The Drilling Business Model
Driver or Inhibitor of Performance & Innovation
SPE-167933

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Welcome to the Elephant in the Room

An obvious truth that is either being ignored or going unaddressed

No direct rewards for technology and performance enhancements

Drilling systems automation needs integrator and rewards
A reverse order presentation
Why wait for the punch line

• The Blueprint for the successful business model
• Contracting practices affecting performance
• Organizational Architecture
  – Lean Manufacturing / Systems Thinking
• Tender process
• General Contractor
• Lessor or Operator
• History that brought us here – in the paper
  – Warning 12,000 words! + 33 references

Warning 12,000 words! + 33 references
The Blueprint – an overview

General Contractor

Organization Architecture

Critical management processes

Define SOW, payment schemes

Highest Net Value
The Blueprint - details

1. Design comprehensive **organization architecture** aligning all participants to objectives of the well(s).
2. Design **interdependencies**: well construction / subsurface / production.
3. Define **General Contractor** & interdependence well design & production operations.
4. Define the measures of value delivery, hierarchical system of **KPI’s**.
The Blueprint - details

5. Design systems for **critical management processes**.
6. Define the **scope of work, key performance indicators** and **reward structures** in contracts according to organization architecture.
7. Distinguish role **lessor** of drilling units and **performance driller**: make contracts recognize these.
8. Award **highest net value** calculated from a model of the drilling program(s) with high and low outcomes to assess sensitivity. **Do not award on lowest price.**
The Blueprint - details

9. Include **planning phase** of the operation.

10. Treat all personnel as part of the **well delivery team** and not as individual companies performing a supply service.

11. Develop **strong relationship** between the onsite execution team and the office based planning / support team.
Drivers Affecting Change
Contracting practices = performance

Characteristics of Contract Types

- Degree of outsourcing
- Breadth of service
- Degree of performance payment
- Delegation of control

- Day Rate
- Well Management
- IPS
- IPM
- PEC
Organizational Architecture
Lean Manufacturing / Systems Thinking

Deliverables:
- Reduction subsurface uncertainty
- Data acquisition
- Well placement
- Well bore integrity
- Well inflow
- .......
- ..........
Tender Process
Saving costs or Killing value

Independents
• Operations department is the buyer
• Operations department focuses on well cost / value
• SOW related to the project

Large Operators
• SCM department controls the tender process
• SCM department focuses low cost / commoditization
• SOW not structured to the WC project

Projects based on low bids failed - Merrow
Who is the General Contractor

• IPM / PEC - very clear

• Day rate contracts - unclear
  • Partially assigned responsibilities – muddied waters
  • Assertion of role varies by operator
  • Lacks distinction between engineering, construction and commissioning

• Drilling Systems Automation requires an integrator
  • Fragmented / huge interoperability issues

• The wholly owned subsidiary GC
  • A successful analogy
Lessor or Driller

• Standardization of drill ships led to firm costs / firm yard delivery schedule
  • Encouraged new players with new investors

• Financial markets value earnings (EBITDA)
  • Day rate minus costs
  • High utilization – more days on contract

• Reputation for safety / reliability

Lessor more than Driller
Need a General Contractor
The Blueprint – an overview

Yes!
Traditional Drilling Business Model is an Inhibitor of Performance and Innovation

Higher Net Value

Organization Architecture

General Contractor

KPI's
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