



UNION JACK OIL

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AIM: UJO

West Newton PEDL183 Conceptual Development Plan Overview and Update

JUNE 2022

PRODUCTION, DRILLING, DEVELOPMENT AND
INVESTMENT IN THE UNITED KINGDOM ONSHORE
CONVENTIONAL HYDROCARBON SECTOR

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Union Jack Investment Strategy in Action

– Update on West Newton Conceptual Development Plan



West Newton is an extremely significant onshore oil and gas resource for the UK

- Potentially the largest hydrocarbon discovery onshore since 1973
- Potential resource: 35 million barrels of oil equivalent (“mmboe”) recoverable hydrocarbons, with a sales gas component of 203 Bcf
- Located in north-east England surrounded by significant existing oil and gas infrastructure
- Phased capital investment significantly de-risks the financial profile of the project
- Union Jack has a 16.665% economic interest in West Newton

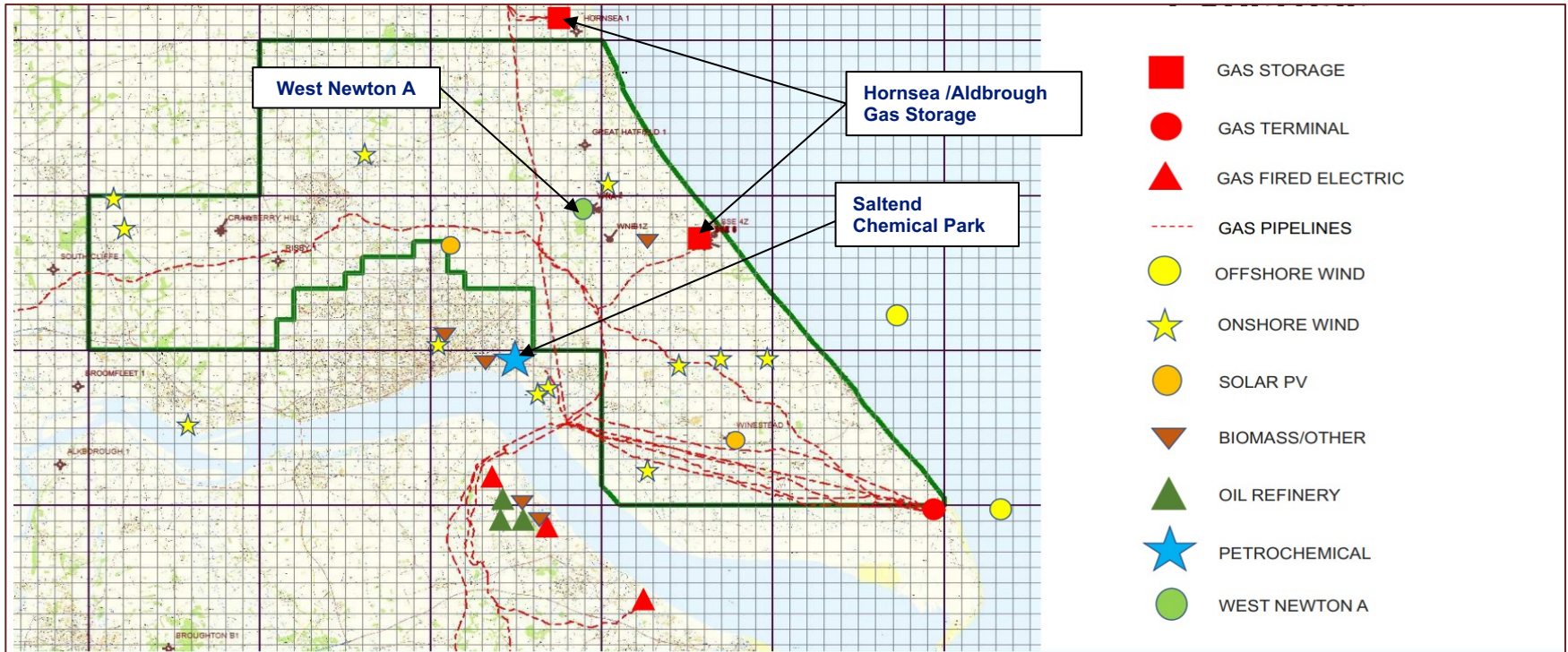
January-June 2022 post-EWT analysis and modelling:

Provides explanations and initial solutions to deliver sustained flow rates
Supports conceptual development plan with attractive economic potential

**Union Jack’s disciplined investment strategy has created opportunities
for significant value creation**

West Newton PEDL 183, near Hull, UK

– Overview of Location and Infrastructure



- **2014:** West Newton discovered with initial A-1 well
- **2019-2021:** Two appraisal wells drilled (A-2 and B-1Z) **confirming a major oil and gas discovery**
- Planning permission obtained for five additional wells at the West Newton A (four) and B (one) sites
- **A key attraction** of West Newton is the lower capital intensity associated with onshore developments

Location and nearby infrastructure are key to rapid monetisation

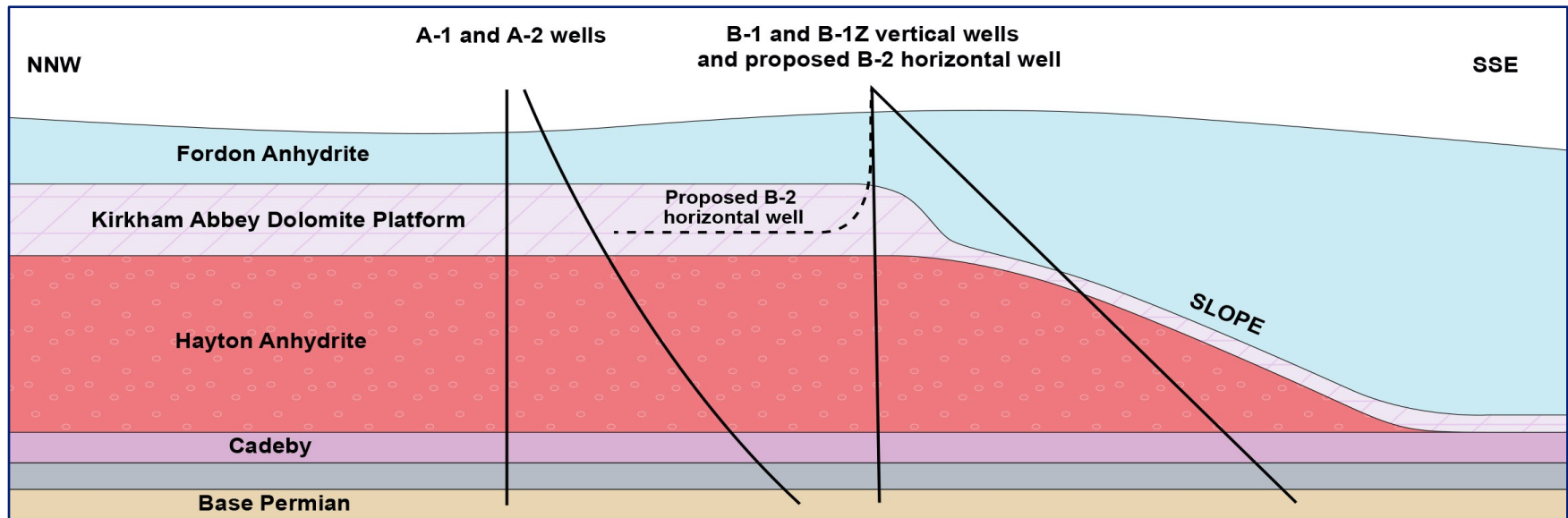
West Newton Geology and Well Locations

- Vertical Wells Have Defined Resource
- Future Development Wells to be Horizontal



Vertical drilling to date has set up the opportunity to drill highly productive horizontal wells in the Kirkham Abbey formation:

- Three wells drilled on West Newton (A-1, A-2, B-1Z) have all made discoveries in the Kirkham Abbey formation
- These wells have proved up a hydrocarbon saturated reservoir with significant areal extent and column thickness
- Rich data set from drilling and testing will inform drilling of first optimised horizontal well (B-2)
- Horizontal wells will expose significantly more reservoir to the wellbore and allow for enhanced productivity potential
- All future development wells expected to be horizontal



Drilling and testing activity to date to be used to optimise drilling of future horizontal producer wells

Extended Well Testing (EWT) in 2021 at two locations A-2 and B-1Z confirmed the resource potential:

- Gas and liquid hydrocarbons were recovered to surface from both wells A-2 and B-1Z
- There is a substantial hydrocarbon column and resource in place. We believe the reservoir contains either light oil with a high GOR OR, more likely; **predominantly natural gas with associated hydrocarbon liquids**
- EWT provided us with a substantial and valuable data set and improved understanding of West Newton asset

During testing, there was a lack of sustained hydrocarbon flow from these wells. Post-EWT analysis from RPS and CoreLab has significantly enhanced our understanding of why this occurred and how to resolve it

Two key causes were formation damage and limited impact of acidisation:

- **January 2022: post EWT modelling by RPS showed:**
 - Most of the acid stimulation only interacted with a small section of the perforated intervals. An optimised acid stimulation programme that includes active diversion techniques would likely improve production rates.
 - Substantially higher production rates from horizontal wells compared to vertical wells. Potential for initial first month production rates of 35.6 million cubic feet of gas per day ("mmcf") (5,900 barrels of oil equivalent per day "boepd")
- **May - June 2022: post EWT analysis by CoreLabs (Stim-Lab) explained:**
 - The cause of the formation damage from drilling and completion work and,
 - Crucially, demonstrated reservoir flow from multiple samples:

"In this sample, the unfractured core plug easily demonstrated matrix flow with both API brine, diesel and gas"

Post-EWT analysis confirms West Newton has the potential to produce significant hydrocarbons

Post EWT Analysis Explains Lack of Sustained Flow

– Drilling Damage and Limited Benefit from Acidisation

Acid Interacted With Limited Reservoir Section

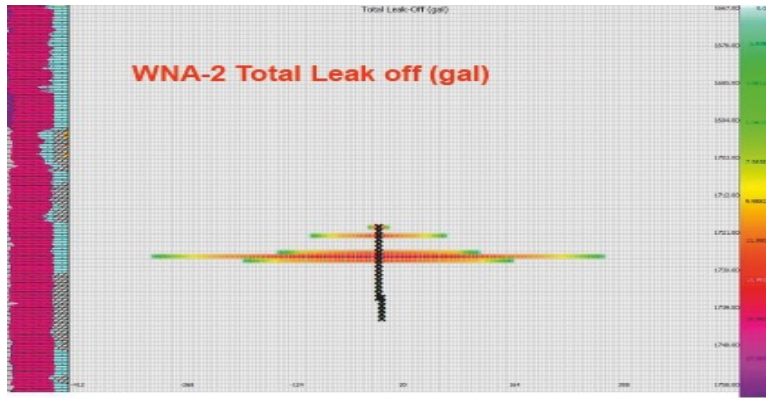


Figure 1

Source: RPS

Figure 1

- RPS analysis indicates significant differences in permeability across the Kirkham Abbey formation at the A-2 well
- RPS concluded that acidisation interacted only with small portion of perforated interval
- Efforts to induce flow through acidisation therefore likely to have been ineffective

Roller Oven Erosional Stability

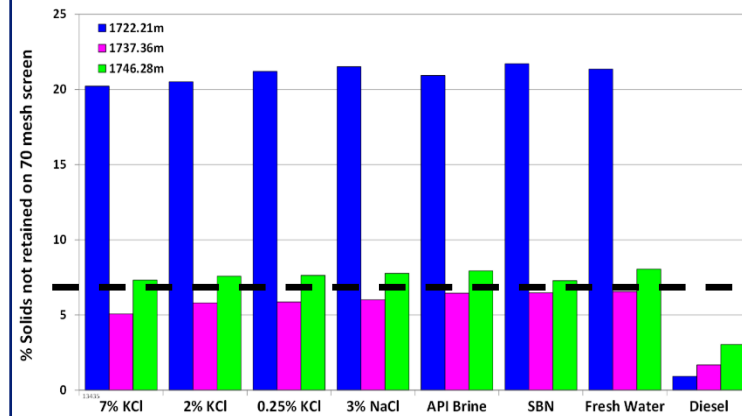


Figure 2

Source: CoreLab (Stim-Lab)

Figure 2

- “Roller Oven” Erosional Stability measures stability of the Kirkham Abbey formation samples to various fluids
- Samples showed high instability to all aqueous (water) based fluids
- Samples showed lower instability to oil based fluids (diesel)
- Results suggest that water based muds, used during drilling, are likely to have caused damage to the reservoir, impeding hydrocarbon flow, **which would be avoided with use of oil based muds**

Post EWT analysis shows mechanisms for reservoir damage and provides potential solutions

Lab Results Demonstrate Flow Through Reservoir Sample

– Modelling Indicates Significant Production Potential

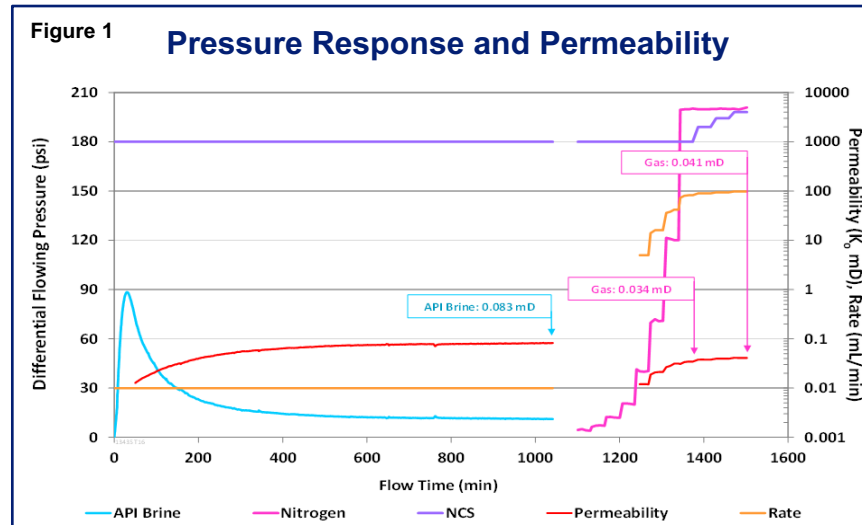


Figure 1 CoreLab (Stim-Lab) tested and analysed fluid flow using diesel, gas and brine in core samples from both A-2 and B-1Z

- Tests established matrix flow in the sample
- There was stable flow established with brine and improved gas flow and indicated matrix permeability demonstrated as fluid saturation was displaced (red lines)

“In this sample, the unfractured core plug easily demonstrated matrix flow with both API brine and diesel”
(CoreLab (Stim-Lab))

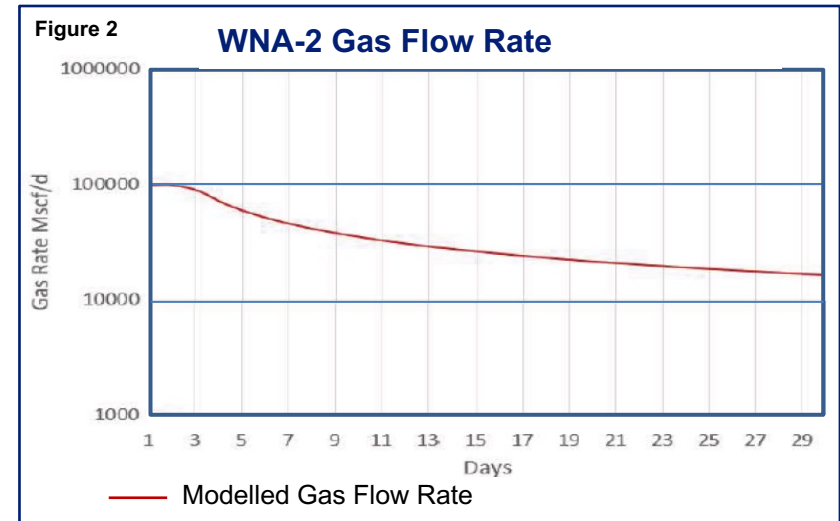


Figure 2 demonstrates flow rates modelled by RPS

- RPS modelled expected rates based using an optimised completion method and horizontal well
- Modelled 35.6 mmcf/d gas flow (5,900 barrels of oil equivalent) as daily average rate for first month production

Productivity potential underpins our Conceptual Development Plan

West Newton Conceptual Development Plan

– To be Underpinned by First Horizontal Development Well (B-2)



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Conceptual development plan overview:

- Eight well gas development concept
- Design of gas and liquid infrastructure to provide sales quality gas and to allow for production of associated liquids
- Recoverable hydrocarbon volumes of 35 mmboe with sales gas component of 203 Bcf

Project next steps:

- **H2 2022:**
 - CPR expected Q3
 - Optimise engineering solution and design first development well
- **H1 2023: drill first development well, materially de-risking project at a relatively modest cost**

First gas modelled by H1 2025

Economic modelling calculates:

- Gross pre-tax NPV(10) of US\$448 million
- IRR of 87% based only on recoverable sales gas and small volumes of associated liquids; any additional oil likely to improve economics

Investment in infrastructure can be leveraged by:

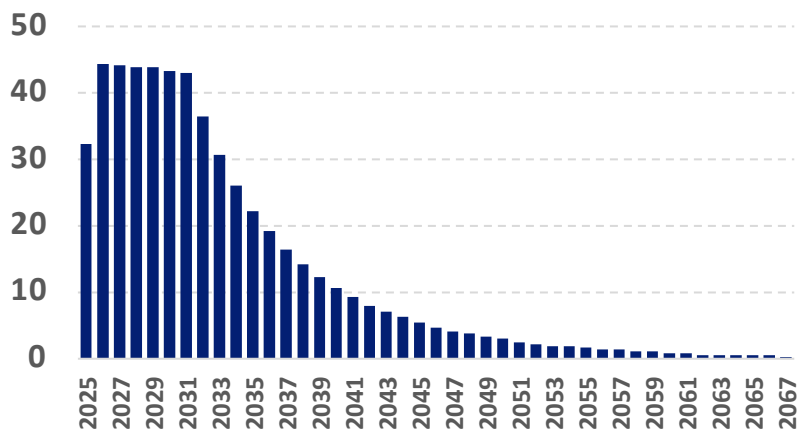
- Additional potential developments of other prospects in the Greater West Newton area

West Newton continues to offer potentially transformational returns for Union Jack's shareholders

Modelled Gas Production Volumes from West Newton

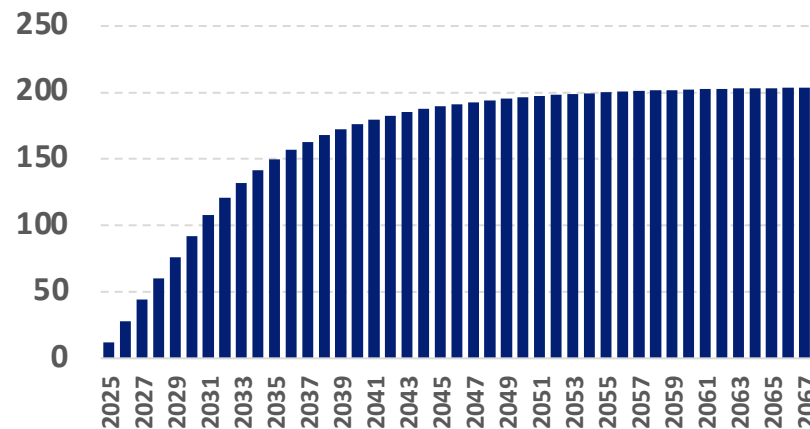
– Assuming a Total of Eight Wells

Sales Gas Production Rate (Mcf/d)



- Initial five well development with first production 2025
- Three further wells to be drilled 2028-2030
- Plateau production rate (assumes gas only) ~44 mmcf/d
- Gas infrastructure facilitates potential production of additional liquids, which would further improve economics

Cumulative Sales Gas Production (Bcf)

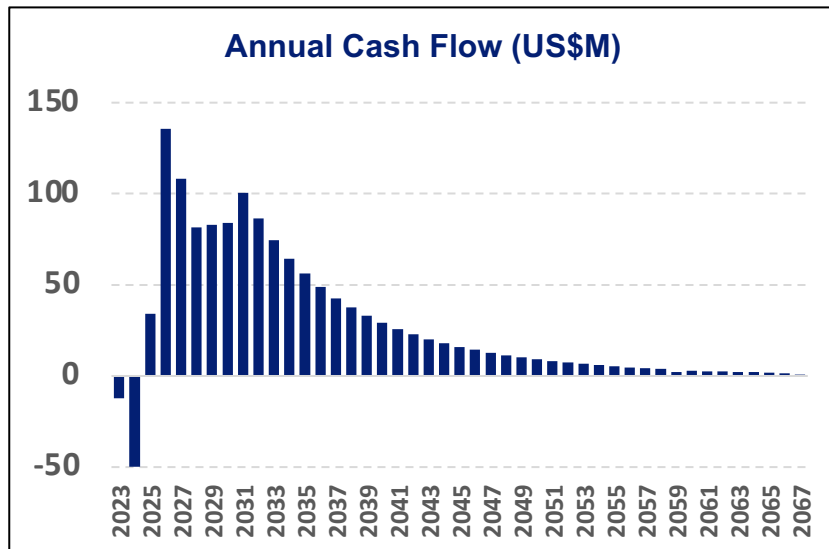


- Model assumes total sales gas production of ~203 Bcf
- Equates to ~25 Bcf recoverable sales gas per well
- Model based on main West Newton field only
- Potential to tie in other fields in the Greater West Newton area subject to further exploration success

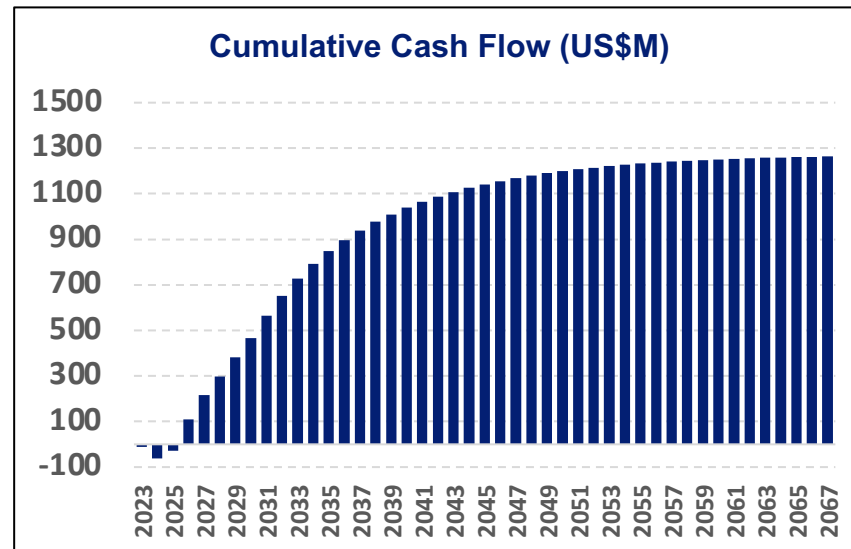
First potential gas production in 2025

Economic Analysis

– Strong Multi-year Cash Flow Generation



- Gross NPV(10) of **US\$448 million** pre-tax
- Pre-tax IRR of **87%**
- Significant cash flow generation from first year of production
- Gas price assumption based on recent RPS published forecast (April 2022)



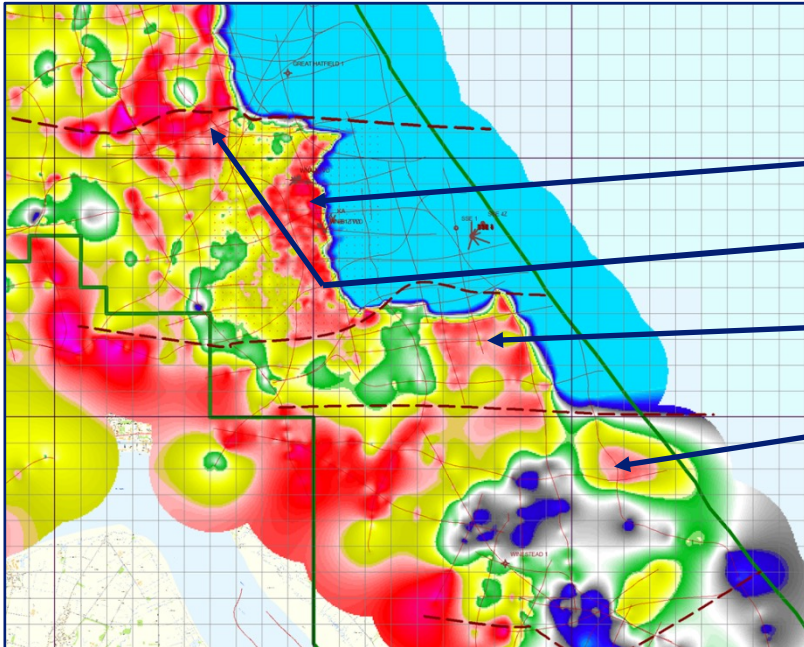
- Cumulative gross cash flow ~\$1.3 billion
- Total pre-production capex US\$139 million (initial five well development, facilities and tie-in)
- Additional wells drilled from cash flow
- Economics assumes 2.9 bbls/mmcf of condensate

Rapid monetisation potential

PEDL 183 Significant Follow on Potential

– Mapping Highlights West Newton Lookalikes

Multiple Anomalies Identified Across PEDL183



- Significant follow-on potential in the Greater West Newton area, within PEDL183
- Multiple anomalies identified, with similar characteristics to West Newton

Estimated In Place Volumes

Prospect	Gas in Place Range (Bcf)
West Newton	287 – 431
Ellerby	156 – 429
Spring Hill	114 – 221
Withernsea	45 – 219

- Learnings from West Newton around drilling and completion techniques can be leveraged at follow-on targets
- Potential to tie other prospects into West Newton gas and liquid hydrocarbon infrastructure

Significant follow-on development potential within PEDL183 licence area

Conclusion

– West Newton Conceptual Development Plan



West Newton development concept anchored around eight well gas and associated liquids project

Post-EWT analysis has significantly enhanced understanding of potential well productivity and increased confidence in a strong economic case:

- 35 mmboe recoverable hydrocarbons with a sales gas component of 203 Bcf
- US\$448 million NPV(10) with IRR of 87%, based on sales gas and small volumes of associated liquids
- Located nearby to gas infrastructure facilities enabling rapid monetisation

Conceptual Development Plan reflects confidence in value realisation potential:

- Goal to drill first development well in 2023
- Planning and permitting for future operations is under way

First production potential in 2025

Union Jack's disciplined investment strategy to unlock significant value potential at West Newton

West Newton Volumetric Estimates

	OGIP*	RGIP*
Low Case	286.8 Bcf	200.7 Bcf
Mid Case	378.6 Bcf	265.0 Bcf
High Case	431.1 Bcf	301.8 Bcf

- Kirkham Abbey reservoir is assumed to be predominantly gas-charged with associated liquids
- Recoverable volumes assume a recovery factor of 70%
- Weighted average porosity: 7.7%
- Weighted average water saturation: 35.3%
- The variation between the low, mid and high cases is most affected by the aerial extent and shape of the reservoir:
 - Low (1700 hectares), Mid (2350 hectares) and High (2752 hectares)

*Assumes that the Kirkham Abbey isopach thins on a 1:1 ratio with the thickening of the overlying Brotherton to Basal Fordon Anhydrite interval and utilizes the 0.8 Net/Gross in the Kirkham Abbey

**Economic modelling assumes total recovered gas
~ in-line with low case RGIP numbers and limited associated liquids
– substantial upside potential**

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