Site Investigations and Survey Guidelines

'…raising standards in the energy industry'

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INTERNATIONAL ENERGY
CONSULTANTS ORGANISATION

GEMS Group

www.gems-group.com

London
24th March 2010

AIMS

Guidelines for Site Investigations and surveys

Historical overview

Currently used

In Progress

Future aims

Co-ordination and co-operation

" Guidelines, guidelines everywhere …

but do we know where to find them?"

The Rime Of the Ancient Mariner by Samuel Taylor Coleridge

Major Organisations

Organisations involved in the production of Guidelines.

UKOOA	United Kingdom Operators Assosciation
OGP	International Association of Oil & Gas producers
OSIG	Offshore Site Investigation and Geotechnics
ISO	International Organisation for Standardization

ISO International Organization for Standardization

OGP International Association of Oil & Gas Producers

SUT

UKOOA – Past and Current

Guidelines and Publications

1. CONDUCT OF MOBILE DRILLING RIG SITE SURVEYS
2. GUIDELINES FOR THE CONDUCT OF MOBILE DRILLING RIG SITE INVESTIGATIONS IN DEEP WATER

Data Formats

UKOOA 'P' Formats

P1/90	POST PLOT DATA EXCHANGE TAPE
P2/94	EXCHANGE FORMAT FOR RAW MARINE POSITIONING DATA

UKOOA – Guidelines

CONDUCT OF MOBILE DRILLING RIG
SITE SURVEYS Volumes 1 and 2
Issued as final in 1997

"Volume 1 of the UKOOA Guidelines for the Conduct of Mobile Drilling Rig Site Surveys summarises objectives and requirements for such surveys.
Volume 2 describes in greater detail, the basis for the requirements, and the technical standards and methods required to fulfil them.
It is recognised that these Guidelines will need to be revised as new equipment and techniques become available*"*

CURRENT STATUS

Still available and is being used, but recognised as outdated.
To become obsolete and be superseded by new OGP guidelines.

Reference location (s) :
http://www.epsg.org/Exchange/OPS13B.pdf
http://www.epsg.org/Exchange/OPS13C.pdf

OGP – General

OGP Now taking over from UKOOA as primary organisation and are active in both revising guidelines and data format standards.

Main Committee Responsible : OGP Survey And Positioning Committee

Committee Chair : Richard Wylde (Exxon Mobil)

Sub-Divisions Geodesy Subcommittee and P-Format Task Force

P-Format Task Force

P-Formats (data Exchange)

Description	current Version	Status
P1 (Post Plot co-ords)	P1/90	Revision in progress
P2 (raw data)	P2/94	Revision in progress
P5 (Pipeline positioning)	P5/94	
P6 (Bin Grid Orientation)	P6/98	
P7 (Well deviation)	P7/2000	

OGP – Ctd

Guidance Notes

OGP currently has 10 Guidance notes in use :

GN #	Description	GN #	Description
1	Geodetic awareness	7	EPSG Geodetic Parameter Dataset
2	Use of Bin Grids and Coordinate Reference Systems in Workstations	10	Geodetic Transformations Offshore Norway
3	Contract Area Definition	13	Advisory Note on Datum Transformation Evaluation and Use
4	Use of the International Terrestrial Reference Frame (I.T.R.F) as Reference Geodetic System for Surveying and Real-time Positioning	14	Coordinates Reference Systems in Reserves Unitisation Agreements
5	Coordinate Reference System Definition	16	Quality Control of Proposed Well Co-ordinates

OGP – Ctd

On-Going / Existing guidelines

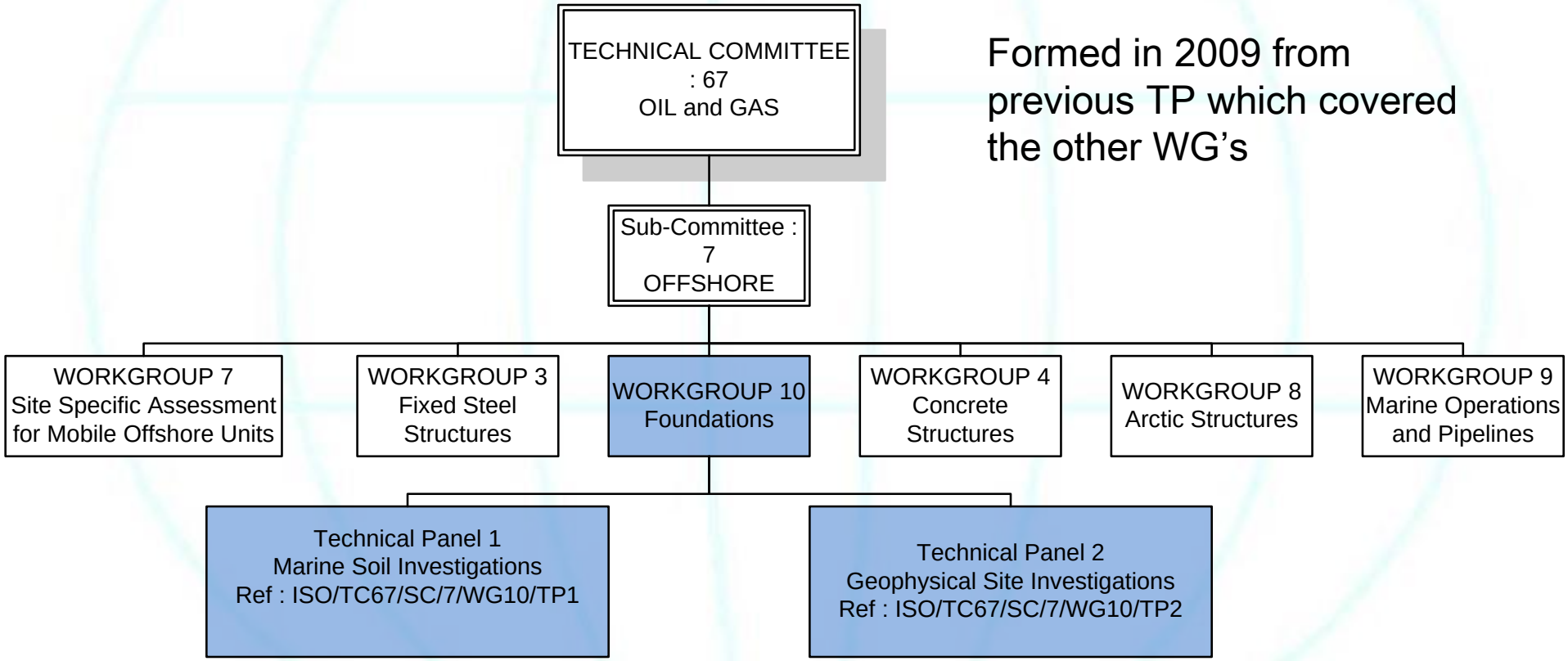
Guidelines

Description	Status	Release date
Guidelines for the conduct of marine drilling hazard site surveys for offshore drilling locations	Draft Final	Release imminent
Guidance for the use of DGNSS positioning	On-going	2-3 months
Guidance on the use of co-ordinate systems in data management on the UKCS (Revision of UKOOA)	On-going	
GIS Model for the delivery and exchange of seabed survey data	On-going	

OGP – Site Investigation

Main Committee Responsible	: OGP Survey And Positioning Committee
Sub-Committee	: Site Investigations
Committee members	: BP, Shell, Gardline, Fugro, Total, Total, Statoil, Maersk and Metoc
Title	: **Guidelines for Conduct of Marine Site Surveys Site Investigation for Offshore Drilling Locations**
Status	: Final draft, waiting green light from OGP committee
Release date	: April / May 2010
Intention	: Replacement of UKOOA guidelines.

ISO – Structure



WG 10 : Foundations

Formed in 2009 from previous TP which covered the other WG's

ISO – Documents of Relevance

There are three documents being worked on which are of relevance to Site Investigations

- ISO/TC67/SC/7/WG10/TP1
  Marine Soil Investigations
  Status : in progress, well advanced
  Issue date : 2011
  Led by : Viggo Karlsen, Statoil
- ISO/TC67/SC/7/WG10/TP2
  Geophysical Site Investigations
  Status : Started, 20 + members
  Issue Date : 2013
  Led By : Thierry des Vallieres, Total
  Key Points : Co-ordinating with API
- ISO/TC67/SC/7/WG7
  Site-specific assessment of mobile offshore units - Part 1: Jack-ups
  Status : Issued as draft :-2010

OSIG – Guidelines

OSIG are currently in the process of reviewing and re-working a number of specific guidance notes

Description	Current revision	Status
GUIDANCE NOTES ON SITE INVESTIGATIONS FOR OFFSHORE RENEWABLE ENERGY PROJECTS	Rev2, March 2005	Rev 3 in Progress
GUIDANCE NOTES ON GEOTECHNICAL INVESTIGATIONS FOR MARINE PIPELINES	Rev3, 2004	Rev 4 in progress
GUIDANCE NOTES ON GEOTECHNICAL INVESTIGATIONS FOR SUBSEA STRUCTURES	Rev2, Aug 2000	Revision well advanced.
GUIDANCE NOTES ON GEOTECHNICAL INVESTIGATIONS FOR WELL ENGINEERING		In Progress

And More…..

In addition to those bodies and documents already mentioned it should be noted that there are a significant number of other organisations of relevance some of the main ones are listed below :

ISO 9001 Quality Systems – Model for Quality Assurance in Design, Development, Production, Installation and Servicing
NORSOK Standard G-001 (Rev. 2, October 2004) Marine Soil Investigations
NS G-CR-001 Common Requirements for Marine Soil Investigations
NS 3481 Soil Investigation and Geotechnical Design of Marine Structures
BS 5930 Code of Practice for Site Investigations
BS 1377, Parts 1 to 9 Methods of Tests for Soils for Civil Engineering Purposes
API RP 2A Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms – Working Stress Design
ISSMGE International Society for Soil Mechanics and Geotechnical Engineering. International Reference Test Procedure for the Cone Penetration Test (CPT) and the Cone Penetration Test with Pore Pressure (CPTU) - Report of the Technical Committee 16 on Ground Property Characterisation from In situ Testing (1999)
SOLAS 74/78/81/83 International Maritime Organisation. International Conventions for the Safety of Life at Sea
SNAME – The Society of Naval Architects and Marine Engineers (2002) Technical and Research Bulletin 5-5A, Guidelines for Site Specific Assessment of Mobile Jack-Up Rigs

References

The following table is a good starting point for further information

Organisation / Authority	website / Link	Description	reference Number
OSIG	http://sig.sut.org.uk/sutosig.htm	GUIDANCE NOTES ON SITE INVESTIGATIONS FOR OFFSHORE RENEWABLE ENERGY PROJECTS	Rev2, March 2005
OSIG	http://sig.sut.org.uk/sutosig.htm	GUIDANCE NOTES ON GEOTECHNICAL INVESTIGATIONS FOR MARINE PIPELINES	Rev3, 2004
OSIG	http://sig.sut.org.uk/sutosig.htm	GUIDANCE NOTES ON GEOTECHNICAL INVESTIGATIONS FOR SUBSEA STRUCTURES	Rev2, Aug 2000
OSIG	http://sig.sut.org.uk/sutosig.htm	GUIDANCE NOTES ON GEOTECHNICAL INVESTIGATIONS FOR WELL ENGINEERING	
UKOOA	http://www.epsg.org/Exchange/OPS13B.pdf http://www.epsg.org/Exchange/OPS13C.pdf	CONDUCT OF MOBILE DRILLING RIG SITE SURVEYS Volumes 1 and 2	issue 1.2, 1997
UKOOA	http://www.epsg.org/Exchange/OPS13A.pdf	GUIDELINES FOR THE CONDUCT OF MOBILE DRILLING RIG SITE INVESTIGATIONS IN DEEP WATER	issue 1, July 2000
OGP	http://www.ogp.org.uk/	GUIDELINES FOT THE CONDUCT OF DRILLING HAZARD SITE SURVEYS	underway
ISO	http://www.iso.org	Marine Soil Investigations	19901-8
ISO	http://www.iso.org	Geophysical Site Investigations	underway
ISO	http://www.iso.org	Site-specific assessment of mobile offshore units - Part 1: Jack-ups	DIS 19905-1:2009
BSI	http://www.bsigroup.co.uk/en/Assessment-and-Certification-services/Management-systems/Standards-and-Schemes/ISO-9001/	ISO-9001	
IMO	http://www.imo.org/Conventions/contents.asp?topic_id=257&doc_id=647	SOLAS	