CDP 1 AS A DECOMMISSIONED PLATFORM - OPERATIONS MANUAL	Ref. No.: MA FF 91 00 0001
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GENERAL RECORD OF REVISIONS

Revision number	Revision date	Revision type	Revised by
01	**Nov. 90**	Rev. CDP1 Operations Manual to reflect the decommissioned status	
02	**15.6.97**	Establish new introduction pages and corrections in sections 2.2, 2.8, 2.9, 4.2 and remove diagr.4.2 Remove inspection routes in section 10	PBEllingsen O.Sørensen M.Øvreeide
03	**13.08.97**	Include QP meeting room on distribution list	PBEllingsen

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CDP1

AS DECOMMISSIONED PLATFORM

REVISION OF OPERATIONS MANUAL VOL.1

CHAPTER 0

FOREWORD

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SECTION 2.2 - ENVIRONMENTAL DESIGN CRITERIA

1. SOIL PROFILE

Tabulated below is the soil profile as defined by samples taken from CDP1 location :

Depth Below Seabed (m)	Soil Description
0 to 9	Medium to fine sand DR = 80 to 90 per cent
9 to 16	Upper clay C_u = 13 to 25 t/m^2
16 to 38	Medium to fine sand with layers of clay C_u = 15 t/m^2
38 to 80	Hard clay C_u = > 50 t/m^2
80 to 150	Medium dense sand

2. SCOUR PROTECTION

A scout protection system for "carpets" was fitted at the installation of the platform, but this system is now considered inefficient due to damage. Gravel dump was placed in two 90 degrees sectors (north and south) during autumn 1983 right outside the slab to prevent scouring. The scour condition is considered presently stable.

3. SETTLEMENT

Settlement of the concrete structure has been measured once a year from 1980 up to and including 1993.

Comparison of the settlement results from 1980 to 1989 do not show any development.

Due to the commissioned status of the platform from 1991, a new set of reference points for the settlement measurements were established in 1990.

A comparison of 4 years of settlement results with the new set of reference points does not show any major development.

No regular settlement measurement campaign has been planned for the future.

SECTION 2.8 - CATHODIC PROTECTION

1. GENERAL

1.1 To prevent galvanic action all submerged steel parts are cathodically protected by a system of sacrificial zinc anodes designed for a projected life of 20 years.

1.2 The design current density is 100mA/m2 for bare steel in sea water for structure outside and inside the core. The current per well is taken to be 5A.

1.3 Isolating the steel items from the reinforcing bars in the concrete structure has been attempted. Allowance is, however, made for current demand in reinforcing bars, estimated at 1.0mA/m2 for fully immersed concrete, and at 10.0mA/m2 in the oxygen-rich exposure zone at water level.

1.4 Cathodic Potential measurements inside the concrete core will from 1997 be performed every second year.

2. SYSTEMS OF PROTECTION

2.1 Conductor Guide Frame

2.1.1 Only the guide frame above sand ballast at elevation +70.2m has been cathodically protected. The frames inside the sand ballast have only had a temporary function and are thus only coated.

2.1.2 The cathodic protection consists of 15 zinc anodes of 184 kg welded on the upper surface of the tubular members on the frame.

3. SACRIFICIAL ANODES

3.1 The sacrificial zinc anodes used on flat plates and structural steel members are in block form. Each anode is cast round a steel core which is welded to the surface to be protected.

3.2 Segment-type bracelet anodes are used on pipelines and are attached by clamp bolts. The electrical connection is then made by thermite welding copper cable from the anode to the pipelines.

4. INSULATION

Supports for the access platform riser sleeves and the 4” and 8” risers and “J”-tubes are all neoprene-lined.

5. PRECAUTIONS

5.1 Because a large number of zincs are connected between a large number of different points along the tube, there are bound to be differences of potential. If parts at even a small potential difference come into electrical

contact, a local current will be set up and a spark might result which could cause a fire in a hazardous area. Consequently, the provisions and recommendations of the following codes apply :

a) IP Electrical Model Code of Safe Practice in the Petroleum Industry 5.4 & 5.7
b) International Oil Tanker and Terminal Safety Guide 10.2 & 10.5

SECTION 2.9 - INSPECTION AND MAINTENANCE

1. GENERAL

Principally for safety reasons inspection and maintenance are considered as separate functions. A system of In-Service Inspections (IIS) has been developed to rationalize and monitor the inspection procedures for each platform, and together with a Preventive Maintenance System (PMS) will ensure the integrity of the structure.

The Frigg Field straddling the UK/Norwegian dividing line has four platforms subject to British Jurisdiction, CDP1, TP1, QP and FP; and two DP2 and TCP2 under Norwegian Jurisdiction. In order to operate the four UK sector platforms it is a legal requirement to have a current Certificate of Fitness, which is issued by a Certifying Authority on behalf of the Department of Energy. This certificate is not required for the Norwegian sector platforms, although a condition evaluation is made by the Norwegian Petroleum Directorate.

In order to obtain the basis for renewal of the Certificate of Fitness, and meet the requirements of the condition evaluation all platforms are subject to major survey.

2. INSPECTION

2.1 Full details of the In-Service Inspections are given in the IIS manuals. Contained in these manuals are full details of the scope and methods of inspection together with recording and monitoring procedures. Areas covered include primary and secondary structures.

The objectives of the inspection philosophy can be defined as follows :

a) To prevent accidents that could cause undue risk to personnel coming onboard for necessary inspection and maintenance work.
b) To ensure that the structure is in an acceptable condition and does not represent a hazard to the environment on the Frigg Field.
c) To be able to detect any major and severe deterioration of the primary structure in order to maintain the Certificate of Fitness.

The above water inspection programme will be performed on a yearly basis while the under water inspection will take place twice in the certification period.

3. MAINTENANCE

3.1 Maintenance routine for navigation and obstruction lights including associated solar panels and battery system is once a year.

3.2 Maintenance routine for checking/repair of all escapeways, ladders, gangways etc. is once a year.

3.3 Maintenance routine for helideck e.g. painting, portable fire extinguishers, safety netting etc. is once a year.

SECTION 4.2 - FIREFIGHTING AND SAFETY

1. FIREFIGHTING

1.1 General

Portable firefighting equipment is stored on helideck on QP and will be used whenever a hel. Transport is due for CDP1.

If any boarding is done from the sea side, the vessel crew will carry on equipment.

Reference to OPM15 and PMM no. 3.

CHAPTER 10

SAFETY

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