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Authority

# UKCS

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Unlocking the 30<sup>th</sup> round opportunities

Gunther Newcombe  
Operations Director

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# UKCS significant future potential



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## Infrastructure

10,000+ wells  
250+ subsea systems  
3,000+ pipelines  
250+ fixed installations

Source – OGA

## Production (boepd)

2014	1.4 million
2015	1.6 million
2016	1.65 million

Source – OGA and Oil & Gas UK

## Costs

Unit costs down by 33%

Average unit operating costs fell from £18 per barrel in 2014 to £12 per barrel in 2016

Source – OGA

## Resources

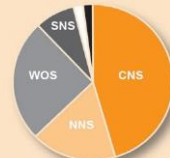


Source – OGA

## Developed

5.7bn boe

Developed, or under development

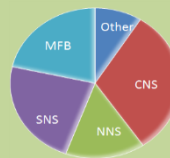


Source – OGA

## Undeveloped Discoveries

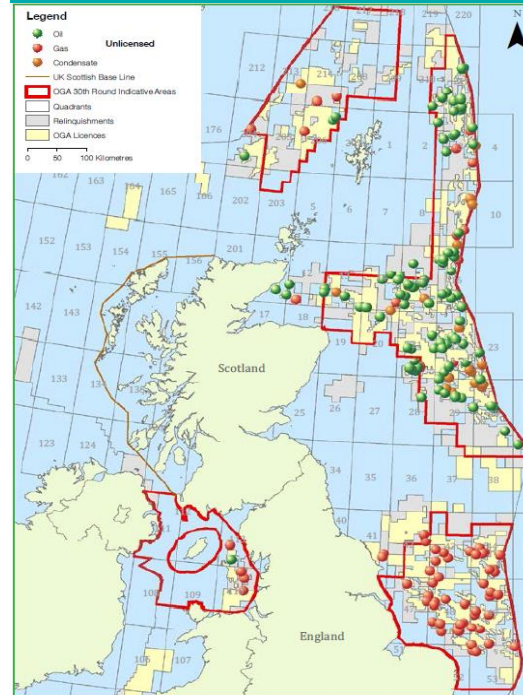
3.2bn boe

Currently not being pursued



Source – OGA

## 30th round acreage and discoveries



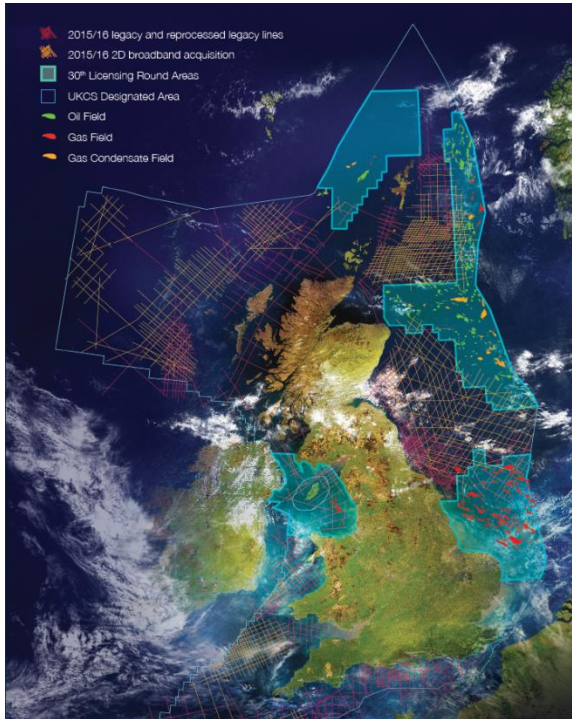
Source – OGA

Still a large upside from exploration, development and mature field potential

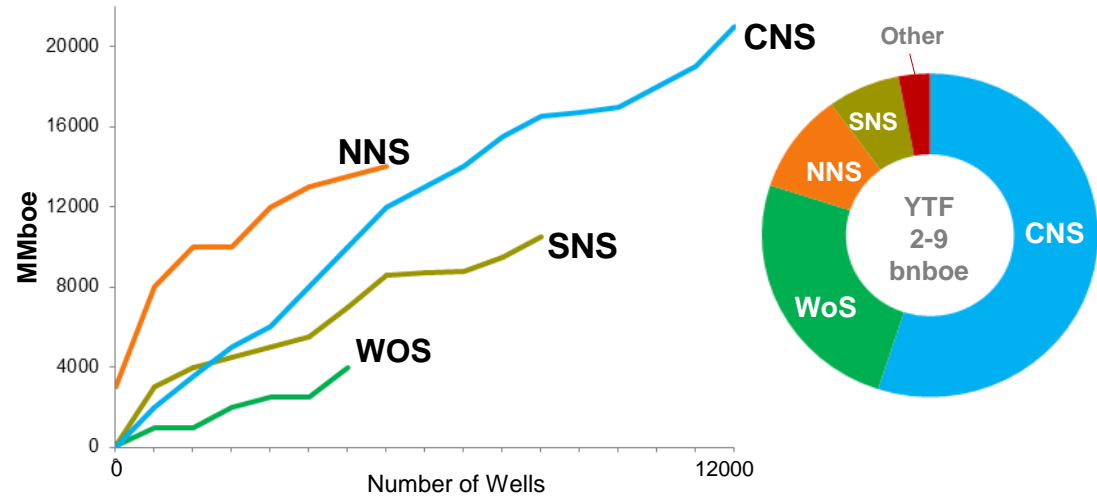
# Revitalising exploration



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Source – OGA

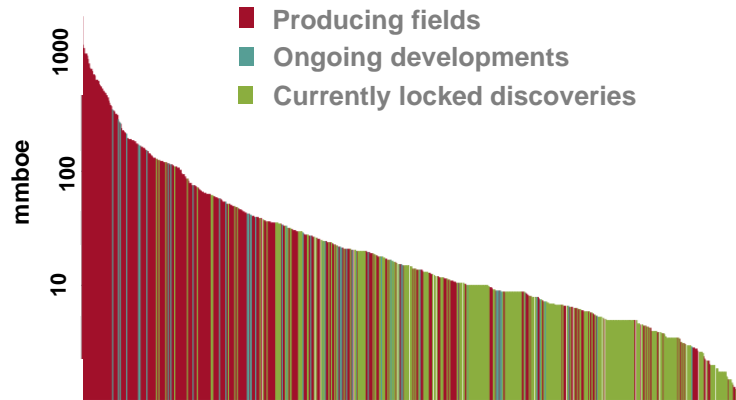


Seismic research in under-explored areas, release of reports and data. New approach to licensing underway, increased focus on technical rigour and modern technologies

Significant YTF potential still exists in UKCS with OGA completing re-evaluation by end 2018

# Unlocking undeveloped discoveries

## Remaining reserves

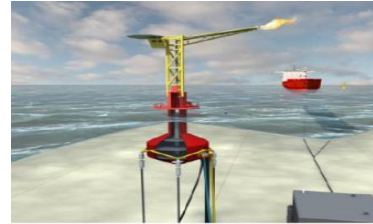


**350 undeveloped discoveries** currently not being pursued across the UKCS of which **140** are part of the 30th Licensing Round. These need to be unlocked by technology and other enablers

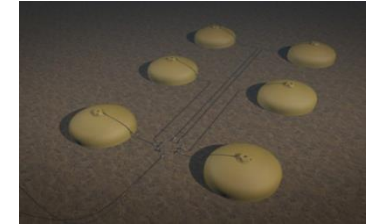
Source – OGA

## Examples of technology

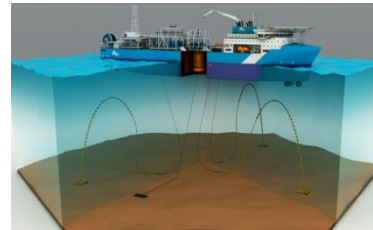
Unmanned buoy



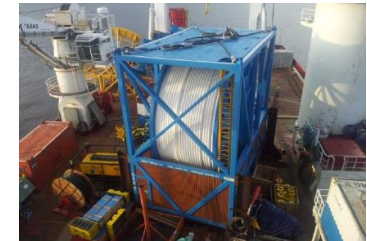
Subsea storage



Versatile Production Unit



Spooled pipeline



Currently over 3bnboe discovered resource potential exists in UKCS

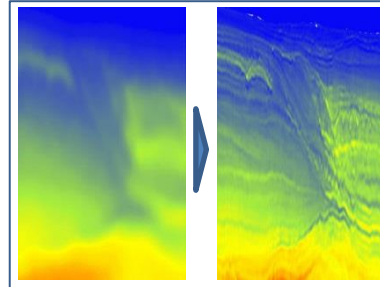
## Seismic and subsurface

Modern data and technologies, including:

- Modern geophysical data availability
- Acquisition technologies
- Seismic processing and inversion
- Modelling and interpretation



Ocean bottom nodes – Ref.

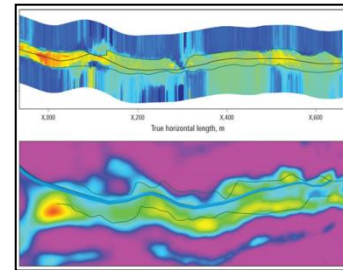


Full wave Inversion – Image courtesy of Schlumberger

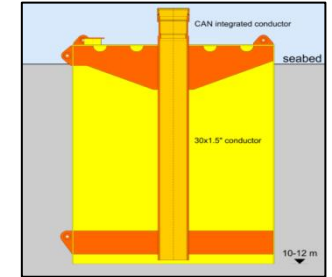
## Wells

Best practices and technology innovation, incl.:

- LWD and Geo-steering
- Extended reach drilling
- Multilaterals, Drilling while casing, Drilling liners
- Innovation in conductors, mud system, and BOPs



LWD using deep-resistivity, and Geosteering



CANductor, Image courtesy of NeoDrill

## Efficient Tiebacks

Existing and novel technologies include:

- Mechanical hot taps
- Mechanically connected pipe
- Modular spooled pipe systems
- Low cost platform solutions
- Local chemical, hydraulic, storage and power generation systems

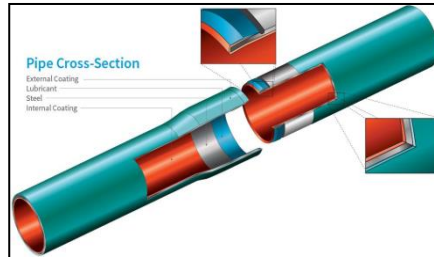
## Stand Alone Systems

Key novel technologies include:

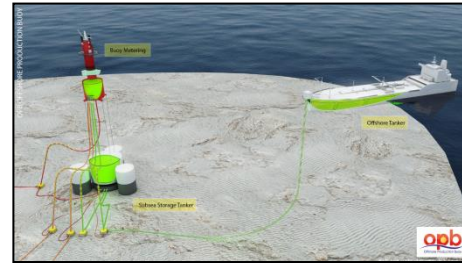
- Unmanned Production Buoys
- Mini FPSOs
- Versatile Production Units
- Subsea Storage
- Subsea Factory



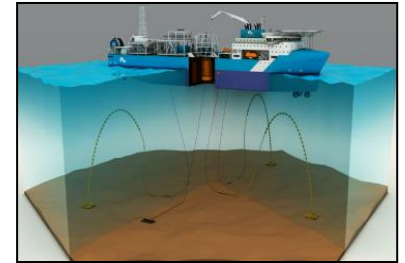
Spooled Pipe -Image Courtesy of Airborne Oil & Gas



Zap-Lok Mechanically connected pipe - Image Courtesy of Cortez Subsea

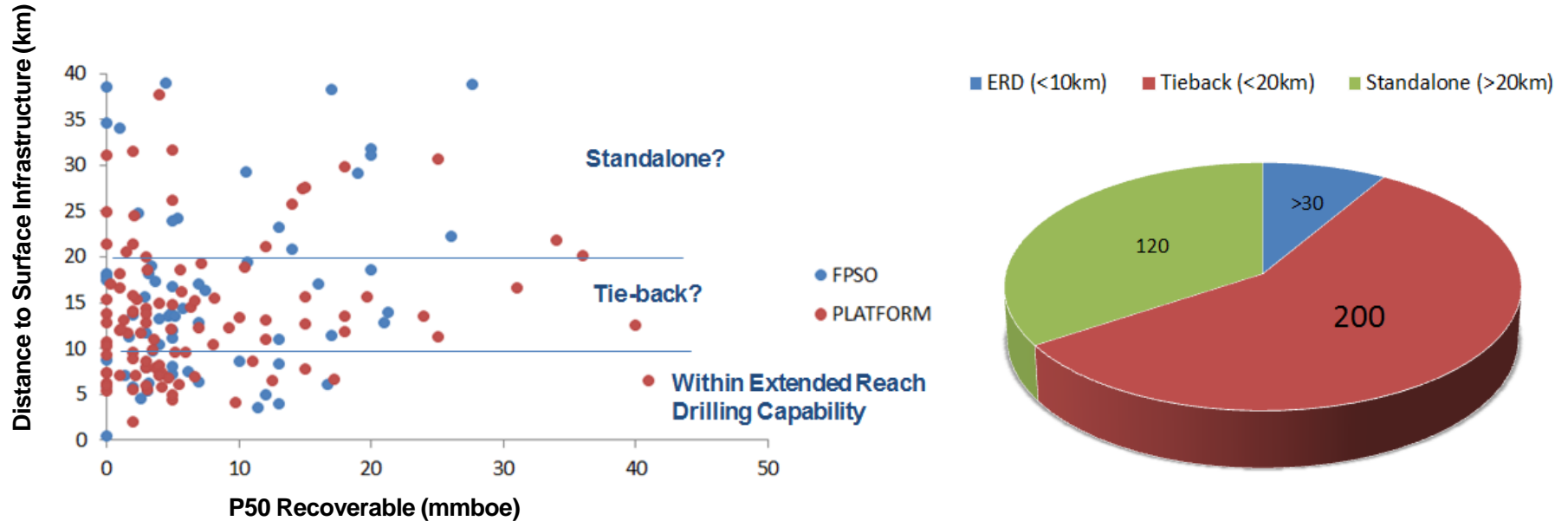


Unmanned Production Buoy - Image Courtesy of OPB



Small scale FPSO -Image Courtesy of Amplus Energy

## Potential Field Development Solutions – Based on Distance from Infrastructure





# 30<sup>th</sup> Round Opportunity



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## 30<sup>th</sup> Licensing Round

- **Data** – Upfront release of discoveries data packages and technical montages, regional maps, GIS functionality
- **Award criteria** – Quality of operators' plans and commitments including technologies for exploration and development

## Technology Stewardship

- **Best practices** – Existing technologies (from operators' Technology Plans) deployed to scale to unlock 30<sup>th</sup> Round prize
- **Novel technologies** – Help operators, OGTC and other organisations accelerate introduction of breakthrough technologies

## Area Plans

- **Operators' engagement** – Ensure industry identify and pursue value from collaboration in 30<sup>th</sup> Round exploration/development
- **Area plans** – OGA works proactively with operators on selected areas and clusters, if/as these may need specific support

OGA's proactive approach to promoting 30<sup>th</sup> Round opportunities