

Petsec Energy Ltd Investor Presentation October 2016



*Australian Stock Exchange Symbol: PSA
American Depository Receipts (ADRs): PSJEY*

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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 following releases to the ASX: Announcements on 8 March 2016 and 15 March 2016; and the 2015 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.

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- MENA / Yemen – Damis (Block S-1) Production, Block 7 (Al Barqa) Exploration

Petsec Energy Corporate Profile: Corporate Objective & Strategy

Corporate Objective

To increase shareholder value through successful oil and gas exploration, development and production, and by oil and gas reserve acquisitions, thereby building Petsec Energy into a significant mid-tier oil and gas exploration and production company.

Corporate Strategy

To drill high impact exploration prospects, predominately for oil and develop those discoveries, and to acquire oil and gas reserves, developed/producing or undeveloped, in onshore leases which hold significant development, low risk exploitation and high exploration potential, that make a major positive impact on the value of Petsec Energy.

The geographical focus is onshore and offshore Louisiana and Texas, USA , the Republic of Yemen, and the MENA region generally.

Petsec Energy: International Expansion

Historically the strategic and geographical focus has been predominately exploration in Louisiana, USA. This focus had shifted in 2014 to include oil reserve acquisition in the Middle East and North Africa (MENA) region. In Yemen, the Company holds two leases. One with undeveloped oil resources, and substantial exploration potential, and the second a production licence over five sizeable oil and gas discoveries, one of which is developed (An Nagyah) and has until recently been in production. The Company will actively continue to identify and acquire additional developed and undeveloped reserves within the MENA region.

A close-up photograph of a concrete wall corner, showing the texture and a vertical crack in the concrete. The image is set against a yellow background.

PETSEC ENERGY LTD ABN 92 000 602 700

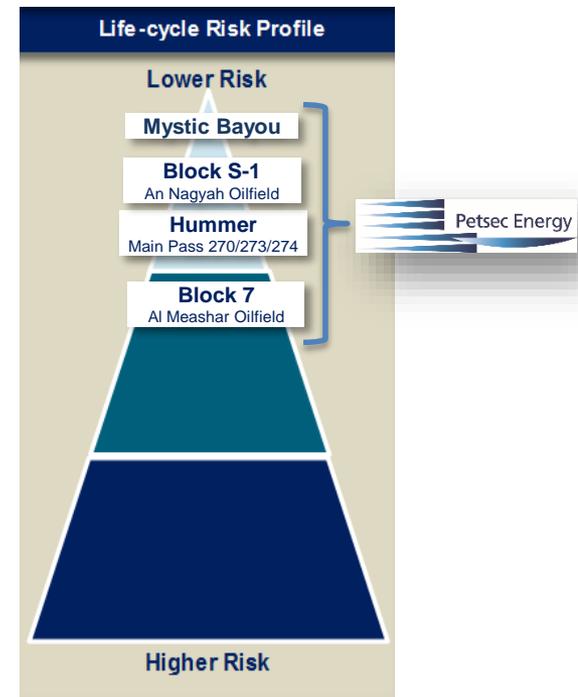
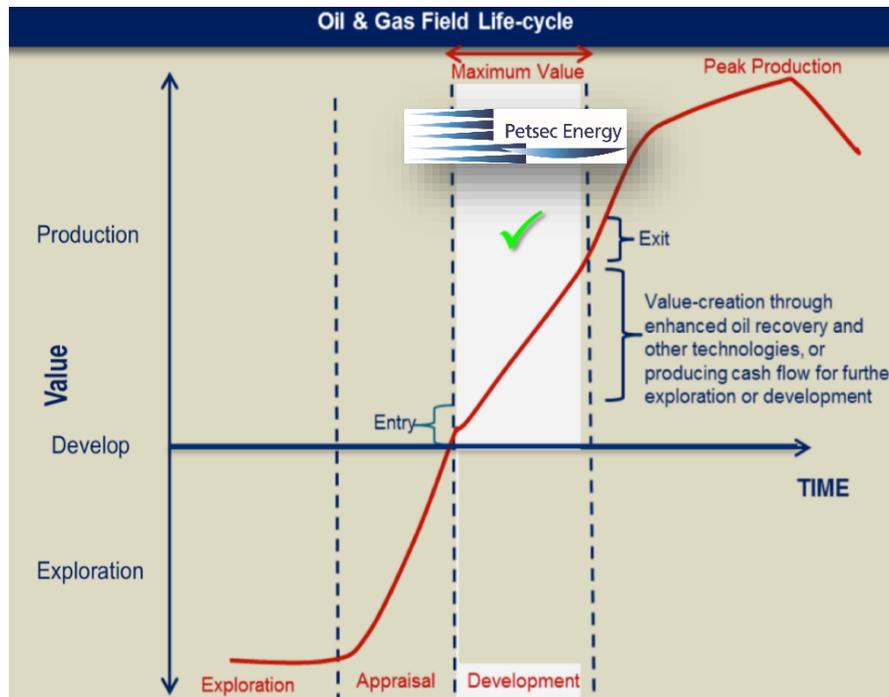
The Company is listed on the Australian Stock Exchange (symbol: PSA) and traded over the counter in the USA as American Depositary Receipts (ADRs) (symbol: PSJEY). Its corporate office is in Sydney, Australia, its USA operations offices are in Houston, Texas and Lafayette, Louisiana, and its Middle East and North Africa (MENA) operations office is in Dubai, United Arab Emirates (UAE).

Corporate Strategy: Expansion Philosophy

Acquire assets during the current period of low oil prices and in locations with a challenging political climate which prohibits much larger companies from operating, and where our network of contacts and relationships can advance projects.

❖ Risk Management:

- **Subsurface: The Geology – Target ‘World Class Petroleum Systems’.**
- **Engineering: Acquire ready to produce hydrocarbons / Facilities & wells are in place.**
- **Surface Conditions / Operating Environment: ‘Licence to operate’ – local knowledge, leverage relationships & contacts.**



Petsec Energy is an independent oil and gas exploration and production company listed on the Australian Stock Exchange with operations in the shallow waters of the Gulf of Mexico and onshore Louisiana, USA (offices Houston & Lafayette), and onshore in Yemen (offices Sanaa & Dubai-UAE).

USA

- ❖ Operated in USA Gulf of Mexico and Louisiana since 1991.
- ❖ Drilling success: 109 wells / 81 successful / 74% success – net production 214.3 Bcfe, US\$564MM EBITDAX.
- ❖ 2015 discoveries: Mystic Bayou & Hummer (Main Pass 270/273/274) / 2P reserves 3.6 MMboe (predominately Mystic).
- ❖ Hummer: Potential to exceed predrill mapped target of 59 Bcf & 1.2MMbbl – 183 Bcf & 3.7MMbbl. Reserves determination requires well test to determine oil component and further development wells.
- ❖ 2016 Development - Hummer: Jacket, well completion, well test – oil volumes. Net capex ~ U\$2MM.
- ❖ Net 2P reserves as of 1 January 2016: 3.7 MMboe / NPV10 US\$32.7MM (predominantly Mystic).

Yemen

- ❖ Commenced operations 2014.
- ❖ Damis (BlockS-1) Production Licence (100% PI) acquired February 2016:
 - Holds five oil & gas discoveries – An Nagyah (developed/productive) / Osaylan, Harmel, An Naeem & Wadi Bayhan (undeveloped).
 - An Nagyah Oilfield reserves as of 1 January 2016 ²: 12MMbbl oil gross / 5.6 MMbbl net (NPV10 U\$155.4MM).
 - The four undeveloped oil & gas fields hold resource potential ³: > 34 MMbbl oil & 550Bcf gas gross.
- ❖ Block 7 (Al Barqa) 75% working interest (63.75% participating interest) acquired 2014/2015:
 - Al Meashar undeveloped oil discovery – 2 wells / target 11 MMbbl oil gross (7 MMbbl net) / > 50 MMbbl potential
 - Eight prospects / leads: target sizes 2 to 900 MMbbl oil gross.

¹ Calculated using deterministic method and conversion to BOE was calculated using ratio of six thousand cubic feet of natural gas to one barrel of oil

² Source: DeGolyer and McNaughton Canada Limited

³ Source: Wood Mackenzie Asia Pacific Pty Ltd

Petsec Energy History: Capital Structure / Oil & Gas Prices

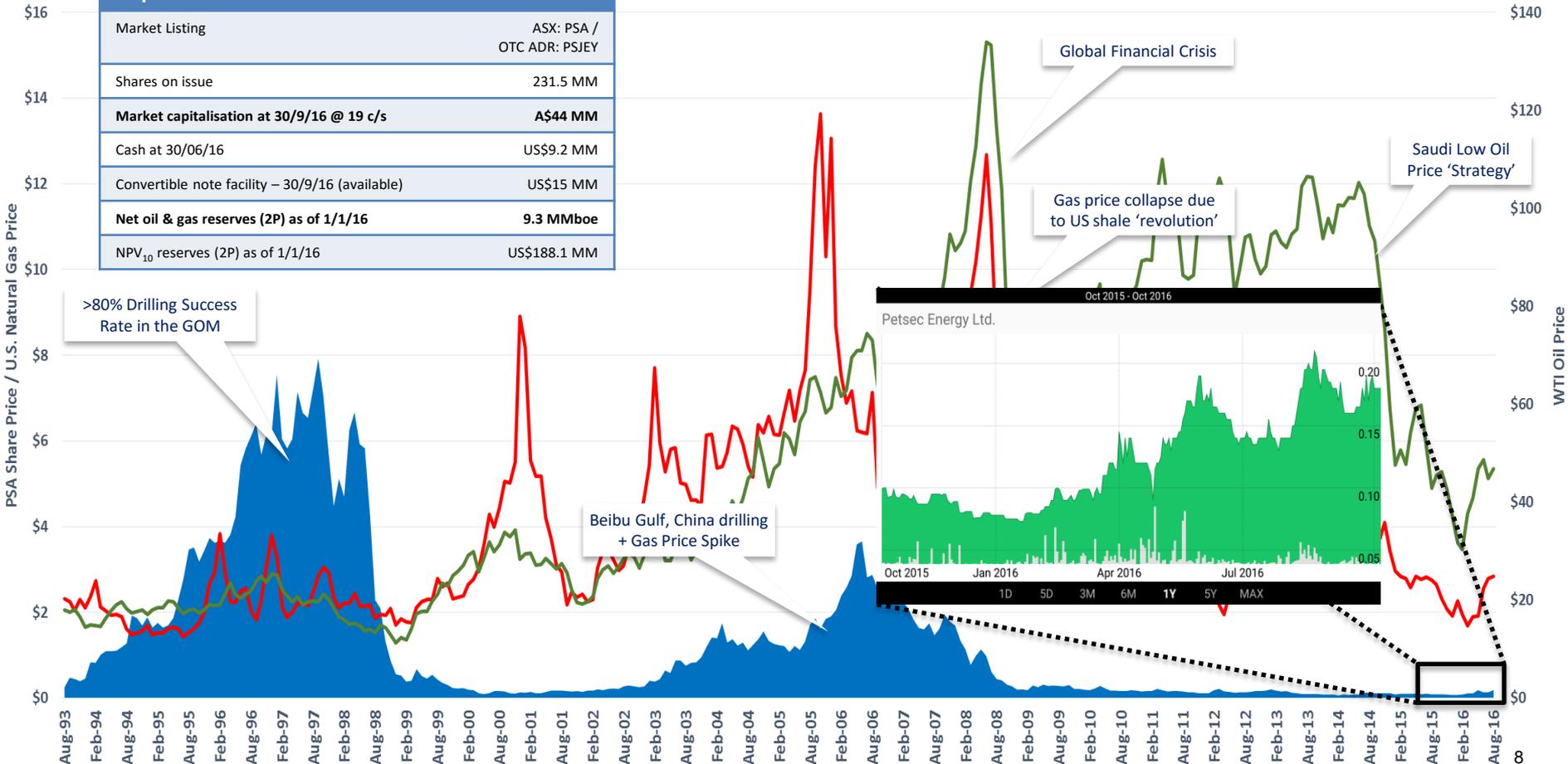
Capital Structure / WTI Oil and US Natural Gas Prices

Petsec Energy (PSA) Share Price / WTI Oil Price / U.S. Natural Gas Price

■ PSA Share Price ■ Natural Gas Price ■ WTI Oil Price

Capital Structure

Market Listing	ASX: PSA / OTC ADR: PSJEY
Shares on issue	231.5 MM
Market capitalisation at 30/9/16 @ 19 c/s	A\$44 MM
Cash at 30/06/16	US\$9.2 MM
Convertible note facility – 30/9/16 (available)	US\$15 MM
Net oil & gas reserves (2P) as of 1/1/16	9.3 MMboe
NPV ₁₀ reserves (2P) as of 1/1/16	US\$188.1 MM



>80% Drilling Success Rate in the GOM

Beibu Gulf, China drilling + Gas Price Spike

Global Financial Crisis

Gas price collapse due to US shale 'revolution'

Saudi Low Oil Price Strategy

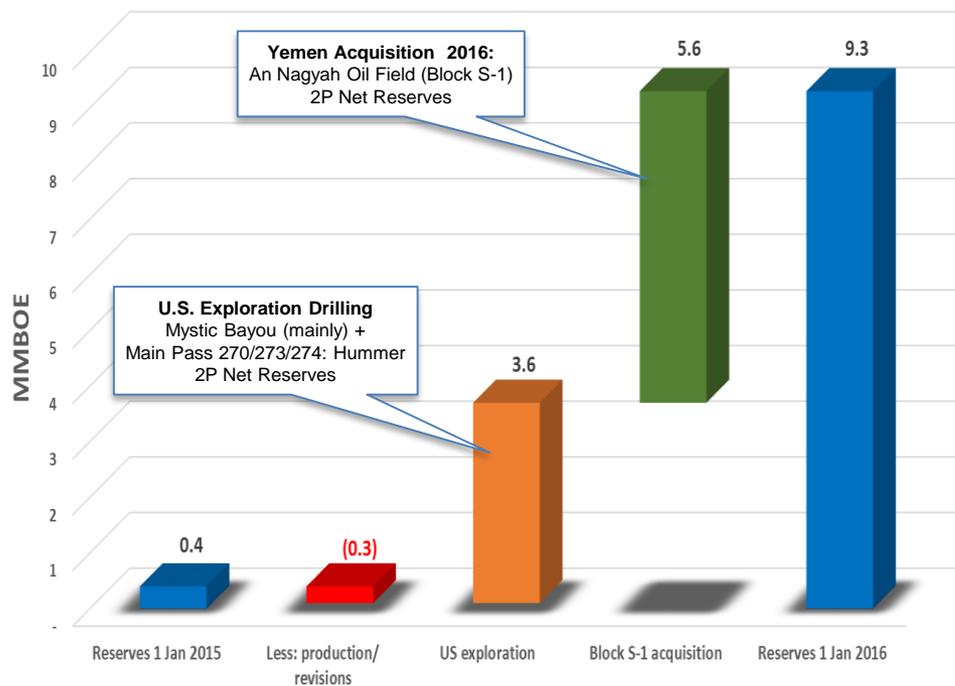


WTI Oil Price

Petsec Energy:

12 Month 2P Reserves Growth & Valuation

3000% Growth in Net 2P Oil & Gas Reserves



Net Reserves – NPV10 US\$188.1MM (~ A\$1.06/share)

Oil Equivalent (MMBoe) ¹	Net Proved Reserves ²	Net Probable Reserves ²	Net Proved + Probable Reserves ²
USA Reserves			
Reserves as of 1 Jan 2015	0.3	0.1	0.4
Additions	2.0	1.6	3.6
Revisions	(0.1)	(0.1)	(0.2)
Production	(0.1)	-	(0.1)
USA reserves as of 1 Jan 2016	2.1	1.6	3.7
Yemen Reserves			
Reserves as of 1 Jan 2015	-	-	-
Acquisitions – An Nagyah Oilfield	4.5	1.1	5.6
Yemen reserves as of 1 Jan 2016	4.5	1.1	5.6
Group Reserves as of 1 Jan 2016	6.6	2.7	9.3
NPV₁₀ Petsec Group Reserves as of 1 Jan 2016			US\$188.1MM ~ A\$1.06/share

1 Million barrels of oil equivalent (using a ratio of approximately six thousand cubic feet of natural gas to one barrel of oil).

2 Net reserves means those reserves representing the Company's net revenue interest (or net economic interest) which is the Company's working interest less royalties payable in the USA, and in Yemen net of all costs including all Yemen government costs including taxes.

Petsec Energy

USA Oil and Gas Assets

Petsec Energy Oil & Gas Assets

USA Production / Development Projects

Onshore Louisiana & Shallow Waters Gulf of Mexico



- ❖ USA net 2P oil & gas reserves as of 1 January 2016 were 3.7 MMboe with a NPV10 of US\$32.7 million (Cawley, Gillespie & Associates) mostly attributed to the Mystic Bayou Field.
- ❖ Production: Two fields – Jeanerette (ASF #4 well) and Mystic Bayou Williams # 2 Alt. well.
- ❖ **Development Projects:**
 - Williams No.2 Alt. well brought into production on 31 August 2015, four months after spud. Three further development well locations.
 - Main Pass 270 #3 BP 1 well on the Hummer prospect discovered in 2015 will be completed and tested in 2016. A further three to nine development well locations identified.



2015 USA Discovered Reserves: 3.6 MMboe

Mystic Bayou Prospect – Onshore Louisiana

- ❖ Located 65 kilometres (40 miles) southeast of Lafayette in a low lying area of the Atchafalaya River Basin in St. Martin Parish, onshore Louisiana USA
- ❖ Petsec owns a 25% non operating working interest (18.5% net revenue interest).
- ❖ Currently producing at a gross rate of ~5.5 MMcfpd and 190 bcpd.



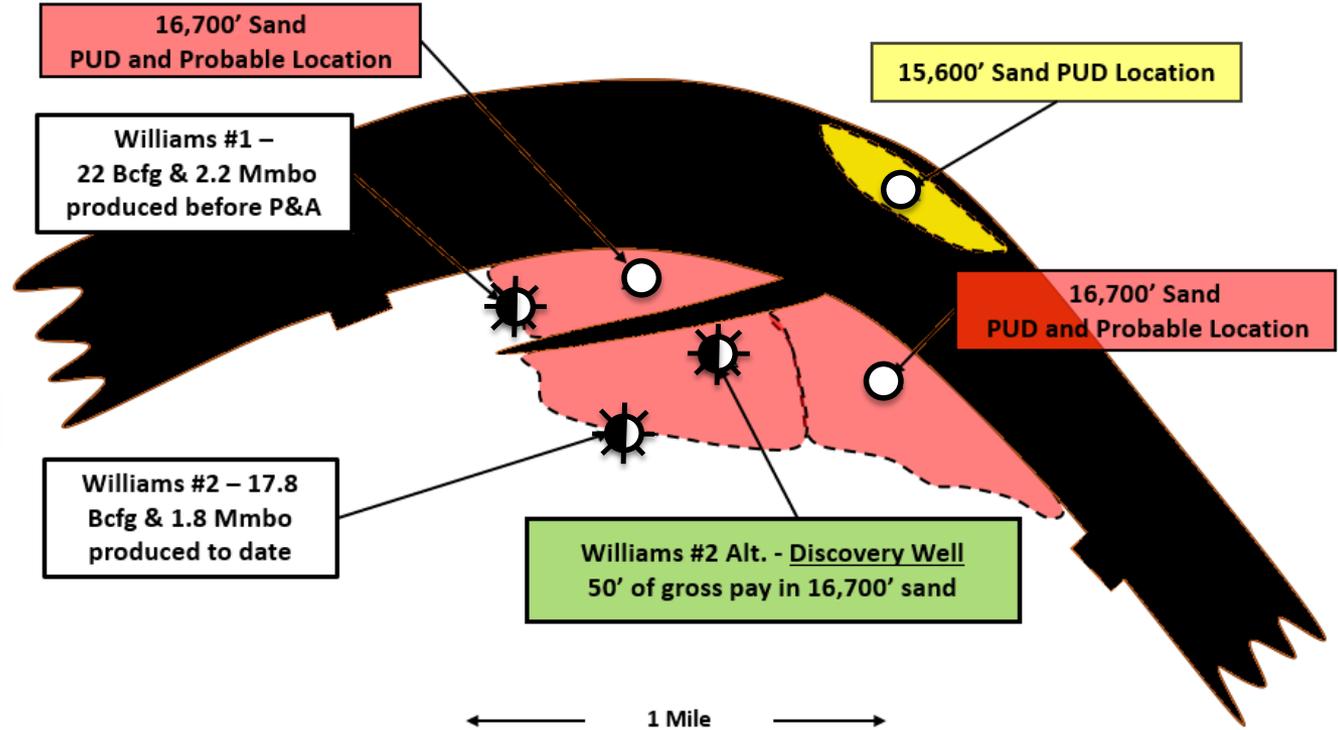
Petsec Energy Oil & Gas Assets USA Production & Development

2015 USA Discovered Reserves: 3.6 MMboe

Mystic Bayou Prospect – Onshore Louisiana

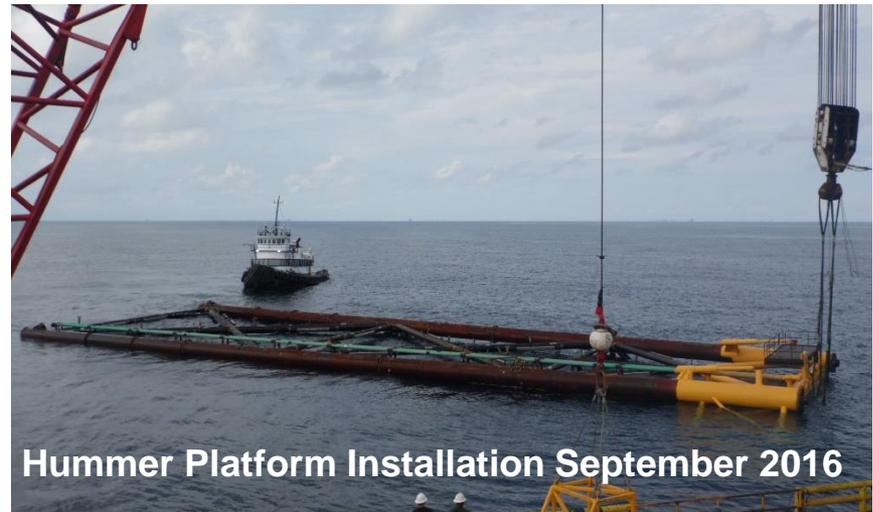
- ❖ The Mystic Bayou Field has produced in excess of 3.4 million barrels of oil and 39 billion cubic feet of gas in the target horizons.
- ❖ The Williams #2 Alt well was drilled to a total measured depth of 5,263 metres (17,266'), equivalent to 5,143 metres (16,873') true vertical depth.
- ❖ Future development will focus on drilling the adjacent three well locations of proved undeveloped reserves shown in the adjacent schematic.

Mystic Bayou Map with 16,700' Reservoir Outlines



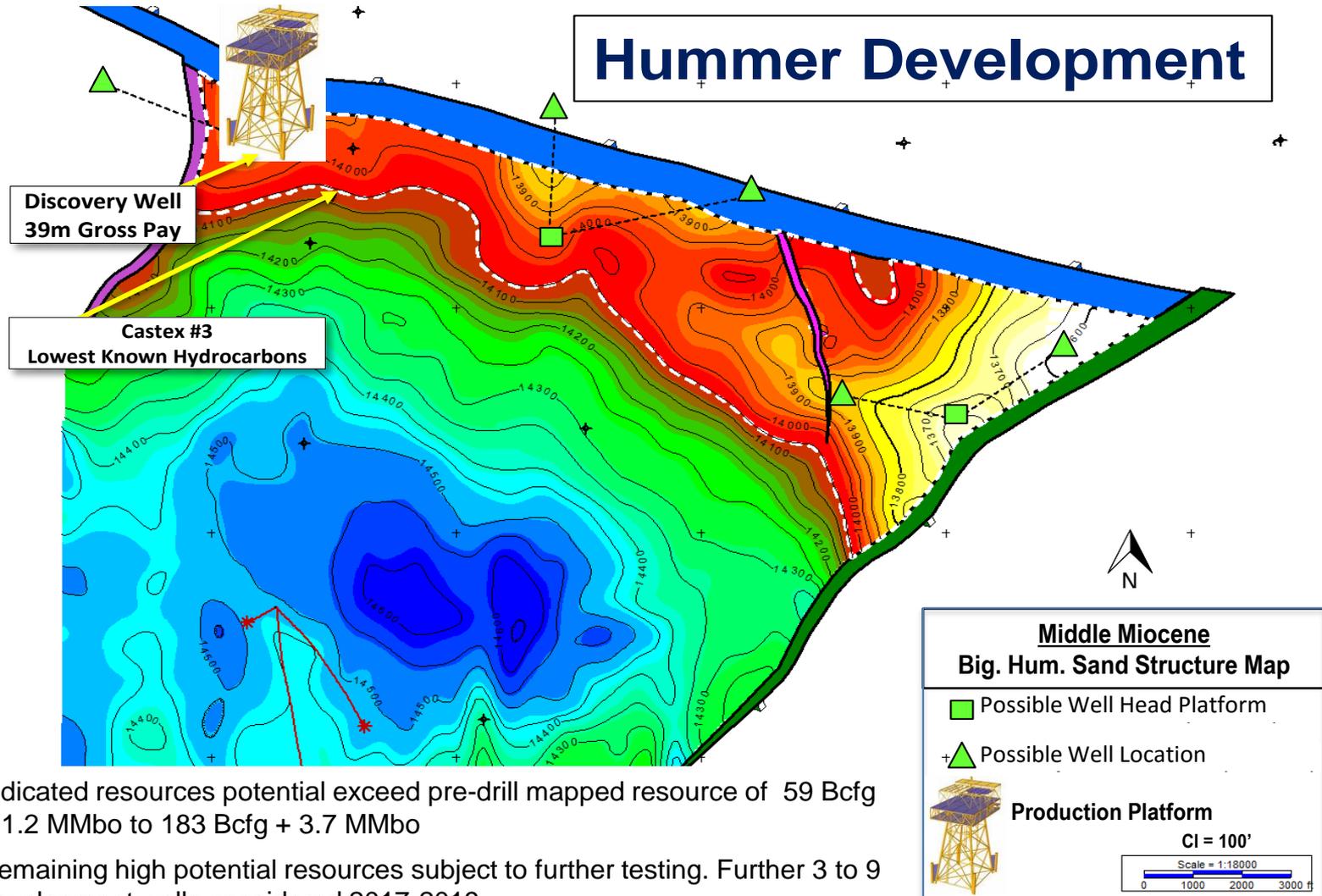
2017 Offshore Production Start-up

- ❖ The Hummer gas-condensate, possible oilfield, is located approximately 80 kilometres (50 miles) southeast of the Mississippi River delta, in 65 metres (215 feet) of water in the Gulf of Mexico USA.
- ❖ Petsec owns a 12.5% non-operating working interest (10.24% net revenue interest).
- ❖ The Main Pass 270 #3 exploration well was drilled in June-December 2015 to a total depth of 4,800 metres (15,748') TVD.
- ❖ The discovery well was cased and mud-line suspended December 2015. Intersected 129 feet of oil & gas pay.
- ❖ Potential to exceed pre-drill mapped target of 59 Bcf & 1.2MMbbl – 183 Bcf & 3.7MMbbl



- ❖ Installation of the jacket, completion of well, and well testing is anticipated to be completed by November.
- ❖ Results from testing will facilitate design and engineering of platform topsides.
- ❖ First commercial production from the Big Hum Sand is expected to commence in 2nd quarter 2017.
- ❖ Additional appraisal drilling is expected to occur in 2017-18 testing the deeper Criss I sand reservoir for oil potential – 1 well to be drilled in 2017.
- ❖ The nearest analogue field at Main Pass 280/281 (Walter Oil & Gas Corp.) has produced in the order of 28MMbblss oil (estimate) from the Criss I reservoir, the equivalent section to be tested by Petsec for oil in the 2nd quarter 2017

2017 Offshore Production Start-up



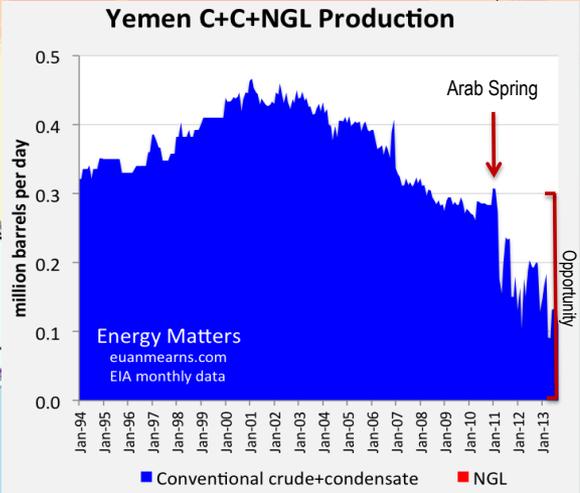
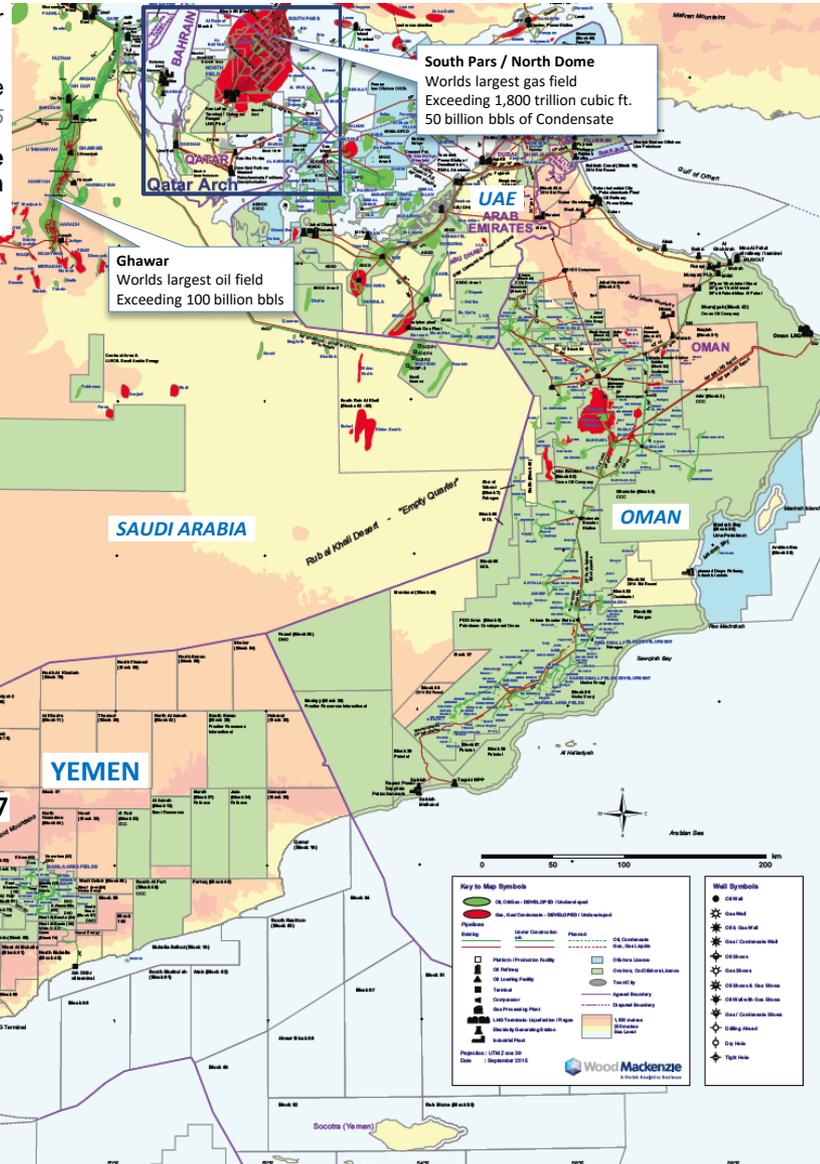
- ❖ Indicated resources potential exceed pre-drill mapped resource of 59 Bcfg + 1.2 MMbo to 183 Bcfg + 3.7 MMbo
- ❖ Remaining high potential resources subject to further testing. Further 3 to 9 development wells considered 2017-2019.

Petsec Energy

MENA Oil and Gas Assets

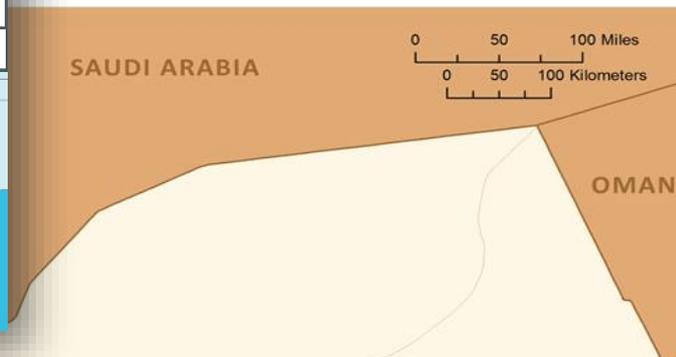
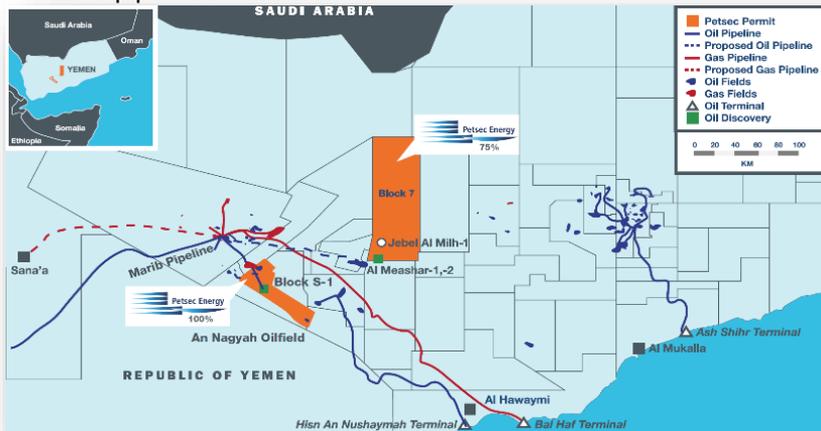
Middle East and North Africa (MENA) World's Largest Oil & Gas Reserves

- ❖ MENA provides major expansion potential for Petsec with a large number of material Lower Risk acquisition opportunities within the region.
- ❖ Approximately 53% of the world's proven oil reserves are located in the Middle East. *Source: OPEC Annual Statistical Bulletin 2015*
- ❖ Yemen, located on the Arabian Plate, contains geology comparable to that of Saudi Arabia, comprising the equivalent Petroleum Systems to those of Saudi Arabia.



Petsec Energy Yemen Leases: Damis (Block S-1) & Block 7

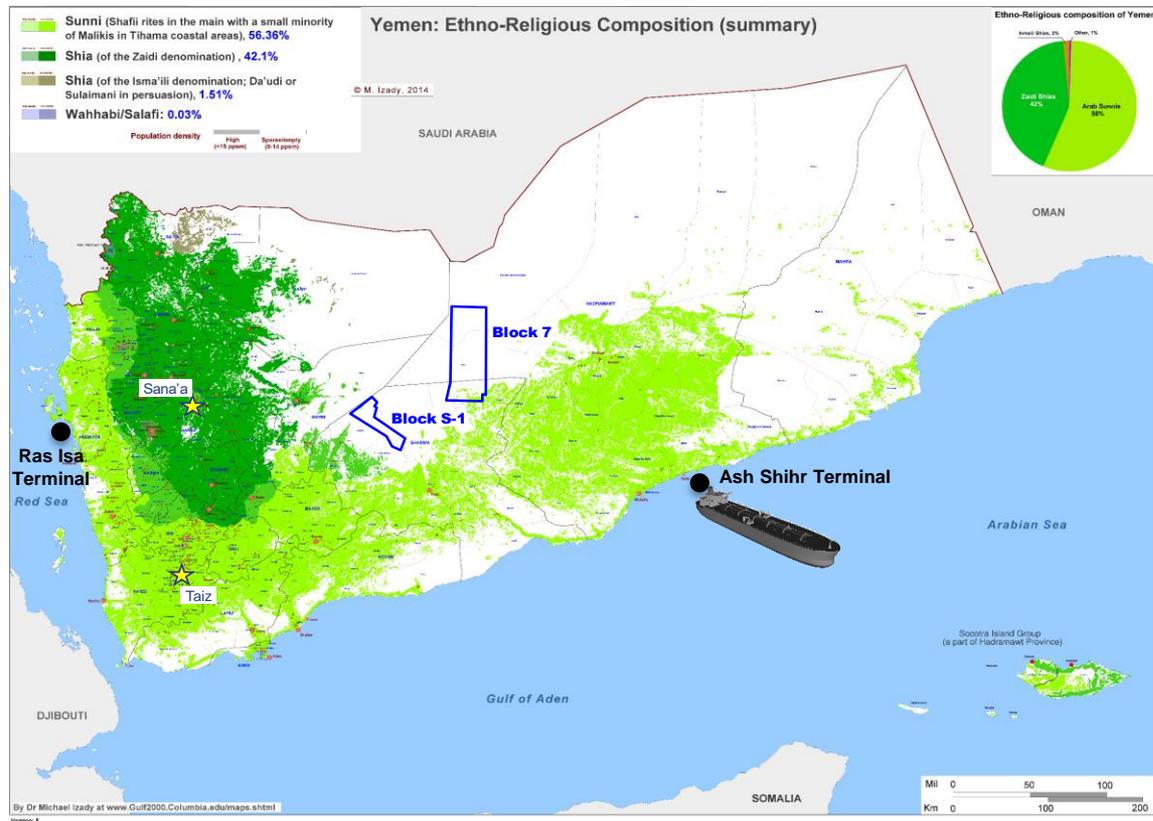
- ❖ Petsec's Yemen blocks are located in the prolific Shabwa Basin that has exceptional petroleum source rocks and associated petroleum system, in excess of 2 billion barrels of oil have been discovered in the basin to date.
- ❖ Damis (Block S-1) includes 5 oil and gas fields, including the productive and developed An Nagyah Oil Field with significant production infrastructure that is connected to the main Marib Export Pipeline.
- ❖ Al Barqa (Block 7) holds the Al Meashar Oilfield and eight material prospects and leads located adjacent to major infrastructure and planned future pipelines.



Yemen Political Status

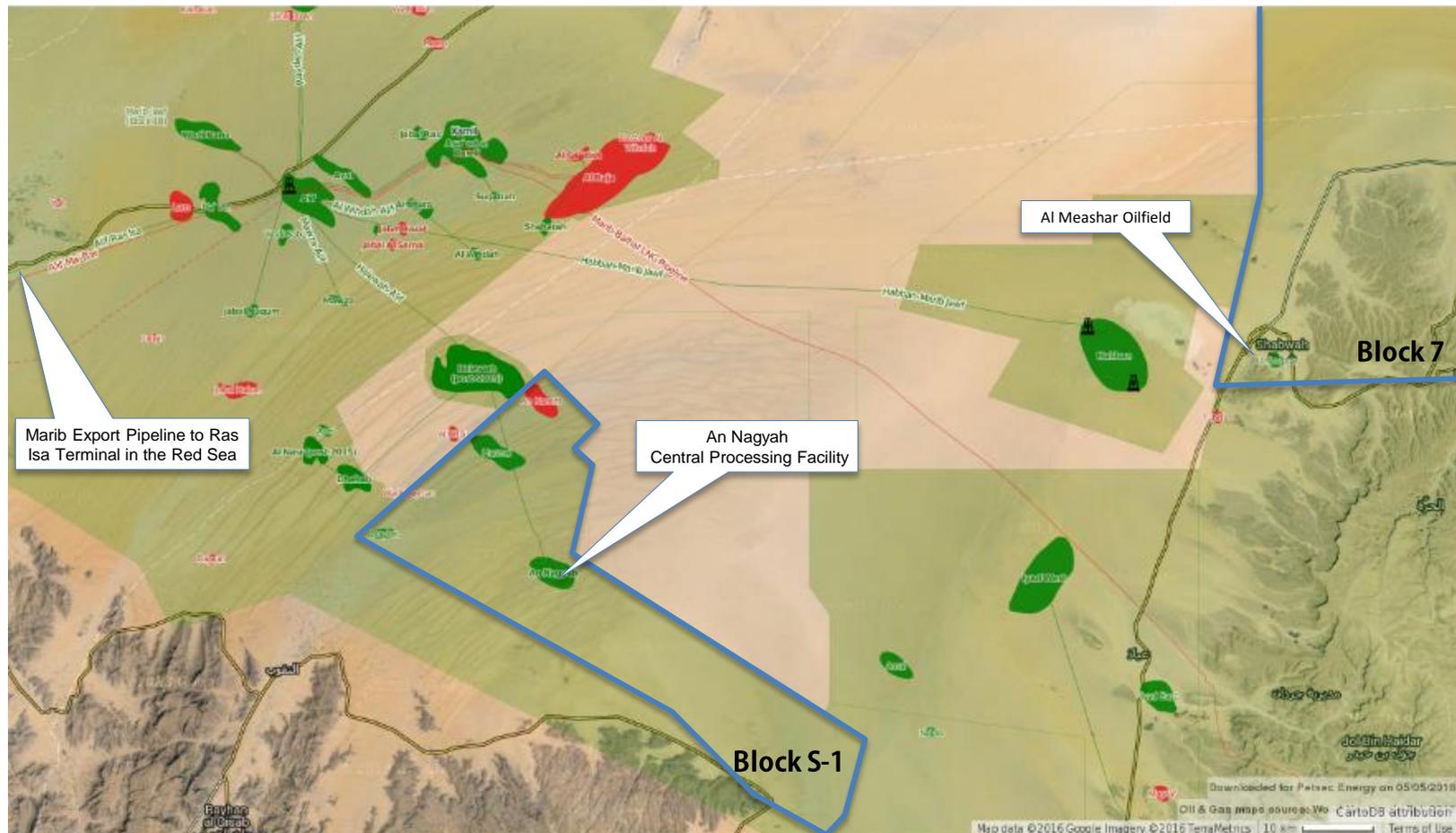
Peace Negotiations Underway

- ❖ September – 150,000 bpd Aden Refinery re-opens
- ❖ August 2016 – Ash Shihr Terminal in the Gulf of Aden re opens, lifting of 3 million barrels of crude by Glencore
- ❖ 22nd April 2016 - Peace negotiations begin in Kuwait.
- ❖ 30th April 2015 – Last crude exports with cessation of liftings, oil industry in Yemen remains shut-in.
- ❖ 28th March 2015 – Saudi-led coalition of Gulf Arab states launches air strikes against Houthi targets and imposes naval blockade.
- ❖ 14th October 2014 - Houthi rebels take control of Sanaa.
- ❖ 1st August 2014 - President Hadi sacks his coalition cabinet & ministry.
- ❖ Our areas of operation in the Shabwah Governorate are very sparsely populated (see figure) and remain relatively peaceful, with the local government extending their support for the restart of operations in both Block S1 and Block 7.

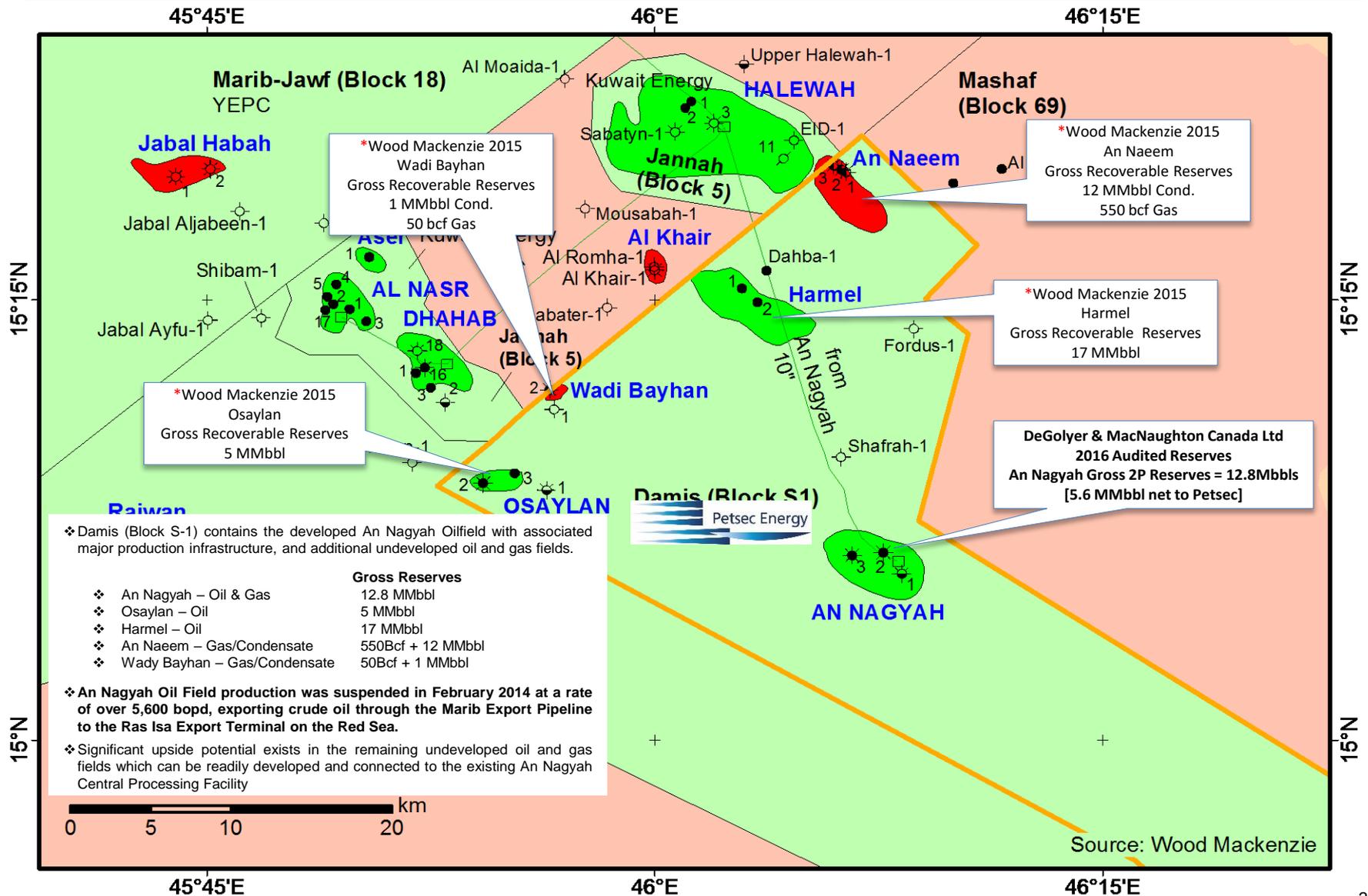


Damis (Block S-1): An Nagyah Oilfield Marib-Shabwah Basin Production Hub

- ❖ Damis (Block S-1) and Block 7 are located within the prolific, 'world class', Marib-Shabwah Basin.
- ❖ Excess production capacity at the An Nagyah CPF in Block S-1 can be utilised to produce the identified reserves in the four undeveloped fields within the block.
- ❖ An Nagyah is connected to the Marib-Shabwah production hub which delivers crude for export directly to the Ras Isa Terminal on the Red Sea via a 610-910mm diameter 438 km export pipeline.



Damis (Block S-1) Production Licence 5 Oil & Gas Fields



An Nagyah Oilfield Central Processing Facility

Accommodation & Life Support Area.

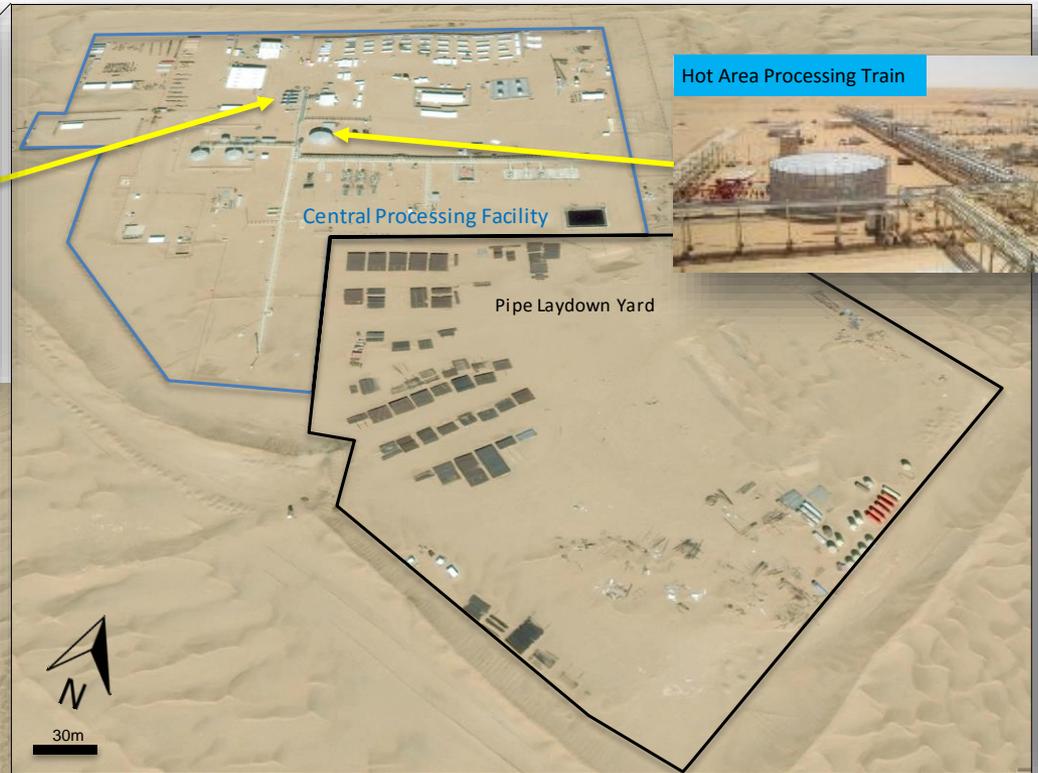


Hot Area Processing Train



Central Processing Facility

Pipe Laydown Yard



30m



100m

- ❖ **The previous operator has invested over \$450 million in the An Nagyah Oilfield;** acquiring seismic data, drilling, production facilities and associated infrastructure.
- ❖ Due to the arid environment the An Nagyah facility is in exceptional condition and has been well maintained during the current shut-in period.
- ❖ The CPF is connected via the Company's 80,000 bopd pipeline to the Marib Export Pipeline (200,000 bopd capacity) to the Export Terminal at Ras Isa on the Red Sea.
- ❖ **A large inventory of spare parts, drilling equipment and compression equipment is warehoused onsite.**

An Ngyah Oilfield Central Processing Facility



Crude Storage

- ❖ The Central Processing Facility (CPF) was completed in 2004 reaching a peak production rate of over 12,000 bopd.
- ❖ The CPF can process 20,000 bopd.
- ❖ Crude storage capacity of 17,500 bbls.
- ❖ The field was producing in excess of 5,000 bopd when production was suspended in February 2014.
- ❖ There are currently 15 production wells shut-in.
- ❖ Experienced Yemeni production staff are based at the CPF.
- ❖ **The company is planning for the re-start of production in the first quarter of 2017.**

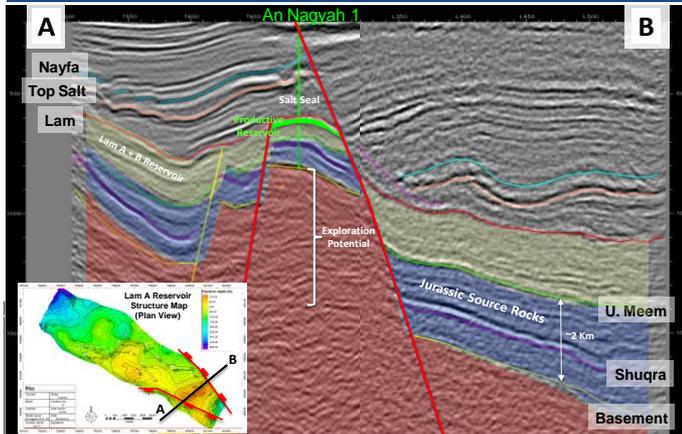


Desalinator

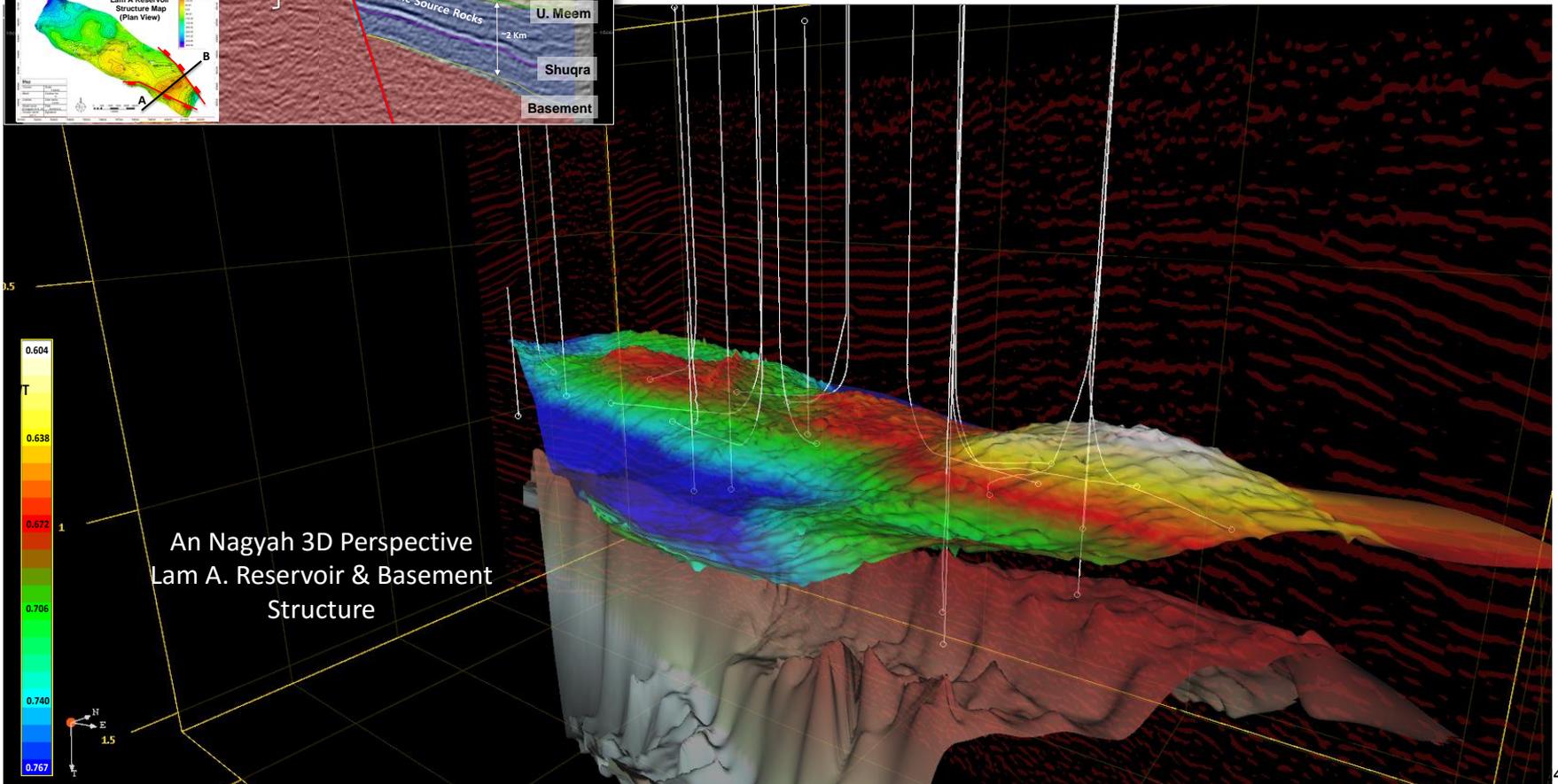


Separator Pipework

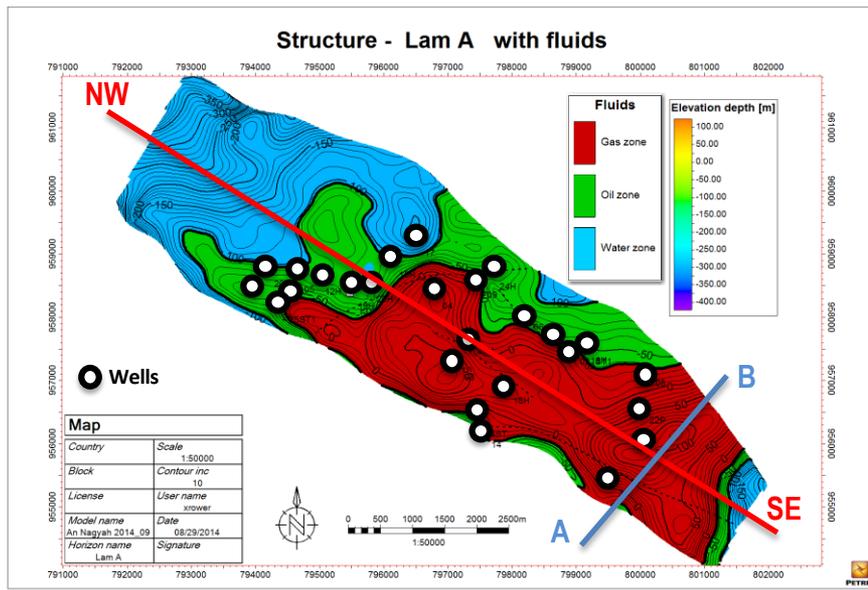
An Nagyah Oilfield Subsurface 3D TWT Cube & Seismic Cross Section



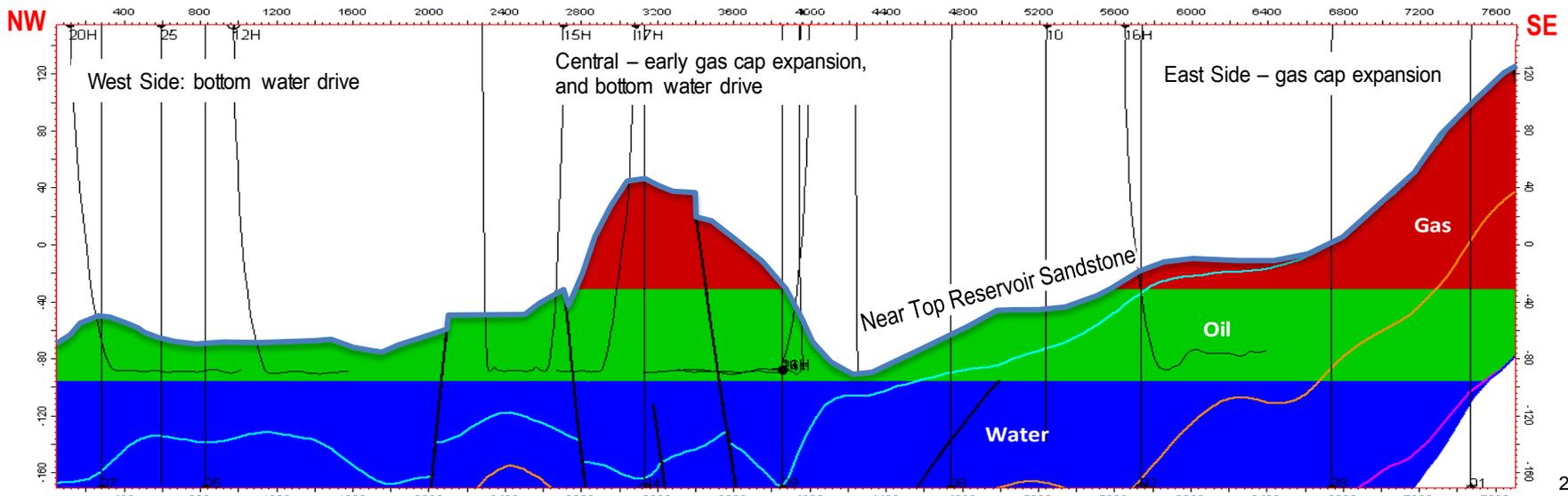
- ❖ The An Nagyah Oilfield is located within a world class petroleum system containing in excess of 2,000m of exceptional quality Jurassic source rocks.
- ❖ Structurally the field is a North-West to South-East trending tilted horst block within the Jurassic aged Sab'atayn Rift Basin.
- ❖ The most prolific reservoir is the uppermost Lam Sandstone, a thick sequence (100-125m) of delta front sandstones of Late Jurassic age.
- ❖ 15 production wells currently shut-in available for restart of production.



An Nagyah Oilfield Reservoir Geological Cross Section

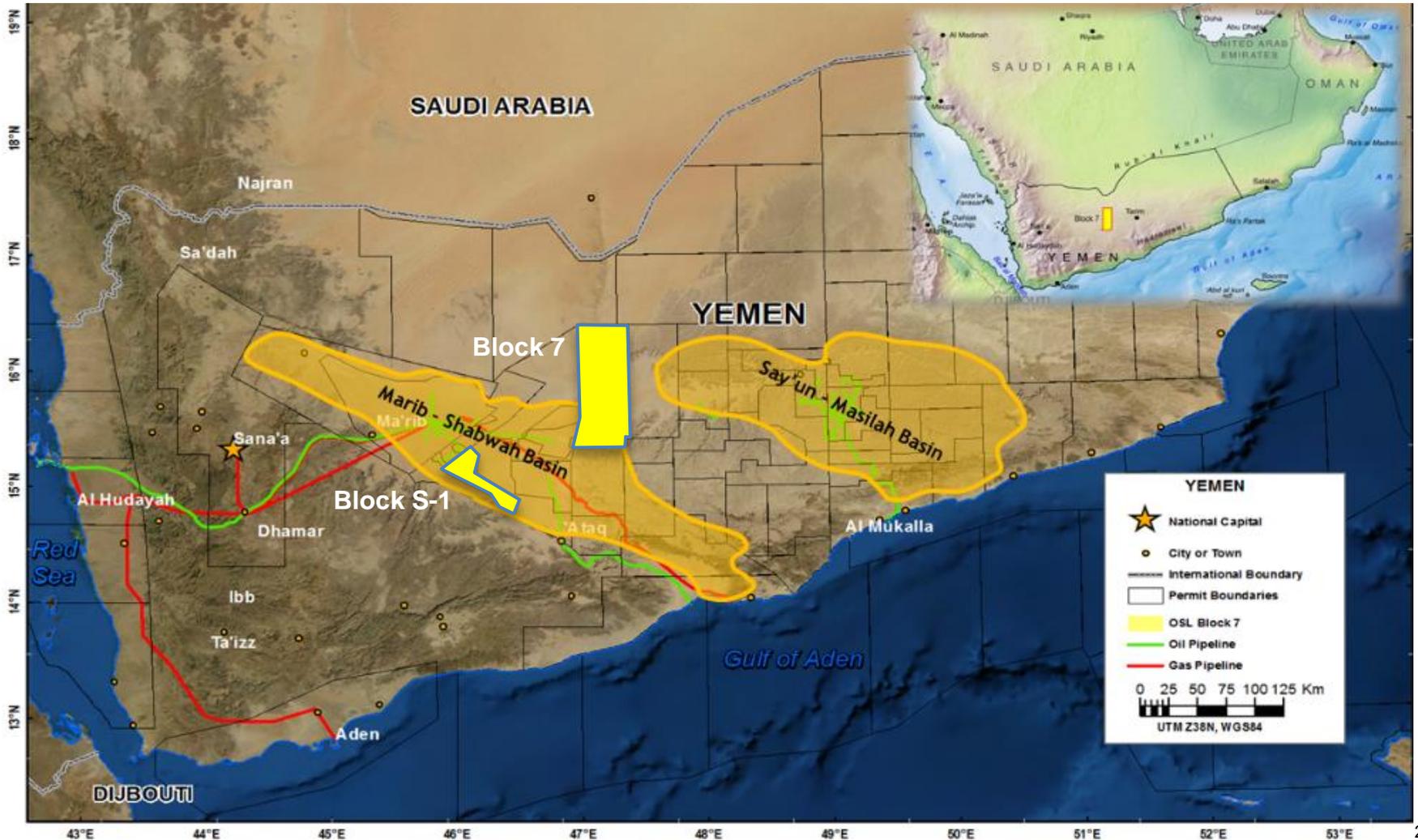


- ❖ The An Nagyah Oilfield contains a 50 metre oil column and up to a 135 metre gas cap at its structural crest.
- ❖ Oil is produced through vertical and horizontal wells drilled across the sandstone reservoir.
- ❖ Production in the field is maintained through an active aquifer in the north-west flank of the field and via gas expansion in the up dip South-Eastern crest where there is a significant gas cap.
- ❖ Peak production has exceeded 12,000 bopd but has been limited by gas compression capacity for the re-injection of produced gas back into the reservoir.
- ❖ The re-injected gas maintains reservoir pressure and allows for greater recovery of oil from the field.



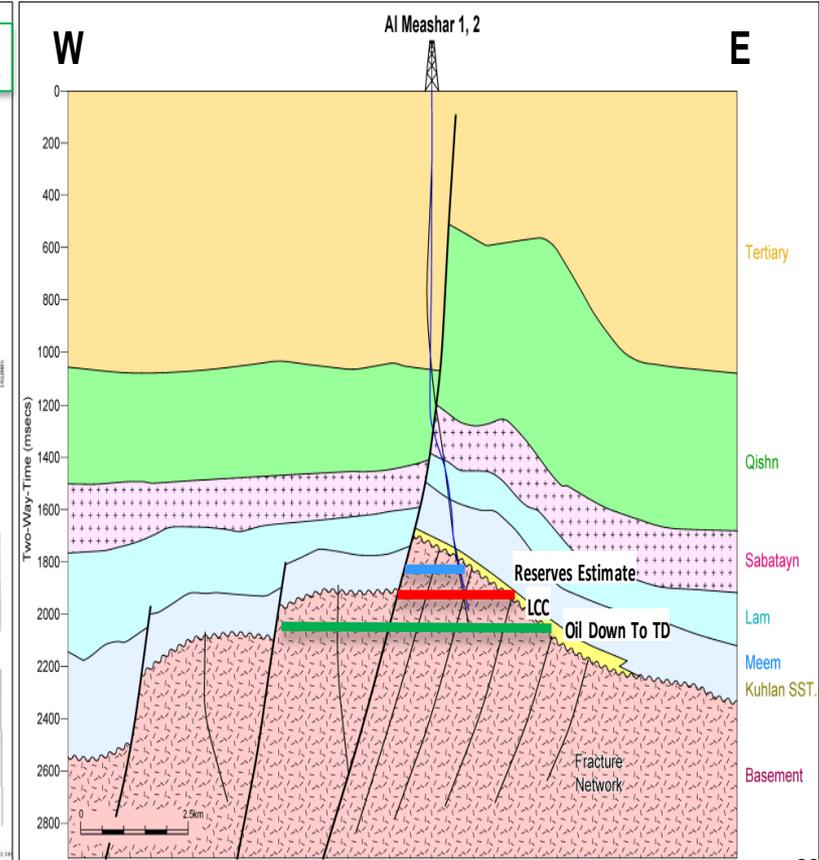
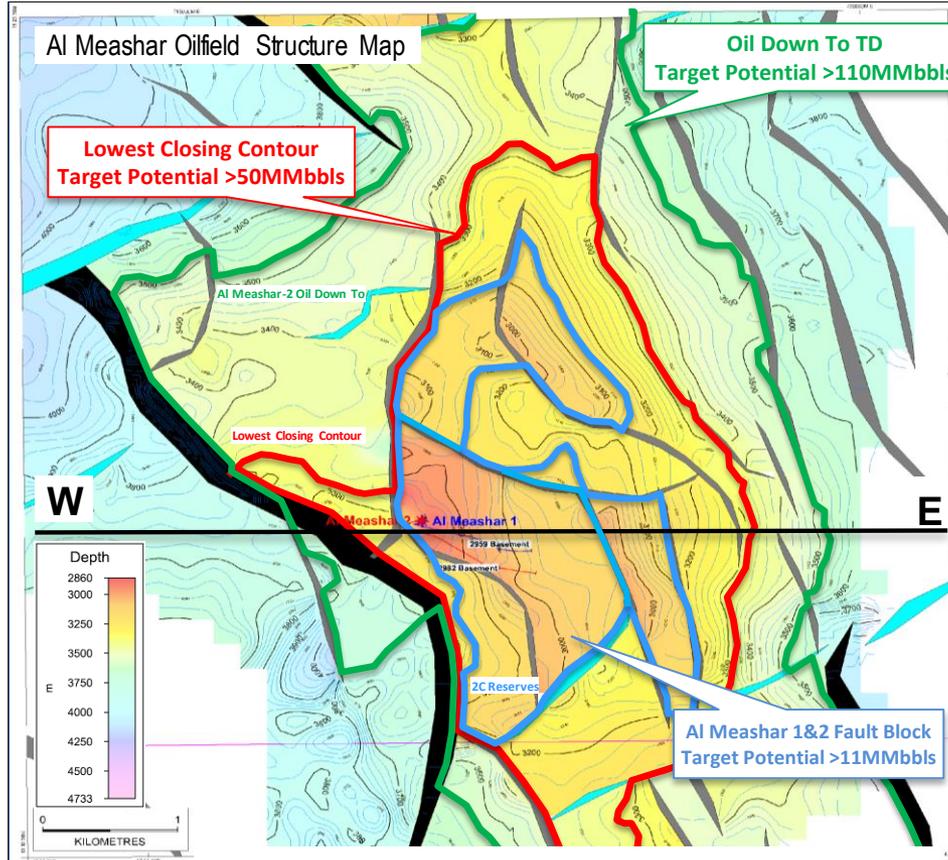
Al Barqa (Block 7) Development & Exploration Potential

- ❖ Block 7 is located approximately 80km east of Block S-1, within the prolific Shabwah Salt Basin.
- ❖ The block holds the Al Meashar Oilfield (two wells) and an inventor of dell defined prospects and leads with mapped target sizes ranging from 2 – 900 MMbo within the highly productive Khulan-Basement play fairway.

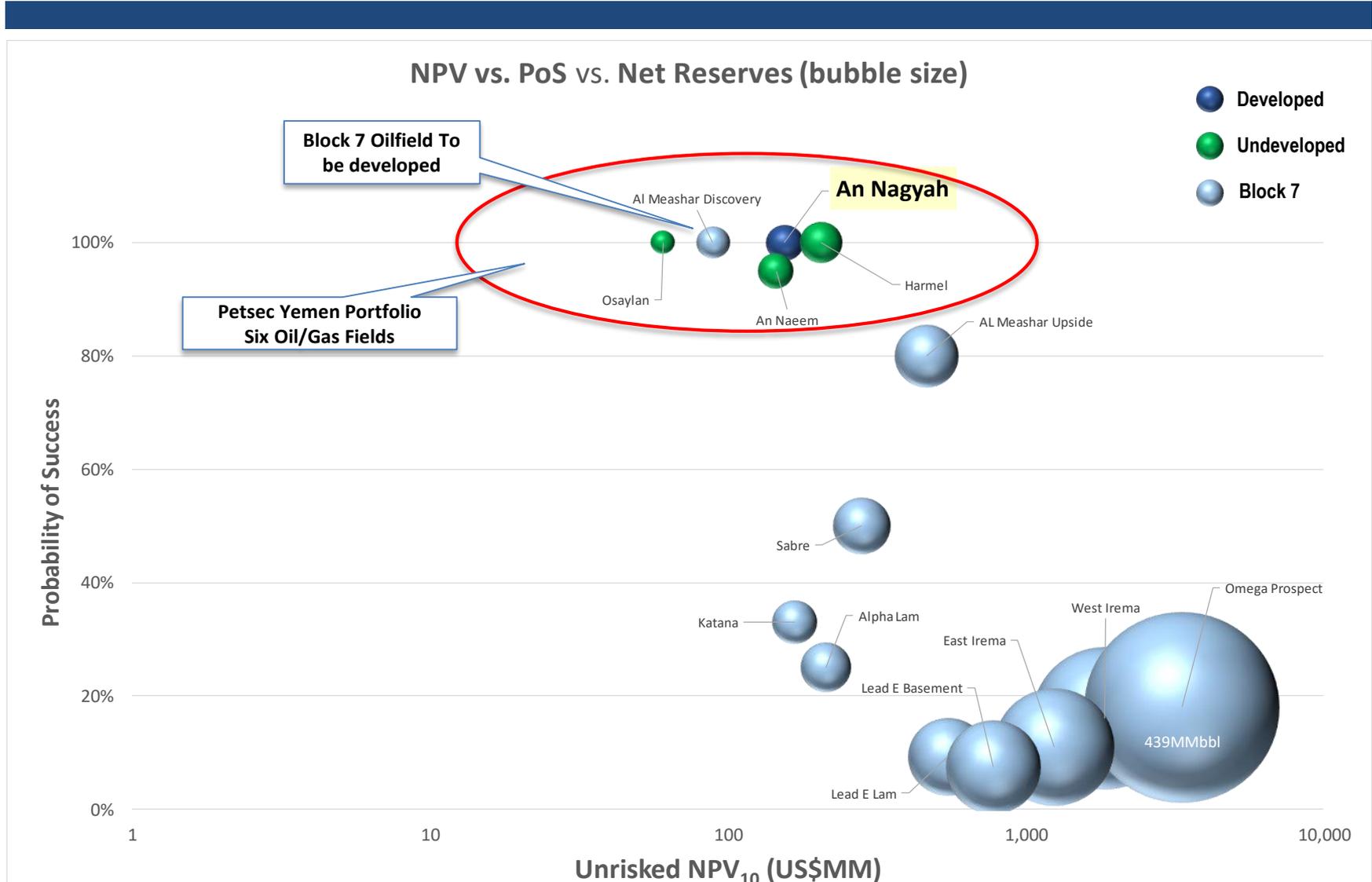


Al Barqa (Block 7) Al Meashar Development Potential

- ❖ 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** which has an oil column of **945m** and has been producing **~20,000 BOPD** up until production was suspended in March of 2015.
- ❖ The Al Meashar undeveloped oil discovery within the drilled fault block – two well intersection targets **11 MMbbl oil gross** (7 MMbbl net) with potential to increase to **> 50 MMbbl** within the currently mapped red Lowest Closing Contour.
- ❖ 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 target within the oil-down-to (ODT) green contour exceeds 110 MMbbbls.**
- ❖ 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.

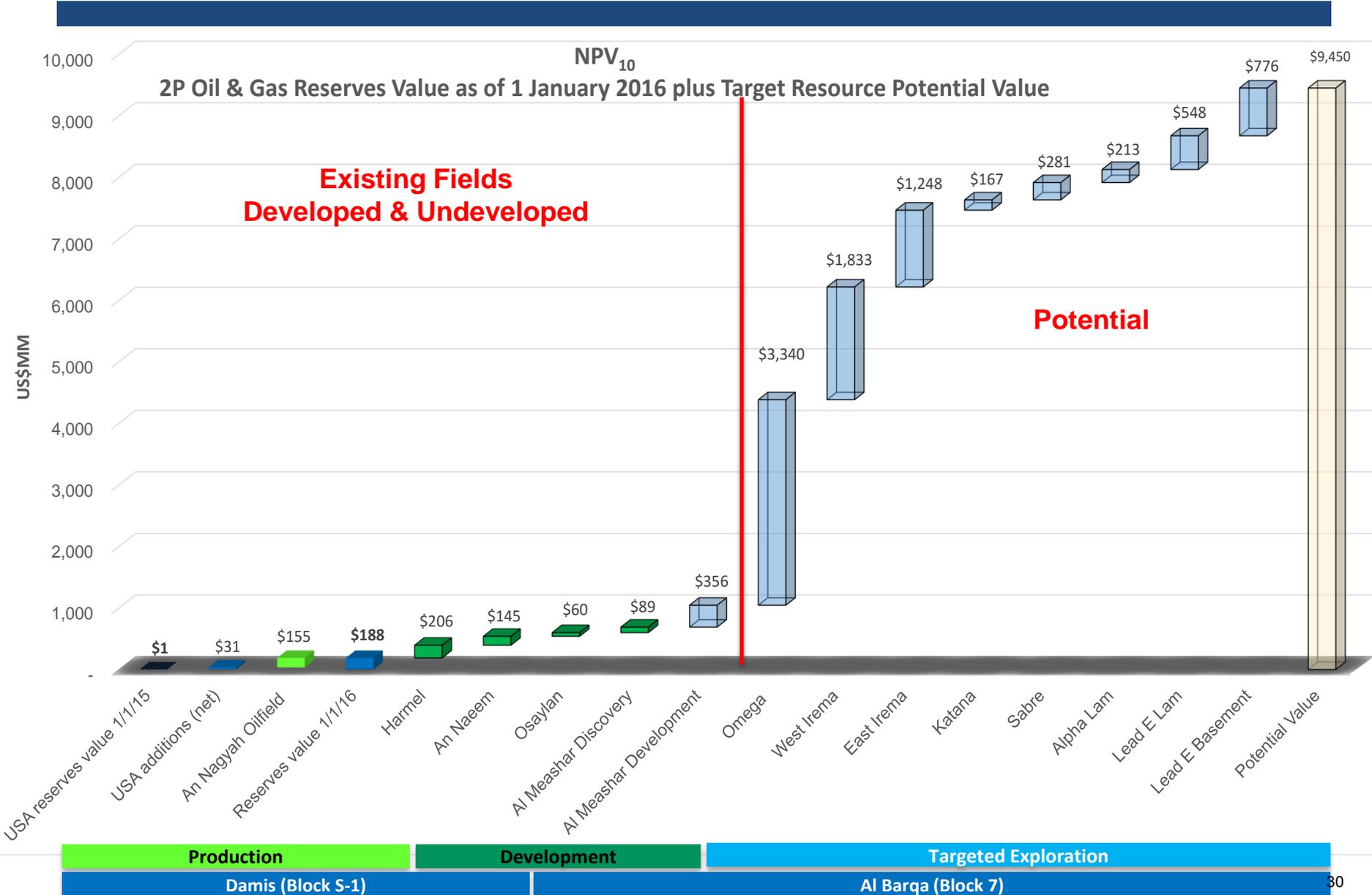


Yemen Reserves Potential Significant Upside



The attributed NPV10 of US\$155.4MM is solely restricted to the audited reserves of the An Nayah developed oilfield. The Chart above clearly identifies An Nayah as the starting point to a significant reserve base of material value.

Estimated Reserves Value & Potential Significant Upside



An Nagyah Production Restart & Further Oil Reserve Acquisitions

Damis (Block S-1)

- ❖ **Restart oil production at the An Nagyah Oilfield- 1Q 2017:**
 - ❖ Currently there are 15 wells capable of producing oil at An Nagyah; production is expected to restart at or above 5,000 bopd - field exceeded 5,650 bopd when it was last in production in February 2014.
 - ❖ Following the start-up of production a work-over and infill drilling campaign is targeted to double production.
 - ❖ Production from the other oilfields in Block S-1 will also be initiated from existing wells with produced crude being trucked to the An Nagyah CPF for processing and export via pipeline.

Al Barqa (Block 7)

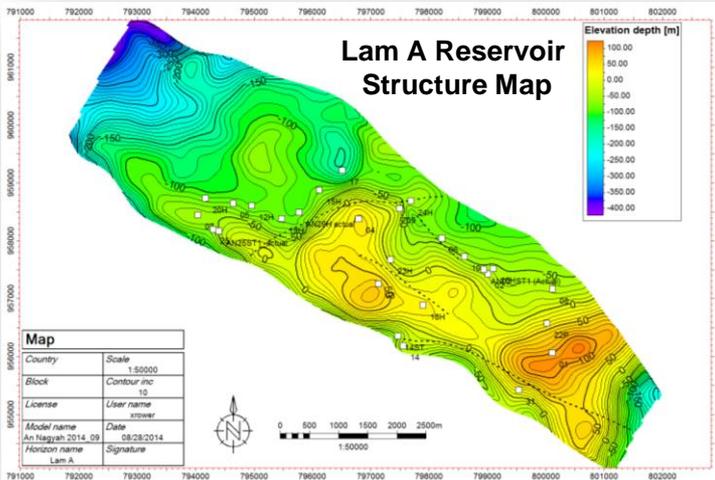
- ❖ Initiate a long term production test of the Al Meashar 1 & 2 wells when conditions allow.
- ❖ Drill an exploration well on the Omega Prospects given rig availability.

Acquisitions

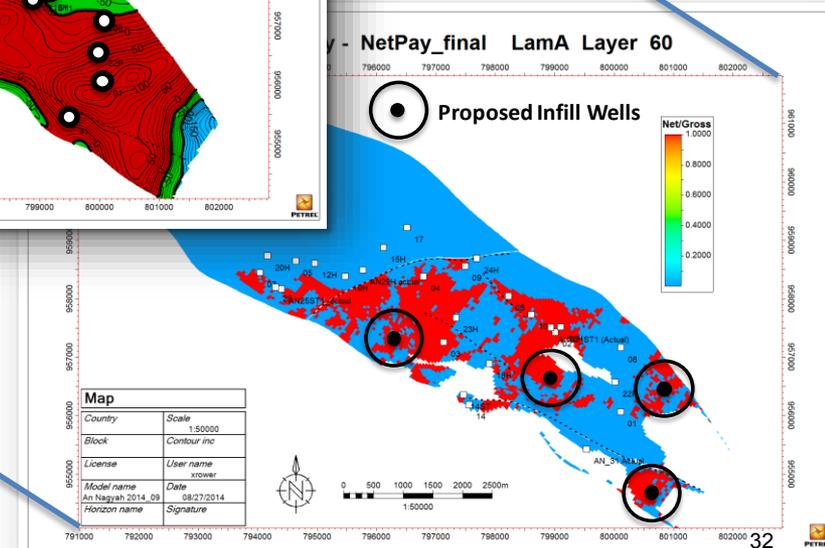
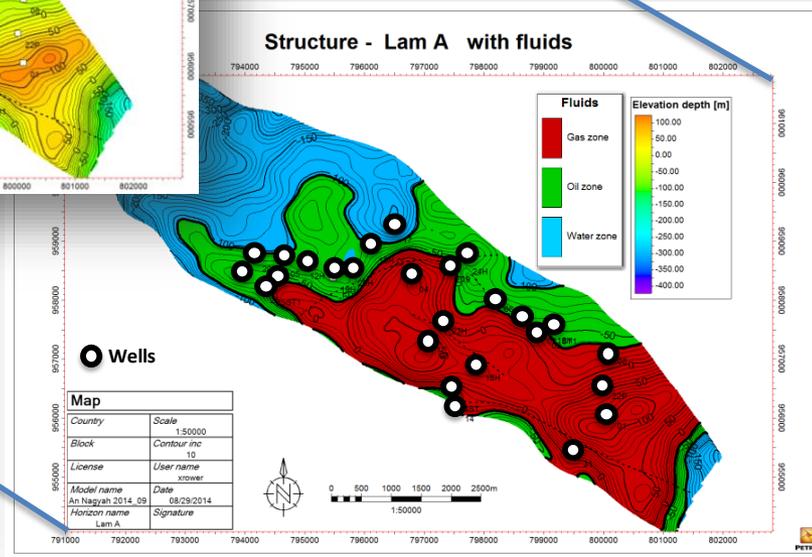
- ❖ There are a number of projects available in Yemen that have the potential to deliver significant upside through the application of new technology, and low cost operations.
- ❖ 'Distressed' assets are available in the current low oil price environment and the current political climate which restricts larger companies from operating.

2017-18 MENA Programme

An Nagyah - Production Increase

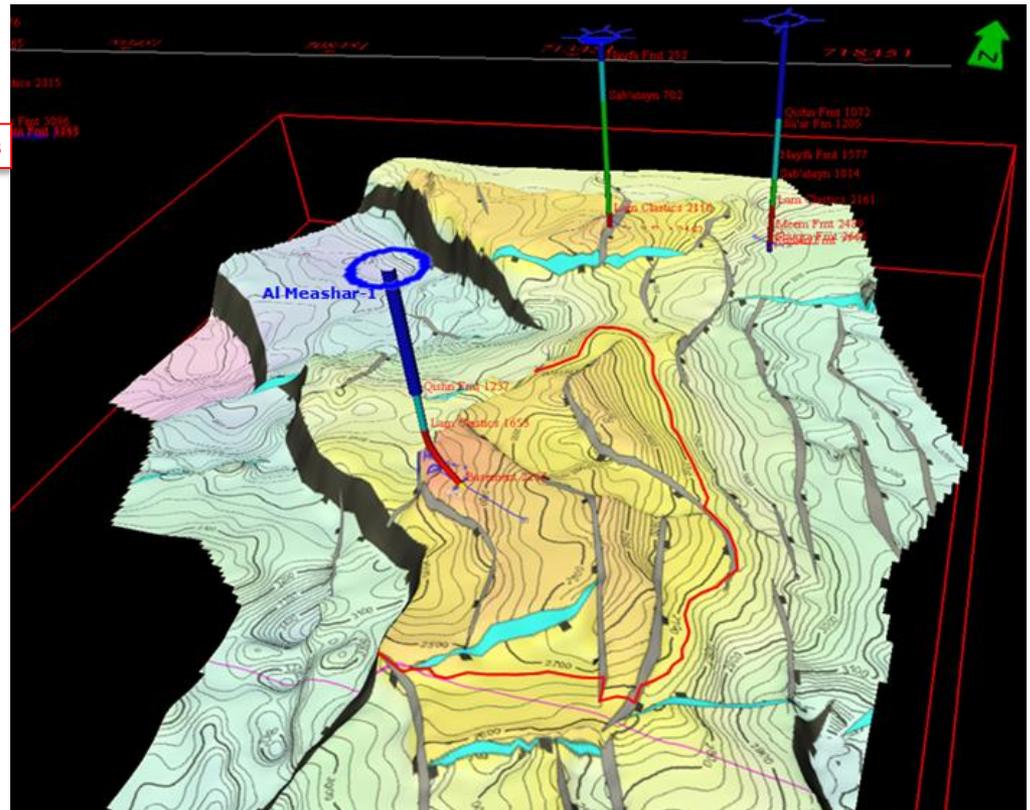
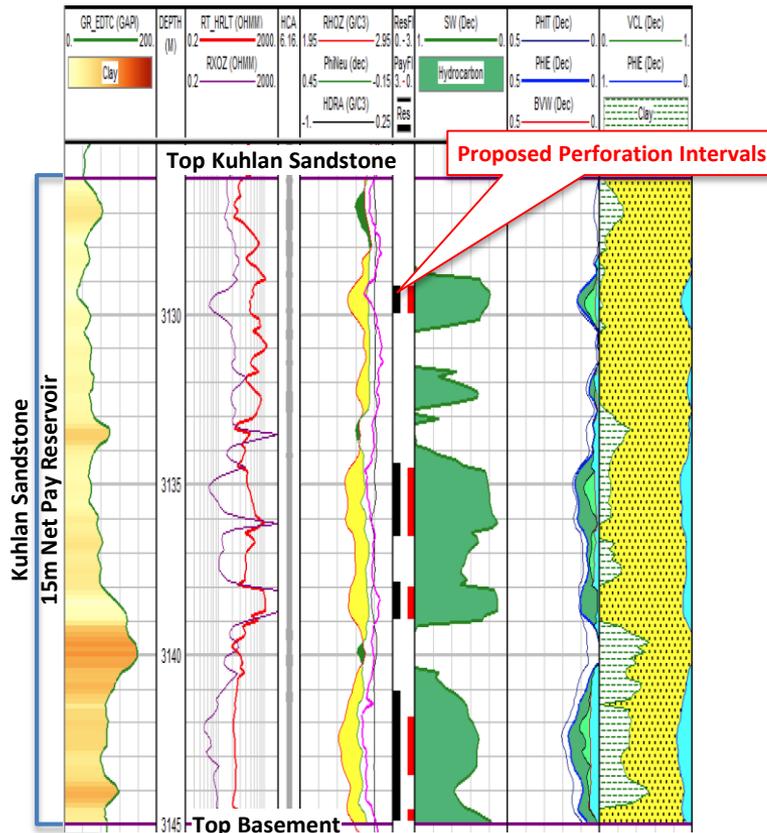


- ❖ Cash flow from production will be re-invested to increase production rates and ultimate reserve recovery.
- ❖ Reservoir modelling and simulation work conducted by the previous operator has identified unswept reservoir segments.



- ❖ Simulation studies will be completed to identify and prioritise key wells for a work-over programme which is expected to increase production.
- ❖ Four proposed infill development wells will substantially increase production rates and recovered reserves.

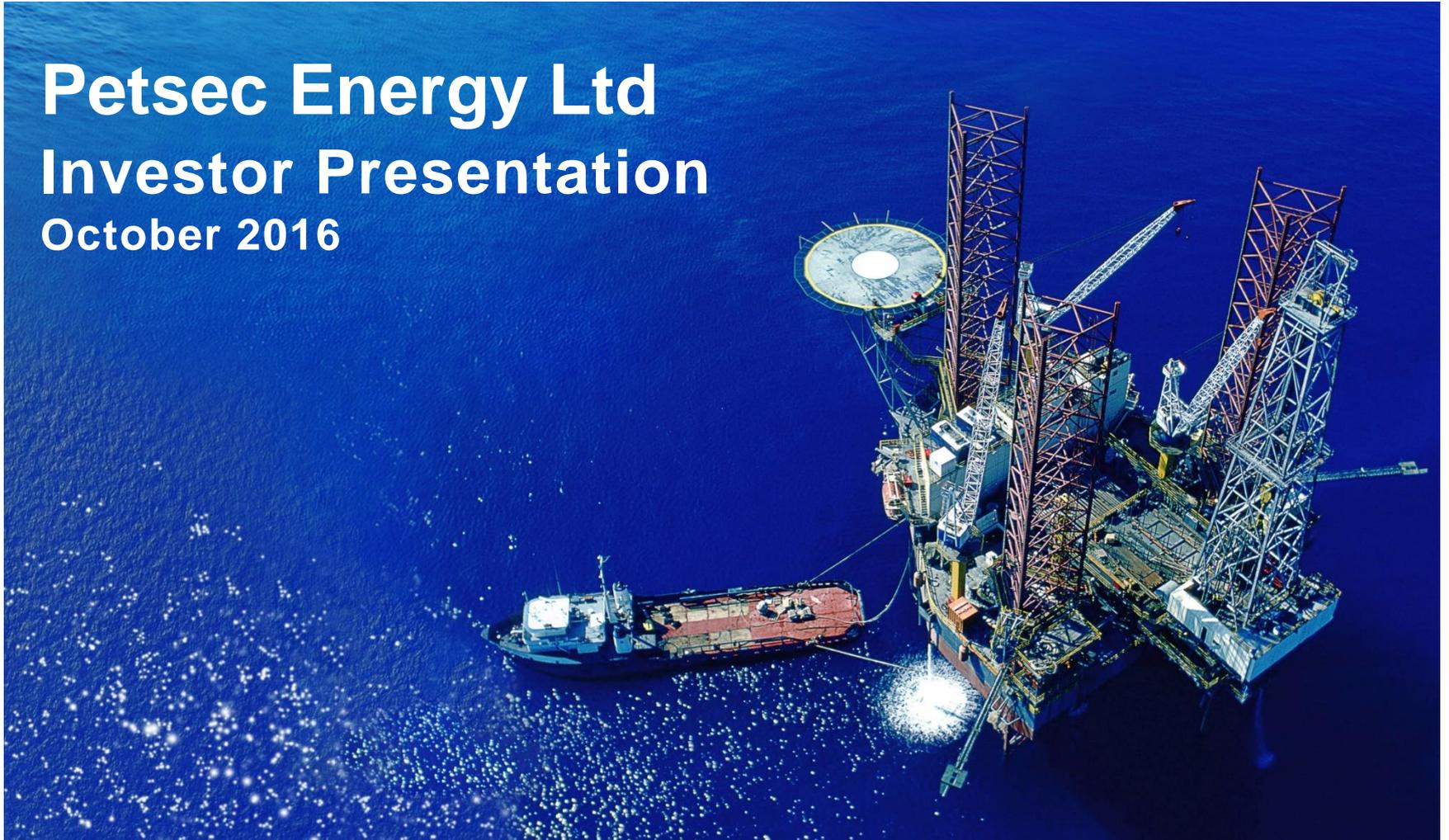
- ❖ The Al Meashar 1 & 2 well heads are in place and both wells are suspended. The proposed re-entry will drill out the suspension plugs and install production tubing in both wells using a low cost work-over rig located at the Habban CPF, 14km to the West.
- ❖ Petrophysical analysis of the Kuhlan Sandstone in Al Meashar-2 demonstrates 15m of oil saturated net reservoir pay, the casing will be perforated for production testing of the Kuhlan Sandstone.
- ❖ In Al Meashar-1 the basement section is to be tested utilising a long tail pipe to avoid interference with production in Al Meashar-2 out of the Kuhlan Sandstone. The Al Meashar-1 well tested a peak flow of 1046 BOPD & 6.36 MMcfpd gas on 1" choke over Shukra, Kuhlan and basement during testing of the discovery well.
- ❖ **The Kuhlan Sandstone overlaying basement is in communication with the Basement reservoir and is the production 'highway' as demonstrated in the Habban Oilfield. The well logs suggest 11% porosity consistent with Kuhlan in OMV's Habban Oilfield to the West.**



Petsec Energy Ltd

Investor Presentation

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