Bcf		
	1C	2C	3C	Low	Best	High
Frankland-1 Dongara	23.4	33.0	46.1			
Frankland-1 IRCM	6.0	8.6	12.8			
Total	29.4	41.6	58.9			
Frankland NE Dongara				7.4	12.0	18.6
Frankland NE IRCM				2.3	3.8	6.0
Total Frankland NE				9.7	15.8	24.6
Frankland NE 2 Dongara				13.5	21.8	33.5
Frankland NE 2 IRCM				4.8	8.0	12.2
Total Frankland NE 2				18.3	29.8	45.7
TOTAL ALL PROSPECTS GAS	Contingent Resources Bcf		Pro	spective Resources	Bcf	
	1C	2C	3C	Low	Best	High
	29.4	41.6	58.9	28.0	45.6	70.3

# Leander Reef Trend



- Three structures, all significantly larger than Cliff Head oil field
- Each exhibits structural closure an area of over 20 km<sup>2</sup>
- Leander Reef-1 well was drilled in 1983
- Well drilled in to fault, missing the target reservoir horizon
- Leander Reed Trend therefore remains untested



## Leander Reef Trend Seismic Example





## Leander Reef Trend Resources



Best estimate prospective resources over 3 prospects 98 MMBbls

Largest prospect has potential for up to 78 MMBbls

Prospect	Prospective Resources MMbbl			
	Low	Best	High	
Leander Reef Upthrown	26.5	46.1	78.1	
Leander Reef Downthrown	21.4	38.0	66.3	
Leander Reef West	8.0	14.0	23.6	
TOTAL ALL PROSPECTS OIL	Prospective Resources MMbbl			
	Low	Best	High	
	55.9	98.1	168.0	





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