

# Making Decisions with Engineering: Subsea Field Abandonment Strategy

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# Who are the key Stakeholders?



*“Engineers aim to fulfil functional objectives and requirements while considering the limitations imposed by practicality, regulation, safety and cost”*

**Minimum scope possible based on well architecture and subsurface setting**

**Defined vessel requirement per phase**

**Partner buy-in**

**Contractually achievable**

# **Subsea Field Abandonment: Technical Approach**

**Credible plan per well based on current technology**

**Clear, logical time basis using field offset**

**Highlight equipment required to campaign P&A - £MM commitment**

**Agreed cost models applied**

**Why does it cost so much?**

**A boat then a rig then another boat?**

**But A.N Other operator abandoned  
their field for half that!**

**Supply chain will answer the  
problem when we tender**

# **Subsea Field Abandonment: Challenges to Expect**

**Can't we abandon wells  
using new technology?**

**Why can't we bullhead everything,  
not just a handful of wells?**

**Why do we need to buy all this  
equipment?**

**Deferring the work delays the spend,  
so we'll do that**

# In Conclusion, Subsea P&A:

- ▶ Must be done - sounds obvious, but is often dismissed/softened without basis
- ▶ Can be deferred, but what is the counter plan?
- ▶ Is a key offshore activity – we're in the business of executing operations
- ▶ Requires significant investment for no return – we're limiting outgoings not maximising profit
- ▶ Has a wide-range of Stakeholders with different opinions and experience
- ▶ Is significantly different per field, and often per well
- ▶ Must use external third-parties to provide the vessel/rig, subsea equipment etc

# Why Decision Making is Crucial



- ▶ Decisions provide firm foundations to progress; indecision creates waste and increases cost
- ▶ Projects need bounds and fixed points to produce meaningful output
- ▶ Decision points create deadlines: motivating engineers to conclude their findings and enabling stakeholders to address them in a collaborative manner

# What are the Decisions to make?

*What is the base-case workscope?*

*And how much WoW and NPT is added to that?*

*And what scope change events do you expect to encounter?*

*And how frequently will you encounter them?*

*And which type of vessel will complete each aspect?*

*And when will you do it?*

*And how will you schedule the work?*

*And what will it cost when we do it?*

*And what happens when it doesn't go to plan?*

*And what do you want to set the ARO/DSA at to cover it?*

*And what equipment do we need to connect to the well?*

*And what contingency equipment will we use?*

*And is it available now?*

# What is the Engineering Challenge?

***“Don’t tell people how to do things, tell them what to do and let them surprise you with their results”*** *Phil Knight, Nike Founder*

- ▶ Demonstrate how realistic the plan is – share findings and be open with what you have learnt
- ▶ Understand what your client wants – everyone is different
- ▶ Have confidence and belief in what you’re proposing
- ▶ Anticipate challenge and strive for lowest possible cost – we’re in demolition not construction
- ▶ Ultimately: build trust with stakeholders to help them understand why they can decide based on your work

# Realism vs Opportunity vs Optimism

- ▶ Delivering lowest possible cost is vital for successful Project Management regardless of discipline
- ▶ Does banking on a change to “givens” that we’re not in control of make financial sense?
- ▶ What could be coming:
  - New technology
  - Relaxation in regulation
  - Reduced vessel rates
  - Change in taxation/cost base
- ▶ This type of decision represents one of the biggest challenges in terms of approach and ideology between engineers and stakeholders

# Zenith Energy: Engineering-Driven Decisions

- ▶ Framed the project at initiation – agreed assumptions and items in and out of scope
- ▶ Compiled well data, then screened it efficiently to output minimum-scope P&A designs
- ▶ Assessed campaign-critical items: mooring patterns, VXT tooling, diver requirement
- ▶ Evaluated the leading equipment concept to undertake the entire scope
- ▶ Benchmarked actual field and operator offset timings and cost bases
- ▶ Iterated well sequencing scenarios – ranked them using key criteria and trusted the data
- ▶ Issued technical notes to pace the sharing of information and conclude sub-projects
- ▶ Delivered a complete field P&A assessment to the client, keeping them in control



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