



PANTHEON
RESOURCES PLC

Annual General Meeting & Webinar

20 March 2023 – London

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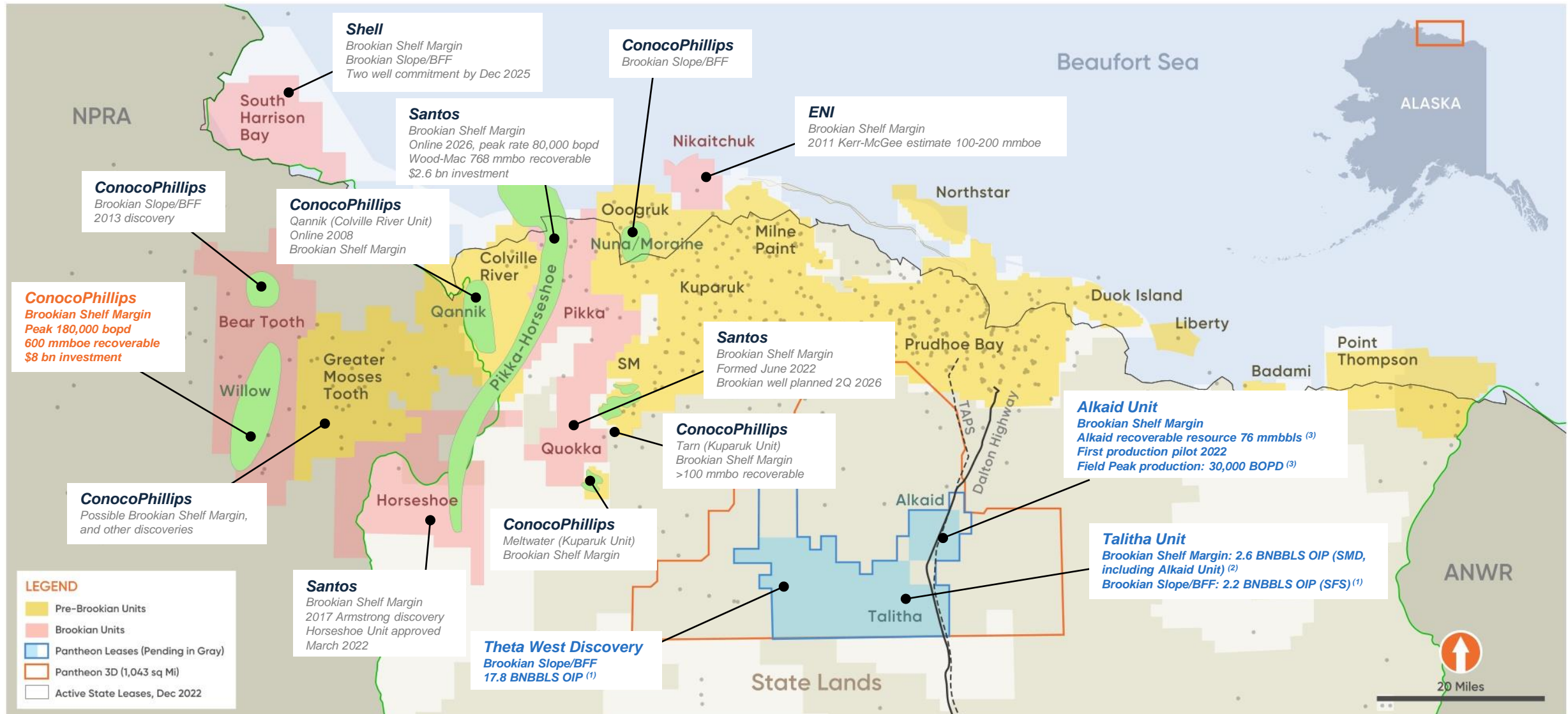
**appointment effective post AGM*

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- **Cautionary Statement:** The estimated quantities of petroleum that may be potentially recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery, appraisal and development. Further exploration, appraisal and evaluation are required to determine the existence of a significant quantity of potentially movable hydrocarbons. The estimates contained within this presentation are only estimates and there can be no guarantees that these estimates will be realised.
- **Competent Person’s statement:** Michael Duncan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking to qualify as a Competent Person in accordance with the guidance note for Mining, Oil & Gas Companies issued by the London Stock Exchange in respect of AIM Companies, which outlines standards of disclosure for mineral projects. Michael Duncan consents to the inclusion in this Presentation of the matters based on his information in the form and context in which it appears.
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Brookian Projects, Alaska North Slope



(1) Management estimate. Pantheon RNS 25 April 2022; (2) Management estimate. Pantheon RNS 16 July 2021; (3) Lee Keeling and Associates, 17 January 2020; "Review of the Test Results Engineering Parameters Alkaid-Phecda Area Alaska"; modelled full field development of 30,000 bpd as per Lee Keeling and Associates

Lessons Learned



- **Improve communication to shareholders**
- **Expand management & technical team**
- **Tighten cost control**
- **Reduce execution risk vulnerability**

PANR Market Disinformation



Belief	Reality
Questionable resource claims	<ul style="list-style-type: none">Positive evaluations by SLB, Baker Hughes/AHS, LKA; engaged Netherland Sewell & Assoc to produce IER and recoverable resource estimateWood Mackenzie - March 23 - Theta West a top four largest discovery globally in 2022State has awarded PANR two units: Alkaid (22,804 acres) and Talitha (44,463 acres), recognizing underlying hydrocarbon accumulation
HAL relinquished 25% of ENTIRE project	<ul style="list-style-type: none">HAL held 25% interest in 6 of over 60 leases (c. 2.5% project W.I.)HAL as service provider no longer competing with their customersAvoided payment for past costs and a release from future liabilities
Alkaid #2 flow condemns PANR acreage	<ul style="list-style-type: none">Total flow > 500 BPD of oil, condensate, and NGL + 2.3 mmcf/d gas plus fluids from frac & formation water ⁽⁴⁾Reservoir deliverability exceeds expectations without artificial liftAlkaid is one of four reservoirs and comprises less than 4% of PANR resource baseTheta West BFF/SMD/SFS reservoirs are larger and independent of Alkaid
NGLs and condensates on North Slope are worthless	<ul style="list-style-type: none">Liquids (500 BPD of oil, condensate, and NGL) produced on the North Slope are blended and sold as Alaskan crude (ANS)ANS normally trades at premium to WTI and close to Brent

Footnotes: (4) IP30 rate: Source - PANR management, including oil (180 bpd), condensate and NGL (together, 325 bpd)



Work Program Status



Where we are

- 1,043 sq miles of 3D from 2012 through 2016
- Tested light oil in Alkaid 1 in 2019
- Two units approved in 2020
 - *Alkaid (22,804 acres)*
 - *Talitha (44,463 acres)*
- Drilled Talitha-A in 2021 (IHS top discovery in 2021)
- Tested light oil at Talitha-A in Theta West Lower Basin Floor Fan, SFS, and SMD reservoirs in 2022
- Drilled Theta West-1 in 2022 (WoodMac top discovery 2022⁽⁵⁾) and tested light oil in Theta West Lower Basin Floor Fan reservoir
- Drilled Alkaid-2PH/2 in 2022
 - *Built production facilities*
 - *Currently in long term production testing*
- Current acreage position 153,063 (8-10 years remaining in term) plus 40,000 acres (10 year terms) pending, total 193,063 acres
- 88Energy Hickory well testing SMD/SFS/BFF and Kuparuk immediately to south (500 ft) of Pantheon acreage



Where we're going

- Update SLB report (17.8 BNBBLS Net OIP⁽⁶⁾) to include new lease resource additions
- Continuously updating the static model and moving to dynamic modeling for resource update
- Engaging leading oil service companies to optimize development scenarios for all reservoirs
- Engaged Netherland Sewell to produce first Theta West resource and Alkaid reserves – important for farmout process
- Partner/farmout discussions starting
- SLB providing data room and technical support

+23 Billion BBLs net OIP (Oil in Place), over 2 Billion BBLs recoverable (tested). c.\$0.10/bbl finding cost!⁽⁸⁾

Footnotes:

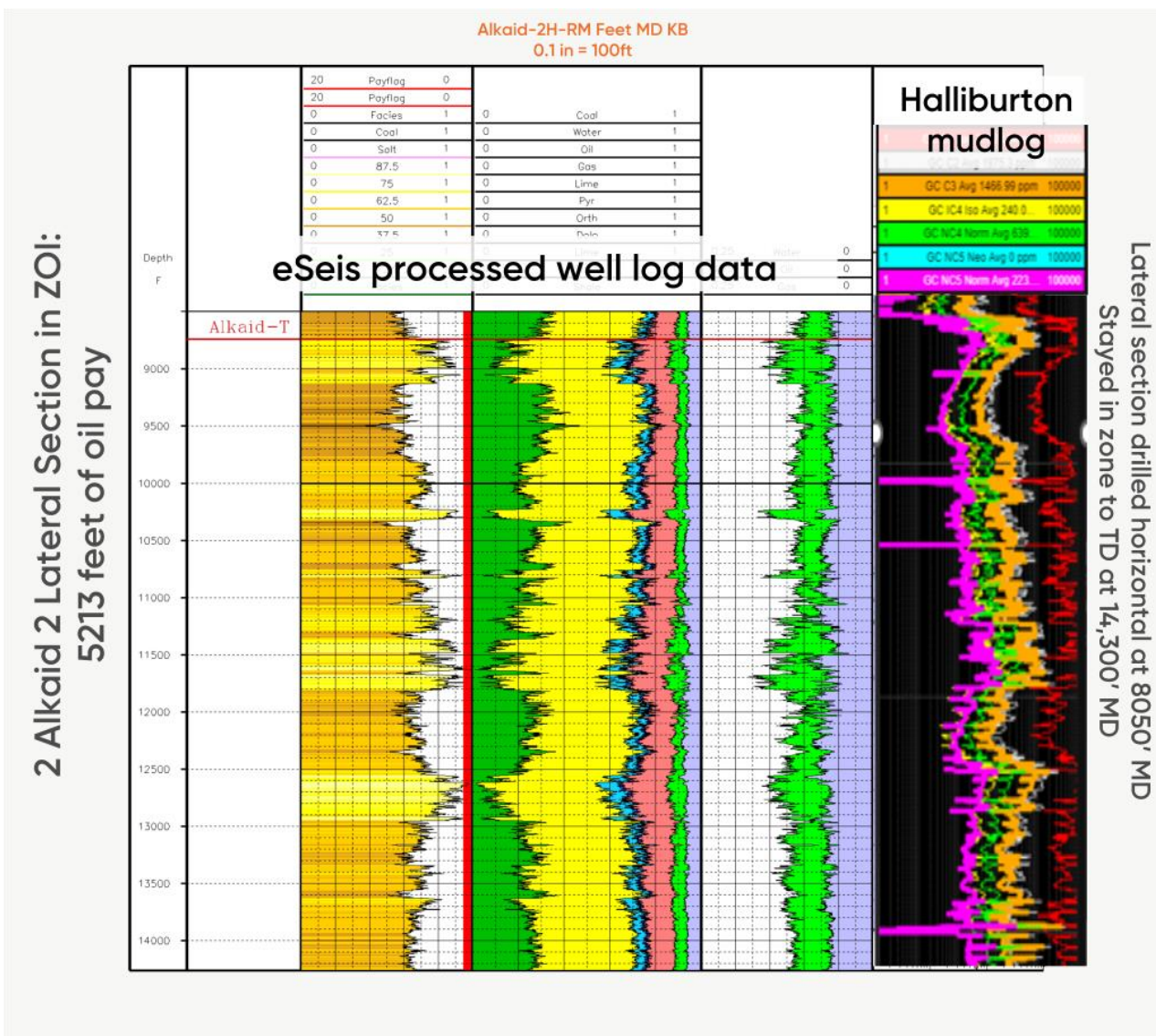
(5) Wood Mackenzie, "Alaska Upstream Review of 2022": more appraisal and production tests required before discovery considered commercial

(6) SLB report, 1 December 2022, "Great Bear Pantheon Report," Contract Number 1-1STFA85 and 11-TC7YFN

(8) Management estimates



Alkaid-2 Highlights – Productive Oil Reservoir



- 5213 net feet of pay in the horizontal section of the well
- Effective porosity ranging from 8-18% (average 12%)
- Proven continuous oil-bearing reservoir in the Alkaid Seismic Anomaly ZOI (zone of interest) across Greater Alkaid extending from Alkaid-1 to the Dalton Highway and Trans Alaska Pipeline
- Derisked the eastern (Phecda) extension of Greater Alkaid
- Penetrated oil-bearing reservoir section in Alkaid Deep below the ZOI (in the Alkaid-2PH Pilot)
- Penetrated the oil-bearing extension of the Regional Shelf Margin Deltaic Play (SMD) across Greater Alkaid to the Dalton Highway and TAPS



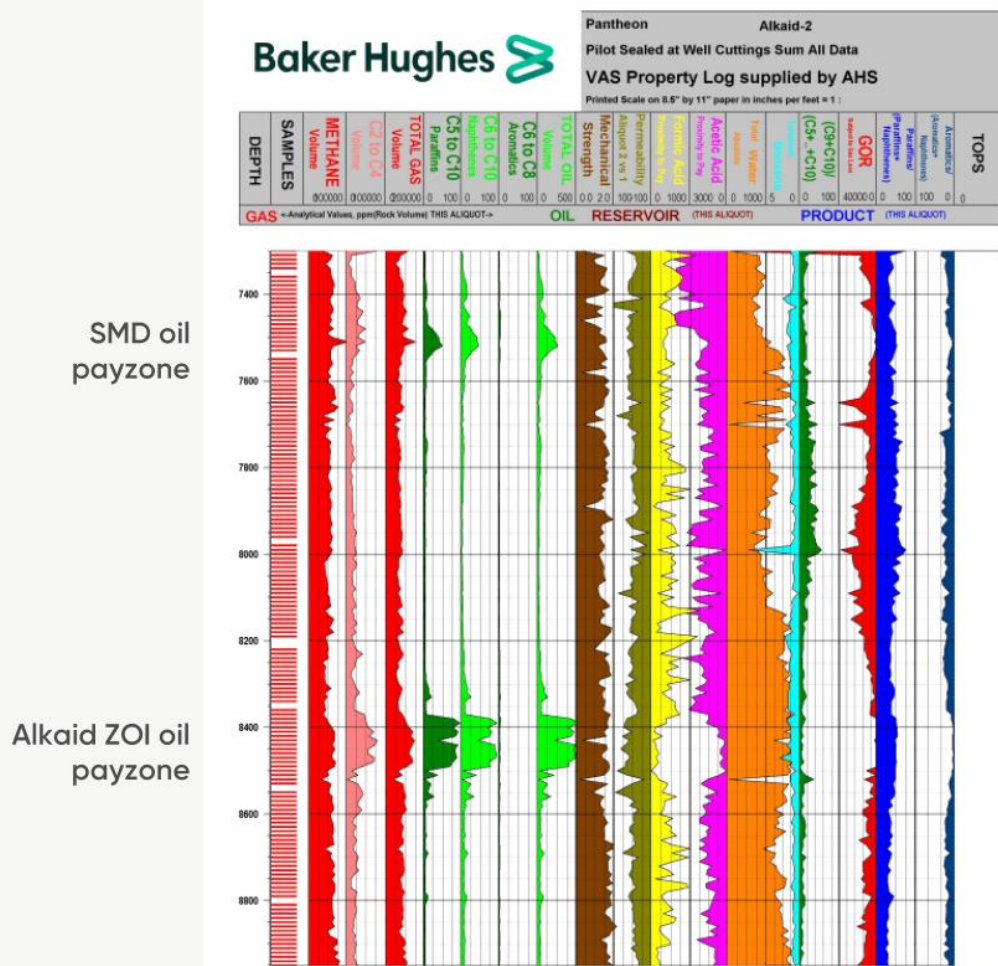
Oil Encountered in Alkaid-2 wellbore lateral from Heel to Toe



We collect rock (cuttings and core) and fluid data (VAS, oil and gas samples) while drilling to provide a view of reservoir quality and pore fluid composition pre-stimulation

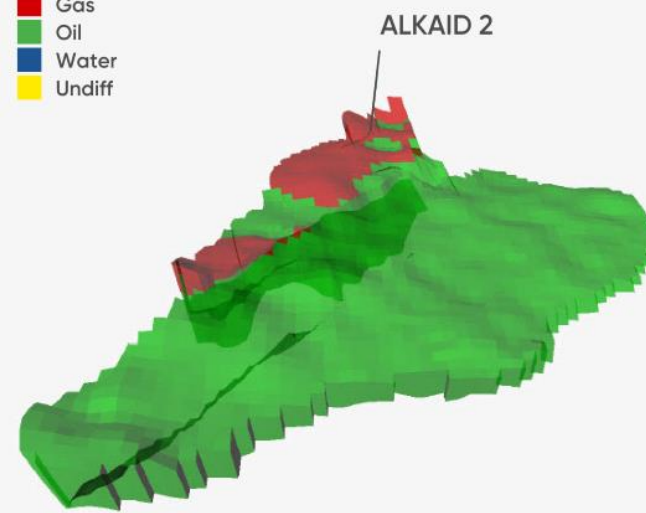


- SLB engineering review suggests possible thin gas cap plus solution gas contribution
- Lateral in oil leg
- Other fluid scenarios are also possible
- Uncertainty in fluid properties



LEGEND

- Gas
- Oil
- Water
- Undiff



A Possible Scenario

- APL: 37
- $R_s = 1.1$ mscf/bbl
- $P_b = 3,600$ psi
- $GOC = -7,840'$
- $PR = 3,650$ psi # - 7,854' (lateral)
- Resulting in a small gas cap 50' above Alkaid lateral



Reservoir Variation



- Alkaid-2 cannot be used as a proxy for reservoir performance across entire PANR project portfolio
- Alkaid reservoir is significantly different from BFF (Theta West), SMD, and SFS reservoirs
- Significant variation can exist even within individual reservoirs due to changes in lithofacies and burial depth which is what we are seeing across our acreage position.
- PANR acreage is large and hence there will be significant variation - 153,063 acres (+ additional 40,000 acres pending) with multiple proven play types

The Alkaid-2 is not, in our opinion, a make or break well. In our opinion, there is zero chance that any result at Alkaid would reduce our enthusiasm for the main prize, the Lower Basin Floor Fan of the Theta West structure (WHI June 22)

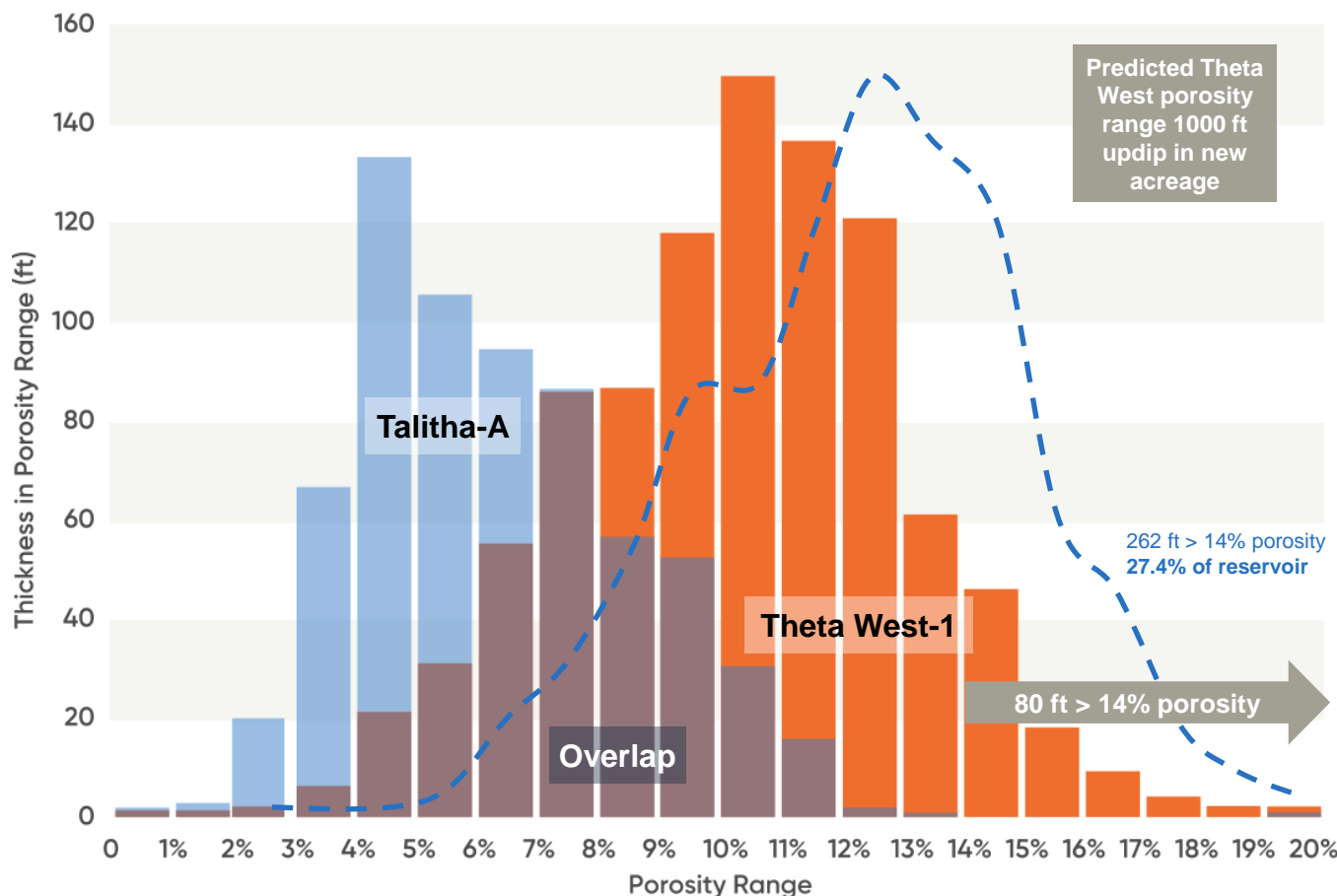


Theta West Basin Floor Fan Porosity Distribution



Variation within the Same Reservoir

Average Porosity Increased by 60% from Talitha-A to Theta West-1; Predicted to Double in New Leases



- Largest asset in PANR portfolio
- Giant basin floor fan
- 17.8 bn bbls OIP⁽¹⁾
- Can go 1000 ft+ updip to Theta West-1 (updip locations at ~6200 ft SS)
- High quality crude (high 30's API)
- “Theta West was the fourth biggest global discovery in 2022.” WoodMac ⁽⁵⁾

Footnotes:

(1) Management estimate. Pantheon RNS 1302J, 25 April 2022)

(5) Wood Mackenzie, “Alaska Upstream Review of 2022”, March 2023; more appraisal and production tests required before discovery considered commercial



Alkaid-2 Test Takeaways



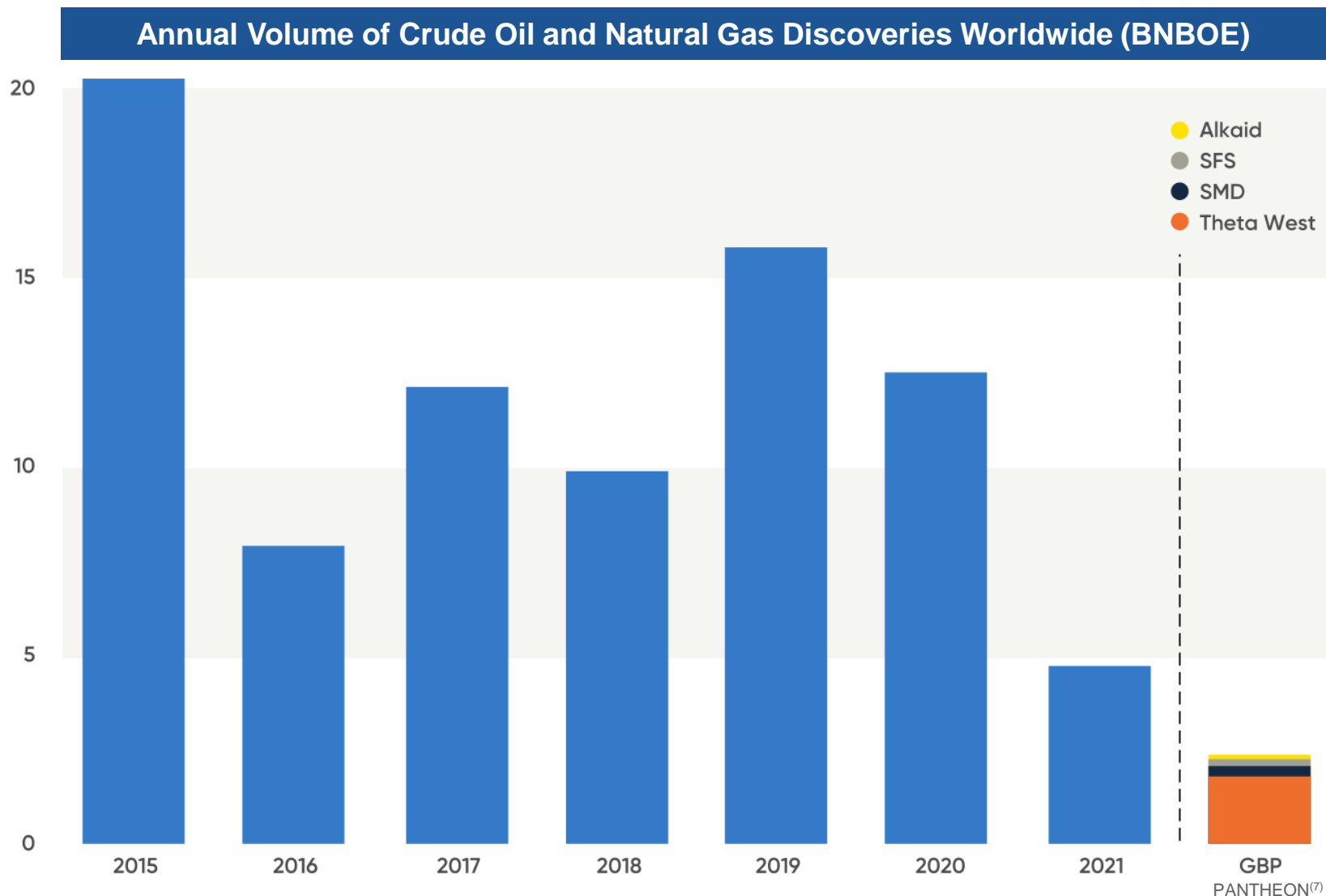
- Successfully drilled and encountered oil through the entire lateral, supported by:
 - *Gas analysis*
 - *VAS*
 - *Petrophysics*
- Associated rich gas – improves reservoir performance
- Exsolved gas and/or possibility of frac into gas cap could explain high GOR
- Total IP30 flow > 500 BPD ANS + 2.3 mmcf/d gas plus frac & formation water⁽⁴⁾
- Reservoir deliverability measured by total fluids better than expected
- Deeper laterals and downdip locations expected to mitigate gas production and improve oil recoveries and rates



Footnotes: (4) IP30 rate: Source - PANR management, including oil (180 bpd), condensate and NGL (together, 325 bpd)



PANR Resource Assessment: Global Context



Worldwide Discoveries; Rystad Energy; 2015-2021

- Worldwide Source: Rystad Energy
- Includes Gas BOE, a significant portion of reported discoveries
- PANR resource is all oil

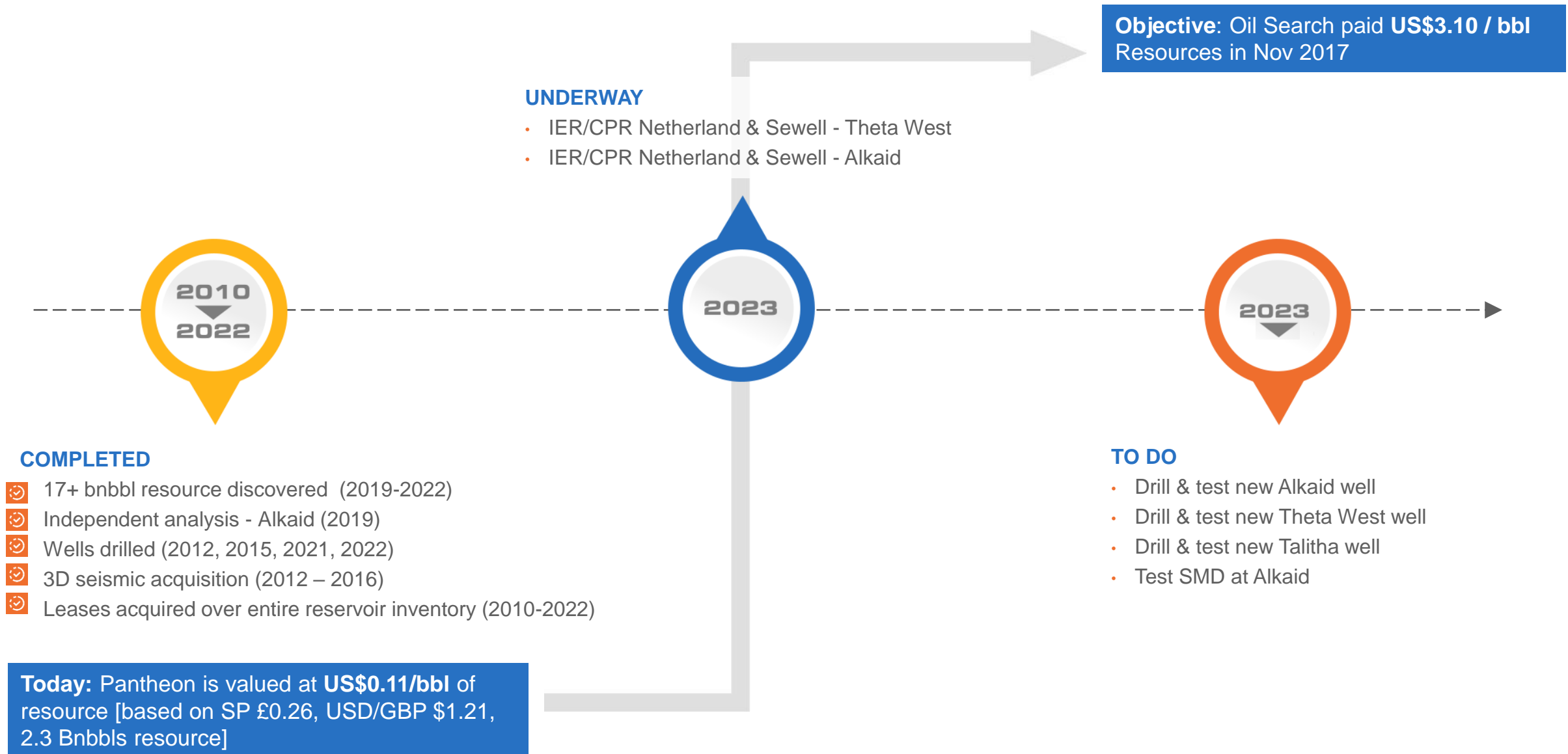
- “Theta West pushes our resource estimate past the 40 bnboe threshold”
- “Alaska & Theta West fare well in global rankings”
- “Theta West was the fourth biggest global discovery in 2022.”

Wood Mackenzie - Alaska Upstream Review of 2022 ⁽⁵⁾

⁽⁵⁾ Wood Mackenzie, “Alaska Upstream Review of 2022”, March 2023; ; more appraisal and production tests required before discovery considered commercial

⁽⁷⁾ Management estimated resource 2.3 billion barrels recoverable, added to Rystad report for comparison

Pantheon Resources – Timeline





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Q & A