

# Introduction to Positioning and Survey

16th March 2011  
Green Room, Ibis Hotel,  
Murray Street, Perth., Australia



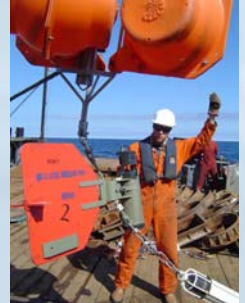
## Programme

**08.15 Registration**

**08.25 Introduction - Pete Wademan, Woodside Energy Ltd.**

**08.45 SESSION 1 - GEODESY and POSITIONING PRINCIPLES**  
**Geodesy - Gareth Jones, BHP Billiton**

- \* Coordinates - Geographical - Grid - Cartesian
- \* Ellipsoids
- \* Horizontal Datums
- \* Datum Transformations
- \* Vertical Datums
- \* Geoid
- \* Projections and Grids



**09.45 Positioning Principles - Ken Eddy, Fugro Survey Pty Ltd.**

- \* Range-Range
- \* Angular
- \* Range-Bearing
- \* Pseudo Range
- \* GPS principles
- \* Precision
- \* Reliability
- \* Least Squares Adjustment

**10.35 Tea/Coffee**

**10.50 SESSION 2 - POSITIONING TECHNOLOGY**

**Surface Positioning - Gareth Almond, OmniSTAR Pty Ltd.**

- \* History of Surface Positioning Radio Waves
- \* Principles
- \* Frequency and Range
- \* Triangulation
- \* GPS
- \* GPS Error Sources
- \* DGPS positioning (Code Phase/Carrier Phase)
- \* Transmitting Corrections
- \* WAS, SA, RTK
- \* Correction & Subscription Service

**11.45 Vessel Dynamics - Phil Griffin, Marine Management Consulting**

- \* Centre of Gravity
- \* Stability
- \* Pressure Point
- \* Turning of Vessels
- \* Squat
- \* Magnetic Compass
- \* Gyro Compass
- \* Attitude Sensors
- \* Attitude Sensor Calibration
- \* Inertial Navigation Sensor

**12.45 Lunch**

**13.30 Underwater Positioning Technology - Bruce Baker, Neptune Geomatics**

- \* USBL
- \* LBL
- \* Metrology
- \* ROV
- \* INS

**14.30 SESSION 3 - OVERVIEW OF OTHER SURVEY TECHNIQUES**

**Tides and Currents - Scott Noreika, RPS Metocean**

- \* Tide Measurement
- \* Current Profiling
- \* Sound Velocity Profiling
- \* Prediction
- \* Temp Salinity

**15.15 Tea/Coffee**

**15.30 Bathymetry and Engineering Geophysics Systems - Andy Lane, Woodside Energy Ltd.**

- \* SBES
- \* MBES
- \* SSS
- \* SBP
- \* Magnetometer
- \* ROV mounted vs AUV

**16.00 Survey Data Processing - Erin Pyke, Fugro Survey Pty Ltd.**

- \* Validation
- \* Tide Correction
- \* Interpolation
- \* Data Modeling - Gridding and Thinning and Countouring
- \* Data Presentation/Visualization

**16.30 SESSION 4 - CASE STUDY**

**Bayu Undan Installation - Ken Eddy, Fugro Survey Pty Ltd.**

**17.00 Day End**



SUT reserves the right to amend/change the programme as it sees fit.

# Registration Information

For further information on this event please contact Joyce Bremner on [j.bremner@sut.org](mailto:j.bremner@sut.org) T: + 61 (0) 8 9446 9903  
To register, either e-mail the information required on the registration form to [perthevents@sut.org](mailto:perthevents@sut.org)  
or fax the completed form to + 61 (0) 8 9446 9905

## Registration Fees

SUT Members - \$500.00 + GST

Non Members - \$550.00 + GST

**Fee includes - A copy of the Handbook of Offshore Surveying - Book One - value \$200**

All refreshments, CD containing PDF's of the main presentations.

## Preferred Payment Methods:

**Credit Card:** Mastercard, Visa or AMEX\* ONLY. We cannot accept payment by any other card.  
*\*Please note payments made by AMEX will attract a 2.75% surcharge.*

**Cheque:** Australian Dollar only, made payable to The Society for Underwater Technology  
Send to, SUT, PO Box 7284 Cloisters Square, Perth WA 6850  
Please make sure you reserve a place by e-mail or fax before sending payment.

## Cancellations:

Refunds will be made on written cancellation received up to ten working days in advance of the event, but will be subject to a 15% handling charge. 50% will be deducted up to three working days in advance and 100% thereafter up to the start of the event. No refund will be given for non-attendance. Delegates may wish to nominate a substitute in their place.

**Joining Instructions** Joining instructions will be e-mailed to each registered delegate.

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## Registration Form

Please e-mail completed form to [Perthevents@sut.org](mailto:Perthevents@sut.org) or fax the to +61 (0) 8 9446 9905

Please tick to indicate your preferred payment method: SUT Member No. \_\_\_\_\_

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Credit Card No: VISA, MASTER CARD or \*AMEX \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

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Amount to be charged \$ \_\_\_\_\_ Signature \_\_\_\_\_