ENTREPRISE DE RECHERCHES ET D'ACTIVITES PETROLIERES



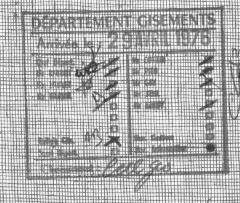
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elfnorge

PRODUCTION FACILITIES

MONTHLY REPORT

MARCH 1976



DIRECTION ERICG

DIVISION ETUDES - CONSTRUCTION - DEMARRAGE

Date MARCH 1976

An error was made in the paging of the February Monthly report, please note that:

page nr. 13 should be page nr. 4 bis

page nr. 24 should be page nr. 17 bis

We regret any inconvenience this error may have caused.

ELF NORGE

D.E.P. 4061 N° 6/636

FRIGG FIELD

PRODUCTION FACILITIES

MONTHLY REPORT

MARCH 1976

Distribution:

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FORAGES

GISEMENTS

EQUIPEMENTS

Dpt. CONTRATS TECHNIQUES (5 ex)

S.G. DIVISION RISQUES ASSURANCES

DIRECTION FRIGG (3 ex)

DIVISION ECD FRIGG (M. GAINETTE)

- Dpt. INFRASTRUCTURE (M. LAFFONT)

- Dpt. ETUDES-PRODUCTION (M. TARTERA)

- Dpt. INSTALLATION (M. DUSSERT)

- Dpt. COST CONTROL (M. ASSOULY)

- SERVICE ADMINISTRATION PERSONNEL (M. IVARA)

DIVISION TRAVAUX MER (M. LE REST)

- Dpt. SEA CONSTRUCTION (2 ex)

Operations on the Frigg site progressed slowly due to bad weather conditions.

On the QP platform, the work using the barge ETPM 1601 and then the barge OCEANIC DB 22 followed a normal course.

On CDP1, three holes were drilled in the slab. Drilling operations were stopped to allow the installation of the gantry crane.

The TP1 platform left ARDYNE on March 23, and is moored in the LOCH FYNE. Immersion tests were realised under good conditions. The TP1 support frame was completed in DUNKIRK and tow-out to LOCH FYNE started March 28. The construction of the treatment modules in ANTWERP is progressing under better conditions. These modules should be ready in June and July 1976. Module A intended for the QP platform is complete and controlled. Module B is nearly ready. These modules will be loaded on barge in April and May 1976.

The construction of the DP2 jacket has been delayed by a few days due to a strike on the CHERBOURG yard. Loading of the jacket on the barge should occur on April 24.

The construction of the caisson roofs on TCP2 continued during March. The delays in the fabrication of the TCP2 support frame on the AKER yards of STORD and TANGEN is considerably delayed. The delay reached approximately four weeks if compared to the planning drawn up in January 1976.

The fabrication of the TCP2 treatment modules is progressing normally. The delay previously observed has been made up.

The schedule of the Frigg operations has been revised in order to take into consideration the real progress of the construction and installation operations on the site. This schedule will be ready at the end of April.

LIST OF ATTACHMENTS

- . CDP1 CONCRETE DRILLING PLATFORM : planning
- . DP2 DRILLING PLATFORM NR. 2 : planning
- . QP LIVING QUARTERS PLATFORM : planning
- . TCP2 TREATMENT AND COMPRESSION PLATFORM NR. 2 : planning
- . TP1 TREATMENT PLATFORM nr. 1 : planning

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I. OFFSHORE OPERATIONS

1.1. QP installation

Due to the damage to the stiffleg substructure and the consequent delay in the installation programme, the plan to use the NEPTUNE 7 as a work platform for the installation of the QP insert piles was abandonned. The NEPTUNE 7 was towed back to STAVANGER and anchored in the IDSE fjord on March 11 and all material for QP was unloaded.

The ETPM 1601 derrick barge was mobilized and arrived in STA-VANGER on March 14. The QP equipment which was on the NEPTUNE 7 was loaded on the ETPM 1601, which departed for FRIGG on March 15. Reinforcement and hook-up operations on the DM-3 modules on QP were carried out until March 28. The ETPM 1601 returned to STAVANGER and departed for LOCH FYNE on March 30. The constant tension modules were loaded onboard in STAVANGER.

1.2. Flare status

A survey of the bottom connection of the flare was performed on March 16 with the minisub PC 8 (INTERSUB). The survey showed that one of the hydraulic counterlocks was nearly disconnected. This will be repaired during April using the PC 1202 submarine.

The fog and light signals are out of order and electricians are on site to repair the latter.

1.3. DPl status

The fog and light signals are working.

1.4. CDP1 structure

- . The following work was completed during the month of March :
 - Slab drilling (FORAKI): Three holes in total have been drilled. The rig has been temporarily demobilized due to

interference with the erection of the gantry crane.

- Installation of the bottom sheave in the shaft.
- Cantilever for the living quarters and relocation of quarters (EUMECH).
- Installation of seal caisson in tunnel E.
- . The erection of the gantry crane is in progress (BUZICHELLI). The lifting and anchoring legs (SW and NW) are complete. Six sections of the western roller beam have been assembled on deck.

The preparation of the foundation for the two eastern columns is in progress and two sections of the eastern roller beam are assembled.

- . The following operations are in progress:
 - Preparation for the pull-in of the 8" and 26" lines
 - Preparation for the installation of the new helideck.
 - Preparation for the installation of the cantilever for the electric generators.
 - Finishing work of process pipes, J-tubes and utility piping.
 - Cathodic protection.
 - Electrical work.
 - Ventilation.
 - Skidbeams for modules.
 - Installation of utility risers.

II. PRODUCTION FACILITIES - PHASE I

2.1. CDP1 production facilities

2.11 Production modules

2.111 Rework PM2 - PM3 - PM4

- Engineering: 98%

- Procurement: 95%

- Fabrication: 90%



76/149/6 VIEW OF ELF T.P. 1. PLATFORM FROM WEST SHOWING 27.2.76. ERECTION OF TOWER CRANE TO COLUMN C. 1 IN PROGRESS.

2.112 New modules (production and utilities)

Engineering: Structural: 98%

Piping : 98%

Fire and safety : 98%

Electrical : 98%

Instrumentation: 98%

Procurement: Structural :100%

Equipment : 98%

Electrical: 98%

Piping : 97%

Instrumentation: 90%

Fabrication: REG BOOTH (SD1) :100%

PENN & BAUDIN (PH): 40% DE GROOT (WH1A-1B): 65%

WILSON WALTON

(BR1 & BR2 : 70%

Flare booms : 75%

2.2. Treatment platform nr. 1 - TP1

2.21 Concrete structure

2.211 Installation studies & preparation of marine operations.

LOCH FYNE operations: The detailed studies relative to main and secondary lifts are still being continued.

Tow LOCH FYNE - FRIGG: The detailed procedure drawn up by STC has been issued and will be reviewed before finalization.

2.212 Construction

The structure was almost complete when the decision to leave ARDYNE was taken.

The following items remained to be completed:

- Repairs to roof coating.
- Completion of immersion system, mainly in columns.

2.213 Mechanical works

Erection of risers: We may consider that 95% of the work as stated in the scope of work was completed before tow-out. We expect that the remaining work will be completed in LOCH FYNE without delaying the tow to FRIGG.

Erection of appurtenances: This has been our main concern, but weather conditions considerably hindered these operations. When towing operations were started, the following appurtenances were installed (mainly only temporarily fixed):

- Casing supports on both columns, with two casings on each.
- Barge bumper on Cl.

2.214 LOCH FYNE

Moorings are complete and ready to receive the structure.

The tugs were mobilized for March 20, in ARDYNE. Disconnection started on March 22, the structure left ARDYNE on the 23rd at 2.00 p.m. Connection started immediately and was completed on March 26.

Immersion tests started on March 30, the roof was flooded on the 31st.

2.22 Steel support frame

2.221 Engineering

(McDERMOTT-HUDSON)

After several meetings between McDERMOTT-HUDSON and DNV and with the results of the fatigue analysis performed in OSLO, McDERMOTT-HUDSON submitted their final figures for the reinforcement of the structure.

Some stiffeners will be added around the 48" longitudinal trusses, because of :

- Temporary loads on deck 21 (northern extremity).
- Working load on deck 23.
- Impact load of module 01 on the southern end during lifting operations.

Additional stiffeners will be added to the 5,5" trusses crosswise to the 16" and around the 30" pulling holes.

Small modifications were performed (walkway bracings, additional welding, grinding of gussets).

The "D shaped holes" must be closed off before tow-out of TP1 to FRIGG and additional safety doors are required.

2.222 Fabrication

Fabrication was completed on March 27 and the barge MORLAND 4 left DUNKIRK on March 28 for LOCH FYNE.

At the time of departure the main tasks (lifting padeyes, risers, T-stiffeners, service piping) were completed 100%.

The last McDERMOIT-HUDSON requirements were prefabricated and separately shipped to LOCH FYNE).

2.23 Temporary decks

(BROWN & ROOT / CMP / MONBERG & THORSEN)

2.231 Engineering

Completion is 90%.

2.232 Fabrication of decks 13 and 21

- . Deck 13 was completed and shipped April 2 on the MORLAND 5 barge along with the last wing truss.
- . Deck 21, completion of structure 85%, equipment delivered 20%. The original delivery schedule has been met.

2.233 Fabrication of decks 22 and 23

- Helideck 22 was completed on March 29th and shipped to FRIGG on April 22nd.
- . The structure for the work module is almost complete and the delivery of equipment will start the first week of April.

 The MANITOWOC 4100 crane has not yet been selected.

2.24 Engineering of treatment modules

(McDERMOTT-HUDSON)

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

2.241 Structural engineering

The most important work at the present time is the design and fabrication of the new padeyes.

Work is continuing on additional stiffening for pipe supports.

2.242 Mechanical engineering

The third turbine is on site. The first and second turbines are being checked for level and alignment. The air conditioning equipment has been installed on deck unit nr. 12 and delivered for deck unit nr. 7.

2.243 Electrical engineering

V.R.H. are to cable and wire turbines nr. 1 and 2 for the onshore commissioning.

2.244 Instrument engineering

Prefabrication and installation started on March 9.

2.25 Construction of treatment modules and deck units

(MME under McDERMOTT-HUDSON management)

The fabrication of spools in the pipe shop is still being delayed because of late delivery of fittings. The situation is improving, however an important amount of isos are still being held.

2.251 Erection of framing and painting

Module 01 : 92% (padeyes to be replaced)

Module 02 : 95%

Module 03 : 93% (padeyes to be replaced)
Module 04 : 93% (padeyes to be replaced)

Module 05 : 96%

Deck unit 06: 90%

Deck unit 07:100%

Deck unit 08 : 90%

Deck unit 09 :100%

Deck unit 10: 95%

Deck unit 11: 95%

Deck unit 12: 95%

... / ...

2.252 Prefabrication of piping

Spools in fabrication: 1806

Spools completed : 1371

2.253 Module outfitting

The status at the end of March is as follows:

Modules	01	02	03 .	04	05
Erection of equip.	92%	100%	85%	92%	80%
Erection of piping	55%	50%	20%	55%	30%
Electricity	35%	4 5%	70%	60%	70%
Instruments	16%	25ક	98	45%	30%
Cladding	30%	10%	-	95%	95%

2.254 Deck unit outfitting

The status at the end of March is as follows:

Deck units	06	07	08	09	10	11	12
Erection of equip. Erection of piping Electricity Instrumentation		45% 35% 15% 10%	10% 50% 0%	100% 50% 65% 60%	40% 35% 45%	30% 0% 0%	80% 90% 40% 50%

2.3. Living quarters platform QP

(McDERMOTT-HUDSON)

2.31 Engineering of living quarters building

The following information reflects the status at the end of March 76 unless otherwise stated:

2.311 Structural engineering

The gantry crane supports were re-designed an additional steel floor next to the helihangar was designed for a store-room.

A study was made of the effects of the new water depth on the platform.

The aviation fuel system was reviewed in accordance to the requirements stated in the shipping regulations.

2.312 Mechanical engineering

Modifications, mainly to the fire fighting system, were prepared according to the requests of DTNO.

Some minor items were purchased, mainly additional fire and safety equipment.

2.313 Electrical engineering

Coordination with the vendors involved is continuing.

2.314 Instrument engineering

The review of the oceanographic and meteorological equipment specifications is in progress.

The ESD system has been finalized and will be submitted to ELF NORGE.

Both types of radar have been specified and the study of the structure is continuing.

2.32 Construction of living quarters

(CHANTIERS DE LA GARONNE under McDERMOTT-HUDSON management)

A slight slippage of the schedule was observed and the dates for load-out were postponed. The new load-out dates are:

Module A : April 22

Module B : End of May in accordance with the ETA of barge

MORLAND 5 now being used for TP1.

2.321 Structure

The acceptance of module A is in progress. Module B can be considered complete except for some detail work which mainly consists of the deck crane pedestal and paint retouching.

2.322 Outfitting

The following chart indicates the status at the end of March:

Modules	A	В	roof units
Inner floors	100%	96%	70%
Partition walls,			
doors :	100%	98%	85%
Ceilings	100%	98%	30%
Cabins, office	100%	90%	_
Common rooms	100%	-	-
Laundry kitchen	100%	-	_
Service area	-	92%	_
Air conditioning	97%	85%	10%
Piping	100%	95%	90%
Electrical	98%	85%	30%

2.33 Supervisory control and field communications

(COMSIP under McDERMOTT-HUDSON management)

2.311 QP modules

Phase I functional tests are complete at 90%. Phase II functional tests are in progress.

2.312 TP1 interface room

The cabinet and cable trays are complete.

2.4. Lines and connections

The decision to change the 8"5/8 (Kill line), the 4"1/2 (condensate line) and the 2 x 2" (air line and pilot line) has been taken, as the pipes already purchased do not comply with the specifications, mainly for that which is relative to resilience. In spite of this problem, the fabrication of the spools is progressing normally for the 32" and the 8"5/8 because for these last lines, Phase II pipes are being used.

The fabrication schedule anticipates the installation of the first 8"5/8 spool in CDP1 on April 15, 1976, in spite of a delay in the mobilization of the cargo barge, initially anticipated for March 20, 1976.

The results of the preliminary hyperbaric welding tests (surface and caisson) are satisfactory. The tests in the caisson for the selection of a root pass and that of two filler passes are being prepared and should occur in April during a simultaneous mobilization of the TAYLOR installations by ELF and NORSK HYDRO. Tenders for the replacement of the pipes were sent out.

2.5. Telecommunications

2.51 Telecommunciations with U.K.

The offshore hook-up contractor is studying the erection procedures for the microwave tower fabricated by CHARPENIE MODERNE.

2.52 Telecommunication with NORWAY

The base of the satellite antenna is installed. The installation of other equipment is in progress.

III. PRODUCTION FACILITIES - PHASE II

3.1. Drilling platform nr. 2 - DP2

3.11 Jacket - Support frame

3.111 Engineering

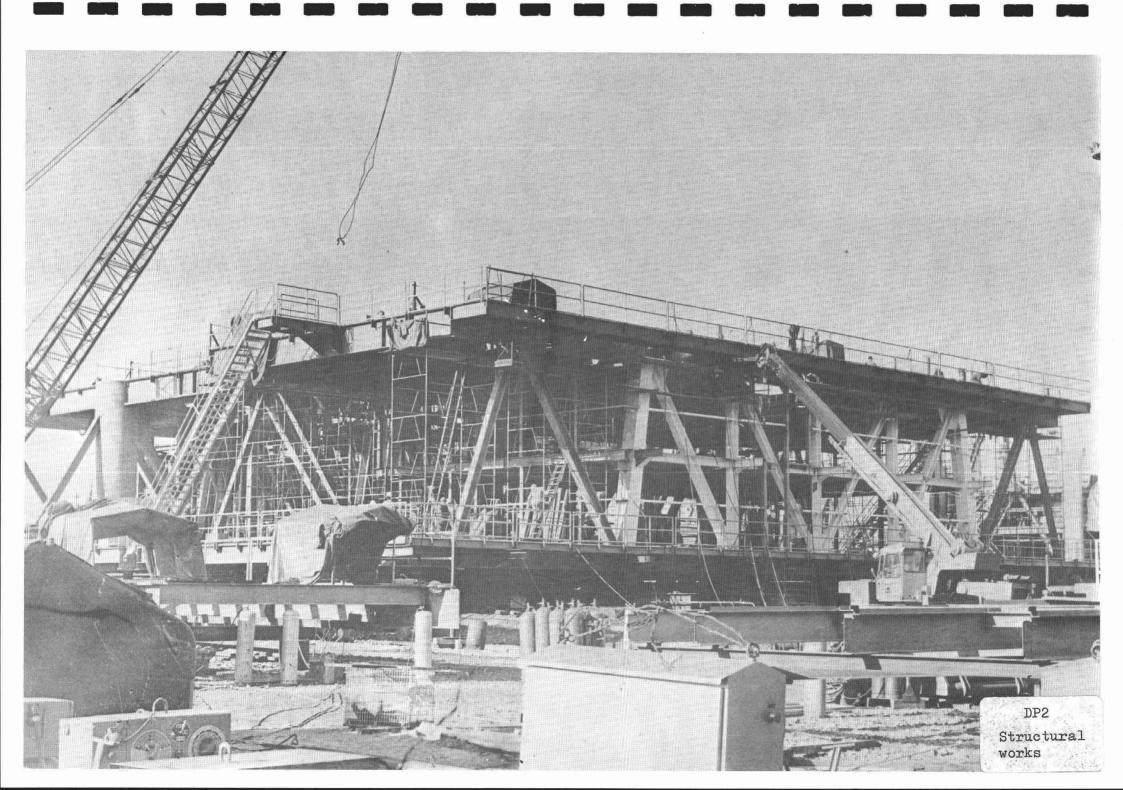
- a) The protection for the 26" risers will be installed offshore with clamps pre-installed in CHERBOURG. The design is progressing.
- b) It has been decided to increase the length of the support frame to allow for a new arrangement of the packages during the insert pile drilling phase. Consequently, modifications of walkways and stairways are being issued.
- b) The padeyes for lifting the support frame have been relocated in the legs.

3.112 Installation studies

a) The first issue of the installation procedures manual was reviewed at the beginning of the month. The main changes will be as follows:

A ringer crane mounted on a mat will be used instead of the stiffleg modules as it can be skidded on the temporary work deck. This decision entails modifications to the temporary work deck which are in progress at the present time.

We will try to avoid using the heavy false rotary tables for the first primary piles which will be installed with the barge.



3.113 Prefabrication

- a) Buoyancy tanks: The last 62" buoyancy tanks will leave SORENAM at the end of this month.
- b) Boat landings: Both boat landings are in St. WANDRILLE. The one for face A will be fabricated using theoretical dimensions.
- c) Pumphouse trusses: Both pumphouse trusses are in St.WANDRILLE, but have not yet been assembled. They are being checked for defects.
- d) Mat for ringer crane: AKER will build this mat which needs to be ready at the beginning of June.

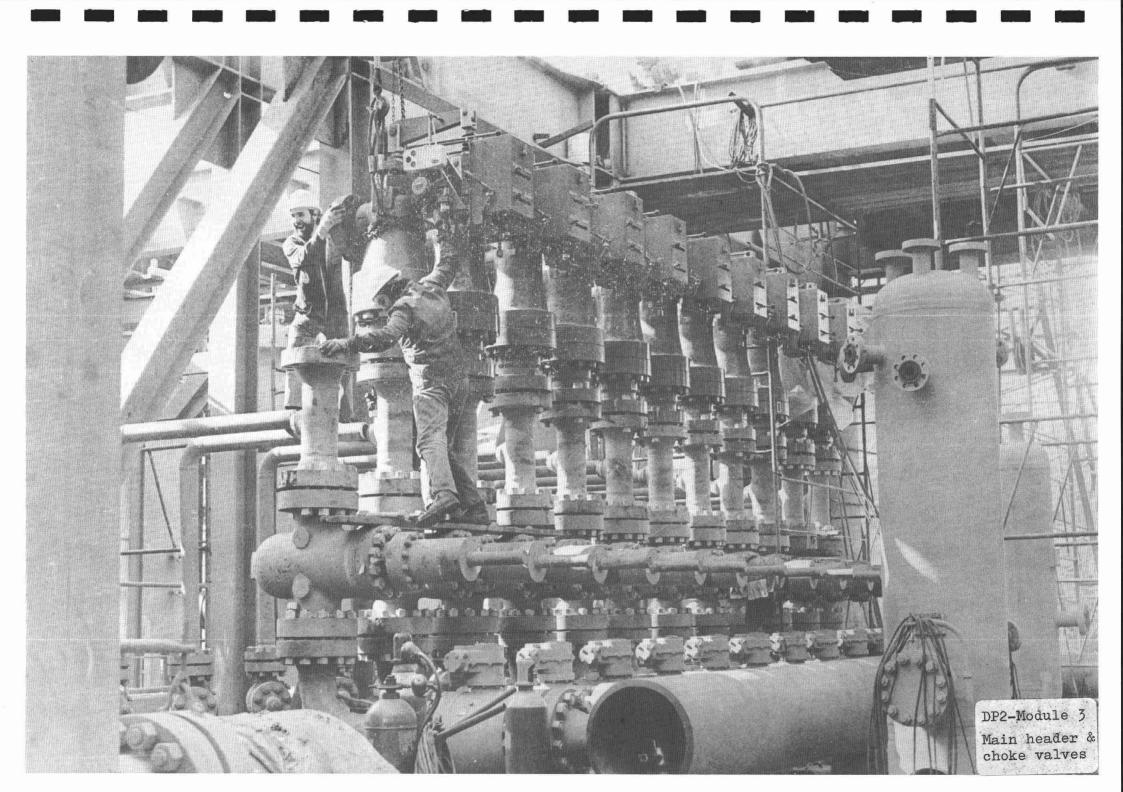
3.114 Fabrication

- a) CHERBOURG yard: Due to a strike (From March 2 till March 9) the estimated date for load-out is now expected to be April 20 with departure May 1st.
- b) St. WANDRILLE yard: The first shipment of piling is scheduled to be loaded on the TENDER CAPTAIN at the beginning of April.
 - The estimated date for departure of the support frame is July 1st on the barge REFANUT.
- c) Temporary work deck (MOMBERG THORSEN): The job is progressing in AALBORG (Denmark) with on site delivery scheduled for the middle of May.

3.12 Production modules

. Engineering :

The total engineering progress is 94%. The detailed engineering progress is as follows :





TCP.2 29.2.76

- General arrangement : 97%
- Model construction : 90%
- Piping arrangement : 95%
- Isoing : 95%

. Procurement :

Procurement progress is 98%. The material delivered on site is 87%, including steel.

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

. Fabrication :

a) Framing construction:

The total progress for the four modules is 95,8%.

Module 01	: 85%	Module 03	:	97,6%
Module 02	: 100%	Module 04	:	99%

b) Equipment installation:

The total progress is 42% (prefabrication of piping included).

Module 01	:	31%	Module 03 : 51,5%
Module 02	:	67%	Module 04 : 12%

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

3.2. TCP2 Platform

3.21 Structure

3.211 Management

The critical stages of the construction schedule have been rearranged by the special coordination group ELF/NORCON/BROWN & ROOT/CHRISTIANI & NIELSEN.

Change order nr. 13 relative to the BROWN & ROOT installation has not yet been approved due to the price level of the insert plates. ELF asked that NORCON take the responsibility and make a new proposal.

For change order nr. 20, concerning the heavy ballast, an agreement relative to the total quantity of diving material and to the additional cost has been reached by both parties concerned.

3.212 Engineering

Drawings and supporting calculations for the ring beams which connect the upper domes of the structures were approved on time.

The design of the structure shafts is progressing well.

The concrete shaft top elevations from the tip of the steel skirts to level 129.70 has been approved by DNV.

3.213 Construction

. Diving ballast	: 100%
. Slipform demob. working deck	: 72%
. Slipform demob. inside of slipform	: 54%
. Erection of steel beams for upper domes	: 58%
. Upper domes :	
- Form work	: 35%
- Reinforcement	: 26%
- Concreting	: 11%

The programme for survey of the damage in the upper part of the cell walls was discussed at a meeting between ELF, DNV and NORCON in ANDALSNES.

Before repair can be started, the methods and test results must be approved by ELF and DNV.

The cracks observed have been accepted as repairable after casting of the domes.

ELF assumed these imperfections could cause corrosion of the reinforcement because of the lack of long term experience with epoxy. ELF has reservations as to the life of the structure.

DNV stated that the durability of the structure depends on the quality of the repair work. NORCON will be provided with additional documents for approval.

3.214 Support frame

AKER contract and fabrication in STORD:

Considerable problems are still hampering the fabrication in the workshop. At present, work is running four weeks behind schedule, due mainly to the lack of qualified welders and to the team framing (work in three eight hour shifts). The maximum number of welders in March was ninety (3 x 30). One hundred additional welders would be needed to make up this delay. Only the ultrasonic control team has been reinforced recently.

TANGEN yard (AKER group) :

The fabrication of nodes at TANGEN is also subject to a six weeks delay as no node has yet been welded.

CMP yard :

The start-up of fabrication appears to be following the planning, however, they are waiting for the results of the C.O.D. and CHARPY VEE notch tests conducted using the electrodes chosen by the contractor.

Other subcontracting:

AKER has not yet taken a decision relative to additional sub-contracts (approximately 200 tons to be placed with CMP or other fabricators).

Issue of shop drawings:

220 drawings from a total of 500 have been issued. The AKER shop drawings are being checked by T.N.O.

Average progress:

The progress of the programmed target is 10.24%

Target A/C for week 13 : 15.36%

Target A/C (to 25/3/76) : 6.00%

Shortfall : 9.36%

The slippage is equal to 4 1/2 weeks.

C.O.D. tests and stress relieving problem :

A meeting will take place on March 31 with DNV, NORCON and the constructors to finalize this important problem. The engineering performed by KVAERNER ENGINEERING is following a normal course but DNV and T.N.O. asked KVAERNER to supply additional calculations for justification.

Detail verifications are still needed.

A large part of the drawings have, in general, been approved by DNV and T.N.O. However, the final approval is dependent on the additional calculations requested by these control organizations i.e. re-calculation after alteration in compression loads.

3.215 TCP2 riser installation

Further to the decisions taken at the beginning of this month the special group worked on the integration of the NORCO and BROWN & ROOT/CHRISTIANI NIELSEN time schedules.

The above resulting time schedules are based on the last issued time schedules by these two contractors.

NORCO delayed the starting of slipforming by two weeks, this could affect the BROWN & ROOT/CHRISTIANI NIELSEN activities.

. Installation :

. Guides for risers at intermediate level of cells	: 1	L 00 %
. Guides for risers at upper level of cells	: 1	800
. Erection crane column 3	:	80%
. Erection crane column 5	:	30%
. Lift cell nr. 3	:	20%
. Lift cell nr. 5	:	0%
. Platform lower level in columns 3 and 5	:	90%
. Condensate tank platforms	: 1	.00%

. Fabrication :

. J-tube truss welding prefabrication	: 95%
. Riser prefabrication	: 95%
. Platform for cell 3	: 65%
. Platform for cell 5	: 55%
I	

3.22 TCP2 Treatment modules

3.221 Structural design

The insurance underwriters have accepted the principle of having the section of module 04, main deck, rebuilt and the pancake 08 repaired. This work is presently being carried out at KVAERNER BRIG's yard in EGERSUND and is due for

completion the first week of May 76. ELF NORGE will soon forward to the insurance company the necessary information relative to the cost of this work. The overall schedule for fabrication of modules and pancakes is not affected by this incident.

Engineering

- . Bridge between TP1 and TCP2: The larger part of the engineering work is now complete. Detail design and drafting is proceeding normally and will be completed next month.
- . Generator package: The design of this unit is now complete. The technical documents will be sent to the construction site in ORKANGER next week as well as a request for quotation on this item.
- . Interface room (pancake 13): The technical documents and a request for quotation for the installation of equipment in the interface room have been sent to SPIE BATIGNOLLES-VIGOR in ORKANGER and to COMSIP.
- Sales gas metering: The scheme for the proposed sales gas metering has been dispatched to NPD and DNV.
 Associated piping design - fabrication is being held pending approval.
- . Pipe supports : Drawings for module 01 have been issued to the construction site.
- Lifting of modules: The design of reinforcements for modules 02 and 03 for lifting with the glycol contactors installed is proceeding. A study is being carried out for the lifting of module 02 with a lifting frame.
- . McDERMOTT-HUDSON will forward to NORWEGIAN CONTRACTORS the structural data of the modules in order to check the behavior of the support frame loaded with the modules and the pancakes.

. A responsibility chart for the design of the temporary installation has been issued to the engineering companies with the corresponding drawings.

3.222 Process design

Process engineering

A meeting was held between ELF/McDERMOTT-HUDSON to look into the influence on the design of the NPD and DNV requirements and to discuss the actions to be taken to implement these requirements.

The general close out meeting with the NPD and DNV relative to the process design is due to take place at the end of April.

A feasibility study has been carried out on the possibility of installation of a spare HP vent on the support frame. The conclusions are now under examination.

. Mechanical engineering

Work is proceeding on the review of the flexibility of the piping and design of pipe supports.

The piping design is in progress and iso drawings are regularly issued to the site.

. Electrical engineering

Engineering work is proceeding on the modifications and additions requested by the NPD and DNV at the area classification meetings.

The electrical shut-down logic needs to be examined by ELF before being submitted.

. Generator package: PARSONS & PEEBLES have improved their efficiency and the design of this unit is now complete. Minor modifications to the design have been required. These will, however, not affect the construction schedule. Running tests of the generator sets will take place at the Kongsberg plant around Easter.

3.223 Project management services

- . In February a PERT programme was issued by McDER-MOTT-HUDSON covering the design, procurement and construction of the modules and pancakes. This first issue was based on the schedule issued by SPIE-BATIGNOLLES/VIGOR on January 15 and could not take into account the actual situation on the site at the date of issue. However, it will be up-dated each month and the next issue will reflect the exact situation of engineering and construction at that time.
 - . The estimated percentage of completion of engineering is 63%.
 - The estimated percentage of completion of project management services is 25%.
 - . Procurement situation is as follows :

Number of inquiries issued this month: 5
Number of inquiries under evaluation: 12
Bid summaries issued this month: 11
Telex orders placed this month: 2
Formal purchase orders issued: 2
Purchase order supplements issued: 23

3.224 Construction of TCP2 - Treatment modules

1. Prefabrication work at EGERSUND

All work is complete with the exception of the additional work due to the re-fabrication of module 04 and repairs to pancake 08. This work is due for completion in the first week of May.

2. Fabrication at ORKANGER

The percentage of progress (for the week ending 21-3-76) is as follows:

	Modules	Pancakes	Total
Structure Piping Equipment	25,01% 21,04% -	0,95% 6,29% -	15,98% 14,46% -
Electrical	-	-	-
Instrument	-	-	-
Load-out	-	-	-

Scheduled: 10,4%

- General:

The overall construction is on schedule but it is to be noted that this is due to the piping being ahead of schedule compiled with the structural work being late. The contractor has been reminded of his responsibilities in achieving a balanced progress throughout the construction period and has submitted a revised planning for modules 01, 02 and 03 which he claims will reduce his shortfall from one month to two weeks.

To explain the above situation it has to be noted that the contractor is faced with the difficulty of qualifying Norwegian structural welders. Many of them cannot perform the tests successfully and the Norwegian Authorities are at the present time reluctant to issue additional work permits for foreign workers. This is a new situation for the contractor insofar as it was agreed that SPIE BATIGNOLLES/VIGOR would be allowed to have on site as many foreign workers as necessary to perform the work on time.

The contractor is now forced to negociate each work permit case by case. A solution will have to be found shortly to this situation as SPIE BATIGOLLE/VIGOR expects to also have on site electricians and instrument workers. This could heavily compromise the schedule.

3.23 Compression

A decision relative to the installation date of the compression should be taken at the end of the month.

In the meantime, in order to be ready in time, the technical specifications and the various other documents needed for the bidding are being prepared.

The optimization studies of the cooling water circuits are continuing.

The leadership for the general study of the distribution has been entrusted to KVAERNER TECHNIP.

3.24 Lines and connections

The fabrication of the pipes is in progress. Tenders for the coating were sent out.

IV - CONTRACTS

. Contract E. 35 - REG BOOTH.

Regularization of change orders nr. 001 A, 0012 A, 004, 005, 006, 007, 011, 012, 014, 015, 016, 017, 018, 024.

Amount: 19.544,93

. Contract E. 38 - WILSON WALTON.

Regularization of change orders nr. 001 and 007.

Amount: 52.561,- & .

. Contract E. 2 bis - Amendment 3) - OCEANIC CONTRACTORS.

Regularization of the DP1 refloating operations from load-out (14/10/74 till 31/1/75).

Amount: 1.645.963 US dollars.

. Contract S. 207 - LARSEN SHIPPING.

Rental of a 300' x 90' flat top barge DINO 1 for six months (Plus a three months option starting March 10, 1976).

Amount: 661.500 US dollars.

. Contract S. 118 General engineering of the DP2 deck modules.
Amount: 615.000 FF.

. Contract S. 210 - LARSEN SHIPPING.

Rental of a cargo barge (300' x 90' x 20') DINO 2 for the transportation of the CDP1 modules.

Amount: 320.120 US dollars.

. Contract S. 211 - UNION DE REMORQUAGE.

Rental of two (300' x 90' x 20') cargo barges TITAN 8 and TITAN 9, for the transportation of the CDP1 modules.

Amount: 320.120 US dollars.

. Contract S. 213 - KARMOY BARGES.

Rental of the cargo barge KARMOY BARGE 1 for the transportation of the CDP1 modules.

Amount: 320.120 US dollars.

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. Contract S. 209 - UNITED TOWING.

Rental of a tug SUPERMAN for a period of two months, starting February 1976.

. Contract E. 13 - Amendment 2 - E.T.P.M.

Authorization to work in LOCH FYNE (Stage III).

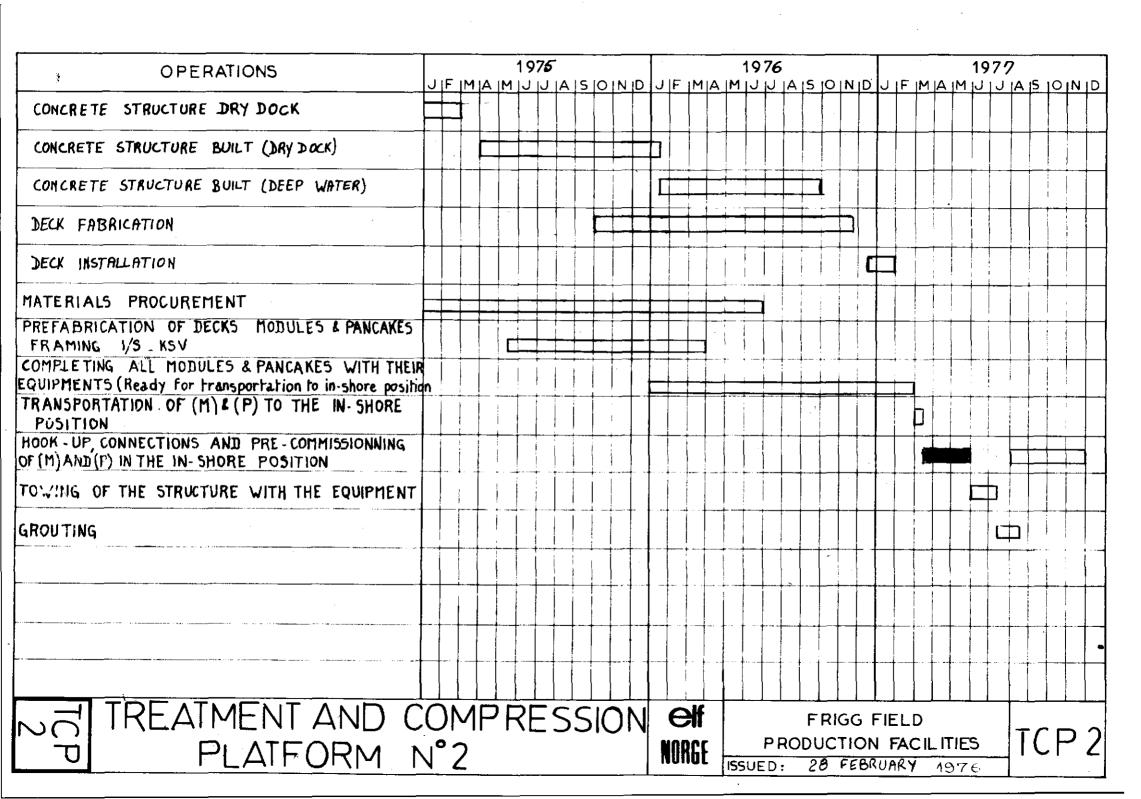
No amount stated.

Amount: 745.000 NKR (5960 FF).

- . Contract E. 25 Amendment 5 GEORGE WIMPEY M.E. Authorization to work in LOCH FYNE (Stage III). No amount stated.
- . Contract E. 7 Amendment 3 BROWN & ROOT.

 Authorization to work in LOCH FYNE (Stage III)

 No amount stated.
- . Contract E. 37 Amendment 1 PENN & BAUDIN.
 Regularization of change orders.
 Amount : 360 536,86 DFL.
- . Contract S. 206 BROWN & ROOT.
 Rental of four RB 90 winches installed on four flat top barges for the
 pulling in of lines.
 Amount : 433.310 US dollars = 1.950 KF.



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