

UNITED NATIONS  
GENERAL  
ASSEMBLY



Distr.  
GENERAL

A/AC.135/1/Add.1  
12 March 1968

ENGLISH ONLY



AD HOC COMMITTEE TO STUDY THE  
PEACEFUL USES OF THE SEA-BED AND  
THE OCEAN FLOOR BEYOND THE LIMITS  
OF NATIONAL JURISDICTION

GOVERNMENT OF NORWAY

REGULATIONS RELATING TO SAFE PRACTICE ETC. IN  
EXPLORATION FOR AND EXPLOITATION OF PETROLEUM  
RESOURCES OF THE SEA-BED AND ITS SUBSOIL  
(ROYAL DECREE OF 25 AUGUST 1967)

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REGULATIONS RELATING TO SAFE PRACTICE ETC. IN  
EXPLORATION FOR AND EXPLOITATION OF PETROLEUM  
RESOURCES OF THE SEA-BED AND ITS SUBSOIL

By virtue of Section 3 of Act of 21 June 1963, on the exploration and exploitation of the natural resources of the sea-bed and its subsoil and Royal Decree of 9 April 1965, relating to the exploration and exploitation of petroleum in the sea-bed and its subsoil, it is hereby provided:

Chapter I

Introductory provisions

Section 1

These regulations shall apply to exploration for and exploitation of petroleum in the sea-bed or in the subsoil in Norwegian internal waters, in Norwegian territorial waters and in that part of the continental shelf which is under Norwegian sovereignty.

Section 2

The Royal Norwegian Ministry of Industry (hereinafter called the Ministry) may issue further regulations which are necessary for the implementation of these regulations.

The Ministry or anyone it authorizes may, under special circumstances, grant dispensation from provisions laid down in or by virtue of these regulations.

Section 3

Anyone carrying out such activities as mentioned in Section 1, is obliged in addition to the provisions contained in the licence, to comply with the provisions of these regulations and of regulations issued pursuant hereto, and to see to it that these provisions are complied with in regard to their activities. This applies to the licensee, as well as to anyone carrying out such activities for him, either personally or through employees or through independent contractors or sub-contractors.

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Orders and prohibitions issued by the Ministry, shall be directed to the licensee. In cases where delays may create danger, such orders and prohibitions may be directed to the responsible person on a platform, vessel or aircraft or other installation to which these regulations apply. In these cases orders and prohibitions may also be issued by anyone authorized by the Ministry. Copies of such orders or prohibitions shall be forwarded to the licensee without delay.

#### Section 4

Exploration and exploitation of petroleum must be carried out in a safe manner in accordance with good oil field practice and with the regulations in force at any time. The activity must not to an unreasonable degree interfere with other activities. Particular care must be taken to avoid any unreasonable impediment or nuisance to shipping, fishing or aviation, to avoid damage or risk of damage to marine life or to underwater cables or other underwater installations and to avoid pollution or risk of pollution to the sea-bed and its subsoil, the sea and the air.

#### Section 5

The licensee shall currently and in writing keep the Ministry informed of the names, address and nationality of contractors or sub-contractors carrying out main activities in the areas mentioned in Section 1.

#### Section 6

Before provisional or permanent installations, including all types of drilling platforms, are placed on or above the sea-bed or in its subsoil in the areas mentioned in Section 1, the Ministry's written consent to the location or relocation must be obtained. The Ministry shall likewise sufficient time in advance be informed about removals and movements of the said installations.

A notice concerning an approved location of said installations shall sufficient time in advance be inserted by the licensee in "Etterretninger for Sjøfarende" ("Notice to Mariners"), "Kunngjøring fra Luftfartsdirektoratet" ("Notice from the Directorate of Aviation") and likewise be announced in the Norwegian Broadcasting Corporation's "Fiskerimeldinger" and in any other manner

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which the Ministry may decide. It shall contain information as to the type and position of the installation, light and sound signals etc. The licensee shall likewise in the manner prescribed above inform about the removal and movements of such installations.

## Chapter II

### Exploration

#### Section 7

Survey vessels and aircraft must comply with international and Norwegian regulations and rules in force for the particular location at any time, relating to navigation and aviation respectively.

Vessels - and aircraft to the extent it is deemed necessary - must be acquainted with the Norwegian rules for the marking of floating and stationary fishing gear and with the rules relating to lights to be carried by vessels engaged in trawling and other fishing.

They must keep at a safe distance from vessels engaged in fishing and from floating and stationary fishing gear. Particular care must be taken when larger gatherings of fishing vessels are observed.

#### Section 8

Vessels to be used for seismic surveys must be equipped with radar, echosounder and sonar (asdic). The said equipment shall be of an approved type and must be in full operating order.

#### Section 9

Aircraft are not allowed to be used for seismic surveys without special permission from the Ministry.

#### Section 10

Seismic surveys are subject to the following rules:

(a) Prior to the commencement of seismic surveys, the sonar and radar shall in good time be turned on and shall be kept continuously sweeping round a full circle.

Echosounder and sonar shall thereafter continuously be kept in use till the termination of the surveys.

(b) As long as seismic surveys are being carried out, the survey vessel shall fly the international flag signal in force, at present HD.

(c) Special care must be shown in the use of explosives. They must not be detonated in the vicinity of vessels engaged in fishing or in the vicinity of floating and stationary fishing gear. Nor must they be detonated if schools of fish are discovered under or near the shot point.

Furthermore, detonations must be carried out in such a manner as not to cause damage or risk of damage to underwater cables or other underwater installations.

(d) The explosives employed must be of such types as to cause the least possible damage to marine life.

(e) Charges must not be larger than necessary and shall be detonated as near to the surface of the sea as possible. The Ministry reserves the right to decide the types of explosives to be used etc., as well as to fix the maximum charges to be detonated.

(f) The charges shall be equipped with safety devices which render the charges harmless if they remain in the water for more than two hours. Such safety devices shall beforehand be approved by the Ministry or any one authorized by it.

The charges shall likewise be marked with the name of the licensee or other identification approved by the Ministry.

#### Section 11

In ample time prior to the commencement of seismic surveys, the Directorate of Fisheries in Bergen shall be notified. Furthermore, the said Directorate shall be kept informed of the movements of the vessels and their calls at Norwegian ports.

#### Section 12

A daily log shall be kept of the surveys. As regards seismic surveys, the log shall include information on the size of the charges and the number of explosions, with a precise indication of the shot points. Charges which fail to fire or which misfire, shall also be entered into the log. The log shall, as far as possible, contain information of importance to the question of the effects of the surveys on marine life. The Ministry may require the log to be produced.

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### Chapter III

#### Drilling platforms

##### Section 13

The licensee shall - in ample time prior to the commencement of drilling operations - transmit to the Ministry or anyone authorized by it a description of the platform, together with the necessary drawings and specifications.

Prior to the commencement of drilling operations in the areas mentioned in Section 1 above, consent of the Ministry or anyone authorized by it must be obtained for the use of the drilling platform with installations and equipment.

The cost involved shall be covered by the licensee.

##### Section 14

The drilling platform shall at all times be seaworthy and be provided with such equipment as required for the safe operation of the platform i.a. the necessary nautical equipment, telecommunication systems for radio communications on both assigned and emergency frequencies with land stations, helicopters, ships and other platforms in the area, position marking equipment (light and sound), lifesaving equipment, firefighting equipment, first aid equipment, etc.

The Ministry or any one authorized by it may at any time inspect the platform with installations and equipment. The cost involved shall be covered by the licensee.

##### Section 15

The drilling platform must be constructed in such a manner as to be strong enough to withstand the weather and wind conditions which may be anticipated in the areas mentioned in Section 1. The anchoring systems and jack-up legs etc. must be so constructed that the platform is kept in place under the weather conditions that reasonably may be anticipated.

All drilling equipment with machinery and accessories must be properly constructed and maintained. The licensee shall check that the platform with equipment at all times is in proper working condition.

Substantial damages caused to the platform or its equipment or installations shall immediately be reported to the Ministry or anyone authorized by it. Repair of such damages or substantial changes in the construction shall immediately be reported to the Ministry or anyone authorized by it.

#### Section 16

The drilling platform with equipment and installations shall be equipped with all necessary safety devices in accordance with good oilfield practice in order to prevent accidents.

Walkways, stairways and working surfaces shall be equipped with non-slip surface and, where necessary, be equipped with suitable toeboard and railing.

The companionways, stairways, etc. between the various parts of the platform shall be so constructed as to permit safe passage.

Railing shall likewise be installed on gangways, platforms and around open tanks, shafts, gutters, etc. creating hazards for the safety of the personnel.

The platform shall be constructed in such manner that living quarters and working areas shall be sufficiently separated. The living quarters shall be sufficiently sound insulated, ventilated and heated.

The decks of the platform shall be constructed in such a manner that water washing the decks drains off easily.

The work rooms and living quarters shall be equipped with a sufficient number of emergency exits giving easy access to the lifesaving equipment such as escape ropes, climbing nets etc.

#### Section 17

The drilling platform shall be positioned so as to give maximum protection to the operation performed thereon including mooring of vessels, landing and take off of helicopters. Particular care should be shown to avoid oil or gas leakage from reaching sources of ignition.

#### Section 18

During operations whereby the platform is lifted or lowered necessary personnel only shall be present on the platform. The personnel remaining on board

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shall, as far as possible, be stationed on deck and be equipped with approved life vests. Suitable means for safe and immediate removal of personnel from the platform shall remain in readiness during the entire operation. In addition, a standby vessel with sufficient capacity and equipment shall be kept ready in the immediate vicinity of the platform.

The manoeuvres mentioned in the first paragraph shall, as far as possible, be undertaken only in daylight and when this is rendered safe by wind and weather conditions.

The provisions contained in Section 106 shall apply.

#### Section 19

Towing of drilling platforms in areas mentioned in Section 1 intended for use in these areas, shall not be carried out without prior notification to the Ministry or any one authorized by it. The Ministry or any one authorized by it may give further provisions for the towing. The towing must be carried out in accordance with the international and Norwegian rules and regulations in force at any time. Necessary personnel only shall remain on the platform during towing. All proper safety measures must be taken.

The towing must be carried out in such a manner that it causes the least possible nuisance in the area. Special consideration shall be taken to fishing and shipping in the area.

#### Section 20

Unauthorized persons may not enter the drilling platform without special permission of the licensee or anyone he authorizes. During stay on the platform, visitors must comply with the safety rules applicable to the platform. Visitors shall upon arrival be instructed about safety regulations in force. Specific information must be given about areas where smoking is allowed.

#### Section 21

The licensee shall at any time keep a record of all persons present on board the platform or on their way to and from the platform. The record shall contain

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the name of the individual and the name of the company or agency by whom he is employed. This record shall be available for the Ministry or anyone it authorizes at the licensee's base in Norway.

#### Section 22

Detailed safety instructions shall be prepared for each drilling platform with regard to its operation and with special emphasis on the safety and well being of the personnel involved. Each employee will be required to sign a receipt for their individual copy.

The person in charge shall ascertain that the workers have understood oral and written instructions given for the execution of an operation.

Furthermore, general instructions shall be prepared for each drilling platform with regard to measures to be taken in emergencies. These instructions shall likewise be handed to the personnel in the above-mentioned manner. At frequent intervals drill exercises shall be held with a view to such situations. The daily log shall contain necessary information as to such drills.

#### Section 23

Before drilling is commenced, an organization plan shall be submitted to the Ministry or anyone authorized by it. This plan shall clearly stipulate the command set-up and the line of command. A chief responsible and deputy shall always be present on the platform. The plan must expressly stipulate their abilities. The chief responsible must as far as possible have maritime experience. If not, he shall always have an assistant with sufficient maritime experience.

#### Section 24

The drilling platform shall be marked with the name of the platform and the name of the licensee.

The marking shall be effected in such a manner as to make identification easily possible from vessels as well as from aircraft. The marking shall be easily visible in daylight as well as at night.

#### Section 25

The drilling platform shall be equipped with approved lights, sound signals, shape and flag signals. Under special circumstances, the Ministry may decide that the platform shall be equipped with light and sound buoys round the platform, with lighthouse lanterns etc.

For the protection of air traffic the platform shall be equipped with approved warning lights.

Furthermore, all points on the platform which may endanger helicopter service shall be sufficiently marked.

#### Section 26

From sunset to sunrise a drilling platform shall be equipped with one or more white lights and placed so as to ensure that at least one light is visible upon approaching the platform from any direction. The lights shall be placed not more than thirty metres and not less than six metres above sea level and shall be visible - in dark nights with good visibility - at least ten nautical miles. The lights shall be equipped with synchronized devices rendering a flashing character according to Morse letter U approximately every fifteen seconds. The lenses of the lights must be constructed in such a manner as to ensure that the lights - in addition to being visible at the above-mentioned distance - are visible from any vessel being in the vicinity of the platform.

#### Section 27

A platform shall be equipped with one or more potent synchronized devices capable of emitting sound signals installed and constructed in such a manner as to be audible upon approaching the platform in any direction. The sound signals shall be placed not more than thirty metres and not less than six metres above sea level and shall be audible at a distance of at least two nautical miles in calm weather. The character shall be rhythmic blasts - two short and one long blast corresponding to Morse letter U approximately every thirty seconds.

The short blast shall last a minimum of 0.75 seconds. The sound signals shall be in operation when the visibility is less than two nautical miles.

#### Section 28

The drilling platform shall be equipped with an emergency system for light and sound devices which shall be switched on immediately if the ordinary equipment fails.

#### Section 29

The light and sound systems provided for in Sections 26-28 must be so constructed as to function without special attention in cases where the platform is evacuated for a shorter or longer period of time.

#### Section 30

The drilling platform shall be equipped with sufficient electric light to make work and stay onboard as safe as possible.

The drilling platform shall be equipped with sufficient emergency lights powered from an independent energy source.

The emergency lights shall be switched on immediately if the ordinary light fails.

Furthermore, flashlights of approved type shall be easily available at appropriate places.

The emergency lights and the flashlights shall be inspected with regular intervals. Note of the inspection shall be made in the log.

### Chapter IV

#### Drilling

#### Section 31

Drilling shall not be commenced until the Ministry's written consent hereto has been obtained, see Section 39 in Royal Decree of 9 April 1965 relating to exploration and exploitation of petroleum in the sea-bed and its subsoil on the Norwegian continental shelf.

Section 32

Before such consent as mentioned in Section 31 is granted, the applicant shall submit to the Ministry a drilling programme which, inter alia, shall contain the following information:

(a) The name of the drilling platform, together with a description of the construction and equipment of the platform, and information as to whether the drilling will be carried out by others than the licensee. If the platform has already been used with the Ministry's consent on the areas mentioned in Section 1, it is sufficient to give information about later changes in construction, installation and equipment etc.

(b) Information on the geographical position of the well.

(c) The estimated depth of the well.

(d) The geological strata which are assumed to be penetrated.

(e) Depth of the ocean at the well site.

(f) A programme for the installation of casing. The programme shall give the necessary details as to diameter, weight and dimensions of the casing, whether new or used casing is to be applied, at what depths the casing is intended to be installed, together with a cementing programme.

The said casing programme shall be in accordance with good oilfield practice. Necessary consideration shall, inter alia, be given to the possibility of unknown geological structures in the subsoil at the well site. Necessary consideration shall likewise be given to any pressure which may be anticipated in the well.

(g) Description of blowout preventers including auxiliary equipment which will be used during the drilling, with information as to make, type, necessary technical details and the manner in which they will be installed. The description shall likewise contain the necessary information as to pressure tests of the blowout preventers. Details must furthermore be given as to the manner and frequency of pressure tests to be taken during the period of drilling.

(h) Drilling fluid programme.

(i) Programmes for pressure tests and other measurements of the well.

(j) Coring programme.

(k) Testing programme for possible petroleum finds.

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Four copies of the safety instructions applicable to the platform and the work carried out whether issued by the licensee or a contractor, shall be enclosed unless these safety instructions previously have been submitted to the Ministry. Information as to changes in or amendments to safety instructions previously submitted must be given.

### Section 33

Major changes in the drilling programme must not be made without the consent of the Ministry.

In emergencies the said programme may be departed from without previous consent. The Ministry shall in such cases be notified forthwith of the alterations and of the underlying circumstances.

### Section 34

Prior to the placing of a drilling platform in position for drilling, the sea-bed shall be checked and other necessary safety precautions be taken in accordance with good oilfield practice with a view to ensuring that the platform will remain in place during operations.

The result of the examinations shall forthwith be transmitted to the Ministry.

The licensee must currently check during drilling that the conditions of the sea-bed at the places where the legs of the drilling platform are situated, are not materially changed. In case of floating platforms or ships the anchors shall likewise be regularly checked, i.e., by checking the tension of anchor-chains and cables.

### Section 35

The drilling platform must be placed at a safe distance from other installations for exploitation of petroleum, as well as from lighthouses, sea-buoys, telegraph and telephone cables, pipelines etc.

In areas mentioned in Section 1 where cables, pipelines and other underwater installations exist, anchoring, jacking-up of platforms and drilling cannot be commenced till the licensee has undertaken a thorough bottom survey, which has localized exactly the position of the underwater cable, pipeline and installation.

Without the expressed consent of the Ministry anchoring, jacking-up or drilling must not take place at a distance less than one nautical mile from cable, pipeline or installation and not less than two nautical miles from telephone or telegraph amplifier.

If damage is caused to the said cables, pipelines or installations, the licensee and the other persons and companies mentioned in Section 3 shall be liable to pay indemnity for the damage caused.

#### Section 36

The lower deck of the drilling platform must be at a safe distance above the sea level.

#### Section 37

As soon as the drilling platform has been placed in position, the Ministry shall be informed in writing about the exact geographical position of the platform.

#### Section 38

When circumstances so demand, the licensee shall provide for a standby vessel which shall be stationed at the platform during drilling operations. This standby vessel shall have sufficient capacity and equipment to take onboard and provide for the total crew of the platform in cases of emergency.

#### Section 39

On platforms where the derrick has been lowered, the derrick must not be raised until the drilling platform is properly placed on the sea-bed or properly anchored. Prior to the erection of the derrick, it must be thoroughly checked so that the derrick is in proper condition.

Erection or lowering of the derrick must be carried out only when weather and wind conditions render this safe, and as far as possible only by day. The required safety measures for protection of life and health shall be taken, including such measures as are mentioned in Sections 18 and 106 of this decree.

No other work must be carried out below or in the immediate vicinity of the derrick while this is being erected or lowered.

#### Section 40

The derrick with equipment such as winches, gin-poles and other rig equipment, together with wire ropes etc., shall be of a type approved by a recognized agency and be inspected at short intervals. These inspections shall be recorded in the daily log.

Wire ropes shall be replaced or cut as soon as they show signs of wear and tear, or in cases when this is rendered necessary by the amount of work in ton-kilometres performed by the wire.

#### Section 41

The derrick shall be equipped with necessary safety devices in order to avoid accidents.

Moving parts, such as chains, travelling blocks, gear, belts, shafts, couplings and clutches etc., shall as far as possible be properly shielded. The crown block shall be equipped with a safety device in order to prevent the wire from leaving the sheave.

All hooks must be equipped with safety latches.

When practical, the derrick shall be equipped with escape rope or similar devices installed in such a manner as to lead away from the derrick. The derrick floor shall have a sufficient number of emergency exits.

#### Section 42

The outgoing crew shall by the end of each shift inform the incoming crew of defects and damages on platform or equipment which have arisen or been detected during the shift and which have not been repaired. The incoming crew shall make certain that the equipment is in a safe condition.

A note shall be made in the daily log about substantial defects which are not immediately repaired.

#### Section 43

Special care must be taken in the loading, unloading, handling and racking of drill pipes and casing. Due precaution must be taken to prevent racked pipes and casing from rolling or shifting.

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#### Section 44

Prior to the opening of a well, the necessary safety devices for the proper control of the well must be present and easily available on the platform. The said devices shall be installed without delay, as the drilling makes it necessary in accordance with good oilfield practice.

During drilling of the well all necessary steps shall be taken to keep the well under full control against the presence of oil, gas, water etc., which may cause explosions, blowouts, pollutions or other destruction or accidents.

In case of explosions from blowouts etc. in the well, all necessary steps shall immediately be taken in accordance with good oilfield practice to re-establish safe working conditions and bring the well under control. In addition, all necessary measures must immediately be taken to repair, as far as possible, all damages sustained.

#### Section 45

Suitable measures must be taken during drilling so as to avoid as far as possible pollution and disturbance of the geological formations encountered.

#### Section 46

Each well must be equipped with surface casing according to good oilfield practice. The surface casing shall be placed at the depths dictated by the geological structures and with a view to securing complete control of the well at any time.

The surface casing shall be properly cemented over its full length. The cement shall be given sufficient time to cure prior the commencement of further drilling.

#### Section 47

Intermediate casing must be installed in such a manner and at such time as to ensure full control of the well at any time considering i.a. the geological structures of the subsoil, the danger of blowouts or other explosions, the protection of other resources in the subsoil, the danger of pollution of sea and air.



Intermediate casing must be properly cemented in conformity with good oilfield practice.

#### Section 48

The production casing shall be installed and cemented in a manner to isolate all hydrocarbon bearing zones.

#### Section 49

The casing mentioned in Sections 46-48 shall have such dimensions, diameter, weight and thickness and otherwise be designed and installed in such a manner as to withstand any anticipated pressure encountered in the well during drilling or production.

After casing has been installed and properly cemented it must be pressure tested according to good oilfield practice before drilling is resumed.

The installation of used casing is not allowed without proper testing of such casing in advance.

#### Section 50

Apart from drilling for opening the well, drilling must not be carried out before blowout preventers and their auxiliary equipment have been properly installed in accordance with good oilfield practice.

The blowout preventers shall have such construction and such capacity as to enable them, together with the casing installed and the drilling fluid, to fully control any pressure which may be anticipated in the well.

The blowout preventers shall be equipped with hydraulic controls operated with manual remote control from the derrick floor within easy reach of the driller. The blowout preventers shall furthermore be equipped with an extra remote control which may be operated independently and placed at a safe distance so as to be easily and quickly reached in the event the controls at the derrick floor cannot be reached or fails to function.

The controls shall plainly indicate whether the blowout preventers are open or closed.

Blowout preventers of a sufficient capacity and in a sufficient number must be installed according to good oilfield practice. After the surface casing has been set, a minimum of one bag type preventer, one blind ram type preventer and one pipe ram preventer must be used. The accumulator system required for the operation,

of the hydraulic system of the blowout preventers shall be of sufficient capacity to operate against maximum pressure conditions to be expected on well head during drilling.

#### Section 51

In addition to the blowout prevention equipment mentioned in the preceding sections, the necessary additional blowout prevention equipment, including a kelly cock and an automatic inside blowout preventer valve (backpressure type) shall be at hand on the platform in accordance with good oilfield practice.

#### Section 52

During drilling, installation and cementing of casing, the blowout prevention equipment shall be pressure tested and operated at regular intervals. Operations of the BOPs shall be carried out as frequently as necessary and at least once per twenty-four hours and at least each time the drill pipe and bit are removed from the well. The BOPs shall be pressure tested at regular intervals according to good oilfield practice.

A note shall be made in the daily log concerning such testing.

#### Section 53

During drilling, drilling fluid of the proper density shall be kept circulating at all times in the well, in accordance with good oilfield practice. It shall ordinarily be filtered and constantly checked against undesirable elements including gases or liquids which may cause explosions or fire. The drilling fluid shall be of the proper consistency and weight considering the geological conditions and other circumstances at the well site. Proper care must be taken in applying drilling fluid so as to avoid pollution of the sea.

Shale shaker and active drilling fluid tanks shall be provided with suitable and adequate means to remove combustible vapours to a safe location. Areas where the shale shakers and drilling fluid tanks are located, shall regularly be tested with gas detectors or explosion meters against explosive gases. The drilling fluid tanks shall be equipped with mud pit level indicators. The indicator shall be so constructed as to make it possible to read the mud pit level directly on the control panel at the driller's stand.

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#### Section 54

Drilling which deviates from the vertical line drawn from the centre of the well head shall not be allowed without the written consent of the Ministry. However, such consent is not required for unintentional deviations over shorter distances, deviations to straighten out a well or to overcome difficulties encountered during drilling. The well shall be checked to ensure that it does not deviate substantially from the vertical line.

The written consent of the Ministry is required in cases of drilling multiple holes from the same location.

#### Section 55

Gas detectors or explosion meters shall be readily available on the platform.

The platform shall likewise be provided with a sufficient number of apparatus for full breathing protection.

If sulphureous or other poisonous gases are encountered during drilling, all necessary safety measures shall be taken for preventing accidents. The Ministry shall be notified forthwith.

#### Section 56

In connexion with swabbing, drill stem testing, shooting, hydraulic fracturing or chemical treatment of a well, all necessary safety measures must be taken. Preferably such activities must take place by daylight and only when wind and weather conditions render it advisable.

The work must be performed with a view to preventing damage to the well or the penetration of salt water or other alien matter into the well.

Details of the activities mentioned in the first paragraph, together with information on the result achieved, shall be included in the report to the Ministry mentioned in Section 70.

#### Section 57

Prior to the commencement of the activities mentioned in Section 56, the drilling platform shall be cleared of all unnecessary obstructions. Only the personnel necessary for the operation shall be on deck. All necessary precautions against fire shall be taken. The firefighting equipment shall be ready for immediate use.

After termination of the activities mentioned in Section 56, the well and drilling platform shall immediately be cleaned.

#### Section 58

During acidizing operations the personnel who may come in contact with acid shall be provided with protective clothing including hoods, gloves and boots.

Acid containers must be handled with care and shall during transport and use be properly secured so as to prevent movement, breakage or the inflicting of damage to the surroundings.

A sufficient amount of neutralizing material shall be easily available for neutralizing any spillage of acid.

#### Section 59

If coal or other natural resources are encountered during drilling, the Ministry shall within a reasonable time be informed about the nature and extent of such deposits. All necessary precautions must be taken to preserve exploitable deposits. The Ministry may issue instructions for the preservation of the discoveries.

#### Section 60

During drilling operations the necessary logs must be taken according to good oilfield practice. Such logs together with any analysis made thereof shall without delay be forwarded to the Ministry.

The Ministry shall receive a composite log of the well within six months after the completion of a well. Within the same time limit a final report concerning the well shall be transmitted to the Ministry.

#### Section 61

The finding of any petroleum deposits shall promptly be reported to the Ministry.

Within a reasonable time, complete information relating to the nature of the deposits and what further steps have been taken to determine the extent of the deposits and the results thereof, shall be submitted in writing to the Ministry.

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Furthermore, information shall be given as to whether the deposits are considered commercially exploitable. When the plan for exploitation is complete, it shall likewise be furnished to the Ministry.

#### Section 62

Wells where petroleum finds have been made shall be secured in a proper manner according to good oilfield practice, so as to facilitate production, protect the well against penetration of water or other alien matter into the well, to prevent the escape of petroleum from the well, and to protect the sea and air against pollution.

#### Section 63

The Ministry shall be informed at least twenty-four hours in advance of discontinuation of extended duration and resumption of drilling operations.

## Chapter V

### Abandonment of wells

#### Section 64

The Ministry shall be informed at least 24 hours in advance of the abandonment of a well. The statement shall contain information as to the reasons why the well will be abandoned. In addition, a plan shall be submitted for the pugging, securing and abandonment.

The Ministry may stipulate a time limit within which each installation in or above the well shall be removed.

#### Section 65

When a well is abandoned, casings and cementing in the well must not be removed or destroyed except as provided in Section 67 without the written consent of the Ministry.

#### Section 66

An abandoned well shall be plugged - in accordance with good oilfield practice - with top cement plugs and with additional cement plugs in such a number, with such length and at such a distance between the individual plugs as is required in order to maintain complete control of the well and prevent the escape of petroleum from the well or penetration of salt water or other alien matter into the well.

The well, including the interval between the cement plugs, shall be filled with drilling fluid or other fluid of sufficient density to safely withstand, together with the plugs, any pressure which may develop within the well.

#### Section 67

When a well is abandoned, parts of casing and other installations protruding from the seabed must - except as provided in Section 64-66 - be removed to such a depth that no obstruction remains which may cause danger or impediment to fishing or shipping. Before final abandonment of the well, the licensee must make sure that on the seabed and on the surface of or in the vicinity of the well head no

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obstruction remains which result from his activity and which may cause damage or impediment to fishing, shipping or other activities.

## Chapter VI

### Reports, samples etc., relating to drilling, finds and abandonment of the well

#### Section 68

While drilling is in progress, the licensee shall keep a daily log of the drilling operations on a form approved by the Ministry. Such log shall be made at least in duplicate. One copy shall be filed at the licensee's office in Norway. The other copy shall at all times be retained at the platform and there be available for inspectors appointed by the Ministry.

#### Section 69

The daily log shall contain data on all operations during the day. Such information shall include:

- (a) Depth of the well at the beginning of the day.
- (b) Depth of the well at the end of the day.
- (c) Diameter of the well.
- (d) The geological formations encountered.
- (e) Characteristics of drilling fluid used.
- (f) Installation of casings.
- (g) If casings are installed, all relevant data concerning the installation, indicating the diameter, wall thickness, type, quality, weight and length, together with information whether new or used casings are employed and to what depth the casings have been installed.
- (h) Particulars concerning cementing.
- (i) Water, oil, gas etc., encountered.
- (j) Details concerning well logs.
- (k) Deviation tests, formation tests, pressure tests, temperature measurements in the well as well as other tests undertaken.
- (l) Any other operations carried out, such as fishing up of broken drill pipes from the well, shooting, perforating, fracturing or acidizing of wells, completion and abandonment of the well etc.

(m) When the Ministry so decides, what steps are taken to protect underwater tele-cables in the area.

The daily log shall further contain information about accidents, damages, injuries and other occurrences and other information which may be deemed to be of current or future interest to the authorities.

The Ministry may require further information concerning the activities carried out.

#### Section 70

As long as drilling operations are carried out in the areas mentioned in Section 1 and the well has not been completed or abandoned according to prevailing rules and regulations, the licensee shall transmit to the Ministry a weekly report of the activities. The report shall contain the information mentioned in Section 69 with regard to the week in question. This report shall be in the possession of the Ministry within the expiry of the following week.

#### Section 71

The licensee shall, when drilling is in progress, take samples from the drilling fluid of all rock types in all the geological formations penetrated.

When drilling is carried out in geological formation which may be of interest from petroleum point of view, such samples shall be taken at frequent intervals. In these instances the intervals ordinarily shall not exceed 10 meters.

All samples taken shall be washed, dried and preserved in bags suited for the purpose. They shall be labelled with the name of the well and contain information on the date and depth of taking. The samples or parts thereof shall within 3 months after the completion or abandonment of the well be dispatched - at the expense of the licensee - to Norges geologiske undersøkelse (The Geological Survey of Norway).

Geologists of the Ministry and of the Institute shall at any time have access to the samples.

#### Section 72

The licensee shall, when it is deemed necessary, take and keep cores of the various geological formations penetrated. Within three months of the termination of the drilling, the licensee shall dispatch, at his own expense, complete longitudinal



sections of each core to Norges geologiske undersøkelse. The longitudinal section shall contain not less than one fourth of the core. The Ministry shall receive copies of descriptions and analysis made of the core.

## Chapter VII

### Electrical installations

#### Section 73

Electrical installations and electrical equipment of any nature shall be constructed, installed and maintained in such a manner as to prevent, as far as possible, danger of accidents, fires, explosions etc.

#### Section 74

During activity in the areas mentioned in Section 1 of this decree, the licensee and any other person mentioned in Section 3 shall comply with the electrical regulations for drilling platforms in force at any time.

The electrical installations, and equipment including generators, wires etc. must at any time conform to regulations in force.

#### Section 75

The drilling platform shall, for the purpose of electrical installations, be classified in danger areas. More detailed regulations relating to this classification as well as regulations relating to electrical installations within each danger area may be issued by the Ministry or anyone authorized by it.

#### Section 76

The generators, diesel engines etc. shall be placed at such distance from the derrick as to prevent, as far as possible, penetration into the generator room of inflammable gases etc. Generators, other principal electrical installations and diesel engines etc. shall be placed in compartments constructed of fire proof materials.

The equipment shall be adequately powered to develop sufficient energy for carrying out the drilling in a satisfactory manner. Regard shall be had to increased demand for power due to unforeseen circumstances.

#### Section 77

Electrical installations shall be effectively earthed in accordance with the regulations in force.

All plants, machinery, derrick and other installations of steel, including containers for oil, gas etc., which may accumulate static electricity, shall likewise be earthed in conformity with the regulations in force.

#### Section 78

All electrical installations shall be protected in such a manner as to prevent higher voltage than prescribed, from being introduced into the wiring system.

#### Section 79

Electrical installations and wiring must be provided with adequate protection against the penetration of water, humidity etc. Special care must be taken where out-door installations and wiring are concerned.

#### Section 80

Electrical installations serving light- and sound-signals, blowout preventers, firefighting equipment etc. shall, when necessary, be equipped with a reserve wiring system which shall be routed and which shall work independently of the main system.

#### Section 81

Portable electrical equipment and lights used in danger areas on the platform shall be of explosion proof construction. Only flashlights of an approved type shall be used on the platform.

#### Section 82

The drilling platform shall be equipped with a main switch for all electrical installations in danger areas. Such main switch shall be installed in a place

easily accessible and outside danger areas. The main switch shall also be equipped with remote control from the control panel of the driller.

### Section 83

A qualified electrician - approved by the Ministry or any one authorized by it - shall always be available on the platform. Only qualified electricians may carry out the following work on board:

- (a) Installation and maintenance of electrical equipment and circuits.
- (b) Necessary examinations and testing of electrical equipment and wiring including inspection that the earthing system is in order and that the electrical code in general is complied with.

The qualified electrician shall take care that electrical installations at all times are in conformity with the regulations in force.

## Chapter VIII

### Prevention of fire

#### Section 84

During activities in those areas mentioned in Section 1 of this decree, the regulations concerning the prevention of fire on drilling platform in force at any time must be complied with.

Sufficient care must be taken in connection with all activities which may cause fire. Special care must be shown in the handling and storing of inflammable equipment and material such as explosives, inflammable liquids and gases, materials which are known to cause self ignition etc.

#### Section 85

On each platform there shall be appointed a person who shall have the daily responsibility for the firefighting services on board both with regard to the steps to be taken to prevent fire, as well as the steps to be taken if a fire should occur. Furthermore, a firefighting squad shall be organized consisting of a sufficient number of the personnel. This squad shall receive special training in fighting fires and explosions with the firefighting equipment at hand.

A firefighting plan shall be elaborated advising each employee of his place and task in case of fires. Regard must be had to the shift plans. On each shift a firefighting leader shall be appointed.

The personnel shall be acquainted with this firefighting plan which shall be made public on a conspicuous place on the platform.

Fire drills must be held regularly for the firefighting squad and the rest of the personnel.

A note shall be made in the daily log concerning fire drills held and checks made on the firefighting equipment.

#### Section 86

The platform with installations and equipment shall, as far as possible, be of a fireproof construction.

The drilling platform shall be equipped with firefighting equipment of such type and in such number that effective firefighting operations are made possible. The equipment shall be installed in proper places and always ready for immediate use.

The fire pumps and their prime movers shall be constructed and placed in such a manner that sufficient pressure will be maintained in the fire hoses irrespective of the place on the platform where a fire might occur.

The engine room of the platform shall be equipped with a permanent main firefighting installation or other firefighting equipment deemed satisfactory by the Ministry or any one authorized by it.

#### Section 87

In addition to the equipment mentioned in Section 86, the platform shall be equipped with a sufficient number of approved mobile fire-extinguishers. These shall be placed easily accessible in strategic positions on the platform and shall always be ready for use.

A sufficient quantity of refill material for the fire-extinguishers shall be available at the platform at all times.

#### Section 88

Adequate procedures shall be established on each platform to assure immediate detection and alarm of a fire.

Furthermore, the platform must be equipped with a fire warning system which can easily be heard all over the platform.

#### Section 89

Use of naked light, fire or working operations causing flying sparks are permitted only where such activities may occur without creating danger of fire or explosions. The permission of the person responsible for the firefighting onboard must be obtained in each case in advance.

Smoking is permitted in the living quarters of the platform. Otherwise, smoking shall be permitted only in such areas and at such times where no danger is caused thereby. The person in charge of the platform shall decide on these questions.

Prohibition against smoking shall immediately be announced by a sufficient number of signs in Norwegian and the foreign language concerned in the place to which the prohibition applies.

#### Section 90

Welding and metalcutting by gas or electricity shall be carried out in a safe manner and in accordance with the rules and regulations in force at any time. Permission must be obtained in advance from the person responsible for the firefighting on the platform. All necessary precautions must be taken during the performance of such work. The person responsible for the firefighting shall ensure especially that:

- (a) The welding and cutting equipment are in full order.
- (b) The place where welding and cutting to be performed is free of gas and that no inflammable material of any kind is as far as possible present in the vicinity. Inflammable material which can not be removed must be sufficiently protected.
- (c) Firefighting personnel and sufficient firefighting equipment must be at hand.

After the completion of the work the working place shall be thoroughly checked so as to prevent that sparks or glow may cause fire.

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## Chapter IX

### Storage and use of explosives

#### Section 91

During transportation, storage and use of explosives, the safety regulations in force at any time shall be complied with.

#### Section 92

On a drilling platform only approved types of explosives, including detonator and booster, shall be used. The explosives shall be of such a type as to render them harmless by the effect of being in sea-water for a period of 24 hours at the maximum. Perforating charges and charges used for casing cutting are not included in the foregoing requirement.

#### Section 93

Explosives shall be kept on board only during periods reasonably prior to their use, and only in such quantities as are required for the expected use.

#### Section 94

Explosives shall be stored in magazines which are specially approved for this purpose. Detonator, booster and explosives must be kept separate.

The magazines shall be so placed and constructed as to facilitate the throwing overboard of explosives in cases of emergencies.

#### Section 95

The transportation of explosives to and from the platform as well as loading and unloading, must be undertaken with the utmost care. The explosives must not be exposed to sunshine, rain, humidity, frost, etc.

#### Section 96

Explosives must be used by qualified persons only. Blastings must not be carried out under unfavourable weather conditions such as thunder and lightning storms etc.

Blastings shall, as far as possible, be carried out only during daylight.

### Section 97

All necessary safety precautions must be taken while blastings are carried out.

Radio equipment and other equipment which may endanger blasting activities must not be used while blasting is carried out. Radio silence shall also be observed on ships and helicopters which are not at a safe distance from the platform considering the type and strength of the radio equipment.

Other activities involving similar risk are likewise prohibited. The landing and take-off of helicopters and mooring of vessels are likewise prohibited during this period. The provisions contained in Section 57 relating to safety measures apply correspondingly.

## Chapter X

### Perforating

#### Section 98

Perforating operations must be carried out in accordance with good oilfield practice and the rules and regulations in force at any time.

#### Section 99

All personnel except those required to perform the perforating work shall be kept away from the derrick floor and from the areas under the derrick floor, while the work is performed.

#### Section 100

During perforation word all necessary precautions must be taken including those prescribed in Section 57.

Extreme caution should be exercised to prevent premature firing. The provisions contained in Section 97 apply correspondingly.

#### Section 101

Ammunition for the perforating gun should be stored in metal containers properly earthed.

The provisions contained in Section 94 apply correspondingly so far as practical.

## Chapter XI

### Telecommunications

#### Section 102

The drilling platform shall be equipped with radio communications according to the rules and regulations in force.

Before any platform is put into operation in the areas mentioned in Section 1, the above mentioned installation shall be approved by the Ministry or any one authorized by it.

Inspection of the above-mentioned radio communication equipment shall be made whenever it is deemed necessary by the Ministry or any one authorized by it.

#### Section 103

The radio communication equipment mentioned in Section 102 shall be installed in adequate rooms for that purpose and shall be permanently installed so as to prevent it from being damaged or displaced by sudden movements of the platform.

#### Section 104

The radio installation shall only operate on approved frequencies and with approved power and in compliance with the conditions laid down in the radio communication licence issued for the said installation. It must be maintained and operated in accordance with the international conventions in force to which Norway is a party and in accordance with Norwegian laws and regulations.

Broadcasting (sound and television) from the platform is prohibited.

#### Section 105

The radio installations shall be operated by radio operator holding an approved certificate in accordance with prevailing rules and regulations.

#### Section 106

During operations whereby the platform is lifted or lowered, see Section 18, and during other operations and manoeuvres creating special danger such as landing

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and take-off of helicopters, mooring of vessels etc., the radio station shall be ready for use and manned with a radio operator.

#### Section 107

The radio installations mentioned in Section 102 shall cover the necessary connexions with approved fixed stations on land, ships, helicopters and other drilling platforms in the area.

The platform shall likewise be equipped with sufficient number of survival craft stations of an approved type for lifeboats and other survival craft.

### Chapter XII

#### Communications

##### Section 108

The platform shall have at its disposal a system of communications consisting of ships and helicopters sufficient for good and safe operation and maintenance of the platform.

The system must be fully sufficient to meet any emergency which may occur. Special consideration must be paid to life, health and welfare of the crew of the platform.

##### Section 109

Before a platform is put into operation in the areas mentioned in Section 1, the licensee shall submit to the Ministry a plan covering the communication system mentioned in Section 108. The platform shall not be put into operations until this system has been approved by the Ministry.

##### Section 110

The drilling platform shall be constructed in such a manner as to permit the transfer of persons and goods to and from the platform without creating unreasonable danger or risks to human lives, platform, vessel or goods.

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Vessels must not moor, be moored or remain alongside the platform when wind and weather conditions create dangers for the vessel or the platform.

The drilling platform shall be equipped with properly constructed and maintained fender systems, buoys systems or similar mooring devices offering safe transfer of persons and goods to or from the platform without creating hazards for platform, vessel, persons or goods. Alternate possibilities should exist for such mooring and transfer of persons and goods.

#### Section 111

Ships used for transport to and from the platform shall be constructed, equipped, manned and maintained in accordance with the rules and regulations in force at any time.

#### Section 112

The drilling platform to be used in the areas mentioned in Section 1, shall be equipped with an approved helicopterdeck.

The drilling platform shall be constructed in such a manner as to secure an unobstructed flight path for landing on and take-off from the helicopterdeck.

The drilling platform must be equipped with the installations and equipment which is deemed necessary for good and safe operations of helicopters to and from the platform in accordance with the rules and regulations in force at any time.

#### Section 113

Helicopters used for transport to and from the platform shall be constructed, equipped, manned and maintained in accordance with the rules and regulations in force.

The helicopters shall be of such type and have such capacity as to be able to serve the platform in a safe and satisfactory manner. The helicopters shall be constructed in such a manner or otherwise be equipped with such devices that they are able to land on the sea. The helicopters shall carry lifesaving equipment, life saving winch, firefighting equipment, first aid equipment and navigation and communication equipment in accordance with the rules and regulations in force and the approved flight manual.

Licence is required for helicopter service to and from the platform.

## Chapter XIII

### Use of radioactive equipment

#### Section 114

Due care must be shown in the transport, storage, handling and use of radioactive material and equipment in order to avoid harmful effects to human life and health or other organic life in compliance with the international and Norwegian rules and regulations in force at any time.

Special care must be shown to avoid harmful effects to marine life.

#### Section 115

In sufficient time before radioactive equipment is put into use, the licensee is obliged to submit for approval to the Ministry or any one authorized by it a complete plan for the transport, storage and use thereof. The plan shall contain a description of the safety measures to be taken.

#### Section 116

The personnel to be occupied with the transport, storage, handling and use of the radioactive equipment, shall be specially trained for this task. The number of persons participating in this work or persons who otherwise may be exposed to the danger of radioactive rays, shall be reduced to a minimum.

All necessary precautionary measures must be taken to avoid harmful effects to the persons mentioned above and for the rest of the personnel on board.

Personnel engaged in the transport, storage, handling and use of radioactive material shall regularly be submitted to medical control and always undergo medical examination before being appointed to such work.

#### Section 117

Radioactive material and equipment with containers shall always be properly marked advising about the danger of radioactive rays. Storage rooms on board the platform and during transport shall be marked in a similar manner,

When not in use, radioactive material and equipment shall be kept in locked rooms. All other necessary measures shall be taken to avoid that such equipment may be lost or misplaced.

Radioactive material and equipment shall only be kept on board the platform during periods immediately prior to their use and only in such quantities as required for the immediate use.

#### Section 118

If radioactive material and equipment are misplaced or lost, the licensee shall immediately notify the Ministry or any one authorized by it.

Radioactive waste or packing material which has contained radioactive material, shall be disposed of in a safe and approved manner in accordance with the rules and regulations in force at any time. Such waste or material must in no event be thrown overboard.

### Chapter XIV

#### Miscellaneous

##### Section 119

For such activities as mentioned in Section 1 in this decree, the rules and regulations in force at any time for the protection of the workers on board the drilling platform shall apply.

##### Section 120

The licensee, contractors and any other person working on board shall at all times take the necessary precautions to avoid accidents.

##### Section 121

The employees shall be equipped with safety helmets, safety boots, safety belts and other safety equipment which they are obliged to use when working conditions so require.

##### Section 122

No one shall be in areas where there is lack of oxygen or pollution of the air by inflammable or poisonous gases or by other obnoxious vapours or dust in

such quantities as to endanger human life or health without being equipped with the necessary breathing apparatus.

#### Section 123

Before diving operations are commenced, a work plan shall be submitted for approval to the Ministry or any one authorized by it. The plan shall contain details concerning the equipment to be used in the diving operation, the manner in which the diving operations will be carried out and details with regard to what safety precautions have been taken to protect the life and health of the diver.

If the diver is not equipped with approved Norwegian Diver Certificate, permission must be obtained in advance from the Ministry or any one authorized by it for the diver or divers involved.

Diving operations must be carried out in a safe manner according to the rules and regulations in force at any time.

#### Section 124

Outdoor working areas shall if possible be screened and heated in safe manner during the winter season or when otherwise weather conditions so require.

#### Section 125

Working areas shall at all times be kept as clean and free from hindrances and impediments as possible. Possible hindrances, protruding points, low ceilings etc. shall be properly marked.

The drilling platform shall as far as possible be cleared of oil spillages, ice, snow, etc.

The living quarters shall at all times be properly cleared and kept in good order. The quarters shall have sufficient equipment and light to ensure the health and comfort of the personnel. The living quarters shall be properly ventilated and heated. The ventilation system shall be so constructed as to prevent the penetration of poisonous or obnoxious gases, dust, etc. through the system into the quarters. The ventilation system shall be equipped with main switches for immediate cutting off of system in case of danger of gases etc.

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#### Section 126

The drilling platform shall as far as possible be equipped with a sick-bay (hospital room) with adequate facilities to care for the sick and injured. The platform shall have available complete first aid equipment in accordance with the rules and regulations in force at any time. The first aid equipment shall be sufficient to give at any time satisfactory aid on board and during transport ashore in connexion with any foreseeable accident or disease. The first aid equipment shall be available on immediate notice.

The platform shall be provided with resuscitating equipment which likewise shall be immediately available at all times.

On each shift at least one member of the personnel must have passed an approved first aid course.

A maximum number of the personnel shall be taught an approved method of artificial respiration.

Before drilling operations are started, arrangement shall be made with a medical association or a doctor to ensure that a doctor is available at all times for transport to the platform at the shortest possible notice to render medical aid on board in case it is not deemed advisable to move a sick or injured person.

#### Section 127

If a disease is discovered on the platform which may be of a contagious nature or otherwise be a risk to the health of the personnel or others, a Norwegian medical doctor shall be called to the platform without undue delay.

If fatalities and serious injuries to the personnel or to others occur, they shall immediately be notified to the Ministry or any one authorized by it. In addition an ordinary sickreport shall be forwarded in connexion with all accidents or diseases caused by the activities on board and which result in disabilities of more than three days of the above mentioned persons.

### Chapter XV

#### Final provisions

#### Section 128

By violations of the provisions of this decree or of the provisions contained in regulations issued pursuant to this decree, the provisions contained in

Sections 45 and 48 of the Royal Decree of 9th April, 1965 concerning exploration for and exploitation of petroleum deposits in the seabed or its subsoil apply correspondingly.

Section 129

Willful or gross negligent violations of the provisions of this decree or of the provisions contained in regulations issued pursuant to this decree are punishable according to the applicable law in force.

Section 130

This decree enters into force immediately.

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