

Independent Verification and Validation of Sensors and Systems in Drilling

Development of an Agreed / Consistent Industry Methodology
(Recommended Practice)

Maria Araujo: JIP Program Manager; Manager R&D, SwRI

Paul Wood: JIP Deputy Program Manager; Staff Analyst, SwRI

John de Wardt: JIP Deputy Program Manager; President DE WARDT AND CO

Stage I: Identification and prioritization of sensors / systems benefitting from IV&V, one proof of concept of IV&V application

Key aspects this JIP

- Objective: Verification and validation of data in situ on drilling operations
 - Applicable standards will be used, as appropriate
 - e.g. sensor standards by IEEE
- Purpose: Provide a means to assure data accuracy for critical sensors / systems to achieve acceptable control from manual through various levels of automated drilling and to support data analytics
- Product: An industry Recommended Practice (RP) suitable for use by typical industry participants

Work Plan – Now thru March 2019

- Launch Steering Committee
 - Complete appointments of drilling industry experts / leaders
 - Include representatives of IADC DEC, IADC ART, SPE DSATS, OGDQ, ISCWSA
 - Appoint JIP Funder representatives as funding received
- Identify and classify sensors / systems of interest in drilling
- Prioritize sensors / systems
 - Impact on drilling process
 - Value to drilling process
 - Ease to apply
 - Cost to apply

Work Plan – Now thru March 2019 (Cont'd)

- Select sensor / system for proof of concept for use of IV&V
- Identify sensor / system experts to consult on the chosen proof of concept
- Develop IV&V proof of concept
- End of Stage I review
 - Present proof of concept for review
 - Present sensor / system ranking
 - Perform stage gate review

Current steering committee members

The end of Stage I will be a Stage Gate review by the Steering Committee, JIP Funders and IADC DEC to approve or disapprove (with recommendations) to commence Stage II

Contact Info for Joining the JIP

- Maria Araujo
 - maria.araujo@swri.org
 - 210-522-3730
- Paul Wood
 - paul.wood@swri.org
 - 210-522-3275
- John de Wardt
 - john@dewardt.com
 - 970-879-3103