

Upstream II: International Growth

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International growth

Norway and Trinidad & Tobago illustrate our distinctive capabilities

Distinctive capabilities

Delivering challenging mid-size capital projects

Targeted exploration in known basins and subsurface models

Targeted, strategic acquisitions

World-class stewardship of production hubs

Case studies



Case study 1: Norway

Building a North Sea business through exploration, project development and acquisition



Case study 2: Trinidad & Tobago

Gaining access to Atlantic Basin LNG through acquisition and project development

Covered in the Maximising Asset Value case studies

Norway

A natural international growth step for Centrica

Compelling business case

- ✓ Significant resource potential
- ✓ Similar geology to the UKCS
- ✓ Pipeline links to UK
- ✓ Similar operating environment to UKCS
- ✓ Favourable investment climate
- ✓ Stable tax regime

More barrels to produce

Remaining discovered reserves, billion boe



More barrels to find

Yet to find, billion boe



Bigger finds

Average find size, 2006 – 2010, billion boe

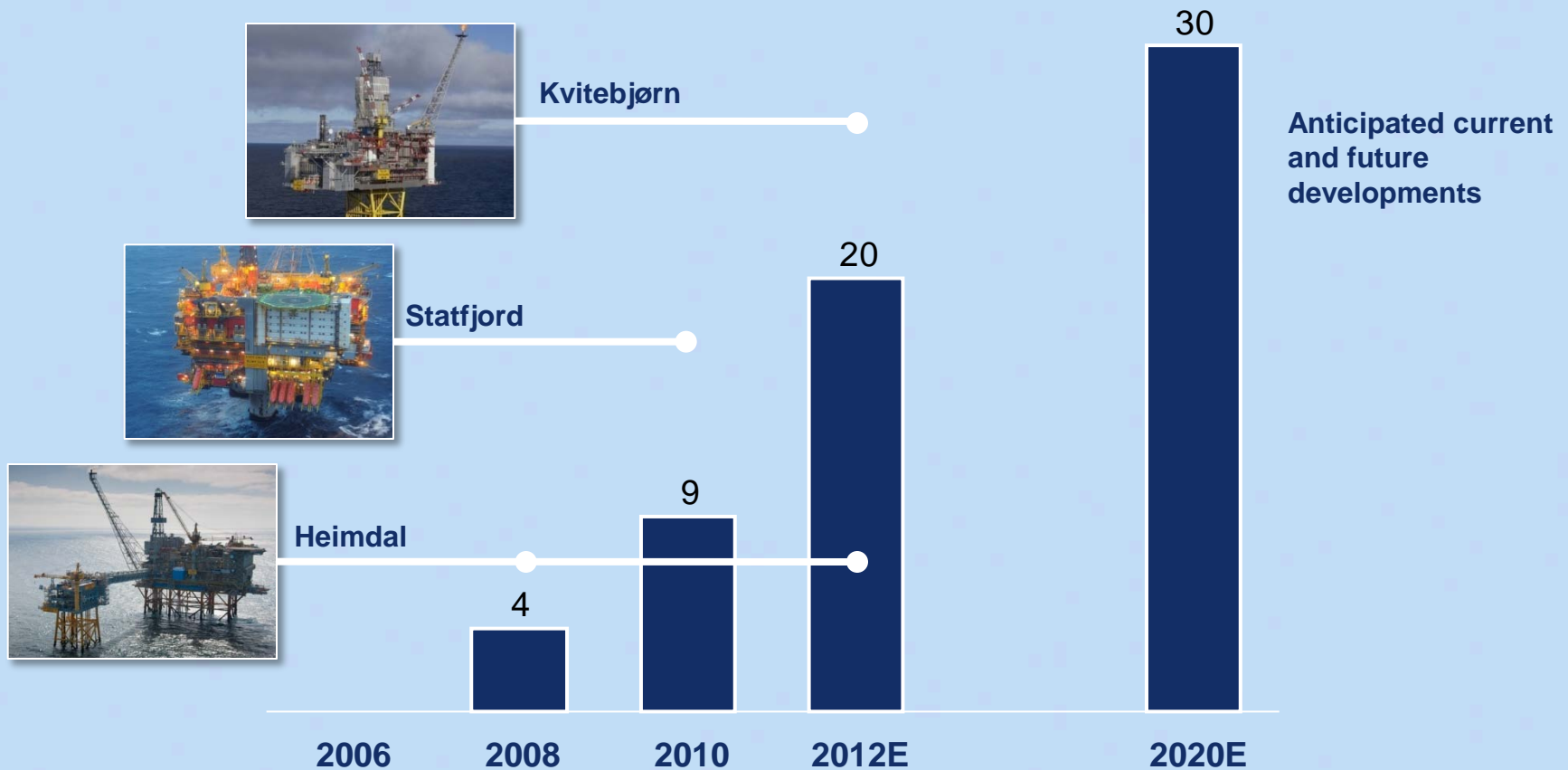


Source: Wood Mackenzie

Norway

We have grown the business from a standing start in 5 years

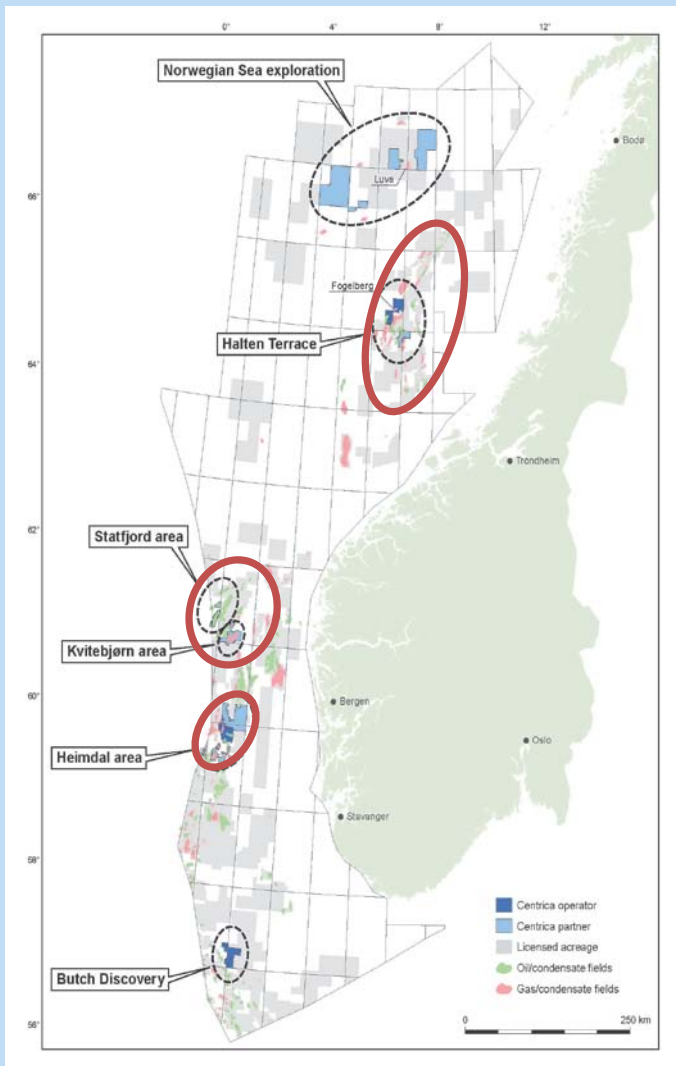
Growth in Centrica's Norwegian production mmboe/a



Statfjord photograph: Harald Petterson, Statoil

Norway

We have acquired and developed interests in 3 large hubs



Halten Terrace (operated and non-operated)

- Fogelberg and Maria discoveries
- Further exploration prospects and licenses

Statfjord/Kvitebjørn (non-operated)

- Giant cross-boundary Statfjord field in late life gas blow-down
- Kvitebjørn high-pressure/high temperature (HP/HT) field with stable production and further infill drilling opportunities
- Valemon future development project

Heimdal (operated and non-operated)

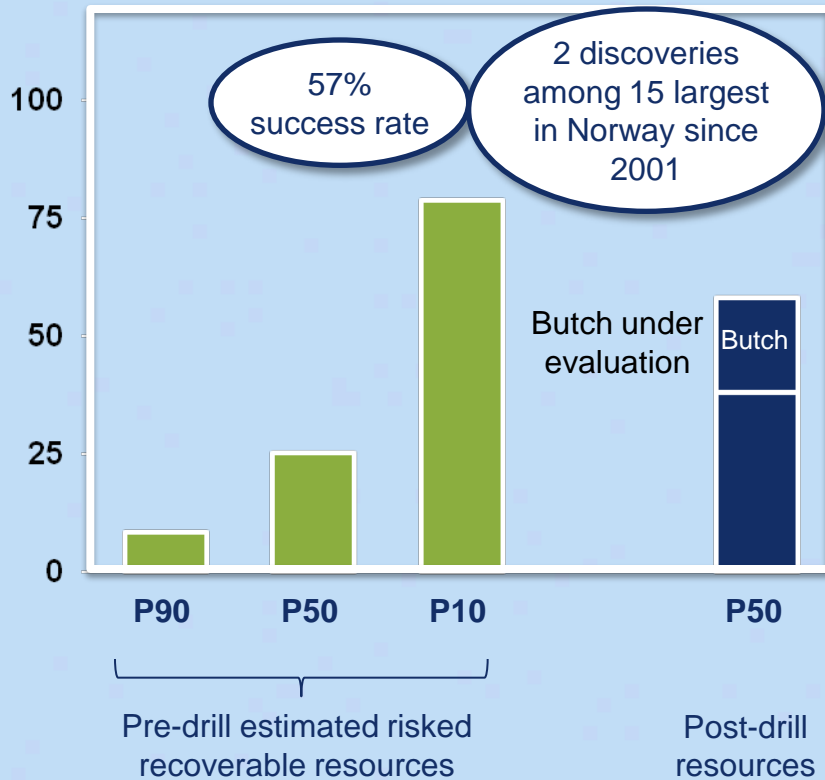
- Four producing fields: Heimdal, Vale and Byggve/Skirne with focus on prolonging field life and delivering tie-backs
- Atla, Peik, Frigg Gamma/Delta, Rind and Fulla development projects and further exploration prospects

Norway

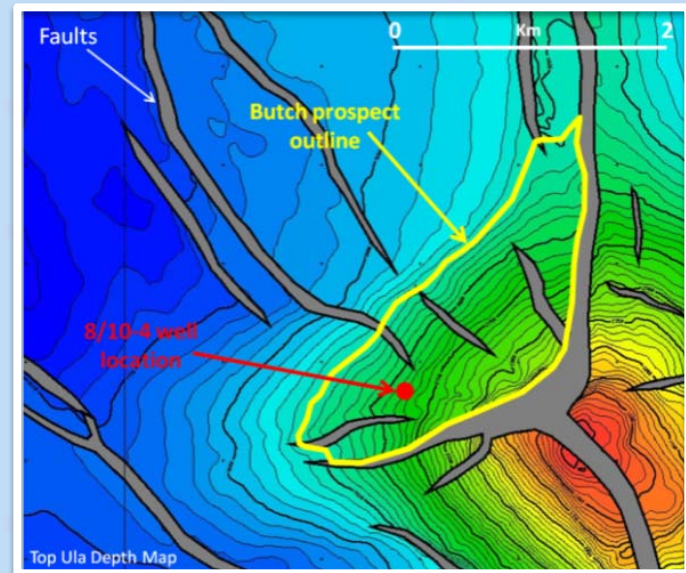
We developed a highly successful exploration programme

Exploration results to date have been at the high-end of expectations

Cumulative resources after 7 wells, mmboe



Butch drilling ongoing



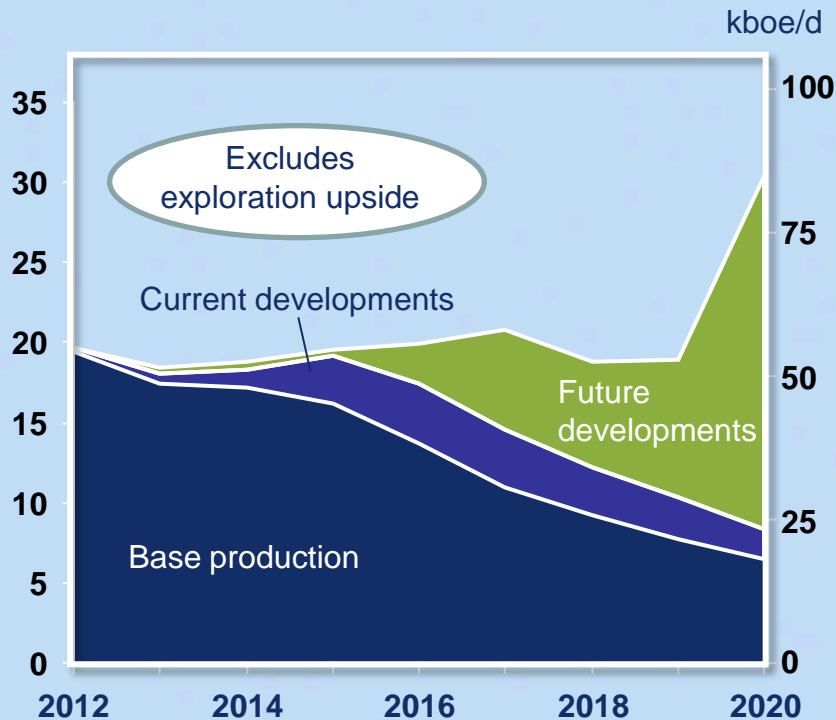
- 220km offshore in Block 8/10
- 11km SE of BP's producing Ula Field
- Spudded 15 August 2011
- Discovery confirmed 14t October 2011

Norway

Developing our discoveries and acquisitions will drive growth

Norwegian production and development outlook

mmboe



Current developments (post-FID)

- **Valemon:** significant HP/HT field being developed via Heimdal infrastructure, extending field life
- **Atla:** small non-operated field

Future developments

- **Maria:** light oil discovery requiring further appraisal, with design concept selection scheduled for 2012
- **Fogelberg:** operated gas discovery
- **Kvitebjørn øst:** further infill drilling to extend production plateau
- **Peik:** operated HP/HT field potentially tied back to Heimdal
- **Frigg Gamma/Delta, Rind and Fulla:** operated discoveries acquired through Statoil package

Trinidad & Tobago

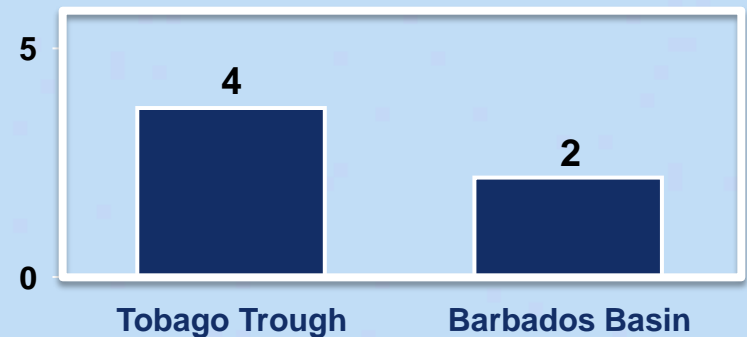
The region is attractive for investment

Compelling business case

- ✓ Prolific hydrocarbon basin
- ✓ Significant exploration opportunities
- ✓ Stable fiscal regime
- ✓ Extensive existing infrastructure
- ✓ Competitive operating and development costs
- ✓ Potential access to Atlantic basin or Asian LNG markets

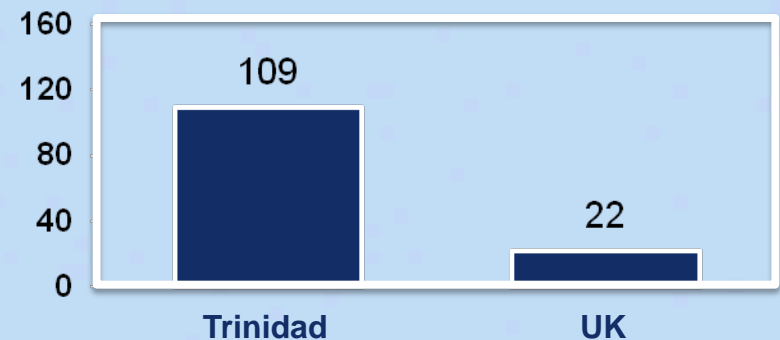
Significant gas resources¹

Undiscovered technically recoverable, billion boe



Large average find size²

Discovered resources 2006 – 2010, mmboe

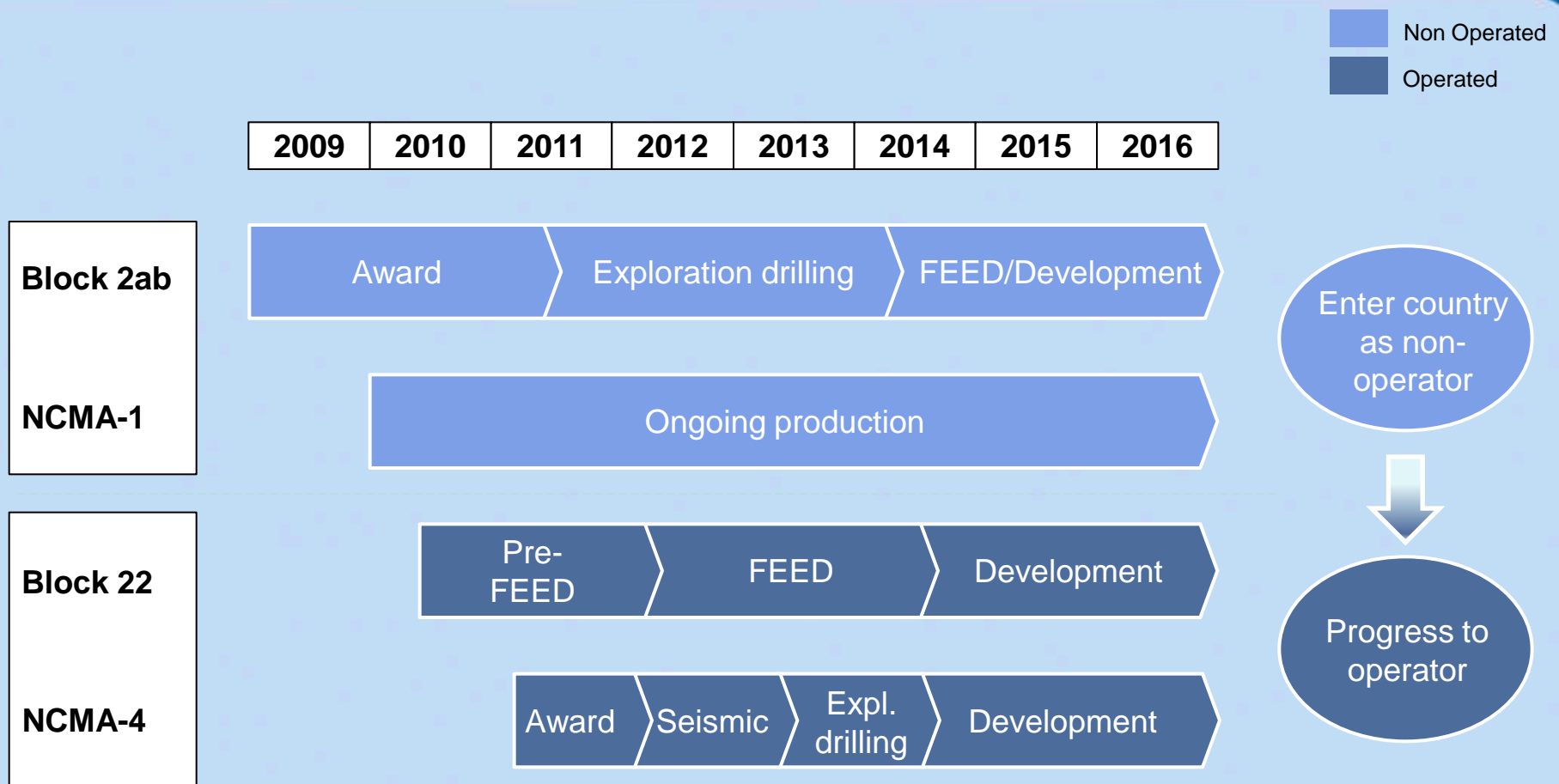


1. USGS

2. Wood Mackenzie

Trinidad & Tobago

We have grown a sizable business within 3 years



Trinidad & Tobago

NCMA-1 is our current producing asset in the islands

- NCMA-1 produces ~400 mmscf/d (24 mmboe/a), with a Centrica net share of 70mmscf/d (4.2 mmboe/a)
- Gas exported through Train 2 and 3 of ALNG under contract
- 17.3% equity share, operated by BG



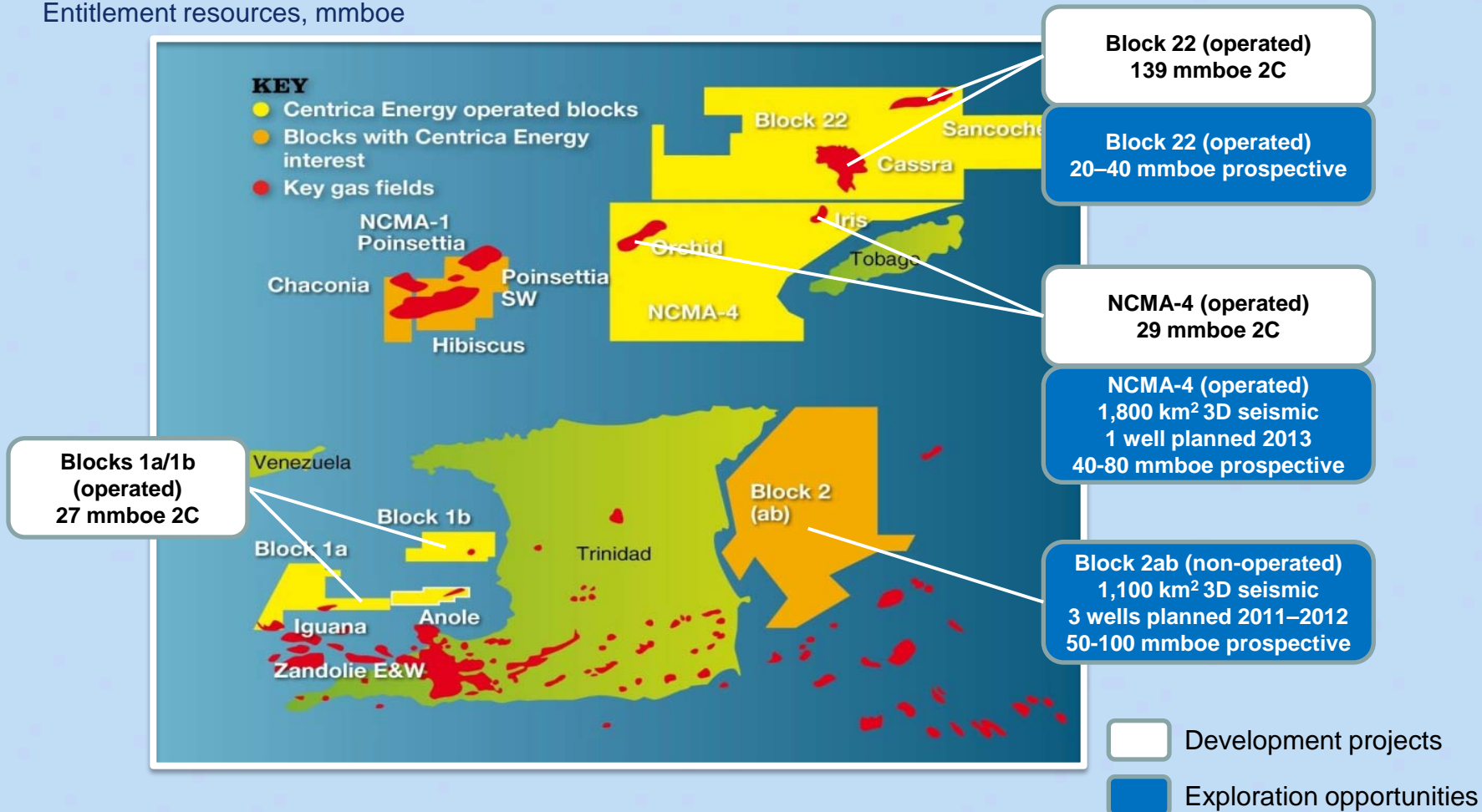
- Sales contract linked to Henry Hub prices with premium for diversion of cargoes (typically ~90% of cargoes diverted)
- Entitlement determined by a production sharing agreement

Trinidad & Tobago

We have a large development and exploration portfolio

Development projects and exploration opportunities

Entitlement resources, mmboe



Trinidad & Tobago

We are evaluating Block 22 development options beyond ALNG

Atlantic LNG



- World-class existing facility
- 15.2 mmtpa capacity in 4 trains
- Ownerships differ across each train

Mid-scale LNG (MLNG) CNG



- Mid scale LNG plant based on standardised design
- Existing, proven technology
- Evaluating up to 1.5mmtpa plant



- Proven technology
- Low capex
- Existing technology land-based
- Marine deployment has been approved by Marine Classification Societies

Floating LNG (FLNG)

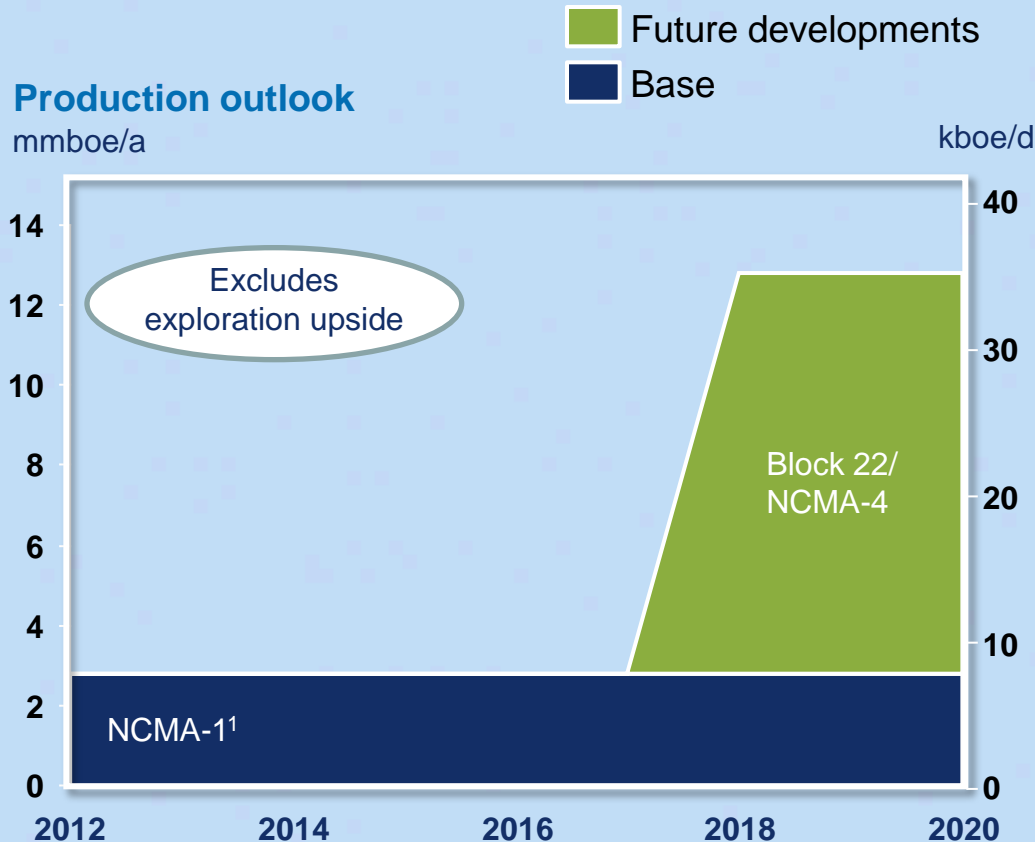


- New technology
- Significant technical challenges
- Large scale required to be economical

- *Potential access to Atlantic Basin and Asian LNG markets*
- *Our capability in executing capital projects will ensure we realise full value*

Trinidad & Tobago

Delivering development projects brings significant growth



- The 6 current discoveries across Centrica's PSCs provide material growth potential
- For planning purposes, we anticipate first gas around 2017 – 2018, subject to completion of FEED on export options

1. Entitlement and tax barrels

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Q&A

