

### PETSEC ENERGY LTD

ACN 000 602 700

U N C E M

7<sup>th</sup> November 2018

### **Petsec Energy Ltd General Meeting Presentation**

Petsec Energy Ltd (ASX: PSA / OTC ADR: PSJEY)

Attached is a copy of the presentation to be delivered today by Petsec Energy Ltd.'s Chairman and Managing Director, Terry Fern, at the General Meeting of members of Petsec Energy Ltd, held at Governor Macquarie Tower, Level 15 Auditorium 1, One Farrer Place, Sydney.

A copy of the presentation will also be made available on the Company's website, www.petsec.com.au.

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# Forward Looking Statement Disclaimer

This presentation contains predictions, estimates and other forward looking statements that are subject to risk factors associated with the oil and gas industry. Although the company believes that the expectations reflected in these statements are reasonable, it can give no assurance that its expectations and goals will be achieved. Important factors that could cause actual results to differ materially from those included in the forward looking statements include, but are not limited to, commodity prices for oil and gas, currency fluctuations, the need to develop and replace reserves, environmental risks, drilling and operating risks, risks related to exploration and development, uncertainties about reserve estimates, competition, loss of market, government regulation, economic and financial conditions in various countries, political risks, project delay or advancement, and approvals and cost estimates.

All references to dollars in this presentation are to US currency, unless otherwise stated.

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The reserves assessment follows guidelines set forth by the Society of Petroleum Engineers – Petroleum Resource Management System (SPE-PRMS). The USA and Yemen reserve estimates provided within this presentation are based on information contained within the announcements to the ASX on 22 February 2018 and the 2017 Annual Report.

The Company confirms that it is not aware of any new information or data that materially affects the information included within the above releases, and that all the material assumptions and technical parameters underpinning the estimates therein continue to apply and have not materially changed.



# Petsec Energy Capital Structure & Valuation

Market Listing	ASX: PSA / OTC ADR: PSJEY
Shares on issue	333.6 MM
Market capitalisation at 19/10/18 @ A\$0.12 / share	~ US\$28.5MM (A\$40.0MM)
Cash at 30/09/18	US\$3.0MM
US\$15 million convertible note facility – 19/10/18 (available cash)	US\$8.0MM
Petsec net oil & gas audited reserves (2P) as of 1/1/18	9.4 MMBOE
USA: Mystic & Hummer (15.9 Bcf of gas + 1.137 MMbbl of oil) (Based on Cawley, Gillespie & Associates reserves at 1/1/18; 31 December 2017 strip pricing)	3.8 MMBOE
YEMEN: An Nagyah (Based on DeGolyer & McNaughton Canada Limited reserves at 1/1/16; US\$30/bbl based on trucking model, 5,000 bopd)	5.6 MMBO
(Target gross recoverable reserves of 19.8 MMbo (8.8 MMbo net to Petsec) at 10k bopd, US\$80/bbl oil price, US\$15/bbl	OPEX)
Petsec NPV <sub>10</sub> audited reserves (2P) as of 1/1/18	US\$189.8MM
LICA	equiv. to A\$0.80/share
USA	US\$34.8MM (A\$0.15/share)
YEMEN (8.8 MMbo net to Petsec; NPV <sub>10</sub> US\$320MM @ 10k bopd, US\$80/bbl oil price, US\$15/bbl OPEX)	US\$155.1MM (A\$0.65/share)



# **Petsec Energy Potential Valuation**

Assets and liabilities		NPV <sub>10</sub> Estimates		
		A\$MM¹	A\$/Share <sup>2</sup>	
USA reserves (2P): Hummer, Mystic, Jeanerette – 3.8 MMBOE <sup>1</sup> US\$34  Based on Cawley, Gillespie & Associates 2P reserves at 1/1/18; 31 December 2017 strip pricing	49	0.15		
USA potential upside Hummer B-2 well (high case) US\$36MM		51	0.15	
	Sub-total USA	100	0.30	
Yemen - An Nagyah Oilfield — 8.8 MMBO (US\$320MM)  Based on target gross recoverable reserves:19.8 MMbo;10k bopd, US\$80/bbl oil price, US\$15/bbl OPEX		450	1.35	
Yemen undeveloped oil fields - 46 MMBO + 550 BCF (> US\$500MM)  Based on oil only at US\$45/bbl + 2% pa escalation		> 700	2.10	
	Sub-total Yemen	1,150	3.45	
Total USA & Yemen		1,250	3.75	
Less: Debt		(9)	(0.03)	
Total potential valuation		1,241	3.72	

<sup>1</sup> USD/AUD exchange rate of \$0.71

<sup>2</sup> Based on current number of shares outstanding of 333,587,924



# **Projected Net Operating Cashflows FY2019**

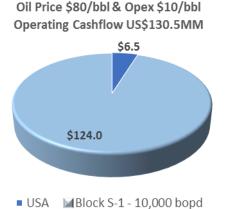
#### FY2019 Net Operating Cashflows: Hummer (2 wells) + Mystic (1 well); An Nagyah @ 10,000 bopd

#### An Nagyah Oilfield - Marib Pipeline Option

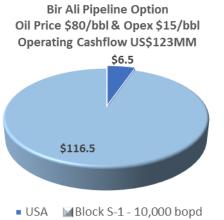
- → Total net operating cashflows to Petsec Energy of US\$130.5MM An Nagyah: US\$124MM + USA: US\$6.5MM
- ♦ An Nagyah Oilfield assumptions: US\$80/bbl oil price + US\$10/bbl OPEX

#### An Nagyah Oilfield - Bir Ali Trucking Option

- ♦ Total net operating cashflows to Petsec Energy of US\$123MM An Nagyah: US\$116.5MM + USA US\$6.5m
- ♦ An Nagvah Oilfield assumptions: US\$80/bbl oil price + US\$15/bbl OPEX

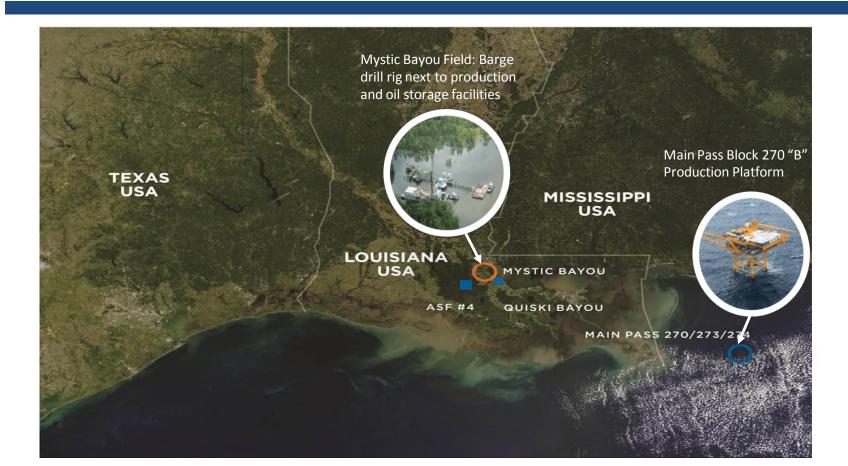


Marib Pipeline Option





# Petsec Energy USA Operations





# Petsec Energy USA Operations

#### **Strong Track Record & History in the Gulf of Mexico**

- ♦ Operated in USA Gulf of Mexico and Louisiana since 1991.
- ♦ Drilling success: 109 wells / 81 successful / 74% success net production > 216 Bcfe, ~ US\$548MM EBITDAX.
- Active Projects: Jeanerette, Mystic Bayou & Hummer (Main Pass 270/273/274).

#### **Existing 2P Reserves**

♦ USA 2P Reserves @ 1.1.2018: 15.9 Bcf of gas + 1.137 MMbbl of oil (3.8 MMboe); NPV<sub>10</sub> value of US\$34.8MM (A\$0.15/share).

#### Jeanerette: 12.5% Working Interest

♦ Discovery well (July 2014); producing intermittently; requires workover.

#### Mystic Bayou: 25% Working Interest

- ♦ Discovery well (August 2015); Commenced production November 2015. Current Gross Production 2.4 MMcfgpd and 33 bcpd.
- Field Future Development: Additional three development well locations to be drilled.

#### **Hummer: 12.5% Working Interest**

- Discovery well (November 2015); Commenced production in November 2017. Current Gross Production: 16 MMcfpd and 320 bopd.
- ♦ Field Future Development: Additional 3 to 8 appraisal/development well locations to be drilled.
- ♦ B-2 Appraisal/Development well: Spud 19 August 2018 to test six oil and gas reservoirs.
- → TD December 2018; MD18,559 ft. and TVD 16,624 ft. Production expected February 2019.



### Mystic Bayou Gas/Oil Field - Onshore Louisiana

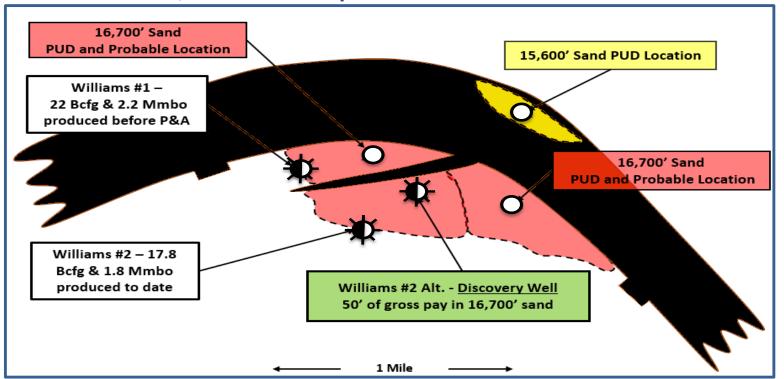




# Petsec Energy USA Production / Development

#### Mystic Bayou Gas/Oil Field – Onshore Louisiana

### 16,700 ft. Sand Map with reservoir outlines





#### Hummer Gas/Oil Field 12.5% W.I.: Main Pass Blocks 270, 273, 274

#### **Large Structure Over 5 Mile Strike**

→ Hummer Gas/Oil Field structure extends over a strike of five miles within the Main Pass Block 270,273,274 leases which cover 15,000 acres, in some 200 feet of water, located 20 miles to the East of the mouth of the Mississippi River.

#### **B-1 Discovery Well Penetrated Five Oil & Gas Reservoirs**

- The B-1 exploration discovery well was drilled in Main Pass Block 270 to a true vertical depth (TVD) of 15,748 ft. in the NW corner of the Hummer Field structure, to test a single reservoir with a pre-drill mapped target potential of 183 Bcf gas + 3.7 MMbbl oil.
- ♦ The well penetrated five oil & gas reservoirs, including the primary objective reservoir which was completed and commenced production on 21 November 2017. The well is currently producing 16 MMcfgpd and 320 bopd.

#### **B-2 Appraisal / Development Well to Test Six Reservoirs**

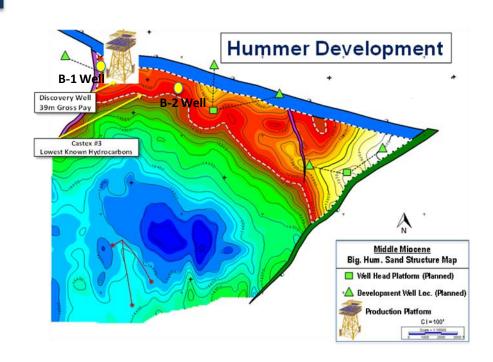
- ♦ The first appraisal/development well, the B-2, spud in August 2018, is drilling ahead, and will test six gas/oil reservoirs, 6.000 ft to the East of the B-1 well.
- → The B-2 well TD of 16,624 ft. TVD, is expected in December 2018 and the well be in production in February 2019. Should these reservoirs be successful as mapped, the B-2 well could deliver an additional NPV<sub>10</sub> of US\$36MM (A\$0.15 / share).
- ♦ The Hummer Gas/Oil Field will require up to eight appraisal/development wells.



#### Hummer Gas/Oil Field: Main Pass Blocks 270, 273, 274

#### **Structure Map - Reservoir D**

- Hummer Gas/Oil Field structure extends over a strike of five miles within the Main Pass Block 270, 273, 274 leases which cover 15,000 acres.
- The B-1 exploration well was drilled in Main Pass Block 270 to a true vertical depth (TVD) of 15,748 ft. in the NW corner of the Hummer Gas/Oil Field structure, to test a single reservoir (Reservoir D) with a pre-drill mapped target potential of 183 Bcf gas + 3.7 MMbbl oil.
- The well penetrated five oil & gas reservoirs, including the primary objective reservoir which was completed for production (red area), and is currently producing 16 MMcfgpd and 320 bopd.
- ♦ The B-2 appraisal/development well, the first of up to 8 appraisal/development wells required to develop the field, is being drilled from the Main Pass Block 270 "B" Production Platform, with a planned bottom hole location some 6,000 feet to the East of the B-1 discovery well.
- The well is designed to test, at an optimum structural position, six potential oil and gas reservoirs, these being the five oil and gas reservoirs intersected in the B-1 well and a deeper horizon not tested by the B-1 well, but productive in the area.
- The estimated net cost to the Company to drill and complete the well for production is approximately US\$4 million.





### Main Pass 270/273/274 Hummer Project: Ensco 68 Jackup Drill Rig (B-2 Well)

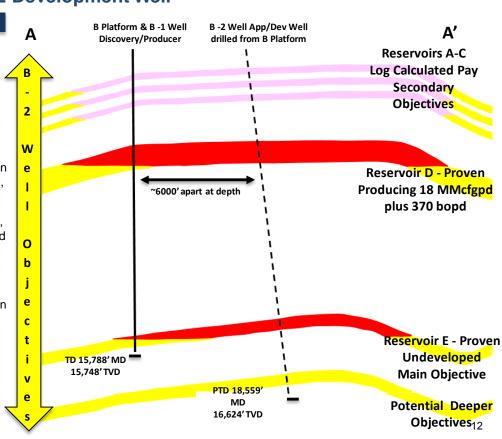




#### Hummer Gas/Oil Field: B-1 Discovery Well, B-2 Development Well

#### Cross-Section: A -A' along B-2 Well path

- The B-1 vertical exploration discovery well penetrated five oil & gas reservoirs.
- The main objective of the B-1 well (Reservoir D) had a pre-drill mapped target potential of 183 Bcf gas + 3.7 MMbbl oil. The B-1 well is currently producing 16 MMcfgpd & 320 bopd from Reservoir D.
- Reservoir E was also proven in the B-1 well and is the main objective of the B-2 appraisal/development well. It is productive in nearby fields (Main Pass 280/283 Field Complex), 14 miles to the East of Main Pass Block 274, with production greater than 27 MMbo and 60 Bcf of gas.
- The B-2 well, drilled from the Main Pass Block 270 "B" Production Platform, is designed to test, six reservoirs, five of these reservoirs were intersected by the B-1 well, and deeper objectives which are productive in the area, of similar size to Reservoir E.
- ♦ The well is planned to drill to a measured depth (MD) of 18,559 feet with a true vertical depth (TVD) of 16,624 feet. The main objectives are reserves in Reservoirs D and F.
- Cawley, Gillespie & Associates (reserve auditors) estimated B-1 well net reserves to Petsec for Reservoir D & E at 1.1.2018, to be 6.5 Bcf and 0.96 MMbbl with an NPV10 of US\$24.5MM.
- The B-2 well could deliver an additional NPV10 value of US\$36MM (A\$0.15 / share) should the six reservoirs be successful as mapped.



#### **Hummer Gas/Oil Field: B-2 Development Well**

#### B-2 Well expected to commence production in February 2019

- ♦ The B-2 Well spud on 19 August 2018.
- ♦ Well is expected to reach total depth (TD) of 18,559 ft. MD/16,624 ft. TVD in December.
- ♦ Production is expected to commence in February 2019.

#### **B-2 Well is fully funded**

- ♦ The estimated net cost to the Company to drill and complete the well for production is approximately US\$4MM.
- ♦ The Company has US\$5MM in Tranche 3 of its Convertible Note Facility with which to fund the well. This has been drawn down by US\$2MM with US\$3MM remaining available

	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18	Jan 19	Feb 19	Beyond
Drilling								
Completion								
Facility Upgrade								
Production								



# **Yemen Operations**





# **Status of Yemen Production**

#### **Petsec's Assets**

#### **Yemen Portfolio**

- Petsec operates two blocks, Damis (Block S-1) and Al Barqa (Block 7), within a proven productive fairway in the Jurassic Shabwa Basin containing kilometers of world class source rocks and located adjacent to existing export infrastructure
- ♦ The Portfolio includes the An Nagyah productive oil field, five material appraised fields awaiting development and significant exploration targets

#### **Production Restarting in Yemen**

- PetroMasila, a Yemeni national oil company, originally re-started oil production in Yemen in August 2016 with exports following shortly thereafter of multiple cargos of 1 to 2 million barrels shipped to Southeast Asia
- Austrian OMV is the first Western company to restart production from it's Habban Oilfield in April 2018 and is currently reported to be trucking over 5,000 bopd with two liftings of 500,000 barrels having occurred from the Bir Ali Export facility on the southern Gulf of Aden Coast
- → Habban oil is being trucked 40km to the West Ayad Field CPF in Block-4 at the head of the Bir Ali Pipeline with a capacity of 135,000 bopd which is operated by YICOM, a Yemen Government company

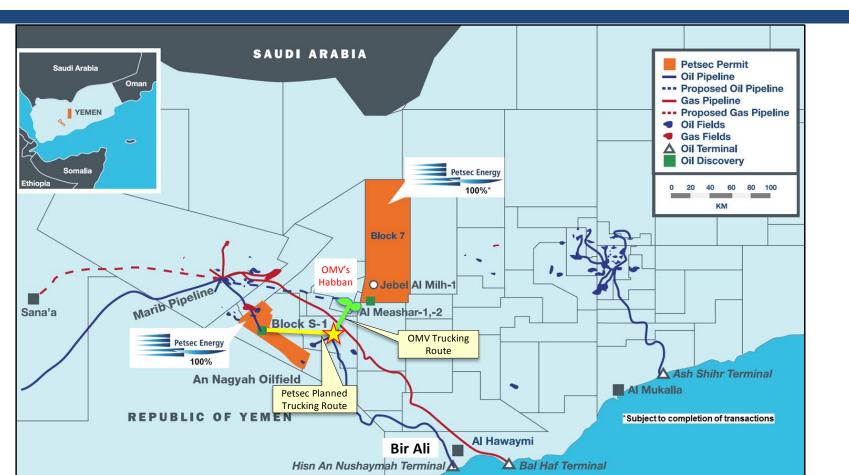
#### **Petsec Production Plans**

Petsec is planning to truck up to 10,000 bopd from the An Nagyah Oilfield 70km to the West Ayad Field CPF which is the current off-loading point for OMV oil connected to the Bir Ali Export Terminal on the southern Gulf of Aden coast by a 207km pipeline



# **Shabwa Basin: Truck Transportation of Crude Oil**

#### **OMV Habban Oilfield Production**





# Yemen Operations: Block S-1 and Block 7

**PETSEC Yemen Oilfields & Exploration Prospects** 

**Developed: 19.8 MMbbls oil gross** 

Undeveloped: 45 MMbbl to > 50 MMbbls oil + 550 Bcf gas

Exploration: > 1 billion bbls oil

Damis (Block S-1) Production Licence

100% working interest (82.5% participating interest)

- Five Oil & Gas Fields:
  - Developed/Productive: An Nagyah Oilfield 15 production wells
  - 19.8 MMbbls oil target gross recoverable (8.8 MMbbls oil net to Petsec)
  - An Nagyah NPV<sub>10</sub> US\$320MM (AUD: \$1.35 cents/share) net to Petsec @ US\$80/bbl
  - Undeveloped: Osaylan, Harmel, An Naeem, Wadi Bayhan > 34 MMbbl oil & 550 Bcf gas gross 1
  - NPV<sub>10</sub> US\$420MM Net to Petsec @ US\$45/bbl

Al Barga (Block 7) Exploration Licence 100% working interest (85% participating interest) <sup>2</sup>

- Al Meashar: Undeveloped oil field 2 wells tested at 200 1,000 bopd
  - 11 MMbbl to > 50 MMbbl gross (9.3 MMbbl 42.5 MMbbl net) / Upside potential: 110 MMbbl
  - Al Meashar 11 MMbbl NPV<sub>10</sub> US\$90MM net to Petsec @ \$45/bbl
- Eight prospects / leads: target sizes range from 2 to 900 MMbbl oil gross. Four largest > 1 billion bbls
- NPV<sub>10</sub> > US\$10 billion net to Petsec @ US\$45/bbl

Source: Wood Mackenzie Asia Pacific Pty Ltd

The Company has an agreement with KUFPEC (25% W.I.) to acquire its interest in Block 7. The agreement is pending completion and is subject to customary approvals from the Government of Yemen and the Ministry of Oil and Minerals



### Marib-Shabwa Basin: Oil & Gas Production Hub

#### Damis (Block S-1) Production Licence

- 100% working interest (82.5% participating interest)
- ♦ An Nagyah Oilfield target gross recoverable 19.8 MMBO / Net 8.8 MMBO (NPV<sub>10</sub> US\$320MM net to Petsec) <sup>1</sup>
- ♦ The four undeveloped oil & gas fields hold resource potential: > 34 MMbbl oil & 550 Bcf gas ²; NPV<sub>10</sub> > US\$420MM net to Petsec

#### Al Barqa (Block 7) Exploration Licence

- 100% working interest (85% participating interest) 3
- ♦ Al Meashar undeveloped oil discovery 2 wells / target 11 MMbbl oil gross (9.3 MMbbl net NPV<sub>10</sub> US\$90MM) / > 50 MMbbl potential

Marib Export Pipeline (300,000 BOPD capacity) to Ras Petsec Energy Isa Terminal in the Red Sea Al Meashar Oilfield An Naeem Target recoverable oil Target recoverable 11 - 50 MMbbl gross 12 MMbbl Cond. 550 bcf Gas Wadi Bavhan Harmel Block 7 Target recoverable Target recoverable oil 1 MMbbl Cond.+ 50 bcf Gas 17 MMbbl An Nagyah Oilfield OMV's Habban Oilfield 19.8 MMbbl Gross to Petsec Potentially 350 MMbbl Oil recoverable with Central Processing Facility Osaylan Target recoverable oil 5 MMbbl Bir Ali Export The CPF connected to the Marib Petsec Energy Pipeline Export Pipeline to the Export (135,000 Terminal at Ras Isa on the Red Sea BOPD) Block S-1 Downloaded for Petrec Energy on 05/05/2018 Oll & Gas maps source: We CartoDB attribution Map data @2016 Google Imagery @2016 TerraMetrics | 10 km \_\_\_\_\_\_ | Terms of Use

Source: Petsec Production Economics US\$80/bbl, opex US\$15/bbl, 10,000 bopd
 Source: Wood Mackenzie Asia Pacific Pty Ltd. NPV<sub>10</sub> based on US\$45/bbl + 2%pa escalation

<sup>3</sup> The Company has an agreement with KUFPEC (25% W.l.) to acquire its interest in Block The agreement is pending completion and is subject to customary approvals from the Government of Yemen and the Ministry of 01 and Minerals.

<sup>4</sup> NPV<sub>10</sub> based on US\$45/bbl + 2% p.a. escalation



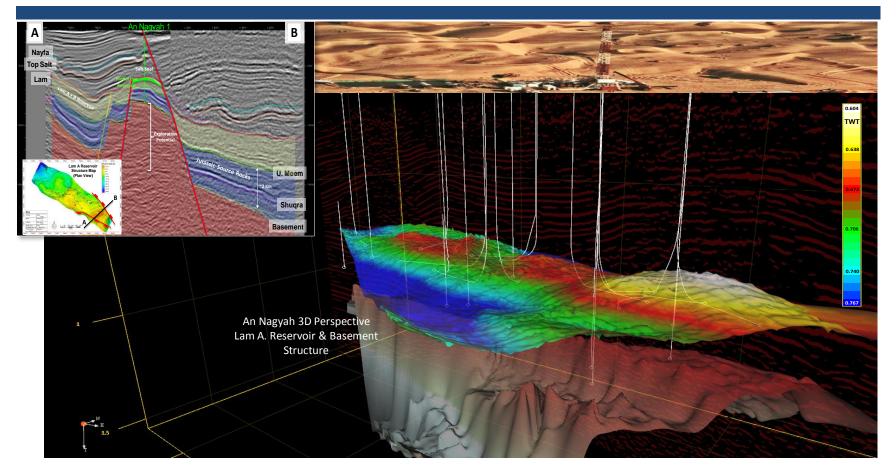
# Damis (Block S-1) An Nagyah Oilfield

#### An Nagyah Oilfield

- → The An Nagyah Oilfield is located within a world class petroleum system containing in excess of 2,000m of exceptional quality Jurassic source rocks'
- ♦ Structurally the field is a North-West to South-East trending tilted horst block within the Jurassic aged Sab'atayn Rift Basin.
- ♦ The most prolific reservoir is the uppermost Lam Sandstone, a thick sequence (100-125m) of delta front sandstones of Late Jurassic age
- ♦ The field is covered by modern 3D seismic
- ♦ 15 production wells are currently shut-in available for restart of production
- → The previous operator, Occidental, had invested over US\$450MM developing Block S-1 with the An Nagyah
  Oilfield having produced approximately 25 MMbbl of oil to date
- ↑ Target gross recoverable reserves of 19.8 MMbo (8.8 MMbo net to Petsec) at 10,000 bopd, US\$80/bbl oil price
   & US\$15/bbl OPEX
- ♦ The An Nagyah production facility is secure and has been well maintained during its recent shut-in period and remains in good condition. Production capacity is 20,000 bopd
- ♦ Recent survey of well heads, pumping station, generators, compressors, control room, pipelines and warehouse has confirmed there is no damage and the field can readily be restarted



# Damis Block S-1: An Nagyah Oilfield Subsurface 3D TWT Cube & Seismic Cross Section





# **An Nagyah Oilfield**

**Central Processing Facility (CPF)** 









# Petsec Energy An Nagyah Oilfield: Truck Transportation of Crude Oil

#### **Western Production - OMV**

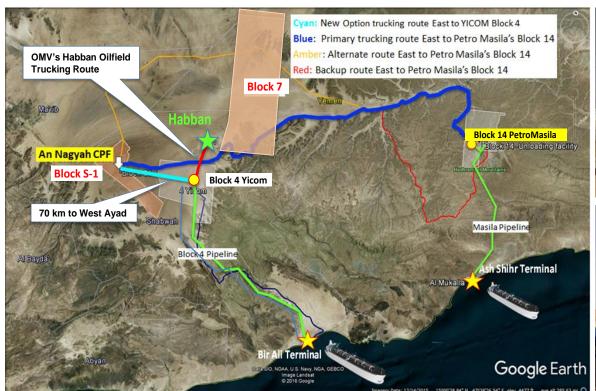
- ♦ OMV restarted oil production from the Habban Oilfield in April 2018, the first foreign operator to restart since the Yemen oil industry was suspended in March 2015
- ♦ The Habban Oilfield was suspended in March 2015 due to Marib/Ras Isa Oil Terminal embargo by the Saudi Coalition. The Coalition is currently attempting to liberate the Port of Hodeidah on the Red Sea so as to reopen the Ras Isa Oil Terminal and the Marib Pipeline which is connected to the Shabwah Basin oil producers
- ♦ OMV is trucking over 5,000 bopd 40km South to the West Ayad Field CPF in Block-4, and from there into the 207km Bir Ali Pipeline, South East to the Bir Ali Oil Export Terminal, with 500,000 bbl storage capacity attached to a SPM which can accommodate 500,000 bbl oil tankers

#### **Petsec Production Re-start Planning**

- ♦ Petsec Energy has submitted a production restart plan for the An Nagyah Oilfield to the Yemen Ministry of Oil and Minerals for their review and approval to produce 10,000 bopd, trucking 70km by road East to the West Ayad/Bir Ali Pipeline in Block 4 for export at the Bir Ali terminal
- ♦ Petsec have engage with all stakeholders associated with production and transportation of oil from An Nagyah to the Bir Ali terminal for export
- ♦ The Ministry of Oil and Minerals (MOM) have given 'in principal' support for our plans and is reviewing technical and financial capacity documentation provided by the Company



# An Nagyah Oilfield: Truck Transportation of Crude Oil









# **An Nagyah Oilfield – Truck Loading Facility**











# **An Nagyah Oilfield: Re-start Status**

#### Saudi Support of Production Re-start

♦ The Saudi Coalition have since the beginning of 2018 stated the intention to support the Yemen oil industry by providing increased security in Marib and Shabwah, and to secure the port of Hodeidah and the Ras Isa oil terminal. The Yemen Government declared in late December 2017 a new Minister of Oil and Minerals, Mr. Aws Al-oud who has engaged with the oil industry and has encouraged restart of production in the Marib and Shabwah Basins, and sent all operators letters of directive to restart production as soon as possible. Petsec Energy is engaged with the Minister, the Oil Ministry, Block S-1 staff and sub-contractors, local tribal and administrative leaders, which are generally all supportive of the restart. As a new operator in Yemen, the administrative review process is slow.

#### **Western Production - OMV**

♦ OMV as operator of the Habban Oilfield, located 70km to the NE of Petsec Energy's An Nagyah Oilfield in Block S-1 and 14km West of our Al Meashar Oilfield in Block 7, began restricted production in April 2018 (~5,000 bopd) and trucking of oil 40km to the Bir Ali Pipeline in Block 4 to the South and to Block 14 to the East. OMV is the first foreign oil producer in Yemen to restart oil production since the shut-in of March 2015.

#### **Petsec Planning**

♦ Petsec remains engaged with the Yemen Hadi administration and is seeking support from the Ministry of Oil and Minerals (MOM) for a variation of the current development plan transporting oil by the Marib Pipeline to Ras Isa on the Red Sea near the Port of Hodeidah, which will enable trucking of An Nagyah oil to the nearest operational point of oil storage with export facilities, and access to those Yemen Government facilities – Block 4 (YICOM operated) 70km by truck, and/or Block 10 (PetroMasila operated) 580km by truck. A restart plan for both Bir Ali and Masila has been submitted to the Minister for his review and approval.



# DAMIS (Block S-1)

### **An Nagyah Oilfield Re-start Status**

#### **Production Restart Government Consents**

- Petsec is engaged with the Ministry of Oil and Minerals (MOM) seeking consent to operate a trucking project to deliver An Nagyah oil to the nearest operational point of oil storage, 70km to the East at the head of the Block 4 export pipeline which delivers the oil 207km to export facilities located at Bir Ali on the Gulf of Aden Coast
- Petsec, as a new operator in Yemen is under review by the MOM and has provided technical and financial capacity documentation in support of a trucking operation
- ♦ Petsec's proposed production re-start plan has been provided to the Ministry of Oil & Minerals (MOM) for review and consideration
- Petsec has committed to meet all An Nagyah Field operations and production obligations to the Government

#### **Production Restart Preparation**

- ♦ Manufactured truck loading unit with a minimum 5,000 bopd capacity (upgradable to 10,000 bopd)
- Employed Yemeni General Manager, Mr. Riad Fadle, previously involved in the original development of the An Nagyah Oilfield by Vintage Petroleum and then in a Government Relations role for Occidental Petroleum Corp after their takeover of Vintage in 2006
- We have conducted meetings with the field operations workforce and have in-principal arrangements for the re-manning of the CPF
- We have engaged with subcontractors providing support services to the operations and have in-principal arrangements for their support to restart production
- Meetings have been held with the local tribal and governorate leadership, securing their support for the restart of production at An Nagyah, including secure access corridors for trucking
- Tender discussions have been undertaken with domestic transport companies for the trucking of up to 10,000 bopd to the head of the Block 4 pipeline



# **Yemen Projected Net Operating Cashflows FY2019**

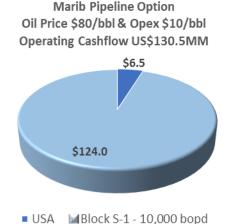
### FY2019 Net Operating Cashflows: An Nagyah 10,000 bopd

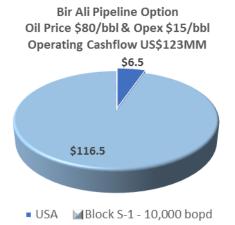
#### An Nagyah Oilfield - Marib Pipeline Option

- ❖ Total net operating cashflows to Petsec Energy from An Nagyah: US\$124MM
- ❖ An Nagyah Oilfield assumptions: US\$80/bbl oil price + US\$10/bbl OPEX

#### An Nagyah Oilfield - Bir Ali Trucking Option

- ❖ Total net operating cashflows to Petsec Energy from An Nagyah: US\$116.5MM
- An Nagyah Oilfield assumptions: US\$80/bbl oil price + US\$15/bbl OPEX







# **Yemen Operations**





# Al Barqa (Block 7)

### **Al Meashar Oilfield Development Potential**

#### **Al Meashar Oilfield Discovery**

- ♦ The Al Meashar Oilfield was discovered and tested at rates ranging from 200 to 1,000 BOPD in 2010 by Australian company Oil Search Limited
- ♦ The Al Meashar 1 & 2 discovery wells intersected an oil column in excess of 800m in the Kuhlan Sandstone and Basement formations, the same formations as in OMV's Habban Oilfield (350 MMbbl) which has an oil column of 945m and has in the past produced ~20,000 bopd up until production was suspended in March of 2015. In April 2018 OMV restarted production and is currently trucking 5,000 bopd to Block 4 / Bir Ali Pipeline
- → The Al Meashar undeveloped oilfield is estimated at 11 MMbbl oil gross (9.3 MMbbl net) within the drilled single fault block outlined in blue with potential to increase to > 50 MMbbl within the currently mapped structural closure red line, Lowest Closing Contour

#### **Potential Resource**

- ♦ The oil column identified in the Al Meashar wells exceeds the mapped structural closure by more than 200m as defined by the red LCC contour in the map below. Current estimates of oil within the green (oil-down-to) contour exceeds 110 MMbbls
- ♦ Current estimates of oil target potential within the currently mapped red Lowest Closing Contour exceeds 50 MMbbls

#### **Development**

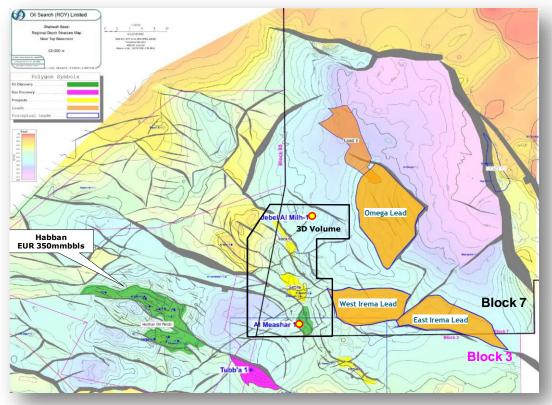
- ♦ The Al Meashar discovery wells are currently suspended and are awaiting production testing
- ♦ Development drilling on the Al Meashar structure is expected to extend the oil potential of the entire play fairway within the Block 7 licence area

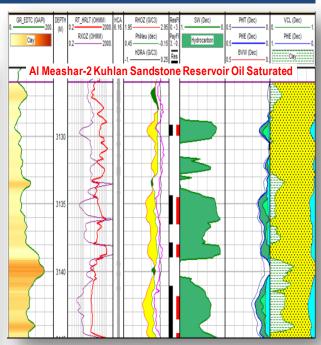


# **Block 7 Al Meashar Discovery**

### **Kuhlan Sandstone Reservoir Parameters**

- ♦ Al Meashar area 12-18m Kuhlan Sandstone Reservoir
- 11.1% primary porosity (PHIE)



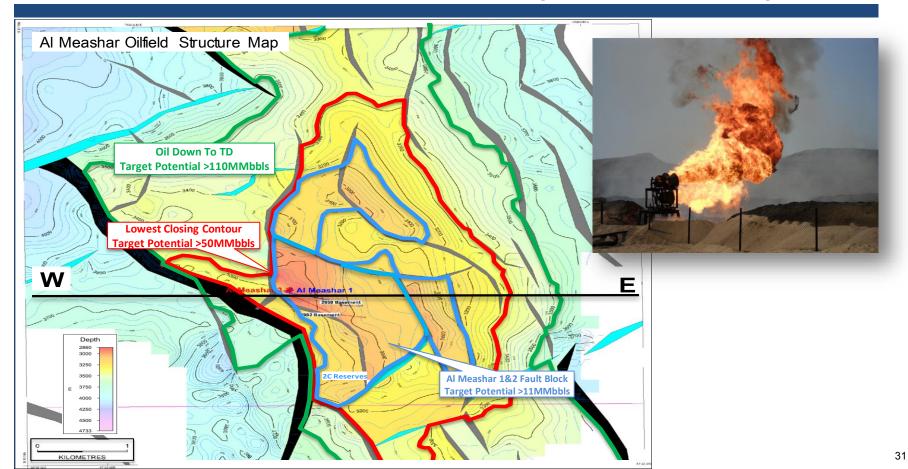


- Expect 15 to 20m Kuhlan Sandstone reservoir thickness across Block 7 within other prospect targets
- Consistent reservoir characteristics to Al Meashar Oilfield
- Fluvial channel facies sandstone reservoir



# Al Barqa (Block 7)

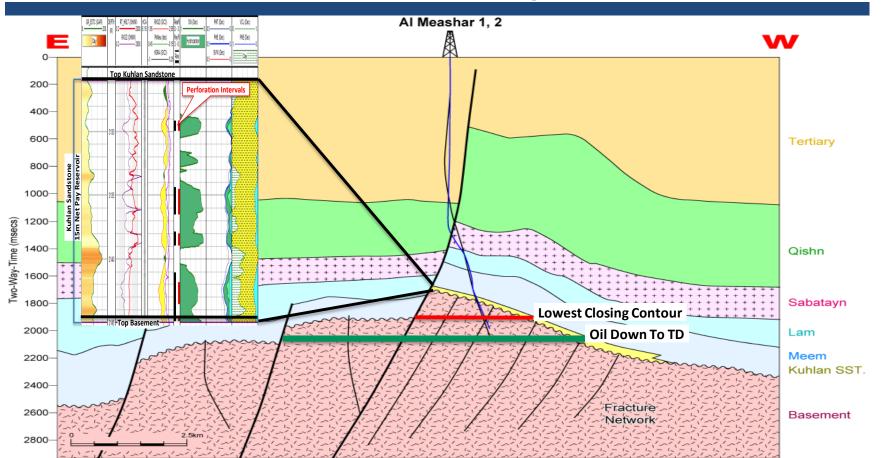
# **Al Meashar Oilfield Development Structure Map**





# Al Barqa (Block 7)

# **Al Meashar Oilfield Development Cross Section**





### Yemen Potential Value to Petsec Energy

#### **Developed Oilfields: Recoverable Oil**

An Nagyah: 19.8 MMbbl Oil Gross (8.8 MMbbl Oil net of recovery costs to Petsec) 10,000 bopd, US\$80/bbl, US\$15/bbl OPEX

Estimated Net NPV<sub>10</sub> Oil ~ US\$320MM (A\$450MM) @ US\$80/bbl <sup>1</sup> (A\$1.35/share)

#### **Undeveloped Oilfields: Recoverable Oil**

46 MMbbl Oil ( + 550 Bcf Gas) <sup>2</sup>

Damis (Block S-1)

 Wadi Bayhan
 U\$\$11MM

 Osaylan
 U\$\$60MM

 Harmel
 U\$\$206MM

 An Naeem
 U\$\$145MM

Al Barga (Block 7)

Al Meashar US\$90MM

Estimated Net NPV<sub>10</sub> Oil > US\$500MM (A\$700MM) @ US\$45/bbl (A\$2.10/share)

Developed + Undeveloped Oil = US\$820MM (A\$1.1BN) (A\$3.45/share)

#### **Exploration**

#### 4 largest prospects targeting > 1 billion bbls recoverable

Omega 439 MMbbl West Irema 241 MMbbl East Irema 164 MMbbl Lead E 174 MMbbl

#### Estimated Net NPV<sub>10</sub> > US\$10BN <sup>3</sup>

- 1 Petsec Energy estimates
- Source: Wood Mackenzie Asia Pacific Ptv Ltd.
- NPV<sub>10</sub> valuation (oil only) based on US\$45/bbl + 2% escalation



