

Unlocking Value in the UKCS

The Royal Institution

25 February 2015

Agenda

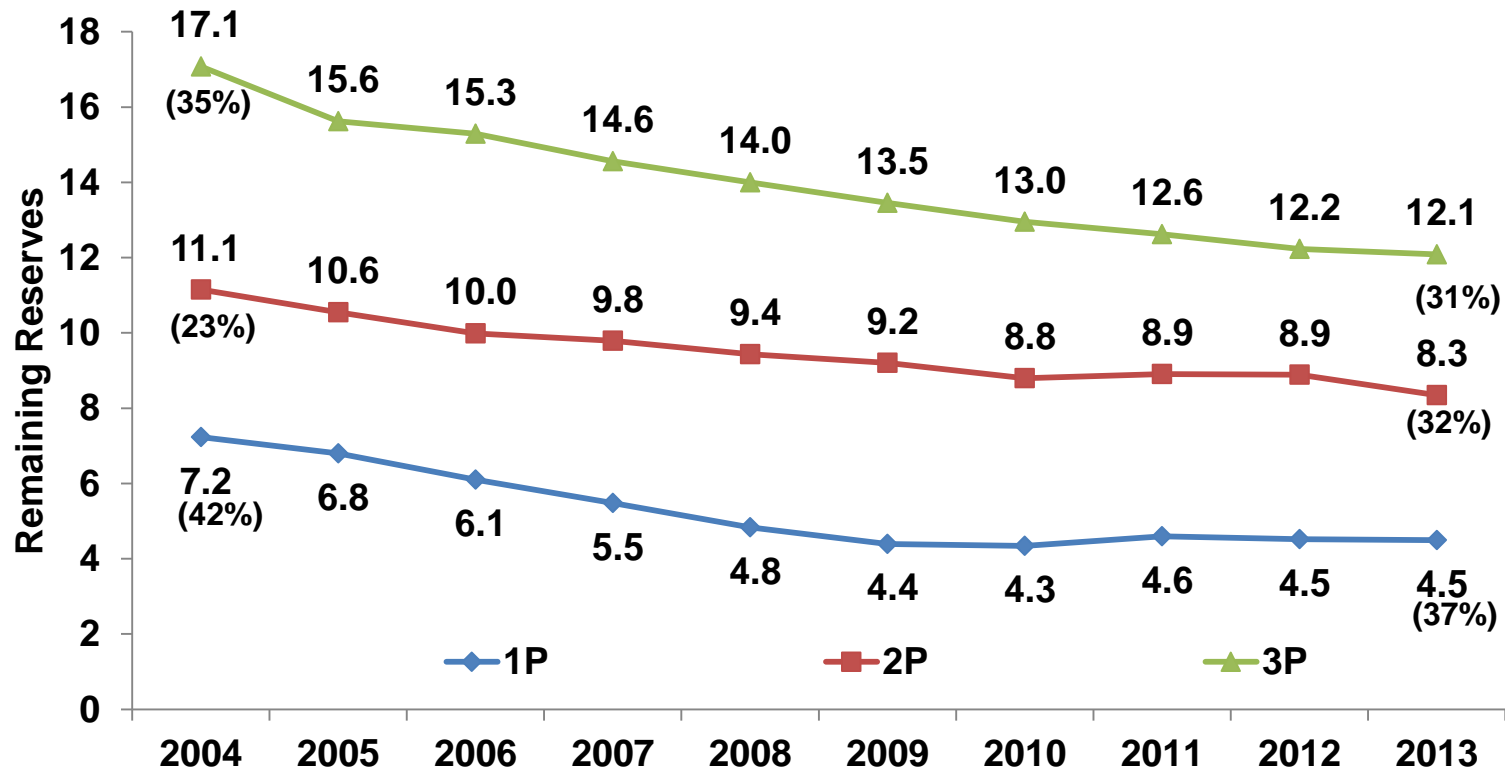
- ❑ The Remaining Opportunity
- ❑ Positioning UKCS Asset Holders for Success
- ❑ Unlocking Infrastructure
- ❑ Rejuvenating the UKCS

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- ❑ **The Remaining Opportunity**
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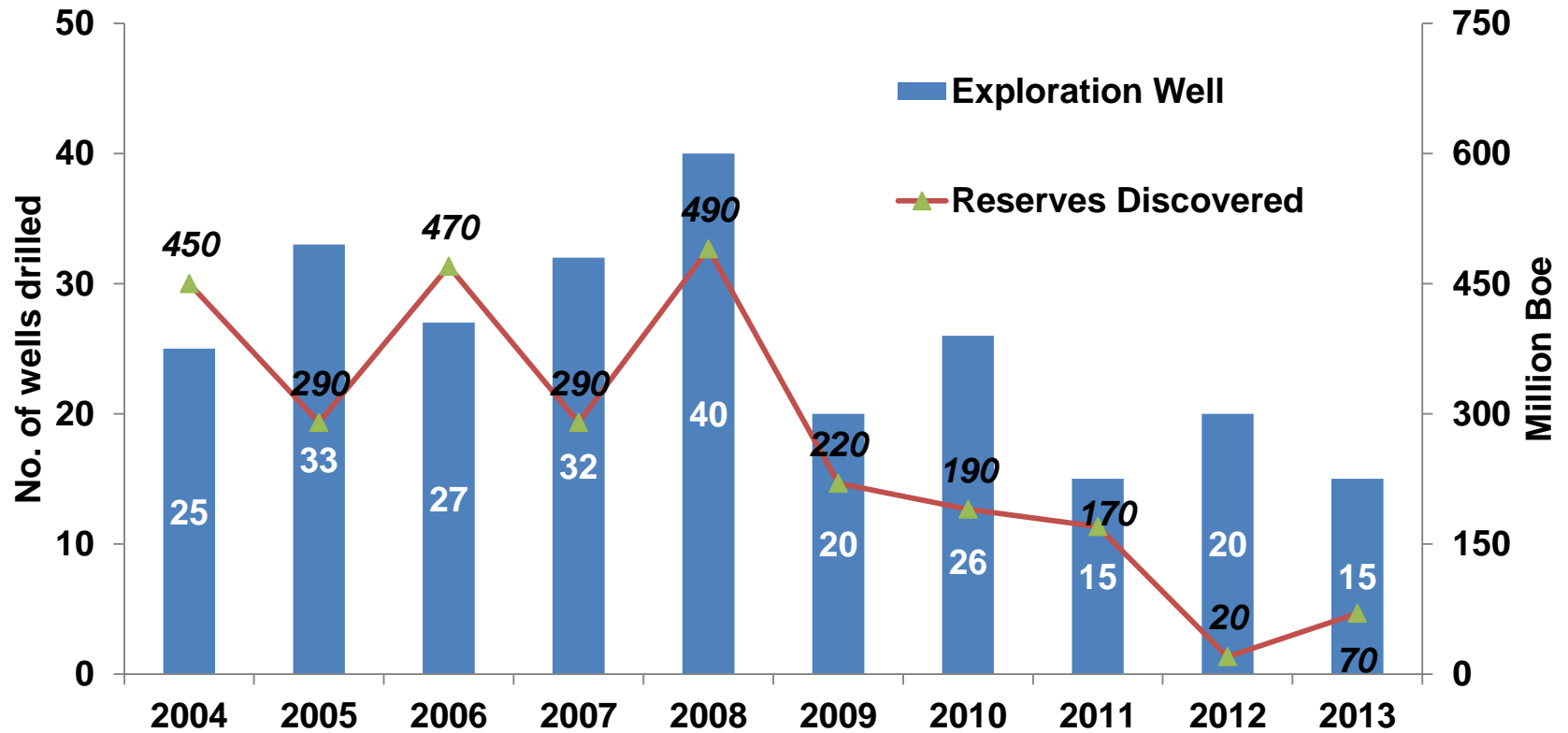
Since 2004, UK 2P reserves have fallen by ~25%...

Trends in Estimated UK Reserves, 2004-2013, Bboe



Exploration is not replacing resources and well count is down

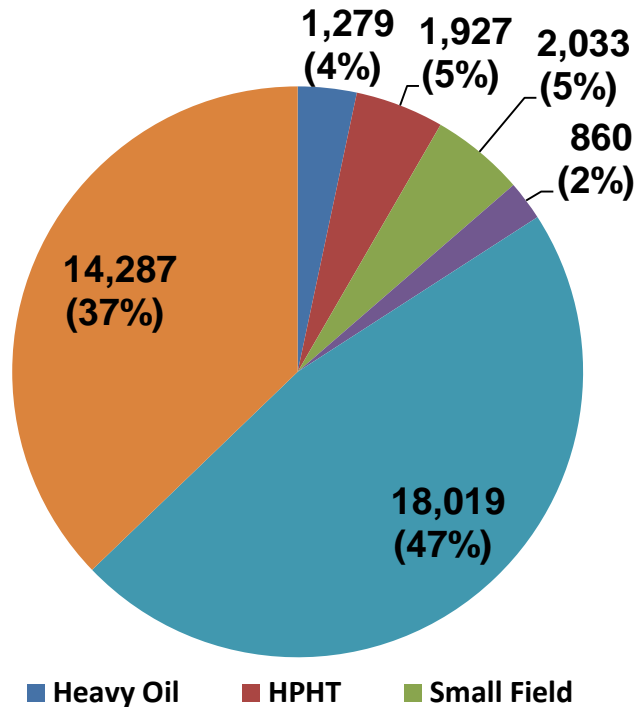
Trends in Estimated UK Exploration



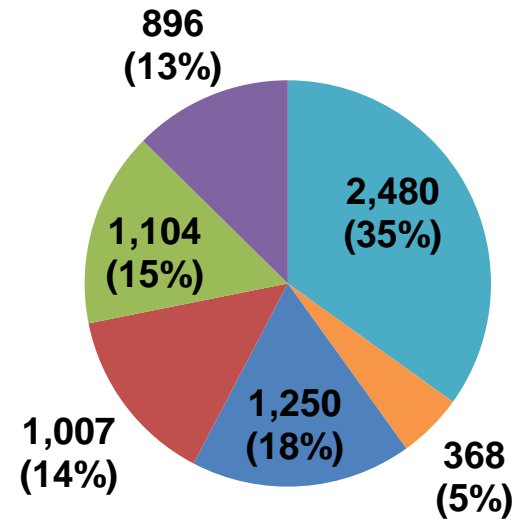
Sources: UK Department of Energy and Climate Change (DECC) and Oil and Gas UK

Although a maturing field, the UKCS still has the potential to produce an additional 7,100 MMBoe

**Oil and Gas production
1975 - 2013 (MMboe)
Total = 38,400 MMBoe**



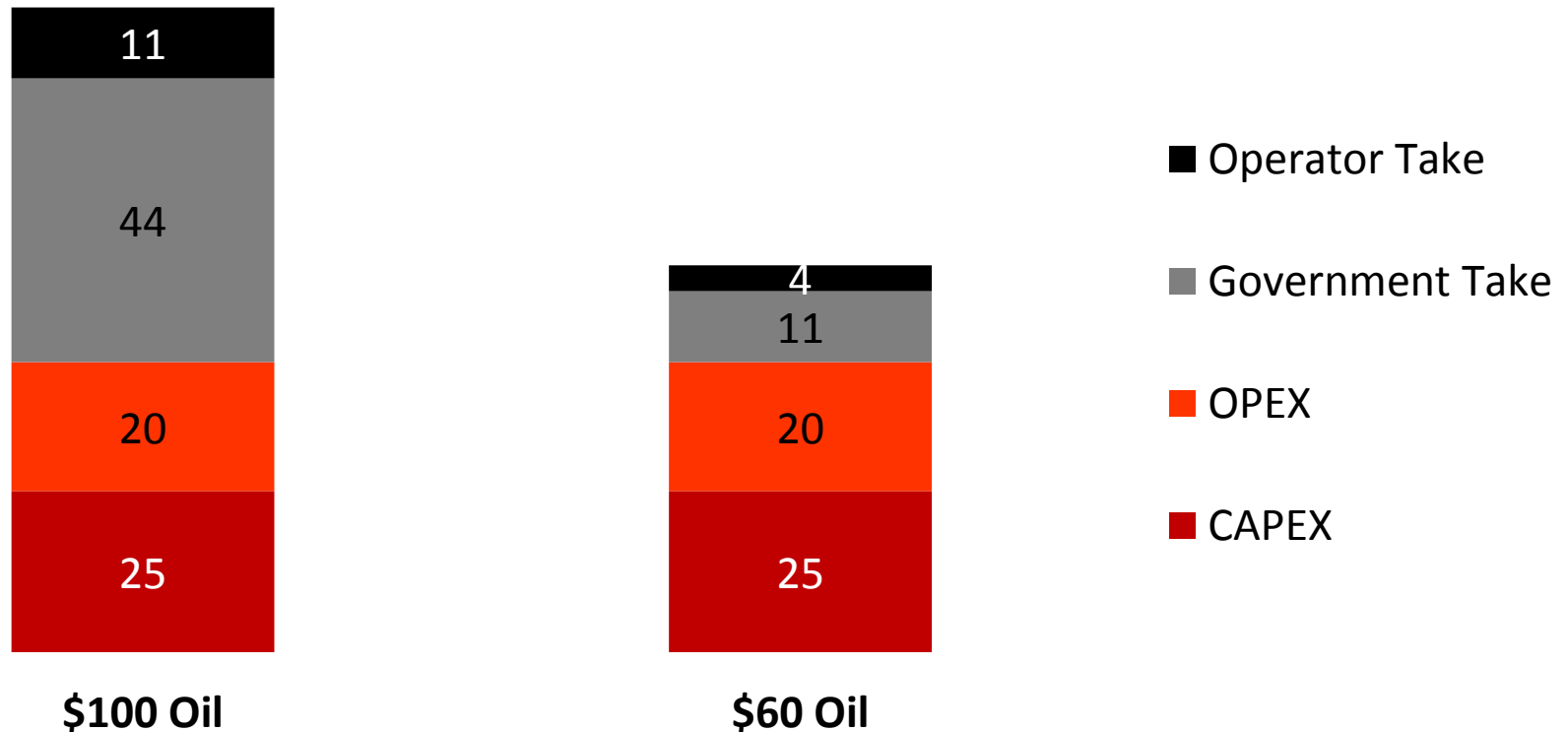
**Reserves and Resources Under
Production or Likely to be
Developed, 2014
Total = 7,109 MMBoe**



Future production is expected to diversify with a bigger proportion of total production coming from HPHT and Heavy Oil

For the UKCS to remain profitable either costs or government take must come down

Oil Price Scenarios for \$45/bbl Lifting Cost



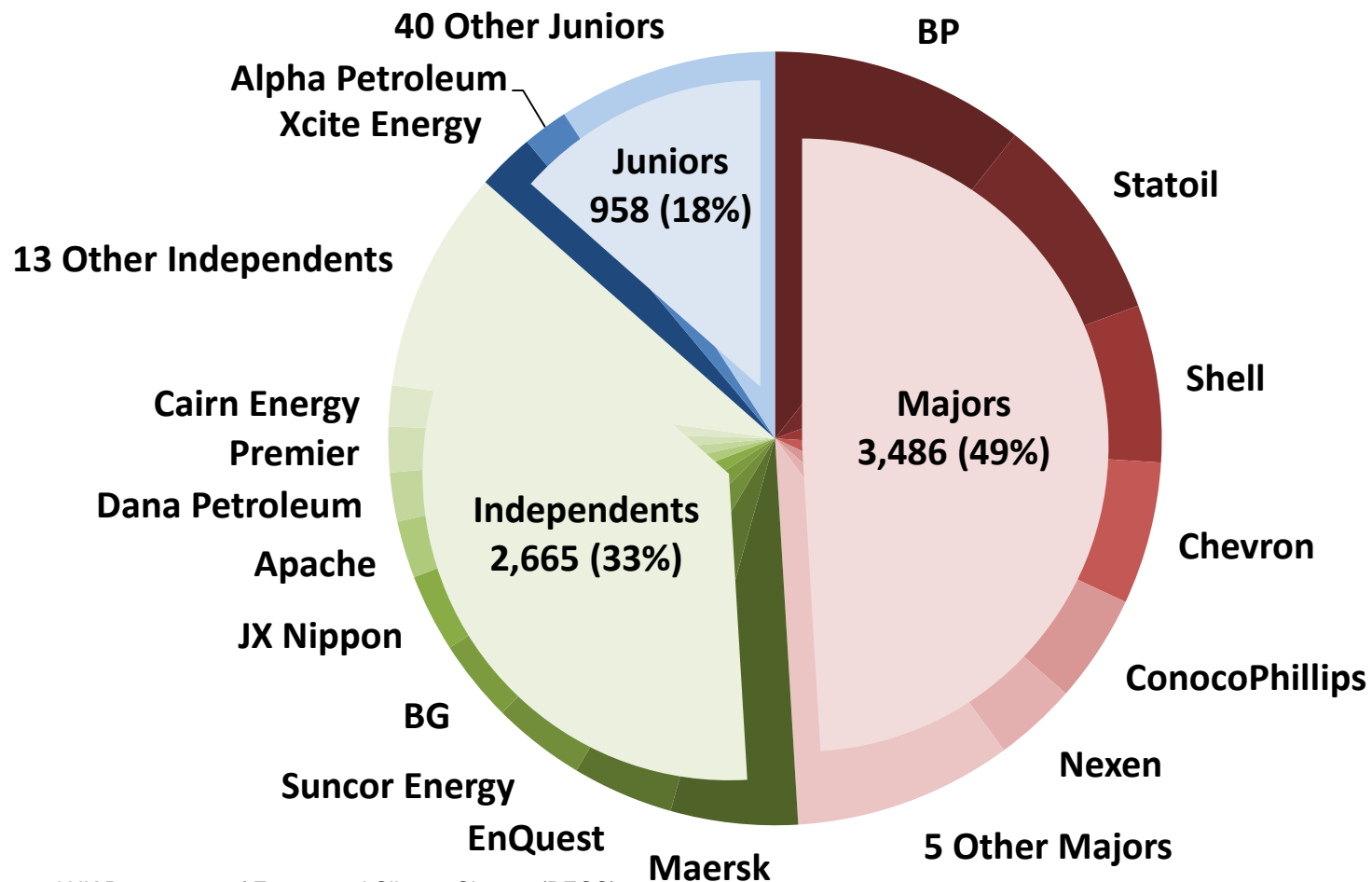
But, what does this mean for the current UKCS Asset Holders?

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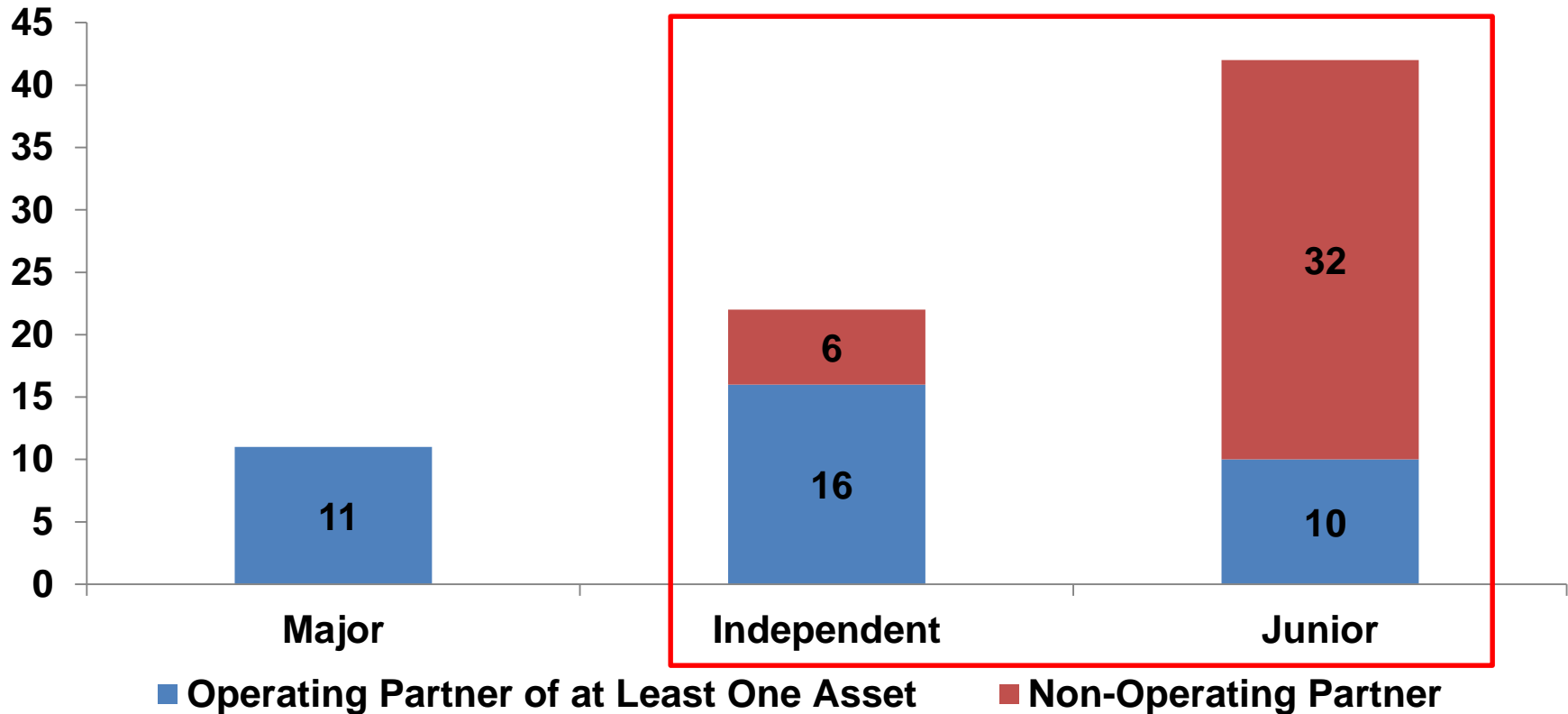
11 majors hold 49% of reserves and resources that are under production or likely to be developed

**Reserves & Resources Under Production or Likely to be Developed
Total = 7,109 MMBoe**



Although there are 75 reserves and resource holders, only 37 are the operating partner of at least one asset

Number of Holders of Reserves and Resources that are Under Production or Likely to be Developed



In the current environment, any divestitures would likely come from Independents and Juniors first, since Majors can afford a “stop-start” development approach

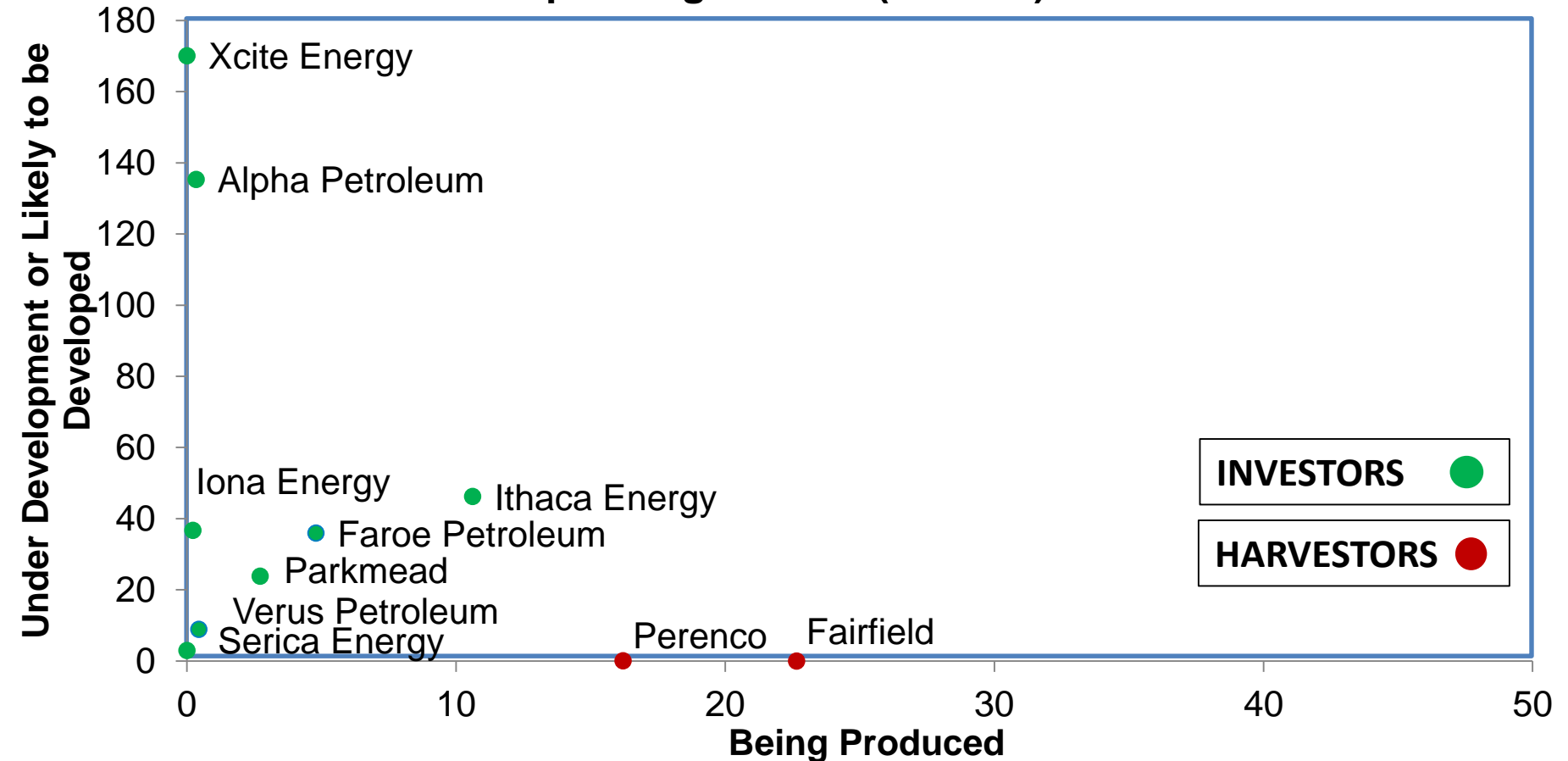
The 10 junior operators tend to be strongly North Sea-centric

Area of Operations of UKCS Juniors

Xcite Energy	North Sea				
Alpha Petroleum	North Sea				
Verus Petroleum	North Sea				
Faroe Petroleum	North Sea				
Iona Energy	North Sea				
Fairfield	North Sea				
Ithaca Energy	North Sea				
Parkmead	North Sea	Netherlands			
Serica Energy	North Sea	Ireland	Africa		
Perenco	North Sea	Africa	Vietnam	Peru	Turkey

8 of 10 operating juniors are highly active in developing new resources, which will add value to the UKCS

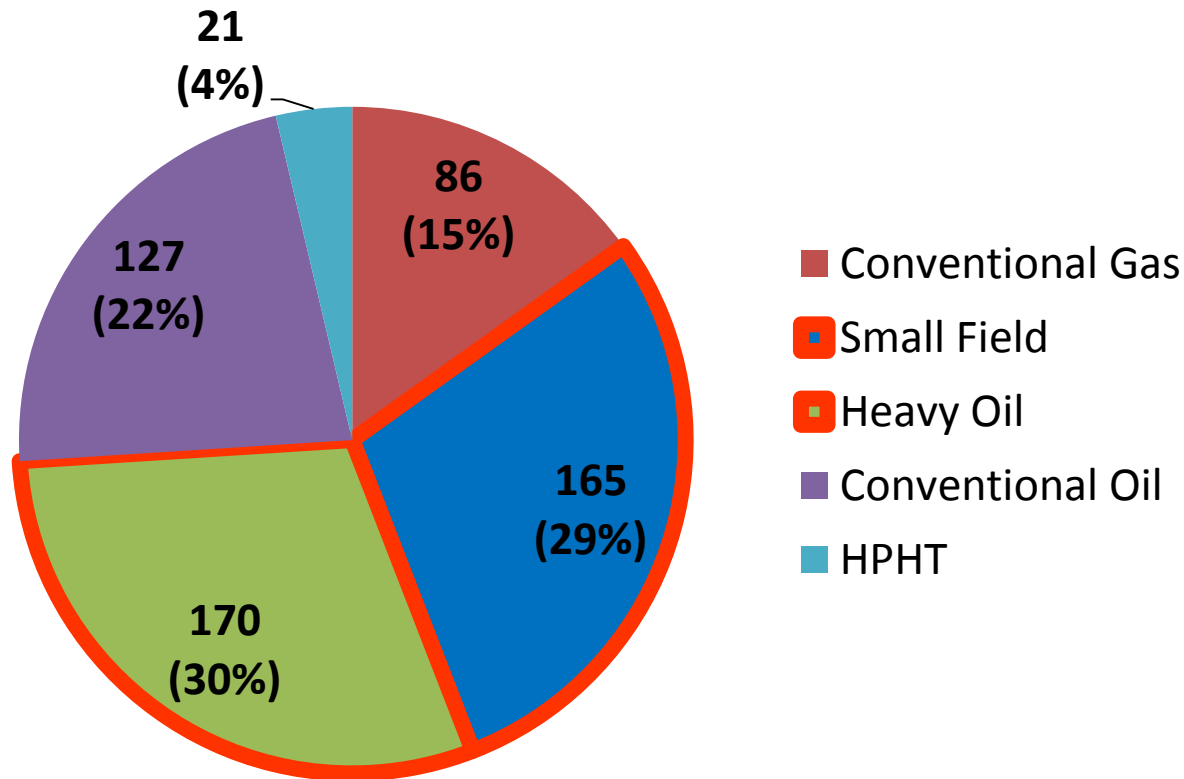
Reserves & Resources of Operating Juniors (MMBoe)



However, “Investors” are likely under pressure given low oil prices and therefore high capital costs

Juniors have a strong focus on commercially challenging small fields and technically challenging heavy oil

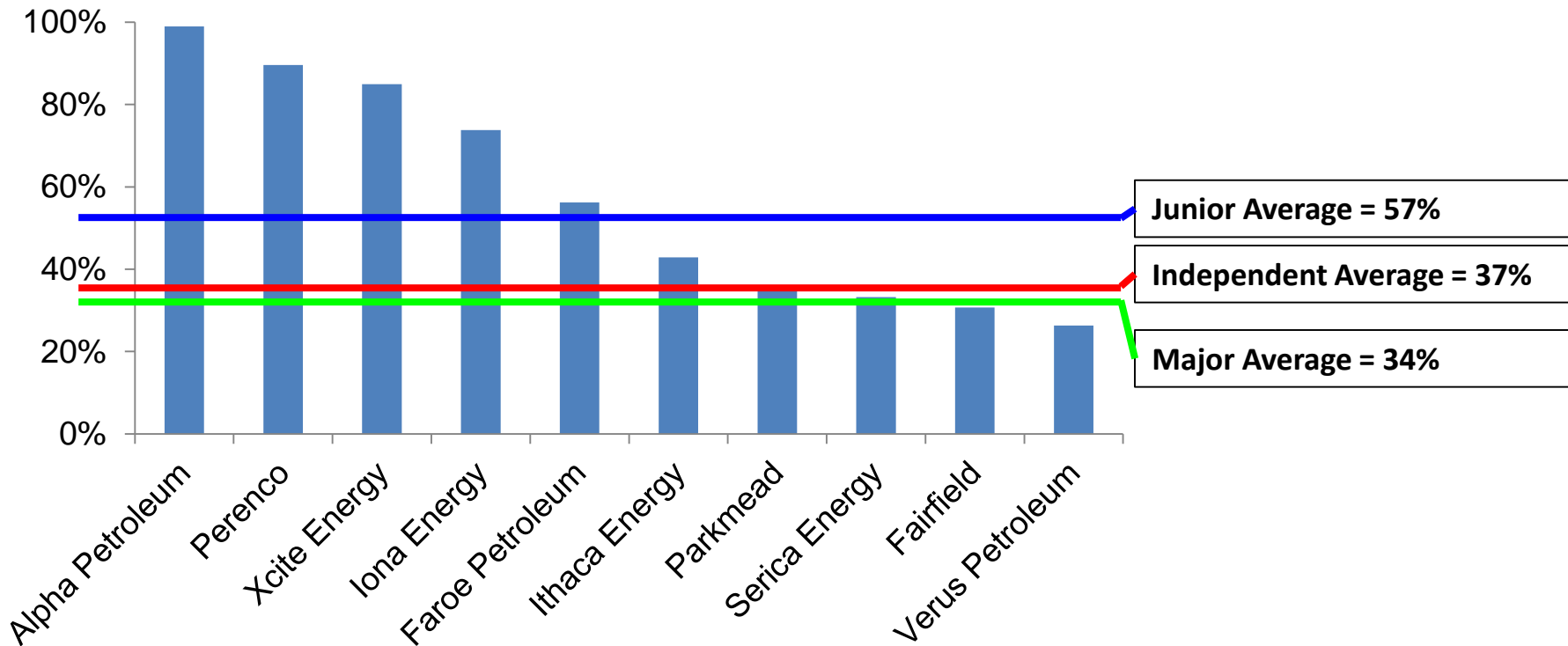
Reserves & Resources Under Development or Likely to be Developed of Operating Juniors (MMBoe)



These are the challenging developments that will be squeezed with the current low oil price

On average, Juniors retain a significantly higher equity share in their fields compared to Independents and Majors

Junior Operator Field Equity



Junior-owned equity can be leveraged for services or capital to rejuvenate distressed developments, if permitted by existing debt and capital agreements

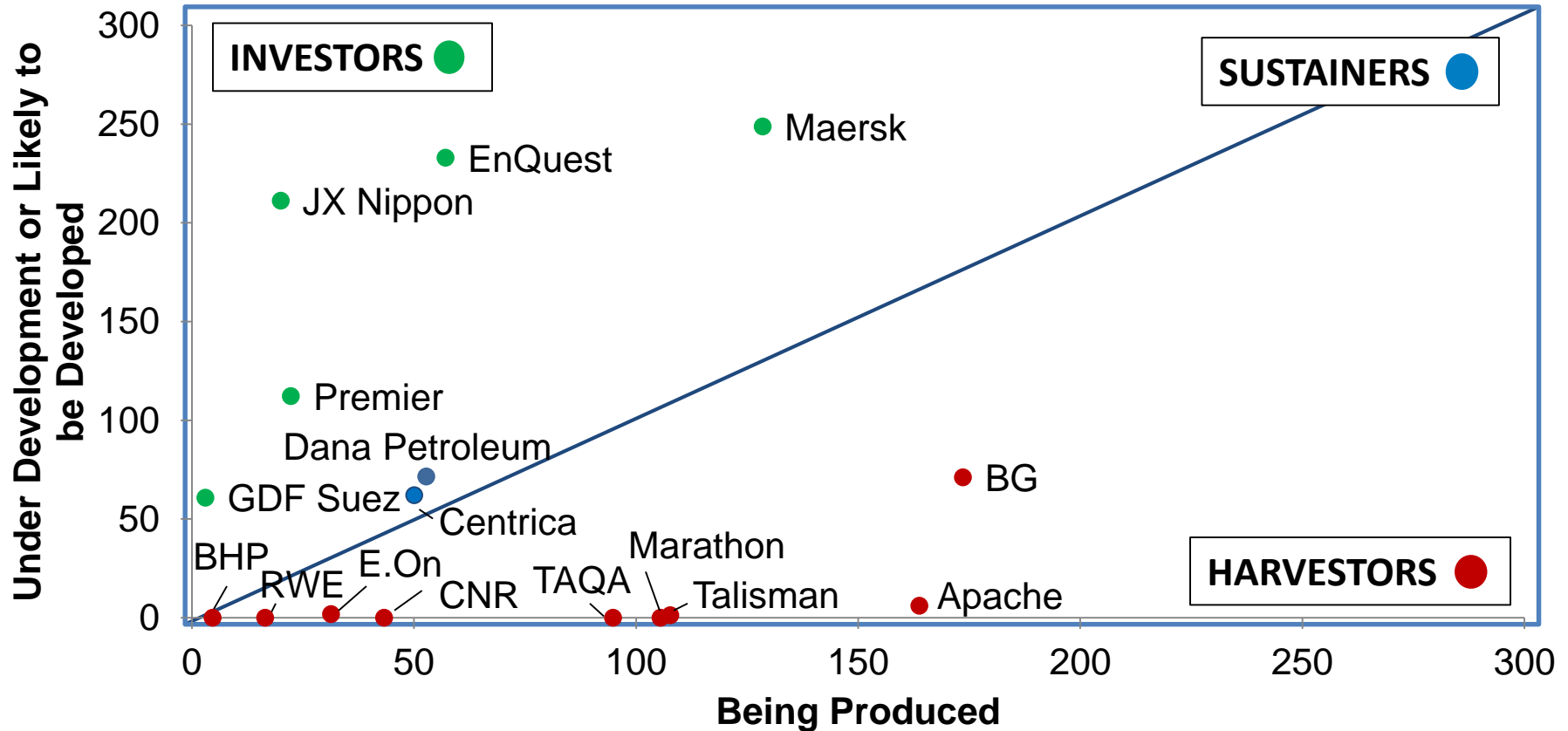
Independents are generally not as exposed to the UKCS market as the juniors

Area of Operations of UKCS Independents

EnQuest	North Sea	Malaysia					
CNR	North Sea	North America	Africa				
Dana Petroleum	North Sea	Africa	Onshore Europe				
E.ON	North Sea	Africa	Russia				
Centrica	North Sea	North America	South America				
Marathon	North Sea	Africa	North America	Middle East			
Premier	North Sea	Africa	Asia	South America			
Maersk	North Sea	Africa	Middle East	South America			
TAQA	North Sea	North America	Africa	Middle East	Asia		
GDF Suez	North Sea	Onshore Europe	Africa	Middle East	Asia		
RWE	North Sea	Onshore Europe	Africa	South America	Asia		
Apache	North Sea	Australia	Canada	United States	Egypt		
JX Nippon	North Sea	Middle East	Asia	Australia	North America		
BG	North Sea	Africa	North America	South America	Australia	Asia	
BHP	North Sea	Australia	North America	Africa	Asia	South America	
Talisman	North Sea	North America	Africa	Middle East	Asia	Australia	South America

9 of 16 operating independents have few new investments

Reserves & Resources of Operating Independents (MMBoe)



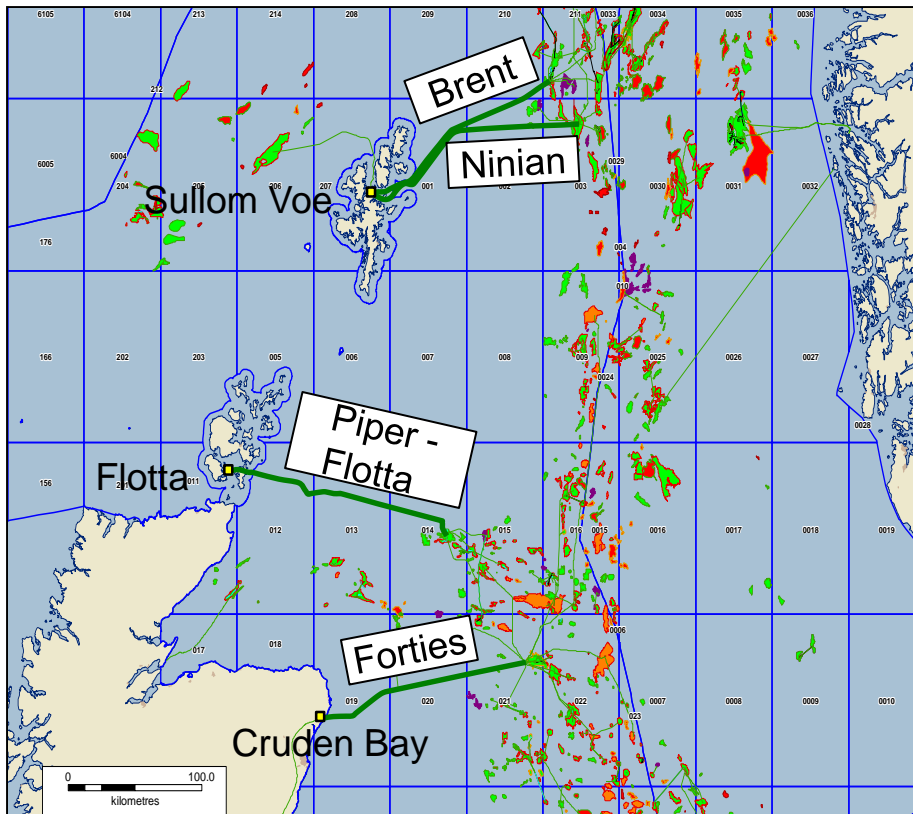
Uncertainty surrounds independents with no new developments as they occupy an unsustainable position

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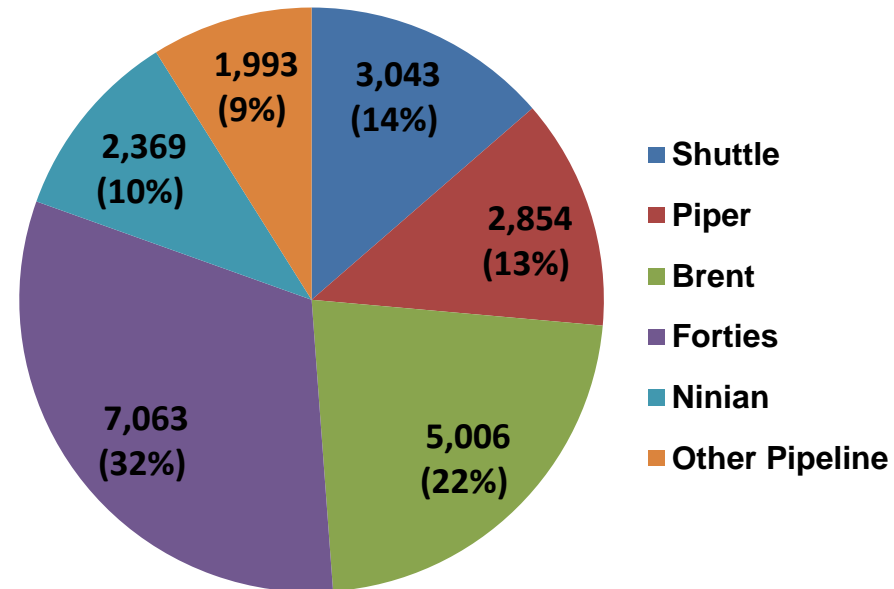
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Historically, 86% of all UKCS oil production has been exported via pipeline

Major Oil Pipeline Arteries for Central and Northern North Sea



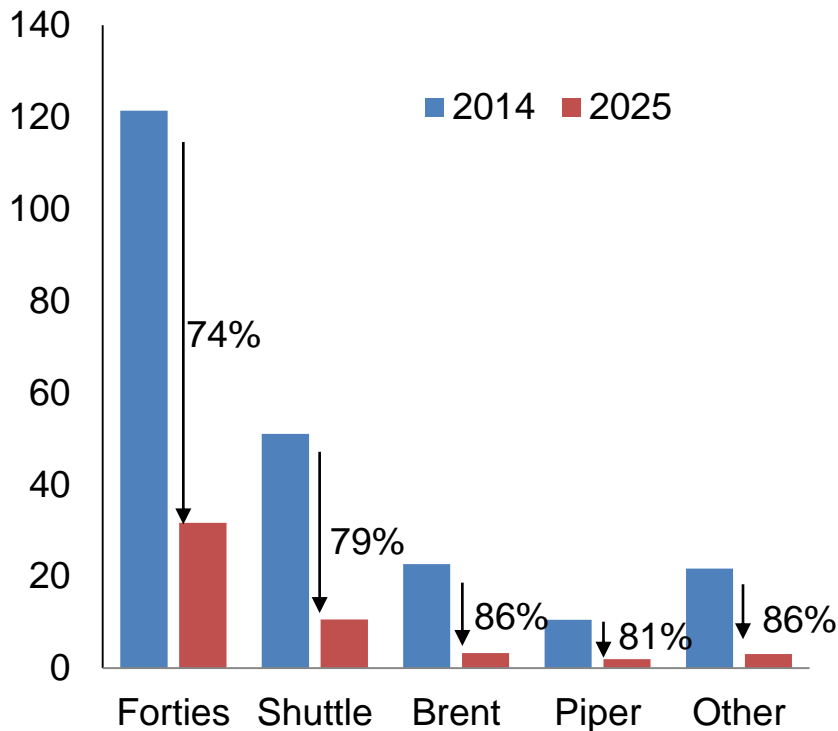
Conventional Oil, 1975-2013 (MMboe) Total = 22,328 MMboe



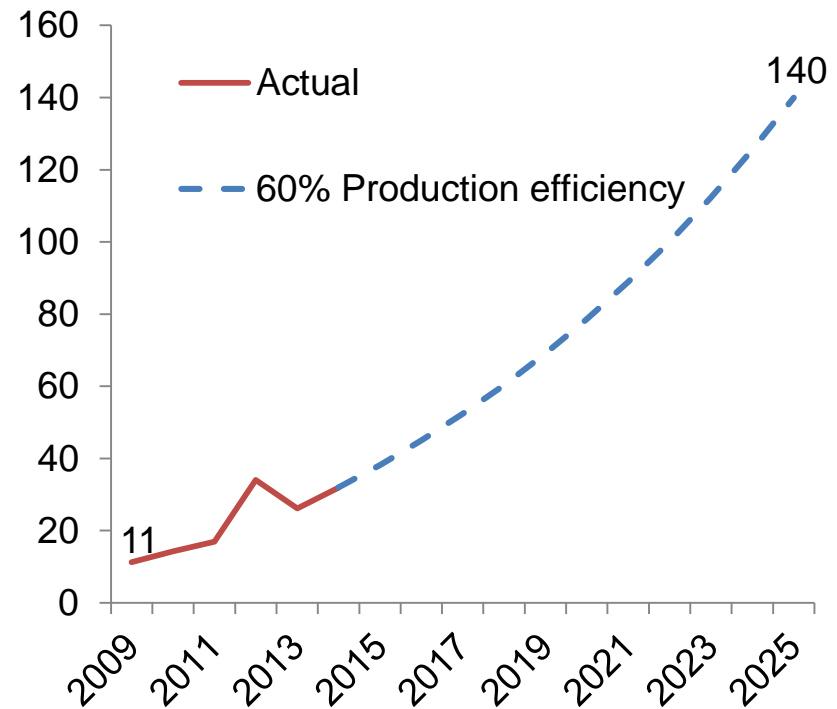
Brent, Piper, and Forties pipelines and associated hubs have accounted for 67% of all oil exports

Declining production and rising operating expenses threaten economic viability of major oil pipeline and export hubs

Forecast Oil Production by Export Route, 2014 vs. 2025E (MMboe) ⁽¹⁾



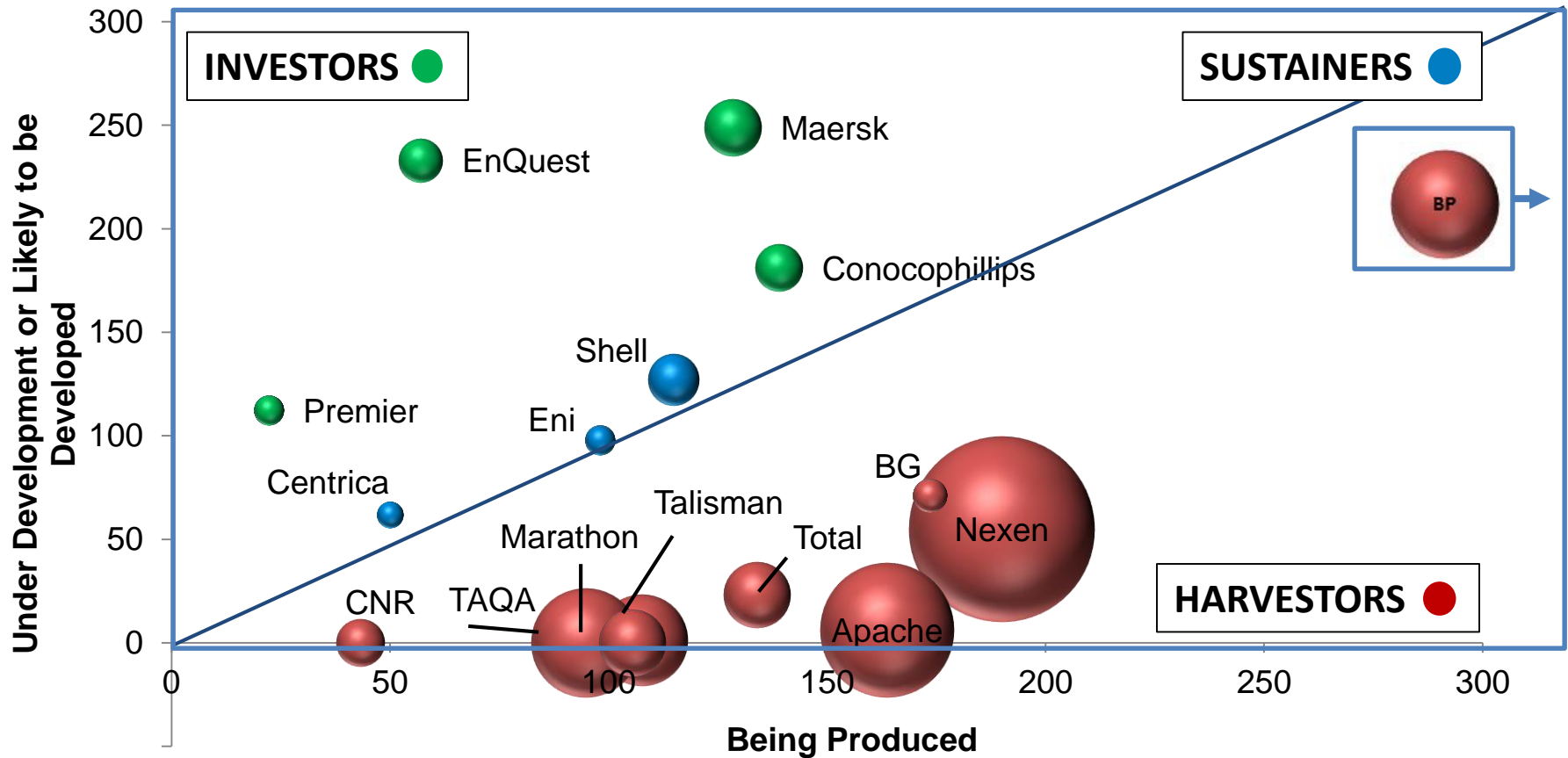
Forecast Operating Expense, 2009-2025 (\$/Bbl)



Closure of Brent, Piper, or Forties pipelines and associated hubs would therefore have a significant impact on oil evacuation

Unfortunately, the biggest hub operators are not adding new reserves through new field developments

UKCS Hub Operators (Bubble Size = 2013 Volume through Operated Hubs)



It is inefficient for hub operators to be both midstream facilities operators and upstream field producers

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Rejuvenating the UKCS

- ❑ Juniors have equity that can be traded to improve commercial viability of current developments
- ❑ Co-operation among operators will drive down costs
- ❑ Hub ownership and upstream operations should be separated and taxed accordingly
- ❑ Taxation must be revised to allow profits that are high enough to encourage further investment from operators