Critical Data in Capable Hands
An Innovation and Collaboration Success Story
Studio for TechLog™

Laura Leung
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All references to dollars, cents or $ in this presentation are to US currency, unless otherwise stated.

References to “Woodside” may be references to Woodside Petroleum Ltd. or its applicable subsidiaries.
AGENDA

1. Background
2. Design Requirements
3. Corporate Environment
4. Team Selection
5. Communication & Collaboration
6. Studio for Techlog Solution for Woodside
7. Benefits
8. Conclusions

About the Presenter:
Laura Leung is the Petrophysics Wellsite Studies & Operations Manager for Woodside, based in Perth, Australia. After training in Mechanical Engineering and Mathematics at the University of Melbourne, she has accumulated more than 18 years industry experience in both technical Petrophysics and leadership roles. Through her career, Laura has worked on assets across three continents, including a residential posting in Libya. Most recently she has been focussed on technical contract and data management activities. A key highlight has been driving the collaborative efforts to implement Studio for TechLog as a Petrophysical Data Management system within Woodside.
• Strategic & technical decision taken in 2011 to change Woodside’s Petrophysics software solution to TechLog
  • Improved technical options
  • Alignment with other key subsurface software platforms

• Challenges:
  • Required a change in Woodside’s way of working
  • Attempted to manage with process …

• Unsuccessful!
  • No “One Well” capability!
  • Manual data transfer & QC
  • Email notifications for loading / transfer requests
  • Manual synchronisation with corporate database
  • Limited assurance gateways
  • No visibility / control of user projects
Evolving the Requirements

User Imperatives

- "One Well World"
- Automated & Streamlined Process
- Clean & Complete Corporate Database
- Robust Assurance & Governance
- Auditable

Design Requirements

+ Internal architecture
  - Data hierarchy
  - Metadata capture
  - Repository structure

+ Connections & interfaces
  - Corporate database synchronization
  - User project connectivity

+ Governance
  - Documented processes
  - Audit trail
  - Access control

Enabling Innovations

➢ Woodside-Specific workflow development
  - Dataset promotion & update protocols

➢ Joint development of Inner Logix (ILX) Connectors
  - Direct connection between Corporate Database and Studio for Techlog Repositories
Planning in a dynamic environment

- Physical office relocation triggering “new ways of working”
- Evolving technical environment
  - Numerous moving pieces
  - Concurrent
  - Interrelated
  - Unclear timelines
- Proactive & Agile planning
  - Retain flexibility
  - Avoid re-work
  - Manage business priorities
- Active Engagement & Stakeholder Management

Build the RIGHT team!
Building the RIGHT team

• Woodside Subsurface
  • Petrophysics
  • Geoscience
  • Exploration
  • Management Endorsement

• Woodside Digital
  • Applications Support
  • Data Management

• SLB Technical Expertise Onsite
  • On site / in house specialists
  • Regional centre & office support
  • International subject matter experts
Using the RIGHT team

• Stakeholder Engagement
  • Optimising Interfaces
  • Efficient Communication
  • Proactive Change Management

• Remote development (technical connectors)
  • Align activity across multiple (global) sites
  • Delivery on an international scale
THE SOLUTION

Corporate Database

What?
Well Header, Survey / Trajectory, Biostrat, Stratigraphy, Current “Best”

Static” data: Original format log data, contractor core data, processed data

Petrophysics Value-Add: Milestone projects, Studies data, full Evaluation parameters

Working data Sensitivities, alternative investigations.

How?

Loaded directly from Corporate Database
Synchronised automatically

Manually Loaded via Data Manager (one time load)

Promoted by Data Manager following gatekeeper / assurance process

Uploaded by user
Subject to naming conventions!

• Data from Corporate Database automatically synchronised to Studio
• User projects built from Studio data, and linked to Studio Repository
  • User receives notifications when linked objects updated in repository
• ALL meaningful user data shared to the collaboration area by users
Did we achieve our objectives?

Key Objectives

- “One Well World”
- Automated & Streamlined Process
- Clean & Complete Corporate Database
- Robust Assurance & Governance
- Auditable

Previous World

- Multiple instances of each well
- Entirely manual process
- Database Status Unclear
- Limited Governance & Assurance
- Minimal history or audit trail

Studio for TechLog Solution

- Single, central, connected instance of each well
- Automatic synchronisation
- Studio Repository mirrors Corporate Database
- Embedded assurance gateways & status clarity
- Comprehensive data history & audit trail available
Positioned for the future

• Studio for TechLog is LIVE in Woodside
  “One Well World” now a reality

• Benefits Realised
  • Improved data management through reduction in manual processing
  • Increased confidence in information due to embedded assurance & governance processes
    • Reduced study cycle time (up to 80%)
    • Reduced data collation
    • Eliminated data re-validation
  • Data management structures used to communicate subsurface uncertainty
  • Replicated successful data management template across the business

• Looking Forward
  • Framework established for future data integration & workflow collaboration; DELFI
Optimal technical solution delivered via **INNOVATIVE** Woodside-specific workflow & data management process

Effective communication built strong **COLLABORATIVE** working relationships internally and externally for Woodside and Schlumberger

Revolutionary data management leveraged to **ACCELERATE** delivery of technical solutions

_We have defined a new way of working...._