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FRIGG FIELD PRODUCTION FACILITIES

FEBRUARY 1976

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D.E.P.

4061 N° 6/413

FRIGG FIELD

PRODUCTION FACILITIES

MONTHLY REPORT

FEBRUARY 1976

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The installation work of the QP jacket progresses slowly. The Derrick Barge Blue Whale have installed two packages of the Oceanic drilling modules but suffered an accident in the course of the last package lifting.

The work on CDP1 has been delayed by the bad weather. The drilling equipment Foraki has carried out, after re-setting, the first drilling in the slab and recovered the 32" core.

The construction of the platform TP1 at Ardyne continues according to the programmed schedule. The support frame has been cut to the required length and the assembly work will start early in March.

The construction of treatment modules in Antwerp was again delayed, partially due to the wait for decisions concerning the metering.

The QP modules are being completed in Bordeaux and the dates of the load out on the cargo will be kept.

The construction of the DP2 jacket at Cherbourg and of the modules in St. Wandrille continue normally according to the scheduled planning.

The second phase of the slipforming of the caisson of TCP2 started on January 23rd, was completed on February 12 at the 42,70 m. level.

The fabrication contract of the support frame by Aker and of its addendum N° 2 were signed. 1000 of the structural elements of considerable thickness were subcontracted to CMP. The work progress of Aker at Stord in February is insufficient.

I - OFFSHORE OPERATIONS.

1.1. QP. installation.

The derrick barge BLUE WHALE, owned by NETHERLANDS OFFSHORE COMPANY, was committed on February 1, 1976, for 45 days. All remaining drilling module packages were loaded from CCB (BERGEN).

Two packages, each weighing approximately 110 tons, were lifted on the 12 and 13th of February. On the 23rd, the boom of the 2000 ton BLUE WHALE derrick was lost at sea, the boom of the stifleg also sustained some damages. The BLUE WHALE sailed back to ROTTERDAM.

The semi-submersible drilling platform NEPTUNE 7 was towed out of the STAVANGER fjord to FRIGG East and anchored on what was previously the 25/2-4 well, 10 miles east of QP. NEPTUNE 7 has on board all the equipment and stores needed to assist in the transfer of the QP. drilling modules.

1.2. Flare status.

The fog horn is working, but the light signal was put out at the beginning of February.

1.3. DP.1 status.

The fog horn and light signals are working. The installation of instrumentation cabin was postponed in order to fit the telemetry system required by DET NORSKE VERITAS and NORWEGIAN PETROLEUM DIRECTORAT.

1.4. CDP.1 Structure.

The bad weather disturbed and delayed all operations.

The following work was completed during the month of February :

- Installation of the 26" risers and anchors in the central core and tunnels (Eumech).
- Installation of dewatering pumps (Eumech).
- Installation of 8" seal in tunnel E (Eumech).
- Installation of an adaptor between the 26" main seal and clamp in tunnel F (Eumech).

- Testing of tunnels C and D (DORIS - NORWEGIAN CONTRACTOR).
- Cathodic protection cable trays (Eumech).
- Installation of anodes for the 26" and 8" riser (Eumech).
- Slab drilling : the Foraki rig has been completely renovated (mast, engine of the winch, hydraulic unit and engine of the turn table). The first 32" core was pulled up on February 27th. The DST equipment is standing by onshore.
- Preparation for the installation of the skid beams (Eumech).
- The cantilever for the living quarters is 90 % complete (Eumech).
- Topographic survey for gantry crane and Eumech operations (DORIS-BLOMS).
- Installation of the lift in the central core (Eumech).
- Installation of the sheave block at the bottom of the central core (Eumech).
- The erection of the gantry crane is in progress.

The following operations were completed this month :

- Legs SW and NW on the break water wall.
 - Four sections of the West roller beam (on the deck).
 - Two sections of the East roller beam (on the deck). (Buzichelli).
 - The total settling of the platform since installation is 14,3cm
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II - PRODUCTION FACILITIES - PHASE I.

2.1. CDP.1 Production facilities.

2.11. Production modules.

2.111. Rework PM2 - PM3 - PM4.

- Engineering : 95 (increase in scope).
- Procurement : 92
- Fabrication : 80

2.112. New modules (production and utilities).

<u>Engineering</u> : Structural	: 97 %,
Piping	: 95 %,
Fire and Safety	: 95 %,
Electrical	: 95 %,
Instrumentation	: 95 %.

<u>Procurement</u> : Structural	:100 %,
Equipment	: 97 %,
Electrical	: 95 %,
Piping	: 95 %,
Instrumentation	: 85 %.

<u>Fabrication</u> : REG BOOTH (SD1)	:100 %,
PENN & BAUDIN (PH)	: 20 %,
DE GROOT (WH1A & 1B)	: 60 %,
WILSON WALTON (BR1-BR2)	: 60 %,
(flare booms)	: 30 %.

2.113. Transportation of modules.

The transport of the main modules will be realised by four (300' x 90') barges. Loading will start in April.

The barges will moore to the platform and to two buoys. Tugs will provide assistance . This procedure will impede as little as possible the other FRIGG operations requiring the use of barges.

2.114. Hook-up on platform.

The contract with Eumech is being finalized.

2.212. Construction.

- Caisson : The largest part of the repair and cleaning work has been completed.
- Columns : Only some minor repair work, grouting of MAC DERMOTT HUDSON plates, dismantling of scaffolds and closing of manhole accesses remain to be performed.
- Immersion system : Tests are progressing well and on 25 February, six ballasts out of nine had been approved.
- Roofs : 20 roofs out of 23 have been closed.
- Tower cranes : 2 cranes were completely dismantled and the dismantling of the third one is in progress.

2.213. Mechanical work.

- Erection of risers : progress at the present time is satisfactory and no specific problems are expected which could delay the anticipated completion date.
- Erection of appurtenances : By 24 February, only 78 % of MAC DERMOTT HUDSON plates were erected and bolted up. This work slippage has been caused by adverse weather conditions.
- Prefabrication of casing supports was completed, except for the final cutting of horizontal stays, which is held up pending results of the photogrammetric survey. On 24 February, none had been lifted into position. The first lifting was expected to occur on the 15. Prefabrication of casings and sump caissons is complete.

2.214. LOCH FYNE moorings.

The southern, northern and western legs are complete, including tensioning barges on the northern and western legs. The eastern anchor has been set. The remaining work is the installation of a buoy on this leg.

2.22. Steel support frame.

2.221. Engineering.

(MAC DERMOTT HUDSON).

No further progress this month, except the verification of the northern extremity of accommodation deck 21 and helideck 22.

2.222. Completion of fabrication.

(C.M.P., under BROWN & ROOT management).

Operations are following a normal path in DUNKIRK and it is planned to complete everything, except for painting, on 20 March, 1976.

After having received the dimension between the axis of the columns as manufactured at ARDYNE (the actual dimension differs by only 2 cm from the theoretical), the support frame was cut on 26 and 27 February.

The status for other operations is as follows (end of February) :

- progress of lifting pad-eyes : 20 %,
- assembly of risers : 65 %,
- assembly of T-stiffeners : 40 %,
- service piping : 95 %.

2.23. Temporary decks.

2.231. Engineering.

(BROWN & ROOT de FRANCE).

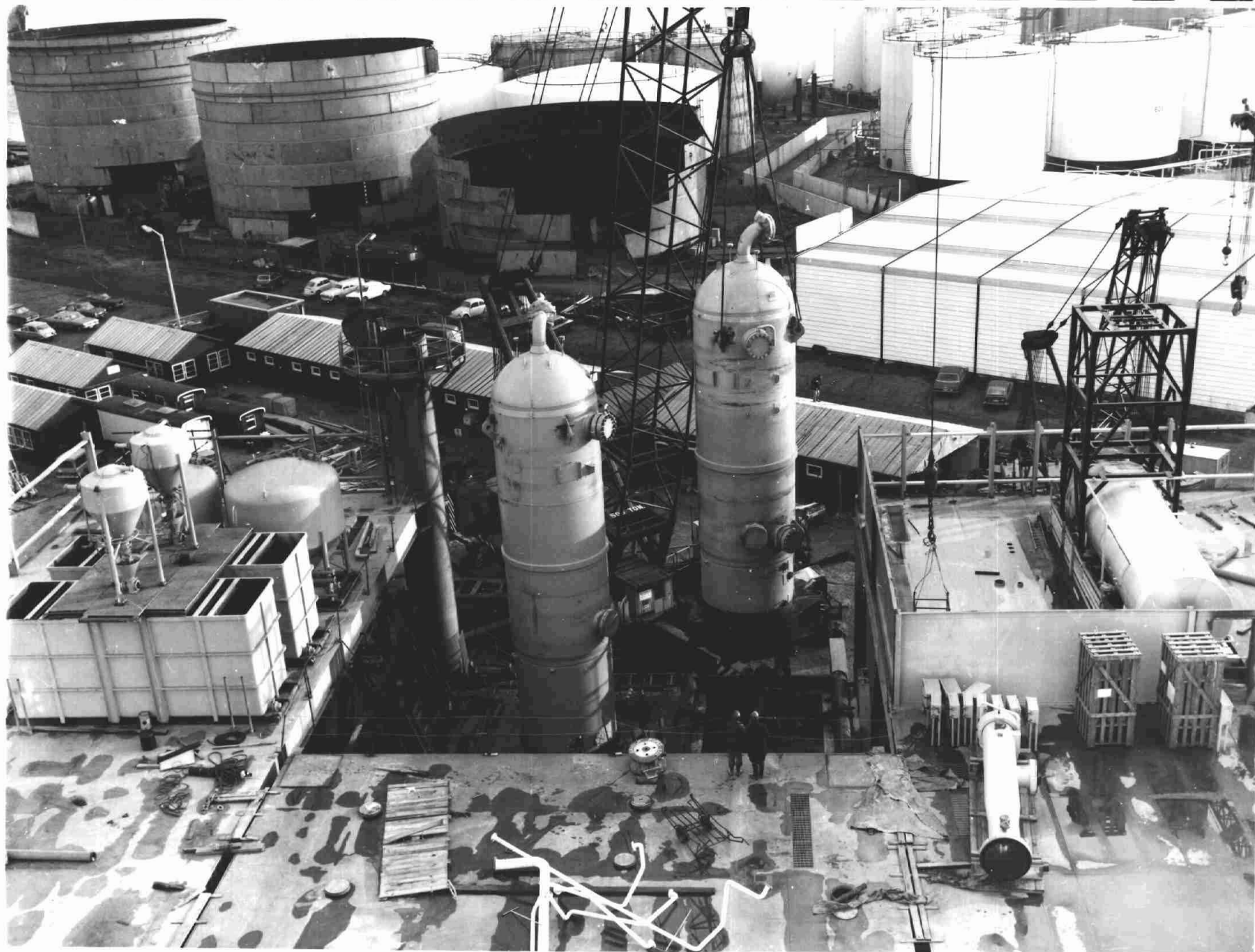
Engineering is complete, except for sheave block 24, which will be completed in early March.

Mechanical and electrical drawings have been reviewed to incorporate the latest data from Vendors.

2.232. Fabrication of decks 13 and 21 (living quarters).

(C.M.P. under BROWN & ROOT management).

Progress has been slow on the outfitting of deck unit 13. Completion is 50 %.



Glycol contactors - TP1 modules

In view of the amount of work that remains to be carried out, completion is still planned for approximately March 20.

During transport to LOCH FYNE, deck units will be placed with the support frame on barge MORLAND 4.

Progress was good on deck unit 21. The structure is now 70 % complete. The fitting and welding of intermediate and secondary beams is in progress.

2.233. Fabrication of decks 22 (helideck) and 23 (winch module).
(MONBERG & THORSEN under BROWN & ROOT management).

Helideck : the structure is nearing completion. The remaining work is mainly painting and electricals. The schedule has been improved and load out is expected to occur before the end of March.

The barge DINO 1 will be used for transport to LOCH FYNE.

Winch module : Prefabrication work is continuing in COPENHAGEN on the floor plate support beams and floor plate sections.

2.24. Engineering of treatment modules.
(MAC DERMOTT HUDSON).

The following information reflects the situation at the end of January 1976, unless otherwise stated :

2.241. Structural Engineering.

The lifting study for modules 1 and 4 was reviewed in February, because of difference in offset between center of gravity and center of lifting.

Work is continued on additional stiffening for pipe supports and underdeck and abovedeck supports for equipment in workshop.

Design of the floodlight tower and details on module 5 were started.

2.242. Mechanical Engineering.

Halon system : Engineering discussions with the vendor were continued, relative to final details.

Air conditioning : Engineering is complete, except for module 05 and 06 areas.

2.243. Electrical engineering.

Discussions were held with PARSONS & PEEBLES to finalize the acoustic hoods for the turbines.

2.244. Instrument engineering.

P and I drawings were updated.

2.25. Construction of treatment modules and deck units.

(MERCANTILE MARINE ENGINEERING under MAC DERMOTT HUDSON management).

The fabrication of the spools in the pipe shop has been delayed due to delays in the delivery of some fittings, but mainly due to the lack of isometric drawings. A large number of drawings are being held, pending a decision on the metering system.

The delay in the piping erection programme has caused a delay in the start of the electrical work. It is estimated that the crash programme is now approximately 6 weeks behind schedule.

2.251. Erection of framing and painting.

The status at the end of February is as follows :

Module 01	: 90 % (pad-eyes to be replaced),
Module 02	: 95 %,
Module 03	: 90 %,
Module 04	: 90 % (pad-eyes to be replaced),
Module 05	: 95 %,
Deck unit 06	: 90 % (modifications to be carried out),
Deck unit 07	: 100 %,
Deck unit 08	: 85 %,
Deck unit 09	: 100 %,
Deck unit 10	: 95 %,
Deck unit 11	: 95 %,
Deck unit 12	: 95 %.

.../...

2.252. Prefabrication of piping.

Spools in fabrication :

Spools completed :

2.253. Module outfitting.

The status at the end of January is as follows (%) :

Modules	1	2	3	4	5
Erection of equipment	90	100	80	90	75
Erection of piping	10	10	5	10	0
Electricity	15	10	65	30	65
Instrumentation	10	20	0	40	10
Cladding	0	0	0	25	95

2.254. Deck unit outfitting.

The status at the end of February is as follows (%) :

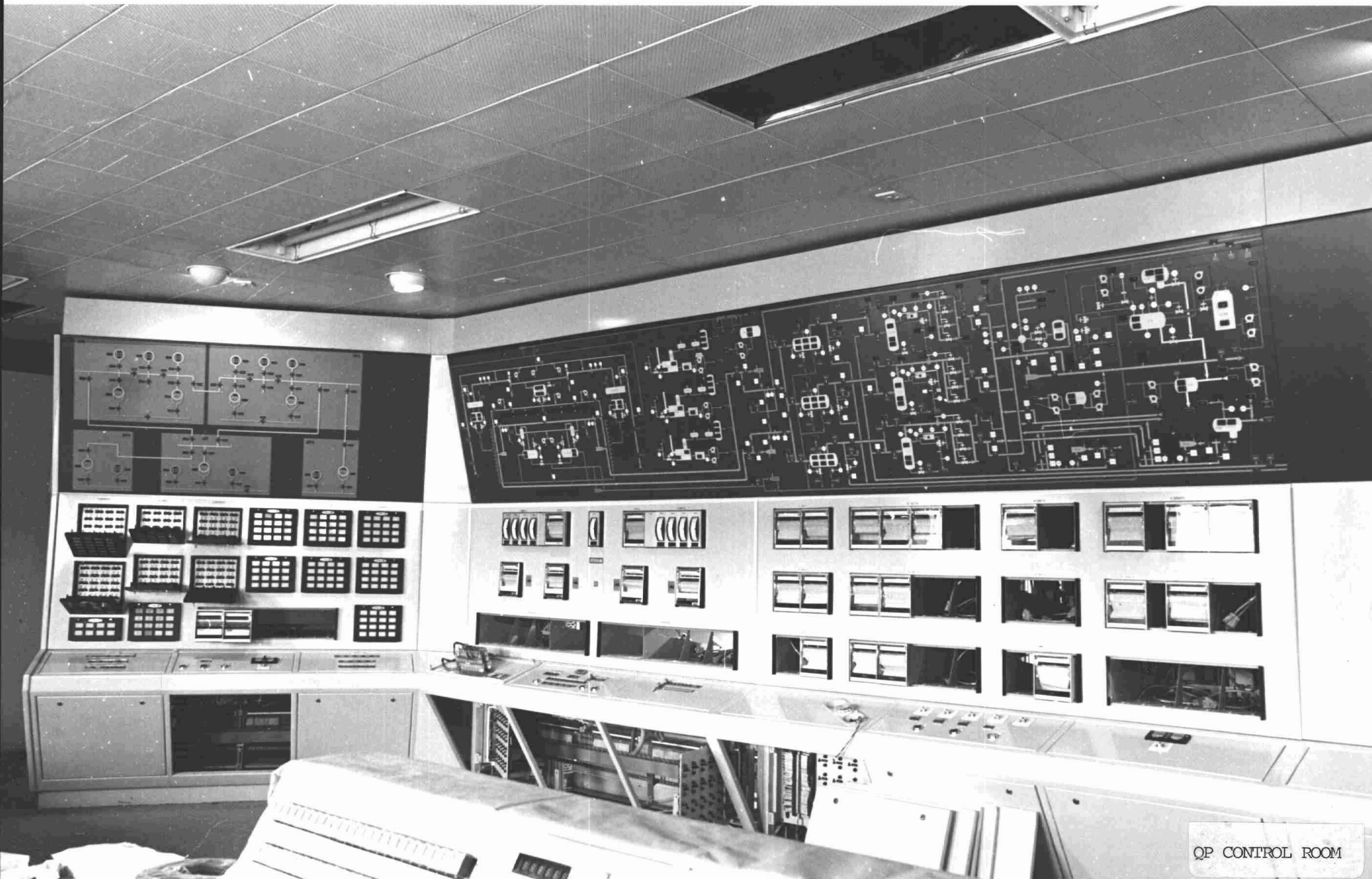
Deck units	6	7	8	9	10	11	12
Erection of equipment	100	35	10	100	90	20	35
Erection of piping	0	20	05	10	15	0	10
Electricity	05	05	0	60	30	0	15
Instrumentation	15	05	0	50	10	0	05

2.3. Living quarters platform QP.2.3.1. Engineering of living quarters building.

(MAC DERMOTT HUDSON)

The following information reflects the status at the end of January 1976, unless otherwise stated.

.../...



QP CONTROL ROOM

2.311. Structural engineering.

Redesigned gantry crane for lifting fire pump . Designed extra steel floor under helideck apron for air conditioning equipment. Redesigned the wind breaks.

2.312. Mechanical engineering.

Modifications, mainly to the fire fighting system, were engineered according to D.T.N.O requests.

Some minor items were purchased, mostly workshop equipment and extra fire and safety equipment.

2.313. Electrical engineering.

Coordination with the vendors involved is continuing.

2.314. Instrument engineering.

Study continued on oceanographic and meteorological equipment to meet N.P.D. requirements.

The ESD system has not yet been finalised. It is held for details on ventilation system.

2.32. Construction of living quarters.

(CHANTIERS DE LA GARONNE, under MAC DERMOTT HUDSON management).

A slight slippage of the schedule was observed, but it will not change the dates for load-out.

Module A will be completed about 15 March, Module B and roof unit 5 about 15 April. As a result of the delay in the installation programme of the jacket, the transport barges with the modules on board will stand by in BORDEAUX until approximately July 1976.

The modules will be kept air conditioned and environmentally controlled during the standby period.

2.321. Structure.

Modules A and B can be considered complete, except for some detail work which mainly consists of walkways and paint retouching.

The doors of the U.K. communication room - battery room building are to be installed. Important detail work remains to be realised on the helihangar

2.322. Outfitting.

The following chart indicates the status at the end of February (%) :

Modules	A	B	roof units
- Inner floors	100	95	70
- Partition walls, doors	100	95	60
- Ceilings	95	75	0
- Bedrooms	100	90	-
- Commons rooms	95	85	-
- Laundry, kitchen, workshop	100	-	-
- Service area	-	90	-
- Air conditioning	95	85	10
- Piping	100	95	85
- Electricity	95	80	20

2.33. Supervisory control and field communications.

(COMSIP under MAC DERMOTT HUDSON management).

2.331. QP. modules.

Phase I functional tests are progressing satisfactorily, as well as installations of some Phase II equipments.

2.332. TP.1 interfare room.

Cable laying is in progress.

2.4. Lines and connections.

Based on the diagram adopted at the beginning of January 1976 for the lay-out of the FRIGG Field, the fabrication of the spools for all the phase I lines (24" and 32") has commenced. The choice of the transport barge has been made and barge has been mobilized for March 20, 1976.

The installation procedures as well as the stress calculations in the tubes during laying operations have been received.

The trials for classification of the filler metals and coated electrodes for the hyperbaric weldings have been recently completed as well as the preliminary welding tests in caisson. They will be followed by procedure testing and qualification of procedure.

2.5. Telecommunications.

2.51. Telecommunications - U.K.

The microwave tower was completely assembled in a horizontal position and CHARPENTE MODERNE made a survey to determine the erection aids to be added to the panels to insure their fitting when erected offshore. The tower is now being dismantled. The erection aids will be added and the offshore hook-up contractor will establish erection procedures. MARCONI has assembled the tropo-dishes at the C.D.L.G. yard in BORDEAUX.

2.52. Telecommunications - NORWAY.

The basis of the satellite antenna was installed on the top of helihangar in BORDEAUX.



DP2 - Jacket fabrication
UIE yard (Cherbourg)
Lifting of file 4

2.115. Pull-in line.

BROWN & ROOT is finishing the procedure. The barge MEADERS will be used for the operation.

It has been decided :

- to give priority to the pull-in of the 8" kill line,
- to try to pull-in at least one 26" line (incidence between MEADERS and other operations on FRIGG and supplies for CDP.1).

The preparation of the work has started in view of commencing operations towards 15 April.

2.2. Treatment Platform N° 1 : TP1

2.21. Concrete structure.

2.211. Installation studies and preparation of marine operations.

- Installation of the support frame (main piece 1600 T) will be accomplished with the ETPM 1601 and DB 22 (or MEADERS) barge. The erection aids have been designed for the weight to be distributed inequally between the 2 cranes (1100 T for 1601 and 500 T for the other crane). Other lifts will be accomplished by the HEBE II. An amendment to Contract E.25 with WIMPEY, covering the corresponding mechanical work, is being prepared and mobilization of facilities and equipment has commenced.

- Tow ARDYNE - LOCH FYNE :

The detailed procedure issued by SEA TANK Co. was presented to N.D.A. and the overall features have been approved.

- Tow LOCH FYNE - FRIGG :

The damage stability problems have been examined and the situation at the present time is as follows :

- . At light draft, there will be collision mats on the caisson : both fixed and portable.
- . At deep draft, a polyurethane cork will be set in the columns around the waterline to prevent flow of water in the bottom of the columns , should a collision occur.





BROWN & ROOT (UK) LTD. ELF PROJECT NO. 78-5714 AT ARDYNE POINT

SHOT NO. 221 GENERAL VIEW ON RIG INCLUDING HEBE 2 IN OPERATION

DATE: 26.2.1976.

NEG NO. 3000/73/6A

III. PRODUCTION FACILITIES - PHASE II

3.1. Drilling platform nr. 2 - DP.2

3.11. Jacket - support frame

3.111. Engineering

- a) The following decisions were taken concerning the lay-out of the DP.2 risers :
- . no change for the 8" kill line,
 - . 4" condensate riser will be "inside" jacket from elevation - 10 m up to level + 5 m,
 - . 26" production risers will stay "outside" the jacket but a fendering system is being studied, which could provide a protection for these risers against an energy of 5 t x m,
 - . boat landing on face B will be removed.
- b) Load-out studies realised by U.I.E. were discussed by all parties concerned. Some modifications will need to be incorporated.
- c) Launching analysis from Mc DERMOTT HUDSON was discussed. It appears that same nodes may have to be reinforced.
- d) The main girders of the support frame may have to be increased in length for installation purposes.

3.112. Installation studies

The following items have been accomplished during the month of February, 1976.

- a) The control panel rework in STAVANGER was completed in January, and transported to CHERBOURG before February 1st. The two items missing when the STAVANGER work was complete (a pump and a gage) have since been sent to CHERBOURG and installed. Two "throw-away" type filters need to be replaced and should be in CHERBOURG later next week. The accumulator now needs to be recharged, nitrogen bottles obtained for testing purposes, and the panel checked out one final time on the ground. It will then be ready for installation on the jacket.

.../...

- b) All 12 flooding valves have been received at CHERBOURG, dis-assembled by BETTIS & CAMERON, cleaned, and re-assembled. In addition, the bleed ports of the actuators have been re-oriented for each specific valve position in order to minimize problems when filling the entire hydraulic system.
- c) Fabrication continues on the temporary work deck by MONBERG & THORSEN at AALBORG, Denmark. No problems are foreseen to affect the May 1st departure date.
- d) ELF continues to forward calculations and information to DET NORSKE VERITAS for their review and/or approval.
- e) The INTERMAC 600 has been scheduled to leave ROTTERDAM headed for CHERBOURG on 20th March, allowing sufficient time for U.I.E. to prepare it to receive the jacket.
- f) Fabrication of the bear cages to be used as construction aids for installation of the four center piles has not yet been started.

3.113. Prefabrication.

a) Buoyancy tanks.

- 100" and 62" tanks from ACTIME are in CHERBOURG and being rechecked.
- 62" tanks from SORENAM : 4 tanks are in CHERBOURG. The remaining three are being fabricated

b) Boat landing.

The fabrication will be completed at the beginning of next month. The boat landing for face A will be finished by SOCOMET per theoretical dimensions. Both will be sent to ST. WANDRILLE when complete.

- c) Pumphouse trusses by IMEPSA will be finished at the beginning of next month.



TCP2

2/2/76

3.114. Fabrication.

a) Cherbourg.

File one was lifted at the end of January and file four at the beginning of February. The filling between files one and two and three and four is almost completed at the present time. Load-out seems possible by the middle of April.

b) St. Wandrille yard.

The first shipment of piling will be ready at the end of March, and will consist of the four center piles, four primary corner piles and some primary corner pile followers.

Modifications to the lifting pad-eyes of the support frame encountered some difficulties and as a result, Mc DERMOTT HUDSON will have to relocate them.

3.12. Production modules.

. Engineering :

The total engineering progress is 90 %. The detailed engineering progress is as follows :

- general arrangement : 92 %,
- model construction : 90 %,
- piping arrangement : 90 %,
- isoing : 90 %.

The progress for engineering is less than for the previous month due to the re-design of module 4.

. Procurement :

Procurement progress reaches 98 %. The material delivered on site : 86 % (steels included).

The delivery of equipment has slowed down due to problems encountered in the quality of the material.

.../...

. Fabrication :

a) Framing construction :

The total progress for the four modules is 89 %.

Module 1 : 71 % Module 3 : 91 %

Module 2 : 100 % Module 4 : 98 %

b) Equipment installation :

The total progress is 31 %. (Piping prefabrication included).

The completion of the modules is still anticipated for the end of August 1976.

3.2. TCP.2 Platform.

3.21. Structure.

3.211. Management.

The construction schedule proposed by NORCON has been approved. However, some modifications are being investigated by BROWN & ROOT, NORCON, CHRISTIANI & NIELSEN for the critical stages.

Change orders 11 and 13, respectively, relative to platform model and additional work related to BROWN & ROOT installation are still being discussed. These cannot be approved due to price level of insert plates. In order to prevent further problems and delays for the engineering and construction ELF requested from NORCON and BROWN & ROOT a check list of all information to be exchanged between NORCON and BROWN & ROOT.

3.212. Engineering.

Drawings and supporting calculations for the upper domes of the structure were approved on time.

The basic data for suction holes in columns 3 and 5 for the sea-water pumps of the compression units has been agreed upon. At the present time, design has commenced.

Preliminary studies were started on the temporary equipment needed for tow-out, installation and hook-up operations.

.../...

- The engineering performed by KVAERNER ENGINEERING is following a normal course, but DET NORSKE VERITAS and T.N.O. ask KVAERNER to supply additional justifications. Detail verifications are still necessary.

KVAERNER revised a certain number of drawings which will be transmitted to AKER on March 1st, 1976.

- A large part of the drawings have in general been approved by DET NORSKE VERITAS and T.N.O., however, the final approval is dependent upon additional justifications requested by the control organization.

The revised drawings and calculations will also need to be approved again by DET NORSKE VERITAS and T.N.O.

- AKER STORD proceeds with the drafting of shop drawings (approximately 43 % are ready) and the last welding procedures are being prepared.
- The problem relative to the results of the COD tests will be discussed with DET NORSKE VERITAS during the week of March 2nd, 1976.
- T.N.O., in charge of verification of shop drawings (agreement between KVAERNER's design drawings and AKER's shop drawings) has commented on the first AKER shop drawings.

3.215. TCP.2. riser installation.

Prefabrication and installation work are currently on schedule. Assuming that there will be no slippages in the delivery of promised material, no delays are foreseen.

Extensive discussions were held on possible conflicts between the NORCON and CHRISTIANI & NIELSEN activities during the installation of the intermediate platform and erection of the slipforming units on columns 3 and 5.

CHRISTIANI & NIELSEN are having difficulties in finding qualified welders. Although the situation has been improving during January, problems could occur in the future.

Fabrication progress :

- J tube truss welding : complete for J1, J3, J5, J6 and J7.
- 26" riser, 24 m section fabricated.
- Platform for cell 3 : 85%.
- Platform for cell 5 : 50%

Installation progress :

- Guides for riser at intermediate level of cells : 100%
- Guides for risers at upper level of cells : 28%

3.22 TCP2 Treatment modules3.221 Structural design

On the night of February 9, 1976, a large section of module 04 main deck, was lost overboard from the ship OBRESTAD off EBERSUND in bad weather. Pancake 08 also suffered some damages in the accident. This accident occurred during transport by S.B.V. from EBERSUND to ORKANGER.

Engineering

- . Bridge between TP1 and TCP2 : The material order requisitions for the secondary framing were issued for enquiry. Detail design and drafting are continuing.
- . Generator package : The design of this complex was delayed by four weeks in order to coordinate the design requirements.
- . Sales gas metering : A design study of the support frame for the three tube metering system embodying the pancake construction concept was completed.
- . Pipe supports : Design of pipe supports was resumed at the beginning of February.

3.222. Process design.- Process engineering.

A simplified shut-down system flowsheet was prepared for the process units on TCP.2. A meeting was held between N.P.D./D.N.V./ELF/M.D.H. for review and comment on our process/shut down design.

The study of the problems of reduced maximum flow rate in the HP, flare tips was completed at the same time. The study relative to the operational problems associated with the removal of the remote flare stack is in progress.

- Mechanical engineering.

Work is proceeding on the review of the flexibility of various piping systems. MAC DERMOTT HUDSON is now introducing computer techniques to assist in this work. The M.D.H. Mechanical Department have also reviewed the location of the pipe supports.

- Electrical engineering.

Discussions were held in LONDON and STAVANGER with DET NORSKE VERITAS and N.P.D. on hazardous area classification, platform emergency shut-down system and emergency electrical supplies for TCP.2.

. Generator Package : a meeting was held with PARSONS & PEEBLES to discuss the problems arising from the change to a semi-modular form of construction for the Generator Package.

PARSONS & PEEBLES advised that one of their sub-contractors (REYNOLLE BELMOS) had temporarily ceased production as a result of industrial action. The delivery date for the equipment (380 volts M.C.C.) will be seriously affected.

. No noticeable improvement in PARSONS & PEEBLES's performances has been effected in spite of repeated requests.

- . A further delay in the delivery dates of the KONGSBERG turbine is pending as a result of MAC DERMOTT HUDSON's insistence that the gear boxes be fully load tested. Following MAC DERMOTT HUDSON protests, KONGSBERG has revised their schedule and are working overtime in an effort to maintain the promised delivery dates.

3.223. Project management services.

Procurement situation is as follows :

- number of inquiries issued this month : 10
- number of inquiries under evaluation : 17
- bid summaries issued this month : 13
- telex orders placed this month : 2
- formal purchase orders issued : 5
- purchase order supplement issued : 46

3.224. Construction of TCP.2 - Treatment modules.

1. Prefabrication work at EGBERSUND.

The total percentage of work completed for module/deck or pancake/deck is as follows :

Modules	Main deck	Upper deck
Module 01	100 %	100 %
Module 02	100 %	100 %
Module 03	100 %	46 %
Module 04	100 %	98 %
Pancakes		
Pancake 05	57 %	
Pancake 06	100 %	
Pancake 07	53 %	
Pancake 08	99 %	
Pancake 09	100 %	
Pancake 11	100 %	
Pancake 12	13 %	
Pancake 13	11 %	

The aforementioned figures result in an overall completion of 86,8 % (scheduled 90,3 %).

2. Fabrications work at ORKANGER.

- Percentage of progress (week ending : 15.02.76).

	Module	Pancake	Total
Structure	13,33 %	-	8,33 %
equipment			
piping	6,35 %	0,64 %	3,82 %
electrical			
instrumen-			
tation			
TOTAL			3,36 %

Scheduled : 5 %.

- Manpower figures :

Productive : 151 { structure : 30
 { piping : 27

Staff : 29

TOTAL : 180

- General :

The contractor S.B.V. is making real efforts to follow his programme, and is increasing his labour force accordingly. He expects to have by March 1st :

. 20 pipefitters

. 24 welders

The ratio is somewhat out of proportion, as one would expect a more normal 2 to 1 welder to pipefitter ratio . This might give rise to overfabrication of prework, which could cause problems in the MAC DERMOTT HUDSON drawing department, should such a situation go unnoticed.

3.23 Compression

- The studies relative to compression are still slowed down, awaiting a decision concerning the installation date. As soon as this decision is made, the first task will be to call for bids for the compressors and turbines. In order to lose a minimum of time, KVAERNER TECHNIP will prepare the technical documents necessary for the bidding.
- Various studies have been completed for utilities, fuel gas and electrical generation.

3.24 Lines and connections

The fabrication of piping is in progress.

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3.213. Constuction.

Slipforming of the upper part of the cells, which re-started on January 23, was completed February 12th, up to level 42,70 m.

Except for some cracks which occurred near the top of the walls on seven cells (these will be repaired), the work was performed in a satisfactory manner.

Dismantling of slipforming and preparatory work for the construction of ring in cells 1, 3, 5 and upper dome are in progress.

Taking into consideration the last stability calculations during tow-out, which show that the meta-centric radius was reduced to 1,04 m, it has been decided to replace the sand ballast with a 2,2 t/m³ wet density, by olivin ballast with a 2,7 t/m³ wet density. This modification will re-establish a meta-centric radius of 1,30 m.

The olivin ballast was placed in cells 12, 13, 18 and 19 and is currently being placed in cells 2, 4 and 7.

3.214. Support frame.

-The contract with AKER, including amendment n° 1, has been signed.

AKER sub-contracted approximately 1000 T of structures (the three steel rings) to the French constructor C.M.P. (DUNKIRK). AKER also sub-contracted to their TANGEN yard 15 nodes thus approximately 105 tons.

It is anticipated to have the remaining elements fabricated in STORD, where fabrication is running three weeks behind schedule presented by AKER on the 2nd January, 1976. The welding tests on 60 mm (COD tests) are not satisfactory and AKER does not yet master the in shop fabrication (deformation and welding sequence problems). More over, the number of available welders on this project is very insufficient in February.

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IV - CONTRACTS

- . Contract S. 199 - (SCOOP OCEANOGRAPHIE).
Telex of intent - Bathymetric survey for TP.1 - DP.2 and TCP.2
Estimated cost : 500.000 FF.
- . Contract E. 16 - Amendment 8 -(U.I.E.)
Regularization of change orders PA. 27 - SW. 1 - SW. 2 - SW. 3.
Amount : 634.500 FF.
- . Contract S. 180 -(SYMINEX.)
Addition to the telex of intent.
Start-up of equipment for mechanical and geotechnical measures on CDP.1
Amount : 85.500 FF.
- . Contract E. 14 - Amendment 2 -(SEA TANK Co/ DET NORSKE VERITAS).
Regularization of amendment relative to the formal homologation of the TP.1 platform.
Amount estimated at : 1.078.000 FF.
- . BROWN & ROOT - Telex of intent.
Rental of a tug for the floating crane HEBE II from CORY SHIP TOWAGE (Glasgow).
Estimated cost : 845.000 FF.
- . Contract E. 16 - Amendment 3 - (U.I.E.).
Estimated cost : 750.000 FF.
- . Contract S. 117 - Amendment 4 -(MAC DERMOTT HUDSON).
(Telexed order)
Trials in basin on DP.2 model.
Estimated cost : 25.500 DFL.
- . Contract E. 43 -(EUMECH).
Hook-up of CDP.1 modules.
Estimated cost : 30.000 KF.

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- . Contract S. 201 - (NEPFOR Ltd).
Transfer of Neptune VII to FRIGG for QP. operations.
Estimated cost : 7.850 KF. (60 days).
- . Contract E. 36 - Amendment 1 - (DE GROOT).
Regularization of change orders 2, 3, 5 and 6 relative to additional work.
Cost : 125.270 DFL.
- . Contract E. 11 - Amendment 2 -(C.F.E.M.).
Regularization of amendments 2, 3, 4, 5 and 6 relative to various jobs.
Amount : 21.670 KF.
- . Contract S. 191 -(I/S MORLAND BARGES OPERATING)
Rental of the barge MORLAND 4 for the transportation of the TP.1 support frame from DUNKIRK to LOCH FYNE.
Cost : 1.050.000 U.S. dollars.
- . Contract S. 203 - (I/S MORLAND BARGES OPERATING).
Rental of the barge MORLAND 5 for the transportation of the QP. modules.
Cost : 688.500 U.S. dollars.
- . Contract S. 178 - (SOFRESID).
Site engineer hired for 15 months at ANDALSNES.
Cost : 604.000 FF.
- . Contract S. 204 - (STAFFORD ASSOCIATES).
Assignment of Cpt. STAFFORD as Consultant for the towing and immersion of TP.1
Estimated cost : 15.000 £
- . Contract E. 39 - (ACTIME).
Order for nine 62" buoyancy tanks and two 100" buoyancy tanks for DP.2
Amount : 2.587.900 FF.
- . Contract E. 16 - Amendment 9 - (U.I.E.).
Regularization of change orders CH. 13, 15, 17, 21, 22, 23, 24, 25, 26 and PA. 30, relative to additional work on the DP.2 jacket.
Global cost : 1.663.000 FF.

- . Contract E. 6 - Amendment 5 - (U.I.E.).
Regularization of last change orders relative to the construction of the QP. jacket.
Amount of Amendment N° 5 : 3.872.638 FF.
- . Contract E. 25 - Amendment 4 - (WIMPEY).
Additional means for the LOCH FYNE operation.
Amount : 2.704.110
- . Contract S. 205 - (BROWN & ROOT U.K.).
Rental of a flat top barge "BRHM 2".
Amount : 387.000 U.S. dollars.
- . Contract E. 27 + Amendment 1 - (C.M.P.).
Construction of the temporary deck and helideck for TP.1 (Contract).
Updating of the scope of work.
Prices and specifications (amendment).
Amount : 2.703.160 FF.
- . Contract S. 202 - (MAERSK SUPPLY SERVICE).
Rental of a cargo barge for 19 months, starting March 20, 1976.
Amount : 9.315 KF.
- . Contract E. 16 - Amendment 11 - (U.I.E.).
Regularization of change order PA.22, relative to the increase in the price of rolling operations, from 22.000.000 FF to 37.000.000 FF thus an increase of 15.000.000 FF.
- . Contract E. 42 - (SELTRUST OFFSHORE SERVICES Ltd).
Contract for the offshore hook-up of the equipment modules on the TP.1 and QP. platforms.
Estimated cost : 2.070.000 £.

LIST OF ATTACHMENTS

- . ELF NORGE - FRIGG Field : Construction schedule of
production facilities
 - . Concrete Drilling Platform n° 1 - CDP.1 : Planning
 - . Drilling Platform n° 2 - DP.2 : Planning
 - . Living Quarter Platform - QP : Planning
 - . Treatment and Compression Platform n° 2 - TCP.2 ... : Planning
 - . Treatment Platform n° 1 - TP.1 : Planning
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