EXHIBIT/P-00044

Offshore Area Petroleum Geophysical Operations Newfoundland and Labrador Regulations, N.L.R. 16/97

NEWFOUNDLAND AND LABRADOR REGULATION 16/97

Offshore Area Petroleum Geophysical Operations Newfoundland and Labrador Regulations
under the
Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act
(O.C. 96-438)

Amended by:

2001 c42 s45

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(O.C. 96-438)

16/97; 2001 c42 s45

(Filed February 12, 1997)

Under the authority of section 145 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act* , the Lieutenant-Governor in Council makes the following regulations.

16/97; 2001 c42 s45

Dated at St. John's , April 26, 1996 .

A. Faour
Deputy Clerk of the Executive Council

REGULATIONS

Analysis

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Short title

1. These regulations may be cited as the *Offshore Area Petroleum Geophysical Operations Newfoundland and Labrador Regulations* .

16/97 s1; 2001 c42 s45

Definitions

2. In these regulations

(a) "Act" means the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act* ;

(b) "complement", in respect of a vessel or platform from which a geophysical operation is conducted, means all persons on the vessel or platform whose primary duties relate to the operation of the vessel or platform;

(c) "explosive" has the same meaning as in section 2 of the *Explosives Act* ;

(d) "geophysical crew" means all persons engaged in a geophysical operation, but does not include a member of the complement;

(e) "geophysical operation" means the measurement or investigation, by indirect methods, of the subsurface of the earth for the purpose of locating petroleum or of determining the nature of the seabed and subsurface conditions at a proposed drilling site or of a proposed pipeline route, and includes a seismic survey, resistivity survey, gravimetric survey, magnetic survey, electrical survey and geochemical survey and work preparatory to that measurement or investigation, such as field tests of energy sources, calibration of instruments and cable ballasting, but does not include a velocity survey or a vertical seismic survey that is not a walkaway vertical seismic survey;

(f) "geophysical operation authorization" means an authorization issued by the board under paragraph 134(1)(b) of the Act to conduct a geophysical operation;

(g) "gravimetric survey" means a geophysical operation that measures the properties of the earth's gravitational field;

(h) "interest" has the same meaning as in section 47 of the Act;

(i) "magnetic survey" means a geophysical operation that measures the properties of the earth's magnetic field;

(j) "non-exclusive survey" means a geophysical operation that is conducted to acquire data for the purpose of sale, in whole or in part, to the public;

(k) "operator" means a person who holds a geophysical operation authorization;

(l) "participant" means a person who is a party to an agreement under which a participation survey is conducted;

(m) "participation survey" means a geophysical operation that is conducted by an operator under an agreement between the operator and one or more participants to acquire data that are to be shared among the participants;

(n) "seismic energy source" means an energy source that is used to generate acoustic waves in a seismic survey;

(o) "seismic survey" means a geophysical operation that uses a seismic energy source to generate acoustic waves that propagate through the earth, are reflected from or refracted along subsurface layers of the earth, and are subsequently recorded; and

(p) "shotpoint" means the surface location of a seismic energy source.

16/97 s2; 2001 c42 s45

PART I
GENERAL

Geophysical operation authorization

3. A person may apply for a geophysical operation authorization by submitting to the chief conservation officer 3 copies of a completed application form.

16/97 s3

Submission of application

4. Subject to section 5, an application in respect of a geophysical operation shall be submitted not less than

(a) 30 days before the planned commencement date of the operation, if chemical explosives are not the proposed seismic energy source; and

(b) 90 days before the planned commencement date of the operation, if chemical explosives are the proposed seismic energy source.

16/97 s4

Application re extension or modification of operation

5. (1) An application to extend the duration for which a geophysical operation has been authorized shall be submitted at least 15 days before the end of the period being extended or, where the commencement date is being modified, the planned new commencement date.

(2) An application in respect of a modification of a geophysical operation that has been authorized, other than a modification of its duration, shall be submitted at least 15 days before the commencement of the geophysical operation or, where the geophysical operation has commenced, the start of the geophysical operation as modified.

16/97 s5

Notification

6. When a geophysical operation is commenced, terminated or cancelled by an operator, the operator shall immediately notify the chief conservation officer in writing of the date of commencement, termination or cancellation.

16/97 s6

Authorization to be posted

7. An operator shall post a copy of the geophysical operation authorization in a conspicuous location in the vessel, platform or aircraft from which the geophysical operation is conducted.

16/97 s7

Damage to property

8. An operator shall take all reasonable safeguards against damage to property as a result of the geophysical operation.

16/97 s8

Fire

9. Where a fire occurs as a result of a geophysical operation, an operator shall take all safe and reasonable measures to control and extinguish the fire and to minimize the danger to persons, property or the environment that results or may reasonably be expected to result from the fire.

16/97 s9

Refuse

10. Subject to another applicable law, an operator shall ensure that all refuse produced as a result of a geophysical operation is handled in the following manner:

(a) all fuel, oil, oily material or lubricants are collected in a closed system that is designed for that purpose;

(b) all oil or oily material that is not burned on a vessel or platform and all non-combustible material is transported in a suitable container to, and disposed of at, a suitable waste disposal facility on land; and

(c) where combustible material is burned on a vessel or platform, precautions are taken to ensure that the fire does not endanger a person or the safety of the vessel or platform.

16/97 s10

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PART II
GEOPHYSICAL OPERATIONS

Air gun system

11. Where an operator who is conducting a geophysical operation uses or intends to use an air gun as a seismic energy source, the operator shall ensure that

(a) all air gun components are maintained in good operating condition and are kept free from dirt, oil and excess grease;

(b) during the operation, the air vessels, air manifolds, air lines, electrical lines and the compressor of the air gun system are regularly inspected for signs of abrasion and wear, and that the compressor, where defective, and defective air vessels are promptly repaired or replaced and defective manifolds or lines are promptly replaced;

(c) all fittings, valves, hoses, electrical lines, pipes or other components used for an air gun comply with the manufacturer's specifications for that air gun;

(d) where there is air pressure in the air gun, the pressure is maintained as low as is practicable but sufficiently high to ensure that the air gun remains seated and that there is no danger of accidental firing;

(e) no maintenance of the air gun is carried out until

(i) the air pressure in the air gun and the air line connected to the air gun has been completely bled off, and

(ii) the shuttle of the air gun can be moved freely by use of a wooden safety tool to confirm that the air gun has been completely depressurized; and

(f) where more than one air gun is used as a seismic energy source, a procedure is established and followed for the connection of each air gun to its air line and pressure control valve.

16/97 s11

Air gun testing

12. (1) Where an air gun is test-fired on the deck of a vessel or platform during a geophysical operation, the operator shall ensure that the person who is responsible for the operation and maintenance of the air gun is present during the test.

(2) Where a test referred to in subsection (1) is carried out, the responsible person referred to in that subsection shall ensure that

(a) before the test-firing, a siren is sounded to alert all persons aboard the vessel or platform of an impending air gun test-firing operation, in time to allow evacuation of an area within an 8 metre radius of the test-firing site;

(b) not more than one air gun is test-fired at one time;

(c) before the test-firing, an inspection is done to ensure that the area within an 8 metre radius of the test-firing site is clear of unauthorized persons;

(d) all pipes and hoses connected to the air gun that are subject to high pressure are secured or equipped with safety chains to prevent whipping of the pipes or hoses when air pressure is injected into them;

(e) the air pressure in the air gun is below 500 psi; and

(f) the person in charge of the vessel or platform is advised that the test is being carried out.

(3) During a geophysical operation, an air gun shall not be test-fired while the air gun is in the water if there are divers within 1,500 metres of the air gun.

(4) During a geophysical operation, an air gun shall not be test-fired on a vessel or platform without the approval of the chief safety officer.

16/97 s12

Gas exploders

13. Where an operator who is conducting a geophysical operation uses or intends to use a gas exploder as a seismic energy source, the operator shall ensure that

(a) no person smokes, welds or brazes in an area that is in close proximity to gas cylinders or inflammable liquid tanks;

(b) gas storage areas are properly ventilated;

(c) all valves and fittings used on a gas cylinder are approved by the manufacturer of the cylinder for use on the cylinder;

(d) all equipment used for handling explosives is approved by the manufacturer of the equipment for the handling of explosives;

(e) every gas cylinder and inflammable liquid tank is stored in an area set aside for that purpose and signs warning of the hazard of explosion are posted in conspicuous locations in that area;

(f) every propane or butane cylinder is stored at the greatest possible distance from an oxygen cylinder or inflammable liquid tank; and

(g) every gas cylinder is protected from overheating.

16/97 s13

Electrical seismic energy sources

14. Where an operator who is conducting a geophysical operation uses or intends to use an electrical seismic energy source, the operator shall ensure that

(a) the charging and discharging circuits of the electrical seismic energy source are equipped with circuit breakers;

(b) the electrical cables of the electrical seismic energy source are protected from damage and are adequately insulated and grounded to prevent current leakage and electrical shock; and

(c) the electrical seismic energy source, when tested, is fully immersed in water.

16/97 s14

Helicopter support

15. Where a helicopter is used in a geophysical operation, the operator shall ensure that

(a) the helicopter deck on the vessel or platform from which the operation is conducted is designed, constructed and operated in accordance with the *Guidelines Respecting Helicopter Facilities on Ships* , TP 4414, published in December 1986 by the Canadian Coast Guard, as amended; and

(b) an immersion suit that complies with the Canadian General Standards Board Standard CAN/CGSB-65.17-M88, *Helicopter Passenger Transportation Suit System* , published in January 1988, as amended, is worn by every member of the geophysical crew who is on a flight to or from the vessel or platform from which the operation is conducted.

16/97 s15

PART III
OCCUPATIONAL SAFETY AND HEALTH

Radio communication

16. An operator who is conducting a geophysical operation shall ensure that radio communication is maintained with all vessels and platforms in the vicinity of the operation and with a shore-based station.

16/97 s16

Safe working practices

17. An operator shall ensure that all equipment and materials that are used during a geophysical operation are handled, operated and maintained in accordance with the manufacturers' specifications.

16/97 s17

Crew safety requirements

18. An operator who is conducting a geophysical operation shall ensure that every member of the geophysical crew

(a) wears a suitable personal flotation device at all times when the member is working on deck;

(b) is equipped with a safety belt and a safety line whenever the member is positioned or working near the cable reel or working on the back deck during periods when there is a possibility of the member falling or being thrown or swept overboard;

(c) does not work alone on the back deck; and

(d) wears high visibility clothing.

16/97 s18

Evacuation route

19. An operator who is conducting a geophysical operation shall ensure that an evacuation route is set up from each work station and that the route is accessible to every member of the geophysical crew who is working at that station.

16/97 s19

No smoking

20. (1) A person shall not smoke near a marine recording cable or in an area where inflammable materials or explosives are being used or stored in the course of a geophysical operation.

(2) An operator shall post, near the cable and in each area referred to in subsection (1), a sign prohibiting smoking.

16/97 s20

Hours of work

21. (1) Subject to subsection (2), an operator shall ensure that no member of the geophysical crew is required to work

(a) a shift in excess of 12 consecutive hours; or

(b) 2 successive shifts the combined total of which exceeds 12 hours unless that member has had at least 6 consecutive hours of rest between those shifts.

(2) Subsection (1) does not apply to a member of the geophysical crew who is required to work in the case of an emergency.

16/97 s21

Training of geophysical crew

22. (1) An operator shall ensure that every member of the geophysical crew

(a) is familiar with the safety equipment that the member may use, and with the safety procedures that the member may have to carry out during the operation;

(b) undergoes the instruction, training and drills necessary to enable the member to cope with both normal operations and emergency situations;

(c) is familiar with the *Safety Manual for Geophysical Field Operations* , 6th edition, 1986, published by the International Association of Geophysical Contractors, as amended; and

(d) has successfully completed

(i) a survival course approved by the chief safety officer, and

(ii) a helicopter underwater escape course approved by the chief safety officer, where regular changes of geophysical crew by helicopter are planned.

(2) The chief safety officer shall approve

(a) a course referred to in subparagraph (1)(d)(i) if the chief safety officer is satisfied that the course will provide an adequate level of knowledge of the hazards and emergencies that are likely to be encountered on a vessel or platform that is engaged in a geophysical operation and of techniques for surviving those hazards and emergencies; and

(b) a course referred to in subparagraph (1)(d)(ii) if the chief safety officer is satisfied that the course will provide adequate training in the methods of escaping from a helicopter that is underwater.

(3) An operator shall ensure that only those members of the geophysical crew who are trained in the operation and maintenance of the seismic energy source and the components of seismic energy systems will be responsible for their handling and maintenance.

16/97 s22

Access to regulations required

23. An operator who is conducting a geophysical operation shall keep, in a place that is accessible to the geophysical crew, a copy of all regulations in respect of occupational safety and health on the vessel or platform.

16/97 s23

PART IV
REPORTING REQUIREMENTS

Status report

24. An operator shall submit to the chief conservation officer, at the commencement and termination of the geophysical operation and once a week during the operation, in a manner and form approved by the chief conservation officer, a report on the progress of the operation that includes

(a) the number assigned to the operation that is the subject of the geophysical operation authorization;

(b) the identification of the lines on which the data are collected;

(c) the quantity of data collected per line;

(d) the location and status of vessels and platforms from which the operation is conducted; and

(e) unusual weather conditions or other incidents that cause downtime.

16/97 s24

Final report

25. (1) Within 12 months after the date of termination of a geophysical operation, an operator shall submit to the chief conservation officer a report that includes

(a) a title page that indicates the number that is assigned to the operation that is the subject of the geophysical operation authorization, the report title, the type of operation conducted, the location of the operation, the duration of operations at that location, the names of the contractors, the operator, the interest owners, as defined in section 47 of the Act, and the author, and the date of the report;

(b) a table of contents;

(c) an introduction or abstract;

(d) location maps that show the boundaries of the area that is subject to each interest covered by the operation and the identification numbers of those interests;

(e) a summary of significant dates, the number of members of the complement, the number of members of the geophysical crew, the type and number of each type of equipment used, the production data, the total distance surveyed, the downtime per day, and the number of kilometres of data recorded per day;

(f) a summary of weather, sea and ice conditions and their effect on the operation;

(g) a general description of the operation including the instrument type, the accuracy of the navigation, positioning and survey systems, the parameters for the energy source and recording system and the configuration of the seismic energy source and deployed recording system;

(h) a detailed description of the geophysical data processing method including the processing sequence and the processing parameters for seismic, magnetic, gravimetric and other geophysical surveys;

(i) shotpoint maps, track plots, flight lines with numbered fiducial points, gravity station maps and, for seabed surveys, location maps for core holes, grab samples and seabed photographs;

(j) a fully processed, migrated seismic section for each seismic line recorded and, in the case of a 3-D survey, each line generated from the 3-D data set;

(k) a high?resolution section for each line recorded in a well-site seabed survey or a pipeline route survey;

(l) a series of gravity and magnetic profiles across all gravimetric and magnetic surveys for which interpretative maps have not been made;

(m) shotpoint location data;

(n) bathymetric maps that are compiled from the data collected;

(o) interpretative maps that are appropriate to the data collected including

(i) structure and isopach maps, time structure and time interval maps, velocity and residual velocity maps, and seismic amplitude and character change maps,

(ii) final Bouguer gravity maps and residual or other processed gravity maps, and

(iii) final total magnetic intensity contour maps and residual, gradient or other processed magnetic maps;

(p) synthetic seismograms and seismic modelling studies that use synthetic seismograms, vertical seismic profiles at wells that were used in the interpretation of the operation data, amplitude versus offset studies, and seismic inversion sections; and

(q) the interpretation of maps and seismic sections including

(i) geological and geophysical correlations,

(ii) where applicable, correlations between gravity, magnetic and seismic data,

(iii) in the case of seabed surveys, the geophysical correlation of shallow seismic data with data from cores and geotechnical boreholes,

(iv) details of corrections or adjustments that were applied to the data during processing or compilation, and

(v) the operator's velocity information that was used in a time-to-depth conversion.

(2) An operator shall incorporate in a map submitted under paragraph (1)(o) previous data collected by the operator that are related to the area covered by the map and that are of a type similar to the data from which the map was produced.

(3) Notwithstanding subsection (1), an operator who has conducted a non-exclusive survey need not, in the report required by subsection (1), provide the information and materials described in paragraphs (1)(n) to (q) in respect of data that are available for purchase by the public.

(4) Where an operator who has conducted a non-exclusive survey ceases to make available for purchase by the public the data from that survey that were so available, the operator shall, within 12 months after the date on which the operator ceased to make the data available, submit to the chief conservation officer a supplementary report that contains the information and materials described in paragraphs (1)(n) to (q) in respect of the data, unless the chief conservation officer has received a report under subsection (5) that includes that information and those materials.

(5) Every purchaser of geophysical data that arise from a geophysical operation in an area that is subject to an interest, where the costs of the purchase of the data are credited against deposit or rental requirements of the interest, and every participant shall submit to the chief conservation officer a report that contains all of the information and materials described in paragraphs (1)(n) to (q) that have been prepared by or for that purchaser or participant.

(6) Where a purchaser of geophysical data that arise from a geophysical operation in an area that is subject to an interest has reprocessed the data and the costs of the reprocessing are credited against deposit or rental requirements of the interest, the purchaser shall submit to the chief conservation officer a report that contains the information and materials described in paragraphs (1)(a), (h), (j) to (l) and (o) to (q) that have been prepared in respect of the reprocessed data by or for the purchaser.

(7) The reports required by subsections (5) and (6) shall be submitted

(a) in the case of a participant, within 12 months after the date of termination of the geophysical operation; and

(b) in the case of a purchaser, by the time the costs referred to in subsection (5) or (6) are credited.

(8) A person who has submitted a report referred to in this section shall, in respect of data that pertain to the location of shotpoints or stations, immediately notify the chief conservation officer of errors, omissions or corrections identified in or made to the data subsequent to the submission of the report.

(9) A report referred to in this section shall be submitted in the form, manner and quantity approved by the chief conservation officer.

16/97 s25

Retention of data

26. (1) An operator shall, after completion of a geophysical operation, retain in Canada the following information and materials:

(a) seismic field data in digital format and a description of the data format, together with all supporting information;

(b) fully processed, migrated seismic data in digital format;

(c) in the case of a magnetic survey, the final digital field data, field analog monitors, diurnal charts, altitude profiles, and all other supporting information;

(d) in the case of a gravimetric survey, the location, elevation, final digital field data, and gravity profiles;

(e) in the case of seabed investigations at well-sites, all sidescan sonar records and mosaics, fathometer records, sub-bottom profile records, grab samples, cores, and seabed photographs; and

(f) all other observations or readings that were obtained during the field operation.

(2) A person shall not destroy or discard the information or material referred to in subsection (1) after the period referred to in subsection (4) unless the person has given the chief conservation officer not less than 60 days' notice of that intention and, if so requested within the notice period, has given the chief conservation officer the information or material or a copy of it.

(3) The chief conservation officer may require an operator to supply the information and materials referred to in subsection (1), in a form approved by the chief conservation officer.

(4) A person shall not destroy, discard or remove from Canada the information or material referred to in subsection (1) within 15 years after the completion of the geophysical operation without the written approval of the chief conservation officer.

(5) Where fewer than 15 years have elapsed since the completion of the geophysical operation, the chief conservation officer shall approve the destruction, discarding or removal from Canada of the information or material referred to in subsection (1) if the chief conservation officer is satisfied that the information or material is of no significant use or value.

(6) Notwithstanding subsection (4), information or material referred to in subsection (1) may be removed from Canada without the approval of the chief conservation officer for the purpose of being processed in a foreign country, provided that the information or material is returned to Canada as soon as the processing is complete.

(7) An operator shall retain in Canada on reproducible film the most recent fully processed, migrated seismic sections of the geophysical operation and shall not destroy that film or remove it from Canada without the written approval of the chief conservation officer.

(8) The chief conservation officer shall approve the destruction or removal from Canada of the most recent fully processed migrated seismic sections on reproducible film if the chief conservation officer is satisfied that a copy of the film has been retained in Canada or the film is not of significant use or value in Canada.

16/97 s26

PART V
ACCIDENTS

Reports

27. An operator shall inform the chief conservation officer and the chief safety officer immediately, by the most rapid and practical means, of a serious accident or incident that occurs

during a geophysical operation and that causes injury to or loss of life of a person, or damage to property, or that constitutes a threat to the environment.

16/97 s27

Investigation

28. The chief conservation officer and chief safety officer may investigate an accident or incident that occurs during a geophysical operation and that

(a) involves the death of or injury to a person;

(b) causes significant damage to or failure of geophysical equipment; or

(c) results in pollution or other damage to the environment.

16/97 s28