

DEP SPECIFICATION

**FORMATION TOPS, FAULT INTERSECTIONS, AND FLUID
FILL PREDICTION FOR EXPLORATION, APPRAISAL, AND
DEVELOPMENT WELLS**

DEP 25.80.10.11-Gen.

February 2017

ECCN EAR99

DESIGN AND ENGINEERING PRACTICE

DEM1



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PREFACE

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1. INTRODUCTION

1.1 SCOPE

This DEP specifies requirements and gives recommendations for formation and fault marker top and fluid fill prediction and is applicable to all wells, including exploration, appraisal, development, water, and relief wells, and pilot holes.

The purpose of this DEP is to ensure that reliable estimates of formation depths, fluid fill and fault depths, which capture the full range of uncertainty, are provided as input to pore pressure predictions, drilling hazards analyses, and well designs. It covers all formations from surface to total depth for the planned well.

It is not in the scope of this DEP to specify which discipline(s) will perform the analyses leading to the prediction. This responsibility varies between regions and OUs.

This DEP is related to the following DCAF control(s):

- PPFG prognosis (XORP4) ID1704;
- Well Proposal (XORP 4) ID1671;
- Well Proposal ID1556;
- Well Functional Specification ID657;
- Pore Pressure Prediction Report – Dev ID 572;
- Pore Pressure Prediction Report – Development (Update) ID1430.

The custodianship and accountability for this DEP resides with the Production Geology Discipline Head.

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 2014; see (1.5) regarding the changes.

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This DEP is intended for use in wells 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.