

DEP SPECIFICATION

GEOHAZARDS ASSESSMENT FOR EXPLORATION, APPRAISAL AND DEVELOPMENT OPERATIONS

DEP 25.80.10.13-Gen.

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DESIGN AND ENGINEERING PRACTICE

DEM1



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PREFACE

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These views are based on the experience acquired during involvement with the design, construction, operation and maintenance of processing units and facilities. Where deemed appropriate DEPs are based on, or reference international, regional, national and industry standards.

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TABLE OF CONTENTS

1.	INTRODUCTION	4
1.1	SCOPE	4
1.2	DISTRIBUTION, INTENDED USE AND REGULATORY CONSIDERATIONS	4
1.3	DEFINITIONS	4
1.4	CROSS-REFERENCES	6
1.5	SUMMARY OF MAIN CHANGES.....	6
1.6	COMMENTS ON THIS DEP	6
1.7	DUAL UNITS.....	6
1.8	NON NORMATIVE TEXT (COMMENTARY).....	6
2.	BACKGROUND.....	7
3.	APPLICATION AND RESPONSIBILITIES	7
4.	GEOHAZARDS ASSESSMENT	8
4.1	GENERAL.....	8
4.2	DATA REQUIREMENTS	8
4.3	GEOHAZARDS ANALYSIS	10
4.4	GEOHAZARDS COMMUNICATION AND DOCUMENTATION.....	12
5.	REFERENCES	16



1. INTRODUCTION

1.1 SCOPE

This DEP specifies requirements and gives recommendations for geohazards assessment for offshore and onshore exploration, appraisal and development wells and infrastructure.

The purpose of this DEP is to ensure that geohazards are appropriately assessed in conjunction with well-site selection and infrastructure layout, and as input to well design and execution.

The custodianship and accountability for this DEP resides with the Global Discipline Head Geophysics.

This DEP contains mandatory requirements to mitigate process safety risks in accordance with Design Engineering Manual (DEM) 1 – Application of Technical Standards.

This is a revision of the DEP of the same number, dated February 2015. It has been renamed and now includes content that was previously in DEP 25.80.10.14-Gen. for Onshore Geohazards, dated February 2015. DEP 25.80.10.14-Gen. is now withdrawn; see (1.5) regarding the changes.

1.2 DISTRIBUTION, INTENDED USE AND REGULATORY CONSIDERATIONS

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This DEP is intended for use in facilities related to oil and gas production. This DEP may also be applied in other similar facilities.

When DEPs are applied, a Management of Change (MOC) process shall be implemented; this is of particular importance when existing facilities are to be modified.

If national and/or local regulations exist in which some of the requirements could be more stringent than in this DEP, the Contractor shall determine by careful scrutiny which of the requirements are the more stringent and which combination of requirements will be acceptable with regards to the safety, environmental, economic and legal aspects. In all cases, the Contractor shall inform the Principal of any deviation from the requirements of this DEP which is considered to be necessary in order to comply with national and/or local regulations. The Principal may then negotiate with the Authorities concerned, the objective being to obtain agreement to follow this DEP as closely as possible.

1.3 DEFINITIONS

1.3.1 General definitions

The **Contractor** is the party that carries out all or part of the design, engineering, procurement, construction, commissioning or management of a project or operation of a facility. The Principal may undertake all or part of the duties of the Contractor.

The **Manufacturer/Supplier** is the party that manufactures or supplies equipment and services to perform the duties specified by the Contractor.

The **Principal** is the party that initiates the project and ultimately pays for it. The Principal may also include an agent or consultant authorised to act for, and on behalf of, the Principal.

The word **shall** indicates a requirement.

The capitalised term **SHALL [PS]** indicates a process safety requirement.

The word **should** indicates a recommendation.

The word **may** indicates a permitted option.

1.3.2 Specific definitions

Term	Definition
ALARP	As Low As Reasonably Practicable
BOP	Blow Out Preventer. Equipment used for well control for riserless or closed circulation drilling.
Competence	The ability to perform a particular job in compliance with performance standards (that is suitably trained and with sufficient experience and understanding to safely perform the assigned work without supervision or with only a minimum degree of supervision).
DCAF	Discipline Controls and Assurance Framework
DWOP	Drill Well on Paper is a meeting of all rig-based and office-based stakeholders prior to spud to ensure alignment.
Geohazard	A naturally occurring or man-made feature or condition that could adversely impact HSSE or the asset during exploration, appraisal and development operations.
GWDP	Global Well Delivery Process
HSE-CA	Health, Safety and Environment - Critical Activity
LoB	Line of Business, an organisation within Shell that represents a group of assets involved in hydrocarbon exploration and production, often spanning across national boundaries.
OU	Operating Unit. An organisation within a LoB involved in hydrocarbon exploration and production within a country.
Recognized Geohazards Specialist	Person with competence of skill or mastery level in geohazard assessment as defined in the Geoscience competence framework.
SIMOPS	Simultaneous Operations
Seafloor Survey Data	Geophysical data that is not conventional or derived from conventional seismic data (e.g., multibeam bathymetry, sidescan sonar, subbottom profile, magnetometer, etc.)
SWF	Shallow Water Flow
TD	Total Depth. Bottom depth of a well at the completion of drilling operations.
Tophole	The well interval drilled from mudline or surface without a BOP. Typically called "riserless interval" in most offshore settings.
XORP	Exploration Opportunity Realization Process