

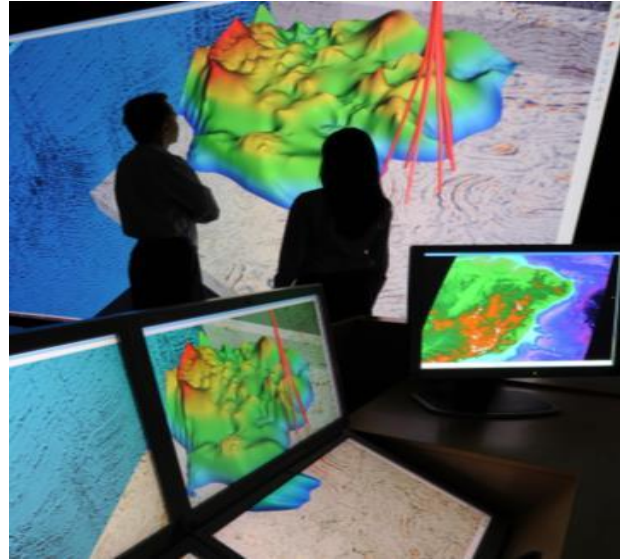


EEEGR Platinum Sponsor



# George Walker, Halliburton





## Late Life & Decommissioning Group - Overview

George Walker— P&A Manager Norwich  
July 12<sup>th</sup> 2016

# Agenda

- Halliburton decommissioning & late life team
- Halliburton UK decommissioning experience
- Traditional decommissioning set-up & economic challenges
- Halliburton Solutions
- Benefits & Results
- Questions?



# Halliburton decommissioning & late life team



- IWI Team – Global response
- Formed to address changes in industry
- UK Decommissioning & late life associated disciplines – P&A, PE, Pipelines & Topsides
- Raise awareness of different approaches to decommissioning
  - *e.g Late life extension methods*
  - *offsetting costs, efficient P&A models*
- Project engineering capabilities
- IWI - Research and development of disruptive technologies, approx 30 decom focused technologies



# Halliburton UKNS decommissioning experience

- Recent experience
  - Well P&A Campaigns – **10** projects
  - Pipelines Decommissioning (make safe) campaigns – **15** projects
  - Cutting & recovery – **15** projects

*How has this helped?*

- Identify the bottlenecks e.g. DECC approvals, missing well data, asset or well condition issues, SIMOPS
- Lessons learned
  - Applying best practices in future projects
  - Cost reductions
  - Efficiencies
  - Contingency planning



# Traditional Decommissioning Set up



## Challenge

- Contractor involvement is when planning at late stage
- Planned scope and costs already allocated
- Discrete project definition – P&A or late life solutions (well intervention)
- No financial reward for operator
- Limited information on assets, wells condition, old equipment , pipeline contents- unknown costs
- Bringing asset up to standard to effectively P&A – Rig reactivation costs
- Decom cost uncertainty & liability – Selling assets

## Results

- Project time over runs
- Costs exceed plan

# Halliburton Solution



vs.



## Solution

- Early engagement with contractor - collaborative approach
- Maximising Combination projects - Exploring offsetting costs of P&A against enhanced production on candidate wells, PPS Simops –similar equipment for operations.
- Capturing information upfront to de-risk the unknowns for the assets/wells i.e. investigative slickline, light well intervention for larger campaigns
- Identify problem wells up front to plan around it
- **Operationally cost effective methods:**
  - Multiskilled personnel > familiarity > increased operational efficiency > reduced POB - offshore abandonment team
  - Reduced footprint equipment
- **Contractually cost effective methods:**
  - Bonus/Malous contracts
  - Fixed price well
  - Project management
  - Collaboration with drilling contractor and other key service providers

# Conclusion

## Benefit

- Access to our lessons learned from previous projects
- Reducing project costs through operational & contractual methods
- Shared risk with operator and contractor – performance benefits
- Time & cost efficiencies throughout project

## Results

- SNS project for 16 well campaign utilised multi skilled crew and project managed services = 77 days ahead of AFE & 20% under budget
- NNS platform 33 well P&A campaign utilised multi skilled crew = 99.3% operational efficiency
- SNS Well P&A & Pipeline decommissioning concurrently, time on well reduced significantly, multi-skilled crew – 105 days ahead of AFE



**THANK YOU**

