BHP

# Petroleum Investor meeting

## Barrenjoey and BHP

**Geraldine Slattery | President Operations Petroleum**

**Matthew Ridolfi | Vice President Major Developments**

9 November 2021

# Combined business creates significant scale

**BHP Petroleum and Woodside have high-quality, complementary asset portfolios which combine high margin oil and long life LNG**

**Global scale**

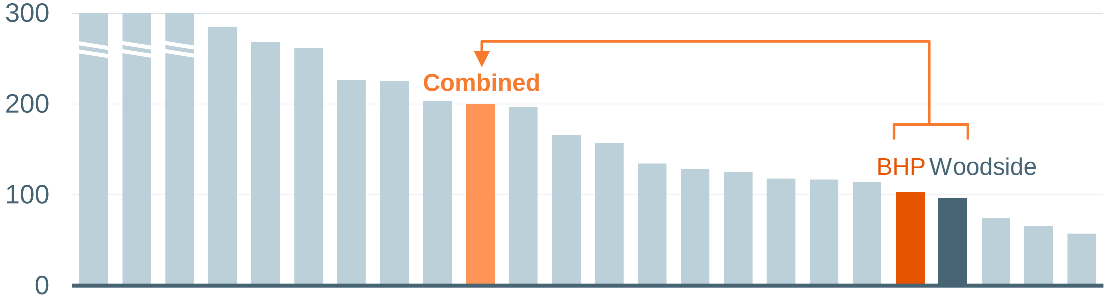
- Global top 10 independent energy company by production and largest energy company on ASX
- Global top 10 LNG producer
- Production of ~200 MMboe supported by resilient foundation assets

**Diversified, low risk portfolio**

- Highly complementary product mix:
  - High margin oil with attractive upside
  - Low-cost and long-life LNG
- Conventional portfolio primarily in OECD countries
- Key exposures in Australia and Gulf of Mexico

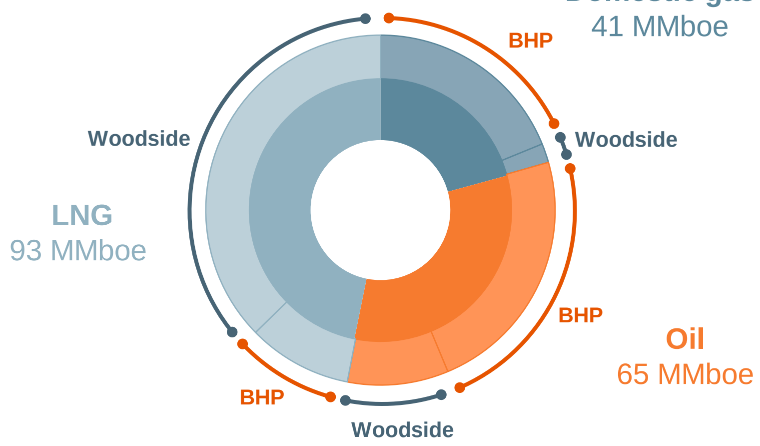
## Global top 10 independent energy producer

(FY21 production, MMboe)




## Diversified product mix

(MMboe production)



# FY21 Petroleum operational highlights

**We were safer and more productive**

| Safety | Production | Unit costs |
|---|---|---|
| **Zero fatalities**<br>TRIF on target (<1), with focused improvements across our COVID controls and employee mental health & resilience | **102.8 MMboe**<br>Production exceeded guidance range of 95-102 MMboe, despite significant uncontrollable impacts (weather, COVID) | **US$10.83/boe**<br>Petroleum unit costs slightly better than full year guidance driven by higher-than-expected volumes |

| Social Value | Portfolio | Major projects |
|---|---|---|
| **US$5-7M per year**<br>Supporting our communities through a focus on education and environmental programs that enhance people's livelihoods | **Rebalanced**<br>acquisition of additional 28% in Shenzi; exploration partnerships advancing; Neptune sale in May 2021 | **Advancing**<br>first production achieved at Atlantis Phase 3, West Barracouta and Ruby; continued de-risking of Trion, Scarborough, Shenzi N |

Notes: TRIF – Total Recordable Injury Frequency.



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# Core assets concentrated in key heartlands

**Over 3 Bboe in resource underpinned by a mix of premier producing assets with embedded growth options and emerging heartlands**

## Australia

Bass Strait
Northwest Shelf (NWS)
Scarborough
Pyrenees
Macedon

**65** *72% Gas*
**MMboe**
FY21 Production

**1,260**
**MMboe**
2P+2C resources

## US Gulf of Mexico

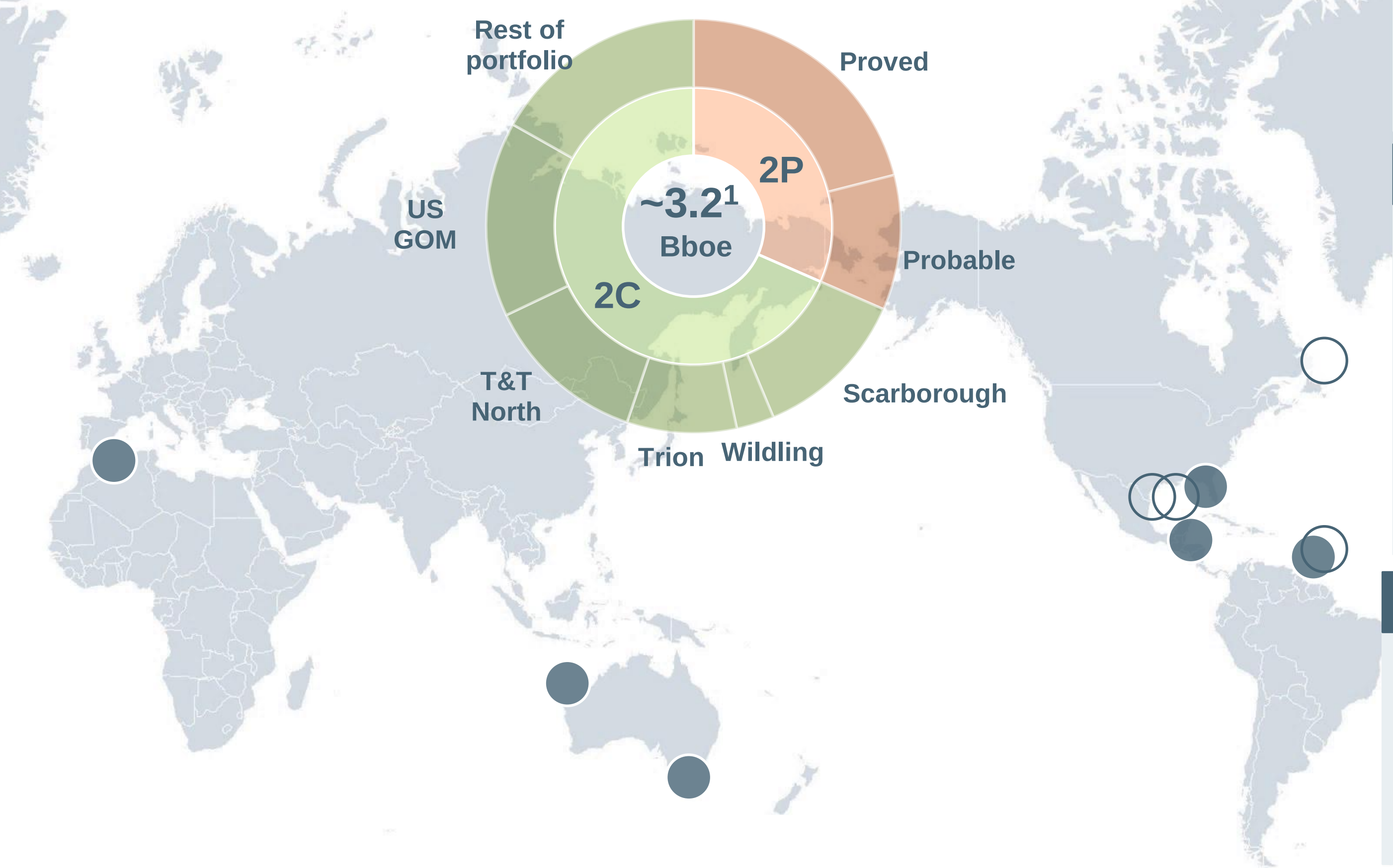
Mad Dog
Atlantis
Shenzi
Wildling

**26** *95% Liquids*
**MMboe**
FY21 Production

**1,056**
**MMboe**
2P+2C resources

## Resources

***2P+2C: 47% Liquids, 53% Gas***




## Mexico

Trion

**275**
**MMboe**
2P+2C resources

## Trinidad & Tobago

Angostura
Ruby[2]
Calypso (T&T North)
T&T South

**9** *94% Gas*
**MMboe**
FY21 Production

**570**
**MMboe**
2P+2C resources

## Exploration Acreage

Eastern Canada: 5,434 km$^2$
Western GoM: 1,049 km$^2$
Central GoM: 979 km$^2$
Barbados: 5,004 km$^2$
Mexico: 771 km$^2$

Note: Algeria resource volumes included in Rest of portfolio wedge. Algeria FY21 production of 3 MMboe.
1. Reflects 2P, 2C remaining resource as of 30 Jun 2021 (BHP Share).
2. Ruby project includes the Ruby and Delaware fields.

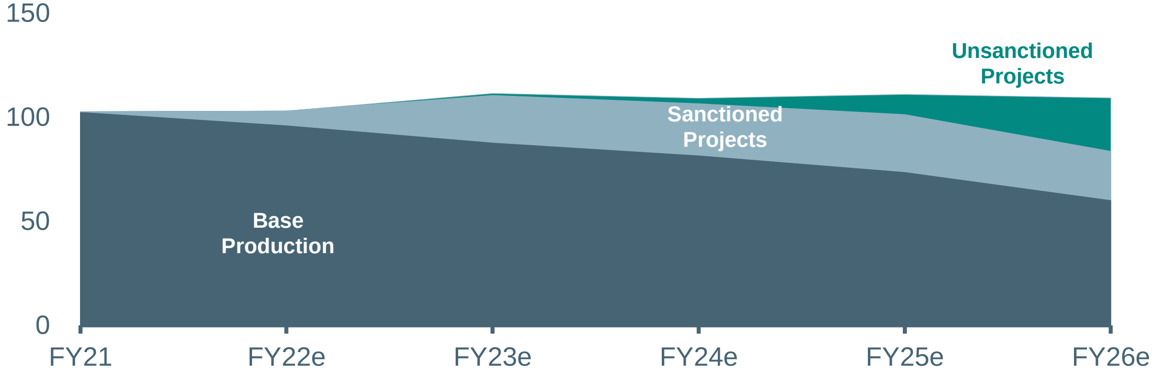
Producing / Development Assets
Exploration Licenses

# High-margin barrels drive production growth and returns

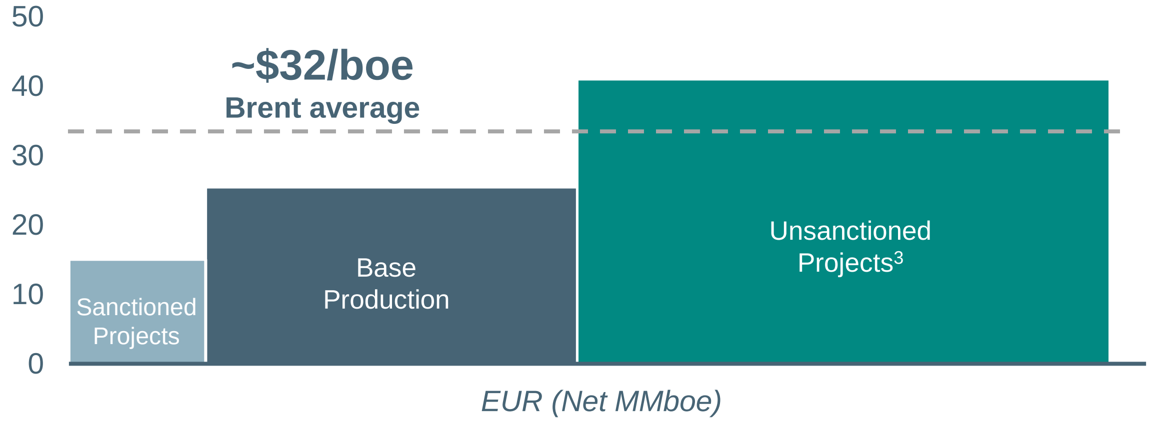
**Current opportunities deliver significant volumes, and more than offsets base field decline**

| | |
|---|---|
| **Base production** | • Large, low cost producing assets with expansion potential and access to infrastructure and attractive markets<br>• Strong free cash flow and returns through 2020s<br>• 10+ years of significant production from the base |
| **Sanctioned projects** | • Oil-dominated projects delivering strong returns<br>• Atlantis Phase 3, Mad Dog Phase 2 and Shenzi Subsea Multiphase Pumping (SSMPP) add ~17 MMboe in FY23 |
| **Unsanctioned projects** | • Competitive pipeline of high-return and improvement projects keep production relatively stable through FY26<br>• Scarborough, Trion, and US GOM embedded options add significant potential growth from mid-2020s |

**Value accretive production potential over the medium term[1]**
(Production, MMboe)




**Highly resilient, low cost of supply asset base**
(Brent equivalent to achieve a point-forward breakeven at NPV10[2], $/boe)




1. Per Base Plan.
2. As of 1 July 2022.
3. Unsanctioned projects include Trion, Scarborough, and all embedded growth projects with projected FID through 2030.



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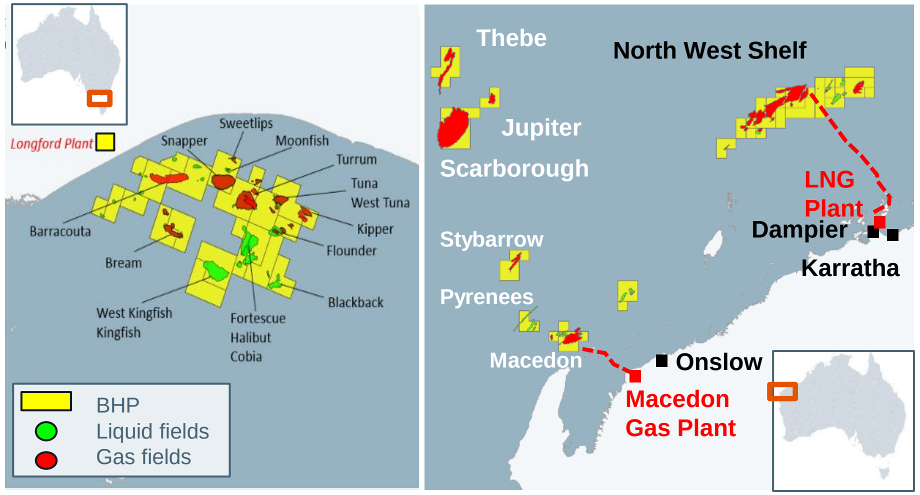
# **Australia** | Strong free cash flow generation

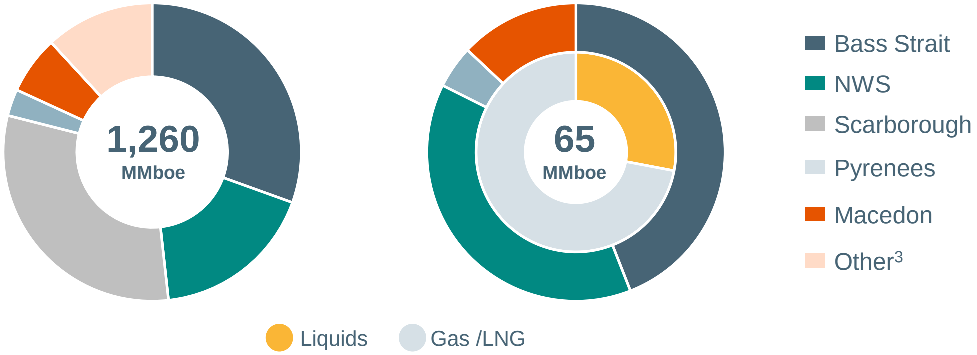
## Bass Strait and North West Shelf demonstrate the strength of our base assets

- **Bass Strait** is a material and highly cash generative, advantaged gas play
- **North West Shelf** generates strong free cash flow from equity gas and additional revenue generation from other resource owners
- **Pyrenees & Macedon** operated fields deliver strong base production and top quartile operations, with expansion opportunities enabled by infrastructure
- Material growth potential through development of **Scarborough** – large, long life and high-quality resource close to attractive LNG markets and regional infrastructure

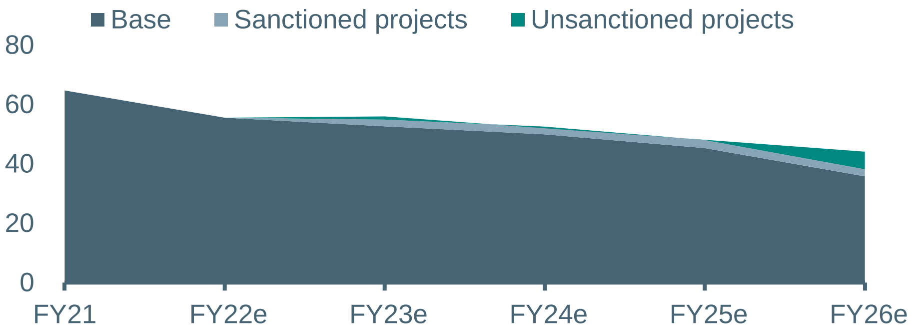
### Asset Location




### Remaining Resource[1]    FY21 Production[2]




### Net Production (MMboe)[4]



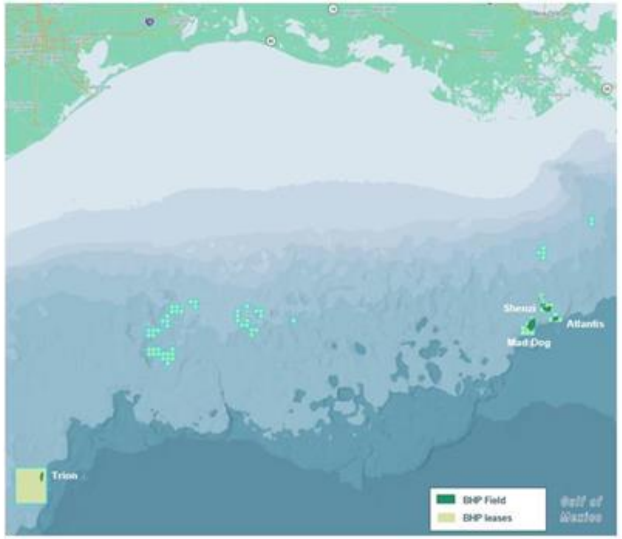

1. Reflects 2P, 2C remaining resource as of 30 June 2021.
2. FY21 full year production.
3. Remaining Resource "Other" includes Exmouth, Thebe & Jupiter.
4. Per Base Plan.

# US Gulf of Mexico | Large, long-life and expandable

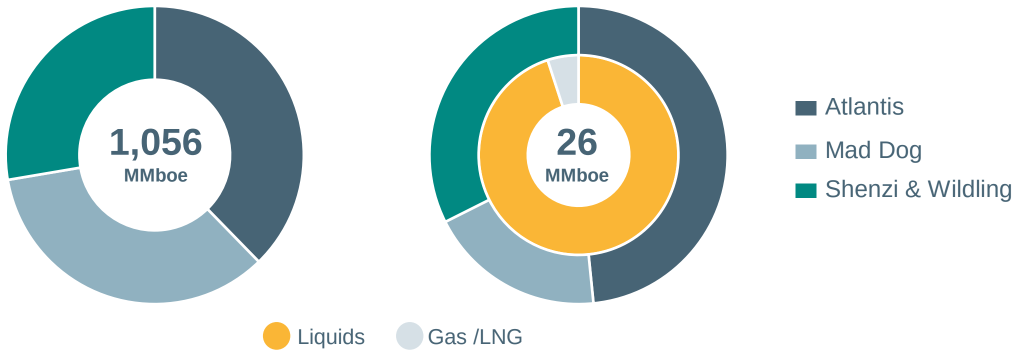
## Robust growth pipeline of high-return options across all three assets

- A long history of developing and operating assets in Gulf of Mexico
- **Shenzi** continues to demonstrate our operating capability in deepwater Gulf of Mexico, with industry leading safety, reliability and uptime
- Material non-operated position in large, long-life oil assets **Atlantis** and **Mad Dog**
- Near term growth projects deliver attractive returns and significantly increase overall portfolio contribution over the early to mid-2020s
- Established technical capability in understanding and optimizing assets for value

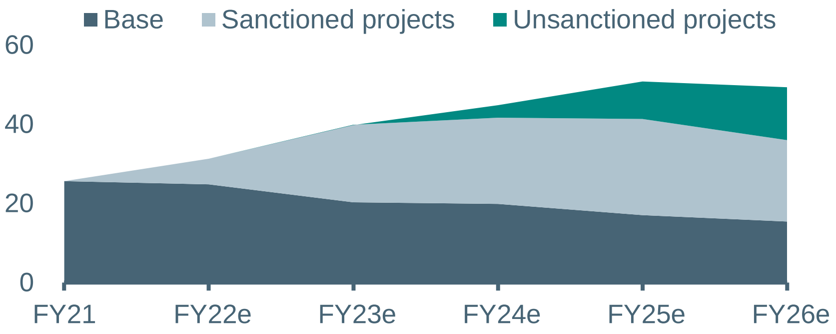
### Asset Location




### Remaining Resource[1] / FY21 Production[2]




### Net Production (MMboe)[3]




1. Reflects 2P, 2C remaining resource as of 30 Jun 2021.
2. FY21 full year production.
3. Per Base Plan.



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# US Gulf of Mexico | Large, long-life and expandable

**Leveraging advanced technology to unlock a suite of competitive, high-return growth options**

## Greater Shenzi and Wildling

- Developed in 2006, producing since 2009; now provides ullage for highly economical infill wells, enhanced recovery and tie-backs
- Shenzi North sanctioned in Aug-2021, with ~$25/bbl breakeven and payback <2 years
- Further expansion potential from Wildling, progressing to FEED in CY2022

## Atlantis

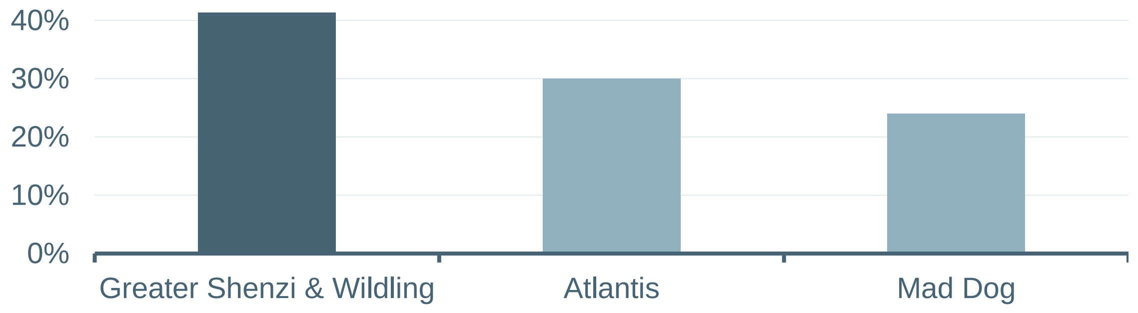
- Atlantis Phase 3 achieved first production in July 2020
- Additional upside through multiple infill producers and major facilities expansion opportunities

## Mad Dog

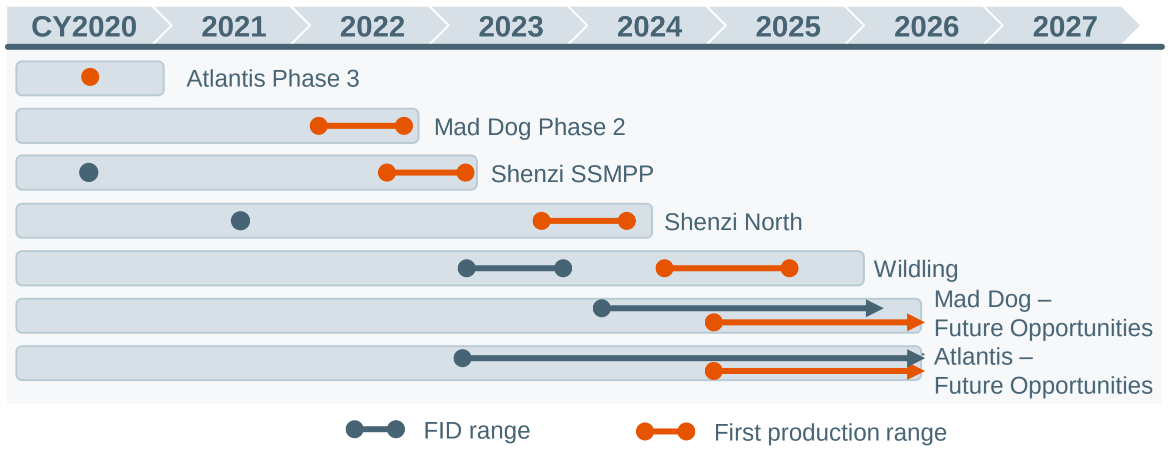
- Phase 2 first oil expected mid-CY2022, with capacity to produce 140 kboe/d via a semi-submersible platform
- Hub expansion potential from infill opportunities, water injection opportunities and near field exploration

### Attractive, high-return future growth options in the Gulf of Mexico

(Average IRR [1], %)




### Robust pipeline of high-return opportunities



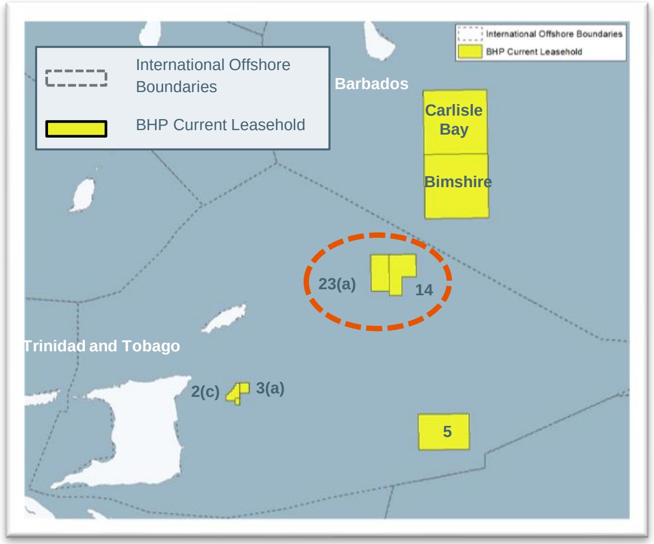

1. Average IRR weighted by NPV at Consensus pricing.

# Future growth options | Delivering into the next decade

**Material growth options to sustain our portfolio and create new Heartlands**

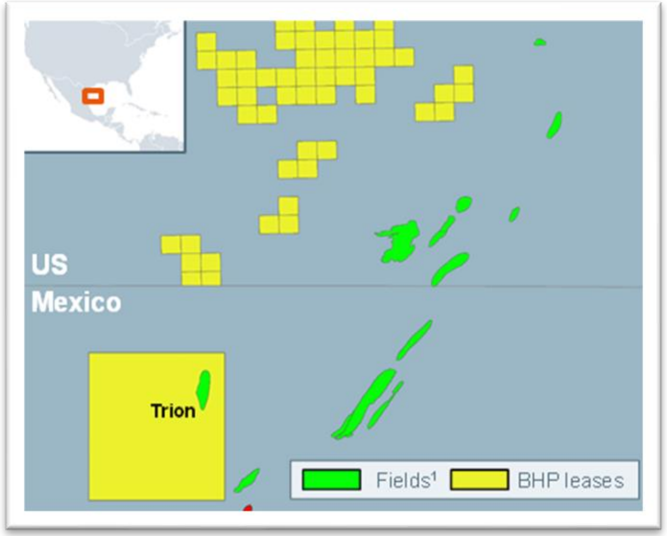
## Calypso

- BHP 70% (Operator), BP 30%
- Multiple gas discoveries; low $CO_2$ content and low greenhouse gas intensity
- Appraisal activities commenced CY2021
- Advantaged gas opportunity well positioned to the Atlantic LNG plant onshore Trinidad & Tobago



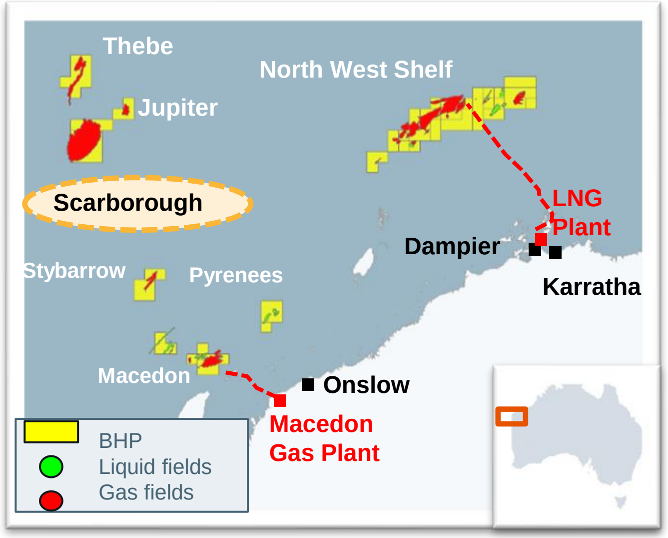

## Trion

- BHP 60% (Operator), Pemex 40%
- Discovered in 2012 by Pemex, BHP acquired operatorship in 2017 and then further appraised
- Development concept decisions taken
- FEED engineering began Q2 CY21; progressing to FID from mid-CY2022 with first production targeted from CY2026




## Scarborough

- BHP 26.5%, Woodside 73.5% (Operator)
- Large, high-quality resource with low $CO_2$ content and low GHG intensity, close to attractive LNG markets and infrastructure
- Future development options in Thebe & Jupiter provide further upside
- Plan towards Scarborough FID by end-CY2021; first production targeting CY2026



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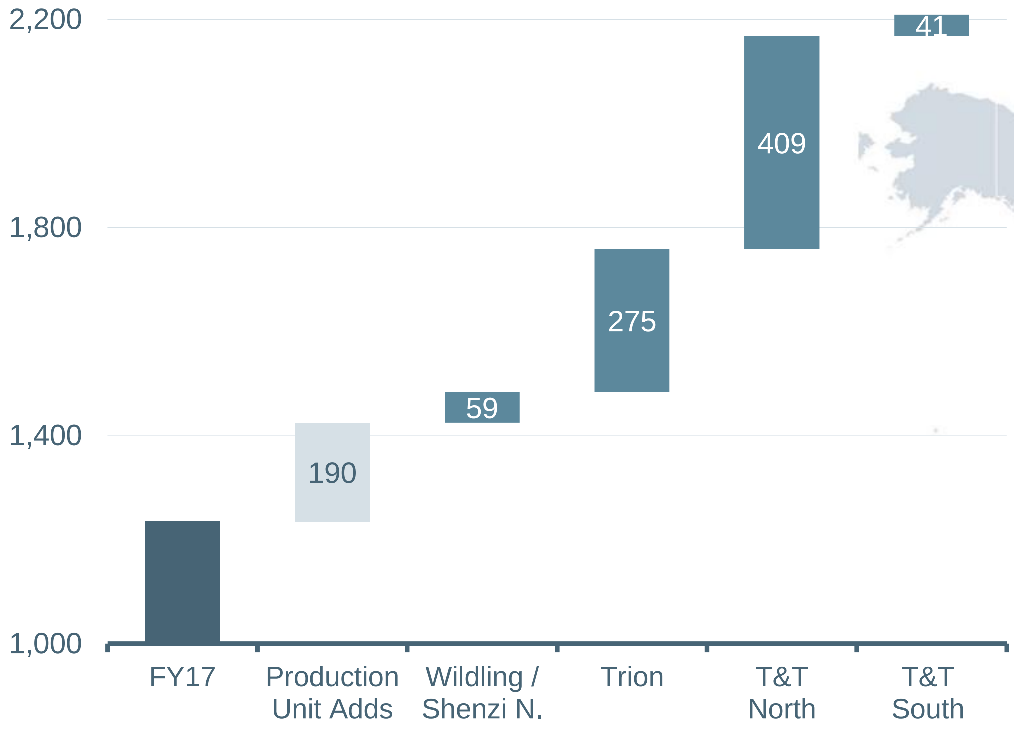
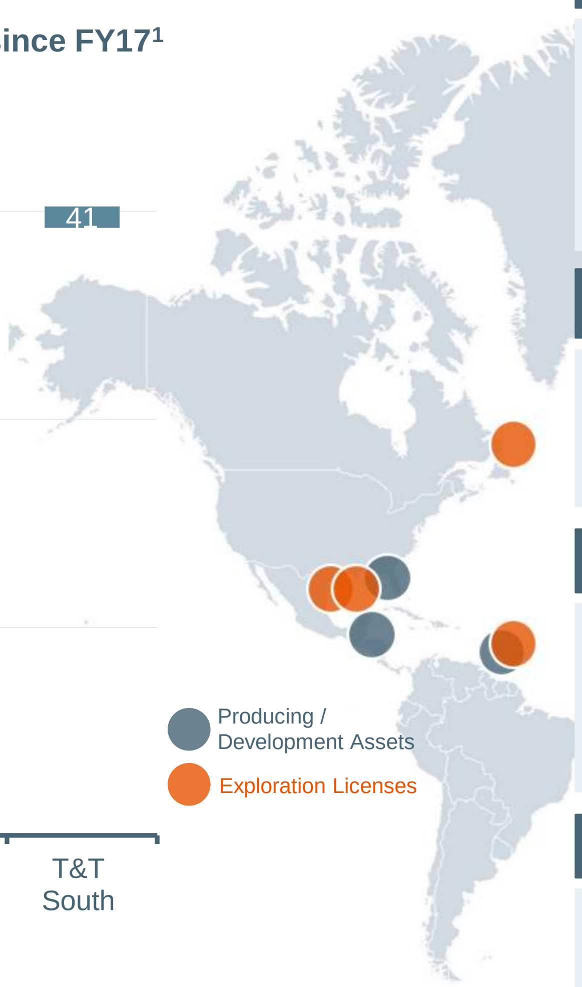
# Future growth options | Exploration and acquisitions

**Replenishing the portfolio for the future**

**Growth strategy has added ~1.0 Bboe of 2C resources since FY17[1]**




## Gulf of Mexico

***Western: 1,049 km²*** ***Central: 979 km²***

- Large structures in proven Central GOM Heartland & significant running room in unexplored Western GOM
- Testing Central GoM Wasabi opportunity; expected results in Q1 CY22

## Eastern Canada

***Orphan Basin: 5,434 km²***

- Large leases with multiple play types offer future growth optionality

## Caribbean

***Barbados: Carlisle Bay 2,498 km² & Bimshire: 2,506 km²***

- Started acquisition of 3D seismic survey across the 2 licenses[2]

***Trinidad & Tobago Licenses (North – Calypso; South – Magellan)***

## Mexico

***Trion: 771 km²***

- Exploration prospects near Trion field, oil potential

1. Reflects additions since FY17, not full resource volumes per asset.
2. Government approved.



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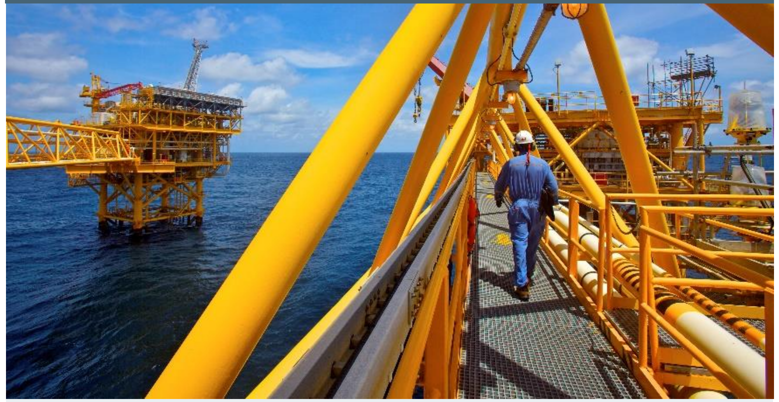
# Petroleum has a strong record of performance and results

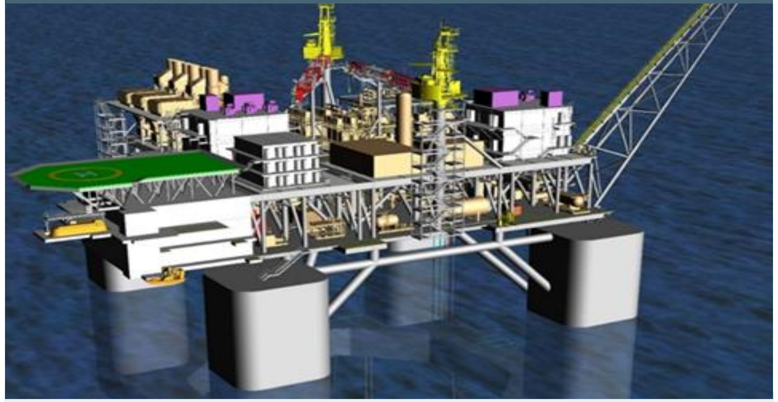
**Proven track record of delivering on our commitments**

## Delivering the Base



- **High quality assets:** FY21 production exceeded guidance, overcoming headwinds from COVID and weather events in US Gulf of Mexico
- **Safe and sustainable operations:** Continued prioritization of the safety of our people and operations, evidenced through our strong HSE performance and high availability

## Advancing Growth Projects



- **Project delivery:** Ruby achieved first oil ahead of schedule and on budget; Trion awarded a major facility FEED contract per schedule in Q4 FY21
- **Enhanced seismic imaging:** Ocean Bottom Node (OBN) seismic to unlock contingent resources and new opportunities

## Commitment to Sustainability

- **Social Value:** Maximizing the social value of our business through the energy we produce, the people we employ, and bettering the communities around us
- **ESG:** On track to meet Net Zero targets by 2050 and emissions reduction targets of 15% by 2025 and 30% by 2030 on Scope 1 & 2 equity share GhG emissions



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**To ask a question please either:**

Unmute your line or, press *6

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# 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 6 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. 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 2021. 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.

**Net BHP Petroleum Reserves and Contingent Resources (MMboe) as of 30 June 2021**

| | Australia | | | | | | United States | | | | | Trinidad & Tobago | Trinidad & Tobago | Mexico | Algeria | Other Assets | BHP Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bass Strait | NWS | Pyrenees | Macedon | Scarborough | Thebe + Jupiter | Shenzi | Shenzi North | Wildling | Atlantis | Mad Dog | Angostura + Ruby | Calypso | Trion | ROD | | |
| **1P** | **107** | **151** | **12** | **43** | **0** | **0** | **74** | **0** | **0** | **79** | **137** | **52** | **0** | **0** | **9** | **0** | **665** |
| **2P** | **179** | **186** | **21** | **54** | **0** | **0** | **105** | **0** | **0** | **175** | **192** | **86** | **0** | **0** | **13** | **0** | **1011** |
| **2C** | **209** | **35** | **16** | **18** | **390** | **142** | **94** | **31** | **64** | **223** | **173** | **34** | **409** | **275** | **33** | **50** | **2195** |
| **2P+2C** | **387** | **222** | **36** | **72** | **390** | **142** | **199** | **31** | **64** | **398** | **365** | **120** | **409** | **275** | **45** | **50** | **3206** |
| **Fuel Included Above** | | | | | | | | | | | | | | | | | |
| 1P | 9.5 | 21.4 | 0.2 | 2.8 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 4.0 | 4.2 | 1.4 | 0.0 | 0.0 | 0.8 | 0.0 | 47.3 |
| 2P | 11.4 | 26.3 | 0.2 | 5.4 | 0.0 | 0.0 | 3.2 | 0.0 | 0.0 | 7.0 | 6.1 | 2.3 | 0.0 | 0.0 | 0.8 | 0.0 | 62.6 |
| 2C | 6.8 | 0.1 | 0.0 | 1.5 | 43.9 | 18.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 71.1 |
| 2P+2C | 18.2 | 26.5 | 0.2 | 6.9 | 43.9 | 18.5 | 3.2 | 0.0 | 0.0 | 7.0 | 6.1 | 2.3 | 0.0 | 0.0 | 0.8 | 0.2 | 133.7 |

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 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 2021, 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.

# Petroleum portfolio | Producing assets and growth projects

## Quality assets concentrated in key heartlands in the Gulf of Mexico, Trinidad & Tobago and Australia

**Producing Assets[1]**

| Asset | Description | Operator | BHP ownership | FY21 Production (MMboe) | End of field life | 1P[3] (MMboe) | 2P[3] (MMboe) | 2P+2C[3] (MMboe) |
|---|---|---|---|---|---|---|---|---|
| Shenzi[2] | Oil asset located in the US Gulf of Mexico with TLP (tension leg platform) development operated by BHP. | BHP | 72% | 8.1 | 2030s | 74 | 105 | 294 |
| Atlantis | One of the largest fields in the US Gulf of Mexico, with field production average of ~93,000 bopd over last 5 years and base decline offset via infill drilling and successful workovers. | BP | 44% | 12.1 | 2040s | 79 | 175 | 398 |
| North West Shelf | Integrated LNG project with material remaining resource position. Five LNG trains allowing transition towards a third party gas tolling facility extending operations for decades to come. | Woodside | 12.5% – 16.67% across 9 separate joint venture agreements | 24.8 | 2040s | 151 | 186 | 222 |
| Mad Dog | Original development with a Truss Spar host (A-Spar): Dry trees, floating spar hull, with integrated drilling and production capabilities of ~4,400 feet of water depth. | BP | 23.9% | 4.8 | 2040s | 137 | 192 | 365 |
| ROD Integrated Development | The Rhourde Ouled Djemma (ROD) Integrated Development, which consists of the ROD, Sif Fatima – Sif Fatima North East (SF SFNE) and four satellite oil fields. | Joint Sonatrach/ENI | 29.3% effective interest in the ROD Integrated Development | 3.1 | 2020s | 9 | 13 | 45 |
| Bass Strait | Major integrated asset consisting of offshore facilities, onshore plants and associated pipeline infrastructure. Advantaged gas position with with modest investable opportunities. | Exxon | Gippsland Basin Joint Venture (GBJV): 50.0%<br>Kipper Unit Joint Venture (KUJV): 32.5% | 28.5 | 2030s | 107 | 179 | 387 |
| Pyrenees | Subsea oil development in 200m water depth tied back to FPSO. | BHP | WA-42-L permit: 71.43%<br>WA-43-L permit: 39.999% | 3.0 | 2030s | 12 | 21 | 36 |
| Macedon | Subsea gas development in 200m water depth tied back to onshore domestic gas plant. | BHP | 71.43% | 8.4 | 2030s | 43 | 54 | 72 |
| Trinidad and Tobago (Angostura and Ruby) | Angostura: Discovered by BHP in 1999, phase 2 included a new gas export platform and two pipelines with gas sales to Trinidad & Tobago commencing in 2011.<br>Ruby: Developed through a wellhead program, tied back to the Angostura infrastructure. Offsets declining production from Angostura. | BHP | 45.0% Block 2(c)<br>68.46% effective interest in Block 3(a) Project Ruby | 9.3 | 2030s | 52 | 86 | 120 |

**Growth projects**

| Asset | Description | Operator | BHP ownership | Potential execution timing (FID) | Potential first production | FY22 – FY30 Capex (BHP share, nominal US$bn) | 1P[3] (MMboe) | 2P[3] (MMboe) | 2P+2C[3] (MMboe) |
|---|---|---|---|---|---|---|---|---|---|
| Scarborough | Large offshore gas development exporting gas from a floating production unit to Pluto LNG facility for onshore processing. | Woodside | 26.5% | CY21 | CY26 | ~2 bn | - | - | 532 |
| Trion | Large greenfield development in the deepwater Mexico GoM. Resource uncertainty reduced with recent successful appraisal drilling of 2DEL and 3DEL wells. Recently moved into FEED phase. | BHP | 60% | CY22 | CY26 | <5 bn | - | - | 275 |
| Calypso | Operated deepwater advantaged gas discovery in Trinidad & Tobago, well positioned to existing regional infrastructure and with low $CO_2$ content / low greenhouse gas intensity. Multiple development concepts under evaluation. | BHP | 70% | CY26 | CY27-28 | ~3 bn | - | - | 409 |

1. Includes all sanctioned and brownfield projects.
2. Includes Shenzi North & Wildling.
3. Net BHP Reserves and Contingent Resources as of 30 June 2021. Scarborough estimates include Thebe & Jupiter.



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# Petroleum portfolio | Embedded growth within producing assets

## Suite of quality projects in key heartlands to support production longevity

**Sanctioned Projects (in execution)**

| Asset | Description | Operator | BHP ownership | Potential first production | Estimated peak production capacity (gross) | FY22 – FY30 Capex (BHP share, nominal US$bn) |
|---|---|---|---|---|---|---|
| Shenzi SSMPP | Shenzi Subsea Multi-Phase Pumping (SSMPP); subsea pumping to increase production rates from existing wells. | BHP | 72% | CY22 | 6.5 kbpd in CY22 | <0.25bn |
| Mad Dog A Spar | 3-4 infill wells tied to Mad Dog A Spar. | BP | 23.9% | CY23 | 18 kbpd in CY26 | <0.25bn |
| Mad Dog Phase 2 | Semi-submersible platform with 22 subsea wells (14 producing wells and 8 water injection wells). | BP | 23.9% | CY22 | 140 kbpd in CY23 | ~0.75bn |
| Atlantis Phase 3 | 8-well subsea tieback achieved first production in CY20. | BP | 44% | CY20 | 35 kbpd in CY24 | <0.5bn |
| Pyrenees Phase 4 | Well re-entry program comprising infill drilling and water shut off operation. | BHP | 71.43% | CY23 | 13.5 kbpd in CY23 | <0.25bn |
| NWS Lambert Deep & GWF 3 | 4-well subsea tieback to existing infrastructure | Woodside | 17% | CY22 | 250 MMscfd in CY22 | <0.25bn |
| Shenzi North | 2-well subsea tieback to Shenzi TLP. IRR of over 35%[1], a breakeven of ~$25/bbl and a payback of <2 years. | BHP | 72% | CY24 | 30 kbpd in CY24 | <0.5bn |

**Unsanctioned Projects**

| Asset | Description | Operator | BHP ownership | Potential execution timing (FID) | Potential first production | FY22 – FY30 Capex (BHP share, nominal US$bn) |
|---|---|---|---|---|---|---|
| Wildling | 2-well subsea tieback to Shenzi TLP via Shenzi North. | BHP | 100% | CY22 – 23 | CY24 – 25 | <0.75bn |
| Shenzi growth opportunities | Additional infill opportunities to increase production with 3 producing and 2 water injection wells tied back to Shenzi TLP. | BHP | 72% | CY22 – 25 | CY24 – 26 | ~0.5bn |
| Atlantis growth opportunities | Additional development opportunities for 12 infill producing wells and 6 additional water injection wells. Opportunity to increase production via Subsea Multi-Phase Pumping (SSMPP) and topside modification. | BP | 44% | CY23 – 28 | CY25 – 29 | ~2bn |
| Mad Dog Phase 2 growth opportunities | Additional opportunities to increase the Mad Dog Phase 2 production beyond the initial investment scope with 9 new wells tied back to existing facility. | BP | 23.9% | CY25 – 26 | CY26 – 28 | ~0.5bn |
| Mad Dog WI expansion | Two water injector wells providing water from Mad Dog Phase 2 facility to increase production at existing A Spar facility. | BP | 23.9% | CY24 | CY25 | <0.25bn |
| NWS growth opportunities | 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 | 17% | CY24 – 26 | CY26 – 28 | <0.25bn |
| Bass Strait growth opportunities | Kipper expansion (additional Phase 1B well & compression) for acceleration and incremental resource capture from the Kipper field. | Exxon | GBJV: 50.0%<br>KUJV: 32.5% | CY24 – 27 | CY27 – 28 | ~0.5bn |

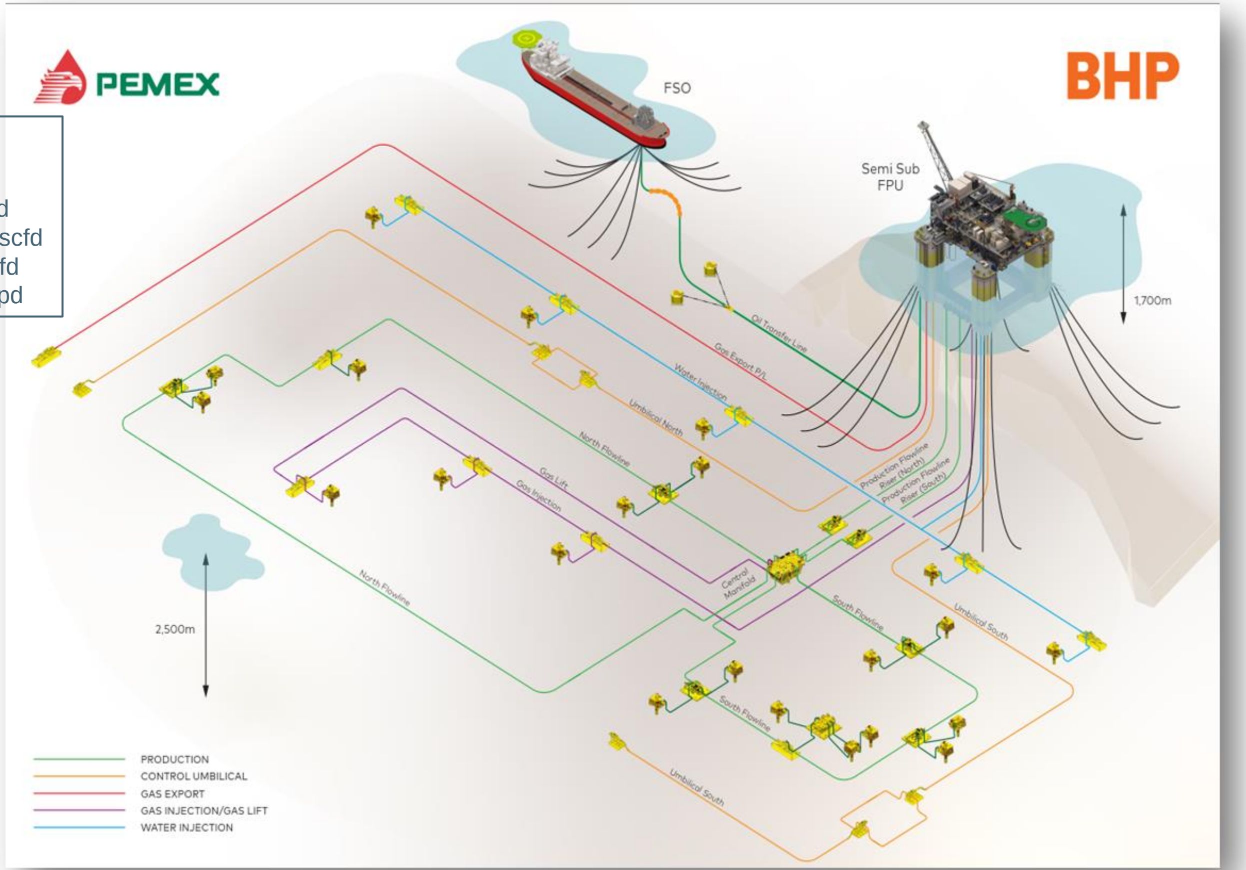


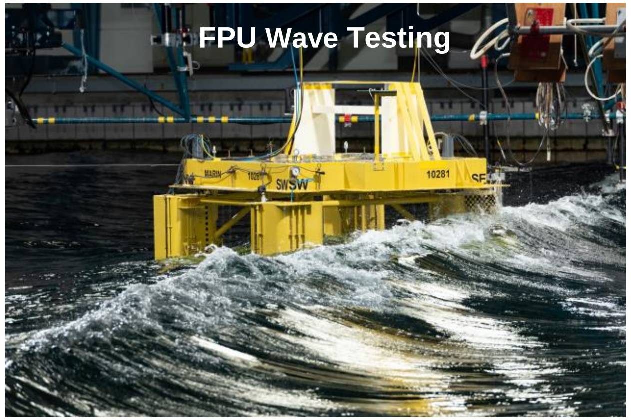
BHP

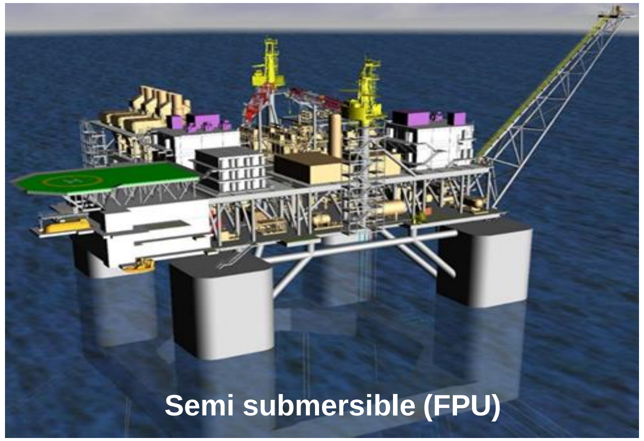
# Trion is moving towards FID

**CONCEPT**

27 wells: 14P, 10WI, 3GI
Oil production: 100 kbopd
Gas production: 145 mmscfd
Gas injection: 133 mmscfd
Water injection; 140 kbwpd





FPU Wave Testing


Semi submersible (FPU)

Gate 0
August 2019

Gate 1
June 2020

Gate 2
August 2021

Declaration of Commerciality

FID from mid-CY2022

Potential First Production 2026

Identification | Selection | Definition | Execution

BHP