

  
**sea tank co**

SIR ROBERT MC ALPINE & SONS, LTD. *26/7/74*

*HONNOR Y. P. R.*  
**ELF NORGE A/S**

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**FRIGG FIELD**

**TREATMENT PLATFORM N° 1**

**TP1**

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**MONTHLY REPORT**

**N° 1 to 5**

**TP1 - A - 205 - 9 - SCF 001.**

**To 20<sup>th</sup> JUNE 1974**



CONTRACTOR ' S MONTHLY REPORT N° 1

FEBRUARY 1974

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 1

3 WEEK PERIOD UP TO 24TH FEBRUARY, 1974

II SITE PROGRESS REPORT

A. GENERAL REPORT

1. Site Levelling: Work on site effectively commenced on the 4th February, 1974 with the shifting of spoil heaps followed by excavation to the construction basin. General preparatory site work had already been commenced for the construction of the Shell platform.
2. Access Road and Bridge: A temporary access across the Ardyne Burn has been replaced by the permanent bridge, which is in use although some work remains to be completed on approaches. The initial black top site access road is being strengthened. Heavy earthmoving equipment which has to cross the Ardyne Burn now does so on a ford formed north of the permanent access bridge. Initial access was over a temporary bridge.
3. Services: An initial electricity supply to the site has been commissioned. This will later be augmented. A telephone line has been connected to the site and the G.P.O. are installing a multi-pair cable as fast as possible. Installation of the site water supply system, fed from the Ardyne Burn, has started. The site ground conditions only require a foul drainage system installation of which will follow the positioning of the main building and fixed plant installations.
4. Basin Construction: Excavator has made a good start. 6 No. scrapers are in use. A start has been made on the wellpoint drain system to the top ring. It seems probable that the natural ground conditions will act as a cut-off at the lower levels of excavation. Steel sheet piling to the sea wall temporary bank, which has been partially formed, will commence shortly.
5. Wharf: Steel sheet piling for the shipping wharf is approximately 50% complete to the outer wall. Progress has been hindered by mechanical troubles with the Delmag diesel hammers. Piling to inner wall will be starting shortly.
6. Offices: Construction of McAlpine's main offices is half completed. Temporary offices are in use for the construction team and these will subsequently transfer to the construction offices, erection of which will commence in a few weeks time.
7. Plant and Equipment: An auxiliary concrete plant for construction of the silo temporary works has been commissioned. Construction of the concrete batching plant for construction in the basin has begun.
8. Materials: Steel piles for the wharf and basin sea wall are on site. Tie rods for the wharf are being delivered. Concrete aggregates are being stock-piled at Ayr Harbour ready for transport to the site when the wharf is commissioned. Alternative arrangements have been completed for delivery of small quantities of these aggregates for initial requirements.

Continued .....

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 1

LIST OF CONTENTS

SECTION I	DESIGN PROGRESS REPORT
	Not prepared
SECTION II	SITE PROGRESS REPORT
	A. General Report
	B. Progress Schedule
SECTION III	PROCUREMENT PROGRESS REPORT
	A. Bulk Items
	B. Prefabricated and Brought-in items
SECTION IV	CRITICAL PATH ANALYSIS



9. Labour: Adequate labour is available for present requirements and the effective strength is 78 no.
10. Weather: The weather conditions during the first half of the month were bad. Calmer, drier weather in the latter part of the month permitted better progress, which included forming the temporary sea wall bank in readiness for piling the protective sea wall, and for excavation of the seaward half of the basin.
11. Photographs: 5 No. aerial photographs taken on the 6th March are enclosed. Weather conditions prevented these being taken earlier.

PGB/CS  
13.3.74.

# ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

## CONTRACTOR'S MONTHLY REPORT NO. 1

3 WEEK PERIOD UP TO 24TH FEBRUARY, 1974

### II SITE PROGRESS REPORT (continued)

#### B. PROGRESS SCHEDULE

##### 1. Temporary Works and Construction Facilities

Section of Work	Percentage Completion				Comments
	Engineering	Drafting	Construction		
			Programmed	Actual	
<u>Temporary Works</u>					
1. Office Accommodation (combined)	100	100		0	Awaiting planning approval to alternative siting   

Section of Work	Percentage Completion				Comments
	Engineering	Drafting	Construction		
			Programmed	Actual	
25. Concrete placing booms.	50	30		-	
26. Prepare jetty and offshore moorings.	70	25		-	
27. Sea wall removal and dredging.	20	-		-	
28. Tow out, moor and connect services.	35	-		-	
29. Slipform shutters to columns.	-	-		-	
30. Construction hoists to columns.	30	-		-	
31. Dismantle tower cranes.	10	-		-	
32. Clear platform for tow.	-	-		-	
33. Connect tugs and slip moorings.	-	-		-	
2. <u>Permanent Structure</u>					
1. Precast skirt sections					
(a) Make			-	-	
(b) Place			-	-	
2. Caisson base slab 0.50 m			-	-	
3. Prestress base slab			-	-	
4. Vent pipework			-	-	
5. Grouting pipework			-	-	
6. Piezometer pipework			-	-	
7. 'J' tubes			-	-	
8. Sea bed risers			-	-	
9. Immersion pipework			-	-	
10. Caisson dwarf walls			-	-	
11. Caisson walls in basin			-	-	
12. Caisson walls at moorings			-	-	
13. Complete base slab & fillet			-	-	
14. Caisson ballast concrete			-	-	
15. Construct columns (2 No)			-	-	
16. Prestress and grout columns.			-	-	
17. Caisson roofs.			-	-	
18. Immersion module and cabling.			-	-	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 1

3 WEEK PERIOD UP TO 24TH FEBRUARY, 1974

III PROCUREMENT PROGRESS REPORT

(A) BULK ITEMS

Material	Order Placed	Quantity Delivered		Comments
		Scheduled	Actual	
Concrete Aggregates	15.1.74.	tonnes	- tonnes	Initial delivery in transit
Concrete Sand	15.1.74.	tonnes	- tonnes	
Cement	7.1.74.	tonnes	- tonnes	
Reinforcement		tonnes	- tonnes	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 1

3 WEEK PERIOD UP TO 24TH FEBRUARY, 1974

III. PROCUREMENT PROGRESS REPORT (continued)

(B) FABRICATED & BROUGHT-IN ITEMS - M<sup>c</sup>ALPINE SUPPLY

Items	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
1. <u>Precast Skirts</u>					
(a) Lifting anchorages	7.3.74.	N.A.	13.3.74.	-	
2. <u>Caisson Base Slab 0.50 m</u>					
(a) Grout directional Steelwork					
(b) Sea bed grout pipe- work					
(c) Sea bed water dis- charge pipes					
(d) Piezometer pipe- work					
(e) Tower crane fixings					
(f) Prestressing cables etc.					
3. <u>Caisson Base Dwarf Walls</u>					
This and other sections to follow.					

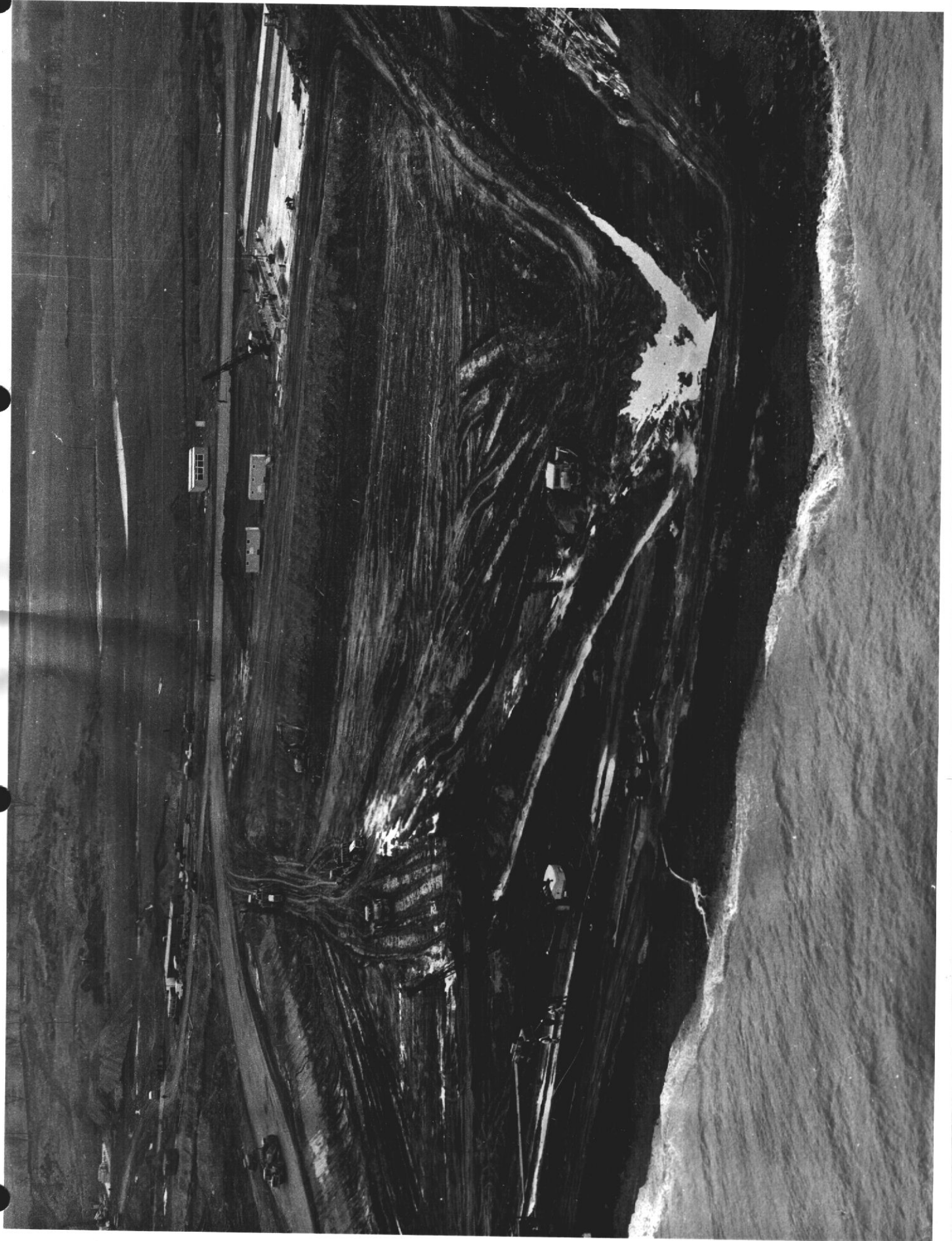
ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

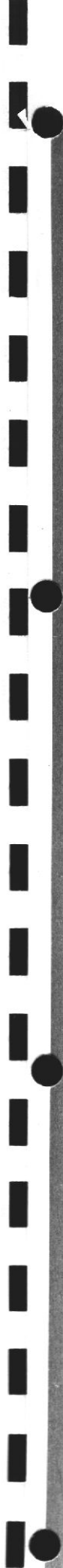
CONTRACTOR'S MONTHLY REPORT NO. 1

3 WEEK PERIOD UP TO 24TH FEBRUARY, 1974

#### IV CRITICAL PATH ANALYSIS

A tender programme is being finalised now and this will be followed up by a C.P.M. network analysis.



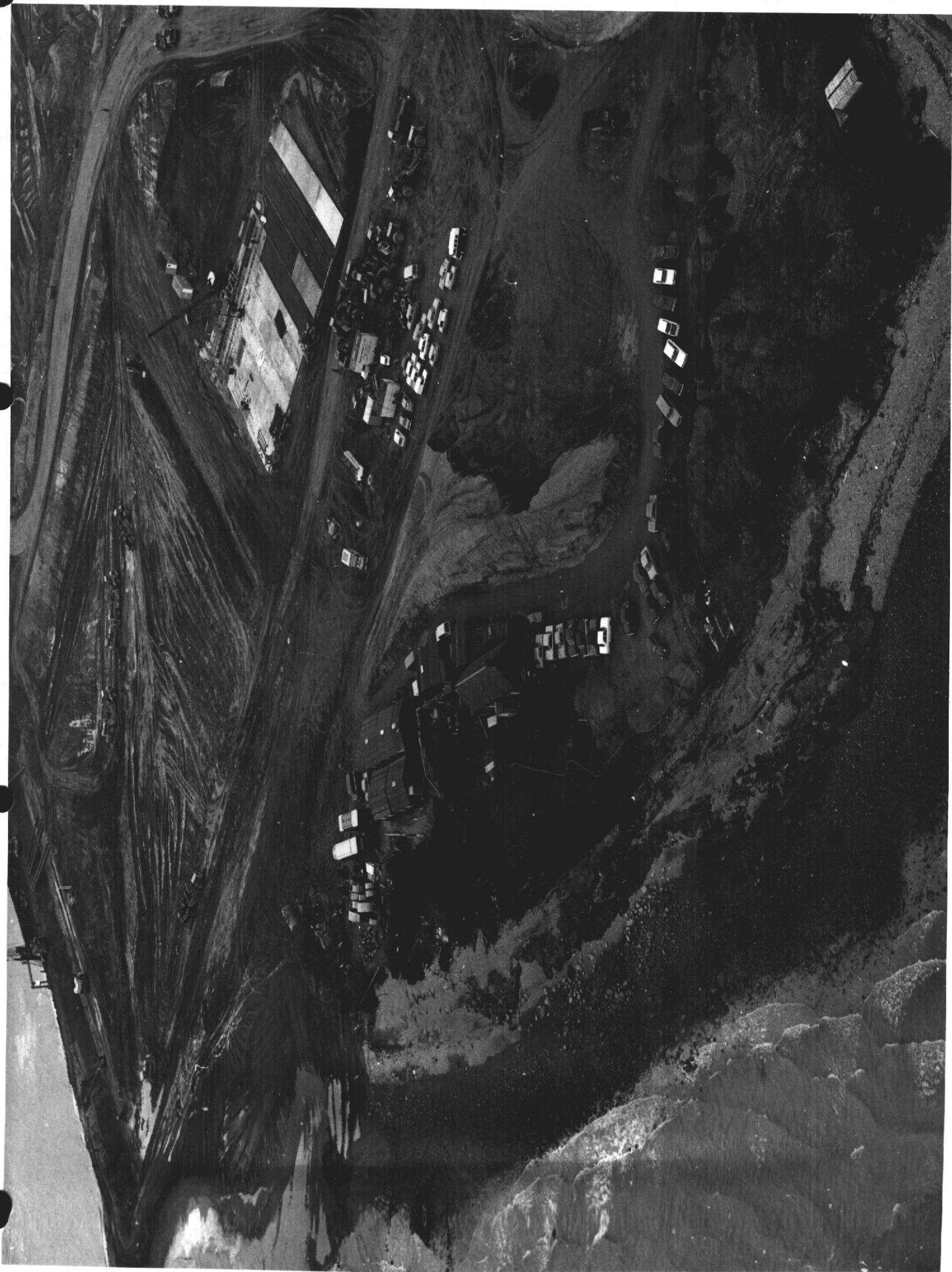












CONTRACTOR ' S MONTHLY REPORT N° 2

MARCH 1974

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 2

LIST OF CONTENTS

SECTION I

DESIGN PROGRESS REPORT

- A. General Report ) Not prepared
- B. Structure Drawings )
- C. Equipment Drawings and Notes )
- D. Temporary Works & Construction Facilities

SECTION II

SITE PROGRESS REPORT

- A. General Report
- B. Progress Schedule
- C. Labour Report
- D. Plant Report

SECTION III

PROCUREMENT PROGRESS REPORT

- A. Bulk Items
- B. Prefabricated and Brought-In Items

SECTION IV

CRITICAL PATH ANALYSIS

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1CONTRACTOR'S MONTHLY REPORT NO. 2MARCH, 1974I DESIGN PROGRESS REPORT (Cont'd)D. Temporary Works and Construction Facilities

Section of Work	Percentage Complete		Comments
	Engineering	Drafting	
<u>TEMPORARY WORKS</u>			
1. Office Accommodation (combined)	100	100	
2. Camp Accommodation	100	100	
3. Canteen	100	100	
4. Site Water Supply	100	100	
5. Electricity Supply to Site	100	100	
6. Telephones	100	100	
7. Site Foul Drainage	100	100	
8. Wharf	100	80	
9. Auxiliary Concrete Batchers	100	100	
10. Main Concrete Batchers	100	100	
11. Concrete Mix Approval	100	100	
12. Reinforcement Yard	100	100	
13. Joiners Shop	100	100	
14. Fitters Shop	100	100	
15. Prestressing Store	100	100	
<u>CONSTRUCTION FACILITIES</u>			
20. Sheet Pile Sea Wall	100	100	
21. Basin Excavation	100	100	
22. Basin Wellpointing	100	100	
23. Tower Crane Erection	100	100	
24. Slipform Shutters to Caisson Walls	70	40	
25. Concrete Placing Booms	65	40	
26. Causeway to Floating Jetty	50	-	
27. Floating Jetty	100	50	

Cont'd/

Section of Work	Percentage Complete		Comments
	Engineering	Drafting	
<u>CONSTRUCTION FACILITIES</u> (Cont'd)			
28. Offshore Moorings	75	40	
29. Sea Wall Removal and dredging	50	-	
30. Tow Out and Moor	60	0	
31. Connect Services after Tow Out	10	-	
32. Slipform Shutters to Columns	-	-	
33. Construction Hoists to Columns	30	-	
34. Dismantle Tower Cranes	10	-	
35. Clear Platform for Tow	-	-	
36. Connect Tugs and Slip Moorings	-	-	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY NARRATIVE REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT

A GENERAL REPORT

1. General Comment

Construction of the Basin and setting up Temporary Works continued during the month. Precasting the Caisson Skirts commenced early in the month. Placing the first of these skirts in position in the Basin is expected in the second week of April.

2. Photographs

4 No. aerial photographs taken on the 2nd April 1974, are enclosed at the back of this Report.

2 photographs show the construction basin, and the other 2 the principal area of temporary works in the North-West area of the Site.

3. Weather

Conditions were generally better than during the preceding month; being drier, less windy and warmer. The main disruption to progress was a wet spell from Thursday 14th March to Monday 18th March 1974, which stopped excavation for several days waiting for the ground to dry.

4. Labour

The effective labour force has been increased considerably during the month to an effective strength of 345 men. A detailed breakdown of the labour is given in Part C of this Section. The build-up of labour strength is generally satisfactory.

5. Plant & Equipment

Erection of the batching plant at the East corner of the basin, for construction work in the basin, has been held back pending the clarification of outstanding matters with the Local Planning Authorities. Concrete will be made available from the  $\frac{3}{4}$  cy. batcher or the 2 x 2 cy. batcher at the West end of the Site.

Setting up of the Joiners Shop and reinforcement yard continues. Buildings for prestressing and general stores are under erection.

Details of the principal items of plant on Site are included in Section II D.



ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY NARRATIVE REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT

A GENERAL REPORT

6. Temporary Works

(a) Access Roads & Bridge

Construction of the Site roads has progressed steadily following on behind erection and installation of the various offices, buildings, plant and services. The original temporary bridge over the Ardyne Burn has been replaced so as to give scrapers full access to the East side of Ardyne Burn unaffected by the state of the tide.

(b) Services

Installation has continued on the Site Water Supply, and the system is expected to be operational in the first half of April 1974.

The North of Scotland Hydro Electric Board are proceeding with the provision of an augmented 11kv supply to the Site.

The G.P.O. have increased the number of lines to the Site to 5, and are arranging for this to be increased to 25 as soon as practicable.

The Soil Drainage System to the offices and adjoining buildings has been partially laid, and has been commissioned with a temporary septic tank. The sewage treatment plant is being installed, which will then allow the effluent to be discharged into the sea.

(c) Offices

Erection of the continued Site construction office is proceeding. McAlpine's general offices have been completed and occupied.

(d) Camp Accommodation

Erection of the camp accommodation has not commenced pending a decision by the Planning Authorities on an alternative siting East of the Ardyne Burn. Clearance of this had been expected before now, but it is said that a definite decision will be given in April 11th 1974.

(e) Wharf

Steel sheet piling has been completed, but progress has been held up awaiting delivery of Tie Rods. A temporary causeway North of the Wharf has been formed for unloading the relatively small quantities of concrete aggregates and sand needed at the time.

7. Concrete Mixes

Concrete mix designs have been agreed and approval given for structural use of concrete from the auxiliary batching plant.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY NARRATIVE REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT

A GENERAL REPORT

8. Construction Basin & Permanent Structure

Excavation to the construction basin has made good progress, and should be completed early in April.

Due to the nature of the ground encountered, all the well-pointing system necessary has been installed. This is limited to a high level length on the 'sea' side of the basin.

Precasting of the caisson skirts is nearly half complete, slightly late to programme.

9. Materials

Reinforcement delivered to the Site now covers the requirements for the "as launched" section of the caisson.

Small quantities of aggregates have been delivered to the Site for the permanent structure. Bulk Cement is being delivered as required for the construction.

Some of the Built-In Items have been delivered to Site. Some deliveries are overdue and are being chased, but are not causing concern at the present time.

10. Programmes

A C.P.M. network analysis programme has now been prepared and issued. See Section IV of the Report.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1CONTRACTOR'S MONTHLY REPORT NO. 2MARCH, 1974II SITE PROGRESS REPORT (Cont'd)B. PROGRESS SCHEDULE1. Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>TEMPORARY WORKS</u>				
1. Office Accommodation (Cont'd)		10	10	
2. Camp Accommodation		-	-	Awaiting Planning Approval to alternative Siting
3. Canteen		95	90	
4. Site Water Supply		70	60	
5. Electricity Supply to Site		5	5	Progress refers to augmented supply
6. Telephones		35	35	Refers to Telephone Lines to Site
7. Site Foul Drainage		50	50	
8. Wharf		53	25	
9. Auxiliary Concrete Batcher		100	-	
10. Main Concrete Batcher		5	5	See General Report II A.5.
11. Concrete Mix Approval		100	100	Report relates to Auxiliary Batcher
12. Reinforcement Yard		75	5	
13. Joiners Shop		90	70	
14. Fitters Shop		30	30	
15. Prestressing Store		50	45	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT (Cont'd)

B. PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities (Cont'd)

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>CONSTRUCTION FACILITIES</u>				
20. Sheet Pile Sea Wall	100	100	100	Complete 22/3/74
21. Basin Excavation	75	74	58	Average Level - 5.35
22. Basin Well Pointing	100	100	100	Complete 2/3/74
23. Tower Crane Erection	-	-	-	
24. Slipform Shutters to Caisson Walls	-	-	-	
25. Concrete Placing Booms	-	-	-	
26. Prepare Floating Jetty	-	-	-	
27. Prepare Offshore Moorings	-	-	-	
28. Sea Wall Removal & Dredging	-	-	-	
29. Tow Out and Moor	-	-	-	
30. Connect Services after Tow Out	-	-	-	
31. Slipform Shutters to Columns	-	-	-	
32. Construction Hoists to Columns	-	-	-	
33. Dismantle Tower Cranes	-	-	-	
34. Clear Platform for Tow	-	-	-	
35. Connect Tug & Ship Moorings	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT (Cont'd)

B. PROGRESS SCHEDULE

2. Permanent Structure

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
1. Precast Skirt Sections				
(a) Make	54	47	47	
(b) Place	-	-	-	
2. Caisson Base Slab 0.50m	-	-	-	
3. Prestress Base Slab	-	-	-	
4. Vent Pipework	-	-	-	
5. Grouting Pipework	-	-	-	
6. Piezometer Pipework	-	-	-	
7. J - Tubes	-	-	-	
8. Sea Bed Risers	-	-	-	
9. Immersion Pipework	-	-	-	
10. Caisson Dwarf Walls	-	-	-	
11. Caisson Walls in Basin	-	-	-	
12. Caisson Walls at Moorings	-	-	-	
13. Complete Base Slab & Fillet	-	-	-	
14. Caisson Ballast Concrete	-	-	-	
15. Construct Columns (2 No)	-	-	-	
16. Prestress & Grout Columns	-	-	-	
17. Caisson Roofs	-	-	-	
18. Immersion Module & Cabling	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT

C. LABOUR REPORT

The effective Labour strength at the Month Ending is as follows:-

<u>McAlpine Labour</u>	Joiners	37 No
	Bricklayers	1 No
	Steelfixers	16 No
	Labourers	124 No
	Plant Drivers & Black Gang	79 No
	Chainmen, Hut Attendants, etc.	16 No
		<hr/> 273 No <hr/>
Subcontractors Labour	Tractor Shovels	15 No
	Millars Wellpoint	1 No
	Humphreys & Glasgow	23 No
	Appollo Construction	4 No
	Graydon Construction	7 No
	Clifton Construction	4 No
	Terrapin	8 No
	Star Painters	3 No
	Balfour Kilpatrick	5 No
	Fox Welding	1 No
	Tyers Welding	1 No
		<hr/> 72 No <hr/>
<u>TOTAL EFFECTIVE STRENGTH</u>		<u>345 No</u>

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 2

MARCH, 1974

II SITE PROGRESS REPORT

(D) PLANT REPORT

Plant Return for major items of equipment in effective use.

<u>Crawler Cranes/Excavators</u>	2 No NCK 1405 4 No NCK 605 1 No Priestman Lion III 1 No NCK Andes C 41B
<u>Wheeled Cranes</u>	1 No 15 Ton Telescopic Jib Mobile
<u>Backactor Excavators</u>	1 No 1 cy. Hydraulic Excavators 2 No $\frac{5}{8}$ cy. Hydraulic Excavators
<u>Crawler Tractor/Dozers</u>	3 No
<u>Tracker Shovel Loaders</u>	5 No
<u>Wheeled Tractors</u>	3 No
<u>Wheeled Shovel Loader</u>	1 No
<u>Dump Trucks</u>	16 No
<u>Scrapers</u>	8 No - mainly TS14 Machines
<u>Crawler Pusher Dozers (with scraper)</u>	6 No
<u>Grader</u>	1 No
<u>Truckcretes</u>	6 No
<u>Dumpers</u>	3 No
<u>Concrete Batchers</u>	1 No Bentford PB34 $\frac{3}{4}$ cy. (auxiliary batcher)
<u>Tower Cranes</u>	1 No Record 646E (rft. yard)

Also, Generators, Welding Sets, Lighting Sets, Concrete Vibrators, Mobile Concrete Mixers, Pumps, Transport Vehicles, Air Compressors, Piling Hammers, and Extractor, Fuel and Water Bowsers, Chainsaws, Saw Benches, Poilers, Transformers, Battery Charger, Grabs, Rollers, Reinforcement Cutting and Bending Machines, Storage Tanks, Aggregate Screening Plant, Mobile Toilets

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 2

MARCH, 1974

III PROCUREMENT PROGRESS REPORT

(A) BULK ITEMS

MATERIAL	ORDER PLACED	TOTAL QUANTITIES DELIVERED		QUANTITY DELIVERED FOR MONTH	COMMENTS
		SCHEDULED	ACTUAL		
Concrete Aggregates	15/1/74	6210 tonnes	1150 tonnes	1150 tonnes	See Note 1
Concrete Sand	15/1/74	4140 tonnes	705 tonnes	705 tonnes	See Note 1
Cement	7/1/74	250 tonnes	250 tonnes	250 tonnes	See Note 2
Reinforcement		1350 tonnes	1449 tonnes	1449 tonnes	

NOTES:

1. Concrete Aggregates and Sand  
Quantities delivered are adequate for current requirements.  
Supply rates will be increased when Wharf is operational.
2. Cement  
Deliveries phased to suit concrete requirements in conjunction  
with Silo Storage capacities at Mixers.



MARCH, 1974

III PROCUREMENT PROGRESS REPORT (Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
1. <u>Precast Skirts</u>					
(a) Lifting Anchorages	7/3/74 (3016/ M/A)		13/3/74	Yes	
2. <u>Caisson Base Slab 0.50m</u>					
(a) Grout Directional Steelwork	5/3/74 (3016/ B/303)		Collect 16/3/74	11/3/74 3/4/74	Cut to length & tangs fixed on Site 50m outstand- ing
(b) Seabed Grout Pipe -work	4/3/74 (3016/ B/302)	B.S.C.	21/4/74	-	
Diffusors for ditto	-	-	4/3/74	Yes	Soletanche supply
(c) Seabed Vent Pipes 3"	4/3/74 (3016/ B/302)	B.S.C.	1/4/74		
5"	"	B.S.C.	1/4/74		
10"	12/3/74 (3016/B /304)	B.S.C.	1/4/74		Despatched for flanging 25/3/74
Plugs for ditto	-	-	4/3/74	Yes	Soletanche supply
(d) Piezometer Pipe -work	4/3/74 (3016/B /302)	B.S.C.	21/4/74		
Plugs for ditto	-	-	4/3/74	Yes	Soletanche supply

# III PROCUREMENT PROGRESS REPORT (Cont'd)

## (B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
2. Cont'd					
(e) Tower Crane Fixings			12/4/74	3/4/74	
(f) Prestressing Equipment Strand	21/2/74 (3016/B/300)	Bridon Wire	25% by 1/5/74		
Sheathing	27/2/74 (3016/B/301)	C.C.L.	1/4/74	8/4/74	Complete
Grout Exit Couplers	27/2/74 (3016/B/301)	C.C.L.	1/4/74	8/4/74	Complete
Plain Couplers	27/2/74 (3016/B/301)	C.C.L.	1/4/74	8/4/74	Complete
Tube Units	"	C.C.L.	1/4/74		
Bearing Plates and Grips	"	C.C.L.	1/5/74		
Dummy Barrels	"	C.C.L.	1/5/74		
(g) 3" Instrumentation Pipe	C37/27	B.S.C./Inshaw	9/4/74 - 18/4/74		
(h) Echo Sounding Reservations					U.I.E. Supply
3. <u>Caisson Base Dwarf Walls</u>					
(a) Ground Bottom Switch Plates	C37/26	-	12/4/74		McA. Supply
(b) Sleeves for Cables to Echo Sounders and Contacts	-	-			U.I.E. Supply

### III PROCUREMENT PROGRESS REPORT (Cont'd)

#### (B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
3. Cont'd					
(c) Immersion Pipe-work Outlets	-	-			U.I.E. Supply
(d) Risers Anchors	-	Brown & Roote			
(e) Risers Tubes 24" 26" 32"					
(f) Risers Supports					
(g) J Tubes 10 $\frac{3}{4}$ " & 18"	9/4/74 (3016/B/305)	A. Findlays			5 No. pieces for stage 1 'B' elements
(h) Tunnels 38" 44"		A. Findlays			6m length through 'B' elements
(i) Mooring Points		A.K.D.			Item 2 Drg. 192
(j) Towing Points					
4. Caisson Walls in the Basin					
Details of this Section and other Sections to follow					

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 2

CONTRACTOR'S MONTHLY REPORT NO. 1

MARCH, 1974

IV CRITICAL PATH ANALYSIS

The Critical Path Analysis Programme has been prepared and issued. (C.P.M. run 7th March 1974) This shows all the operations involved in the construction, but some of these will require to be examined in more detail as construction drawings come forward.

The date available for tow from Ardyne Point is the 1st May 1975.





7404/24/7

ELF BASIN - PRECASTING OF SKIRTS PROCEEDING IN FOREGROUND. DATE 2/4/74



7404/24/14

MAIN BATCHING PLANT IN CENTRE. WHARF UNDER CONSTRUCTION  
WITH BEACHED SHIP DELIVERING AGGREGATE ABOVE. FITTING SHOP  
IN FOREGROUND.

DATE 2/4/74

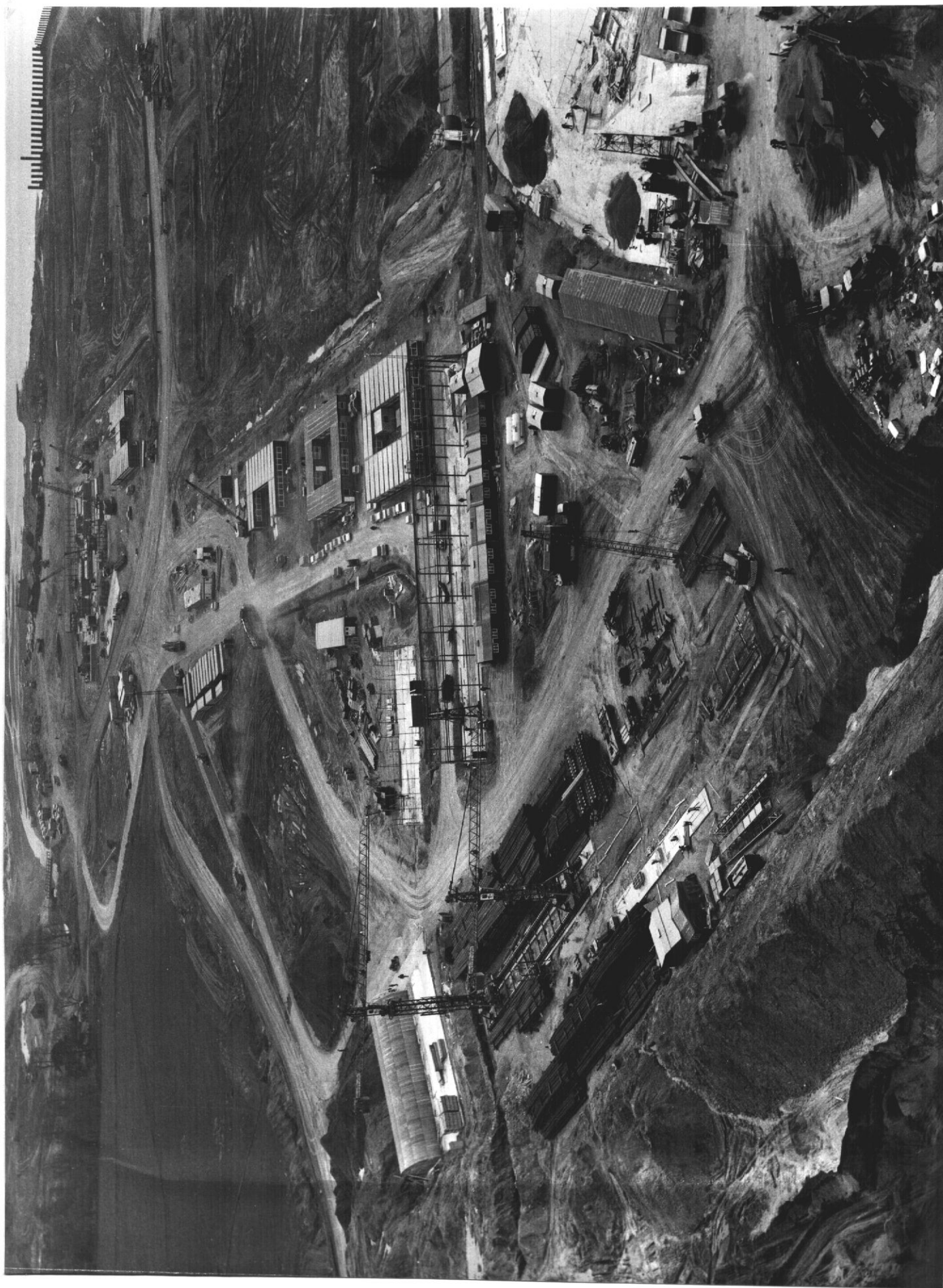




7404/24/36

REINFORCED STORAGE AND BENDING YARD IN FOREGROUND.

DATE 2/4/74



7404/24/36

REINFORCED STORAGE AND BENDING YARD IN FOREGROUND.

DATE 2/4/74

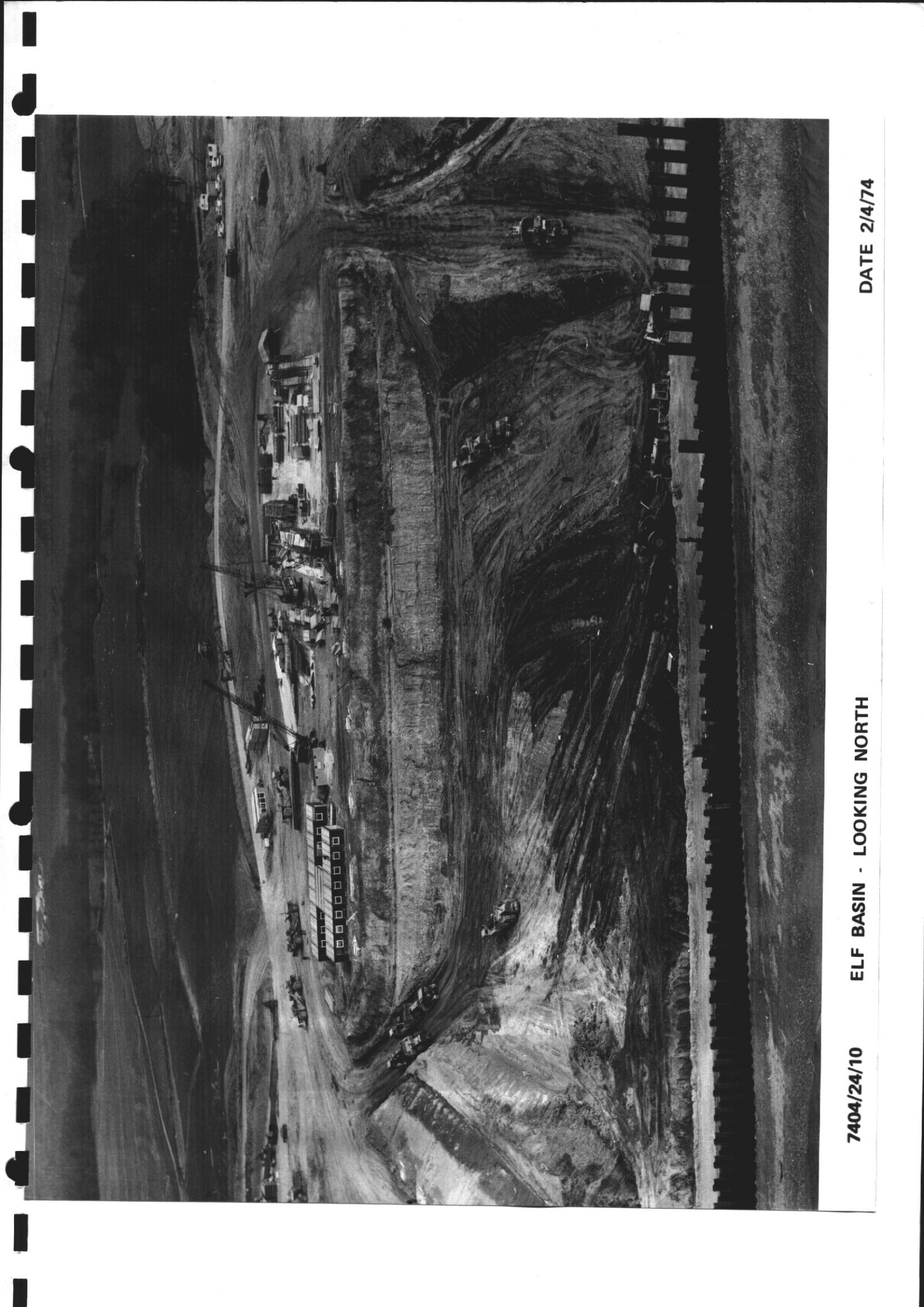




7404/24/36

REINFORCED STORAGE AND BENDING YARD IN FOREGROUND.

DATE 2/4/74



7404/24/10

ELF BASIN - LOOKING NORTH

DATE 2/4/74

CONTRACTOR ' S MONTHLY REPORT N° 3

APRIL 1974

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 3

LIST OF CONTENTS

SECTION I DESIGN PROGRESS REPORT

- A. General Report ) Not
- B. Structure Drawings ) Prepared
- C. Equipment Drawings and Notes )
- D. Temporary Works and Construction Facilities

SECTION II SITE PROGRESS REPORT

- A. General Report
- B. Progress Schedule
- C. Labour Report
- D. Plant Report

SECTION III PROCUREMENT PROGRESS REPORT

- A. Bulk Items
- B. Prefabricated and Brought-In Items

SECTION IV CRITICAL PATH ANALYSIS

APRIL, 1974I DESIGN PROGRESS REPORT (Cont'd)D Temporary Works and Construction Facilities

Section of Work	Percentage Complete		Comments
	Engineering	Drafting	
<u>TEMPORARY WORKS</u>			
1. Office Accommodation (combined)	100	100	Camp now sited in original location north of construction site. Erection details being finalised.
2. Camp Accommodation	100	80	
3. Canteen	100	100	
4. Site Water Supply	100	100	
5. Electricity Supply to Site	100	100	
6. Telephones	100	100	
7. Site Foul Drainage	100	100	
8. Wharf	100	100	
9. Auxiliary Concrete Batchers	100	100	
10. Main Concrete Batchers	100	100	
11. Concrete Mix Approval	100	100	
12. Reinforcement Yard	100	100	
13. Joiners Shop	100	100	
14. Fitters Shop	100	100	
15. Prestressing Store	100	100	
<u>CONSTRUCTION FACILITIES</u>			
20. Sheet Pile Sea Wall	100	100	
21. Basin Excavation	100	100	
22. Basin Well Pointing	100	100	
23. Tower Crane Erection	100	100	
24. Slipform Shutters to Caisson Walls	100	95	

Cont'd/

I DESIGN PROGRESS REPORT (Cont'd)

D Temporary Works and Construction Facilities

Section of Work	<u>Percentage Complete</u>		Comments
	Engineering	Drafting	
<u>CONSTRUCTION FACILITIES</u> (Cont'd)			
25. Concrete Placing Booms	100	80	
26. Causeway to Floating Jetty	50	0	
27. Floating Jetty	100	80	
28. Offshore Moorings	80	50	
29. Sea Wall Removal and Dredging	75	0	Dredging order about to be placed.
30. Tow Out and Moor	60	0	
31. Connect Services after Tow Out	30	10	
32. Slipform Shutters to Columns	0	0	
33. Construction Hoists to Columns	30	0	
34. Dismantle Tower Cranes	10	0	
35. Clear Platform for Tow	-	-	
36. Connect Tugs and Slip Moorings	-	-	

APRIL, 1974

II SITE PROGRESS REPORT

A. GENERAL REPORT

1. General Comment

Excavation of the basin was completed early in the month, and the base slab construction started. Temporary works continued steadily.

On 18th April 1974, the Joiners went on unofficial strike, and had not returned to work by the end of the month. Construction and placing of the precast skirts was halted, as was the preparation of the first bay of the 0.5m base slab. Prefabrication of slab beams by the Steel Fixers was continued for as long as possible.

2. Photographs

2 No. aerial photographs taken on 4th April 1974, are enclosed at the back of this Report.

1 photograph shows the construction basin looking North, and the other the main batcher, wharf and fitting shop.

3. Weather

Conditions were very good, with only four days on which rain fell, and winds were light and the dry weather has helped considerably in the progress of the works in general.

4. Labour

The Labour force consists of 319 men. However, of these, 44 are Joiners, and so do not appear in the total of effective labour for the end of the month, a detailed breakdown of which is given in Part C of this Section.

5. Plant & Equipment

Outstanding matters concerning the siting of the batching plant at the East corner of the basin for construction work in the basin have been cleared with the Local Planning Authorities. Preparatory work for the foundations should start early in May.

The erection of the main batcher for Shell is now complete, and the plant is operational. It could be available for concrete if necessary.

The Joiners Shop, Prestressing Store, and Fitters Shop structures are almost complete. The wiring up of heaters and lights should follow soon.

Details of the principle items of plant on Site are included in Section II D.

Cont'd/....

## II SITE PROGRESS REPORT (Cont'd)

### A. GENERAL REPORT

#### 6. Temporary Works

##### (a) Access Roads

The main Sections outstanding now are the road to the Wharf from the reinforcement yard, the ring round the Fitters Shop, and the approach to the Elf Offices. Some preparatory work was done on these during the month. Now that the excavation for Shell is almost finished, it should prove possible to maintain the roads in a cleaner condition.

##### (b) Services

The Site Water Supply Installation is effectively complete, and operational, providing pure water to all parts of the Site.

The North of Scotland Hydro Electricity Board are awaiting confirmation of wayleave for the augmented 11 KV supply to the Site.

The G.P.O. have increased the number of lines to the Site to 15, and it is hoped that this will be increased to a total of 50, as soon as practicable.

The soil drainage system to the Offices and adjoining buildings is effectively complete, and the sewage treatment plant is operational.

##### (c) Offices

The Offices for McAlpine, and Sea Tank have been completed and occupied. The Elf Offices is under construction and should be occupied in the middle of May.

##### (d) Camp Accommodation

Planning permission on the alternative siting East of the Ardyne Burn was not granted, and so development of the original Site was commenced. Some Site levelling has been done in preparation for the building foundations.

##### (e) Wharf

All sheet piling and tie rods and the majority of the main fill have been completed. Dredging in front of the Wharf has continued, and a certain amount of aggregates have been offloaded at the Wharf.

#### 7. Concrete Mixes

Concrete mix designs for the auxiliary batcher were agreed last month. (March) The seven day tests for the main Shell batcher have been started.



II SITE PROGRESS REPORT (Cont'd)

A. GENERAL REPORT

8. Construction Basin & Permanent Structure

The weather was very dry and progress was uninterrupted. Excavation of the construction basin was completed early in the month, and the placing of the free draining layer has been effectively finished.

The precasting of skirts progressed very well up to the Joiners' strike, and was very nearly finished. Since then, no further progress has been possible.

Placing of the precast skirts has started, and this progressed well up to the Joiners' strike. The only progress since then has been the excavation of trenches to receive further units.

The blinding strips, grout directional steelwork and grout boxes for the majority of the Eastern quarter of the 0.5m base slab, and the hardboard, polythene sheeting and reinforcement for the first bay of the 0.5m base, are effectively complete. Apart from the prefabrication of base slab beams by the Steelfixers, nothing more can be done until the Joiners resume work.

9. Materials

Reinforcement continued to be delivered to the Site, and adequate supplies have been built up.

Aggregates have been delivered to the Wharf, and a satisfactory stock is being built-up.

Bulk cement is being delivered as required.

Built-in items continue to be delivered to Site. Overdue deliveries are being chased, but are not causing concern at the present time.

10. Programmes

Once the present Industrial Action has been resolved, it will be necessary to update the current C.P.M. Programme.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 3

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

1. Temporary Works and Construction Facilities

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>TEMPORARY WORKS</u>				
1. Office Accommodation (Cont'd)		95	85	
2. Camp Accommodation		5	5	Erection in original location
3. Canteen		100	5	
4. Site Water Supply		95	25	
5. Electricity Supply to Site		15	10	Electricity Board await- ing confirm- ation of way- leave
6. Telephones		60	60	Refers to telephone lines to Site
7. Site Foul Drainage		85	35	
8. Wharf		75	22	
9. Auxiliary Concrete Batcher		100	-	
10. Main Concrete Batcher		5	-	See General Report Section II A.5.
11. Concrete Mix Approval		100	-	Report relates to Auxiliary Batcher
12. Reinforcement Yard		75	-	Some per- manent equip- ment not yet delivered
13. Joiners Shop		95	5	
14. Fitters Shop		75	45	
15. Prestressing Store		85	35	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 3

APRIL, 1974.

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

1. Temporary Works and Construction Facilities (Cont'd)

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>CONSTRUCTION FACILITIES</u>				
20. Sheet Pile Sea Wall	100	100	-	
21. Basin Excavation	100	100	26	
22. Basin Well pointing	100	100	-	
23. Tower Crane Erection	40	-	-	
24. Slipform Shutters to Caisson Walls	1	-	-	
25. Concrete Placing Booms	-	-	-	
26. Prepare Floating Jetty	85	-	-	latest start is 29/6/74
27. Prepare Offshore Moorings	100	-	-	latest start is 13/6/74
28. Sea Wall Removal and dredging	-	-	-	
29. Tow out and Moor	-	-	-	
30. Connect Services after Tow out	-	-	-	
31. Slipform Shutters to Columns	-	-	-	
32. Construction Hoists to Columns	-	-	-	
33. Dismantle Tower Cranes	-	-	-	
34. Clear Platform for Tow	-	-	-	
35. Connect Tugs & Slip Moorings	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

APRIL, 1974

II SITE PROGRESS REPORT (Cont'd)

B. PROGRESS SCHEDULE

2. Permanent Structure

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
1. Precast Skirt Sections				
(a) Make	100	93	46	
(b) Place	42	41	41	
2. Caisson Base Slab 0.50m	45	1	1	Work at stand-still due to withdrawal of Joiners.
3. Prestress Base Slab	-	-	-	
4. Vent Pipework	-	-	-	
5. Grouting Pipework	-	-	-	9 No. Grouting Boxes (out of 25 No.) placed in 0.5m Base Slab.
6. Piezometer Pipework	-	-	-	
7. J-Tubes	-	-	-	
8. Sea Bed Risers	-	-	-	
9. Immersion Pipework	-	-	-	
10. Caisson Dwarf Walls	22	-	-	
11. Caisson Walls in Basin	-	-	-	
12. Caisson Walls at Moorings	-	-	-	
13. Complete Base Slab & Fillet	-	-	-	
14. Caisson Ballast Concrete	-	-	-	
15. Construct Columns (2 No.)	-	-	-	
16. Prestress and Grout Columns	-	-	-	
17. Caisson Roofs	-	-	-	
18. Immersion Module & Cabling	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

CONTRACTOR'S MONTHLY REPORT NO. 3APRIL, 1974II SITE PROGRESS REPORT(C) LABOUR REPORT

The effective Labour strength at the Month Ending is as follows:-

McAlpine Labour	Joiners	See note below
	Bricklayers	1 No
	Scaffolders	4 No
	Steel Fixers	13 No
	Painter	1 No
	Labourers	114 No
	Plant Drivers & Black Gang	96 No
	Chainmen, Hut Attendants, etc.	17 No
		<hr/> 246 No <hr/>

The effective Joiners' strength on the books is 44 No, but the Joiners are not working owing to a Labour Dispute.

Subcontractors Labour	Millars Wellpoint	1 No
	Humphreys & Glasgow	6 No
	Appollo Construction	2 No
	Graydon Construction	4 No
	Terrapin Limited	8 No
	Balfour Kilpatrick	5 No
	Tyers Welding	1 No
	Sterling Construction	2 No
		<hr/> 29 No <hr/>
	<u>TOTAL</u>	<u>275</u> No

TOTAL EFFECTIVE STRENGTH 275 NO (DOES NOT  
INCLUDE 44 NO JOINERS)

APRIL, 1974

II SITE PROGRESS REPORT

(D) PLANT REPORT

Plant Return for major items of equipment in effective use.

<u>Crawler Cranes/Excavators</u>	2 No NCK 1405
	4 No NCK 605
	1 No NCK Andes C41B
<u>Back Actor Excavators</u>	1 No 1½ cy. Hydraulic Excavators
	1 No 1 cy. Hydraulic Excavators
<u>Crawler Tractor/Dozers</u>	3 No
<u>Tracked Shovel Loaders</u>	5 No
<u>Wheeled Tractors</u>	3 No
<u>Wheeled Shovel/Excavators</u>	4 No
<u>Dumptrucks</u>	12 No
<u>Scrapers</u>	1 No
<u>Truckoretes</u>	8 No
<u>Dumpers</u>	5 No
<u>Concrete Batcher</u>	1 No Bentford PB34 $\frac{3}{4}$ cy. (Auxiliary Batcher)
<u>Tower Cranes</u>	1 No Record 646E (reinf. yard)

Also, Generators, Welding Sets, Lighting Sets, Concrete Vibrators, Mobile Concrete Mixers, Pumps, Transport Vehicles, Air Compressors, Piling Hammers, and Extractor, Fuel and Water Bowers, Chainsaws, Saw Benches, Boilers, Transformers, Battery Charger, Grabs, Rollers, Reinforcement Cutting and Bending Machines, Storage Tanks, Aggregate Screening Plant, Mobile Toilets.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 3

APRIL, 1974.

III PROCUREMENT PROGRESS REPORT

(A) BULK ITEMS

MATERIAL	ORDER PLACED	TOTAL QUANTITIES DELIVERED		QUANTITY DELIVERED FOR MONTH	COMMENTS
		SCHEDULED	ACTUAL		
Concrete Aggregates	15/1/74	14490 tonnes	4565 tonnes	3415 tonnes	See Note 1
Concrete Sand	15/1/74	9660 tonnes	2262 tonnes	1557 tonnes	See Note 1
Cement	7/1/74	350 tonnes	350 tonnes	100 tonnes	See Note 2
Reinforcement		1500 tonnes	1489 tonnes	40 tonnes	

NOTES :

1. Aggregate and Sand deliveries to be rescheduled to suit revised programme after settlement of Industrial Dispute.
2. Cement called forward to suit consumption and storage space.

APRIL 1974

III PROCUREMENT PROGRESS REPORT (Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
1. <u>Precast Skirts</u>					
(a) Lifting Anchorages	7/3/74 (3016/ M/A)		13/3/74	Yes	
2. <u>Caisson Base Slab</u> <u>0.50m</u>					
(a) Grout Directional Steelwork	5/3/74 (3016/B/ 303)		Collect 16/3/74	11/3/74 3/4/74	Cut to length & tangs fixed on Site 50m outstanding
(b) Seabed Grout Pipe-work	4/3/74 (3016/B/ 302)	B.S.C.	21/4/74	8/5/74	350 L.M.
Diffusors for ditto	-	-	4/3/74	Yes	Soletanche Supply
(c) Seabed Vent Pipes 3"	4/3/74 (3016/B/ 302)	B.S.C.	1/4/74	3/5/74	1200/2000m
5"	"	B.S.C.	1/4/74	11/4/74	126m i.e. 50%
10"	12/3/74 (3016/B/ 304)	B.S.C.	1/4/74		Despatched for flanging 25/3/74
Plugs for ditto	-	-	4/3/74	Yes	Soletanche Supply
(d) Piezometer Pipe-work	4/3/74 (3016/B/ 302)	B.S.C.	21/4/74	3/5/74	700m
Plugs for ditto	-	-	4/3/74	Yes	Soletanche Supply
(e) Tower Crane Fixings			12/4/74	3/4/74	



III PROCUREMENT PROGRESS REPORT (Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
2. Cont'd					
(f) Prestressing Equipment Strand	21/2/74 (3016/B/300)	Bridon Wire	25% by 1/5/74		Delivery awaiting stressing shed completion
Sheathing	27/2/74	C.C.L.	1/4/74	8/4/74	Complete
Grout Exit Couplers	27/2/74 (3016/B/301)	C.C.L.	1/4/74	8/4/74	Complete
Plain Couplers	27/2/74 (3016/B/301)	C.C.L.	1/4/74	8/4/74	Complete
Tube Units	"	C.C.L.	1/4/74	29/4/74	Complete
Bearing Plates and Grips	"	C.C.L.	1/5/74	-	Despatch mid May
Dummy Barrels	"	C.C.L.	1/5/74	-	Despatch mid May
(g) 3" Instrumentation Pipe	C37/27	B.S.C./Inshaw	9/4/74- 18/4/74	24/4/74	
(h) Echo Sounding Reservations					U.I.E.
3. <u>Caisson Base Dwarf Walls</u>					
(a) Ground Bottom Switch Plates	C37/26	-	12/4/74	Yes	McA. Supply
(b) Sleeves for Cables to Echo Sounders & Contacts	-	-		2/5/74	U.I.E. Supply 5 No. Total
(c) Immersion Pipe-work Outlets	-	-		2/5/74	U.I.E. Supply 4 No.
(d) Risers Anchors	-	Brown & Roote		Yes	10/14
(e) Risers Tubes 24" 26" 32"					
(f) Risers Supports					

III PROCUREMENT PROGRESS REPORT (Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
3. Cont'd					
(g) J-Tubes 10 $\frac{3}{4}$ " & 18"	9/4/74 (3016/B /305)	A. Findlays			5 No. pieces for stage 1 'B' Elements
(h) Tunnels 38" 44"		A. Findlays			6m length through 'B' Elements
(l) Mooring Points		A.K.D.			Item 2 Drg. 192
(m) Towing Points					
4. <u>Caisson Walls in the Basin</u>					
Details of this Section and other Sections to follow					

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 3

APRIL, 1974

IV CRITICAL PATH ANALYSIS

A more comprehensive Analysis is being prepared including fuller details of the mechanical and electrical work.

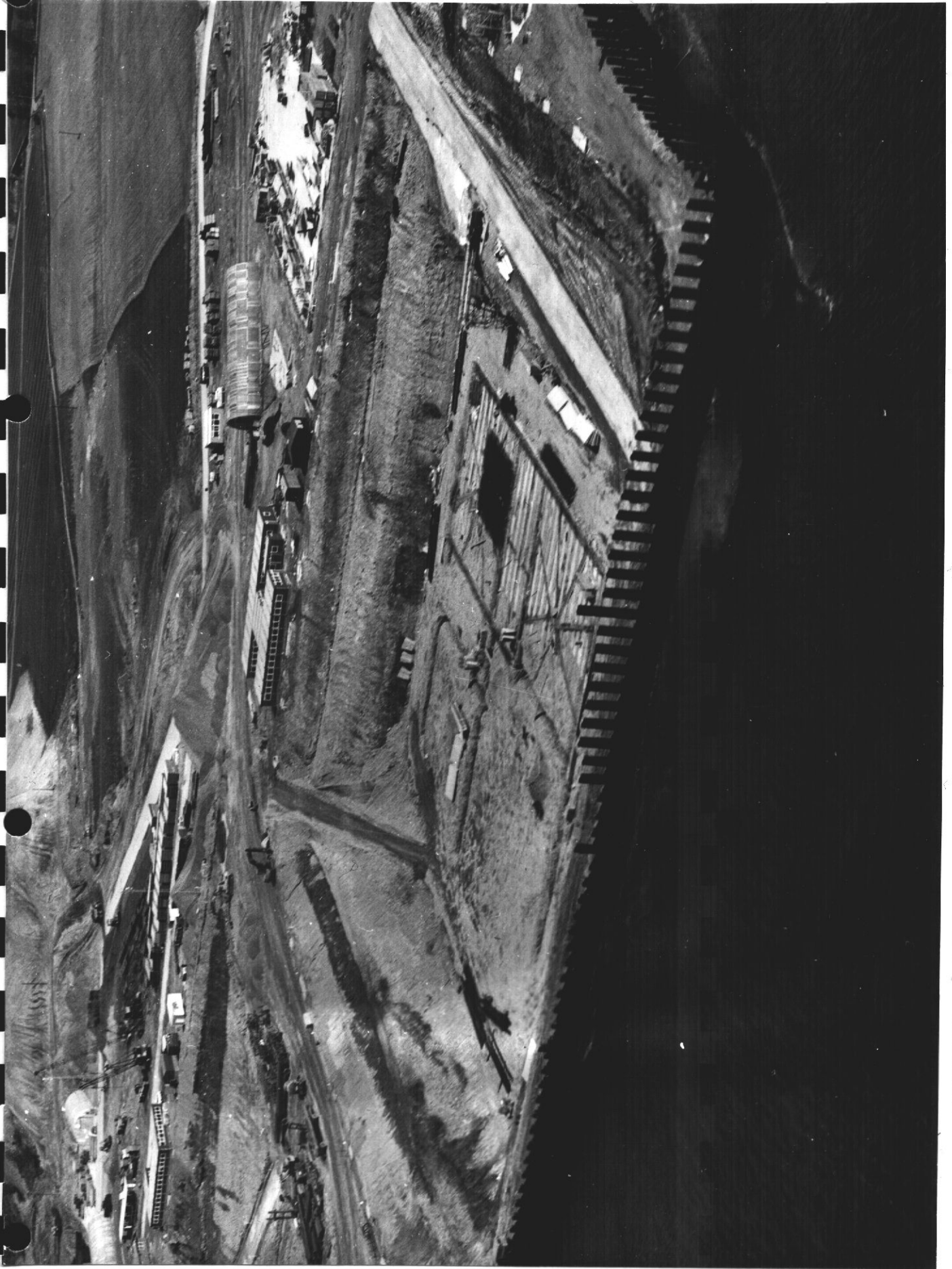
Following a resumption of work by the Joiners, an update will be prepared to include the effect of the time lost.



7405/29/28

MAIN BATCHING PLANT IN CENTRE. WHARF UNDER CONSTRUCTION.  
PRECASTING SKIRT UNITS, CENTRE RIGHT. FITTING SHOP IN  
FOREGROUND.

DATE 4/5/74



7405/29/30

ELF BASIN LOOKING NORTH.

DATE 4/5/74

CONTRACTOR ' S MONTHLY REPORT N° 4

MAY 1974

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

LIST OF CONTENTS

SECTION I DESIGN PROGRESS REPORT

- A. General Report ) Not
- B. Structure Drawings ) Prepared
- C. Equipment Drawings and Notes )
- D. Temporary Works and Construction Facilities

SECTION II SITE PROGRESS REPORT

- A. General Report
- B. Progress Schedule
- C. Labour Report
- D. Plant Report

SECTION III PROCUREMENT PROGRESS REPORT

- A. Bulk Items
- B. Prefabricated and Brought-In Items

SECTION IV CRITICAL PATH ANALYSIS

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

I DESIGN PROGRESS REPORT (Cont'd)

(D) Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Comments
	Engineering	Drafting	
<u>TEMPORARY WORKS</u>			
1. Office Accommodation (combined)	100	100	Camp now sited in original location north of construction Site. Erection details being finalised
2. Camp Accommodation	100	95	
3. Canteen	100	100	
4. Site Water Supply	100	100	
5. Electricity Supply to Site	100	100	
6. Telephones	100	100	
7. Site Foul Drainage	100	100	
8. Wharf	100	100	
9. Auxiliary Concrete Batchers	100	100	
10. Main Concrete Batchers	100	100	
11. Concrete Mix Approval	100	100	
12. Reinforcement Yard	100	100	
13. Joiners Shop	100	100	
14. Fitters Shop	100	100	
15. Prestressing Store	100	100	
<u>CONSTRUCTION FACILITIES</u>			
20. Sheet Pile Sea Wall	100	100	
21. Basin Excavation	100	100	
22. Basin Well Pointing	100	100	
23. Tower Crane Erection	100	100	
24. Slipform Shutters to Caisson Walls	100	100	

Cont'd/....



I DESIGN PROGRESS REPORT (Cont'd)

D Temporary Works & Construction Facilities

Section of Work	<u>Percentage Complete</u>		Comments
	Engineering	Drafting	
<u>CONSTRUCTION FACILITIES</u> (Cont'd)			
25. Concrete Placing Booms	100	100	
26. Causeway to Floating Jetty	75	0	
27. Floating Jetty	100	100	
28. Offshore Moorings	80	60	
29. Sea Wall Removal & Dredging	90	30	
30. Tow Out and Moor	70	30	Remainder of Engineering by United Towing
31. Connect Services after Tow Out	85	60	
32. Slipform Shutters to Columns	40	10	
33. Construction Hoists to Columns	40	10	
34. Dismantle Tower Cranes	10	0	
35. Clear Platform for Tow	0	0	
36. Connect Tugs and Slip Moorings	0	0	

MAY, 1974

II SITE PROGRESS REPORT.

(A) GENERAL REPORT

1. General Comment

The unofficial strike by the Joiners was still continuing at the end of the month, although they had returned to work for part of Monday 20th May. Very little progress was achieved on the permanent structure, but temporary works continued satisfactorily, except for places where Joiners were required to fix shutters for plant and machine bases.

2. Photographs

1 No. aerial photograph taken on 6th June 1974, is enclosed at the back of this Report. It shows the construction basin looking North towards the Labour Camp.

3. Weather

Conditions were variable, but with a good amount of dry weather. Rain fell on quite a few days, but in general was limited to heavy showers of short duration, which dried up quickly due to a fairly strong wind. There was no prolonged interruption to work because of the weather.

4. Labour

Due to the Joiners' strike, the Labour force has been reduced. As shown in the breakdown of effective labour in Part (C) of this Section, the total effective strength is 231 men. This does not include 41 No. Labourers and 31 No. Steelfixers who have been temporarily laid off, and the 47 Joiners on strike.

5. Plant & Equipment

Details of the principle items of plant on Site are included in Part (D) of this Section.

Two aggregate hoppers have been installed on the Wharf, thereby facilitating the unloading of aggregates.

The Prestressing Store is effectively complete, and the Joiners Shop and Fitters Shop are nearing completion. The installation of heaters and lights is underway.

6. Temporary Works

(a) Access Roads

The road round the Fitters Shop has been completed up to formation level. Preparatory work to the road to the camp has progressed very well, and is almost complete to formation level, and the area in front of the Elf Offices has been tidied up.

Cont'd/....

6. Temporary Works (Cont'd)

(b) Services

The Site Water Supply installation is complete, except for the supply to the camp. All other parts of the Site have pure water.

The North of Scotland Hydro Electricity Board have obtained confirmation of wayleave for the augmented 11 KV supply to the Site, and are proceeding with the work.

The G.P.O. have increased the number of lines to the Site to 16, but only 15 of these are operational at the moment. It is hoped that a total of 50 lines will be installed in due course.

The remaining work to be done on the soil drainage and sewage system is the connecting up of the camp. Work to all other parts of the Site has been completed.

(c) Offices

Office accommodation for McAlpine, Elf and Sea Tank is complete and occupied.

(d) Camp Accommodation

The majority of the Site levelling has been completed and the construction of foundations and erection of Terrapin buildings has progressed steadily.

(e) Wharf

The main fill to the sheet piling has been completed, and work has started on the erection of the derrick. Two aggregate hoppers have been installed on the Wharf, and all the pipe bollards are in place. Aggregates have continued to be unloaded during the month.

Dredging in front of the Wharf is effectively complete. The outstanding items of work are the slab, and some plant bases, which, it is hoped, will be completed quickly as soon as the Joiners resume work.

7. Concrete Mixes

The erection of the Elf main batcher has been held up by the Joiners' strike, although the Fitters have been fabricating as much as possible. Tests are underway for examining the strength/age relationship of retarded concrete.

8. Construction Basin & Permanent Structure

Due to the Joiners' strike, the precasting of skirt units could not be completed, and the majority of the Steelfixers have now been suspended temporarily, pending a settlement of the dispute.

The Joiners did return temporarily on 20th May, and some stressing ducts were fixed, but apart from that, nothing was achieved during the month.

9.

Materials

Reinforcement deliveries to Site have continued through the month, and adequate supplies have been built up.

Aggregates have been offloaded at the Wharf, and stockpiles are increasing steadily.

Bulk cement is being delivered as required.

Built-in items continue to be delivered to Site. Overdue deliveries are being chased, but are not causing concern at the present time.

10.

Programmes

Once the present Industrial Action has been resolved, it will be necessary to update the current C.P.M. Programme.

MAY, 1974

II SITE PROGRESS REPORT

(B) PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>TEMPORARY WORKS</u>				
1. Office Accommodation (combined)		100	5	Erection in original location
2. Camp Accommodation		15	10	
3. Canteen		100	-	
4. Site Water Supply		95	-	Refers to telephone lines to Site
5. Electricity Supply to Site		17	2	
6. Telephones		64	4	
7. Site Foul Drainage		85	-	Report relates to Auxiliary Batcher
8. Wharf		90	15	
9. Auxiliary Concrete Batcher		100	-	
10. Main Concrete Batcher		5	-	
11. Concrete, Mix Approval		100	-	
12. Reinforcement Yard		95	20	
13. Joiners Shop		98	3	
14. Fitters Shop		80	5	
15. Prestressing Store		95	10	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1CONTRACTOR'S MONTHLY REPORT NO. 4MAY, 1974II SITE PROGRESS REPORT (Cont'd)(B) PROGRESS SCHEDULE1. Temporary Works & Construction Facilities (Cont'd)

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>CONSTRUCTION FACILITIES</u>				
20. Sheet Pile Sea Wall	100	100	-	Latest start is 29/6/74  Latest start is 13/6/74
21. Basin Excavation	100	100	-	
22. Basin Well Pointing	100	100	-	
23. Tower Crane Erection	94	-	-	
24. Slipform Shutters to Caisson Walls	45	-	-	
25. Concrete Placing Booms	-	-	-	
26. Prepare Floating Jetty	85	-	-	
27. Prepare Offshore Moorings	100	-	-	
28. Sea Wall Removal and Dredging	-	-	-	
29. Tow Out and Moor	-	-	-	
30. Connect Services after Tow Out	-	-	-	
31. Slipform Shutters to Columns	-	-	-	
32. Construction Hoists to Columns	-	-	-	
33. Dismantle Tower Cranes	-	-	-	
34. Clear Platform for Tow	-	-	-	
35. Connect Tugs & Slip Moor- ings	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

2. Permanent Structure

Section of Work	Percentage Complete		Progress for Month (Percentage)	Comments
	Programmed	Actual		
1. Precast Skirt Sections				
(a) Make	100	93	-	
(b) Place	85	41	-	
2. Caisson Base Slab 0.50m	75	1	-	Work at stand-still, due to withdrawal of Joiners
3. Prestress Base Slab	-	-	-	
4. Vent Pipework	-	-	-	
5. Grouting Pipework	-	-	-	9 No. Grouting Boxes (out of 25 No.) placed in 0.5m Base Slab
6. Piezometer Pipework	-	-	-	
7. J-Tubes	-	-	-	
8. Sea Bed Risers	-	-	-	
9. Immersion Pipework	-	-	-	
10. Caisson Dwarf Walls	67	-	-	
11. Caisson Walls in Basin	-	-	-	
12. Caisson Walls at Moorings	-	-	-	
13. Complete Base Slab & Fillet	-	-	-	
14. Caisson Ballast Concrete	-	-	-	
15. Construct Columns (2 No.)	-	-	-	
16. Prestress & Grout Columns	-	-	-	
17. Caisson Roofs	-	-	-	
18. Immersion Module & Cabling	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes



ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

II SITE PROGRESS REPORT

(C) LABOUR REPORT

The effective Labour strength at the Month Ending is as follows.

<u>McALPINE LABOUR</u>	Scaffolders	4	No
	Bricklayers	2	No
	Steelfixers	5	No
	Labourers	80	No
	Plant Drivers & Black Gang	90	No
	Chainmen, Hut Attendants etc.	20	No
	Painters	1	No
		<u>202</u>	No
 <u>SUBCONTRACTORS LABOUR</u>	Humphreys of Glasgow	8	No
	Terrapin	8	No
	Tyers Welding	1	No
	Balfour Kilpatrick	5	No
	Inter Consult	4	No
	Pedding	3	No
		<u>29</u>	No
	 TOTAL	 <u>231</u>	 No

This Total does not include the number of Joiners on strike, but still on our books, namely 47 No. total.

It also does not include the number of other operatives who have been temporarily laid off because of the strike.

These are : Steelfixers 31 No.  
Labourers 41 No.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

II SITE PROGRESS REPORT

(D) PLANT REPORT

Plant Return for major items of equipment in effective use.

Crawler Cranes/Excavators

2 No NCK 1405  
4 No NCK 605  
1 No NCK Pennine C34B  
1 No NCK Andes C41B  
1 No Priestman Lion

Back Actor Excavators

2 No 1½ cy Hydraulic Excavators  
1 No 1 cy Hydraulic Excavators  
1 No 5/8 cy Hydraulic Excavators

Crawler Tractor/Dozers

4 No

Tracked Shovel Loaders

7 No

Wheeled Tractors

1 No

Wheeled Shovel/Excavators

3 No

Dumptrucks

9 No

Scrapers

1 No

Mobile Cranes

1 No

Truckcretes

8 No

Dumpers

5 No

Concrete Batcher

1 No Bentford PB34 3/4 cy  
(Auxiliary Batcher)

Tower Cranes

1 No Record 646E (Reinf. Yard)

Also, Generators, Welding Sets, Lighting Sets, Concrete Vibrators, Mobile Concrete Mixers, Pumps, Transport Vehicles, Air Compressors, Piling Hammers, and Extractor, Fuel and Water Bowsers, Chainsaws, Saw Benches, Boilers, Transformers, Battery Charger, Grabs, Rollers, Reinforcement Cutting and Bending Machines, Storage Tanks, Aggregate Screening Plant, Mobile Toilets, Boats, Aggregate Hoppers.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

III PROCUREMENT PROGRESS REPORT

(A) BULK ITEMS

MATERIAL	ORDER PLACED	TOTAL QUANTITIES DELIVERED		QUANTITY DELIVERED FOR MONTH	COMMENTS
		SCHEDULED	ACTUAL		
Concrete Aggregates	15/1/74	22770 tonnes	12020 tonnes	7455 tonnes	See Note 1
Concrete Sand	15/1/74	15180 tonnes	4191 tonnes	1929 tonnes	See Note 1
Cement	7/1/74	395 tonnes	395 tonnes	45 tonnes	See Note 2
Reinforcement		1875 tonnes	1922 tonnes	433 tonnes	

NOTES

1. Aggregate and Sand deliveries to be rescheduled to suit revised programme after settlement of Industrial Dispute
2. Cement called forward to suit consumption and storage space

ELF-NORGE FRIGG T.P.1.

CONTRACTOR'S MONTHLY REPORT NO. 1

MAY, 1974.

III PROCUREMENT PROGRESS REPORT (Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
1. <u>Precast Skirts</u>					
(a) Lifting Anchorages	7/3/74 (3016/ H/A)		13/3/74	Yes	Complete
2. <u>Caisson Base Slab 0.50m</u>					
(a) Grout Directional Steelwork	5/3/74 (3016/ B/303)				Complete
(b) Seabed Grout Pipe - work	4/3/73 (3016/ B/302)	B.S.C.	22/7/74	8/5/74	700/3800
Diffusors for Ditto	-	-	4/3/74	Yes	Complete
(c) Seabed Vent Pipes 3"	4/3/74 (3016/ B/302)	B.S.C.	22/7/74	3/5/74	1200/2000
5"	"	B.S.C.	22/7/74	11/4/74	126/200
10"	12/3/74 (3016/ B/304)	B.S.C.	August		400/1000
Plugs for Ditto	-	-	4/3/74	Yes	Complete
(d) Piezometer Pipe - work	4/3/74 (3016/ B/302)	B.S.C.	22/7/74	3/5/74	700/3800
Plugs for Ditto	-	-	4/3/74	Yes	Complete
(e) Tower Crane Fix- ings	.		12/4/74	3/4/74	Complete

Cont'd/....

III PROCUREMENT PROGRESS REPORT

(Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
2. (Cont'd)					
(f) Prestressing Equipment Strand	21/2/74 (3016/ B/300)	Bridon Wire	25% by 1/5/74		Delivery Commence
Sheathing	27/2/74	C.C.L.	1/4/74	8/4/74	Complete
Grout Exit Couplers	27/2/74 (3016/ B/301)	C.C.L.	1/4/74	8/4/74	Complete
Plain Couplers	27/2/74 (3016/ B/301)	C.C.L.	1/4/74	8/4/74	Complete
Tube Units	"	C.C.L.	1/4/74	29/4/74	Complete
Bearing Plates and Grips	"	C.C.L.	1/5/74	-	Complete
Dummy Barrels	"	C.C.L.	1/5/74	-	Not yet Delivered
(g) 3" Instrumentation Pipe	C37/27	B.S.C./ Inshaw	9/4/74- 18/4/74	24/4/74	Complete
(h) Echo Sounding Reservations					U.I.E. Complete
3. <u>Caisson Base Dwarf Walls</u>					
(a) Ground Bottom Switch Plates	C37/26	-	12/4/74	Yes	McA. Supply Complete
(b) Sleeves for Cables Sounders & Contacts	-	-		2/5/74	U.I.E. Complete
(c) Immersion Pipe-work Outlets	-	-		2/5/74	U.I.E. Complete
(d) Risers Anchors	-	Brown & Root		Yes	10/14
(e) Risers Tubes 24" 26" 32"	-				Brown & Root
(f) Risers Supports					Brown & Root

III PROCUREMENT PROGRESS REPORT

(Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
3. (Cont'd)					
(g) J-Tubes 10 $\frac{1}{2}$ " & 18"	9/4/74 (3016/ B/305)	A. Findlay			5 No. Pieces for stage 1 'B' Elements
(h) Tunnels 38" 44"		A. Findlay			6m length through 'B' Element
(i) Mooring Points		A.K.D.			Item 2 Drg. 192
(m) Towing Points					
4. <u>Caisson Walls in the Basin</u>					
(a) Fixing Bolts for temporary Concreting Boom					Complete
(b) 7 No. Steel- plates, reference electrodes	26/6/74	A. Findlay	End July		

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 4

MAY, 1974

IV CRITICAL PATH ANALYSIS

A more comprehensive Analysis is being prepared including fuller details of the mechanical and electrical work.

Following a resumption of work by the Joiners, an update will be prepared to include the effect of the time lost.



7406/33/20

ELF BASIN LOOKING NORTH

DATE 6/6/74



CONTRACTOR ' S MONTHLY REPORT N° 5

JUNE 1974

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974

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LIST OF CONTENTS

-----

SECTION I	DESIGN PROGRESS REPORT
	A GENERAL REPORT
	B STRUCTURE DRAWINGS
	C MODEL TESTS
	D TEMPORARY WORKS AND CONSTRUCTION FACILITIES
SECTION II	SITF PROGRESS REPORT
	A GENERAL REPORT
	B PROGRESS SCHEDULE
	C LABOUR REPORT
	D PLANT REPORT
SECTION III	PROCUREMENT PROGRESS REPORT
	A BULK ITEMS
	B PREFABRICATED AND BROUGHT-IN-ITEMS
SECTION IV	SUPPORT FRAME
	A DESIGN
	B PROCUREMENT
	C FABRICATION
SECTION V	IMMERSION EQUIPMENT
SECTION VI	RISERS AND "J" TUBES
SECTION VII	GROUTING
SECTION VIII	MARINE OPERATIONS
SECTION IX	CRITICAL PATH ANALYSIS
SECTION X	PHOTOGRAPHS

SECTION I

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DESIGN PROGRESS REPORT

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974  
-----

I - DESIGN PROGRESS REPORT

A GENERAL REPORT

The general layout of equipment : grouting, risers, tunnels, "J" tubes, instrumentation seemsto be fixed for the as launching tray and it is now possible to finilize the structural drawings.

Are still to be determine equipments on the roof of the caisson, inside the columns and at the top of the columns.

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20TH JUNE, 1974

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I - DESIGN PROGRESS REPORT

B STRUCTURE DRAWINGS

All drawings concerning 500 mm thick base slab are already issued and most of them approved by DNV.

A part elements where tunnels and "J" tubes are included all drawings concerning first 2.5 m height of walls are issued and most of them approved by DNV.

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR'S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974

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I - DESIGN PROGRESS REPORT

C MODEL TESTS

Model tests are carried out at WAGENINGEN by N.S.M.B.

Tests for incomplete structure (towing out from the dry dock) are done.

Tests for light structure towing (towing in the North Channel) are done.

Tests for deep draft towing (towing in the North Sea) are done.

Tests concerning action of waves on columns are done.

Complete results of these tests are still not available.

The only tests still to be carried out beginning of July are the positionong tests.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE. 1974

I DESIGN PROGRESS REPORT (Cont'd)

(D) Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Comments
	Engineering	Drafting	
<u>TEMPORARY WORKS</u>			
1. Office Accommodation (combined)	100	100	Camp now sited in original location north of construction Site. Erection details being finalised
2. Camp Accommodation	100	100	
3. Canteen	100	100	
4. Site Water Supply	100	100	
5. Electricity Supply to Site	100	100	
6. Telephones	100	100	
7. Site Foul Drainage	100	100	
8. Wharf	100	100	
9. Auxiliary Concrete Batchers	100	100	
10. Main Concrete Batchers	100	100	
11. Concrete Mix Approval	100	100	
12. Reinforcement Yard	100	100	
13. Joiners Shop	100	100	
14. Fitters Shop	100	100	
15. Prestressing Store	100	100	
<u>CONSTRUCTION FACILITIES</u>			
20. Sheet Pile Sea Wall	100	100	
21. Basin Excavation	100	100	
22. Basin Well Pointing	100	100	
23. Tower Crane Erection	100	100	
24. Slipform Shutters to Caisson Walls	100	100	

Cont'd/....

I DESIGN PROGRESS REPORT (Cont'd)

(D) Temporary Works & Construction Facilities

Section of Work	<u>Percentage Complete</u>		Comments
	<u>Engineering</u>	<u>Drafting</u>	
<u>CONSTRUCTION FACILITIES</u> (Cont'd)			
25. Concrete Placing Booms	100	100	Remainder of Work by United Towing
26. Causeway to Floating Jetty	100	50	
27. Floating Jetty	100	100	
28. Offshore Moorings	90	75	
29. Sea Wall Removal & Dredging	90	30	
30. Tow Out and Moor	90	30	
31. Connect Services after Tow Out	95	80	
32. Slipform Shutters to Columns	40	30	
33. Construction Hoists to Columns	50	15	
34. Dismantle Tower Cranes	10	0	
35. Clear Platform for Tow	0	0	
36. Connect Tugs and Slip Moorings	0	0	



SECTION II

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SITE. PROGRESS REPORT

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE, 1974.

II SITE PROGRESS REPORT

(A) GENERAL REPORT

1. General Comment

The unofficial strike by the Joiners ended on 11th June 1974, when they returned to work. Construction got underway quickly, and has progressed well. The precasting of the skirts has been completed, and the placing of them has progressed satisfactorily. The first two base slab pours and the first dwarf wall pour have been completed. Temporary Works and Camp Accommodation also progressed satisfactorily.

2. Photographs

1 No. Aerial Photograph taken on 23rd June 1974, enclosed at the back of this Report.

3. Weather

Conditions were reasonably good, with rain falling on only seven days, and then only in the form of showers except for one day of continuous heavy rain. There was no prolonged interruption to work because of the weather.

4. Labour

Now that the Joiners have returned to work, the Labour Force has been increased to an effective strength of 386 men. A detailed breakdown of this Labour is included in Part C of this Section.

5. Plant & Equipment

Details of the principle items of plant on Site are included in Part D of this Section.

In addition to the two aggregate hoppers already in operation, a 15 Ton Derrick is being erected on the Wharf.

The Tower Cranes for the caisson are on Site, and erection of the first one on the completed base slab should start in the near future.

The Joiners' Shop and Prestressing Store are now complete, and the Fitters' Shop requires only brick partitions and the installation of heaters and lights.

## II

### SITE PROGRESS REPORT

#### (A)

#### GENERAL REPORT

#### 6.

##### Temporary Works

##### (a)

##### Access Roads

The Site roads not yet completed, namely; the roads to the Fitters' Shop, Camp, Wharf and the Elf Offices are largely ready to receive the Blacktop which should be laid in the near future.

##### (b)

##### Services

Work has started on the connecting up of the Site Water Supply to the Camp. All other parts of the Site have pure water.

Installation of electricity distribution cables round the Site is well advanced.

The North of Scotland Hydro Electricity Board are proceeding with the augmented supply to the Site, and the substation for this is under construction.

The number of telephone lines to Site is 16, and it is hoped that this will be increased to 50 in due course.

Work has started on the Soil Drainage and Sewage System to the Camp, this being the only part of the Site not completed.

##### (c)

##### Camp Accommodation

All Site levelling is completed and the foundations for the Terrapin Buildings are well advanced. The buildings themselves are being erected steadily.

##### (d)

##### Wharf

Dredging at the side of the Wharf for the permanent landing ramp was done, and sheet piling has started.

The erection of the unloading Derrick has progressed well, and the aggregate hoppers are facilitating the unloading of sand and aggregates.

The main outstanding items of work are the slab and some plant bases.

#### 7.

##### Concrete Mixes

Concrete for the Permanent Structure has been provided by the main Batcher, and by the Auxiliary Batcher for Temporary Works. The Batcher adjacent to the Elf Basin has not been erected yet, although reinforcement has been fixed for some foundations.

II SITE PROGRESS REPORT

(A) GENERAL REPORT

8. Construction Basin & Permanent Structure

Since the return of the Joiners, work on the Permanent Structure has progressed well. The precasting of skirts is effectively finished, and the placing of them is now well advanced. Two raft 'A' elements and one 'B' element have been poured, and three further 'A' elements are being prepared for pouring in the near future.

The progress is shown pictorially in Appendix A following the progress schedule.

Additional piling has been commenced at the South corner of the Basin in preparation for future enlargement of the Basin, and for the establishment of strongpoints in preparation for closure of the sea wall after float out of the caisson.

9. Materials

Reinforcement deliveries to Site have continued through the month.

Aggregates and sand have been offloaded at the Wharf, and stock-piles have increased steadily.

Bulk cement has been delivered as required.

Built-In Items have continued to be delivered to Site, and the situation is satisfactory.

10. Programmes

Revised construction programmes have been issued, and an updated C.P.M. programme is being prepared

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE, 1974

II SITE PROGRESS REPORT

(B) PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>TEMPORARY WORKS</u>				
1. Office Accommodation (combined)		100	-	Erection in original location
2. Camp Accommodation		30	15	
3. Canteen		100	-	
4. Site Water Supply		97	2	
5. Electricity Supply to Site		22	5	Refers to telephone lines to Site
6. Telephones		64	-	
7. Site Foul Drainage		88	3	
8. Wharf		90	-	
9. Auxiliary Concrete Batcher		100	-	
10. Main Concrete Batcher		7	2	
11. Concrete Mix Approval		100	-	
12. Reinforcement Yard		95	-	
13. Joiners Shop		99	1	
14. Fitters Shop		85	5	
15. Prestressing Store		99	4	Report relates to Auxiliary Batcher

BLF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE 1974

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities (Cont'd)

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>CONSTRUCTION FACILITIES</u>				
20. Sheet Pile Sea Wall	100	100	-	
21. Basin Excavation	100	100	-	
22. Basin Well Pointing	100	100	-	
23. Tower Crane Erection	100	-	-	
24. Slipform Shutters to Caisson Walls	75	-	-	
25. Concrete Placing Booms	100	-	-	
26. Prepare Floating Jetty	85	-	-	Latest start is 29/6/74
27. Prepare Offshore Moorings	100	-	-	Latest start is 13/6/74
28. Sea Wall Removal & Dredging	-	-	-	
29. Tow Out and Moor	-	-	-	
30. Connect Services after Tow Out	-	-	-	
31. Slipform Shutters to Columns	-	-	-	
32. Construction Hoists to Columns	-	-	-	
33. Dismantle Tower Cranes	-	-	-	
34. Clear Platform for Tow	-	-	-	
35. Connect Tugs & Slip Moorings	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE, 1974

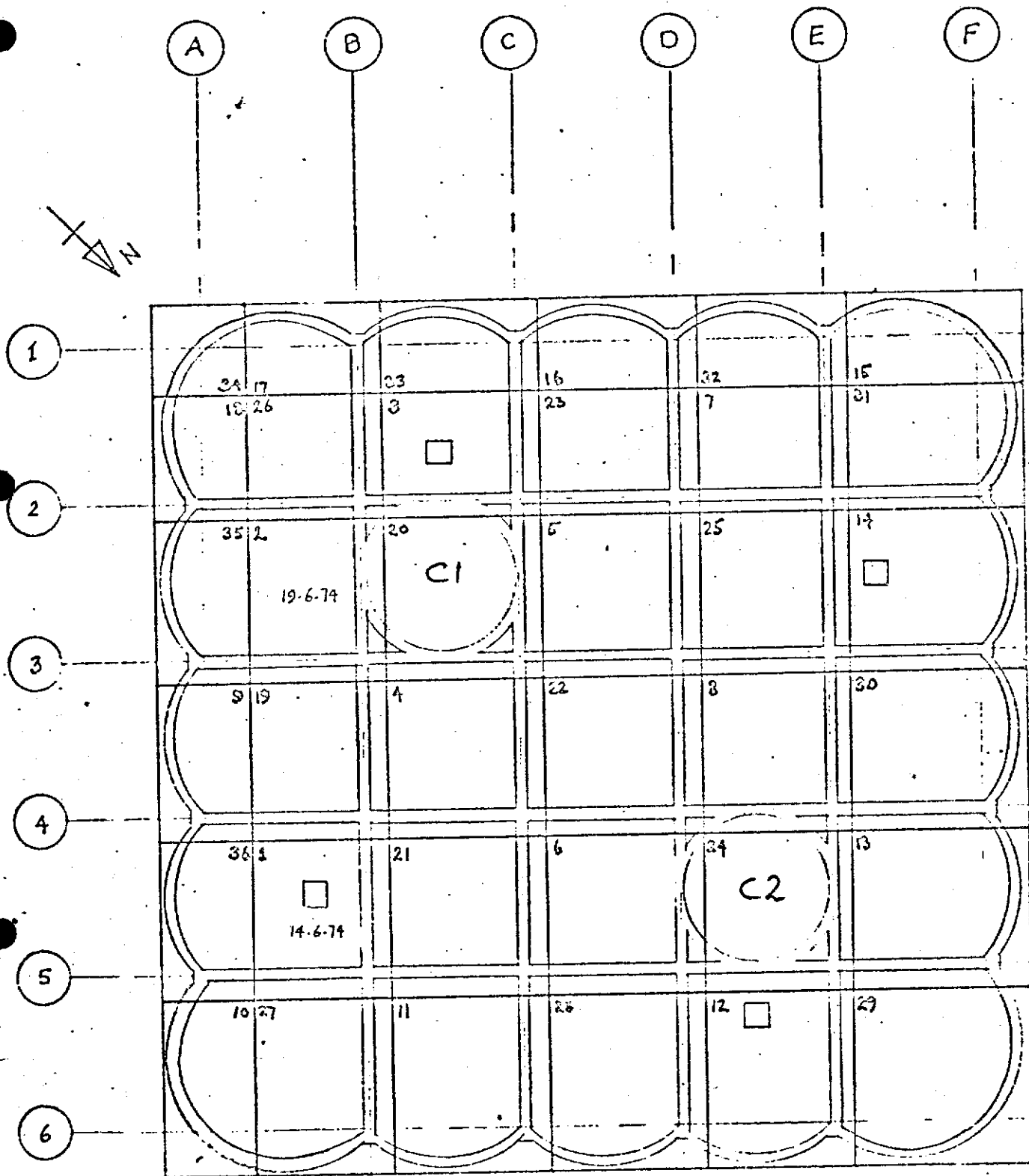
II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

2. Permanent Structure

Section of Work	Percentage Complete		Progress for Month (Percent-age)	Comments
	Programmed	Actual		
1. Precast Skirt Sections				
(a) Make	100	100	7	
(b) Place	100	76	35	
2. Caisson Base Slab 0.50m	100	10	10	
3. Prestress Base Slab	-	-	-	
4. Vent Pipework	-	-	-	
5. Grouting Pipework	-	-	-	12 No. Grout-ing Boxes (out of 25 No.) placed in 0.5m Base Slab
6. Piezometer Pipework	-	-	-	
7. J-Tubes	-	-	-	
8. Sea Bed Risers	-	-	-	
9. Immersion Pipework	-	-	-	
10. Caisson Dwarf Walls	93	3	3	
11. Caisson Walls in Basin	-	-	-	
12. Caisson Walls at Moorings	-	-	-	
13. Complete Base Slab & Fillet	-	-	-	
14. Caisson Ballast Concrete	-	-	-	
15. Construct Columns (2 No.)	-	-	-	
16. Prestress & Grout Columns	-	-	-	
17. Caisson Roofs	-	-	-	
18. Immersion Module & Cabling	-	-	-	

NOTE : Programme Percentages Complete are based on Earliest Finishes

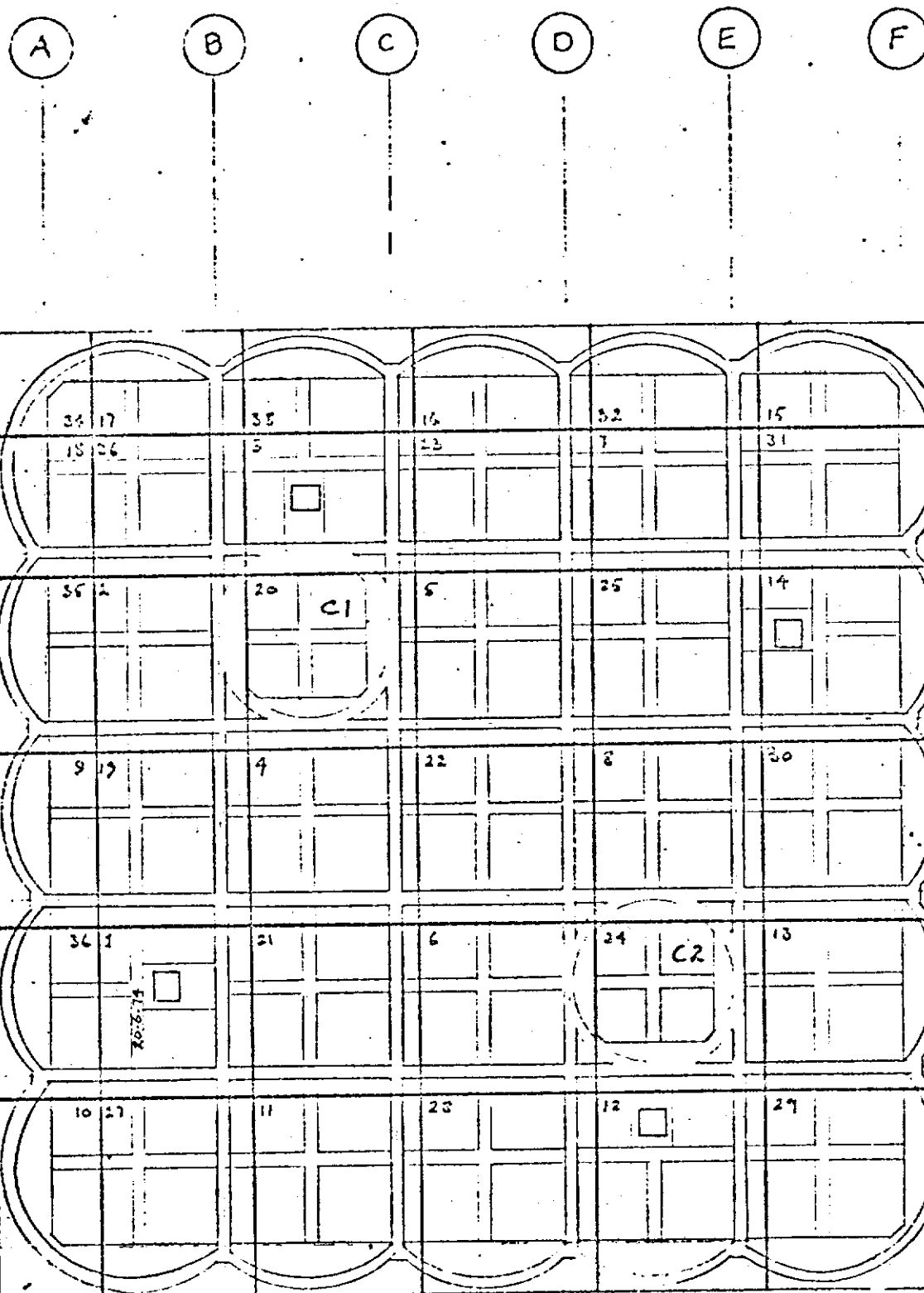


0.5 m. base slab pours.

'A' Elements

ELF - NORGE TP 1





Dwarf Wall Pours.

'B' Elements

ELF-NORGE TP 1

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE, 1974

II SITE PROGRESS REPORT

(C) LABOUR REPORT

The effective Labour strength at 20th June 1974, is as follows.

McALPINE LABOUR	Joiners	45	No.
	Scaffolders	5	No.
	Bricklayers	2	No.
	Steelfixers	35	No.
	Labourers	123	No.
	Plant Drivers & Black Gang	112	No.
	Chainmen, Hut Attendants etc.	30	No.
	Painters	<u>1</u>	No.
		353	No.

<u>SUBCONTRACTORS LABOUR</u>	Humphreys & Glasgow	4	No.
	Terrapin	15	No.
	Tyers Welding	1	No.
	Balfour Kilpatrick	3	No.
	Inter Consult	6	No.
	Sterling Erectors	2	No.
	West Sea	<u>2</u>	No.
	33	No.	

<u>TOTAL</u>	<u>386</u>	No.
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ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE. 1974

II SITE PROGRESS REPORT

(D) PLANT REPORT

Plant Return for major items of equipment in effective use.

Crawler Cranes/Excavators

- 1 No. NCK 1405
- 2 No. NCK 605
- 1 No. NCK Pennine C34B
- 2 No. NCK Andes C41B
- 1 No. Priestman Lion

Back Actor Excavators

- 1 No. 1½ cy. Hydraulic Excavators
- 2 No. 5/8 cy. Hydraulic Excavators

Crawler Tractor/Dozers

1 No.

Tracked Shovel Loaders

5 No.

Wheeled Tractors

3 No.

Wheeled Shovel/Excavators

4 No.

Dumptrucks

7 No.

Mobile Cranes

1 No.

Truckorettes

7 No.

Dumpers

7 No.

Concrete Batchers

- 1 No. Bentford PB34 3/4 cy. (Auxiliary Batchers)
- 1 No. Winget 2 x 2 cy. (Main Shell Batchers)
- 1 No. Record 646E (Reinf. Yard)

Tower Cranes

Also, Generators, Welding Sets, Lighting Sets, Concrete Vibrators, Mobile Concrete Mixers, Pumps, Transport Vehicles, Air Compressors, Piling Hammers, and Extractor, Fuel and Water Bowsers, Chainsaws, Saw Benches, Boilers, Transformers, Battery Charger, Grabs, Rollers, Reinforcement Cutting and Bending Machines, Storage Tanks, Aggregate Screening Plant, Mobile Toilets, Boats, Aggregate Hoppers.

SECTION III

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PROCUREMENT PROGRESS REPORT

ELF-NORGE PRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 5

TO 20TH JUNE, 1974

III PROCUREMENT PROCESS REPORT

(A) BULK ITEMS

MATERIAL	ORDER PLACED	TOTAL QUANTITIES DELIVERED		QUANTITY DELIVERED FOR MONTH	COMMENTS
		SCHEDULED	ACTUAL		
Concrete Aggregates	15/1/74	30,532 tonnes	21,745 tonnes	9,725 tonnes	See Note 1
Concrete Sand	15/1/74	20,355 tonnes	6,714 tonnes	2,523 tonnes	See Note 1
Cement	7/1/74	584 tonnes	584 tonnes	189 tonnes	See Note 2
Reinforcement		2,219 tonnes	2,187 tonnes	265 tonnes	

NOTES

1. Aggregate and Sand deliveries to be rescheduled to suit revised programme.
2. Cement called forward to suit consumption and storage space.

ELF-NORGE FRIGG T.P.1.  
CONTRACTOR'S MONTHLY REPORT NO. 5  
TO 20TH JUNE, 1974

III PROCUREMENT PROGRESS REPORT (Cont'd)  
 (B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
1. <u>Precast Shirts</u>			13/3/74	Yes	Complete
(a) Lifting Anchorages	7/3/74 (3016/ M/A)				
2. <u>Caisson Base Slab</u> <u>0.50m</u>					Complete
(a) Grout Directional Steelwork	5/3/74 (3016/ B/303)	B.S.C.	22/7/74	8/5/74	700/3800
(b) Seabed Grout Pipe - work	4/3/73 (3016/ B/302)				
Diffusors for Ditto	-	-	4/3/74	Yes	Complete
(c) Seabed Vent Pipes 3"	4/3/74 (3016/ B/302)	B.S.C.	22/7/74	3/5/74	1200/2000
5"	"	B.S.C.	22/7/74	11/4/74	126/200
10"	12/3/74 (3016/ B/304)	B.S.C.	August		400/1000
Plugs for Ditto	-	-	4/3/74	Yes	Comple
(d) Piezometer Pipe - work	4/3/74 (3016/ B/302)	B.S.C.	22/7/74	3/5/74	700/380
Plugs for Ditto	-	-	4/3/74	Yes	Comple
(e) Tower Crane Fix- ings			12/4/74	3/4/74	Comple

Cont'd/....

III PROCUREMENT PROCESS REPORT (Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
2. (Cont'd)					
(f) Prestressing Equipment Strand	21/2/74 (3016/ B/300)	Bridon Wire	25% by 1/5/74		Delivery Commenced
Sheathing	27/2/74	C.C.L.	1/4/74	8/4/74	Complete
Grout Exit Couplers	27/2/74 (3016/ B/301)	C.C.L.	1/4/74	8/4/74	Complete
Plain Couplers	27/2/74 (3016/ B/301)	C.C.L.	1/4/74	8/4/74	Complete
Tube Units	"	C.C.L.	1/4/74	29/4/74	Complete
Bearing Plates and Grips	"	C.C.L.	1/5/74	-	Complete
Dummy Barrels	"	C.C.L.	1/5/74	-	Not yet Delivered
(g) 3" Instrumentation Pipe	C37/27	B.S.C./ Inshaw	9/4/74- 18/4/74	24/4/74	Complete
(h) Echo Sounding Reservations					U.I.E. Complete
3. <u>Caisson Base Dwarf Walls</u>					
(a) Ground Bottom Switch Plates	C37/26	-	12/4/74	Yes	McA. Supply Complete
(b) Sleeves for Cables Sounders & Contacts	-	-		2/5/74	U.I.E. Complete
(c) Immersion Pipe-work Outlets	-	-		2/5/74	U.I.E. Complete
(d) Risers Anchors	-	Brown & Root		Yes	10/14
(e) Risers Tubes 24" 26" 32"	-				Brown & Root
(f) Risers Supports					Brown & Root

III PROCUREMENT PROCESS REPORT

(Cont'd)

(B) FABRICATED AND BROUGHT-IN ITEMS

Item	Order Placed	Fabrication	Delivery Due	Delivery Made	Comments
3. (Cont'd)					
(g) J-Tubes 10 $\frac{1}{2}$ " & 18"	9/4/74 (3016/ B/305)	A. Findlay			5 No. Pieces for stage 1 'B' Elements
(h) Tunnels 38" 44"		A. Findlay			6m length through 'B' Elements
(i) Mooring Points		A.K.D.			Item 2 Drg. 192
(m) Towing Points					
4. <u>Caisson Walls in the Basin</u>					
(a) Fixing Bolts for temporary Concreting Boom					Complete
(b) 7 No. Steel- plates, reference electrodes	26/6/74	A. Findlay	End July		



SECTION IV

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SUPPORT FRAME

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974  
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IV - SUPPORT FRAME

Mac DERMOTT HUDSON is designing the support frame.

The contract for the fabrication of the support frame the tie  
in cans, the boat landings and the fenders have been awarded  
to Construction Metallique de Provence (C.M.P.).

SECTION V

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IMMERSION EQUIPMENT

ELF NORGE FRIGG TREATMENT PLATFORM N° 1

CONTRACTOR'S MONTHLY REPORT N° 5

TO 20 TH JUNE, 1974

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V - IMMERSION EQUIPMENT

1 - Progress : 19,96 %

2 - Studies

See following schedule

- . list of drawings issued from UIE's Research Department
- . list of drawings supplied by MATRA
- . list of specifications, calculation notes and requisitioning

3 - Orders

We have already ordered the following equipments :

- . BYRON JACKSON pumps
- . MATRA instrumentation
- . COMSIP ENTREPRISE electricity
- . EPCO waste-water
- . MAREP valves

4 - Fabrication

Concerned pieces for the following drawings have been delivered on the site :

- . FE 435 T 5250 1/2

2/2

Pieces embedded in first phase concrete

- . FE 435 T 5251

Diffusion bottles embedded in second phase concrete

. Concerned pieces by the following drawings are in hand of fabrication

- . FE 435 T 5252 sleeves in the internal walls columns C1 and C2

- . FE 435 T 5253 sleeves in the internal walls cells B1 to B9.

No		Direction						Latitude	
T 5283								12" EP 0300 E1 and E2	
T 5284								12" EP 0100 E1 to E2	
T 5285								12" EP 0200 E1 E2	
T 5286								14" SW 0301 B	
T 5287								10" SW 0302	
T 5288								8" SW 0401 B	
T 5289								8" SW 0402	
T 5290								annulé	
T 5291								6" SW 03-05/11/12/01/03/10	
T 5292								6" SW 03-06/13/07/08/09	
T 5293								6" SW 03-05/11/12/01/10	
T 5294								6" SW 04-06/13/07/08/09	
T 5295								10" SW 08-00/15.00/01.00 11.00/07.00/03.00	
T 5296								10" SW 09.00/16.00/10.00 11.00/12.00	
T 5297								3" SW 05.05/11/12/01/03/10	
T 5298								3" SW 05.06/13/07/08/09	
T 5299								6" SW 05.01	
T 5300								7" SW 03.02	
T 5301								14" EP 05.00 E 10.00 10.00 E	
T 5302								12" EP 10.00 E 10.00 10.00 E	
T 5303								14" EP 06.00 E 10" 10.00 10.00 E	
T 5304								14" EP 11.00 E	
T 5305								14" EP 11.00 E	

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SELF PRIGG T.P.1

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SECTION VI

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RISERS AND "J" TUBES

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974  
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VI - RISERS AND "J" TUBES

BROWN AND ROOT is in charge of the design of risers, "J" tubes and all clamps and equipment needed for risers and "J" tubes installation.

Mac DERMOTT HUDSON is in charge of the design of tunnels, ramps and crossing of columns walls by the external risers. Tunnels and ramps design is nearly ended but crossing of columns design will start mid of August.

SECTION VII

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GROUTING

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974  
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VII - GROUTING

All equipment to be installed in the caisson have been designed and procurement is made.

SOLETANCHE is now working on the layour of their plant on the north part of the support frame.

SECTION VIII

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MARINE OPERATIONS

SECTION IX

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CRITICAL PATH ANALYSIS

ELF NORGE FRIGG TREATMENT PLATFORM N° 1  
CONTRACTOR ' S MONTHLY REPORT N° 5  
TO 20 TH JUNE, 1974  
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IX - CRITICAL PATH ANALYSIS

A complete analysis including equipment was issued in June.

Due to the strike a new analysis is being prepared and will be issued beginning of August.



SECTION X

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PHOTOGRAPHS



7406/55/12

ELF BASIN LOOKING SOUTH

DATE 23/6/74