

## Collision Avoidance Work Group

14<sup>th</sup> meeting, Concorde La Fayette Hotel, Paris, 7th Mar 2013

### MINUTES OF MEETING

Present: Bill Allen, Jerry Codling, Steve Grindrod, Angus Jamieson, Adrian Ledroz, Bjorn Erik Loeng, Mark Michell, Erik Nyrrnes, Son Pham, Benny Poedjono, Andy Sentance, Anas Sikal, Patrick Walker, Harry Wilson (Group leader).

Absent: Darren Aklestad, Neil Bergstrom, Andy Brooks Pete Clark, Aprameya Dhara, Ian Mitchell, Roger Goobie, Phil Harbidge, Fernando Laroca, Jonathan Lightfoot, Dave McRobbie, Ludovic Macresy, Ross Lowdon, Wayne Phillips, Jim Shipstead, Brett Van Steenwyk, Jim Towle

Visitors: Tim White

### Special Meeting

This meeting convened as a joint meeting with the Error Model Maintenance sub-committee to attempt to agree on good practice recommendations for modelling and applying Inclination Only survey data. At the last Collision Avoidance meeting, this topic was raised by several Operators as needing urgent attention.

Agenda:

09:00-10:00 Collision Avoidance  
Status reports on action items from previous meeting  
10:00-12:30 Joint  
Inclination Only Surveys – Good Practice.  
13:30 – 16:30 Error Model Maintenance

### Collision Avoidance

#### Changes to Group membership

Patrick Walker of Sperry and Bjorn Erik Loeng of Statoil have joined the Group. Phil Harbidge has left the Group to participate in other Workgroups.

#### Minutes of the last meeting (Harry Wilson)

Following on from meeting 13, activity focussed on the new task of recommending good practice for the use of *Inclination Only* surveys, and there has been little progress on the several action items noted in the San Antonio minutes. Their status was summarised as follows.

## ISCWSA/SPE Wellbore Positioning Technical Section

Best Practices document (Ross Lowdon, proposed at meeting 11)

Ross thinks his original objective is largely achieved by the draft Process Management document, and that there is no need to continue with a Best Practices document.

Task cancelled

Lexicon (Pete Clark)

Meeting 13 Action: Pete to get a definition of “combined covariance” from Landmark.

Status: Unknown

Bibliography (Pete Clark)

Meeting 13 Action: Pete will filter the bibliography and report to the group before the next meeting.

Status: Unknown

Current Common Practice (Harry Wilson)

Meeting 13 Actions:

Angus: ensure that the ellipse expansion method is defined correctly.

Harry and Erik Nyrnes: clarify or update the Statoil method to reflect their current practice.

A list of “desirable features of a clearance scan” has been included.

Andy Brooks to add to this list that the outcome should be independent of the ellipse plot scaling.

Status:

Input from Angus and Erik received around meeting time; still to be incorporated

Desirable Features already added to draft.

No update on Andy’s task

**Action:** Harry to publish revision by end June.

Separation Factor Calculation Process (Pete Clark)

Harry wishes to reformat Pete’s document slightly to align it with other publications of the Workgroup – but hasn’t found time to do so yet.

**Action:** Harry to publish by end June.

Standard well sets (Andy Sentance/Harry Wilson)

Still working on adding Pete Clark’s requested 90 degree intercept, head-on approach.

**Action:** Harry and Andy to publish by end June.

Process Management (Bill Allen/Harry Wilson)

**Action:** Bill and Harry to publish by end June.

### **Inclination Only Surveys**

Andy Sentance presented a draft proposal developed with Harry Wilson. This included an analysis, previously distributed, of the implications of adopting either of the two commonly used methods of describing wellpaths surveyed using inclination only tools. Andy pointed out that the objective was to propose a method that results in safe drilling practices, while requiring a minimum of change to existing software and procedures.

The key points discussed and agreed were:

- The wellpath should be plotted as perfectly vertical, with the recorded inclinations used to calculate position uncertainty
- The calculation of position uncertainty should use existing ISCWSA error terms, if possible
- Planned wells were a special case, since they would indicate zero inclinations. They will probably need a dedicated error model with a new term

## ISCWSA/SPE Wellbore Positioning Technical Section

Angus Jamieson pointed out that plotting wells as vertical means that TVD is always reported deeper than it really is; a problem for G&G departments. Harry expressed the opinion that this was a limitation of running an inadequate survey programme, and the best that could be achieved was to include the TVD bias as an additional measured depth uncertainty, but that even that may be including unjustified precision, given the approximate nature of the proposed model. Angus pointed out that the TVD bias could be significant (e.g. 4/1000 at average inc 5°), and it was agreed that the model should include an allowance for this effect.

Son Pham said that, despite the intention of minimising the need to alter well planning software and procedures, database management was affected by the proposed method. Others argued that it was mostly at the implementation level and not at the user level, however, it was agreed that the recommendations would include examples of how it might be implemented in software.

**Action:** Andy and Harry to revise their proposal based on the discussion, and distribute to the Workgroup for final review before publication. (Distribute by 9<sup>th</sup> April.)

**Collision Avoidance meeting closed.**