



# CAPITAL MARKETS DAY 2018

29 November - London



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Whilst Tullow believes the expectations reflected herein to be reasonable in light of the information available to them at this time, the actual outcome may be materially different owing to factors beyond the Group's control or within the Group's control where, for example, the Group decides on a change of plan or strategy.

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Capital Markets Day 2018

# CEO INTRODUCTION

Paul McDade, Chief Executive Officer





# TODAY'S PRESENTERS FROM OUR EXECUTIVE TEAM



## CEO INTRODUCTION

**Paul McDade**  
Chief Executive Officer



## GROWTH THROUGH DISCOVERED RESOURCES

**Mark MacFarlane**  
Executive Vice President, East Africa



## DRIVING OUR EXPLORATION & SUB-SURFACE CAPABILITY

**Angus McCoss**  
Exploration Director



## MAXIMISING PRODUCTION

**Gary Thompson**  
Executive Vice President, West Africa



## FINDING NEW OIL

**Ian Cloke**  
Executive Vice President, New Ventures



## FUNDING OUR GROWTH

**Les Wood**  
Chief Financial Officer



# A NEW EXECUTIVE TEAM DELIVERING ON OUR OBJECTIVES

## CONTINUED STRENGTHENING OF BALANCE SHEET

### FREE CASH FLOW

#### Maximising free cash flow through:

- Increased production
- Efficient capital allocation
- Embedded cost discipline



### BALANCE SHEET

#### Strengthened balance sheet through:

- Significant debt reduction
- Long-term gearing of 1-2x
- Secured RBL & Bond refinancing



### PORTFOLIO MANAGEMENT

#### Progress monetisation options:

- Uganda farm down
- Exit non-core assets
- Selective exploration farmdowns



## MAXIMISING VALUE FROM CURRENT PORTFOLIO

### WEST AFRICA

#### Maximise production:

- ITLOS resolution; GJFFD approval
- Re-start of drilling at TEN & Jubilee
- Complete turret remediation
- Arrest decline on non-op portfolio
- Reduce Group opex



### EAST AFRICA

#### Develop discoveries:

- Farm-down Uganda equity
- Driving Uganda to FID
- Shift from E&A to phased development in Kenya
- Target Kenya FID end 2019



### NEW VENTURES

#### Find new oil:

- Mature portfolio and prospects
- Clear 3-year programme
- Commence Guyana-Suriname campaign
- Seek new high-value opportunities



# OUR AMBITION TO GENERATE SUSTAINABLE VALUE



Balancing the interests of our investors, host countries and people

# DEFINING TULLOW'S POSITION IN THE E&P INDUSTRY



## The four pillars of our growth ambitions



Africa



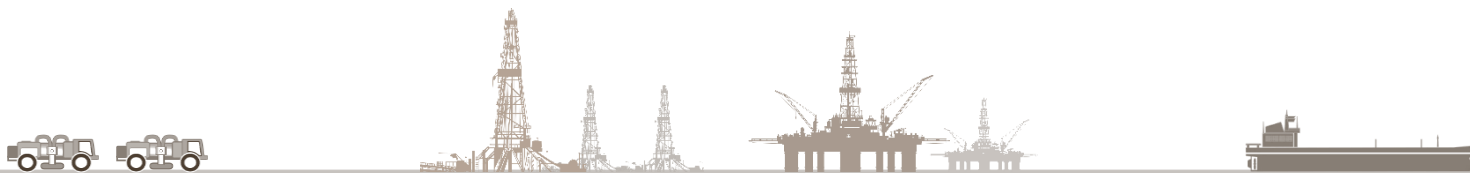
Oil



Sustainable



Progressive



A balanced E&P business, focused on oil & specialising in emerging markets



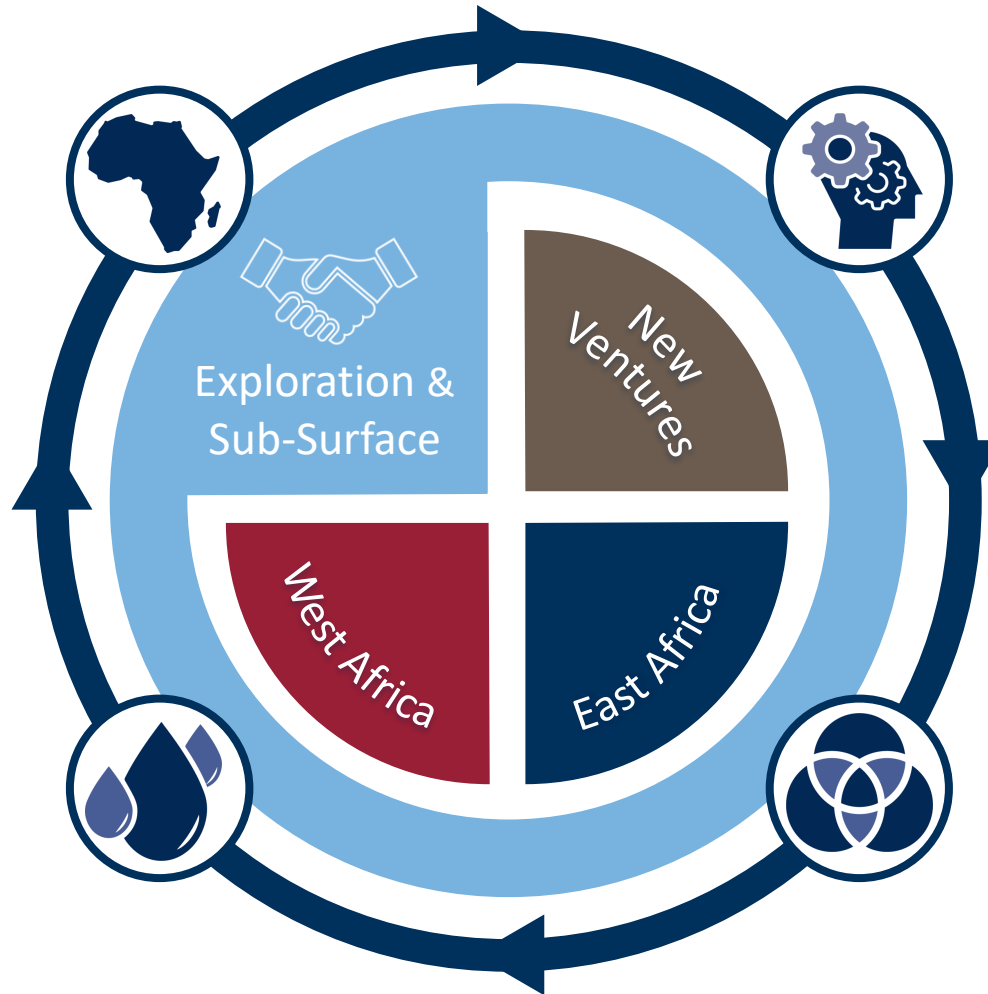
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# DRIVING OUR EXPLORATION & SUB-SURFACE CAPABILITY

Angus McCoss, Exploration Director



# A DISTINCTIVE & COLLABORATIVE WAY OF WORKING



# BALANCED E&P BUSINESS

## Balance: Portfolio-Programme-People

- E - Exploration:** seasoned basin openers
- A - Appraisal:** just in time & optimised
- D - Development:** agile & efficient
- P - Production:** low cost & long plateau

### **E - #1: Finds new oil**

- A** - Early appraisal of discoveries
- D** - Pre-drill development concepts
- P** - Discovery well testing

New Ventures

West Africa

- E** – Exploration to extend field life
- A** - Sequence for oil development
- D** - Develops oil to sustain production
- P - #1 Produces oil for revenues**





East Africa

- E** – Exploration for incremental phases
- A** - Delineation & injection trials
- D - #1 Develop major oil projects**
- P** – New major production hub



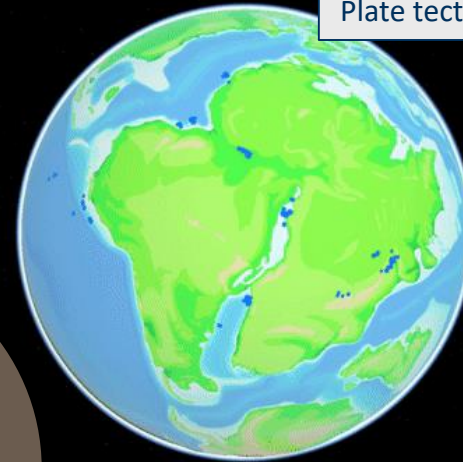
# UTILISING SMART TECHNOLOGY

## Innovative early adoption

-  New tools for old challenges
-  Leverage proven technologies
-  Effective cross-application
-  Low cost experimentation

New Ventures

Plate tectonic models

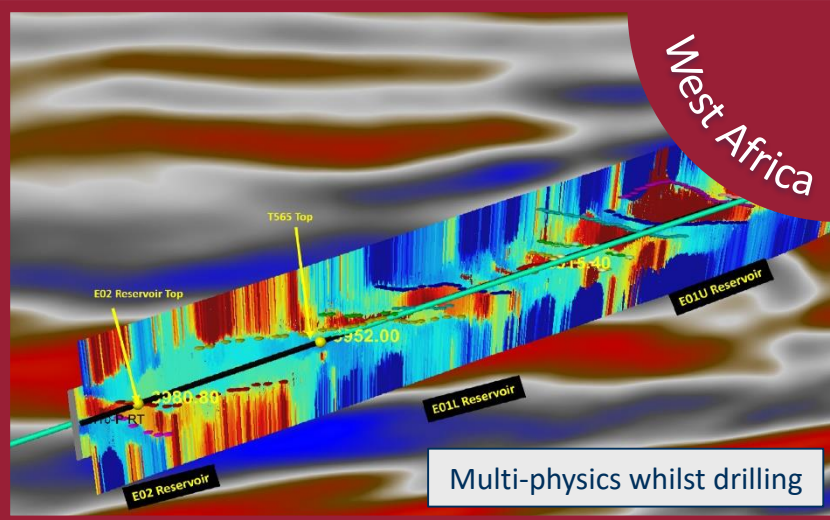


East Africa



GIS for efficient & safe logistics

West Africa



Multi-physics whilst drilling

## Centre of excellence in Dublin



World class geophysical group



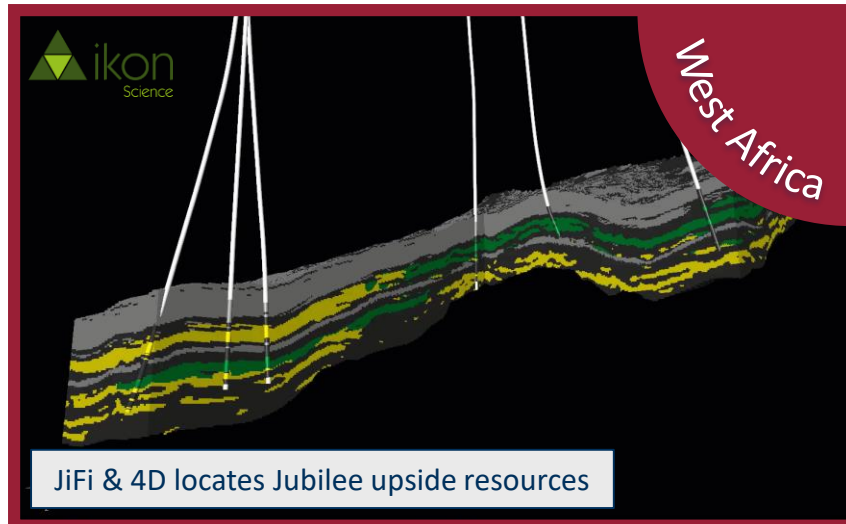
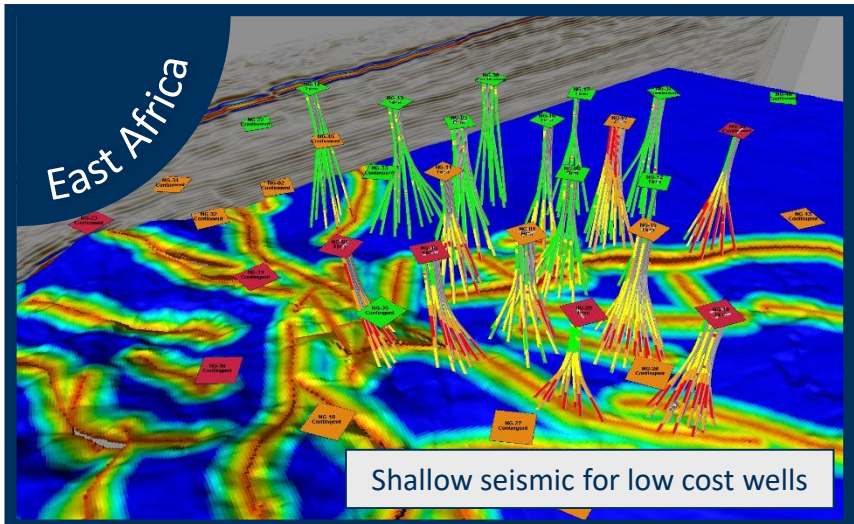
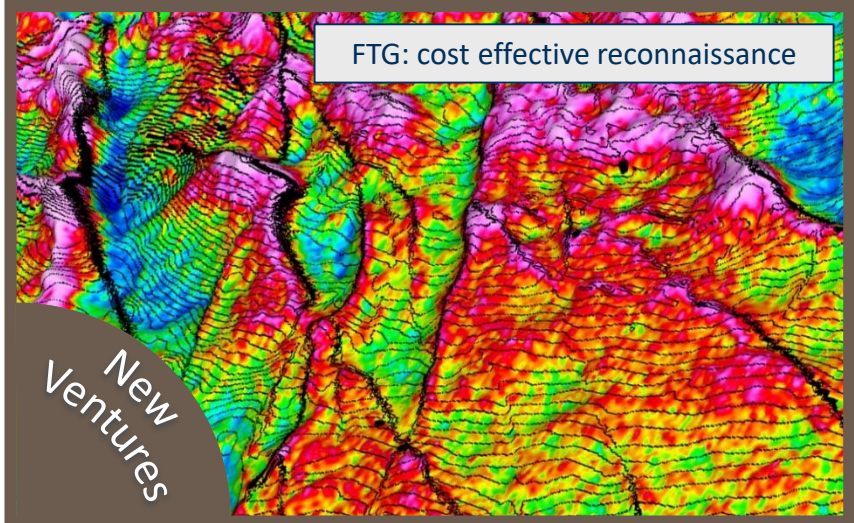
Knowledge across asset life cycle



Bespoke acquisition & processing



Maximizing '*bang for buck*'





# DELIVERING VALUE THROUGH DIGITALISATION

## Bold digitalisation goals

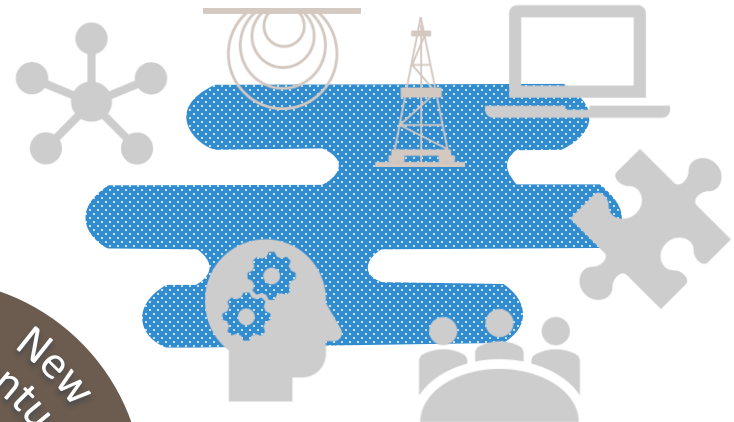


Culture of innovation

Smart people + smart data

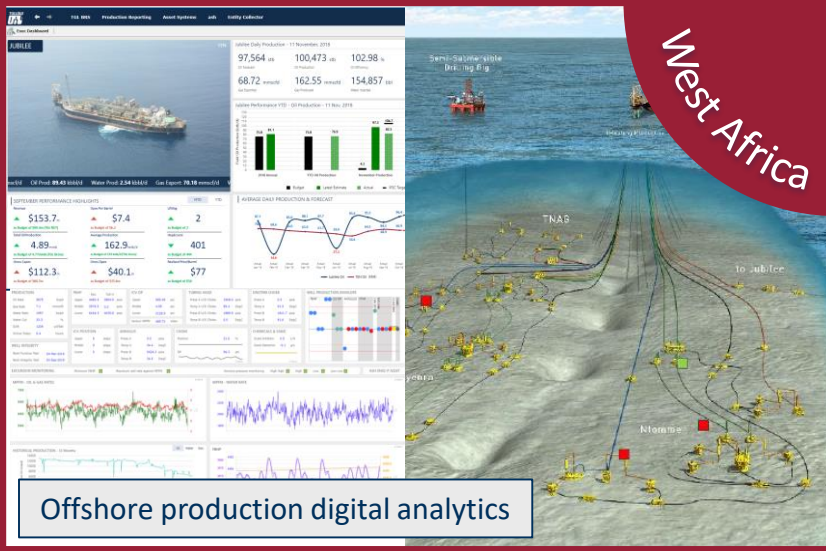
e-Enabled collaboration

Digitally enhanced performance



New Ventures

New plays from Tullow's data lake





## VALUE TO OUR BUSINESS

### Distinctive & collaborative way of working

- Balanced E&P with full-cycle opportunity set
- Collaboration with agility, leveraging skills with deep learning
- Value creation applying leading-edge technology

#### FINDING NEW OIL

**>2 Bbo**

unrisked gross resource  
potential to be tested over  
next 3 years

#### GROWTH FROM DISCOVERED RESOURCES

**~2.3 Bbo**

discovered gross 2C  
resources maturing towards  
new production

#### MAXIMISING PRODUCTION

**>1.5 Bbo**

gross discovered  
resource base for  
production

Our distinct approach across exploration & sub-surface creates value upside

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# FINDING NEW OIL

Ian Cloke, EVP New Ventures



# A BUSINESS APPROACH TO EXPLORATION



## Focused

Refined portfolio of high-value assets in Africa & South America



## Smart deals

\$300m from deals completed over the last three years



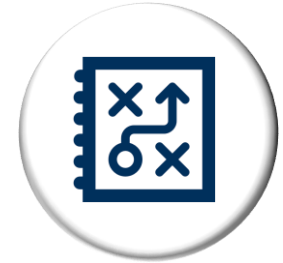
## Discipline

Rigorous, consistent & disciplined deployment of capital



## Efficiency

Savings through agile working, turnkey solutions & new technology

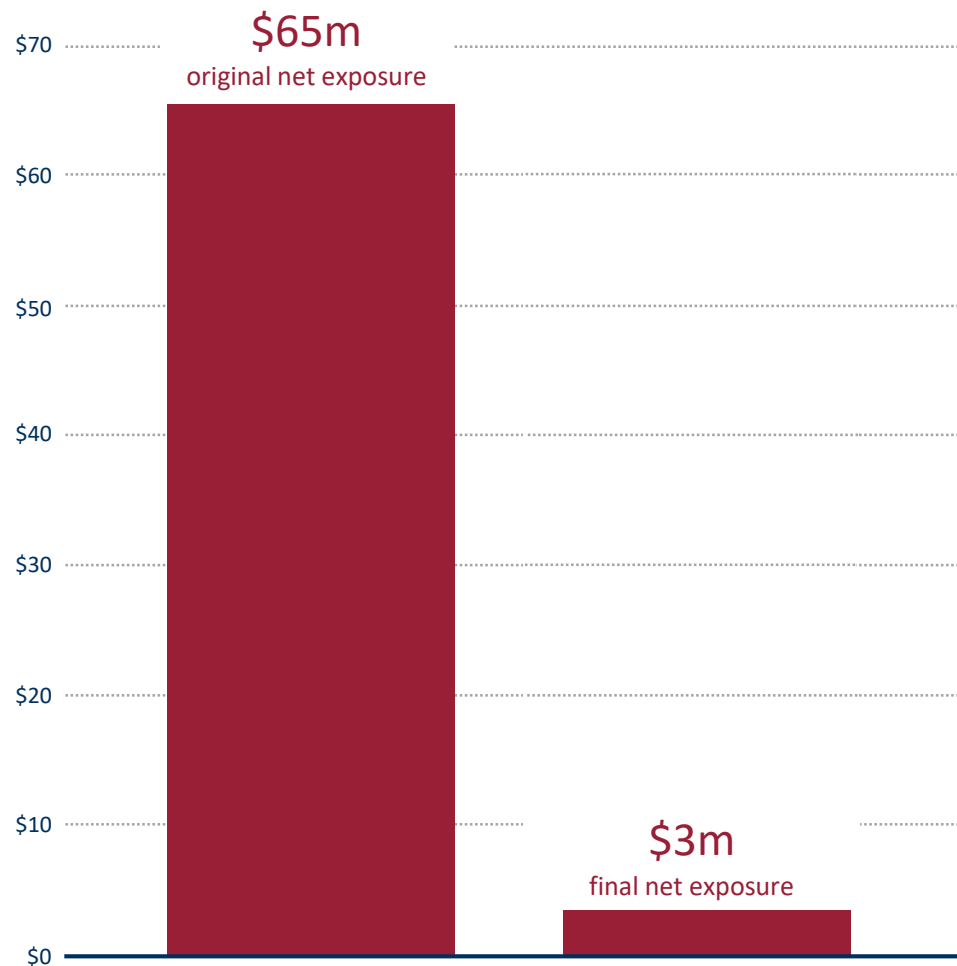


## Superior execution

Simple wells delivered safely, responsibly, on time and on budget

Maximising the value of every \$ in pursuit of exploration success in 2019 and beyond

## STRATEGY IN ACTION – CORMORANT WELL



Focused only on shallow target



Simplified well design



Farmed down to 35% with past costs & carry



Lean, low-cost, responsible operation

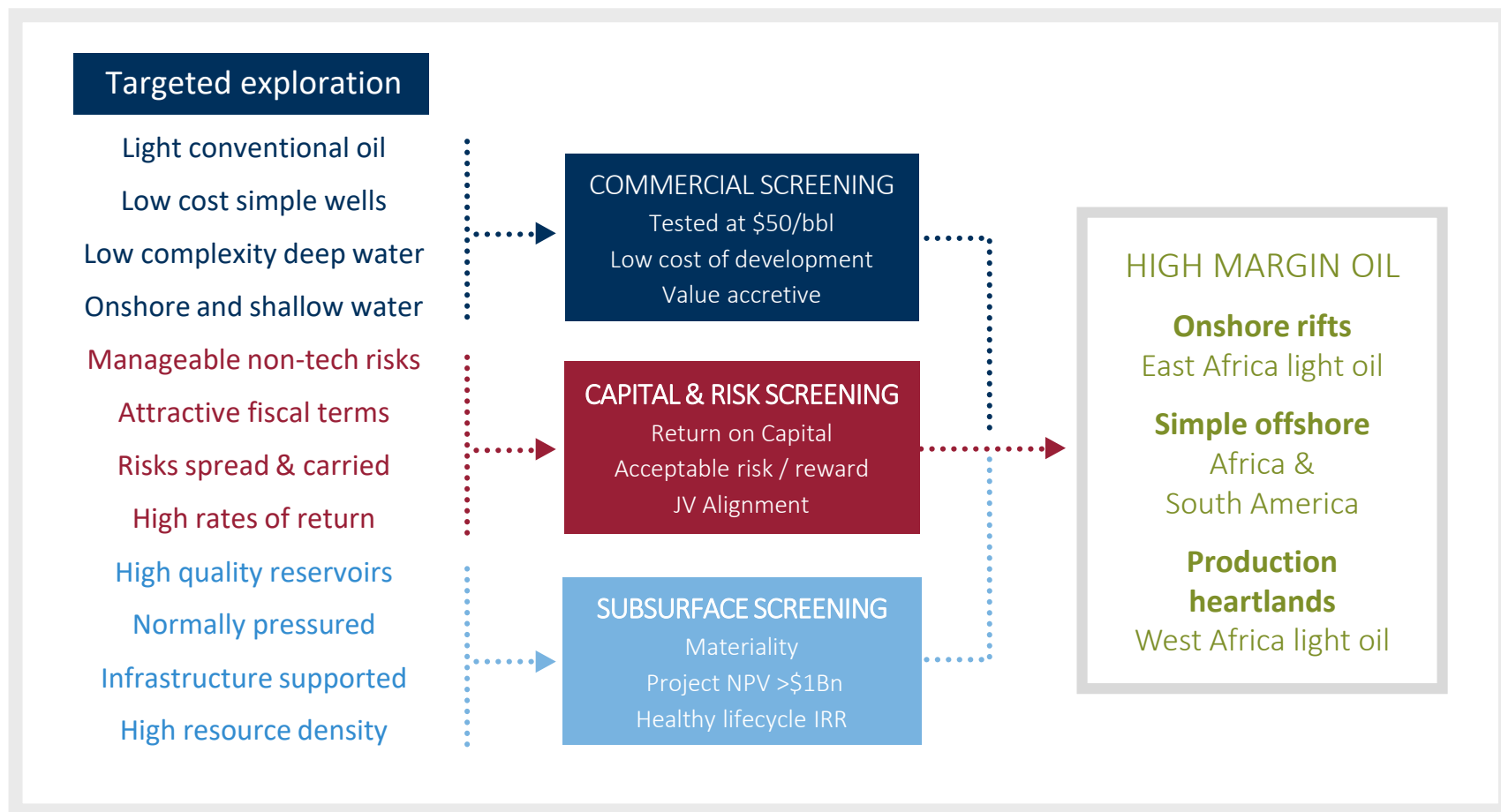


Superior delivery reducing non-productive time

Ability to test frontier basins with low-cost exposure wildcat wells



# EXPLORATION CRITERIA FOR VALUE CREATION



Creativity balanced by fiscal discipline, technical/commercial rigour & business acumen

# RESETTING OUR EXPLORATION PORTFOLIO

August 2013

17 countries

87 licences

346,064 sq km

Exit from non-core acreage

# BUILDING A LEADING EXPLORATION PORTFOLIO

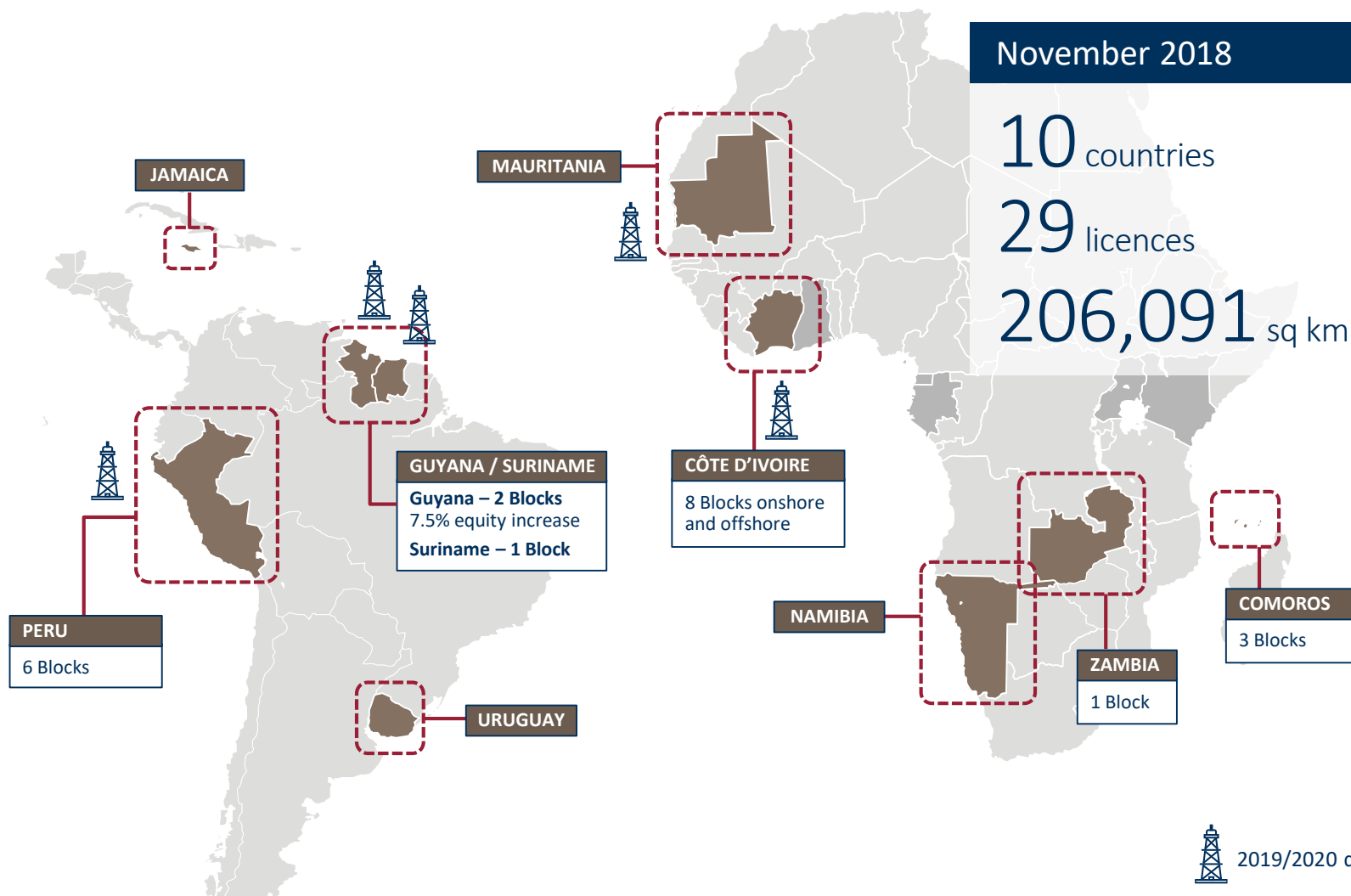


November 2018

10 countries

29 licences

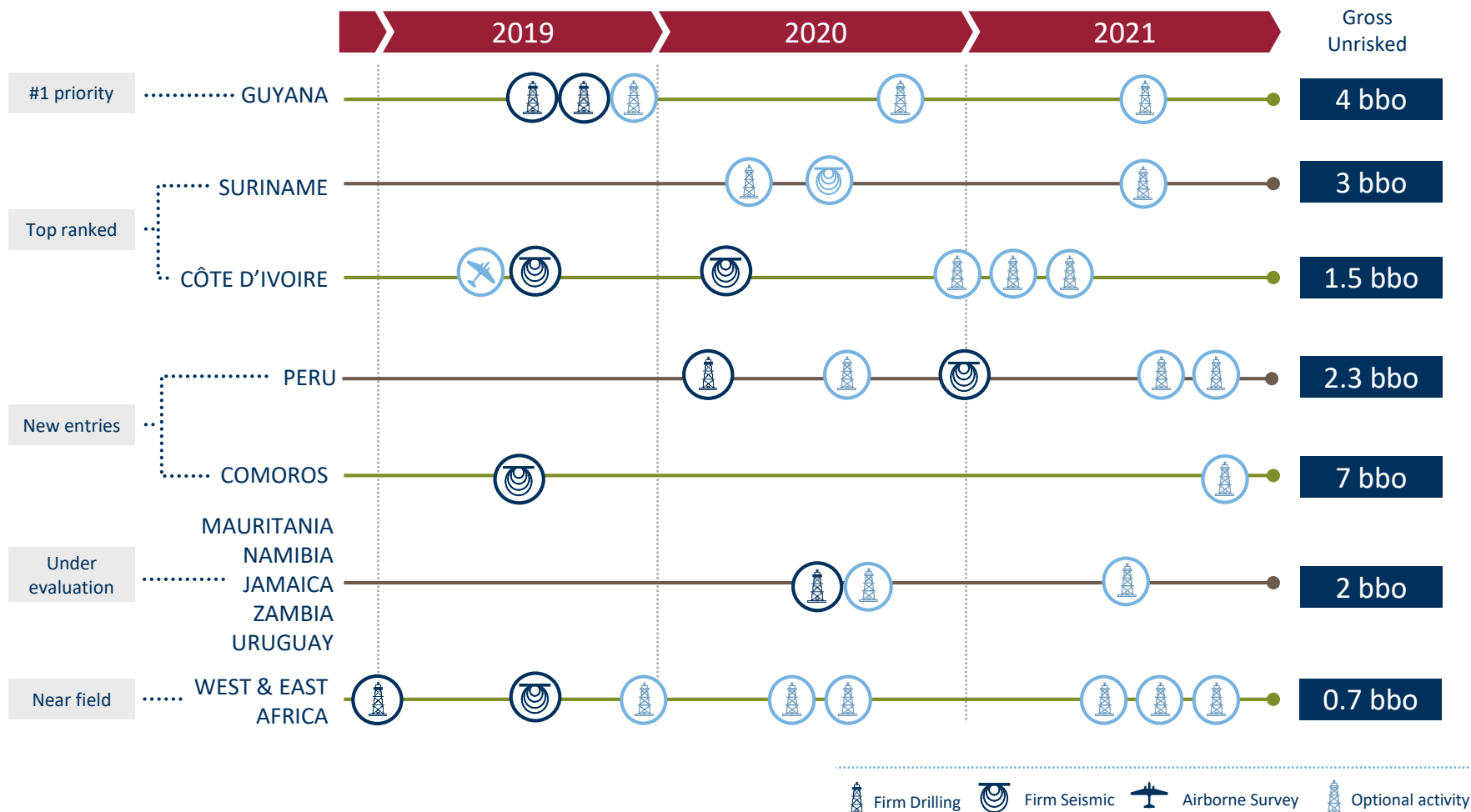
206,091 sq km



Focused portfolio of high value opportunities

Peru & Comoros licences remain subject to final Government approval

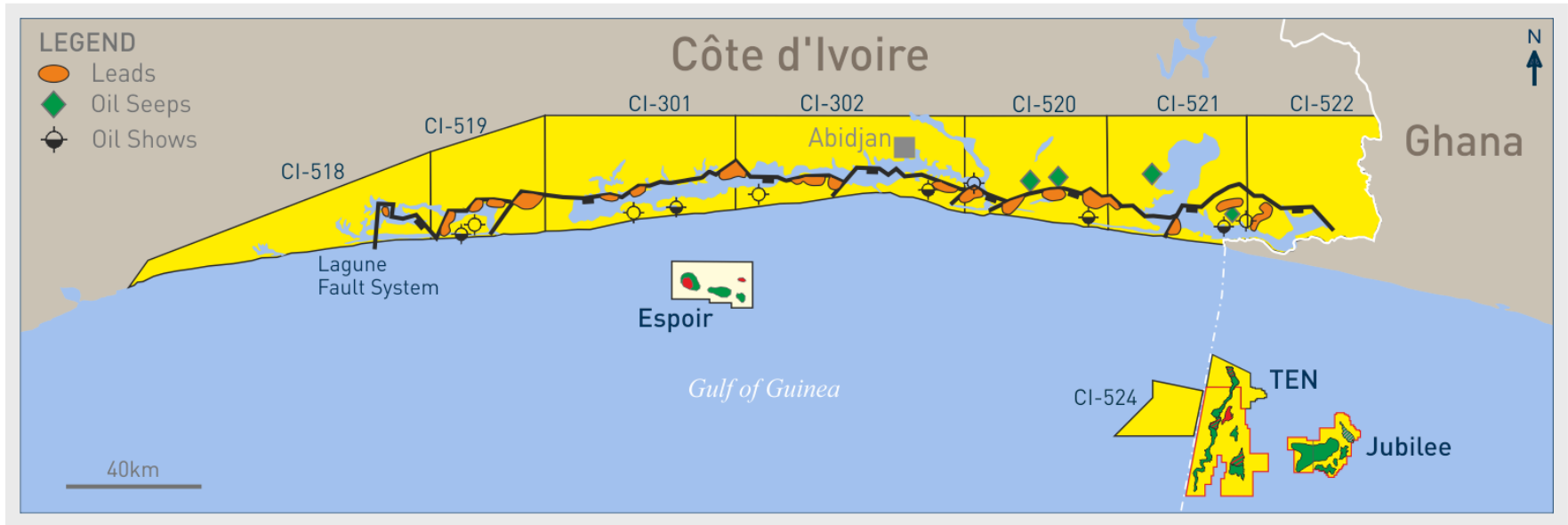
# MULTIPLE HIGH-IMPACT CAMPAIGNS OVER NEXT THREE YEARS




Drilling 3-5 high impact wildcats per year, within \$150m exploration budget



# SPOTLIGHT ON CÔTE D'IVOIRE



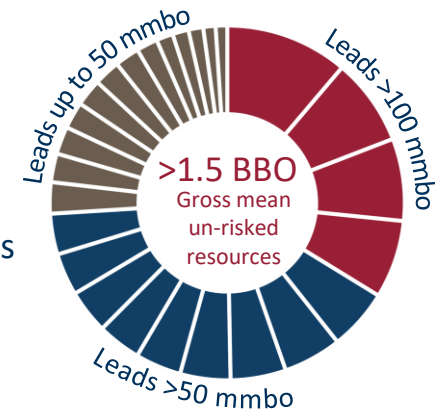
  
Low-cost  
exploration in  
core West Africa  
oil province

  
Using both  
proven &  
innovative  
technology

  
Carried work  
programme;  
60% operated  
equity

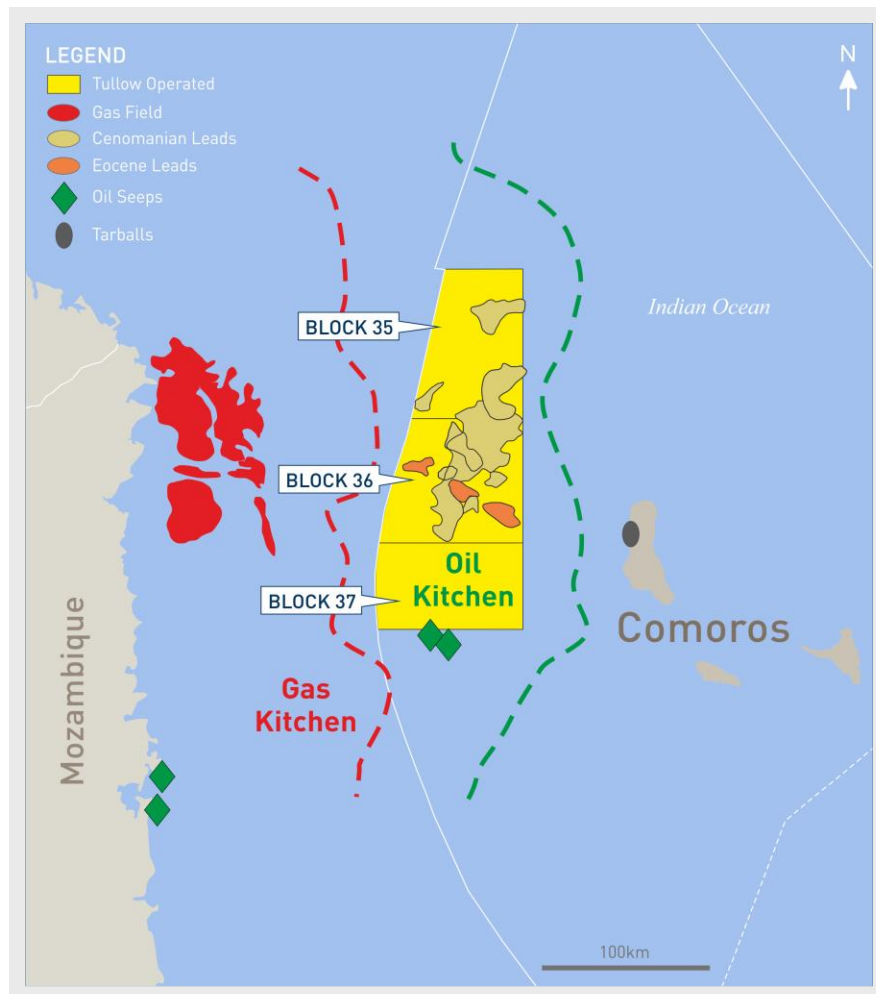
  
High-value  
barrels & low  
breakeven

  
Light footprint  
execution across  
8,000 sq km  
acreage



Identification of an underexplored play & rapid capture of an industry-leading position

# SPOTLIGHT ON COMOROS



~7 BBO  
17 Leads  
16,063 sq km  
35% equity



Large, operated, offshore oil play in East Africa



Simple drilling and attractive fiscal terms



Managed cost exposure in frontier acreage



Flexible options to leverage seismic market

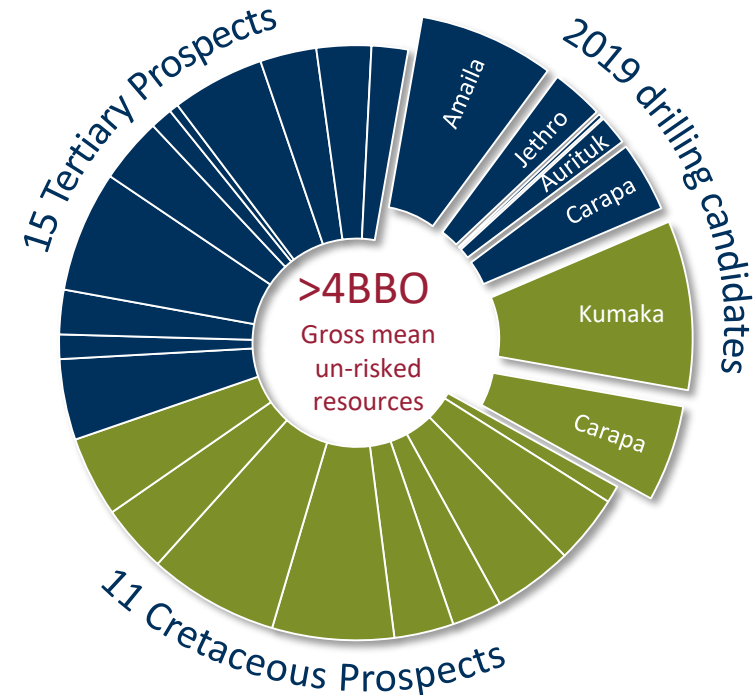
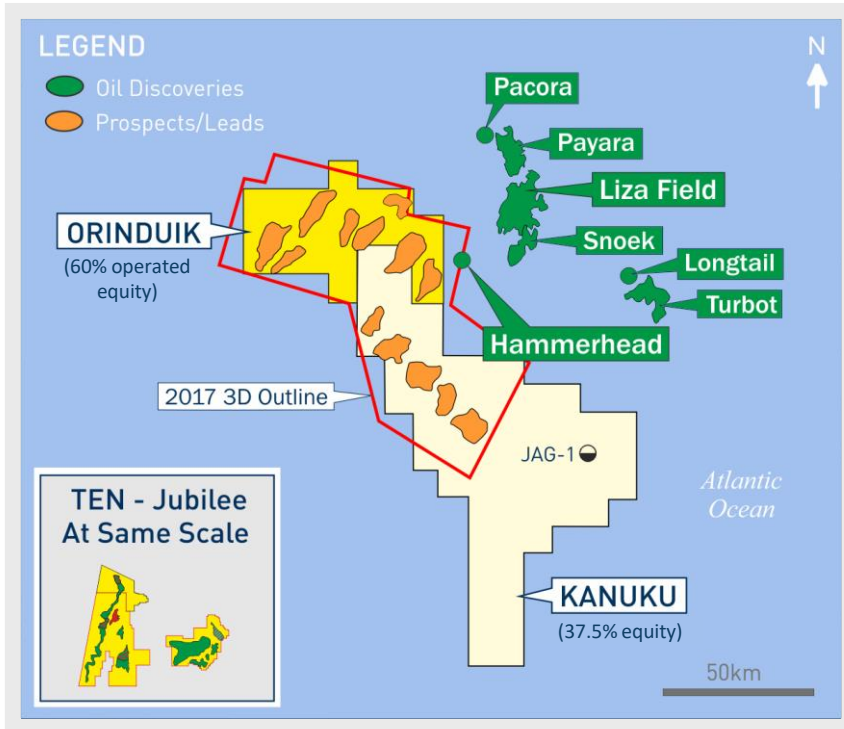


Rapid deal-making with like-minded partner

Building a sustainable frontier exploration programme for 2021 and beyond

Comoros licences remain subject to final Government approval

# SPOTLIGHT ON GUYANA



Shelf-edge acreage in industry hot-spot



Leveraging a decade of knowledge



Increased equity in Kanuku, up-dip of giant oil discoveries



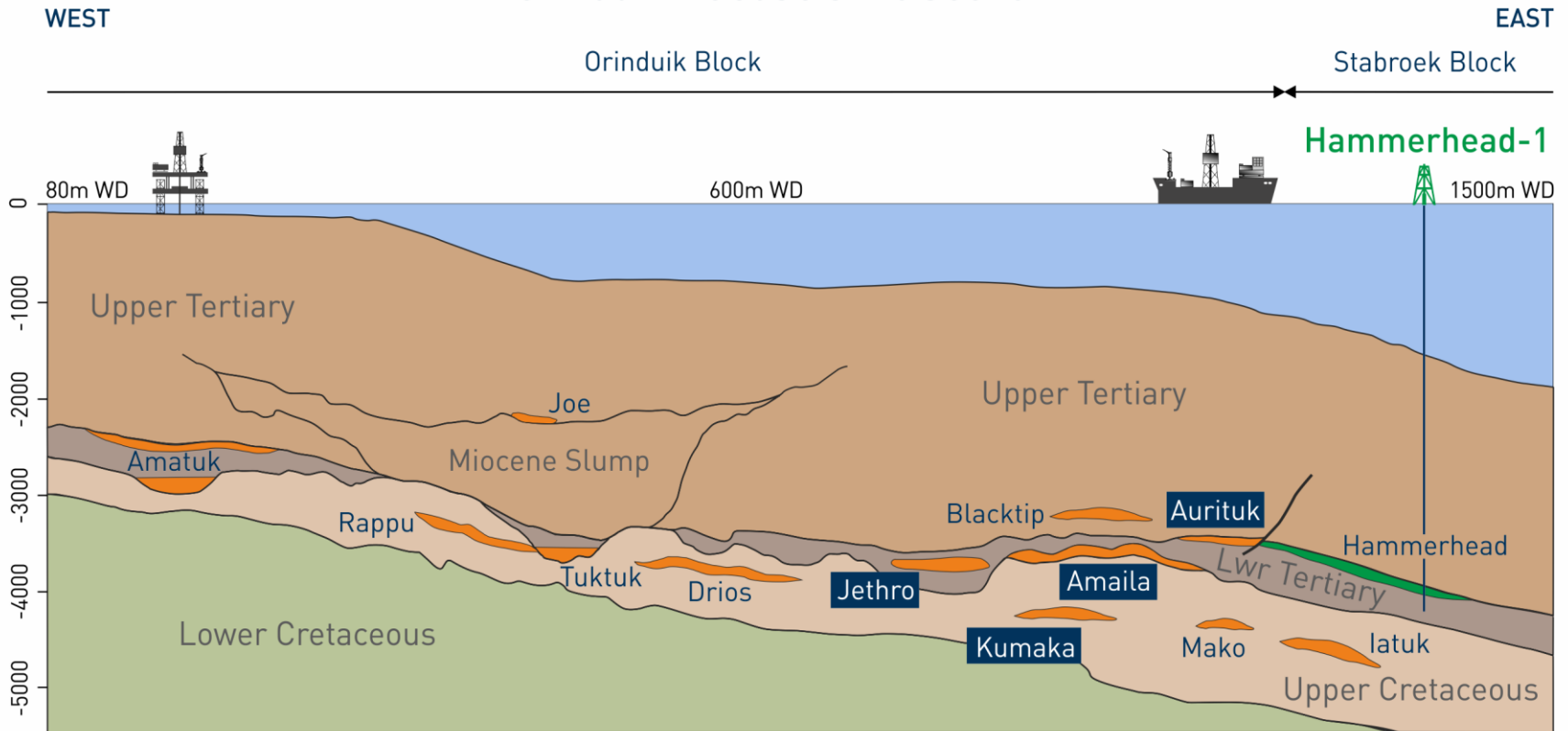
Acquired 3D seismic at bottom of industry cycle



Sharing Ghana operational expertise to maximise efficiencies

>1 bbo gross unrisked resources to be tested by three wells in 2019

## Orinduik - GeoSeismic Section



2019 drill candidates

Transformational opportunity with multiple follow-up potential



## OUTLOOK FOR OUR NEW VENTURES BUSINESS

### Active drilling plans

- Testing five high impact areas in the next three years

### Reset portfolio

- Acreage in current and emerging hotspots

### Gained entry at low cost

- Quality validated by the calibre of farm-in partners

### Rigorous & disciplined

- Repeatable exploration process and capability

### Fiscal discipline

- Deliver programme within \$150m exploration budget

### Focus on delivery

- Positioned to deliver exploration success

Reset and ready to commence multi-year, high-impact exploration campaigns

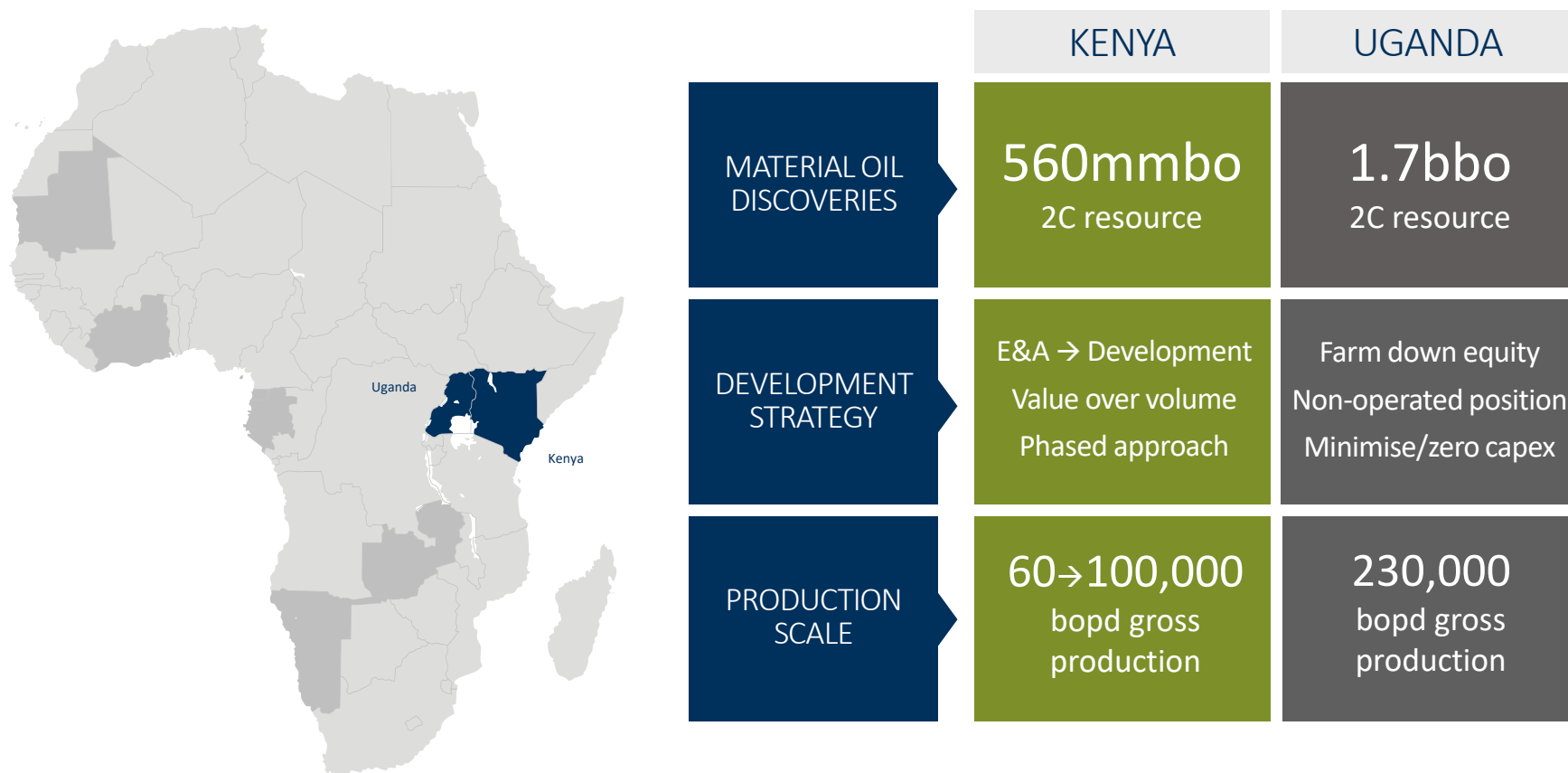
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# GROWTH FROM DISCOVERED RESOURCES

Mark MacFarlane, EVP East Africa



# UGANDA & KENYA - DEVELOPING TRANSFORMATIONAL DISCOVERIES



Targeting ~300,000 bopd gross production from East Africa in the early 2020s

# UGANDA IS A BEST-IN-CLASS PROJECT



## Key project metrics

~\$3.5 billion  
value of farm-downs by Tullow in  
Uganda since 2012



~100 mmbbl  
net 2P reserves  
to be booked  
at FID

~\$4.50/bbl  
unit  
upstream  
Capex



First Oil  
2022...  
...at no cost to  
Tullow



2.5bn bbls  
material 3C  
technical upside

Final Investment  
Decision in  
1H 2019

23,000 bopd  
net Tullow production

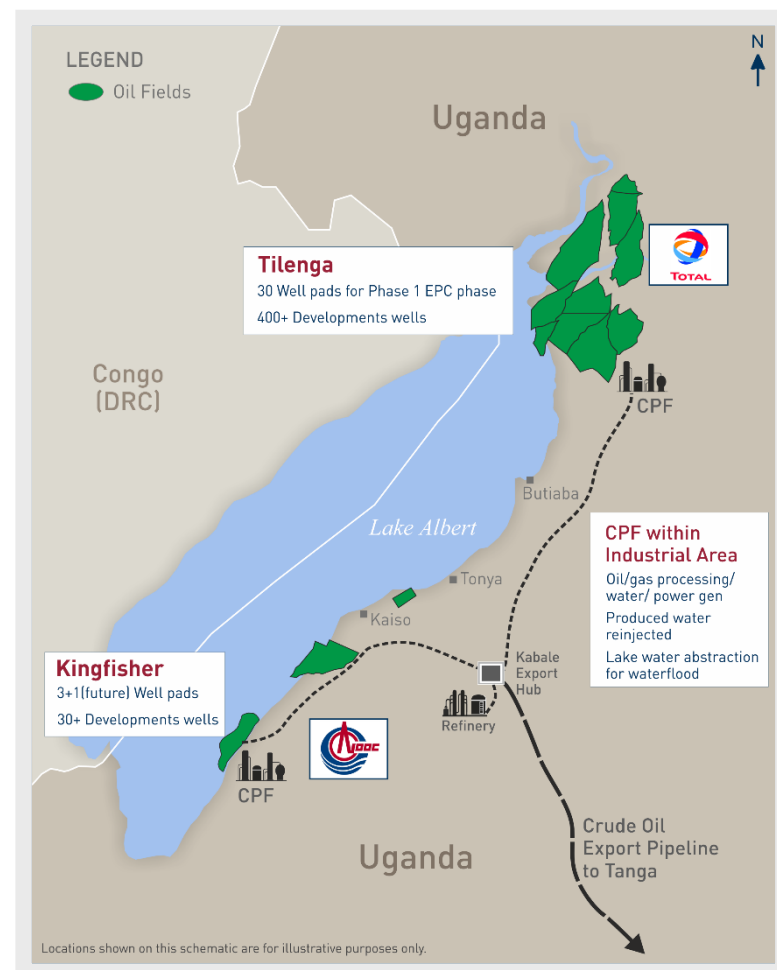
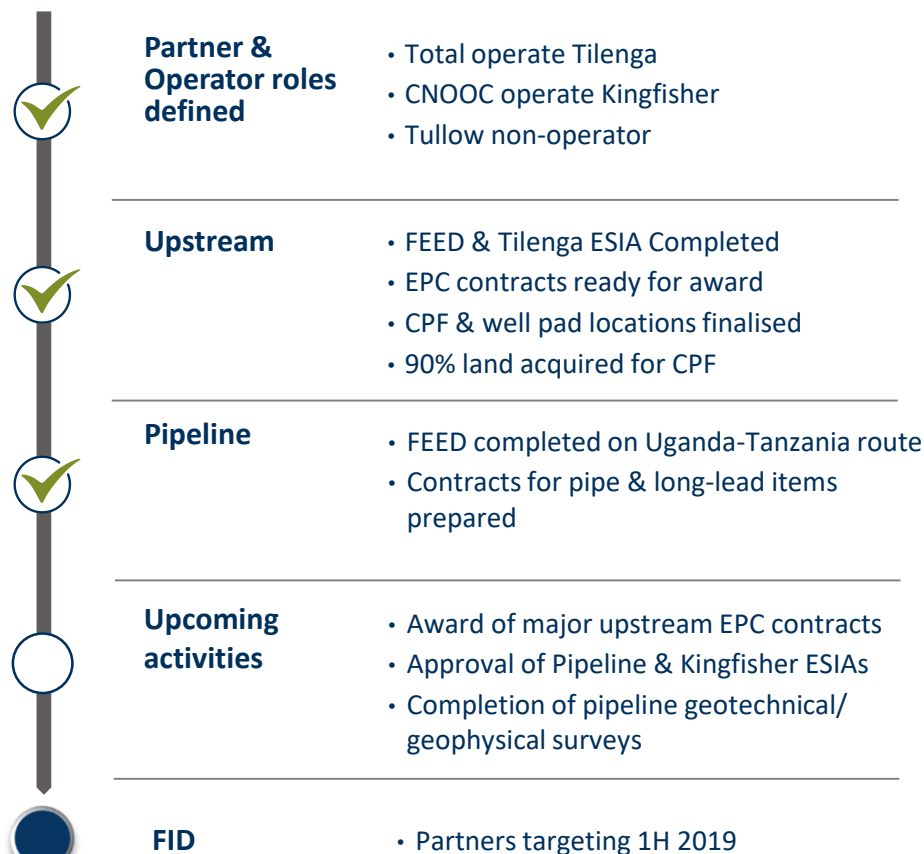


Robust development; Tullow share funded through farm down



# UGANDA - PROJECT UPDATE

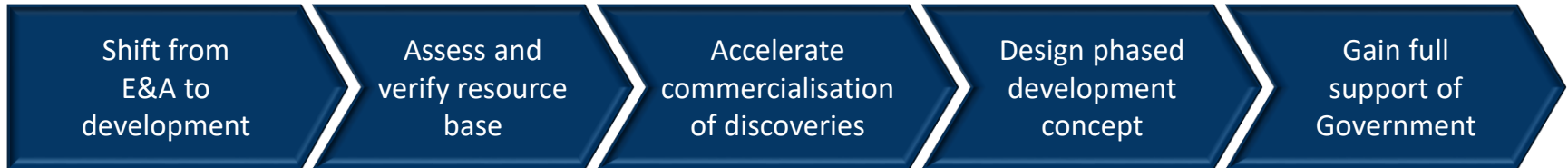
## Key milestones to FID



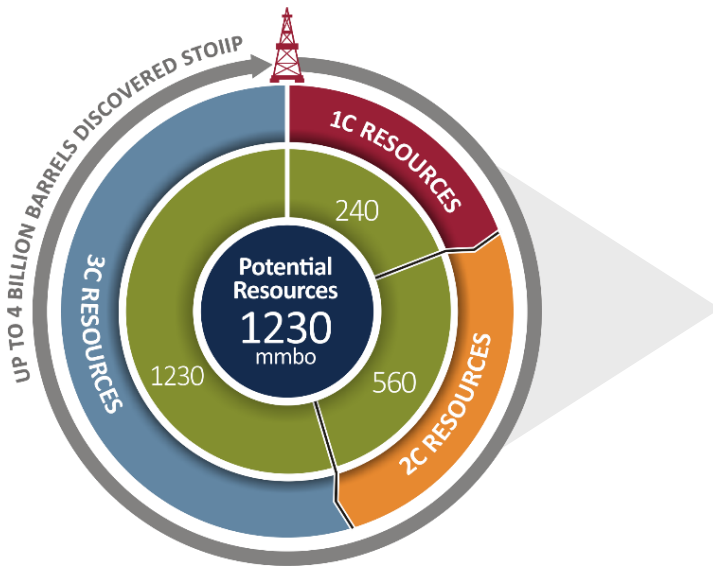
Multiple technical milestones achieved in readiness for FID 1H 2019

# KENYA - A PROGRESSIVE APPROACH TO ONSHORE FIELD DEVELOPMENT

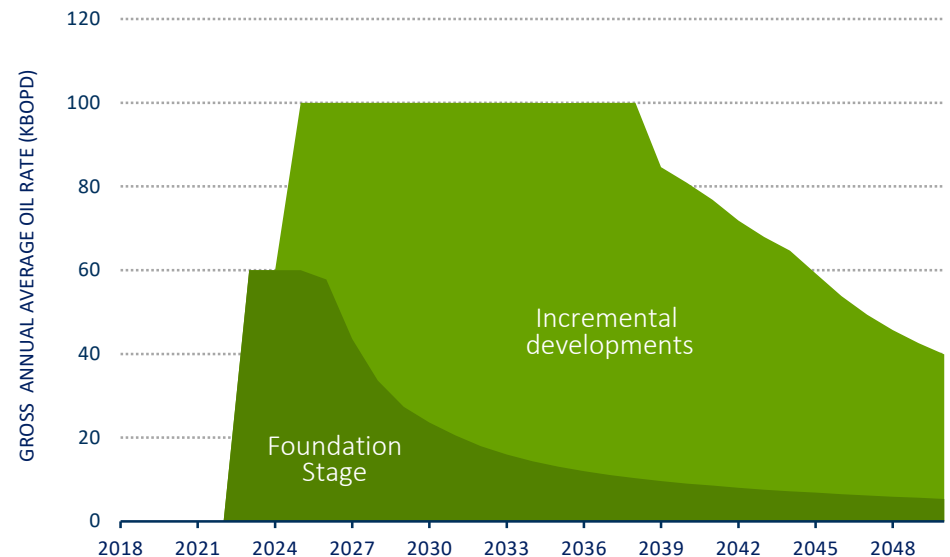
## A new strategy to commercialise Kenya discoveries



### South Lokichar resources

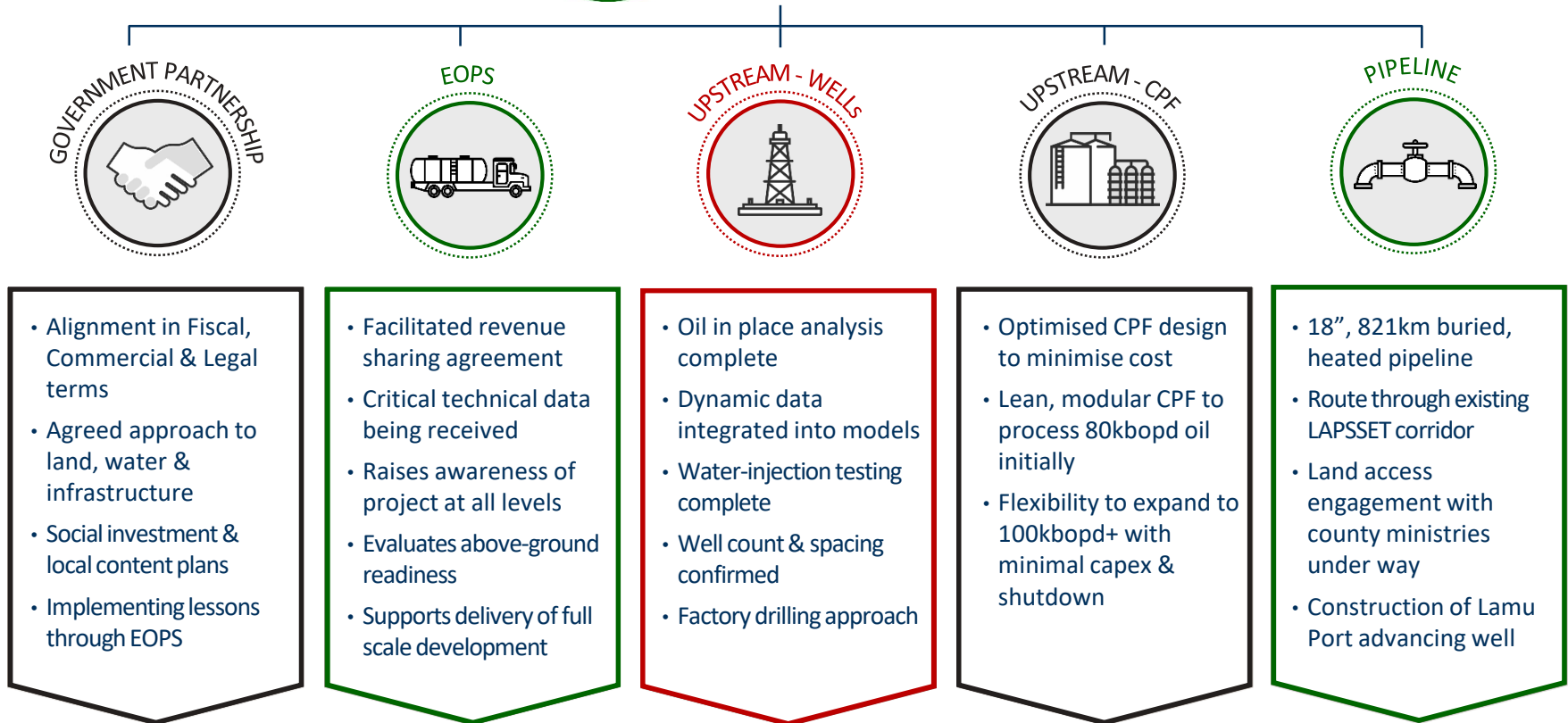


### Long-term production profile



Single focus of accelerating the development of Kenya's resources

# PROJECT OIL KENYA – KEY BUILDING BLOCKS TO PROJECT DELIVERY



Significant amount of work completed by Partners and Government in 2018

## KENYA – STEPPING STONES TO FID

To achieve FID in 2019, the following tasks must be completed:

Complete pipeline & upstream Front End Engineering & Design



Submit Environmental and Social Impact Assessment



Finalise agreements over land title for upstream and pipeline



Heads of Terms for critical commercial frameworks with Govt

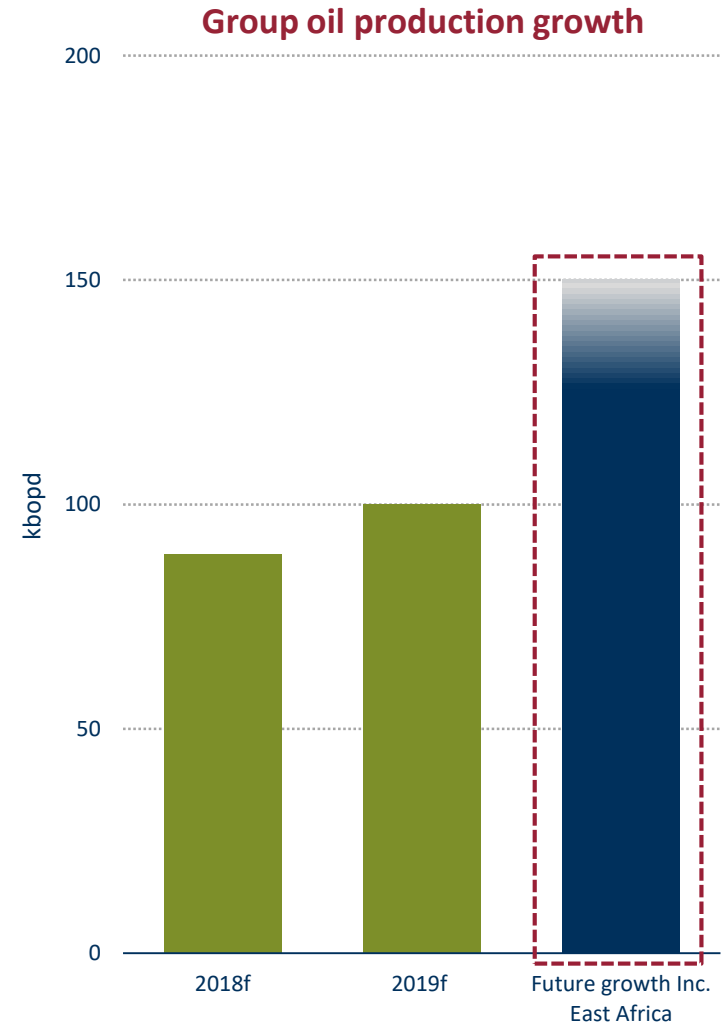
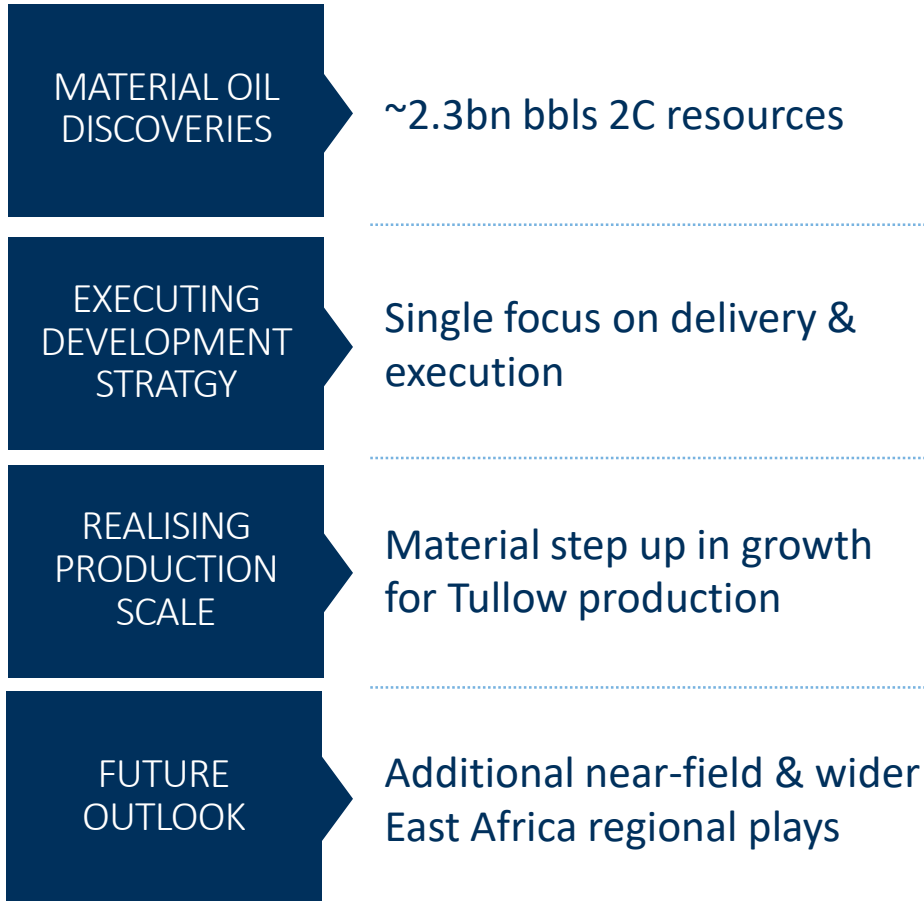
Finalise contract on agreed project water source

Award of Engineering, Procurement and Construction contracts

Implement project finance structure for the pipeline

Ambitious, clear path to achieving FID in 2019, first oil in 2022

# CREATING TULLOW'S NEXT PRODUCTION HUB



East Africa remains core component of Tullow's growth strategy



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# MAXIMISING PRODUCTION

Gary Thompson, EVP West Africa



# CASH GENERATION FROM EXISTING ASSETS



## WEST AFRICA BUSINESS

### PRODUCTION GROWTH

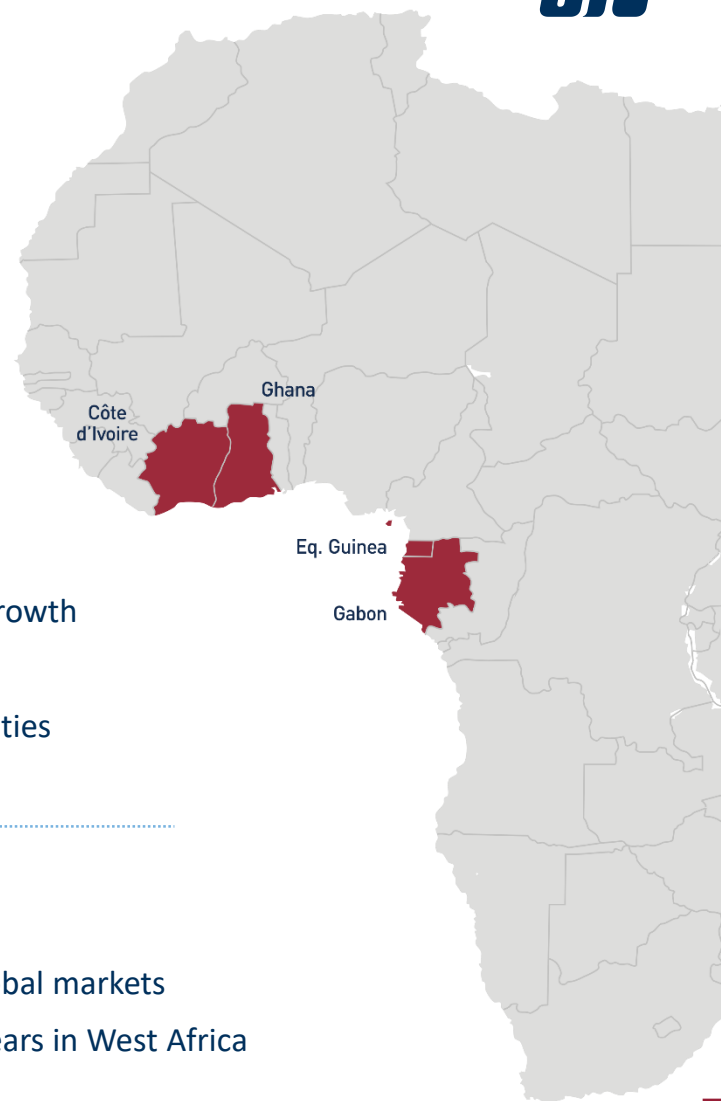
- Scope to grow net production beyond 100,000 bopd
- Return to a multi-year drilling campaign in Ghana
- Revival of Central & West Africa portfolio

### RESERVES GROWTH

- Significant scope for continued reserves & resources growth
- Organic delivery of Ghana business that is still growing
- Portfolio of infill, near-field, and exploration opportunities

### LOW RISK/ HIGH VALUE

- Low-cost operations averaging ~\$10 opex/bbl
- High-quality, low-sulphur light crudes, appealing to global markets
- Established relationships and expertise through 30+ years in West Africa

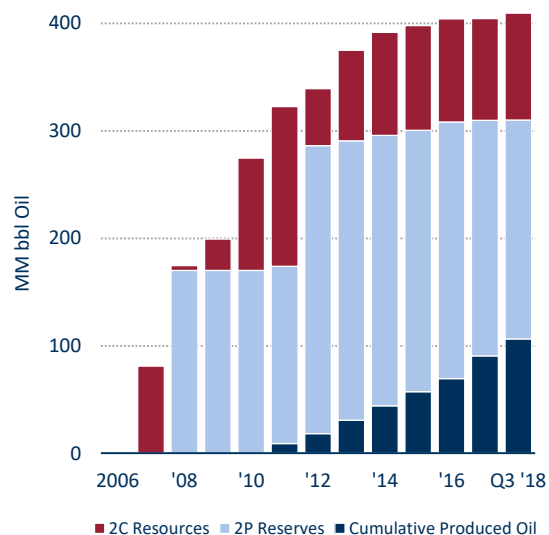


## GHANA BUSINESS DELIVERED ORGANICALLY



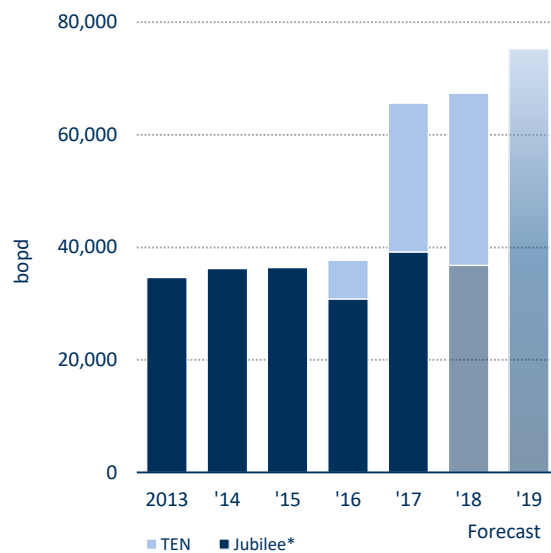
Significant asset base early  
in production lifecycle

Net Reserves/Resources



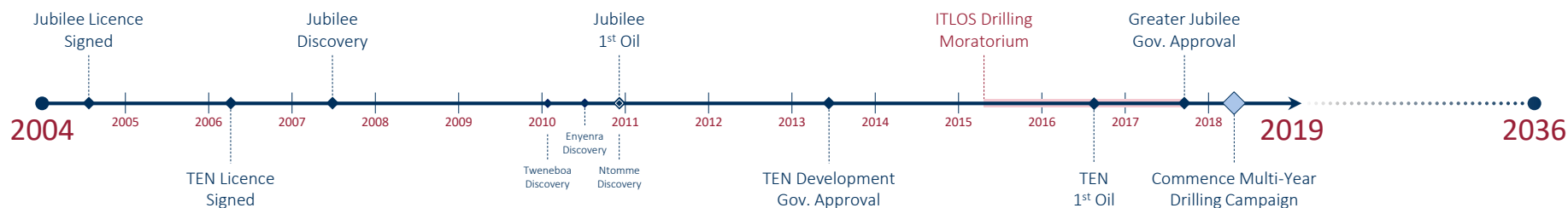
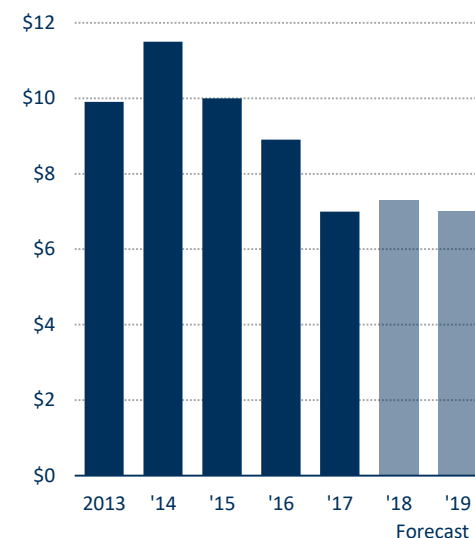
Robust business delivering  
growing production

Net Production



Business reset &  
sustained cost discipline

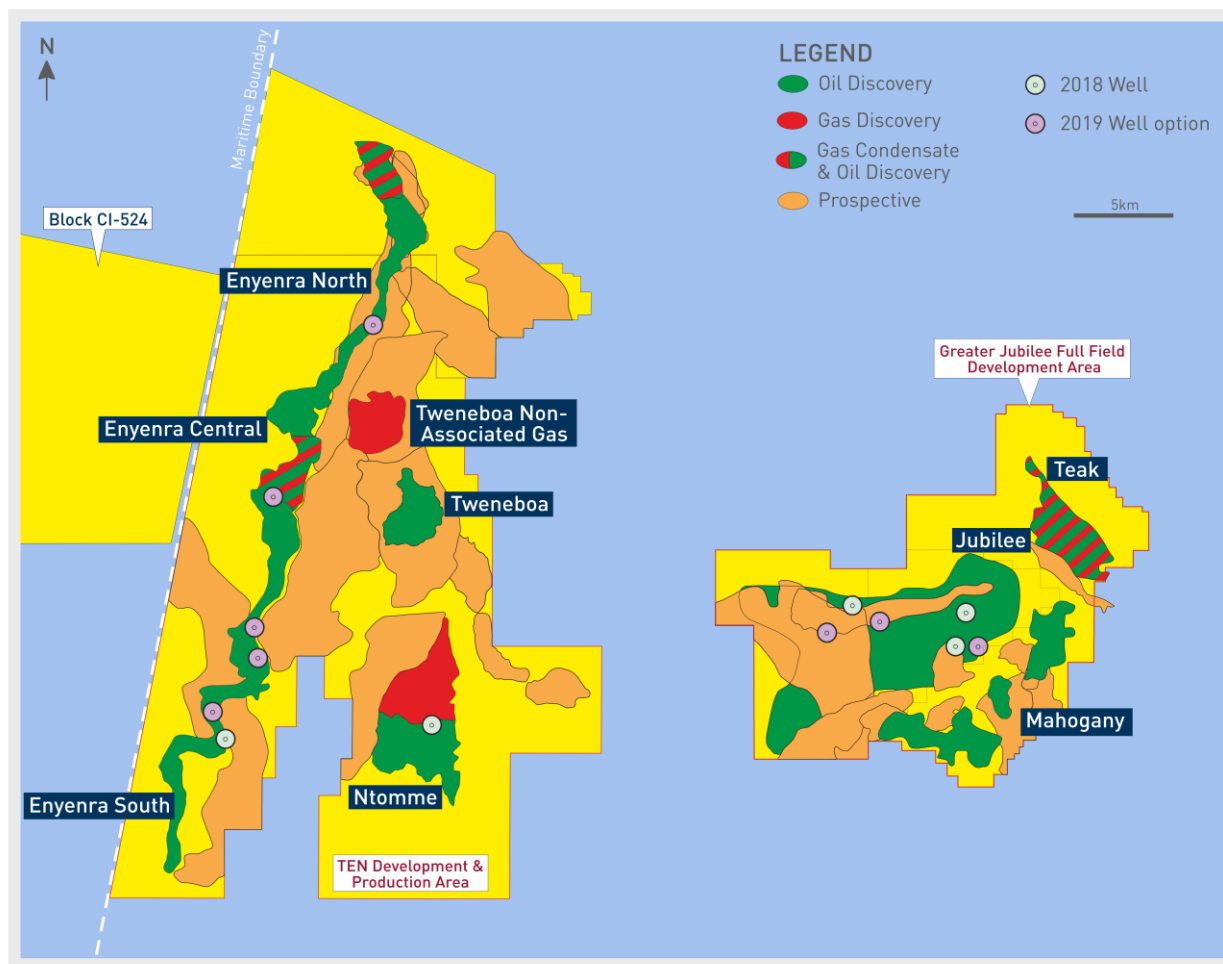
Opex/boe



# GHANA RESERVES & RESOURCES



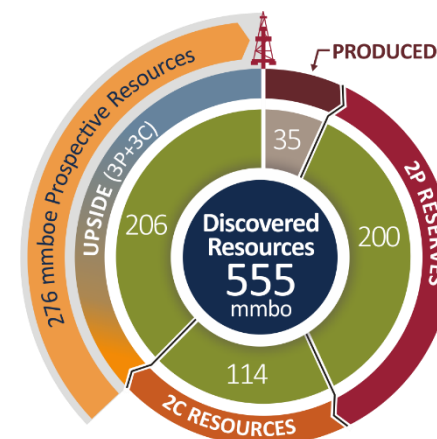
## Jubilee & TEN



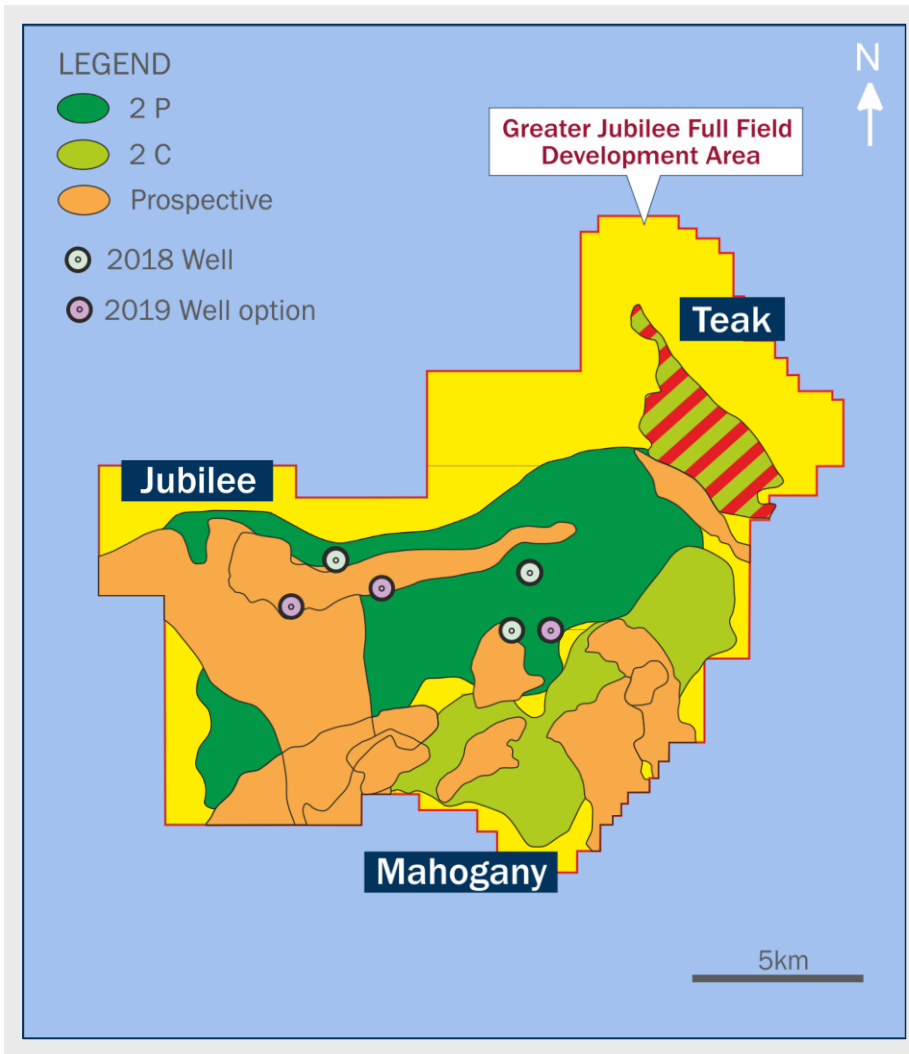
### Jubilee Oil (gross)



### TEN Oil (gross)



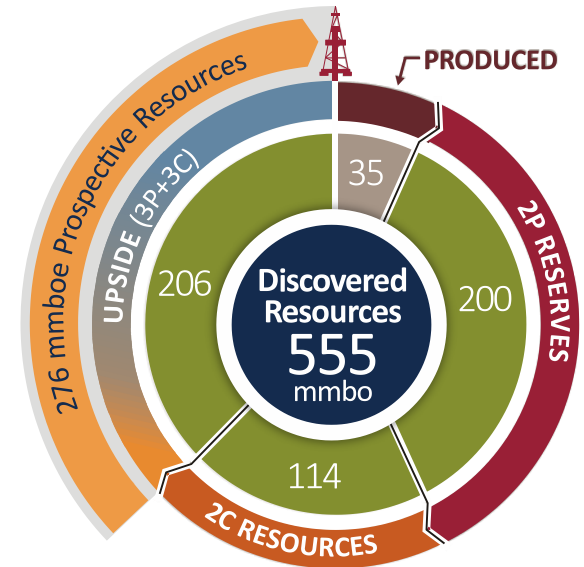
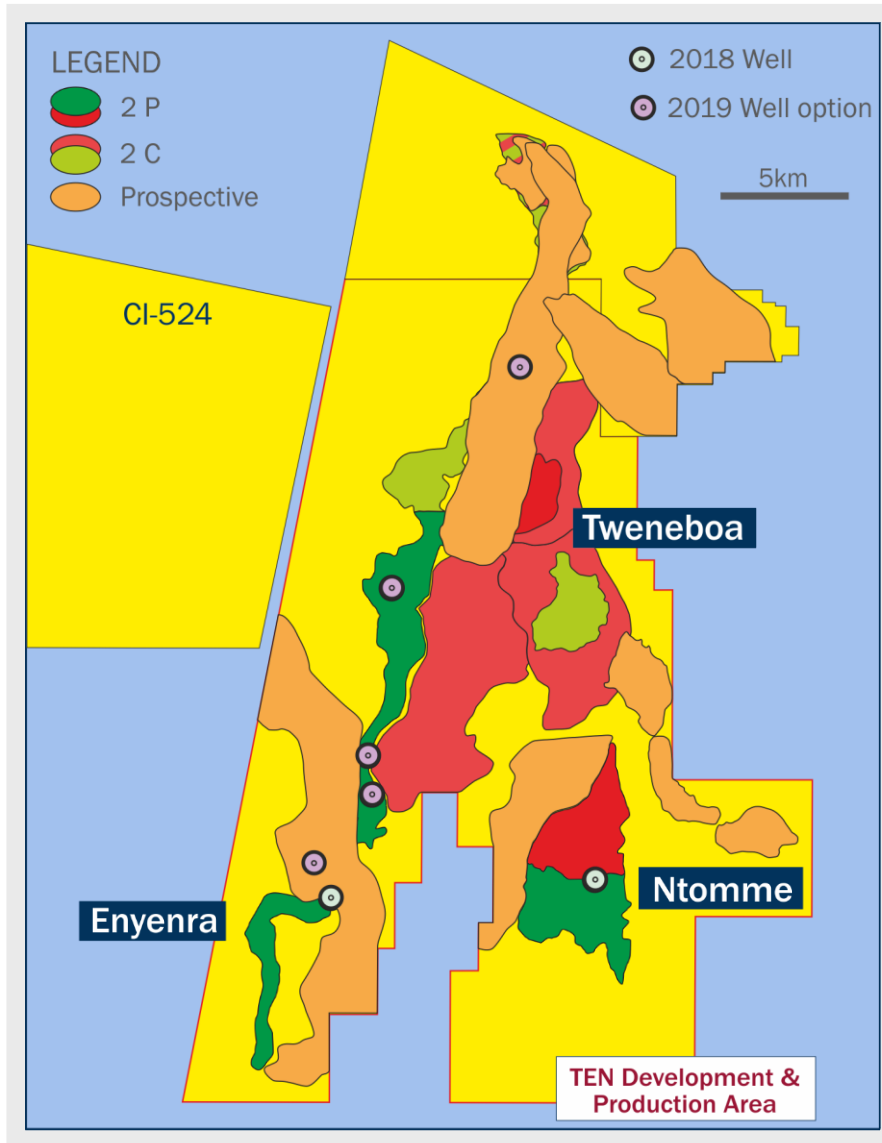
# JUBILEE RESOURCES



- Jubilee remains a world class asset with a significant 2P Reserves base
- 2C Contingent Resources primarily located in Jubilee & Mahogany
- Material 3P + 3C upside will be continually assessed as drilling campaign progresses
- Significant potential for organic growth through exploration in existing licence

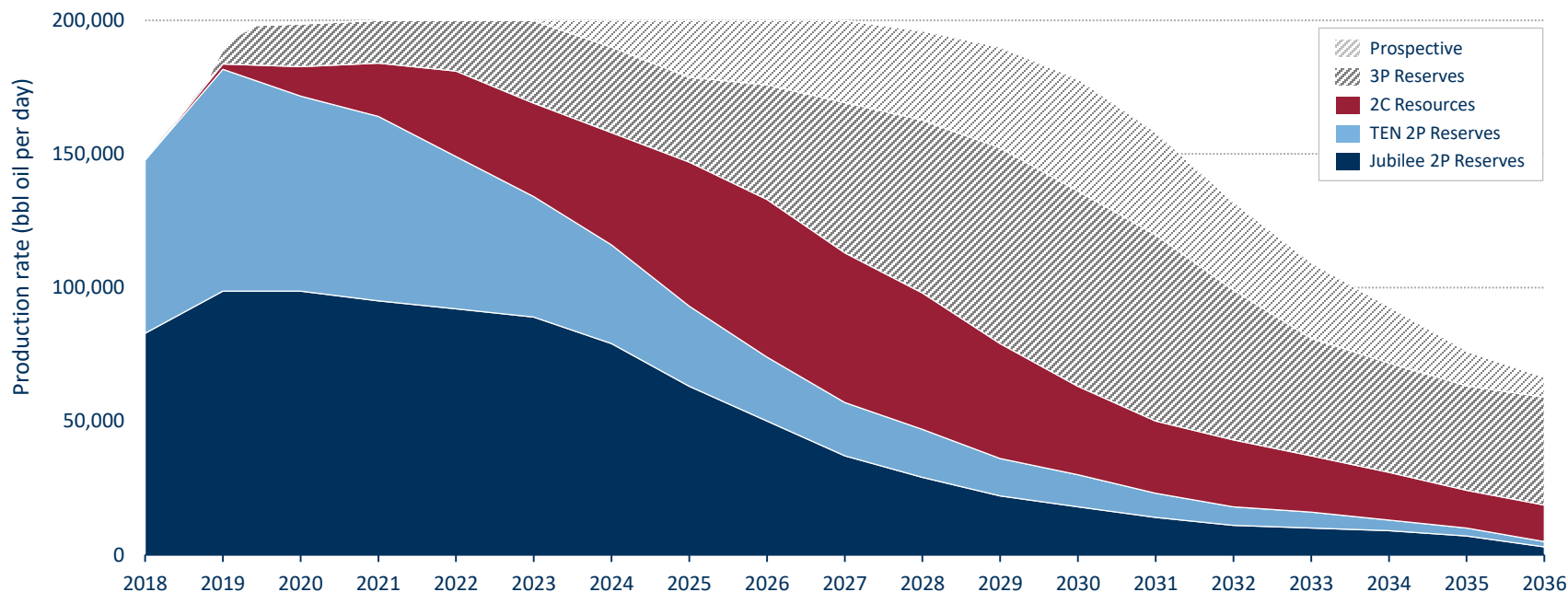


# TEN RESOURCES



- Strong production performance from TEN with bulk of reserves still to be produced
- Material 2C Resources to be tied-back to TEN FPSO
- Significant 3P + 3C upside potential
- Portfolio of near-field exploration opportunities
- Additional exploration opportunities in Block CI-524, adjacent to TEN licence

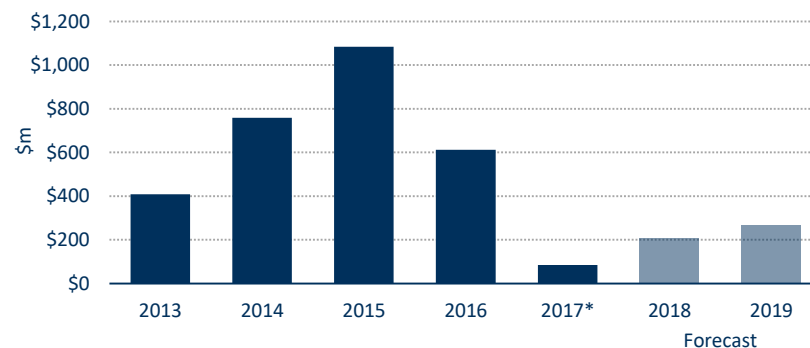
## GHANA LONG-TERM PRODUCTION OUTLOOK



## Investment to sustain production

- Growing production to 180,000+ bopd
- \$200-300m annual capex to grow & sustain plateau
- Market conditions continue to facilitate capex flexibility

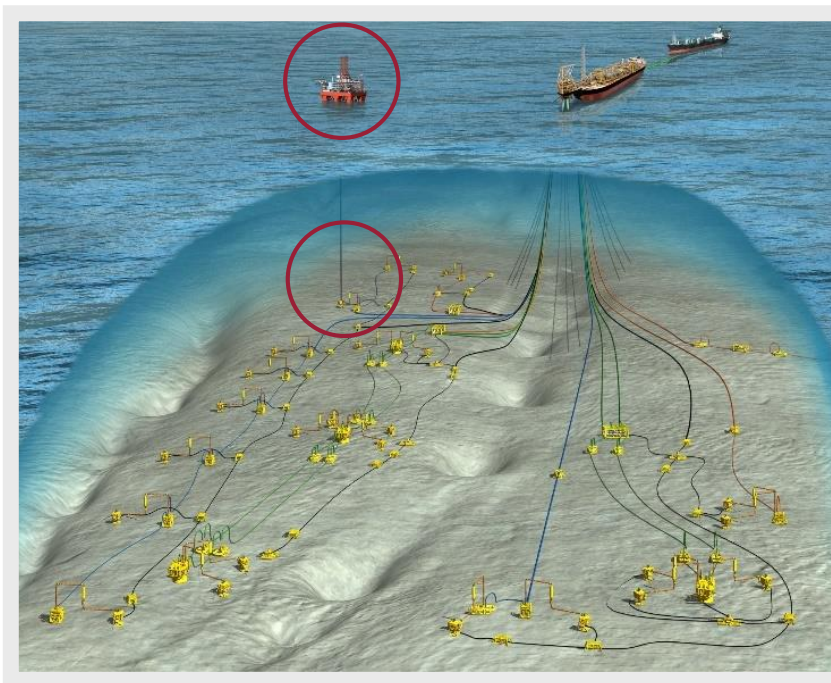
## Ghana net capex



# COST DISCIPLINE & PERFORMANCE: WELLS



## Well Engineering



Maersk Venturer & Stena Forth 6<sup>th</sup> generation deepwater drilling rigs

**-\$52m**

Average well cost difference of 2018 wells vs. previous campaign

**97%**

2018 drilling rig operational up-time

**26**

Re-tendered / re-negotiated service company contracts since 2014

**-1.75 Days**

Reduction in average drilling days per well vs. previous campaign

**Top Quartile**

5 of last 7 wells achieved top quartile drilling performance Vs. Peers. All 7 are top 50%.

**0 / 0 / 0**

Medical cases, LTI's, Environmental spills

**> 430,000**

Exposure hours

**6,000**

Job safety analyses

**17,000**

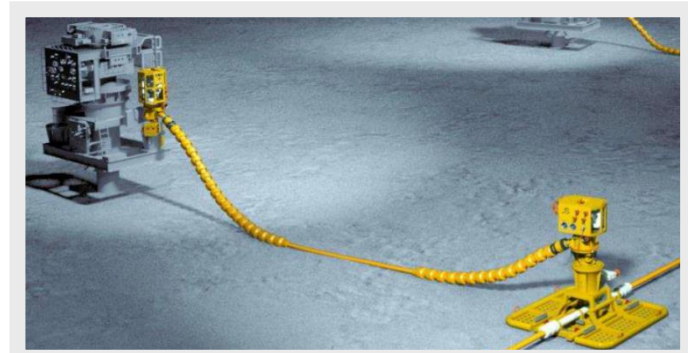
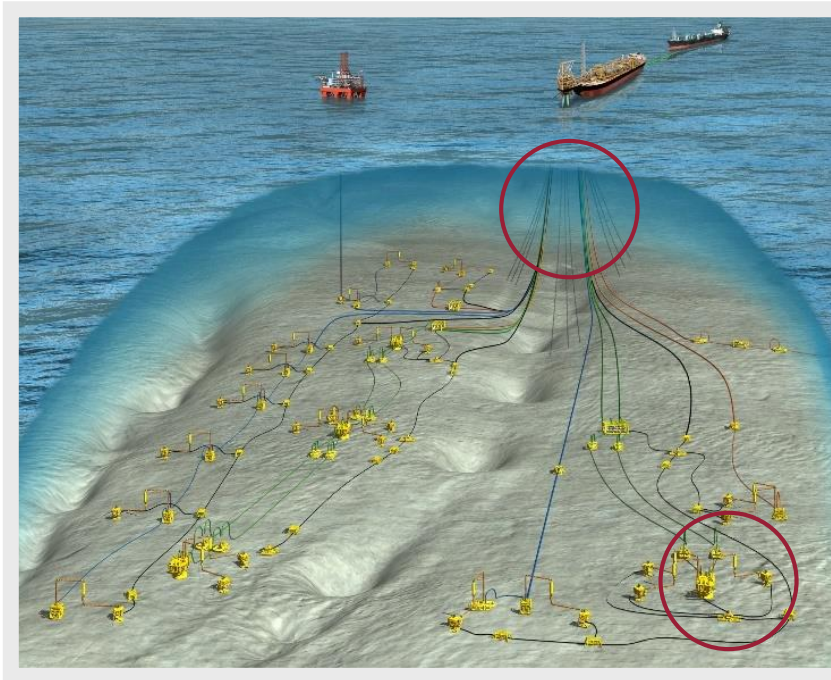
Crew safety observations

# PROJECT DELIVERY & INNOVATION: SUBSEA



## Subsea Engineering

### Innovation in TEN Additional Development Opportunities



Source: Enpro Subsea

Inline-Tee's concept as a cost-effective alternative to production manifolds saving  $\approx$  \$35m each

### Rig-less well interventions at lower costs with less production deferment



Use of construction support vessels are saving \$3-5m/well with reduced oil deferments

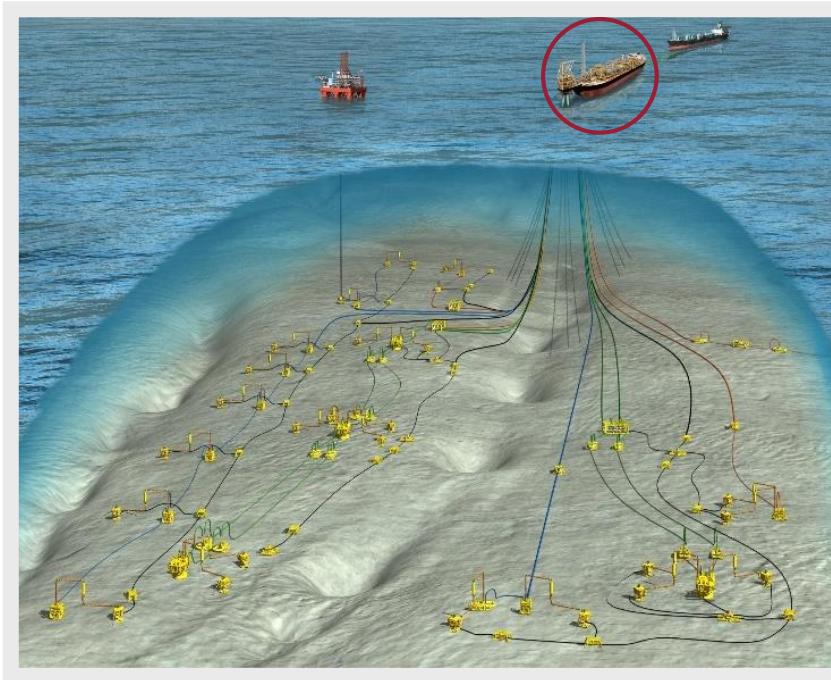
### Additional initiatives being pursued

- Flexible jumpers with flow access modules vs. Rigid jumpers
  - Less bespoke, more standardised components to reduce lead-times
- Elimination of costly riser base structures in add-on developments
- Heated pipe vs. conventional dual-flowline architecture
  - Possible improvement in flow-assurance to increase production efficiency



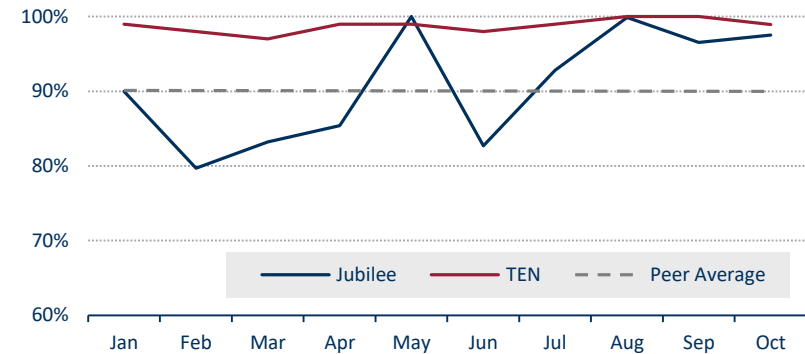
# EFFICIENCY & UPTIME: FPSO PERFORMANCE

## Surface Facilities



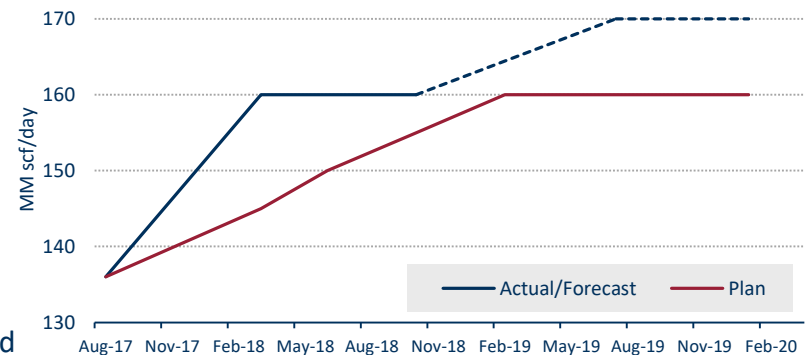
- TEN FPSO operating efficiency consistently > 98%
- Jubilee FPSO operating efficiency increasing post-2018 planned shutdowns
- Increasing oil production by de-bottlenecking gas processing capacity
- Production optimisation & 'Produce-to-the-Limit' processes embedded
- Next step: implementation of digitalisation

### 2018 Production efficiency



Jubilee turret remediation nearing completion and returning to steady-state operations

### Jubilee gas handling capacity



Growing production by systematically removing bottlenecks



## INVESTING IN THE FUTURE

### The Goal

- Improve production & safety performance
- Drive uptime through failure prediction
- Minimise failures to lower maintenance costs

### How

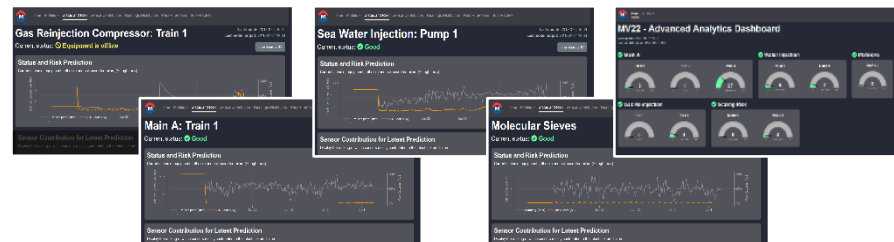
- Implement digital program
- Leverage proven application from other FPSOs
- Digital hardware & data to implement program in place

### What next?

- Launching initial initiative in 2019
- Fast adoption by leveraging Brazil experience
- Small 2019 CAPEX commitment
- Ability to extend digitalisation benefits from FPSO to subsurface & subsea



- Proven offshore digital & analytics Suite
- Already incorporates 7 FPSO's in MODEC fleet
- Multiple deep learning models already deployed
- Advanced analytics insights that lead to operational change & action



# CENTRAL & WEST AFRICA PORTFOLIO

## NON-OPERATED ASSETS

### Solid production base

28% of 2018 Group production

Focus on low-investment/high-value

Stable 5+ year production profile

~\$16 opex/boe

### Diversified & low risk

3 countries / 26 licences / 24 fields

14+ years of regional experience

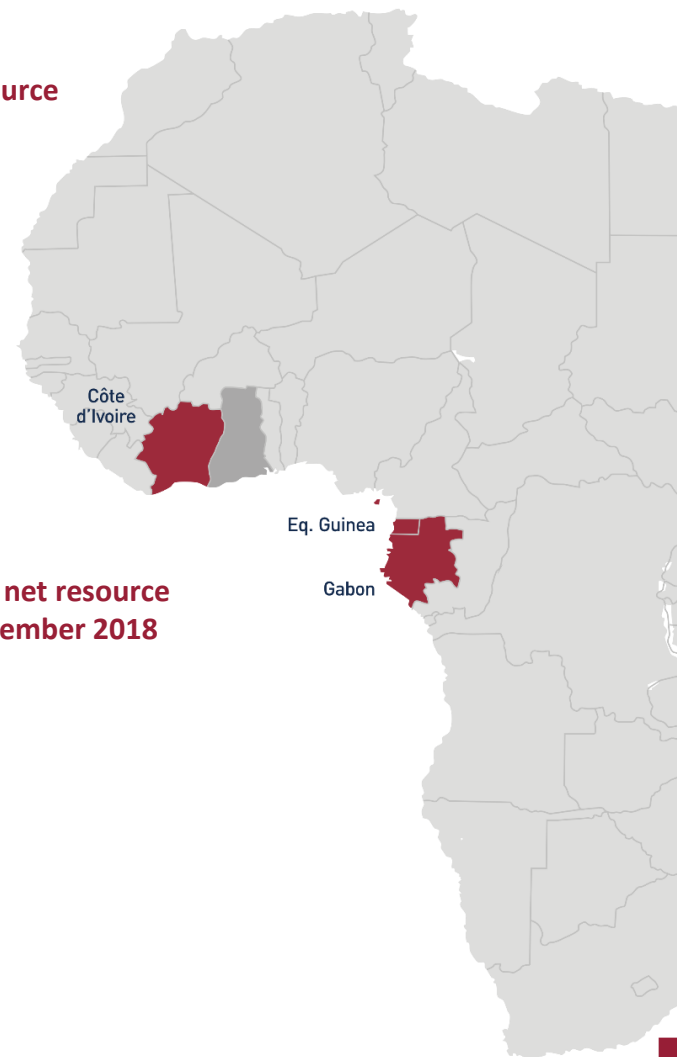
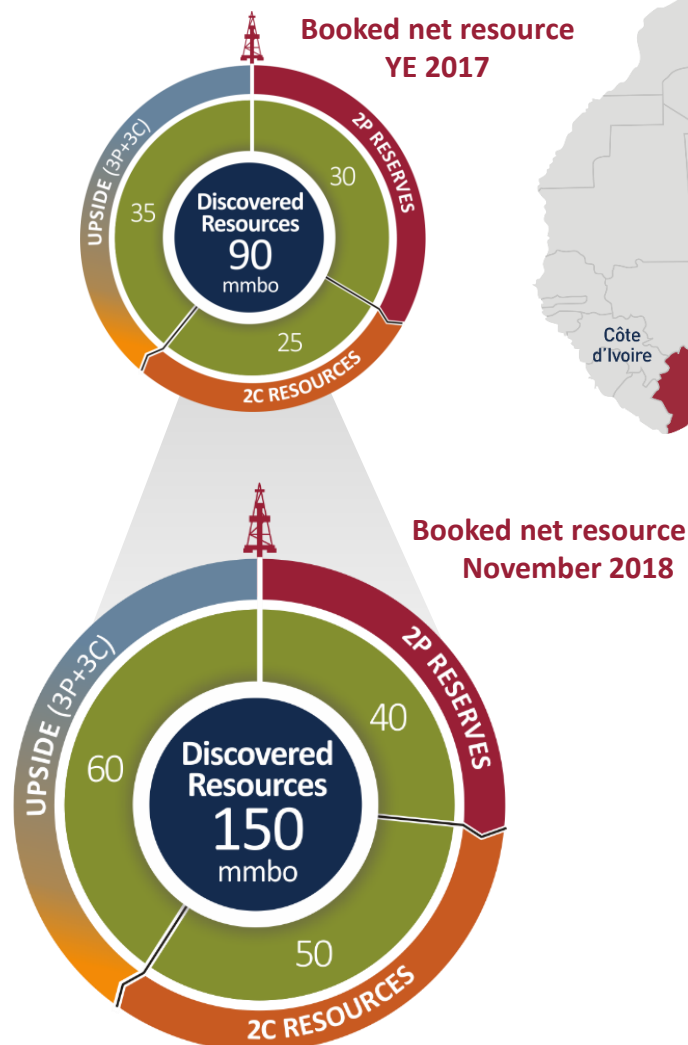
Primarily infill drilling & workovers

### Platform for growth

Near-field exploration

New exploration licences

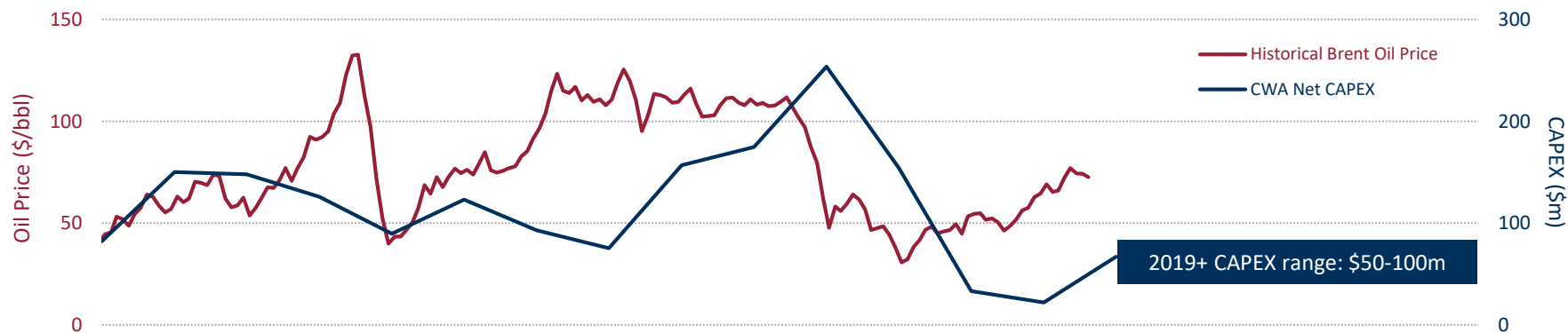
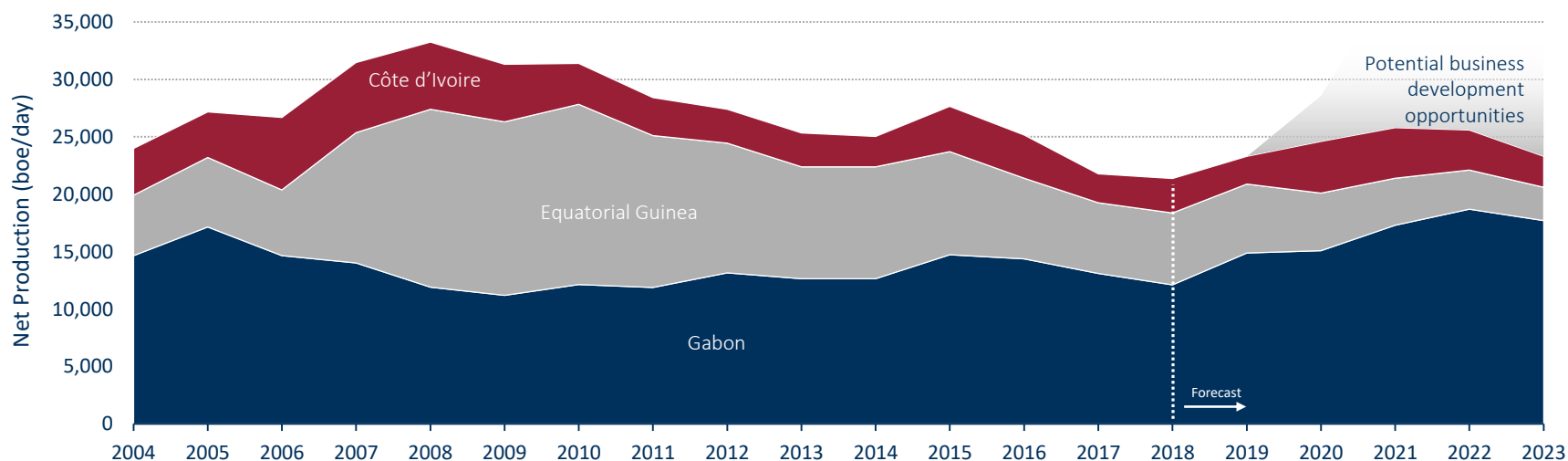
Bolt-on business development



## CENTRAL &amp; WEST AFRICA PERFORMANCE



## Reliable long-term production with capex flexibility



# CENTRAL & WEST AFRICA REVIVAL



**160%**

CWA 2P reserves replacement in 2018

(12.5 mmboe added in 2018)

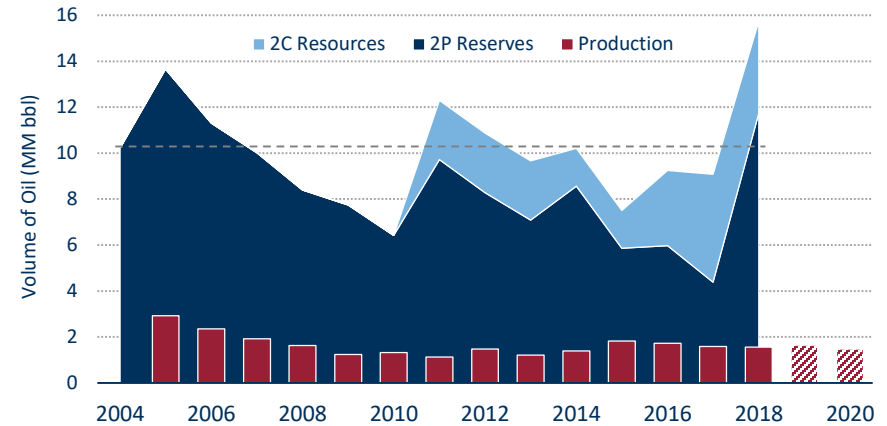
**70%**

CWA 2P+2C resources increase in 2018

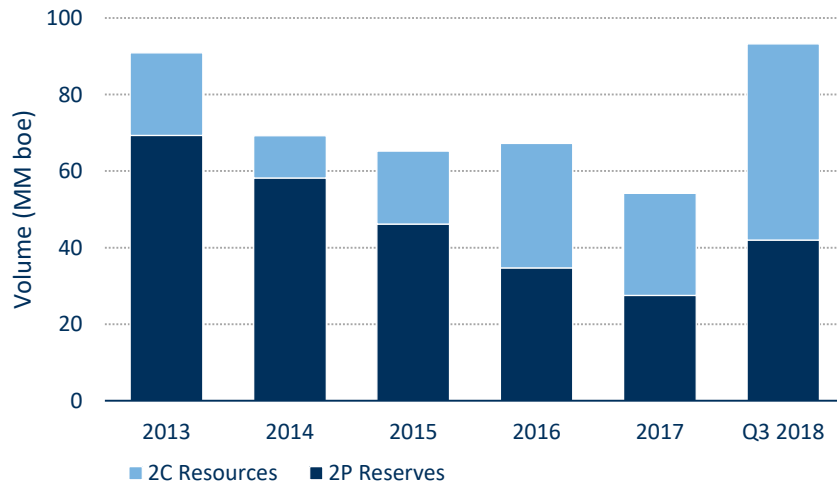
(~35 mmboe increase in 2018)

## Tchatamba

Reserves growth despite consistent production



## Central & West Africa reserves/resources history

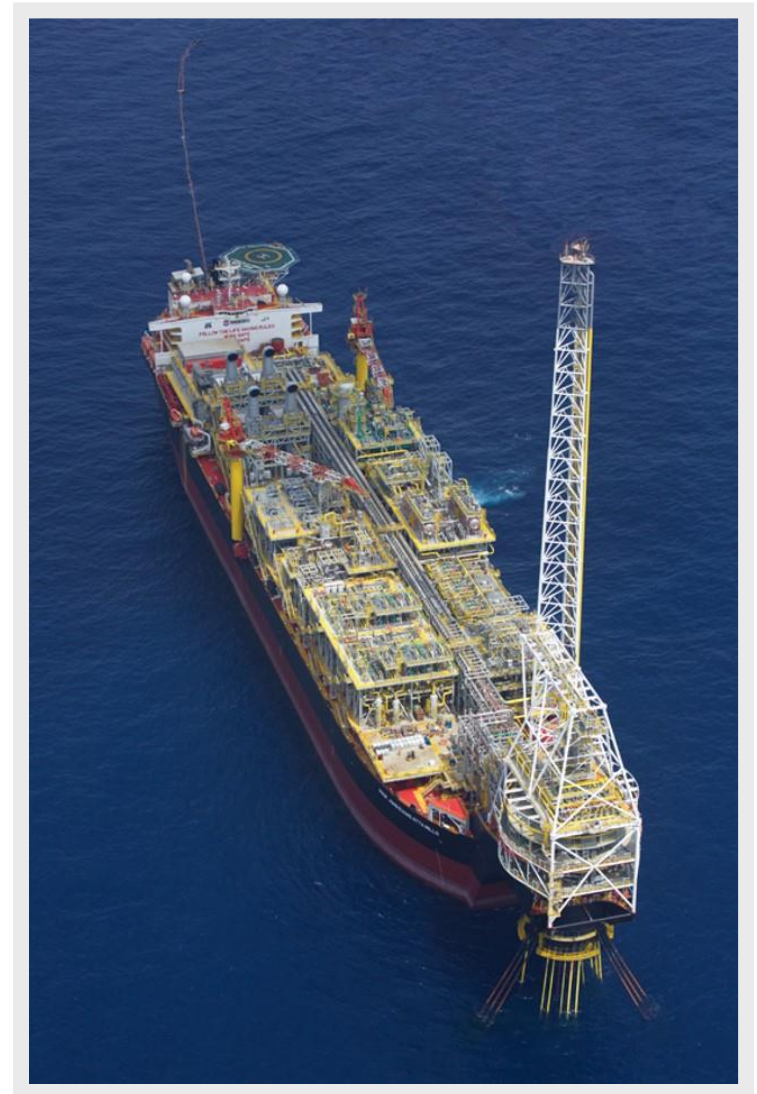


# WEST AFRICA BUSINESS SUMMARY



## Investment overview

- Diversified portfolio of low-cost, long-life assets that continues to deliver strong cashflows
- Continued investment in Non-Operated Portfolio delivering low-risk value and diversification
- Near term growth to ~100kbopd net production
- Return to a multi-year drilling campaign in Ghana to increase production
- Significant scope for continued reserves/resource maturation and growth
- Established long-term relationships in West Africa that underpins further growth aspirations





Capital Markets Day 2018

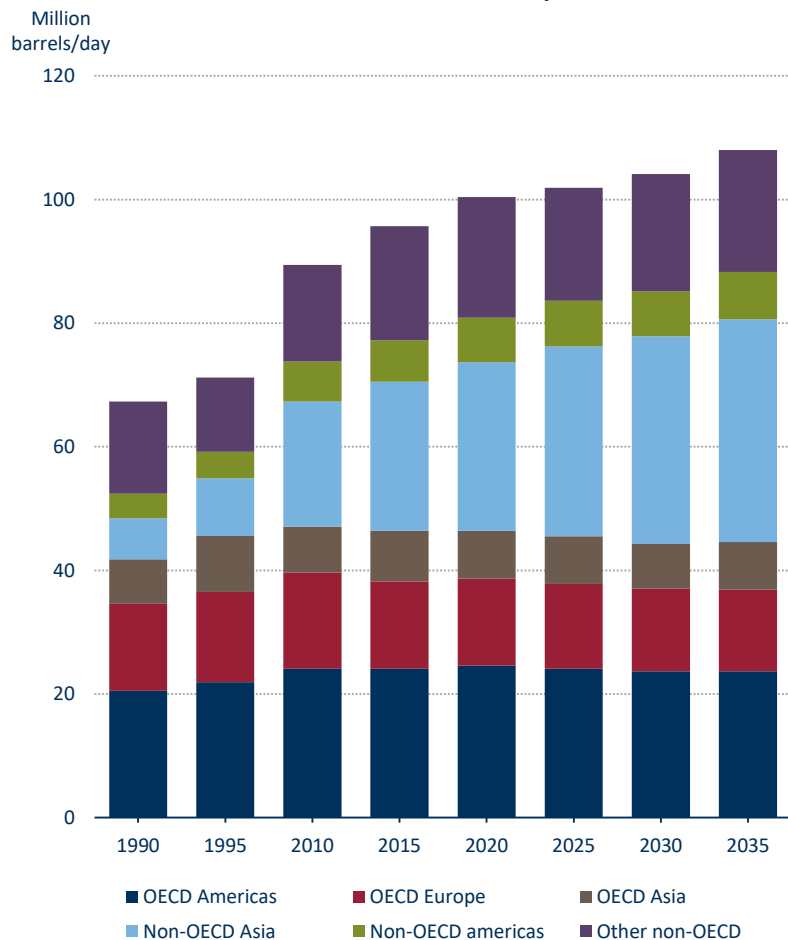
# FUNDING OUR GROWTH

Les Wood, Chief Financial Officer



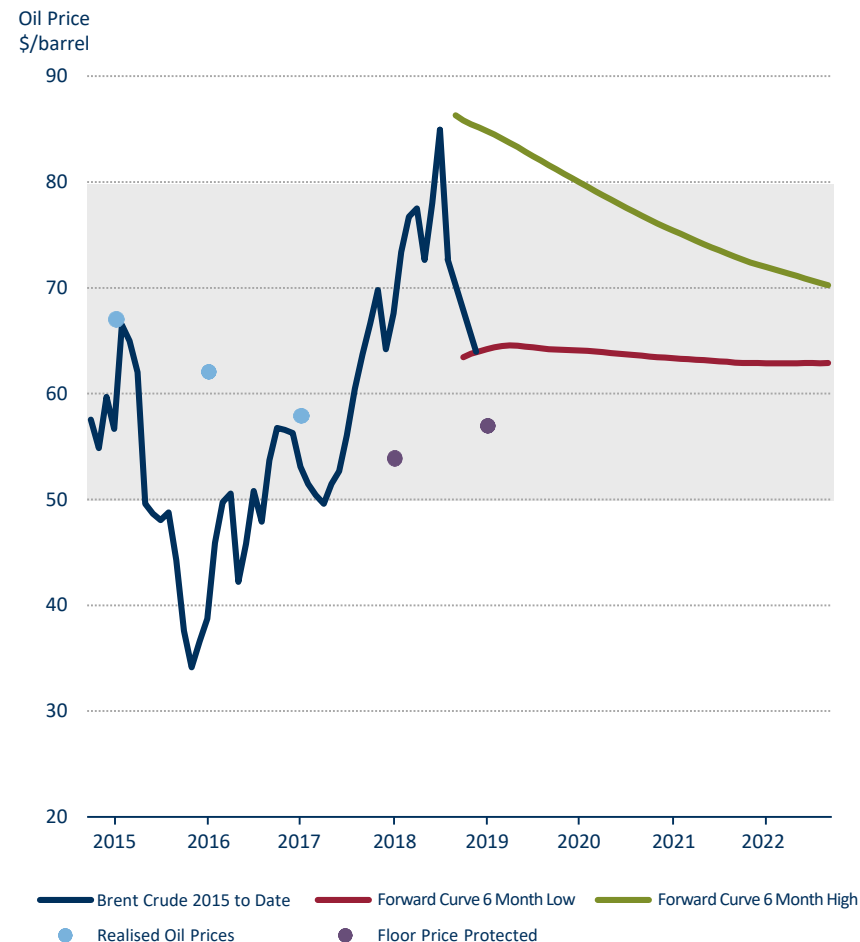
# SECTOR AND OIL PRICE OUTLOOK CREATES OPPORTUNITIES

Growing long term global oil demand  
is an opportunity for low  
cost oil-focussed operators



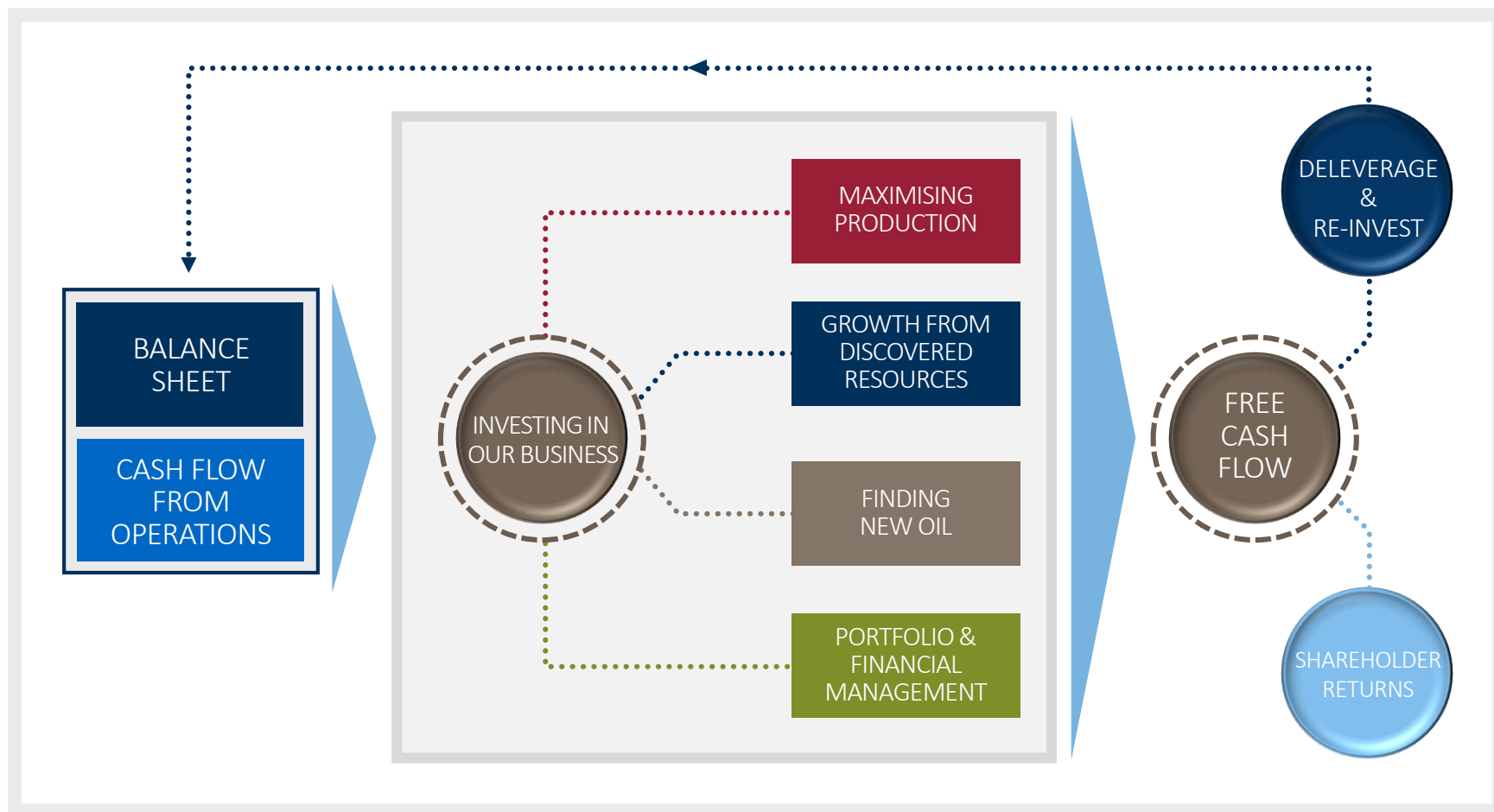
Source: Energy Information Administration

Flexible capital allocation creates the  
opportunity for growth against the  
backdrop of a volatile oil price



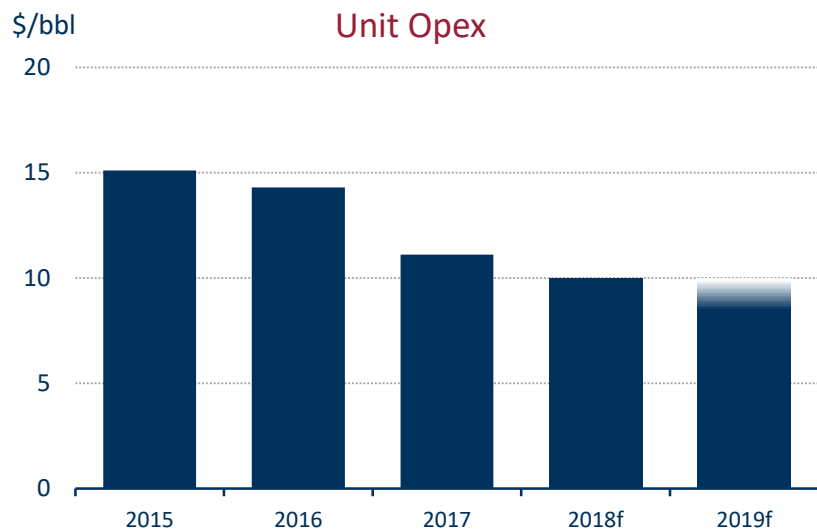
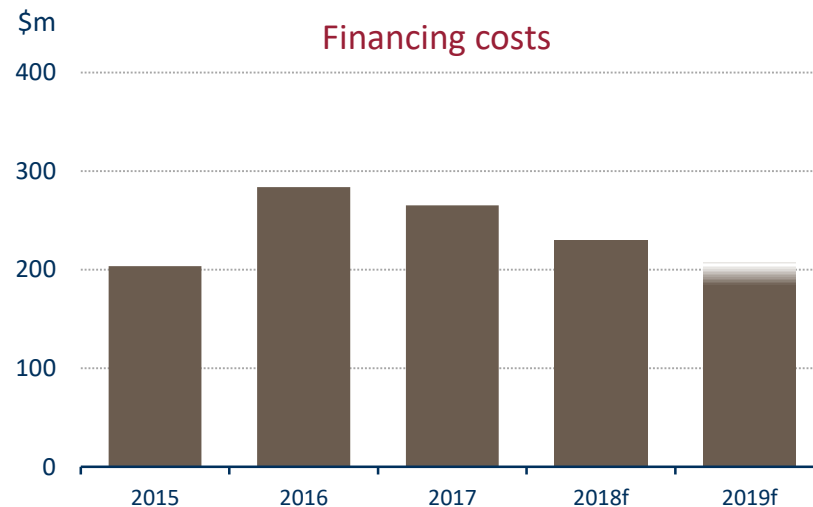
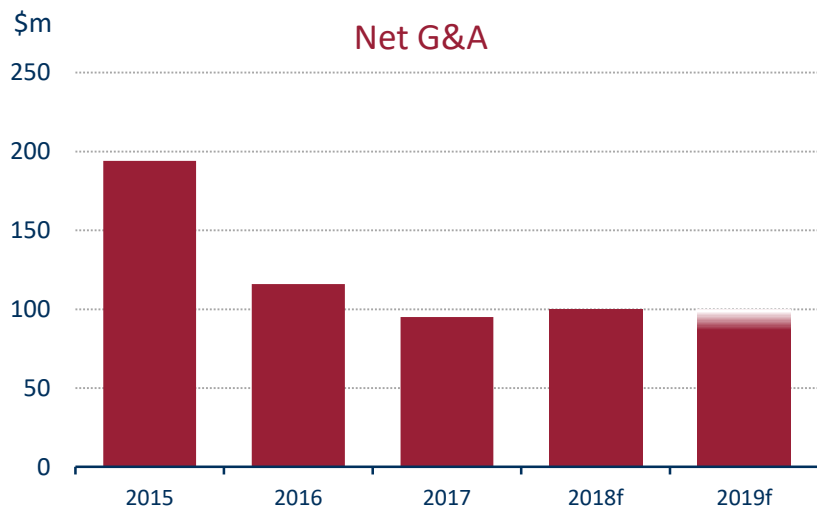
Source: Bloomberg and Tullow data @ 21/11/18

# A BALANCED SELF-FUNDING E&P COMPANY



Strong free cash flow generation provides a solid platform for growth and returns

# COST BASE RESET FOR THE LONG TERM



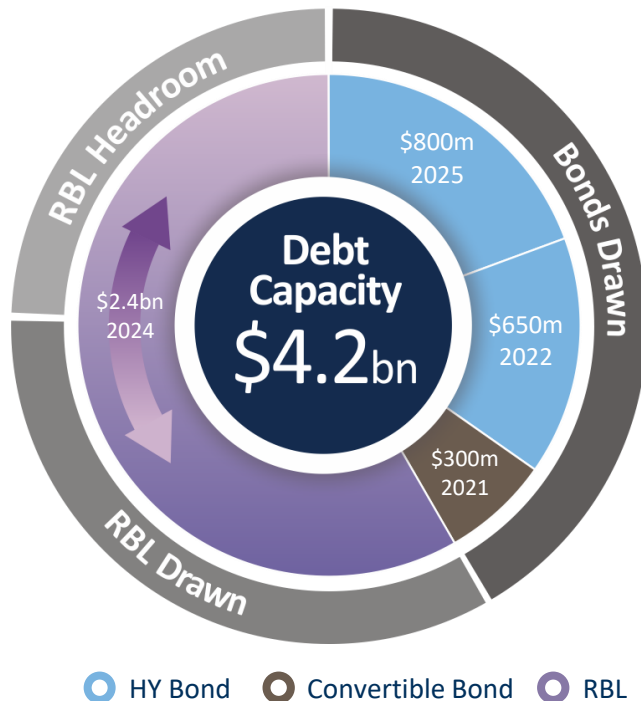
## Continued cost discipline

- Competitive industry cost base
- Cost conscious culture embedded
- Targeting further operational efficiencies
- Optimising capital structure
- Sustaining low cost base through the cycle

# CONTINUED PRUDENT FINANCIAL MANAGEMENT

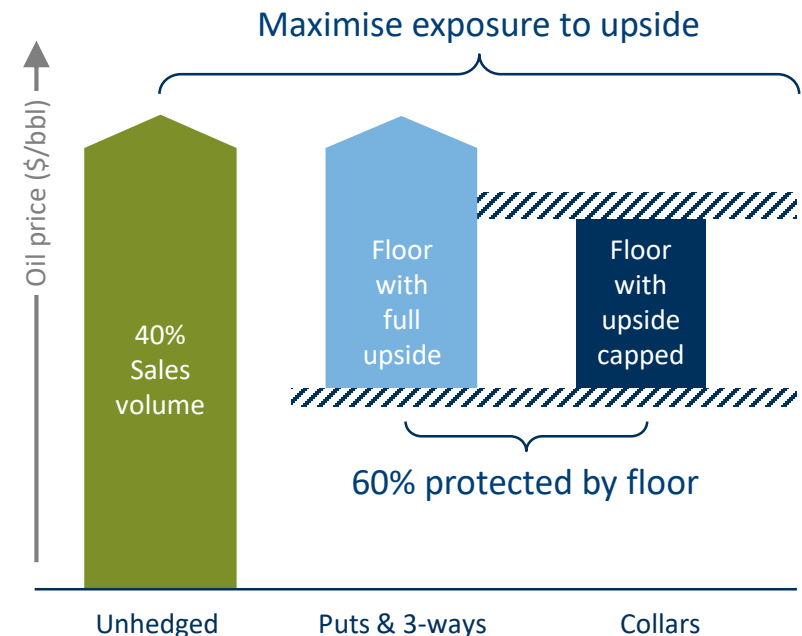
## Diversified and evolving capital structure

- A balance of funding sources
- Revolving RBL provides long-term flexibility
- Strong liquidity headroom
- No near-term maturities



## Revenue protection through hedging

- Proven hedging policy over 10 years
- Continue to systematically hedge
- Ongoing optimisation of structure and cost
- 2015-17 yielded \$850 million





# CAPITAL ALLOCATION FRAMEWORK

## DEBT AND LIQUIDITY

Balance sheet robust to future oil price volatility

Driving net debt below \$2 billion in near term

Retain flexibility with longer term gearing of 1x-2x

Ensuring headroom for future opportunities

## INVESTING IN OUR BUSINESS

Apply strict criteria to allocate capital across the portfolio:

**Maximising production:**

Immediate cashflow  
High returns, short payback

**Growth from discovered resources:**

Future cash flow  
Medium-term payback

**Finding new oil:**

Significant value  
New resources, capital growth

**Other opportunities**

## SHAREHOLDER RETURNS

Demonstrating financial discipline and business progress

Capital Returns Policy established

Sustainable annual ordinary dividend

Additional returns in periods of strong FCF

Balanced capital allocation focused on maximising shareholder returns

# DELEVERAGING THE BALANCE SHEET REMAINS A PRIORITY

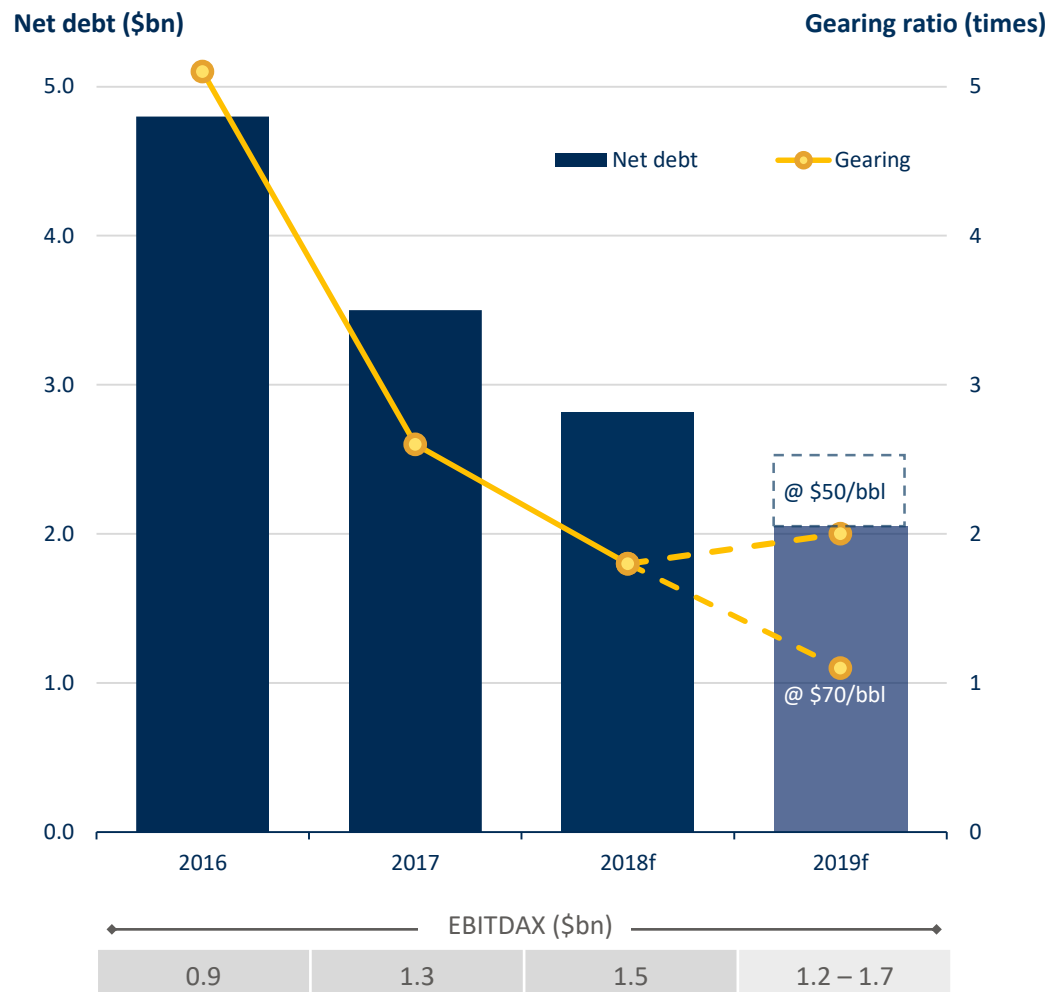
## DEBT & GEARING

Balance sheet robust to future oil price volatility

Driving net debt below \$2 billion in near term

Retain flexibility with longer term gearing of 1x-2x

Building sufficient headroom for future opportunities



Robust balance sheet provides flexibility to support growth

Note: 2019 forecasts based on oil price range of \$50/bbl and \$70/bbl

# ATTRACTIVE OPPORTUNITIES FOR CAPITAL INVESTMENT

← Annual investment outlook →

## INVESTING IN OUR BUSINESS

Apply strict criteria to allocate capital across the portfolio:

### Maximising production:

Immediate cashflow  
High returns, short payback

### Growth from discovered resources:

Future cash flow  
Medium-term payback

### Finding new oil:

Significant value  
New resources, capital growth

### Other opportunities

### MAXIMISING PRODUCTION

\$200m - \$300m  
Ghana

\$50m - \$100m  
Non-op

### GROWTH FROM DISCOVERED RESOURCES

Fully covered  
Uganda

\$75m  
Kenya (pre-FID)

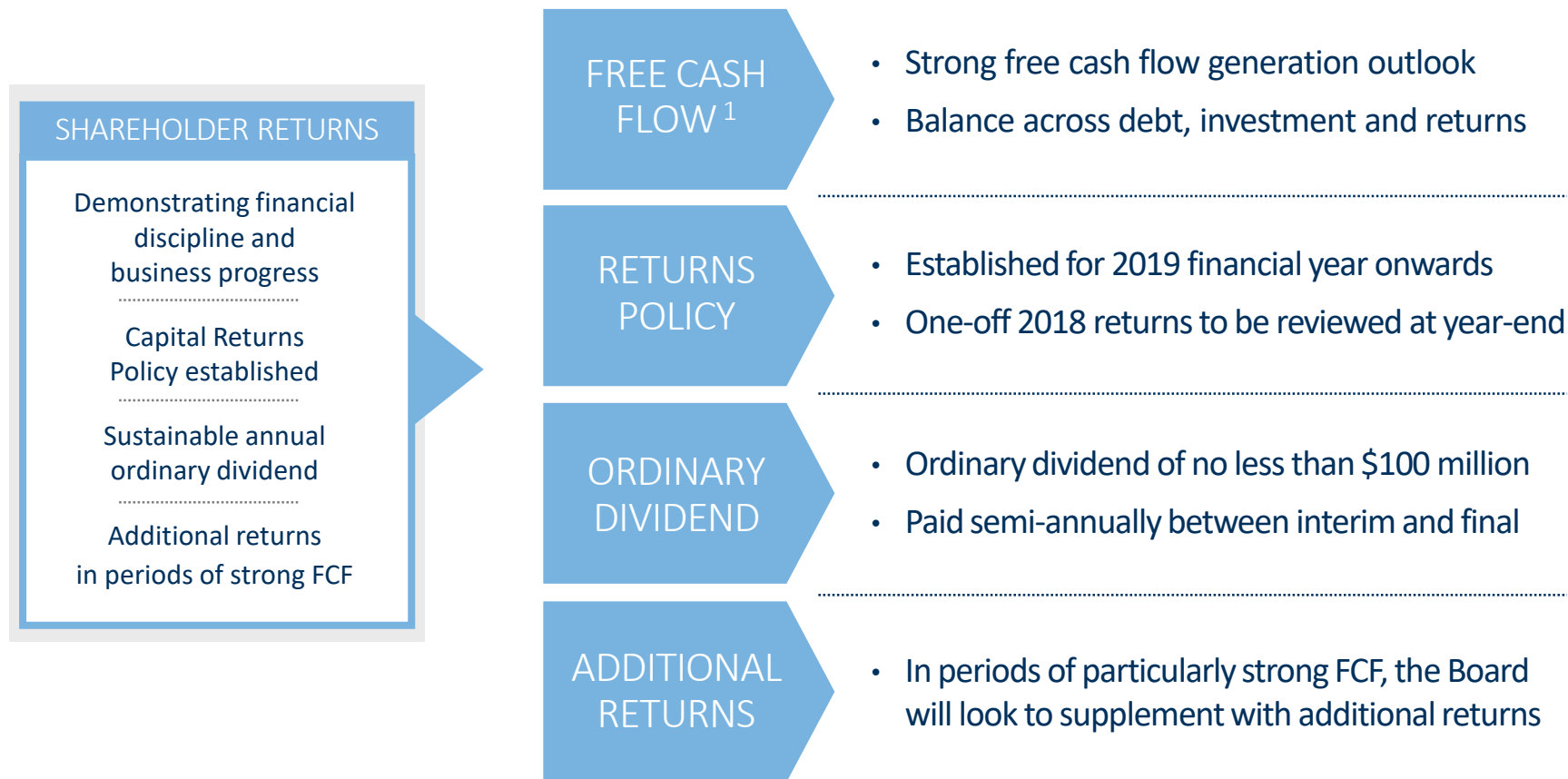
### FINDING NEW OIL

Up to \$150m  
Exploration

- Invest up to \$600m in high value assets
- Flexibility to lower capex if required with low oil price
- 2019 capex forecast of ~\$570m

Disciplined capital investment in opportunity rich portfolio

# FINANCIAL PROGRESS ENABLES SHAREHOLDER RETURNS



Confidence in future delivery allows reinstatement of sustainable dividend

<sup>1</sup>Free cash flow: Cash after all costs, capex and financing but before dividends and debt paydown

# A BALANCED E&P DELIVERING GROWTH & RETURNS

## Cash generation

- Reset business delivering substantial free cash flow
- Balanced capital allocation to maximise returns

## Debt & Gearing

- Significantly strengthened balance sheet
- Deleveraging remains a priority

## Investing in our assets

- Disciplined capital investment to grow our business
- Flexibility retained to respond to oil price below \$50

## Shareholder returns

- Capital Returns Policy established
- Ordinary dividend supplemented by additional returns

Delivering on our targets to create value for our shareholders



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