

Tullow Oil plc

# 2014 HALF-YEARLY RESULTS

30 July 2014





This presentation contains certain forward-looking statements that are subject to the usual risk factors and uncertainties associated with the oil and gas exploration and production business.

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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### TULLOW OIL PLC – 2014 HALF-YEARLY RESULTS





## Good progress made during 1H 2014



## West Africa

- Stable Jubilee production 103,000 bopd
- TEN development on time and on budget
- Onshore discovery at Igongo in Gabon

## **East Africa**

- Kenya discoveries support development plans
- MoU signed with Government of Uganda
- Project FID targeted for late 2015/16

## Corporate

- European asset sales progressing well
- Balance sheet further strengthened
- Strong cash flow maintained





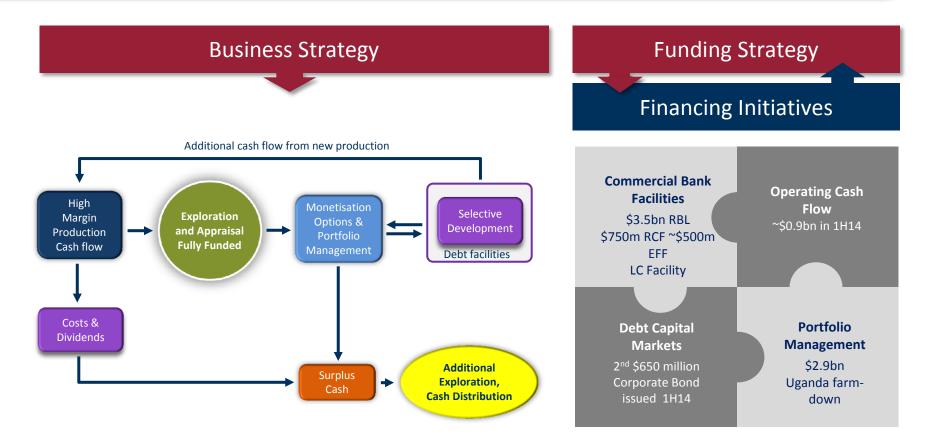
### TULLOW OIL PLC – 2014 HALF-YEARLY RESULTS





## Business and funding strategy





## Solid cash flow and well funded balance sheet to execute strategy

## 2014 Half-yearly results summary



	1H 2014	1H 2013	Comments	
Sales revenue	\$1,265m	\$1,347m	Unchanged from 1H 2013 after adjusting for Bangladesh asset sale and Gabon production deferral	
Gross profit	\$673m	\$764m		
Administrative Expenses	(\$120m)	(\$89m)		
Loss on disposal	(\$115m)	-	Contingent consideration & licence payment	
Exploration costs written off <sup>1</sup>	(\$402m)	(\$176m)	1H activity – \$185m Prior years - \$217m	
Operating profit	\$36m	\$500m		
(Loss)/profit after tax	(\$95m)	\$313m		
Basic earnings per share	(8.3c)	32.2c		
Interim dividend per share	4.0p	4.0p	Unchanged	
Capital investment <sup>2</sup>	\$1,048m	\$804m	In line with \$2.1 billion forecast for FY 2014	
Cash generated from operations <sup>3</sup>	\$905m	\$1,016m	Unchanged as per Sales Revenue above	
Net debt <sup>4</sup>	\$2,802m	\$1,729m	Headroom of \$2.3 billion at end June	

<sup>1</sup> Before tax refunds

<sup>2</sup> 2013 excludes Spring acquisition and includes Norway capex on an after tax refund basis

<sup>3</sup> Before working capital movements

<sup>4</sup> Net debt is cash and cash equivalents less financial liabilities

Continued solid generation of gross profit and operating cashflow; loss after tax due to increased exploration write-offs and one-off items

## Sources and uses of funds



## Cash inflow \$1,672m

- Operating cash flow \$728m<sup>\*</sup> (1H 2013:\$1,030m<sup>\*</sup>)
- Net loan draw down \$944m (1H 2013:\$901m)

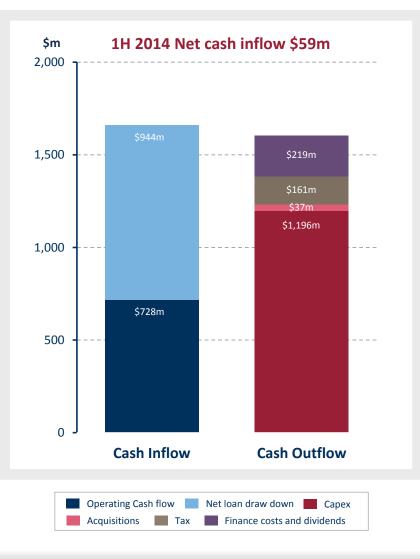
## Cash outflow \$1,613m

- Cash Capex \$1,196m (1H 2013:Capex \$847m)
- Acquisitions nil (1H 2013: \$393m)
- Other payments \$37m(1H 2013 nil)
- Cash tax paid \$161m (1H 2013:\$291m)
- Finance Costs & fees, & Dividends \$219m (1H 2013:\$177m)

## Net cash inflow \$59m

• Increase in cash balances

\* After working capital,

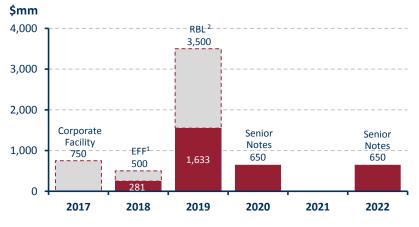


## Debt capital structure has evolved in 1H14



### **Debt maturity profile**

\$mm	Commitment size	Maturity
RBL	3,500	Dec 2019
Corporate Facility	750	Apr 2017
6% Senior Notes	650	Nov 2020
6¼% Senior Notes	650	Apr 2022
EFF <sup>1</sup>	~500	Dec 2017



- (1) Norwegian Exploration Finance Facility
- (2) Final maturity; RBL amortises linearly over 2016 2019

### Key metrics

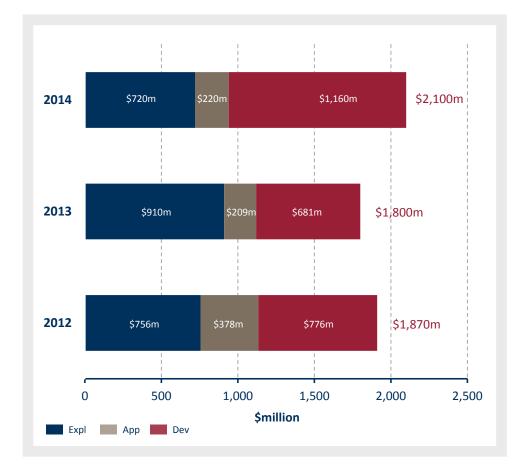
\$mm	30 June 2014
Cash and cash equivalents	411
Debt outstanding	
RBL Facilities	1,632
EFF <sup>1</sup>	281
Corporate Facility	-
Senior Notes	1,300
Total debt	3,213
Net debt	2,802
Facility headroom	2,300

- RBL remains core facility (development/producing asset based)
- Corporate Facility (further capacity from resources base)
- Corporate bonds provide diversification of investor base, tenor, structure (unsecured) and pricing (fixed rate)
- LC Facility creates \$300m additional headroom

Tullow has access to ~\$6.0bn of committed debt facilities with current headroom of \$2.3bn and no near term maturities

## 2014 capital expenditure





#### Notes:

i) 2013 Capital Expenditure excludes the Spring acquisition expenditure

ii) 2013 and 2014 Exploration expenditure is net of Norwegian tax refund

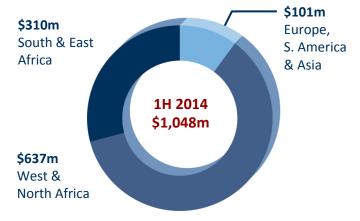
iii) 2011 Capital Expenditure excludes the Nuon and Ghana EO acquisition expenditure.

### \$2.1 billion capex for full year 2014

- Ghana: Jubilee Phase 1A & TEN developments (\$760m)
- Kenya: Exploration and appraisal drilling (\$310m)
- Uganda: Appraisal drilling and development progress towards FID (\$200m)
- Other Africa: Maintaining mature production & high impact exploration (\$580m)
- ESAA: selected high impact exploration (\$220m)
- ESAA: Maintaining mature production (\$30m)

### 1H 2014 capital split:

• 35% Ghana; 90% Africa



## Highlights



## Financial performance

Strong Revenue and Cash Flow generation from core West African production

## Strong balance sheet

Second successful \$650m bond issue, re-financing of \$750m corporate RCF plus new \$300m LC facility

### Portfolio management

Sale of non-core European and Asian assets and ongoing TEN farm-down

Investing for the long term

Solid cash flow and well funded balance sheet to execute strategy



## DEVELOPMENT & OPERATIONS PAUL MCDADE

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## Core West African production on track to meet FY 2014 target

**KENYA** 

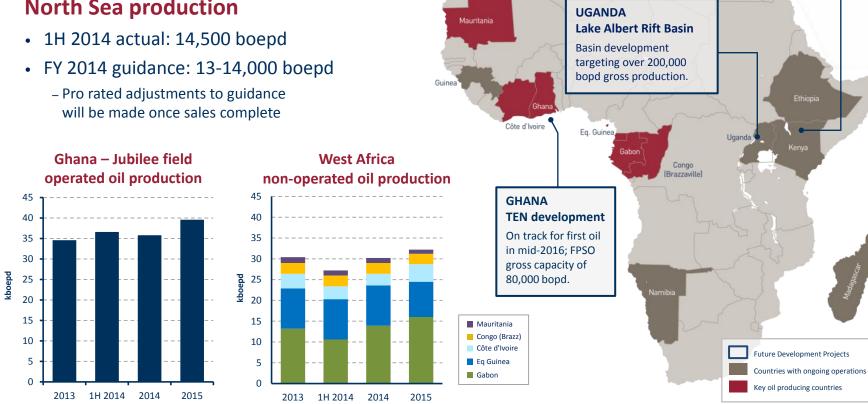
South Lokichar Basin

Development studies underway; single basin has potential to produce in excess of 100,000 bopd gross.

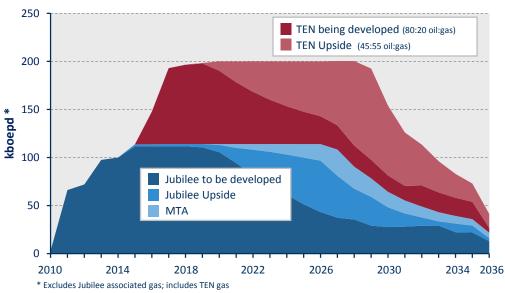
## West African production

- 1H 2014 actual: 63,900 boepd
- FY 2014 guidance: 64-68,000 boepd

### North Sea production



## Ghana projects on track to enhance production and cash flow



#### Ghana gross production profile



- Jubilee production on track to meet 2014 FY production guidance of 100,000 boepd
  - Jubilee 1H 2014 gross production 103,000 bopd
  - Onshore gas processing facility expected online in Q4 2014
  - Production to be increased to FPSO capacity in 2015, subject to gas disposal
- TEN development project on budget and on track to deliver first oil mid-2016
  - \$4.9bn budget
  - c.30% project completed; c.50% by year end
  - 8 of 10 wells required at startup drilled
  - Facility oil production capacity of 80k bopd

Developing over 2 billion boe of reserves and resources

2,000

1,800

1,600

1.400

1,200

1,000

800 600

400

200

FY 2011

\$m

## West African production generating strong cash flows

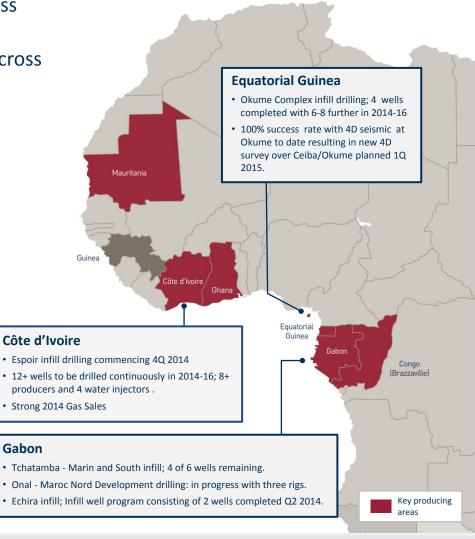
- Significant incremental investment activity across non-operated assets
- Strong pre-tax operating cash flow generation across • West African portfolio in 1H 2014
  - Pre tax operating cash flow: \$916m

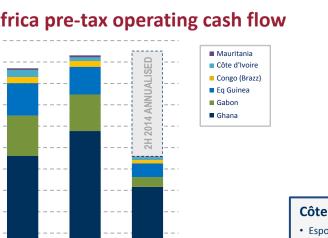
### West & North Africa pre-tax operating cash flow



FY 2013

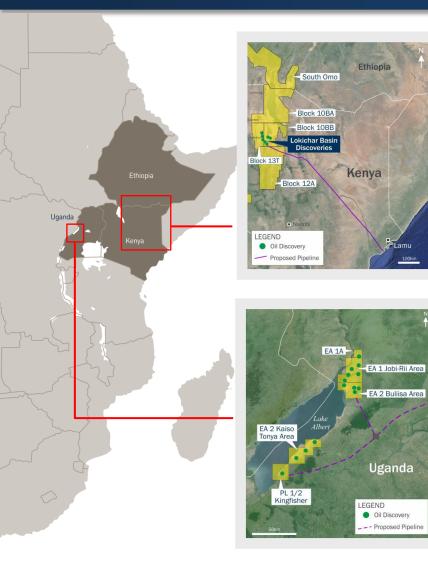
FY 2012



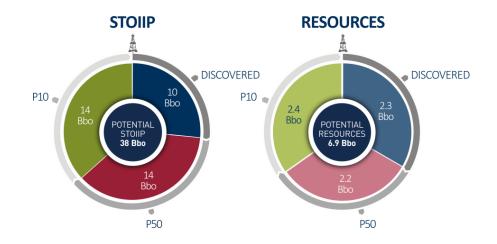


1H 2014

## Progressing oil resources towards development in East Africa



- Full life cycle regional scale E&P business
- Two basins discovered; over 300,000 bopd gross potential
- Large yet-to-find from basin opening campaigns
- GoU, GoK & partners aligned for earliest possible first oil
- Significant progress on Uganda and Kenya upstream developments and export pipeline



World class asset base – early in value cycle

## Highlights



Core West African production

Core West African production on track; generating 1H pre tax operating cashflow \$916m

TEN development

TEN development mid-2016 first oil on track; building to a 100,000bopd regional business

East Africa progress

Kenya E&A progressing; Uganda & Kenya development studies underway for 2015/16 FID's

Non-core asset portfolio management

Portfolio management of non-core Asian and North Sea assets on track







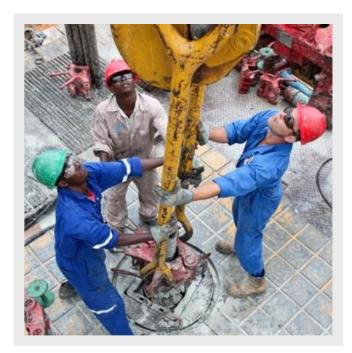
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## Finding oil in 2014



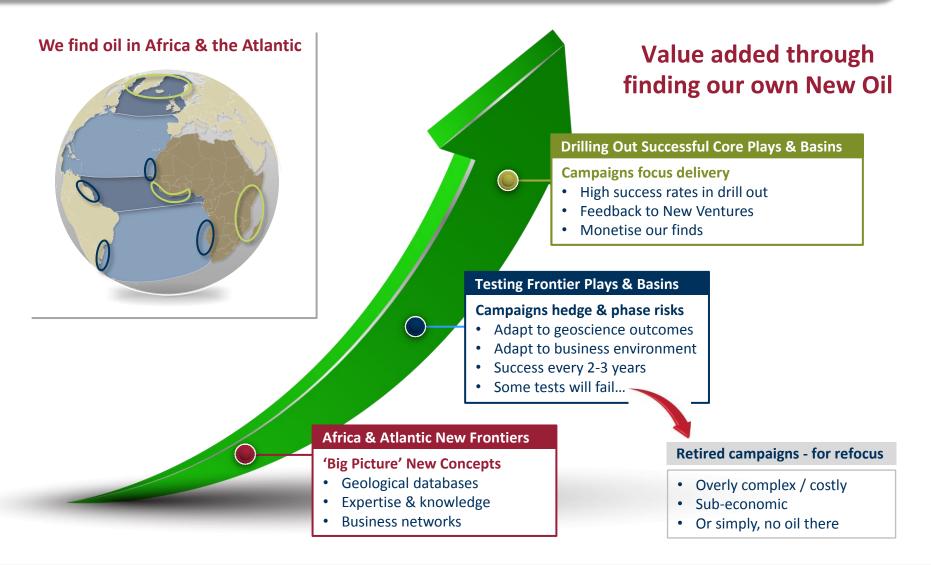
H1 E&A Outcomes	Commercial Discovery	Technical Discovery	Dry Hole
EAST AFRICA			
Exploration	Ewoi-1 Amosing-1 Ekunyuk-1	Emong-1	Shimela-1 Gardim-1
Appraisal	Twiga-2A Ngamia-2 Waraga-3 Rii-2		Agete-2E
WEST AFRICA	1		
Exploration	lgongo-1	Fregate-1	Tapendar-1
Appraisal	J-24 LM3 OMOC-601		
NORTH ATLANTIC			
Exploration	Hanssen-1 Vincent-1	Langlitinden-1	Gotama-1 Lupus-1
Appraisal			Butch East Butch SW

- We continue to find our own oil
- Cost-effective feedstock for value creation
- Campaign approach hedges annual variability
- E&A investment managed to maximise value



## Campaign approach to finding oil in Africa & the Atlantic

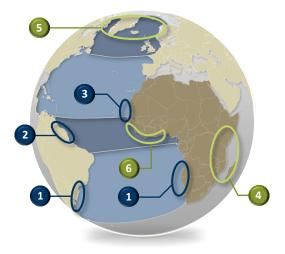




## Balancing investment across the portfolio



### We find oil in Africa & the Atlantic



### Frontier

#### **1** South Atlantic Margins

Low cost options give exposure to upside Older turbidites beneath shelf (low cost)

### Guyanas Margin

2

New oil basin opened in 2011 Strong portfolio enables value refocus

#### Africa & Atlantic New Frontiers

>100 opportunities reviewed p.a. 97% rejected on value basis

#### 2015 E&A Capex Split



#### **B** Central Atlantic Margin

New oil play opened in 2014 Shift to lower-cost material oil plays

~25%

### Core



East African Rift Basins

10 Bbo STOIIP found in ~40 Bbo potential 2 new oil rift basins opened 2006 & 2012 Oil province potential in 12+ basin portfolio

### (5)

#### North Atlantic Continental Shelf

Hoop oil basin opened in Barents Sea Near infrastructure exploration Fiscal incentives encourage exploration

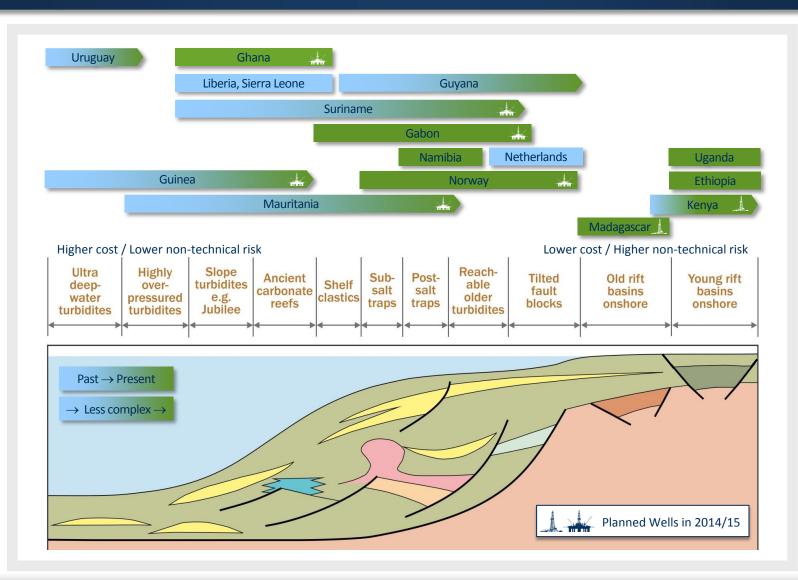
6

#### West African Margin

Discovered 4.6 Bboe in place Near infrastructure exploration Selective wildcats for elusive next Jubilee

~65%

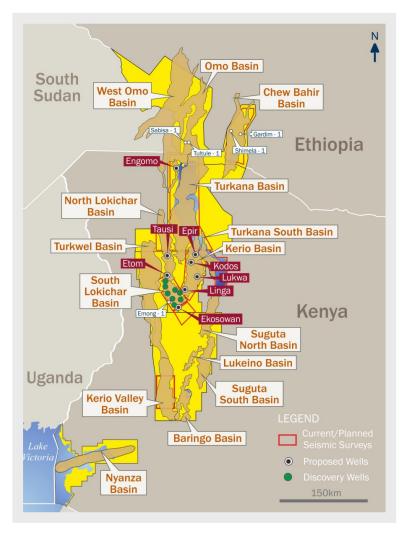
## Shifts of emphasis within exploration portfolio for value



ΤΙΠΙΟΠΙ

## Kenya – Ethiopia: World-class oil province potential





## **E&A campaign delivery – parallel approach**

### 1. South Lokichar Basin drill-out, appraisal & testing

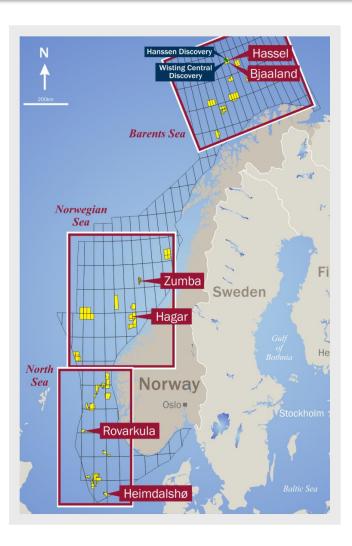
- Discovery of over 600 mmbo Pmean gross resources
- · Flow tests confirm good productivity
- 8/9 wildcat wells discover producible oil
- Emong-1 discovers oil in tight sands
- Etom-1 drilling and Ekosowan-1 to spud Q4

### 2. Basin testing wildcats

- Volcanics encountered in Chew Bahir lacustrine basin
- Kodos-1 to test Kerio Central sub-basin in 2014
- Epir-1 to test Kerio North sub-basin in 2014
- Engomo-1 to test Turkana NW sub-basin in 2014
- 2015 activity: five more sub-basins to be tested

Eight new sub-basins to be tested in 18 months

## Near infrastructure & Frontier opportunities in North Atlantic



2014 HALF-YEARLY RESULTS











#### **Barents Sea - Frontier**

- Major oil finds continue at Wisting prospect cluster
- Hassel & Bjaaland target cluster potential up to 500 mmbo

### Norwegian Sea - Near Infrastructure

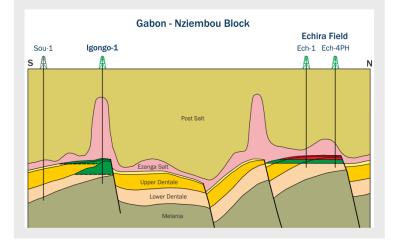
- Zumba Upper Jurassic exciting new syn-rift play
- Hagar Upper Jurassic structural play

### North Sea - Near Infrastructure

- Heimdalshø drilling Upper Jurassic structural play
- Rovarkula Middle & Upper Jurassic structural play

## West African near-field exploration in producing heartlands



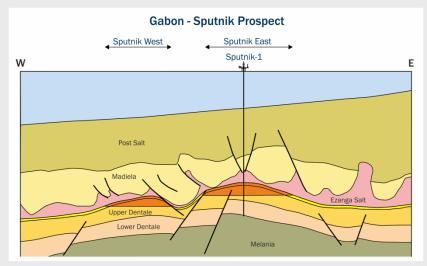


### Frontier exploration in producing heartlands

- Pre-salt oil play being tested offshore
- Sandstone reservoirs targeted; age equivalent to Brazil/Angola pre-salt carbonate play
- Sputnik to spud imminently 206 mmbo (gross unrisked mean), 427 mmbo (P10), CoS 27%
- Further prospects & leads identified with gross mean risked resources > 330 mmbo

### **Oil field & production plateau extensions**

- Numerous near-field & near-infrastructure exploration & appraisal prospects in Ghana, Gabon (e.g. Igongo), Equatorial Guinea, Côte d'Ivoire, Congo B
- High value & cost effective incremental projects for rapid tie back & oil production



Utilising proprietary knowledge & technology for maximum value extraction

## Highlights



### Good progress year to date

Successful Exploration & Appraisal outcomes in first half of 2014, continuing to add value to portfolio

## Campaign approach

Campaign approach hedges annual variability, phases risk & focuses delivery

## Shift of emphasis

Investment in successful onshore campaigns and lower complexity offshore wells to maximise value

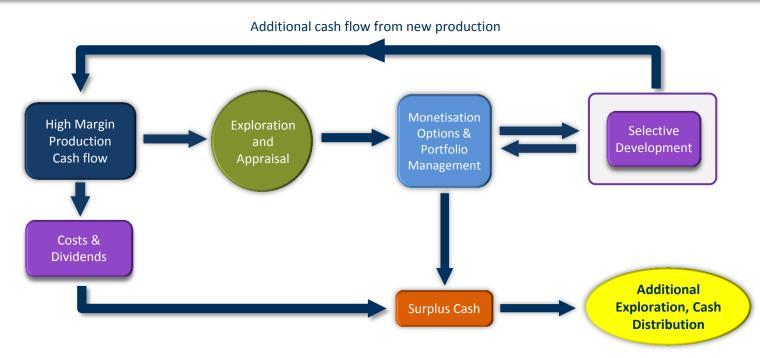
More to come in 2014+

Three basin opening wildcats in Kenya, Sputnik well in Gabon & multiple wells in Norway

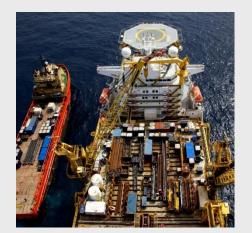


## Delivering on our strategy





- Material cash flow generation and development upside from West Africa
- New oil province potential in East Africa delivering significant future resource growth
- Industry leading exploration portfolio in Africa and Atlantic Margins
- Strong balance sheet provides foundations to deliver long term value to shareholders



### TULLOW OIL PLC – 2014 HALF-YEARLY RESULTS

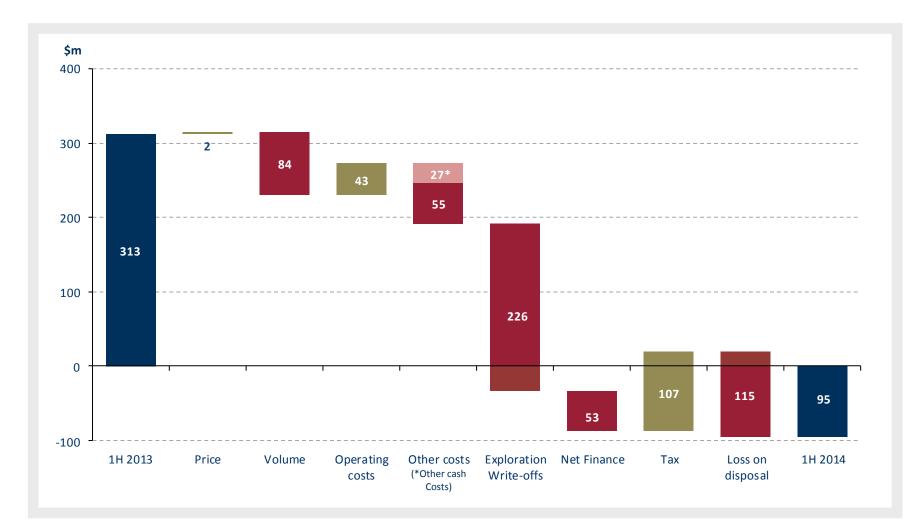
APPENDIX





## Net income 1H 2014 v 1H 2013







### TULLOW OIL PLC – 2014 HALF-YEARLY RESULTS

## APPENDIX DEVELOPMENT & OPERATIONS





## Potential to increase Jubilee FPSO capacity



		Work completed	Work in progress	Work outstanding
Oil optimisation		Run down improvements Cooling optimisation	Run down improvements Cooling modifications	Pumps and exchangers
Gas compres	sion	Debottlenecking	Rewheeling Dehydration optimisation	Upgrading power capacity
Water injecti	ion		Scale unit by-pass	
POTENTIAL	Oil	125 kbopd 🗖	135 kbopd	140 kbopd
	Gas	160 mmscfd 🗖	🔶 170 mmscd 🗖	180 mmscfd
PRODUCED				

#### **FPSO capacity improvements**

### • Current oil capacity

- Constrained by gas export infrastructure
- On track to deliver 100,000 bopd in 2014

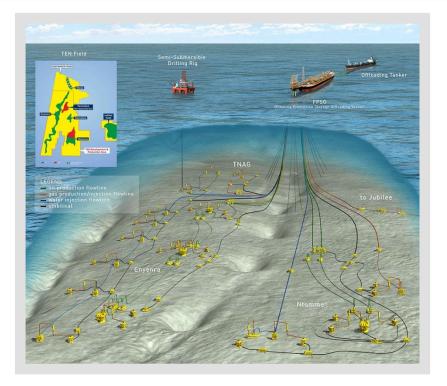
### • FPSO capacity is being upgraded

- FPSO tested at maximum 126,000 bopd
- On completion of FPSO debottlenecking, oil capacity of c.140,000 bopd
- Gas capacity being increased from 160 mmscfd to c.180 mmscfd
- Good reservoir management will determine long term production potential

Near term opportunities to increase long-term FPSO capacity

## Visible future growth – TEN development overview





**TEN Development Capex** US\$bn 1.6 **TEN OIL** 1.4 1.2 1.0 0.8 0.6 0.4 0.2 2014 2015 2016 2017 2018 2013

### **Base development case**

- 300 mmboe reserves being developed
- 24 well development
- Gross development capex of \$4.9 billion
- Leased FPSO, capacity of 80,000 bopd

## Mid-2016 start up

- 10 wells on stream at start up; 7 drilled to date
- Plateau production reached by end 2016
- c.\$4 billion capex spent by First Oil

### Post start up

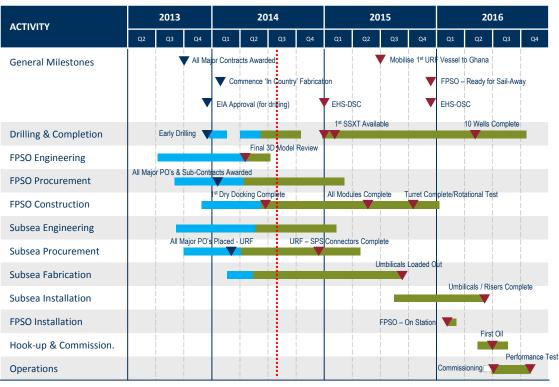
- Drill and complete remaining 14 wells by 2018
- Initiate export of gas by mid-2017
- Focus on delivering upside resources

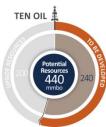
Well results to date underpin confidence in resource estimates

## Visible future growth - TEN Project on track



### **Execution schedule with strategic milestones**









- Over 2 million man-hours worked to date
- Major contracts awarded to 'world-class' contractors with West Africa experience
- Tullow delivery teams staffed and in place
- All permits in place for installation works, beginning in 2015
- Project progress to date on track; expect progress to be c.50% by end of 2014

Project remains on schedule and within budget

## Non-operated - strengths and opportunities



Material portfolio of high margin resources

High margin oil fields give broad technical base with potential to drive future value growth

Influencing non-operated activities

Learning from and challenging operators to transfer knowledge across West Africa portfolio

Track record of sustaining production

Selective high quality investment opportunities enable sustained production

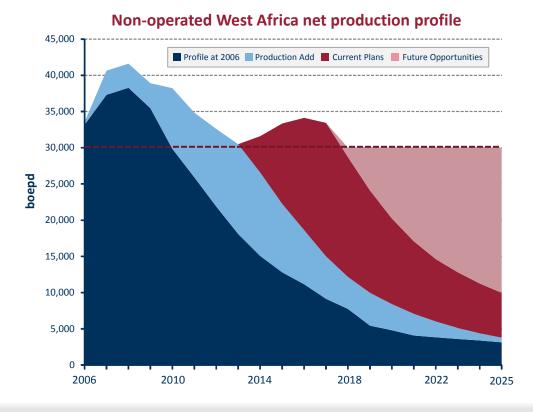
Stakeholder management

Strong in-country relationships to ensure alignment with host Governments

### Non-operated – sustaining high margin production



- Good technical work has delivered investment opportunities
- High return investments compete strongly for capital within Tullow's portfolio
- Medium term investment plans sanctioned and under way

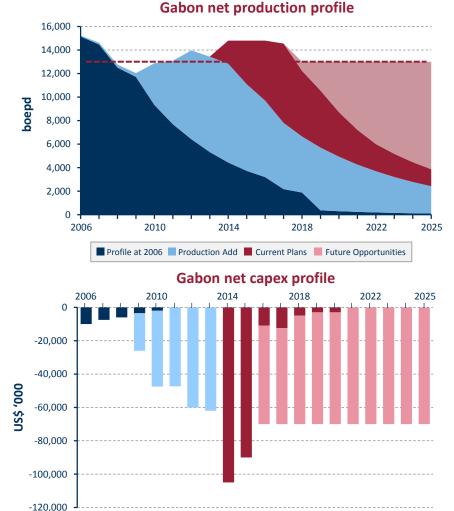


High value incremental investments can sustain net production around 30,000 boepd to 2020+



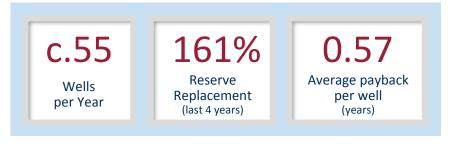
### Non-operated case study: Gabon





## • High value infill drilling has offset decline

- Tullow technical influence impacting Operator decisions
- Sputnik, pre-salt exploration opportunity, offers material upside potential in 2014

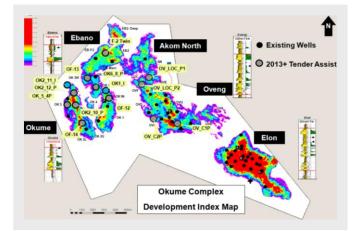


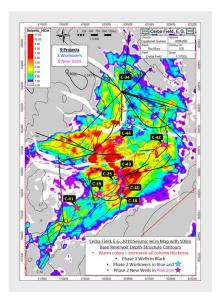
Strong reserves replacement can sustain net production >13,000 boepd, with exploration upside

### Non-operated case study: Equatorial Guinea

- Use of 4D seismic data to optimise infill drilling
  - First iteration in 2010 (learning ahead of use at Jubilee & TEN)
  - Next campaign planned for late 2014/15 (Ceiba)
- Outstanding results achieved on Ceiba
  - Initial 20,000 bopd gross flow rate from recent infill wells
- Ongoing drilling activity on Okume Complex
  - -10 well programme under way
  - -4 future wells on Elon, dependent on 4D data processing

4D seismic enabling previously unseen oil to be developed

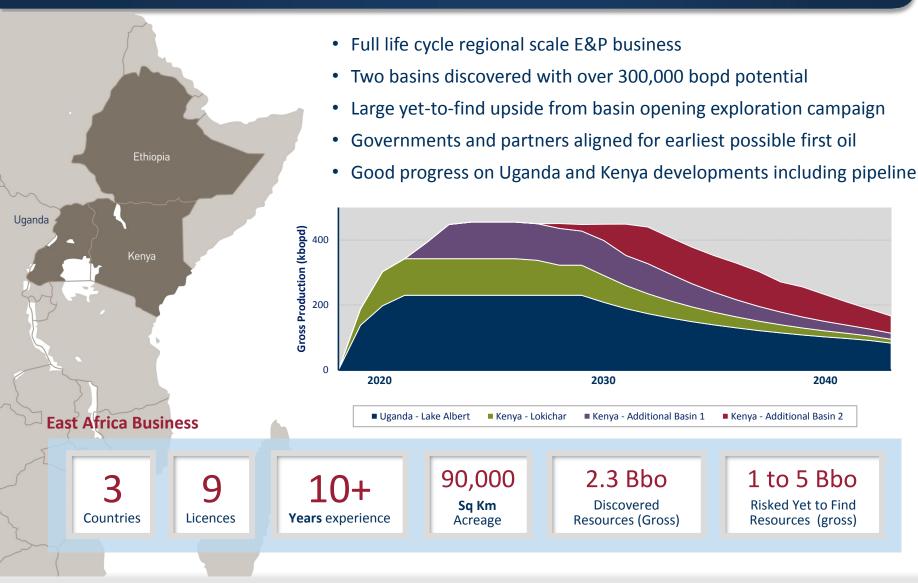




### East Africa Business highlights



2040



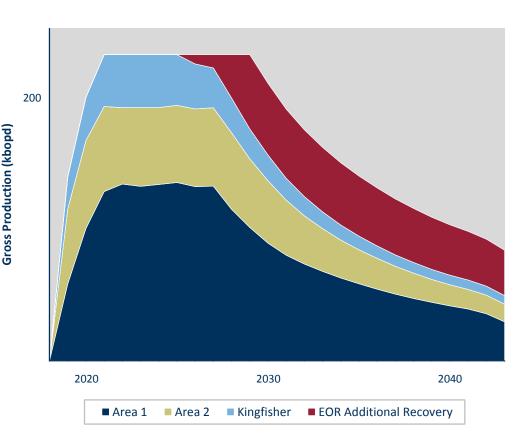
### Uganda – development status

#### **Project definition being finalised**

- Appraisal programme completed
- Development costs reduced by 30%
- Kingfisher PL awarded, all EA2 Field Development plans submitted to GoU, remaining EA1 plans to be submitted between June and December 2014.
- Enhanced oil recovery (EOR) being worked

# MoU underpins basis of development

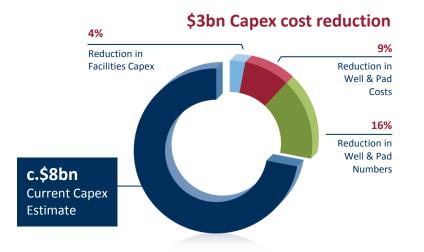
- MoU provides agreement on export pipeline and local refinery initially 30,000 bopd
- Regional export pipeline being progressed.



### Focus on enhancing project value and regional synergies

### Uganda development optimisation and Capex savings



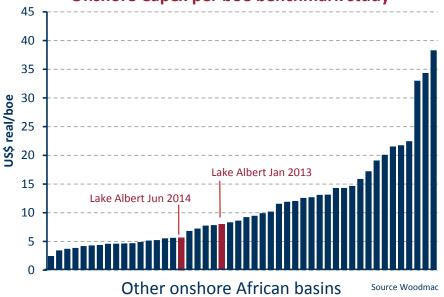


- Development optimisation and Capex reduction programme in 2013/14
- Capex reduced from c.\$11bn to c.\$8bn
  Tullow's c.\$6/bbl competitive with benchmarks
- Further Capex reductions targeted
- 60% of life of project Capex pre first oil
  - Tullow's share \$1.6 bn at current equity

#### **Capex reductions**

- · Wells executed to standardised repeatable designs
- · Well designs minimise pad numbers
- Purpose built rigs and pads minimise drilling, completion and rig move times
- Facilities costs reduced by redesign of process, reduction in flowline lengths & sharing of facilities

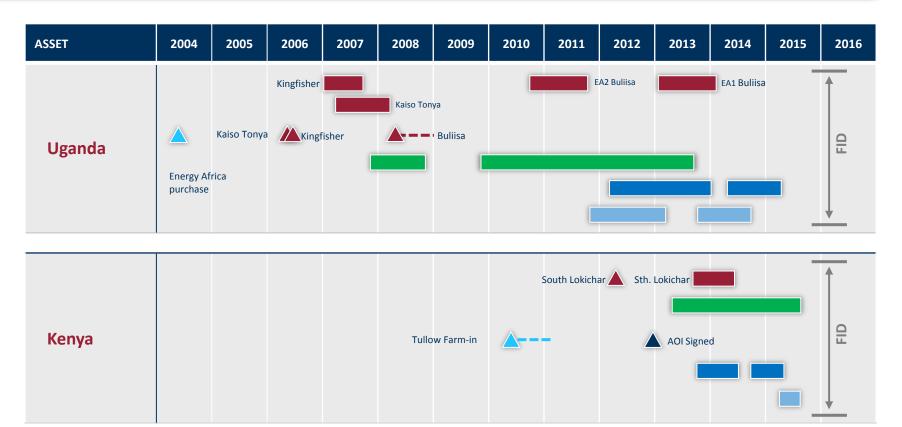
### Further Capex reductions targeted



#### Onshore Capex per boe benchmark study

### Shortening appraisal timelines in Kenya





### Kenya and Uganda FID can be delivered together by mid-2016

Discoveries

Milestones

**3D** Seismic

Appraisal, Drilling & Testing

FEED

FDP

### Focus on driving down Kenya well costs

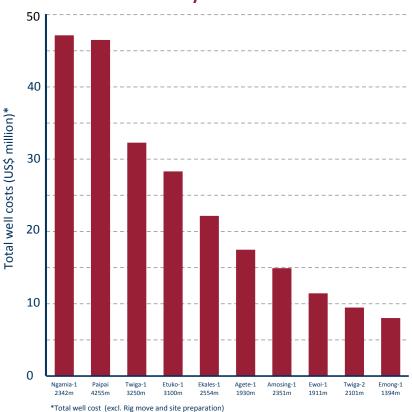


#### Since 2004

- 104 exploration and appraisal wells & sidetracks 77 as operator
- 40 wells tested both production & injection
- 57,700 sq km of FTG surveys all as operator
- 12,362 km 2D seismic & 2,152 sq km 3D seismic

### Significant savings based on experience

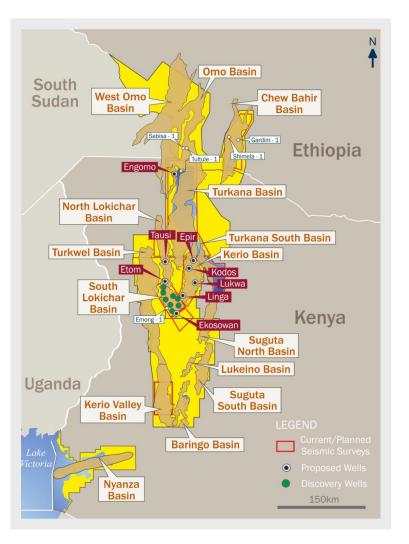
- Transferring learnings on well design and execution across region
- Driving down exploration drilling costs & further reductions targeted
- Reducing rig move time and cost



#### Tullow most experienced explorer of Tertiary Rift Basins in Africa

Kenya well costs

### Exploring Kenya & Ethiopia's significant resource potential



The following basins will be tested in 2014/2015	Date
North Kerio Basin: Kodos	3Q 2014
Turkana Central Basin: Epir	3Q 2014
Turkana North Basin: Engomo	4Q 2014
North Lokichar Basin	1H 2015
Kerio Valley Basin	1H 2015
Nyanza Trough	2H 2015
Kerio South Basin	2H 2015
South Omo Basin	2H 2015

ΤΗΓΟΗ

Eight basin opening wells to be drilled by end of 2015

### Kenya development plans rapidly advancing

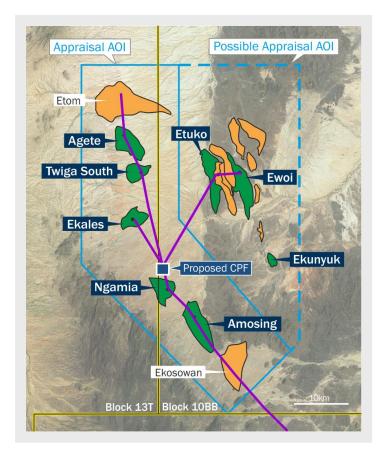


#### Explore, appraise and develop simultaneously

- Exploration and appraisal drill out by end 2015
  - 600 mmbo Pmean gross resources discovered to date
- Appraisal Area of Interest (AOI) established
- Extended well tests being planned
- Development plan for discovered resources by end 2015
  Targeting c.100,000 bopd gross
- Social & environmental baseline surveys under way
- Parallel basin opening exploration campaign
  Potential for subsequent development phases

### Shortening timeline to first oil

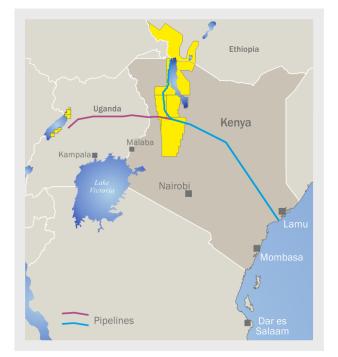
- · Government aligned on early first oil ambitions
- Leveraging Uganda experience to accelerate activities
- Targeting end 2015/2016 FID



### Rapid progress being made towards commercialisation

### East Africa regional crude oil export pipelines







- Regional pipeline agreed
  - Governments across region supportive
- Significant progress on technical design
  - Routing and environmental screening completed
  - Conceptual design studies completed
    - Buried pipeline
    - Flow assurance heating technology identified
    - Offshore loading system concept designs complete
  - Pre-FEED substantially progressed
  - Current costs estimated at c.\$4.5 bn
- Structuring of pipeline companies being addressed
  - Tariffs and commercial structures being progressed

Export pipelines will unlock value of regions oil



#### TULLOW OIL PLC – 2014 HALF-YEARLY RESULTS

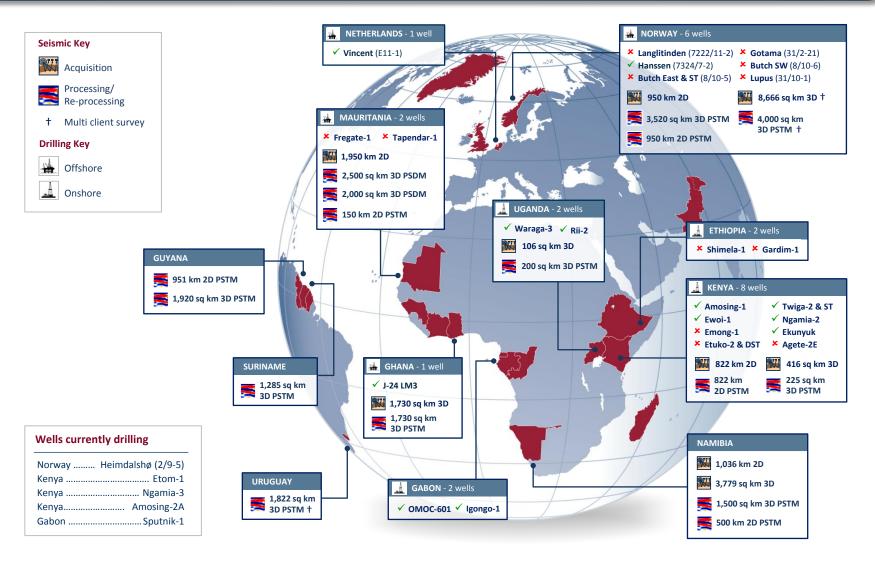
APPENDIX EXPLORATION & APPRAISAL





### 2014 Exploration and Appraisal activities





### 18 month Exploration and Appraisal programme



				mmboe			
Country	Block	Prospect/Well	Interest	Gross Mean	Net Mean	Spud Date	
VEST & NORTH A	FRICA						
Gabon	Arouwe	Sputnik-1	35%	206	72	Imminent	
· · ·	anned exploration wells, Tullow's ploration wells to add to the succ	. ,	, .	ack record of replacing re	eserves and sustaining pro	oduction.	
Mauritania	C-10	Kibaro/Lamina	59.15% (op)	67 / 85	39 / 52	2H 2015	
The Mauritania expl	loration programme continues wi	th the drilling of Kibaro or Lamir	a on the shelf area of Blo	ck C-10 in 2015.			
	_						
			10.050(1)	20			
Ghana	DW Tano	Wawa-2A	49.95% (op)	28	13	2H 2015	
Ghana	DW Tano	Wawa-2A	49.95% (op)	28	13	2H 2015	

### 18 month Exploration and Appraisal programme



				mmboe		
Country	Block	Prospect/Well	Interest	Gross Mean	Net Mean	Spud Date
OUTH & EAST AFF	RICA					
		Etom		21	8	In progress
	13T	Ekales appraisal	50% (op)	53	20	Q4 2014-2015
		Tausi		35	14	1H 2015
	100.4	Engomo (formally Kiboko)	F0% (ap)	50	23	Q4 2014
Kenya	10BA	North Turkana Basin well	50% (op)	53	24	1H 2015
		Amosing-2	50% (op)	13	5	In Progress
		Kodos		74	30	Q3 2014
		Epir (formally Aze)		55	22	Q4 2014
	10BB	Ekosowan		40	16	Q4 2014
		South Kerio Basin well		118	59	1H 2015
		Dyepa		54	22	1H 2015
		Ngamia appraisal		70	28	In progress
		Amosing appraisal		30	12	Q4 2014 - Q1 201
	12A	Lead 12A-1	65% (op)	41	21	1H 2015
	12B	Ahero Lead A	50% (op)	44	22	2H 2015

With over 120 leads and prospects across multiple basins there is significant prospectivity and follow-up potential in this pioneering campaign that has the potential to open up a significant new oil province in East Africa.

Madagascar	Block 3111	Berenty	100%* (op)	84	84	1H 2015		
2D seismic acquired, processed & interpreted - further seismic being shot in 2014 with Berenty well planned to spud 1H 2015. *- Tullow has agreed to farm-out 35% to OMV, subject to various approvals being obtained.								

### 18 month Exploration and Appraisal programme



m m h a a

				mmboe		
Country	Block	Prospect/Well	Interest	Gross Mean	Net Mean	Spud Date
EUROPE, SOUTH AN	/IERICA & ASIA					
Norway	PL 494	Heimdalshø	15%	140	21	In progress
	PL 591	Zumba	80% (op)	254	203	1H 2015
	PL 642	Hagar	20%	491	98	1H 2015
	PL537	Hassel (Wisting East N)	20%	97	17	1H 2015
	PL537	Bjaaland (Wisting East South)	20%	147	29	1H 2015
	PL626	Rovarkula	30%	36	11	1H 2015

Our exploration inventory and campaigns in Norway will continue to be built up through the years ahead, far beyond this current 18 month programme. Tullow's exciting Barents Sea frontier acreage provides transformational new exploration opportunities for opening and extending new plays particularly after the Wisting light oil discovery in 2013. Our Norwegian Sea and northern North Sea acreage has multiple proven and new plays and prospects close to existing infrastructure for quick monetisation.

Suriname	Block 31	Spari	30%	246	62	1H 2015
	Block 47	Goliathberg-Voltzberg South	100% (op)	287	287	2H 2015

3D seismic acquired, processed & interpreted over deep water turbiditic Goliathberg and other prospects in Block 47 with farm-down ongoing, and shallow water turbiditic leads and prospects in Block 31.

### Exploring for high value oil



### **Oil finding principles**

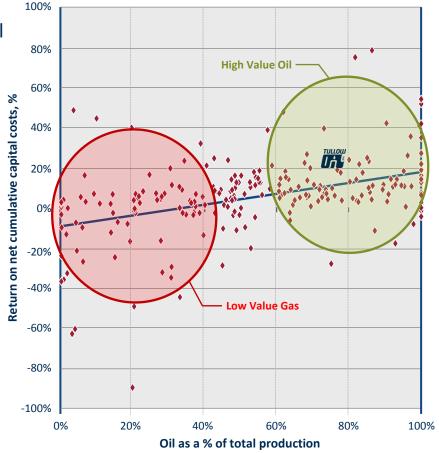
- Focus on finding high value producible light oil
- Oil is multiples more valuable than gas
- Oil is easier to commercialise

### **Oil finding approach**

- Oil finding focus applied across business
- Geophysically, oil harder to find than gas
- Proprietary technologies & know-how
- Scientific method: idea test feedback

Top quartile returns from oil discoveries

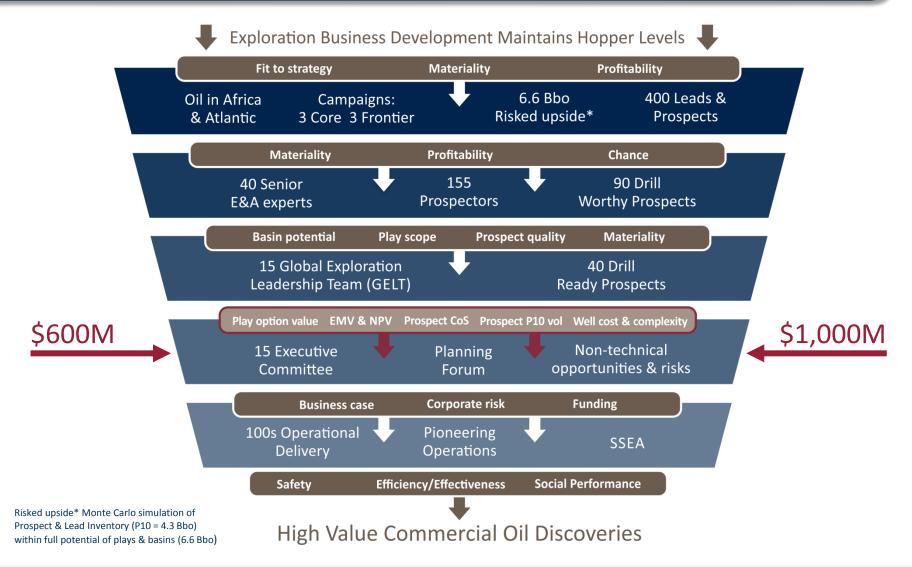
## Higher profitability associated with higher oil reserve mix



Source: IHS Herold Global Upstream Performance Review: Worldwide (August 2013)

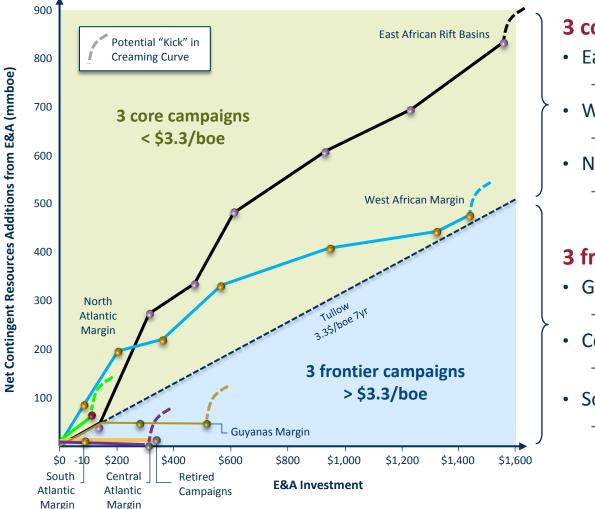
### How we explore: our process works





### Cost efficient exploration \$3.3/boe (2007-2013)





### 3 core campaigns < \$3.3/boe

- East African Rift Basins \$1.95/boe - Investing in a major winner
- West African Margin \$3.2/boe
  - Pioneering done, return to Jubilee NFE
- North Atlantic Margin \$2.25/boe - Capital efficient commercial plays

### 3 frontier campaigns > \$3.3/boe

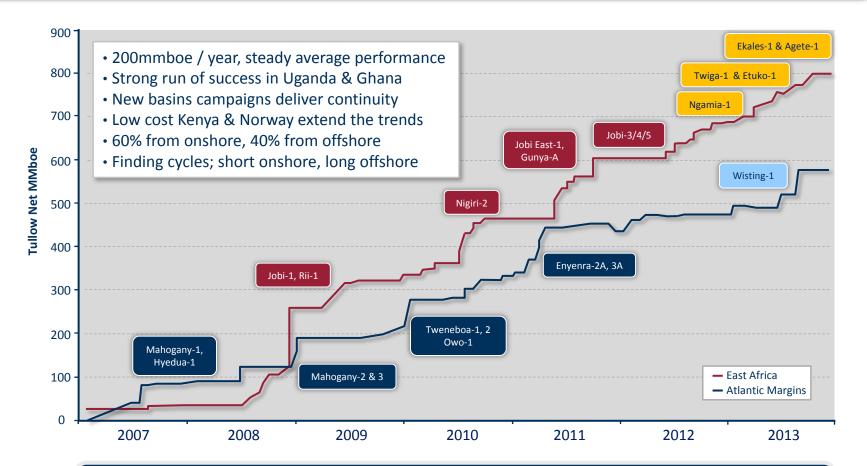
- Guyanas Margin
  - Flat-lined at Zaedyus. Suriname kick?
- Central Atlantic Margin

- Proven oil basin, shift to low cost plays

South Atlantic Margin

- Entry positions near Angola/Brazil

### Net contingent resource additions from E&A



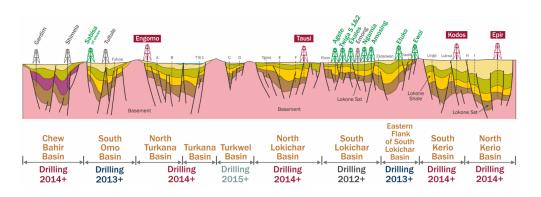
Success in new basin opening exploration strategy has led to good prospects for lower finding costs

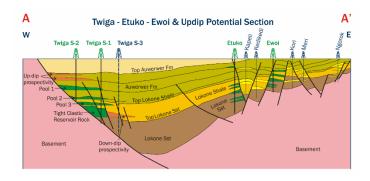
### Kenya overview: volumes, maps & cross-sections





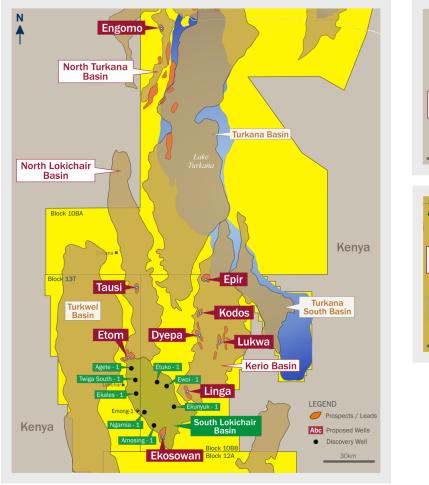


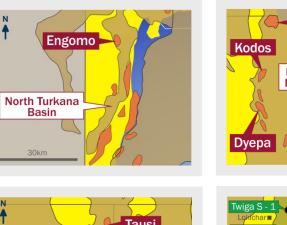


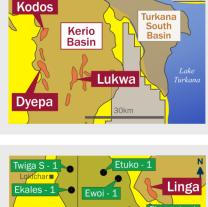


### Kenya exploration in 2014

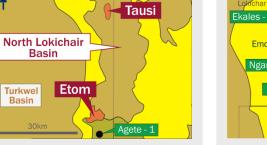








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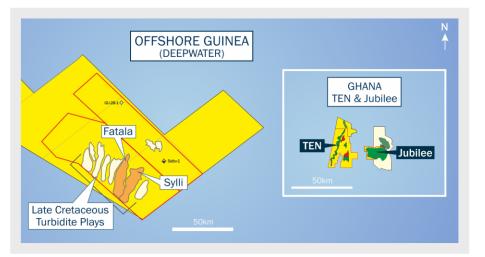


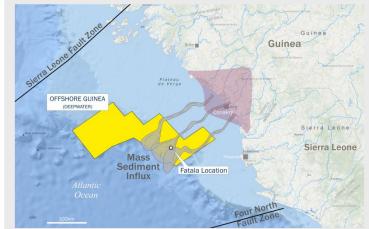


#### Three basin opening wells in 2H 2014

### Guinea phase of West African Margin Campaign







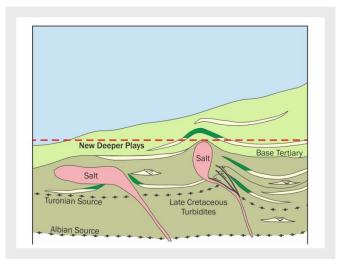
#### Targeting the elusive upside of the Jubilee play

- Regional geology points to turbidite sands deposited by an ancient delta of the Niger River
- Potential scale of opportunity on a par with Ghana
- Fatala selected for drilling; 373 mmbo (gross unrisked mean), 974 mmbo (P10), CoS 20%
- Further prospects & leads identified; total gross mean risked resources > 350mmbo

### Central Atlantic Margin Campaign



Mauritania Outboard Plays



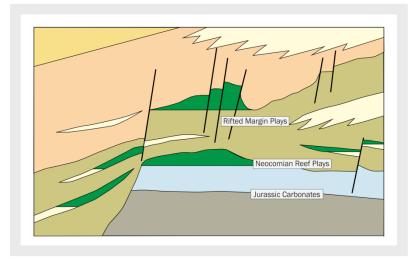
### Mauritania shelf plays (2<sup>nd</sup> phase)

- Cost effective exploration shifts inboard
- Rifted margin & carbonate plays
- Kibaro prospect; 67 mmbo (gross unrisked mean), 150 mmbo (P10), CoS 24%
- Further prospects & leads identified with gross mean risked resources > 1 Bbo

#### Mauritania deepwater turbidites (1st phase)

- Fregate-1 discovers over 30m light oil & condensate
- Commercialisation options under review (high costs)
- Follow-up potential of new oil play being high-graded
- Campaign break to integrate data

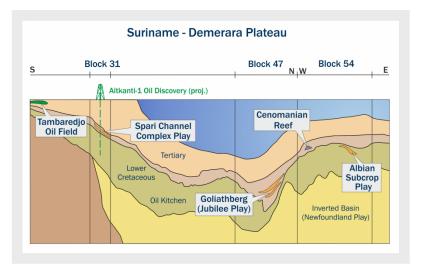
#### Mauritania Inboard Plays

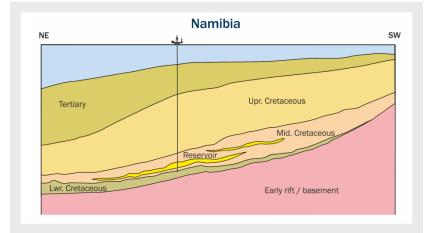


### Next growth – frontier exploration examples

#### Namibia reachable turbidites

- Older turbidites beneath shelf (low cost)
- Oil system established by Wingat-1 (HRT)
- New 3D survey highlights 2015 prospect
- Albatross prospect; 422 mmbo (gross unrisked mean), 1093 mmbo (P10), CoS 17%
- Further prospects & leads identified with gross mean risked resources > 150 mmbo

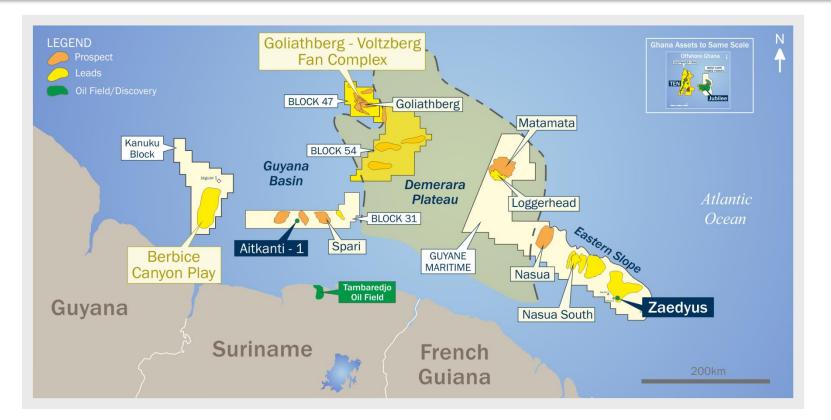




### **Guyanas Margin**

- Significant oil charge proven by Zaedyus-1 (72 m pay)
- Industry interest continues to ramp-up
- Commanding acreage spread with play diversity
- Equity being managed to mitigate exposures
- Goliathberg operated prospect in Suriname; 287 mmbo (gross unrisked mean), 788 mmbo (P10), CoS 20%
- Further prospects & leads identified with gross mean risked resources > 716 mmbo

### Guyanas: extensive "Jubilee play" potential plus upside plays



- Non-operated E&A lacks success after Zaedyus-1, turns to de-risked oil plays and new attractive lower geo-pressured prospects on Eastern Slope
- Regional campaign shifts to operated Suriname venture & to lower-cost shallower plays in proven oil basin

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