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GP 10-40

Drilling Rig Audits and Rig Acceptance

Group Practice

BP GROUP
ENGINEERING TECHNICAL PRACTICES

Foreword

This is the first issue of Engineering Technical Practice (ETP) BP GP 10-40.

DWOP Policy Summary

Onshore and offshore drilling units and workover units shall be subject to a formal rig audit to ensure compliance with this standard.

New onshore and offshore drilling units or upgraded offshore drilling units shall be subject to an integrated acceptance test (IAT).

Mobile offshore drilling units shall be audited to assess marine assurance in accordance with Group Marine Standard.

The segment engineering technical authority rig acceptance/design/movement shall approve the use of all rig auditors, other than the rig audit group, and the audit protocols utilised

Followup audits shall be scheduled within 24 month from initial, or last, rig audit.

SPU shall make decision to accept or delay acceptance of a drilling unit on contract

SPU shall be accountable for closeout of audit recommendations.

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Introduction

BP is committed to conducting business in a manner that ensures wells are designed, drilled, completed, and maintained in accordance with high and consistent standards. BP will comply with all relevant laws and regulations and will be sensitive to balanced economic and environmental needs of the community. Sound engineering judgment and governmental regulations may require that operations be performed in accordance with standards which exceed these statements.

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1. Scope

This GP provides requirements for onshore and offshore rig audits and rig acceptance, including well intervention vessels that have drilling equipment installed.

2. Normative references

The following normative documents contain requirements that, through reference in this text, constitute requirements of this technical practice. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this technical practice are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

BP

	Integrity Management Standard
	Group Marine Standard inc Mobile Offshore Drilling Unit Practice
EP-GP-04-30	Occupied Temporary Buildings
GP-10-41	Drilling Facilities Project Execution
GP-10-42	Design of Drilling Facilities
GP-10-43	Moving and Securing of Mobile Offshore Drilling Units
BPA-D-002	Well Control Manual

American Petroleum Institute (API)

RP 2C	Specification for Offshore Cranes
RP 2D	Operation and Maintenance of Offshore Cranes
RP 4G	Use and Procedures for Inspection, Maintenance, and Repair of Drilling and Well Servicing Structures.
RP 7G	Drill Stem Design and Operating Limits.
RP 8B	Procedures for Inspection, Maintenance, Repair, and Remanufacture of Hoisting Equipment.
Spec 16C	Specification for Choke and Kill Systems
Spec 16D	Control Systems for Drilling Well Control Equipment.
RP 53	Blowout Prevention Equipment Systems for Drilling Wells.
RP 54	Occupational Safety for Oil and Gas Well Drilling and servicing Operations.
RP 64	Diverter Systems Equipment and Operations.
RP 500	Classification of Locations for Electrical Installation at Petroleum Facilities Classified as Class 1, Division 1 and Division 2.

Other Industry Standards

IMCA	Common Marine Inspection Document (CMID)
IMO	Mobile Offshore Drilling Units (MODU Code)
STCW95	Standard of Training, Certification and Watchkeeping - 1995.

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3. Symbols and abbreviations

For the purpose of this GP, the following symbols and abbreviations apply:

ARAS	Audit report action sheet
BOP	Blow out preventer.
CMID	Common marine inspection document.
DP	Dynamic positioning
ETP	Engineering technical practice
FMEA	Failure mode and effects analysis.
GMS	Group marine standard
HP/HT	High pressure high temperature.
HSE	Health, safety, and environment.
HSSE	Health, safety, security, and environment.
IAT	Integrated acceptance test.
IAT	Integrated assurance test (for BP facilities).
IM	Integrity management standard
IMCA	International Marine Contractors Association
IMO	International Maritime Organisation
MODU	Mobile offshore drilling unit.
MSDS	Material safety data sheet.
QA	Quality assurance.
QC	Quality control
SPU	Strategic performance unit
STP	Site technical practice

4. General

a. Drilling unit selection is the responsibility of the SPU. Wells team shall ensure that operating capability of the drilling unit is suitable for prevailing environmental and regulatory conditions at wellsite.

b. Prior to commencement of contract or beginning operations for BP:

1. Onshore and offshore drilling units and workover units shall be subject to a formal rig audit to ensure compliance with this standard.

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2. New onshore and offshore drilling units or upgraded offshore drilling units shall be subject to an integrated acceptance test (IAT).

c. Prior to awarding a long term contract for a new build onshore and offshore drilling unit a full technical review of the proposed new build shall be carried out with rig audit group participation. The review shall include but not be limited to review of proposed design from both a drilling and marine operations perspective, review of contractors project execution plan and organisation to deliver, review of schedule robustness, key risks and mitigations, start up plans, equipment selection criteria and QA/QC

5. Rig audit parameters

5.1. General

a. Requests for rig audits shall be coordinated through the head of rig audit

b. The segment engineering technical authority rig acceptance/design/movement shall approve the use of all rig auditors, other than the rig audit group, and the audit protocols utilised

5.2. Initiating an audit

a. The applicable wells manager, or appointed delegate shall identify requirements for an audit of a drilling unit.

b. The applicable wells team shall ensure that the requirement to perform an audit is discussed during the tendering process and included in the rig contract.

c. Audit terms of reference shall be produced and agreed.

1. The terms of reference should identify the scope of the audit including people, processes and plant with the aim being to verify compliance to specified minimum requirement, to contract specified requirement and regulatory requirements, including local regulatory requirements.

5.3. Audit team formation

a. Rig audit team composition shall be arranged by the rig audit group.

b. Audit team leader shall be designated by the rig audit group.

c. A master mariner and marine engineer shall be included on teams that audit a MODU.

5.4. Rig audit protocol

a. Audit programme shall be based on applicable:

1. ETPs and STPs.
2. Group Standards, for example IM and GMS
3. CMID and CMID ANNEX
4. Rig audit group standards and lessons learnt database.
5. MODU Code
6. API specifications and recommended practices
7. Local legislation.
8. Local rules, for example North Sea Lifting Rules
9. Classification Society Rules

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5.5. Audit reports

a. All rig audit reports shall be reviewed and approved by the segment technical engineering authority rig acceptance/design/movement

b. Rig audit reports shall be retained for 10 years.

c. Exceptions to standard retention periods are:

1. Audit reports relating to BP owned facilities shall be retained.

2. Some documents that shall be retained due to their legal status or nature.

d. A copy of a rig audit report should be published on the rig audit website.

5.6. Audit report recommendations

a. For the audit report, recommendations from ARAS shall be placed in one of four classes.

b. The following definitions shall be used to assign class and categories for observations:

1. Class categories

a) Class 1 - Items that do not comply with BP policies or standards.

b) Class 2 - Items that are outside API, legislation, and rig owner policies and have potential for high safety or environmental impact.

c) Class 3 - Items expected to be in place from a combination of competent drilling contractor and knowledgeable operator.

d) Class 4 - Items that can be used by drilling contractor and/or BP to build on the project, although they are not considered essential.

5.7. Audit debrief

A debriefing to wells team leader, or his delegate, shall be conducted after the rig audit. At that time, the audit team leader shall review the key audit findings.

5.8. Audit closeout

a. Wells team leader shall develop final, formalised "closeout" programme with actions and deadlines.

b. Wells team leader shall:

1. Be accountable for closeout of recommendations.

2. Manage response to audits and its recommendations.

5.9. Audit followup

a. Wells team shall initiate a followup audit to:

1. Confirm compliance with recommendations.

2. Reassess condition of the drilling unit.

3. Address specific needs such as poor performance (including HSSE)

b. Followup audits shall be scheduled within 24 month from initial, or last, rig audit.

6. Rig Acceptance

6.1. General

a. Drilling units with operating history shall be audited using the process outlined in section 5, and acceptance criteria should be determined.

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b. New onshore and offshore drilling units or upgraded offshore drilling units shall be subject to an integrated acceptance test (IAT) prior to commencement of contract or operations for BP.

c. On upgraded offshore drilling units the IAT should only focus on the upgraded or modified systems

6.2. Setting standards

a. Wells team responsibility

1. Wells team shall establish technical expectations and requirements with rig owner.
2. Wells team shall ensure that established expectations and requirements are met.

b. Decision to accept a drilling unit

1. Decision to accept a drilling unit shall include an evaluation of aspects that pose a risk to or may have influence on the programme, including:
   a) Major accident risk.
   b) HSSE.
   c) Location.
   d) Rig specific and well specific factors.
   e) Special considerations relating to activities to be performed.
2. Assessment shall include a review of technical requirements and management systems, including safety management.

c. Compliance requirements

1. Applicable standards shall be communicated to drilling contractor as part of the tender process.
2. Drilling contractor shall demonstrate how the selected drilling unit will achieve compliance with requirements.

6.3. Rig acceptance process

a. IAT guideline document and execution plan

1. IAT guideline document shall be:
   a) Applicable to new onshore and offshore drilling units, or upgraded offshore drilling units.
   b) Written by the rig audit group.
   c) Distributed to wells team by the head of rig audit.
   d) Used during IAT.
2. IAT guideline document and execution plan shall be:
   a) A living document.
   b) Reviewed by project/wells teams
   c) Updated following an onsite review by the entire IAT team that draws on their varying areas of expertise.

b. IAT processes

1. During IAT of a floating MODU, riser recoil and emergency disconnection function should be tested.

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2. During IAT, the rig crew shall be continually assessed in the following areas:
    a) Attitude to safety.
    b) Commitment to safe working practices.
    c) Processes used.

c. In addition to IAT, a technical rig audit shall be conducted to evaluate all systems using a nonintrusive audit technique.

6.4. Acceptance report format

a. Upon completion of IAT, an audit report shall be issued along with a qualitative risk assessment.

7. Acceptance criteria

7.1. Audit

a. SPU shall make decision to accept or delay acceptance of a drilling unit on contract.

b. Audit shall focus on:
    1. Safety critical, drilling, mechanical, marine if applicable and electrical equipment.
    2. Competence of the drill, marine if applicable and maintenance crews
    3. Management systems in place to safely and efficiently manage use of the drilling unit.

c. IAT
    1. Drilling unit commissioning shall be complete, documented, and traceable prior to beginning IAT.
    2. Multidiscipline audit team should be used for audit and IAT.

d. Audits may generate recommendations that shall require response and closeout by wells teams.

7.2. Operating requirements

7.2.1. General

a. Wells team leader shall be accountable for:
    1. Ensuring that scope and programme of activities for the operation are defined.
    2. Establishing operational and functional criteria to govern selection of drilling unit.

b. Technical selection criteria should include:
    1. Location specific requirements, such as:
        a) Water depth.
        b) Geographical location.
        c) Temperature.
        d) Rescue facilities.
    2. Environmental requirements and constraints, such as:
        a) Time of year.
        b) Weather window.
    3. Rig specific requirements, such as:

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a) Equipment ratings.
b) BOP.
c) Pump capacity.
d) Deck space.
e) Deck load.
f) Crane capacity.
g) Jacking system, if applicable
h) Dynamic positioning, if applicable

4. Well specific requirements, such as:
   a) Derrick capacity.
   b) Top drive.
   c) HP/HT.
   d) Intervention activities.
   e) Well testing, if applicable.
5. Operational requirements, such as:
   a) Handling of riser and BOP.
   b) Simultaneous operations.
   c) Marine operations.
6. Management systems, such as:
   a) Safety management.
   b) QA.
   c) Maintenance.
7. Special considerations, such as nonstandard operations.
8. Rig owner policies.
9. Compliance with local legislation.
10. Compliance with API specifications and recommended practices.
11. ABS/DNV classification or equivalent, if applicable.
12. MODU Code, if applicable.

c. Recommendations from a rig audit or IAT shall be graded and categorised in accordance with Table 1.

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Table 1 - Class definitions of audit/IAT recommendations

Class	Definition	Consequence
1	Items that do not comply with BP policies or standards.	Rig not considered operable until requirements are met, defect/shortcoming rectified, or risk assessment has been undertaken and put into effect.
2	Items that are outside API, legislation, or rig owner policy; have high safety or environmental impact potential; or are necessary for project to start.	Rig not considered operable until requirements are met, defect/shortcoming rectified, or risk assessment has been undertaken and put into effect.
3	Items expected to be in place from a combination of competent drilling contractor and knowledgeable operator.	Remedies to be completed preferably prior to beginning/returning to work or within an agreed period defined in risk management plan.
4	Items not considered essential that can be used by drilling contractor and/or BP to build on the project.	Audit team shall advise urgency of need for corrective response.

7.2.2. Equipment suitability for planned activities

a. Wells team, with assistance from rig audit group, shall review relevant aspects of drilling unit design to confirm suitability for proposed operations.

b. If drilling unit design does not meet specified design criteria:

1. Necessary remedial actions shall be agreed to by BP and contractor.
2. Implementation plan shall be prepared and executed prior to operational startup.
3. Identification of remedial actions with an accompanying implementation plan shall be a requirement of the minimum conditions of satisfaction.
4. Specific operational requirements that will require special consideration should include:
   a) Mooring/station keeping design and analysis, including FMEA studies.
   b) Deepwater or harsh environment activities.
   c) High pressure/high temperature well operations.
   d) DP vessel operations and operability plots.
   e) Power management systems.
   f) Vessel management systems.
   g) BOP equipment configurations and controls including mud gas separator and vent line capacities.
   h) Deployment of specific equipment (e.g., Xmas Trees).
   i) Drilling and marine emergency equipment.
   j) Well testing and location of equipment in relation to occupied buildings.

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8. Mobile offshore drilling unit marine assurance

8.1. General

a. Mobile offshore drilling units shall be audited to assess marine assurance in accordance with GMS.

b. To assess marine assurance in accordance with GMS, marine assurance audits shall be performed by marine specialists.

8.2. Marine assurance audit process

a. Marine assurance audit shall:

1. Ensure that marine related operations are being conducted in accordance with national and international regulations and established industry guidelines.

2. Ensure that marine related operations are being conducted in accordance with GMS and the associated practices, in particular the MODU Practice.

b. Marine auditor responsibilities follow:

1. CMID and CMID ANNEX (BP Requirements for MODU)

a) All chapters within CMID and CMID ANNEX (BP Requirements for MODU) shall be used by marine auditor to perform a marine assurance audit.

2. Marine auditor shall:

a) Complete an audit report and identify deficiencies or recommendations.

b) Describe all marine assurance work performed during the marine assurance audit, including results of tests on equipment or systems.

3. Marine auditor should review previous marine audit reports and verify that appropriate corrective action has been taken concerning observations and recommendations. Actions not closed out shall be carried forward to marine assurance audit report.

c. Wells team shall review marine assurance audit report, CMID and CMID ANNEX (BP Requirements for MODU) report with rig owner.

d. Program to mitigate identified risk associated with marine assurance shall be developed by wells team.

e. Recommendations

1. Recommendations from marine assurance audit shall be reviewed by wells team and accepted, changed, or rejected.

2. If a recommendation is not accepted, reason for the decision shall be documented, filed, and rig audit group notified.

f. Rig audit group shall contact wells manager within 1 month of audit to review status of audit recommendations.

8.3. Marine auditor qualifications

a. For a self propelled MODU, two marine auditors with the following qualifications shall be used:

1. Master mariner with unlimited STCW95.

2. Chief engineer with STCW95.

b. For a moored or self elevating MODU, a minimum of one marine auditor shall be used and have at least one of the following qualifications:

1. Chief engineer with STCW95.
2. Master mariner with unlimited STCW95.

8.4. Marine auditor experience

Marine auditor shall have:

a. Minimum 5 yr of seagoing experience, with minimum 5 yr of experience in MODU operations.

b. Demonstrated recent experience of marine auditing.

c. Audit training/qualifications.

8.5. Marine auditor knowledge

Marine auditor knowledge shall include:

a. Current maritime legislation.

b. Classification society and international maritime requirements and standards for the type of MODU being audited.

c. Technological advances in vessel/equipment/MODU.

d. BP safety rules and expectations.

e. GMS and the associated practices, in particular the MODU Practice

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