Chevron



human energy®

# Upstream overview

Jay Johnson Executive Vice President



1. 7. 1.17

# **Focusing on returns**



**Expanding cash and** earnings margins

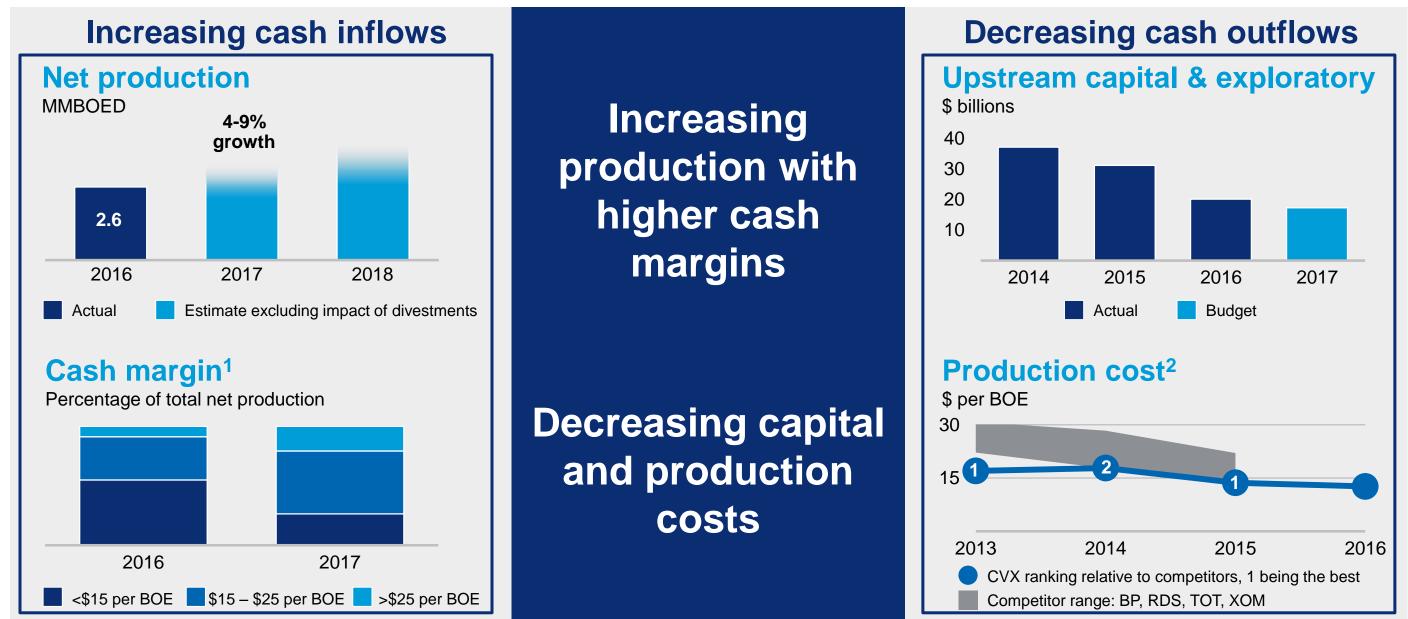
**Effectively allocating capital** 

High-grading the portfolio

Image: Sonam platforms



# Improving upstream performance

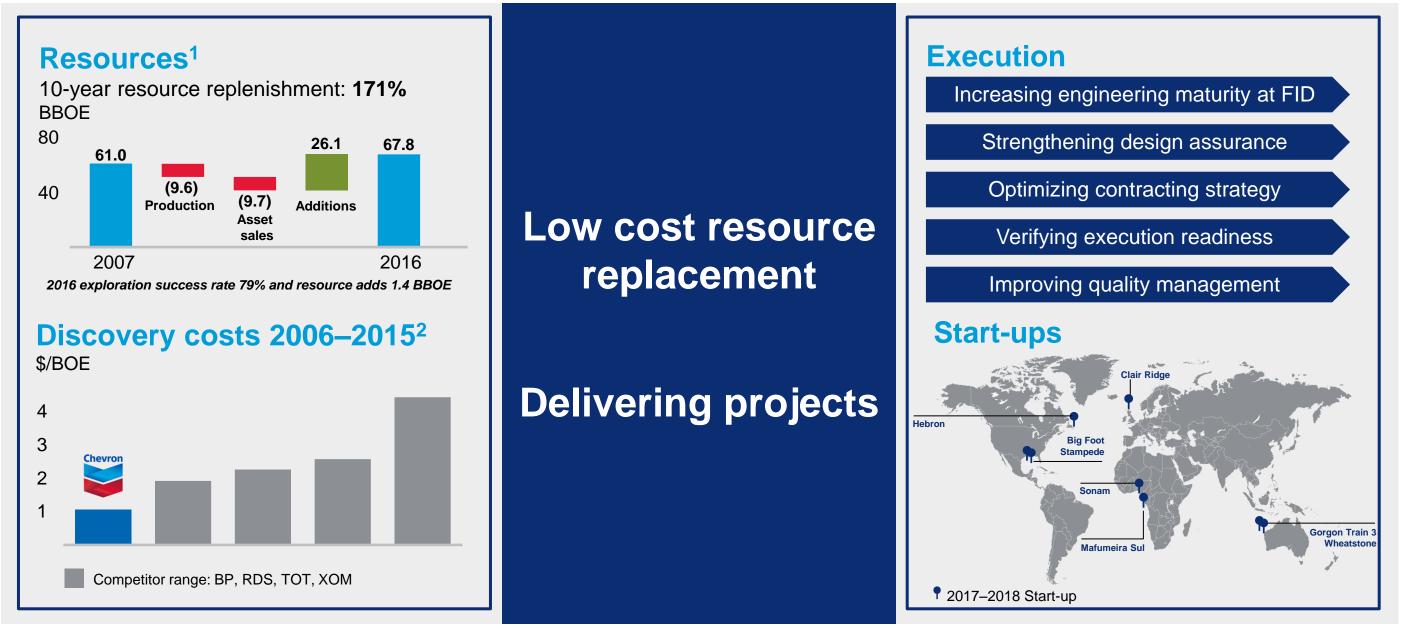


<sup>1</sup> Estimated after-tax cash margin at \$50/bbl in 2016 & 2017. Adds back impact of non-cash items. Note: \$50/bbl Brent is for illustrative purposes only and not necessarily indicative of Chevron's price forecast. © 2017 Chevron Corporation



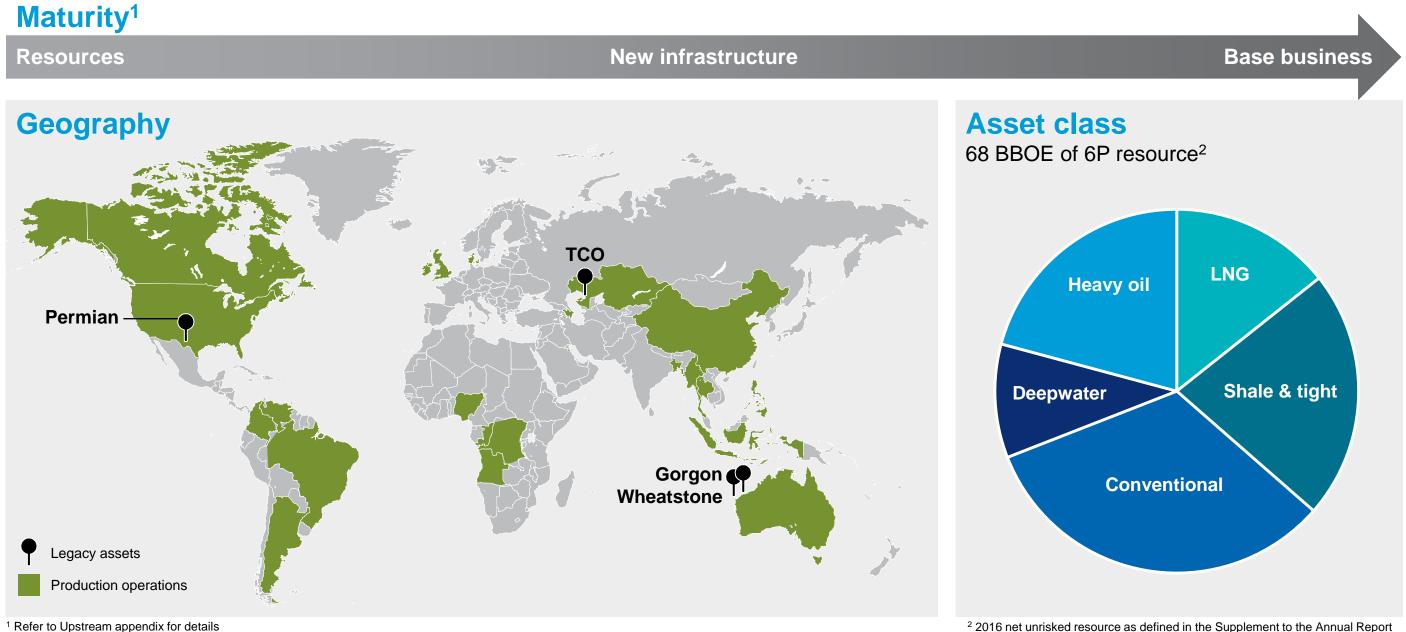
<sup>2</sup> Sourced from supplemental information on oil and gas producing activities (in 10-K, 20-F). Production expenses (excluding taxes) + taxes other than income + other expense/income (excluding asset sale gains/losses).

# **Resources to production**



<sup>1</sup> 2016 net unrisked resource as defined in the Supplement to the Annual Report <sup>2</sup> Source: Wood Mackenzie Company Exploration Benchmarking September 2016

# **Diverse portfolio**



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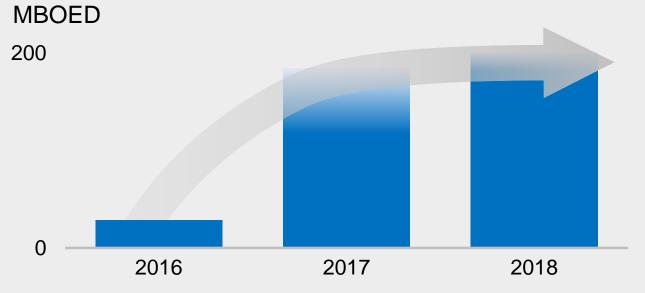
<sup>2</sup> 2016 net unrisked resource as defined in the Supplement to the Annual Report

# **Gorgon and Wheatstone**

### Gorgon

- Trains 1 and 2 online
- Gorgon and Jansz fields online
- Train 3 start-up underway

### **Gorgon net production**



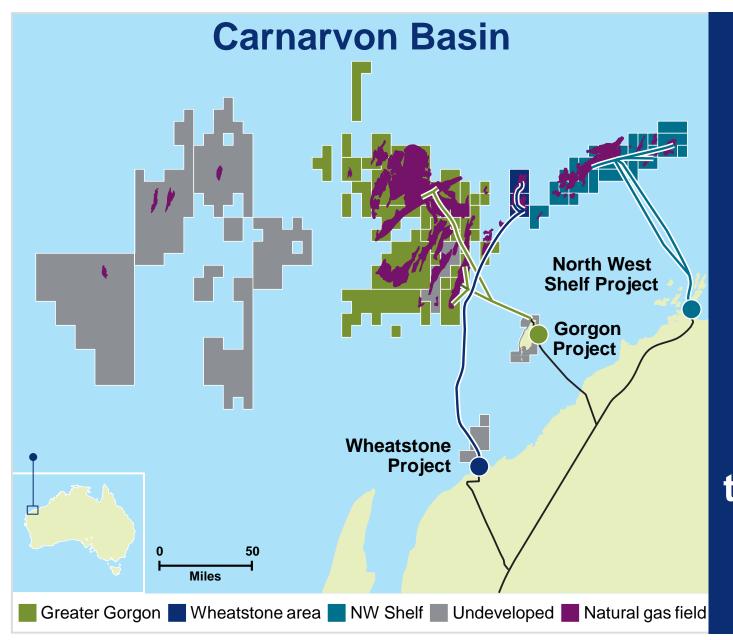
## Wheatstone

- Train 1 construction nearing completion
- Train 1 start-up mid-2017
- Train 2 start-up 6-8 months after Train 1





# Australian gas position



Long-term cash generator

**Optimization and debottlenecking** of our 15.8 MMTPA capacity

Monetize ~50 TCF\* resource through equity or 3<sup>rd</sup> party capacity



# **Tengiz**

## **Base business**

- Record production in 2016
- Outstanding reliability
- Strong earnings and cash generation
- Exceptional turnaround performance



# **FGP / WPMP\***

- 2 drilling rigs operating on multi well pads
- Site construction ramping up
- Port progress on plan
- Initiated module fabrication
- On track for first production in 2022

### **Production profile**



Second generation plant

### **Original plant**

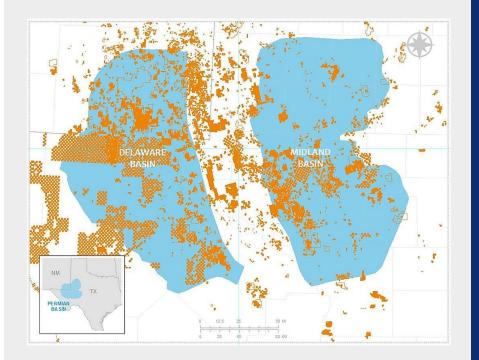


\*FGP – Future Growth Project; WPMP – Wellhead Pressure Management Project

# **Permian**

### **Quality position**

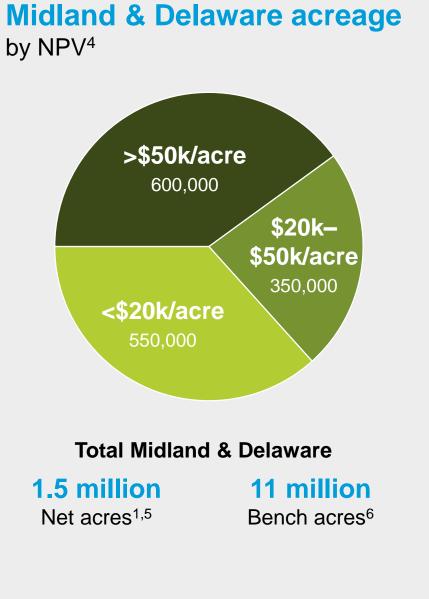
- 2 million net acres<sup>1</sup>
- 85% no or low royalty
- 9.3 BBOE resource<sup>2</sup>



Ramping up to 20 rigs by year end 2018

> **Free cash flow** by 2020<sup>3</sup>

Future upside potential of >700 MBOED within a decade



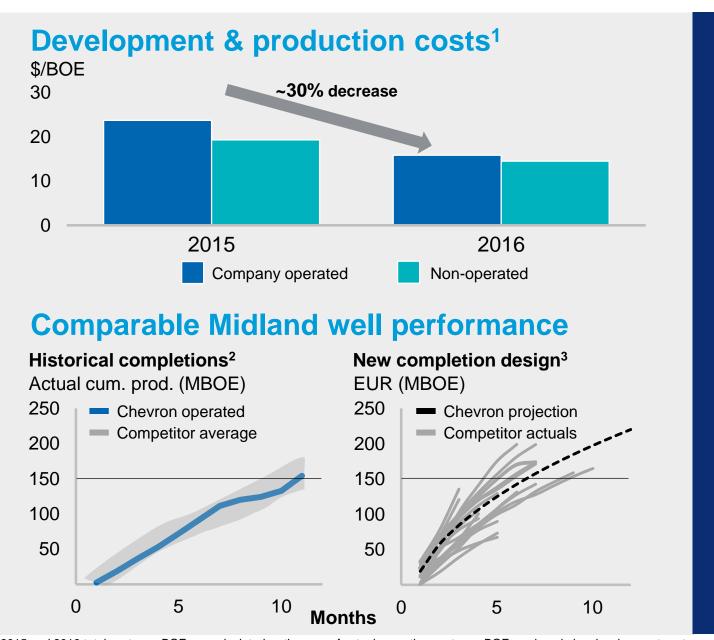
\*NPV calculated assuming simultaneous development of all assessed benches (fully costed) across all acreage, using flat \$50 WTI, \$2.50 gas and \$25 NGL prices for illustrative purposes only and not necessarily indicative of Chevron's price forecast <sup>5</sup> Prospective for shale & tight development <sup>6</sup> Bench acreage is number of potentially developable landing zones multiplied by mineral acreage 9

<sup>1</sup> Net mineral acres <sup>2</sup> 2016 net unrisked resource as defined in the Supplement to the Annual Report <sup>3</sup> Assuming flat \$50 WTI, \$2.50 gas and \$25 NGL prices for illustrative purposes only and not necessarily indicative of Chevron's price forecast

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# **Permian performance**



## **Demonstrating competitive** performance

### Lowering costs

## Improving recovery

<sup>1</sup>2015 and 2016 total costs per BOE are calculated as the sum of actual operating costs per BOE produced plus development costs per BOE expected ultimate recovery for wells put on production in 2015 and 2016 <sup>2</sup>Midland Co., Wolfcamp B, 1,000-1,500lbs/ft fracs, normalized to 7,500', multi-well pads put on production in 2016 <sup>3</sup>Midland Co., Wolfcamp B, 1,600-2,000lbs/ft fracs, normalized to 7,500', competitor multi-wells put on production in 2016 © 2017 Chevron Corporation





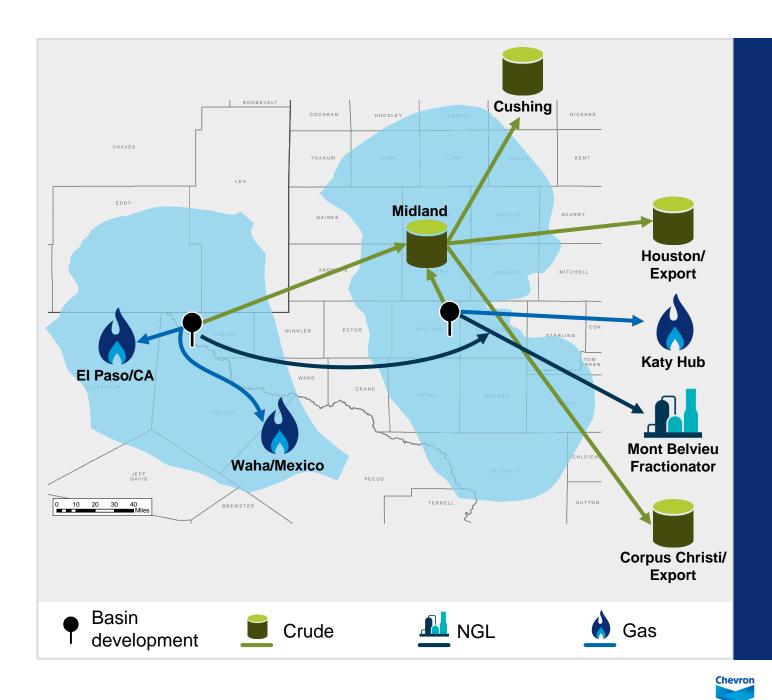
# **Permian support**

# **Supply Chain** Staggered contract durations

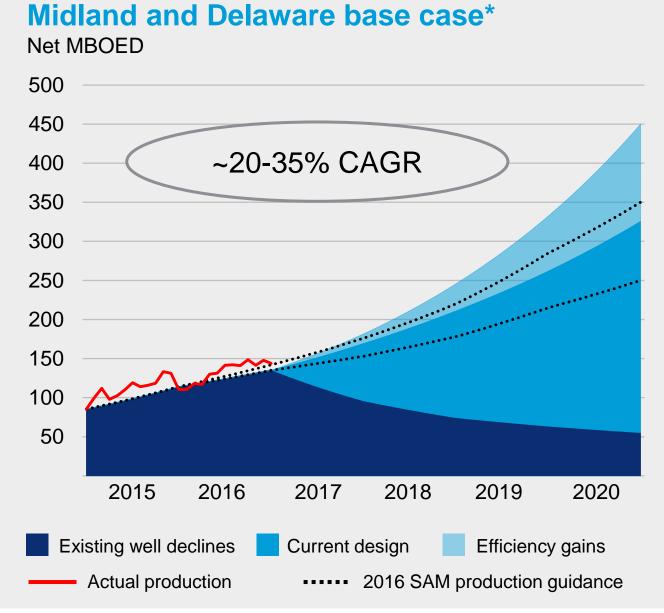
- Leveraging global scale
- Indexed contracts

## Infrastructure

- Secured takeaway capacity
- Multiple market outlets
- Expansion options



## **Permian value**



\*Reflects shale and tight production only; further upside cases not depicted in graph

Accelerated pace of development

**Competitive cost and recovery** 

Superior royalty position

**Realize near-term value through** swaps, leases and sales

# **Portfolio strength underpinned by base assets**



2017 base plus shale declines ~2%

2020 base\* plus shale grows ~1%

Lower risk, short-cycle investments

**Diverse opportunities with** new base assets

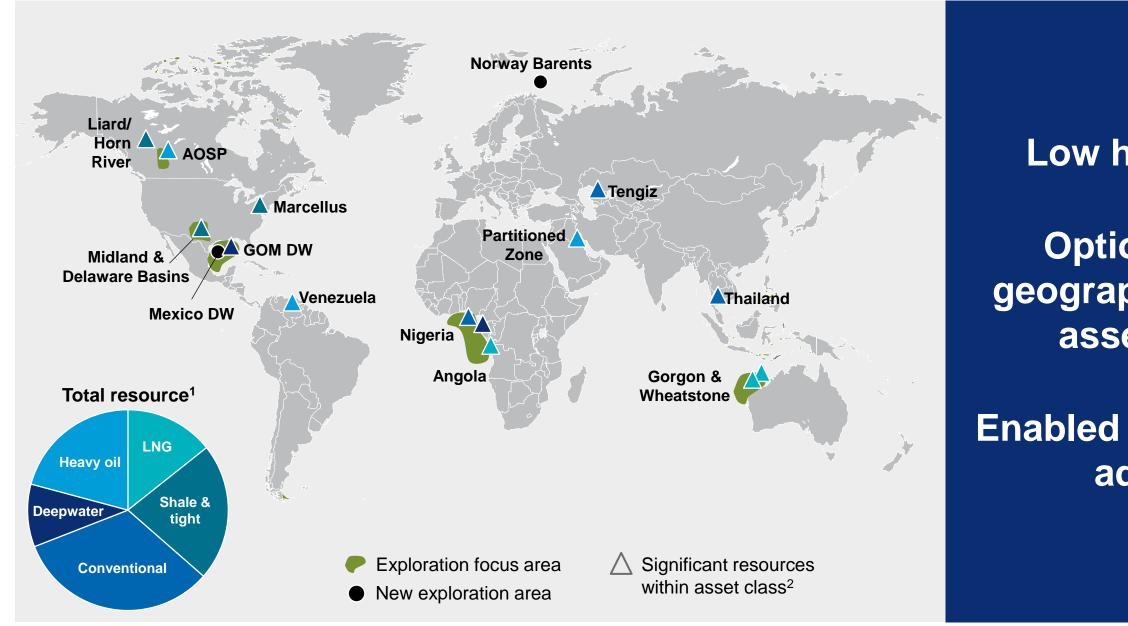
Image: Kern River Field





\*Includes MCPs with first production / ramp-up 2016-2018 and that fully ramp-up production by 2019

# **Resources for the future**



<sup>1</sup>2016 net unrisked resource as defined in the Supplement of the Annual Report <sup>2</sup> Represents the three largest resources by asset class; additional details in Upstream appendix

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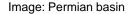
## Low holding cost

## Options across geographies and five asset classes

## Enabled by technology advances

# Closing

Improving cash flow and returns Delivering on projects and base business Advantaged and diverse portfolio Large resource base for the future





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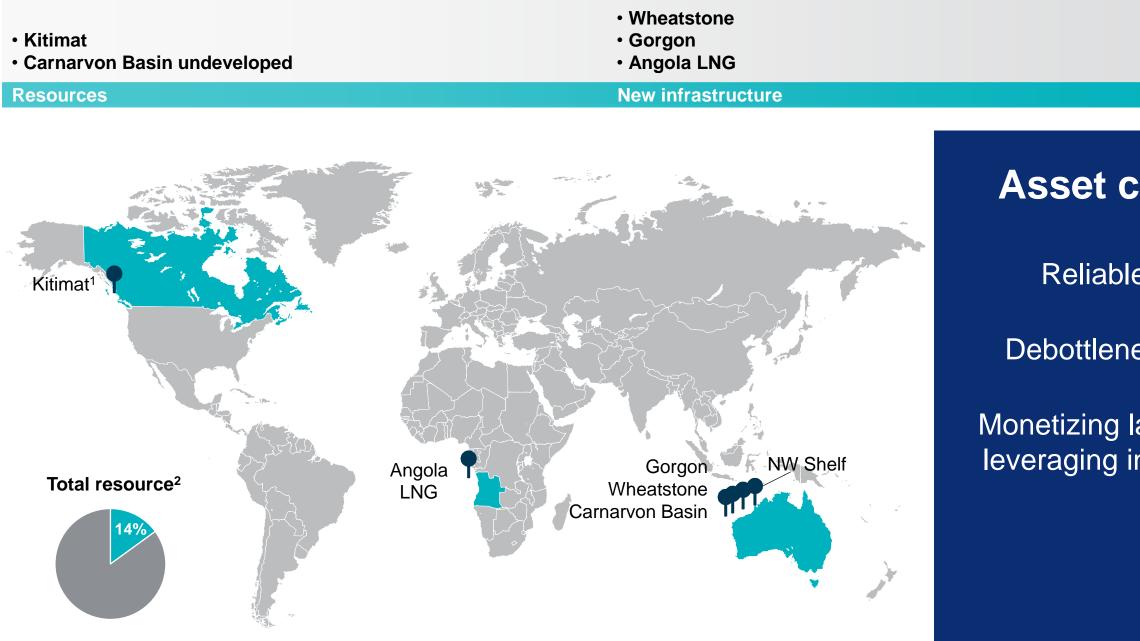


# **Upstream appendix**



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# LNG



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### NW Shelf

### **Base business**

## Asset class focus

### Reliable operations

### Debottlenecking facilities

### Monetizing large resource by leveraging installed capacity

# Shale & tight





### **Base business**

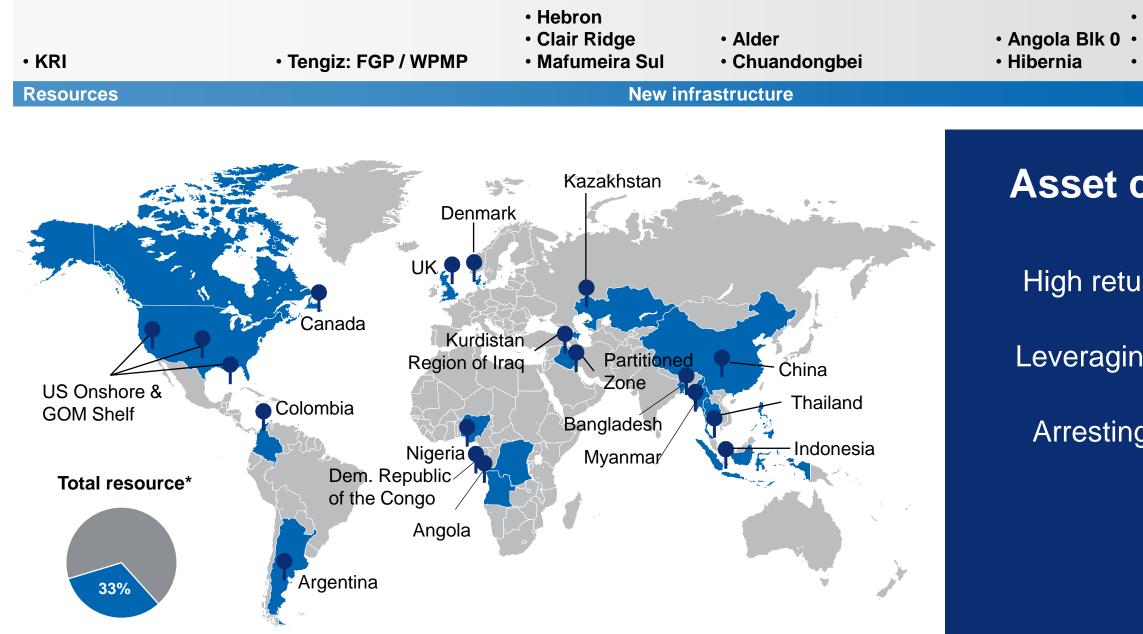
### **Asset class focus**

### Returns driven growth

### Lowering operating and development costs

### Large resource positions with low holding costs

# **Conventional assets**





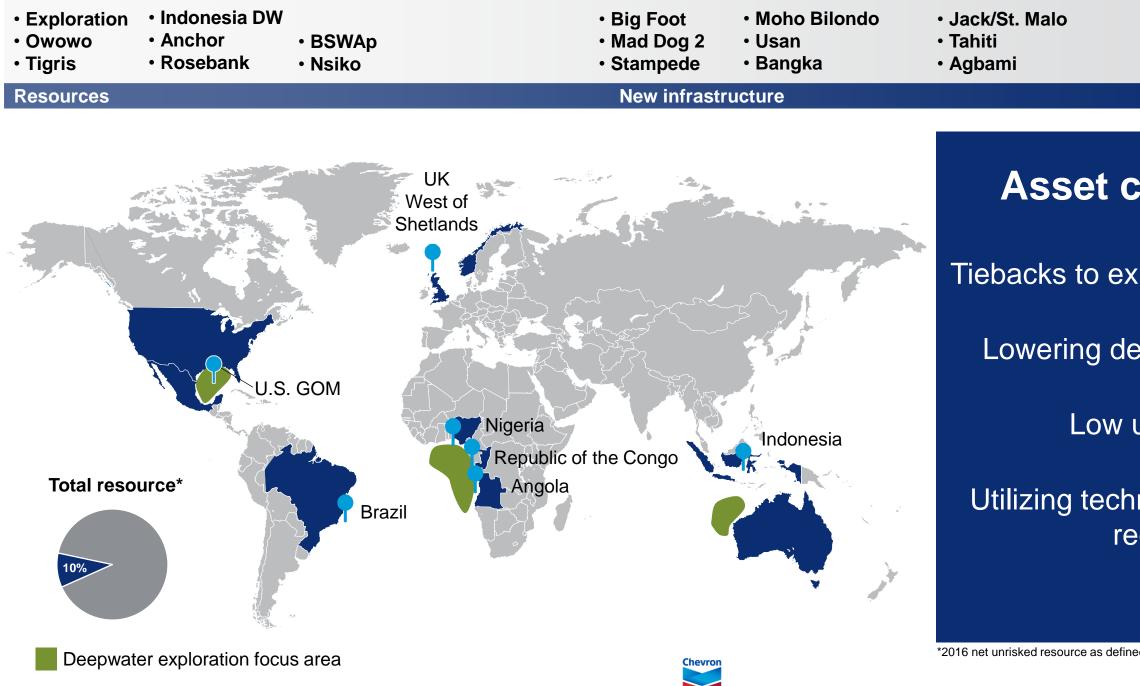
 Karachaganak 
Tengiz Base Thailand • Nigeria • AIOC Indonesia

### **Base business**

### Asset class focus

- High return investments
- Leveraging infrastructure
  - Arresting base decline

## **Deepwater**



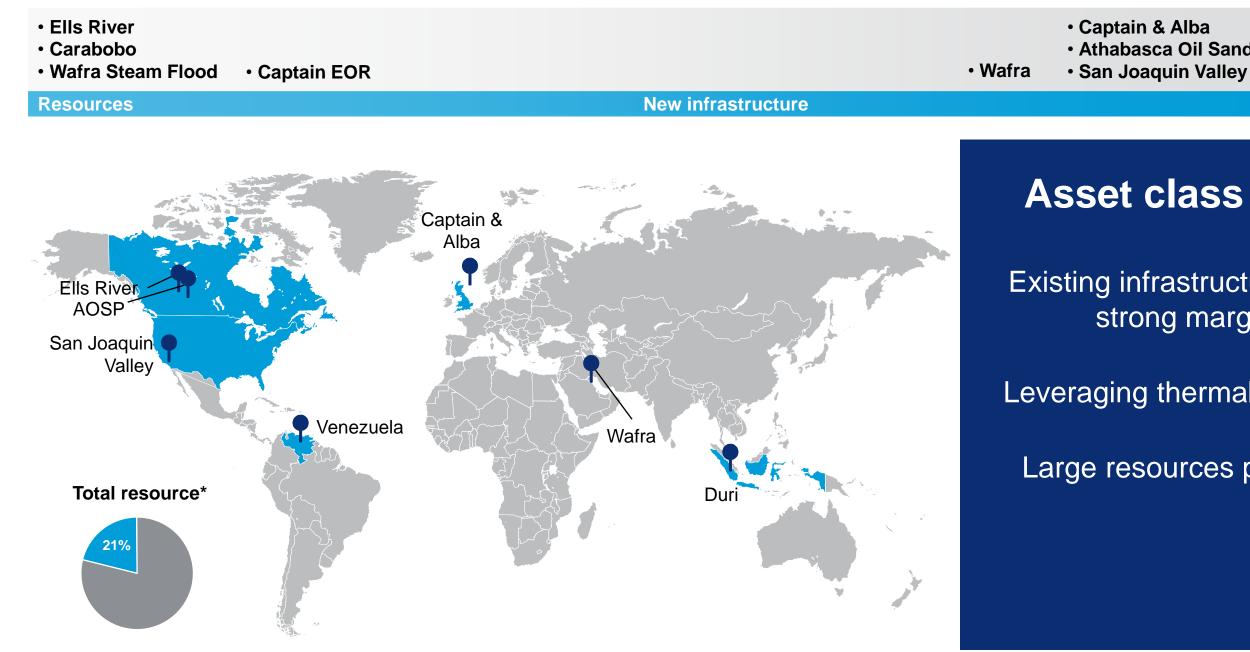
- Frade
- Petronius
- Block 14

### **Base business**

## Asset class focus

- Tiebacks to existing infrastructure
  - Lowering development costs
    - Low unit OPEX
  - Utilizing technology to improve recovery

# Heavy oil



Athabasca Oil Sands

- Duri
- Boscan
- Petropiar

### **Base business**

### **Asset class focus**

Existing infrastructure drives strong margins

Leveraging thermal expertise

Large resources per asset