

# Decommissioning in the GoM and the UKCS



**Marathon Oil**<sup>®</sup>

- Who is Marathon Oil ?
- Where are we on our decommissioning journey?
  - UKCS Overview
  - GoM Overview
- Status of decommissioning programs
- Compliance
- Collaboration
- Contracting

# Comparison of decommissioning in the UK and the US?

- That might work very well in “X”, but it will not work here!
- When in the UK, substitute “X” with “Houston”
- When in the US, substitute “X” with “Aberdeen”
- Perfect alignment
- Being an optimist I took this as a very strong foundation on which to build

# Our Decommissioning Goals?

- We wish no harm to people
- We wish no harm to the environment
- We wish no harm to our reputation
- Given the above;
  - We wish decommissioning to be as cost effective as possible

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# Who is Marathon Oil?

- 1887 Formed as the Ohio Oil Company
- 1905 Moved headquarters to Findlay, Ohio
- 1926 Discovered the Yates Field in West Texas
- 1962 75<sup>th</sup> anniversary and name change to Marathon Oil Company
- 1967 Development of world's first purpose built LNG tankers, exporting from Alaska
- 1983 Brae Alpha in the UK comes on stream
- 1990 Headquarters moved to Houston, TX
- 2007 First LNG cargo from Equatorial Guinea
- 2010 Entered Eagle Ford shale play in Texas
- 2011 Marathon Oil Corporation becomes independent upstream company

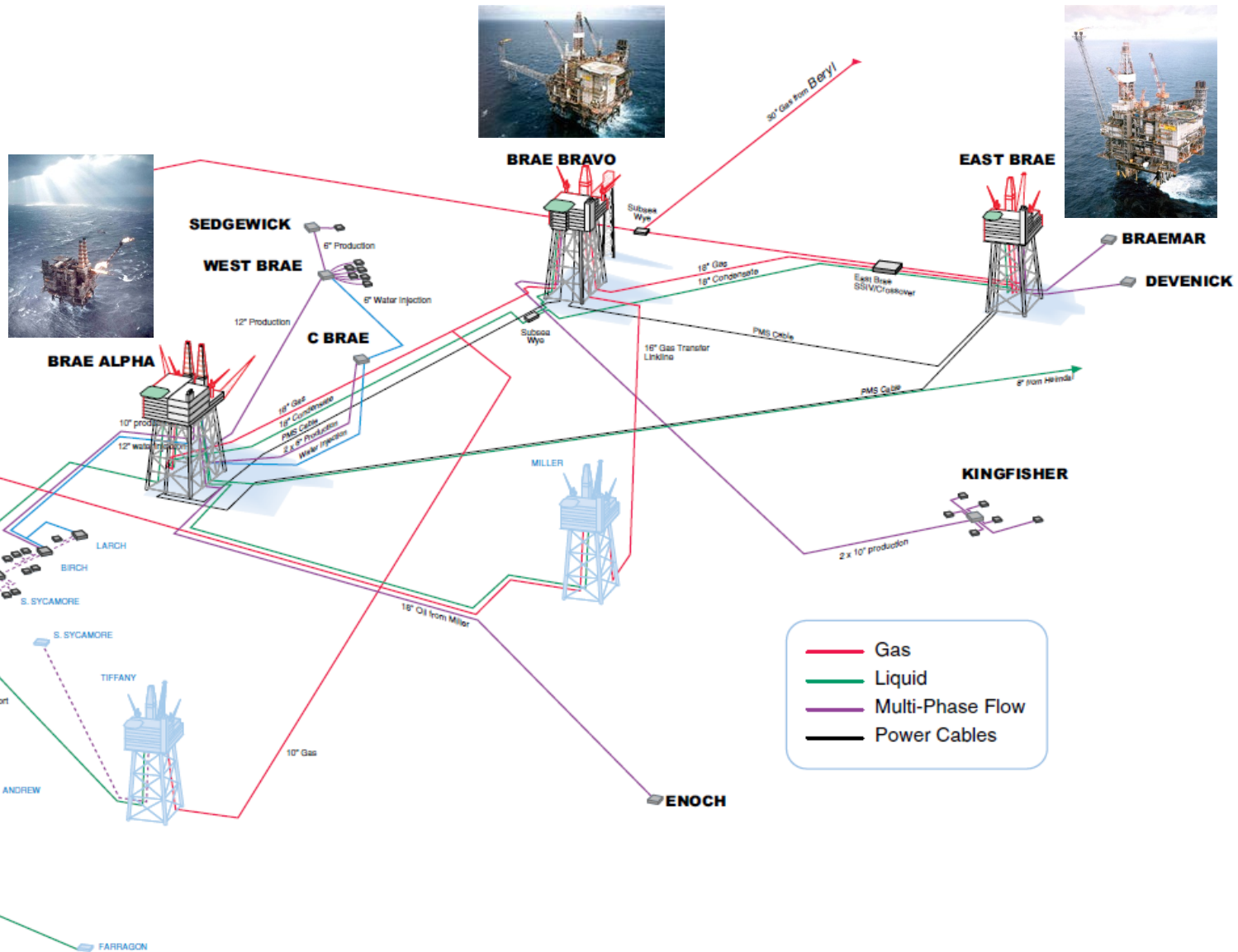
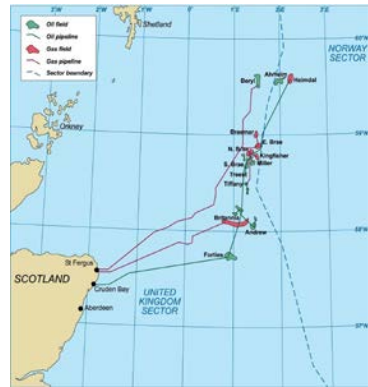
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# Where are we on the decommissioning journey?

- We are relatively new to offshore decommissioning
- We have been asking ourselves many questions
  - We have only discovered a few answers
- We feel we are living in a price based environment
- We have been looking for the game changer(s) that would improve efficiency and drive down costs
- We still have many questions but we feel we have made some progress



# UKCS - Brae Overview



<b>■ Steel Jacket Platforms to be removed</b>	<b>3</b>
▪ Platform drilled wells to plug and abandon	85
▪ Total weight of topsides to remove	87,000 tonnes
▪ Total weight of jackets to remove	46,000 tonnes
<b>■ Subsea Installations to be removed</b>	<b>3</b>
▪ Subsea drilled wells to plug and abandon	19
▪ Total weight manifolds/templates to remove	1,000 tonnes
▪ Total length of flowlines to abandon	75 kilometres
▪ Total length of umbilicals to abandon	38 kilometres
<b>■ Pipelines/Submarine Cables to abandon</b>	<b>6 pipelines, 3 cables</b>
▪ Total length of pipelines to abandon	195 kilometres
▪ Total length of submarine cables to abandon	57 kilometres

# Gulf Of Mexico Decommissioning Program

- Marathon has nine properties that will soon require well P&A programs and / or facilities removal projects
- Five of the nine are operated by Marathon
- Four have platform facilities, all others being subsea only
- The water depth varies considerably, with the shallowest at 173 feet, and the deepest at over 6,200 feet
- There are four assets at approximately 3,000 feet
- In addition to these production assets, there are a number of other exploratory wells that require final abandonment
- The program started in 2013 and will continue steadily beyond 2026

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## ■ UKCS

- Decommissioning team formed in 2010-2011
- Initial focus was on a single platform decommissioning project
- Changes in CoP dates mean we now have a field programme
- Well P&A ready to commence in 2015
- Earliest platform CoP forecast in 2018
- Completion forecast for removal is approximately 2032

## ■ GoM

- Nine facilities to be decommissioned
- Four have platform facilities, all others being subsea only
- Initial approach was facility by facility approach
- Defined as a program in 2014
- Well P&A underway
- Estimated completion of these assets by 2026

# Decommissioning Program Status – 2 of 2

- We now have two programs
  - This creates the potential to manage the areas as single integrated effort
  - Increase the attractiveness of participation to the supply chain
  - Improve planning and preparation activities
  - Enjoy synergies and economies of scale
- We are actively sharing across the geographies
  - Two teams, working as part of a global effort
  - Shared processes, practices and tools
  - Single integrated information management system
- Three key areas of consistency
  - Compliance
  - Collaboration
  - Contracting

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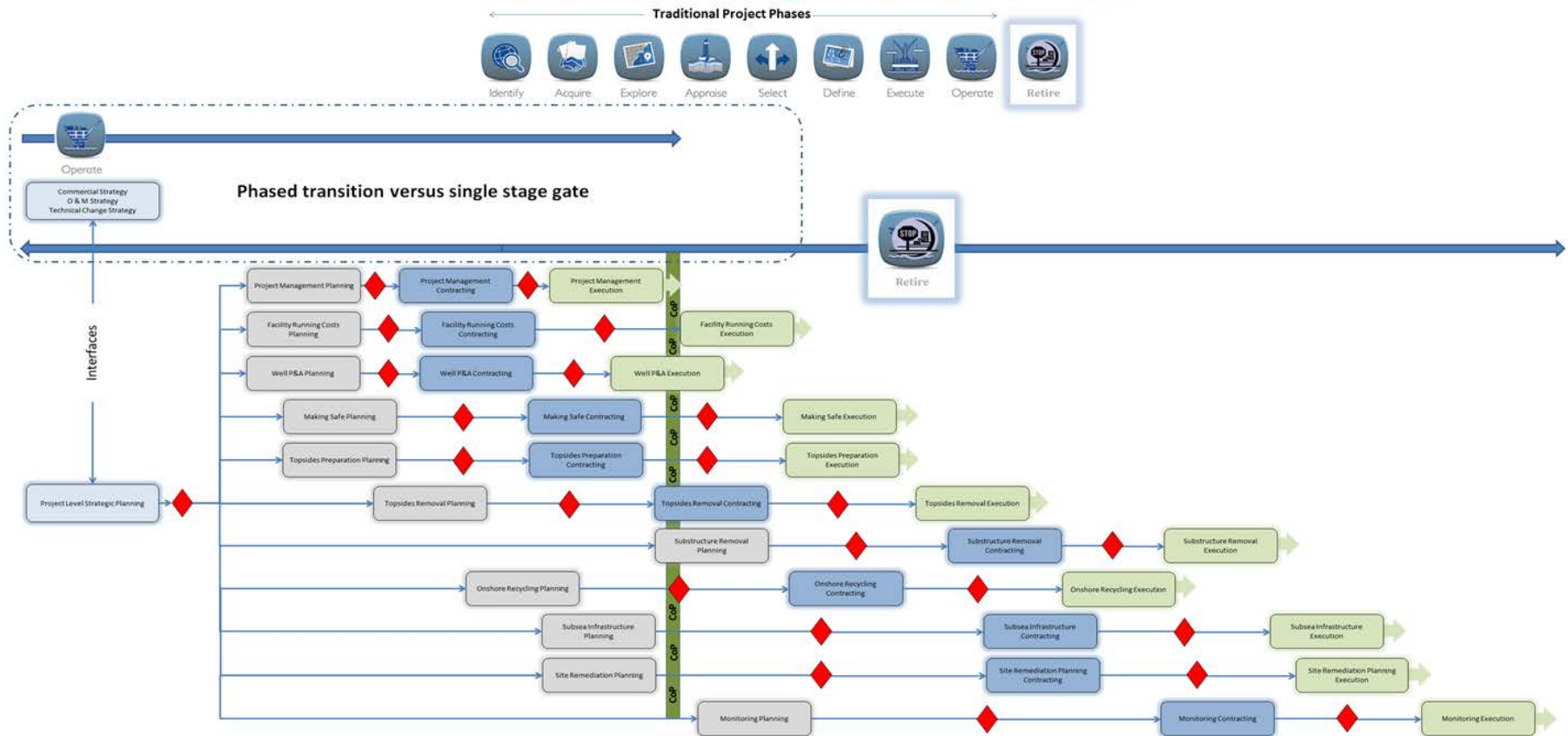
# Compliance - Internal

- We believe that decommissioning needs to be managed differently from traditional capital investment projects
- The traditional stage gate approach for projects of Appraise, Select, Define and Execute does not, in our minds, adequately address the unique features of decommissioning
- We have introduced the “Retire” phase to our project management process
- This is new phase in the asset life cycle, rather than a new project
- This distinction, while seemingly small, has enabled us to look at things quite differently and we believe it is helping us better plan, communicate, prepare for and manage the effort.



# The Retire Phase - Graphic

## Decommissioning: The Retire Phase



# The Retire Phase - Overview

- Recognizes the transition from:
  - Operate, to
  - Late Life Asset Management, to
  - Decommissioning
- Illustrates that not all elements mature at the same time or pace
  - Some are complete prior to CoP
  - Some occur years after CoP
- Accommodates multiple, targeted assessments of readiness
  - Enhances decision making quality
- Increases awareness of decommissioning as a part of asset life cycle
  - In design, construct and operate, as well as in retire

# Compliance - External

- Decommissioning projects are compliance projects
  - We have to do them; we have signed up to do them
- We are actively seeking early and ongoing interaction and dialogue with the regulators
  - We invited an employee of DECC to work in our office, along side our team, to help us both better understand priorities, goals and concerns
  - We have ongoing dialogue with BSEE ahead of the dates for facility removal and permit submittal for the same reasons
- We believe it is critical to have clear understanding and application of the regulations to ensure effective planning, strong alignment and predictability
- We would prefer to engage in these discussions as part of an industry effort rather than simply as Marathon
  - This is but one example of potential industry collaboration

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# Collaboration

- We believe decommissioning encourages collaboration
  - As an Owner, we see no competitive advantage over other Owners
  - We recognize there are differences within the supply chain, but still feel collaboration is possible
- The question is “how do we best collaborate?”; not “should we collaborate?”
- We ensure we are very active in industry forums and with our peers
- We do not have much decommissioning experience, but
  - We have a significant near term global portfolio
- We are happy to share what we know, but
  - We learn more when we listen than when we talk

# Collaboration Progress

- View on collaboration has changed
- We are currently pursuing a small multi-owner group
- This group will approach the supply chain as a collective
- Degree of collaboration will vary by work type
  - Continuum from sharing of information to joint programs

# Collaboration Opportunities

- Multi-owner, multi year subsea well P&A programs
  - This has worked in the past
- Multi-owner, multi year facility removal programs
  - This can work in the future
- Standard processes and tools designed to
  - Improve performance and efficiency
  - Improve communication with the supply chain
  - Lower costs
- We are keen to hear of, and discuss, other opportunities
- We believe collaboration will only be effective if we engage with the supply chain

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# Contracting

- We would like to increase contractor's margins and pay for this out of overall project cost savings
- To do this we need innovation and ideas from the contracting community
  - We do not have a monopoly on good ideas
- Ideally, we wish our contract relationships to be
  - Open
  - Trusting
  - Successful and long term, and
  - Continuously improving
- Our contractor selection process for key contracts will focus on dialogue, the relationship and strive for solutions where we all can win
  - Challenging but worth it

# Decommissioning Program Goal



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