Geomatics support during the upstream oil and gas life cycle

**Access**
- Coordinate Reference Systems, licence boundaries & contextual GIS
- Seismic survey positioning & regional data integration
- Exploration drilling hazard surveys
- Rig moves and well positioning
- Environmental Impact Assessments surveys
- Site & route geophysical and geotechnical surveys

**Exploration & Appraisal**
- Appraisal rig moves and well positioning
- Pre-installation surveys
- As-built surveys
- 3D seismic survey positioning
- GIS asset mapping and Oil Spill Response / Common Operating Picture
- Satellite imagery / remote sensing data provision and analytics
- Pipeline and asset inspection

**Development**
- Facilities installation positioning support, manitool etc.
- P6/11 v1.1 format description, SSDM revised model, vertical CRS guidance
- Still to release: DHSS revised guidelines, P1/11 and P4/11 User Guides and P4/11 v1.1 format description, SSDM revised model, vertical CRS guidance note, satellite remote sensing for oil spills at sea guidelines (JV with IPIECA)

**Production**
- Oil Production

**Retirement**
- Infill site surveys & rig / well positioning
- Structure monitoring
- Environmental monitoring surveys
- Abandonment and post-abandonment surveys

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**Chair’s message**

Geospatial data integrity, provided through the combination of:
- accurate positioning during field operations & data acquisition
- appropriate geospatial data management, mapping and visualization

is a key component to reduce safety, environmental and business risk in the oil and gas industry.

The Committee’s primary objective for the near future will be to maintain our advocacy of industry regulators, associations & standards bodies and to maintain, enhance and develop existing deliverables such as the EPSG Geodetic Parameter Dataset, the SSDM – Seabed Survey Data Model, position data exchange formats and GIGS process.

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**Business value of Geomatics in the Oil & Gas Sector**

**Operational Efficiency**
- Reduced operational cost and fewer delays
- Infrastructure, wells, seismic, site investigation – positioned where intended
- Better SIMOPS management (common, standardised and accurate activity situational awareness)

**Risk Reduction**
- Reduced operational risk
- Improved emergency response
- Compliant with regulatory requirements
- Correct legal boundary definitions
- Improved spatial integrity during data transfer and manipulation

**Business Value**
- Enhanced, high quality geospatial analytics, better visualisation, better subsurface models

**Informed and competitive business decisions – spatially accurate, high quality operations positioning, geospatial data and maps.**

- more efficient, lower risk, trusted data

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**What does the Geomatics Committee do?**

The Geomatics Committee provides global guidance for the survey & positioning and geospatial data management disciplines.

It aims to help IOGP Members by:
- developing and disseminating good practice, providing a forum for exchanging knowledge, influencing regulators and standards organizations, maintaining international position data exchange formats, data models and a global geodetic parameter dataset (EPSG), liaison with industry associations.

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**Work streams for 2017 and beyond**

Continue active ownership of key industry:
- Guidelines and Position Data Exchange formats – maintain
- GIS Data Models – maintain SSDM and develop LSDM
- Geospatial Integrity of Geoscience Software (GIGS) – revise and update test datasets
- IOGP’s EPSG Geodetic Parameter Dataset – maintain and enhance
- P7 wellbore survey data exchange format – revise
- Oil Spill Response Common Operating Picture guidelines (JP with IPIECA) – maintain

Work with OGC, ISO, SEG and Regulators to promote adoption or improvement of coordinate data and reference system standards.

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**2016 Highlights**

- Joint IOGP/IMCA/THSIS 6th Geomatics Industry Day – 110 Aberdeen based attendees
- Report (No 373-23) on use of the Web Mercator Coordinate Reference System
- Inputs to SEG updates of position elements of SEG D v3.1 and SEG Y v2.0 seismic data exchange formats
- Regulator advocacy on IOGP Drilling Hazard Site Survey (DHSS) guidelines (US, Trinidad, Egypt, UK)
- Webinar on DHSS reports and updated P Formats – 60 global Operators attendees
- Still to release: DHSS revised guidelines, P1/11 and P4/11 User Guides and P4/11 v1.1 format description, SSDM revised model, vertical CRS guidance note, satellite remote sensing for oil spills at sea guidelines (JV with IPIECA)

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For more information visit www.iogp.org/geomatics