

## NEWS RELEASE

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**Date** 11 November 2019  
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### Petroleum briefing

BHP President Operations Petroleum, Geraldine Slattery, today said Petroleum is set to deliver strong returns and contribute significant value for BHP through the 2020s and beyond, built on a foundation of quality assets, and attractive growth options.

Speaking to investors and analysts at a briefing in Sydney, Ms Slattery said Petroleum is a great business with competitive growth potential and is aligned with BHP's strategy of being in the best commodities, with the best assets, enabled by the best culture and capabilities. Petroleum has delivered strong financial performance over many years and this is set to continue.

"In a decarbonising world, deepwater oil and advantaged gas close to established infrastructure can offer competitive returns for decades to come."

Ms Slattery outlined a scenario<sup>1</sup> that could potentially:

- Generate robust EBITDA margins of more than 60 per cent and an average Return on Capital Employed of more than 15 per cent over the next decade;
- Deliver average Internal Rates of Return of around 25 per cent for major projects, which are resilient through cycles; and
- Support an average annual volume growth of up to 3 per cent between the 2020 and 2030 financial years.

"Our portfolio of quality assets and pipeline of competitive growth options are expected to generate strong free cash flow and returns through the 2020s and beyond", Ms Slattery said.

Petroleum's growth options currently include Scarborough, Wildling Phase I, Trion and Trinidad & Tobago North. While these remain subject to our strict Capital Allocation Framework, they are well placed to compete with other options in the Group's portfolio.

"Our capabilities in safety, exploration and deepwater operations, coupled with a high-performance culture give us confidence that we can deliver on our plans into the future," Ms Slattery said.

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<sup>1</sup> Represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance. Based on Wood Mackenzie's most recent long-term oil and gas price forecasts as follows: Brent oil price assumption (2020-2030 average: US\$74.34/bbl, real 2019); Japan LNG DES price assumption (2020-2030 average: US\$7.86/MMBtu, real 2019).

Presentations will be webcast live at <https://edge.media-server.com/mmc/p/362g83wf> and all materials be available on our website at [bhp.com](http://bhp.com).

A summary of guidance and project details contained in the presentation is included below.

## Guidance

Asset	FY20e		Medium term	
	Production	Unit costs <sup>1</sup>	Production	Unit costs <sup>1</sup>
Conventional Petroleum	110-116 MMboe	US\$10.5-11.5/boe	~110 MMboe average	<US\$13/boe

## Future options

Options	Operator	BHP Ownership	Potential execution timing	Capex BHP share (US\$m)	Tollgate	Potential first production <sup>2</sup>	Description
<b>North West Shelf Other Resource Owner</b>	Woodside	16.67%	<5 years	>250	Pre-feasibility	FY26	Low risk investment opportunity to maximise Karratha Gas Plant value through processing other resource owner gas; benefits through tolling fees, cost recovery and life extension.
<b>Pyrenees Phase 4</b>	BHP	71.43%	<5 years	>250	Opportunity Assessment	FY22	Combination of well re-entries and new subsea wells which aim to optimise incremental value using the existing infrastructure.
<b>Scarborough<sup>3</sup></b>	Woodside	26.5%	1 year	1,400-1,900	Pre-feasibility	FY24	Large resource of 13 subsea wells connected to a semisubmersible floating production unit from which gas is exported via pipeline to Pluto LNG facility for onshore processing.
<b>Atlantis Phase 4</b>	BP	44%	<5 years	>250	Opportunity Assessment	FY24	Additional development opportunities for infill producing wells. Data obtained from Phase 3 project de-risks further development of multiple hydrocarbon bearing zones.
<b>Mad Dog Northwest Water Injection</b>	BP	23.9%	<5 years	>250	Pre-feasibility	FY24	Two water injector wells providing water from Mad Dog Phase 2 facility to increase production at existing A Spar facility.
<b>Mad Dog opportunities</b>	BP	23.9%	<5 years	>250	Opportunity Assessment	FY25	Additional opportunities to increase the Mad Dog Phase 2 production beyond the initial investment scope with new wells tied back to existing facility, results in highly economic opportunities.
<b>Shenzi Growth opportunities</b>	BHP	44%	1 year	<250	Pre-feasibility	FY23	Shenzi Subsea Multi-Phase Pumping (SSMPP); Subsea pumping opportunities to increase production rates from existing wells.

Options	Operator	BHP Ownership	Potential execution timing	Capex BHP share (US\$m)	Tollgate	Potential first production <sup>2</sup>	Description
<b>Wildling Phase 1</b>	BHP	44%-72%	1-2 years	~500	Pre-feasibility	FY23	Two Shenzi North wells tied-back to the Shenzi platform, provides the opportunity to accelerate production and unlock additional recoverable reserves. Phased development accelerates first oil, minimizes appraisal cost and reduces risk.
<b>Trion</b>	BHP	60%	2-3 years	>5,000	Conceptual	FY25	Large greenfield development in the deepwater Mexico GoM. Resource uncertainty reduced with recent successful appraisal drilling of 2DEL and 3DEL wells.
<b>Trinidad &amp; Tobago North</b>	BHP	70%	<5 years	Under study	Opportunity Assessment	FY27	Completed successful exploration program on our Northern licenses. Potential material gas play in deepwater Trinidad & Tobago, well positioned to the Atlantic LNG plant onshore Trinidad & Tobago.

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

## Exploration

Options	Location	Ownership	Maturity	Earliest first production	Description
<b>Western GoM</b>	US – Gulf of Mexico	100% Operator	Frontier	Early 2030s	Acquired a significant acreage position in historically underexplored Western Gulf of Mexico
<b>Mexico</b>	Mexico – Gulf of Mexico	60% Operator	Exploration	Late 2020s	Opportunity to tie back prospects to future Trion hub. Included in Trion Minimum Work Program
<b>T&amp;T Southern Gas (Magellan)</b>	Trinidad & Tobago	65% Operator	Exploration	Mid 2020s	Discovered gas play in deepwater Trinidad & Tobago
<b>T&amp;T Southern Deep Potential</b>	Trinidad & Tobago	65% Operator	Frontier	Late 2020s	Evaluating multiple play types to test deeper potential in deepwater Trinidad & Tobago based on deep oil shows from Le Clerc exploration
<b>Eastern Canada</b>	Orphan Basin	100% Operator	Frontier	Early 2030s	Recent bid success for blocks with large liquids resource potential in the offshore Orphan Basin in Eastern Canada
<b>Significant remaining project potential with unrisked NPV of up to US\$14 billion<sup>4</sup></b>					

1. Based on an exchange rate of AUD/USD 0.70. Unit costs are in nominal terms.
2. Potential first production data is an estimate and does not constitute guidance.
3. Based on information provided by operator. Represents BHP's current equity position as 25% in WA-1-R and 50% in WA-62-R.
4. Exploration unrisked value at BHP prices.

Further information on BHP can be found at: [bhp.com](http://bhp.com)

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# BHP

## Petroleum briefing

Positioned for long-term value creation

Geraldine Slattery | President Operations Petroleum

11 November 2019

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# Disclaimer

## Forward-looking statements

This presentation contains forward-looking statements, including statements regarding: trends in commodity prices and currency exchange rates; demand for commodities; plans, strategies and objectives of management; closure or divestment of certain operations or facilities (including associated costs); anticipated production or construction commencement dates; capital costs and scheduling; operating costs and shortages of materials and skilled employees; anticipated productive lives of projects, mines and facilities; provisions and contingent liabilities; tax and regulatory developments.

Forward-looking statements can be identified by the use of terminology including, but not limited to, 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'may', 'should', 'will', 'continue', 'annualised' or similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward-looking statements.

These forward-looking statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this presentation. Readers are cautioned not to put undue reliance on forward-looking statements.

For example, future revenues from our operations, projects or mines described in this presentation will be based, in part, upon the market price of the minerals, metals or petroleum produced, which may vary significantly from current levels. These variations, if materially adverse, may affect the timing or the feasibility of the development of a particular project, the expansion of certain facilities or mines, or the continuation of existing operations.

Other factors that may affect the actual construction or production commencement dates, costs or production output and anticipated lives of operations, mines or facilities include our ability to profitably produce and transport the minerals, petroleum and/or metals extracted to applicable markets; the impact of foreign currency exchange rates on the market prices of the minerals, petroleum or metals we produce; activities of government authorities in some of the countries where we are exploring or developing these projects, facilities or mines, including increases in taxes, changes in environmental and other regulations and political uncertainty; labour unrest; and other factors identified in the risk factors discussed in BHP's filings with the US Securities and Exchange Commission (the 'SEC') (including in Annual Reports on Form 20-F) which are available on the SEC's website at [www.sec.gov](http://www.sec.gov).

Except as required by applicable regulations or by law, the Group does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events.

Past performance cannot be relied on as a guide to future performance.

## Presentation of data

Unless specified otherwise: variance analysis relates to the relative performance of BHP and/or its operations during the 2019 financial year compared with the 2018 financial year; operations includes operated assets and non-operated assets; total operations refers to the combination of continuing and discontinued operations; continuing operations refers to data presented excluding the impacts of South32 from the 2014 financial year onwards, and Onshore US from the 2017 financial year onwards; copper equivalent production based on 2019 financial year average realised prices; references to Underlying EBITDA margin exclude third party trading activities; data from subsidiaries are shown on a 100 per cent basis and data from equity accounted investments and other operations is presented, with the exception of net operating assets, reflecting BHP's share; medium term refers to our five year plan. Numbers presented may not add up precisely to the totals provided due to rounding. Production profiles and financial metrics are based on an unconstrained scenario which assumes execution of all unsanctioned projects; current equity interests; and Wood Mackenzie long-term price forecasts. These do not constitute guidance. Advantaged gas refers to gas that is geographically advantaged through infrastructure, customers or both.

## Alternative performance measures

We use various alternative performance measures to reflect our underlying performance. For further information please refer to alternative performance measures set out on pages 45 to 54 of the BHP Results for the year ended 30 June 2019.

## No offer of securities

Nothing in this presentation should be construed as either an offer or a solicitation of an offer to buy or sell BHP securities in any jurisdiction, or be treated or relied upon as a recommendation or advice by BHP.

## Reliance on third party information

The views expressed in this presentation contain information that has been derived from publicly available sources that have not been independently verified. No representation or warranty is made as to the accuracy, completeness or reliability of the information. This presentation should not be relied upon as a recommendation or forecast by BHP.

## BHP and its subsidiaries

In this presentation, the terms 'BHP', 'Group', 'BHP Group', 'we', 'us', 'our' and 'ourselves' are used to refer to BHP Group Limited, BHP Group Plc and, except where the context otherwise requires, their respective subsidiaries set out in note 13 'Related undertaking of the Group' in section 5.2 of BHP's Annual Report on Form 20-F. Notwithstanding that this presentation may include production, financial and other information from non-operated assets, non-operated assets are not included in the BHP Group and, as a result, statements regarding our operations, assets and values apply only to our operated assets unless otherwise stated.

## Price assumptions

For all price point comparisons, unless otherwise indicated, crude oil and natural gas (including LNG) prices are based off Wood Mackenzie's most recent long-time price forecasts. The Brent oil price assumption is sourced from Wood Mackenzie's May 2019 Macro Oil Long Term Outlook (H1 2019). Our assumption for LNG gas price is sourced from Wood Mackenzie's June 2019 Global Gas Service price outlook H1 2019. Brent oil price assumption (2020-2030 average: Wood Mackenzie US\$74.34/bbl, real 2019). Japan LNG DES price assumption (2020-2030 average: Wood Mackenzie US\$7.86/MMBtu, real 2019). These prices are not intended to reflect management's forecast for future prices or the prices we use for internal planning purposes.

## Petroleum briefing

11 November 2019

# Statement of petroleum resources

The estimates of Petroleum Reserves and Contingent Resources contained in this presentation are based on, and fairly represent, information and supporting documentation prepared under the supervision of Mr. A. G. Gadgil, who is employed by BHP. Mr. Gadgil is a member of the Society of Petroleum Engineers and has the required qualifications and experience to act as a qualified Petroleum Reserves and Resources evaluator under the ASX Listing Rules. This presentation is issued with the prior written consent of Mr. Gadgil who agrees with the form and context in which the Petroleum Reserves and Contingent Resources are presented.

Reserves and Contingent Resources are net of royalties owned by others and have been estimated using deterministic methodology. Aggregates of Reserves and Contingent Resources estimates contained in this presentation have been calculated by arithmetic summation of field/project estimates by category with the exception of the North West Shelf (NWS) Gas Project in Australia. Probabilistic methodology has been utilised to aggregate the NWS Reserves and Contingent Resources for the reservoirs dedicated to the gas project only and represents an incremental 16 MMboe of Proved Reserves. The barrel of oil equivalent conversion is based on 6000 scf of natural gas equals 1 boe. The Reserves and Contingent Resources contained in this presentation are inclusive of fuel required for operations. The respective amounts of fuel for each category are provided by the following table or by footnote for the resource graphics. Production volumes exclude fuel. The custody transfer point(s)/point(s) of sale applicable for each field or project are the reference point for Reserves and Contingent Resources. Reserves and Contingent Resources estimates have not been adjusted for risk. Unless noted otherwise, Reserves and Contingent Resources are as of 30 June 2019. Where used in this presentation, the term Resources represents the sum of 2P reserves and 2C Contingent Resources.

BHP estimates Proved Reserve volumes according to SEC disclosure regulations and files these in our annual 20-F report with the SEC. All Unproved volumes are estimated using SPE-PRMS guidelines, which among other things, allow escalations to prices and costs, and as such, would be on a different basis than that prescribed by the SEC, and are therefore excluded from our SEC filings. All Resources and other Unproved volumes may differ from and may not be comparable to the same or similarly-named measures used by other companies. Non-proved estimates are inherently more uncertain than proved.

**Table 1: Net BHP Petroleum Reserves and Contingent Resources (MMboe) as of 30 June 2019**

	Offshore US		Offshore Australia			Rest of World			Total BHP
	Gulf of Mexico	Western Australia	Bass Strait and Minerva	Subtotal	Algeria	Mexico, Gulf of Mexico	Trinidad and Tobago	Subtotal	
<b>Proved</b>	<b>302</b>	<b>268</b>	<b>206</b>	<b>475</b>	<b>16</b>	<b>0</b>	<b>48</b>	<b>64</b>	<b>841</b>
<b>Probable</b>	<b>147</b>	<b>73</b>	<b>64</b>	<b>137</b>	<b>5</b>	<b>0</b>	<b>18</b>	<b>23</b>	<b>307</b>
<b>2P</b>	<b>449</b>	<b>341</b>	<b>271</b>	<b>612</b>	<b>21</b>	<b>0</b>	<b>66</b>	<b>87</b>	<b>1,147</b>
<b>2C</b>	<b>488<sup>1</sup></b>	<b>633</b>	<b>182</b>	<b>814</b>	<b>63</b>	<b>222</b>	<b>336<sup>2</sup></b>	<b>622</b>	<b>1,924</b>
<b>2P+2C</b>	<b>937<sup>1</sup></b>	<b>974</b>	<b>452</b>	<b>1,426</b>	<b>83</b>	<b>222</b>	<b>402<sup>2</sup></b>	<b>708</b>	<b>3,071</b>
<b>Fuel Included Above</b>									
Proved	10.6	32.4	12.3	44.7	1.1	0.0	1.1	2.3	57.6
Probable	2.8	9.8	4.2	14.0	0.0	0.0	0.4	0.4	17.3
2P	13.5	42.2	16.5	58.7	1.1	0.0	1.6	2.7	74.9
2C	0.0	60.9	6.8	67.7	1.5	0.0	0.0	1.5	69.1
2P+2C	13.5	103.1	23.3	126.4	2.6	0.0	1.6	4.2	144.1

The SEC permits oil and gas companies, in their filings with the SEC, to disclose only Proved, Probable and Possible Reserves, and only when such Reserves have been determined in accordance with SEC guidelines. We use certain terms in this presentation such as "Resources," "Contingent Resources," "2C Contingent Resources" and similar terms as well as Probable Reserves not determined in accordance with the SEC's guidelines, all of which measures we are strictly prohibited from including in filings with the SEC. These measures include Reserves and Resources with substantially less certainty than Proved Reserves. US investors are urged to consider closely the disclosure in our Form 20-F for the fiscal year ended 30 June 2019, File No. 001-09526 and in our other filings with the SEC, available from us at <http://www.bhp.com/>. These forms can also be obtained from the SEC as described above.

1. The US Gulf of Mexico 2C Contingent Resources includes 19 MMboe for the Samurai field which has been sold for value. The sale closed on 4 November 2019.
2. The Trinidad & Tobago 2C Contingent Resources exclude the FY20 Béle and Tuk discoveries which represent a combined 180 MMboe (Net) as of 30 September 2019.

# We start with our purpose

A strong sense of purpose drives better outcomes for all stakeholders

**Our new purpose**  
To bring people and  
resources together to  
build a better world





# Petroleum is positioned for long-term value creation

Our strategy identifies how to position the portfolio to maximise long-term value and deliver high returns for shareholders

## Best commodities

**Oil attractive for decades**  
even with electrification, supported by supply gap and steep cost curves

**Advantaged gas**  
through infrastructure, customers, or both

**New supply**  
needs to be continuously induced to balance markets

## Best assets

**>60% EBITDA margin**  
expected over the next 10 years from our high-quality assets

**Competitive pipeline**  
of options yields ~3% average production CAGR from FY20 to FY30

**Optimise legacy assets**  
manage mature assets for value

## Best capabilities

**Safety and sustainability**  
top quartile safety performance

**Exploration success**  
focused strategy added ~800 MMboe in 2C resources since FY17

**High-performing culture**  
leading to top quartile operational and deepwater drilling performance

**Petroleum ROCE expected to average >15% over the next 10 years; average major project IRRs of ~25%**

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance. EBITDA margin and ROCE based on Wood Mackenzie prices. ROCE excludes exploration.

# Quality assets delivering value and returns

A strong base combined with high-return projects and exploration growth opportunities significantly increases value

## Strong performance record

Over the past five years our portfolio has delivered consistent high margins and strong returns

- Highest EBITDA margin within BHP at >65%
- Average ROCE of ~15%

## Returns-led pathway to growth

High margins and competitive returns are expected to continue over the next 10 years

- Potential EBITDA margins<sup>1</sup> >60% to FY30
- Average ROCE<sup>1</sup> of 12% to FY24, expected to rise to ~20% from FY25-30

## Exploration drives future value

Continued focus on replenishing resource

- Added ~800 MMboe in 2C resources since FY17
- Exploration unrisks value of US\$14 billion<sup>2</sup>
- Counter-cyclical investment to develop value accretive exploration

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

1. EBITDA margins and ROCE at Wood Mackenzie prices. ROCE excludes exploration expenditure.

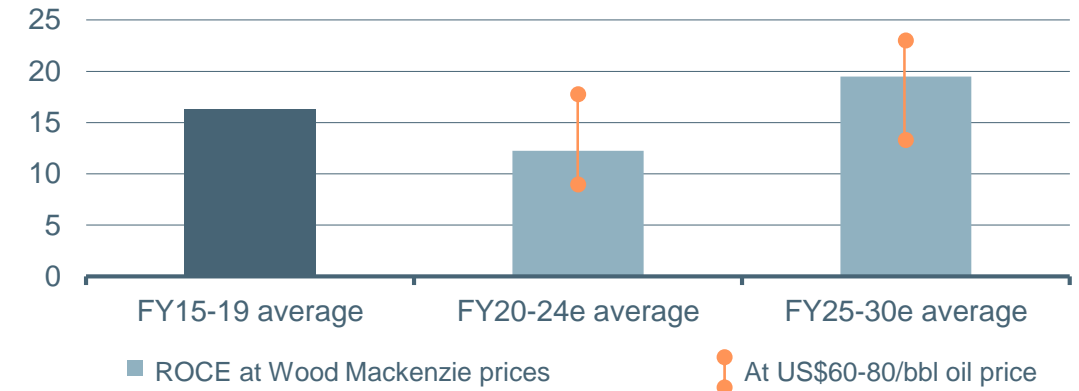
2. Exploration unrisks value at BHP prices.

3. Risked value uplift: represents total potential increase in base value from the addition of upside opportunities.

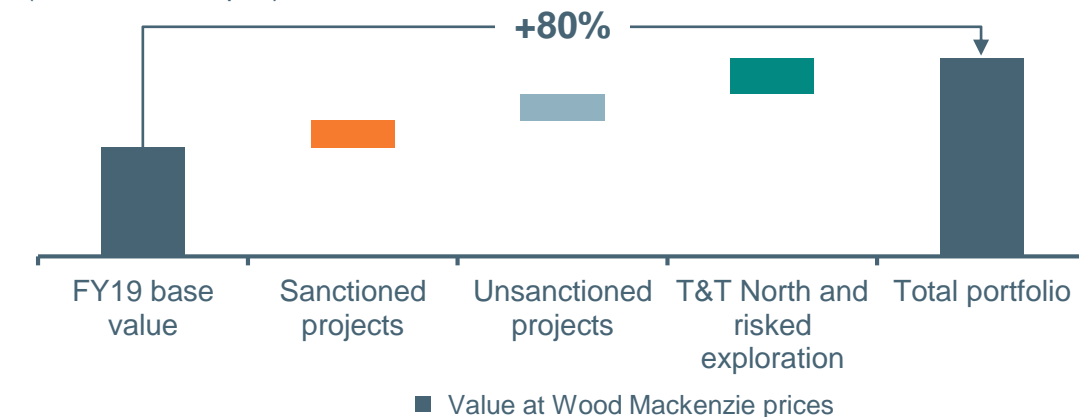
Petroleum briefing

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Strong returns from our high-quality portfolio (ROCE<sup>1</sup>, %)



Growth options have the potential to grow base value by up to 80%<sup>3</sup> (Risked value uplift)



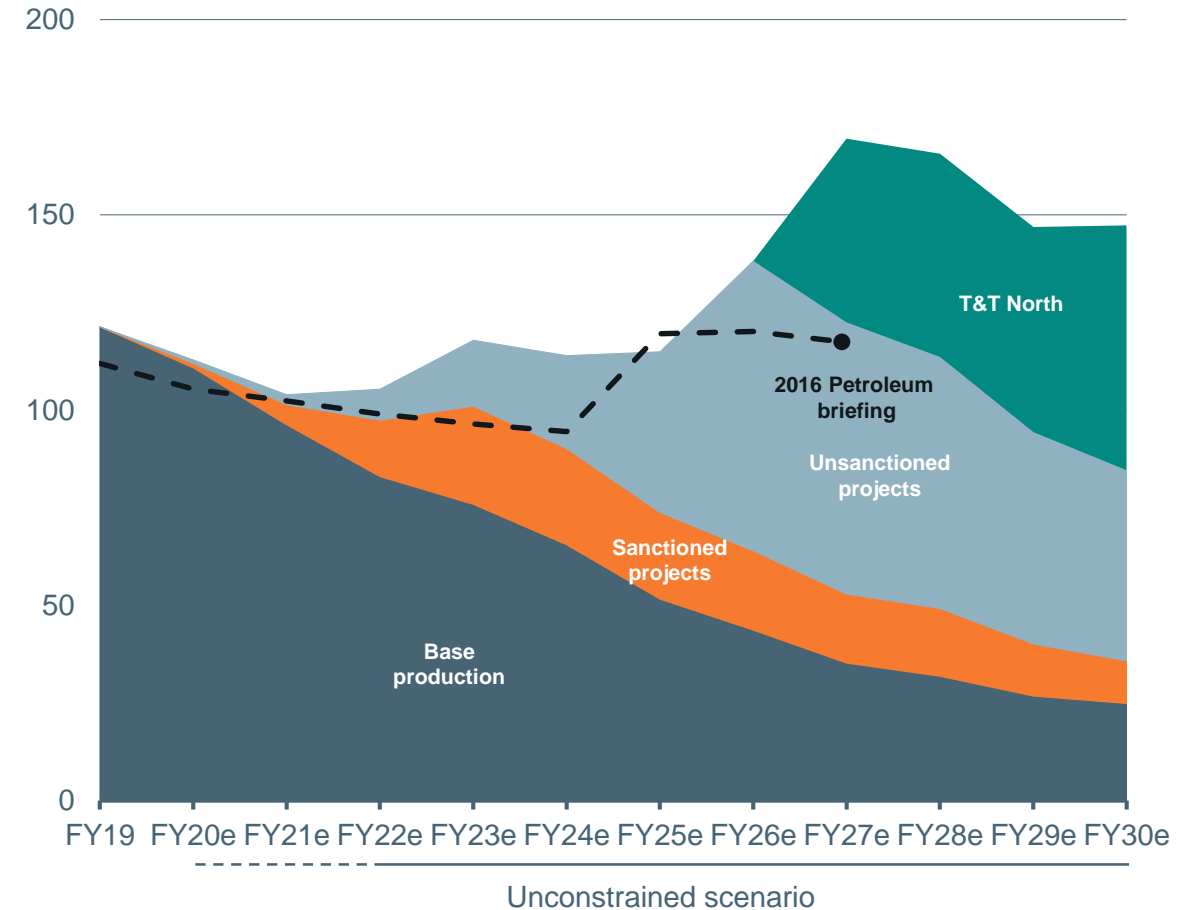
# High-margin barrels drive production growth and returns

Current opportunities deliver significant volumes, and more than offset Bass Strait and North West Shelf field declines

<b>Base production</b>	<ul style="list-style-type: none"> <li>• Strong free cash flow and returns through 2020s</li> <li>• 10+ years of meaningful production from the base</li> <li>• High-returning investments limit overall production decline to ~1.5% CAGR over the next five years</li> </ul>
<b>Sanctioned projects</b>	<ul style="list-style-type: none"> <li>• Oil-dominated projects delivering strong returns</li> <li>• Atlantis Phase 3, Mad Dog Phase 2, Ruby and West Barracouta to add ~25 MMboe in FY23</li> </ul>
<b>Unsanctioned projects</b>	<ul style="list-style-type: none"> <li>• Scarborough, Trion and US GoM embedded options add significant potential growth from mid-2020s</li> <li>• Competitive pipeline of high-return and improvement projects yield ~3% production CAGR from FY20-30</li> </ul>
<b>Exploration and future options</b>	<ul style="list-style-type: none"> <li>• Material gas discoveries in Trinidad &amp; Tobago North</li> <li>• Progressing exploration in Western Gulf of Mexico and Eastern Canada for tier one oil opportunities</li> <li>• Targeting further oil exposed growth</li> </ul>

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

Value accretive production potential over the next decade  
(Production, MMboe)



# Petroleum investments compete for capital

## Flexibility to manage investments across the Group

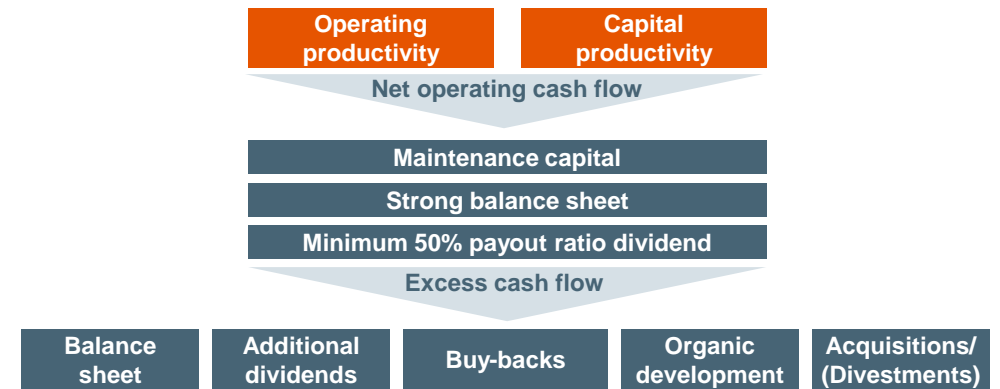
- We aim to balance investments, shareholder returns and balance sheet strength to maximise value and returns

- promotes discipline in all capital decisions
- we have a broad suite of attractive opportunities across all quadrants of our risk and return framework
- high number of valuable Petroleum options that compete strongly against other options in the Group portfolio; only the most competitive opportunities will progress
- Petroleum major projects with average IRRs ~25%; resilient through the cycle

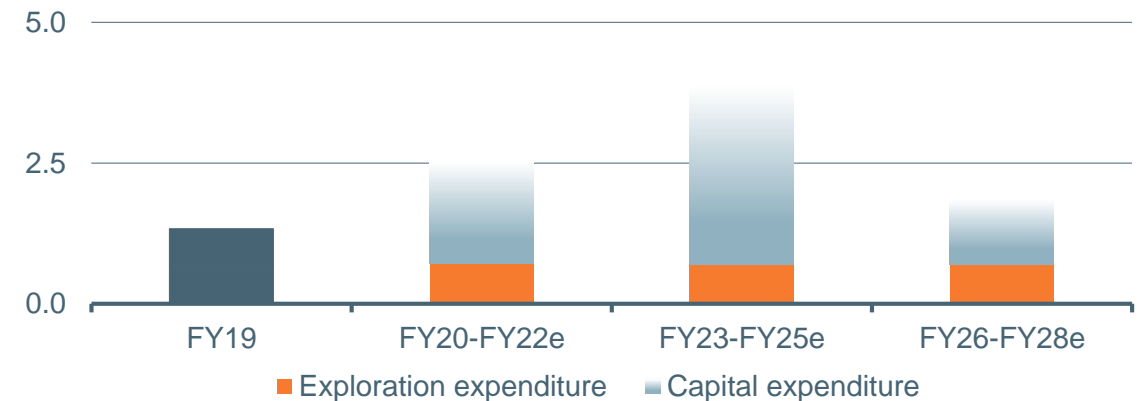
- Flexibility to manage investments across the Group

- optionality through high-equity interests and operatorship
- embedded options allow capital phasing and smoothing

## Capital Allocation Framework underpins investment decisions



## Petroleum unconstrained investments to fund all existing options<sup>1</sup> (US\$ billion)

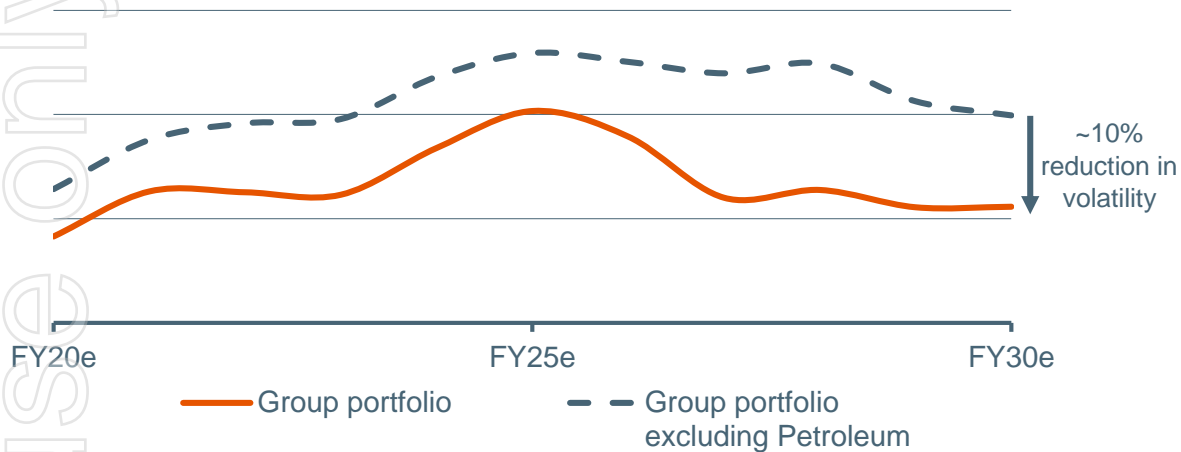


1. This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

# Petroleum creates a stronger and more resilient BHP

Petroleum provides portfolio benefits, beyond being an attractive commodity

## Petroleum reduces cash flow volatility<sup>1</sup> (Net operating cash flow volatility, %, nominal)

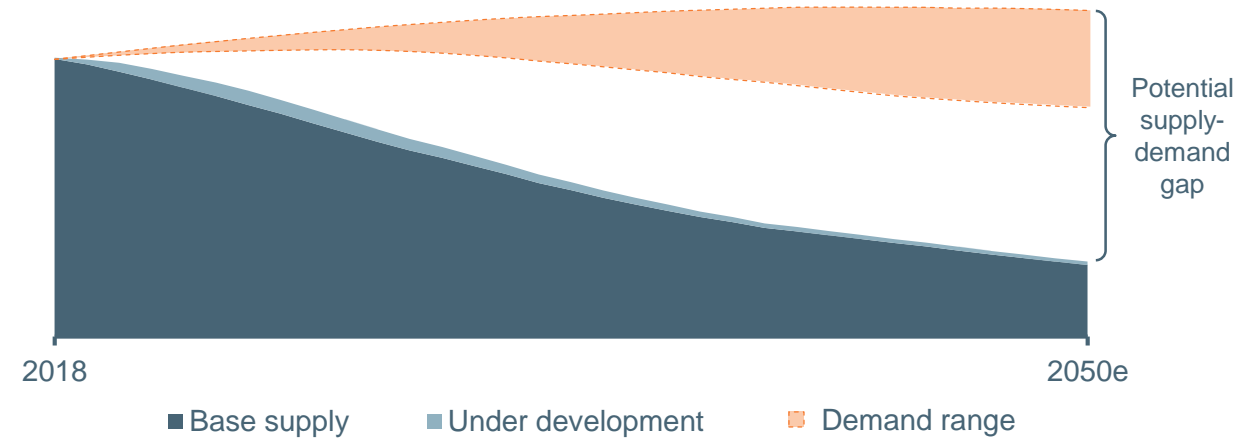


## Increases competition for our capital

- Greater opportunity to invest in large, valuable projects
- Multiple high-quality options, with attractive economics available; only the best options selected
- Diversification encourages greater counter-cyclical investment

<sup>1</sup> Based on historical price and forex volatilities and correlations over the past 20 years.

## Oil is an attractive commodity



Source: BHP internal analysis.

## Leverages core capabilities

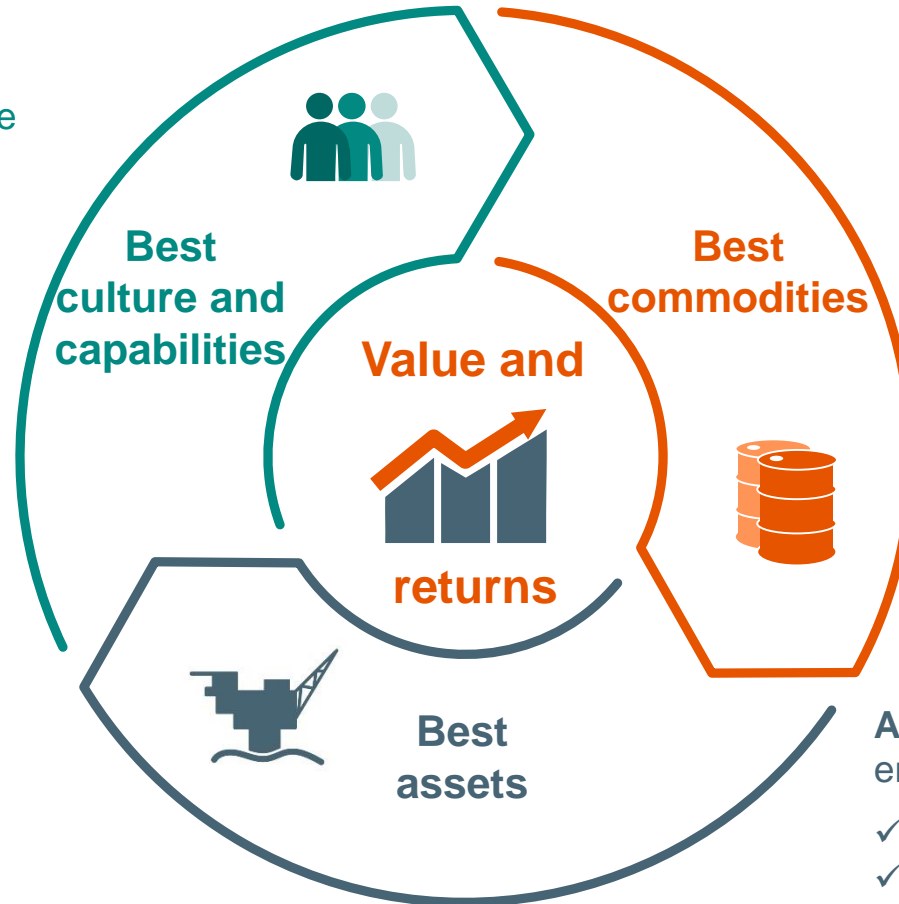
- Shared safety, project execution and operational learnings
- Differentiated and integrated geoscience expertise
- Global view of industrial commodities and energy markets
- Strong balance sheet enhances ability to access and develop options

# Our strategy to maximise value and returns

Petroleum aligns directly with BHP's strategy

**Culture and capabilities** that enable the execution of our business strategy

- ✓ Unwavering focus on safety and sustainability
- ✓ Access, exploration and appraisal capabilities
- ✓ Inclusive, empowered and high-performing culture



**Highly attractive commodities** positioned to meet the world's growing energy needs

- ✓ Crude oil
- ✓ Advantaged natural gas

**Assets** resilient through the cycle with embedded growth options

- ✓ Large, long-life and expandable
- ✓ High margin
- ✓ Focused on early access

Driven by a commitment to transformation, capital discipline and social value

An offshore oil and gas platform is shown at dusk, illuminated by its own lights against a dark blue sky with scattered clouds. The platform's complex steel structure, including pipes, walkways, and a crane, is visible. The sea is dark and calm in the foreground.

# BHP

## Oil and gas market outlook underpins our investments

Michiel Hovers

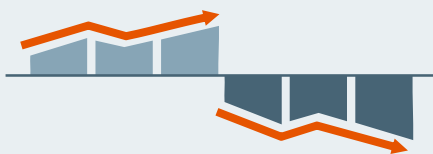
Group Sales and Marketing Officer

Angostura

# We are deliberate about the commodities we choose

Focused on holistic long-term value creation potential, informed by supply-demand balance – not just demand outlook

## Favourable supply and demand gap



Favour commodities where inducement economics, rather than operating costs, set the price more often than not

## Large market sizes



Enables future growth options in our assets

## Differentiated demand drivers



Reduced portfolio cash flow volatility  
Enables counter-cyclical investment  
Reduced risk of disruption in end-use markets

## Value creation and return potential



Steep cost curves  
Value in upstream



# Supportive fundamentals for oil and advantaged gas

New supply needs to be continuously induced to balance markets

## *Why* we like oil

- **Conventional oil assets to remain attractive for several decades**
  - supply-demand gap exists across all demand cases, even after an eventual peak
  - perpetual natural field decline leads supply to decline faster than demand
  - steep cost curve creates margin for assets competitive on the cost curve
  - even with increasing electrification, a supply-demand gap maintains inducement economics

## *When* we like gas

- **Gas assets are attractive if:**
  - geographically advantaged through infrastructure, customers, or both
  - competitive on the cost curve
- **Abundance of the underlying resource makes asset choice critical**

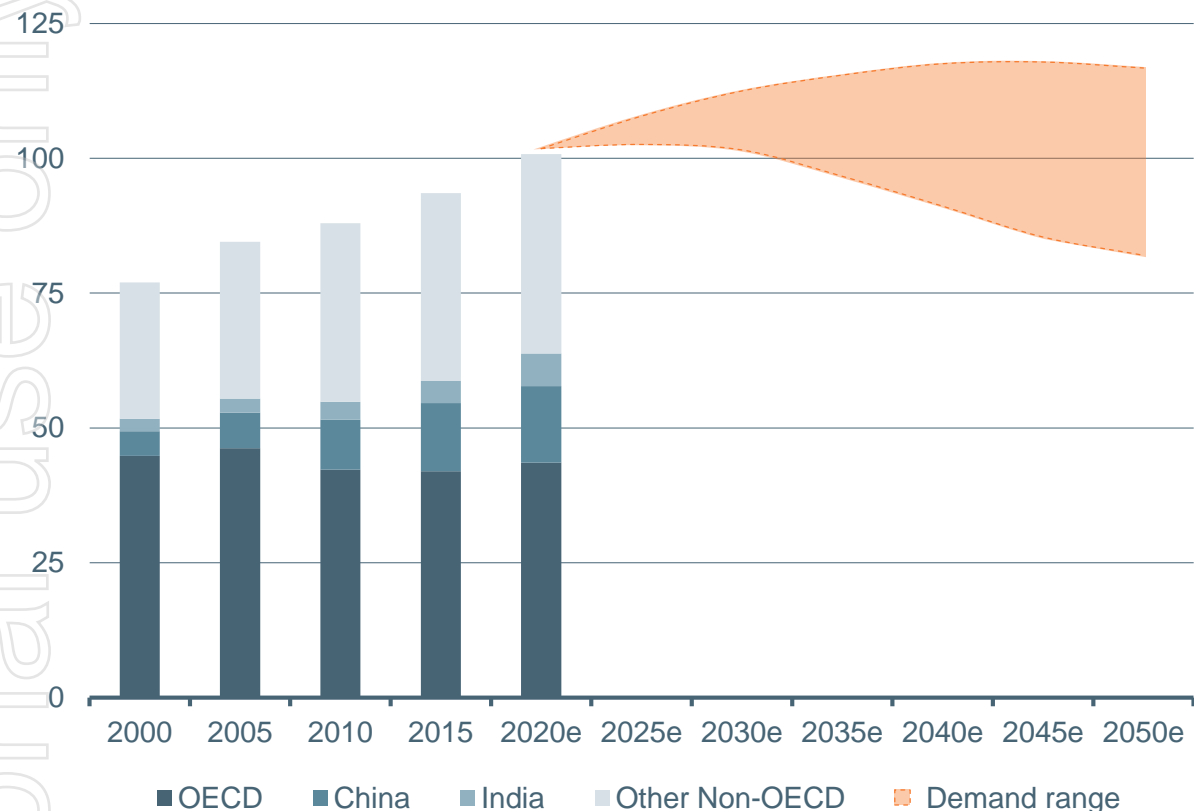
Structural supply-demand gap and a steeper cost curve underpins our more favourable outlook for oil than gas

# Oil demand to peak and then decline modestly

Demand tempered by the electrification of transport and fuel efficiency improvements, offset by rising living standards

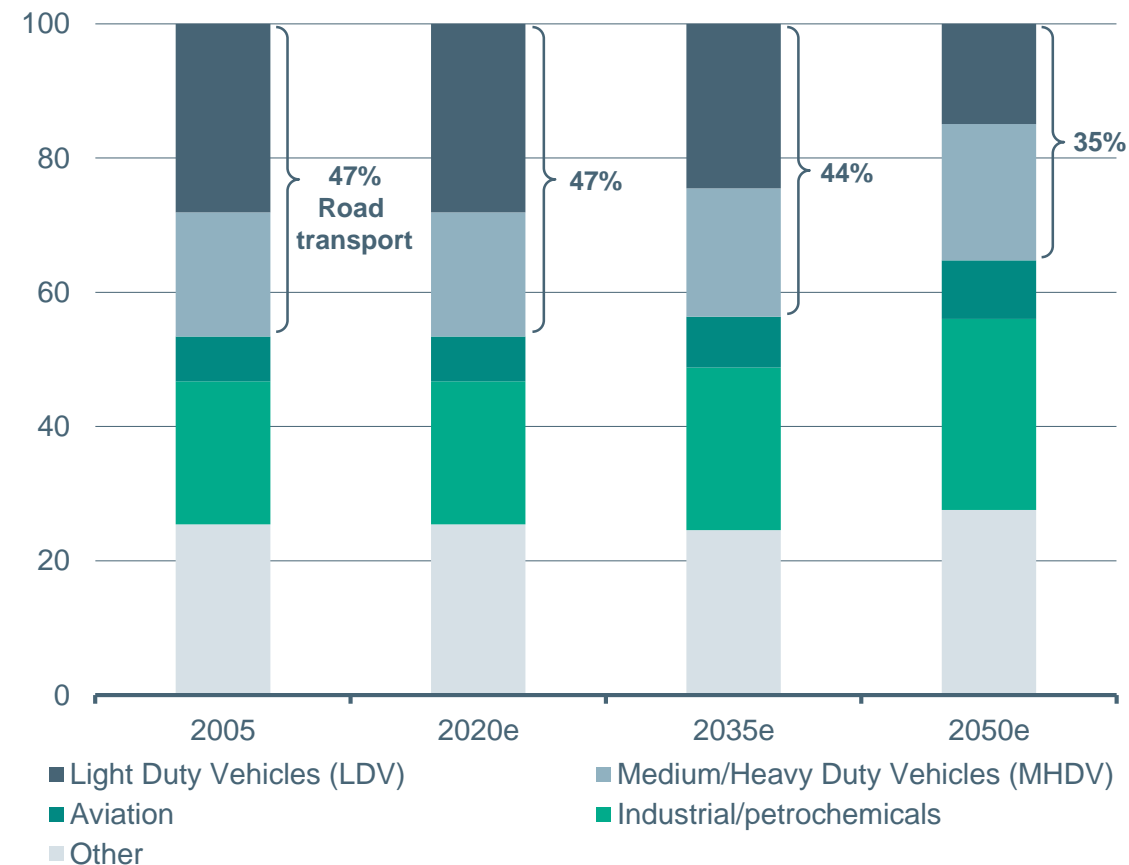
## Liquids demand by region

(MMbbl/d)



## Liquids demand by sector<sup>1</sup>

(%)



Source: BHP internal analysis.

1. Sectoral breakouts refer to our Central case assumptions.

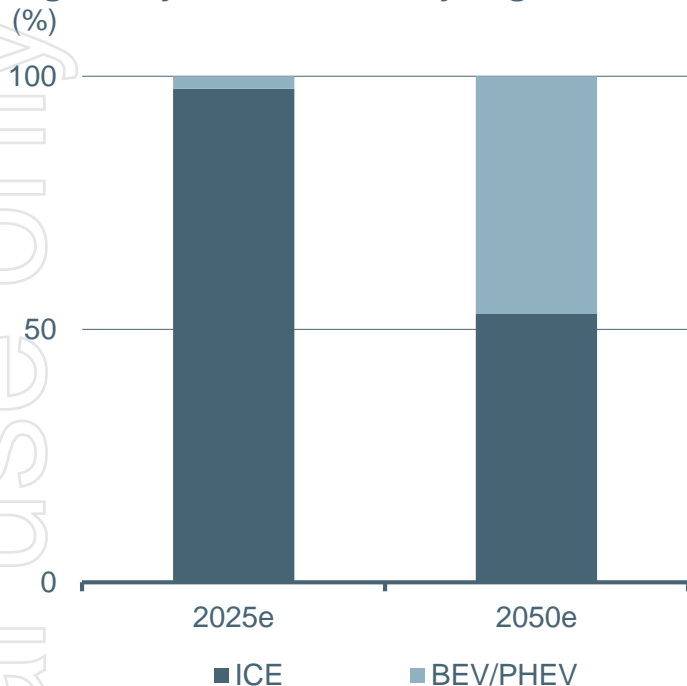
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# Electrification of transport: a strategic theme

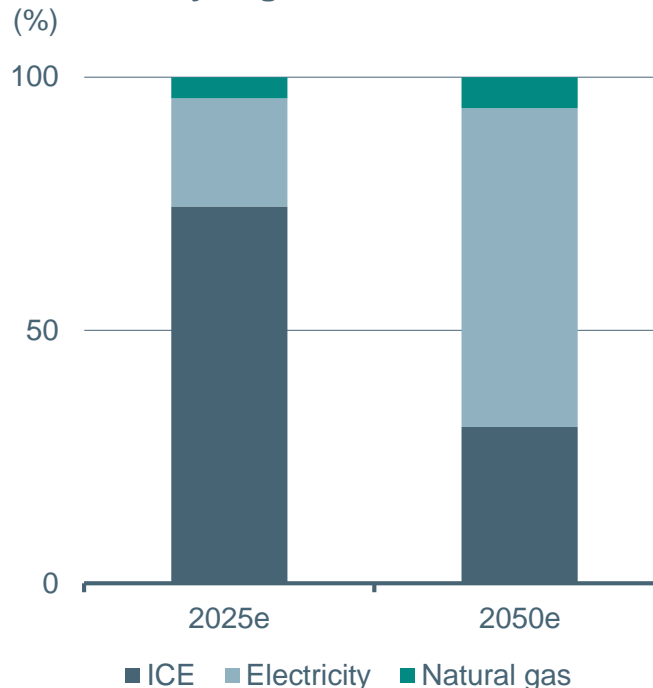
Light duty vehicle and bus fleet electrification is inevitable, however the medium and heavy truck fleet remain resilient

### Light duty vehicles fleet by segment



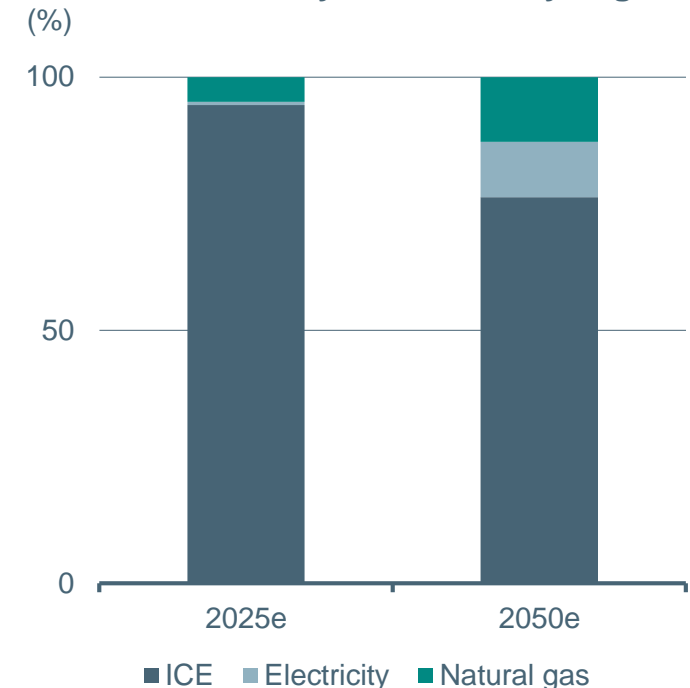
Today: 28 MMbbl/d → 2050: 8–22 MMbbl/d

### Bus fleet by segment



Today: 3 MMbbl/d → 2050: 2–4 MMbbl/d

### Medium and heavy truck fleet by segment



Today: 14 MMbbl/d → 2050: 14–20 MMbbl/d

Contribution of oil demand from road transport expected to fall from ~50% today to a range of 30–40% by 2050

Source: BHP internal analysis.

Note: All data represented in the charts corresponds to our Central case assumption, while the range in text references our High and Low cases. ICE: Internal Combustion Engine; BEV/PHEV: Battery Electric Vehicles/Plug-in Hybrid Electric Vehicles.

# Compelling long run supply-demand fundamentals

A supply gap of more than 50 MMbbl/d could emerge by 2035; “yet-to-find” barrels will be an increasingly important contributor

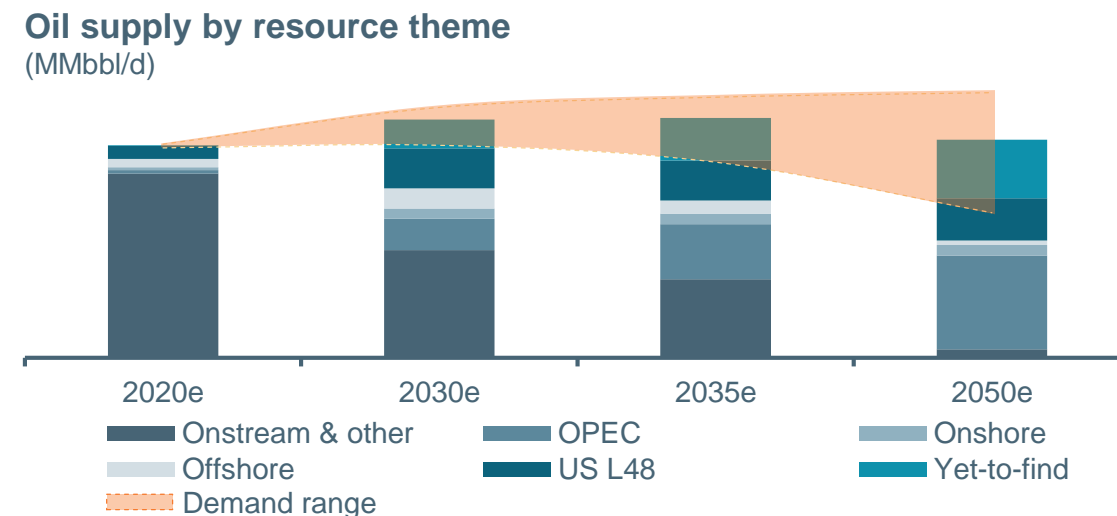
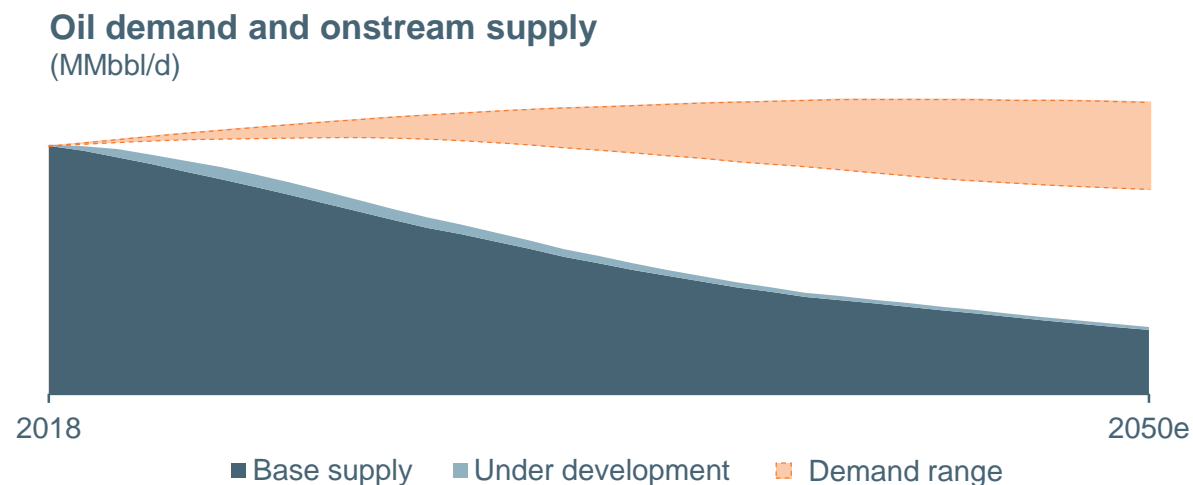
## • Compelling fundamentals

- there is a structural supply-demand gap in all our cases that persists beyond the peak in demand
- base supply decline will require cumulative new supply equal to 1.5x OPEC by 2035
- we expect oil to be in an inducement pricing regime more often than not; cost curve to remain steep

## • Upstream investment and project sanctions required

- the industry has under-invested in both exploration and deepwater development over the past five years<sup>1</sup>
- conventional oil resources sanctioned for development fell to 7 Bboe from 2016-18 (annual average), 60% lower than previous five years<sup>1</sup>
- creates the possibility of a steep price correction in the mid-2020s

1. International Energy Agency (2019), World Energy investment 2019, IEA, Paris.



Source: BHP internal analysis.

# Gas demand diversified and resilient; LNG gaining share

**LNG demand could double by 2035, outpacing global gas demand growth**

## • Global gas demand to rise

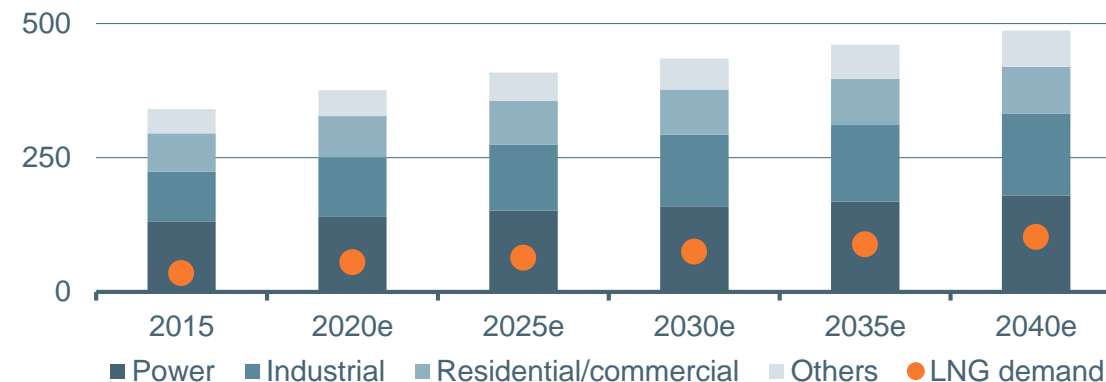
- share of total primary energy demand increases from 22% to 26% by 2050
- gas complements renewables in power sector
- LNG is the fastest growing fossil fuel segment, with LNG share of global gas demand expected to rise from 12% to ~20% by 2050

## • Recent wave of new LNG supply weighs on the market until the mid 2020s

- new supply from North America, Australia, Russia and Mozambique out-stripping demand, with overflow to European storage
- strong demand growth from Asia and Europe could allow the market to balance by the mid-2020s

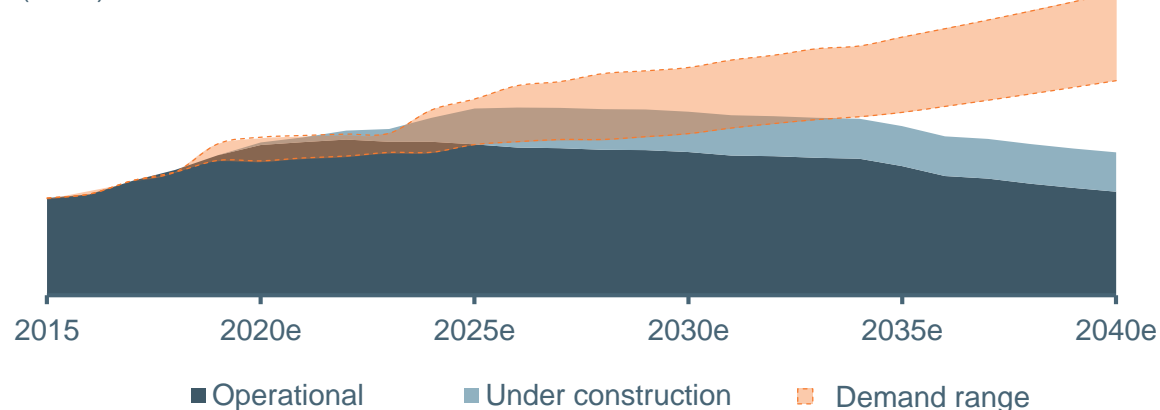
## Global gas demand by sector

(Bcf/d)



## Global LNG supply-demand balance

(Bcf/d)

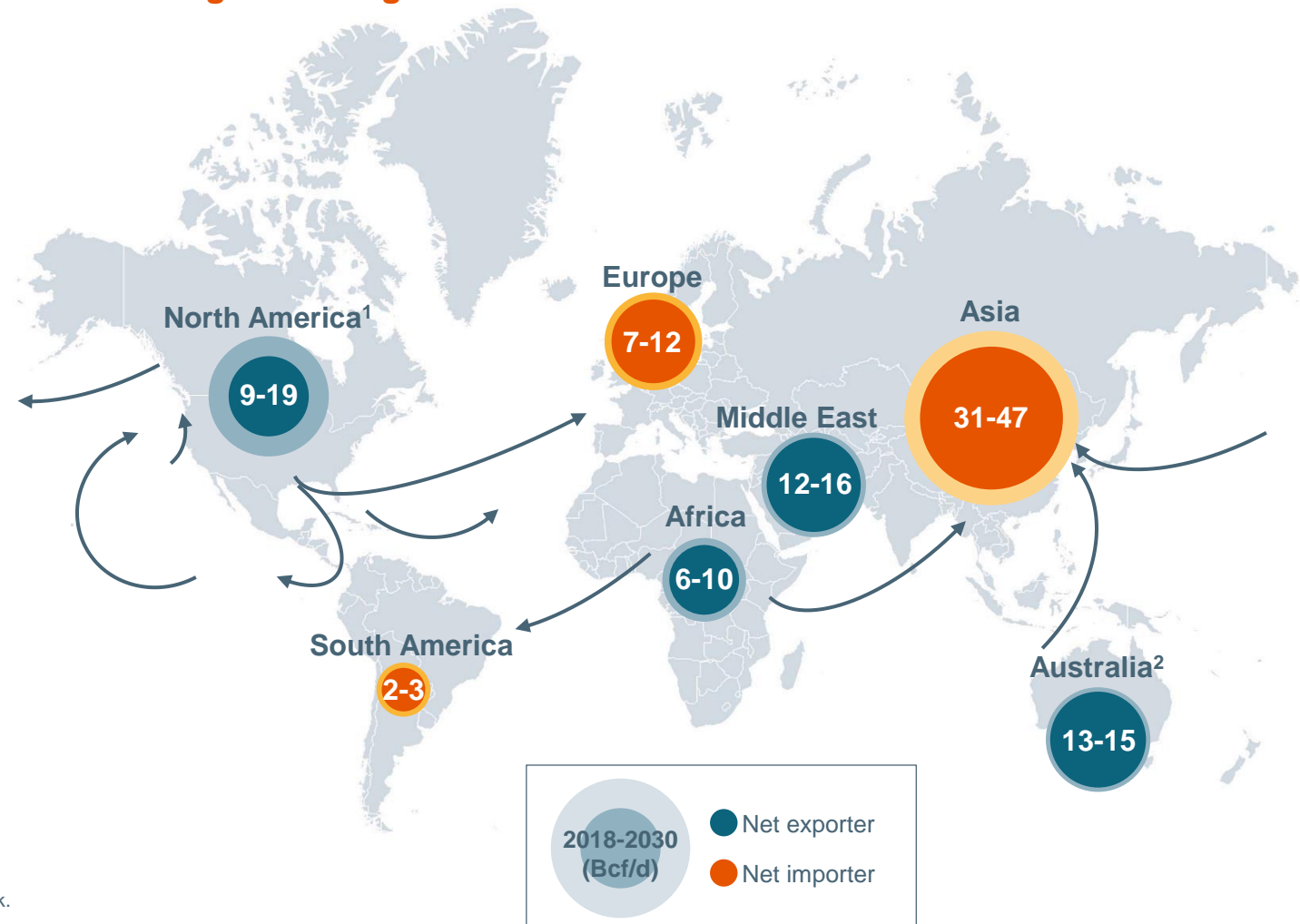


Source: BHP internal analysis.

# Price harmonisation increases importance of asset choice

Natural gas assets with access to infrastructure will be advantaged as the global LNG market matures

- LNG market moving towards a global benchmark
  - US export capacity is drawing the key consumer regions of Asia and Europe closer together
  - as the industry expands, single large projects have less impact on the overall market balance
- Contracting terms continue to evolve
  - contract duration has reduced since the early 2000s, as buyers demand shorter lengths
  - spot markets are deepening
  - indexation to oil has dropped in favour of Henry Hub indexing and hybrid pricing structures



Note: Price harmonisation refers to the convergence of LNG pricing around a global benchmark.

Source: BHP internal analysis.

1. Includes Mexico.

2. Includes Papua New Guinea.

# Supportive fundamentals for oil and advantaged gas

New supply needs to be continuously induced to balance markets

## *Why* we like oil

- **Conventional oil assets to remain attractive for several decades**
  - supply-demand gap exists across all demand cases, even after an eventual peak
  - perpetual natural field decline leads supply to decline faster than demand
  - steep cost curve creates margin for assets competitive on the cost curve
  - even with increasing electrification, a supply-demand gap maintains inducement economics

## *When* we like gas

- **Gas assets are attractive if:**
  - geographically advantaged through infrastructure, customers, or both
  - competitive on the cost curve
- **Abundance of the underlying resource makes asset choice critical**

Structural supply-demand gap and a steeper cost curve underpins our more favourable outlook for oil than gas

# BHP

## High-return assets and opportunities

Geraldine Slattery  
President Operations Petroleum



ersonal use only



# Quality assets concentrated in key heartlands

Over 3 Bboe in resources provide potential to expand our presence in the Gulf of Mexico, Trinidad & Tobago and Western Australia

## Western Australia

Northwest Shelf (NWS)  
Scarborough  
Pyrenees  
Macedon

**974**  
MMboe

2P+2C resources

## Bass Strait

**452**  
MMboe

2P+2C resources

## US Gulf of Mexico

Mad Dog  
Atlantis  
Shenzi  
Wildling  
Neptune

**937**  
MMboe

2P+2C resources

## Eastern Canada

Eastern Canada: 5,434 km<sup>2</sup>

## US Gulf of Mexico

Western: 2,180 km<sup>2</sup>  
Central: 838 km<sup>2</sup>

## Mexico

Trion

**222**  
MMboe

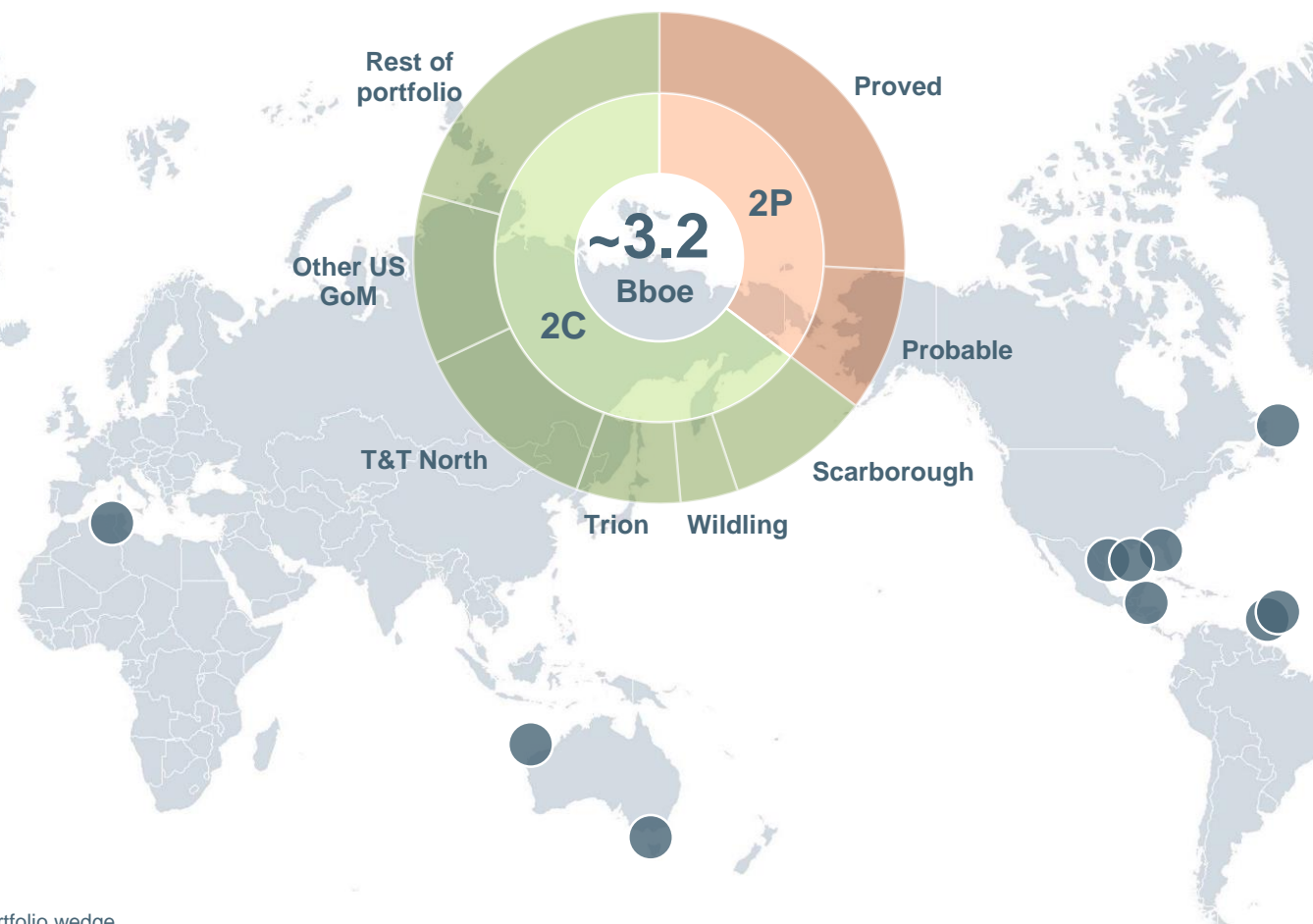
2P+2C resources

## Trinidad & Tobago<sup>1</sup>

Angostura  
Ruby<sup>2</sup>  
T&T North  
T&T South

**582**  
MMboe

2P+2C resources



Note: Algeria resource volumes included in Rest of portfolio wedge.

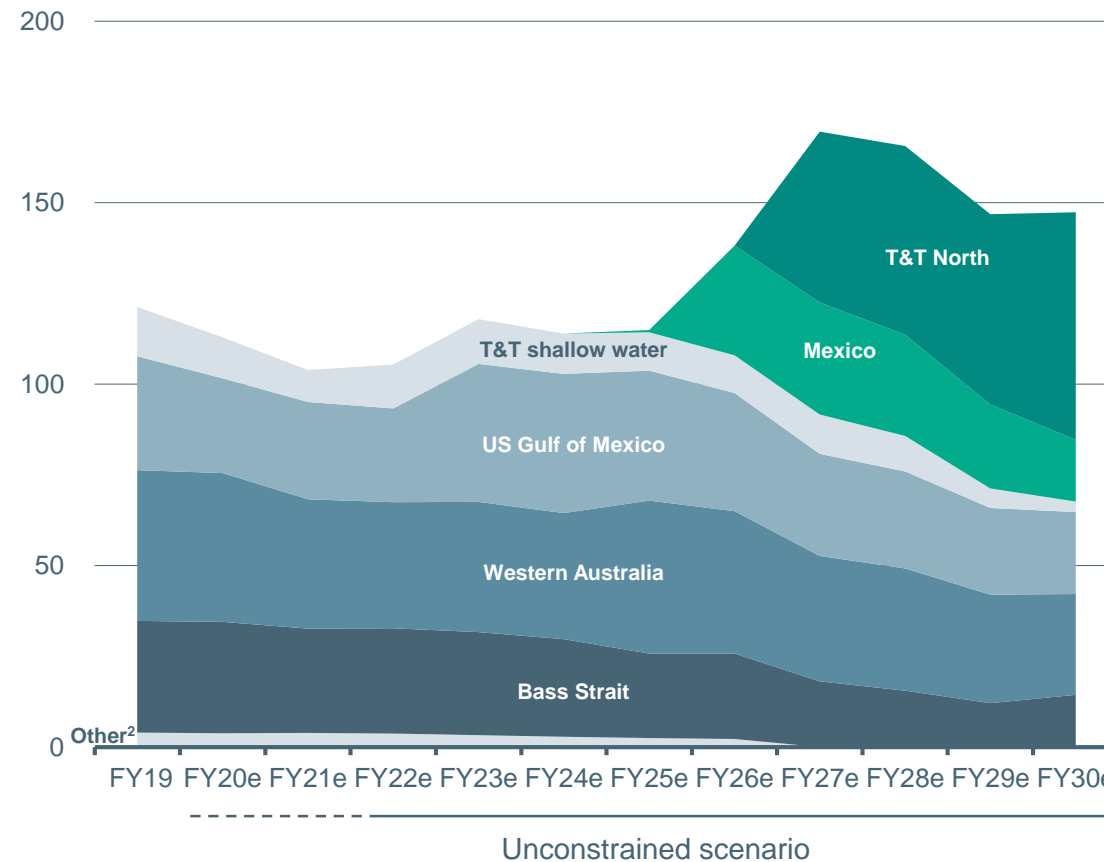
1. Includes Bél  and Tuk discoveries which represent a combined 180 MMboe (net).
2. Ruby project includes the Ruby and Delaware fields.

# Replenishing the portfolio with high-value resources

Balanced portfolio provides strong foundation for growth through the next decade

Heartlands	
Bass Strait	Advantaged gas position with modest investable opportunities
Western Australia	North West Shelf provides strong free cash flows; Scarborough offers growth potential
US Gulf of Mexico	Large, long-life and expandable oil position
Mexico	First deepwater oil asset in Mexico with equity and exploration potential
Trinidad & Tobago	Advantaged gas position with significant volumes and equity, providing flexibility on development

Value accretive production potential over the next decade<sup>1,2</sup>  
(Production, MMboe)



1. This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance. Volumes include base, sanctioned and unsanctioned projects, and exploration.  
2. Other production includes volumes from Algeria.

# Australia: strong free cash flow generation

## Bass Strait and North West Shelf demonstrate the strength of our base assets

- **Bass Strait: high returns with upside through the 2020s**

- highly cash generative, advantaged gas play
- West Barracouta sanctioned in FY19 with a ~20% IRR
- multiple improvement projects with expected average IRRs >30%

- **North West Shelf: consistently delivers high returns**

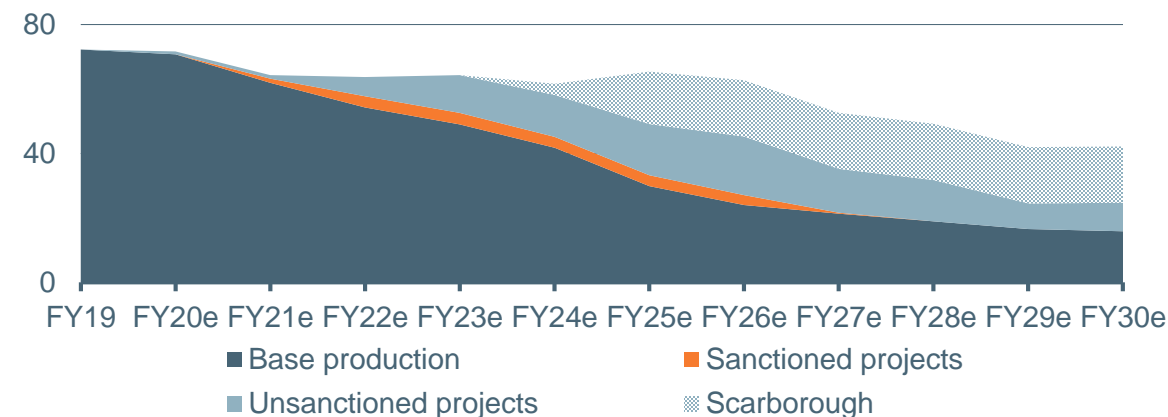
- strong free cash flow generation from equity gas
- followed by revenue generation from other resource owners

- **Manage the portfolio for value**

- advance Scarborough to final investment decision
- commercialise remaining resources
- recognise optimal exit windows

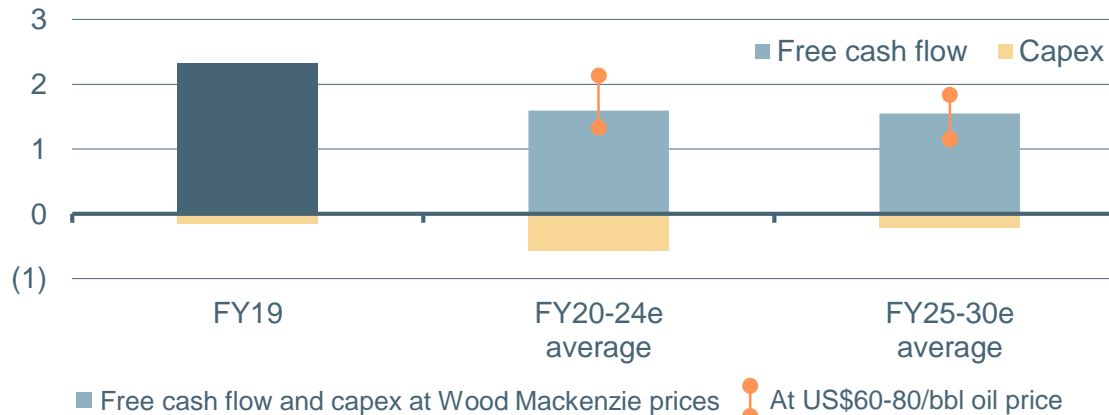
### Australian assets: production by lifecycle<sup>1,2</sup>

(Production, MMboe)



### Australian assets: free cash flow and capex profile

(US\$ billion)



1. This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance. Volumes include base, sanctioned and unsanctioned projects, and exploration.

2. Scarborough production at BHP effective working interest of 26.5% across WA-1-R and WA-62-R; excludes the 10% option.

# Scarborough: working to advance development

Material growth potential through development of Scarborough and unlocking additional contingent resources

- **Large, long-life resource**

- 2C resources: 11.1 Tcf<sup>1</sup> (gross)
- proposed development concept of 13 subsea wells tied back to a semi-submersible floating production unit
- opportunity for further expansion through Thebe/Jupiter tieback

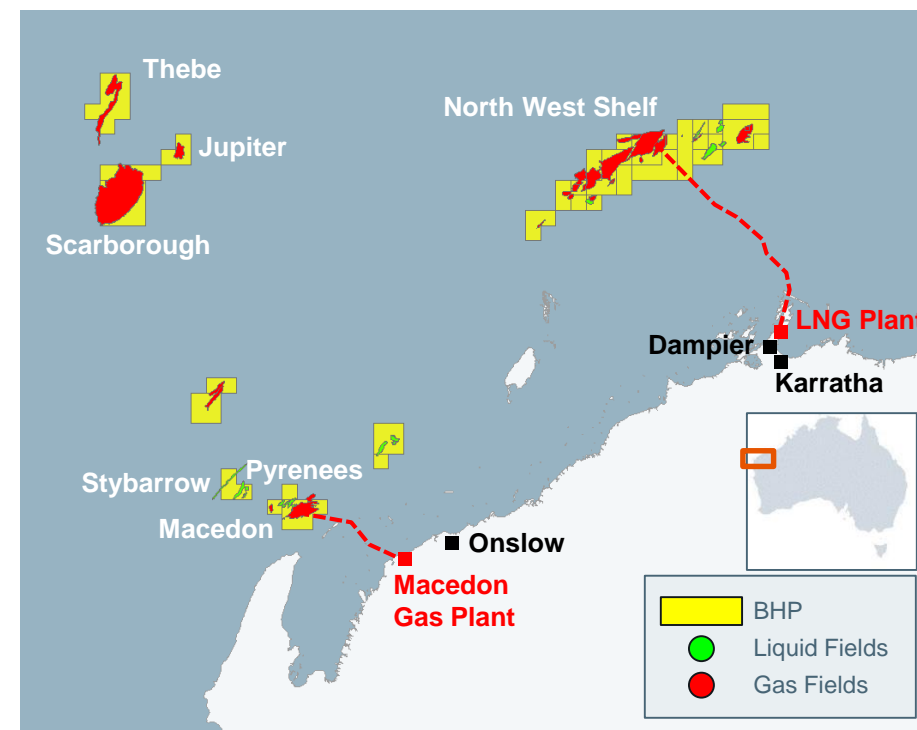
- **Advantaged gas opportunity**

- close to attractive LNG markets
- enabled by leveraging regional infrastructure

- **Working with operator to advance development**

- negotiations for gas processing ongoing
- capex of US\$1.4–1.9 billion<sup>1</sup> (net), with a final investment decision expected in CY20

## BHP's Western Australia heartland



## Timeline



●—● FID range

→ First production range

<sup>1</sup> Based on information provided by operator. Represents BHP's current equity position as 25% in WA-1-R and 50% in WA-62-R.

# US Gulf of Mexico: big fields get bigger

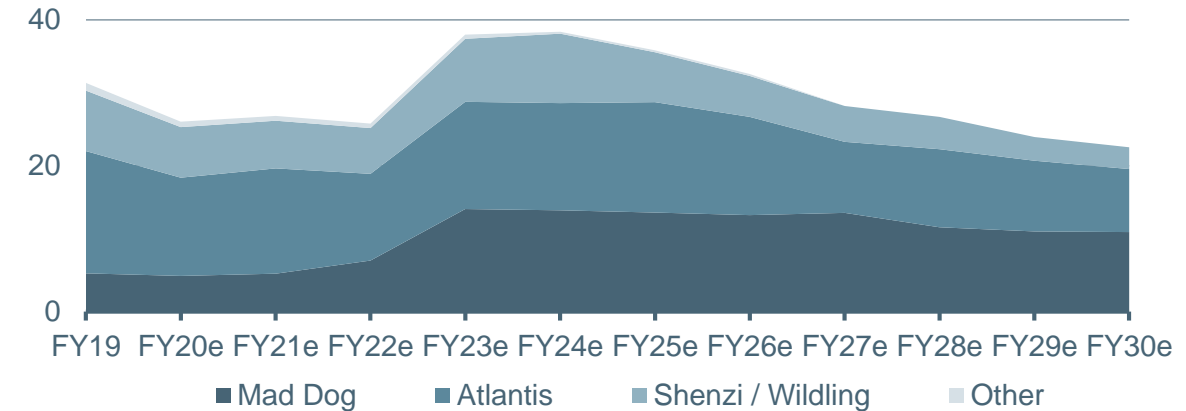
## Growing pipeline of high-return projects across all three assets

- **Atlantis: additional targets unlocked with advanced seismic**
  - Phase 3: 8 well tieback; 32 Mbbbl/d incremental liquids peak rate (gross); >40% IRR with first oil expected in CY20
  - multiple future development projects in planning phase
- **Mad Dog: tier one asset in the US Gulf of Mexico**
  - Phase 2: 140 Mbbbl/d liquids peak rate (gross); >15% IRR with first oil expected in CY22
  - future unsanctioned projects include Northwest Water Injection (NWI) and tieback opportunities
- **Shenzi: operated infield and nearfield opportunity sets**
  - Wildling Phase 1: two well development tieback to Shenzi derisks future development phase concept
  - future unsanctioned projects include Shenzi Subsea Multi-Phase Pumping and further infill targets
- **Pipeline of unsanctioned growth opportunities enabled by Ocean Bottom Node (OBN) seismic and advanced processing**

1. This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

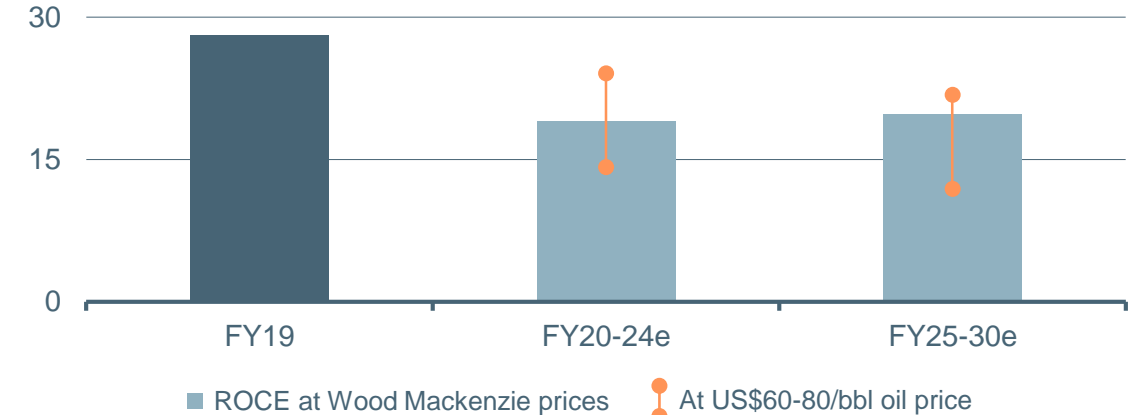
## US Gulf of Mexico delivers value-accretive production<sup>1</sup>

(Production, MMboe)



## US Gulf of Mexico drives strong returns over the next 10 years

(ROCE, %)

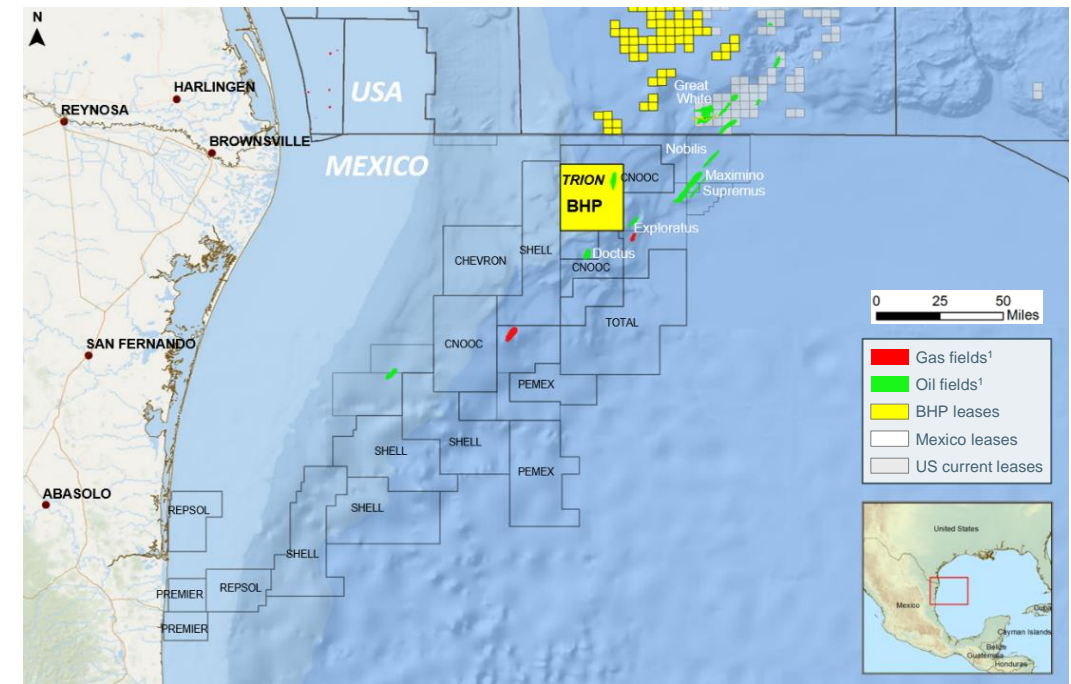


# Trion: Mexico's first deepwater development

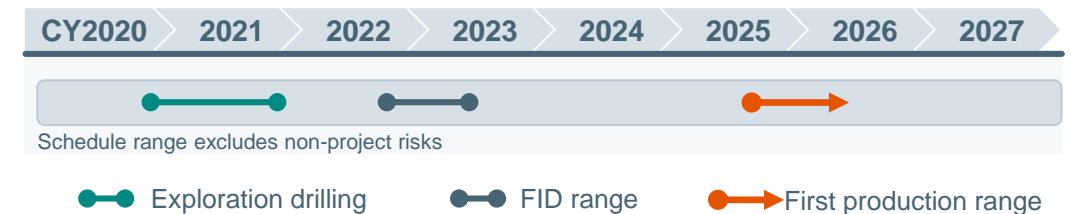
Material oil resource advancing towards an early 2020s final investment decision

- Large oil resource: 222 MMboe net 2C resources
- Successful appraisal program has reduced uncertainty
  - first deepwater well drilled by an international operator
  - top-tier drilling performance
  - reduced downside uncertainty associated with potential gas cap
- Deploying our deepwater capabilities in Mexico
  - top-five deepest offshore oil development
  - focus on building strong relationships, safety performance and social value
- Unlocking further opportunities
  - additional exploration drilling in the Trion block in FY21
  - continue to look for attractive investment opportunities to expand our position in Mexico

BHP's Trion position in relation to US Gulf of Mexico blocks



## Timeline



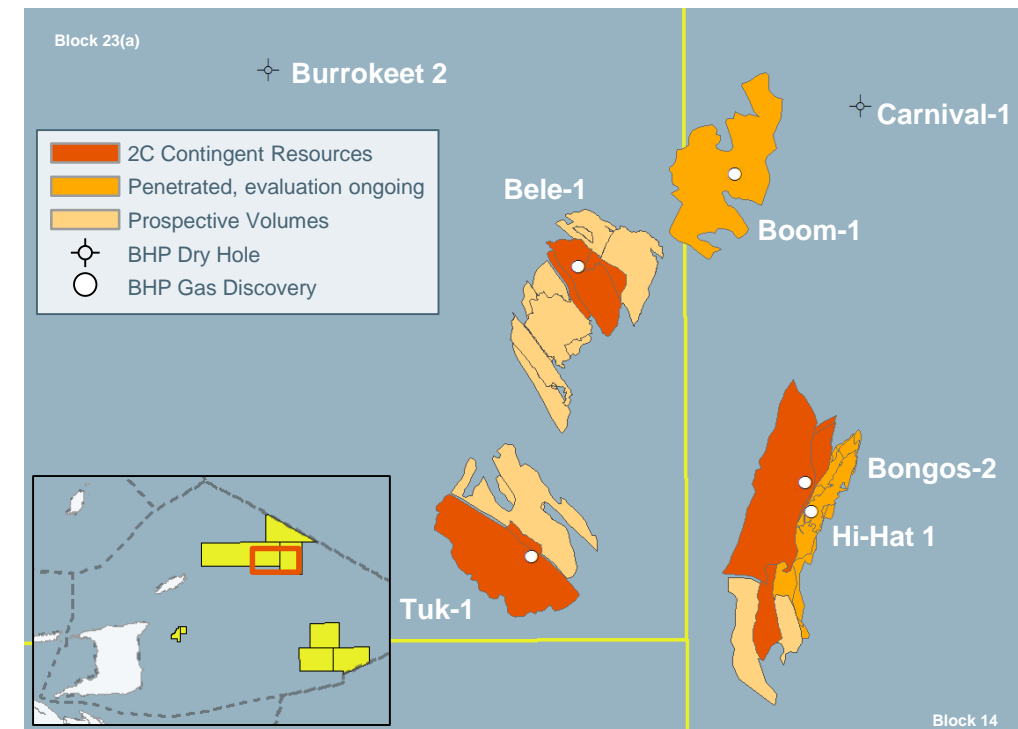
1. Source: Wood Mackenzie.

# Trinidad & Tobago: a material, deepwater gas discovery

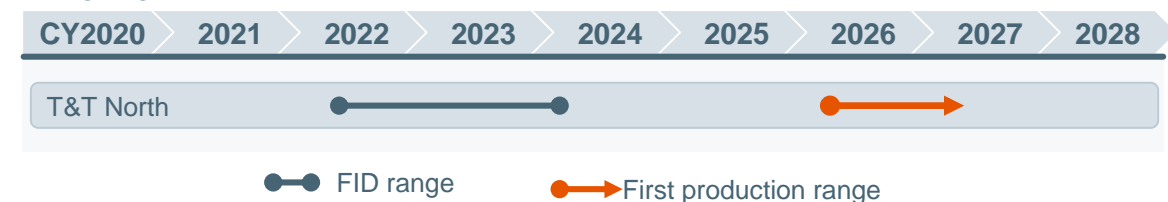
Building on our existing position in the region and successfully unlocking a frontier basin

- **T&T North deepwater gas exploration program successful**
  - discovered 3.5 Tcf gross contingent resources, with additional unpenetrated potential (net interest 70%)
  - evaluation ongoing for upside potential from recent drilling
  - multiple gas discoveries suited to a hub development
- **Development planning and commerciality assessment**
  - targeting LNG and gas-short domestic markets
  - currently evaluating multiple development concepts
  - final investment decision expected by CY24
- **Ruby to offset declines from Angostura in mid-2020s**
  - Ruby project sanctioned August 2019; IRR ~30%
  - further oil development upside unlocked from recent OBN
- **Additional exploration and appraisal opportunities**
  - evaluating a deep test in the southern deepwater licenses
  - assessing commerciality potential of gas discovery in the south

## Trinidad & Tobago North licenses and discoveries



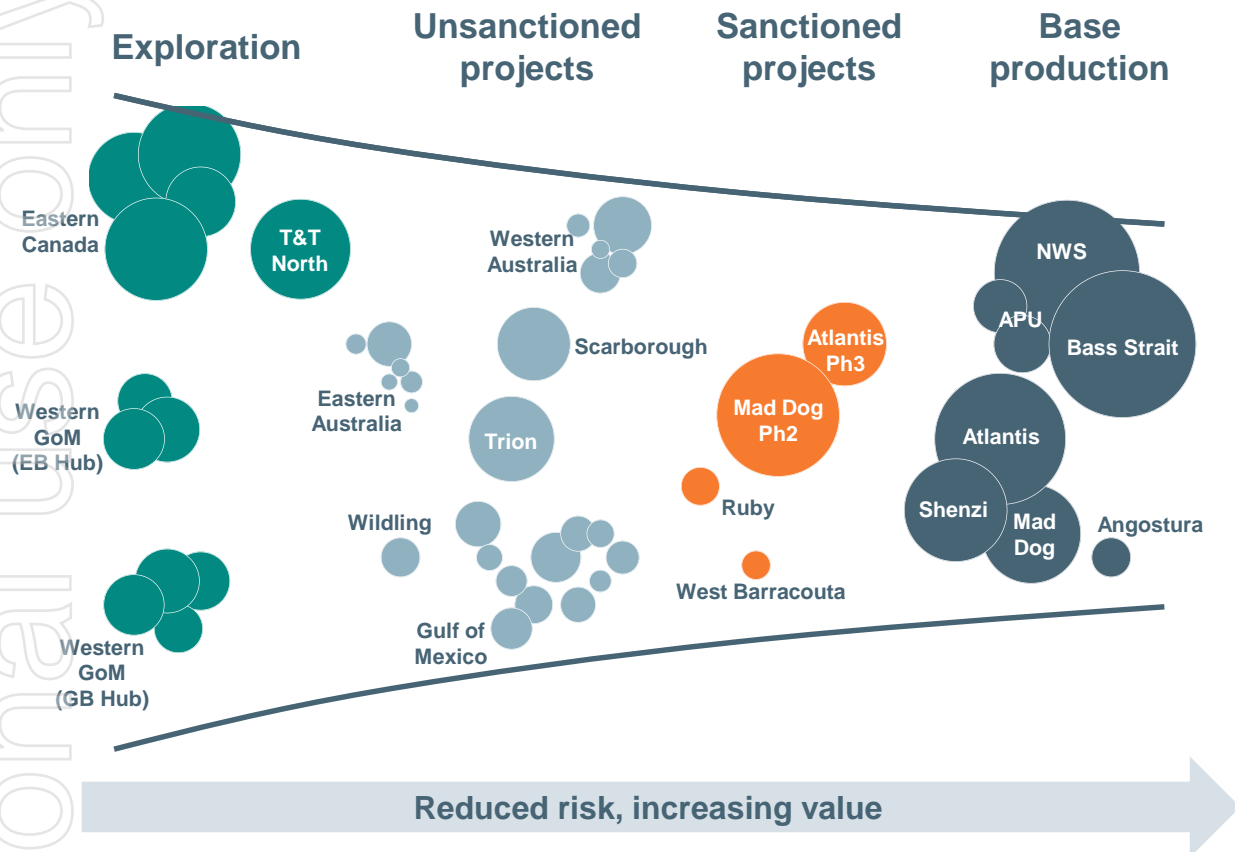
## Timeline



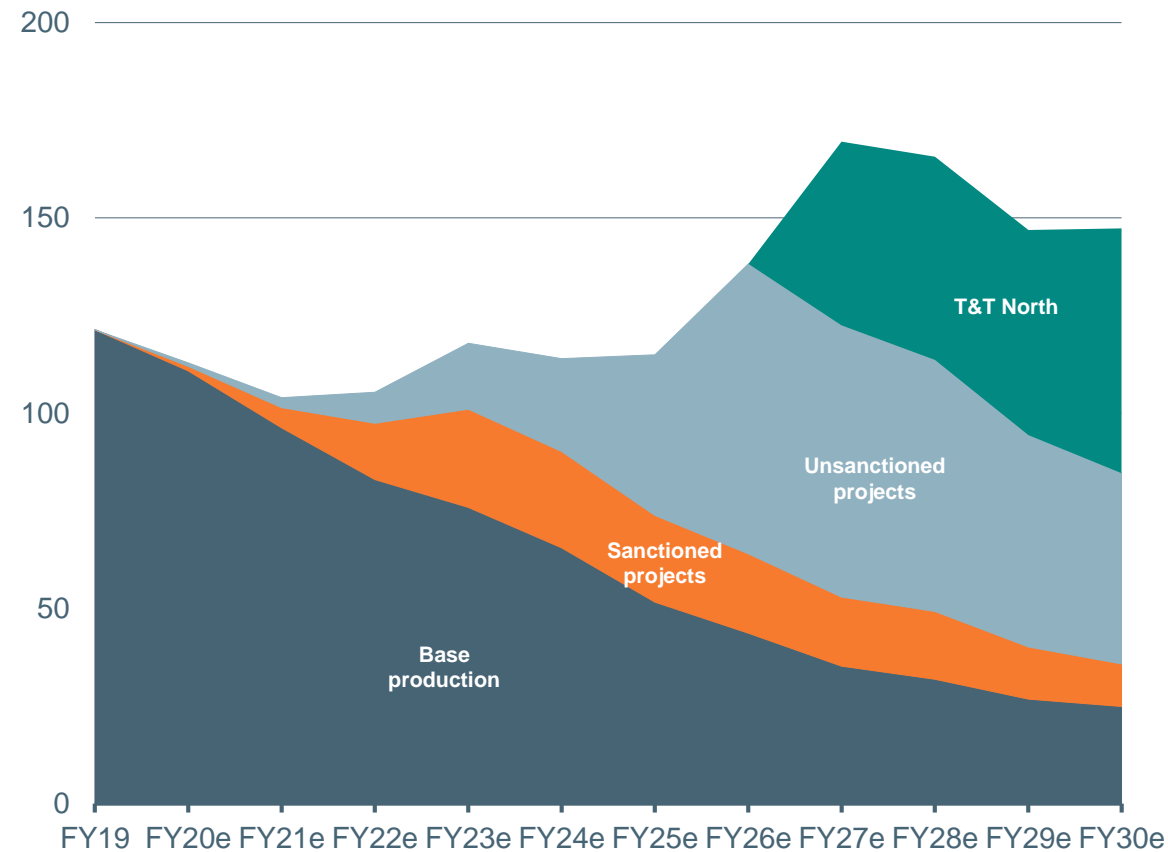
# A healthy pipeline of options supports our future

Constantly identifying and derisking new opportunities while progressing only the best options

Significant growth potential over the next decade  
(Value<sup>1</sup>, BHP share)



Value accretive production potential over the next decade<sup>2</sup>  
(Production, MMboe)



1. Unrisked values at BHP long-term price forecasts.  
2. This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance; Eastern Canada and Western GoM volumes not shown as they begin producing outside the forecast period.



# BHP

## Delivering the future through exploration

Sonia Scarselli

VP Exploration and Appraisal



Deepwater Invictus

ersonal use only

# Our exploration strategy is delivering

Exploration has added ~800 MMboe of 2C resources since FY17

Access

Explore

Appraise

- **Tier one potential, geographically focused**

- bias for oil
- big reservoir systems, world class source rock
- large scale; >100 Mboe/d net; multiple pools >250 MMboe

- **Value focused**

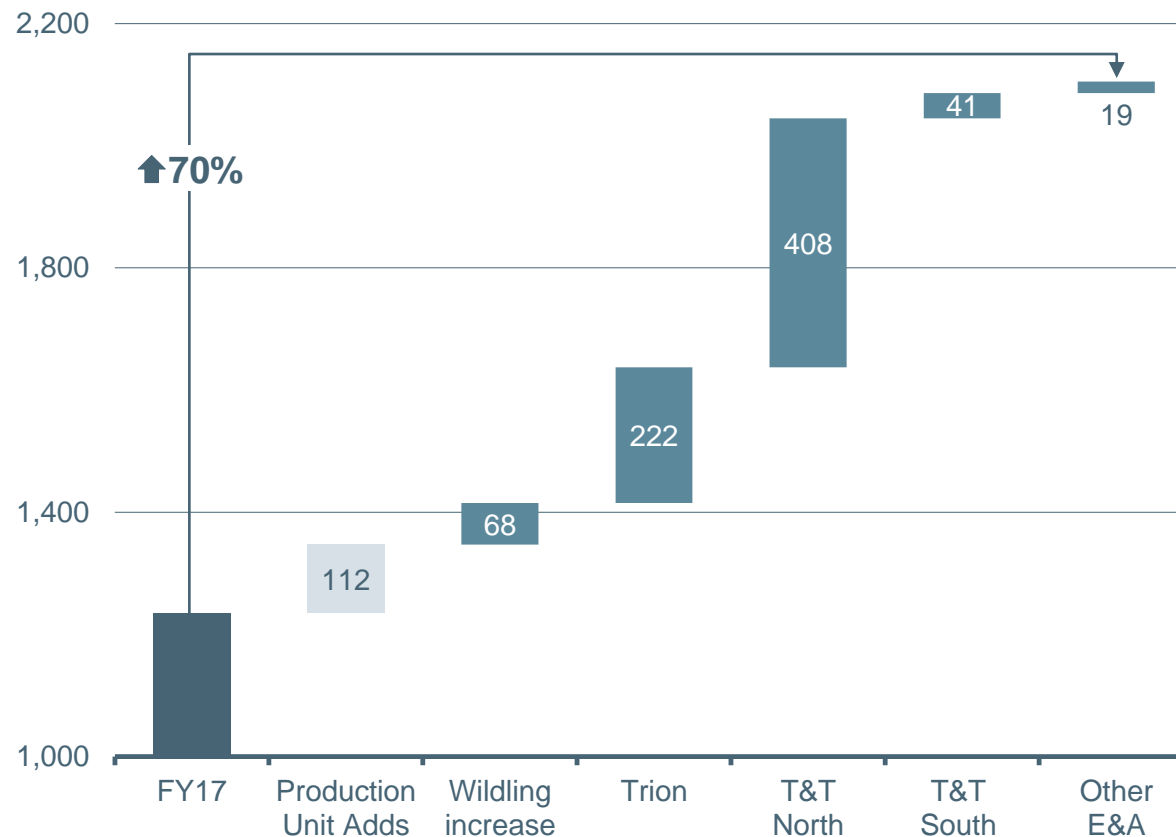
- competitive fiscal terms
- early access at high equity

- **BHP way**

- acquire the right data
- rigorous “bottom-up” systems based technical evaluation

## Substantial increase in 2C<sup>1,2</sup> resources, back to FY12 levels

(Net 2C resources, MMboe)



1. T&T North 408 MMboe includes FY19 Bongos 2C of 228 MMboe and FY20 Bélé and Tuk discoveries which represent combined 2C of 180 MMboe as of 30 September 2019 (net, no fuel).

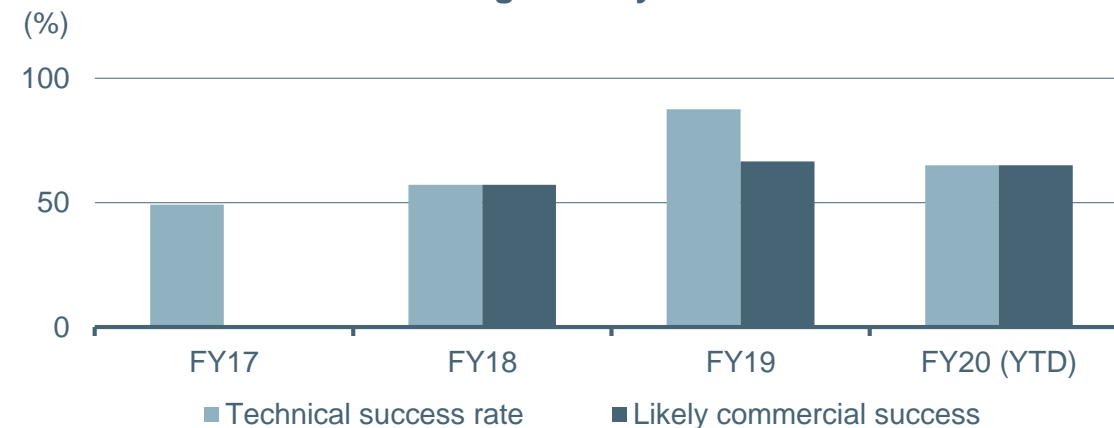
2. Samurai 19 MMboe (net, no fuel) exited for value. The sale closed on 4 November 2019.

# Investing in the BHP way underpins our success

Getting the right data, at the right time, and capturing the play is crucial to creating value in exploration

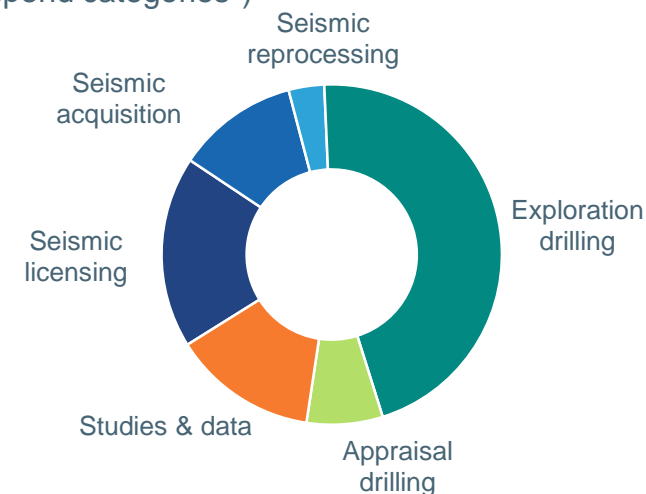
- Invest in the right data to describe the volume, risk and value of an opportunity to maximise chance of success
- Focused strategy has resulted in strong technical and likely commercial success
  - Trion
  - Wilding
  - Trinidad & Tobago North
- We have the right people and processes
  - regionally based exploration teams supported by globally integrated geoscience expertise
  - right data and fit-for-purpose systems
- Added new tier one opportunities

## Technical success translating to likely commercial success



## Acquiring the right data ahead of drilling

(FY20 – FY24 spend categories<sup>1</sup>)



<sup>1</sup>. Excludes lease access and rental costs.

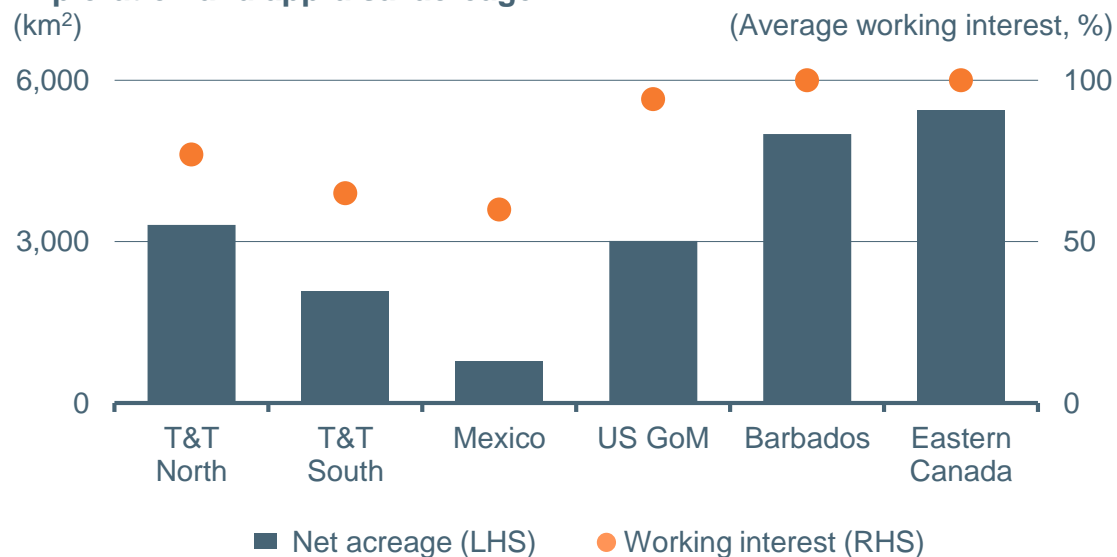
# Early access to capture value and enable optionality

We have added tier one potential opportunities to the portfolio at high equity



- Early access with high equity to manage risk through lifecycle
- Large material positions in major potential petroleum systems
- Continue to look for oil focused opportunities that improve value of the portfolio

Exploration and appraisal acreage (km<sup>2</sup>)



# Eastern Canada: major potential tier one oil opportunity

## Orphan Basin bringing options for the 2030s

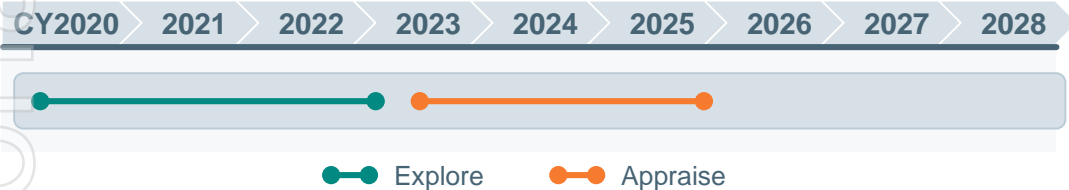
### • Opportunity details

- BHP (100% WI, operator)
- Orphan Basin contains significant prospective potential<sup>1</sup>
- large leases (2,700 km<sup>2</sup>) with multiple play types (one GoM lease is 23 km<sup>2</sup>)
- giant structures with 100-500 km<sup>2</sup> with potential for multiple closures at reservoir level

### • Next steps

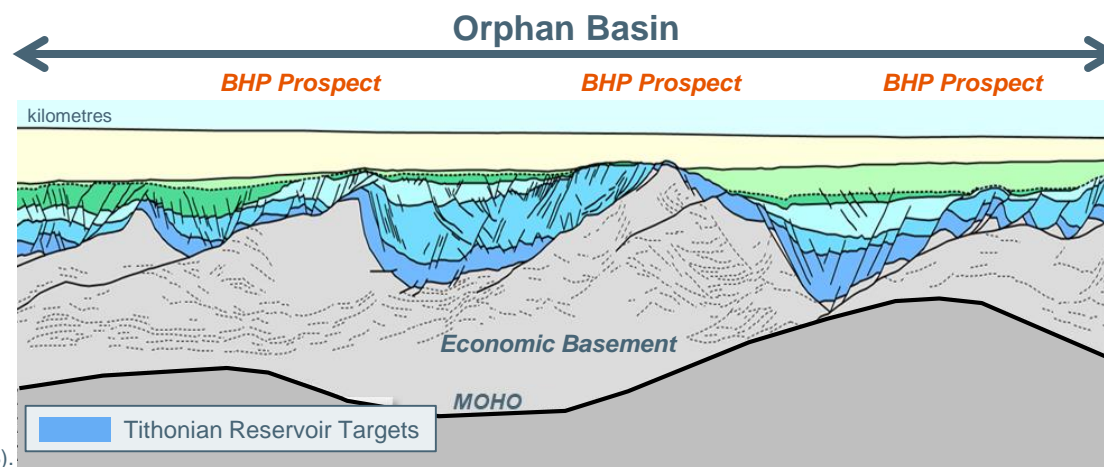
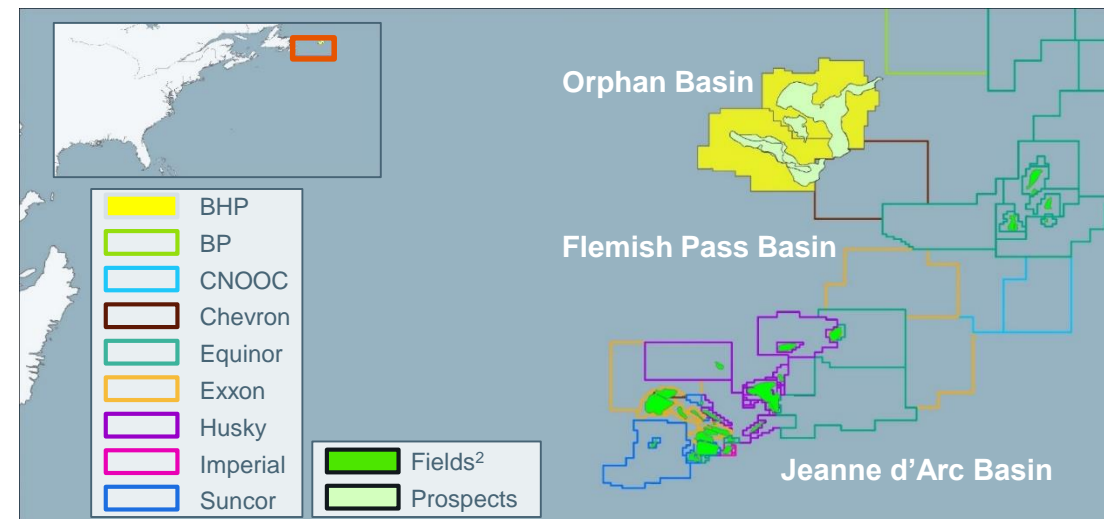
- reprocessing seismic
- targeting first exploration well in FY22

### Timeline



1. Offshore Newfoundland & Labrador Resource Assessment – Orphan Basin Area NL18-CFB01 (BeicipFranlab September 2018).

2. Source: Wood Mackenzie.



# Western GoM: extending prolific Perdido play sub-salt

## Using innovative technology to image the play

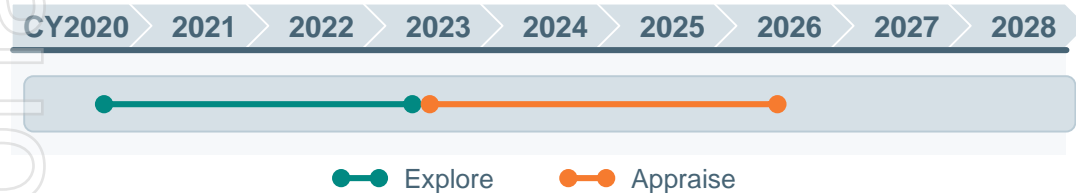
### • Opportunity details

- BHP (100% WI, operator); secured key position as early mover
- historically underexplored area due to sub-salt imaging challenges
- acquired world's first exploration OBN<sup>1</sup> seismic survey to improve sub-salt imaging; currently finalising processing
- added new Garden Banks (GB) Hub in August 2019 lease sales

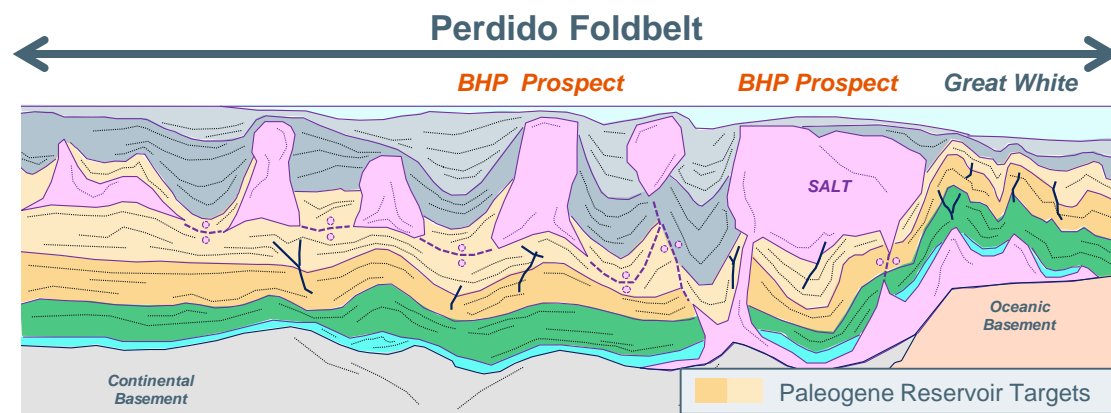
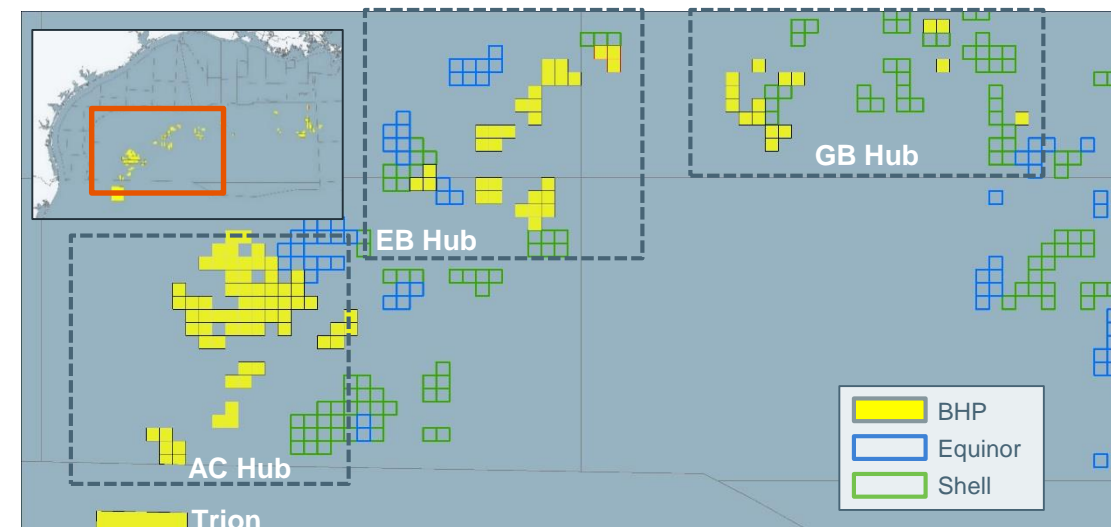
### • Next steps

- targeting first East Breaks (EB) Hub exploration well in FY21/FY22
- planning OBN for GB Hub in FY21

### Timeline

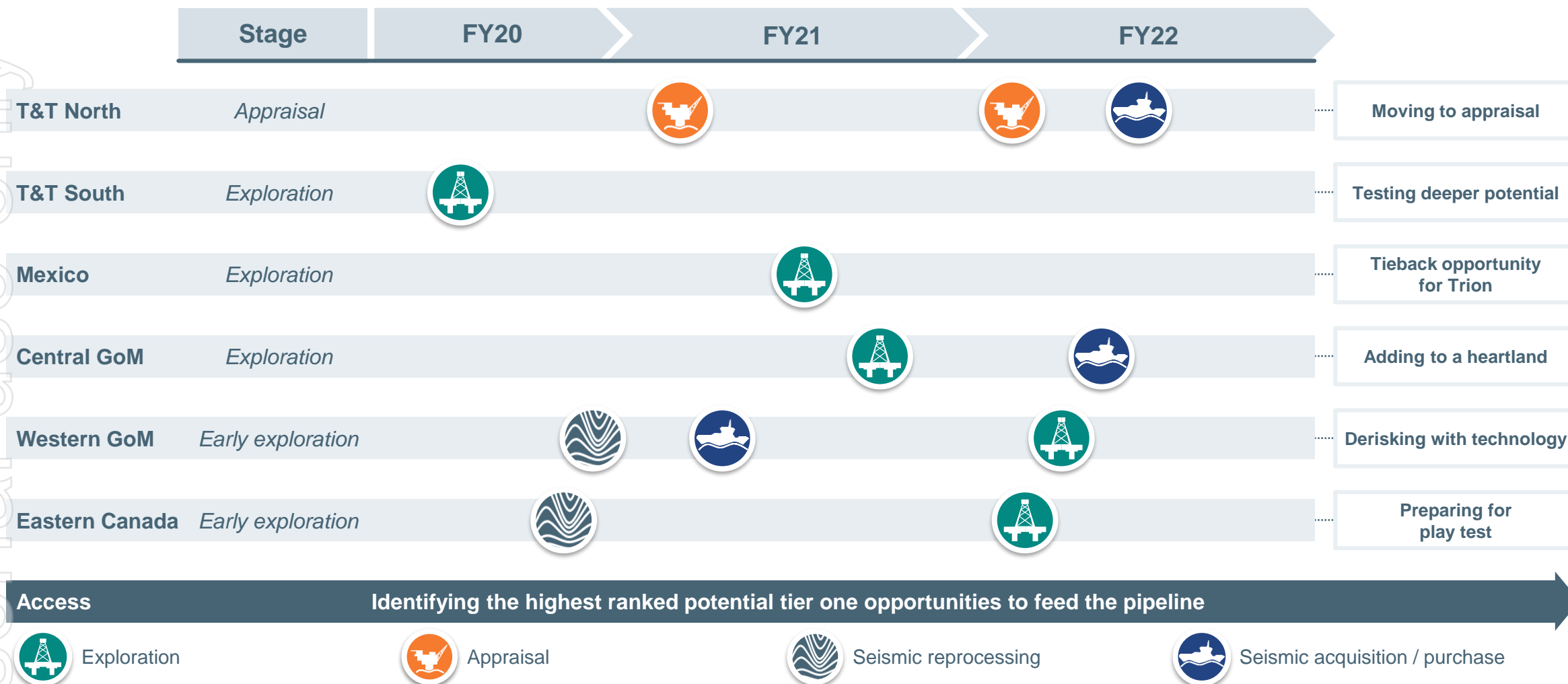


1. Western GoM OBN 2018 Seismic, OCS Permit T18-010.



# Finding new hydrocarbons – executing our program

Testing five petroleum systems over the next three years



# BHP

## Capabilities to deliver on our strategy

Geraldine Slattery  
President Operations Petroleum

Houston

ersonal use only





# Social value is an integral part of our business

The health and safety of our people, environment and wellbeing of our communities are essential preconditions to shareholder value

Our people	Environment	Communities
<b>Safety</b>	<b>Climate</b>	<b>Mexico</b>
<b>44% ↓</b> high potential injury events from FY15 to FY19, only eight injury incidents since FY15	<b>15% ↓</b> greenhouse gas emissions from FY18 to FY19 driven by efficiency gains and production decline	<b>10%</b> national content, up to double the licence agreement requirements
<b>Inclusion and diversity</b>	<b>Conservation</b>	<b>Trinidad &amp; Tobago</b>
<b>87%</b> favourable inclusion index score, 14% higher than oil and gas industry peers in FY19	<b>3 programs</b> across US Gulf Coast, Trinidad & Tobago and Australia to preserve wetlands, limit coastal erosion, and preserve marine life	<b>Road safety</b> reduction in road fatalities since BHP began working with the Government and NGOs on road safety

# Exploration strategy reset is delivering success

## Larger discoveries and higher success rate drives improvement in finding cost

- **Building on recent exploration success**

- success in Mexico, Trinidad & Tobago and the US Gulf of Mexico increased 2C resources by ~800 MMboe since FY17
- strong technical and likely commercial success

- **Leading explorer in maximising resource per well**

- 80 MMboe per well in average resource size
- top third within peer group<sup>1</sup>

- **Focused exploration has led to competitive finding costs**

- potential heartland established in Trinidad & Tobago
- during 2015-2019, BHP ranked in the top third for average exploration finding costs at US\$2.6/boe<sup>1,2</sup>

- **Leading approach to exploration**

- acquire the right data to reduce risks ahead of drilling
- only drill prospects with a high probability of working

Source: Wood Mackenzie, including BHP commissioned 2019 Exploration Benchmarking report.

1. Peer group includes oil majors and upstream independents.

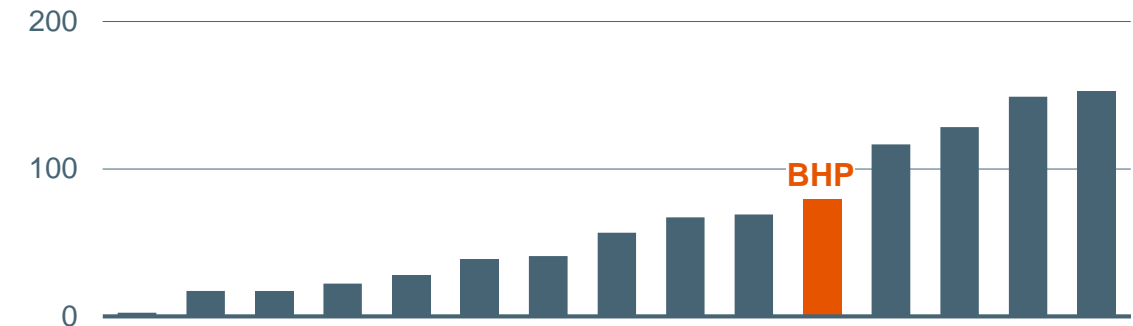
2. Finding costs are calculated based on total exploration spent divided by net discovered resources from 2015-2019 YTD.

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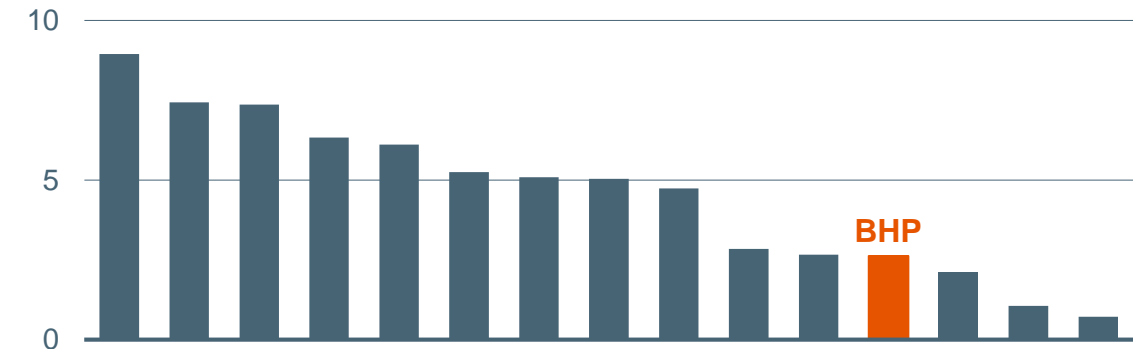
### 2015-2019 average discovery size<sup>1</sup>

(MMboe per well)



### 2015-2019 exploration finding cost<sup>1,2</sup>

(US\$/boe, real 2019)



# High performance culture delivering results

Relentless focus on costs and continuous improvement demonstrated in our operational and drilling performance

- **Continuous focus on productivity and high-margin investments supports unit costs below US\$13/boe**

- US\$3.5/boe reduction over five years, with 12% lower volumes
- medium-term unit cash costs expected to remain below FY14 levels

- **Demonstrated deepwater drilling capability**

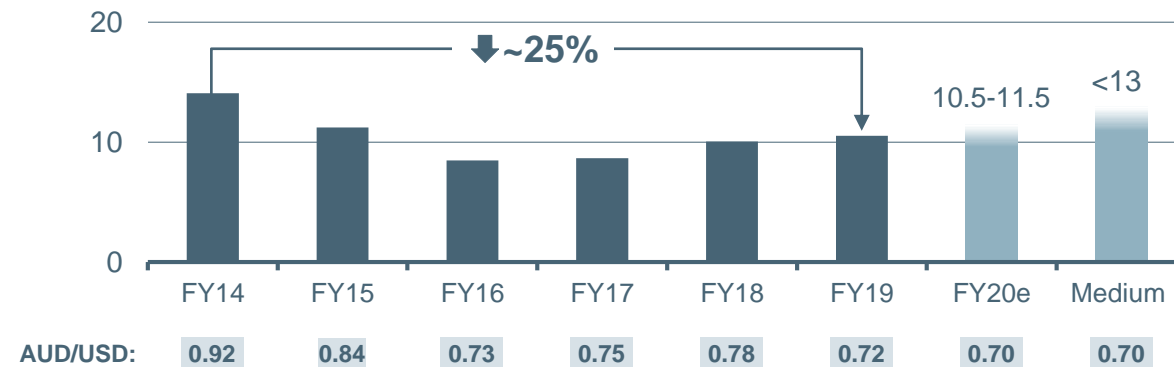
- proven capability in the deepwater
- continuous learning cycle through transformation
- Trion 3DEL the fastest well drilled in Mexico deepwater

- **Investing in our project capabilities and capital discipline**

- working with joint venture partners
- Project Centre of Excellence
- mature governance framework

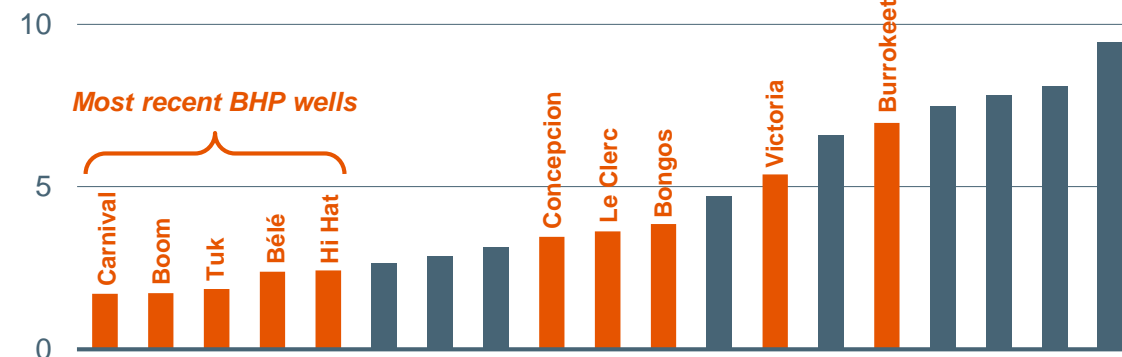
## Unit costs actively managed

(US\$/boe)



## Recent deepwater drilling performance in Trinidad & Tobago 2016-2019<sup>1</sup>

(days per 1,000 ft)



1. All 2019 wells are named above. Trinidad & Tobago BHP wells exclude coring and logging time. Two Suriname wells are also included in the Trinidad & Tobago data. Source: IHS Rushmore and CNH (Mexico wells).

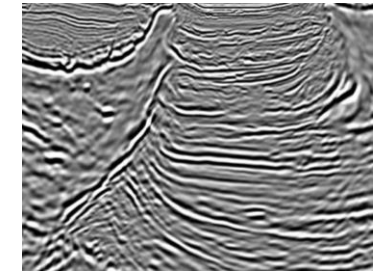
# Transformation unlocking new opportunities

Focused on key value drivers for BHP

## Explore

### Transparent Earth

- OBN acquisition for deepwater exploration
- Low frequency seismic sources for breakthrough image accuracy
- Machine Learning & Data Analytics powering Petroleum and Minerals Global Endowment

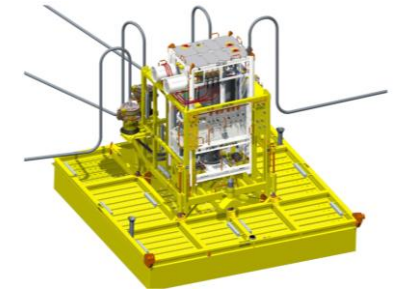


OBN early seismic image from the Western Gulf of Mexico

## Develop

### Facilities of the future

- Leveraging digital technologies for Trion design, construct and operate
- Integrating emerging technology optionality
- Multi-phase pumping applied to GOM deep-water operated development and production

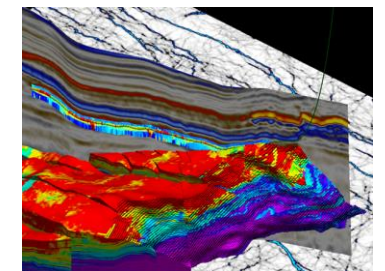


Multi-phase subsea pump

## Produce

### Integrated reservoir imaging and characterisation

- OBN to unlock contingent resources and new opportunities
- Integrating 4D seismic and well imaging tools will unlock further Pyrenees potential
- Proprietary production optimisation tools



Integrating seismic, reservoir simulation and real-time logging to best place wells for maximum recovery

An offshore oil rig is illuminated with warm yellow lights against a dramatic sunset sky with orange and purple clouds. A support vessel is visible in the lower right. A large crane structure extends from the rig towards the top right corner.

# BHP

## Petroleum delivers value and strong returns

Geraldine Slattery  
President Operations Petroleum

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# High-margin barrels drive production growth and returns

Current opportunities deliver significant volumes, and more than offset Bass Strait and North West Shelf field declines

## Base production

- Strong free cash flow and returns through 2020s
- 10+ years of meaningful production from the base
- High-returning investments limit overall production decline to ~1.5% CAGR over the next five years

## Sanctioned projects

- Oil-dominated projects delivering strong returns
- Atlantis Phase 3, Mad Dog Phase 2, Ruby and West Barracouta to add ~25 MMboe in FY23

## Unsanctioned projects

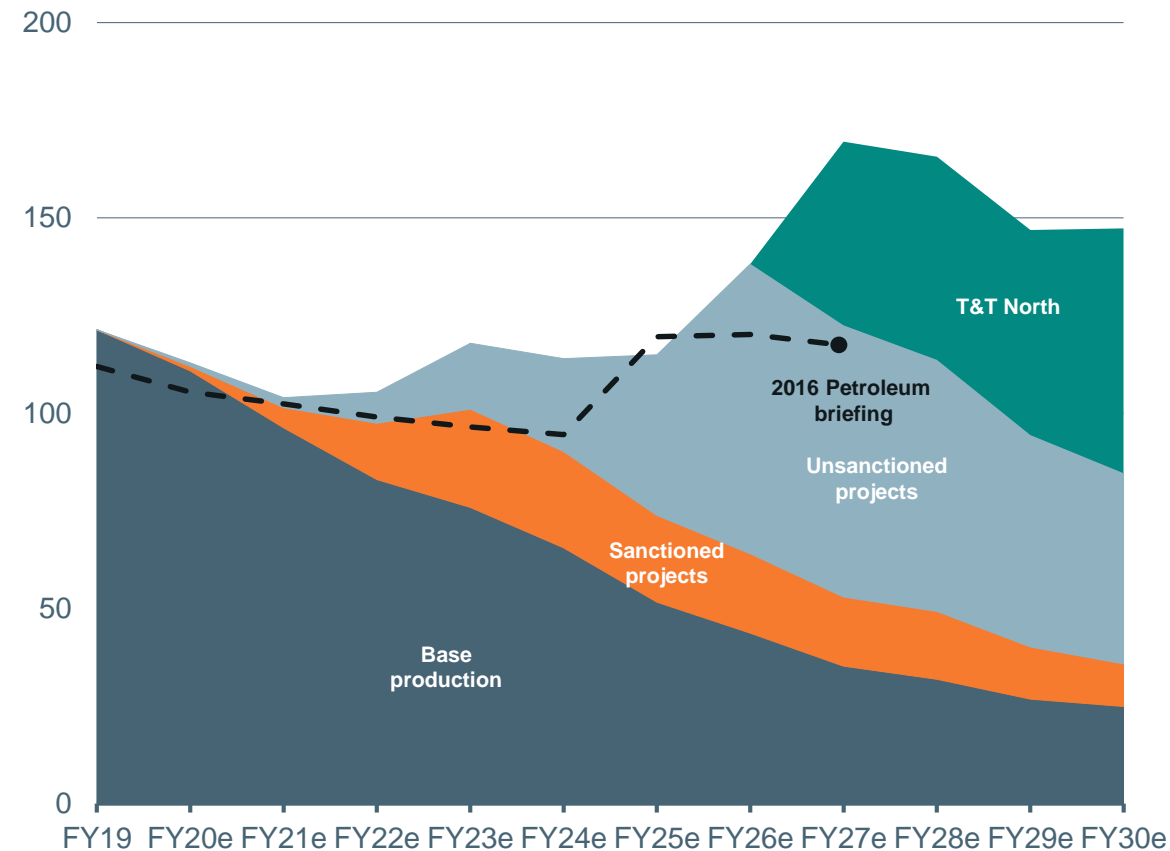
- Scarborough, Trion and US GoM embedded options add significant potential growth from mid-2020s
- Competitive pipeline of high-return and improvement projects yield ~3% production CAGR from FY20-30

## Exploration and future options

- Material gas discoveries in Trinidad & Tobago North
- Progressing exploration in Western Gulf of Mexico and Eastern Canada for tier one oil opportunities
- Targeting further oil exposed growth

## Value accretive production potential over the next decade

(Production, MMboe)



Unconstrained scenario

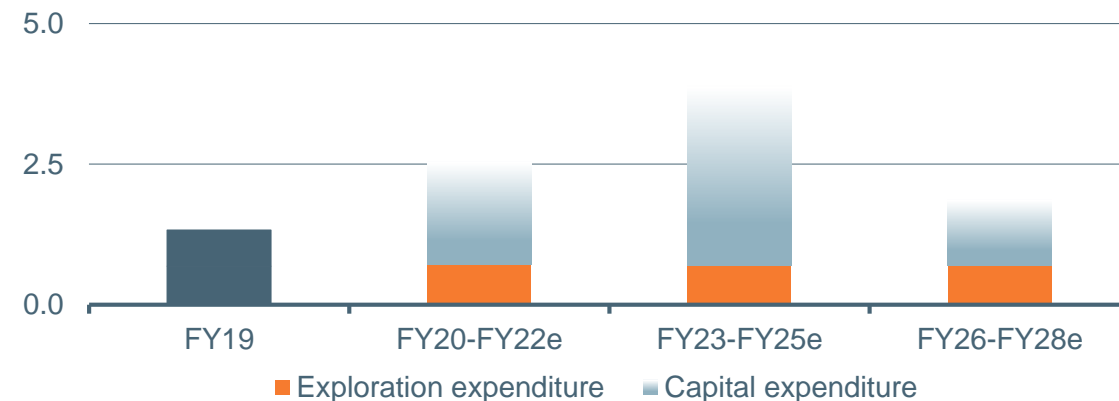
Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

# Petroleum investments compete for capital

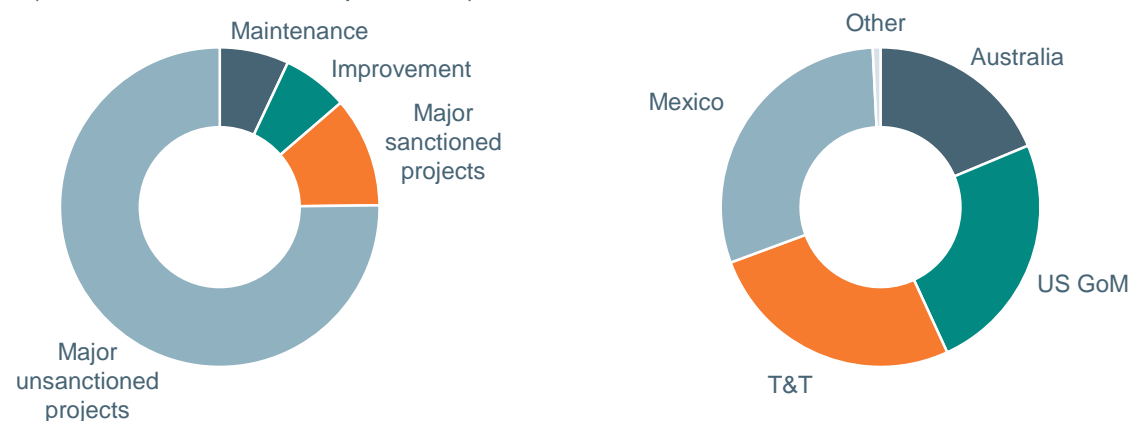
## Flexibility to manage investments across the Group

- We aim to balance investments, shareholder returns and balance sheet strength to maximise value and returns
  - promotes discipline in all capital decisions
  - we have a broad suite of attractive opportunities, across all quadrants of our risk and return framework
  - high number of valuable Petroleum options that compete strongly against other options in the Group portfolio; only the most competitive opportunities will progress
- Flexibility to manage investments across the Group
  - optionality through high equity interests and operatorship
  - embedded options allow capital phasing and smoothing

## Petroleum unconstrained investments to fund all existing options<sup>1</sup> (US\$ billion)



## Flexibility in average annual capital expenditure<sup>2</sup> (FY20-28e, % of total expenditure)

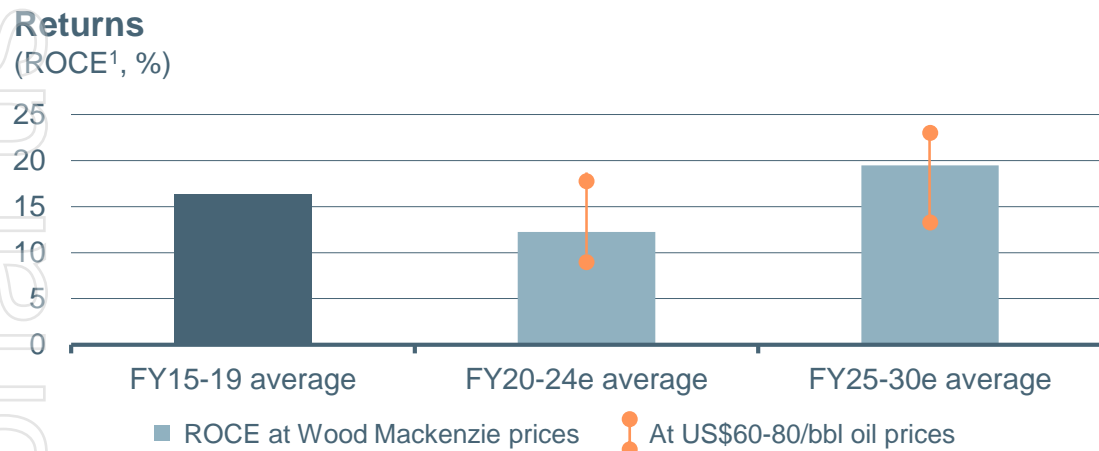
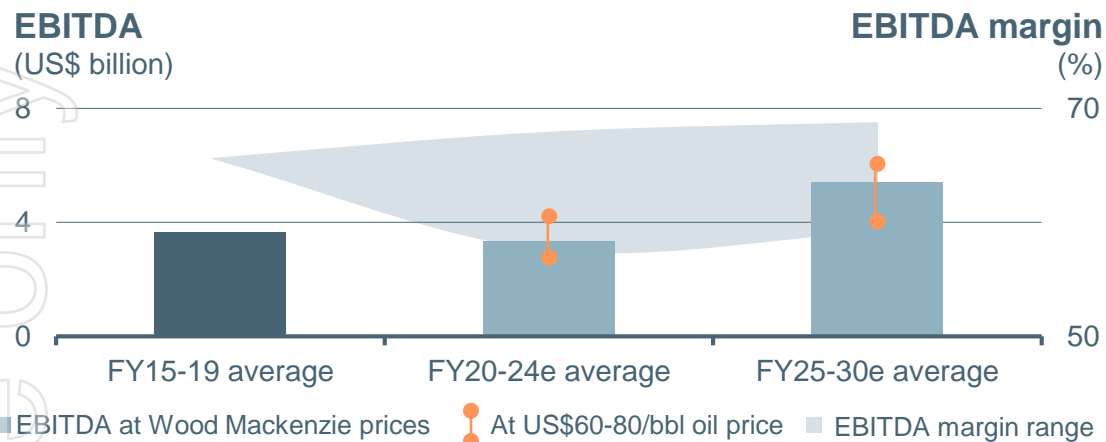


1. This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

2. Excludes annual exploration expenditure.

# Delivering strong margins, high returns and value

A strong base combined with high-return major projects and exploration growth opportunities significantly increases value



Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

1. Excludes exploration expenditure.

2. Risked value uplift: represents total potential increase in base value from the addition of upside opportunities.

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**Growth options have the potential to grow base value by up to 80%<sup>2</sup>**  
(Risked value uplift)





# Petroleum is positioned for long-term value creation

Our strategy identifies how to position the portfolio to maximise long-term value and deliver high returns for shareholders

## Best commodities

### Oil attractive for decades

even with electrification, supported by supply gap and steep cost curves

### Advantaged gas

through infrastructure, customers, or both

### New supply

needs to be continuously induced to balance markets

## Best assets

### >60% EBITDA margin

expected over the next 10 years from our high-quality assets

### Competitive pipeline

of options yields ~3% average production CAGR from FY20 to FY30

### Optimise legacy assets

manage mature assets for value

## Best capabilities

### Safety and sustainability

top quartile safety performance

### Exploration success

focused strategy added ~800 MMboe in 2C resources since FY17

### High-performing culture

leading to top quartile operational and deepwater drilling performance

**Petroleum ROCE expected to average >15% over the next 10 years; average major project IRRs of ~25%**

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance. EBITDA margin and ROCE based on Wood Mackenzie prices. ROCE excludes exploration.

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**BHP**

# BHP

## Appendix

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# Petroleum guidance

Conventional Petroleum	FY20e	Medium term					
Petroleum production (MMboe)	110 -116	~110	FY20 volumes expected to decrease due to planned maintenance at Atlantis and natural field decline across the portfolio. Decline of ~1.5% p.a. over medium term includes projects yet to be sanctioned.				
Capital expenditure (US\$bn)	1.2		Sanctioned	Capex (BHP share)	First production	Production (100% basis at peak)	
			Mad Dog Phase 2	February 2017	US\$2.2 billion	CY22	140,000 bbl/d
			West Barracouta	December 2018	~US\$140 million	CY21	104 MMscf/d
			Atlantis Phase 3	February 2019	~US\$700 million	CY20	32,000 bbl/d (oil)
			Ruby	August 2019	~US\$280 million	CY21	16,000 bbl/d (oil) and 80 MMscf/d (gas)
Exploration expenditure (US\$bn)	0.7		Focused on Mexico, the Gulf of Mexico, Canada, the Caribbean and identifying growth opportunities.				
Unit cost (US\$/boe)	10.5-11.5	<13	Excludes inventory movements, embedded derivatives movements, freight, third party product purchases and exploration expense. Based on exchange rate of AUD/USD 0.70.				

Note: All guidance is in nominal terms.

# World class portfolio of producing assets

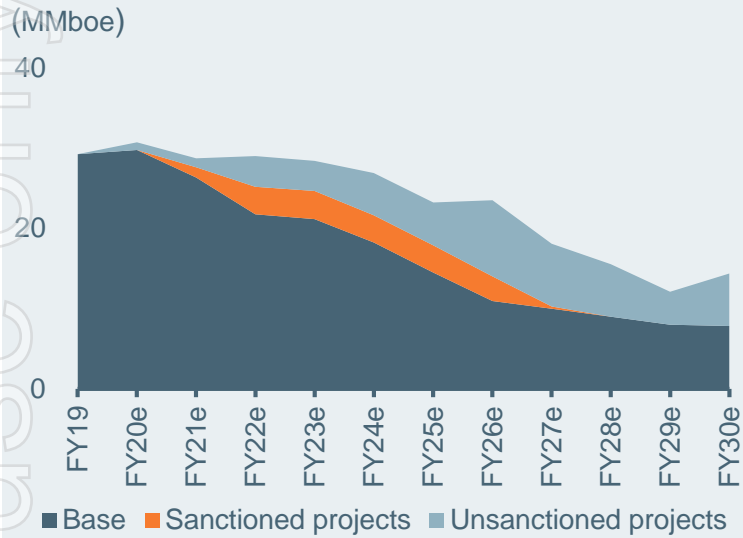
Country	Asset	Operator	BHP ownership	First production	FY19 production	Future Development Options
Australia	Bass Strait	Esso	Gippsland Basin Joint Venture (GBJV): 50.0% Kipper Unit Joint Venture (KUJV): 32.5%	1969	Liquids: 10.6 MMboe Gas: 18.6 MMboe	West Barracouta ( <i>sanctioned</i> ) Kipper Phase 2 Additional infill opportunities
Australia	North West Shelf (NWS)	Woodside	12.5 – 16.67% across 9 separate joint venture agreements	1984	Liquids: 6.7 MMboe Gas: 24.2 MMboe	South Goodwyn North West Shelf Other Resource Owner Additional infill opportunities
Australia	Pyrenees	BHP	WA-42-L permit: 71.43% WA-43-L permit: 39.999%	2010	Liquids: 3.3 MMboe	Pyrenees Phase 4
Australia	Macedon	BHP	71.43%	2013	Gas: 7.3 MMboe	Wet Gas Compression Additional infill opportunities
United States	Atlantis	BP	44.0%	2007	Liquids: 15.5 MMboe Gas: 1.3 MMboe	Atlantis Phase 3 ( <i>sanctioned</i> ) Atlantis Phase 4 Atlantis opportunities
United States	Mad Dog	BP	23.9%	2005	Liquids: 5.1 MMboe Gas: 0.1 MMboe	Mad Dog Phase 2 ( <i>sanctioned</i> ) Mad Dog Northwest Water Injection Mad Dog opportunities
United States	Shenzi	BHP	44.0%	2009	Liquids: 8.0 MMboe Gas: 0.3 MMboe	Subsea Multi-Phase Pumping Wildling Phase 1 Additional infill opportunities
United States	Neptune	BHP	35%	2008	Liquids: 0.6 MMboe Gas: 0.0 MMboe	
Trinidad & Tobago	Greater Angostura	BHP	45.0% Block 2(c) 68.46% effective interest in Block 3(a) Project Ruby	2005	Liquids: 1.2 MMboe Gas: 12.5 MMboe	Ruby ( <i>sanctioned</i> )
Algeria	ROD Integrated Development	Joint Sonatrach / ENI	29.3% effective interest in the ROD Integrated Development	2004	Liquids: 3.6 MMboe	Phase 2 Infill Drilling

Note: FY19 production from Minerva and UK assets not included in the above table.  
Amounts in the above Ownership column represent working interest.

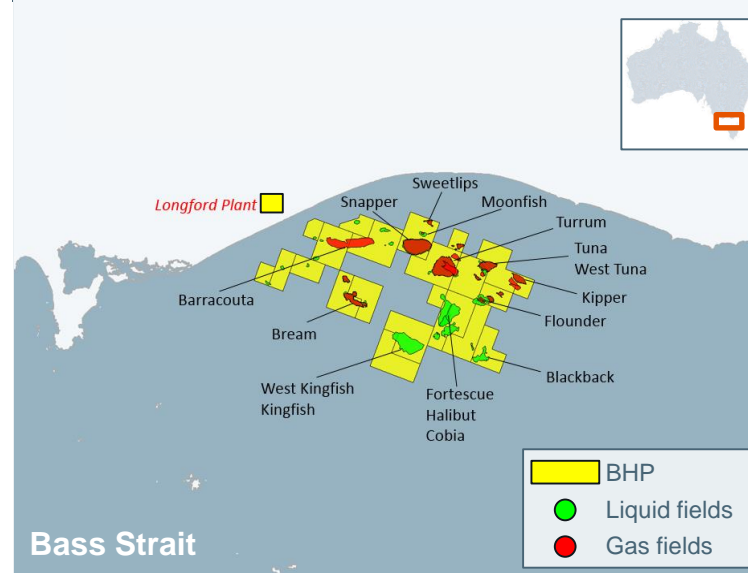
# Bass Strait: high returns with upside through the 2020s

Strong market demand supports continued investments

## Net production



## Bass Strait detail



## Investment opportunities

### Sanctioned projects

- West Barracouta sanctioned in FY19, ~20% IRR, with first production expected in CY21

### Unsanctioned projects

- Multiple unsanctioned improvement projects with average IRRs >30%
  - Kipper Phase 2 expected to FID in FY20, proposed as a 2 well tieback
  - Longford gas plant debottlenecking to sustain throughput in FY25
- Seismic planned for CY20 to unlock resource development

## Key highlights

- Advantaged gas play
- Highly cash generative
- Strong acreage and infrastructure position

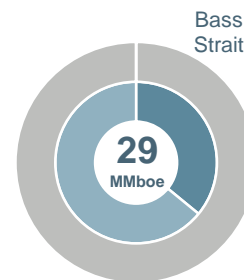
Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

1. Excludes Minerva field.
2. At Wood Mackenzie prices.

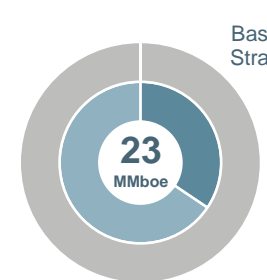
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## FY19 production



## FY25e production



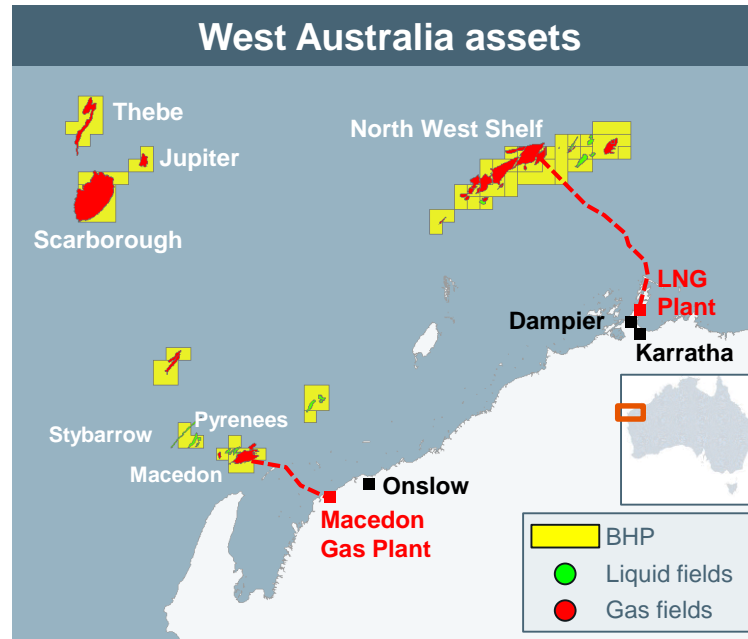
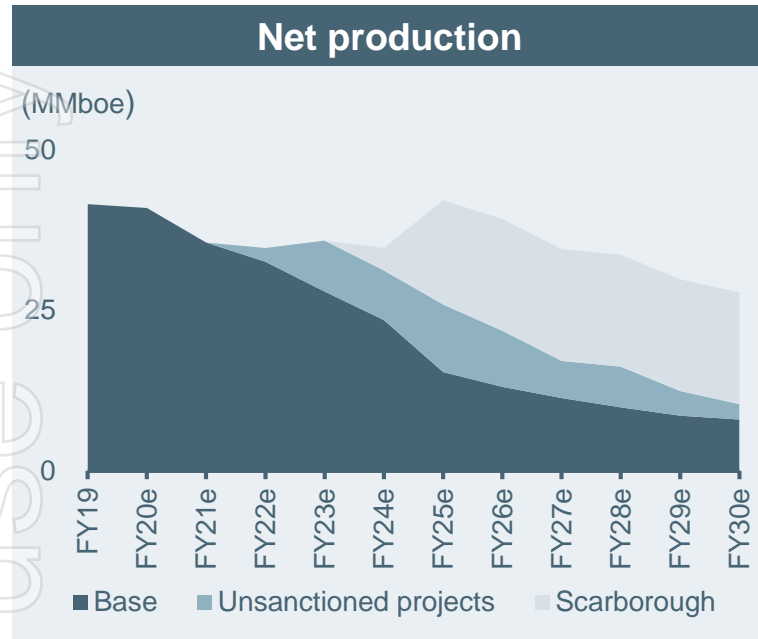
● Liquids production ● Gas production

## Key metrics

1P Reserves:	206 MMboe <sup>1</sup>
2P Reserves:	270 MMboe <sup>1</sup>
2P+2C Resources:	451 MMboe <sup>1</sup>
FY20-25 average ROCE:	~15% <sup>2</sup>

# Western Australia: strong base with optionality

Material growth potential through development of Scarborough and unlocking additional contingent resources



- ### Investment opportunities
- #### Unsanctioned projects
- Scarborough offers material growth
  - Multiple unsanctioned improvement projects with average IRRs >35%
    - South Goodwyn: 3 well subsea tieback
    - Lambert Deep standalone subsea tieback
    - Macedon and NWS compression projects
  - North West Shelf tolling opportunity for third party gas
  - Pyrenees Phase 4: robust opportunities targeting developed and undeveloped reservoirs being matured

### Key highlights

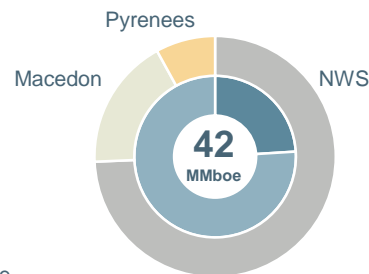
- Scarborough FID expected in CY20, with increased resource base
- Greater Western Flank 2 achieved first gas in FY19, ahead of schedule
- Strong free cash flow generation and returns on brownfield projects

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.  
 1. At Wood Mackenzie prices.

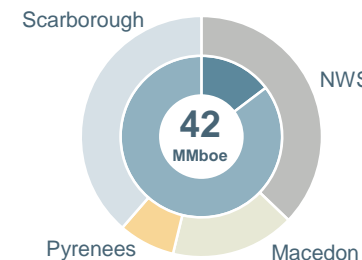
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### FY19 production



### FY25e production



### Key metrics

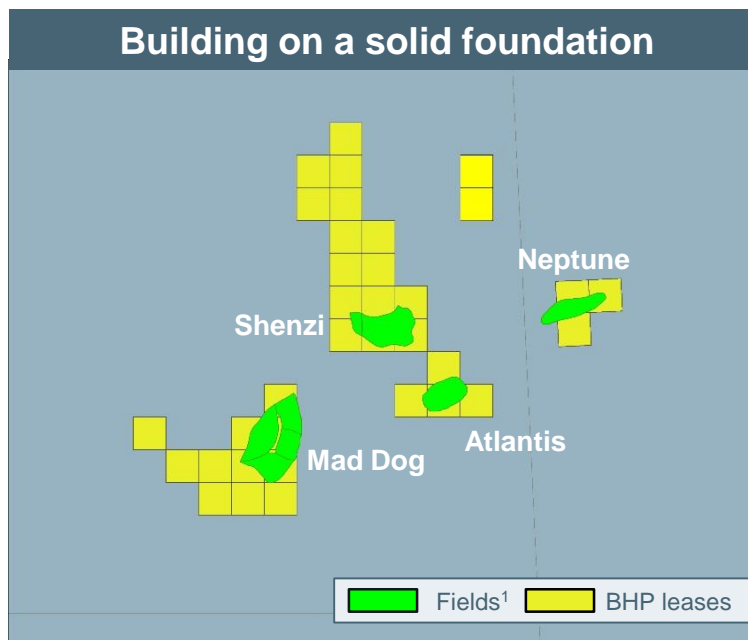
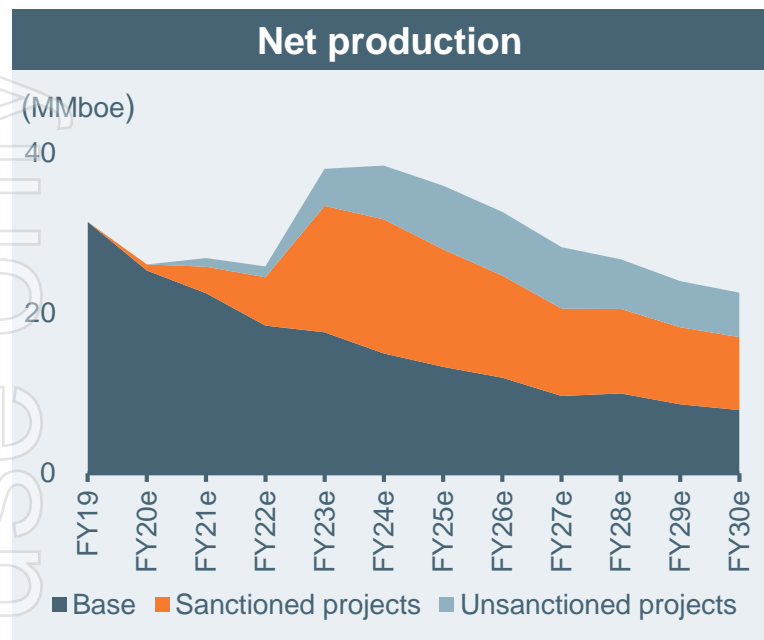
1P Reserves:	268 MMboe
2P Reserves:	341 MMboe
2P+2C Resources:	974 MMboe
FY20-25 average ROCE:	~20% <sup>1</sup>

● Liquids production

● Gas production

# US Gulf of Mexico: large, long-life and expandable

Near-term projects deliver attractive returns, while major growth options increase production volumes



### Investment opportunities

**Sanctioned projects**

- Atlantis Phase 3 (19% complete) first oil CY20
- Mad Dog Phase 2 (60% complete) first oil CY22

**Unsanctioned projects**

- Wildling: 2C resource 104 MMboe
  - Phase 1: two well development
  - Phase 2 and 3 on success of Phase 1
- Multiple unsanctioned projects with IRRs >20% unlocked through technology and latent capacity
- Shenzi OBN acquisition planned in FY20 to identify/derisk additional future growth projects

## Key highlights

- Largest fields in the Gulf of Mexico with a long history of delivering value and consistent growth
- Continue to advance future opportunities by leveraging infrastructure, technology and remaining resource

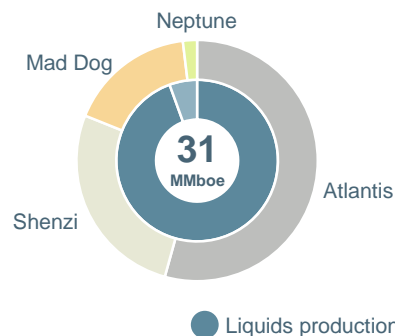
Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

1. Source: Wood Mackenzie. 2. At Wood Mackenzie prices.

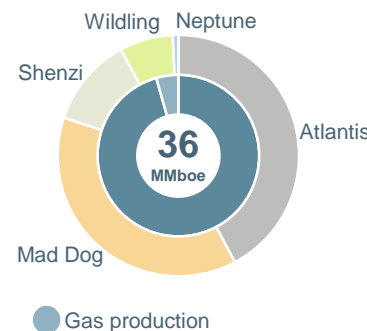
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## FY19 production



## FY25e production



## Key metrics

1P Reserves:	302 MMboe
2P Reserves:	449 MMboe
2P+2C Resources:	937 MMboe
FY20-25 average ROCE:	~20% <sup>1</sup>



# Future options: worked for value, timed for returns

Investment decisions made in accordance with our Capital Allocation Framework and fully consider the broader market impact

Option	Description	Operator	BHP Ownership	Potential execution timing	Capex BHP share (US\$m)	Tollgate	Potential first production <sup>1</sup>
<b>North West Shelf Other Resource Owner</b>	Low risk investment opportunity to maximise Karratha Gas Plant value through processing other resource owner gas; benefits through tolling fees, cost recovery and life extension.	Woodside	16.67%	<5 years	>250	Pre-feasibility	FY26
<b>Pyrenees Phase 4</b>	Combination of well re-entries and new subsea wells which aim to optimise incremental value using the existing infrastructure.	BHP	71.43%	<5 years	>250	Opportunity Assessment	FY22
<b>Scarborough<sup>2</sup></b>	Large resource of 13 subsea wells connected to a semisubmersible floating production unit from which gas is exported via pipeline to Pluto LNG facility for onshore processing.	Woodside	25% WA-1-R (50% WA-62-R)	1 year	1,400 - 1,900	Pre-feasibility	FY24
<b>Atlantis Phase 4</b>	Additional development opportunities for infill producing wells. Data obtained from Phase 3 project de-risks further development of multiple hydrocarbon bearing zones.	BP	44%	<5 years	>250	Opportunity Assessment	FY24
<b>Mad Dog Northwest Water Injection</b>	Two water injector wells providing water from Mad Dog Phase 2 facility to increase production at existing A Spar facility.	BP	23.9%	<5 years	>250	Pre-feasibility	FY24
<b>Mad Dog opportunities</b>	Additional opportunities to increase the Mad Dog Phase 2 production beyond the initial investment scope with new wells tied back to existing facility, results in highly economic opportunities.	BP	23.9%	<5 years	>250	Opportunity Assessment	FY25
<b>Shenzi Growth opportunities</b>	Shenzi Subsea Multi-Phase Pumping (SSMPP); Subsea pumping opportunities to increase production rates from existing wells.	BHP	44%	1 year	<250	Pre-feasibility	FY23
<b>Wildling Phase 1</b>	Two Shenzi North wells tied-back to the Shenzi platform, provides the opportunity to accelerate production and unlock additional recoverable reserves. Phased development accelerates first oil, minimizes appraisal cost and reduces risk.	BHP	44%-72%	1-2 years	~500	Pre-feasibility	FY23
<b>Trion</b>	Large greenfield development in the deepwater Mexico GoM. Resource uncertainty reduced with recent successful appraisal drilling of 2DEL and 3DEL wells.	BHP	60%	2-3 years	>5,000	Conceptual	FY25
<b>Trinidad &amp; Tobago North</b>	Completed successful exploration program on our Northern licenses. Potential material gas play in deepwater Trinidad & Tobago, well positioned to the Atlantic LNG plant onshore Trinidad & Tobago.	BHP	70%	<5 years	Under study	Opportunity Assessment	FY27

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

1. Potential first production data is an estimate and does not constitute guidance.

2. Based on information provided by operator. Represents BHP's current equity position as 25% in WA-1-R and 50% in WA-62-R.

# Atlantis & Mad Dog: 10+ years of future delivery

Long history of consistent growth and delivery through the next decade

## Atlantis Phase 3: BHP (44% WI); BP (operator) - sanctioned

8 well subsea tieback; first production FY21

Project IRR:	>40%
Project capex (BHP share):	US\$700 million
Volumes (100% basis at peak):	32 Mbb/d
Field life:	18 years
Project Status	19% complete (tracking to plan)



**Future options:** Atlantis Phase 4 infill program enabled by OBN and subsurface evaluation

## Mad Dog Phase 2: BHP (23.9% WI); BP (operator) - sanctioned

FPSO with 22 subsea wells (14 producing wells, 8 water injection wells); first production FY22

Project IRR:	>15%
Project capex (BHP share):	US\$2.2 billion
Volumes (100% basis at peak):	140 Mbb/d
Field life:	35 years
Project Status	60% complete (tracking to plan)

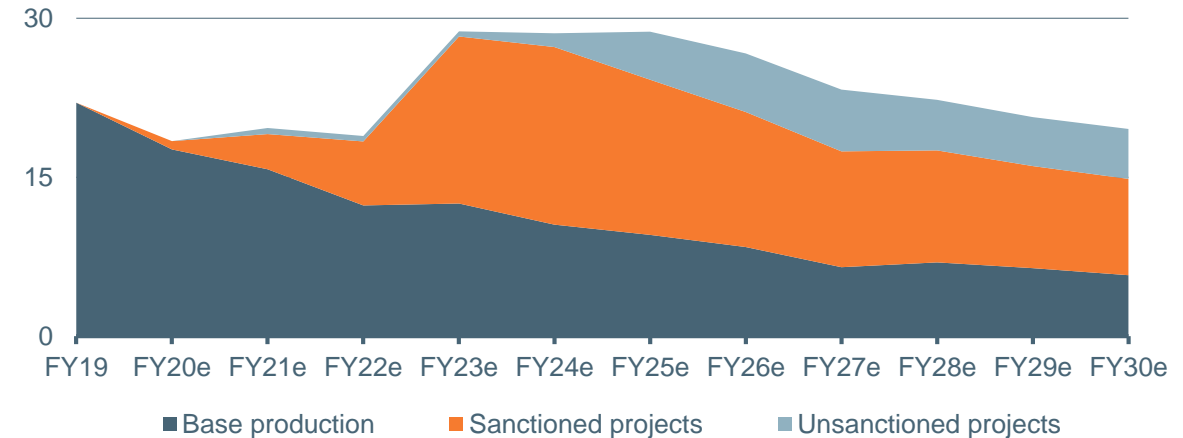


**Future options:** Mad Dog northwest water injection, southwest extension, infill wells and cc sands enabled by ullage at Mad Dog Phase 2

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

## Mad Dog and Atlantis production

(BHP production, MMboe)



## Timeline



# Greater Shenzi and Wildling: continuing to deliver value

Applying technology to unlock more resource and value

## Shenzi growth projects: BHP (44% WI, operator) - *unsanctioned*

Subsea pumping opportunities to increase production rates from existing wells.

Anticipated FID: Q4 FY20; first production: Q1 FY22

Project capex range (BHP share): <US\$250 million

Production (100% basis at peak): 4 Mbbbl/d

Field life: 15 years

**Future options:** Multiple infill assessments underway benefitting from OBN seismic and dynamic appraisal



## Wildling Phase 1: BHP (44% - 72% WI, operator) - *unsanctioned*

Phase 1: Two producer development tied back to nearby facilities

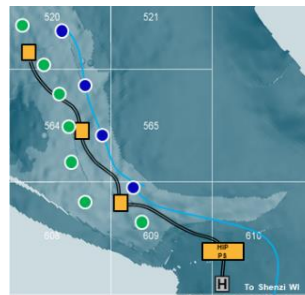
Phase 1 anticipated FID: Q3 FY21; first production: Q2 FY23

Project capex (BHP share): ~US\$500 million

Production (100% basis at peak): 15 Mbbbl/d

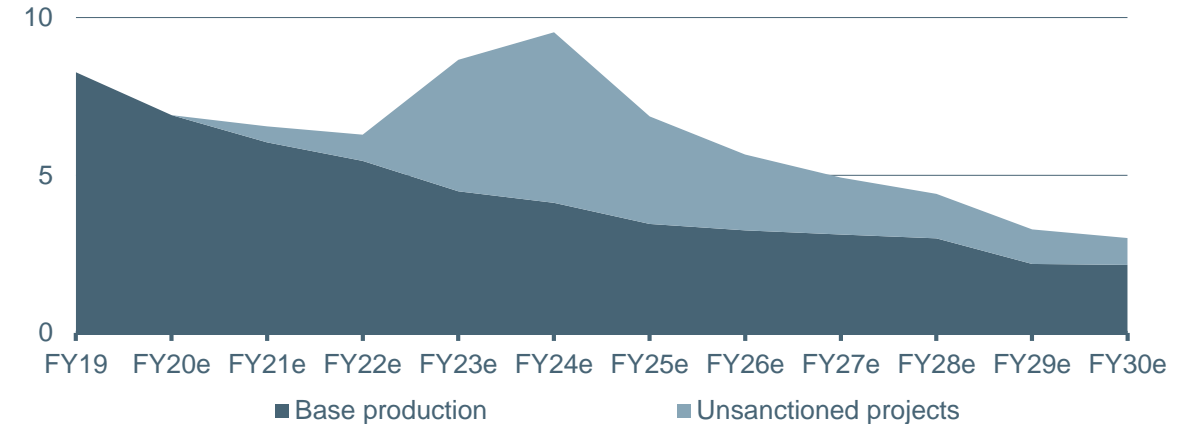
Field life: 15 years

**Future options:** Additional phases with potential for water injection in BHP 100% blocks



## Shenzi and Wildling production

(BHP production, MMboe)



Future volumes from unsanctioned projects are risky.

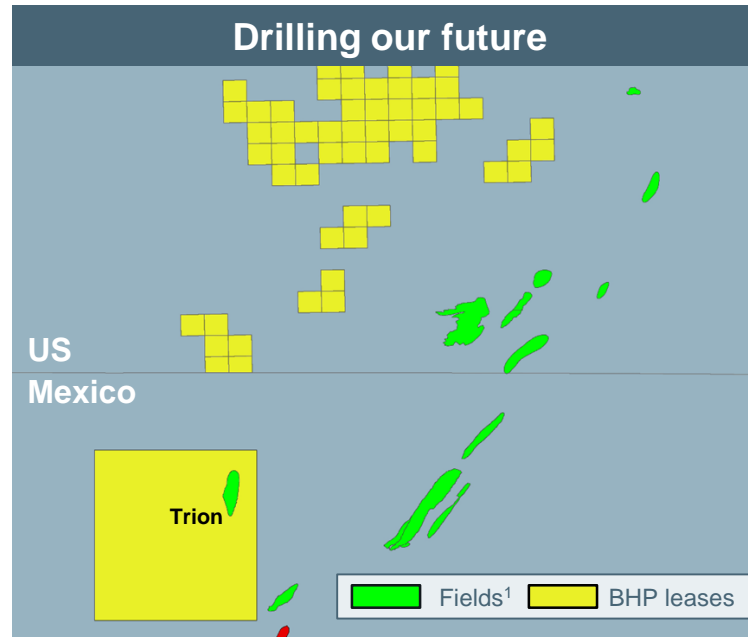
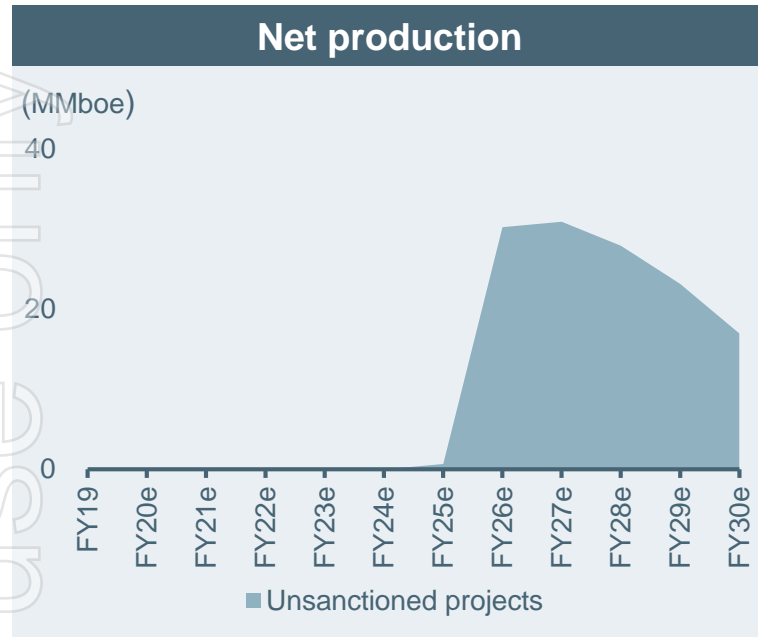
## Timeline



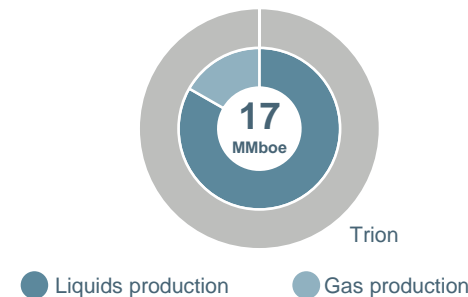
Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

# Mexico: Trion project advancing

Building on our early-mover, high-equity positions in key areas to grow our portfolio



FY30e production



## Investment opportunities

### Unsanctioned projects

- Gross 2C resource of 436 MMboe (net 222 MMboe)
- Unlocking opportunities by being first foreign operator in Mexican deepwater in partnership with PEMEX
- Additional exploration drilling planned for FY21

### Further access opportunities

- Continue to look for attractive investment opportunities to expand our position in Mexico

## Key highlights

- First well drilled by an international operator in the Mexican deepwater (acquired Trion FY17)
- Trion 2 DEL appraisal well encountered oil in line with expectations
- Trion 3 DEL found oil above prior well intersections
- Performing further studies in FY20

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.

1. Source: Wood Mackenzie. 2. At Wood Mackenzie prices.

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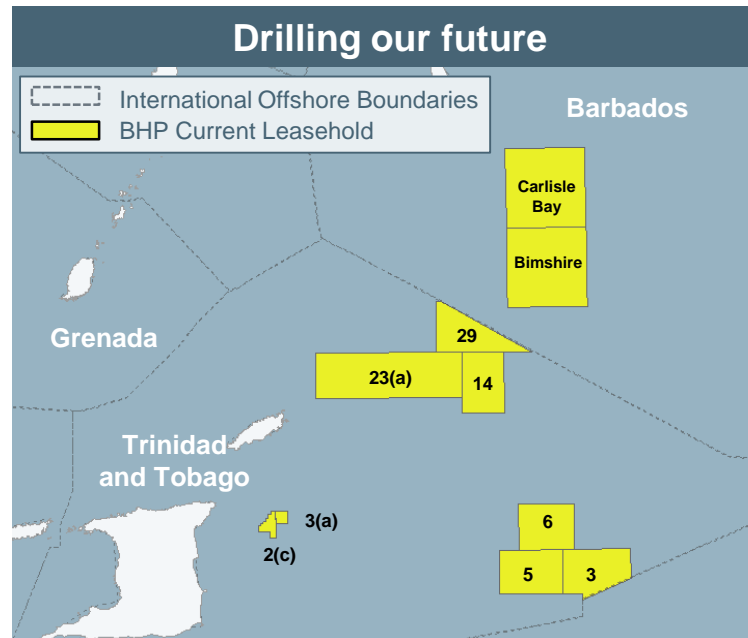
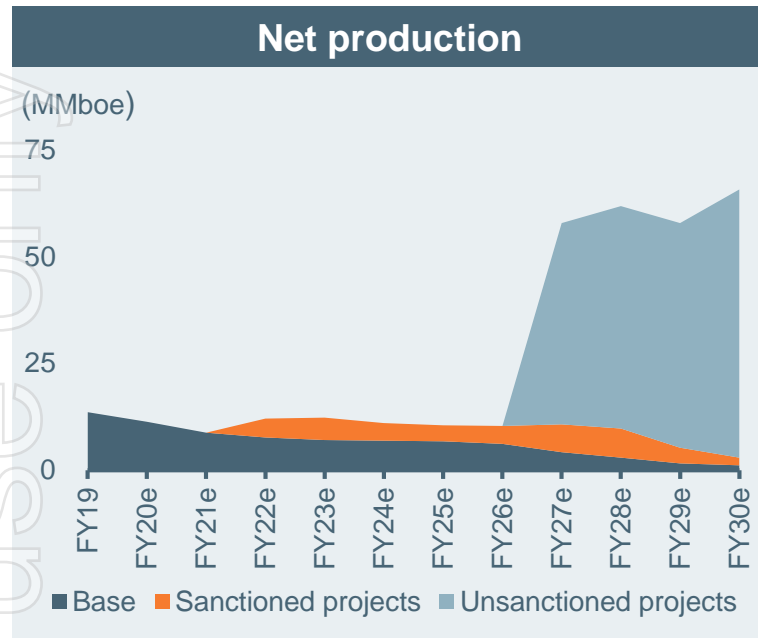
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## Key metrics

Net 2C Resources:	222 MMboe
FY26-30 average ROCE:	~25% <sup>2</sup>

# Trinidad & Tobago: deepwater development potential

Building on our existing position in the region



### Investment opportunities

**Exploration discovery**

- Trinidad & Tobago North: Gross 2C Resources 3.5 Tcf (BHP net interest 70%)
- Incorporating results from Boom and Carnival wells into planning and development studies

**Sanctioned projects**

- Ruby<sup>1</sup> gross 2C resource of 13.2 MMbbl (oil); and 274 Bcf natural gas; IRR ~30% (BHP net interest 65.87%)

**Exploration and appraisal opportunities**

- Potential for two oil prospects to be added to the Ruby development drilling campaign in FY21
- Southern potential for oil and gas

## Key highlights

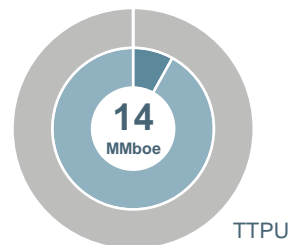
- Ruby<sup>1</sup> sanctioned August 2019; will offset declining production from Angostura in mid-2020s
- T&T North deepwater gas exploration program successful
- Assessing commercial potential of Southern deepwater licenses

Note: This represents an unconstrained scenario based on execution of all unsanctioned projects at current equity interests and does not constitute guidance.  
 1. The Ruby project includes the Ruby and Delaware fields. 2. Includes 2C Resources from Bele and Tuk as at 30 September 2019. 3. At Wood Mackenzie prices.

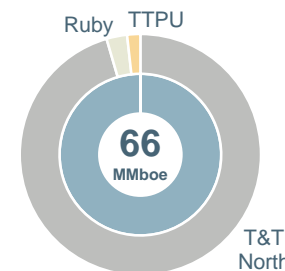
Petroleum briefing

11 November 2019

## FY19 production



## FY30e production



● Liquids production

● Gas production

## Key metrics

1P Reserves:	48 MMboe
2P Reserves:	66 MMboe
2P+2C Resources:	582 MMboe <sup>2</sup>
FY26-30 average ROCE:	~20% <sup>3</sup>

# Exploration: extending our conventional reserve life

Investment decisions made in accordance with our Capital Allocation Framework and fully consider the broader market impact

Option	Location	Ownership	Maturity	Earliest first production	Description	Planned future activity
Western GoM	US – Gulf of Mexico	100% Operator	Frontier	Early 2030s	Acquired a significant acreage position in historically underexplored Western Gulf of Mexico	Finalising processing of Ocean Bottom Node (OBN) seismic survey <sup>1</sup> . Planning OBN survey for GB hub in FY21; targeting first exploration well in FY21/22
Mexico	Mexico – Gulf of Mexico	60% Operator	Exploration	Late 2020s	Opportunity to tie back prospects to future Trion hub. Included in Trion Minimum Work Program	Targeting first exploration well in FY21
T&T Southern Gas (Magellan)	Trinidad & Tobago	65% Operator	Exploration	Mid 2020s	Discovered gas play in deepwater Trinidad & Tobago	Evaluating commerciality
T&T Southern Deep Potential	Trinidad & Tobago	65% Operator	Frontier	Late 2020s	Evaluating multiple play types to test deeper potential in deepwater Trinidad & Tobago based on deep oil shows from Le Clerc exploration	Targeting first exploration well in FY20
Eastern Canada	Orphan Basin	100% Operator	Frontier	Early 2030s	Recent bid success for blocks with large liquids resource potential in the offshore Orphan Basin in Eastern Canada	Targeting first exploration well in FY22
Significant remaining project potential with unrisks NPV of up to US\$14 billion <sup>2</sup>						

1. Western GoM OBN 2018 Seismic, OCS Permit T18-010.

2. Exploration unrisks value at BHP prices.

# Mexico

## Evaluating opportunities in offshore Mexico

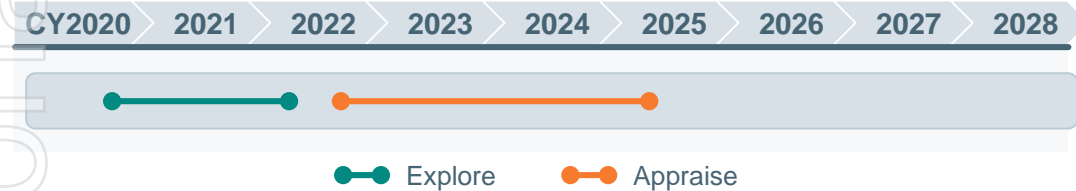
- **Opportunity details**

- targeting first exploration well in FY21
- included in Trion Minimum Work Program
- established strong relationship with PEMEX

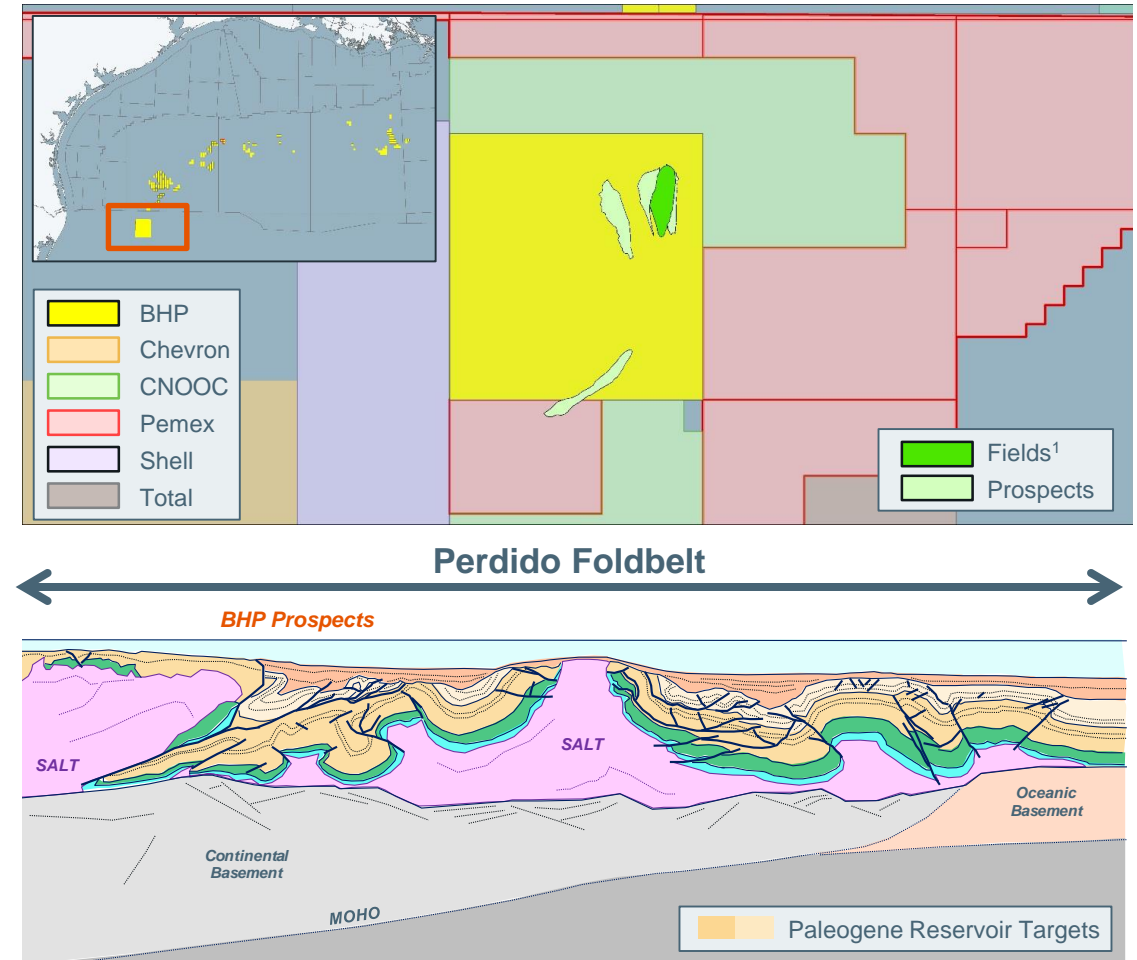
- **Next steps**

- maturing drill ready prospects near Trion
- evaluating multiple play types
- opportunity to tieback to a Trion hub
- potential to expand early mover position

### Timeline



1. Source: Wood Mackenzie.



# Trinidad & Tobago deep potential

## Testing multiple play types

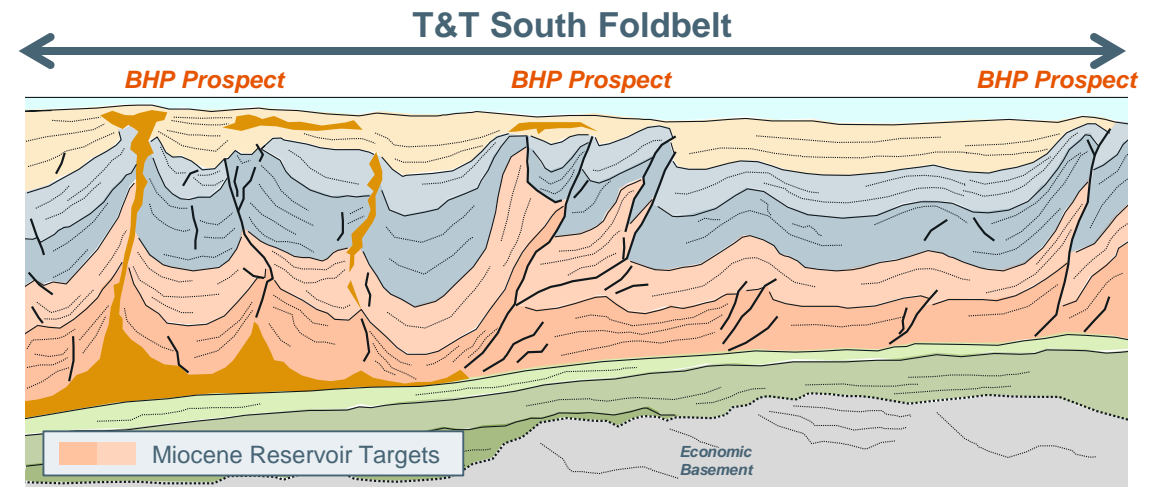
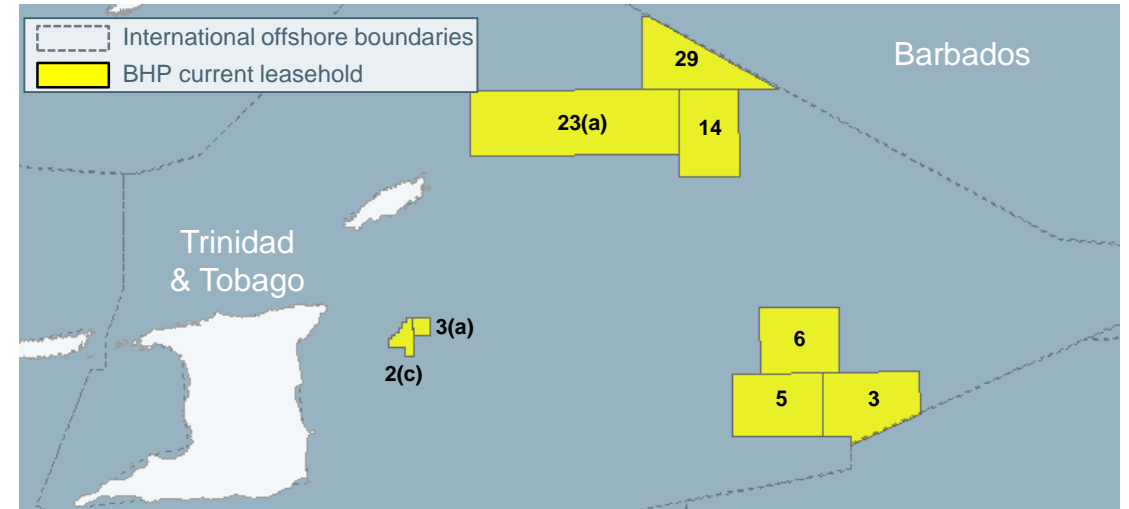
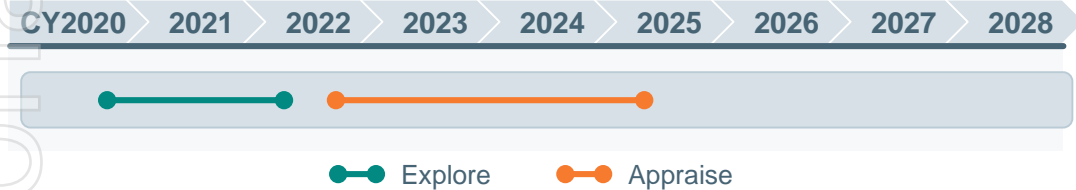
- **Opportunity details**

- BHP (65% WI, operator)
- Le Clerc opened the Magellan Gas Play and saw deep oil shows
- evaluating multiple play types to test deeper potential

- **Next steps**

- exploration well planned for FY20

### Timeline





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**BHP**