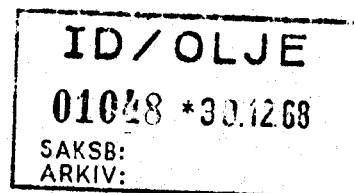


DRILLING PROGRAMME

Murphy 2/3-1



Norwegian Block 2/3, Well No. 1

Location : (b) Approximately 160 miles from Stavanger and 260 miles from Middlesbrough.

Latitude 56° 53' 34" N

longitude 03° 51' 40" E

(e) Water depth : Approximately 185 feet

(c) Projected total depth : 10,300 feet (KB)

Area of closure : 12,800 acres in the Trias,
9,350 acres at the base of the Tertiary.

Vertical closure : 2,400 feet in the Trias,
920 feet at the base of the Tertiary.

(d) Objectives :

1. Sandstones in the Tertiary, particularly in the Paleocene.
2. Porous intervals in the Trias, Jurassic and Cretaceous. These are all productive in Europe and the North Sea.

The well is expected to bottom in the Triassic.

<u>Stratigraphic succession</u> :	<u>Thickness</u> (feet)	<u>Top</u> (feet MSL)
Quaternary	1,980	-
Upper Tertiary (Mid-Miocene to Quaternary)	2,060	2,165
Lower Tertiary (Paleocene to Lower Miocene)	2,500	4,225
Paleocene	675	6,725
Cretaceous Chalk	900	7,400
Lower Cretaceous and/or Jurassic	660	8,300
Jurassic / Upper Trias (Keuper)	900	8,960
Middle / Lower Trias	1,400	9,860

Top of the Zechstein salt is estimated at 11,260 feet. Base of the Zechstein is at about 18,500 feet.

.../...

.../...

This succession is only tentative ; it is based on identification of seismic markers which are far removed from control points. Thicknesses are approximate because available velocity control is not precise.

Identity and thickness of the Upper and Lower Tertiary and Chalk are considered to be the most reliable of all the seismic horizons. The pre-Chalk Mesozoic is most liable to be in error. The Permian sequence is considered to be mainly evaporites but it may contain carbonates (the Magnesian limestone equivalent) and appreciable thicknesses of clastics. Depths to the top of the Bunter are believed to be accurate to within 5 percent and are overestimated rather than underestimated.

It is anticipated that the Upper Tertiary and Quaternary rocks will be clays with some sandy-silty intervals. The Lower Tertiary is expected to be composed of clays, sands and marls. A prospective sand section may be present in the Paleocene. The Upper Cretaceous chalk probably has the typical cherty chalk facies. The Lower Cretaceous and Jurassic interval probably will consist of shales with some porous sands, which are considered prospective ; some thin limestones may be present. The Upper Trias probably consists mainly of varicoloured silty shales, with evaporitic interbeds, but intervals of prospective sands and some evaporites may be present, especially in the lower half. The Lower Trias is expected to be mainly sands interbedded with shales ; these sands are one of the primary objectives. It is not expected that the Zechstein evaporites will be penetrated unless the Zechstein salt is higher than diagnosed. If potential reservoirs containing hydrocarbons are encountered in the Mesozoic above 10,300 feet, consideration will be given to deepening the well to the top of the Zechstein evaporites if these have not been penetrated by that depth. If potential Tertiary and Mesozoic reservoirs are wet, the well should be bottomed at approximately 10,300 feet.

Structure :

The proposed well will penetrate the prospective sections in the crestal area of a large NW-SE trending anticline, see attached Enclosures 1 and 2. The anticline is situated near the central part of a long NW-SE trending belt of

.../...

.../...

of folding in Norwegian waters. The belt is some 30 miles to 40 miles wide and the Murph/Ocean blocks straddle across it. These folds are basically of tectonic origin and are typically associated with flank faults having large throws. Some Zechstein salt flowage may have occurred but this appears to be incidental rather than a cause of growth of the structures.

The anticline has approximately 12,800 acres of elongate domal closure at the horizon which is inferred to be at about the top of the Bunter sandstone. Area of closure decreases gradually to 9,350 acres at the base Tertiary but some closure is still present at the mid-Miocene level.

Closure in the domal area is by dip in all directions, but additional closure in the critical up-dip, NE direction is provided by the large NE throwing fault along the NE flank of the fold. Vertical closure is estimated to be 2400 feet at the Eunter sandstone.

(4) Drilling and Casing Programme :

The well will be drilled using the Odeco semi-submersible barge, "Ocean Traveller", in a floating position. Assuming the above geological prognosis is accurate, the casing programme will be :

<u>Depth</u> (Sea bed)	<u>Depth</u> (KB)	<u>Hole Size</u>	<u>Casing</u>	<u>Cement</u> (up to)
90	365	38	30" Grade B	(Driven last 15')
500	775	26	20" x 95 lbs. H40	To sea bed
2,500	2,775	17½	13.3/8" x 68 lbs. J55	Inside 20" shoe
7,400	7,675	12½	9.5/8" x 47 lbs.	Approx. 3,000'
TD approx.	10,300 (KB)	8½	(4200' N80, 3475' P110) 7" (as required)	Above 9.5/8" shoe.

Depths at which the 9.5/8" and 7" casing strings will be run are approximate and will depend on the formations encountered during drilling.

Subsea wellhead equipment will be installed after the 30" casing has been set.

Drilling to the 20" casing set point will be carried out using sea water without surface returns. All subsequent drilling will be made with full mud returns.

.../...

.../...

Drilling to the 13.3/8" casing set point will be done initially in a 12½" hole, which will be reamed to 17½" after running Schlumberger logs.

Setting depth for the 9.5/8" casing is designed to permit penetration of the Mesozoic objectives with a low weight saturated mud. ✓

(g) T The control equipment at the wellhead will be installed and tested before drilling out the 20" and each subsequent string of casing. A 20" 600 series Hydril preventer tested to 500 psi will be fitted on the 20" casing and used to drill the 17½" hole and run 13.3/8" casing.

On the 13.3/8" string a 10,000 lb. Shaffer double gate, a 10,000 lb. Shaffer single gate and a 5,000 lb. Hydril preventer will be used with a 10,000 lb. 3" Cameron choke and kill line valves to drill the 12½" hole and run 9.5/8" casing. The set-up will be tested to 3000 psi. The BOPs will be tested at regular intervals in accordance with good oilfield practice.

The same set-up will be used on the 9.5/8" casing as is used for the 13,3/8" casing, to drill 8½" hole and run 7" casing. The set-up will be tested to 5000 psi.

(h) Mud Programme :

The mud programme will be as follows :

<u>Depth (sea bed)</u>	<u>Hole Size</u>	<u>Mud Type</u>	<u>Properties</u>			
			Wt.	Visc.	W/L	Oil
0 - 500	26" - 38"	Sea water				
500 - 2,500	12½" - 17½"	Sea water	75-82	50-65	<15	0-10
2,500 - 7,400	12½"	Sea water	75-82	40-55	< 5	0-10
7,400 - TD	8½"	Sea water, saturated if necessary	75-82	40-55	< 5	0-10

Oil up to 10 % may be added to reduce possible pipe sticking.

No major thief zones are expected during drilling. Minor mud losses may occur in the Mesozoic sands. It is not anticipated that any abnormally high pressures will be encountered. However, sufficient weighting materials will be kept available on the rig at all times to counteract any over-pressured zones.

.../...

.../...

Formation Logging :

A Geoservices hydrocarbon and sample logging unit will be in operation during all phases of the drilling when mud returns are obtained. Gas samples will be obtained and analyzed as needed. All samples will be given standard examination to determine age, lithology, porosity, grain size, fluorescence and hydrocarbon stain in a standard solvent.

Ditch cuttings will be collected at 10-foot intervals, unless drilling conditions or geological evaluation warrant otherwise. Samples will be bagged for trading with other companies and three washed samples bagged in plastic bags for lithological and palaeontological use by Murphy and to provide a sample for the Norwegian Geological Survey.

Samples of all fluids obtained by testing will be collected for analysis wherever possible.

(j) - Coring :

Cores may be taken in prospective reservoirs when conditions are suitable and coring is authorized by the operator's technical representative.

Sidewall cores may be taken where reservoir samples or lithological details are required.

(k) - Testing Programme :

DSTs may be run in open hole when conditions are favourable. DSTs may be run through perforations in casing as necessary, weather permitting.

Wire line tests may be run where hole conditions seem suitable for sampling potential hydrocarbon bearing reservoirs.

(l) - Logging :

Schlumberger logs will be run at TD and at each casing point ; they may be run at other times when warranted for formation evaluation.

Sonic / Caliper / Gamma and IES logs and Laterolog 7 will be run throughout. Microlaterolog and Formation Density Log will be run over intervals with potential reservoirs. Neutron logs may be run over intervals where hydrocarbons may be present. Temperature and/or cement bond logs will be run

.../...

.../...

after setting casing. Log scales will be 1 : 500 and 1 : 200.

A well velocity calibration survey will be made at TD.

Should testing through casing be necessary, perforation record logs and Gamma Ray/Neutron and casing collar locator logs will be run.

Deviation :

Directional readings will be taken at about 500-foot intervals. Deviation should be limited to :

- 1° at 500 ft.
 - 2° at 1,000 ft.
 - 3° at 5,000 ft.
 - 5° at 10,000 ft.

General Policy :

This will be to drill through the Quaternary, Tertiary and Cretaceous chalk as quickly as possible if no shows are encountered. Any indications of hydrocarbons will be checked by coring or by taking sidewall cores and wireline tester before running the 9.5/8" casing. A DST of significant shows in the Tertiary may be made before running 9.5/8" casing.

If significant hydrocarbon indications are present in the Lower Cretaceous, Jurassic or Triassic strata, cores may be cut to confirm the presence of hydrocarbons and a DST may be made if warranted.

In the absence of significant hydrocarbon indications in the ditch cuttings and/or mud logger and/or electric logs no cores or DSTs will be taken.

It is envisaged that a maximum of three 60-foot cores will be cut.



Peter W. Taylor.

PWT/SN
Dec. 24,
1968.

Quaternary

Pliocene

L. Miocene to Pliocene

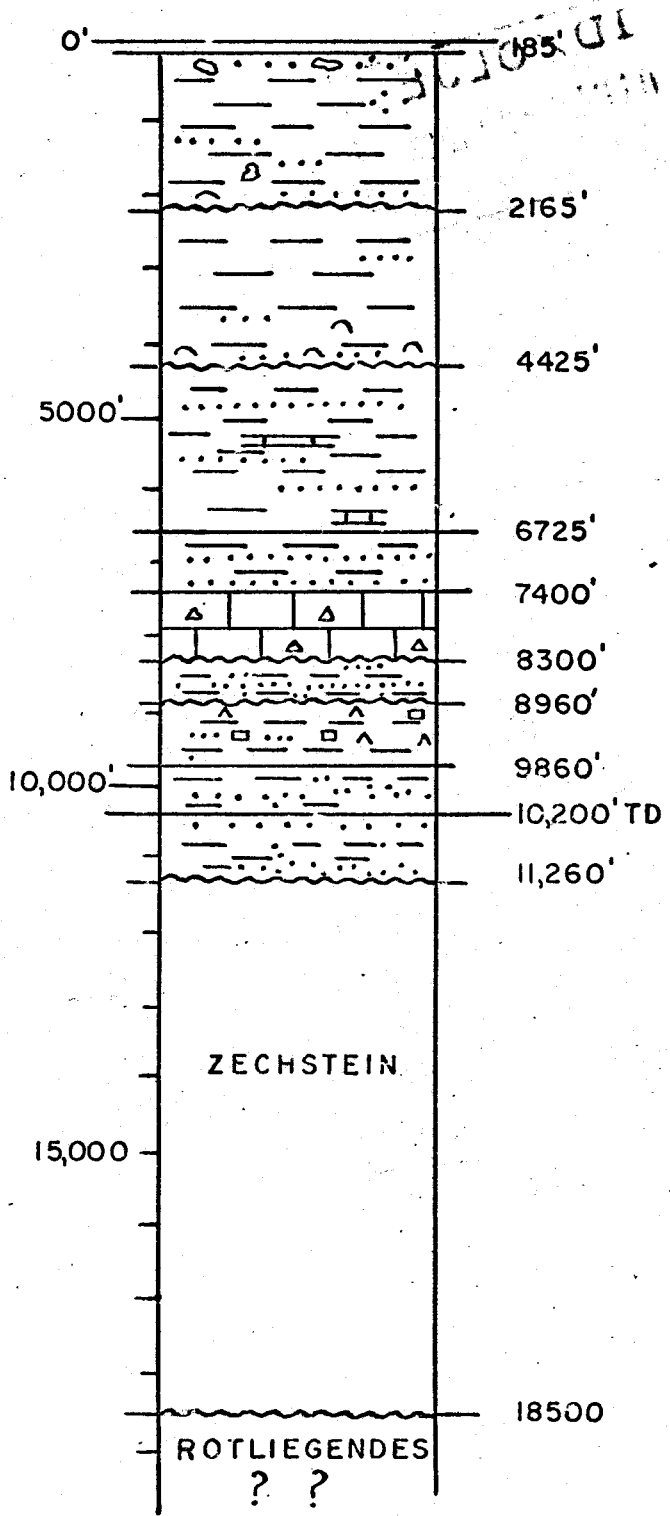
Pliocene

U. Cretaceous

L. Cretaceous and/or Jurassic

Upper Trias

Lower Trias



M.S.L.
Sea bed

Clays with intervals of sand and silt, and possibly some coquinas and limestones.

Clays, sands and marls.

Sands and Shale


Chalk with chert

Shales, sandstones and some limestone.

Varicoloured silty shales with evaporite interbeds and some sandstones.

Shales, evaporites and then sandstones underlain by silty shales, then by Zechstein evaporites

Evaporites plus some Carbonates.


 LONDON ENGLAND

MURPHY 2/3-1

ANTICIPATED GEOLOGICAL SECTION

PWT
Dec 1968

Encl. 4

DRILLING PROGRAMME

Murphy 2/3-1

ID/OLJE
01049-001268
SAKSB:
ARKIV:

Norwegian Block 2/3, Well No. 1

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longitude 03° 51' 40" E

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.../...

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.../...

Murphy 2/3-1

Det ønske kart man
 har å beregne strukturer på
 er:

Time Structure Map on Top of
 Oligocene Sands. Scale 1:100000
 Jan 1970.

Kartet er påskrevet: "Provisional Interpretation"

På grunnlag derav har man beregnet
 vol. i 3 alternativer:

I
 $133.7 \text{ km}^2 = 33 \times 10^3 \text{ acres}$

med 50' av, får man $1.6 \times 10^6 \text{ acreft}$

II
 $61 \text{ km}^2 = 15 \times 10^3 \text{ acres} \Rightarrow \underline{0.75 \times 10^6 \text{ acreft}} = 32 \times 10^9$
 $R = .80$ $1. \times 10^{12} \text{ SCF}$ ~~70 x 10⁹ est~~

III
 $25 \text{ km}^2 = 6 \times 10^3 \text{ acres} \Rightarrow \underline{0.3 \times 10^6 \text{ acreft}} = 13 \times 10^9$
 $R = .80$ utnyttelse res. $.48 \times 10^{12} \text{ SCF}$ ~~.19 x 10¹² SCF~~

Ønske borehull ulla gode sande
 er ~~2/3-1~~ 2 soner god per
 a) 5211 - 5260 $\Rightarrow 49'$ $\phi = 22\%$ $S_w = 30\%$
 b) 5229 - 5369 $\Rightarrow 40'$ $\phi = 23\%$ $S_w = 23\%$

Man bringer følgende for å få en

Data fra De Golyer
 McNaughton
 $V_p = 6.4 \times 10^9$
 $V_g = 0.1 \times 10^{12} \text{ SCF}$
 $R = .80$



NORSKE MURPHY OIL COMPANY

FORRETNINGSAVDELING AV UTENLANDSK AKSJESELSKAP

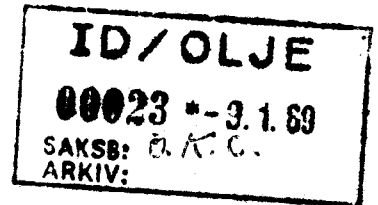
65 Grosvenor St.

London W1X 0BB

TAUSHETSPLIKT

January 3, 1969.

Mr. Olav K. Christiansen
Det Kongelige Departement for Industri og Håndverk
Oljekontoret
Akersgt. 42
OSLO.



Dear Mr. Christiansen,

Attached is an addendum to the drilling programme which we submitted to you for Murphy 2/3-1.

As discussed with you by telephone, please consider the enclosure as an amendment to drilling programme previously furnished.

I would appreciate your acknowledgment and confirmation that that programme is now acceptable.

As agreed with you, I will advise the Ministry of contracts for communications and other services when all arrangements have been completed.

Very truly yours,

Glenn M. Fedderson.

GMF/SN.

ADDENDUM TO DRILLING PROGRAMME

Murphy 2/3 - 1

ID/OLJE
00023 *-2.1.69
SAKSB:
ARKIV:

A. Amended Casing and Cementing Programme

1. 30" Grade B set at approximately 390' KB (120' below seabed). ✓
Cemented with 650 sax Class A plus 4 % calcium chloride.
2. 20" 94 lb. H 40 set at approximately 1500' KB (1230' below seabed).
Cemented with 400 sax Class A plus 16 % gel plus 3 % salt, tailed
in with 400 sax Class A plus 2 % calcium chloride.
3. 13.3/8" 68 lb. J 55 ST and C set at approximately 5000' KB (4730'
below seabed). OK
Cemented with 1900 sax Class A plus 8 % gel plus retarder, tailed in
with 400 sax Class A plus 2 % calcium chloride.
4. 9.5/8" or 7" to be designed on current well conditions and depth.

B. 1. Amendment to Mud Programme

<u>Depth</u>	<u>Mud Type</u>	<u>Weight (lb./cu.ft.)</u>
0' - 1500'	Sea water - gel	71 - 75
1500' - 5000'	Sea water, gel, Q-Broxin, caustic, starch	75 - 82 ✓
5000' - TD	Sea water, gel, Q-Broxin, caustic, starch	82 - 90

2. Estimated Stocks of Chemicals to be kept at Rig

Weight Material	3000 sax
Gel	750 sax
Q-Broxin	500 sax
Caustic	250 sax
Fine LCM	250 sax
Coarse LCM	150 sax
CMC	50 sax
Starch	150 sax
Dia-seal	100 sax
Speciality Items	As needed.

GMF/SN
Jan. 3
1969.



*ga muntlig boretillatelse
over alle før den 5/1/69
one.*

DET KONGELIGE DEPARTEMENT FOR INDUSTRI OG HÅNDVERK

KONTOR: AKERSGT. 42 - TELEFON 41 78 00

POSTADRESSE: OSLO-DEP, OSLO 1

*Norske Murphy Oil Company
65 Grosvenor St.
London W1X 0BB*

~~Phillips Petroleum Company
Akersgt. 45~~

OSLO 1

Gjenpart:

- | | | |
|-------------------------------------|---|----------|
| Deres ref. | Vår ref. (bes oppgitt ved svar) | Dato |
| <input checked="" type="checkbox"/> | Fiskeridepartementet | |
| <input checked="" type="checkbox"/> | Forsvarsdepartementet | |
| <input checked="" type="checkbox"/> | Kommunal- og arbeidsdepartementet | |
| <input checked="" type="checkbox"/> | Direktoratet for arbeidstilsynet | |
| <input checked="" type="checkbox"/> | Elektrisitetstilsynet | |
| <input checked="" type="checkbox"/> | Fiskeridirektoratet | |
| <input checked="" type="checkbox"/> | Fyrdirektoratet | |
| <input checked="" type="checkbox"/> | Helseidektoratet | |
| <input checked="" type="checkbox"/> | Luftfartsdirektoratet | |
| <input checked="" type="checkbox"/> | Politimesteren i Stavanger | |
| <input checked="" type="checkbox"/> | Sjøfartsdirektoratet | |
| <input checked="" type="checkbox"/> | Skattedirektøren | |
| <input checked="" type="checkbox"/> | Statens oljeråd | |
| <input checked="" type="checkbox"/> | Statens utlendingskontor | |
| <input checked="" type="checkbox"/> | Telegrafstyret | |
| <input checked="" type="checkbox"/> | Tolldirektoratet | |
| <input checked="" type="checkbox"/> | Statens strålehygieniske institutt | |
| <input checked="" type="checkbox"/> | <i>H. r. advokatene Arnstein, Haavind og Haavind.</i> | 24.10.68 |

*ID/oye 1048/68
21/69*

*OKC 18/1/69
OKC/IW*

Mr. E. S. Dawkins, c/o North Sea Exploration Services etc

KONTINENTALSOKKELEN. BORETILLATELSE NR. 23.
24 desember 1968 og 3 januar d.s.
Man viser til Deres brev av 21. d.m. med vedlegg.

I medhold av § 33 i kgl. res. av 25. august 1967 vedrørende sikkerhetsforskrifter m.v. for undersøkelse og boring etter undersjøiske petroleumforekomster gir Industridepartementet herved ~~Phillips Petroleum Company~~ tillatelse til å bore etter petroleumforekomster i posisjon:

56° 53' 34" N og 03° 58' 40" Ø i felt 2 blokk B

Underretning om den godkjente posisjon, samt boreplattformens navn, merking og signaler, dato for anbringelse etc. skal i god tid rykkes inn i "Etterretninger for Sjøfarende", "Kunngjøring fra Luftfartsdirektoratet" og kunngjøres i Norsk Rikskringskastings "Fiskerimeldinger". Dessuten skal Forsvarsdepartementet i god tid underrettes om de samme forhold. ~~Phillips Petroleum Company~~ plikter videre å holde disse organer underrettet om enhver forflytning av nevnte boreplattform og andre endringer i merking og signaler etc.

*8/2-69.
Norske Murphy Oil Company*

450 M-52.

Norske Murphy Oil Company

~~Phillips Petroleum Company~~ plikter omgående å underrette Industridepartementet og de gjenpartsadressater som er nevnt i dette brev om boringens påbegynnelse.

SV

Etter fullmakt

Knut Døhlin

Thorgrim Haga

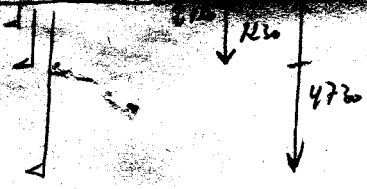
✓ Man gir oppmerksom på at både 20" og 13-3/8" foringsrør skal sementeres i sin fulle lengde.

§ Den mengde sement som er oppført i det utviderte program for foringsrør og sementering av rørene, dater 3. d.m., er ikke tilstrekkelig for sementering av det 20" røret. For det 13-3/8" røret er den oppgitte sementmengde vel 10% over det som teoretisk er nødvendig.

§ Man foreslår at selskapet i sitt koreprogram til korentreprenøren angir sementmengder som ligger ca. 100% over det som teoretisk er nødvendig for sementering av rørene i deres fulle lengde.

Dankens for Murphy
ringte. Hadde vanskeligheder
med at få ned 20" frings-
rør. Næste semester rodet
ud ca. 900' iskludt for
ud de planlagte 1500'.

WV 19/2/69



30"
 OK.
 Volume = $\frac{120}{144} (38^2 - 30^2) \frac{\pi}{4} = 356 \text{ ft}^3$ } OK
 Cement vol. 650 slcs @ 1000 ft ³
 770 ft²

20"
 +
 Cement volume
 inside well core. 4000 ft³ (100% excess).
 Volume = ~~6643~~ 1.5053 x 1110 = 1670
 2.271 x 120 = 272
 1942 ft³
 1997 ft³

Cement vol. $(2100 \times 1.55) + 400 \times 1.48 = 880 \text{ ft}^3$
 400 x 1.48 = 592
 1382 ft³

V For life

13 3/8"
 Volume = 3500 2430 ft³
 6946 x 3770 = 2620 ft³
 1.2060 x 1230 = 1482
 1.019 Total 4102 ft³
 3680 ft³

1750
 750

Cement vol. 142 x 1900 = 3645
 + 1.88 x 400 = 752
 = 4397

OK

Cement volume inside well
 5500 ft³ - 6500 ft³ (50% - 75% excess)

4117 ft³
 4200 + 30%

Tilsvarende hull med ømtrent
samme casing program Amoco 2-8-1

30" ca. 30% mer sement

20" ca. 200% mer sement

~~15 3/8~~^{3/4}" ca. 70% mer sement

15 3/8 casing er av samme type for
begge hull. 7-55.

F.d boreprogram fra Norske Murphy
vedrørende borehull 2/3-1.

Diskuterte casing programmet med
mr. Fedderson over telefon den
31/12/68. Vi ble enige om at man
skulle sende et revidert casing
program hvor dybden for 13-3/8"
ror skulle økes fra ca. 2500 til
ca. 3500' under korbunnen, eller
20" ror skulle settes ved 1000-1500'
og 12-3/8" ved 5000-6000'.

Samtidig skulle man gi nærmere
detaljer om sementtype og mengde,
og om hva slags blende maskiner
for borelam som skulle oppbevares
på borerplattformen.

Når tilleggsopplysningene er mottatt
kan boreprogrammet oppdateres.

Med henvisning til opplysninger om
utpreparater, kommunikasjonssystem,
dykkerselskap osv., så vil disse bli
innstilt så snart endelig uttale er
støttet om hvilken borerplattform som
skal benyttes.

BKC 2/1/69.

BWL 29/12/68

24/12 [Signature]

Telex

From: Ministry of Industry, Petroleum Section, 1140 Oslo
To: Norske Murphy Murcorp London 2/970.

Permission granted to drill well at location 56 degrees 53 min 31 sec north 3 degrees 51 min 49 sec east, and to shoot 25 miles of seismic lines across location.

Notice concerning location must be announced according to § 6 of safety code.

Ministry must receive drilling program prior to spudding in.

About recertification of "Ocean Traveler" Norske Murphy must request inspection of platform by Norwegian Authorities.

I-dept



Kopier av boreposisjonen
J.nr. 165/69

DET KONGELIGE DEPARTEMENT FOR INDUSTRI OG HÅNDVERK

KONTOR: AKERSGT. 42 - TELEFON 41 78 00
POSTADRESSE: OSLO-DEP, OSLO 1

Norske Murphy Oil Company
65 Grøsvorst.
London W1X 0BB
ENGLAND

Se J. nr. 165/
Murphy's brev av 12/2.69.

Sind kopier av vedlagte
brev fra Murphy til gjenpartsadresserte
medlerfr. OKL 19/2/69

18.2.69
Id/olje 23/69
OKC/ABB

Gjenpart:

- ✓ Fiskeridepartementet
- ✓ Forsvarsdepartementet
- ✓ Kommunal- og arbeidsdepartementet
- ✓ Direktoratet for arbeidstilsynet
- ✓ Elektrisitetstilsynet
- ✓ Fiskeridirektoratet
- ✓ Fyrdirektoratet
- ✓ Helsedirektoratet
- ✓ Luftfartsdirektoratet
- ✓ Politimesteren i Stavanger
- ✓ Sjøfartsdirektoratet
- ✓ Skattedirektøren
- ✓ Statens oljeråd
- ✓ Statens utlendingskontor
- ✓ Telegrafstyret
- ✓ Tolldirektoratet
- ✓ Statens strålehygieniske institutt
- ~~H.r. advokatene Arnesen, Haavind og Haavind~~

Wm

KONTINENTALSOKKELEN. BORETILLATELSE NR. 23.

Man viser til Deres brev av 24. desember 1968 og 3. januar d.å. med vedlegg.

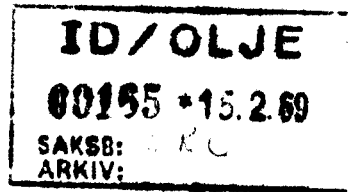
I medhold av § 33 i kgl. res. av 25. august 1967 vedrørende sikkerhetsforskrifter m.v. for undersøkelse og boring etter undersjøiske petroleumforekomster gir Industridepartementet herved Norske Murphy Oil Company tillatelse til å bore etter petroleumforekomster i posisjon:

56° 53' 34" N og 03° 51' 40" Ø i felt 2 blokk 3

Underretning om den godkjente posisjon, samt boreplattformens navn, merking og signaler, dato for anbringelse etc. skal i god tid rykkes inn i "Etterretninger for Sjøfarende", "Kunngjøring fra Luftfartsdirektoratet" og kunngjøres i Norsk Riksringkastings "Fiskerimeldinger". Dessuten skal Forsvarsdepartementet i god tid underrettes om de samme forhold.

★
NORSKE MURPHY OIL COMPANY

FORRETNINGSAVDELING AV UTENLANDSK AKSJESELSKAP



February 12, 1969.

Royal Ministry of Industry & Handicraft
Akersgt. 42
OSLO - Dep.

Attention : Oljekontoret.

Dear Sirs,

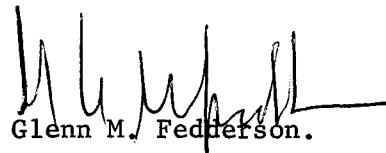
In accordance with Section 40 of the Safety Code - Royal Decree of August 25, 1967 - please be advised that the final surveyed location of the Norske Murphy Oil Company 2/3 - 1 well is :

latitude 56° 53' 09.5" North
longitude 3° 51' 38.1" East

Water depth : 185 ft.

We are pleased to advise that the well was spudded at 19.45 hours on February 10, 1969.

Very truly yours,


Glenn M. Feddersen.

GMF/SN.



DET KONGELIGE DEPARTEMENT FOR INDUSTRI OG HÅNDVERK

KONTOR: AKERSGT. 42 - TELEFON 41 78 00
POSTADRESSE: OSLO-DEP, OSLO 1

Norske Murphy Oil Company
65 Grosvenorst.
London W1X 0BB
ENGLAND

18.2.69
Id/olje 23/69
OKC/ABB

Gjenpart:

Fiskeridepartementet
Forsvarsdepartementet
Kommunal- og arbeidsdepartementet
Direktoratet for arbeidstilsynet
Elektrisitetstilsynet
Fiskeridirektoratet
Fyrdirektoratet
Helsedirektoratet
Luftfartsdirektoratet
Politimesteren i Stavanger
Sjøfartsdirektoratet
Skattedirektøren
Statens oljeråd
Statens utlendingskontor
Telegrafstyret
Tolldirektoratet
Statens strålehygieniske institutt
H.r.advokatene Arnesen, Haavind og Haavind

KONTINENTALSOKKELEN. BORETILLATELSE NR. 23.

Man viser til Deres brev av 24. desember 1968 og 3. januar d.å. med vedlegg.

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$56^{\circ} 53' 34''$ N og $03^{\circ} 51' 40''$ Ø i felt 2 blokk 3

Underretning om den godkjente posisjon, samt boreplattformens navn, merking og signaler, dato for anbringelse etc. skal i god tid rykkes inn i "Etterretninger for Sjøfarende", "Kunngjøring fra Luftfartsdirektoratet" og kunngjøres i Norsk Rikskringkastings "Fiskerimeldinger". Dessuten skal Forsvarsdepartementet i god tid underrettes om de samme forhold.

Norske Murphy Oil Company plikter videre å holde disse organer underrettet om enhver forflytning av nevnte boreplattform og andre endringer i merking og signaler etc.

Norske Murphy Oil Company plikter omgående å underrette Industridepartementet og de gjenpartsadressater som er nevnt i dette brev om boringens påbegynnelse.

Man gjør oppmerksom på at både 20" og 13-3/8" foringsrør skal sementeres i sin fulle lengde.

Den mengde sement som er oppført i det reviderte program for foringsrør og sementering av rørene, datert 3. d.m., er ikke tilstrøkkelig for sementering av det 20" røret. For det 13-3/8" røret er den oppgitte sementmengde vel 10% over det som teoretisk er nødvendig.

Man foreslår at selskapet i sitt boreprogram til bore-entreprenøren angir sementmengder som ligger ca. 100% over det som teoretisk er nødvendig for sementering av rørene i deres fulle lengde.

Etter fullmakt

Knut Dæhlin

Thorgrim Haga

Norske Murphy Oil Company
c/o E.L. Dawkins
North Sea Exploration Services A/S
Strømsteinen

4000 STAVANGER

126
ID/olje 134/69 OKC/AGØ

18.2.69

KONTINENTALSØKKELEN. "OCEAN TRAVELER." BOREPLATTFORMENS
KOMMUNIKASJONSSYSTEM

Deres brev av 3 d.m.

I medhold av sikkerhetsforskriftenes § 108 godkjenner Industri-
departementet herved et kommunikasjonssystem for boreplatt-
formen bestående av helikoptere fra Helikopter Service A/S og
skip fra Offshore Marine Ltd.

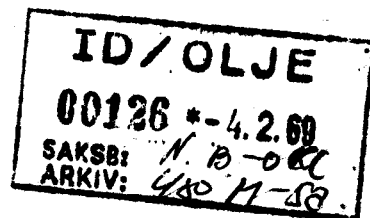
Etter fullmakt

Knut Døhlin

Thorgrim Haga

450. M-5a

NORSKE MURPHY OIL CO.
c/o North Sea Exploration Services A/S
Strömsteinen
Stavanger



3 February, 1969

Ministry of Industry
Oljekontoret
Akersgt. 42,
OSLO-DEP.

Attention: Mr. Olaf K. Christiansen

Dear Sir,

As per your request, we are submitting the following list on sub-contractors who will be contracted by Norske Murphy Oil Co. to furnish services to drill our proposed well 2/3 - 1.

- | | | | |
|----|----------------------------------|--|---|
| 1) | Diving Services | - DIVCON Int'l Ltd.
London, England | } Selskapet godkjennes for
"O.T." i brev datert
18/7/68 (Koppe 444.1)
O.C. |
| 2) | Cementing and pumping
service | - BJ Service, N.V.
Stavanger, Norway | |
| 3) | Helicopter Service | - Helikopter Service A/S
Oslo, Norway | } Kone. system OK.
To bli i bruk on 14/2/69. |
| 4) | Cargo & Supply Boats | - Offshore Marine Ltd.
Great Yarmouth, England | |
| 5) | Drilling Rig | - ODECO Norway, Inc.
Stavanger, Norway | |
| 6) | Mud Engineering Service | - BAROID, Int'l U.K.
London, England | |
| 7) | Electric Logging | - Schlumberger Offshore Services
New York, N.Y., USA. | |
| 8) | Mud Logging | - Geoservice
Paris, France | |

Cont's

- 9) Shore Base Facilities - North Sea Exploration Services A/S
including radio rental Stavanger, Norway

The contracts and/or charters are presently being processed.

A detailed plan covering safety regulations, radio communications, chain of command on the drilling barge, fire fighting, and helicopter and boat communications is being processed for your approval and shall be submitted shortly. We are also preparing copies of this plan for all crew-members aboard the "Ocean Traveler" and an acknowledgment of their receipt by signature will be forwarded to you. X

I trust the above will be satisfactory and please call me if there is any additional information required.

Yours very truly,

E. L. Dawkins

E.L. Dawkins
Operations Manager
Norske Murphy Oil Co.

Ref: ELD/KC

- x) Mr. Dawkins opplyste i Stavanger at kommunikasjonsvesenheten vil bestå av båter og Helikopter Service 7/8 helikopter. Angående kommunikasjonsvesenheten så vil Odens fot-pusker et doly. superintendant være ansvarlig for de ombord med samme myndighet som en skip-kaptein i nordlige regioner. Dykkerselskapet Divcon fikk 13/7/68 tilkalle til å dykke for "O.V." Sikkerhetsprokriften er i hovedsak samme ideer til de med den som tidligere er mottatt for "O.V." og "O.V." Begrunnelser ombord er den samme som brukt tidligere med sin foreskrifter. BTIC 5/2/69

cc: Mr. Glenn Fedderson

Hørseke Muphy Oil Co.
c/o E.L. Dawkins
North Sea Exploration Services A/S
Strømsteinen

4000 STAVANGER

Id/Olje 170/69 OKC/IW

18.2.69

KONTINENTALSØKKELEN "OCEAN TRAVELER". ORGANISASJONSPLAN
FOR PLATTFORMENS DRIFT.

Deres brev av 14. d.m. vedlagt "safety regulations for
Ocean Traveler."

Med hjemmel i sikkerhetsforskriftenes § 25 godkjenner
Industridepartementet herved den organisasjonsplan for
plattformens drift som fremgår av ovennevnte "safety
regulations."

Etter fullmakt

Knut Døhlin

Thorgrim Haga

Mrk. Organisasjonsplanen kunne vært oppsatt på en tydeligere
måte, men det fremgår at det er Odeco's folk som er ansvars-
havende ombord, og dermed er planen identisk med den som
tidligere er godkjent for "O.T." da plattformen ble brukt av
Phillips.

OKC.

NORSKE MURPHY OIL CO.

c/o North Sea Exploration Services A/S
Strömsteinen
stavanger - Norway

ID/OLJE
00134 *-5.2.69
SAKSB: <i>7/13</i>
ARKIV:

3 February 1969

Fiskeridirektoratet
P.O.Box 185
5000 BERGEN

Gentlemen:

This is to notify that the Drill Barge "Ocean Traveler" belonging to ODECO Norway Inc. is expected to get under tow Wednesday morning, February 5th, to Norske Murphy's location in Blk 2/3 of the Norwegian waters. It is estimated that the rig should be on location sometime Friday, February 7th or Saturday February 8th.

The Co-ordinates of the location are as follows:

N 56° 53' 31"
E 03° 51' 49"

Yours truly

E. L. Dawkins
Operations Manager
Norske Murphy Oil Co.

C.c. Ministry of Industry - Oslo
Mr. Glen Fedderson - London



NORSKE MURPHY OIL COMPANY

FORRETNINGSAVDELING AV UTENLANDSK AKSJESELSKAP

ID/OLJE
00195-24.2.69
SAKS: <i>N.B.</i>
ARKIV: <i>452 N6 69</i>

20 February, 1969

M.

[Handwritten signature]

T.E.

25-2-69

[Handwritten initials]

- Fiskeridepartementet
- Forsvarsdepartementet
- Kommunal- og arbeidsdepartementet
- Direktoratet for arbeidstilsynet
- Elektrisitetstilsynet
- Fiskeridirektoratet
- Fyrdirektoratet
- Helsedirektoratet
- Luftfartsdirektoratet
- Politimesteren i Stavanger
- Sjøfartsdirektoratet
- Skattedirektøren
- Statens oljeråd
- Statens utlandingskontor
- Telegrafstyret
- Tolldirektoratet
- Statens strålehygieniske institutt
- H.r.advokatene Arnesen, Haavind og Haavind

Gentlemen:

This is to inform you that Norske Murphy Oil Co. has commenced drilling operations in the Norwegian Sector of the North Sea in Concession 2, Block 3. The final location of the well is

Lat. $56^{\circ} 53' 09.5''$ *N* and Long. $03^{\circ} 51' 38.3''$ E.

The water depth is approximately 186 ft. and well is being drilled by ODECO Norway's "Ocean Traveler".

Yours truly

E.L. Dawkins

E.L. Dawkins
Operations Manager

cc: Mr. O. Christiansen ✓
Industridepartementet

J.M. ID/091 1040 } 60
1043 }
JVC

Sells
3 of 1/2-68' //

Arkiv. 480 M-Sa.

t

05 00+

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tlx 11 oslo

936+936+

justisdept o

hva oensker de og hvem er de +?

dette er olo oslo telex kongensgt 21 ++

jegskal til london c

tlx 11oslo

det velger de selv via auto 936

ikke gjennom 00 ++

jeg har jo slaatt 936+

ok jeg bryter her så forsøker de en gang til

og slå nå 936 og ikke noe annet bi

u

02 936+

15 +? 21970+

11.17

murcorp london

justisdept o

murcorp london

from ministry of industry , petroleum section 1140, oslo
to norske murphy murcorp london 21970

permission granted to drill well at location 56 degrees 53 min
31 sec worth 3 degrees 51 åeeeeee51min 49 sec east, and to shoot
25miles of seismic lines across location.

notice concerning location must be announced according to par. 6 of
safety code.

ministry must receive drilling program prior to spudding in.

about recertification of " ocean traveler"

norske murphy must request inspection of platform by nore eeee
norwegian authorities.

industridept kkk

murcorp london

is the message understood?

murcorp londonplease confirm justisdept 1140.

Norske Murphy Oil Company
c/o Odeco Norway Inc.
Gjensidiges Hus
Kongsgårdbakken 6
4000, STAVANGER

178/69 OKG/KGM 24.2.1969

KONTINENTALSOKKELEN. "OCEAN TRAVELER". BOREPLATTFORMENS
JOURNAL.

Deres brev av 17. d.m.

I medhold av sikkerhetsforskriftenes § 19 godkjenner Industri-
departementet herved ovennevnte journal.

Departementet skal be om at opplysninger som ikke kan plasseres
i egen rubrikk i journalen, f.eks. opplysninger om brannøvelser,
mangler ved utstyr og hvorledes disse er utbedret, skader etc.
blir notert i rubrikken under overskriften "remarks".

Etter fullmakt

Knut Dahlin

Thorgrim Haga

450.M-5a



NORSKE MURPHY OIL COMPANY

FORRETNINGSAVDELING AV UTENLANDSK AKSJESELSKAP

ID/OLJE
00178 • 19.2.69
SAKSB: OKC
ARKIV:

17 February, 1969

~~Mr. Olav K. Christiansen~~

Det Kongelige Departement of Industry & Håndverk
Oslo - Dep.
Oslo 1

Dear Mr. Christianesen,

Per your telephone request of 17 February 1969, enclosed is copy of the daily drilling report and time sheet that is maintained on the Ocean Traveler during our drilling operation in sector 2-3. Please note that it is almost identical to the AAODC report. The ODECO report is slightly revised to include weather conditions, status of fuel and operating crew on duty which is in addition to the information on the AAODC report.

If any further information is required, please advise.

Sincerely

E. Dawkins
Operations Manager

Enc

DAILY DRILLING REPORT

REPORT NO.

DATE

OPERATOR		LEASE		WELL NO.		FIELD OR DIST.		COUNTY		STATE			
CONTRACTOR		RIG NO.	DRILL PIPE STRING NO. SIZE	TOOL JOINT	PUMPS		CASING & LINER RECORD	SIZE	WT. & GR.	DEPTH SET FROM TO	PERFORATIONS FROM TO	CEMENT USED	OTHER
ODECO NORWAY INC.				OD	NO.	MANUFACTURER	TYPE	STROKE LENGTH					
OPERATOR'S REPRESENTATIVE		CONTRACTOR'S TOOL PUSHER		TYPE THD.	1.								
					2.								
					3.								

TIME DISTRIBUTION—HOURS			
	MORN	DAY	EVE
DRILLING ACTUAL			
REAMING			
CIRCULATING			
TRIPS			
DEVIATION SURVEY			
TEST B.O.P.			
CUT OFF DRILL LINE			
REPAIR RIG			
CORING			
WIRE LINE LOGGING			
OTHER			
FISHING			
COMPLETING (A) PERFORATING			
(B) RUNNING TUBING			
(C) SWABBING			
(D) TESTING			
(E) ACIDIZING			
(F) ADDITIONAL			
TOTALS			

MORNING TOUR	NO. DRILLING ASSEMBLY		BIT RECORD		HRS. DRLD.	CORE NO.	FROM	TO	FORMATION (SHOW CORE RECOVERY)	ROTA-RY R.P.M.	WT. ON BIT 1000#	PUMP PRESS.	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.	METHOD PUMPS RUN	MUD RECORD			
	STANDS	DP	FT.	RUN NO.														TIME			
	SNGLS.	DP	FT.	SIZE														WEIGHT			
	D.C.	ID		MFG.														VISC.			
		OD	FT.	TYPE														W.L.-C.C.			
	RMR BODY	OD	FT.	NOZ. NO.														FLTR. CK.			
	STB BODY	OD	FT.	SIZE														PH			
	SUBS	OD	FT.	SER. NO.														SD. CONT.			
	BIT OR C.B.		FT.	DEPTH OUT																	
			FT.	CUMULATIVE HOURS RUN																	
KELLY DOWN		FT.	COND. OF BIT																		
TOTAL		FT.	REAMER CUTTER NO.																		
WT. OF STRING		LBS.	TYPE																		
DRILLER																					
DERRICKMAN																					
ENGINEMAN																					
ELECTRICIAN																					

TIME SUMMARY (OFFICE USE ONLY)	
CONTRACTOR'S TIME HRS:	
OPERATOR'S TIME:	
HRS. W/D.P.:	
HRS. WO/D.P.:	
HRS. STANDBY	
WIRE LINE RECORD	
REEL NO.	
NO. OF LINES	SIZE
FEET SLIPPED	
FEET CUT OFF	
PRESENT LENGTH	
TON MI. or TRIPS SINCE LAST CUT	
CUMULATIVE TON MI. or TRIPS	
NO. OF DAYS FROM SPUD	
CUMULATIVE ROTATING HRS.	

EVENING TOUR	NO. DRILLING ASSEMBLY		BIT RECORD		HRS. DRLD.	CORE NO.	FROM	TO	FORMATION (SHOW CORE RECOVERY)	ROTA-RY R.P.M.	WT. ON BIT 1000#	PUMP PRESS.	PUMP NO. 1 LINER SIZE	S.P.M.	PUMP NO. 2 LINER SIZE	S.P.M.	METHOD PUMPS RUN	MUD RECORD			
	STANDS	DP	FT.	RUN NO.														TIME			
	SNGLS.	DP	FT.	SIZE														WEIGHT			
	D.C.	ID		MFG.														VISC.			
		OD	FT.	TYPE														W.L.-C.C.			
	RMR BODY	OD	FT.	NOZ. NO.														FLTR. CK.			
	STB BODY	OD	FT.	SIZE														PH			
	SUBS	OD	FT.	SER. NO.														SD. CONT.			
	BIT OR C.B.		FT.	DEPTH OUT																	
			FT.	CUMULATIVE HOURS RUN																	
KELLY DOWN		FT.	COND. OF BIT																		
TOTAL		FT.	REAMER CUTTER NO.																		
WT. OF STRING		LBS.	TYPE																		
DRILLER																					
DERRICKMAN																					
ENGINEMAN																					
ELECTRICIAN																					

FUEL	RECEIVED	ON HAND	BBLs.	WEATHER LAST 24 HRS.	WAVES: HT. _____ FT. FROM _____
DRINKING WATER			GALS.	WIND SPEED _____ M.P.H FROM DIRECTION _____	LIST: _____ P. OR S. _____ TRIM _____ F. OR A. _____
DRILLING WATER			GALS.	REMARKS: (SOUNDINGS, DIVER'S INSPECTION, ETC.)	
LUBE OIL			GALS.		
CORE LINE	COND.	LENGTH			

VHKIA:
 SVK2B:
 00338 * 17'S 20
 ID\007E

