Real Time Monitoring (RTM)

NAS Real-Time Monitoring of Offshore Oil and Gas Operations Committee
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API Background

- API is the only national trade association representing all segments of the oil and natural gas industry
- Over 600 member companies involved in all aspects of the oil and natural gas industry
- Over 700 committees and task forces covering various advocacy and technical issues
- Staff of ~270 located in Washington, DC, 33 states, Beijing, Singapore, Dubai & Rio de Janeiro
API/OOC/IADC Industry workgroup

- 60+ members
  - 14 operators
  - 8 drilling contractors
  - 5 service companies/consultants

Objectives:
- Develop Industry position on RTM
- Monitor government activities
- Be responsive to NAS Study Group
- Respond to rulemaking
A better understanding of BSEE’s interest in RTM capability is needed in order to assess the viability and inform Agency.

3 areas of interest as understood by Industry:

- Reduce offshore visits/flights
- Focus on BOP inspection/testing
- Provide support to monitor wells to improve safety of operations
- Forensic tool - intended to capture data to enable retrievable information in the event of an incident (from shore)
Industry recognizes that early detection, assessment and response is key to the safety of offshore operations.

Real Time Data is monitored routinely at the work site in support of operations.

RTM allows for continuous monitoring of data to make observations about ongoing operations.

Remote RTM onshore is one of the many tools employed by Industry that allows for reviewing and analyzing data from ongoing operations.

Remote RTM is not new and has been in use by Industry since the early 80s and continues to evolve over time.
Varying Operations

- With proper procedures Remote RTM can provide another set of eyes for data evaluation
- Data types, data bandwidth and transmission technologies vary between platforms, platform drilling rigs and Mobile Offshore Drilling Rigs
- Monitoring data remotely onshore without operational context or situation awareness may increase risks
- Data monitoring by experienced personnel is important
- Onshore monitoring should be advisory only
Operational decision making should remain with the engineering and operations teams.
Onshore teams plan the operations.
Execution of the planned operations is performed by the offshore team.
RTM and Remote RTM systems currently exist, designed to meet specific business needs.
Data without situational awareness can be a distraction
RTM can support decision makers and current workflow processes
Application of RTM depends on a team of resources that includes trained personnel
RTM in a collaborative environment can help engineering, platform and rig teams work more effectively
Remote RTM is depended upon transmission of data to shore
  Satellite/microwave data transmission is not 100% reliable. Similar to your satellite/cable TV it is affected by weather
Automation and Predictive Software

- Automation and Predictive Software should be addressed separately
- Use of automation and predictive software tools in RTM is premature at this time
- Currently such technology is not utilized consistently across the industry
- Research is still ongoing in these areas
Real-Time Operations Centers

- Helps operations teams with informed assessments
- Provides overlay of data to analyze trends and compare to anticipated values
- One piece of the information puzzle to further inform
- Allows for engaging expertise at the shore base
Real Time Monitoring on drilling operations is an evolving field.

Most facilities are tied via satellites to onshore locations.

Satellite redundancy reduces downtime but transmission can be affected by various conditions.
Remote Real Time Monitoring on production facilities is a mature field.

Shelf RTM systems primarily enabled by microwave or 2 way radio communications.

Deepwater RTM primarily relies on satellite for data transmission.

Some operators’ production facilities are unmanned and monitored remotely, from another offshore facility or from an onshore monitoring facility.
Conclusions

- RTD has been around for over 30 years in the GOM
- Companies have built systems to meet their business needs, Clarity of purpose is key to design of any RTM System
- Trained and experienced rig site personnel are critical to safely drill any well, with or without remote RTM
- Successful RTM may inform an operator that operations are within engineering design or may need to be modified
- RTM can be enabler for decision making, but is not a substitute for competency at the worksite, it one of many tools
Real Time Monitoring

Questions?

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